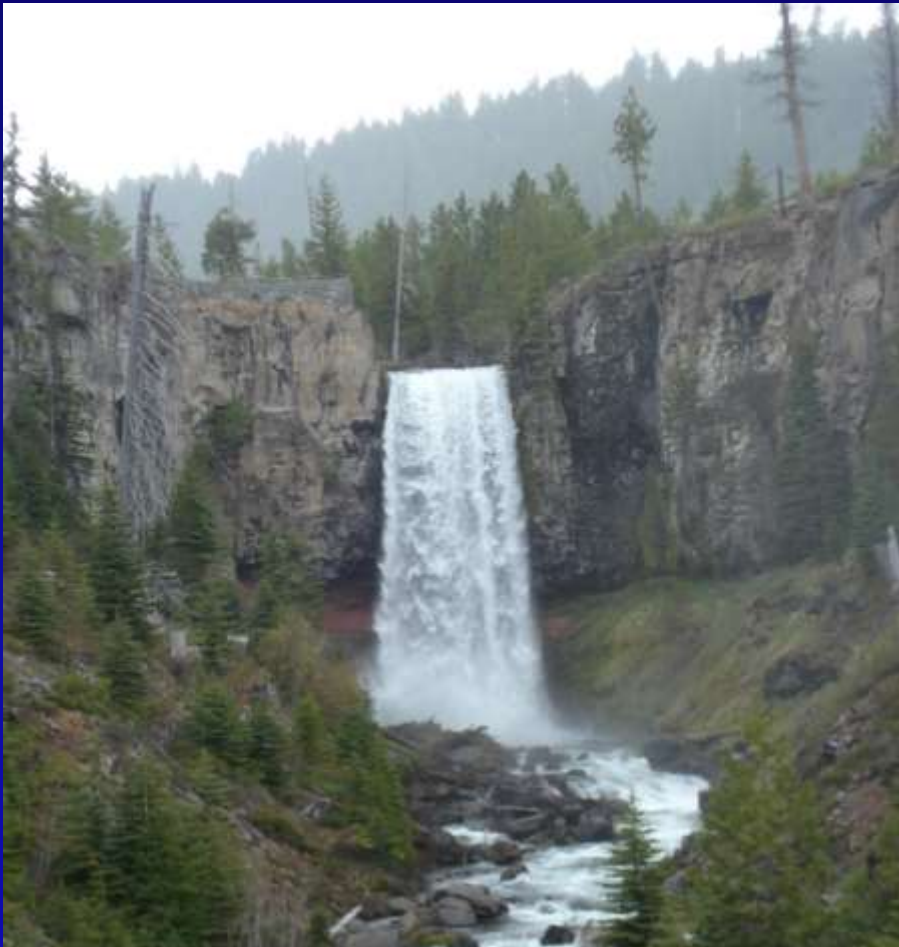


Integrating Ecosystem Services into USFS Policy and Operations

Robert Deal, Tommie Herbert, Jonas Epstein, Nikola Smith
NESST core team, US Forest Service



Overview

- USFS Planning rule, Memorandum and NESST.
- E.S. Champions Forum and NESST.
- New NESST General Technical Report.
- Planning, performance and partnerships.
- Ongoing efforts.



Ecosystem Services on Public Lands

- 2012 Forest Service Planning Rule
- Ecosystem Services into Federal Decision Making (OMB, CEQ Directive)
- NESST- National Ecosystem Services Strategy Team



USFS Planning Rule

- **Ecosystem services and multiple uses** “considering a full range of resources, uses and benefits”
- MUSYA- timber, water, recreation, range, wildlife & fish.
- Early adopter forests are using Planning Rule for forest plan revisions and assessments.
- 2015 Directives state the N.F. should include “key ecosystem services” in forest plan revisions.
- E.S. also includes cultural heritage values, other services not included in multiple use.



Incorporating Ecosystem Services into Federal Decision Making

- October, 2015 –CEQ, OMB Directive.
- Directs agencies to develop and institutionalize policies for ecosystem services in planning, investment and regulatory context.
- Each agency developing work plan due March, 2016.
- Implementation guidance, CEQ convening subject matter experts for “community of practice” concept.



NESST- National Ecosystem Services Strategy Team

Robert Deal, Emily Weidner, Mary Snieckus, Tommie Herbert, Jonas Epstein, Krista Gebert, Tania Ellersick, Greg Arthaud, Nikola Smith, many others



Historical Context

➤ Ecosystem Services Champions Forum

- Two day grassroots effort in 2012 with NFS, R&D and S&PF
- Champions Forum led to **four major objectives-framework**
- Develop common language & understanding of ES
- Relevance of the ES to agency
- BMP, tools for planning, mgmt.
- Better communication about ES across FS Deputy Areas

➤ Framework for the agency



Historical Context

- Ecosystem Services Framework for Agency
 - Associate Deputy Chiefs directed Champions group on different path
 - Instead of framework, wanted to develop policy for agency for incorporating ecosystem services into FS programs and operations.
 - Led directly to chartering of National Ecosystem Services Strategy Team (NESST)
 - NESST charter in 2013, 2016



NESST Purpose

“The National Ecosystem Services Strategy Team was established to collaboratively develop national strategy and policy around ecosystem services and integrate it into Forest Service programs and operations.”



OPPORTUNITIES

- Consider a broad suite of ecosystem services in decision-making and priority setting
- Quantify and communicate in terms of benefits to people through measurement and reporting
- Connect providers and beneficiaries of ecosystem services through partnerships and investments

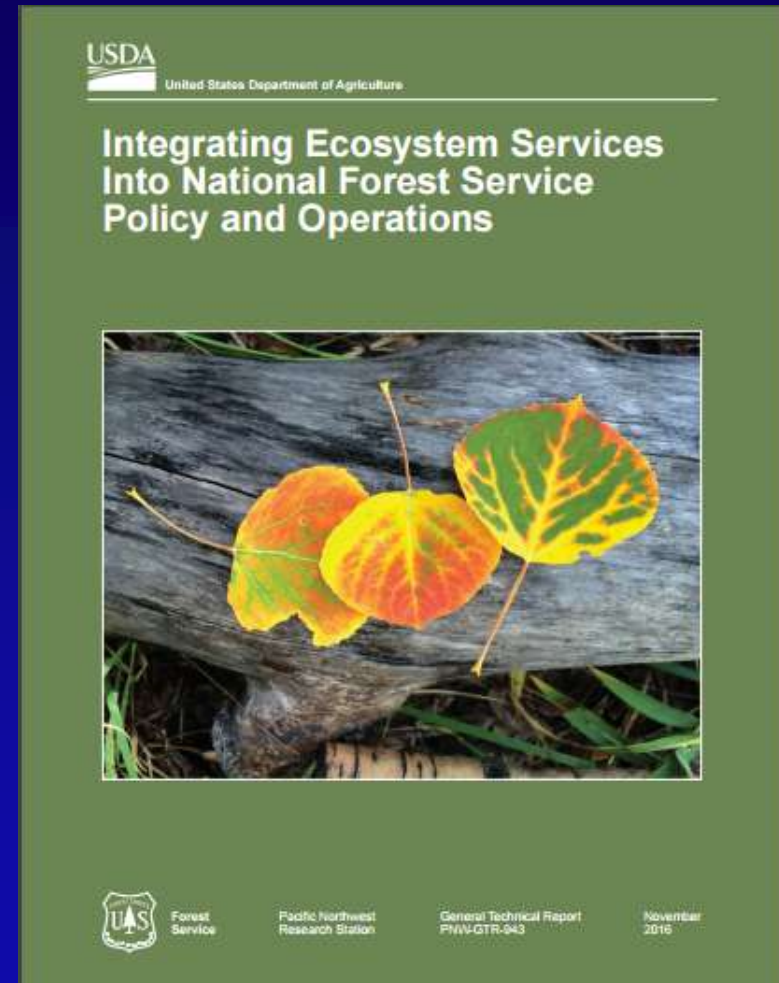


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- Introduction
- Ecosystem Services and USFS
- Elements of an Ecosystem Services Approach
 - Decision-Making and Analysis
 - Measuring, Reporting, Communicating
 - Partnerships and shared investments in ES
- Synthesis
 - Common Needs
- Next Steps



<http://www.fs.fed.us/pnw/publications/gtrs.shtml>

The Opportunities

- **Planning:** Consider a broad suite of ecosystem services in decision-making and priority-setting
- **Performance:** Quantify and communicate in terms of benefits to people through measurement and reporting
- **Partnerships:** Connect providers and beneficiaries of ecosystem services through partnerships and investments

Planning

Considering the full suite of objectives in analysis, decision-making and priority-setting

- Forest Planning
- Project Level Planning
- Prioritizing Restoration Activities
- State Forest Action Plans



Example:

Cool Soda All-Lands Restoration Proposal
Willamette, Sweet Home Ranger District

Project-Level Planning

Community Discussions

- Understanding of ES
- Proposed projects

Mapping/
Analysis

- Ecological drivers
- Assess trade-offs

Rank Priorities

- Impacts on ecosystem services benefits
- Employment

Select Actions

- District Ranger to identify and implement management action

Assess project-level impacts using a collaborative approach

Solicit values and priorities from local communities

Highlight potential outcomes of actions



Ongoing Development

Landscape-level planning and ecosystem services benefits analysis is an important component to following the mitigation hierarchy and developing compensatory mitigation partnerships.

Mitigation Success Story

Francis Marion Sumter NF Conservation Land Use Agreement

The Francis Marion and Sumter National Forests' recent experience with compensatory mitigation provides a valuable on-the-ground look at the benefit of partnerships and how a mitigation framework might be implemented within the Forest Service.

In 2013, the US Army Corps of Engineers for the Charleston District (Corps) and the Francis Marion and Sumter National Forests (Forest) entered into a Conservation Land Use Agreement (Agreement) to establish a framework whereby compensatory mitigation requirements associated with the Corps' permitting requirements could be used to restore or enhance aquatic resources on Forest lands or to contribute suitable resources to the NFS. This innovative agreement has since been used many times, across a variety of project types, helping to accomplish restoration benefiting of Forest watersheds.

The Basics

- Location: Charleston, South Carolina area
- Partners involved:
 - USDA FS
 - US Army Corps of Engineers, Charleston District
 - Private permittees, including Boeing, Duke Energy, and the City of Charleston
 - NGO's: The Nature Conservancy and the Open Space Institute
- Mitigation authority used: Section 404 of the Clean Water Act. Corps requires compensation for unavoidable impacts to United States waters, including wetlands.
- Mechanism employed: Conservation Land Use Agreement, signed in July 2013 with the US Army Corps of Engineers for the Charleston District and the Francis Marion and Sumter National Forests
- Resource impacted & why: wetlands impacted by Duke Energy new power plant, Boeing facility expansion, and the City of Charleston public works project.



Restored longleaf pine habitat on Francis Marion National Forest -
Photo by Daniel Barcellona

"The Francis Marion National Forest is a national priority for conserving and restoring our native longleaf pine forests, which have been imperiled by centuries of cutting and development. The Nature Conservancy is excited to partner with Boeing, Open Space Institute and other conservation groups to protect these important lands and waters."

Mark Robertson, South Carolina State Director,
The Nature Conservancy.



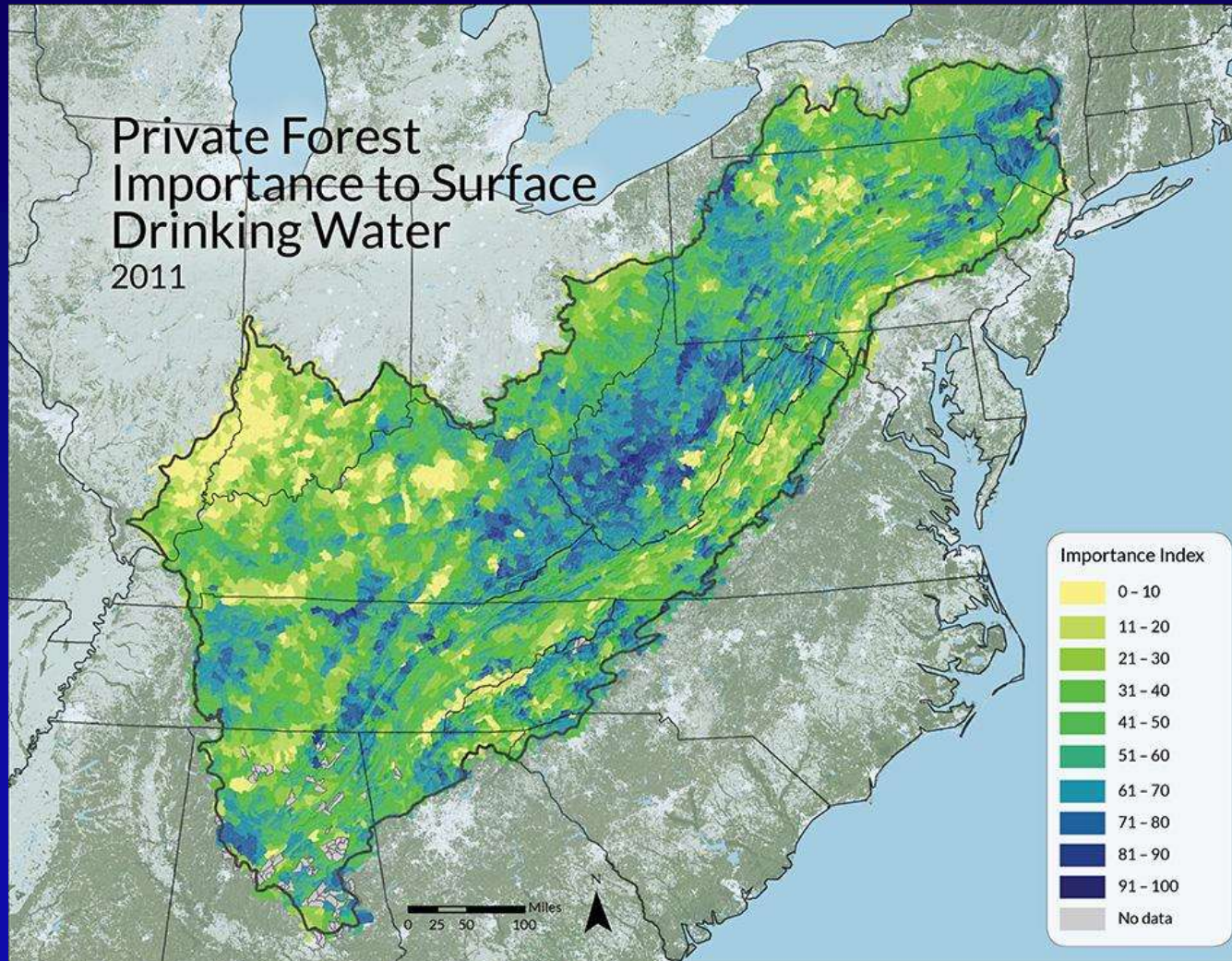
Performance

Quantifying and communicating the value of resources and impacts of management actions in terms of benefits to people

- National Assessments
- Performance Management
- Inventory Monitoring & Assessment



Example: National Assessments



Increasing focus
on geospatial tools
to quantify
benefits delivered
to the public

Characterization of
threat and
justification for
targeted
restoration

Ongoing Development



FY 2015–2020 GOALS AND OBJECTIVES SUMMARY

STRATEGIC GOAL

Sustain Our Nation's Forests and Grasslands

Strategic Objective A. Foster resilient, adaptive ecosystems to mitigate climate change

Strategic Objective B. Mitigate wildfire risk

Strategic Objective C. Conserve open space

STRATEGIC GOAL

Deliver Benefits to the Public

Strategic Objective D. Provide abundant clean water

Strategic Objective E. Strengthen communities

Strategic Objective F. Connect people to the outdoors

STRATEGIC GOAL

Apply Knowledge Globally

Strategic Objective G. Advance knowledge

Strategic Objective H. Transfer technology and applications

Strategic Objective I. Exchange natural resource expertise

MANAGEMENT GOAL

Excel as a High-Performing Agency

Management Objective A. Recruit a diverse workforce

Management Objective B. Promote an inclusive culture

Management Objective C. Attract and retain top employees

Strategic Objective D – Provide Abundant Clean Water (DRAFT, Sept. 7, 2016)						
Situation	Program Activities and Tools	Stakeholders/Participants	Indicators	Outcomes		
				Annual Performance Goal	Strategic Performance Goal	Long-Term Result
15,000+ WCF Watersheds on NFS land	Inventory, Assessment and Prioritization of Watersheds	Local municipalities	# Watersheds Classified	Number of WCF Priority Watersheds Moved to an improved Condition class Annually	By 2020, 54% of National Forest and Grassland watersheds will be Functioning Properly (Class 1)	Watersheds on our Nation's Forests and Grasslands are in good condition, functioning as they should
All classified as Class 1 (Functioning Properly), Class 2 (Functioning at Risk), and Class 3 (Impaired Function)	Education and Public Awareness	National and Regional Partners	% Watersheds Prioritized	% WRAP Plans Developed, Evaluated, Assessed, Monitored	(Strategic Performance Goal Approved by FS, USDA, OMB)	(Approved by FS in Strategic Performance Plan)
297 designated as "priority watersheds" under the Watershed Condition Framework	Partnership Development and Coordination	Federal and State Agencies	% of WRAP Plans Implemented	Number of all Watersheds (priority and non-priority) Maintained at Current Condition Class 1 or 2		
Not all watershed improvement work is done in "priority watersheds."	Best Management Practices Program	General Public	# BMPs monitored	Every 5 years (add mid-term Perf. goal column)		
	Best Available Science	Private landowners				
		Tribal Governments				
Assumptions				External Factors		
<ul style="list-style-type: none"> Implementing WRAPs in Priority Watersheds is a path to Abundant Clean Water Properly functioning watersheds provide the full suite of ecosystem services Implementing a WRAP moves a watershed to an improved condition class Capabilities and resources can be leveraged through partnerships Education, public awareness, and volunteering increases public stewardship of natural resources Availability of technical and budgetary resources may limit the number of watersheds that can be moved to an improved condition class 				Climate change, invasive species, and disturbance can affect watershed condition class even after a WRAP is implemented		
Evaluation/Assessment						
Project- and program-based monitoring and data collection, evaluation of results to track progress in achieving identified outcomes (outcome-based performance measures), annual reporting cycles and metrics, alignment with Agency efforts and goals, constituent feedback. Per Watershed Condition Framework, track restoration accomplishments, and monitor and verify that WRAP implementation improved watershed functioning through Tier 1 and Tier 2 monitoring components						

Partnerships

Connecting providers and beneficiaries of ecosystem services through partnerships and shared investments.

- Incentives for Private Landowners
- Partnerships for Shared Investments
- Damage Assessments
- Environmental Markets



Example: Watershed Investment Partnerships

- Utilities
- Municipalities
- Multi-Sector/ Water Funds
- Federal Agencies
- Corporations
- Consumers/ Communities

VAIL RESORTS
EXPERIENCE OF A LIFETIME™



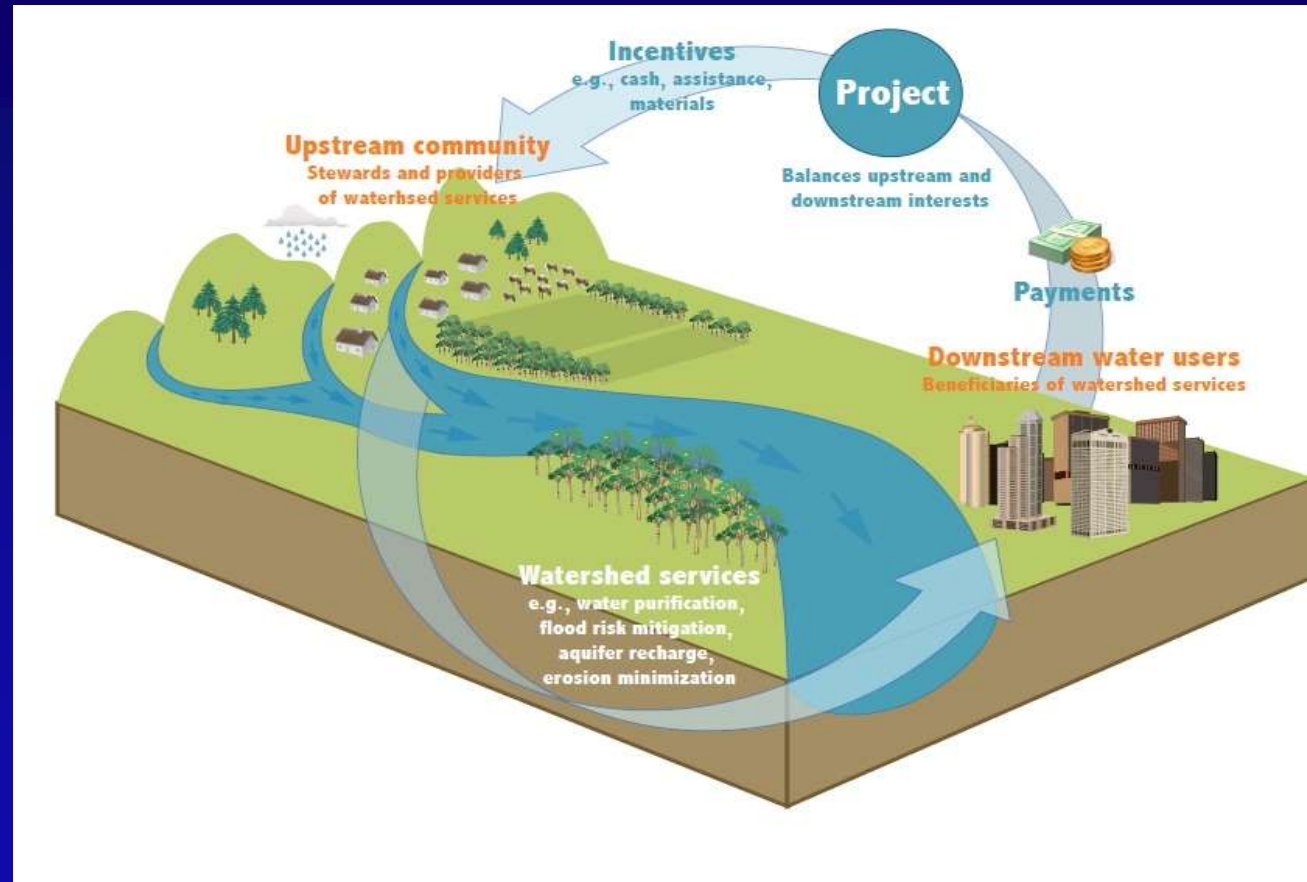
The Nature
Conservancy 

Coca-Cola

Environmental Markets & Investments

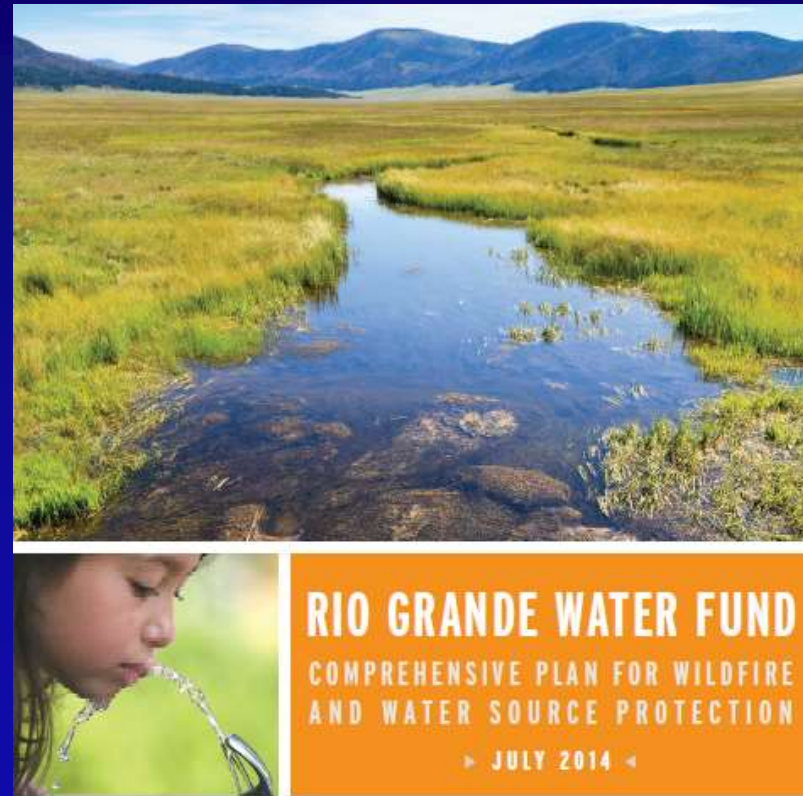
Facilitate environmental markets by:

- creating enabling infrastructure,
- generating credits from NFS land, and
- reducing market barriers for private landowners



Ongoing Development

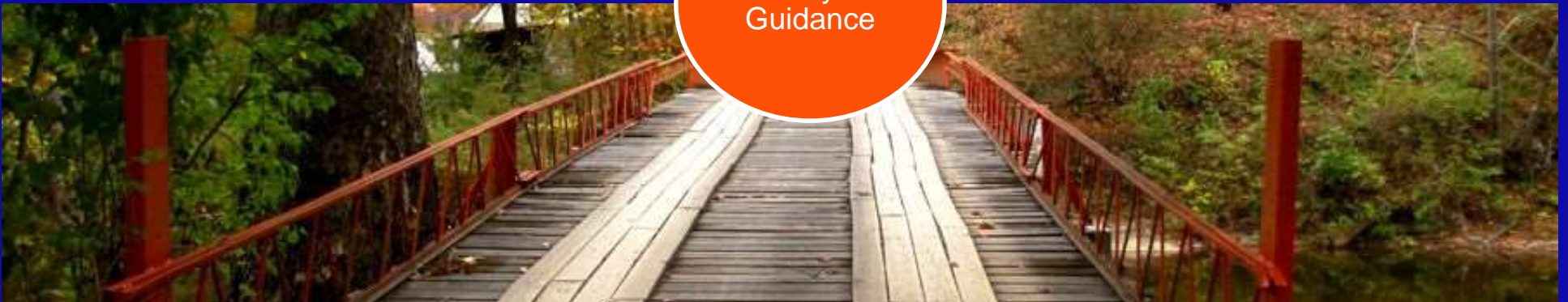
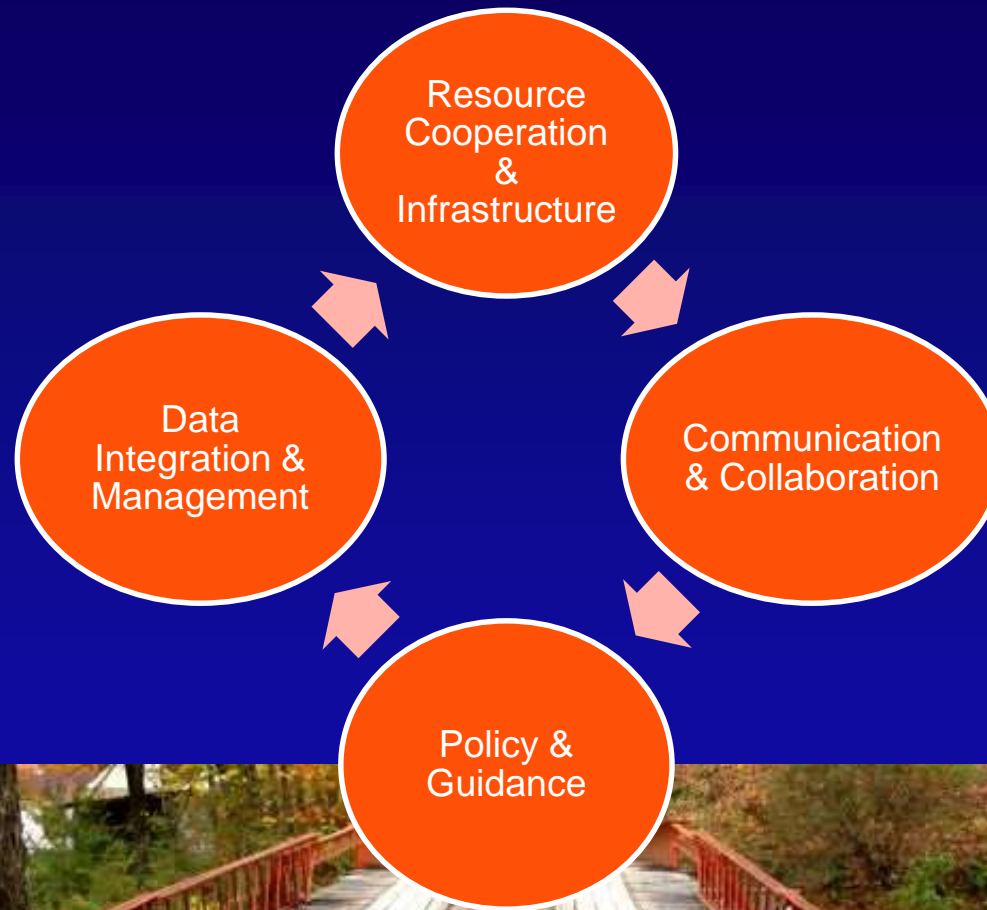
- Bonding mechanisms for accelerated restoration
- Models for cross-boundary compensatory mitigation banking
- Carbon project development on lands with FS landowner assistance funding
- Bringing water funds to scale



Summary of Opportunities

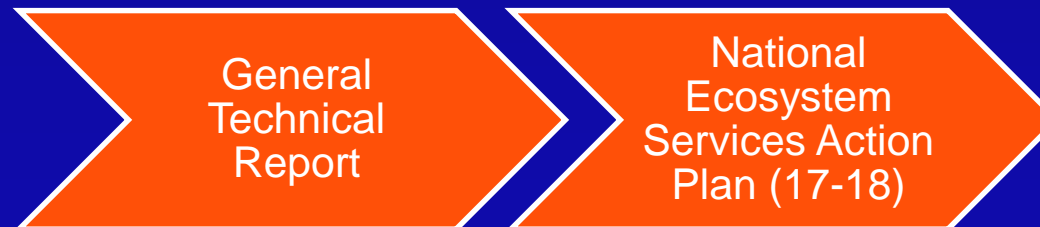
- Ecosystem services **science** can help us analyze trade offs between management decisions and plan for continued public benefits at the landscape scale
- Ecosystem services **tools and methodologies** can help us quantify and communicate the impacts of Forest Service management
- Ecosystem services **concepts** can help us to build partnerships that connect providers and beneficiaries and invite diverse stakeholders to share in our agency's mission

Common Needs



Next Steps

Resources & Infrastructure	Data Management	Communication	Policy & Guidance
<ul style="list-style-type: none">• New Sharepoint site to help practitioners across the agency connect, share, learn	<ul style="list-style-type: none">• New ES tools portal on USDA website – to be released in January	<ul style="list-style-type: none">• Continue monthly webinars• New Champions monthly forum for peer-to-peer sharing	<ul style="list-style-type: none">• Addressing authority for new financial mechanisms• Technical guidance for quantification





QUESTIONS?

