

**Wells National Estuarine Research Reserve
Coastal Training Program Strategy Document 2013 - 2018**

The Wells NERR Coastal Training Program supports community resilience, proactive adaptation to environmental change and development of sustainable solutions to environmental problems through science based collaborative action.

I. Introduction

In 1984 the Wells National Estuarine Research Reserve (NERR) was designated by the National Oceanic and Atmospheric Administration (NOAA) as the only NERR in Maine and one of two NERRs located in NOAA's Acadian Biogeographic Region. Situated on the southern Maine coast, the Reserve comprises 2,250 acres of salt marshes, beaches, dunes, upland fields and forests, riparian areas and submerged lands within the watersheds of the Little, Webhannet and Ogunquit Rivers. Parcels of conserved land owned by the U. S. Fish and Wildlife Service, Town of Wells, the Maine Department of Conservation and the Wells Reserve Management Authority make up the Reserve (Dionne, et al. 2006)

Maine is among the least populous states in the nation, ranking 40th in the nation in terms of absolute population. However, the distribution of population on the landscape in Maine is quite uneven, and the counties in the vicinity of the Wells Reserve are home to between 200,000 and 500,000 people each. In addition, highly populated regions of Massachusetts and New Hampshire are nearby. These areas, like the counties in the region of the Wells Reserve, experienced population growth between 1990 and 2000 that matched or exceeded the national average of 13.2% (Dalton, 2005). In southern Maine, ongoing land use changes associated with population growth and sprawling patterns of development are stressors to the coastal ecosystems studied and protected within the Reserve. Processes provided by these threatened systems support myriad ecosystem services that provide benefits to residents, businesses and visitors to the communities. In the absence of informed management promoting sustainable tradeoffs, human actions typically trend towards a degradation of ecosystems that ultimately diminishes human welfare (Feurt, et al. 2010).

The Coastal Training Program (CTP) of the Wells NERR works directly with communities and organizations to promote science-based decision making and sustainable tradeoffs that preserve ecosystem services. People act to sustain locally valued coastal resources based upon knowledge about the ecosystem services provided by natural areas and the impacts of actions and policies on these services. The Wells NERR Coastal Training Program is designed to take advantage of the critical role that local and regional decision-makers, businesses and citizen's play in determining the character and condition of Maine's coastal areas. Requirements of professional practice and a strong regional stewardship ethic both contribute to the power of collaborative efforts that are the hallmark of the CTP. Training and technical assistance are adapted to influence and support local decisions about land use, infrastructure development, biodiversity conservation and public health and safety, taking into account the system of regulations, policy, planning documents and

scientific findings that play a role in effective collaborative action (Krum and Feurt, 2002; Feurt 2007; Feurt and Steele, 2008).

Integrating the work of the Wells NERR research, GIS, and stewardship programs, the CTP fosters community based protection, stewardship, conservation and restoration of ecosystem services in the Gulf of Maine ecosystem. The geographic coverage of the program focuses primarily on communities in southern Maine and coastal New Hampshire. In partnership with organizations on the CTP Advisory Committee, the Coastal Training Program supports community resilience, proactive adaptation to environmental change and development of sustainable solutions to environmental problems through science based collaborative action. This network of partners informs and engages coastal managers, scientists, business leaders and community members through workshops, trainings, field trips and technical assistance. In some cases, the CTP functions as a tool of adaptive ecosystem management by facilitating the assessment and evaluation of the outcomes of natural resource based decisions, actions and policies (Feurt, 2007; 2008).

Developing an effective CTP requires awareness that underlying the seemingly pragmatic decision making processes influencing land use and coastal management is a complex system of human values, attitudes and motivational forces. Social science research has provided national (Kempton, et al. 1995) and local (Feurt, 2007) evidence for shared values associated with protecting commonly held resources like air and water, providing habitats that support biological diversity and sustaining resources with a commitment to intergenerational equity. During the development and implementation of the first ten years of the Wells NERR CTP, evidence of the collaborative potential of shared values, the pride associated with a diverse system of professional practice and commitment to community and place was recognized as strong motivation for stewardship and application of science-based best management practices. The Wells NERR CTP applies principles and practices based upon a locally developed methodology of Collaborative Learning and Community-based ecosystem management for workshop design and stakeholder engagement (Feurt, 2007; 2008; 2012).

II. Integration with Reserve Goals and Programs

The Wells NERR CTP is integral to accomplishing the vision, goals and objectives of the Wells NERR Management Plan 2012 – 2017 as excerpted below from the plan (WNERR, 2012).

Wells Reserve

Vision: Resilient estuaries and coastal watersheds where human and natural communities thrive.

Mission: To protect and restore coastal ecosystems of the Gulf of Maine through integrated research, stewardship, environmental learning, and community partnerships.

Wells NERR Strategic Goals

Goal I: People appreciate and understand natural environments, make informed decisions, and take responsible actions to sustain coastal communities and ecosystems.

Goal II: Reserve science promotes better understanding of coastal ecosystems, and the results of research are made available to address coastal management issues.

Goal III: Coastal communities have enhanced capacity to protect, manage, and restore coastal habitats.

Goal IV: People understand the effects of climate change on natural and human communities and have the knowledge and tools needed to make informed decisions and adapt to environmental change.

Goal V: The Wells Reserve is a model site and resource for exemplary coastal stewardship that fosters an understanding of the ecological connections among land, water, and people.

Coastal Training Program Objectives

The Wells NERR CTP is guided by three objectives.

Objective 1: Each year 90% of participants in training indicate intent to apply natural and social science-based information in coastal decision-making

Strategies:

1. Identify and translate emerging research and technology tailored to the needs of coastal decision-makers.
2. Increase the application of management-relevant research and monitoring results for environmental decision-makers in support of ecosystem-based management.
3. Develop and evaluate innovative communication strategies and delivery methods that translate science effectively and support collaborative environmental decision-making.
4. Develop methods to incorporate ecological economics approaches and findings into trainings and technical assistance.
5. Provide 8 annual workshops and trainings or 6 technical assistance activities for watershed management, climate adaptation planning, GIS, stakeholder engagement and/or habitat restoration each year.

Objective 2: By 2018 CTP supports three collaborative efforts within the State to sustain ecosystem services and community resilience in a changing climate.

Strategies:

1. Identify and engage diverse partners and stakeholders in appropriate and strategic approaches to sustaining ecosystem services and community resilience.
2. Facilitate dialogue about the need for and application of scientific research to improve management and policy decisions to sustain ecosystem services and support community resilience.

Objective 3: Each year 80% of trainings, workshops and technical assistance are designed to address partner and stakeholder needs identified through needs assessments, evaluations and in consultation with the CTP Advisory Committee.

Strategies:

1. Assess the science, technology, and information needs in accordance with needs assessments and feedback from conducted programs.
2. Respond to those who voice a need for science-based information and technology relevant to coastal stewardship and ecosystem management.
3. Evaluate programs to determine how participants apply the information and knowledge they obtain.
4. Evaluate research translation and application for contributions to measurable environmental outcomes.
5. Facilitate communication of decision-maker needs for science to researchers.

CTP Outcomes

1. Diverse stakeholder workgroups created and supported to promote sustainable land use and conservation.
2. Improved ability of partners and stakeholder groups to collaboratively facilitate ecosystem service conservation.
3. Decision makers increase their knowledge of sustainable land use and conservation practices to maintain community benefits and ecosystem services.
4. Training series and technical assistance delivered to meet partner and stakeholder needs.

Sector Integration

The Wells NERR CTP is well integrated with the Research, Education, Stewardship and GIS functions of the Wells NERR. CTP and Stewardship work together with local land trusts, towns, and community organizations to increase their effectiveness and capacity to conserve natural resources. The CTP hosts and conducts GIS trainings that complement the mapping and technical support services the GIS Center provides. All CTP events are offered for teachers and community members including docents and volunteer actively engaged with the Education Program. Coordination with the Education Coordinator ensures that programs covered by CTP and Education deliver similar messages. One of the goals of the Science Collaborative Project described in the paragraph below is to improve the educational and interpretive messages about community resilience and choices related to sustaining ecosystem services important to Reserve audiences. As results of this project become available the Education Coordinator will work with researchers on the project to evaluate the usefulness of ecosystem services messages.

Through the NERRS Science Collaborative funded project *Sustaining Coastal Landscapes and Community Benefits*, the Wells NERR CTP, Stewardship and Research programs are collaborating to integrate WNERR research findings into an ecological-economic model to improve the communication and application of science with riparian buffer management and policy. This project will have a strong influence during this period on the implementation and adaptation of the CTP with the local stakeholder groups who are partners on the project (Feurt, et al. 2010). Research and CTP are collaborating to develop ecosystem indicators for the Saco Estuary in the University of New England (UNE) -Wells NERR Sustainable Solutions Partnership funded by NSF for the period 2009 – 2014. The Saco Estuary Project draws from newly developed theory and practices for Sustainability Science, an approach that aligns well

with the mission of the NERRS. These two projects specifically address Wells NERR Goal #5 - “The Wells Reserve is a model site and resource for exemplary coastal stewardship that fosters an understanding of the ecological connections among land, water, and people,” developing and testing examples of the integration of natural and social sciences for coastal management.

III. Program Implementation and Priority Issues

Results of the original Market Analysis and Needs Assessment (Krum and Feurt, 2002) suggested two primary training themes for the Coastal Training Program that have been confirmed through regular and consistent evaluation of CTP events:

- I. Land, habitat and resource conservation and restoration
- II. Control of pollution and runoff to protect water quality and biodiversity

The two overarching training themes are addressed through six priority training topics covering the following:

1. Strategies for balancing economic growth and development with quality of life values such as rural character, local agriculture, recreation, scenic views, clean water, and wildlife habitat.
2. Methods for incorporating scientific information about the cumulative impacts of management and policy into decisions affecting natural resources.
3. Ecosystem approaches to conservation and restoration of coastal habitats and biodiversity.
4. Methods for incorporating valid economic implications, such as cost avoidance associated with land conservation and watershed management, into decision making.
5. Use of science-based Best Management Practices (BMPs) for sustaining water quality and quantity.
6. Management strategies and policies that sustain ecosystem services and support community resilience in a changing climate.

Climate change adaptation will be an expanded topic for 2013 - 2018:

The extent to which existing regulations and policies provide adequate protection under anticipated climate change scenarios, is a subject of concern and debate. The level of risk is compounded by increased storm event frequency and intensity and sea-level rise (SLR). Communities throughout New England are struggling financially to repair and replace seawalls, culverts, bridges and sections of roads washed away during recent spring storm events. Municipalities, land use planners, and emergency management officials recognize the need to update their policies for erosion control, storm and wastewater management, setbacks, and site design in coastal areas, but are constrained by funds, time and technical knowledge to plan for climate change.

Conservation groups are similarly faced with the need to prepare for climate change and sea-level rise to protect lands critically important as wildlife habitat. The estuaries and salt marshes of the Wells NERR are threatened by sea level rise and inadequate protected buffer areas for landward migration. Recommendations from a 2006 study (Slovinsky and Dickson, 2006) identified the need to evaluate opportunities for restoration, land use planning and conservation

of natural areas to allow for marsh transgression of nationally significant habitats of both the Wells NERR and adjacent lands of Rachel Carson National Wildlife Refuge. Beginning in 2012, the Wells NERR CTP will partner with Maine Coastal Program, Maine Geological Survey, Southern Maine Regional Planning Commission and The Environmental Finance Center of the Muskie School of Public Service at the University of Southern Maine to implement a series of climate change workshops in southern Maine communities specifically designed to address challenges of planning for marsh migration.

National Contribution of Wells NERR CTP

While the geographic coverage of Wells Reserve Coastal Training Program focuses primarily on communities in southern Maine and coastal New Hampshire. The Wells Reserve CTP provides technical assistance for Collaborative Learning methodologies throughout the National Estuarine Research Reserve System. A training curriculum - *Working Together to Get Things Done*, was developed in collaboration with the NERRS Science Collaborative and piloted at eight Reserves in 2012. The training is designed to build capacity across the NERRS and among partner organizations to support collaborative research, sustainability science and ecosystem based management. Delivery of this training, web-based resources and continued technical assistance to the system is anticipated following the pilot phase in 2012.

IV. The Wells NERR CTP Community of Practice

The CTP Advisory Committee functions as a Community of Practice (Lave & Wenger, 1998; Wenger, 2006) collaborating with CTP to develop and implement trainings, action plans and science based projects oriented to sustaining locally valued ecosystem services and building community resilience to environmental change. Members of these groups interact regularly and are engaged most directly in the CTP's work with the Salmon Falls Watershed Collaborative, the NERRS Science Collaborative Project – *Sustaining Coastal Landscapes and Community Benefits* and the UNE-Wells Reserve Sustainable Solutions Partnership on the Saco Estuary. For this project Wells NERR and UNE are partners in the NSF-funded *Sustainability Solutions Initiative* which integrates ecological science, collaborative learning and ecosystem-based management to develop ecological indicators for the estuarine portion of the Saco River (See Appendix II for a complete list of partnerships).

Emerging partnerships in 2012 have a development and business focus including the Maine Community Development Foundation, Mobilize Maine and the Greater Portland Council of Governments Sustainable Communities Initiative. Partnerships will be expanded to include groups with expertise and interests specifically aligned with targeted training priorities identified in Section III. Building upon the existing efforts of partner organizations will provide synergies which strengthen the CTP and our partners programs. During the period 2013 – 2018 partnerships will be strengthened and expanded with the Sea Level Rise Adaptation Working Group (SLAWG), the Environmental Finance Center of the Muskie School of Public Service and the University of Southern Maine, the newly evolving Southern Maine Water Learning Network and the *Forest Works!* partnership.

Research during the first ten years of the program identified a role for collaborative knowledge networks as a mechanism for accomplishing the goals of CTP (Feurt, 2007; 2008). This type of network is best illustrated by the role of CTP in the Salmon Falls Watershed Collaborative. The

CTP facilitates the Salmon Falls Watershed Collaborative comprised of municipal staff, local, state and federal water managers, regulators and policy makers, local NGOs, water districts and community groups. CTP staff contributed to the Action Plan for this group and will be engaged during the next five years in the implementation and evaluation of the group's progress. In 2012 this partnership was nationally recognized as a model and awarded the United State Water Prize for their work (SFWC, 2012; CWWA, 2012)

V. Audiences for CTP Services and Programs

The Market Analysis and Needs Assessment (Krum and Feurt, 2002) identified municipal officials, land trusts and community based watershed groups as the dominant target audiences for the Wells NERR CTP. This remains the primary audience for this strategic planning period. This audience represents diverse roles and job descriptions, including elected officials, professional staff, and professionals and community members serving on volunteer town boards. Research documenting the structure and function of the system for protecting water in Southern Maine is incorporated into the design, implementation and delivery of the Wells NERR CTP (Feurt, 2007; 2008).

Professional municipal staff includes Town Managers, Planners, Code Enforcement Officers, Public Works and Highway Managers, Town Engineers, Water and Wastewater Managers, Clam Wardens and Harbor Masters. Included in the municipal audience are those volunteers serving on Planning Boards, Site Plan Review Boards, Zoning Boards of Appeals, Economic Development Committees, Open Space Committees, Conservation Commissions, Town Councils or Selectmen. Volunteer boards are in many cases the backbone of the land use decision-making process at the local level. In addition to these municipal audiences, the Market Analysis and Needs Assessment identified land trusts, watershed and river associations, and state and federal employees as audiences for CTP. The CTP uses a systems approach to facilitate collaboration among these audiences as they tackle complex environmental issues from diverse organizational perspectives. These diverse groups are categorized into eight primary categories, representing a *kaleidoscope of expertise*, engaged and supported by the Wells NERR CTP (Feurt, 2007; 2008). The kaleidoscope of expertise includes people who focus their work in the following areas:

1. Planning and land use management
2. Regulations, ordinances, policy and enforcement
3. Engineering, public works, stormwater and wastewater
4. Citizen and business environmental stewardship
5. Education, communication and community outreach
6. Science, research and monitoring
7. Drinking water and source water protection
8. Land and habitat conservation

VI. Training and Outreach Methods, Marketing and Evaluation

CTP services include conferences, workshops, field based workshops, meeting facilitation, strategic action planning, technical assistance and project evaluation. Events are collaboratively planned and implemented with partner groups to increase access to resources and diverse audiences. A suite of less formal but equally effective CTP strategies includes membership in

working groups addressing specific coastal management issues; participation on advisory boards of partner organizations; consultations with CTP audiences; and attendance at municipal meetings providing technical assistance. The Trainings and Technical Services Plan outlining CTP events planned for the period from 2013-2018 appears in Appendix III.

CTP events are marketed using the Wells NERR website, including posting on the calendar, highlighting on the home page and blogs to provide in depth coverage of an event. Email marketing is done using *MailChimp* services and an extensive CTP database of target audiences. Electronic flyers are created for each event and are distributed electronically to individuals, partner organizations and on relevant list serves for the target audience.

CTP services are provided in situations characterized by both collaboration and conflict. Collaborative Learning strategies are applied to enhance stakeholder participation, take advantage of diverse expertise and focus actions on making progress to achieve shared management goals (Daniels and Walker, 2001; Feurt 2007; 2008). To foster collaborative research and the newly evolving discipline of sustainability science, Wells Reserve CTP applies the theory, principles and practices associated with Collaborative Learning and community based ecosystem management (Daniels & Walker, 2001; Meffee et al., 2002; Feurt 2007; 2008). This approach contributes and guides the design, implementation and evaluation of trainings, projects and technical assistance in response to the dynamic needs of region.

The ADDIE process for program design and evaluation, the CTP Logic Model and CTP Performance Measure system guidance are applied to assess the needs and market for CTP services and program effectiveness (Molenda, 2003; NOAA, 2002; 2011). Expert practices for adult learning, training design, diffusion of innovations, and social marketing are used to develop, implement and evaluate CTP (McKenzie-Mohr and Smith, 1999; Molenda, 2003; NOAA, 2002; Rogers, 1995; NRC, 1996). In the case of the current (2012) CTP regional partnerships described earlier, performance metrics and deliverables associated with funding mechanisms are used to evaluate CTP's contribution to and progress on these projects (SFWC, 2011; Feurt, et al. 2010; Morgan and Feurt, 2009; WRSMLT, 2012).

Evaluation is an iterative process incorporated into the *process* of development, marketing and delivery of training and outreach. The CTP will be evaluated for its effectiveness in accomplishing goals and objectives identified in the Wells NERR Management Plan and Strategic Plan as well as those identified for the National Estuarine Research Reserve system. The CTP Performance Measurement System provides the guidance for system-wide evaluation of CTP. Biannual reporting documents Wells NERR performance. Program evaluation will continue to be an agenda item for regular CTP staff meetings and CTP Advisory Committee meetings. During the next five years the CTP will add follow up evaluations to selected trainings to track longer term outcomes. A copy of the CTP performance metric prepared for NOAA for the period July 2013 – 2018 appears in Appendix IV.

The dissertation research of the CTP Coordinator was a formative evaluation for the early stages of the Wells NERR CTP (Feurt, 2007, 2008, 2012). This research used qualitative research methodologies to understand and document the knowledge, values and attitudes of municipal decision makers working with water management in southern Maine, comparing this to the

knowledge, values and attitudes of water program managers, scientists, regulators and outreach specialists working at the watershed scale. Findings from this research were used to design Collaborative Learning strategies to facilitate learning at the science to management interface and are incorporated throughout this strategy document as the principles and practices of the Wells NERR CTP. On-going needs assessments and evaluations are incorporated into each CTP event and project. Collectively, this data and face to face consultations with partners and participants informs the ongoing design of training and communication strategies at the Wells NERR.

VI. Reserve Staffing Scenario and Resources

The CTP program is managed by the CTP Coordinator who is funded 24 hours¹ per week from NOAA Operations Grant funds. The CTP Coordinator works collaboratively with the CTP Associate who is funded at 32 hours. Eight hours for both the CTP Coordinator and Associate come from external grant funding. The Stewardship Coordinator and GIS Specialist also develop and deliver CTP Trainings, Technical Assistance and services. This team communicates regularly to collectively manage Wells NERR CTP events and to integrate the research, monitoring, and stewardship education activities that have objectives relevant to coastal decision-makers.

External resources that support the CTP are undergraduate and graduate interns from the University of New England, Antioch University New England, the University of New Hampshire and NOAA. The CTP seeks external funding to work on large-scale collaborative projects. The NERRS Science Collaborative and the Maine Sustainability Solutions Initiative funded by the National Science Foundation currently support Wells NERR CTP projects.

The Coastal Training Program and Wells Reserve are located on the Laudholm Farm campus, which is listed on the National Register of Historic Places. The office is located in the main farmhouse with the Reserves education and administration offices, along with the Laudholm Trust and Maine SeaGrant offices. Workshops and training take place in the restored dairy barn which houses an auditorium that accommodates 75 people, and small meetings and focus groups take place in the attached library. Off campus is the Alheim Commons, a 20-bed dormitory that accommodates traveling speakers and guests.

APPENDICES

Appendix I. Literature Cited

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¹ The CTP Coordinator is a half-time faculty member of the Department of Environmental Studies at the University of New England and Director of the Center for Sustainable Communities that engages UNE students in service learning and internships with groups and communities served by the CTP.

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Appendix II. Partnerships in the Collaborative Knowledge Network

Wells Coastal Training Program Community of Practice (Advisory Committee)

- Kathleen Leyden, Education and Outreach Specialist for the **Maine Coastal Program**
- Paul Schumacher, Senior Planner of **Southern Maine Regional Planning Commission (SMRPC)**
- Kristen Grant, University of **Maine Sea Grant** Extension Specialist
- Nik Charov, President of **Laudholm Trust**
- LaMarr Clannon, Coordinator for **Maine Nonpoint Education for Municipal Officials (NEMO)**
- Steve Walker, Coordinator of the **Maine Beginning with Habitat Program**
- Andrew Tolman, Director of the **Maine Drinking Water Program**
- Jodi Castallo, Coordinator for **Mt Agamenticus to the Sea Conservation Initiative**
- Alex Mas, Project Manager of Water Resources of Southern Maine Learning Team for **The Nature Conservancy**

Roles and Responsibilities: The Advisory Committee meets annually face to face and interact regularly by phone and email. The group reviews the strategic plan and provides input into relevant projects connected to their individual areas of expertise and interest. Members participate in and provide evaluation feedback on the trainings they attend. Grant opportunities are explored collaboratively.

Membership of the *award winning* Salmon Falls Watershed Collaborative:

- Acton Wakefield Watersheds Alliance
- Berwick (ME) Water Department
- Granite State Rural Water Association
- Great Bay National Estuarine Research Reserve
- Maine CDC Drinking Water Program
- Maine Nonpoint Education for Municipal Officials
- Maine Rural Water Association
- Moose Mountains Regional Greenways
- New Hampshire Department of Environmental Services
- New Hampshire Source Water Protection Program
- Piscataqua Region Estuaries Partnership
- Society for the Protection of New Hampshire Forests
- Somersworth (NH) Planning Department
- South Berwick (ME) Water District
- Southeast Watershed Alliance
- Strafford Regional Planning Commission
- The (national) Source Water Collaborative
- USDA Forest Service
- USDA Natural Resource Conservation Service
- U.S. Environmental Protection Agency
- Wells National Estuarine Research Reserve
- York County Soil and Water Conservation District

Role and Responsibilities: This group implements the Salmon Falls Watershed Collaborative Action Plan

Stakeholders Engaged in NERRS Science Collaborative Project *Sustaining Coastal Landscapes and Community Benefits*, 2010 - ongoing

- Maine Geological Survey
- Maine Association of Conservation Commissions
- Maine Coastal Program
- Maine Nonpoint Education for Municipal Officials (NEMO)
- Maine Sea Grant
- Maine Drinking Water Program
- Maine Department of Inland Fisheries and Wildlife, Beginning with Habitat
- Maine Department of Environmental Protection
- Maine Department of Marine Resources
- Southern Maine Regional Planning Commission
- Mt A to the Sea Conservation Initiative
- Rachel Carson National Wildlife Refuge
- University of New England
- Laudholm Trust
- Piscataqua Region Estuaries Partnership
- Town of Wells, Planning Department
- Town of Sanford, Planning Department
- Town of Kennebunk, Planning Department

Role and Responsibilities: This group implements the objectives and deliverables per the grant.

Stakeholders Engaged in Sustaining Quality of Place and Ecosystem Health in the Saco River Estuary, 2009 - ongoing

- Citizens of Biddeford
- Citizens of Saco
- Saco Planning Board
- Saco Comprehensive Plan Committee
- Saco Conservation Commission
- Biddeford Conservation Commission
- Heart of Biddeford
- Saco Valley Land Trust
- Biddeford Open Space Committee
- Biddeford Planning Board
- Saco River Salmon Club
- Saco River Corridor Commission
- Biddeford Pool Land Trust
- Friends of Wood Island Lighthouse
- Biddeford Pool Improvement Association
- Biddeford Chamber of Commerce
- Blandings Park Wildlife Sanctuary
- Biddeford Environmental Board
- Saco Coastal Waters Commission
- UNE Waste Water Treatment Facility

Role and Responsibilities: This group implements the objectives and deliverables per the grant.

Appendix III. Training and Technical Services Plan for 2013 – 2018

Training & Workshops	2013	2014	2015	2016	2017	Notes
GIS and GPS Training	X	X	X	X	X	Provided by GIS Specialist and CTP Associate. Expand offerings beyond So. ME /partners with Coastal Program
Maine Land Trust Conference	X	X	X	X	X	Collaboration w. Maine Land Trust Network, offer skill based trainings
Science Symposium		X		X		In collaboration with Rachel Carson NWR and UNE
Maine Beaches Conference		X		X		With U Maine Sea Grant
Maine Water Conference		X	X	X	X	Poster or display of key projects
Climate Adaptation Planning for stormwater, flooding and marsh migration	X	X	X	X	X	Partner with State Agency Training for CEOs, Planners and Floodplain Mangers; Coordinate with Sea Grant
Conservation Strategies for Land Trusts and Conservation Commissions	X	X	X	X	X	Coordinated by Stewardship Coordinator to address specific needs
<i>Managing small woodlots for conservation values</i>	X	X				Use Wells NERR Yankee Woodlot Plan to model best practices
Land Use Planning: <i>Strengthening Town Centers & Transforming Commercial Corridor Strips/ Randall</i>	X	X	X	X	X	Includes: Sustainable Site Design; Suitability for development; Low Impact Development; ordinance development, TDR, conservation sub

Arendt						divisions (after 2012)
Salmon Falls Watershed Collaborative Workshops	X	X	X	X	X	Biannual meeting, semi annual conference, field based workshops, demonstration projects
Watershed Restoration /Dam Removal and Fish Passage Restoration	X	X	X	X	X	Lessons learned from Shorey's Brook project, Branch Brook fish passage restoration, riparian buffer management
<i>Working Together to Get Things Done</i>	X	X				National pilot training with NERRS Science Collaborative to build capacity for collaborative research and sustainability science
Riparian buffer management, policies and restoration	X	X	X	X	X	NERRS Science Collaborative Project Trainings related to Ecosystem Service Valuation & Communication
<i>Beautiful Buffers and the People Behind Them</i>		X				Social Marketing Campaign for riparian buffer conservation
<i>Sustaining The Saco</i> - applying indicators of ecosystem health	X	X	X			Stakeholder/Scientist collaboration on development of ecosystem indicators
<i>Water Words that Work and Combat Communications</i> with Eric Eckl	X					Collaborate with partners to bring training to the region again
<i>Lessons in the Landscape</i>	X	X	X	X	X	Field based trainings to showcase best and worst management practices for stormwater, source water protection, watershed conservation and restoration
<i>We're All in the Same Boat</i> Management and Policy Boat Trips	X	X	X	X	X	Water based trainings to gain new perspective on shoreland zoning, land use policy, and research based solutions.
Technical Assistance & Services						
Watershed Collaboration Network support	X	X	X	X	X	Convene and facilitate meetings, provide technical support, facilitate grant funding for projects, conduct tours to key project sites
Land Trust & Conservation Commission Support	X	X	X	X	X	Provide technical support, GIS mapping, facilitate grant funding for projects
Support for Municipal land use, water quality and LID	X	X	X	X	X	Provide technical support and consultation
Ecosystem-based management and Collaborative Learning as methodologies for sustainability science	X	X	X	X	X	Provide technical support and consultation on EBM and Collaborative Learning and their application to facilitate sustainability science
GIS, GPS and spatial analysis	X	X	X	X	X	Provide technical support, consultation and social science skill building
Public participation and key pad poling	X	X	X	X	X	Provide technical support and consultation
Science Translation & Communication	X	X	X	X	X	Provide technical support, consultation and social science skill building
Link NOAA Climate Change Science and Products to Maine Communities	X	X	X	X	X	Facilitate two way linkages with NOAA Scientists and Maine communities

Appendix IV Performance Metric for Coastal Training Program

Wells NERR Measure #3 Strategic Plan 2012 – 2017

Goal: People appreciate and understand natural environments, make informed decisions, and take responsible actions to sustain coastal communities and ecosystems.

Objective: Increase the use of natural and social science-based information in coastal decision-making to sustain ecosystem services relevant to source water protection, riparian buffer management and tidal wetlands conservation.

Strategy: The Reserve's Coastal Training Program will hold targeted workshops promoting the understanding and use of scientific information and the formulation of research activities to address priority coastal management issues including source water protection, tidal wetlands conservation and restoration and riparian buffer management. We anticipate using this methodology to develop and hold at least five trainings, workshops, field-based trainings or collaborative events per year. The Wells CTP will develop interdisciplinary trainings that bring social science methodologies to coastal managers working with land use issues, watershed management and restoration and climate change adaptation.

Performance Measure: Number of targeted workshops, field-based trainings and facilitated collaborations developed and held between 2012-2017 that build coastal decision-maker capacity to balance tradeoffs and integrate the use of relevant natural and social science research and methodologies.

Target: 25 targeted workshops, field trainings and facilitated collaborations developed and held between 2012-2017 that build coastal decision-maker capacity to balance tradeoffs and integrate the use of relevant natural and social science research and methodologies.

Prepared by Christine Feurt and Annie Cox with input and review by the Wells NERR CTP Advisory Committee October 2012