Lake Tahoe "Science to Action" Conference

Working Together to Build Resiliency
at Lake Tahoe

Tahoe Science Advisory Council: Science to Action

Lessons from Science-Management Partnerships on Public Lands

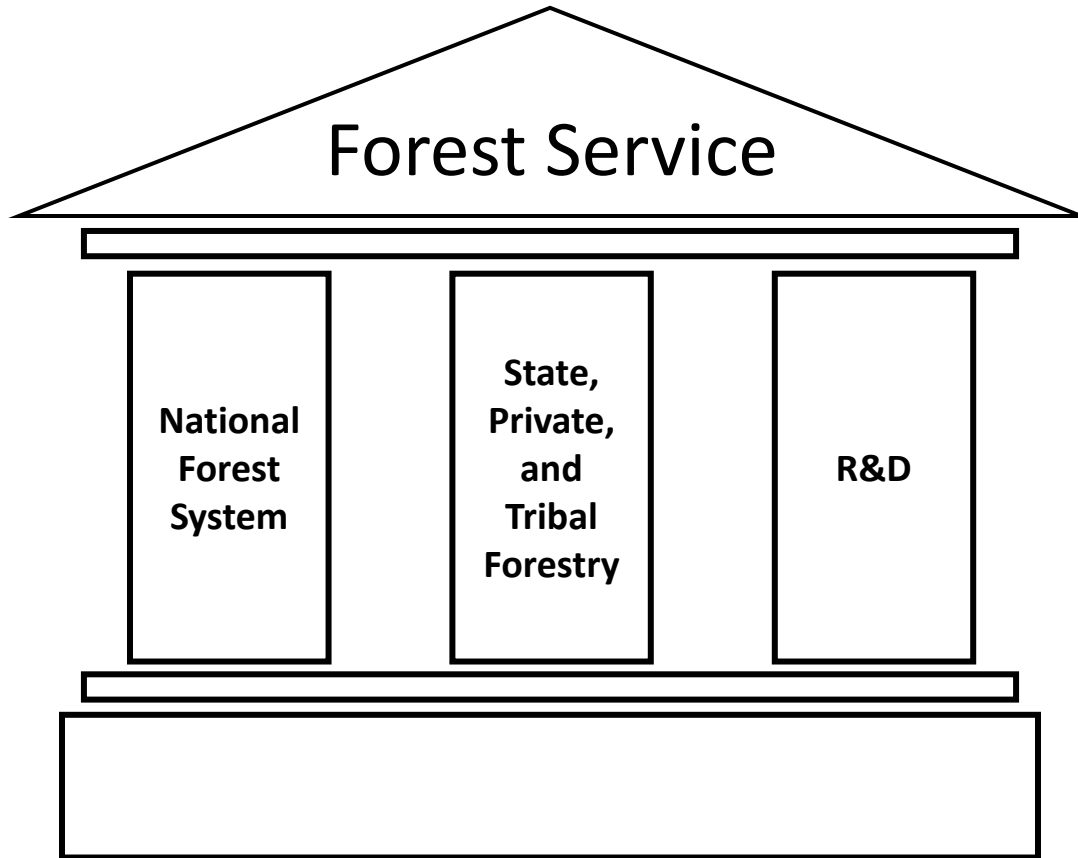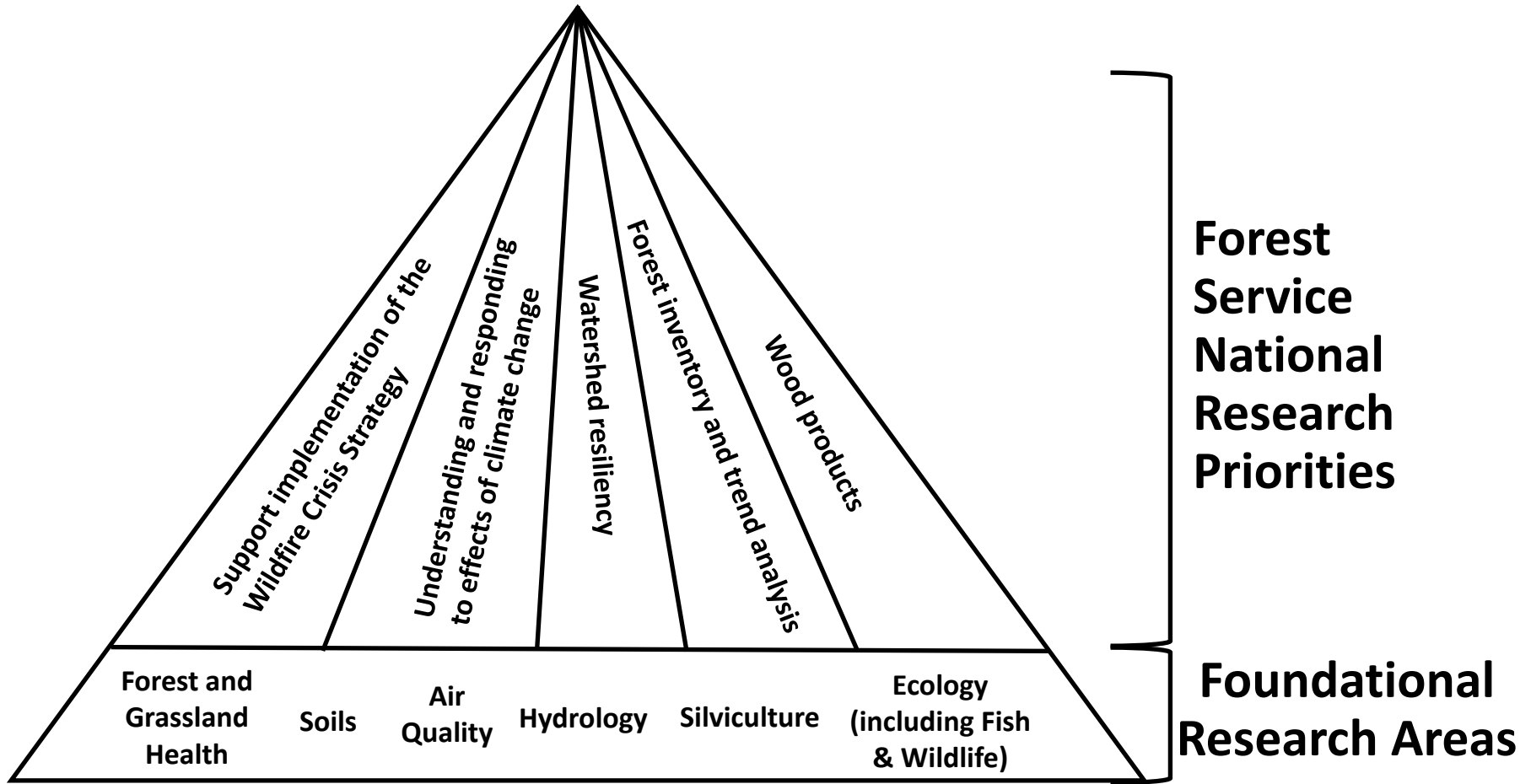Valerie Hipkins, Associate Deputy Chief, Research and Development

Lessons from Science-Management Partnerships on Public Lands

The journey of learning and scientific integration

- *The science-management divide*
- *The missing middle*
- *Forest Service science-management partnerships – Wildfire Crisis Strategy*

Forest Service National Research Priorities

- Support implementation of the Wildfire Crisis Strategy
- Understanding and responding to effects of climate change
- Watershed resiliency
- Forest inventory and trend analysis
- Wood products

Foundational Research Areas

- Forest and Grassland Health
- Soils
- Air Quality
- Hydrology
- Silviculture
- Ecology (including Fish & Wildlife)

Science   Management

The Science-Management Divide

Research expertise, products, information, and tools

Landscape management needs

Barriers and Bridges

Research expertise, products, information, and tools

Organizational barriers
Processes
    (contradictory or opaque)
Communication barriers
Inaccessible tools and data
Conflicting information or
    uncertainty
Funding/capacity

Landscape **management** needs

Barriers and Bridges

Research expertise, products, information, and tools

Landscape **management** needs

Bridging the Divide

- Cross boundaries between scientists and practitioners

  Science delivery specialists

- Deliver science from scientists to those who need it

  Technology transfer specialists

- Translate science into plain language

  Technical writer-editors

- Fill in all the roles we need to perform, analyze, and deliver science

  Support staff

- Disseminate science to the media and public

  Public Affairs Officers

Tools

- Strategic Planning Tools and Technologies
- Risk Assessment Tools
- Decision Support Tools
- Scenario Planning Tools
- Land Resource Planning Tools
- Vulnerability Assessment Tools
- Databases/Information Systems
- Support Tools

The Wildfire Crisis Strategy is a comprehensive plan to reduce the risk of wildfires and their impacts on communities, ecosystems, and the economy. The strategy is based on the best available science, but there are still many areas where more research is needed.

BIL

The Bipartisan Infrastructure Law (BIL) is also known as the Infrastructure Investment and Jobs Act (IIJA).

Infrastructure Investment and Jobs Act (IIJA)

Five-year timeframe (FY22 - FY26)

~$5.5B total for FS including $3.4B for wildfire risk reduction

Other investments include roads and trails, invasive species detection & control, water quality & fish passage, orphaned gas well reclamation, ecosystem restoration

$2M/yr for Joint Fire Science Program

FY22-23 IIJA Spend Plan: $108M for science support.

To date, R&D has allocated funding to 66 research projects.

Priority Research:
Support the Wildfire Crisis Strategy

- Prediction

- Planning

- Decision Support

- Strategic Reduction of hazardous fuels

- Impact assessment

- Recovery

Internal (FS R&D) BIL Wildfire Crisis Strategy Research Solicitation

$20 Million Dollar Solicitation (due date November 17, 2023).

- Rapid detection of wildfire starts
- Early warning systems
- Mechanical thinning, timber harvesting, and pre-commercial thinning
- Prescribed fire and related activities, including hazardous fuels treatments
- Control lines and fuel breaks
- Removal of flammable vegetation
- Utilization of woody materials (biomass) produced by hazardous fuels treatments

Emphasis on projects that can provide timely support to the Wildfire Crisis Strategy Landscapes

Inflation Reduction Act (IRA)

The Protection of Old Growth Forests Provision for $50M and is available for 10 years from enacted in FY22.

This provision is to develop and carry out activities and tactics for the protection of old-growth forests on NFS land and to complete an inventory of old-growth and mature forests.

To date, R&D science support totals $7.79M. Of that total, $1.6M to Climate Hubs

Mature and Old Growth Initiative

Executive Order on Strengthening the Nation's Forests, Communities, and Local Economies (EO 14072), and the Mature and Old Growth (MOG) portions of the Secretary's Memorandum on Climate Resilience and Carbon Stewardship of America's National Forests and Grasslands (due date October 18, 2023).

1. Social science issues related to MOG (underserved communities, indigenous knowledge)
2. Implement a learning process/adaptive management framework for NFS line officers working in/around MOG
3. Where can we keep MOG on the landscape (not a map location per se, but a set of conditions or indicators)
4. Technology Development
   - AI – Natural Language Processing and its broadening application
   - Inventory/monitoring tools
5. Evaluation of carbon and MOG – are OG trees better at storing carbon than young? Synthesis of literature? What kinds of treatments would we want/need to support carbon storage and resilience of MOG forests (and this could dovetail with #2 above).

Manage research engagements.

Build a learning role into science integration work.
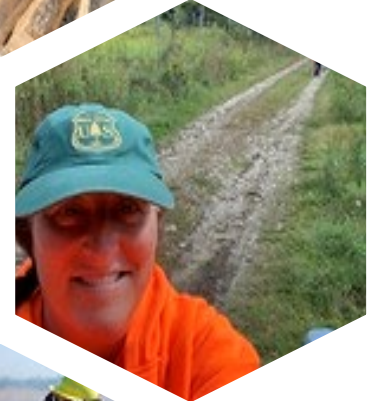
Thursday, October 12th

Lake Tahoe Community College | **Duke Theater**

7:30 Continental Breakfast and Network with Science Delivery Partners
8:30 Welcome and Overview of Concurrent Sessions

Lake Tahoe Community College | **Lisa Maloff University Center**

8:45 Lake Clarity and Water Quality
Conserving Biodiversity

10:30 Break

10:45 Microplastics and Trash
Landscape Restoration: Mayala Wata

12:30 Lunch (provided onsite)

2:00 Nearshore Water Quality and Aquatic Invasive Species
Destination Stewardship