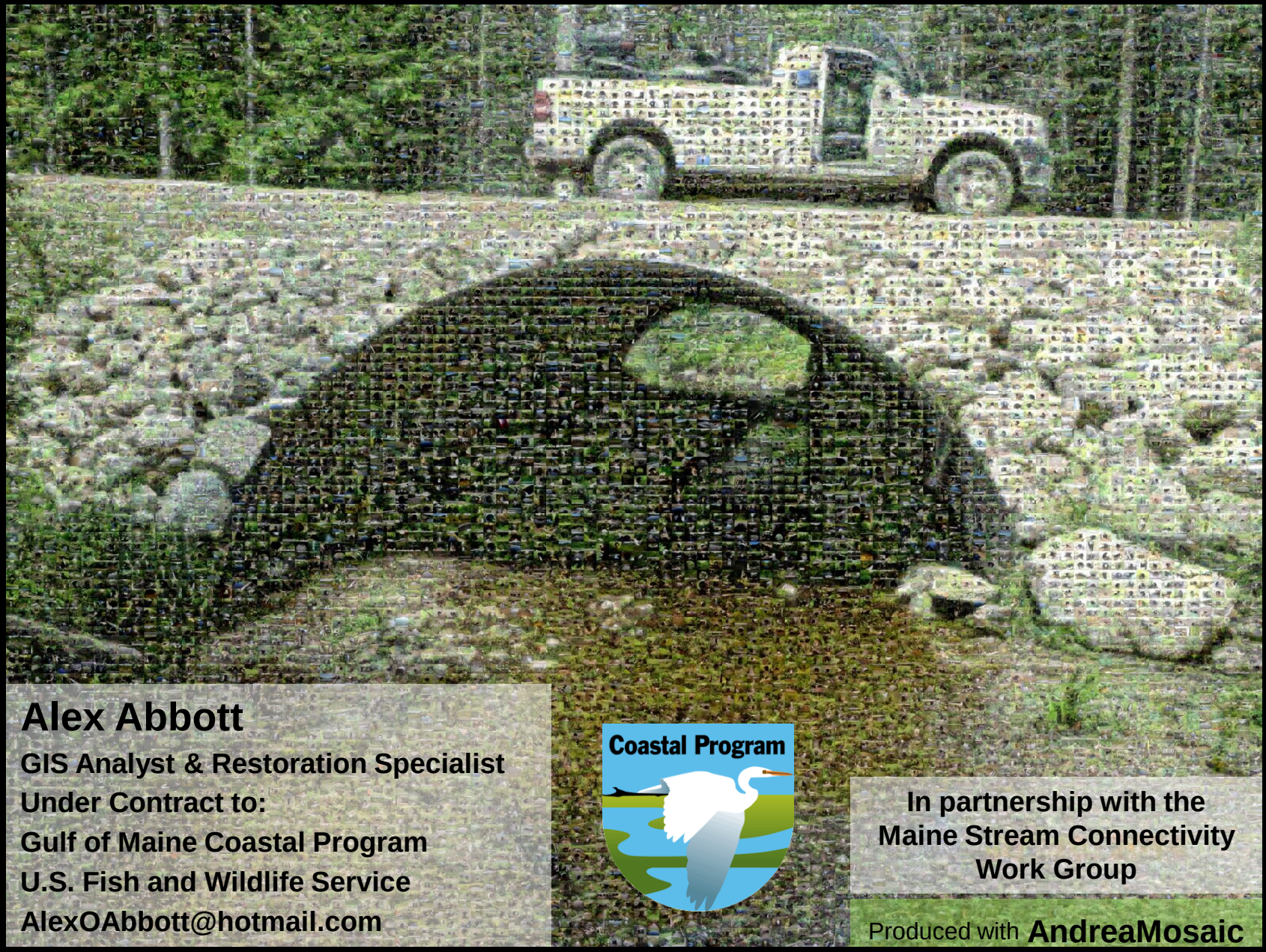
Maine Stream Restoration Collaborative



Alex Abbott

GIS Analyst & Restoration Specialist

Under Contract to:

Gulf of Maine Coastal Program

U.S. Fish and Wildlife Service

AlexOAbbott@hotmail.com

In partnership with the Maine Stream Connectivity Work Group

Produced with **AndreaMosaic**

Collaboration is the key!

Maine Stream Connectivity Work Group

Maine Stream Connectivity Work Group 2012-2013 Report

Maine Coastal Program
Department of Agriculture,
Conservation and Forestry

Assets: Sea-run Species Vulnerable

Assets: Wildlife Vulnerable


CT Wildlife


ME Herp. Society


M. Gallagher


CT Audubon

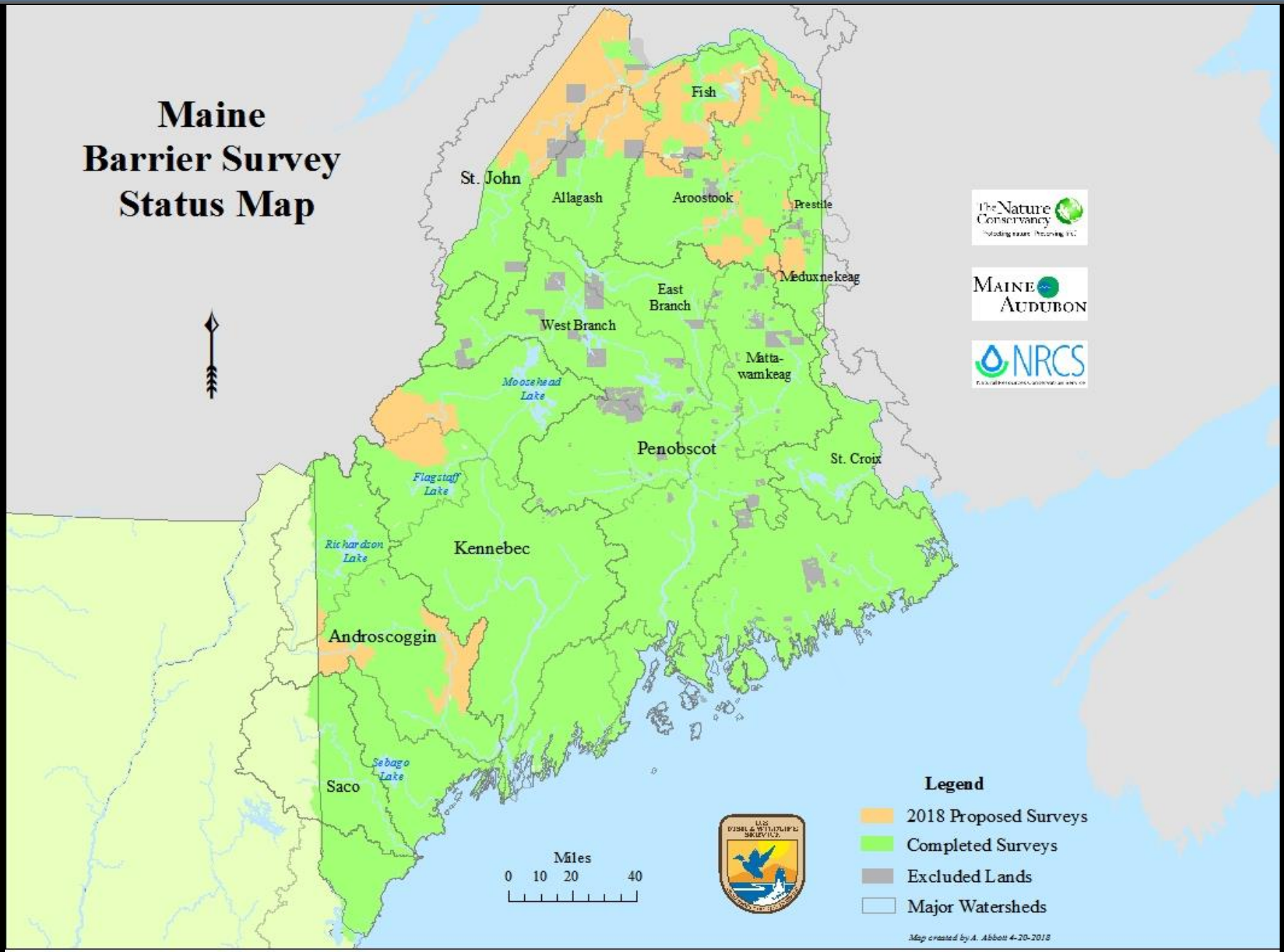
Assets: People & Infrastructure Vulnerable

Maine DOT
Private Landowners
Maine Municipal Assoc.
Acadia National Park
Katahdin Woods & Waters
Towns of

Buckfield	Mt. Chase
Lincolnville	Whitefield
Brownfield	Newburgh
Phillips	Brownville
Waterford	Freeport
Porter	Yarmouth
Brunswick	Starks
New Gloucester	ETC.

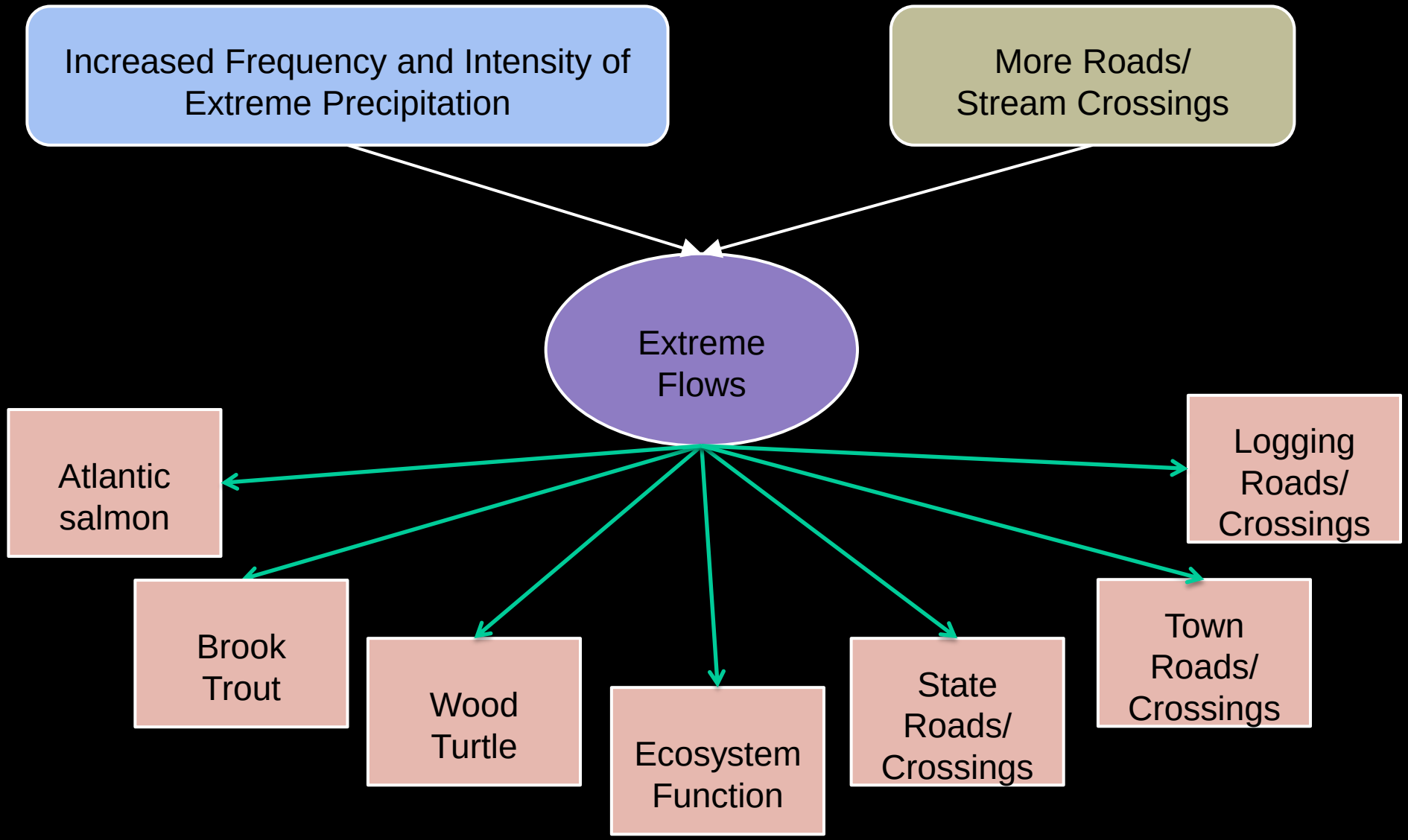
Crossing Failures Make Partners

Assets: Inventory Data Essential



2 Assess Vulnerability & Risks

Assets



3 Investigate Options

Possible Solutions:

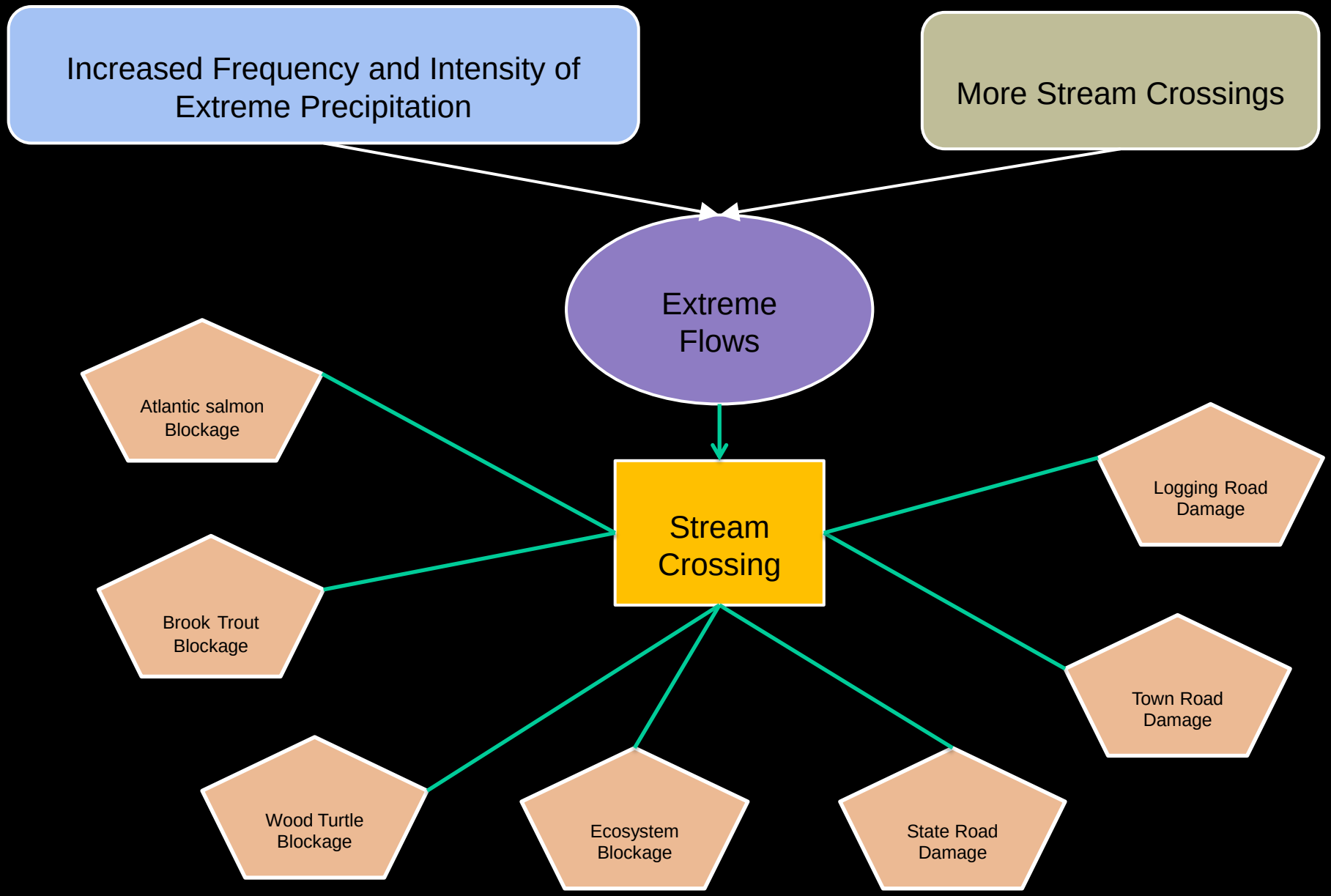
1) Wait for failure

2) Plan for Resilient Replacements

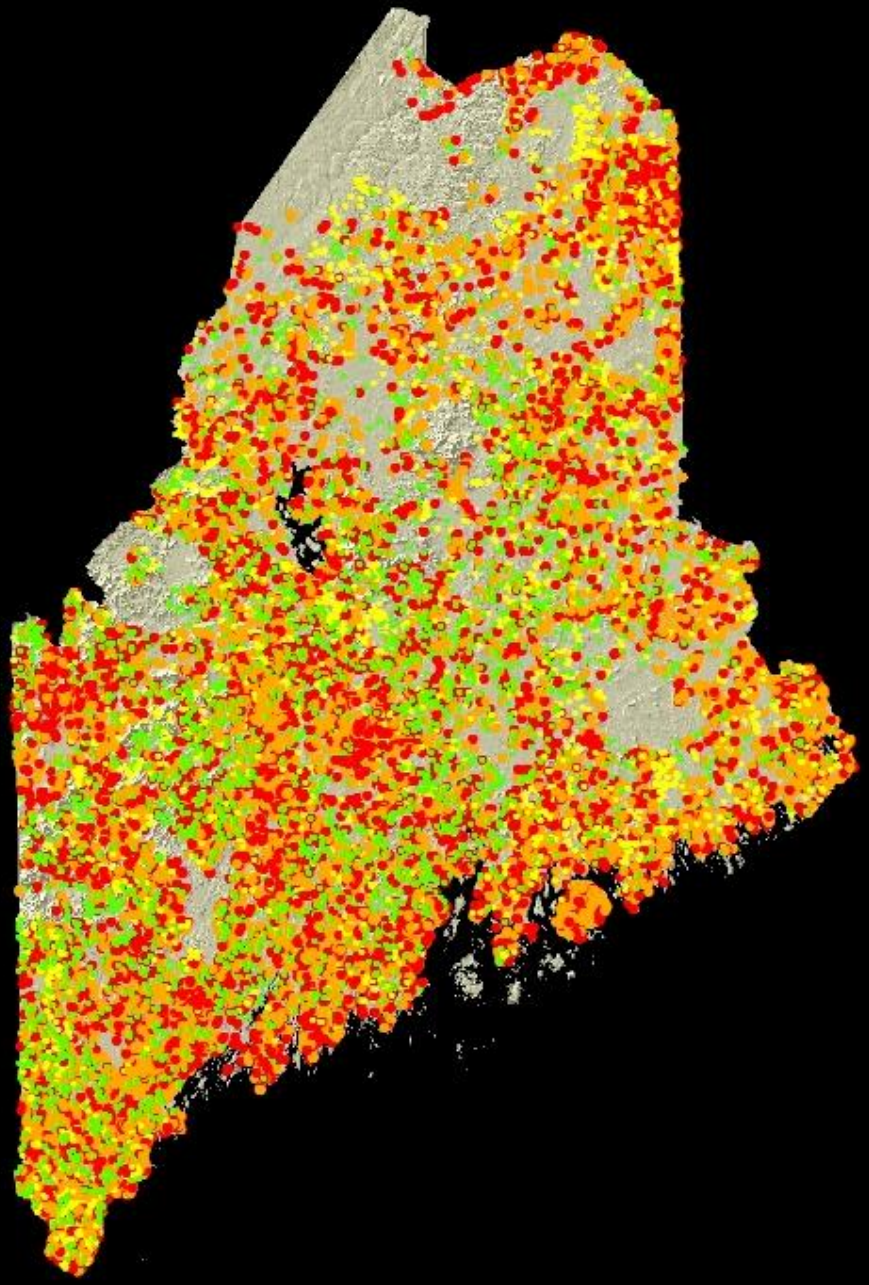
Feasible Actions for Priority Sites:

Stream Simulation Design (USFS) guides capacity, but not structure selection

Multiple Co-Benefits



4 Prioritize & Plan

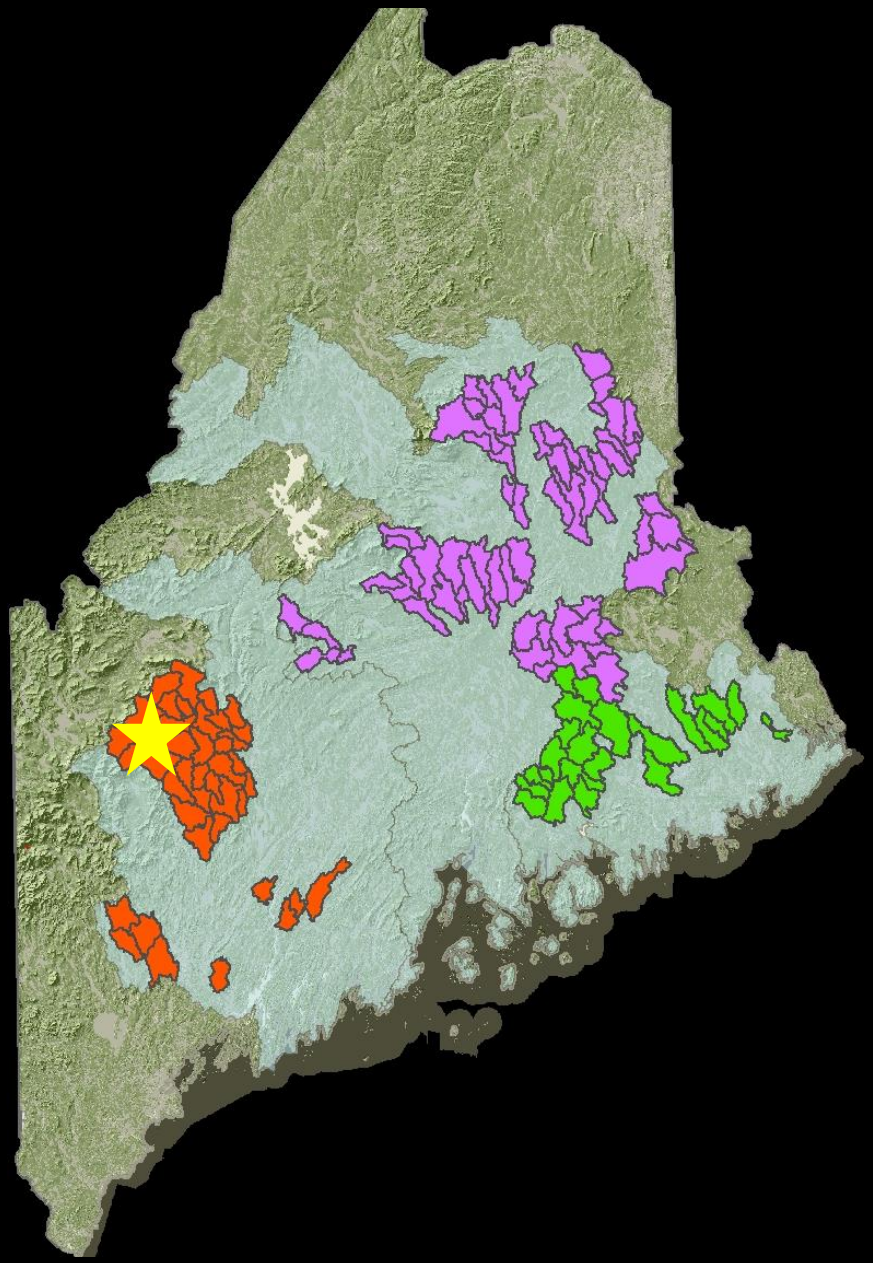


24,000

Potential

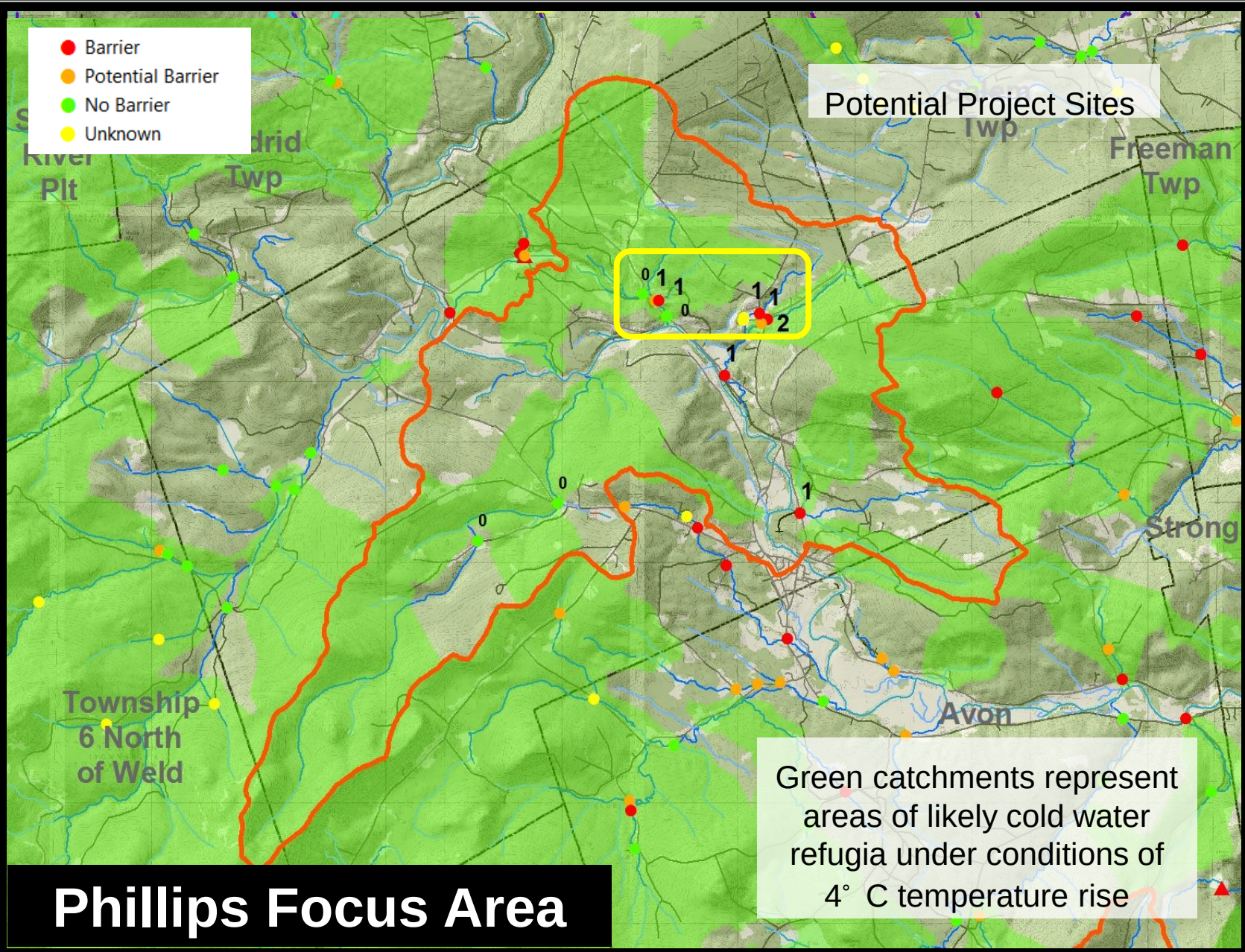
Sites

Many
Ways
to
Prioritize



Atlantic Salmon Focus Areas

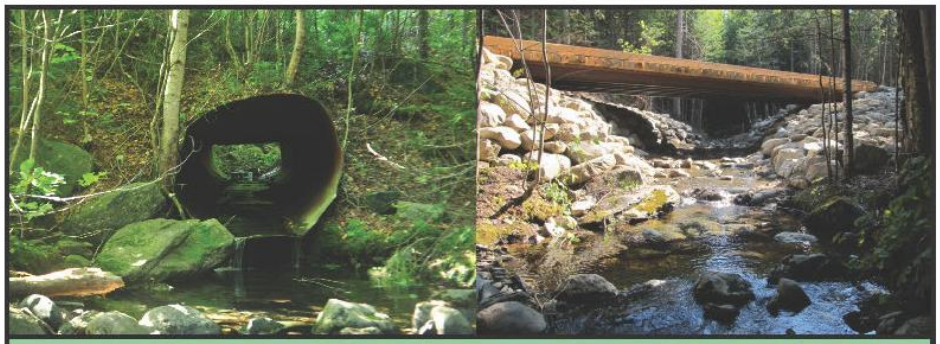
4 Prioritize & Plan



Possible criteria for prioritization

- ✓ Ability to increase resilience (impact)
- ✓ Low environmental impact
- ✓ Ability to implement (public support, political feasibility)
- ✓ Socially responsible (equity)
- ✓ Economic feasibility (financial feasibility, cost/benefit)
- ✓ Regionally responsible
- ✓ Synergy with comprehensive plan
- ✓ Ability to deal with future change

Stream Simulation Training



Stream Simulation Design Workshop for Road-Stream Crossings

This 4.5 day workshop will present the USDA Forest Service's Stream Simulation method, an ecosystem-based approach for designing and constructing a channel through the road-stream crossing structure that reestablishes physical and ecological continuity along the stream. Stream Simulation Design matches the road-stream crossing to the dimensions and characteristics of the natural channel to provide unimpeded fish and other aquatic organism passage, restore natural channel characteristics and fluvial processes, and maximize the long-term stability of the structure.

This workshop will teach participants the Stream Simulation methodology of collecting and interpreting channel data at road-stream crossing sites, applying and integrating these data to develop engineering-based stream simulation design channels and road-stream crossing structures. Workshop participants will work in interdisciplinary teams throughout the course to assess road-stream crossing scenarios at different stages of the stream simulation design process from site assessment to construction. Field exercises at multiple sites will complement and reinforce concepts presented in the classroom as participants identify, assess, and discuss various ecological, geomorphic/hydrologic, and engineering issues.

Limited to 60 participants. *Preference will be given to individuals directly involved in design and installation of road-stream crossing projects.*

Date: July 11-15, 2016

Location: Bates College
Lewiston, ME

Tuition: $150

Lodging and meals: $50/day

Registration Deadline: May 1

Workshop Sponsors:

U.S. Fish and Wildlife Service, U.S. Forest Service, Project SHARE, Maine Department of Environmental Protection, National Fish and Wildlife Foundation

Target Audience:

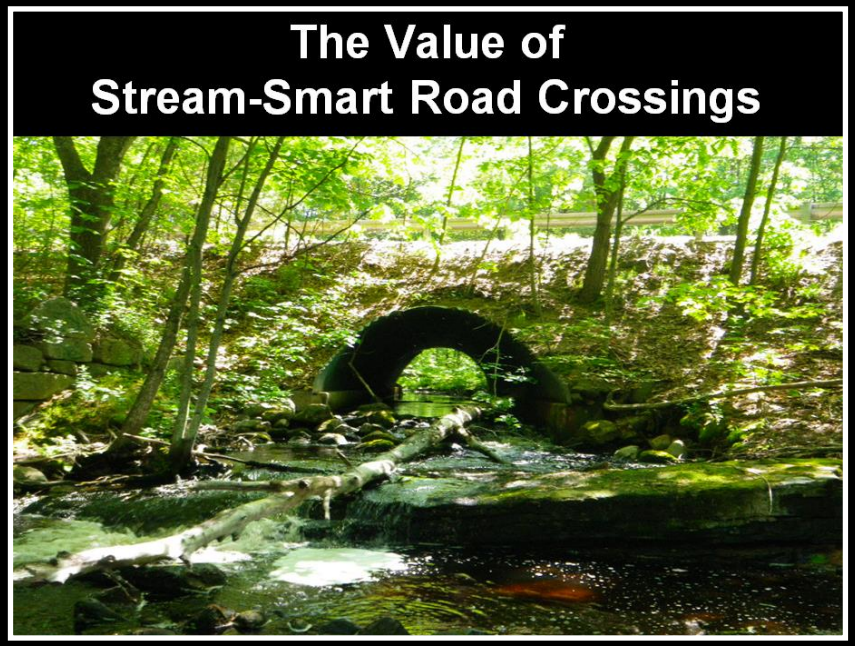
Forestry managers, municipal public works staff, civil engineers, geotechnical engineers, hydrologists, geomorphologists, ecologists, biologists, and geologists.

CEU credits will be available.

Contact for Additional Information:

Serena Doose, USFWS, 207-781-8364, serena_doose@fws.gov

Stream Smart Crossing Training



Phase I:

Introductory Concepts

Phase II:

Stream Survey Techniques

& Data Analysis

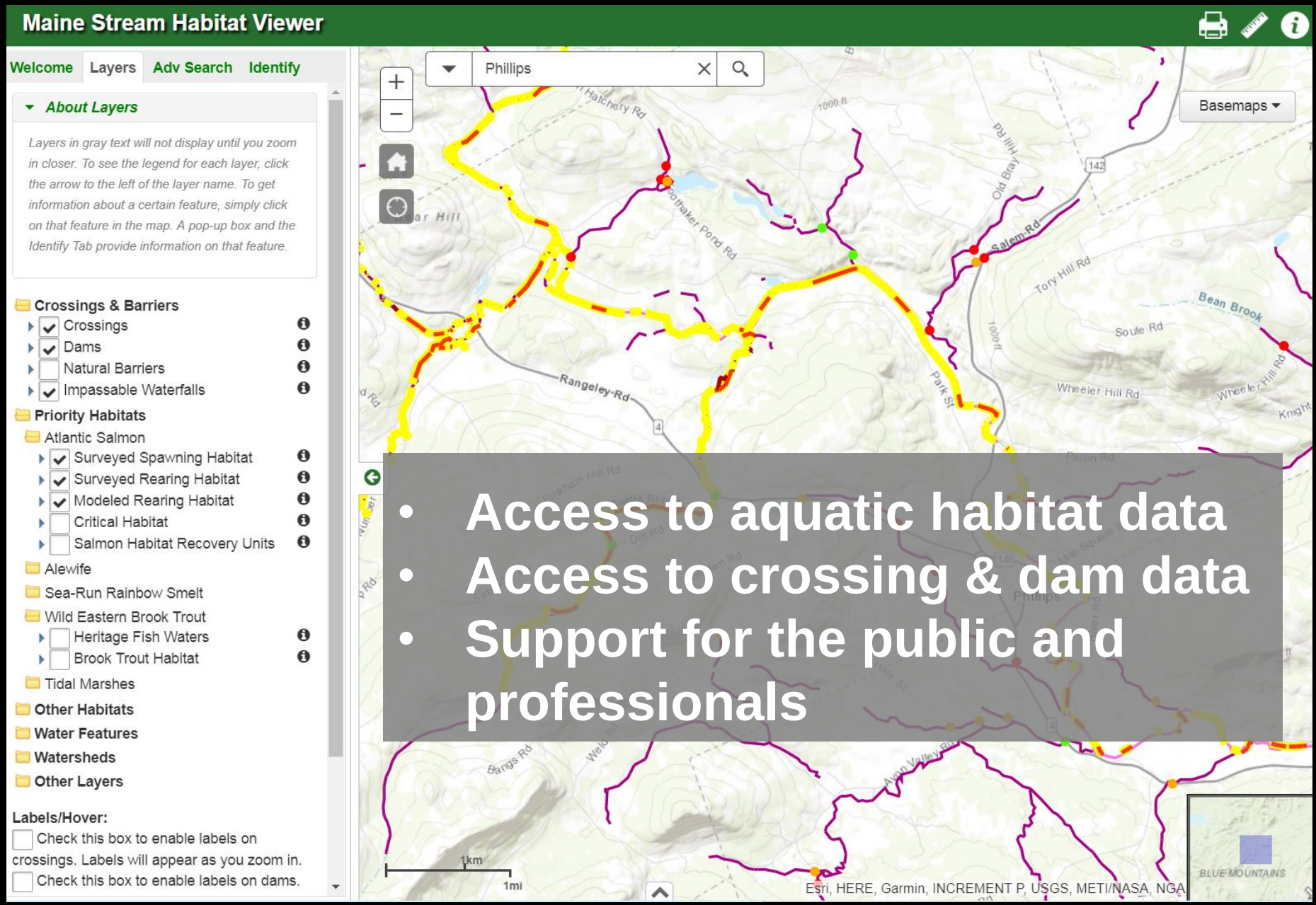
Stream Smart Crossing Training

Stream Smart: Embedded Concrete Box Culvert

3:15 / 12:19

5 Take Action

Maine Stream Habitat Viewer



- Access to aquatic habitat data
- Access to crossing & dam data
- Support for the public and professionals

Collaboration in Action: Funding

- **Maine Transportation Bond - $ 5 million**
  - **for municipal crossings**
- **Maine Aquatic Connectivity Restoration Project –**
  The Nature Conservancy/Natural Resources Conservation Service
  - **$6 million for private crossings**
- **NOAA Species in the Spotlight and Penobscot Blueprint funding for salmon and river herring**
- **National Fish and Wildlife Foundation**
- **Atlantic Salmon Federation**
- **Trout Unlimited**

<u>Help is available</u>, especially for <u>priority habitats</u>

Stream Simulation Assessment

Existing Conditions

Kennard Hill Road

Crossing Replacement

Cole Brook

Porter, Maine

SiteID # 10403

Culvert
Benchmark
Utility Pole
Utility Line

Contour Interval = 1 foot

Benchmarks:
BM1 [925.280] Yellow capped rebar at base of maple SE of crossing
BM2 [925.514] Mag. nail in base of utility pole SW of crossing
BM3 [925.806] Yellow capped rebar at base of ash NW of crossing
BM4 [923.473 Grey capped Rebar at base of 1" birch northeast of crossing

The data represented here was collected on 10/25/16 to provide stream profile, cross-section, and topographic information to guide site restoration, and is not a complete representation of all landscape and stream features.

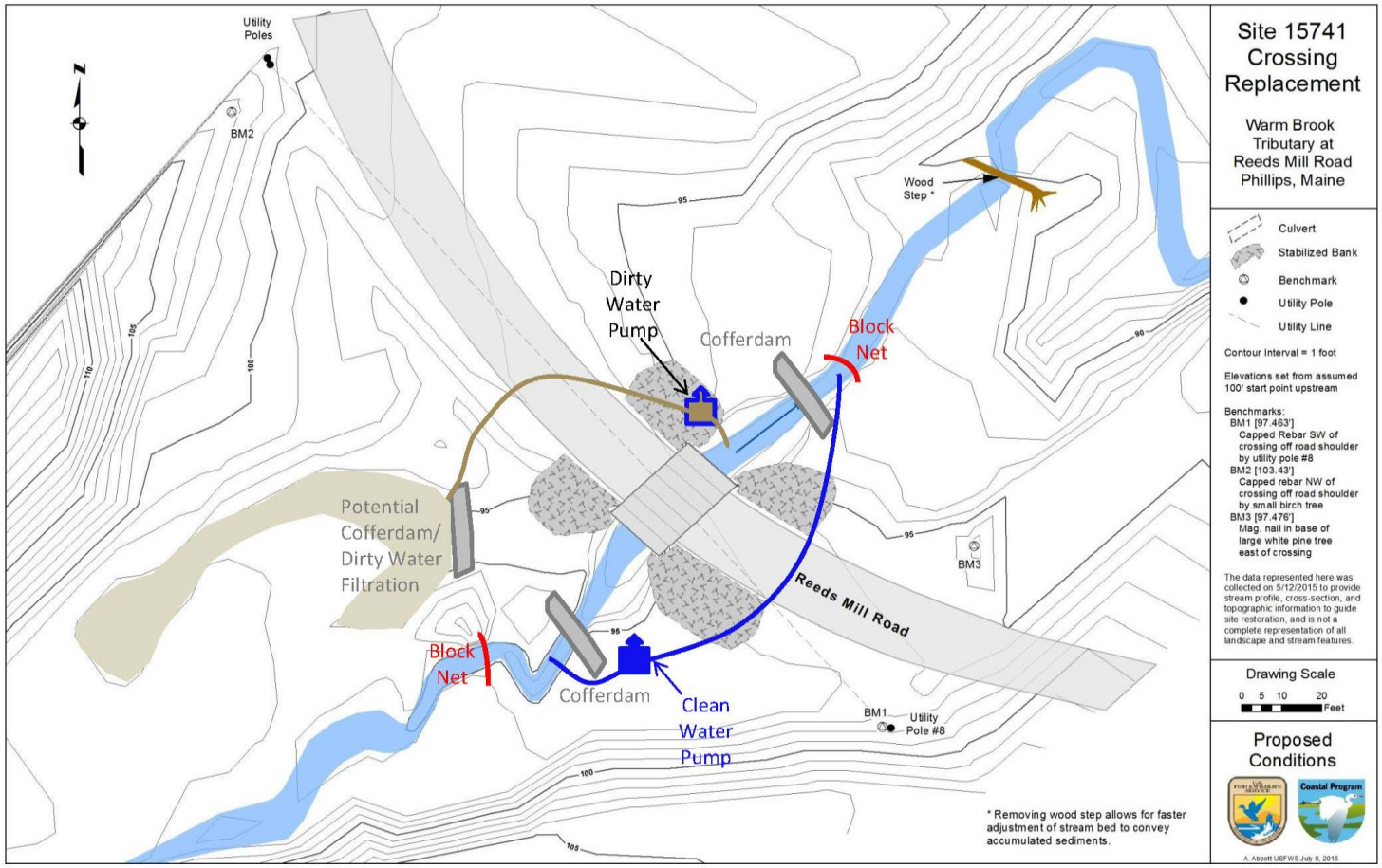
Feet
0 25 50

Coastal Program

A. Abbott USFWS October 27, 2016

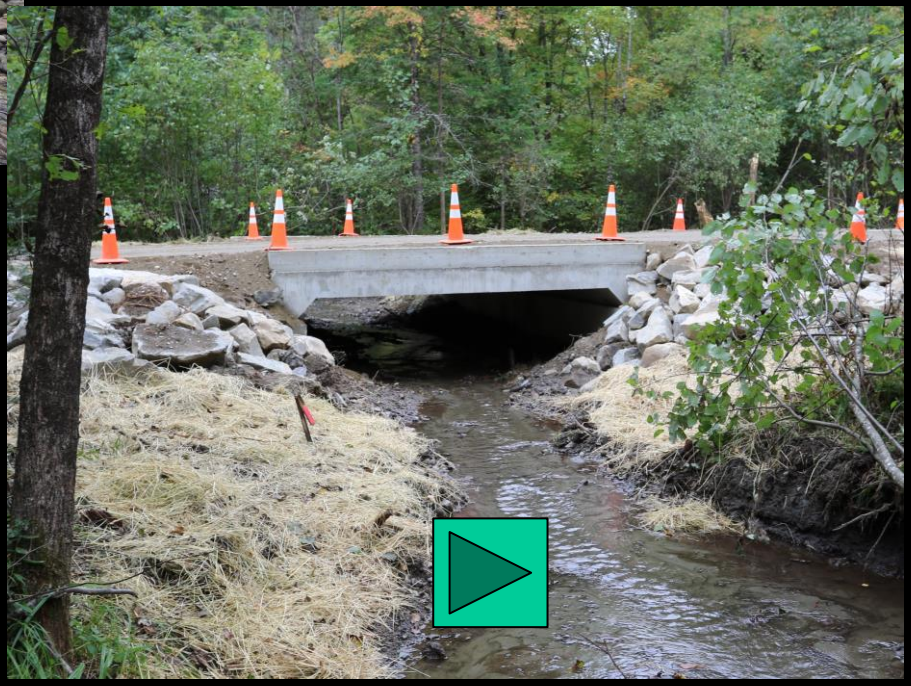
Stream Simulation Restoration Plans

Water Control: Cofferdam, Pump & Filtration Placement



Stream Simulation Restoration

Stream Simulation Restoration



Many Thanks to the members of Maine's

Stream Connectivity Work Group

For their commitment to improving aquatic organism passage and resiliency across Maine.