Practical Tips on Implementing the Eco-Logical Approach

Live Webinar
November 10, 2016
2:30 – 3:30 PM EST
Welcome to the Webinar!

• All attendees on listen only mode
• Questions can be submitted in ‘chat’ window of your control panel to the right
• Responses provided at the end of webinar
• Poll
Practitioner’s Handbook: Developed through SHRP2 Collaboration

- SHRP2 partnership – AASHTO & FHWA
- Provide technical information in usable format
- Visit our SHRP2 websites
  - http://shrp2.transportation.org/Pages/default.aspx
  - https://www.fhwa.dot.gov/gosphrp2/
Second Strategic Highway Research Program (SHRP2) & Its Focus Areas

- **Safety:** Fostering safer driving through analysis of driver, roadway and vehicle factors in crashes, near crashes, and ordinary driving.

- **Renewal:** Rapid maintenance and repair of the deteriorating infrastructure using already-available resources, innovations, and technologies.

- **Capacity:** Planning and designing a highway system that offers minimum disruption and meets the environmental, and economic needs of the community.

- **Reliability:** Reducing congestion and creating more predictable travel times through better operations.
Products & Programs

Practitioner’s Handbooks

- 01 Maintaining a Project File and Preparing an Administrative Record for a NEPA Study (August 2016)
- 02 Responding to Comments on an Environmental Impact Statement (August 2016)
- 03 Managing the NEPA Process for Toll LANAs and Toll Roads (August 2016)
- 04 Tracking Compliance with Environmental Commitments/Use of Environmental Monitors
- 05 Utilizing Community Advisory Committees for NEPA Studies
- 06 Consulting Under Section 106 of the National Historic Preservation Act (August 2016)
- 07 Defining the Purpose and Need and Determining the Range of Alternatives for Transportation Projects (August 2016)
- 08 Developing and Implementing an Environmental Management System in a State Department of Transportation (DOT)
- 09 Using the SAFETEA-LU Environmental Review Process (23 U.S.C. 139)
- 10 Using the Transportation Planning Process to Support the NEPA Process
- 11 Complying with Section 4(f) of the U.S. DOT Act
- 12 Assessing Indirect Effects and Cumulative Impacts under NEPA (August 2016)
- 13 Developing and Implementing a Stormwater Management Program in a Transportation Agency
- 14 Applying the Section 404(b)(1) Guidelines in Transportation Project Decision-Making (August 2016)
- 15 Preparing High-Quality NEPA Documents for Transportation Projects
- 16 Implementing Eco-Logical: Integrating Transportation Planning and Ecological Decision Making (October 2016) **NEW**

http://www.environment.transportation.org/center/products_programs/practitioners_handbooks.aspx
Review Panel for Practitioner’s Handbook

- Margaret Barondess, Michigan DOT
- Kendall Wendling, North Central Texas COG
- Sonna Lynn Fernandez, Idaho Transportation Department
- David Williams, FHWA
- Mike Ruth, FHWA
- Marlys Osterhues, FHWA
- William Malley, Perkins Coie LLP
- Kate Kurgan, AASHTO
- Additional AASHTO, FHWA, and Volpe staff
Today’s Agenda

• Introduction to Eco-Logical and Overview of Practitioner’s Handbook Format
  • Kate Kurgan, AASHTO

• Examples of Applying Eco-Logical
  • Margaret Barondess, Michigan DOT
  • Craig Casper, Pikes Peak Area COG
  • Judy Gates, MaineDOT

• Questions and Answers
SHRP2 Implementing Eco-Logical

- Landscape-scale approach to transportation project development.
- Transportation agencies collaborate during the planning process.
- Lead to agreed-upon mitigation strategies and timely permit decisions.
Implementing Eco-Logical Steps

1. Build collaborative partnerships & vision
2. Characterize resource status
3. Create REF
4. Assess effects on conservation
5. Identify & Prioritize actions
6. Develop crediting strategy
7. Develop agreements
8. Implement agreements
9. Update REF over time
Content

• Overview
• Background Briefing
• Key Issues to Consider
• Practical Tips
• Reference Materials
Overview and Background Briefing

• Overview
• Outlines the goals of Eco-Logical
• Background Briefing
  • Regulations
  • Policies
  • Guidance
• Programs (PEL)

Overview

This Handbook assists transportation agencies in defining a path and realistic goals for implementing the Eco-Logical process for their programs.

In 2006, a team of representatives from eight Federal agencies, including the Federal Highway Administration (FHWA), published Eco-Logical: An Ecosystem Approach to Developing Infrastructure Projects1 to present a vision of early collaboration among transportation, natural resource, and regulatory agencies when planning infrastructure projects and programs. In that vision, the interagency collaboration during system-wide planning provides an opportunity for sustaining or restoring ecological systems and their functions and values on an ecosystem scale, while also identifying more context sensitive solutions for the transportation plan, and improving environmental compliance and documentation.

The goals of Eco-Logical are to:

- Help state and local transportation agencies improve decisionmaking;
- Minimize the time and costs associated with planning, environmental reviews, and permitting;
- Provide for more effective environmental mitigation;
- Capitalize on environmental enhancement opportunities; and
- Improve public perception of the transportation project delivery processes.

Many state departments of transportation (DOTs) and metropolitan planning organizations (MPOs) have used some of the methods that make up the Eco-Logical approach. Eco-Logical broadens the scope of interagency cooperation with an overarching methodology to guide both transportation agencies (state DOTs and MPOs) and resource agencies in addressing natural resource issues system-wide. The Eco-Logical concepts for addressing natural resource avoidance, minimization, and mitigation on a broad scale have been organized into a systematic, step-wise process.

Background Briefing

There is a growing emphasis on resource conservation and planning at the regional level rather than the localized, project level. Recent studies recognize that consolidated, regional-level mitigation provides ecological economies of scale by lowering the cost per acre of restoration, improving the restoration success rate, and increasing the protection to resident species with larger, unfragmented habitats (Murcia 1995, Schwartz 1999, Drechslin and Walton 2000).1,2,3

Federal initiatives toward regional infrastructure planning include:

1. Since the late 1980s, there has been a trend toward watershed-level planning to address water quality in accordance with Sections 303 (impaired waters) and 402 (National Pollutant Discharge Elimination System) of the Clean Water Act (CWA).

References:


Implementing Eco-Logical: Integrating Transportation Planning and Ecological Decision Making
Key Issues to Consider

- Overview
- Outlines the goals of Eco-Logical
- Background Briefing
  - Regulations
  - Policies
  - Guidance
- Programs (PEL)
Practical Tips

• Summary
• Goals of each step
• Narrative description

Practical Tips

This section provides a discussion of the main concepts of each of the IEF steps, with recommendations and considerations in approaching each step. The IEF is intended to be flexible to fit the user’s program, geography, and resources. The IEF is a step-by-step process, and ideally the users would proceed through all of the steps to address a wide array of ecological issues on a regional, program-wide basis. The team building and data gathering of the earlier steps are pre-requisites for the later steps.

Step 1 | Build and Strengthen Collaborative Partnerships and Vision

The goals of this step are to:

1. Break down organizational barriers.
2. Take an inventory of each stakeholder’s goals, priorities, processes, and major areas of concern within a specified planning region.
3. Document significant issues that may affect agency goals and mitigation needs.
4. Create a shared regional planning vision.
5. Obtain and document formal agreements on roles, responsibilities, processes, and timelines that establish or reinforce partnerships.
6. Document criteria and opportunities for using programmatic agreements to better address transportation and conservation planning needs.
7. Identify initial funding options.

The transportation agency, as the responsible party for transportation planning and implementation, typically initiates the IEF process by developing a basic vision and committing an initial investment of resources toward the process. At this stage, the transportation agency begins outreach to other planning organizations and resource agencies in the planning area. The goal of this initial step is to begin identifying the most critical resource conservation needs and creating a shared regional planning vision that addresses all needs and common interests, while also communicating the benefits of the process to all stakeholders.

The Geographic Extent and Scale of the Planning Area. Agencies should jointly consider their overall goals and regional vision in setting a scale for the planning area. Agencies may also consider their own technical capabilities and data availability in selecting a planning area and level of effort. The geographic extent of the planning area and scale of the planning effort...
Eco-Logical Online

Implementing the Eco-Logical Approach

I-75 Corridor Conservation Plan

Margaret Barondess
Michigan Department of Transportation
Environmental Services Section
How do you get started with the Eco-Logical Approach?

1. Build/strengthen collaborative partnerships
2. Integrate ecosystem status, data, and goals
3. Create a regional ecosystem framework
4. Assess regional ecosystem framework
5. Establish and prioritize ecological actions
6. Develop a crediting strategy
7. Develop programmatic agreements and consultations
8. Implement agreements and deliver projects
9. Update regional ecosystem framework
Practitioner’s Handbook: Practical Tips

- Goals & Summary
- Geographic areas
- Team Responsibilities
- Documentation
- Mapping Tools
- Resources

Step 1 | Build and Strengthen Collaborative Partnerships and Vision

The goals of this step are to:

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The transportation agency, as the responsible party for transportation planning and implementation, typically initiates the IEP process by developing a basic vision and committing an initial investment of resources toward the process. At this stage, the transportation agency begins outreach to other planning organizations and resource agencies in the planning area. The goal of this initial step is to begin identifying the most critical resource conservation needs and creating a shared regional planning vision that addresses all needs and common interests, while also communicating the benefits of the process to all stakeholders.

The Geographical Extent and Scale of the Planning Area. Agencies should jointly consider their overall goals and regional vision in setting a scale for the planning area. Agencies may also consider their own technical capabilities and data availability in selecting a planning area and level of effort. The geographic extent of the planning area and scale of the planning effort

Step 2 | Characterize Resource Status and Integrate Natural Environment Plans

The goals of this step are to:

1. Compile the existing available data and plans into a refined map that identifies locations of all resources of interest and areas for conservation and mitigation action.
2. Understand historical-long-term trends, priorities, and concerns related to aquatic and terrestrial species and habitats in the region.
3. Identify data gaps that need to be addressed to achieve a complete and reliable product at the appropriate level of resolution and accuracy.
4. Identify past impacts at critical locations, such as stream crossings and migration corridors (especially if retrofitting will be a mitigation option).
5. Arrive at an agreed-upon set of conservation and mitigation goals.

During Step 2, partner agencies identify, assemble, and combine data into a map that can start to guide planning efforts.

Mapping Tools. Web-based mapping tools are available that reference a number of national datasets. Some also allow users to add more-detailed local layers to the database and share that data.

The most effective mapping platform is one that is compatible with and accessible to all potential users, including the stakeholder agencies, planning consultants, agency and consulting design engineers, and construction managers. If the IEP process will be the new mode of operation, all who are expected to follow it must have easy access and be able to integrate their data and plans.

Ecological systems are dynamic and will continue to change over time. The transportation plan will evolve with changing transportation needs. The GIS mapping of resources and infrastructure must be able to be updated easily, with input from each stakeholder. The more integrated the base map is with the resource agencies’ own products, the more likely it will be a living database. Ideally, the transportation agency’s planning improvements will interface readily and automatically update as the plans are modified. Systems that are “shared” with management responsibilities divided among the stakeholders will be more useful and valuable to project partners.

Important Resources to be Included. Stakeholders should work together to define the list of sensitive resources that will be considered. Recognizing that agencies have unique interests in prioritizing certain types of natural resources, all stakeholders

1 Federal law allows states to enter into funding agreements with Federal agencies (including U.S. DOT), state agencies, and Indian tribes, under which the state provides funds to “support activities that directly and meaningfully contribute to expediting and improving transportation project planning and delivery for projects in that state.” See 23 USC, 131(c).

8 Implementing Eco-Logical: Integrating Transportation Planning and Ecological Decision Making
The goals of Step 1 are:

1. Break down organizational barriers.
2. Take an inventory of each stakeholder’s goals, priorities, processes, and major areas of concern within a specified planning region.
3. Document significant issues that may affect agency goals and mitigation needs.
4. Create a shared regional planning vision.
5. Obtain formal agreements on roles, responsibilities, processes, and timelines that establish or reinforce partnerships.
6. Document criteria and opportunities for using programmatic consultation approaches to better address transportation and conservation planning needs.
7. Identify initial funding options.

With a basic vision in mind and the commitment of the transportation planning organization to make the initial investment of resources toward the IEF process, the transportation planning agency (for example, state DOT or MPO), as the responsible party for transportation planning and implementation, begins outreach to other planning organizations and resource agencies in the planning area.

Define the Scale of the Planning Area. Defining the area under the jurisdiction of the planning organization is straightforward. The geographic extent of the planning area and scale of the planning effort will determine the resolution of the mapping data that is relevant. In other words, a broader brush planning effort would not necessarily require high resolution data, although the resolution of the data that is manageable is limited only by...
Study Location

- Maumee Lake Plain
- Glacial lake bed
- Flat, poorly drained soils
- Between two high density urban centers (Detroit and Toledo)
- Abundance of exotic species
I-75 Reconstruction

- Busiest truck route
- Aging pavement
- Total reconstruction
- $500 million
- 5 phases
Technical Advisory
Goal of the Project

• To develop and implement a Collaboratively-based Landscape Scale Conservation Plan that facilitates rebuilding the I-75 Corridor while maximizing conservation and restoration outcomes in the region.
What were the benefits of building partnerships?

- Regional level data sharing and organization
- Improved resource agency and public perception of MDOT
- Better mitigation options
- More predictable permitting
Outcome of Partnering: Wetland Mitigation
Outcome of Partnering: Public Outreach
Outcome of Partnering: Better Mitigation

• 16,000 state threatened plants in the Right of Way
Partnership Agreements

- MDOT/MDNR Master
- GIS
- MDEQ/MDNR/MDOT Wetland Mitigation
What were the key factors of our success?

- A dedicated core team with the right mix of knowledge and skills
- Extensive outreach to state and federal regulatory agencies, non-profit organizations and local experts
- Appealing to a larger sense of purpose in tackling water quality problems in the Western Lake Erie Basin.
- Support from the leadership and project development staff at MDOT
Margaret Barondess

- barondessm@michigan.gov
- (517) 335-2621
Eco-Logical at Work in Long-term Mitigation

Craig Casper
Pikes Peak Area Council of Governments
How do you get started with the Eco-Logical Approach?

1. Build/strengthen collaborative partnerships
2. Integrate ecosystem status, data, and goals
3. Create a regional ecosystem framework
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5. Establish and prioritize ecological actions
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7. Develop programmatic agreements and consultations
8. Implement agreements and deliver projects
9. Update regional ecosystem framework
Step 3 | Create a Regional Ecosystem Framework (Conservation Strategy + Transportation Plan)

The goals of this step are to:

1. Create the regional ecosystem framework geospatial database, based on mapping and prioritization of resources and transportation and land-use plans.
2. Create transportation program scenarios that address short- and long-term improvements and include all features that may cause impacts to natural resources.
3. Obtain a shared understanding of the current and planned/proposed locations, quantities, and patterns of all development, uses, and resource impacts in the region.

The purpose of Step 3 is to overlay transportation plans and projects with conservation priorities and land uses. This can help partners clearly see where there are areas that may be potentially impacted by transportation projects and where opportunities may exist for conservation.

The Regional Ecosystem Framework (REF). The REF is a geospatial database that includes the data collected in Step 2, as well as land-use plans and the long-range transportation plan. Using the mapping tool(s) selected in Step 2, the stakeholders collect and organize the available natural resource information to understand the ecosystem and to gain consensus on the most important areas for conservation and restoration potential.

Planning Scenarios. At this step, the stakeholders overlay the current transportation plans with resources. Alternative scenarios could be developed depending on features such as near-term versus long-term, low growth versus high growth, and various program funding assumptions. The concepts of scenario planning in the FHWA Scenario Planning Guidebook are directly applicable here. The transportation agency would provide the transportation plan for the planning region, including identification of transportation projects that should be included in the scenarios. The scenarios also could include assumptions about future land use changes based on community land use and management plans from the major local, state, and Federal regulatory, land management, and planning agencies in the region. The combination of the transportation projects and anticipated land use changes would define the “footprint” of future development for the purposes of each scenario; the footprint would provide the basis for estimating environmental impacts under each scenario. Partners should collaboratively define the planning scenarios and then ensure that the REF is designed to illustrate those scenarios. The alternate scenarios can be overlaid on the resource mapping, which will likely show locations where planned improvements overlap important resources.

The conclusion of Step 3 is a good time for the team to share the collection of the natural resource information and overlay of the proposed land use and transportation system improvements with the public. This also provides an opportunity to gather additional information from the public about natural resources in the planning area.

Documentation. The stakeholders should document the development of scenarios. The FHWA Scenario Planning Guidebook recommends visual documentation of scenarios along with a narrative or set of assumptions to describe the developed or modeled scenarios. Documentation will help communicate with partners and the public about how the REF was developed, which data was included, and how planning scenarios were selected.
The goals of Step 3 are:

1. Create the regional ecosystem framework, based on mapping and prioritization of resources and transportation and land use plans.
2. Create transportation program scenarios that address short- and long-term improvements and include all features that may cause impact to natural resources.
3. Obtain a shared understanding of the current and planned/proposed locations, quantities, and patterns of all development, uses, and resource impacts in the region.

Create the Regional Ecosystem Framework. The regional ecosystem framework (REF) is the consolidation of the data collected in Step 2 into a geospatial database, with land use plans, including the long range transportation plan.

Creating Planning Scenarios. At this step, the stakeholders overlay the current plans with resources. Alternative scenarios could be developed depending on factors such as near-term versus long-term and low growth versus high growth assumptions. The transportation planning organization would provide its plan for the planning region and its assumptions. Other land use planning, such as community land use and management plans from the major local, state, and federal regulatory, land management and planning agencies in the region, could be included for a cumulative view. The combination of the plans defines the “footprint” of consideration of impacts.

The alternate scenarios can be overlaid on the resource mapping. It is likely that locations where planned improvements overlap important resources will be readily visible.
Colorado Springs MPO Planning Boundary

Colorado
59 conservation targets were chosen for the project: 23 plants, 2 amphibians, 3 reptiles, 12 mammals, 9 birds, 3 fish, 5 insects, 1 mollusk, plus CNHP Potential Conservation Areas (PCAs).

Create 3 scenarios: Existing, and 2 futures.

Forecast growth to year 2035.

2006-2008 Process

Produce a single land use classification and compatibility scheme that would meet all analysis needs.
SHRP2 - 2013-2015
Development of Regional Advance Mitigation Plan

“I’ll gladly repay you Tuesday, for a hamburger today” - Wimpy

Project Purpose

• Identify potential conservation impacts and opportunities
• Provide a framework to collaborate on mitigation needs
• Conserve and connect important habitats
• Streamline permitting processes
• Integrate planning and decision making between agencies
• Consider both on-site and off-site mitigation opportunities
• Apply the regional ecosystem framework in decision making process
State Agencies
Colorado Department of Local Affairs
Colorado Parks and Wildlife
Colorado Open Lands
Colorado Department of Natural Resources
Colorado Department of Public Health and Environment

Federal Agencies
United States Environmental Protection Agency
United States Fish and Wildlife Service
Housing and Urban Development
Bureau Land Management
Army Corps of Engineers
Colorado Department of Transportation
Military Installations - Fort Carson

Local Agencies and Organizations
Fountain Creek Watershed Flood Control and Greenway District
Sierra Club
Palmer Land Trust
Rocky Mountain Field Institute
Resource Agency Roles

- Identify potential project opportunities
- Review and identify critical areas
- Identify potential opportunities to collaborate with existing sponsors of other projects
- Identify potential regulatory and non-regulatory hurdles and barriers.
Environmental Ecosystem Framework Methodology

Develop a database consisting of:
- Transportation data – projects included in the 2040 RTP.
- External project data - projects being proposed by other agencies.
- Mitigation data – includes conservation targets such as wildlife, plants, and habitats.

Classify Mitigation Targets
- Bin 1 – Federally listed candidate species
- Bin 2 - Critically imperiled rangewide species
- Bin 3 – Imperiled rangewide species and wetland and riparian areas

External Project Data
- Projects proposed by Advisory Committee Members and other agencies.
### Identified Projects

<table>
<thead>
<tr>
<th>PROJ_ID</th>
<th>Project Name</th>
<th>Actual Impact Acres</th>
<th>Total Project Acres</th>
<th>% of Project Creating Impact</th>
<th>% Target Ac in Bin1</th>
<th>% Target Ac in Bin2</th>
<th>% Target Ac in Bin3</th>
<th>Impact Importance</th>
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<tbody>
<tr>
<td>10</td>
<td>Academy Blvd. widening: Drennan Rd to Hwy 115</td>
<td>0.30</td>
<td>377.39</td>
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<td>0%</td>
<td>0%</td>
<td>100%</td>
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<td>21</td>
<td>Black Forest Road Improvements: Woodmen Rd. to Hodgen Rd.</td>
<td>46.98</td>
<td>793.01</td>
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<td>0%</td>
<td>100%</td>
<td>4.5</td>
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<tr>
<td>27</td>
<td>Briargate Pkwy./Stapleton Rd. Connection</td>
<td>182.29</td>
<td>765.84</td>
<td>23.8%</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
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<tr>
<td>44</td>
<td>Eastonville Rd. South Improvements: Meridian Ranch Rd. to Londonderry Dr.</td>
<td>11.58</td>
<td>40.90</td>
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<td>0%</td>
<td>100%</td>
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<td>0.1%</td>
<td>100%</td>
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<td>55</td>
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<td>122.74</td>
<td>553.64</td>
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<td>11%</td>
<td>0%</td>
<td>89%</td>
<td>19.0</td>
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<tr>
<td>57</td>
<td>Fountain Creek Trail Bridge Repair</td>
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<td>0.72</td>
<td>26.1%</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
<td>0.1</td>
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<tr>
<td>69</td>
<td>Historic Bridges Repair and Restoration</td>
<td>2.10</td>
<td>8.43</td>
<td>24.9%</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
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<td>70</td>
<td>Hodgen Rd. Improvements: Black Forest Rd. to Meridian Rd. and from Eastonville Rd. to Elbert Rd.</td>
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<td>562.14</td>
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<td>0%</td>
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<td>100%</td>
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## Results Summary

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<thead>
<tr>
<th>No of species identified</th>
<th>No of species impacts from RTP</th>
<th>Bin #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>5</td>
<td>1</td>
<td>Federally listed &amp; Candidate Species</td>
</tr>
<tr>
<td>14</td>
<td>4</td>
<td>2</td>
<td>Critically imperiled rangewide</td>
</tr>
<tr>
<td>116</td>
<td>25</td>
<td>3</td>
<td>Imperiled rangewide</td>
</tr>
<tr>
<td>137</td>
<td>34</td>
<td></td>
<td>Total Number of Mitigation Targets Impacted</td>
</tr>
</tbody>
</table>

- 52 RTP projects impacted one or more conservation targets
- 148 RTP projects did not impact any conservation targets
Benefits Using Regional Ecosystem Framework

1. Provides a framework to develop and prioritize projects that incorporates economic, community and environmental interests

2. Allows for better collaboration, improved understanding and buy in, and increased trust

3. Leads to integrated projects and improved outcomes

4. Provides a structure to identify and address complex issues early on in the planning process

5. Allows for streamlined permitting process for transportation projects
Lessons Learned Using Regional Ecosystem Framework

- Make sure all interests are represented
- Use web based conferencing
- Define the roles of participants and goals of the project during kick off meeting
- Learn from past mistakes
- Identify milestones and decision points
- Cost of data and license agreements
- Online mapping tools
Measures of Success

• Strengthen Collaborative Partnerships
• Getting resource agencies to agree on Regional Advance Mitigation Plan
• Develop agreements with resource agencies
• Eventual development of a Green Infrastructure Plan
Craig Casper

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- (719) 471-7080 x105
Implementing Eco-Logical in a World of Schedules and Salmon

Judy Gates, Director, Environmental Office
Maine Department of Transportation
Atlantic Salmon
MaineDOT Culvert or Bridge Projects
The Facts

- Schedule (>85% on time) & budget (< 10% vs. award) are two of MaineDOT’s “Capstone” performance measures.
- Approximately 25% of stream projects per work plan year (~50) require consultation for Atlantic salmon.
- Of those 50, about 10 require formal consultation with USFWS.
- MaineDOT transportation liaison in place.
- 7 consultations were completed by USFWS in 2014.
- Section 7 is critical path on 100% of projects intersecting with Atlantic salmon.
- Expectations vary widely; design & construction methods do not.
- ~98% of projects qualify for Categorical Exclusions.
How did we apply the Eco-Logical Approach?

1. Build/strengthen collaborative partnerships
2. Integrate ecosystem status, data, and goals
3. Create a regional ecosystem framework
4. Assess regional ecosystem framework
5. Establish and prioritize ecological actions
6. Develop a crediting strategy
7. Develop programmatic agreements and consultations
8. Implement agreements and deliver projects
9. Update regional ecosystem framework
## The Plan 3.0

<table>
<thead>
<tr>
<th>Deliverable/Activity</th>
<th>Timeframe</th>
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</thead>
<tbody>
<tr>
<td>Draft modified REF</td>
<td>8/2013 – 9/2013</td>
</tr>
<tr>
<td>Draft work flow map</td>
<td>9/2013 – 10/2013</td>
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<tr>
<td>Design and construction BMPs</td>
<td>7/2013 – 12/2016</td>
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<tr>
<td>Implementation Assistance</td>
<td>3/2015, 7/2015, 8/2015</td>
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<tr>
<td>Rank features along a corridor according to risk (Decision Support Tool)</td>
<td>3/2015 - 9/2015</td>
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<tr>
<td>Benefit-cost analyses of stream crossing sizing for habitat and hydrology using T-COAST</td>
<td>3/2015 - 10/2015</td>
</tr>
<tr>
<td>Automate DST</td>
<td>9/2015 - 11/2015</td>
</tr>
<tr>
<td>Determine environmental risk gradient</td>
<td>2017</td>
</tr>
<tr>
<td>Implementation schedule for full work plan</td>
<td>10/2015 – 12/2015</td>
</tr>
<tr>
<td>Final work flow map, crediting vehicle, and Programmatic Biological Assessment</td>
<td>11/2015 – 6/2016</td>
</tr>
<tr>
<td></td>
<td>2017</td>
</tr>
</tbody>
</table>
The goals of Step 7 are:

1. Reach agreement on resource management roles and methods.
2. Set outcome-based performance standards incorporated within programmatic agreements.
3. Create programmatic ESA Section 7 consultation, Special Area Management Plan for wetlands, Regional General Permit, or agreements that enable the transportation agency to proceed with conservation or restoration actions with maximum assurance that their investments will count and will be sufficient.

This step is about developing the Memorandum of Agreement and project-level permitting procedures in concert with the resource agencies. It will include:

1. Specifying coordination protocols for the regulated resources, such as Section 404 permits and Section 7 consultation. These protocols will define responsibilities, document agreements at the project level, and set performance standards for mitigation.
2. Developing standard procedures and designs for projects to minimize impacts.
3. Specifying mitigation ratios and priority sites (where possible).

This step is about developing the MOAs and project-level permitting procedures in concert with the resource agencies. MOAs are legal agreements that must be signed by a representative of each participating agency. MOAs and standard procedures will provide a substantial benefit for expediting project-level permitting and consultation, making these processes and outcomes...
Implementation Assistance Process

MaineDOT drafts PBA

FHWA establishes tasks and schedule

IAP team facilitates 2-day discussion

FHWA revises tasks and schedule

MaineDOT re-drafts PBA

MaineDOT, FHWA, USACE, and USFWS re-draft PBA

FHWA, USACE, and USFWS review “final” PBA

USACE and FHWA formally submit PBA to USFWS
How Implementing Eco-Logical Improved our Delivery

Before...

Safety-condition-LOS  →  Scope-budget-schedule  →  Design  →  Alternatives negotiation  →  NEPA-Permitting  →  Deliver

After...

Safety-condition-LOS  →  RISK-alternatives-BCA  →  Assurances-scope-budget-schedule  →  NEPA  →  Design  →  Deliver/permitting

• We are now planning for a more sequential delivery process.
What were the key factors of our success?

• Understood our need through clear metrics
• Focused, shared goal of a programmatic approach
• Engaged our partners in a meaningful way
• Dedicated staff advocates to see it through
• MaineDOT management support – Chief Engineer
• Dedicated Liaison Position (now two!)
• USFWS management engagement from the middle
What using Eco-Logical delivered...

• ~60% of the 17-18-19 work plan projects intersecting with ATS will qualify to use the PBO

• Consultation time under PBO cut from >8 mo to <15 days

• Including USACE means not having to decide prematurely on the flavor of funding

• Project candidates screened face-to-face 3 years prior to work plan

• MaineDOT management support means we don’t argue internally about money

• Room left for discussions on locations and activities

• Generate funding for meaningful species-specific habitat restoration
Judy Gates

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Recently Updated Practitioner’s Handbooks

• 01 Maintaining a Project File and Preparing an Administrative Record for a NEPA Study

• 02 Responding to Comments on an Environmental Impact Statement

• 03 Managing the NEPA Process for Toll Lanes and Toll Roads

• 06 Consultation Under Section 106 of the National Historic Preservation Act

• 07 Defining the Purpose and Need and Determining the Range of Alternatives for Transportation Projects

• 12 Assessing Indirect Effects and Cumulative Impacts Under NEPA

• 14 Applying the Section 404(b)(1) Guidelines in Transportation Project Decision-Making
Next Practitioner’s Handbooks: Coming Soon!

• *Complying with Section 7 of the Endangered Species Act for Transportation Projects* – November 2016

• *Air Quality* – January 2017
Questions for the Panel?

• All attendees are on mute.
• To submit a question:
  • In GoTo Webinar control panel on the right of your screen.
  • Type your question in the “Question” box.
  • Press “Send.”
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