Intersections between Eco-Logical and PEL: FHWA Programs to Improve Environmental Outcomes

Wednesday, April 6, 2011
2:00 – 3:30 PM Eastern

Presenters
• Gina Filosa, DOT Volpe Center
• Bethaney Bacher-Gresock, Federal Highway Administration
• Mary Gray, Federal Highway Administration
• Tamara Cook, North Central Texas Council of Governments
• Brad Calvert, Denver Regional Council of Governments

Moderated by Mary Gray, FHWA Office of Project Development and Environmental Review
Intersections between Eco-Logical and PEL: FHWA Programs to Improve Environmental Outcomes

What We will be Presenting:

- Overview of the PEL Program
- Overview of Eco-Logical
- STARS Workshops/ SHRP2
- Applications of Eco-Logical and PEL:
  - North Central Texas Council of Governments
  - Denver Regional Council of Governments
What is PEL?

A FHWA PROGRAM promoting tools and resources,

- and -

An APPROACH to transportation decision-making
Elements of the PEL Approach

System-level Planning

Transportation Plans

Integrated Planning

Conservation & Resource Management Information

Voluntary

Required

Project-level Decisions

Linking Planning & NEPA

Environmental Analysis Process (NEPA)
Benefits of the PEL Approach

- Address complex environmental challenges early and avoid environmentally sensitive natural resources.
- Design projects that meet mobility, environmental, and community needs.
- Minimize duplication of efforts and data.

Improves transportation decision-making and project delivery timeframes.
PEL Program Activities

- PEL 101 Training
- STARS Workshops
- PEL Questionnaire
- Case Studies
- *A Guide to Measuring Progress in Linking Transportation Planning and Environmental Analysis*
- Corridor Planning Guidance
Additional Information on PEL

PEL Website:


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Eco-Logical: An Ecosystem Approach to Developing Infrastructure Projects

• **Addresses** challenges in planning for ecosystems and infrastructure:
  – Duplication of efforts
  – Uncertainty and lack of predictability
  – Results: piecemeal mitigation

• **Multiagency steering team convened in 2002**

• **Eco-Logical published in 2006**
The Eco-Logical Approach

- Predictability
- Connectivity
- Conservation
- Transparency
Eight Steps of Integrated Eco-logical Planning

• Build and Strengthen Collaborative Partnerships
• Identify Management Plans
• Integrate Plans
• Assess Effects
• Establish and Prioritize Opportunities
• Document Agreements
• Design Projects Consistent with Regional Ecosystem Framework
• Balance Predictability and Adaptive Management

Photo courtesy of the Volpe Center
FHWA Eco-Logical Grant Program

* Alaska, Hawaii, and Puerto Rico are not included in this map because there are no current Eco-Logical projects in those locations.
FHWA Eco-Logical Activities

• Signatory agency activities and Successes document
• Webinar series
• Integrated Transportation and Ecological Enhancements for Montana (ITEEM)

Highway 83 corridor in Montana. Photo courtesy of the Volpe Center.
Additional Information on Eco-Logical

Eco-Logical Website:

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FHWA Outreach Initiatives

- STARS Workshops
- SHRP2
- Every Day Counts

Highway 83 corridor in Montana. Photo courtesy of the Volpe Center.
Workshop objectives:

• Data and Tools
• Partnerships
• Early Collaboration Strategies
• Local Collaboration Opportunities

Structured Transparent Accountable Reproducible Sustainable
STARS Workshops

Locations:
• California
• Mississippi
• Kansas
• Idaho
• West Virginia (upcoming)
• Montana (upcoming)
Strategic Highway Research Program (SHRP 2)

CO6A & CO6B

- Integration of Conservation, Highway Planning and Environmental Permitting
C06 A & B Key Outcomes

- **C06A:**
  1) Integrated Ecological Framework
  2) Agency specific integrated approach to conservation and transportation planning,

- **C06B:**
  1) Cumulative Effects and Alternatives Analysis
  2) Regulatory Assurances
  3) Ecosystem Crediting
Every Day Counts

Goal: Shorten project delivery and improve environmental outcomes.

Toolkit includes:

• Planning & Environmental Linkages
• Legal Sufficiency Enhancements
• Expanding Use of Programmatic Agreements
• Use of In-Lieu Fee and Mitigation Banking
• Clarifying the Scope of Preliminary Design
• Enhanced Technical Assistance on Ongoing EISs
Relationship to FHWA Streamlining and Stewardship Programs

Time and cost savings:
- Eliminating duplication
- Ecosystem scale mitigation

Improves project delivery by linking planning and NEPA

- Greater interagency collaboration
- Minimal duplication of efforts
- Stronger environmental outcomes
North Central Texas: A Growing Region

Approximately 10,000 Square Miles Metropolitan Planning Area

Forecast 50% growth from 2010 (6.5 M) to 2035 (9.8 M)

Increased demands on infrastructure (current and future)

Increased demands on natural resources

Importance of identifying key resources and evaluating the Green Infrastructure and the Grey Infrastructure

Demands on water resources will become increasingly important as the region grows and forms the foundation upon which the Regional Ecosystem Framework is being built.
Regional Ecosystem Framework (REF)

An Inventory of Environmental Data that Provides a Framework for Assessing Potential Impacts of Infrastructure Projects

Based on 10 Vital Ecosystem Information Layers*

Assigns a Value to Each Subwatershed

**VEIL LAYERS**

- **Green Infrastructure**
  - Wildlife habitat
  - Natural areas
  - Agricultural land

- **Water Quality and Flooding**
  - Impaired water segments
  - Flood zones
  - Surface water quantity
  - Wetlands

- **Ecosystem Value**
  - Rarity
  - Diversity
  - Sustainability

*Data Source: EPA Region 6, Texas GRID data

**Regional Ecosystem Assessment Protocol is based on Ecoregion Analysis
The Regional Ecosystem Framework Wildlife Habitat Score represents a subwatershed quantity of NLCD habitats represented by forest lands, shrublands, grasslands, wetlands, and open water. Data sources include the Texas GRID data. This information has been converted to the Subwatershed for the Dallas-Fort Worth Metropolitan Planning Area for use in long-range planning. For more information on the calculations for this layer, please visit www.nctcog.org/traces.
Regional Screening Tool – Identifies relative importance of an individual subwatershed

Define Key Resources – 10 VEIL layers

Identify Potential for Impacts

Mitigation Opportunities - Potential to identify more valuable mitigation strategies

Supports Ecosystem-Approach to Mitigation
Initial Outcomes and Potential Benefits

**Improved Transportation Decision-Making Process**

- **Conducting some analysis at the planning level = eliminate some duplication of work**
- **Enhanced understanding of priority resources at the regional level**
- **Strengthened collaborative relationships**
- **Utilizing data available to resource agencies = consistency during NEPA Review**
- **Applicable to non-transportation infrastructure development**
- **Potential to assess mitigation strategies that are more valuable to ecosystems**
1. Complete Website that Offers Data

2. Incorporate Data Updates

3. Begin Coordination Efforts with Resource Agencies to Develop Ecosystem-Based Mitigation on Pilot Transportation Project

4. Develop and Implement Regional Mitigation Program for Transportation Projects

5. Develop Performance Measures

6. Assess Potential to use for Cumulative Impacts Analysis
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Special Thank You to EPA Region 6
Planning & Environmental Linkages (PEL)
Brad Calvert, Senior Planner
Denver Regional Council of Governments (DRCOG)
Elements of PEL Approach
Why PEL?

To make planning more effective...
- Comprehensive look at all the factors
- Broader basis to help determine which projects are priorities
- Less backtracking during NEPA

To make agencies more effective...
- Chance for resource agencies to shape vs. react
- Create productive interagency relationships
- Opportunities to cross-train staff
Building on past efforts

Strategic Transportation, Environmental Planning Process for Urbanizing Places (STEP UP)

- Partnership between MPO, CDOT and federal agencies
- Pilot environmental streamlining project
  - Identify environmental issues early
  - Early and continued involvement of resource agencies
  - Planning to improve implementation
Building on past efforts

Transportation Environmental Resource Council

- Formed in 2002 as forum to consider transportation decisions and environmental stewardship

- 15 membership agencies
  - Collaboration during the earliest stages of planning
  - Attempting to always look ahead to next set of challenges
Parker Road PEL Study

- **2nd PEL corridor study**
- Major regional arterial that must balance regional mobility and local access
- Bordered by large state park
- Wetlands, historic properties and listed species
- Long corridor and limited funding for improvements
Each resource agency individually briefed

Early consultation appreciated

Potential issues identified early in the process – opportunity to avoid vs. mitigate

Identified ‘check-in’ points in the planning process

Resource agencies recognize benefits

- Less impact on resources
- Early involvement equals less staff time needed in future
- Better understanding of project can lead to joint mitigation
## Summary Observations – Resource Agency Meetings on Parker Road PEL Study

<table>
<thead>
<tr>
<th>Resource Agency</th>
<th>Initial Reaction to PEL Process</th>
<th>Resources Identified for Parker Rd</th>
<th>Suggested Check in Points</th>
<th>Proposed Method of Documenting ‘Day-1’</th>
<th>Benefits of PEL to the Agency</th>
<th>Potential Concerns about PEL</th>
<th>Outlook for ongoing planning study recommendations into NEPA without backtracking (e.g. purpose and need, alternatives screening)</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Fish and Wildlife Service (USFWS)</td>
<td>Interested in participating.</td>
<td>Listed species to consider: Pardalotes, Curlew, Streamside Banded, Pacific Tree Frog, Western Pond Turtle, Round-tailed Skink, Golden-mantled Ground Squirrel, Bi-State Mule Deer, Sage Thrasher, Sage Grouse, Western Meadowlark, Least Bell’s Vireo, Cactus Wren.</td>
<td>Vision statements (purposes and needs).</td>
<td>Alternative Screening, Environmental Overview.</td>
<td>P_PE.</td>
<td></td>
<td>Discussed the idea of identifying a ‘worst case scenario’ impact area for the entire corridor, and identifying wildlife concerns within that boundary. To the extent that 1) individual projects do not go beyond the worst case impact area and 2) that new species are not identified, or old ones have changed locations, work done in PEL can likely be used as a basis for NEPA.</td>
</tr>
<tr>
<td>Colorado Division of Wildlife (CDOW)</td>
<td>Interested in participating.</td>
<td>Deer crossing near Cherry Creek Rd.</td>
<td>Vision statements (purposes and needs).</td>
<td>Alternative Screening, Environmental Overview.</td>
<td>P_PE.</td>
<td></td>
<td>Revisited the USFWS idea of identifying a ‘worst case scenario’ impact area for the entire corridor, and identifying wildlife concerns within that boundary. To the extent that 1) individual projects do not go beyond the worst case impact area and 2) that new species are not identified, or old ones have changed locations, work done in PEL can likely be used as a basis for NEPA.</td>
</tr>
<tr>
<td>Environmental Protection Agency (EPA)</td>
<td>Interested, but limited ability to sign off on work due to workload and nature of resources (compared to NEPA).</td>
<td>Air Quality.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Revised the USFWS idea of identifying a ‘worst case scenario’ impact area for the entire corridor, and identifying wildlife concerns within that boundary. To the extent that 1) individual projects do not go beyond the worst case impact area and 2) that new species are not identified, or old ones have changed locations, work done in PEL can likely be used as a basis for NEPA.</td>
</tr>
<tr>
<td>Denver Regional Council of Governments (DRCOG)</td>
<td>Acting that can make the process more efficient is good.</td>
<td>Air Quality.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Revised the USFWS idea of identifying a ‘worst case scenario’ impact area for the entire corridor, and identifying wildlife concerns within that boundary. To the extent that 1) individual projects do not go beyond the worst case impact area and 2) that new species are not identified, or old ones have changed locations, work done in PEL can likely be used as a basis for NEPA.</td>
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### Benefits of PEL to the Agency

- Quantifying wildlife concerns and/or could minimize impacts.
- Could reduce time needed on project timeline in NEPA.
- List of federally protected species changes over time.

### Potential Concerns about PEL

- Some species list changes could change between now and when NEPA is done. Would require a look at any new species.

### Outlook for ongoing planning study recommendations into NEPA without backtracking (e.g. purpose and need, alternatives screening)

- Revised the USFWS idea of identifying a ‘worst case scenario’ impact area for the entire corridor, and identifying wildlife concerns within that boundary. To the extent that 1) individual projects do not go beyond the worst case impact area and 2) that new species are not identified, or old ones have changed locations, work done in PEL can likely be used as a basis for NEPA.

### Revised

- No DOW permit or SEIS is required during NEPA. For projects where SB 40 applies, DOW needs to be brought back in for review in NEPA.
- No air monitoring data required.

### Most Resources of Concern to EPA

- Reception of early EPA involvement is minimal.
- Potential to receive COOT-PEA, MOU to transfer EPA staff time toward PEL studies, or reduce formal NEPA review for minor changes upon RAs.

### Workload impacts

- Legal implication to place priority on NEPA and EAs.
- No legal requirement for EPA to review COOTs or planning studies.

### Most Resources of Concern to EPA

- Most resources of concern to EPA are coordination concerns, which would be defined at start of 2003. Some ability to secure EAs, PEL, etc. with potential to reduce EIs, impacts or AEI impacts and to use as in the methods being used which could carry into NEPA.
Lessons learned...

- MUST have support and buy-in from resource agency upper-level management (TERC)
- Helpful to work with agencies to create a ‘worst case scenario’
- Document the conditions which would allow findings to flow directly into NEPA
- Resources can change between PEL and NEPA
- Each agency is different – important to think about consultation beyond the current planning effort
Sustaining PEL Approach

PEL Questionnaire

- Developed by FHWA staff to help with transition to NEPA
- Serves as a summary of the planning process
- Helps planning staff understand the level of detail needed
- Provides NEPA project staff with documentation
- May extend the shelf life of the planning document
Sustaining PEL Approach

PEL Partnering Agreement

- 15 signatories – Signed in June 2009
- Built on a strong foundation of interagency relationships
- Purpose is to encourage the use of the PEL approach
- Outlines benefits of PEL
  - Better information
  - Enhanced decision-making
  - Decisions documented
  - Agencies can determine course of action earlier

Planning and Environmental Linkages Partnering Agreement

Purpose

In the spirit of cooperation and collaboration, and acknowledging the critical role that a number of agencies play in achieving the goals of the transportation industry, this Planning and Environmental Linkages (PEL) Partnering Agreement (Agreement) has been developed to foster proactive working relationships among Colorado Department of Transportation (CDOT), Federal Highway Administration (FHWA), Federal Transit Administration (FTA), Regional Transportation District (RTD), other federal and state resource agencies, regional organizations/agencies and regulatory and land management agencies.

The purpose of the Agreement is to encourage the use of a PEL approach in an effort to meet agency needs while expediting transportation project delivery and to formalize the working relationship among the Transportation Environmental Resource Council (TERC) members.

As members of the TERC and signatories to this Agreement, the state and federal agencies herein are committed to partner together in efforts to develop a process that encourages:

- Early communication, coordination, and collaboration with and input by the agencies in the transportation planning process
- Better informed and strategic transportation decisions
- Transportation options that include multi-modal components when feasible
- Efficient and cost-effective solutions
Ongoing Efforts and Next Steps

CDOT’s Online PEL Decision Tool

- Preliminary scoping tool
  - Helps prepare for study – what approach is needed
  - Can create a basic structure for a study
  - Differentiates between what you know and what you need to know

http://dtdapps.coloradodot.info/pel/home.aspx
Ongoing Efforts and Next Steps

- CDOT PEL Program Manager
- Three new PEL studies set to begin in near future
- Continue to refine guidance on how to plan in order to prepare for projects
- Simplified Environmental Assessment for areas that have used PEL
- Continue efforts to improve assessment of cumulative effects during PEL
- TIP/RTP process to encourage PEL studies
Eco-Logical Webinar Series Announcements

Please mark your calendars for the next webinar in the series:
*Eco-Logical and Wildlife Connectivity: Concepts in Innovative Planning in Colorado*

Tuesday, May 24
1:00 – 2:30 PM Eastern

Slides from the March 16 Eco-Logical Webinar are now available:
*Using Eco-Logical to Identify Priorities for Conservation and Mitigation*