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The National Estuarine Research Reserve System is a network of 27 reserves connected nationally through the National Oceanic and Atmospheric Administration to address state and regional coastal management needs through research, education and stewardship.

National Estuarine Research Reserve System



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Introduction



The Coastal Training Program (CTP) is a national initiative of the National Estuarine Research Reserve System (NERRS) which provides science-based information, tools, and training to coastal decision makers to foster stewardship of coastal resources at the local and regional levels. Acting as a bridge between the science, policy and management communities, CTP also works to increase collaborative networking opportunities to increase information exchange and collaboration among the many individuals, disciplines, and institutions who affect coastal and estuarine ecosystems.



About the Coastal Training Program Summaries:

The following compilation highlights Coastal Training Programs of the National Estuarine Research Reserves. A total of 26 of 27 Reserves have Coastal Training Programs and included here are summaries for programs that have been fully implemented for the last few years. Descriptions of the elements found in each summary are provided here to facilitate interpretation of the document.

1 Program Description:

A brief program description highlights the roles that CTPs play in their communities, such as their ability to respond to emerging issues, how their program delivery and training approaches differ from other local training providers, or how CTP is uniquely positioned to serve important coastal decision-maker audiences.

CTP Coordinators:

The name of each CTP Coordinator, along with highest degree earned, degree specialization, and time spent in position is provided to highlight the variety of backgrounds and academic experiences that the coordinators bring to the program.

2 Success Story 1:

Each section contains two brief success stories that highlight ways that the individual CTPs have delivered science and skills to decision makers, as well as impacts and outcomes in local communities that are a direct result of CTP training events or other collaborative efforts. Each of these success stories is titled according to a coastal management issue that the CTP effort addresses.



3 Select CTP Partners:

A list of select partners with whom the CTP regularly works is also provided. These lists are by no means comprehensive, and represent only a subset of the large partner network that is characteristic of each CTP.

4 Success Story 2:

An additional success story highlighting an event in which CTP delivered science and skills to local decision makers.

5 Training Events:

A list of training events and the audiences targeted by these events illustrates the variety of topics and decision-makers addressed by the CTPs.

6 Reserve Partners

The Reserve's federal and state partners.



Northeast



“Thanks for an interesting evening...the information presented is of great value as we struggle to keep development in concert with the natural elements in our town.”

– Training Participant, Landowner, former Conservation Commission member and Planning Board chairman



My program is... promoting community based protection, stewardship, and conservation, of the Gulf of Maine Ecosystem by engaging coastal managers in knowledge creation and exchange through collaborative knowledge networks and adaptive ecosystem based management.

Christine Feurt, Coordinator since 2002, Ph.D. Environmental Studies

Land Use Planning

The Planning Director of Sanford, Maine initiated a conservation planning project with the Wells Reserve after attending the CTP Workshop, Conservation Options for Land Trusts. The goal of the project is to develop a conservation plan that will identify and prioritize resources including; clean water, natural areas, scenic vistas, public access to recreation and working landscapes including farms and forests. Support for this project was provided through a CICEET grant to improve land use planning and water quality.

“I was really impressed at the caliber of this workshop especially the level of interest of both participants and instructors ...thank you for putting this together it is a big benefit to our community.”

-Workshop Participant



Select CTP Partners
Maine Coastal Program
Maine NEMO
Maine Sea Grant
Maine Drinking Water Program
Southern Maine Regional Planning Commission
University of New England

The “Protecting Our Children’s Water, 2005-2025” Project

This project facilitates and supports the efforts of municipalities, water managers, scientists and NGOs implementing pollution control, conservation and land use management for clean water. Science translation and application, collaborative learning, strategic planning and evaluation of progress toward shared outcomes contribute to the success of this approach.

“This watershed group is so good at educating town officials and energizing town officials (who) work for water quality.”

- Workshop Participant

Training Events & Audiences

Coastal Community Planning and Development

Municipal staff, planning board, comprehensive plan committee

Invasive Species Identification and Control

Conservation commissions, land trusts, land owners

New Vernal Pool Regulations & What You Need to Know

Municipal staff, conservation commission, consultants, developers

Using GIS to Planning for Conservation and Development

Municipal staff, planning board, gis users

Protecting Our Children’s Water

Municipal staff, water district managers, consultants





Great Bay Reserve, New Hampshire

My program is... different from other local training providers. The NERRS CTP framework helps meet the decision makers' needs through a long term professional relationships, and almost-daily audience contact. The CTP shares professional challenges, and delivers the science-based trainings that provide the basis for informed decisions. The CTP is a results-oriented program that continually adapts to meet decision makers' needs to achieve a sustainability. Professional outreach peers routinely attend CTP workshops to stay current on available science and tools.

Steve J. Miller, Coordinator since 2002, M.A. Environmental Studies

Stormwater Management

The Great Bay CTP seeks out and sponsors developers, engineers, and landscapers – the people who request, design, and help install stormwater technologies – to attend programs at the University of New Hampshire (UNH) Stormwater Center. These workshops provide peer-to-peer review and apples-to-apples comparisons of stormwater technologies tested under NH climatic conditions. Results of this work include improved site designs and innovative approaches to reducing runoff and nonpoint source pollution.

“I have found the presentations you have sponsored very informative and constructive toward implementing and promoting protection of the NH seacoast environment. Your outreach efforts are outstanding and from my own watershed protection outreach work in Seabrook, I do know how much effort this takes.”

-Professional Engineer



Select CTP Partners
Natural Resources Outreach Coalition
UNH Cooperative Extension
The UNH Stormwater Center
The City of Portsmouth
NH Dept. of Environmental Services
Strafford Regional Planning Commission
Rockingham Planning Commission
NH Estuaries Project
Cooperative Institute for Coastal Estuarine Technology

Low Impact Development

The utilization of Low Impact Development is a key strategy to improving water quality, especially under the current and projected growth rates. This workshop series focuses on making sure communities understand the role stormwater plays in water quality and quantity, and also key issues such as flooding and infrastructure impacts. The series defines LID and how it functions, outlines how to encourage its use and what other communities are doing, reviews how to eliminate the barriers to implementing LID, and instructs participants how to review site plans for effective stormwater management.

“I see your CTP program as an incredibly valuable program that provides local decision makers with cutting-edge information.”

-NHDES Coastal Watershed Supervisor

Training Events & Audiences

Anticipating Climate Change Impacts in Southern NH

Municipal officials and land use boards

Comprehensive Shoreland Protection Act Update

Municipal officials, land use boards, engineers/developers

Behind Every Good Coast is an Estuary

Municipal officials and land use boards

Protecting Shoreland and Riparian Buffers

Municipal officials and land use boards

Weathering the Storm: Managing Stormwater with LID in Northern NE

Municipal officials, land use boards, municipal engineers and planners





Waquoit Bay Reserve, Massachusetts

My program is ... making a profound difference by bringing science to bear on real world coastal problems. Dynamic, cutting edge and locally relevant are hallmark features of the program. The CTP is not only responsive to audience needs but is often at the forefront of bringing attention to emerging issues of importance. The model of systematically linking audience needs with science that can inform decision-making and evaluating impact allows development of meaningful trainings. A vehicle for delivering information to local professionals and volunteers, the CTP is meeting a crucial need for more training at the local level and influencing the stewardship of coastal resources.

Tonna-Marie Rogers, Coordinator since 2005, M.S. Biological Oceanography

Climate Change

The CTP is helping communities understand the science and potential impacts of climate change and determine effective responses. In partnership with the education sector and others, the CTP has offered a suite of solutions-oriented trainings on mitigating impacts through energy efficiency, high performance building and emissions reduction initiatives. The program is also bringing attention to the importance of adaptation planning to address coastal impacts of climate change.

“Excellent, new information and highly useful to coastal resource management!”

-Ecologist and Local Town Board Member



Select CTP Partners
MA Office of Coastal Zone Management
Woods Hole Sea Grant Program
Cape and Islands Renewable Energy Collaborative
NOAA Coastal Services Center
MA Dept. of Conservation and Recreation

Water Quality Degradation

Coastal water quality impairment from excess nitrogen is a priority concern for many communities in Massachusetts. Groundbreaking research at the NERR demonstrate the importance and contribution of major sources of nitrogen such as wastewater and atmospheric deposition, and form the basis of several training events. Recent workshops have focused on solutions such as wastewater treatment and financing options, including an innovative groundwater treatment technology being tested at the Reserve. Local decision-makers draw on this practical and timely information as they develop plans to meet regulatory limits for nitrogen.

"I felt that the workshop was exceptional. The presenters were well spoken and knowledgeable. I learned a lot of information, met others of like mind, and gained several resources for future involvement. Thank you for putting together such a well organized and thoughtful event."

-Local Conservation Ranger

Training Events & Audiences

Meeting Wastewater Treatment Needs & Financing Solutions

Municipal officials and staff, local boards, engineers, environmental NGOs

Climate Change and Cape Cod: Impacts and Adaptation Strategies

Coastal managers, municipal officials and staff, local boards, NGOs

Municipal Land-based Wind Projects: Maximizing Benefits, Overcoming Barriers

Municipal officials and staff, local boards, NGOs, engineers, businesses

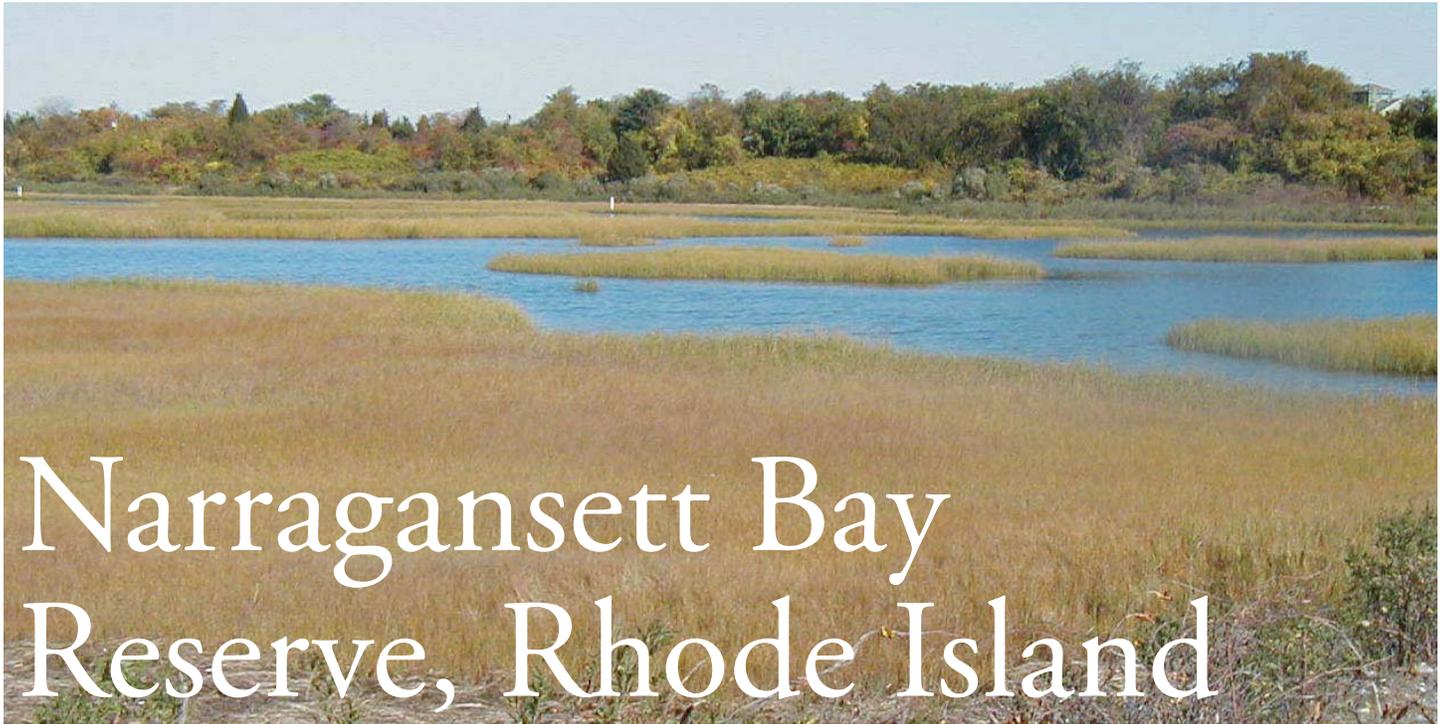
Coastal Stream Habitat Restoration Workshop Series

Coastal managers, municipal staff, restoration specialists, ecologists, NGOs

Negotiating for Coastal Resources

Coastal managers, municipal officials and staff, local boards, NGOs





My program is... unique in that it provides needs-based, targeted trainings along with ongoing technical assistance, ensuring that the knowledge and skills acquired by decision-makers are applied effectively through continuous evaluations of CTP efforts. The CTP also helps to enhance coordination among other training organizations throughout the watershed, through such efforts as the development of an online community calendar in partnership with Grow Smart RI. The calendar not only provides decision-makers with announcements of training events taking place throughout the watershed, but helps to reduce scheduling conflicts and the duplication of training efforts.

Jennifer West, Coordinator since 2005, M.S. Environmental Sciences

Land Use Planning

The CTP provides trainings on Conservation Development, a land-use planning technique that guides growth to the most appropriate areas in order to retain valuable open space, protect sensitive ecological features, and mitigate stormwater impacts. Trainings include hands-on group mapping exercises. As a result of these and other efforts, so far 18 out of the 28 “eligible” (non-urban and not fully developed) RI towns are implementing Conservation Development in their communities.

“A clear, concise, compelling presentation. Relaxed, friendly, yet professional delivery. A pleasant group experience that illustrated the value of the process.”

-Planning Board Member, Town of Warren, RI



Select CTP Partners
RI Department of Environmental Management
Audubon Society of Rhode Island
Grow Smart Rhode Island
Narragansett Bay Estuary Program
Rhode Island Land Trust Council

Low Impact Development

The CTP focuses heavily on the implementation of Low Impact Development. The CTP received a grant to work with towns within the Narragansett Bay Watershed in implementing a greenspace and water quality management plan. The project involves the CTP developing and delivering targeted trainings for each town and assisting them in revising their comprehensive plans and zoning and subdivision regulations to include particular measures to reduce impervious cover, thereby helping to protect water quality.

“I intend to apply the knowledge I have acquired to site visits, design review, and conservation measures. As a result of attending this workshop, I have a much greater understanding of the benefits to developers and towns.”

-Chairman, North Smithfield, RI Conservation Commission

Training Events & Audiences

Conservation Development

Municipal staff and officials, designers and developers

Conservation Design DVD

Municipal staff and officials, designers and developers

Riparian Buffer Restoration

Land trusts and watershed councils, businesses, private landowners

Rhode Island Land and Water Conservation Summit

Land trusts and watershed councils, municipal staff and officials

Power of Place Summit (Smart Growth Conference)

Municipal staff and officials, state officials, designers and developers





Hudson River Reserve, New York

My program is... unique because trainings are targeted at specific audiences and based on their needs. Decision makers learn to consider the human dimensions of natural resource management. They learn content and process skills that help them do their job better and smarter. Training participants increase professional competence; learn information and tools that are current, relevant, objective and science-based; learn from qualified and engaging instructors; and network with both peers and experts.

Emilie Hauser, Coordinator since 2002, M.S. Geological Sciences

Habitat Loss and Alteration

Almost 50% of the 300 miles of the Hudson estuary shoreline is armored. The stewardship and CTP coordinators collaborated to identify alternative stabilization techniques that could enhance habitat and function in the tidal Hudson. The study was paired with training for consultants and regulators involving shoreline issues and a stabilization design project. Interest in protecting shoreline habitats, especially in the face of sea level rise, has led to additional studies, including an initiative funded by a Cooperative Institute for Coastal and Estuarine Technology (CICEET) grant.

“I look for and recommend soft engineering techniques where possible in permit applications. I have sent this information to applicants/consultants. I am mindful of Hudson River issues discussed at the workshop in all Hudson River permit review.”

-Environmental Permits Staff



Select CTP Partners
NY Dept. of Environmental Conservation
Hudson River Estuary Program
Coastal Resources Division of NY Dept. of State
Hudson River Environmental Society
Sustainable Hudson Valley
NOAA Coastal Services Center

Water Quality Degradation

The human dimension is an important aspect of ecosystem-based management. The first of a proposed series of workshops focused on social science applications in natural resource management, specifically for watersheds; looking at the community characterization of Reserve watershed, using social indicators to understand local communities; and community-based social marketing to empower voluntary change.

“I used the information that I learned in the training in my every day work duties and as Chairman of the Watershed Inter-Municipal Council. I have always believed that inter-facing with others with similar duties and interests can only enhance each other.”

-Watershed Coordinator

Training Events & Audiences

Social Sciences Supporting Watershed Management in the Hudson Estuary

Watershed coordinators and natural resource managers

Ecology and Spatial Dynamics of Submerged Aquatic Vegetation (SAV) in the Hudson Estuary

Scientists, natural resource managers, regulators, restoration practitioners

Restoring Migratory Fish Habitat: Mitigating Dams in Tributaries of the Hudson River Estuary

Engineers, restoration practitioners, watershed coordinators, regulators

Soft Engineering Solutions to Shoreline Stabilization

Engineers, natural resource managers, regulators, restoration practitioners



NY Department of
Environmental Conservation



Mid Atlantic



“Thanks for putting together such a convenient, comprehensive course. This is the best course I have ever taken through a government agency. I believe this is in large part due to the high quality of the planning and logistical arrangements associated with the course and the exceptional quality of the instructor. Thanks - we appreciate your efforts.”

–Training Participant



Jacques Cousteau Reserve, New Jersey

My program is... offering a variety of training programs, resources and outreach materials for New Jersey's coastal management community. Coastal decision makers include elected officials, members of local land use boards, and municipal or county government representatives who make decisions about how coastal resources are used and managed. Guided by front-end evaluation (needs assessments), the Jacques Cousteau CTP has increased its capacity to provide resources and technical assistance to larger and more diverse audiences throughout the state. Common delivery approaches include workshops, conferences, online courses, roundtables and one-on-one technical assistance.

Lisa Auermuller, Coordinator since 2002 M.S. Marine Chemical Ecology

Nonpoint Source Pollution

Based on results of cumulative post workshop evaluations of our stormwater trainings, 99.5% of municipal participants reported that they had an increased understanding of stormwater management topics. Additionally, 95.5% reported that they intended to apply the information that they learned as a result of attending the stormwater training. Other outcomes included using new stormwater technologies, preparing a stormwater management plan and planting a rain garden at a municipal building.

"The town I live in installed a walk way around the lake next to my house and there are some issues that have been cleared up thanks to this course. I am now able to access many websites I didn't even know existed.. My thanks for a great course."

-Construction Code Official



Select CTP Partners
Barnegat Bay National Estuary Program
Ocean County Planning Department
Ocean County Soil Conservation District
NJ Dept. of Environmental Protection
NJ Dept. of Community Affairs

Low Impact Development

Chaired by the Jacques Cousteau CTP, the Barnegat Bay Phase II Steering Committee has been conducting Phase II Stormwater outreach and offering technical assistance since 2004. More than a dozen workshops and technical assistance opportunities have been offered to municipal staff, and elected and appointed officials within the watershed. Evaluation results showed an increased understanding of stormwater management topics enabled municipalities within the Barnegat Bay Watershed to take the necessary steps to ensure compliance with their permits.

“This was a very interesting workshop. Particularly the presenters. Each had an excellent product for our Ocean County towns to consider. Storm Management is very important to health of river/bays. Great job. Thank you.”

-Municipal Stormwater Manager

Training Events & Audiences

Understanding Land Use Regulations Online Course

Municipal construction code officials

CICEET Stormwater Road Trip

Municipal DPW staff, environmental commissioners, NGOs, engineers

Effects of Climate Change on Local Estuaries

Environmental commissioners, elected officials and NGOs

Adopt-A-Drain Technical Assistance Program

Municipal DPW staff

Managing Visitor Use

NJ State Parks and Forestry staff





Chesapeake Bay Reserve, Virginia

My program is... in a unique position which enables us to provide critical information to many types of decision-makers in Virginia's coastal zone. Our affiliation with the Virginia Institute of Marine Science and work with other partners gives us an ability to address Chesapeake Bay issues, as well as general coastal zone, water quality, land use, and management issues. User groups include (but are not limited to) emergency and hazard managers, marine contractors, academicians, local and regional planners, resource managers, local county and city staff, state and federal agencies, consultants, and the general public.

Sandra Y. Erdle, Coordinator since 2006, M.S. Biology

Sustaining Estuarine Systems

As a result of a two-day Living Shoreline Summit involving multiple partners and an extremely diverse participant group, many 'desired outcomes' are underway. Training for contractors and local government staff is ongoing, outreach materials have been produced, peer-reviewed proceedings from the summit are printed, guidelines and policy are in the process of being reviewed and updated, and additional meetings on this topic (inspired by this summit) have been held in other states!

"It was important to acknowledge that we don't have all the answers, but that we're moving forward. This is a great first step towards turning the tide from hardened shorelines to living shorelines. Great job!"

-State Agency Staff



Select CTP Partners
Chesapeake Bay Trust
Chesapeake Research Consortium
Virginia Dept. of Environmental Quality
VA Coastal Zone Management Program
VA Dept of Conservation and Recreation
VA Institute of Marine Science:
Center for Coastal Resources Management
NOAA Chesapeake Bay Office

Sustaining Estuarine Systems

Identifying and subsequently protecting perennial streams is critical to water quality, land use decisions, ecosystem integrity, and biodiversity in Virginia's coastal zone. State and local decision-makers depend on, and consistently ask for, this two day course for all new employees (and as a refresher for veterans). Participants are instructed in the classroom, the lab (identifying invertebrates), and in the field as they apply new information and score a variety of stream types.

"I found the field visits the most valuable. It gave me the opportunity to see how to score streams, particularly the various geomorphological and hydrological attributes."

-Staff, Local County Environmental Division

Training Events & Audiences

Introduction to Riparian Buffers

Local county and agency staff, wetlands boards, consultants

Perennial Stream Identification Workshop

Local county and agency staff, wetlands boards, consultants

Natural Heritage Data Explorer

Local county staff, regulatory agencies, consultants, land trusts

Non-tidal Wetlands: RPA Feature or Not?

Local county and agency staff, wetlands boards, consultants

Storm Tide Emergency Management Workshop: Monitoring and Modeling

Emergency and hazard managers from southeastern VA cities and counties





Southeast



"I think the CTP initiative is a fantastic resource for municipalities and NGOs to utilize to accomplish their outreach goals and to further our own knowledge base!"

-Municipal Natural Resource Planner



My program is... constantly adapting to effectively meet the needs of target audiences. This is accomplished through regular surveys of municipal officials and staff, resources managers and land use planners. My program also responds to changes in policy or emerging science to ensure these audiences receive the most pertinent science-based training to promote informed decisions regarding our coastal resources.

Whitney Jenkins, Coordinator since 2001, Master of Environmental Management

Stormwater Management

The North Carolina CTP has provided training on stormwater management since its inception in 2000. Training includes updates on stormwater regulations, stormwater control technology and how land use affects water quality. The CTP demonstrates how low impact development can reduce stormwater runoff and provide residents with a sense of place. As a result of these workshops, various local governments have requested additional technical assistance, including the Towns of Beaufort and Pine Knoll Shores and Carteret County.

"Yesterday's program was one of the best organized, best executed and most beneficial symposiums like that I have ever attended. The information presented was informative, pertinent and to the point. All in all, I learned a great deal in those few hours."

-Branch Chief, NC Division of Water Quality



Select CTP Partners
NC Cooperative Extension
NOAA Center for Coastal Fisheries and Habitat Research
NC Sea Grant
NC Coastal Nonpoint Source Program
UNC-Chapel Hill Grant Source Library
NOAA Coastal Services Center

Estuarine Shoreline Stabilization

North Carolina has over 4,600 miles of rapidly developing estuarine shoreline. To mitigate development impacts, the NC NERR and NC Division of Coastal Management promote alternative shoreline stabilization techniques among various audiences including homeowners and marine contractors. The NC NERR has also been awarded a grant, in collaboration with NOAA's Center for Coastal Fisheries and Habitat Research, to research the impacts of shoreline stabilization techniques on ecosystem services. The CTP will disseminate the results of this project including the ecological and socioeconomic costs and benefits of shoreline erosion and protection alternatives.

"You have done a great job of putting all of the information [on shoreline stabilization] together. The research seemed inconclusive before, but now we have guidelines to go by."

-Marine Contractor

Training Events & Audiences

Coastal Inundation Mapping GIS Training

Floodplain managers and county and municipal staff

Grant Writing for Environmental Improvements

County and municipal officials and staff

Onsite Wastewater Treatment & Disposal System Basics

Real estate professionals

Clean Marina Workshop

Coastal marina owners and operators

Barrier Island Development Issues Workshop

Planning board members





North Inlet-Winyah Bay Reserve, South Carolina

My program is... serving the greater Grand Strand area through successfully-established and well-maintained partnerships with local government and private industry representatives that span both CTP target counties. These partnerships provide opportunities to train on a more regional scale that applies to more than 50 miles of coastline over multiple jurisdictions, thus facilitating coastal resource management at a watershed scale. The CTP's unique, needs-based training approach ensures that programming is relevant and timely for local decision makers, further promoting CTP as a key community resource.

Nicole Saladin, Coordinator since 2007, M.E.M. Coastal Environmental Management

Nonpoint Source Pollution

The North Inlet -Winyah Bay CTP serves as a core training and education provider in the Coastal Waccamaw Stormwater Education Consortium (CWSEC), which includes membership from all small municipal storm sewer systems (SMS4) in Horry and Georgetown Counties. With over 200 activities last year, the CWSEC helps the SMS4s meet National Pollutant Discharge Elimination System minimum control measures 1 and 2, part of a federal stormwater mandate, thereby promoting watershed protection and stormwater management through public education and involvement.

“Regional education consortia like the CWSEC represent a way to optimize limited resources, both financial and temporal, in addition to taking advantage of the knowledge base which only exists among local citizens.”

-Georgetown County Stormwater Engineer



Select CTP Partners
University of South Carolina
Coastal Carolina University
SC Sea Grant Consortium
ACE Basin NERR
NOAA Coastal Services Center
Clemson University Cooperative Extension
SC Office of Ocean & Coastal Resource Management

Habitat Conservation: Isolated Wetlands

Management of isolated wetlands is critical in SC's Grand Strand counties, where 50% of the area is wetland and the majority of developable high land is built out. The "Getting to Know Wetlands" workshop series focuses on wetlands regulations, and provides alternative development strategies that meet growth needs while preserving wetland habitats. By targeting realtors, developers, and government with this series, CTP assists a local Ad Hoc Committee's zoning ordinance efforts that incentivize development away from sensitive wetland and floodplain habitats.

"The CTP wetlands workshop has really stimulated some great discussion and progress among our ad hoc committee on how we can promote wetlands protection through better ordinances and local government involvement in managing our resources."

-Watershed Planner

Training Events & Audiences

Stormwater and Total Maximum Daily Loads

Stormwater managers, public works, local & state regulatory personnel

Getting to Know Wetlands and the Rules That Govern Them

Realtors, developers, municipal planners & officials

Design & Development: Stormwater and Your Bottom Line

Developers, designers, planners, zoning boards

Best Practices, Best Results

Contractors, project managers, inspectors

Pervious Concrete: Hydrological and Structural Design and Construction

Engineers, architects, developers, stormwater managers





My program is... dedicated to providing relevant training to the distinct communities that exist within the ACE Basin watershed. Community needs are addressed individually and training or technical assistance is developed for each. This may include sharing current science or technology, increasing understanding of the environmental, social and economic consequences of human activities and facilitating coordination between organizations.

Rebekah Szivak, Coordinator since 2005, M.S. Marine Biology

Community Development Issues

Through facilitating conversation and providing science-based information, the CTP has helped a group of local community leaders understand local land use planning and act on their knowledge. In addition to building consensus within their community, the Edisto Island Preservation Alliance has successfully petitioned the county to remove a zoning loophole that allowed development without a public notice process.

“We have met with all groups on Edisto, with a better understanding of the overall growth problems and concerns. One of the most important things I have learned is that you have to have all the players in the development process meeting together to plan. You don’t wait to put out fires, you become proactive.”

-Member, Edisto Island Preservation Alliance



Select CTP Partners
*SC Department of Natural Resources
NOAA Coastal Service Center
Town of Bluffton, Town of Edisto Beach,
Town of Hilton Head, Town of Hollywood
US Green Building Council, SC Chapter
Beaufort-Jasper Water and Sewer Authority
Carolina Ready Mix Concrete Association*

Nonpoint Source Pollution

In response to a new town ordinance requiring pervious surfaces, the CTP partnered with the Town of Bluffton to provide training to planners, engineers and architects. Participants received hands-on training in the design and construction of pervious surfaces. Over 100 professionals have attended the series, providing an informed group of decision makers with the knowledge and skills to utilize pervious surfaces for the benefit of their watershed.

“I have been working with this issue for a number of years and it’s rewarding to see how far we’ve come. Thanks for your support of this effort. You are making a difference.”

-Member, Southeast Diamondback Terrapin Working Group

Training Events & Audiences

The Future of Our Drinking Water

Elected and appointed officials, public works staff

Southeast Regional Diamondback Terrapin Workshop

Resource managers, researchers, education providers

Pervious Concrete: Hydrological and Structural Design and Installation

Engineers, architects, developers, planners

Effective Science Communication

Coastal managers, researchers

Dune Restoration: How to help Dunes Help You

Elected and appointed officials, planners, resource managers





Sapelo Island Reserve, Georgia

My program is... facilitating dialogue between city and county elected officials and the research and education community to help translate science to management. We have been able to build a trust in the local community to be a source for non-biased and current scientific information to help the communities protect their natural resources while planning for quality growth.

Suzanne VanParreren, Coordinator since 2004, B.S. Biology

Land Use and Population Growth

A Planning for Quality Growth workshop provided local elected officials, zoning and planning staff and planners with crucial information on zoning, coding and planning information. The goal of the workshop was to help a coastal community plan for quality growth while protecting its natural resources. As a result of this half-day program the city has strengthened and implemented multiple ordinances, received numerous grants and continues to work closely with the reserve and its partners to strive for the best practices and plan for growth with minimal impacts on the natural resources.

“This workshop has provided us with important information to assist in re-coding zoning and help us to plan for growth.”

-Darien City Council Member



Select CTP Partners
GA Department of Natural Resources
GA Coastal Management Program
University of Georgia Marine Extension Service
The Nature Conservancy
Exotic Pest Plant Council
City of Darien

Invasive Species

A Coastal Georgia Exotic Pest Plant workshop brought together scientists from the NERRS, the Exotic Pest Plant Council, The Nature Conservancy, the Georgia Forestry Commission and the University of Georgia with local & regional elected officials, land managers, landscape architects and land-use planners to provide information on the impact, identification and control of exotic pest plants. As a result of the workshop, several new locations have been identified containing invasive species and local authorities are now implementing invasive species prevention and control measures.

“I enjoyed the conference and actually learned far more than I thought I would & enjoyed the networking opportunities as well.”

-Cliff Gawron, Landscape Architect

Training Events & Audiences

High Performance School Building Workshop

School and elected officials, facility managers, architects and engineers

SE Regional Diamondback Terrapin Workshop

Elected officials, academia, natural resource managers, educators

Training for Local Officials: CTP Needs Assessment Results

Elected officials, coastal training providers

Coastal GE Exotic Pest Plant Workshop

Elected officials, land managers, landscape architects.

Habitat Priority GIS Tool Webinar

Biologists, land managers, land-use planners, GIS analysts





Guana Tolomato Matanzas Reserve, Florida

My program is... providing up-to-date scientific information, technologies, skill building and networking opportunities to individuals who are responsible for making decisions that affect coastal resources. The program also provides technical assistance and satisfies needs for our coastal decision makers. The program is bridging gaps and building partnerships throughout the community.

Martin Healey, Coordinator since 2006, M.A. Marine Affairs and Policy

Green Lodging

With 83.6 million visitors in 2005, according to research by VISIT FLORIDA®, the lodging industry is one of Florida's largest commercial sectors. Given its size, the lodging industry can have a significant and positive impact on Florida's natural resources. The first workshop held in 2006 attracted 20 participants and resulted in one hotel becoming a "certified green lodge." The second workshop in 2007 attracted more than 100 participants and the outcome of this workshop was phenomenal. In St. Johns County alone as of May 2008, 11 hotels and inns that participated in the workshop have been certified as green lodges and 6 have pending certification.

"Outstanding program! Excellent seminar format...the course design allowed for technical information exchanges. The presenters appeared motivated and willing to assist. Well done and thanks for the important information."

-Scott Fogg, The Lodge & Club at Ponte Vedra Beach



Select CTP Partners
St. Johns River Water Management District
Florida Fish and Wildlife Conservation Commission
Flagler & St. Johns Counties
Cities of St. Augustine and Palm Coast
Florida Inland Navigation District
Institute of Food and Agriculture and Florida Sea Grant

Land Use Planning for Sustainable Community Development

The Managing of Small Docks and Piers in Florida workshop presented national docks and piers issues, such as impacts to the environment, navigation and public access. Panel presentations covered FL Environmental Permit Regulations, the new Florida Self Certification web based authorization program, overviews of FL Aquatic Preserves and Specially Designated Waters, and perspectives from the FL Marine Construction Association. As a result the City of St. Augustine requested technical assistance from the CTP and NOAA Coastal Services Center concerning a proposed development and “community dock.” This proposed plan was denied by the City under their vista ordinance and based on environmental concerns.

“I intend to share the information and discuss the issues with our board. This was a good time spent.”

-Gary C., Landscape Architect

Training Events & Audiences

PRIMER - Multivariate Statistics for Ecologists Technical Training

Biologists, resource managers, ecologists

Matanzas Inlet Watershed Management Workshop

Federal, state and local agencies, contractors, consultants

Maritime Archaeology Symposium

Archaeologists, university faculty and staff, civic organizations, citizens

Florida DEP Law Enforcement Training

State law enforcement officers

Professional Progress Workshop

Environmental consultants, biologists, industrial professionals





Gulf of Mexico



“Congratulations on a well-coordinated meeting. I think this was a very useful workshop that will pay dividends in the future.”

– Training Participant



Rookery Bay Reserve, Florida

My program is... having an incredible impact because almost no one in our area is targeting professionals and the Reserve has an excellent reputation after 30 years. We are uniquely able to bridge the gap between science and policy by providing communications and project management processes that bring diverse stakeholders together to solve complex coastal issues. We also deliver materials and presentations that are very high quality.

Tabitha Whalen Stadler, Coordinator since 2005, M.A. Science Journalism

Nonpoint Source Pollution

As a result of a successful “Best Management Practices for the Protection of Water Quality in Florida” training for landscape professionals, the City of Naples passed an ordinance requiring training for all landscapers working within city limits. Following this effort, a statewide law requiring training is pending in the Florida legislature. This statewide training initiative will be coordinated by the CTP’s at the three Florida Reserves.

“The most important thing I learned from this workshop was that poor landscaping practices can have major negative effects on our waterways.”

-Landscape Professional



Select CTP Partners
City of Naples and City of Marco Island
South Florida Water Management District
Collier County and Lee County
The Conservancy of Southwest Florida
Audubon of Florida
Marine Industries Association of Collier
Gulf of Mexico States (MS, LA, TX, AL)

Water Quality

Living with Red Tide in Southwest Florida was the focus of a recent CTP workshop. Diverse stakeholders discussed solutions used in other communities and experts answered questions and made suggestions. As a result, Collier County now has twice daily red tide reports at seven locations. Municipal staff make observations about red tide and beach conditions and transmit them via blackberry to update a website and telephone hotline. Visitors and residents can choose beaches that are free of red tide to minimize health impacts, yet protect tourism dollars. The information is also posted on the weather page of the Naples Daily Newspaper.

“I was very impressed with the information I received and will pass along to my clients. I learned that I need to be aware of what I do and that it will have an effect on the environment.”

-Member, Marco Island Association of Realtors

Training Events & Audiences

Go With the Flow: Watershed Science and Policy Program

Elected officials and business leaders

Ecotour Provider Series

Tour operators, parks personnel, environmental educators

ESRI Arc GIS & Coastal Applications of GIS

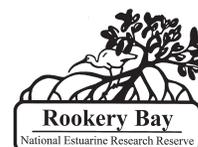
Natural resource managers, municipal staff, consultants

Green Industries Best Management Practices for Protection of Water Resources

Landscape and lawn care professionals

Sedimentation and Erosion Control Inspector Training

Consultants, construction industry and municipal staff





Apalachicola Reserve, Florida

My program is... unique in providing training on a variety of topics: Coastal Hazards and Resiliency, Sustainable Watershed and Land Use Practices, and Ecosystem Studies. We engage diverse audiences in communities along a wide stretch of the Gulf Coast and provide a link to the Gulf of Mexico Alliance.

Rosalyn Kilcollins, Coordinator since 2003, M.S. Geography

Habitat Loss and Alteration

Apalachicola Reserve's CTP staff developed and teaches the Panhandle Habitat Series of one-day classes based on the need for ecosystem training for environmental professionals. The classes are "Barrier Islands," "Seagrass Beds and Salt Marshes," "Estuaries," "Flatwoods and Savannahs" and "Rivers and Floodplains." Each class has morning presentations and an afternoon field trip. Special guests focus on research, regulations or plant identification. Many state and local environmental staff and volunteers have also taken classes.

"For me the most important thing was realizing how many different types of folks are interested or involved in issues that I am working on and getting to hear from them about their concerns."

-State Wildlife Agency Habitat Conservation Planner



Select CTP Partners
FL Coastal Management Program
Association of State Floodplain Managers
NOAA Coastal Services Center
NOAA Gulf Coast Services Center
NOAA Center for Sponsored Coastal Ocean Research
FL Fish and Wildlife Conservation Commission
Southeast Watershed Forum
FSU Coastal and Marine Lab

Community Resiliency, Land Use and Growth

The Coastal Hazards Series includes community resiliency-focused workshops on floodplain management, land use and conservation planning, low impact development, coastal inundation mapping and GIS technology, and sea level rise. Participants in the “Innovative Floodplain Strategies” workshops (including local officials, planners, emergency and floodplain managers, etc) used maps of floodplains, wetlands, and storm surge zones to apply the Coastal No Adverse Impact principles. Groups decided where to conserve or restore wetlands and coastal resources and where to direct growth, and discussed resiliency for coastal communities.

“I learned how critical green infrastructure is to our environment”

-Floodplain Manager

Training Events & Audiences

Panhandle Habitats Series

Permitting staff, environmental consultants, biologists, park staff, science educators,
ecotour operators, volunteers

Remote Sensing Training for Spatial Analysts

GIS staff working with environmental and natural resource agencies

Innovative Floodplain Strategies for Coastal Areas: Applying Coastal No Adverse Impact Principles

Floodplain and emergency managers, planners, elected and appointed officials,
environmental consultants

Ecological Impacts of Sea Level Rise

Researchers and resource managers





Weeks Bay Reserve, Alabama

My program is... incorporates the strengths of Weeks Bay NERR to benefit coastal resource managers with over 20 years of research and science-based outreach. CTP collaborates with state and federal agencies and others building local, regional and national partnerships. Training needs of partners and target audiences are assessed frequently in order to meet requirements in coastal Alabama and adjacent areas. Coordination with other training organizations fostered by CTP ensures that training opportunities with recognized instructors are provided to the decision maker audience.

Michael Shelton, Coordinator since 2002, M.S. Biology

Regional Stormwater Management

For several years, Weeks Bay Reserve CTP has conducted workshops on stormwater, watershed management and nonpoint source pollution. In partnership with the Reserve's Watershed Program and others, a series of advanced stormwater management workshops were held for local elected officials and staff. The effort led to the passage by the Alabama Legislature in 2008 of a bill which could result in a regional stormwater management authority and more effective protection of waterways from runoff and erosion and of property from high water damage.

"Thanks again for all you do to keep us all informed and on the same page. It really makes a difference to the way I can meet the needs of our clients and our firm."

-Professional Engineer



Select CTP Partners
Grand Bay NERR
Mobile Bay National Estuary Program
Coastal Alabama Clean Water Partnership
Mississippi/Alabama Sea Grant
Alabama Coastal Foundation

Technical Training for Wetland Professionals

With several training partners, Weeks Bay CTP has hosted a series of workshops for wetland professionals on the techniques of identifying wetlands and determining functionality. Delineation, soils, invasive species control and functional assessment procedure workshops conducted with recognized instructors furnished regulators, resource managers and consultants with skills to apply in their work. Weeks Bay NERR and the state environmental quality agency are working toward developing improved wetland functional assessment methods for the coastal area.

“This training was an excellent workshop with good attendance from a wide range of partners and consultants.”

-Alabama Department of Environmental Management Partner

Training Events & Audiences

Land Conservation and Financial Strategies

Coastal resource managers, landowners, foresters, consultants

Wetland Rapid Assessment Procedures

Coastal resource managers, consultants, federal and state regulators

Implementing “No Adverse Impact” Floodplain Management in the Coastal Zone

Floodplain managers, municipal staff, planners and developers

Imagine: A Region With Thriving Mixed Use Cities

Planners, elected officials, municipal staff, ngos and developers

Coastal Terrestrial and Wetland Invasive Plant Species

Federal/State/Local resource managers, foresters, consultants, utilities





Grand Bay Reserve, Mississippi

My program is... unique in its ability to respond to emerging issues at the local level. The Grand Bay CTP is working with surrounding communities to provide information and training opportunities focused on conservation planning, floodplain management, and low impact development, topics which were identified as high priority training needs by community leaders after Hurricane Katrina. We also offer a suite of technical training workshops for our natural resource managers. These are typically week-long field classes that explore wetland vegetation, delineation techniques, and invasive species management.

Marian Hanisko, Coordinator since 2004, M.S. Environmental Studies

Stormwater Management

A workshop for municipal planners and stormwater managers provided an opportunity to explore how wetlands improve water quality. The field excursion portion focused on a marsh restoration site that studies the ability of *Juncus roemarianus* (black needlerush) to filter pollutants from stormwater runoff. Participants learned the value of protecting fringe marshes adjacent to developments. They also discussed how data from the study will be used to project the amount of marsh necessary to filter runoff from surrounding developments and maintain healthy water quality.

"I learned how important marsh grass is. It really can help improve water quality."

-Stormwater Manager



Select CTP Partners
Land Trust for the Mississippi Coastal Plain
Mississippi-Alabama Sea Grant Consortium
Mississippi Department of Marine Resources
Mississippi Emergency Management Agency
Southeast Watershed Forum

Land Use Planning for Sustainable Community Development

Representatives from local environmental agencies worked with the staff of the City of Moss Point to identify critical areas for conservation that will help enhance ecotourism opportunities for the city and protect property owners from flood events. Workshop participants utilized maps containing flood information, habitat data, impervious surfaces, and land cover data to assist planning efforts. Outcomes were reported to the mayor and city council and will be incorporated into the city's revised comprehensive plan.

"This workshop made me more aware of watershed issues and how land use planning impacts floodplain management."

-City Employee

Training Events & Audiences

New Approaches to Floodplain Management for Coastal Communities

Elected officials, floodplain managers, consultants, resource managers

Money Matters! Maximizing Funding for Coastal Resource Projects

City and county department heads, elected officials, agency directors

Coastal Inundation Mapping

Floodplain managers, city and county planners, emergency management professionals

Plant ID Class: Wetland & Transitional Habitats of the Mississippi Gulf Coast

Natural resource managers, mitigation bank managers, wetland professionals





West Coast



“With everything I learned at this workshop, I would like to volunteer for the CTP program!”

– Training Participant



Tijuana River Reserve, California

My program is... surpassing the challenges of coordinating bi-national efforts to bring two bordering nations to work together, The Coastal Training Program has influenced decision makers by providing alternative solutions to address the environmental degradation caused from excess accumulation of sediment and erosion pollutants that flow into the Tijuana River Estuary. CTP has promoted state legislation, city ordinances and wetland management plans.

Oscar Romo, Coordinator since 2004, M.S. Computer Science

Stormwater Management

CTP, with the participation of a panel of scientists, conducted a research of the Laureles sub-basin in Mexico, with the aim of identifying the urban, social and environmental dynamics which generates adverse impacts within the estuary. The study allowed us to address the degradation of the wetlands at the source and supported the initiation of a number of pilot projects. As an added value the study was the basis of a city approved Urban Development Master Plan that evolved into a public law published in January 2007.

“...The CTP initiatives represent innovative approaches that translate science into policy making and its commitment to promote environmentally sustainable and binational ground breaking projects and maintain the integrity of the crown jewel of the Southern California Wetlands”.

-The Urban Land Institute’s Awards for Excellence (Smart Growth Jury)



Select CTP Partners
*University of California in San Diego:
Urban Studies and Planning Program
Jacob School of Engineering*
*U.S. Environmental Protection Agency
Wild Coast
Coast Keeper*
*Iberoamericana University
City of Tijuana
Municipal Planning Institute of Tijuana*

Erosion Control Pilot Project

The Tijuana River Estuary is a unique location since the watershed is shared between the U.S. and Mexico. For this reason the water flows that originate in Los Laureles Canyon transport large volumes of sediment and trash having a negative impact to the estuary's ecosystem. Therefore, this pilot project seeks to improve the social organization through developed technologies and supplies which will enable environmental recovery as it receives products brought with erosion and other debris that flows down stream.

"The pervious pavers project has been a unique way of getting students involved with hands on experience and in raising awareness on environmental approaches through the use of best management practices".

-UCSD Urban Studies and Planning Program Student

Training Events & Audiences

Water Harvesting Workshop

Citizens, students, NGOs, academic and governmental staff

Border 2012 Program, California-Baja California Task Force Co-Chairs Meeting

Federal, state and municipal officials, academy, private sector, NGOs,

Elected officials, citizens

Climate Change and Environmental Impacts

University students, academic staff, NGOs, citizens

Zero Emissions Research and Initiatives

University students, academic staff, NGOs,

governmental agencies, citizens





My program... building collaborative learning networks and providing ongoing training for high-turnover jobs in land use planning. By focusing individual habitats, and how to best manage and conserve them, we are able to build collaborative networks that teach and lead each other to conserve one of the biodiversity hotspots of the U.S.

Grey Hayes, Coordinator since 2002, Ph.D. Environmental Studies

Maintaining Biodiversity

The Elkhorn Slough CTP continues its workshop, series focused on the maritime chaparral, an endangered ecosystem. Although this habitat is legally protected, few decision makers understand it or how their decisions affect its conservation. Thus, we bring together leading ecologists with land use planners, regulators, and biological consultants who affect this habitat's future. Because of our training, development has become more sensible, land management is better informed, and protective enforcement has been enhanced.

"I think you've got a great model for the National Estuarine Reserve Coastal Training Program - the issue of how to best transfer the good science that's going on to practitioners and regulators is something that more people need to be concerned about. The forum you put together helped facilitate the sharing of very useful information... I liked the "focused" topic on Maritime Chaparral, rather than something like "Vegetation Types of the Elkhorn Slough Watershed." Your speakers had thought-provoking presentations and solid responses to the questions during the panel discussion."

-Local Biological Consultant



Select CTP Partners
California Coastal Commission
Natural Resources Conservation Service
Private lands managers
University of California Cooperative Extension

Nonpoint Source Pollution

The Elkhorn Slough CTP works in partnership with the Central Coast Rangeland Coalition to bring the best science to the management of central California’s rangelands. By helping ranchers, nonprofit land trusts, agencies, and many others network, formulate questions, and derive answers from knowledgeable people, we hope to help central coast grasslands continue to provide clean air and water for generations to come.

“I have now attended two of your workshops and had to let you know how impressed I am with them. They are well thought out and comprehensive, providing context, relevant research, and on the ground implementation techniques. They provide an excellent balance of presentations, time to learn from other participants, and time in the field. They are respectful of and attended by diverse types of participants, precisely what has been missing from and is necessary for effective conservation strategies and collaborations to develop.”

-Local Land Trust Steward

Training Events & Audiences

California Tiger Salamander Workshop

Land managers and biological consultants

Maritime Chaparral Definition and Delineation

Conservation agency personnel and biological consultants

Jurisdictional Delineation of Waters of the U.S.

Land managers, biological consultants, and regulatory agency personnel





San Francisco Bay Reserve, California

My program is... a bridge between our local science, policy, and management communities. Workshops are developed to address the region's pressing environmental issues and are designed to foster open, multidisciplinary communication and real world problem-solving.

Marina Psaros, Coordinator since 2007, Master of City Planning

Habitat Restoration

The San Francisco Bay estuary once supported 190,000 acres of highly productive tidal marsh, nearly 90% of which was destroyed or altered. Recognition of wetland importance has led to a major focus on restoration in the region. To promote cross-disciplinary learning and to disseminate best practices in adaptive management, the San Francisco Bay CTP developed an ongoing series of trainings for tidal wetlands restoration. To date, we have reached over 300 individuals and provided over 2,100 contact hours.

"First of all I wanted to thank you for such a great training. The topics were fascinating, and the speakers were extremely knowledgeable, intelligent, and open to questions and discussion. I was very impressed by the quality."

-Engineer, Regional Water Quality Control Board



Select CTP Partners
California Coastal Conservancy
San Francisco Bay Conservation and Development Commission
Association of Bay Area Governments
Cooperative Institute for Coastal and Estuarine Environmental Technology
San Francisco Estuary Institute
California Invasive Plant Council

Water Quality

The Coastal Training Program partnered with CICEET to host a workshop on new tools being developed to predict and model the sources, fate, and transport of fecal contaminants in bay waters. The purpose of this workshop was to solicit feedback and suggestions from potential end users of the modeling tool. These end users – public health officials and water quality regulators – were able to help the research team create a more robust and usable model. An upcoming workshop will once again bring together the end users and the research team to discuss the final product.

“I think that is an excellent way to provide practical information regarding the topics presented.”
-Restoration practitioner

Training Events & Audiences

Bay Area Perennial Pepperweed Management Series

Researchers, natural resource managers, conservation agencies

Climate Camp

Conservation practitioners, natural resource managers, program officers

Preparing For Rising Sea Levels in the Bay Area: A Local Government Forum

Elected / appointed officials, municipal staff

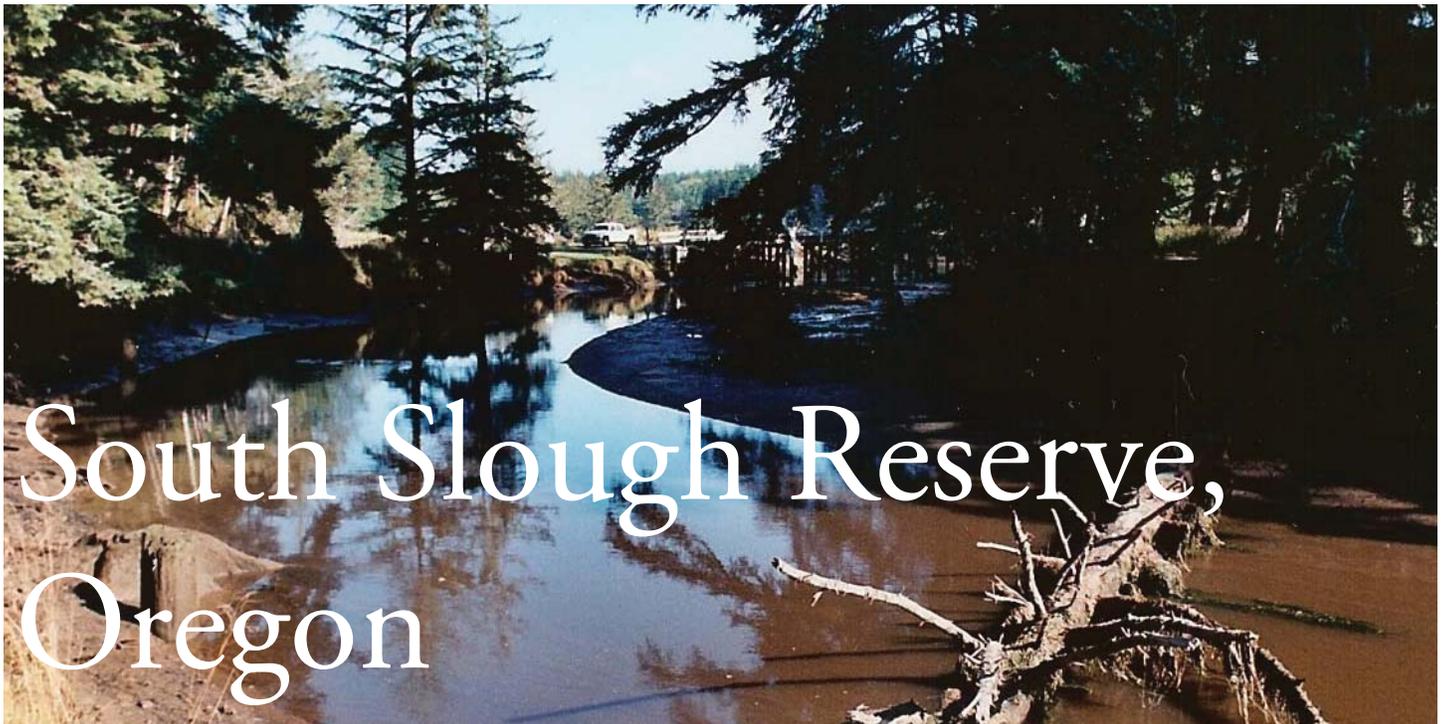
Fecal Contamination in SF Bay: New Predictive Tools for Decision Makers

Water quality regulators, public health officials, researchers

Tidal Wetlands Restoration Series

Biological consultants, natural resource managers, environmental planners





My program is... integrating the work of education, stewardship and research staff to meet the needs of watershed associations, restoration professionals and coastal managers by coordinating field trips and site visits, hosting workshops, and providing technical assistance. Project advisory groups enhance these efforts.

John Bragg, Coordinator since 2002, Background in Journalism, Natural Resource Policy Analysis

Ship Breaking

In 2006 the ship-salvage industry began eyeing Oregon coastal communities for potential sites to dismantle old military vessels. The communities' responses varied from "no way" to "let's learn more." In answer to the call for information, staff of the South Slough National Estuarine Research Reserve and many partnering agencies and organizations hosted a series of public seminars, provided technical information to the governor's office, and participated in a white paper review of how the industry would fit into the state's existing regulatory framework, identifying potential gaps.

"Quite frankly, we were very pleased with the process. We heard from a lot of folks, and we heard their concerns ... We have a small staff, so partnering is the only way we get things done."

-Martin Callery, Oregon International Port of Coos Bay



Select CTP Partners
Oregon State University Extension
Oregon Institute of Marine Biology
Oregon Watershed Enhancement Board
Coos Watershed Association
Oregon International Port of Coos Bay

Invasive Species

Attention to ship breaking in Oregon renewed public concerns about the spread of invasive aquatic organisms that colonize the hulls of mothballed military ships. In 2006 the U.S. Maritime Administration announced it would no longer move mothballed ships from port to port without first cleaning their hulls. In 2007 the Oregon Legislature enacted a law, with only one dissenting vote, restricting ship-recycling to dry docks to protect Oregon's estuaries and bays.

"We take very seriously the economic impacts of any kind of legislation, as well as environmental impacts. Companies will have to bite the bullet if they intend to break up these ships on the West Coast so that all of our estuaries, waterways, and natural resources are protected."

-State Senator Joanne Verger, D-Coos Bay

Training Events & Audiences

West Coast Symposium on the Effects of Tide Gates on Estuarine Habitats and Fishes

Restoration professionals, fish passage engineers, regulators, tribes and watershed associations

Introduction to ArcGIS; Coastal Applications of ArcGIS

Watershed associations, municipal planners

Estuary Habitat Classification Recommendations

Oregon Coastal Management Program

Estuary Habitat Assessment Methods

Watershed associations, restoration professionals





Padilla Bay Reserve, Washington

My program is... making a big splash in the training needs of shoreline planners in Washington State. Using a “course catalog” approach, we offer around 20 classes a year that help shoreline planners and other coastal resource managers feel more prepared and confident in making science-based decisions and implementing environmental regulations. Classes have helped planners update their Shoreline Master Plans; administer shoreline permits and mitigation measures more effectively; evaluate low impact development techniques; and consider alternatives when stabilizing shorelines and dealing with erosion.

Cathy Angell, Coordinator since 2001, B.A. Environmental Science

Land Use and Population Growth

Planners in Washington claim that the training “How to Determine the Ordinary High Water Mark” has helped them properly site and permit houses, docks, and other structures built on the shoreline. This has reduced the risk of damage from flooding and landslides. In addition to increasing the accuracy of permit applications, the training has increased goodwill between planners and state regulatory staff.

“The training offered by your group is by far the best training I have ever participated in. The method in which you share the information and the tools are so user friendly. I look forward to the next class.”

-Mary Jo McArdle, Planner, City of Bellevue



Select CTP Partners
WA State Department of Ecology
WA Sea Grant Program
WA State Department of Trade,
Commerce, & Economic Development
City of Vancouver
City of Tacoma
WA State Department of Fish and Wildlife

Habitat Loss and Alteration

In order to comply with Washington’s Shoreline Management Act, coastal cities and counties are required to update their shoreline master plans. One of our most popular trainings, “Using the WA State Revised Wetland Rating System” (nearly 500 attendees to date), assists planners in properly rating wetlands for managing and protecting these areas under local ordinances. Attendees claim that the training has helped them submit more accurate reports, provide technical assistance to homeowners, and feel more confident in adequately protecting wetlands.

“My wetland ratings are more accurate and contain the information that regulators need to make their decisions, leading to decreased permit review times.”

-Shoreline Planner, workshop attendee

Training Events & Audiences

How to Determine the Ordinary High Water Mark

Local shoreline planners, state planners/regulatory staff, planning consultants

Puget Sound Coastal Processes and Shoreline Stabilization Measures

Local shoreline planners, state planners/regulatory staff, planning consultants

Managing Shoreline Drainage for Slope Stability, Habitat, and Water Quality

Local shoreline planners, state planners/regulatory staff, planning consultants

Shoreline Management and Stabilization Using Vegetation

Local shoreline planners, state planners/regulatory staff, planning consultants





Great Lakes



“We are currently writing legislation for riparian and wetland setbacks and will incorporate information learned into codes.”

- City Engineer



Old Woman Creek Reserve, Ohio

My program is... increasing the ability of local governments to make informed land use decisions for long term protection and restoration of Lake Erie. The Ohio CTP leverages the resources and expertise of three NOAA funded programs and several local partners to identify and respond to decision-maker needs with science-based training, technical assistance, and facilitation of collaborative planning and problem-solving.

Heather Elmer, Coordinator since 2004, M.A. Bioethics

Nonpoint Source Pollution

The Ohio CTP sponsored a stormwater conference attended by nearly 400 elected officials, municipal staff, and engineers. The event featured dozens of technical sessions on stormwater science and policy including the pollutant removal performance of stormwater treatment practices by UNH/CICEET.

“I plan to incorporate much of the information presented into design plans, review of design plans and inspection of construction sites.”

-Consultant, Northeast Ohio Stormwater Conference



Select CTP Partners
*OH Department of Natural Resources:
Division of Wildlife and Office of
Coastal Management
Ohio Sea Grant College Program
Ohio Lake Erie Commission
Ohio State Univ. Watershed Extension
Erie Soil & Water Conservation District
Firelands Coastal Watershed Program
City of Sandusky*

Low Impact Development

The Ohio EPA used the Reserve’s research and monitoring data to set water quality goals for Old Woman Creek. In response, the Ohio CTP held collaborative workshops and provided technical support to help local organizations secure funding for community-based watershed planning. A grant-funded coordinator is now working with local officials and residents to develop a watershed plan. Reserve research will continue to play an integral role, influencing selection of best management practices and measuring progress toward water quality goals.

“We are currently writing legislation for riparian and wetland setbacks and will incorporate information learned into codes.”

- City Engineer, Best Local Land Use Practices Workshop

Training Events & Audiences

Northeast Ohio Stormwater Conference

Elected officials, municipal staff, stormwater professionals

Ohio Balanced Growth Training Program - Best Local Land Use Practices

Elected officials, municipal staff, engineers

Grant-writing for Community Based Watershed Planning

Local agencies and non-profit organizations

Coastal Community Planning and Development

Elected officials and municipal staff

Managing Stormwater in Your Watershed

Elected officials





Caribbean



“Excellent course, the format, methodology, and vocabulary were easy to understand.”

– GIS Training Participant



My program is... the only one providing formal capacity building services in estuarine and coastal issues outside the continental US. CTP features a partnership with the University of Puerto Rico Sea Grant Program, allowing for the sharing of expertise and capabilities in training. This synergy enhances the program at Jobos Bay. Our program provides a portfolio of activities, with innovative approaches such as, the use of new technologies at computer labs to activities which requires the design of projects at the reserve and/or interaction with the socioeconomic development at the watershed.

Lillian Ramirez, Coordinator since 2005, M.S. Biology

Water Quality Degradation

Since 2007 CTP has been providing training in stormwater management for municipal officials. As a result, local municipalities from Puerto Rico submitted a Notice of Intention for the development and implementation of a Stormwater Management Plan as required by EPA for NPDES Small Municipalities (MS4) Storm Water Program, and to address water quality degradation issues. These plans will include a community education program.

“JBNERR CTP enable the delivery of information and a mean of education to Municipalities and interested parties in the responsibility of the controlling stormwater runoff form municipal separate storm sewer systems in urbanized areas”.

-EPA Regional Stormwater Coordinator , Caribbean Region



Select CTP Partners
*Dept. of Natural and Environmental Resources
University of Puerto Rico (UPR) Sea Grant College Program
Environmental Protection Agency:
Puerto Rico
Natural Resources Conservation Service:
Caribbean Region
Interdisciplinary Center for Littoral Studies at UPR*

Land Use and Population Growth

CTP provides several training activities to address land use and urban sprawl in the Jobos Bay watershed. These training activities, such as the implementation of soil management plans and conservation practices in farmlands at the watershed, are addressing these issues, and also improving water quality at the bay and the aquifer.

“This has been something wonderful. It has given me new knowledge, educational material, and an interest that I don’t have before to take that knowledge to communities on my municipality. Thanks for an excellent collaboration and information transfer.”

-Extension Service Official

Training Events & Audiences

Permit Process for Stormwater Management Plans for Local Municipalities

Municipal officials, engineers, developers and planners

Coastal Community Planning and Development

Natural resources managers, planners, municipal officials

Introduction to Geographical Information System (GIS)

Natural resources managers, socio-economic monitoring consultants

Economic Valuation of Natural and Environmental Resources

Planners, municipal officials, natural resources managers

Methodologies and Technical Procedures for Evaluating, Restoring and Monitoring

Mechanical Damages in Sea Grasses

Natural resources managers and restoration technicians





www.nerrs.noaa.gov

