

Eco-Logical Webinar Series



In-Lieu Fee Programs

Presenters:

September 19, 2017

Tim Baumgartner, North Carolina Department of Environmental Quality

[Learn more about Eco-Logical at the FHWA website](#)

Judy Gates, Maine Department of Transportation

Mike Ruth, Federal Highway Administration, Office of Project Development and Environmental Review



U.S. Department of Transportation
Federal Highway Administration

What is Eco-Logical?

- An ecosystem methodology for planning and developing infrastructure projects
- Developed by eight Federal agency partners and four State DOTs
- Collaboration between transportation, resource, and regulatory agencies to integrate their plans and identify environmental priorities across an ecosystem



The Integrated Eco-Logical Framework

1. **Build and strengthen collaborative partnerships**
2. **Integrate natural environment plans**
3. **Create a Regional Ecosystem Framework (REF)**
4. **Assess effects on conservation objectives**

Partner
Share Data
Analyze Effects

5. **Establish and prioritize ecological actions**
6. **Develop crediting strategy**

Identify key sites
and actions

7. **Develop programmatic consultation, biological opinion, or permit**
8. **Implement agreements, adaptive management, and deliver projects**
9. **Update REF**

Document
Implement
Evaluate

Mitigation in the IEF (REF)

- REF (Step 3) is a cornerstone of the Eco-Logical approach
- By integrating resource data with transportation data, the REF helps transportation and environmental agencies identify joint needs and priorities
- Data in the REF is used to build a mitigation approach
 - Identify sites
 - Set priority sites
- Mitigation approaches can help implement and organize the needs and priorities identified through the REF

Step 6: Develop a Crediting Strategy

- Step 6 seeks to integrate tools and strategies for environmental crediting into the Eco-Logical process
- In-Lieu Fee (ILF) mitigation is one type of mitigation that can be used to compensate for unavoidable impacts. In this approach to mitigation, a permittee pays a fee to a third party instead of conducting project-specific mitigation or buying credits from a mitigation bank.

Contact Information

Tim Baumgartner, Director, Division of Mitigation Services, North Carolina DEQ

- 919-707-8543 tim.baumgartner@ncdenr.gov

Judy Gates, Director, Environmental Office, MaineDOT

- 207-624-3100 Judy.Gates@maine.gov

Mike Ruth, Ecologist, FHWA Office of Project Development and Environmental Review

- (202) 366-9509 mike.ruth@dot.gov



Department of Environmental Quality
Division of Mitigation Services

Eco-Logical Webinar



WHO WE ARE...

- * Mission Statement:

Provide cost-effective mitigation alternatives that benefit North Carolina's water resources.

- * Fee based ----- No appropriated funds.

- * Began in ...

1997 - Wetlands Restoration Program

2003 - Ecosystem Enhancement Program

2016 – Division of Mitigation Services



WHAT WE DO



Supports
transportation
and
development:

**COST
CONTROLS
REGULATORY
ACCEPTANCE**

Compensatory
Mitigation for
stream,
wetland,
nutrient offset,
and riparian
buffer

Leverages
mitigation
investments
to the benefit
of the state's
natural
resources

PARTNERS
Landowners
Contractors
Investors
Engineers
Cities &
Counties

Volume of Mitigation

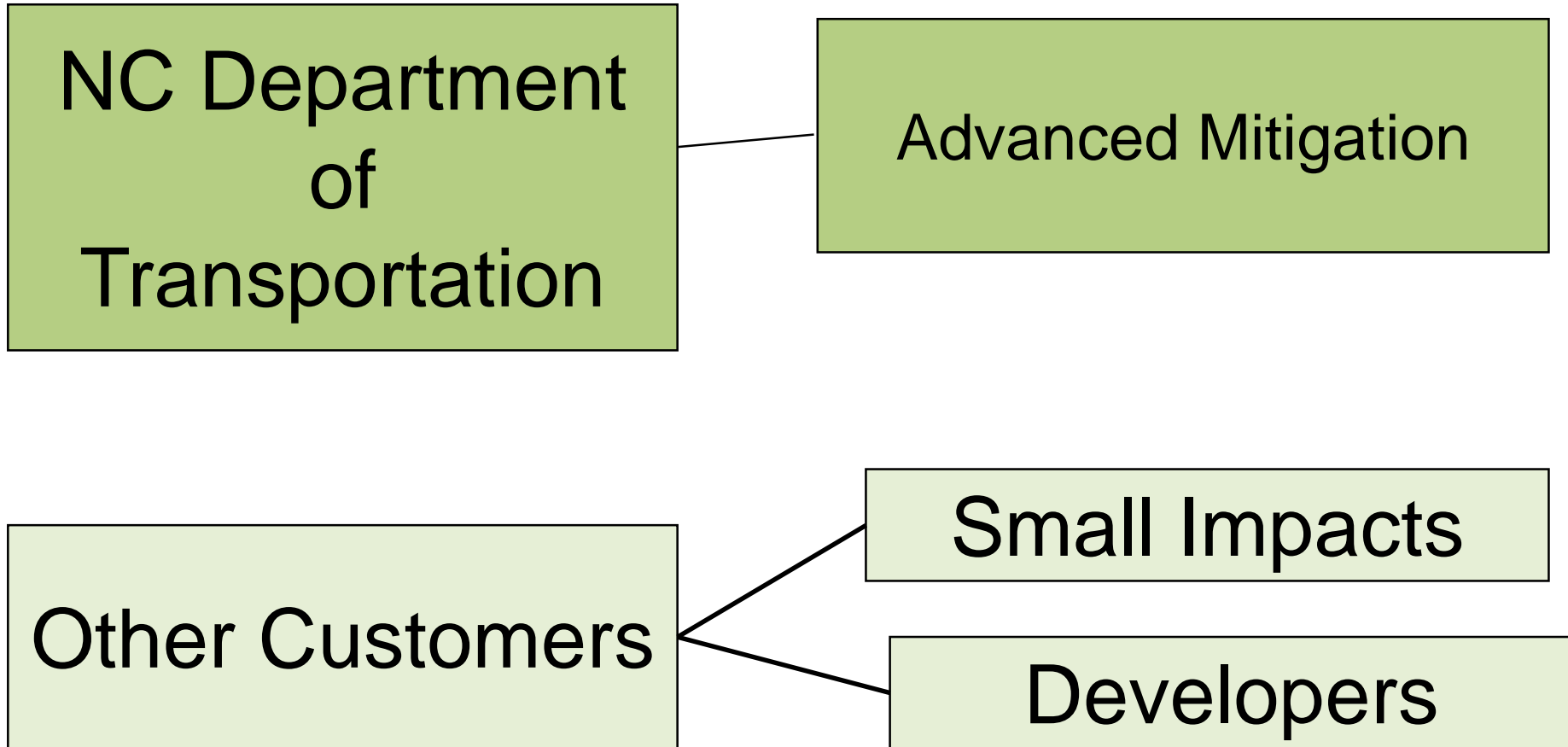
\$1.4 Billion in
mitigation credit assets
(replacement value)

228 Active projects

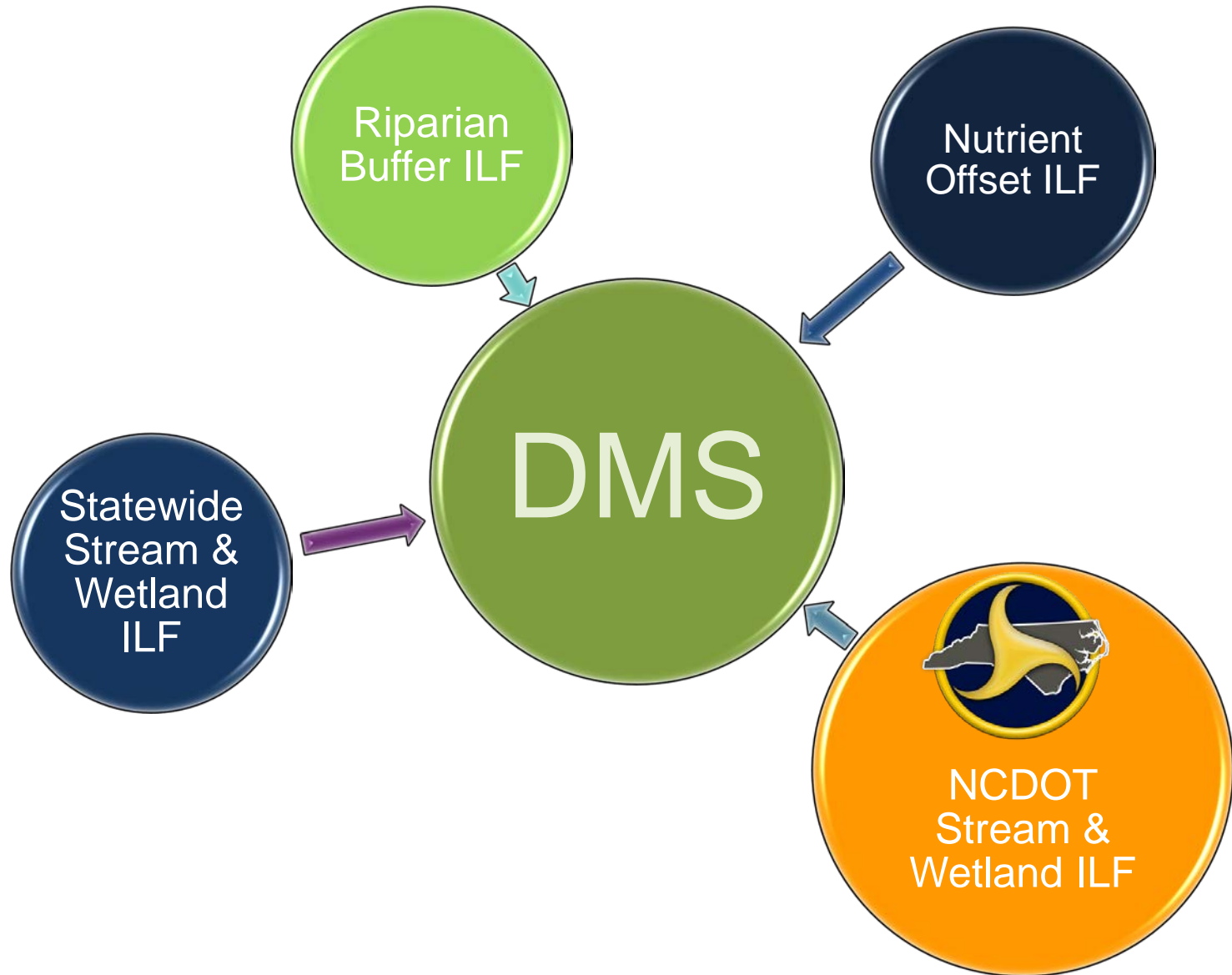
890 Total projects



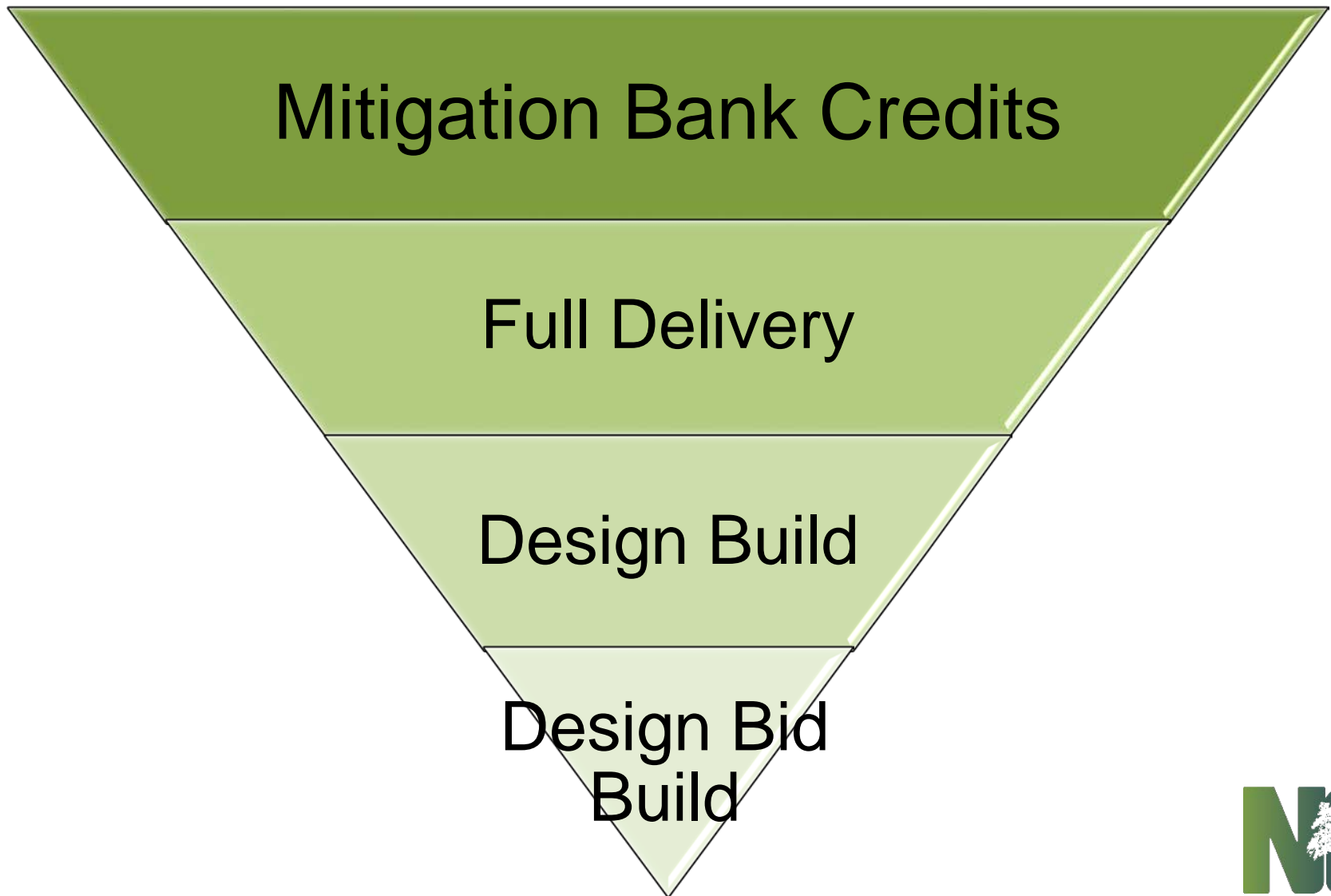
Our Partners/Customers.....



DMS's Mitigation Programs



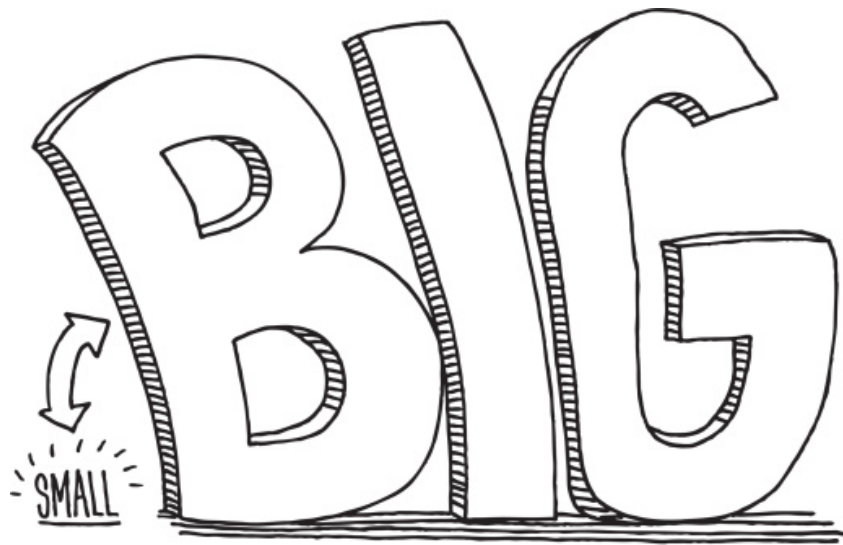
Credit Procurement Methods





Considerations for a successful In Lieu Fee program?

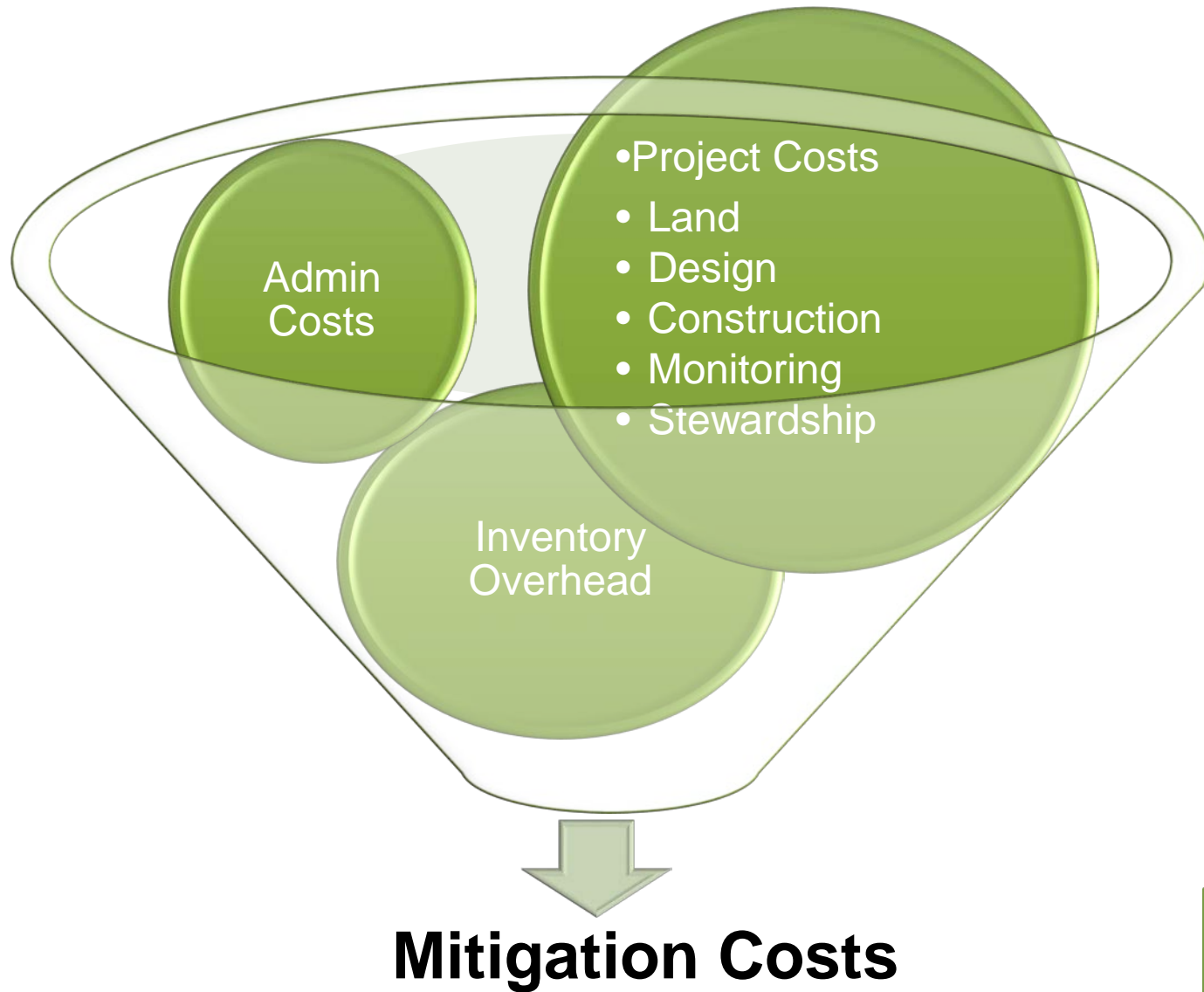
Size, Service, Scope



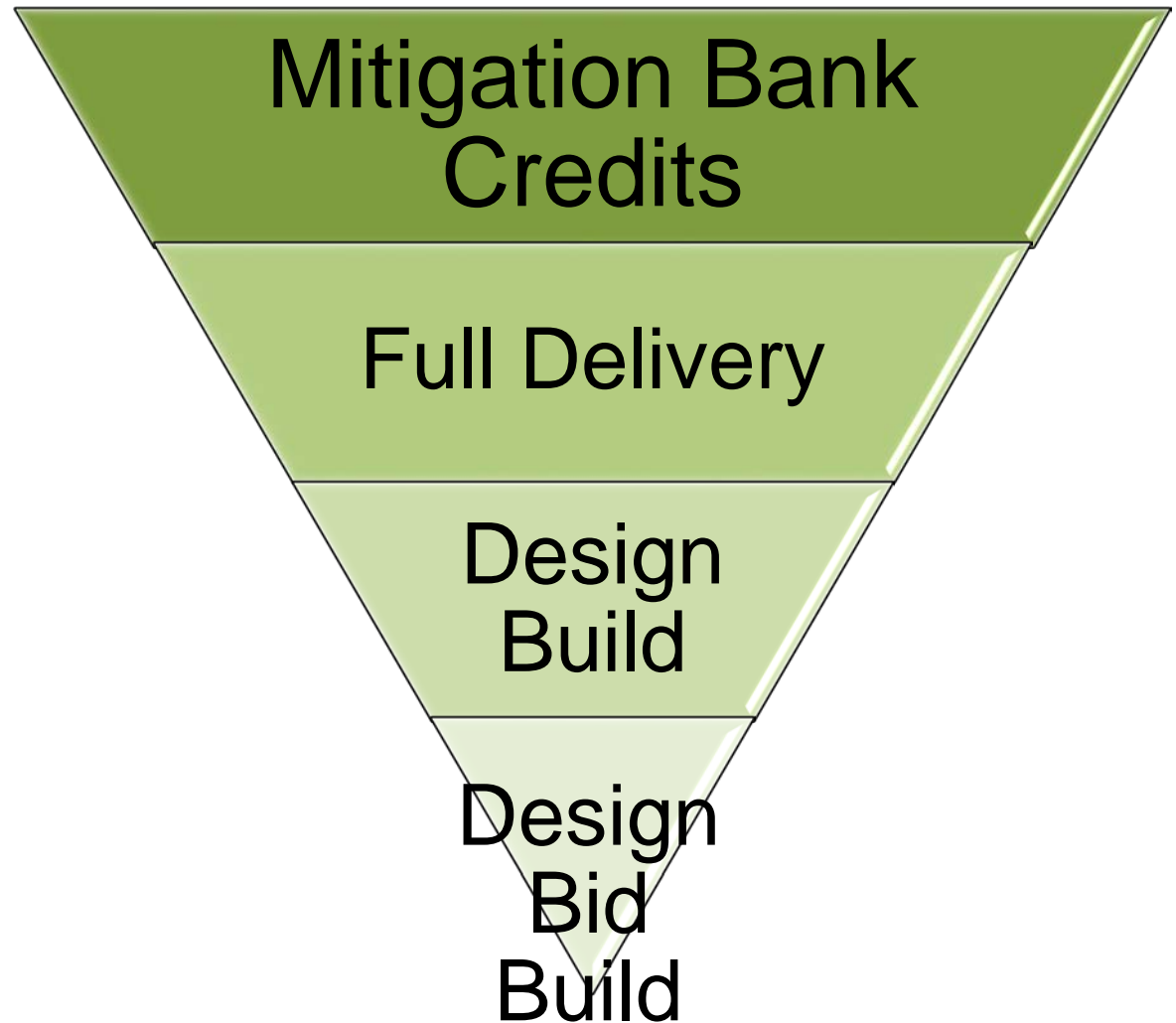
The People



Managing Costs



The Contractual Processes



Managing Risk



Agency Agreement



VS



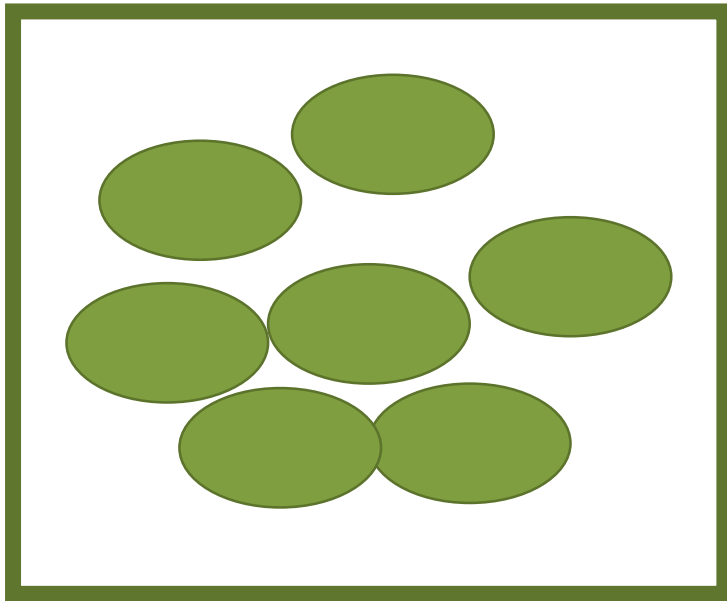
Long Term Property Management



Site Selection is IMPORTANT

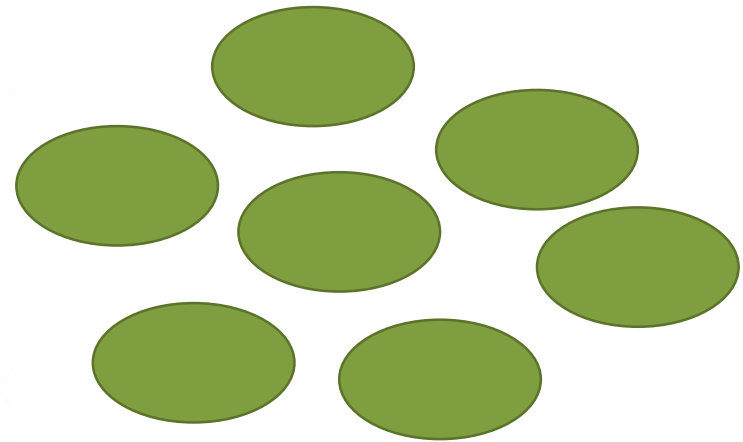


2008 Federal Mitigation Rule



Programmatic

VS



Case by Case

The End Game..... More Important than the Start



Technology to Manage Costs



Any Questions?

Tim Baumgartner
Director

NC Division of Mitigation Services
1652 Mail Service Center
Raleigh, NC 27699-1652
919-707-8543
<http://portal.ncdenr.org/web/eep>

Department of Environmental Quality



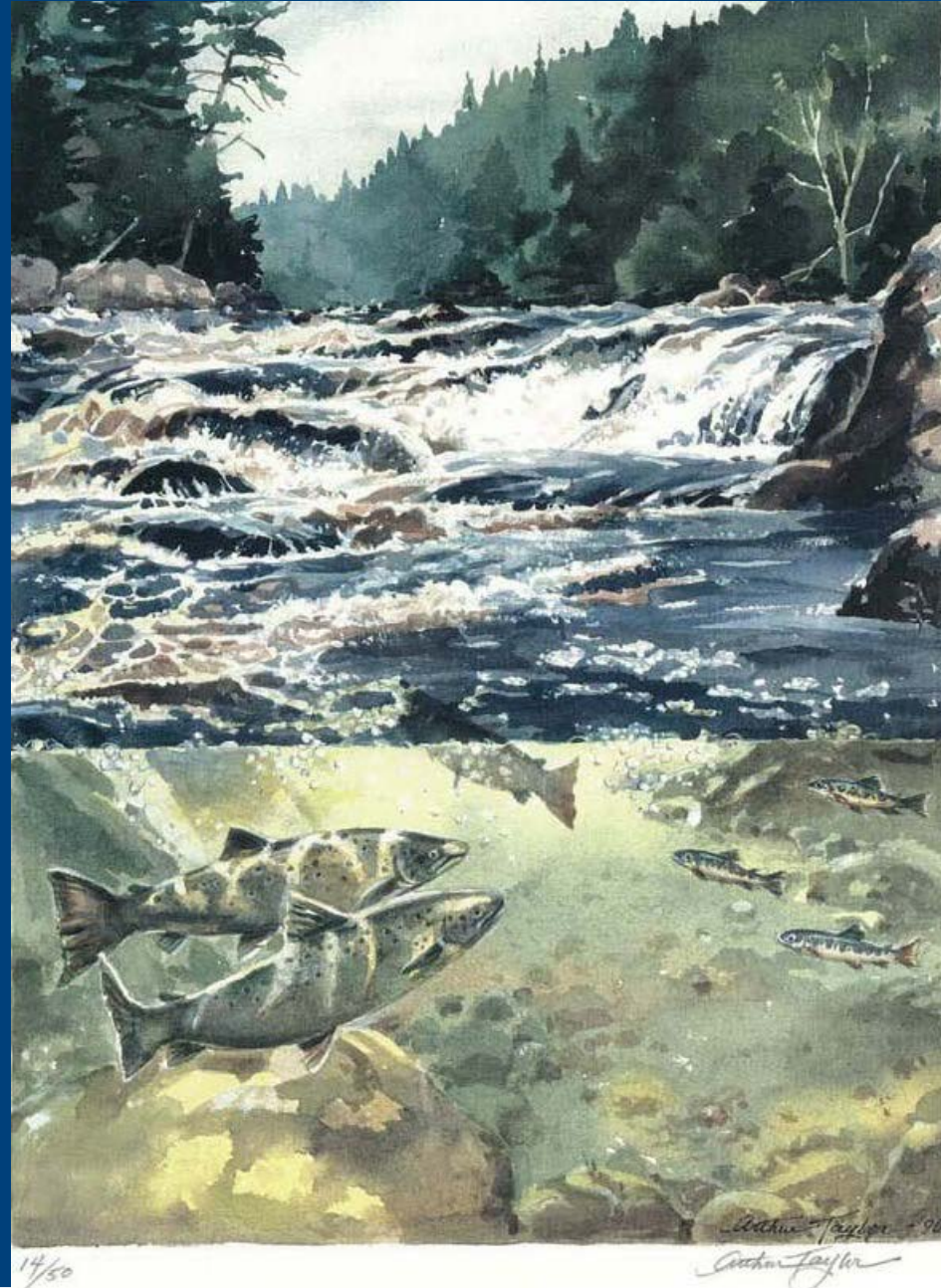
Blood, Sweat and Tiers:

*Four years, Three Agencies,
Two Funding Sources, and One
Endangered Fish Change the
World*

Judy Gates, Director

MaineDOT Environmental Office

September 19, 2017



The Winding Road

 The Timeframe..... 2013 - 2017

 The Agencies..... FHWA

USFWS

MaineDOT

 The Funding..... SHRP2

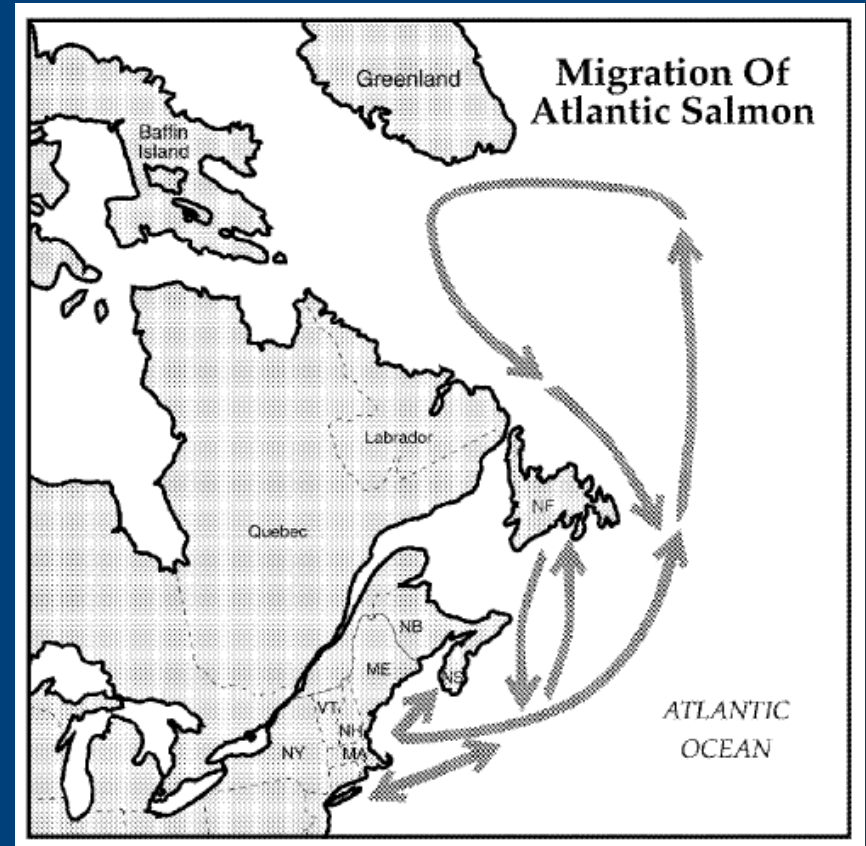
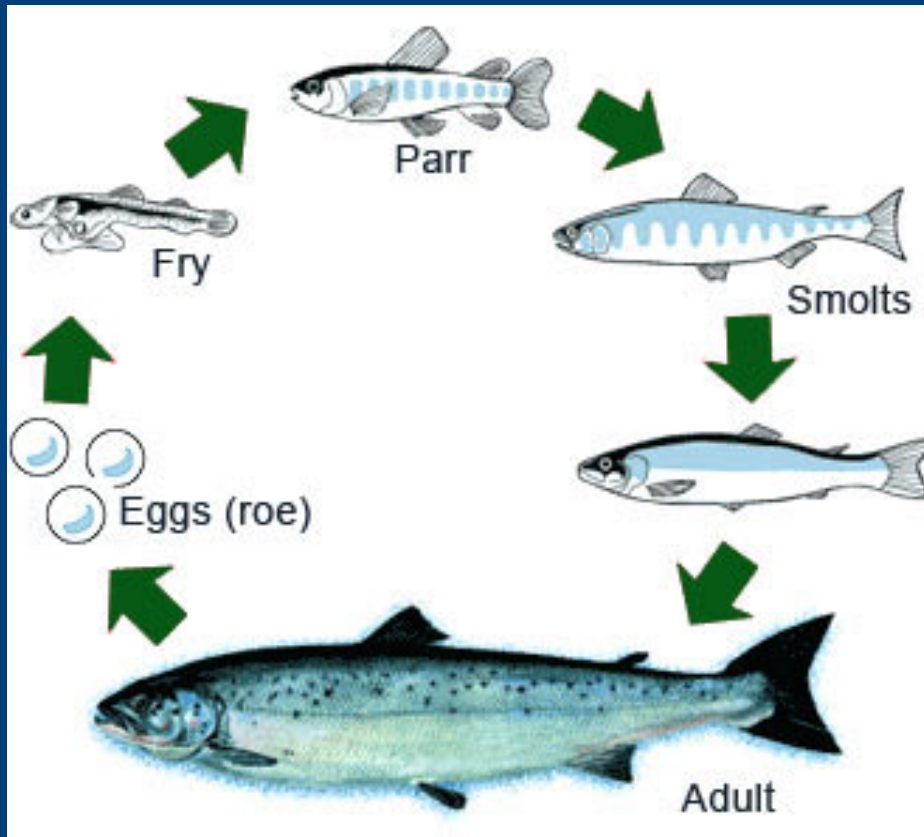
Maine Highway Fund

 The Fish.....

Atlantic salmon



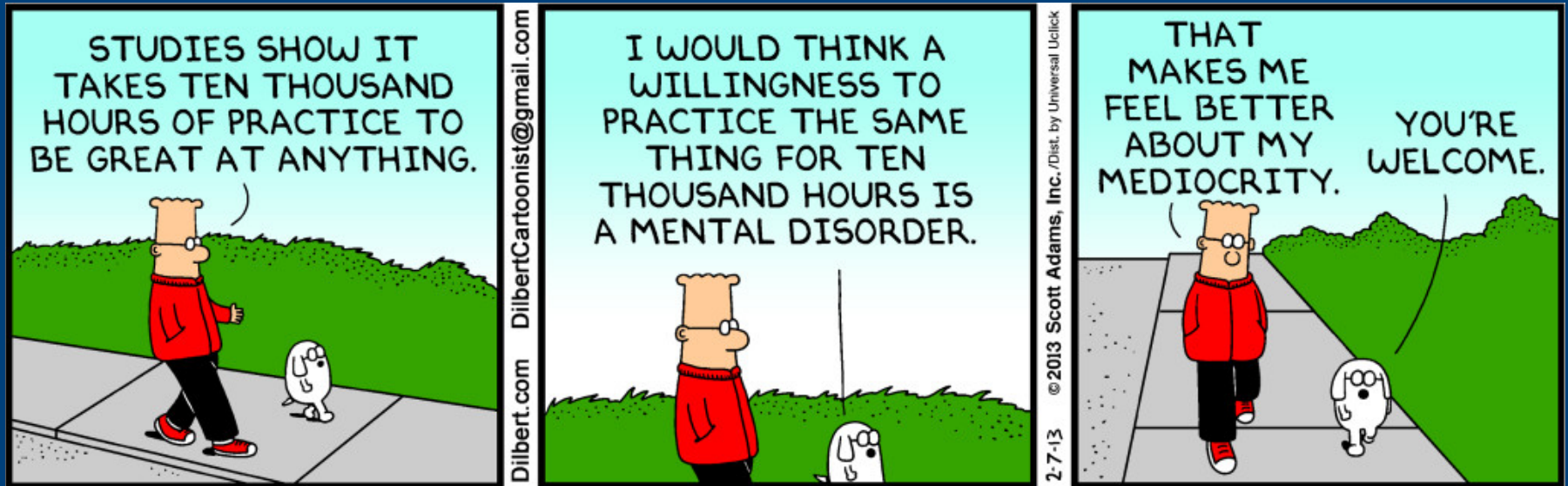
....mysteriously anadromous



Why now?

- 🐟 Missing “Capstone” performance measures: ≥85% on time & ≥90% on budget
- 🐟 Consultation overload: **50** needed vs. **7** completed
- 🐟 “Pushing back” led to **strained** relationships inside and out
- 🐟 Staff caught in the middle = **stress**

Avoiding mediocrity



MaineDOT saw...



USFWS saw...



The vehicle

Programmatic Biological Assessment
for Transportation Projects for the
Gulf of Maine Distinct Population Segment of
Atlantic Salmon and Designated Critical Habitat
U.S. Fish and Wildlife Service Jurisdiction



June 2016

Submitted by:

Maine Department of Transportation

Federal Highway Administration

US Army Corps of Engineers

What's covered



- 🐟 Stream Crossing Replacements
- 🐟 Bridge Removal
- 🐟 Culvert End Resets/Extensions
- 🐟 Bridge Scour Countermeasures
- 🐟 Bridge Maintenance: Grout Bag Installation and Concrete Repair
- 🐟 Temporary Work Access and Temporary Bridges
- 🐟 Invert Line and Slipline Culvert Rehabilitation
- 🐟 Pre-project Geotechnical Drilling

Quality matters

Tier 1 Habitat

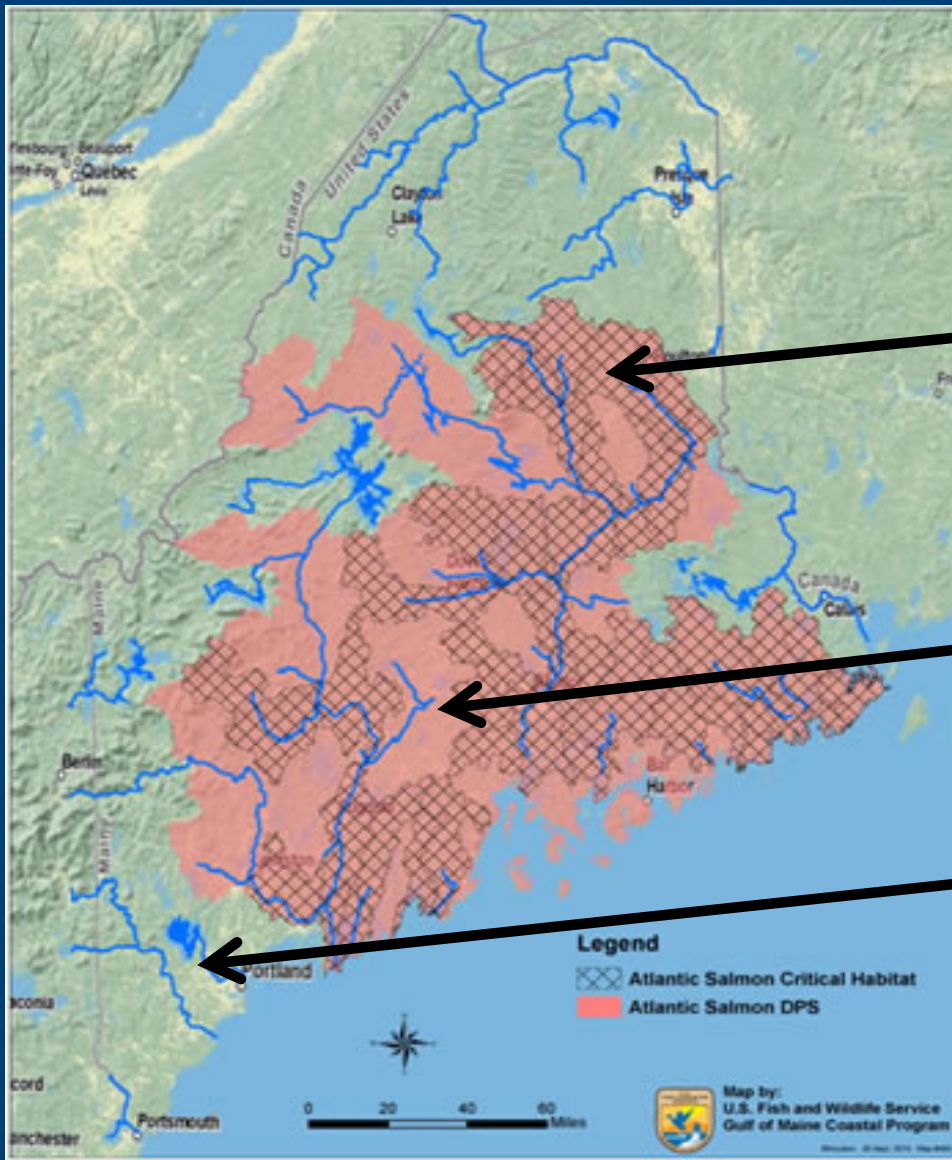
DPS, critical habitat or likelihood of species presence

Tier 2 Habitat

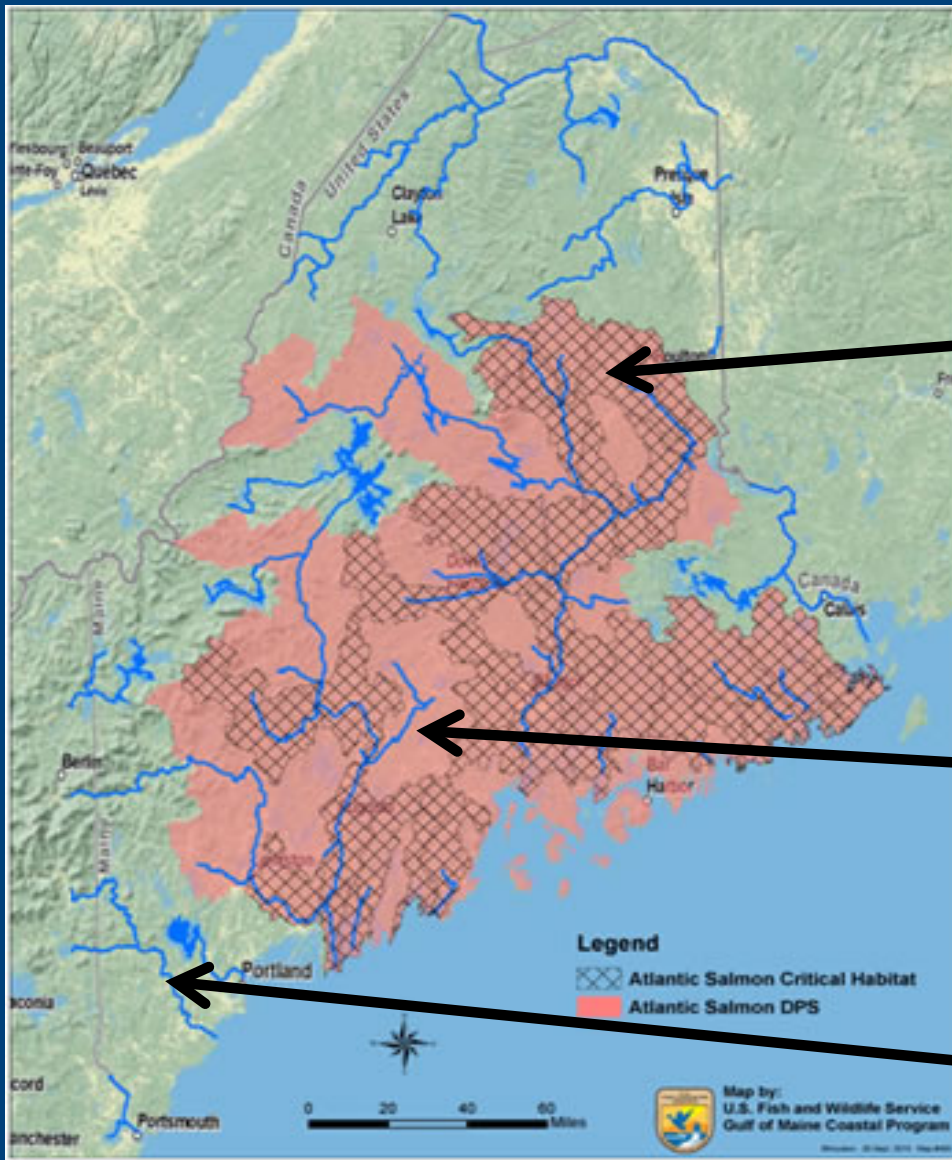
DPS but presence unlikely

Tier 3

not within DPS



Translating quality to expectations using science



Tier 1

1.2 x bank full width + habitat connectivity design + AMMs

NO invert or slip lining

Tier 2

1.0 x bank full width + mitigation + AMMs

Tier 3 BMPs



AMMs/BMPs

Hydro-acoustic monitoring



Habitat connectivity design

Why mitigate?

Fully accessible structure



1.2 bank full width + natural substrate



Why in lieu fee?

- 🐟 State-wide emphasis on repairing stream barriers
- 🐟 Acknowledgement that ideal isn't always possible
- 🐟 Letting the experts decide on restoration
- 🐟 Synergy with US Army Corps of Engineers
- 🐟 Successful track record wetland in lieu fee program
(Maine Natural Resource Conservation Program)

Barriers?

Roadblock: ILF sponsor can't be a federal agency or applicant

Solution: recruit Maine DMR

Roadblock: No head count

Solution: transfer position from MaineDOT mid-stream

Roadblock: Not the right fit

Solution: change job classification

Roadblock: Empty bank account

Solution: Lots of math!





The nitty-gritty

<u>SHRU</u>	<u>Cost Per Habitat Unit</u>
Merrymeeting Bay	\$4855.52
Penobscot	\$3408.02
Down East	\$6346.80

**USFWS stream
barrier surveys**

The Math

EFC cost study

Total lineal feet of crossing structures x cost per lineal foot to upgrade to 1.2 bfw
number of blocked rearing habitat units

ATS recovery plan

<u>SHRU</u>	<u>Cost Per Habitat Unit</u>
Merrymeeting Bay	\$4855.52
Penobscot	\$3408.02
Down East	\$6346.80

2017-2018-2019 Work Plan

<u>SHRU</u>	<u>Estimated In Lieu Fee</u>
Merrymeeting	\$111,677
Penobscot	\$112,464
Merrymeeting	0
Merrymeeting	\$3,046,839
Penobscot	\$6,816
Total	\$3,277,796

Still on the table...

Can in lieu fees be prorated?

$(\text{SHRUs accessible post-project} - \text{SHRUs accessible pre-project}) \times Z \text{ habitat unit cost}$

Re-scope project or pay in lieu fees?

Is Habitat Connectivity Design effective enough?

Will ability to deliver offset increased costs?

....Stay tuned!!





Costs By the Numbers

Activity	Cost
SHRP2 lead adopter grant award	\$250,000
Maine state highway funding	\$120,000
Overall time investment	Four years
Direct time investment	1.68 years
Design changes	1.2bfw ~3X cost of in kind replacement
Adaptive management	\$5-10,000 per project
Crossing design training	\$30,000+
Mitigation	>\$700,000 per year?

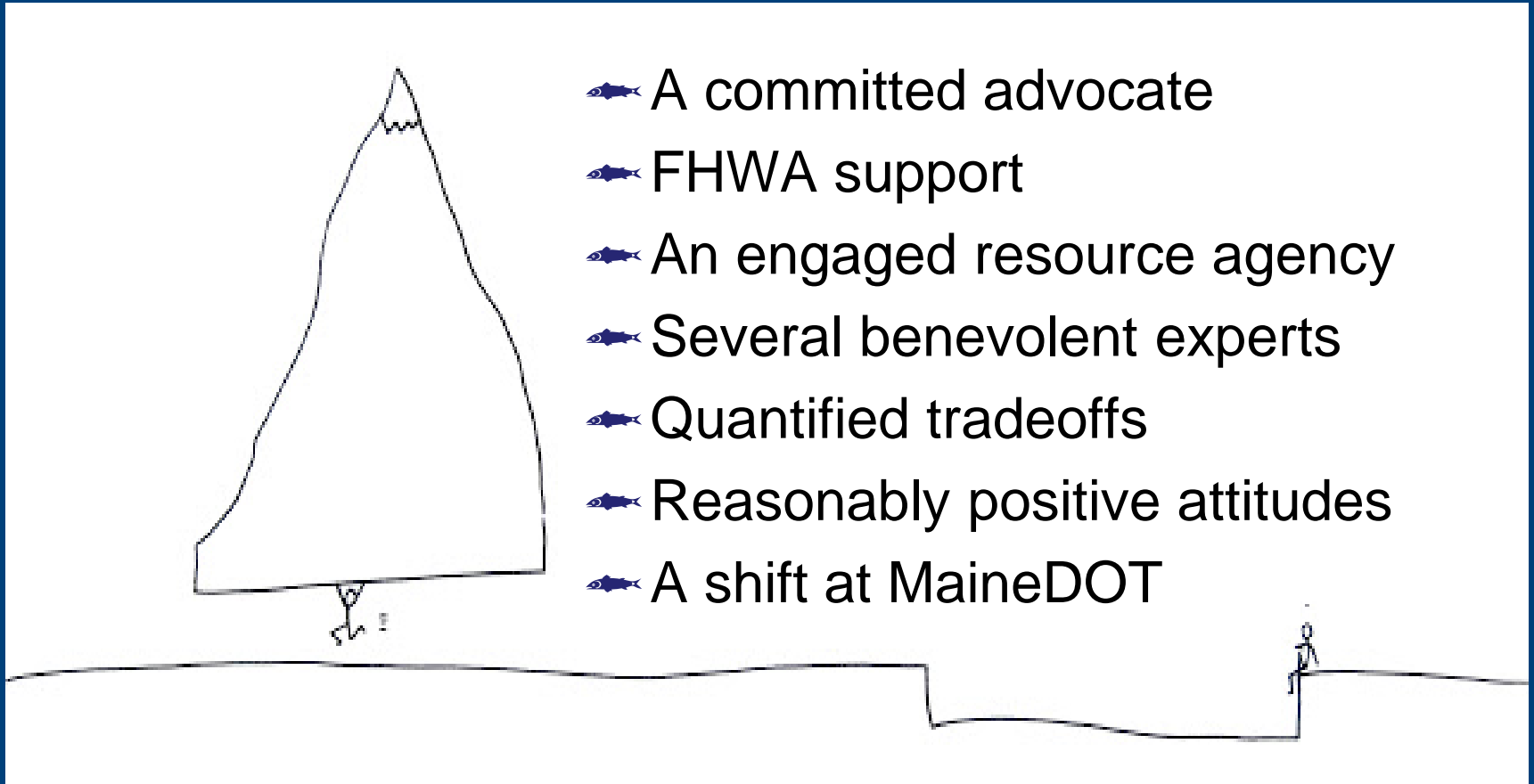


Benefits By the Numbers

Activity	Before MAP/ILF	After MAP/ILF
Document length	50-100 pages	1 page
Biologist preparation	40 hours	1-2 hours
USFWS Review	26 weeks average	1-2 weeks
Consultations completed 'on time'	8%	100%
Design changes	Minimal	None
BMPs	Added cost/hours	Incorporated in estimate
Mitigation	Unpredictable	Incorporated in estimate
Habitat Units 'benefited'	0	~685 per 3-yr work plan
Number of large culverts	X	2X



What moved the mountain?



2016 USFWS Recovery Champions Region 5



Cindy Callahan, FHWA biologist
Patrick Dockens, USFWS liaison
Judy Gates, MaineDOT ENV Director
Cassie Chase, FHWA Env Engineer
David Bernhardt, MaineDOT Commissioner
Joyce Taylor, MaineDOT Chief Engineer
Anna Harris, USFWS Field Office Director
Christopher DeVore, USFWS liaison
Eric Ham, MaineDOT biologist

Missing:
Kristen Chamberlain
David Gardner
Peter Lamothe
Paul Pfiifer
Glenn Smith
Cheryl Martin...



Thank you!

*Signed
Maine's Salmon
& Traveling
Public*