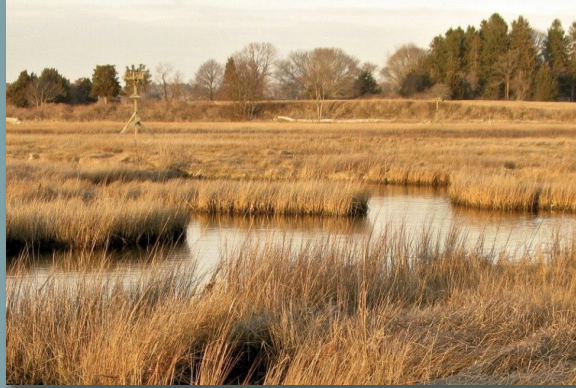


# CT NERR Professional Development Needs Assessment: Survey Results



Amanda Center, Research Associate, Responsive Management  
Presented to the Connecticut National Estuarine Research Reserve  
July 28, 2025

# Acknowledgments and Study Partners

Katie Lund and Larissa Graham,  
CT NERR

Responsive Management

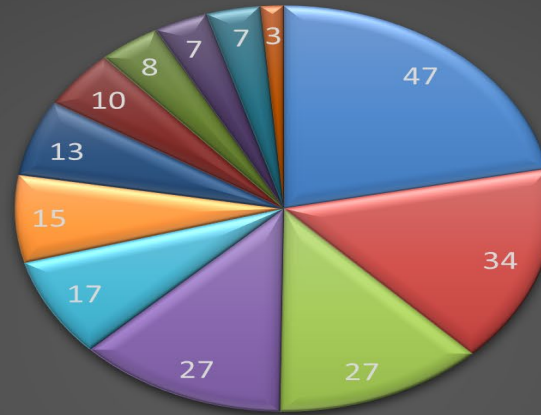
# Presentation Overview



- Who Did We Talk To?
- Key Survey Findings
  - Organizational Information
  - Training Needs
  - Barriers to Training
  - Training Logistics
  - Education Market Analysis Findings
- Recommendations

# Who Did We Talk To?

## Survey Respondents' Organization Types (by frequency)



Nonprofit staff (47)

Municipal staff (27)

Volunteer for conservation organization (17)

Land trust committee member (13)

Elected or appointed official (8)

Municipal commission (volunteer) (7)

State agency staff (34)

Academia (27)

Consultant (15)

Regional agency / organization staff (10)

Federal agency staff (7)

Tribal member / government (3)

# Write-in responses of organizations from a sample of nonprofit respondents.

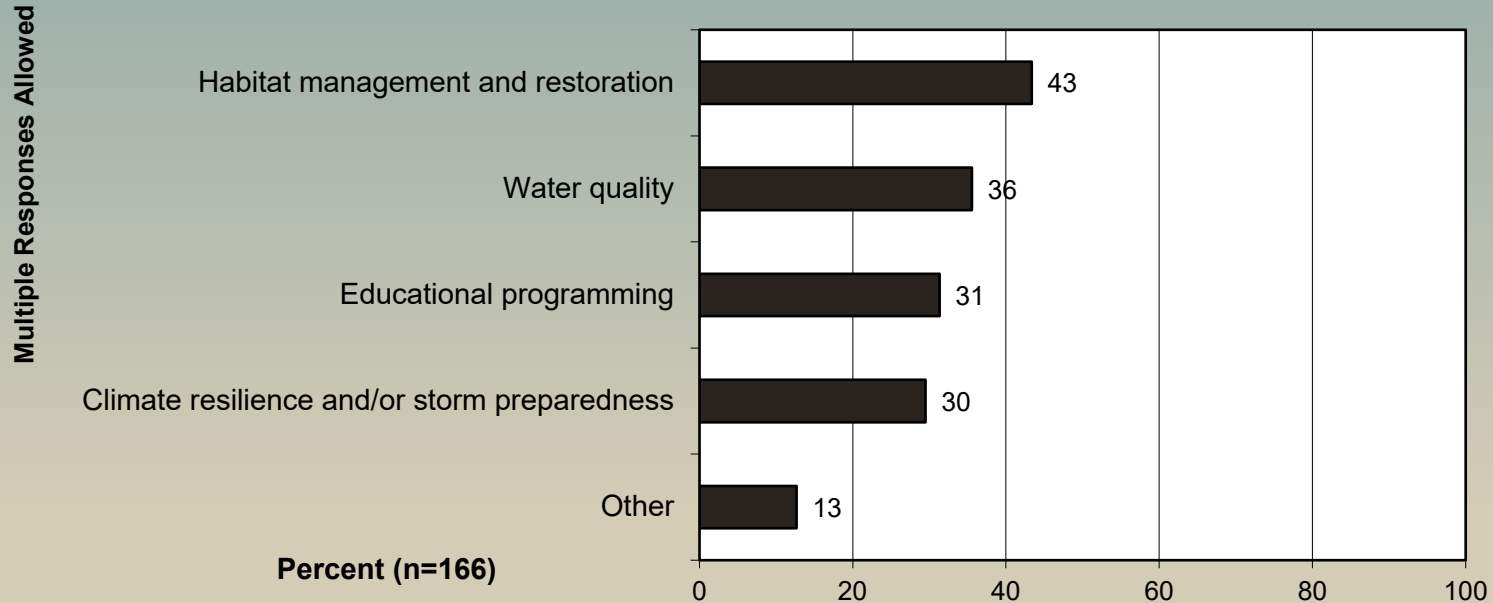
| Nonprofit Organizations                                |                                         |                                                              |
|--------------------------------------------------------|-----------------------------------------|--------------------------------------------------------------|
| CT RC&D                                                | Alliance for the Mystic River Watershed | Ducks Unlimited                                              |
| Save the Sound                                         | Long Island Sound Study                 | CT Audubon Society                                           |
| CT Audubon Society, Roger Tory Peterson Estuary Center | Save the Sound                          | Eastern CT Conservation District                             |
| Aquarium                                               | Connecticut Sea Grant                   | TNC                                                          |
| National Audubon Society                               | Connecticut River Conservancy           | Remote Ecologist                                             |
| The Maritime Aquarium at Norwalk                       | Sustainable CT                          | Denison Pequotsepos Nature Center                            |
| CT Land Conservation Council                           | Connecticut River Museum                | The Nature Conservancy                                       |
| CT Sea Grant                                           | Save The Bay - Narragansett Bay         | Farmington River Watershed Association                       |
| New England Science and Sailing                        | Salmon River Watershed Partnership      | Alliance for the Mystic River                                |
| The Nature Conservancy                                 | Mystic Aquarium                         | New England Science & Sailing Foundation                     |
| The Conn Council of Environmental Quality              | NEIWPC                                  | Save the Sound                                               |
| Great Island Foundation                                | National Audubon Society                | Project Oceanology                                           |
| Community Foundation of Eastern Connecticut            | RiverCOG                                | Eastern CT Conservation District & The Colchester Land Trust |
| Ducks Unlimited                                        | The Maritime Aquarium                   | CT Conference of Municipalities                              |

# Key Survey Findings: Organizational Information



Organizational focus is often split among multiple topics, while the primary topic of individual focus is most often habitat management and restoration.

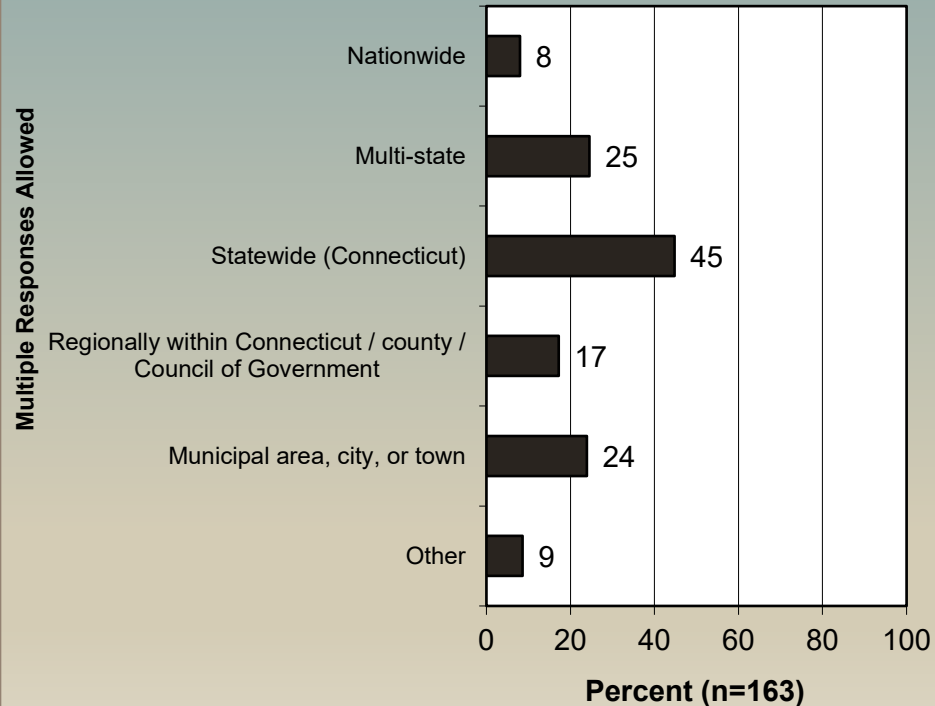
Of the topics you selected, which topic(s) would you say are YOUR primary focus in your current role?



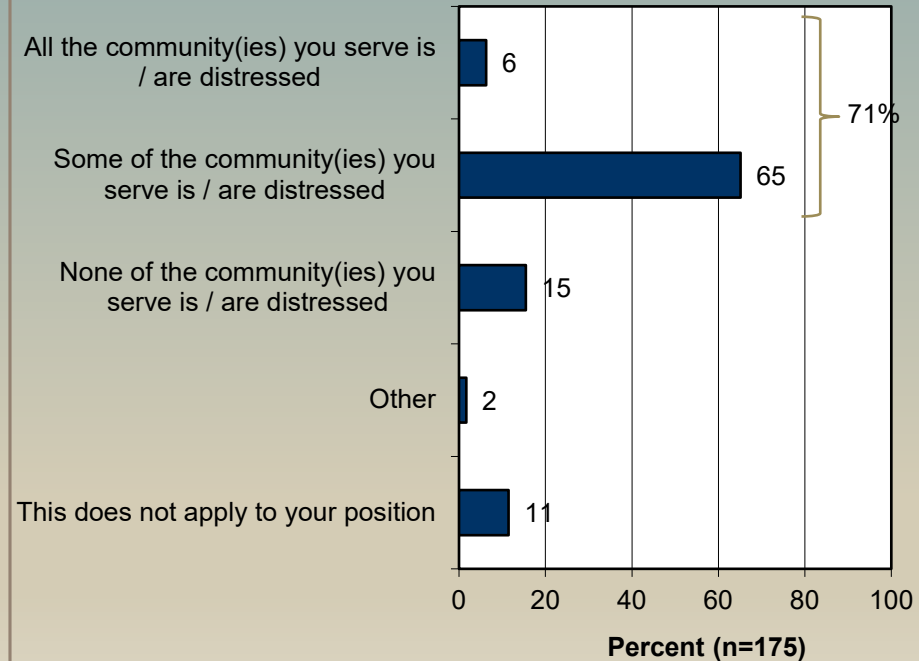


**Most respondents serve the entire state of Connecticut, and many respondents are serving distressed communities.**

### How would you describe the area you serve?

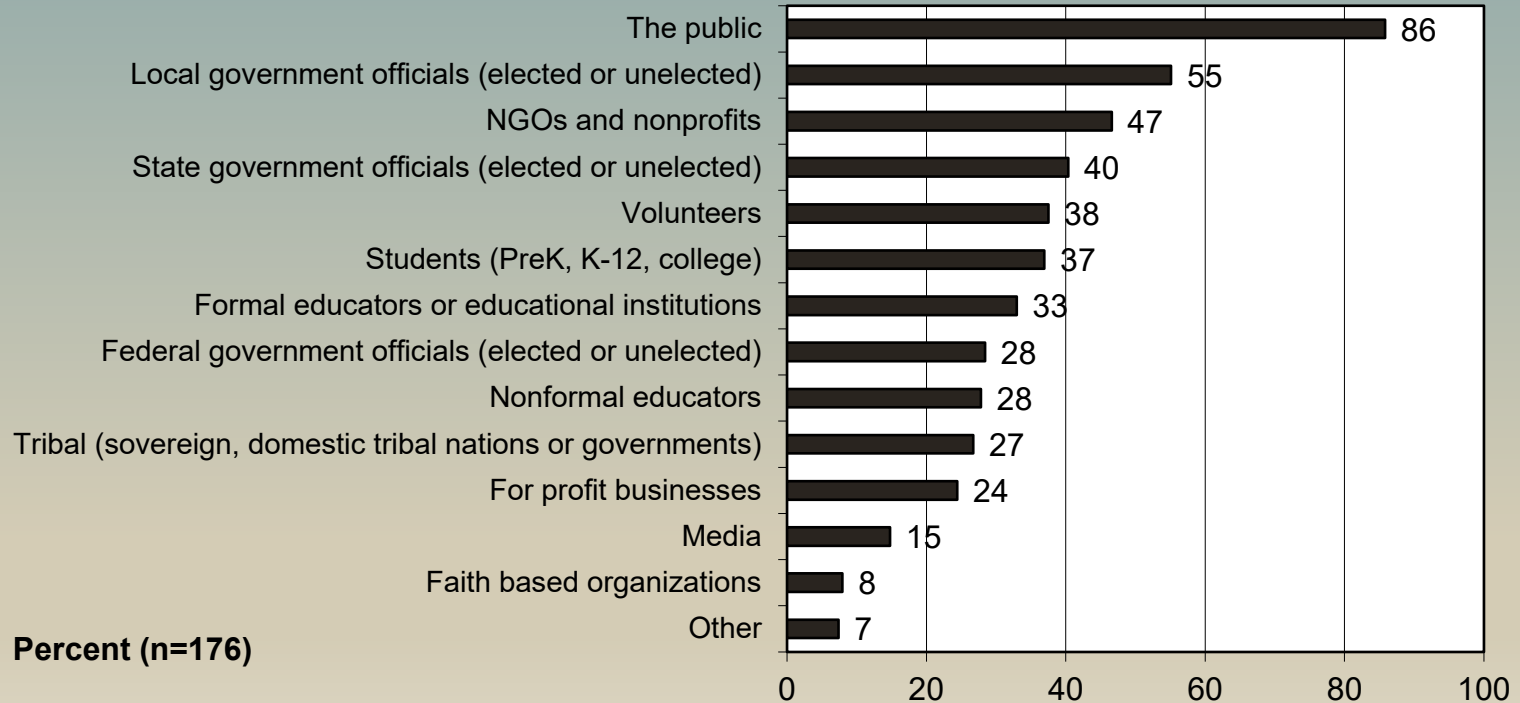


### Would you say...?



Respondents were given a list of possible audiences, from which they could select all that applied. A large majority are serving the general public.

### How would you describe the audience you serve?



# Key Survey Findings: Training Needs

# WATER QUALITY TOPICS

Training topics were categorized into the 3 larger schemes established by CT NERR staff (and asked about earlier in the survey). Note that because education questions were in their own market analysis component, they were not included in these training questions.

- ☐ Stormwater management
  - Green infrastructure
  - Structural technology
  - Other stormwater management topic
- ☐ Pathogen monitoring
- ☐ Land use and nutrient loading to coastal waters
- ☐ Benefits of natural habitats on water quality
- ☐ Ocean acidification
- ☐ Pathogen monitoring



# Habitat Management and Restoration Topics

- ☐ Eelgrass management and restoration
- ☐ Assessing and managing tidal restrictions/road stream crossings
- ☐ Tidal wetland/marsh migration
- ☐ Protecting coastal resources such as dunes, tidal wetlands, bluffs/escarpments
- ☐ Living shorelines for habitat restoration and protection
- ☐ Invasives assessment and management
  - Terrestrial invasives
  - Freshwater invasives
  - Marine invasives
  - Other invasives assessment and management topic
- ☐ Blue carbon
- ☐ Role of riparian buffers
- ☐ Watershed assessment
- ☐ Habitat mapping
- ☐ Soil survey mapping applications
- ☐ Sea floor mapping applications
- ☐ Stream barrier removal for wildlife migration



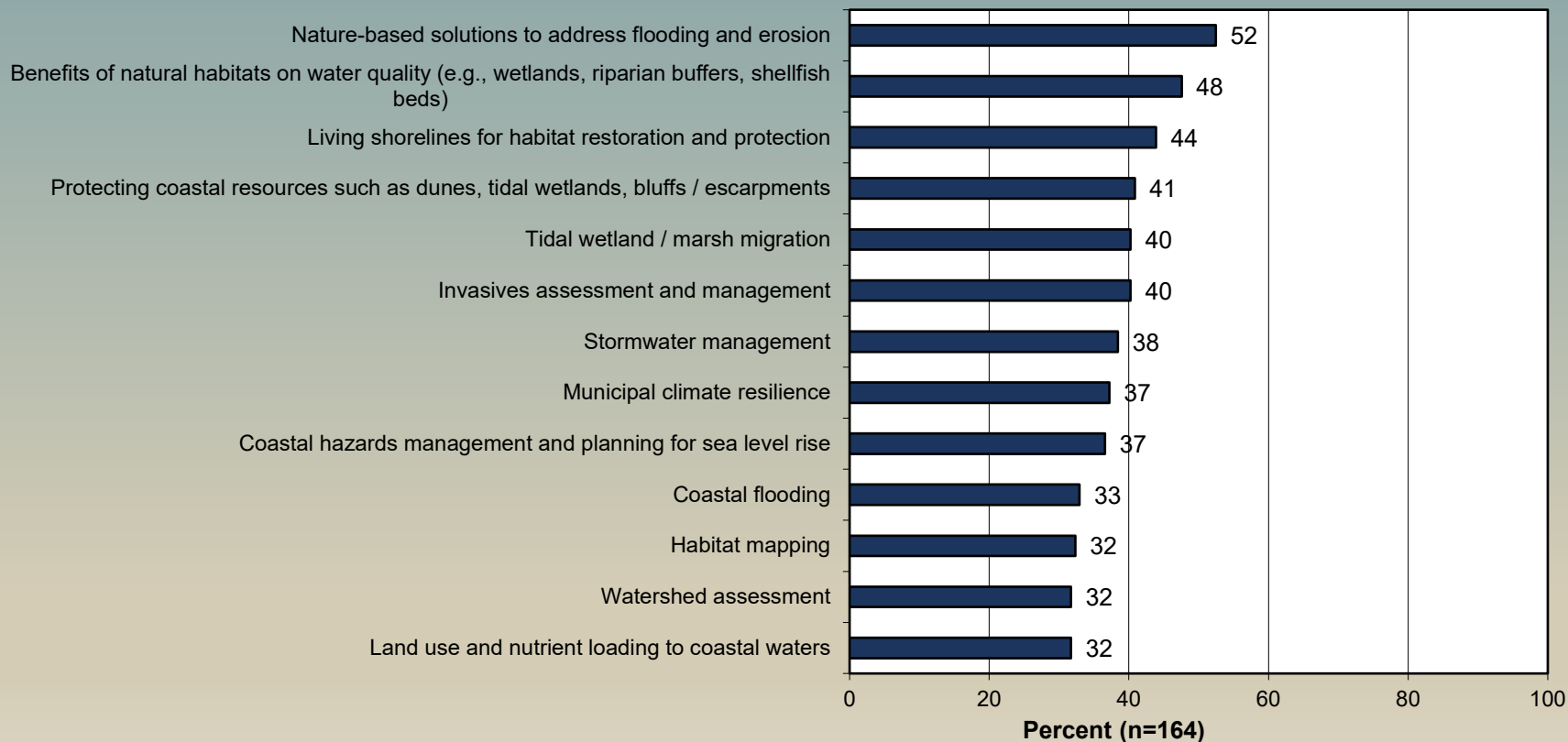
# Climate Resilience and/or Storm Preparedness



- ☐ Coastal flooding
- ☐ Coastal hazards management and planning for sea level rise
- ☐ Nature-based solutions to address flooding and erosion
  - Green infrastructure/stormwater management
  - Living shorelines techniques
    - Site assessment
    - Design criteria
    - Permitting
    - Monitoring protocols
    - Use of reef balls or other artificial reef components
    - Other living shoreline technique topic
  - Other nature-based solution to address flooding and erosion topic
- ☐ Municipal climate resilience
  - Zoning for climate resilience (updates and review of regulations, codes, and ordinances)
  - Vulnerability assessment
  - Other municipal climate resilience topic



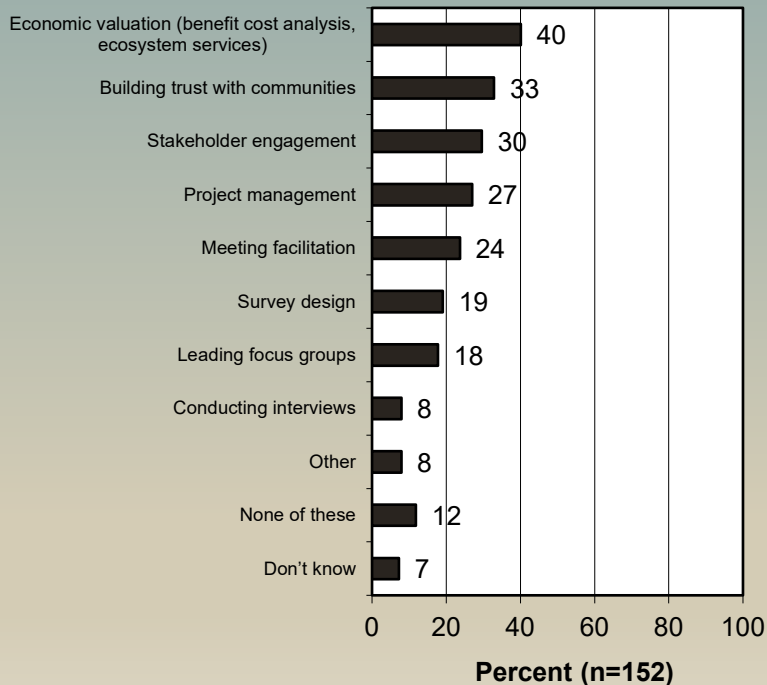
## On which topics would you benefit from training (e.g., workshop, site visit, and/or direct technical assistance)?



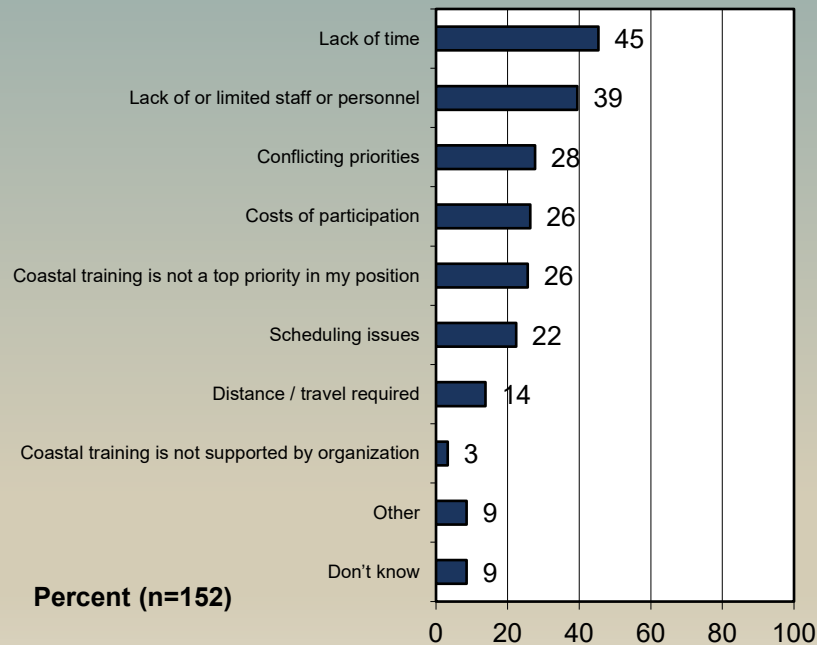


When asked about their needs for skill-based training, economic valuation (benefit cost analysis, ecosystem services) was the top response. Other responses that were selected by more than 30% of respondents related to better engaging audiences and building trust with communities.

### Which type of skill-based training, if any, would be most beneficial to you in your current position?



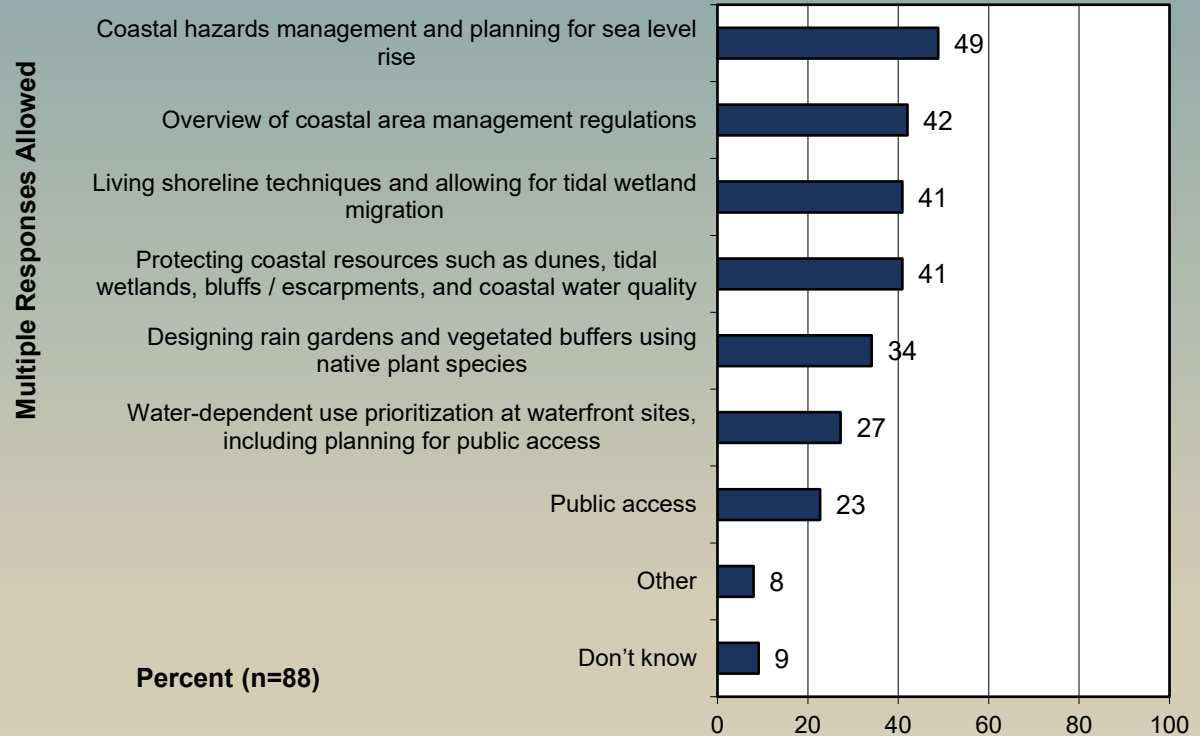
### What are the most significant challenges for you in participating in coastal decision making or management skill-based workshops / trainings / events?



70% of respondents who indicated they could benefit from training on public access do not feel there is enough public access in the town where they work.

When these respondents were further asked about their familiarity with the Coastal Public Access Guide, a large majority (65%) said they are not familiar with the Guide.

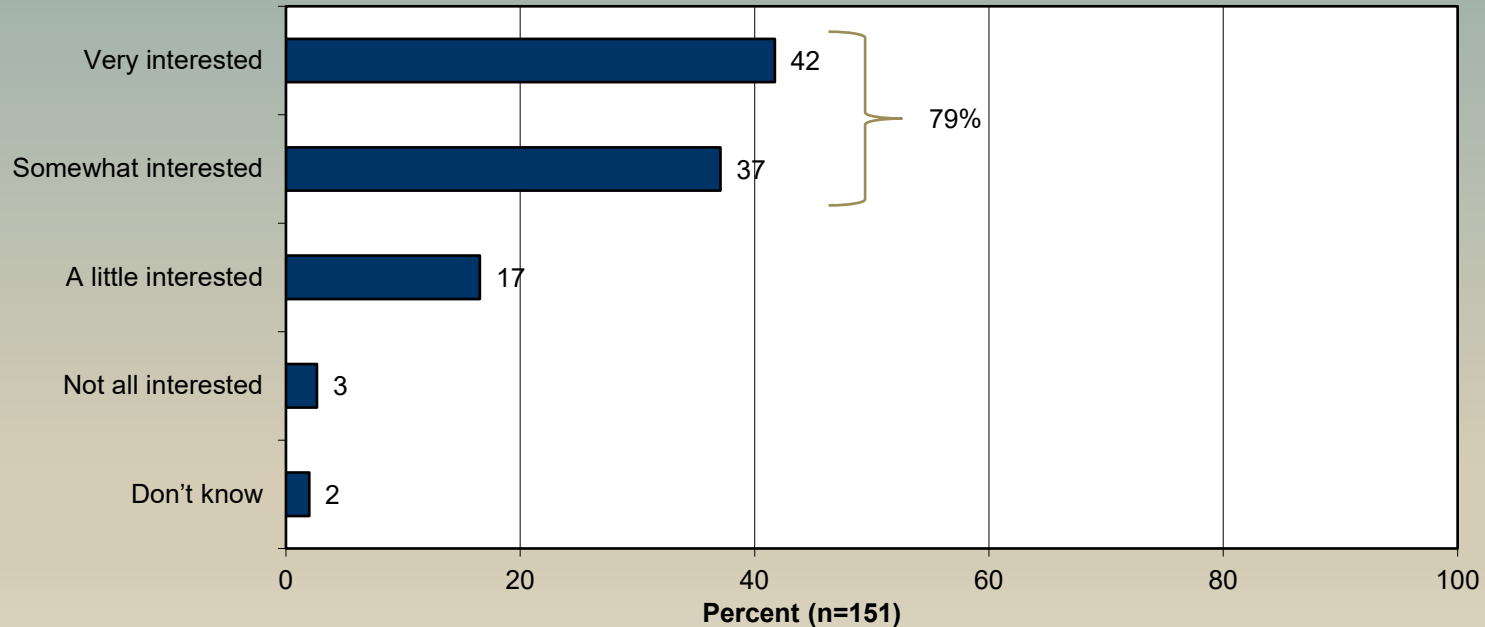
**In your opinion, which of the following coastal land use topics would be most beneficial for training at the local / municipal level? (Asked of municipal commission members or staff, land trust members, nonprofit staff, consultants, and volunteers.)**



# Key Survey Findings: Barriers to Training

While 56% of respondents have not ever participated in a training (e.g., a workshop, technical assistance, site visit), there is a great deal of interest in attending trainings (79% said they are *very* or *somewhat* interested in attending a coastal training).

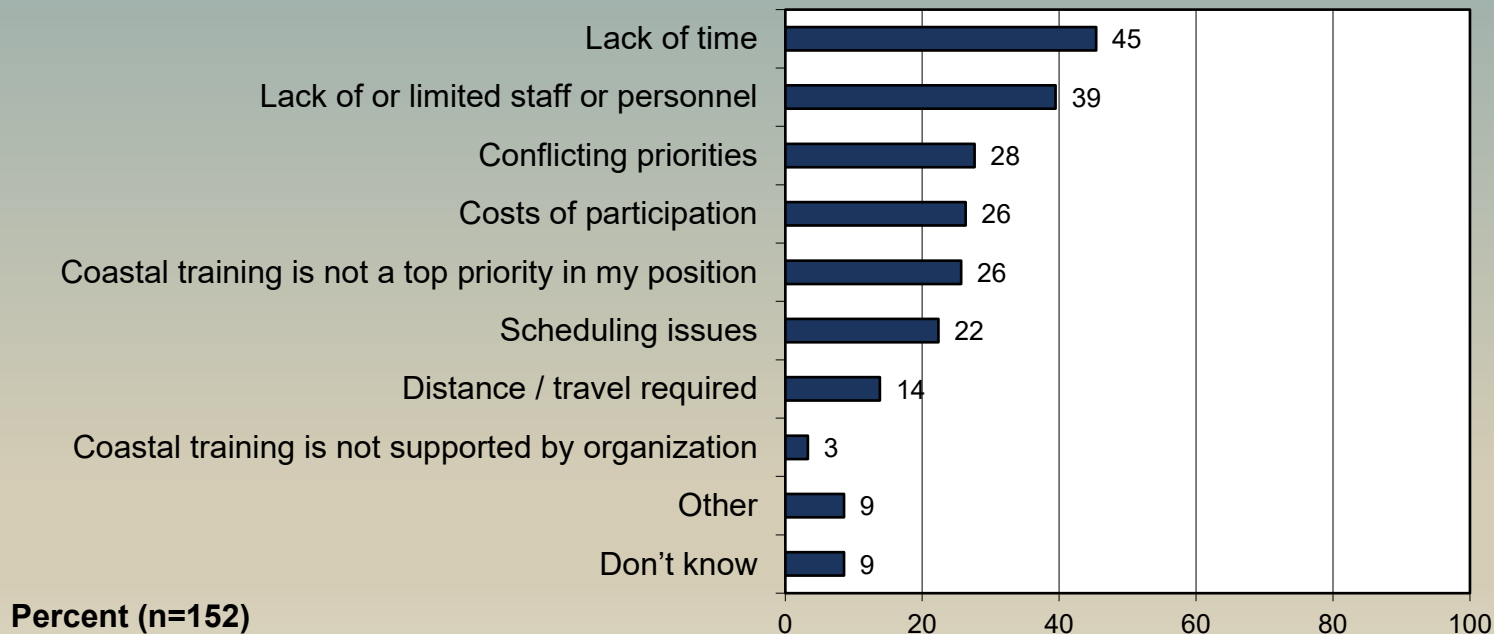
**How interested are you in attending a coastal training? Would you say you are very, somewhat, a little, or not at all interested?**



# Lack of time plays a major role in training participation.

**What are the most significant challenges for you in participating in coastal decision making or management skill-based workshops / trainings / events?**

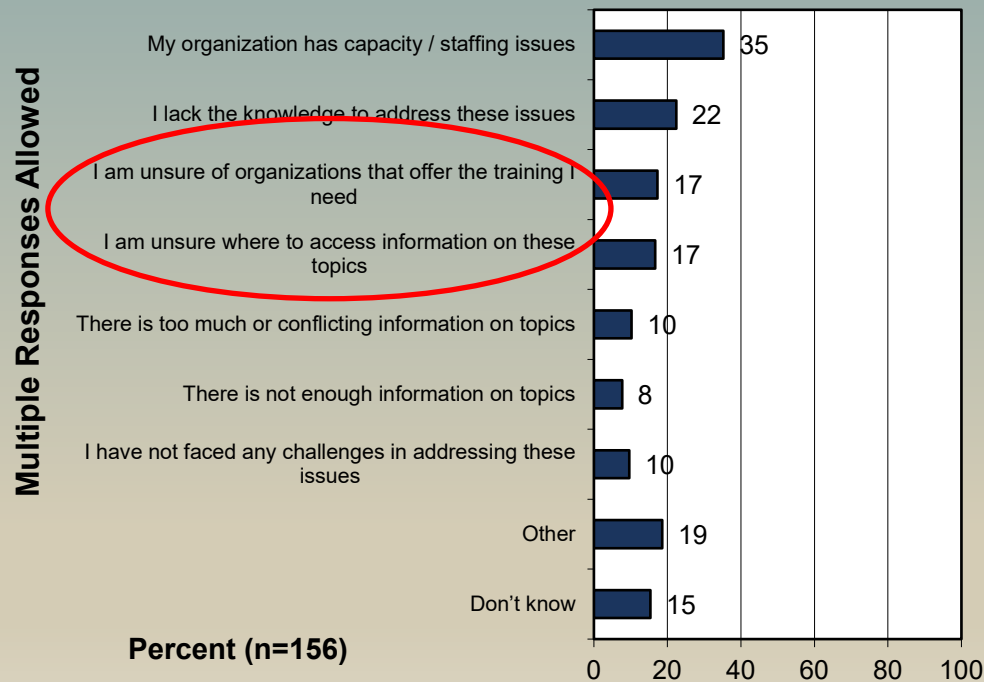
Multiple Responses Allowed



Most respondents are at least somewhat familiar with the Reserve, although questions about barriers to addressing their most significant challenges indicated that some might not be as aware of the services and programs offered through the Reserve.



### What are the most significant challenges you face in addressing these high priority issues?



# Key Survey Findings: Training Logistics



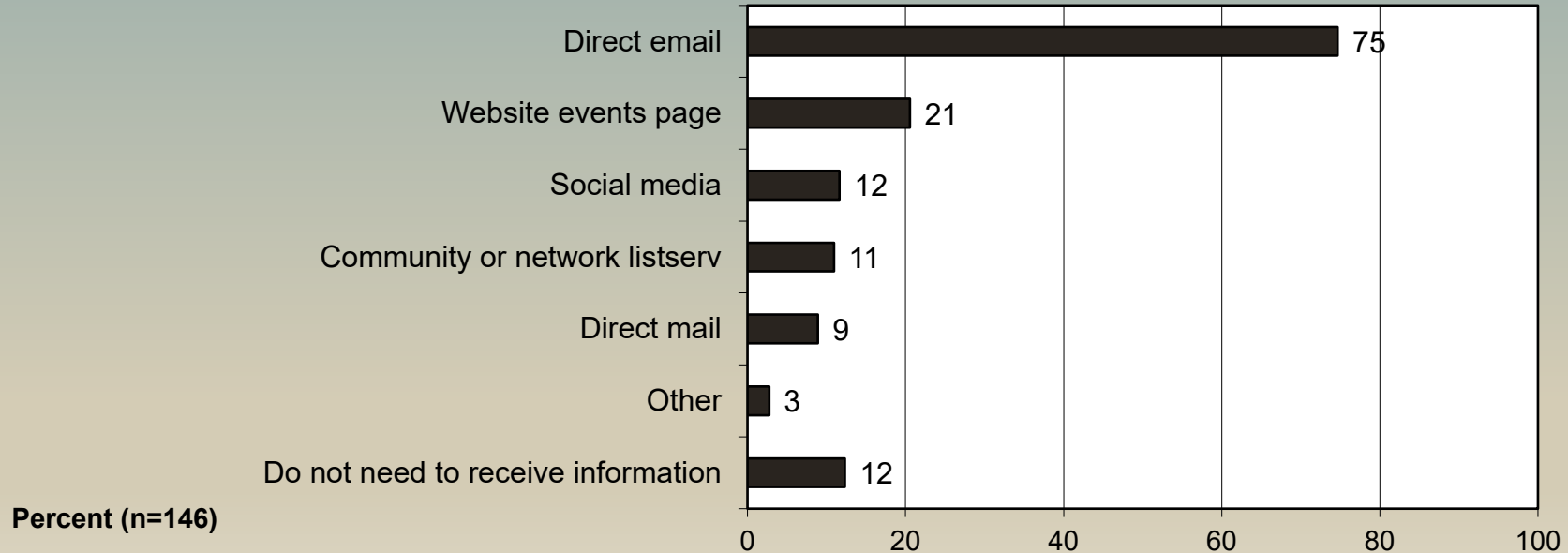
For the most part, responses to specific questions about the timing, location, and logistics of training showed clear consensus that can be used by CT NERR to plan and schedule coastal and skill-based trainings.

| Training Preferences                |                                                             |                                |
|-------------------------------------|-------------------------------------------------------------|--------------------------------|
| Topic                               | Top option                                                  | Percent selected top option    |
| Travel distance                     | 31 to 60 minutes of travel                                  | Selected by 51% of respondents |
| Location (in-person, virtual, etc.) | In-person event – field trip                                | Selected by 49% of respondents |
| Length                              | Half day (3-4 hours)                                        | Selected by 67% of respondents |
| Time of day                         | Morning                                                     | Selected by 64% of respondents |
| Season                              | No preference (among seasons, fall was selected most often) | Selected by 43% of respondents |
| Encouraging incentive               | Food and drink                                              | Selected by 34% of respondents |

Most respondents agree that direct emails are the preferred method of receiving communication about coastal training and education opportunities, announcements, and updates (75%).

**In which of the following ways do you like to receive information about coastal training and education opportunities, announcements, and updates?**

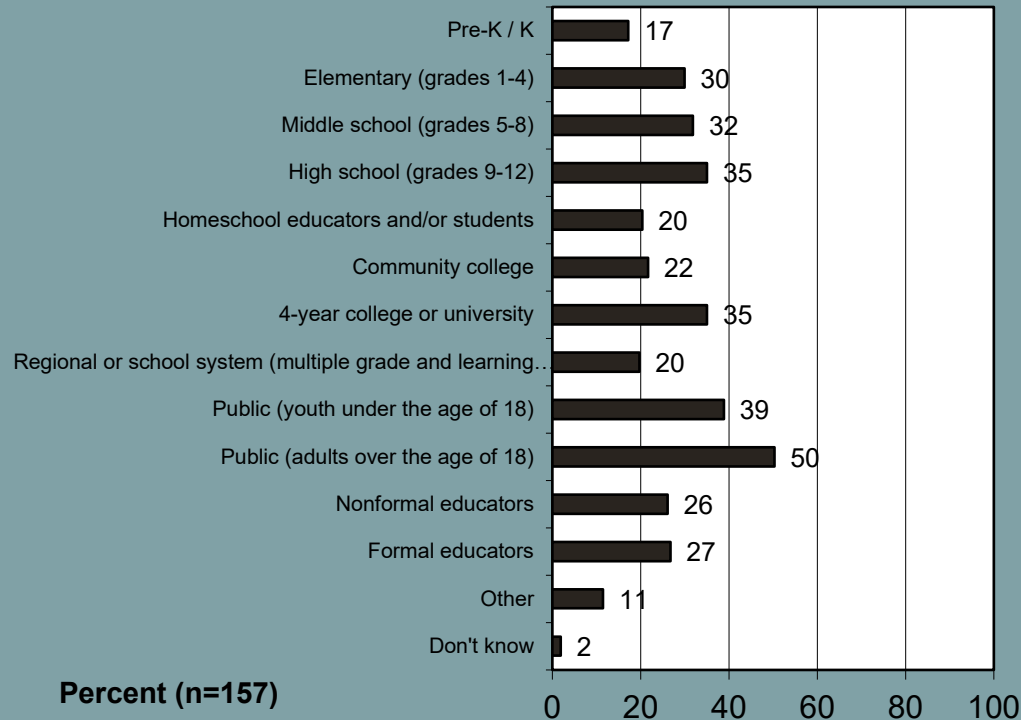
Multiple Responses Allowed



# Key Survey Findings: Education Market Analysis Findings

Among those who focused on educational programming, watersheds and habitats/restoration were the most common educational programming topics regardless of audience.

### What audiences does your educational programming serve?

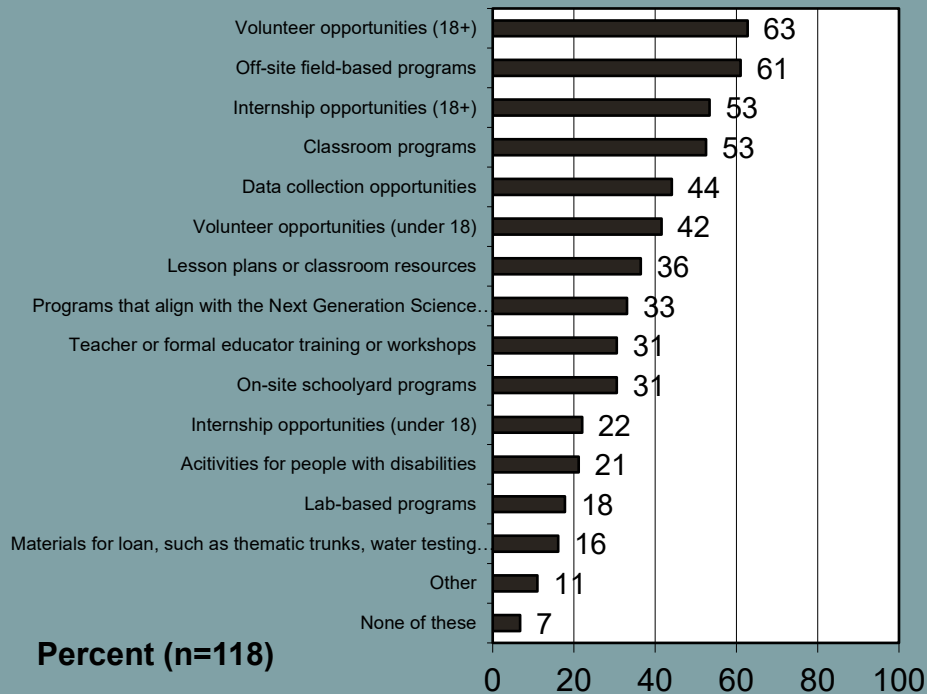


### Educational Programming for Each Audience

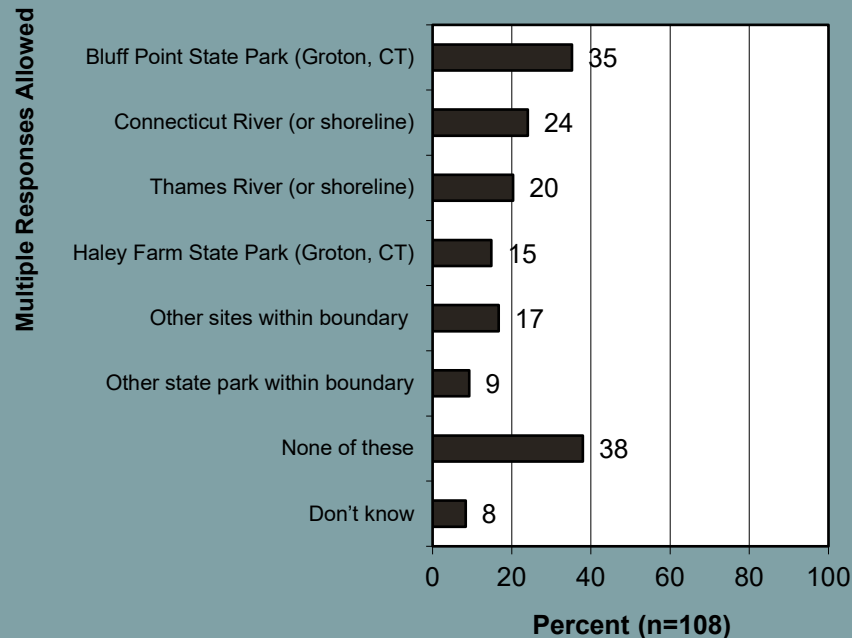
| Audience                             | Top program or activity provided                                                                      |
|--------------------------------------|-------------------------------------------------------------------------------------------------------|
| Pre-K/K                              | Emotional connection to nature, fisheries/wildlife ecology, nature-inspired art, habitats/restoration |
| Grades 1-4                           | Watersheds                                                                                            |
| Grades 5-8                           | Watersheds                                                                                            |
| Grades 9-12                          | Watersheds                                                                                            |
| Homeschool educators and/or students | Fisheries/wildlife ecology                                                                            |
| Community colleges                   | Watersheds                                                                                            |
| 4-year colleges                      | Habitats/restoration                                                                                  |
| Regional or school systems           | Habitats/restoration                                                                                  |
| Public (youth under the age of 18)   | Watersheds, Habitats/restoration                                                                      |
| Public (adults over the age of 18)   | Habitats/restoration                                                                                  |
| Nonformal educators                  | Habitats/restoration                                                                                  |
| Formal educators                     | Watersheds                                                                                            |

While off-site field-based programs are offered by more than half of those who provide educational programming, more than 1/3 do not use the Reserve sites for educational programming.

**Does your and/or your organization's educational programming provide any of the following?**



**From the following list, please select any Reserve sites that have been used or are currently being used in your educational programming.**



When asked about gaps in teacher training and educational programming that the Reserve can help with, responses were varied; however, there were some common themes.

Data gathering and sharing of data needs better coordination—while there are many groups that have the opportunity to gather data, a way to share and better use the data is needed.

Meeting spaces and help with event logistics would benefit educators.

Teachers need resources.

Educators need access to the Long Island Sound itself.

There is a need for information about pollution, particularly non-point source pollution (e.g., animal waste, agricultural runoff).

There is a need for integrating nature into curriculums.

# Recommendations

- Familiarity with CT NERR is high
- Being unsure of where to access information is a barrier to addressing priorities
- Being unsure of organizations that offer information is a barrier to addressing priorities



Market  
programs and  
resources

- Respondents lack time
- Respondents lack capacity



Provide materials  
and brief skill-  
based trainings

- Direct emails are the preferred method of receiving communication about coastal training and education opportunities, announcements, and updates
- A smaller number prefer information on website events page



Send direct  
emails



- Priority topics are nature-based solutions to address flooding and erosion; benefits of natural habitats on water quality (e.g., wetlands, riparian buffers, shellfish beds); living shorelines for habitat restoration and protection; protecting coastal resources, such as dunes, tidal wetlands, bluffs/escarpments; tidal wetland/marsh migration; invasive assessment and management; stormwater management; municipal climate resilience; and coastal hazards management and planning for sea rise



Focus training energy on those topics selected by 35% or more of respondents

- Changes in precipitation and sea level rise are concerns for municipalities
- Current training needs among municipalities are also coastal hazards management and planning for sea level rise
- Overlaps with municipal research conducted in 2017



Focus municipal trainings on sea level rise and coastal hazard management

- Respondents often work with the public and want skill-based trainings and support to build community trust
- Continue to develop preexisting relationships with trusted community leaders and communities
- Information exists that can be built upon



Connect with community leaders

- Clear preferences for time of day, length of training, location of training, and incentives



Build trainings  
around respondent  
preferences

- Respondents indicated that place-based learning opportunities are a gap in teacher education and programming
- The Reserve offers sites for place-based learning
- Find out who is using Reserve sites and for what purpose
- This can help leverage partnerships and fulfill education gaps



Find out more  
about respondents  
who use the  
Reserve sites for  
educational  
programming

# Questions?

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