In-Lieu Fee Programs

Presenters:

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September 19, 2017

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

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

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

Department of Environmental Quality
Division of Mitigation Services

Nothing Compares
NORTH CAROLINA
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**
- 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......

- NC Department of Transportation
- Advanced Mitigation
- Other Customers
  - Small Impacts
  - Developers
- Developers
DMS’s Mitigation Programs

- Riparian Buffer ILF
- Nutrient Offset ILF
- Statewide Stream & Wetland ILF
- NCDOT Stream & Wetland ILF
Considerations for a successful In Lieu Fee program?
Size, Service, Scope
The People
Managing Costs

- Project Costs
  - Land
  - Design
  - Construction
  - Monitoring
  - Stewardship

Admin Costs

Inventory Overhead

Mitigation Costs
The Contractual Processes

- Mitigation Bank Credits
- Full Delivery
- Design Build
- Design Bid Build
Managing Risk
Agency Agreement
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

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http://portal.ncdenr.org/web/EEP
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: \( \geq 85\% \) on time & \( \geq 90\% \) 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

STUDIES SHOW IT TAKES TEN THOUSAND HOURS OF PRACTICE TO BE GREAT AT ANYTHING.

I WOULD THINK A WILLINGNESS TO PRACTICE THE SAME THING FOR TEN THOUSAND HOURS IS A MENTAL DISORDER.

THAT MAKES ME FEEL BETTER ABOUT MY MEDIOCRITY. YOU'RE WELCOME.
MaineDOT saw…

USFWS saw…
The vehicle
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

<table>
<thead>
<tr>
<th>SHRU</th>
<th>Cost Per Habitat Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merrymeeting Bay</td>
<td>$4855.52</td>
</tr>
<tr>
<td>Penobscot</td>
<td>$3408.02</td>
</tr>
<tr>
<td>Down East</td>
<td>$6346.80</td>
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</tbody>
</table>
Total lineal feet of crossing structures x cost per lineal foot to upgrade to 1.2 bfw number of blocked rearing habitat units

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# 2017-2018-2019 Work Plan

<table>
<thead>
<tr>
<th>SHRU</th>
<th>Estimated In Lieu Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merrymeeting</td>
<td>$111,677</td>
</tr>
<tr>
<td>Penobscot</td>
<td>$112,464</td>
</tr>
<tr>
<td>Merrymeeting</td>
<td>0</td>
</tr>
<tr>
<td>Merrymeeting</td>
<td>$3,046,839</td>
</tr>
<tr>
<td>Penobscot</td>
<td>$6,816</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$3,277,796</strong></td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Activity</th>
<th>Cost</th>
</tr>
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<tbody>
<tr>
<td>SHRP2 lead adopter grant award</td>
<td>$250,000</td>
</tr>
<tr>
<td>Maine state highway funding</td>
<td>$120,000</td>
</tr>
<tr>
<td>Overall time investment</td>
<td>Four years</td>
</tr>
<tr>
<td>Direct time investment</td>
<td>1.68 years</td>
</tr>
<tr>
<td>Design changes</td>
<td>1.2bfcw ~3X cost of in kind replacement</td>
</tr>
<tr>
<td>Adaptive management</td>
<td>$5-10,000 per project</td>
</tr>
<tr>
<td>Crossing design training</td>
<td>$30,000+</td>
</tr>
<tr>
<td>Mitigation</td>
<td>$&gt;700,000 per year?</td>
</tr>
</tbody>
</table>
## Benefits By the Numbers

<table>
<thead>
<tr>
<th>Activity</th>
<th>Before MAP/ILF</th>
<th>After MAP/ILF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document length</td>
<td>50-100 pages</td>
<td>1 page</td>
</tr>
<tr>
<td>Biologist preparation</td>
<td>40 hours</td>
<td>1-2 hours</td>
</tr>
<tr>
<td>USFWS Review</td>
<td>26 weeks average</td>
<td>1-2 weeks</td>
</tr>
<tr>
<td>Consultations completed ‘on time’</td>
<td>8%</td>
<td>100%</td>
</tr>
<tr>
<td>Design changes</td>
<td>Minimal</td>
<td>None</td>
</tr>
<tr>
<td>BMPs</td>
<td>Added cost/hours</td>
<td>Incorporated in estimate</td>
</tr>
<tr>
<td>Mitigation</td>
<td>Unpredictable</td>
<td>Incorporated in estimate</td>
</tr>
<tr>
<td>Habitat Units ‘benefited’</td>
<td>0</td>
<td>~685 per 3-yr work plan</td>
</tr>
<tr>
<td>Number of large culverts</td>
<td>X</td>
<td>2X</td>
</tr>
</tbody>
</table>
What moved the mountain?

- A committed advocate
- FHWA support
- An engaged resource agency
- Several benevolent experts
- Quantified tradeoffs
- Reasonably positive attitudes
- A shift at MaineDOT
Thank you!

Signed
Maine’s Salmon & Traveling Public