April 29, 2016

Connect the Connecticut

Communications update for Core Team

In today's presentation...

- Review elements of outreach strategy
- Overview of communication tools
- Update on publicity, success stories, and outreach
- Discuss collecting examples and feedback

Outreach Strategy: The Building Blocks

- Target Audiences
- Key Messages
- Tailored Approaches
- Measures of Success

Target Audiences

Primary audiences -- IMPLEMENTERS

- Core Team organizations
- FWS Programs/Field Offices
- Other conservation partners in the watershed
- Other LCCs in the LCC Network

Secondary audiences -- STAKEHOLDERS

- Congress
- Media in the watershed region
- Communities in the watershed region

Key Messages

- Based on **collaboration** among diverse partners
- Reflects **long-term needs** of human and natural communities
- Offers **best available data and tools** to inform conservation decisions at **multiple scales**
- Can be used to **complement** other resources
- Approach is **adaptable** for use in other geographies

Tailored Approaches

To enable application of the information by **IMPLEMENTERS**:

- Online access to the data and tools
- Guidance on how to use them
- Technical documentation of the process
- Example applications

To support communication with **STAKEHOLDERS**:

- High-level overview
- News stories
- Key points


Connect the
CONNECTICUT
A roadmap for conserving the Connecticut River watershed for future generations

Website

Gallery of Science Products

The data and tools are grouped within the five main categories, and then by the subcategories "Terrestrial" and "Aquatic".

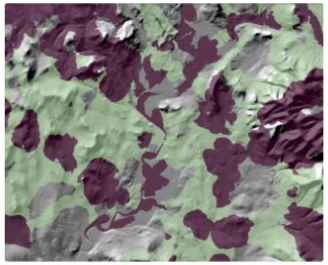
Click on the tabs below to learn what's in each of the five categories of science products, or simply scroll down to view the entire gallery. We provide a detailed description of each science product, and links to where you can access and download the data.

Core Area Network | Supporting Data | Future Change Tools | Restoration Tools | Base Data

Core Area Network

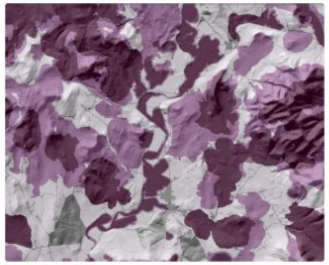
Partners' collective prioritization of high priority (core) areas, connections between them, and methods such as tiering that demonstrate why the entire landscape is necessary to achieve shared goals and objectives based on species and ecosystems.

Terrestrial Core Area Network



Terrestrial core-connector network

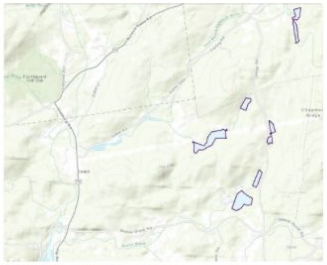
Tier 1 core areas and the connectors between them



Terrestrial core tiers

Tier 1 cores, Tier 2 cores, and supporting landscape

Aquatic Core Area Network



Lake and pond (lentic) cores

Core areas for lakes and ponds in the watershed

River and stream (lotic) cores

Core areas for rivers and streams in the watershed.

Access to data and tools

A Shared Roadmap for Conservation Action

Encompassing New England's largest river system, the Connecticut River watershed provides important habitat for a diversity of fish, wildlife and plants — from iconic species like Bald Eagle and Black Bear to threatened and endangered species like the Shortnose Sturgeon, Piping Plover, and Dwarf Wedgemussel. The 7.2 million acre watershed is also a source of clean water, recreation, food, jobs, and more for the millions of people living in Vermont, New Hampshire, Massachusetts, and Connecticut.

Decades of work to clean the watershed's waterways, protect its forests and farmlands, and restore endangered species have paid substantial benefits in maintaining and revitalizing the natural resources of the watershed. Nevertheless, threats to the watershed's resources remain in the form of habitat loss, degradation and fragmentation from increasing development in the watershed. Moreover, increasingly evident changes in the region's climate will continue to unfold in future decades. These changes may offer new opportunities for some species, but will also pose risks to fish, wildlife, and plants that cannot readily adapt or move in response to the changing climate.

In response to these ongoing and emerging threats, and building on a legacy of conservation success in the watershed, a team of more than 20 partners from state and federal agencies and private organizations came together in 2014 to develop a new, shared conservation plan for the watershed. This plan, and a series of products that can help in achieving the collective goals of the partnership, is known as *Connect the Connecticut*. The name reflects the fact that the most effective long-term strategy for sustaining natural resources across a large landscape like the Connecticut River watershed is to keep important parts of it intact and connected.

Connect the Connecticut takes advantage of capitalizes on emerging capabilities to map, analyze, and forecast changes to natural resources at a scale never before possible. These innovations allowed the partners to develop a detailed, strategic conservation *design*, which is described in more detail in this report. The design outlines a network of *core areas*, or intact, connected, and resilient places within the watershed. This design also includes connections and supporting landscapes that, along with the core areas, serve as a roadmap for conservation. The conservation design also includes tools to inform restoration and a variety of other datasets that can be used in concert with the core area network or independently.

Connect the Connecticut reflects a unified vision that considers the value of fish and wildlife species, and the natural systems they inhabit, from Long Island Sound to the peaks of the White Mountains. Core areas include high quality, resilient examples of the full range of ecosystem types throughout the watershed, from spruce-fir forests to small streams to freshwater marshes. High quality habitat for a set of 15 fish and wildlife speci… Woodcock, Wood… Trout — is also a … of core areas. The… represent others t… within the major … watershed.

Connect the Conn… and information … planners, and mar… effective conserva… enhance the natur… It also provides in… watershed may ch… human communit… These results are … state and local sou… efforts. Rather, Co… intended to provi… large-scale roadm… understanding. C… partnership are co… and other individu… encouraged to use… in their own way … watershed. For m… case studies in usi… for training, and … please visit our we… www.connectthec…

SECTION FOUR - HOW WHAT WE CARE ABOUT IS REFLECTED IN THE DESIGN

The natural resources of the Connecticut River watershed provide many benefits to the public. These include healthy populations of fish and wildlife, clean water, wetlands and forests that protect against flooding and erosion, and many economic, recreational, and educational opportunities. *Connect the Connecticut* is designed to contribute to the protection and enhancement of these resources. With guidance from the *Connect the Connecticut* partnership, sophisticated scientific analyses were used to assess the physical and biological value of resources present in the watershed and identify the most important places and connections for them. The resources that could be mapped and prioritized across the watershed consisted of a) habitat for fish and wildlife, and b) ecosystems and natural communities. *Connect the Connecticut* incorporates both categories of resources in multiple ways.

Habitat for fish and wildlife

Hundreds of species of fish and wildlife inhabit the Connecticut River watershed. Because it is not possible to identify priority habitat locations for all of these species, *Connect the Connecticut* focuses on habitat needed by a carefully-selected set of 20 fish and wildlife species. Many of these species can represent the habitat needs of a large number of species that share many of the same habitats. These "representative species" were chosen not only because their habitat requirements typify those of other species, but also because they are sensitive to landscape change (e.g., loss of habitat due to development). These species are also well studied, enabling researchers to map their habitats.

Collectively, these 20 species represent all the geographic regions of the watershed and major ecosystem types that occur there (Table x). They also reflect different kinds of sensitivity to threats such as development. For example, black bears have large home ranges and are sensitive to fragmentation of their habitat into smaller, disconnected patches. Wood turtles do not require home ranges as large as bears, but they are at risk due to high vehicle mortality rates when crossing roads. Brook trout and Louisiana Waterthrush are sensitive to water pollution and excess stream sedimentation.

Connect the Connecticut incorporates both categories of resources in multiple ways.

Table X. Species of fish and wildlife whose habitat is specifically incorporated into *Connect the Connecticut.*

Species	Ecosystem/Habitat Types
Wood Thrush	Deciduous forest, mature
American Woodcock, Ruffed Grouse	Deciduous forest, young
Black Bear	Forest, large blocks
Moose, Blackburnian Warbler	Mixed (coniferous) forest
Blackpoll Warbler	Spruce-fir forest
Prairie Warbler	Pine barrens (and young forest)
Eastern Meadowlark	Grasslands
Louisiana Waterthrush	Riparian and floodplain forest
Northern Waterthrush, Wood Duck	Forested wetlands
Brook Trout, Wood Turtle	Streams (+ associated uplands)
Alewife, American Shad, Blueback Herring, Short-nosed Sturgeon, Sea Lamprey	Rivers
Marsh Wren	Marshes

User-friendly guidance

Connecticut River Watershed Landscape Conservation Design: *Data Products*

Purpose

The Connecticut River Watershed Landscape Conservation Design (CTR LCD) is intended to focus conservation actions, including land protection, management, and restoration where it will likely do the most good towards conserving biodiversity within the Connecticut River watershed. The LCD provides a watershed-based conservation design to complement or supplement conservation planning done at local or finer extents. Although the LCD offers a way to strategically focus limited conservation resources, by itself it is not sufficient as a total solution to biodiversity conservation in the watershed. This design serves as a starting point that should be used in combination with other sources of information to direct conservation.

The CTR LCD is not a single product or map. Rather, it is a package of data products that collectively identify terrestrial core areas and connectors, aquatic core areas and their watershed-based buffers, and restoration opportunities for dam removal, culvert upgrades, and terrestrial wildlife road passage structures. This package also includes a variety of supporting data layers that separately provide information on the ecological value of all lands and waters regardless of their inclusion in the core area network.

The purpose of this document is to provide a brief description of the data layers included in the CTR LCD package. A separate process document is being developed to describe in detail how these data layers were created.

Disclaimer

The spatial data products comprising the CTR LCD and described in this document were produced by the UMass Designing Sustainable Landscapes (DSL) Project in collaboration with the North Atlantic LCC and the Connecticut River Watershed Landscape Conservation Design (CTR LCD) partnership, with a few exceptions, as noted below.

- These products were developed to test procedures for landscape conservation design that could be extended to the entire Northeast Region in the next phase of the DSL project. These products are now being provided to collaborating partners for review and thus should be viewed as interim pending the outcome of the review process.
- This document provides a brief abstract on each of the data products to facilitate their immediate use and interpretation by the CTR LCD partners. Complete and detailed technical documentation is available for all products at the DSL project website.
- The products described here include only those data products deemed essential to the description of the CTR LCD. A more comprehensive set of data products derived for the entire region are available via the DSL project website.

Technical documentation

TESTIMONIALS

Something for everyone

Practitioners working at different scales across the region can use *Connect the Connecticut* to inform the decisions they make about long-term conservation in the watershed.

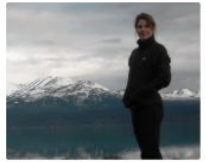
See how our partners are applying the Data & Tools from *Connect the Connecticut* to their work in various aspects of conservation, from land acquisition to restoring aquatic connectivity to protecting endangered species.

"When you make connections between different conservation partners and identify shared goals, you create a potential for greater conservation outcomes."

David Paulson, Massachusetts Divison of Fisheries and Wildlife

"It's valuable to have a holistic approach that is also objective so you can better justify why particular areas may be more important than others."

Patrick Comins, Audubon Connecticut



"Tools like this not only help us think about functionality and integrity at an ecosystem scale, but give us the ability to strategically improve these aspects across the landscape."

Georgia Basso, U.S. Fish and Wildlife Service

"There are so many wells to dip into for information, so the fact that this is comprehensive and comprehensible to those who are not power users of data is really valuable."

Andrew Fisk, Connecticut River Watershed Council

"If you are working locally, you should know what's going on regionally - where there is going to be energy for conservation."

Bill Labich, Highstead Foundation

"As the landscape changes, thinking changes, and priorities change, the core components of this model can continue to be run and provide updated information."

Scott Jackson, University of Massachusetts Amherst

Example applications

Connect the Connecticut

A shared vision for conserving the Connecticut River watershed for future generations

Common resources, shared vision
Encompassing New England's largest river system, the Connecticut River watershed provides important habitat for a diversity of fish, wildlife and plants — from iconic species like bald eagle and black bear to threatened and endangered species like the shortnose sturgeon, piping plover, and dwarf wedgemussel. The watershed is also a source of clean water, recreation, food, jobs, and more, for the millions of people living in Vermont, New Hampshire, Massachusetts, and Connecticut.

The best places to start
The most effective long-term strategy for sustaining natural resources across a large landscape like the Connecticut River watershed is to keep important parts of it intact and connected. *Connect the Connecticut* is a collaborative effort to identify the best places to start: the areas within the watershed that partners agree are priorities for conservation to ensure that important species, habitats, and natural processes will be sustained into the future — even in the face of climate and land use change.

Tools for diverse partners
Using the best available science and information from the North Atlantic Landscape Conservation Cooperative, a team of more than 30 partners from state and federal agencies and private organizations spent more than a year developing a conservation "design" for the watershed. Outlining a network of core areas, or intact, connected, and resilient places within the watershed, the design serves as a roadmap for conservation. It includes a variety of datasets and tools people from all sectors can use voluntarily to make more informed decisions about managing lands and waters. These natural areas provide habitat for wildlife and support local economies and the overall health and well-being of communities.

Protecting fish, wildlife, and natural systems
Connect the Connecticut is a unified vision that considers the value of fish and wildlife species and the natural systems they inhabit. High quality habitat for a set of 15 fish and wildlife species —including American woodcock, black bear, and Eastern brook trout — is a key component of the network of core areas. The partnership identified these species to represent others that rely on similar habitats within the major types of natural systems in the watershed — from spruce-fir forests to small streams to freshwater marshes. By ensuring that high quality habitat for these representative species is included, the design addresses the needs of a range of fish and wildlife. Other key components of the core areas include high quality, resilient locations of both rare and common ecosystem types throughout the watershed, from Long Island Sound to the peaks of the White Mountains.

Connecticut River Watershed Council

Connecticut River

USFWS

Wood thrush

Meaningful, measurable results
Connect the Connecticut is intended to help resource managers, planners, and others prioritize effective conservation actions and adjust course as needed to achieve meaningful and measurable conservation results. The tools and information complement local knowledge by offering broader state, regional, and national context to help sustain important natural resources across large regions in an era of accelerated change.

Partners are now testing the design and exploring potential applications with their agencies and organizations. Information and lessons learned from the landscape conservation design process will be used to refine the products over time, and can be applied in other geographies throughout the Northeast.

For more information
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Nancy McGarigal, U.S. Fish and Wildlife Service:
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USFWS

Black bear

About the North Atlantic LCC
The North Atlantic Landscape Conservation Cooperative is an applied science and management partnership that builds upon a long history of conservation in the region to unite stakeholders around common goals for sustaining natural and cultural resources, and to develop tools and strategies to achieve those goals in the face of threats and uncertainty. For more information, visit www.northatlanticlcc.org

About the U.S. Fish and Wildlife Service
The mission of the U.S. Fish and Wildlife Service is working with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people. We are both a leader and trusted partner in fish and wildlife conservation, known for our scientific excellence, stewardship of lands and natural resources, dedicated professionals, and commitment to public service. For more information on our work and the people who make it happen, visit www.fws.gov

High-level overview

Connect the
CONNECTICUT

Connecting the Connecticut: Partners team up to develop a roadmap for conserving the Connecticut River watershed

Encompassing New England's largest river system, the Connecticut River watershed provides important habitat for a diversity of fish, wildlife and plants from such well-known species as bald eagle and black bear to threatened and endangered species such as piping plover and dwarf wedgemussel.

The watershed is also a source of clean water, recreation, food, jobs and more for millions of people living in Vermont, New Hampshire, Massachusetts and Connecticut.

The best long-term strategy for sustaining natural resources across this kind of large landscape is to keep vital parts of it intact and connected. Connect the Connecticut is a collaborative effort to identify the best places to start—the areas within the watershed that partners agree should be priorities to ensure that important species, habitats and natural processes will be sustained into the future, even in the face of climate and land use change.

"This is truly a groundbreaking effort, building on a long history of collaborative conservation in the watershed," says Ken Elowe, a former state wildlife agency director in Maine who now heads the U.S. Fish and Wildlife Service's science applications program in the Northeast Region.

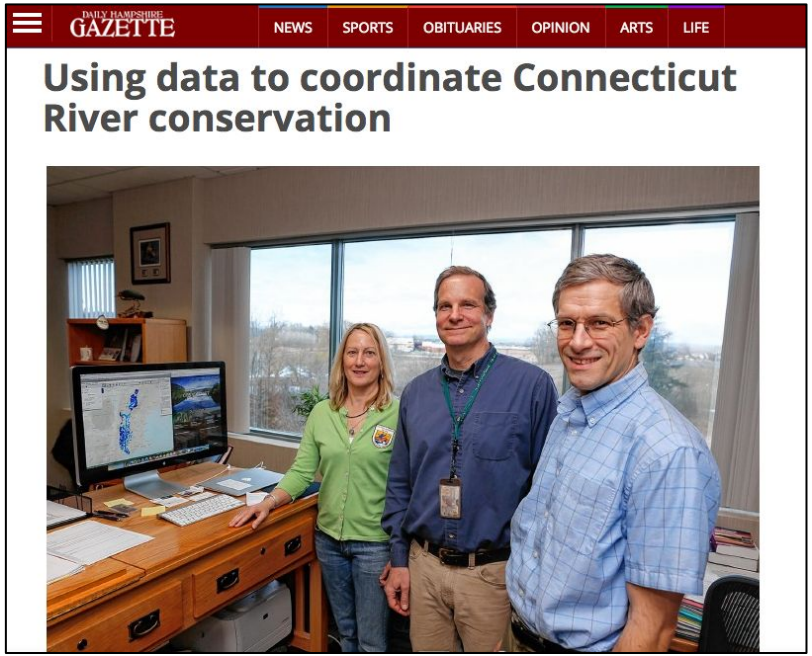
News stories

Measuring Success

Tracking Publicity

- Who is talking about the project?
- What are they saying?
- Where are they getting their information?

Publicity


DAILY HAMPSHIRE GAZETTE
NEWS
SPORTS
OBITUARIES
OPINION
ARTS
LIFE
Using data to coordinate Connecticut River conservation


DAILY HAMPSHIRE GAZETTE
NEWS
SPORTS
OBITUARIES
OPINION
ARTS
LIFE
Opinion > Editorials
Editorial: Data can aid conservation efforts

Measuring Success

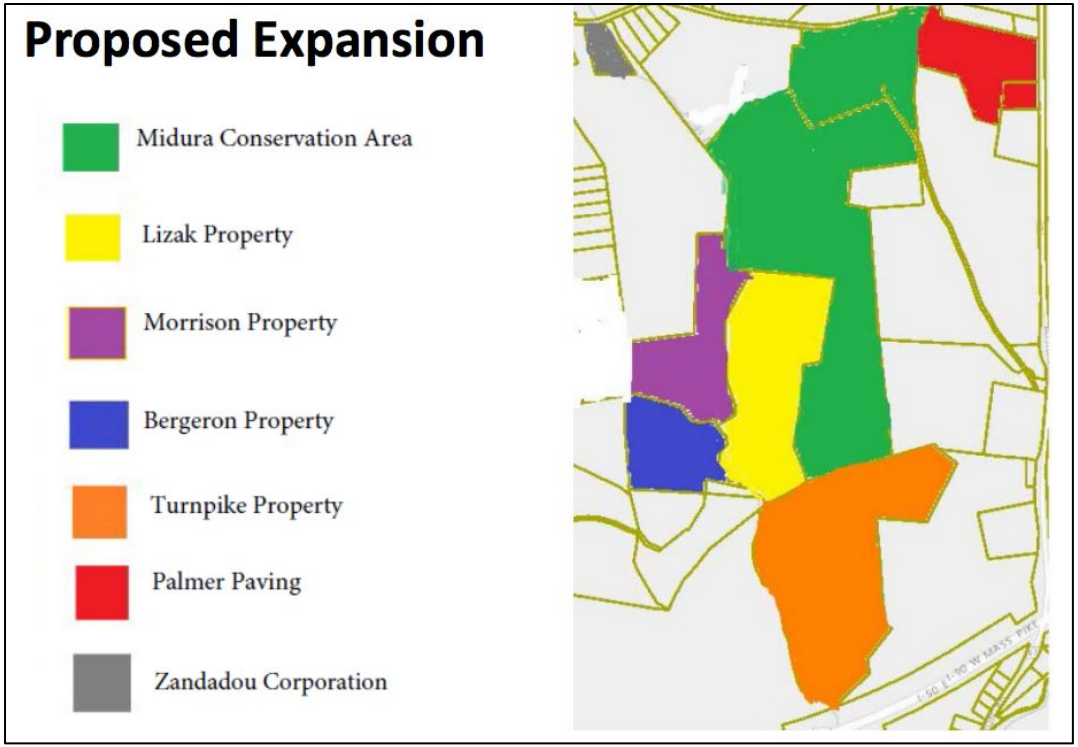
Tracking Application

- Who is using the products?
- How are they applying them?
- Are decisions being made or actions taking place as a result?

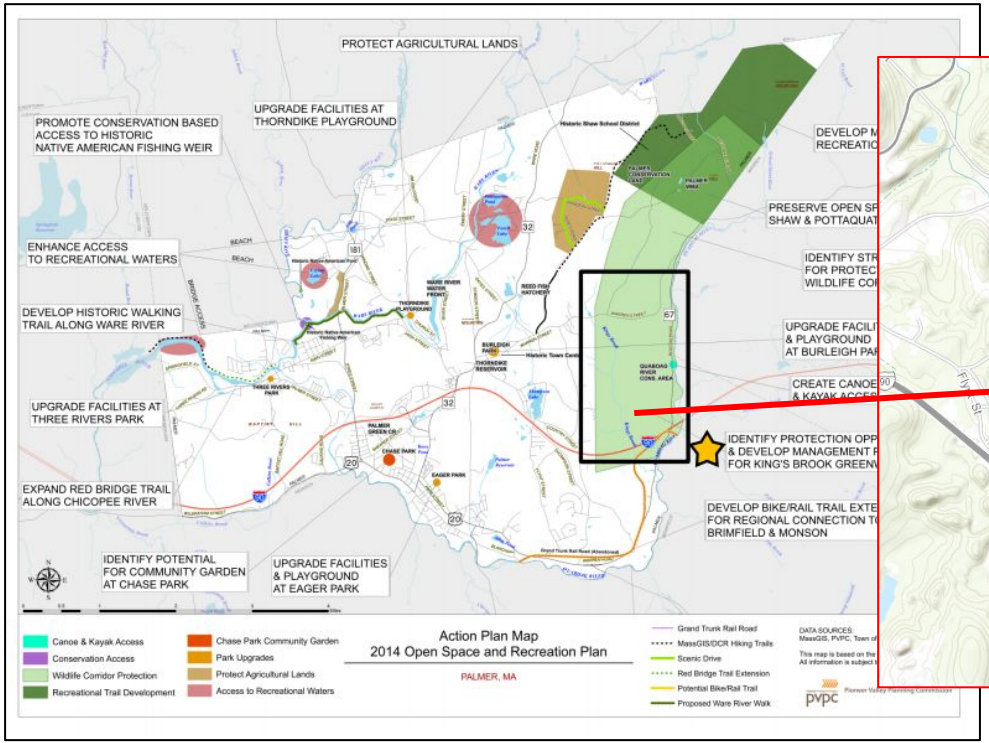
Application

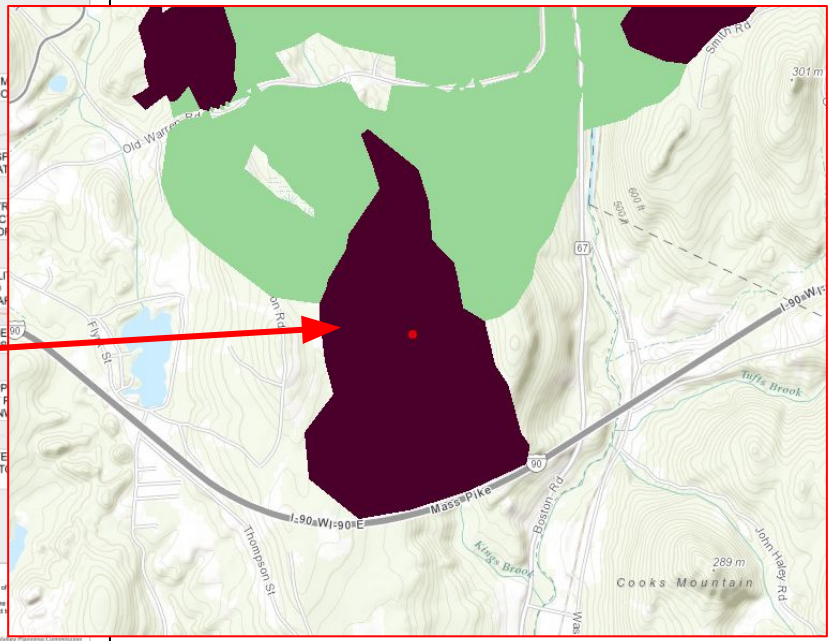
Palmer, Mass. Conservation Commission

The Midura Conservation Area Expansion Program



Application





Application

Application

“The tools gave us more resources as actual land managers to effectively achieve action items within our open space and conservation plan, and again, put it in not only the state, but regional, and national framework to keep our resources resilient.”

Angela Panaccione, Conservation Agent, Town of Palmer

Outreach to date

- U.S. FWS Chesapeake Bay Field Office - September 2015
- National Wildlife Refuge biological workshop, National Conservation Training Center - April 2016