



Building Green and Gray Infrastructure Compatibility through Collaboration

Federal Highway Administration

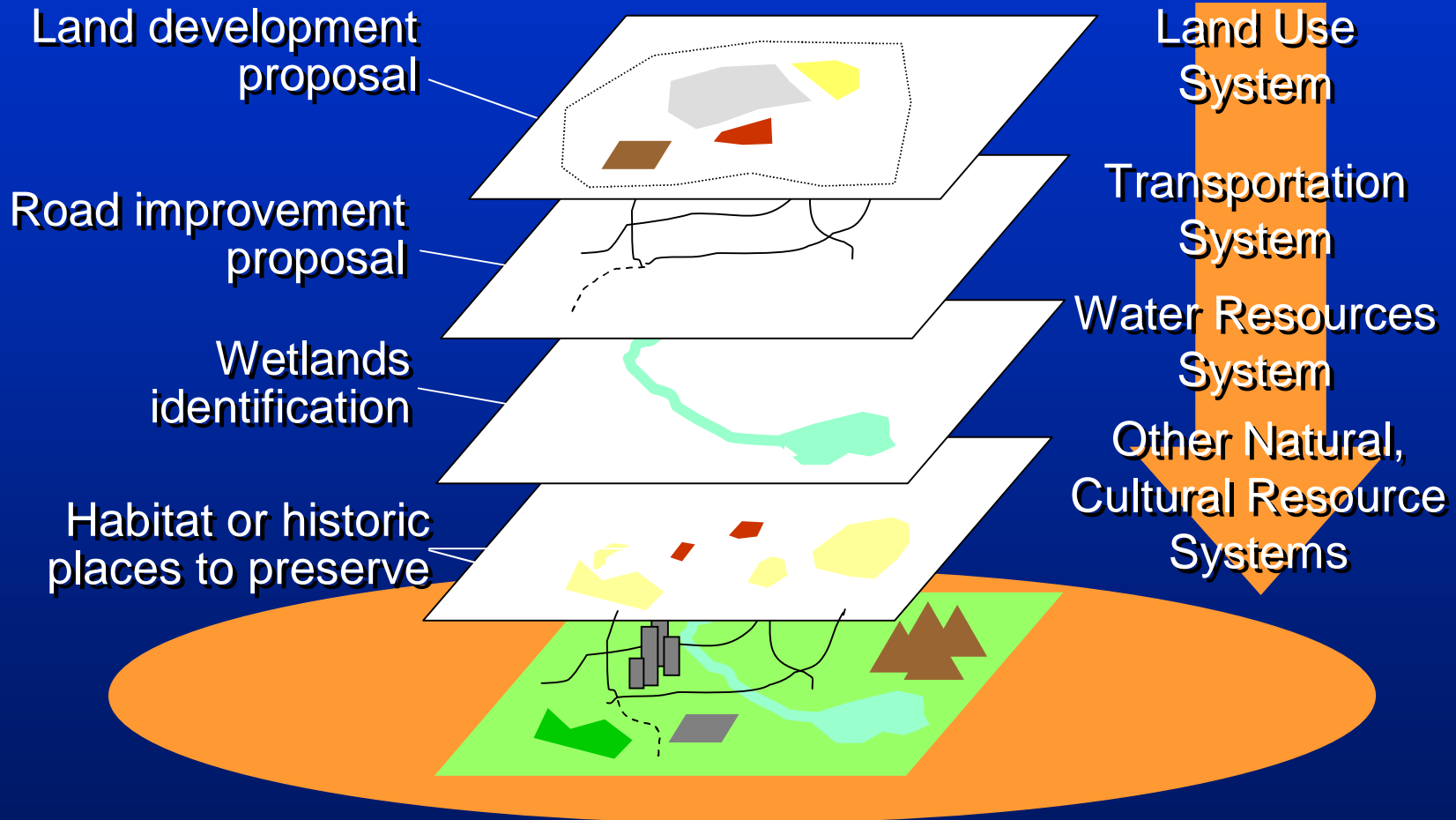
Kevin Moody
FHWA Resource Center

SECTION 6001:

Environmental Considerations in Planning

- **Consultation during development of long-range transportation plans:**
 - **MPOs and States must consult “as appropriate” with State and local agencies responsible for:**
 - **Land-use management**
 - **Natural resources**
 - **Environmental protection**
 - **Conservation**
 - **Historic preservation**
 - **For Statewide plans, States must also consult with Tribal agencies**

Comparing Plans

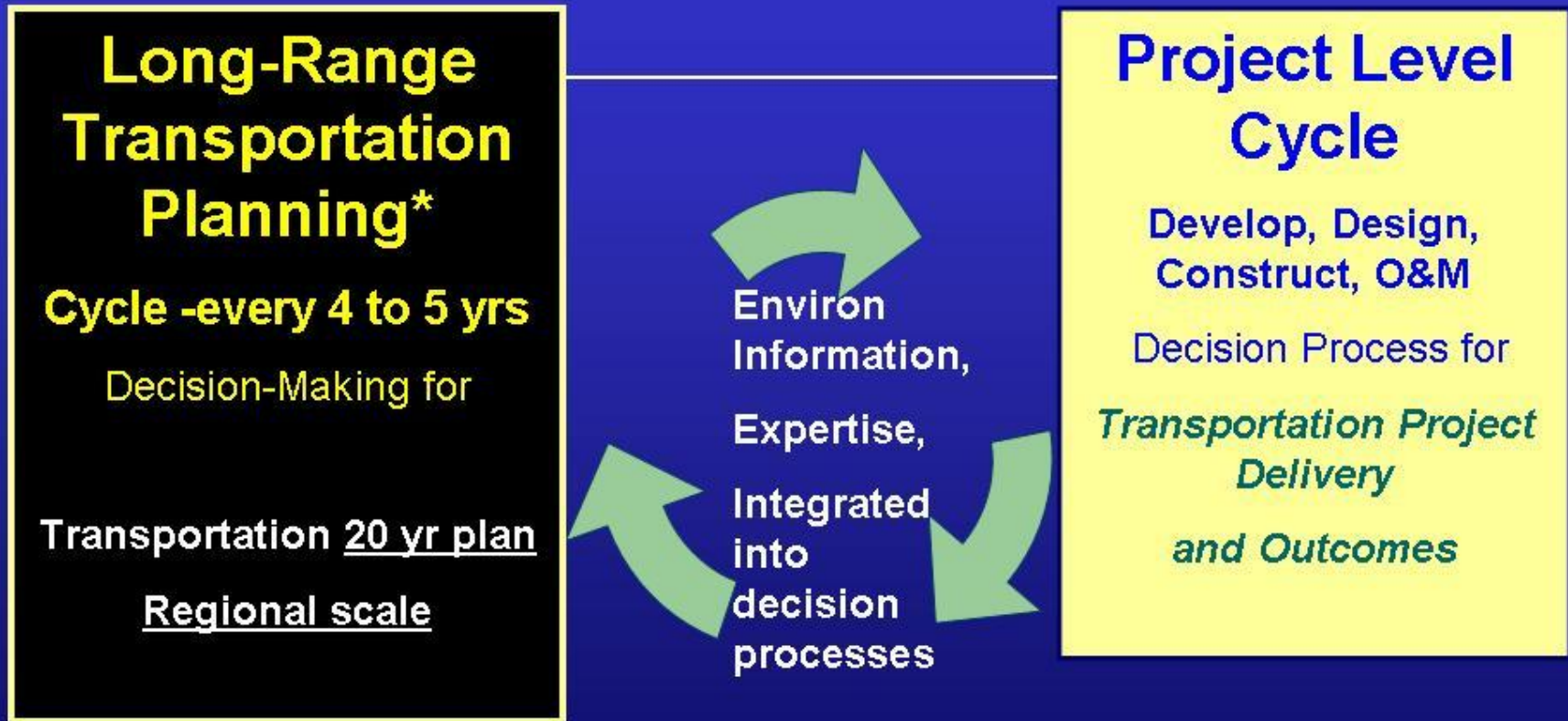


Plans and Inventories

What are some other plans or inventories that need to be considered?



Supporting Long-Range Planning & Project Delivery Cycles within the Process



*** New Transportation Act - SAFETEA-LU and CFR – long-range transportation planning to include environ consultations and info, & discussion of environmental mitigation*

Integrate Information, People, and Decisions

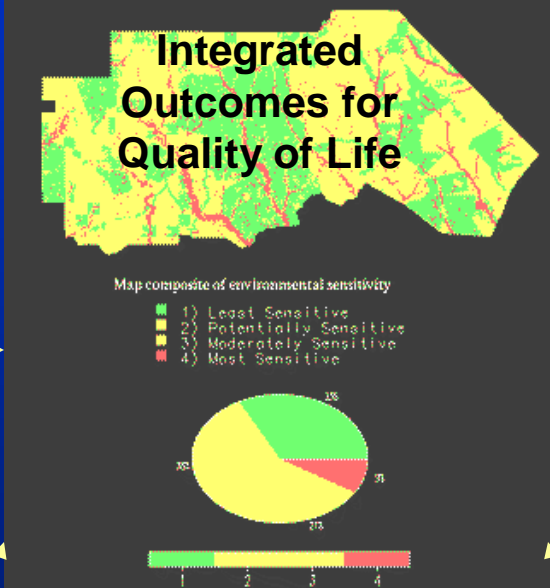


Transportation Decisions, Programs, & Projects



Wildlife, Fish, Ecology, Wetlands, Water

Community Values, Socio-Economics



Contaminants/Hazardous Waste

Agency Coordination, Public Participation

Air Quality and Noise and other Issues

Cultural, Tribal Resources, Public & Private Lands

Mitigation

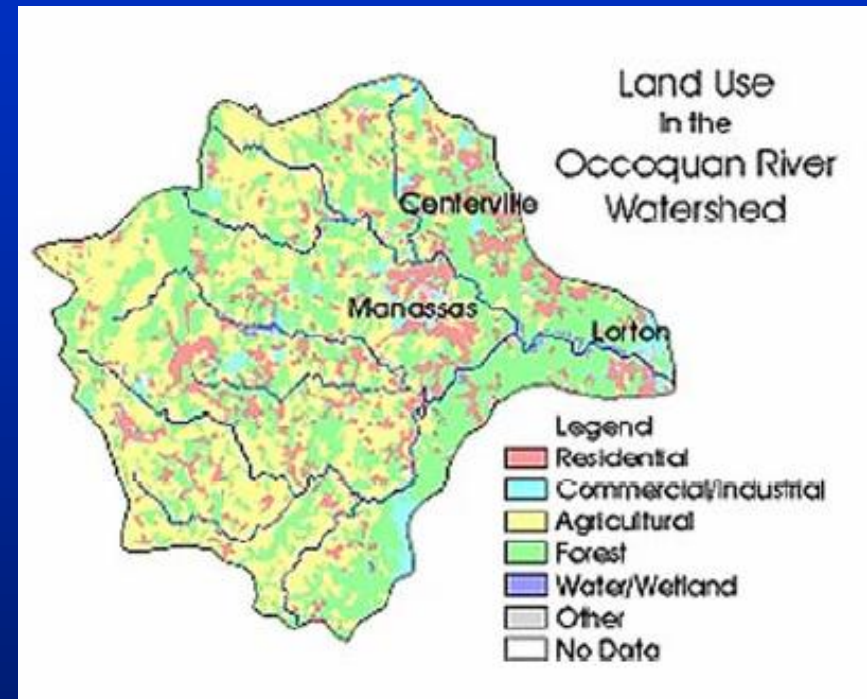
- Long-range transportation plans must include potential environmental mitigation activities and potential locations to carry them out
 - Must be developed in consultation with Federal, State and Tribal wildlife, land management, and regulatory agencies



Mitigation Options and Insights

Individual or Multiple Projects, Uses, Efforts

- Compatible land uses and benefits
- Avoid, minimize, compensate for adverse impacts

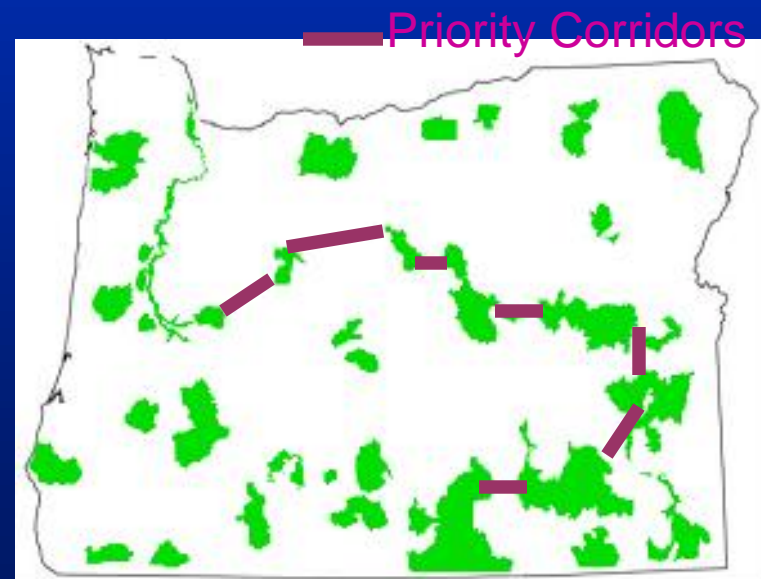


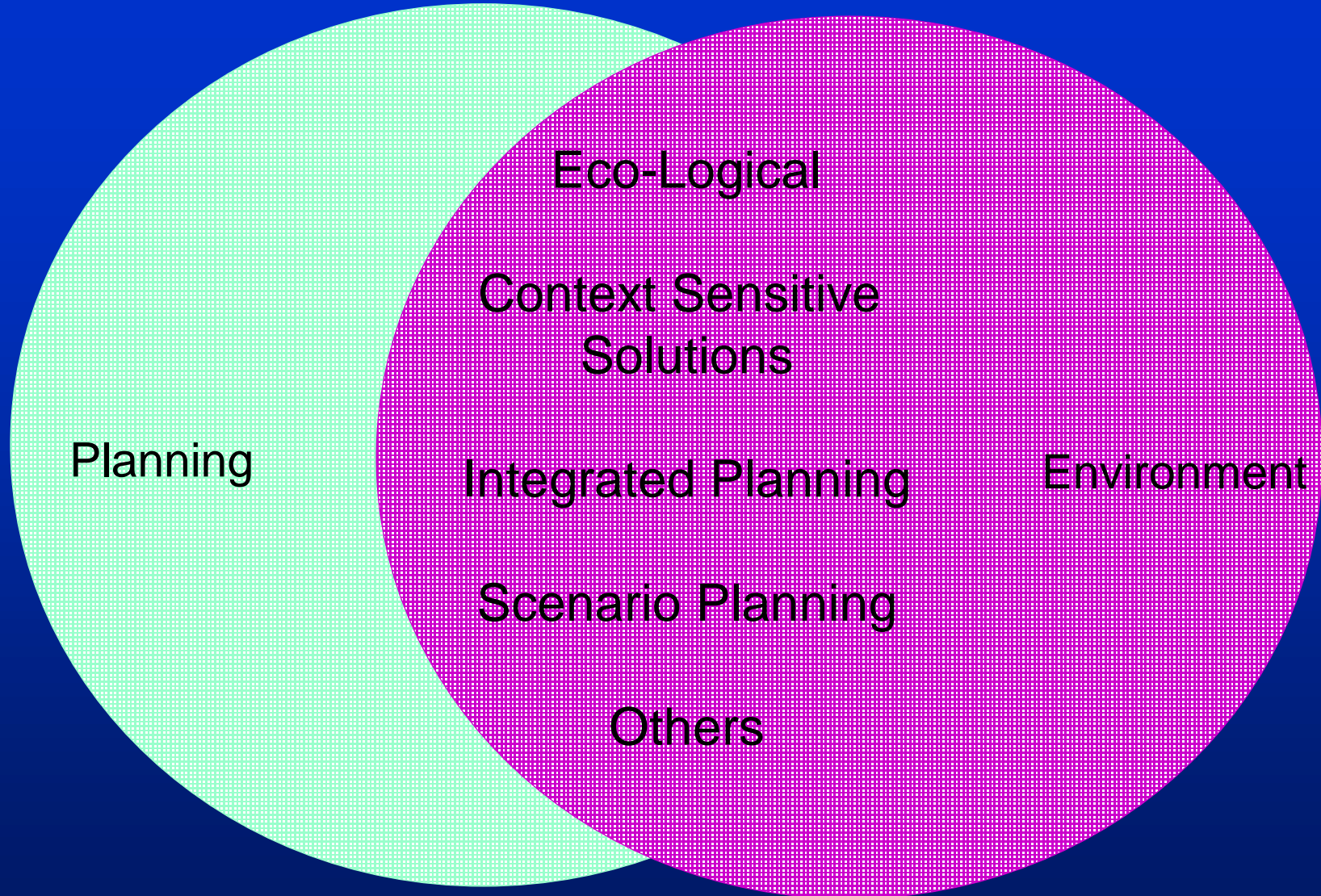
Mitigation Strategies

A blend of options:

- Project-Specific Mitigation
- Multiple-Project Mitigation
- Ecosystem-Based Mitigation
- Mitigation Banking
(focus: aquatic resources)
- Conservation Banking
(focus: protected species/habitats)
- In-Lieu Fee

Examples: Connecting Corridors,
Site selection for mitigation





Planning

Eco-Logical

Context Sensitive
Solutions

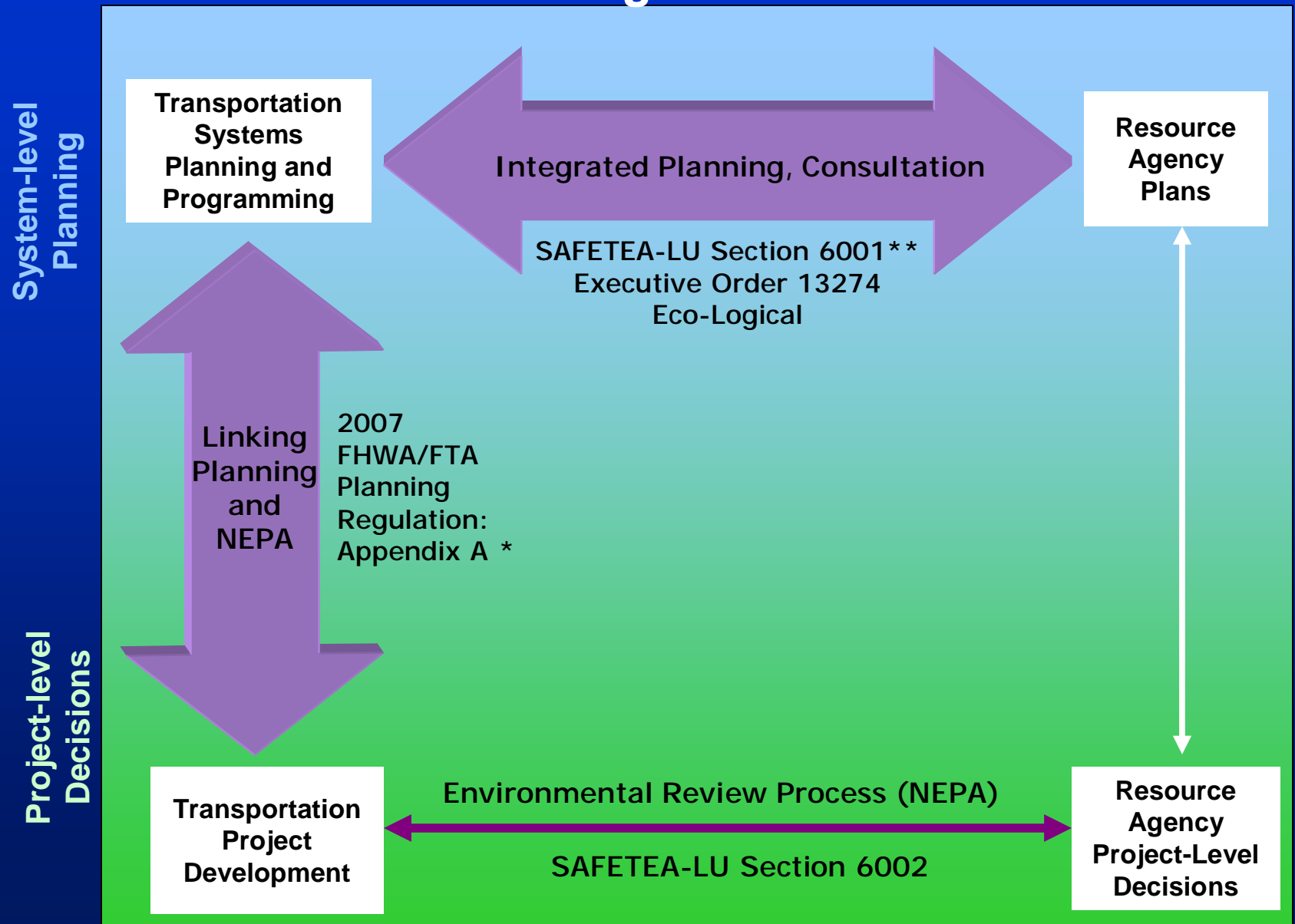
Integrated Planning

Environment

Scenario Planning

Others

Planning and Environment Linkages in Decisionmaking Processes



*23 CFR 450.212, 318, Appendix A

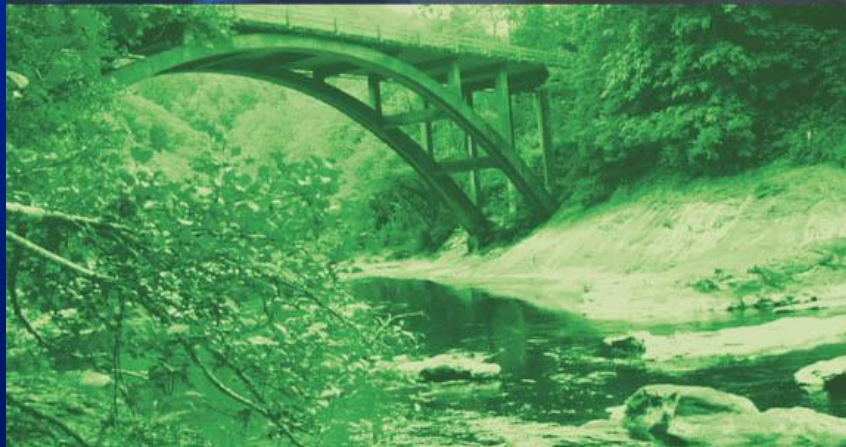
**23 CFR 450.214, 322



An Ecosystem Approach
to Developing
Infrastructure Projects



Eco-Logical

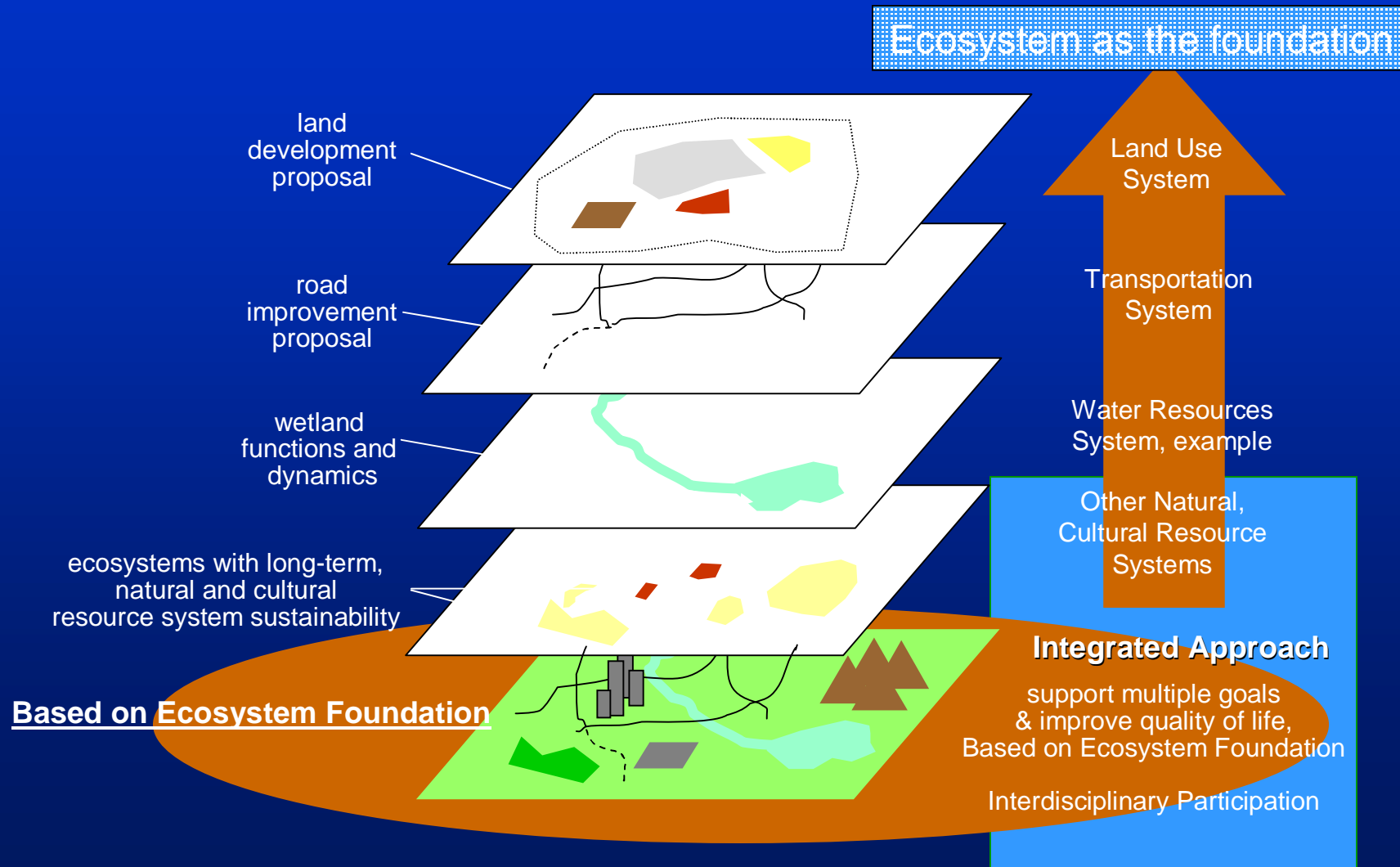


Eco-Logical

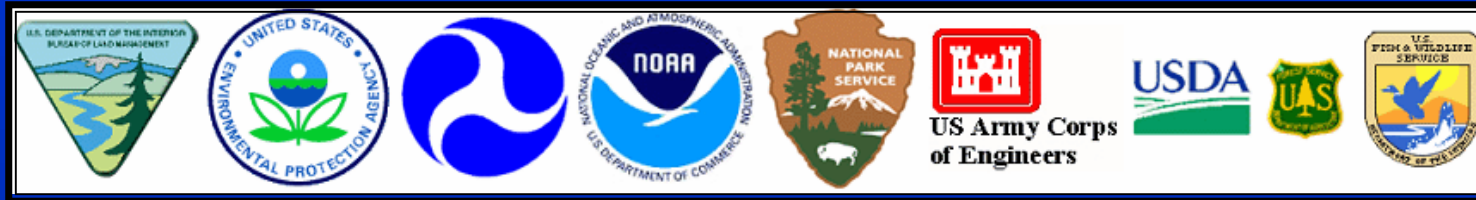
**Eco-Logical: An
Ecosystem Approach
to Developing
Infrastructure Projects**

Ecosystem Approach: A Systems Perspective

Integrated Planning: Systems Perspective



Eco-Logical: Approach to Solutions



1. Inter-agency Steering Team* & strategy

2. Develop/Publish Eco-Logical framework

3. Engage participants, public & private sector

4. To develop & implement strategies

* (Inter-agency team of 8 federal agencies & 4 state Depts of Trans)

Eco-Logical: An Ecosystem Approach to Developing Infrastructure Projects

Prepared by the Steering Team
April 2006

Signed by the Steering Team Partners' Leadership

 Dale Bosworth, Chief of Forest Service Forest Service U.S. Department of Agriculture	 Fran Manzella, Director National Park Service U.S. Department of the Interior
 J. Richard Capka, Acting Administrator Federal Highway Administration U.S. Department of Transportation	 Anne Miller, Director Office of Federal Activities U.S. Environmental Protection Agency
 Kathleen Clarke, Director Bureau of Land Management U.S. Department of the Interior	 Elaine Rogan, Director Office of Wetlands, Oceans, and Watersheds U.S. Environmental Protection Agency
 George S. Dunlop, Principal Deputy Assistant Secretary Department of the Army	 James R. Walpole, General Counsel National Marine Fisheries Service National Oceanic and Atmospheric Administration
 H. Dale Hall, Director U.S. Fish and Wildlife Service U.S. Department of the Interior	

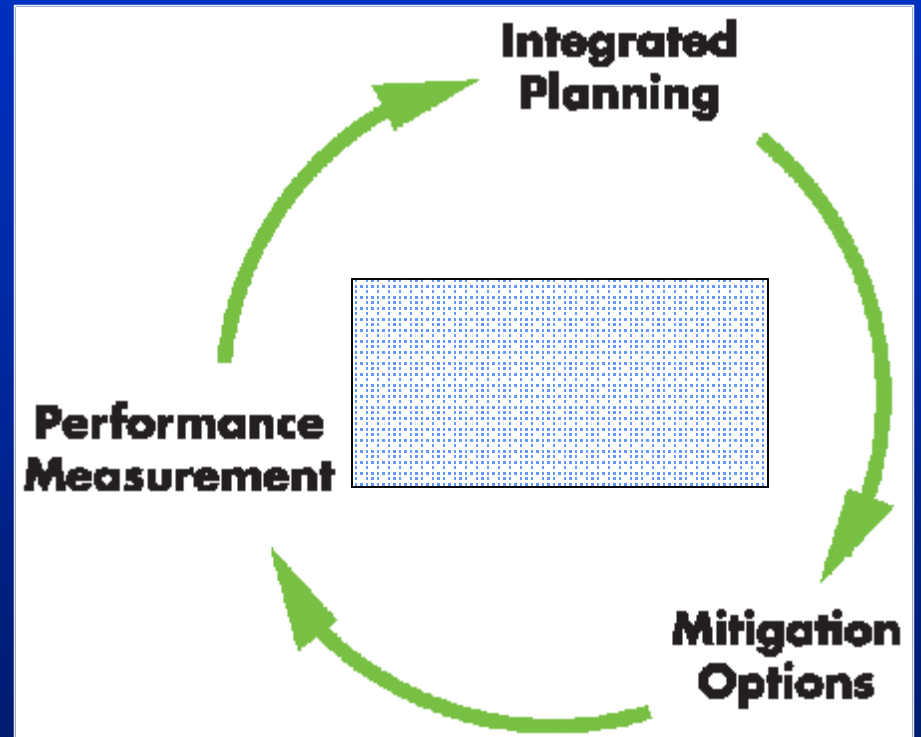


Eco-Logical Approach

8 Federal Agencies agree on:

WHAT IS AN ECOSYSTEM ?

An interconnected community
of living things
and the physical environment
within which they exist
(humans included)



Agency Challenges

%Unknowns & duplicated efforts

%Limits posed by jurisdictions

%Focusing on

- project by project,
- site by site,
- resource by resource

can be piecemeal & ineffective

%Vanishing opportunities

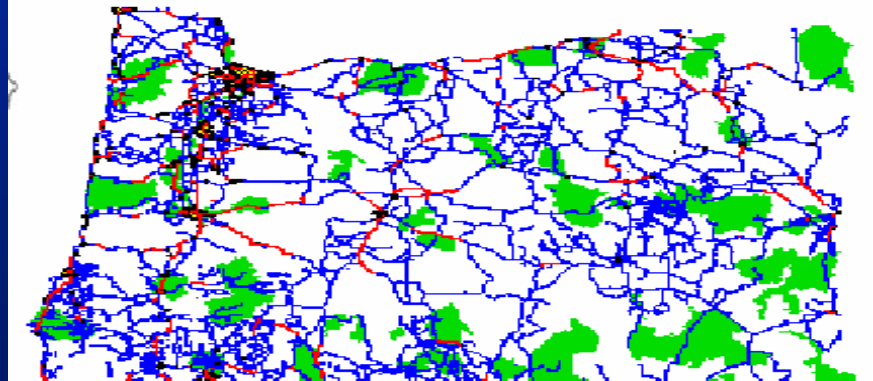
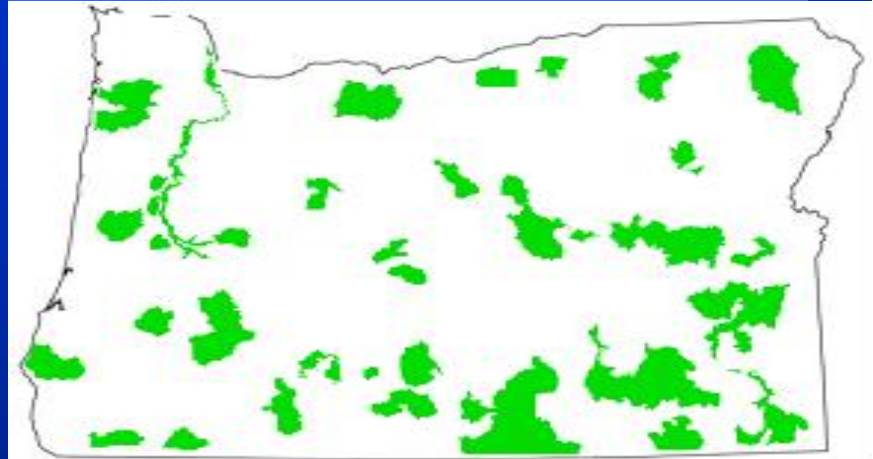


Eco-Logical: Integration

Natural Resource Plan

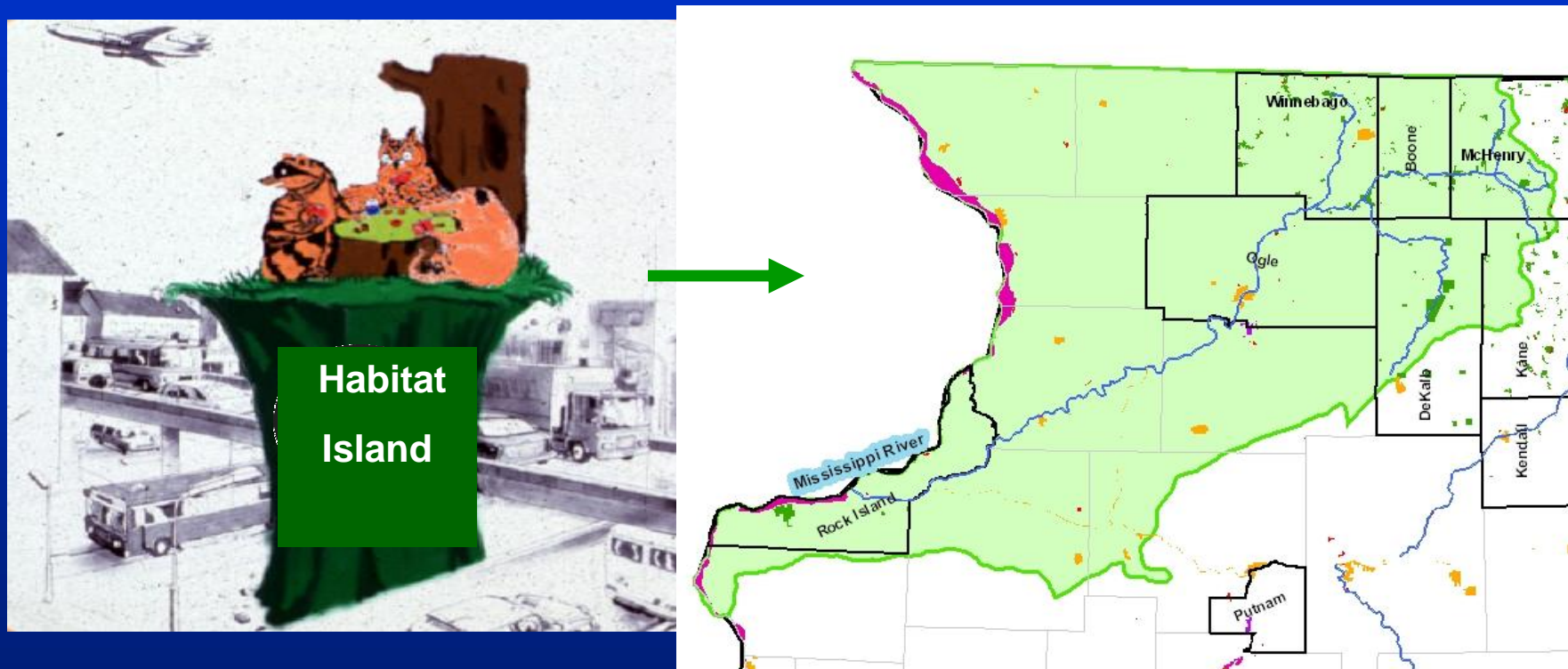
To integrate across:

- Multiple resources
- Agencies & levels & expertise
- Multiple jurisdictions
- Geographic regions
- Multiple projects
- Public & private
- sectors



Simple, Integrated Map: Trans Plan, Urban areas, Natural resource areas

Expand from Single Resource to Multiple Resources and to Broad Landscape Scale Approach



Interdisciplinary Approach for Multiple, Sustainable Benefits:
Invite Transportation Practitioners to Participate

Eco-Logical Implementation & Next Steps

Written multi-agency guide with signatures:

“Eco-Logical: An Ecosystem Approach to Developing Infrastructure Projects”

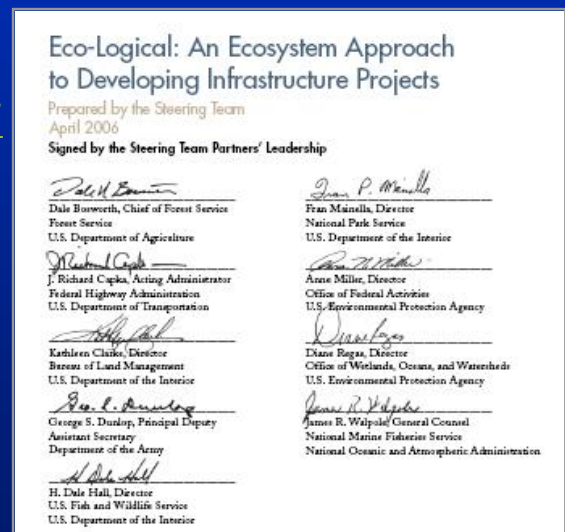
Eco-Logical written guide available online at : <http://www.environment.fhwa.dot.gov>

2007 Federal Highway Grant Program:
Selection Underway of Applications to Fund for \$1,050,000



Multi-agency. partnered implementation (you are invited!)

Federal Highways HQ Contact: Carol Adkins (email: Carol.Adkins@fhwa.dot.gov)



Eco-Logical Grants Announced

- Over 40 Proposals Received
- 14 Grants Announced in 10 States*
- \$1.4 Million Total
- Multi-agency Review Process
- Inter-agency Technical Assistance Teams assigned to each Grant

New Hampshire

- Creating Tools to support Integrated Transportation and Resource Planning in NH
- NH Audubon Society
- NH DOT, NH Department of Environmental Services, NH Fish and Game, Southern NH Planning Commission, Rockingham Planning Commission,
- TNC

Strategic Highway Research Program (SHRP) 2 Capacity Research Plan

Integration of Conservation, Highway Planning,
and Environmental Permitting Through
development of an Outcome-based Ecosystem-
scale Approach and Corresponding Credit
System

Inter-Agency Work Group on Integrated Planning

- Department of Transportation
 - Federal Highway Administration
 - Federal Transit Administration
 - Federal Aviation Administration
- Council on Environmental Quality
- National Marine Fisheries Service
- U.S. Army Corps of Engineers
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- U.S. Forest Service



IPWG Current Work-plan

- Outreach and Training on New Transportation Planning Regulations
- Outreach, Training, and Implementation Strategies for Eco-Logical
- Survey-State of the Practice for Tiering, Corridor, and Sub-area Studies

Conservation and Transportation Planning Workshops

Workshop Goals

Provide an opportunity for experts in the transportation & conservation fields to meet & begin to understand each other's goals & challenges

Introduce information, ideas & facilitate dialog that will assist in the integration of transportation & conservation planning

Develop a strategy to support an on-going process that engages all agencies into a participatory mode that supports the integration of conservation & transportation planning

Integrating Green and Gray Infrastructure

- Connect resource attributes, patterns and processes with transportation
- Describe trends, conditions, "sustainability," and resilience
- Identify likely intersections of natural resources with transportation effects (induced growth and related, encroachment – alteration)
- Effective participation in transportation planning and decision making
- Communicate and collaborate

Integrating Green and Gray Infrastructure

Thanks!