



Eco-Logical: Landscape-Scale Infrastructure, Planning, Mitigation and Decision-making

Reaffirmation Webinar

June 28, 2016

Presenters:

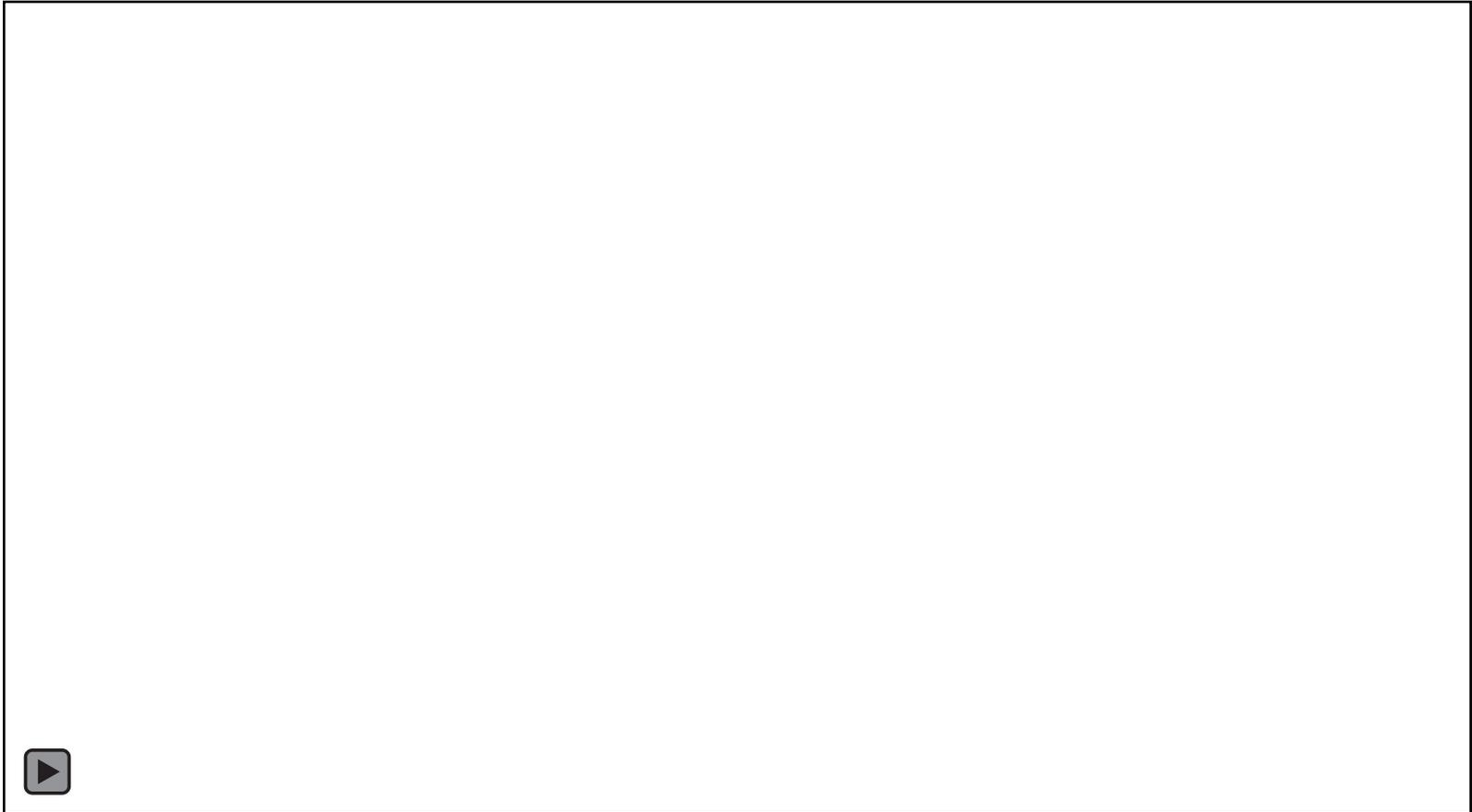
David Williams, FHWA Office of Project Development and Review

Sandra Jacobson, Forest Service

Overview

- 10th Anniversary Eco-Logical Reaffirmation
- Eco-Logical Approach
- Benefits of Eco-Logical
- Forest Service's Application of Eco-Logical
- Panel Discussion on Eco-Logical Past, Present, and Future

Reaffirmation Video



Also at: <https://www.youtube.com/watch?v=rEJ7oNsLJdl&feature=youtu.be>

What is Eco-Logical?

- **Eco-Logical Is:** *A landscape scale approach for planning and developing infrastructure.*
- **The Eco-Logical Approach:**
 - *Draws on collaboration*
 - *Incorporates data*
 - *Establishes and prioritize ecological actions*



Eco-Logical Background

Eco-Logical: An Ecosystem Approach to Developing Infrastructure Projects

Prepared by the Steering Team
April 2006

Signed by the Steering Team Partners' Leadership



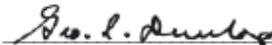
Dale Bosworth, Chief of Forest Service
Forest Service
U.S. Department of Agriculture



J. Richard Capka, Acting Administrator
Federal Highway Administration
U.S. Department of Transportation



Kathleen Clarke, Director
Bureau of Land Management
U.S. Department of the Interior



George S. Dunlop, Principal Deputy
Assistant Secretary
Department of the Army



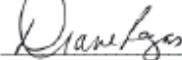
H. Dale Hall, Director
U.S. Fish and Wildlife Service
U.S. Department of the Interior



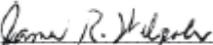
Fran Mainella, Director
National Park Service
U.S. Department of the Interior



Anne Miller, Director
Office of Federal Activities
U.S. Environmental Protection Agency



Diane Regas, Director
Office of Wetlands, Oceans, and Watersheds
U.S. Environmental Protection Agency



James R. Walpole, General Counsel
National Marine Fisheries Service
National Oceanic and Atmospheric Administration

- Originated at Montana DOT and Montana FHWA Division Office in the late 90's
- Eco-Logical published and signed by the Signatory Agencies in April 2006



“Eco-Logical” by Other Names

General terms that describe Eco-Logical include: *Watershed approach*; *Landscape-scale planning and mitigation*; *Ecosystem-scale planning*

Agency programs similar to Eco-Logical:

- BLM: Rapid Ecoregional Assessments
- DOI: Landscape Conservation Cooperatives
- EPA: Watershed Resources Registry
- NOAA: Integrated Ecosystem Assessment Approach
- NPS: Inventory and Monitoring Program
- USACE: Watershed-Based Mitigation
- USFS: Open Space Conservation Strategy

Why Eco-Logical?

Using the Eco-Logical approach leads to mutual benefits for all involved:

- Improved data sharing and interagency coordination
- Programmatic agreements on advance mitigation
- Time savings through accelerated project delivery
- Improved water quality and wildlife movement
- Improved agency relationships
- Reduces redundancy and increases the efficiency, transparency and predictability of the infrastructure delivery process.

Eco-Logical Timeline



Landscape-scale Highlights from Signatory Agencies

- **BLM** initiated 14 Rapid Ecoregional Assessments since 2010
- **DOI** established 22 Landscape Conservation Cooperatives (LCCs)
- **EPA** developed the Watershed Resources Registry (WRR)
- **FHWA** gave over \$3.2 million dollars SHRP2 funds for agencies to Implement Eco-Logical
- **NMFS** conducted Integrated Ecosystem Assessments (IEAs) in five of the nation's eight large marine ecosystems
- **NPS** developed a report on the exposure to park infrastructure and assets based on 1 meter of sea level rise
- **USACE** approved 738 mitigation banks and 52 in-lieu fee programs since 2008 and rolled out RIBITS
- **USFS** removed or upgraded 2,100 road-stream crossings for Aquatic Organism Passage between 2008 and 2015.

Is Eco-Logical feasible for my agency?

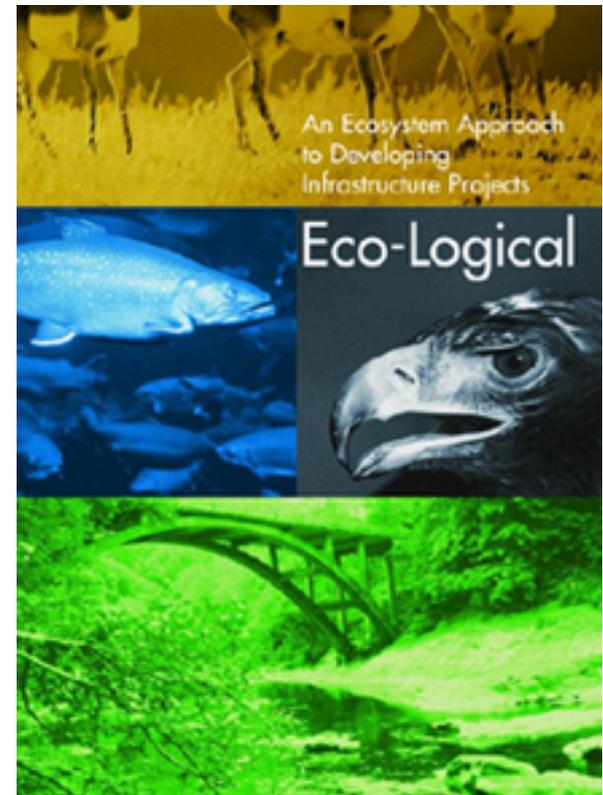
YES!

- Implementing Eco-Logical **works within existing regulations and policies** and represents forward-thinking transportation and responsible environmental practice.
- Implementing Eco-Logical can be adopted using a **phased approach** and offers **incremental benefits** in terms of improved interagency collaboration and communication, and more predictable transportation and environmental review processes.

Panel Discussion

Panelists:

- Nicholle Braspennickx, USACE
- Brian Carlstrom, NPS
- Rachel Herbert, EPA
- Sandra Jacobson, Forest Service
- Michelle Lennox, NOAA Fisheries
- Catherine Liller, USFWS
- Dixie Porter, Forest Service
- Daniel Shivley, Forest Service
- David Williams, FHWA



Contacts

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<https://www.environment.fhwa.dot.gov/ecological/ImplementingEcoLogicalApproach/default.asp>



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Eco-Logical and the Forest Service

Celebrating 10 Years of Partnership
Accelerating Ecological Restoration
to Create Resilient Landscapes and Communities
Across the Nation in light of Climate Change

Sandra Jacobson
Pacific Southwest Research Station
U.S. Forest Service

Gunnison National Forest



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Forest Service Mission

The mission of the USDA Forest Service is to sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations.



Forest Service

What we do

- 193 million acres of National Forests
- 500 million acres help to S&P forests
- 57,000 miles of trails
- 4,300 campgrounds
- \$13 billion in NF visitor contributions to US Economy





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Where we do it: National Forest System Lands



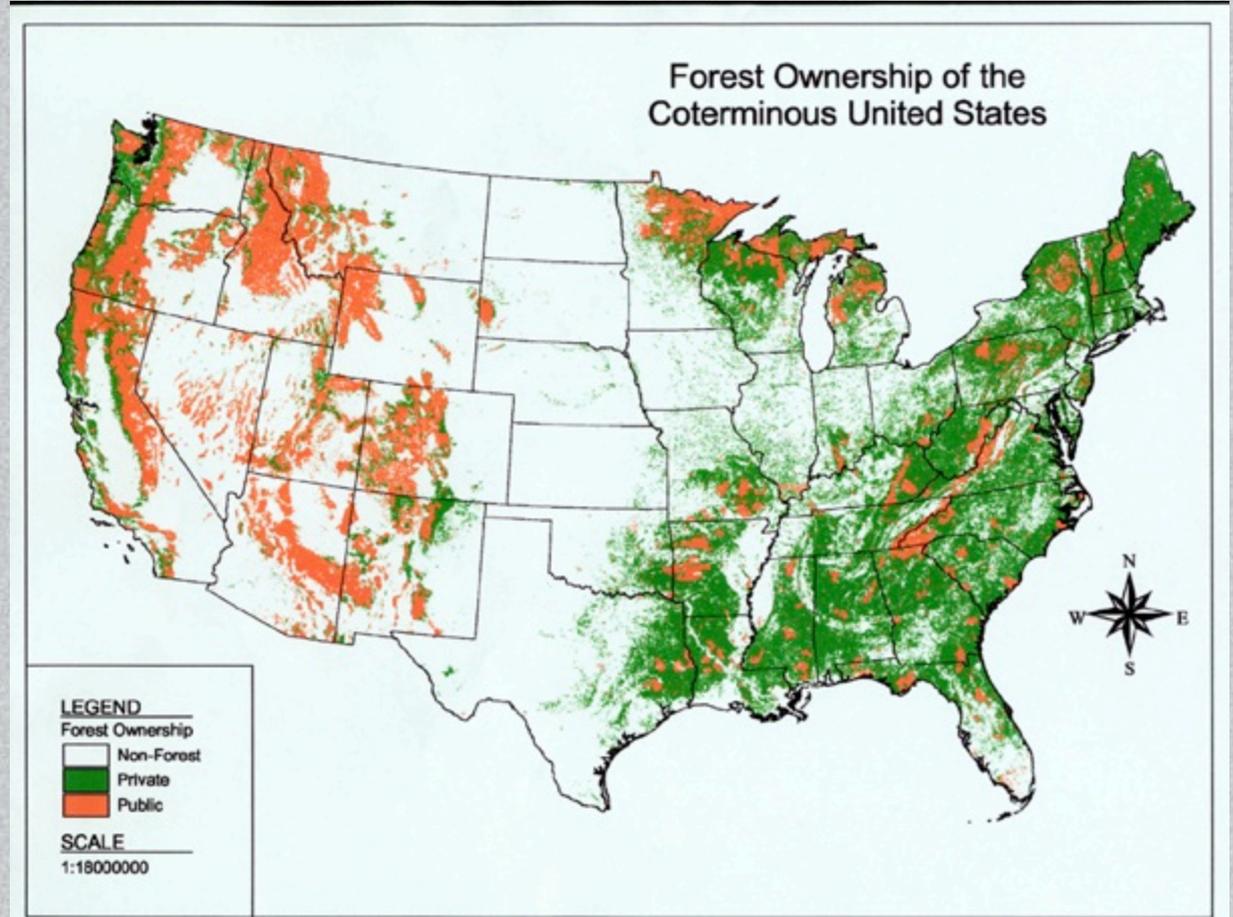
- National Headquarters
- National Forests
- National Grasslands
- Regional Boundaries
- International Institute of Tropical Forestry
- Regional Headquarters
- Research Station Headquarters
- Forest Products Laboratory
- State and Private Forestry Area Headquarters
(In other Regions these activities are directed from Regional headquarters)



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Where we do it: National Forest System and State and Private Lands





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Ecological Restoration





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Special Values: Water





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Special Values : Habitat Conservation of endangered and at risk species.

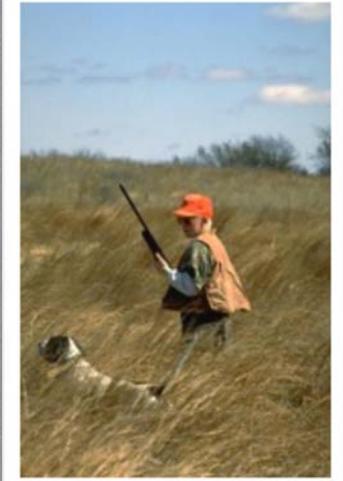




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Special Values: Sustainable Recreation





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Eco-Logical: The US Forest Service's Experience

1. High Level Initiatives

2. Project Level

3. Tech Transfer

Pisgah National Forest

Forest Service Initiatives

Supporting Eco-Logical Concepts

- OSCC
- Watershed Condition Framework
- Open Space Initiative
- Aquatic Organism Passage
- TRB, ICOET, ARC Solutions leadership



Climate change challenge



Office of Sustainable
Climate Change:

Guides the Agency in developing policies and practices to ensure the Nation's forests and grasslands will meet the needs of present and future generations.

Aquatic Organism Passage

- FS does 160-350 AOP projects/yr--- 1000th in 2015!



Project Level Eco-Logical Successes

- Transportation Ecology Cadre
- Highway 89 Stewardship Team
- Project Collaboration Examples: I-90 Snoqualmie Pass





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Forest Service Transportation Ecology Cadre

- Provides expertise nationally
- Eco-Highways Workshop
- Expertise is rapidly retiring



Forest Service

Highway 89 Stewardship Team

- Grassroots interagency team dedicated to reducing WVC
- 89ST mentors 2 new teams through Eco-1 funding



FS Interagency Project Collaboration

- I-90 Snoqualmie Pass



- Pinedale WY
Trappers Point



FS Tech Transfer Successes

- Innovative Approaches to Wildlife and Highway Interactions course
- ICOET
- Transportation-related ecological research



Innovative Approaches to Wildlife and Highway Interactions

- Began 2003 as 1-day course
- 20 sessions later, 14 states, hundreds of students
- Advanced and Intro courses



Forest Service

Numerous FHWA award winners are graduates!

Forest Service ICOET Involvement

- Conference funding support
- Steering Committee
- Presenters



Transportation-related Research

- Videos
- Wildlife Crossings Toolkit
- Forest Service R&D articles, studies, subject matter expertise

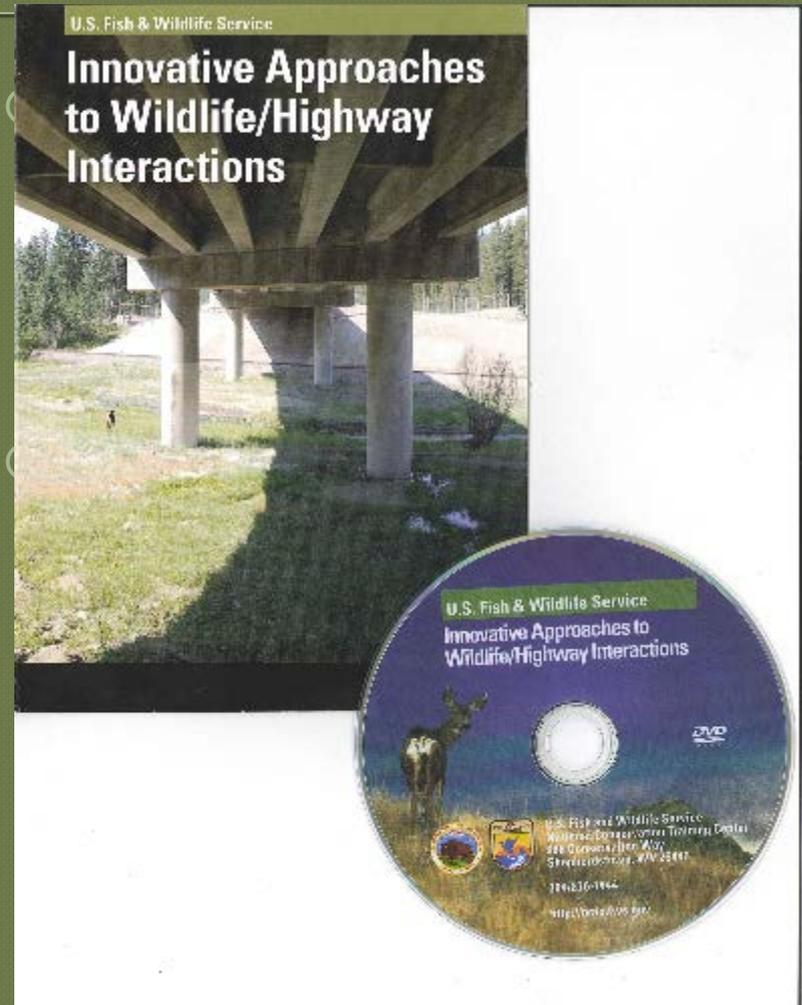
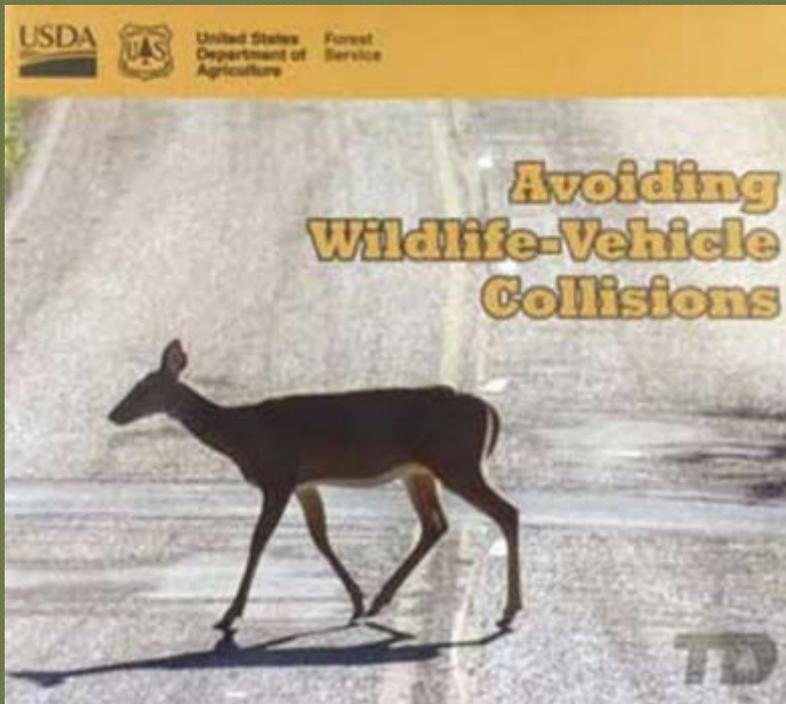




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Videos

- 2014 Telly Award



Forest Service



Wildlife Crossings Toolkit

The screenshot shows a web browser window with the URL www.fs.fed.us/wildlifecrossings/resources/. The browser's address bar includes a search box and navigation icons. Below the browser, the website header features the National Park Service logo and the text "National Park Service". The main content area is titled "Resources" and includes a breadcrumb trail: "You are here: HOME » Resources » Overview of Transportation Ecology".

Search

[enter query] GO!

Browse by Subject

- Home
- ▼ Glossary
- ▼ Resources
 - Overview
 - Decision Support - Large Scale
 - Decision Support - Project Level
 - Integrated Planning
 - Examples
 - Retrofitting Existing Structures
 - Monitoring
 - Funding
- ▼ Conferences and Training

Resources

Overview of Transportation Ecology

Tools here are specifically selected to be useful for natural resource agency biologists and engineers working on public lands. Dive deep into these sections, because there are many examples.

- Large Scale Transportation Planning
- Highway Development Projects
- Integrated Large Scale and Project-Level Planning
- Tools and Examples for FLMAs
- Retrofitting Existing Structures for Wildlife Passage
- Monitoring Tools
- Funding Opportunities

Decision Support Tools for Large Scale/Long Term Transportation Planning

Transportation departments typically distinguish planning for highways at two levels. The long term, strategic level is called 'transportation planning'. It can be as much as 20 years in the future.



Transportation Ecology Research

- Highly collaborative
- Peer-reviewed journal articles
- New studies initiated
- International collaboration





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Eco-Logical: The US Forest Service's Challenges

1. Funding for transportation ecology
2. Succession planning
3. Diverse cooperating agency missions and information-sharing

Pisgah National Forest



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Take Home Message

- The Forest Service is a fully supportive partner in the Eco-Logical concept and process
- Large scale restoration and smaller scale interagency collaboration are key to FS Mission

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