



Aquatic Resource Mitigation Fund



**Lori Sommer- Wetland Mitigation Coordinator
Land Resource Management Program**

NEW HAMPSHIRE THRESHOLDS FOR WETLAND IMPACTS

- NHDES Wetlands Bureau
 - Regulatory program that issues permits for work in wetlands and surface waters

Permitee must meet avoidance and minimization then...

- **Mitigation** is required
 - Wetland impacts > 10,000 square feet
 - Any tidal impact
 - Stream impacts > 200 linear LF
 - Temporary and secondary impacts (ACOE) to buffers of streams and vernal pools



Floodplain protection – Isinglass River, Barrington

MITIGATION SEQUENCE

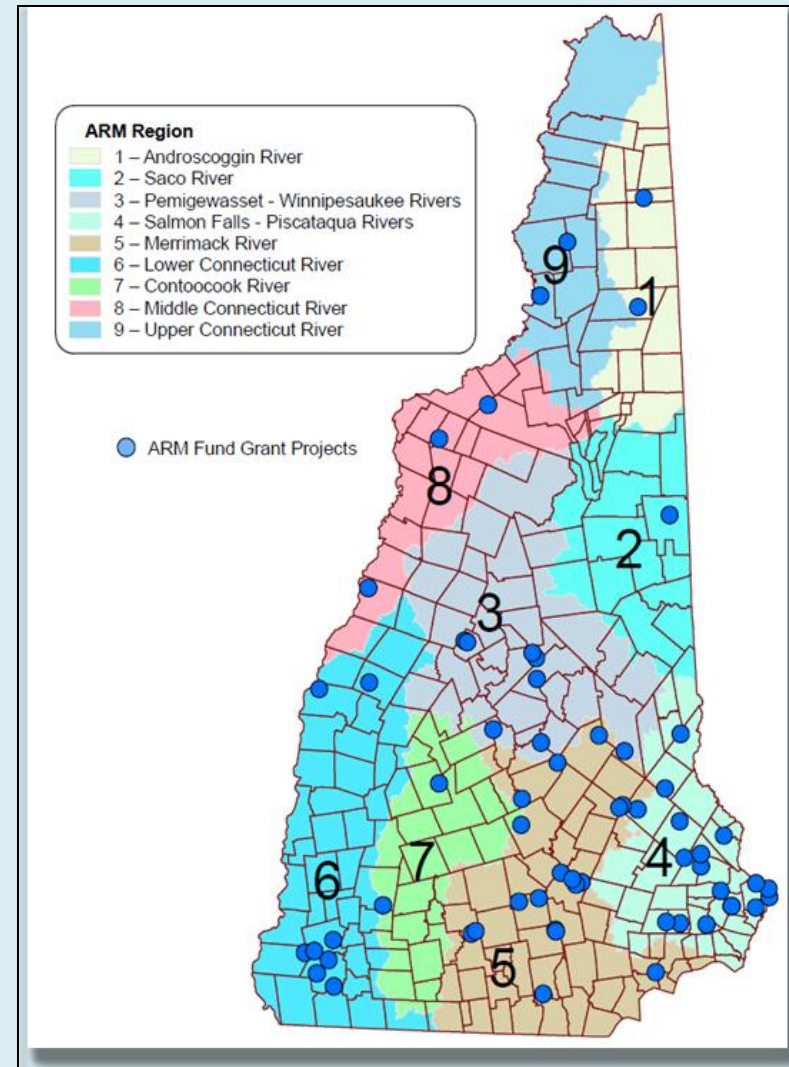
- Permit applicant ***must first consider*** a project prioritized by the town as ***permitee-responsible mitigation***
- Town Conservation Commission is responsible for creating a “Mitigation Priority List”
- If no suitable, local mitigation projects then payment into the **Aquatic Resource Mitigation ("ARM") Fund**



Protection of a 30-acre wetland complex in the Great Bay watershed that is Blanding's Turtle habitat

THE AQUATIC RESOURCE MITIGATION FUND

- **NH ARM Fund (RSA 482-A:28 – 33)**
 - Option for projects that have difficulty finding good local mitigation
 - Payments are made for wetland and stream impacts *for state and federal permits*
 - Funds are pooled by 9 watersheds
 - Money is disbursed as competitive grants in same watershed
- **NHDES Wetlands Bureau oversees the ARM Fund Program**
 - NHDES assumes mitigation responsibility
 - Administers the program and distributes funds as grants



PROJECTS FUNDED BY THE AQUATIC RESOURCE MITIGATION FUND

Preservation of high-quality wetlands and streams and their buffers

Acquisition of land, conservation easements, transaction fees, and costs for protection in perpetuity

Wetland and stream restoration

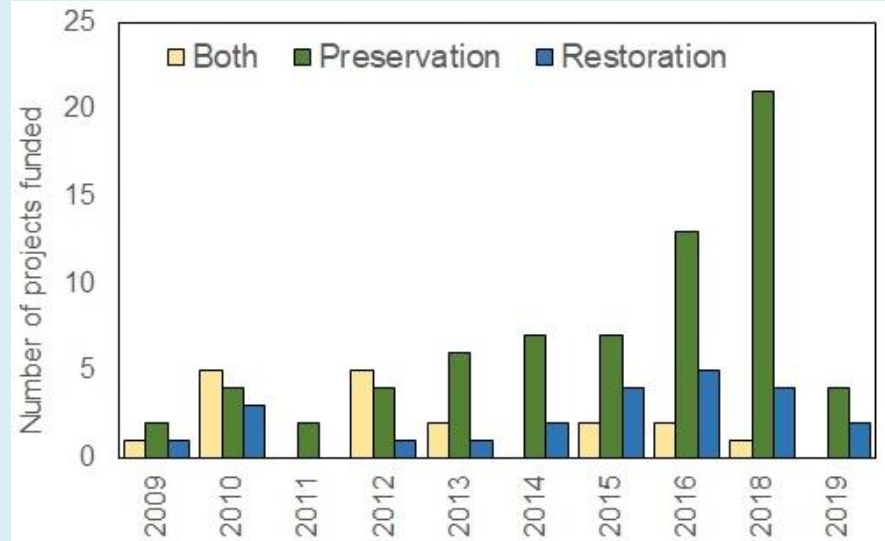
Design, construction costs, plantings, and monitoring

Tidal improvements

living shoreline and coastal stability

Restore aquatic connections

- Dam removals
- Perched culverts that are barriers & flood roads
- Instream habitat modifications



ARM FUND APPLICATION MATERIALS

FULL APPLICATION SUBMISSION CHECKLIST

Required items include:

- ☐ Full-Application Form with applicant's original signature.
- ☐ Project Narrative that includes the following:
 - Project Overview
 - Wetland and Stream Restoration/Enhancement (if applicable)
 - Summary of the Aquatic Resources and Functional Significance
 - Table 1- Table of Aquatic Resources
 - Proximity and Connectivity to Conserved Lands
 - Overall Mitigation Potential
 - Overall Effectiveness and Partnership Potential
 - Cost-Effectiveness and Partnership Potential
 - Table 2- Project budget
- ☐ MAP 1- Aquatic Resources Map
- ☐ MAP 2- Wildlife Habitat Map
- ☐ MAP 3- Landscape Connectivity Map
- ☐ APPENDIX A- Wetlands Functional Assessment or Stream Survey
- ☐ APPENDIX B- Design plans (restoration projects only)
- ☐ APPENDIX C- Letters of support
- ☐ APPENDIX D- Appraisal information (land protection only)
- ☐ APPENDIX E- Files for 1) project boundary 2) wetlands 3) streams and 4) vernal pools using the template
- ☐ SHAPEFILES- Files for 1) project boundary 2) wetlands 3) streams and 4) vernal pools using the template

APPLICATION FORMAT – SUBMIT ONE COPY OF EACH

- 1) Paper Original – includes original signature for the legal contact.
 - Print on 8½" x 11" paper and staple or clip pages – please do not spiral bind the applications.
 - Print maps and photos in color.
 - Letters of support should be included in the application package, do not send these separate.
 - Digital Copy – A copy of the paper application on an external USB drive or CD.
- 2) Digital Copy – Provide the shapefiles with the digital copy.

Submission

- Applications may not be submitted via email.
- Applications that are late or incomplete cannot be accepted.
- Mailed applications must be postmarked no later than 4 PM on August 7.
- Hand-delivered applications must be signed-in at NHDES office by 4 PM on August 7.

AQUATIC RESOURCE MITIGATION FUND GRANT PROGRAM PACKAGE

GRANT APPLICATION AND INSTRUCTIONS

PRE-PROPOSAL DUE DATE: MAY 29, 2020

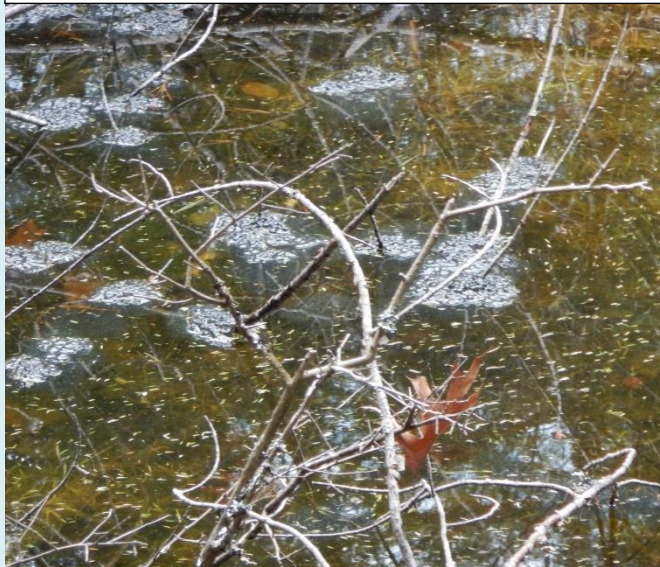
FULL APPLICATION DUE DATE: AUGUST 31, 2020

des.nh.gov
29 Hazen Drive, PO Box 954, Concord, NH 03302-0095



2020 GRANT ROUND SCHEDULE

APPLICATION STEPS	DEADLINES
Request for Pre-Proposals Released	February 1, 2020
Pre-Proposal Submission Deadline	May 29, 2020
Notify applicants for Full Application Submittal	Week of June 15, 2020
Full Application Submission Deadline	August 31, 2020
ACE Public Notice & Division of Historic Resources Review	Week of September 7, 2020
SSC and members of IRT Conduct Site Visits	September and October
SSC Evaluation & Scoring Meeting	October 22, 2020
IRT and Wetland Council Review/Approval	November 9, 2020
Announcement of Awards	December 1, 2020





Wildlife Biologist

Land Protection Specialist

Army Corps

EPA

Aquatic Ecologist

Wetland Scientist

GIS Specialist

Permitter

ARM Specialist

EPA

ARM Coordinator

Wildlife biologist

Botanist

EPA

Army Corps & Staff

2020 ARM FUNDS

ARM Region

- 1 – Androskoggin River
- 2 – Saco River
- 3 – Pemigewasset - Winnepesaukee Rivers
- 4 – Salmon Falls - Piscataqua Rivers
- 5 – Merrimack River
- 6 – Lower Connecticut River
- 7 – Contoocook River
- 8 – Middle Connecticut River
- 9 – Upper Connecticut River

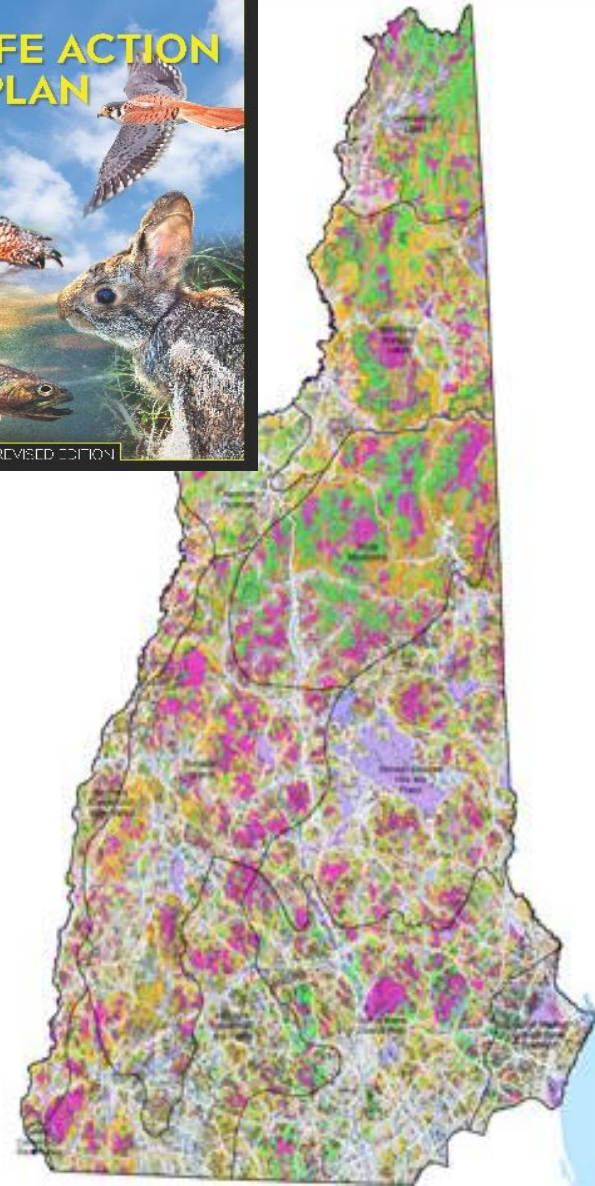
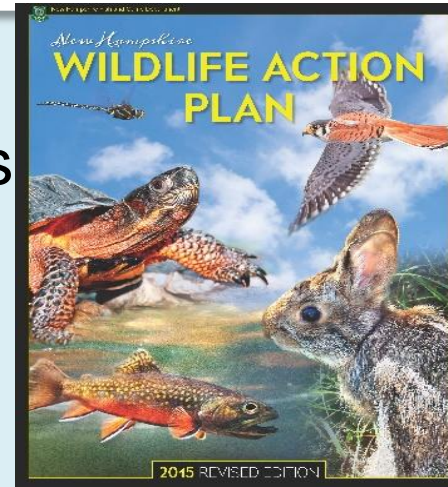
**Available Funding for
2020 Grant Round
~\$3,800,000 statewide**

**Final amounts will be
posted to website in
January*



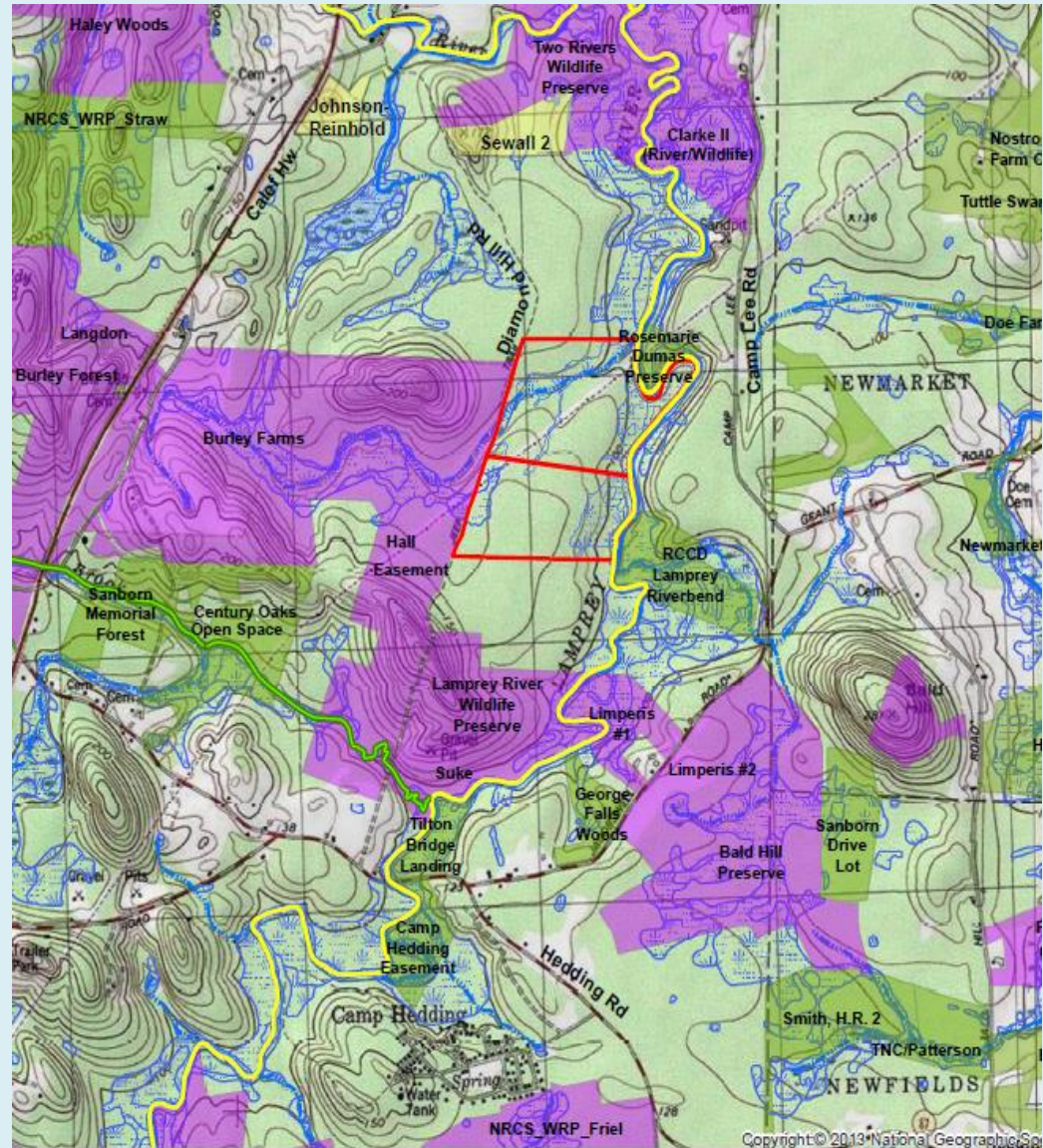
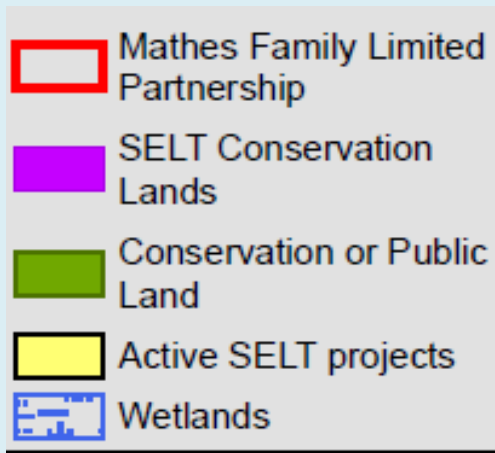
KEYS TO A COMPETITIVE ARM FUND PROJECT

- Locations that meet multiple criteria and will protect key functions and values
 - Fish and Wildlife Habitat
 - Water Quality
 - Flood Storage
- Valuable aquatic resources & restoration opportunities
 - Prime wetlands, vernal pools, designated rivers, important fisheries
- Focus on wildlife habitat & connections
 - Areas ranked as Tier 1 or Tier 2 by the WAP
 - Locations with threatened and endangered species, and exemplary communities



A CONNECTED LANDSCAPE IS MORE RESILIENT

- Project in Exeter with Southeast Land Trust
- 129 acres of land along approx. 1 mile of Lamprey River
- 40 acres of high value wetlands
- 3 documented vernal pools
- Under threat of development
- 3 Rare turtles
- High priority water supply lands



ENHANCING COASTAL FUNCTIONS



Living Shoreline at
Wagon Hill Farm, Durham

\$250,000 ARM Fund Grant in 2018

PROJECT PARTNERS

ARM
NHDES Coastal Program
Town of Durham
UNH
SRPC

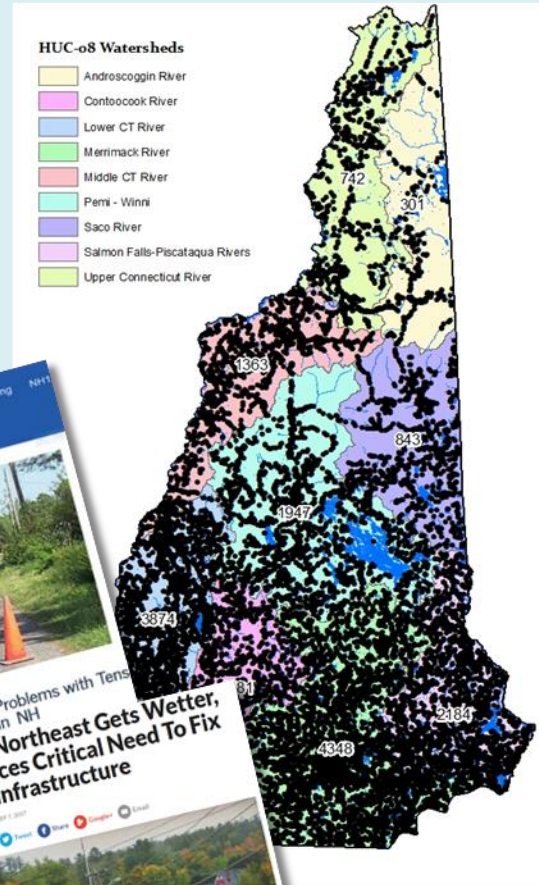
WAP Tier 1
Reconnects salt marsh and
halts eroding bank
5 years of monitoring data



Stream Crossings in New Hampshire

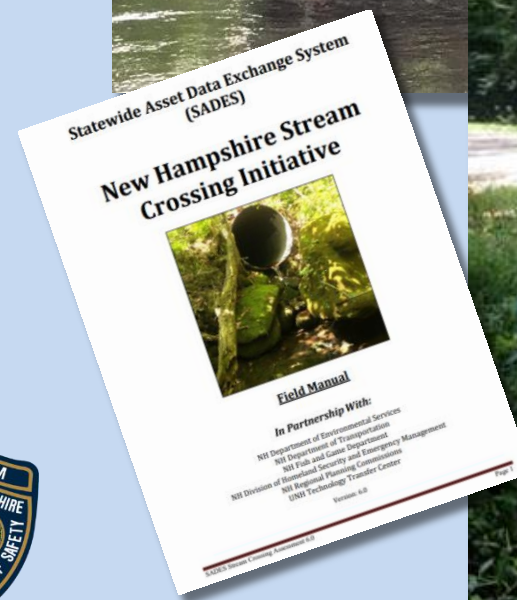
- Many stream crossings are old and undersized
- Public safety hazard
- Need for habitat and reconnection
 - Barriers for fish and turtles
 - Bank and streambed erosion
 - Washed out sediment and road material ends up in rivers

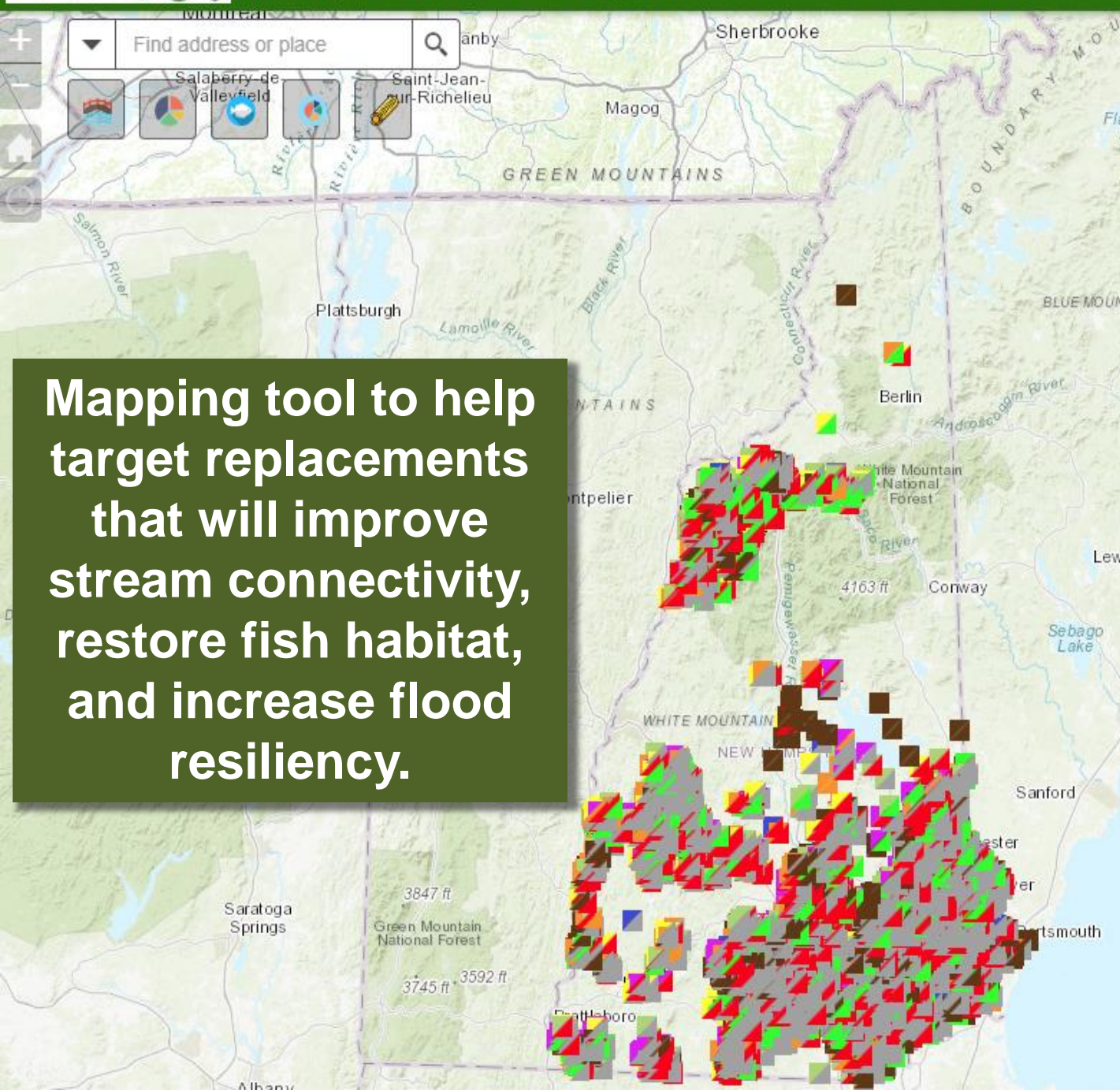
~20,000 total crossings in NH!



New Hampshire Stream Crossing Initiative

- Stream crossing surveys across the state
- Consistent protocol
- Data on stream channel and current structure conditions
- Score culverts
 - ✓ Aquatic organism passage
 - ✓ Geomorphic compatibility
 - ✓ Asset condition
 - ✓ Flood vulnerability





Mapping tool to help target replacements that will improve stream connectivity, restore fish habitat, and increase flood resiliency.

Legend

Survey Pictures



Structure Condition

- Good
- Fair
- Poor

Aquatic Organism Passage

- Full AOP
- Reduced AOP
- No AOP except adult salmonids
- No AOP all organisms
- Unable to Score

Geomorphic Compatibility

- Fully Compatible
- Mostly Compatible
- Partially Compatible
- Mostly Incompatible
- Fully Incompatible
- Wetland Crossing
- Lake/Pond Crossing
- Unable to Score

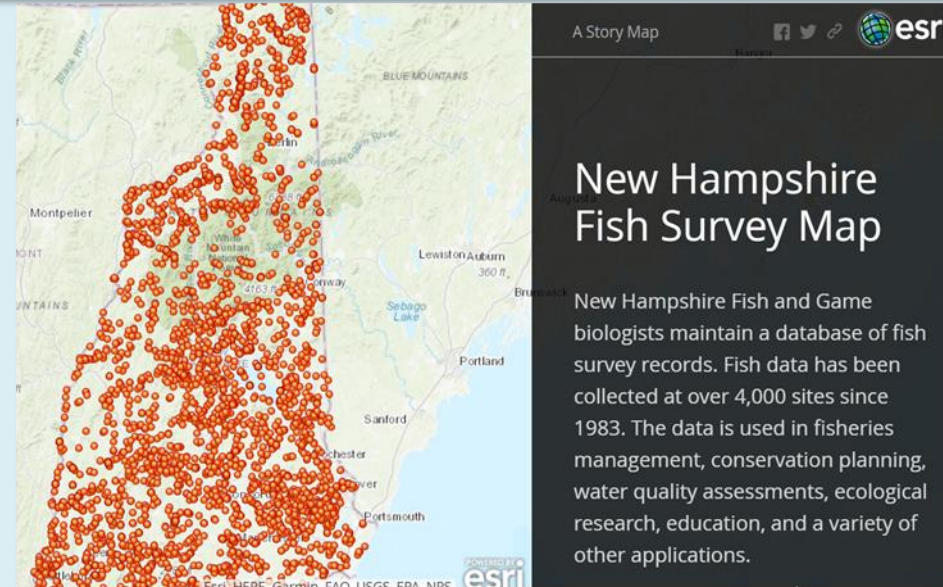
Flood Hazard Record



Aquatic Restoration Mapper – Tool to Identify Priority Replacements

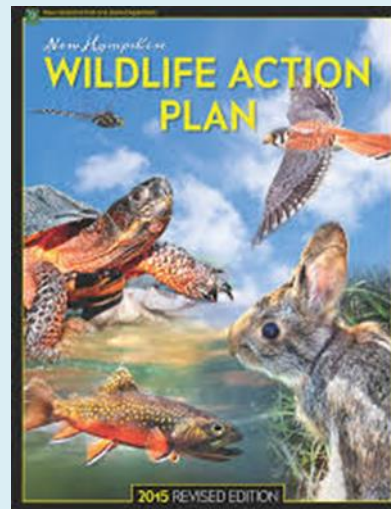
High quality fish and wildlife habitat

- NHFG Wildlife Action Plan
- Threatened and endangered species
- Brook Trout/coldwater fishery
- NHFG Fish Surveys across state
- Reconnects a significant length of stream miles



Improve aquatic organism passage is focus

Flooding and erosion problems



Stream Restoration Projects that can be Used as Mitigation

Projects that will restore aquatic connectivity, improve habitat, & increase flood resiliency

- **Removing aquatic barriers**
- Daylighting buried streams
- Habitat enhancements for fish and wildlife (e.g. wood additions and grade controls)
- Floodplain reconnection
- Bank stabilization with bioengineering
- Removing hard bank armoring
- Removing tidal restrictions

Coir logs, wood, and buffer plantings can be used to stabilize stream banks rather than hard rock



Wood additions create pool habitat for Brook Trout in Nash Stream





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