

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

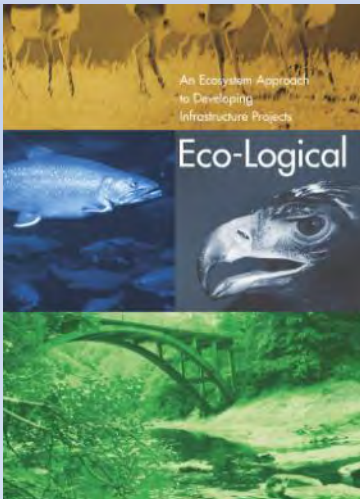
Wednesday, April 6, 2011
2:00 – 3:30 PM Eastern

PLANNING & ENVIRONMENT LINKAGES

Presenters

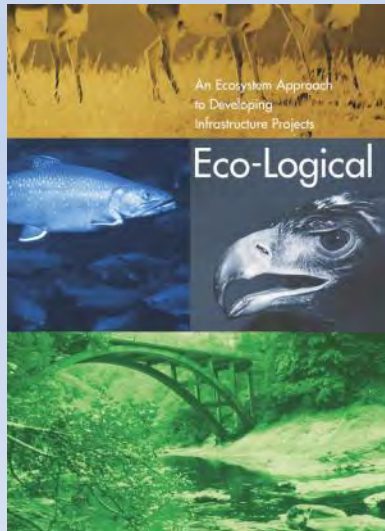
- Gina Filosa, DOT Volpe Center
- Bethaney Bacher-Gresock, Federal Highway Administration
- Mary Gray, Federal Highway Administration
- Tamara Cook, North Central Texas Council of Governments
- Brad Calvert, Denver Regional Council of Governments

Moderated by Mary Gray, FHWA Office of Project Development and Environmental Review



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

PLANNING & ENVIRONMENT LINKAGES



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



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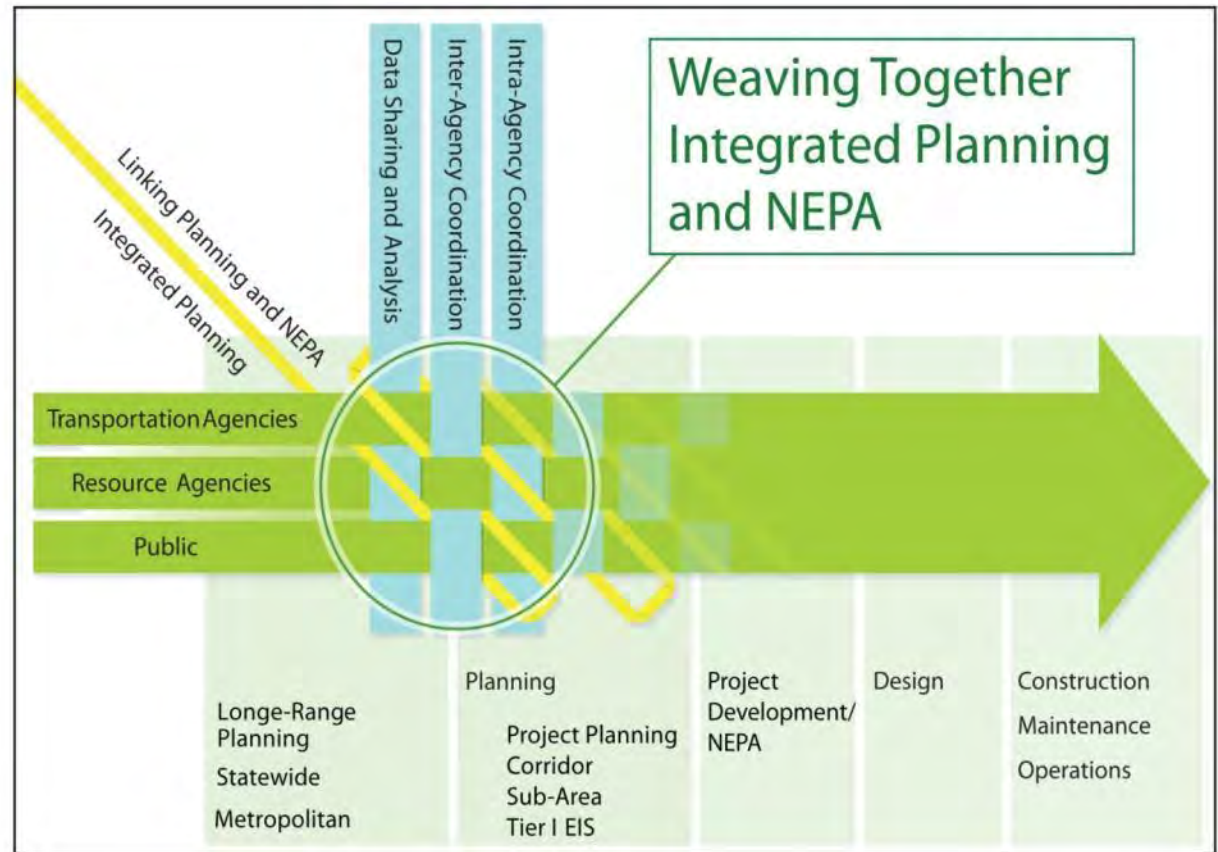
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What is PEL?

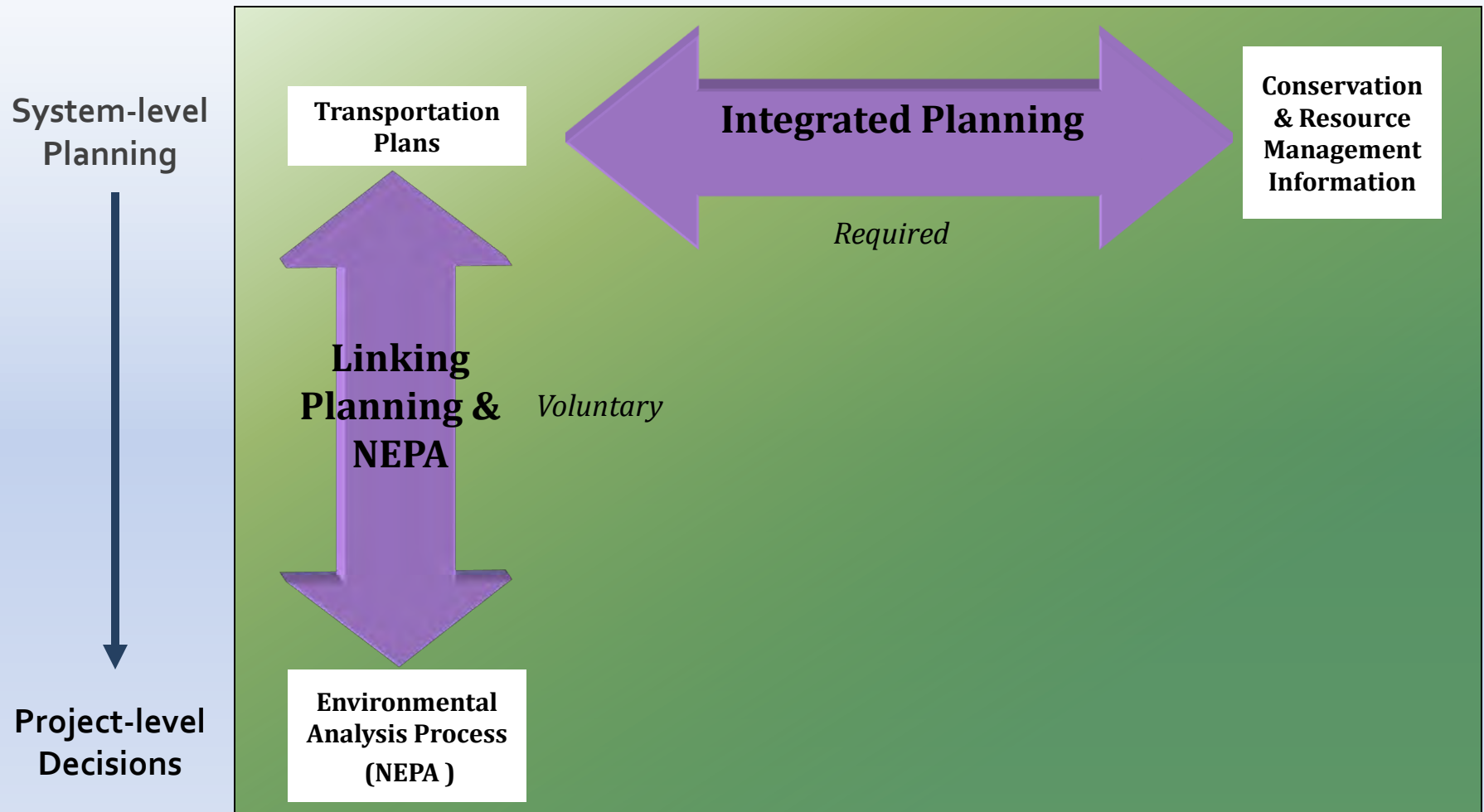
A FHWA PROGRAM
promoting tools and
resources,

- and -

An APPROACH to
transportation decision-
making



Elements of the PEL Approach



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



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Additional Information on PEL

PEL Website:

<http://environment.fhwa.dot.gov/integ/index.asp>

Contacts:

Spencer Stevens

FHWA Office of Planning
Spencer.Stevens@dot.gov
(202) 366-1049

Ruth Rentch

FHWA Office of Project Development
and Environmental Review
Ruth.Rentch@dot.gov
(202) 366-2034

Gina Filosa

U.S. DOT / RITA / Volpe Center
Gina.Filosa@dot.gov
(617) 494-3452

Gina Barberio

U.S. DOT / RITA / Volpe Center
Gina.Barberio@dot.gov
(617) 494-3571



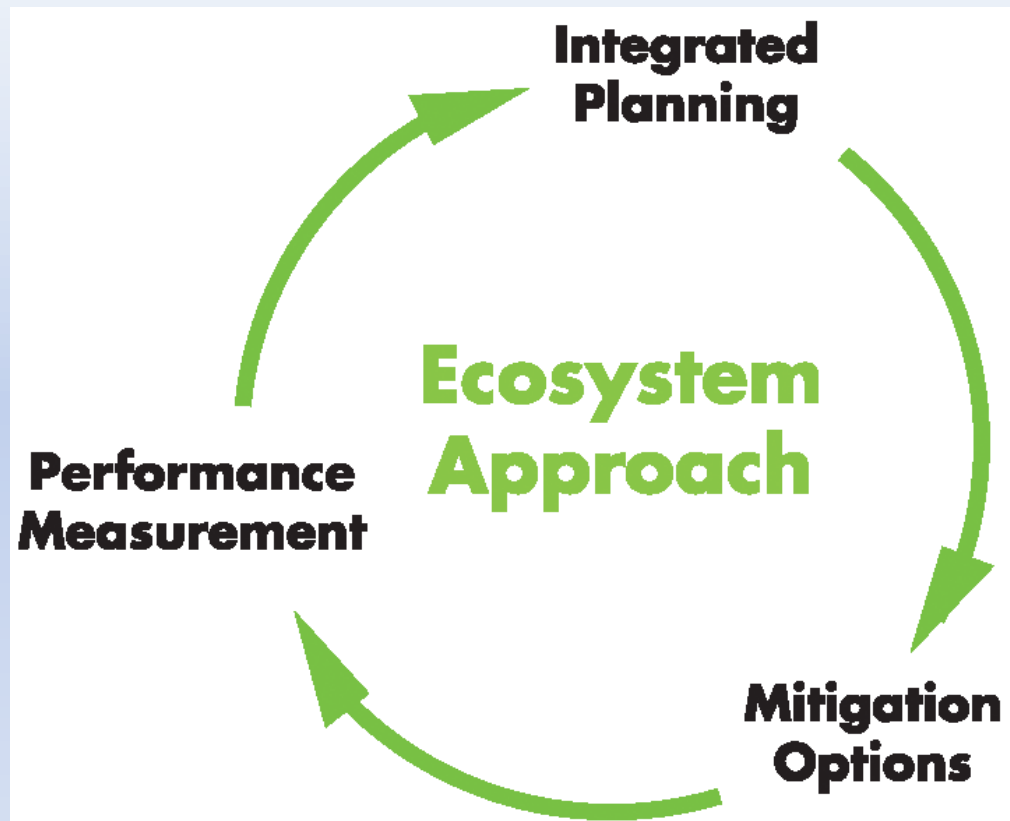
Eco-Logical: An Ecosystem Approach to Developing Infrastructure Projects

- **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

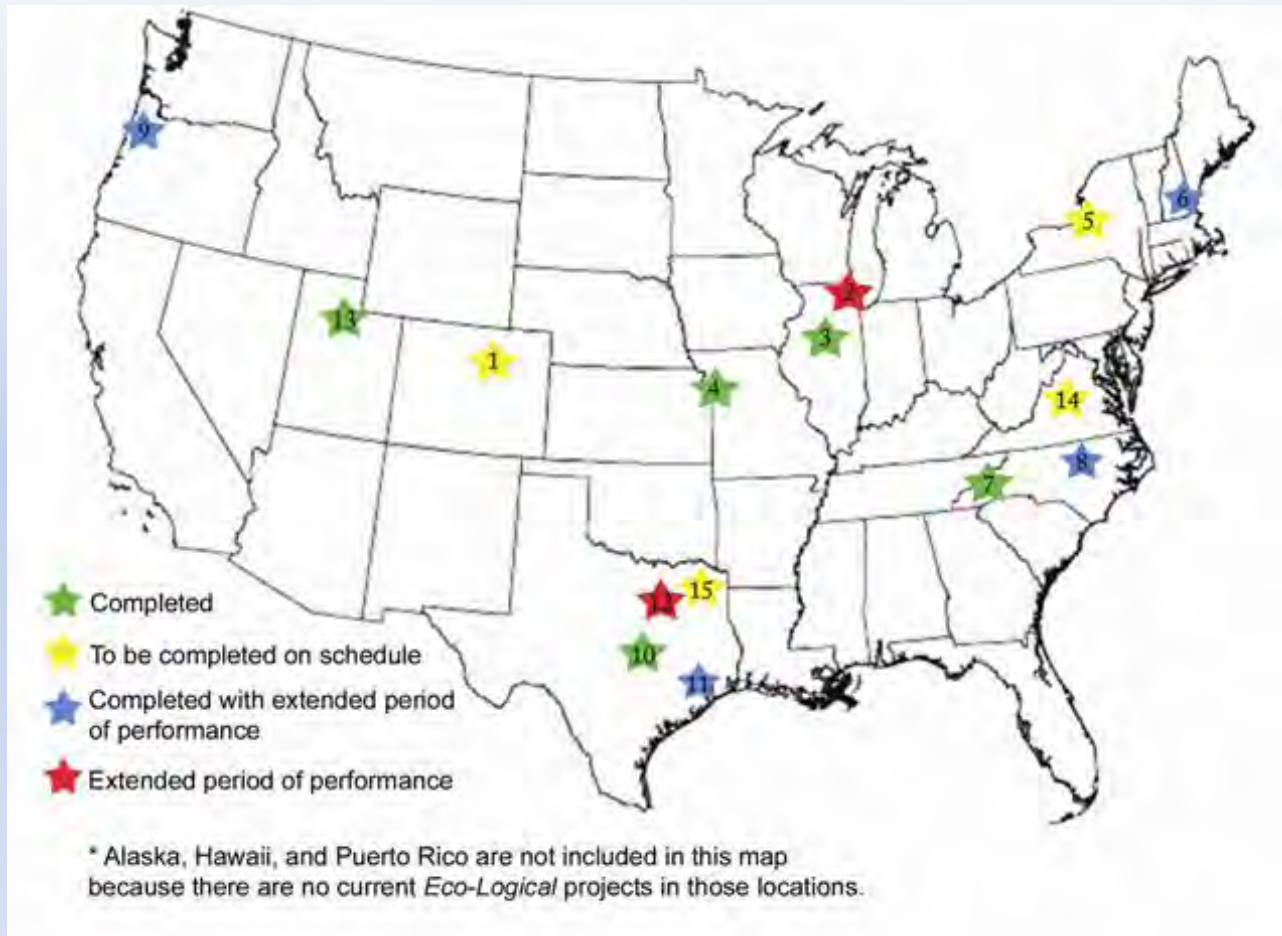
- Build and Strengthen Collaborative Partnerships
- Identify Management Plans
- Integrate Plans
- Assess Effects
- Establish and Prioritize Opportunities
- Document Agreements
- Design Projects Consistent with Regional Ecosystem Framework
- Balance Predictability and Adaptive Management



Photo courtesy of the Volpe Center



FHWA Eco-Logical Grant Program



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:

http://www.environment.fhwa.dot.gov/ecological/eco_entry.asp

Contacts:

Mary Gray

FHWA Office of Project Development
and Environmental Review
Mary.Gray@dot.gov
(360) 753-9487

Mike Ruth

FHWA Office of Project Development
and Environmental Review
Mike.Ruth@dot.gov
(202) 366-9509

Haley Peckett

U.S. DOT / RITA / Volpe Center
Haley.Peckett@dot.gov
(617) 494-2273

Julianne Schwarzer

U.S. DOT / RITA / Volpe Center
Julianne.Schwarzer@dot.gov
(617) 494-3259



FHWA Outreach Initiatives

- STARS Workshops
- SHRP2
- Every Day Counts



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



STARS Workshops

Workshop objectives:

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



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STARS Workshops

Locations:

- California
- Mississippi
- Kansas
- Idaho
- West Virginia (upcoming)
- Montana (upcoming)

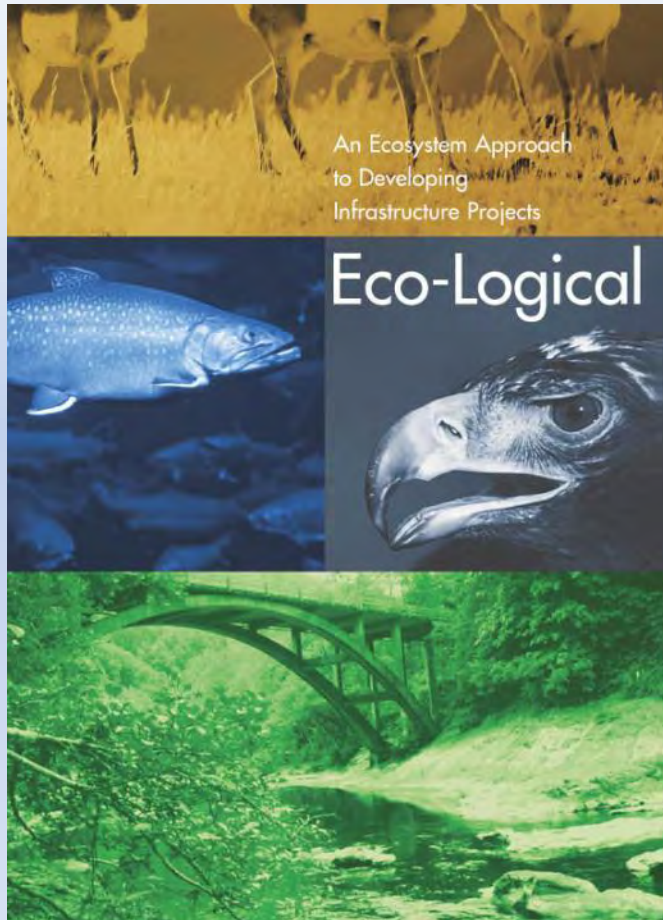


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Strategic Highway Research Program (SHRP 2)



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



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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

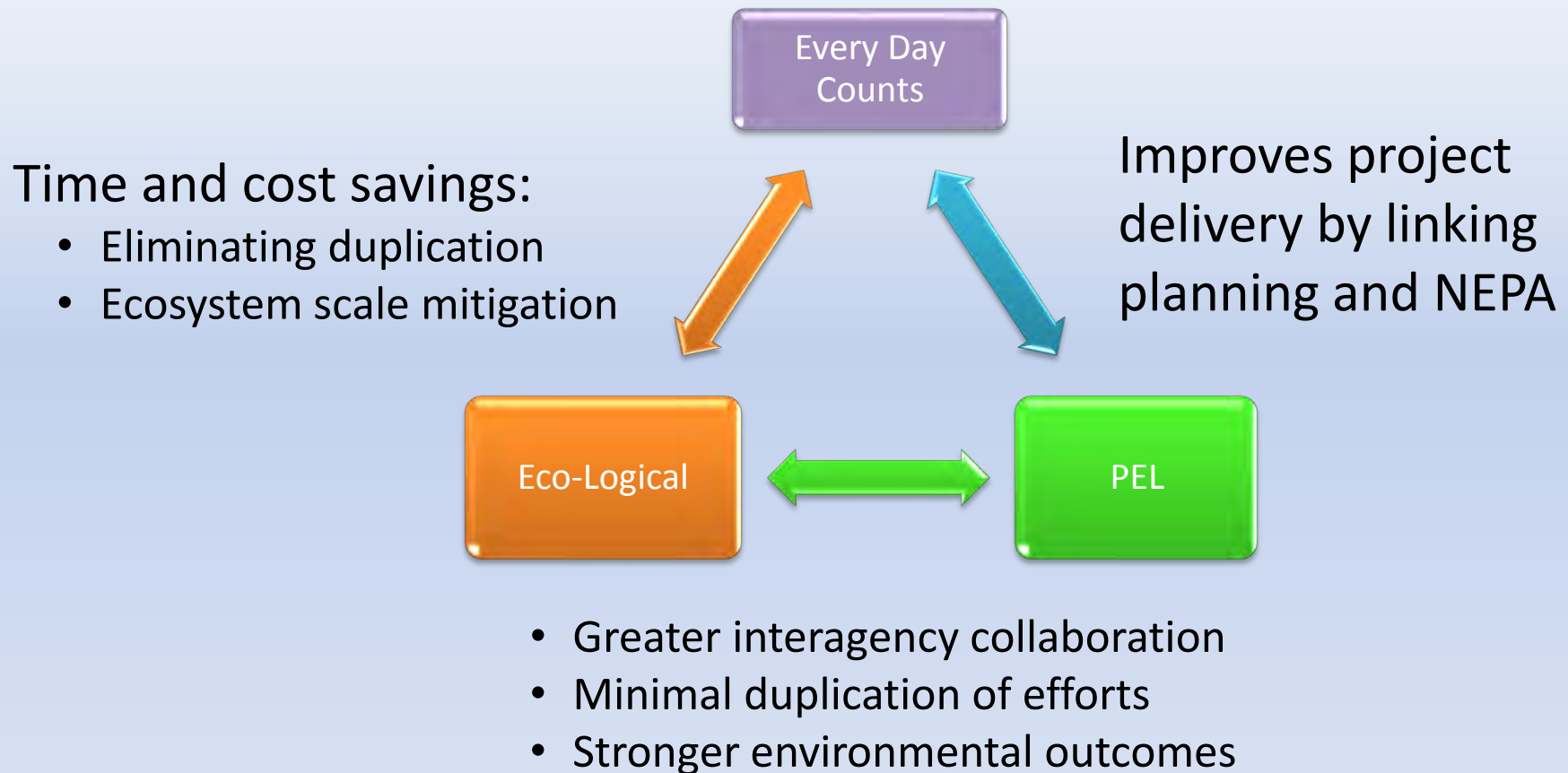


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Relationship to FHWA Streamlining and Stewardship Programs



NORTH CENTRAL TEXAS REGIONAL ECOSYSTEM FRAMEWORK

TAMARA COOK, AICP
Senior Transportation Planner
North Central Texas Council of Governments



NORTH CENTRAL TEXAS: A GROWING REGION

Approximately 10,000 Square Miles Metropolitan Planning Area

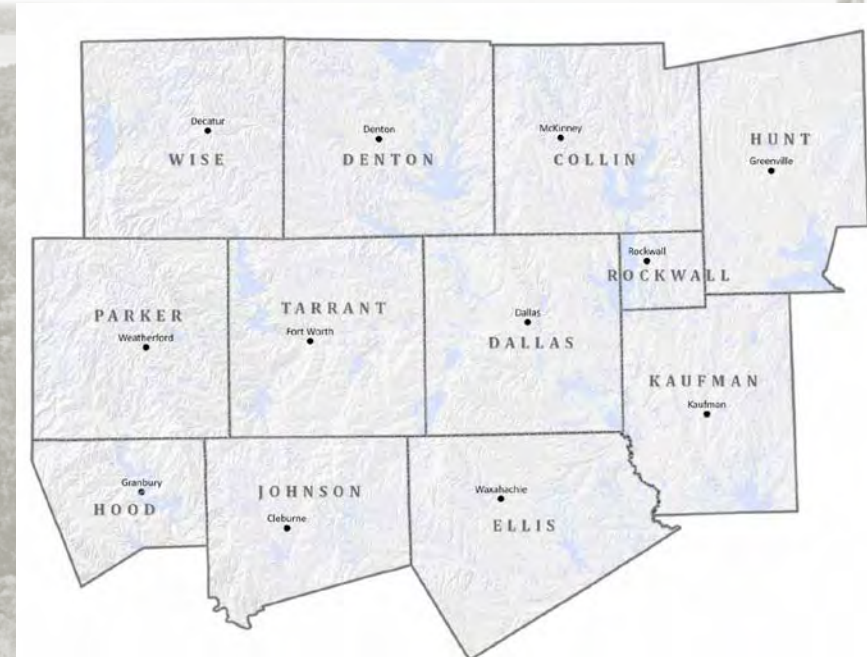
Forecast 50% growth from 2010 (6.5 M) to 2035 (9.8 M)

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



Dallas-Fort Worth Metropolitan Planning Area

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

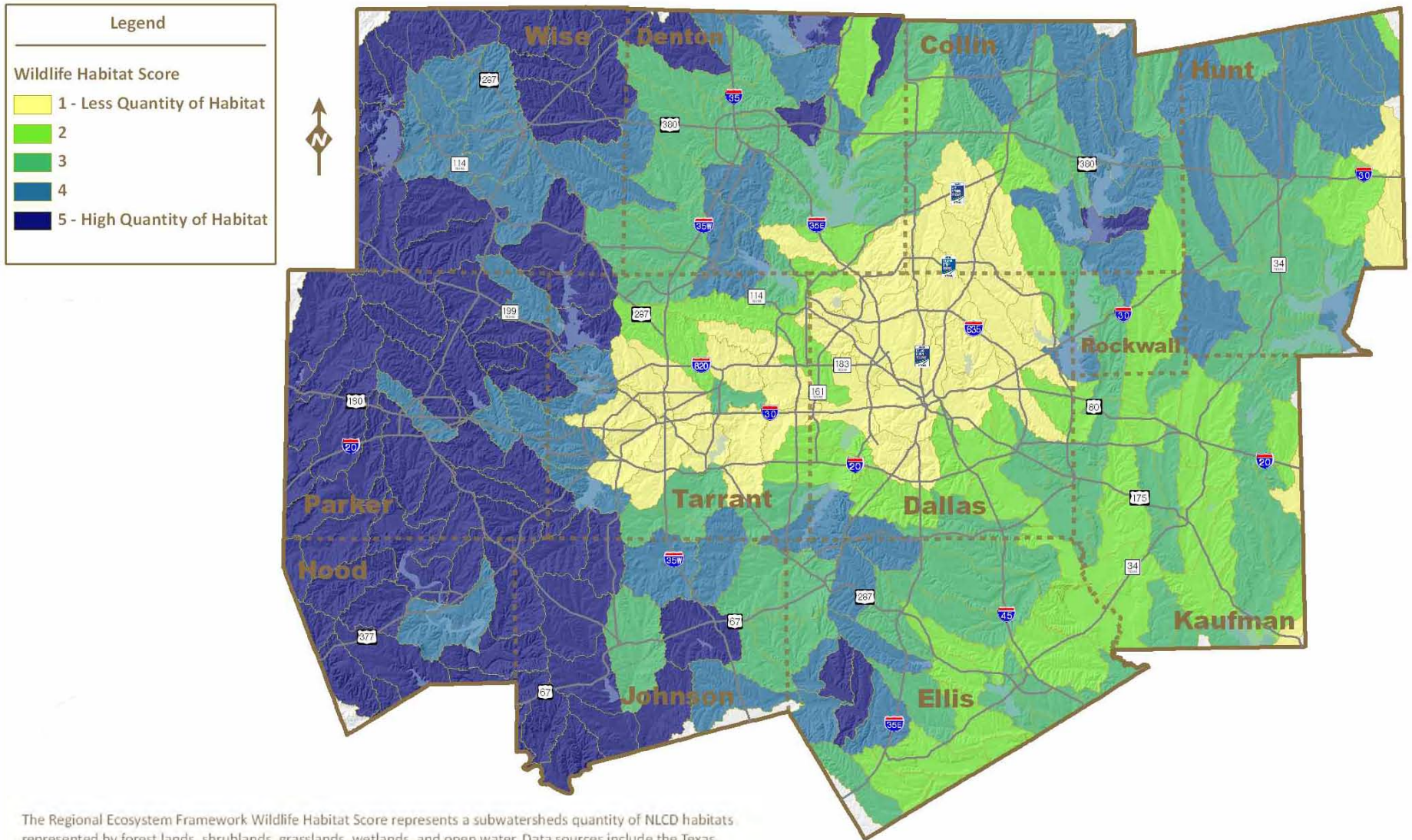
ECOSYSTEM VALUE**

- Rarity
- Diversity
- Sustainability

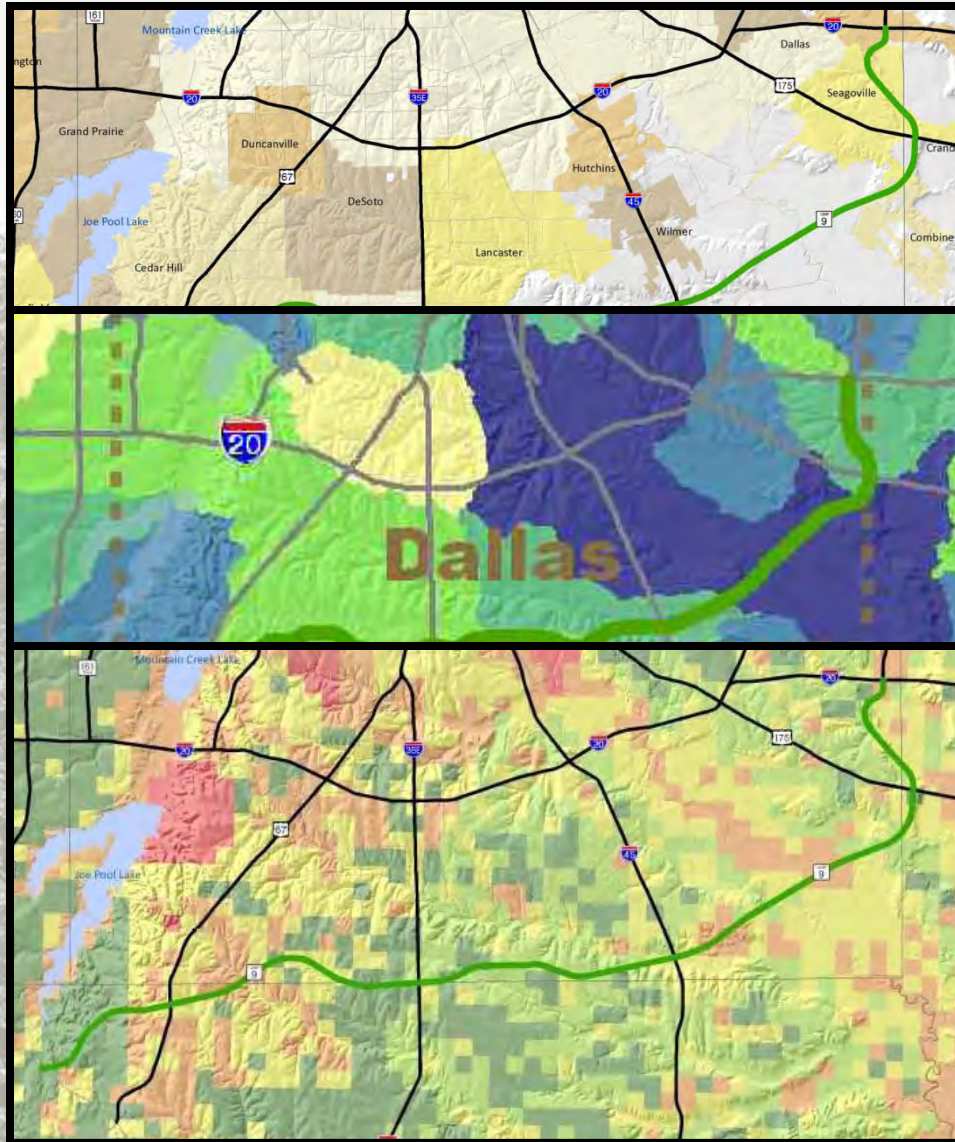
*Data Source: EPA Region 6, Texas GRID data

**Regional Ecosystem Assessment Protocol is based on Ecoregion Analysis

EXAMPLE: REF WILDLIFE HABITAT SCORE



INTEGRATED PLANNING



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

CONDUCTING SOME ANALYSIS AT
THE PLANNING LEVEL =
ELIMINATE SOME DUPLICATION
OF WORK

ENHANCED UNDERSTANDING OF
PRIORITY RESOURCES AT THE
REGIONAL LEVEL

STRENGTHENED
COLLABORATIVE
RELATIONSHIPS

APPLICABLE TO NON-
TRANSPORTATION
INFRASTRUCTURE
DEVELOPMENT

UTILIZING DATA AVAILABLE TO
RESOURCE AGENCIES =
CONSISTENCY DURING NEPA
REVIEW

POTENTIAL TO ASSESS
MITIGATION STRATEGIES THAT ARE
MORE VALUABLE TO ECOSYSTEMS

Improved
Transportation
Decision-Making
Process

NEXT STEPS

- 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**

QUESTIONS & CONTACT

Tamara Cook, AICP

Senior Transportation Planner

North Central Texas Council of Governments

(817) 608-2395

tcook@nctcog.org

Special Thank You to EPA Region 6

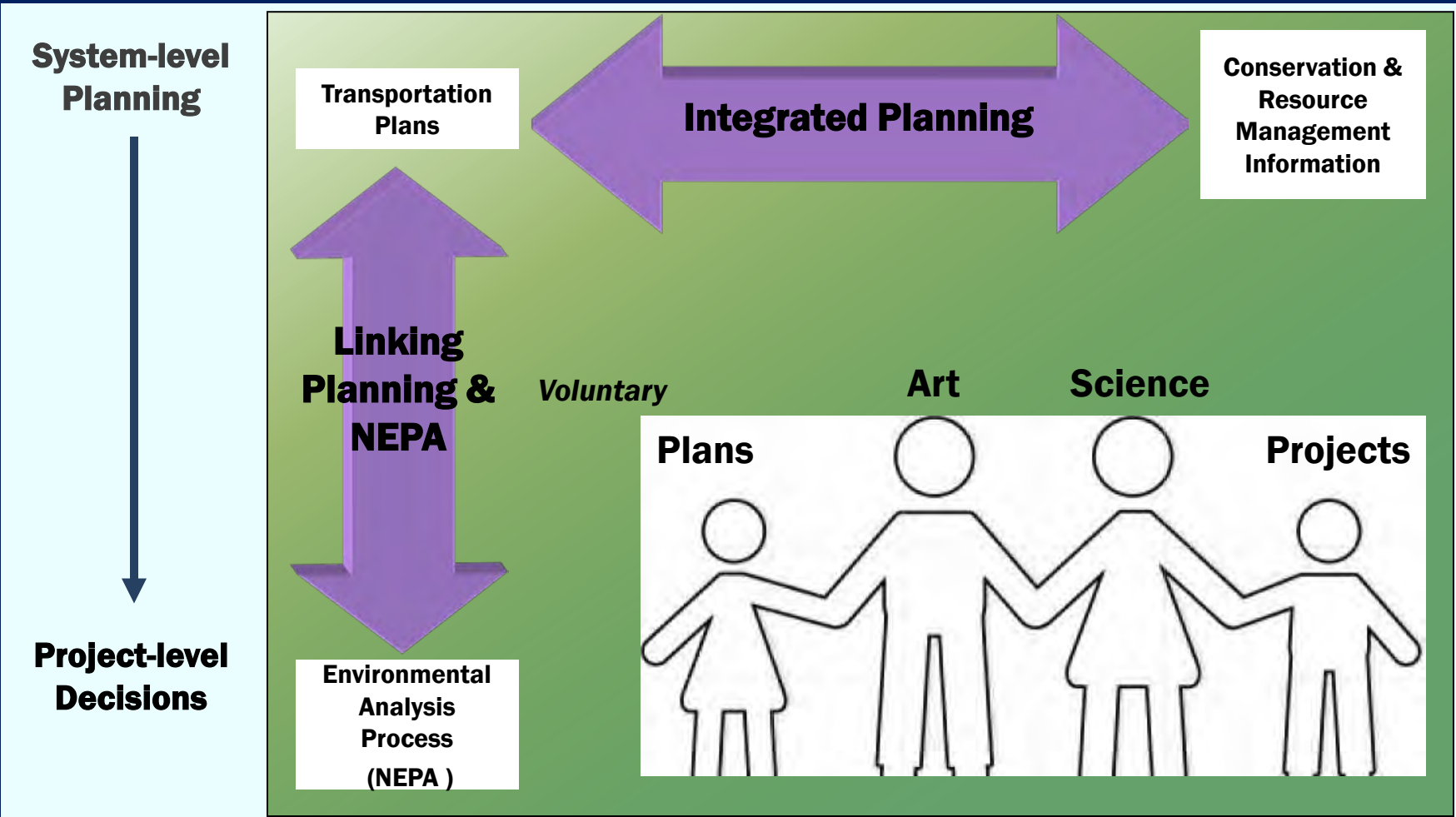
Planning & Environmental Linkages (PEL)

Brad Calvert, Senior Planner

Denver Regional Council of Governments (DRCOG)



Elements of PEL Approach



Planning & Environment Linkages (PEL)



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

Enter/Edit Corridor - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Current Page > Home > List Corridors > Edit Corridor

TPR: North Front Range MPO

Name: North I-25

Primary Investment Category: System Quality

Attributes: System Quality: High Importance, Safety: Moderate Importance, Mobility: Low Importance, Strategic Projects: High Importance

Vision: This corridor will be a significant trade route between Canada and Mexico City.

Goals: Higher speeds, wider lanes, less cars, more trucks, fewer interchanges!

Strategies: Higher speeds, wider lanes, less cars, more trucks, fewer interchanges!

Location Description: US I-25 from milemarker 0 to milemarker 250.

Location Map

Edit Location

Cancel Save



Building on past efforts

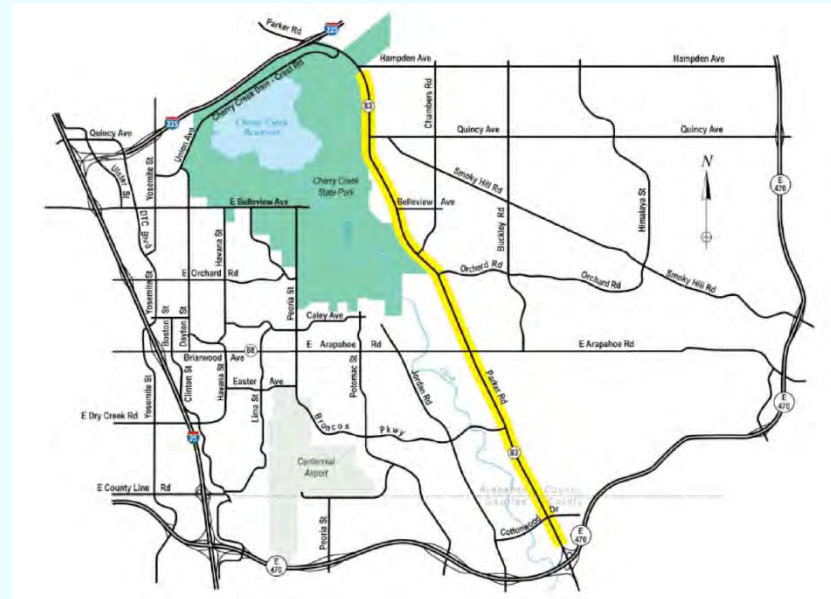
Transportation Environmental Resource Council

- ❑ 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



Parker Road PEL Matrix

- ☐ 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



Parker Road PEL Matrix

Summary Observations – Resource Agency Meetings on Parker Road PEL Study

Resource Agency	Initial Reaction to PEL Process	Resources Identified for Parker Rd	Suggested Check-in Points	Proposed Method of Documenting "Buy-In"	Benefits of PEL to the Agency	Potential Concerns about PEL	Outlook for carrying planning study recommendations into NEPA without backtracking (e.g. purpose and need, alternatives screening)
U.S. Fish and Wildlife Service (USFWS) <i>Allison Michael</i>	<ul style="list-style-type: none"> Interested in participating. Appreciates early consultation and potential for minimizing impacts through early scoping. 	<ul style="list-style-type: none"> Listed Species to consider: Prebles, Ute ladies'-treasures orchid, Colorado butterfly plant, Black-tailed prairie dogs, burrowing owls, bald eagle, and migratory birds S. Platte River depletions Cherry Creek Wetlands 	<ul style="list-style-type: none"> Vision statement (purpose and need) Alternatives Screening Environmental Overview Report Prior to final report recommendations 	<ul style="list-style-type: none"> Review meeting minutes and confirm by e-mail that they accurately reflect our discussions on PEL process, resources discussed, and approach. 	<ul style="list-style-type: none"> Identifying wildlife concerns earlier could minimize impacts Could reduce time needed on project later in NEPA 	<ul style="list-style-type: none"> List of federally protected species changes over time. 	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 did 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.
Colorado Division of Wildlife (CDOW) <i>Crystal Peterson</i>	<ul style="list-style-type: none"> Interested in participating. Appreciates early consultation and potential for minimizing impacts through early scoping. 	<ul style="list-style-type: none"> Deer crossing near Cherry Creek Res. Listed Species: Prebles, Ute ladies'-treasures orchid, Colorado butterfly plant, Black-tailed prairie dogs, burrowing owls, bald eagle, and migratory birds (swallows and raptors) 	<ul style="list-style-type: none"> Vision statement (purpose and need) Alternatives Screening Environmental Overview Report (want review to ensure their comments were captured) Prior to final report recommendations 	<ul style="list-style-type: none"> At a minimum – respond to meeting minutes to confirm discussion May be able to write a letter to specify resources of concern and nature of our discussion 	<ul style="list-style-type: none"> Earlier input hopefully results in less impact to wildlife Chance to make comments on project resources / location before decisions are made 	<ul style="list-style-type: none"> State species list could change between now and when NEPA is done. Would require a look at any new species. 	Reviewed 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. No DOW permit or sign-off is required during NEPA. For projects where SB-40 applies, DOW needs to be brought back in for review in NEPA.
Environmental Protection Agency (EPA) <i>Deborah Lebow-Aal</i>	<ul style="list-style-type: none"> Interested, but limited ability to sign off on anything during PEL due to workload and nature of resources (mitigation oriented as opposed to avoidance and minimization). Would be able to provide more input on PEL leading to EA or EISs, than on those leading to CatEx. 	<ul style="list-style-type: none"> Air Quality Environmental Justice Water Quality Hazardous Waste 	<ul style="list-style-type: none"> Depends: suggested we develop a template checklist with common EPA resource concerns. If PEL project triggers one or more items on the list – EPA would want to participate and may review Vision Statement, Alternatives Screening, Environmental Overview (for methodology) and final report recommendations 	<ul style="list-style-type: none"> Asked that meeting notes be e-mailed. Will try to review and respond confirming attendance and items discussed. 	<ul style="list-style-type: none"> If PEL is for an EIS or EA, early involvement could minimize staff time later on For projects leading to a CatEx, benefit of Early EPA involvement is minimal. Potential to revise CDOT/EPA MOU to target EPA staff time toward PEL studies rather than to EAs as currently written (swap PEL review for time currently spent on EAs) 	<ul style="list-style-type: none"> Workload impacts Legal requirement to place priority on EISs and EAs. No legal requirement for EPA to review CatExs or planning studies. 	Most resources of concern to EPA are mitigation oriented, which would be defined at time of ROD. Some ability to review e.g. PEL methods on defining EJ impacts or AQ impacts and to buy-in on the methods being used which could carry into NEPA.
Denver Regional Council of Governments (DRCOG) <i>Steve Rudy</i>	<ul style="list-style-type: none"> Anything that can make the process more efficient is good 	<ul style="list-style-type: none"> Air Quality Travel Model / Traffic 	<ul style="list-style-type: none"> At traffic analysis – model assumptions Prior to final recommendations 	<ul style="list-style-type: none"> Review meeting notes and respond by e-mail confirming the discussion. Willing to review model assumptions now and document that network is consistent with latest DRCOG plan where appropriate. 	<ul style="list-style-type: none"> Streamlining Less cost Less time Better product Could inform long range planning – corridor visions, etc. 	<ul style="list-style-type: none"> Model assumptions must be current for findings to carry into NEPA 	Need to make sure that the most current travel model assumptions are used, or get written verification from DRCOG that assumptions used are reasonable. Recommended improvements would need formal inclusion into DRCOG RTP – vision or constrained element of the plan.



Parker Road PEL Matrix

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



Federal Highway Administration

Planning/Environmental Linkages Questionnaire

This questionnaire is intended to act as a summary of the Planning process and ease the transition from planning to a National Environmental Policy Act (NEPA) analysis. Often, there is no overlap in personnel between the planning and NEPA phases of a project, so consequently much (or all) of the history of decisions made in the planning phase is lost. Different planning processes take projects through analysis at different levels of detail. Without knowing how far, or in how much detail a planning study provided, NEPA project teams are not aware of and may often re-do work that has already been done. This questionnaire is consistent with the 23 CFR 450 (Planning regulations) and other FHWA policy on Planning and Environmental Linkage (PEL) process.

The Planning and Environmental Linkages study (PEL Study) is used in this questionnaire as a generic term to mean any type of planning study conducted at the corridor or subarea level which is more focused than studies at the regional or system planning levels. Many states may use other terminology to define studies of this type and are considered to have the same meaning as a PEL study.

At the inception of the PEL study, the study team must decide how the work will later be incorporated into subsequent NEPA efforts. A key consideration is whether the PEL study will meet standards established by NEPA regulations and guidance. One example is the use of terminology consistent with NEPA vocabulary (e.g. purpose and need, alternatives, affected environment, environmental consequences).

Instructions: These questions should be used as a guide throughout the planning process, not just answered near completion of the process. When a PEL study is started, this questionnaire will be given to the project team. Some of the basic questions to consider are: "What did you do?", "What didn't you do?" and "Why?". When the team submits a PEL study to FHWA for review, the completed questionnaire will be included with the submittal. FHWA will use this questionnaire to assist in determining if an effective PEL process has been applied before NEPA processes are authorized to begin. The questionnaire should be included in the planning document as an executive summary, chapter, or appendix.

1. Background:

- a. Who is the sponsor of the PEL study? (state DOT, Local Agency, Other)
- b. What is the name of the PEL study document and other identifying project information (e.g. sub-account or STIP numbers, long-range plan or transportation improvement program years)?
- c. Who was included on the study team (Name and title of agency representatives, consultants, etc.)?



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



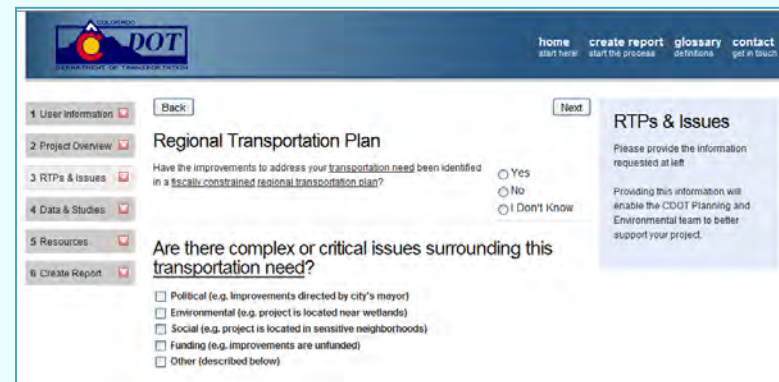
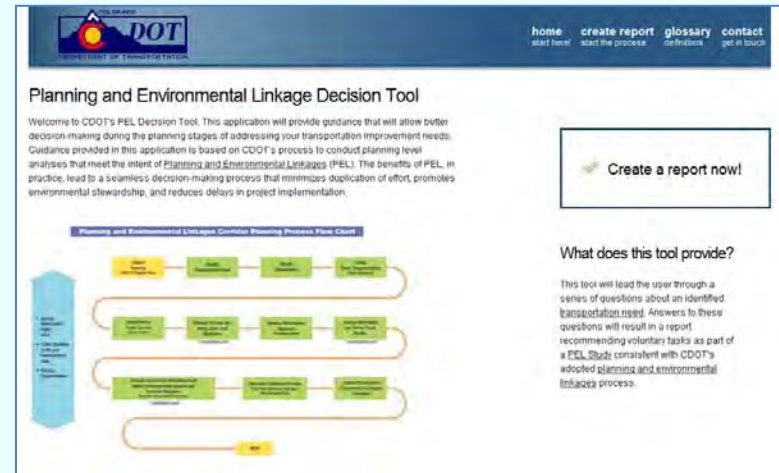
Ongoing Efforts and Next Steps

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**



Brad Calvert, Senior Planner
Denver Regional Council of Governments
bcalvert@drcog.org
303.480.6839



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

http://www.environment.fhwa.dot.gov/ecological/webinars/webinar_03162011.asp

