Northeast Summit on Transportation and Conservation Planning
December 17 &18, 2007

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Wildlife Biologist

Problems to Solutions

Identify Issues

(e.g., WAP, Research)

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Identify Solutions (WAP, Research)

↓

Implement Solutions

- Outreach to target audiences
- On-the-ground change

Requires Partnerships & Funding

Vermont Regional Transportation & Wildlife Meeting (VT, ME, NH)

Benefits of Early Planning & Working Together

- Permit Predictability
- Broad Project Support
- Fiscal Responsibility
- Improved Safety
- Statewide Wildlife Benefit

Northeast Transportation & Wildlife Conference

Vermont, 2004

New Hampshire – Strategic Direction

1. Improve interagency relationships – move from cooperation on project – specific tasks to discussion of programmatic changes and coordinate long-range plans for transportation and environmental initiatives.
2. Create small interagency task groups
3. Have more specific conversations about funding and identify what each partner can bring to the table in terms of funding, staff resources, and data.

NH Wildlife & Transportation Team

December 1, 2004, NHFG

Objective:

To brainstorm ideas which will work towards reducing the intensity and frequency of impacts on wildlife as a result of current and future transportation networks… (i.e., to become more proactive in our approach to dealing with wildlife-transportation conflicts).

23 Participants (NH Fish & Game, NH Department of Transportation, Federal Highway Administration, NH DES, Consulting, UNH- Cooperative Extension, UNH, The Jordan Institute, TNC, NH Audubon


Obstacles & Opportunities
Data and Research
Outreach
Funding
Planning-Mission

Obstacles & Opportunities - Categories

Data-Research

- ID other data/studies available for planning
- ID Priority Research
- Map wildlife corridors
- Consistent collection of roadkill/other data

ID Funding Opportunities

Obstacles & Opportunities - Categories

Outreach/ Public Education

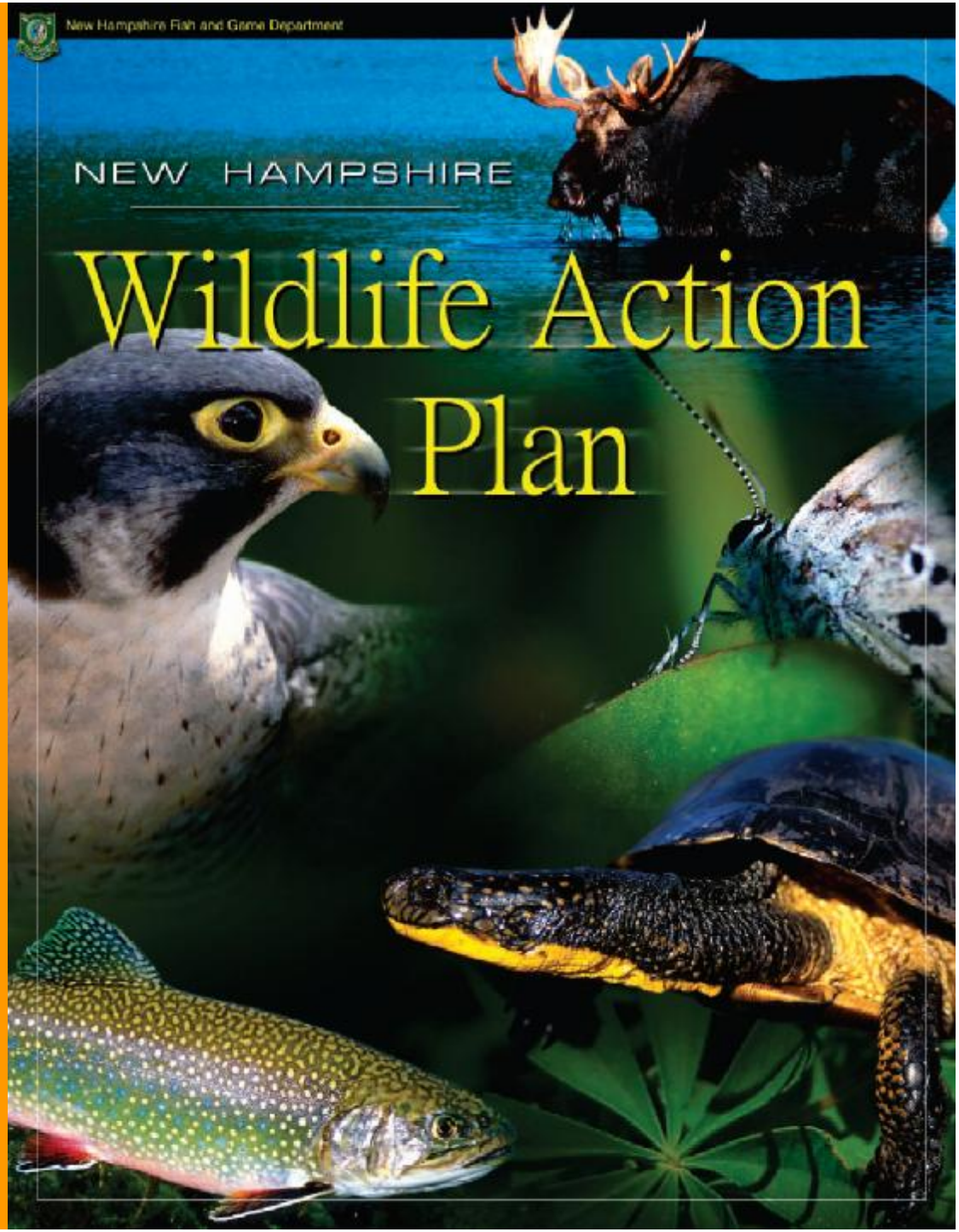
- Create/add to websites
- Create brochures
- Press releases/weather/news (e.g, salamander and turtle X-ing)
- Incorporate wildlife into local courses (e.g., State Program Road Agents)

Planning & Mission

- ID agencies (DOT, NHFG) responsibilities and missions
- ID integrated mission of groups (safety vs. population viability)
- Wildlife Action Plan and NH DOT long-range plan integration

NH Wildlife Action Plan

Submitted
October, 2005



Strategies

- Promote a wildlife-transportation working group (Interagency coordination)

NH Wildlife and Roads Team

July 21, 2006

Research Needs and Prioritization

Sources Used to Identify Research Needs

- NH Wildlife Action Plan
- USGS/ Utah State National Survey of top Transportation and Wildlife Research
- Expert opinion

Categories of Research

- Biology
  - Animal movement,travel corridors, Landscape connectivity
- Impacts on Wildlife
  - Fragmentation, Edge Effects, Invasives, Pollution, Altered Hydrology, Road density, Etc.
- Mitigation
  - Appropriate & Successful passages, guidelines, cost/benefit analyses
- Monitoring
  - Structures & non-structural approaches, standardized protocols
- Communication
  - Regional coordinator to disseminate and communicate information among different sources.

NH Wildlife and Roads Team

Commitment to meet every 6 months

Need for Coordinator position !!!!

Northeastern Transportation and Wildlife Conference
Maine - Fall 2006

Presented NH Wildlife Action Plan & Panel Discussions

Identified NHFG staffing as a key limitation in NH for coordination of Transportation and Wildlife Issues.

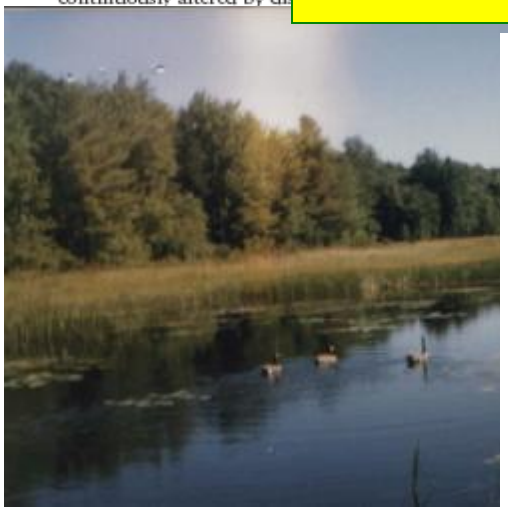
Keeping Track

Wildlife Action Plan Tools

Altered Natural Disturbance Regime

1. DEFINITION

Before European settleme
continuously altered by di



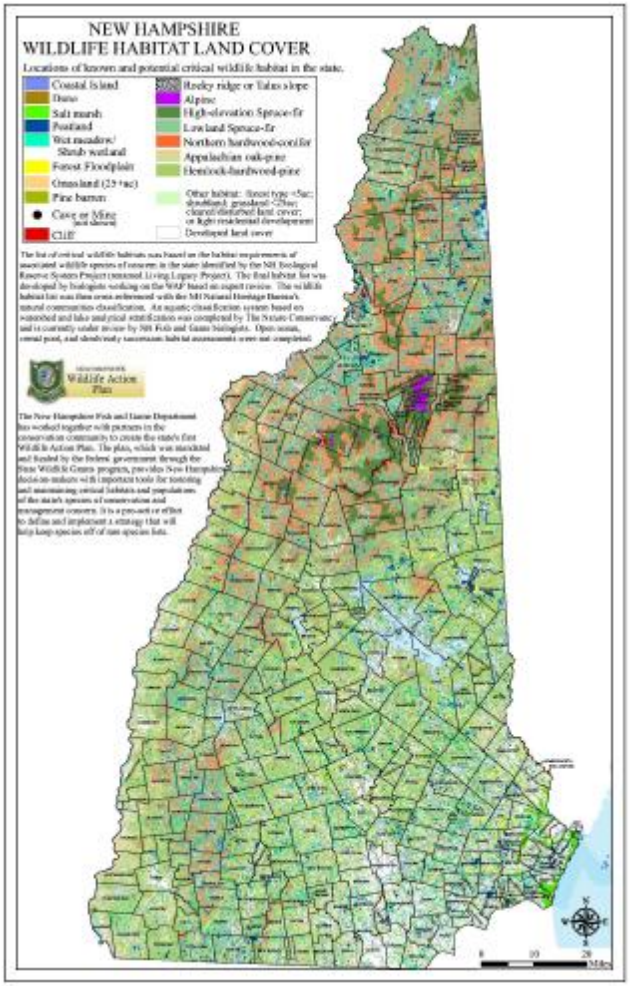
SPECIES PROFILE

Fowler's Toad

Bufo fowleri formerly *Bufo*

Federal Listing: Not listed
State Listing: Special concern
Global Rank: G5T
State Rank: S3
Author: Kimberly, J. Babbitt, University
Hampshire

ELEMENT 1: DISTRIBUTION AND HABITAT



HABITAT PROFILE

Appalachian Oak Pine Forest

Associated Species: Timber rattlesnake, eastern hognose snake, whip-poor will, veery, eastern pipistrelle, eastern red bat, northern myotis, silver haired bat, bobcat, black bear

Global Rank: Not ranked
State Rank: Not ranked
Author: Carol R. Foss, Audubon Society of New Hampshire

ELEMENT 1: DISTRIBUTION AND HABITAT

1.1 Habitat description

Appalach
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1.2 Justification

Appalachian oak pine forest
distribution in New Hamp
10% of the state's land area
that only 7.3% of the state
oak pine forest is on perm
This forest type supports 1
New Hampshire, including
tiles, 67 birds, and 17 mamn
dangered wildlife species occ
include osprey, Cooper's ha
and eastern hognose snake.
tense development has dram

Wildlife most at-risk to Transportation

Wildlife

Blanding's turtle

Wood turtle

Spotted turtle

Black racer

Hognose snake

Bobcat

Habitats

Appalachian oak-pine forest

Vernal pools

Marsh & Shrub wetlands

Wildlife – Transportation Risk Pathways

Rapid growth – demand for new & improved transportation networks

Uncoordinated planning – local land use planning and large-scale conservation planning

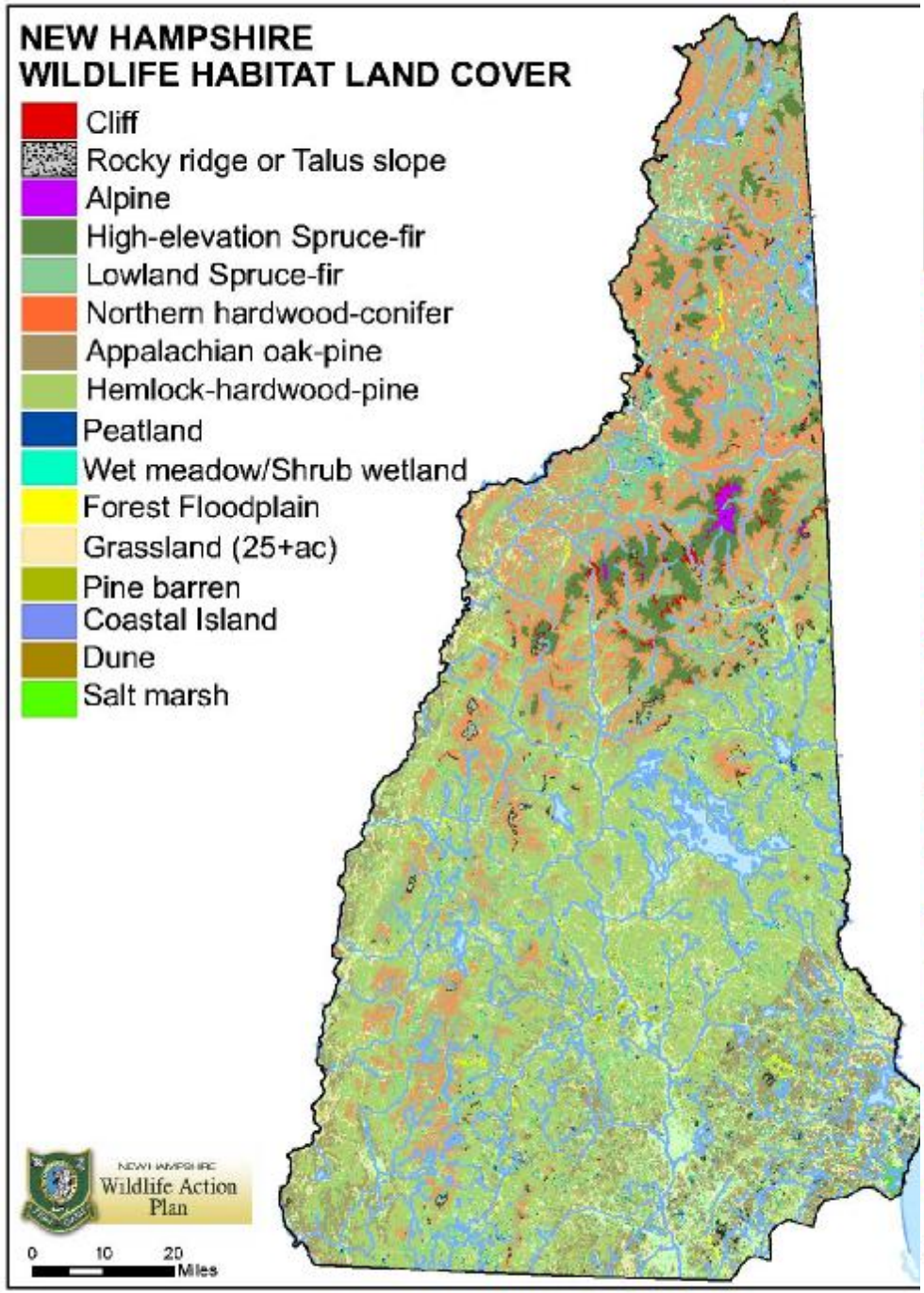
Habitat loss and fragmentation – Direct loss, noise, isolation

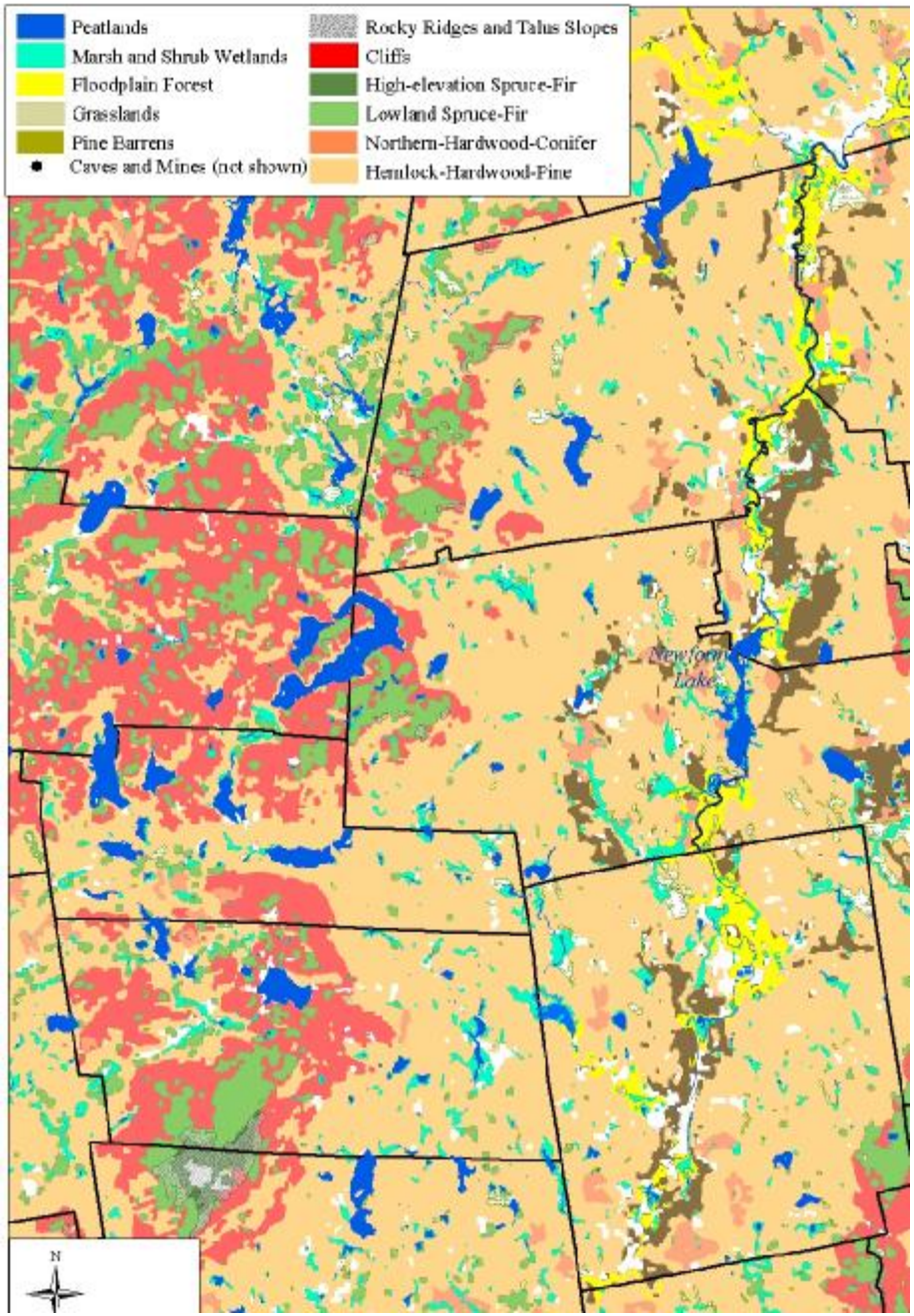
Vegetation mgmt – airport runways and roadsides

Dispersal – barriers to movement

Mortality and collision – population viability and safety

NH Wildlife Habitat Land Cover





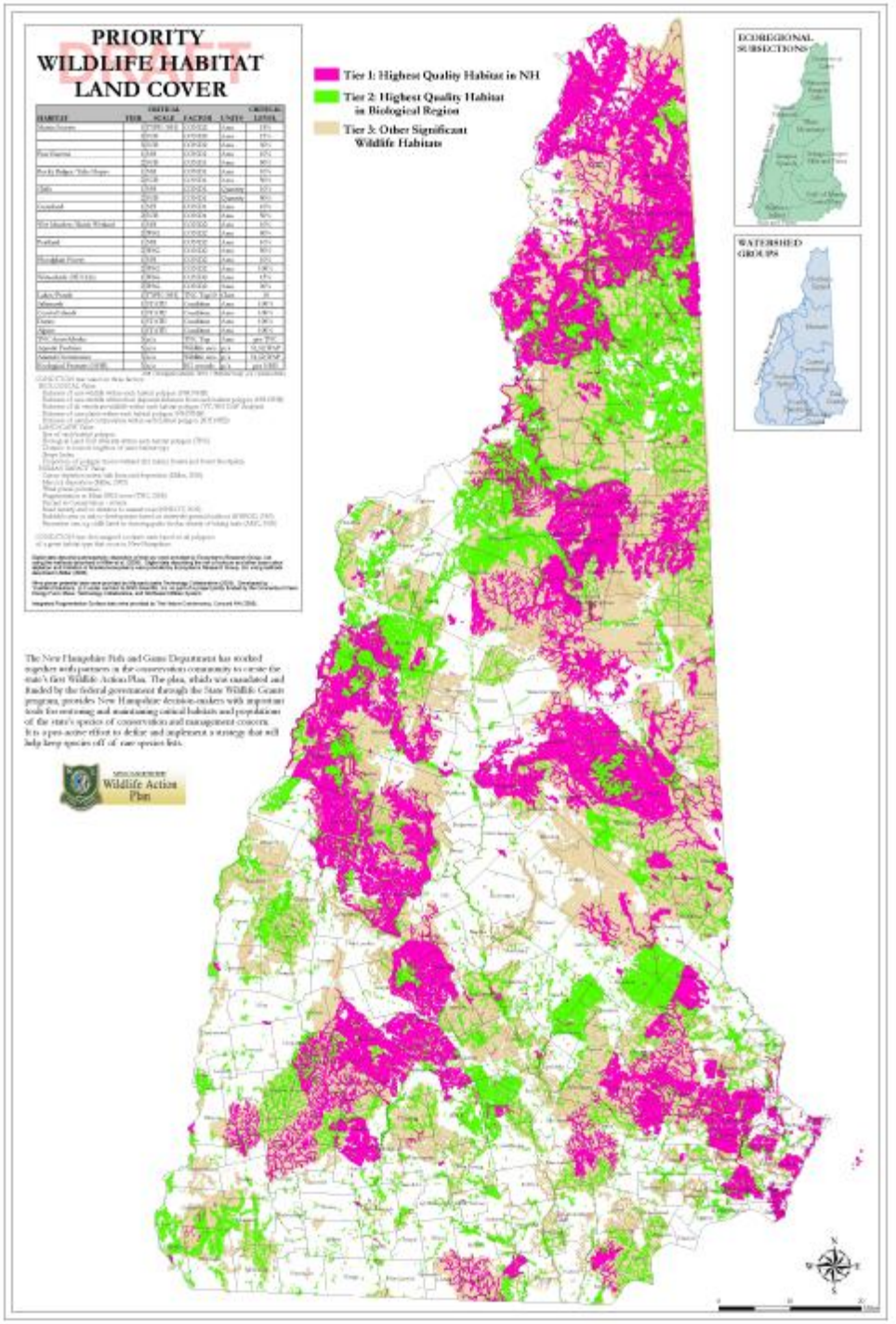
Habitat Condition Assessment

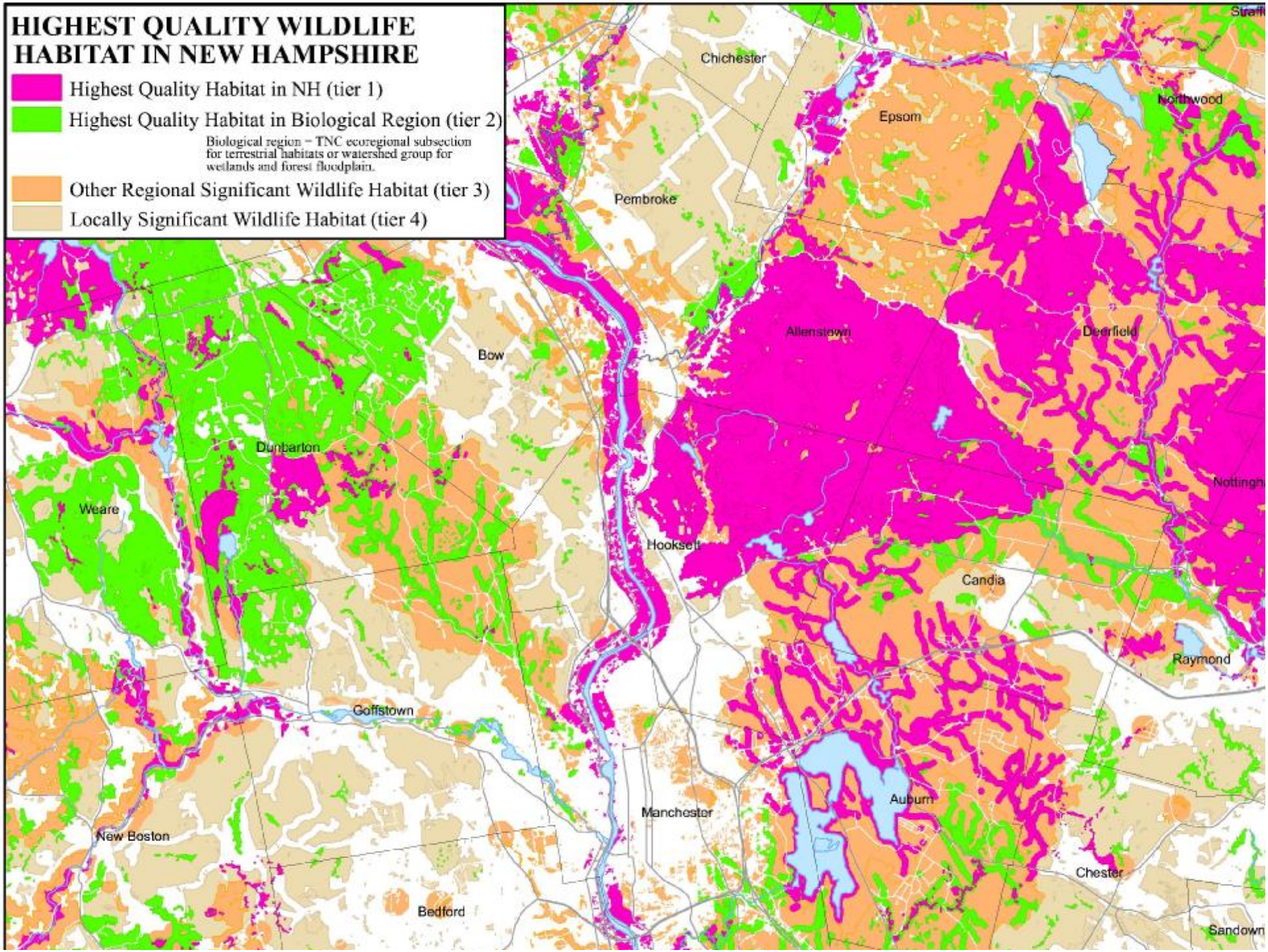
Top % of each habitat type.

Condition based on:

- biological,
- landscape and
- human influence parameters

And based on type of habitat.




HIGHEST QUALITY WILDLIFE HABITAT IN NEW HAMPSHIRE
Highest Quality Habitat in NH (tier 1)
Highest Quality Habitat in Biological Region (tier 2)
Biological region = TNC ecoregional subsection for terrestrial habitats or watershed group for wetlands and forest floodplain.
Other Regional Significant Wildlife Habitat (tier 3)
Locally Significant Wildlife Habitat (tier 4)
Chichester
Epsom
Northwood
Pembroke
Allenstown
Deerfield
Bow
Dunbarton
Weare
Hooksett
Candia
Raymond
Goffstown
Auburn
Manchester
New Boston
Chester
Bedford
Sandown


Protect Undeveloped Habitat Blocks and other key wildlife habitats
Protect riparian & other wildlife corridors

Turning Products into Action

- Deliver wildlife maps to partners and public
- Incorporate habitat conservation into local land planning
- Promote role of regional planning commissions in Landscape-scale conservation

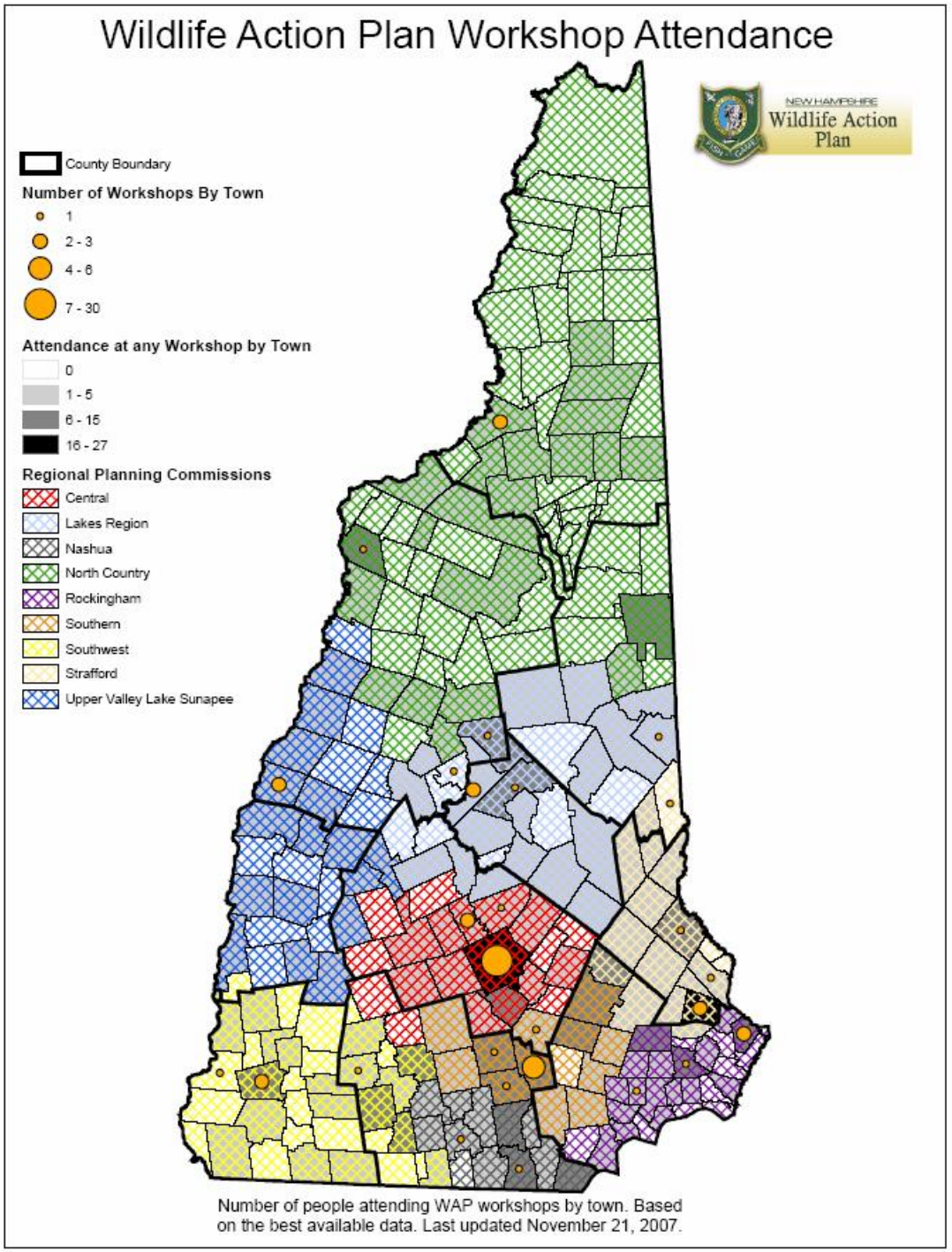
50 workshops –NH WAP

Maps to 180 towns

10 training sessions

1,300 attendants

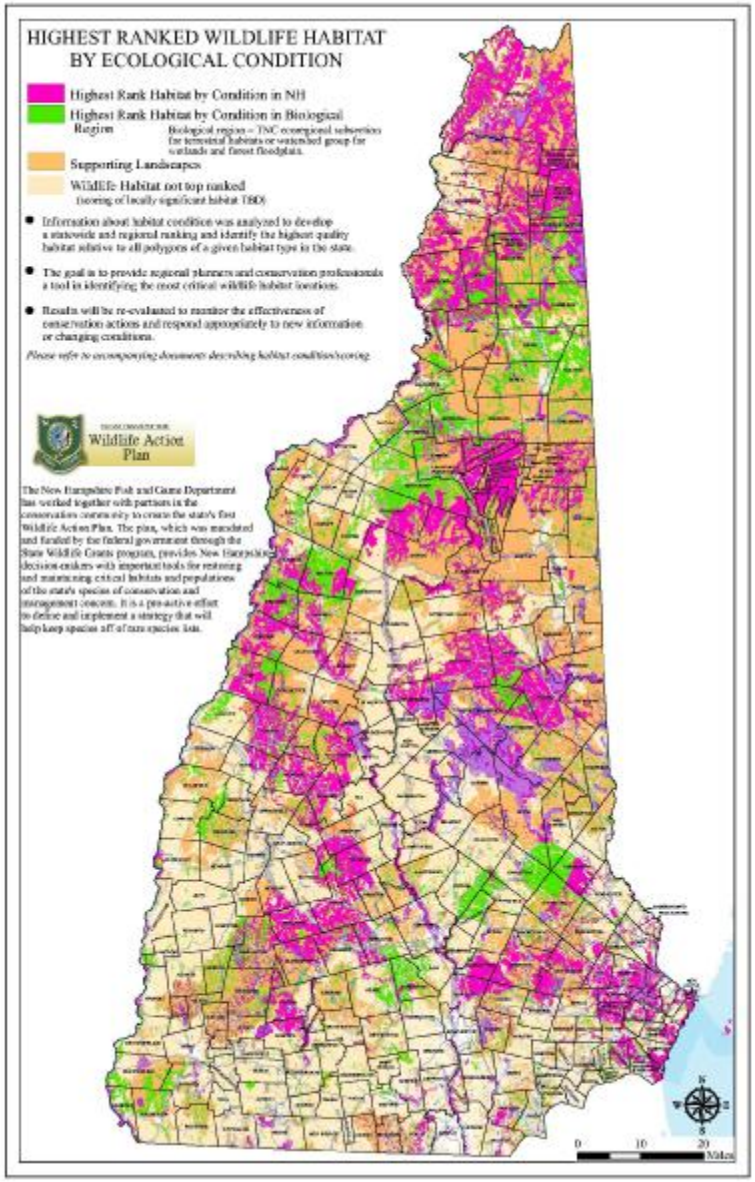
133 communities

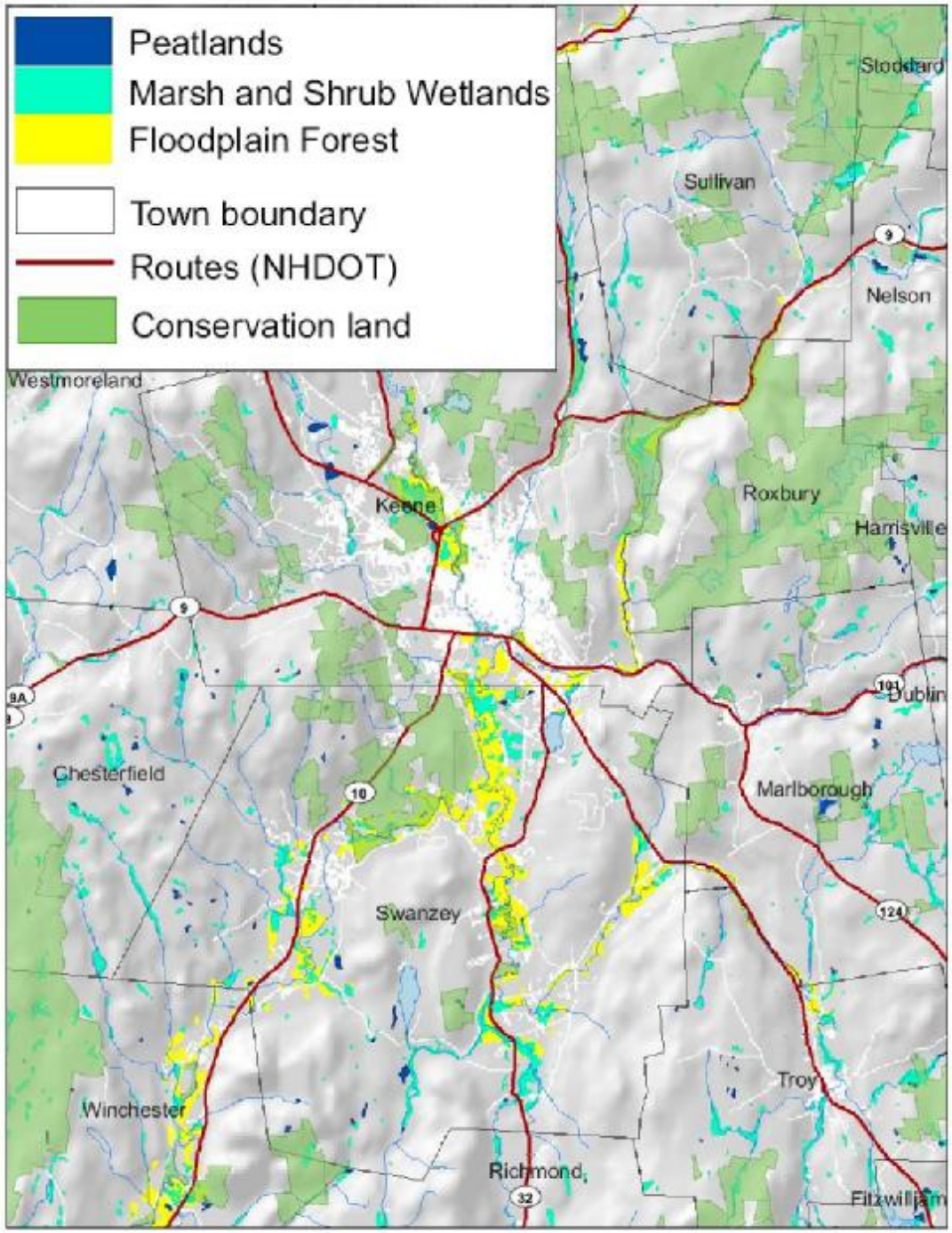


Impact Assessment

1. Avoid
2. Minimize
3. Mitigate

Use NH WAP maps to help prioritize area to <u>avoid</u>, <u>protect</u> & <u>mitigate</u>



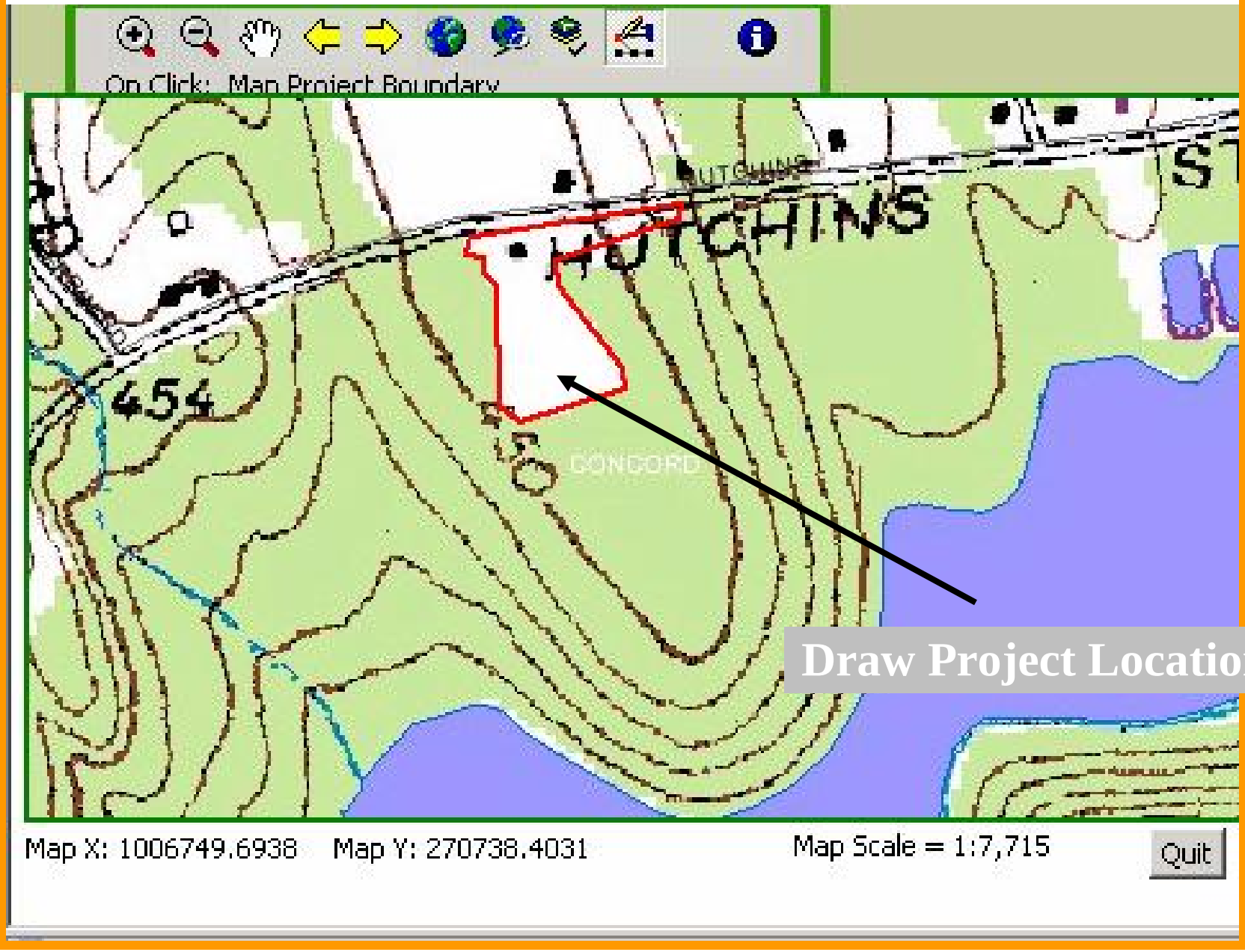

Peatlands
Marsh and Shrub Wetlands
Floodplain Forest
Town boundary
Routes (NHDOT)
Conservation land
Stoddard
Sullivan
Nelson
Westmoreland
Keene
Roxbury
Harrisville
Dublin
Chesterfield
Marlborough
Swanzey
Troy
Winchester
Richmond
Fitzwilliam
9
10
101
124
32

Avoiding Imperiled Species

New England Cottontail

Blanding's Turtle

Online Data Check Tool



Rare Species Screening Layer

Screening layer not seen by the applicant

The applicants ‘drawing’ is compared to the screening layer to determine if there is a potential ‘Hit’ near the proposed project location.

Local Issues

…usually BAD for small wildlife

Design to Reduce Impacts

Road Crossings For Wildlife

Nesting on Road Shoulders

Adopt Stream Crossing Guidelines for New Hampshire

Erosion control netting

Photo by Vermont Fish & Wildlife

Landscape Issues

UPLANDS
are
CRITICAL

to functions and
values of
WETLANDS

Connectivity

Unfragmented Lands

Large Habitat Blocks

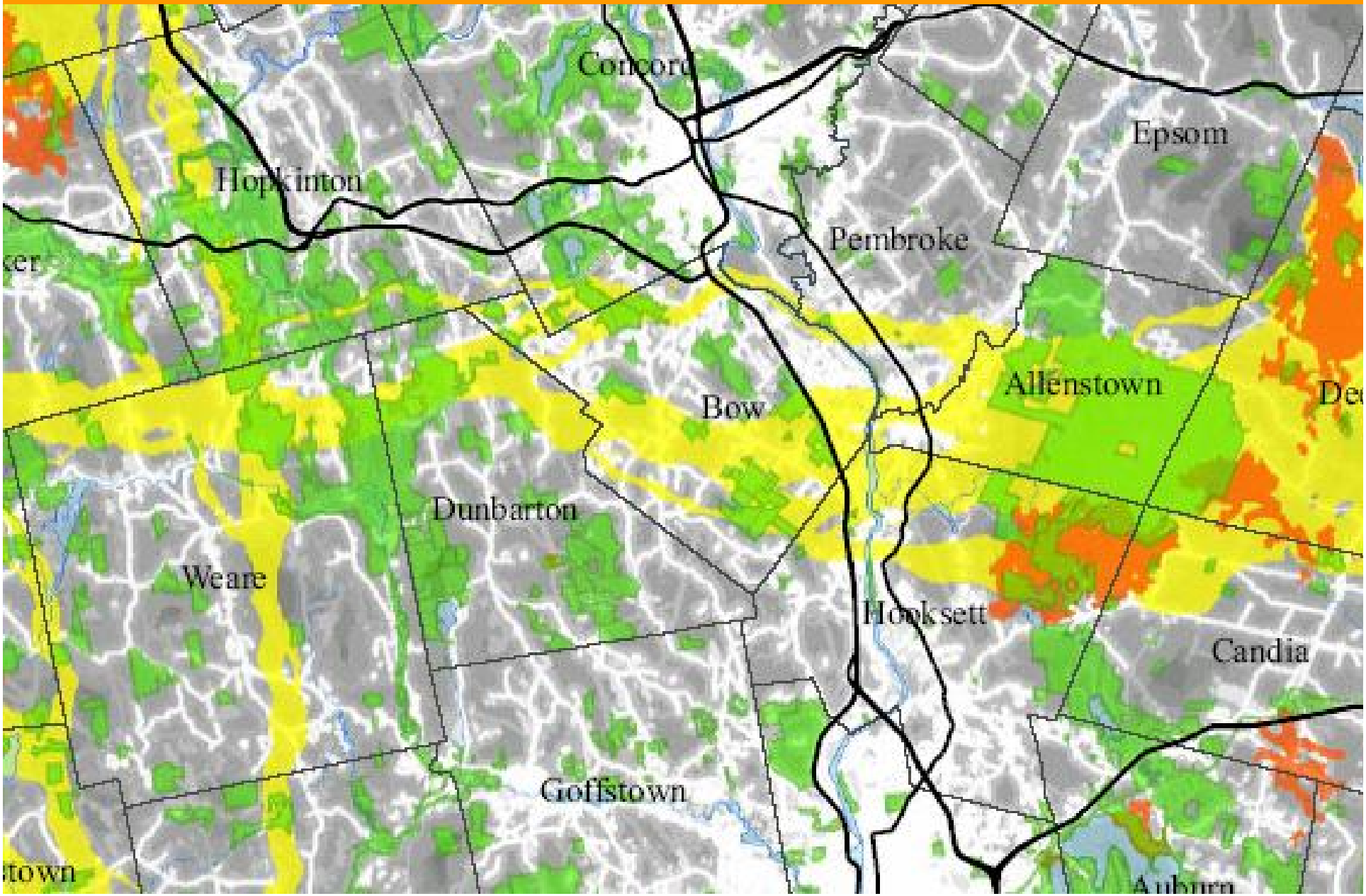
Core Forest Areas

Wetland Complexes

Natural Communities

Riparian Corridors

CONNECTIVITY ANALYSES



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1000
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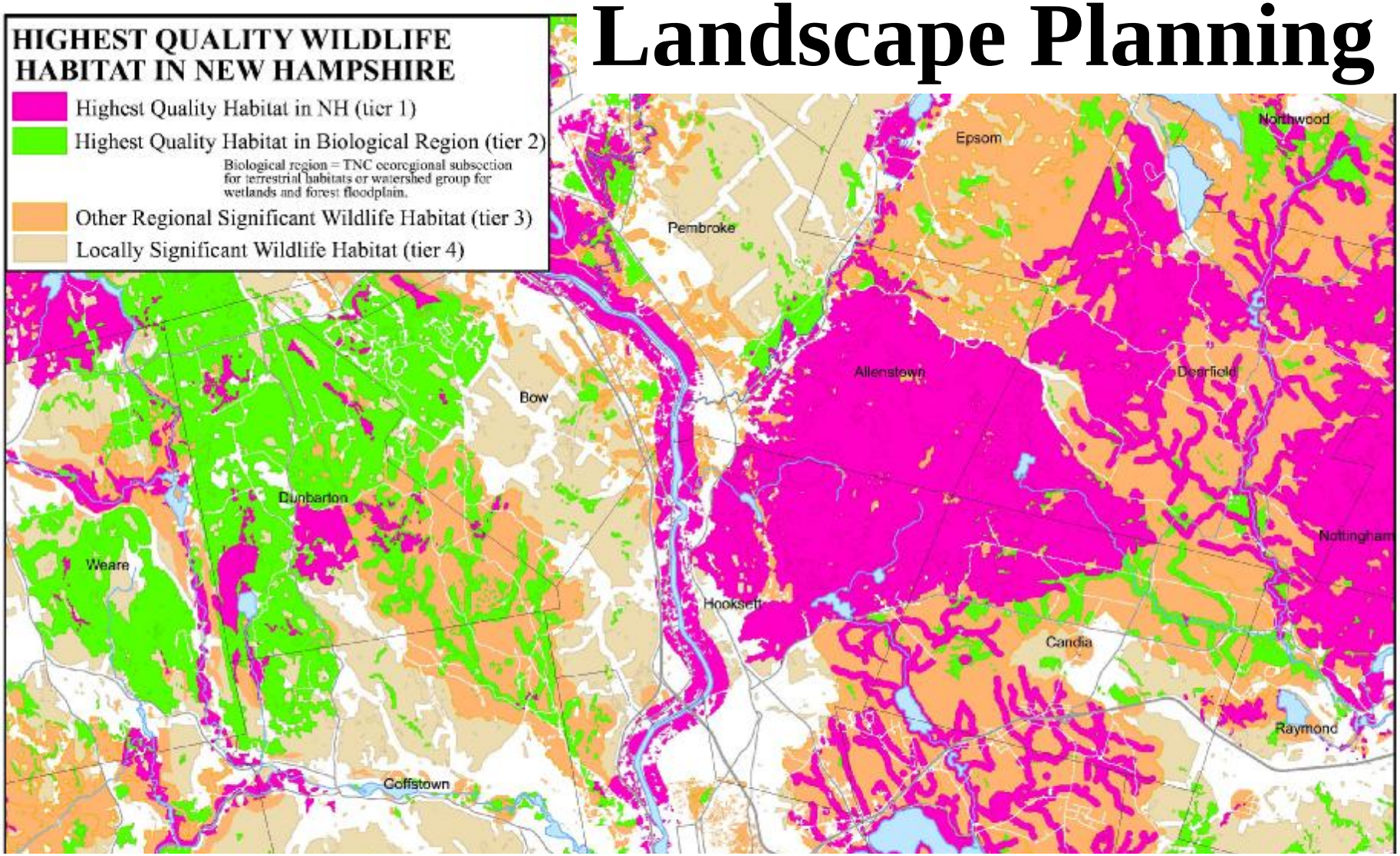
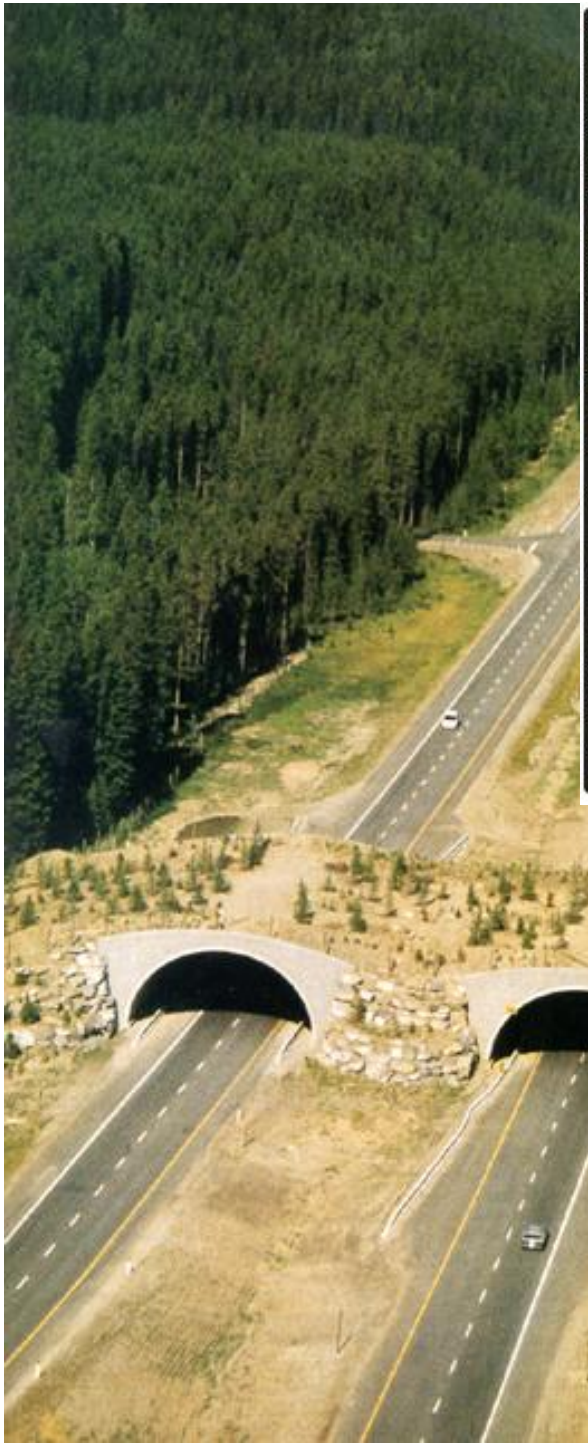
Blanding's turtles and human population density

Landscape Planning



Incorporate Maps & Data into Road Planning and Mitigation Selection at Local & Regional Scale



Improve landscape connectivity:

Identification of collision ‘hotspots’

Natural landscape features

Route 101

Partners in Amphibian & Reptile Conservation

The PARC Mission:

"To conserve amphibians, reptiles, and their habitats as integral parts of our ecosystem and culture through proactive and coordinated public/private partnerships."

PARTNERS IN AMPHIBIAN AND REPTILE CONSERVATION

www.parcplace.org

PARC & Roads

- Sponsored Symposium - Direct and Indirect Effects of Roads on Reptiles and Amphibians, Northeast Natural History Conference, 2006

- Box Turtle and Roads Outreach video clip
- Road salt working group
- Transportation speakers at annual meetings
- National PARC transportation working group

HABITAT MANAGEMENT GUIDELINES (HMG) FOR AMPHIBIANS AND REPTILES

PARTNERS IN AMPHIBIAN AND REPTILE CONSERVATION