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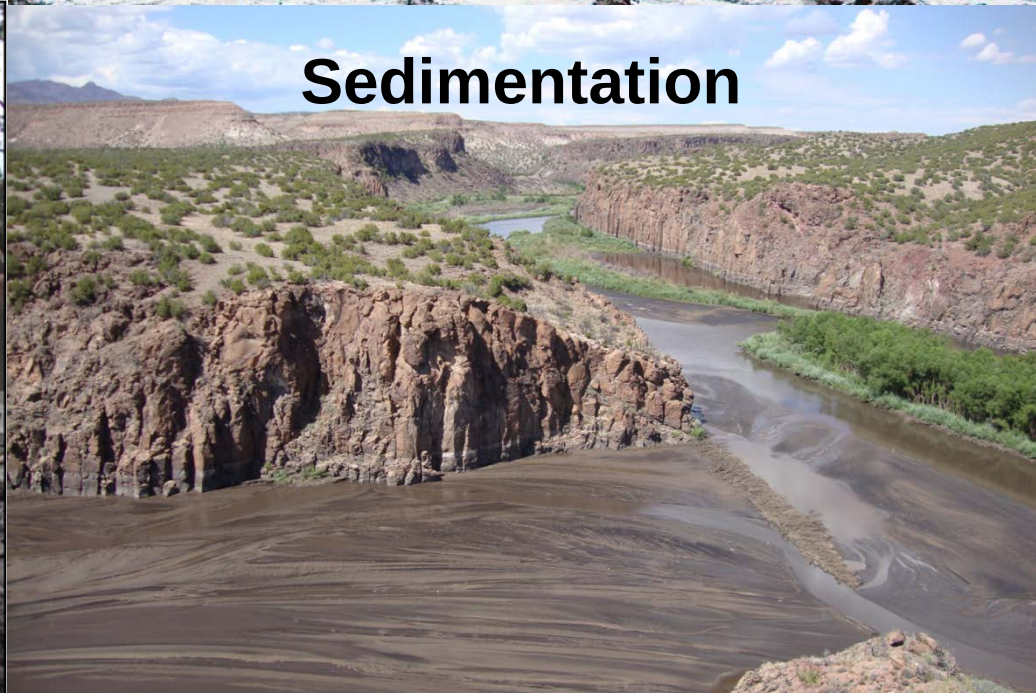
Water Security in New Mexico: Vision for the Rio Grande and Forested Watersheds

CONCERN #1
Increasing areas of high-severity burn

Photo: Craig Allen, USGS

CONCERN #2:
Post-fire flooding and debris flow



CONCERN #3: Water Quality

CONCERN #4:
Cost of 2011 Las Conchas Fire

$48 million fire suppression cost
$138-232 total est. cost of the wildfire

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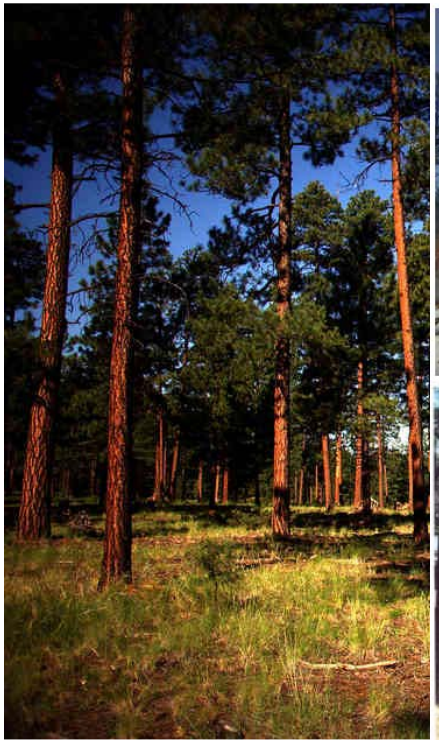
Proactive Management

Scale-up strategies to meet the scale of the severe wildfire:

1. Thinning
2. Fire management
3. Stream restoration
4. Flood mitigation



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Vision and Goal

Vision: Reliable supply of high-quality Rio Grande water and healthy forests for the benefit of New Mexico's communities.

Goal: To protect storage, delivery and quality of Rio Grande water through landscape-scale forest restoration treatments, including headwaters of the San Juan Chama Project.

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Objectives

1. Reduce forest fuels in areas identified as high-risk for wildfire and debris flow.
2. Maintain the reduced wildfire hazard in treated areas.
3. Mitigate the downstream effects of wildfires.
4. Secure sustainable financing from water users, government, investors and donors, and facilitate payments to upstream land managers to help them reduce wildfire and debris flow risk in high priority areas and maintain those areas long-term.

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Accelerate Forest Treatments

Rio Grande Goals:

1.7 million acres of forests

700,000 acres treated or 40% of forests

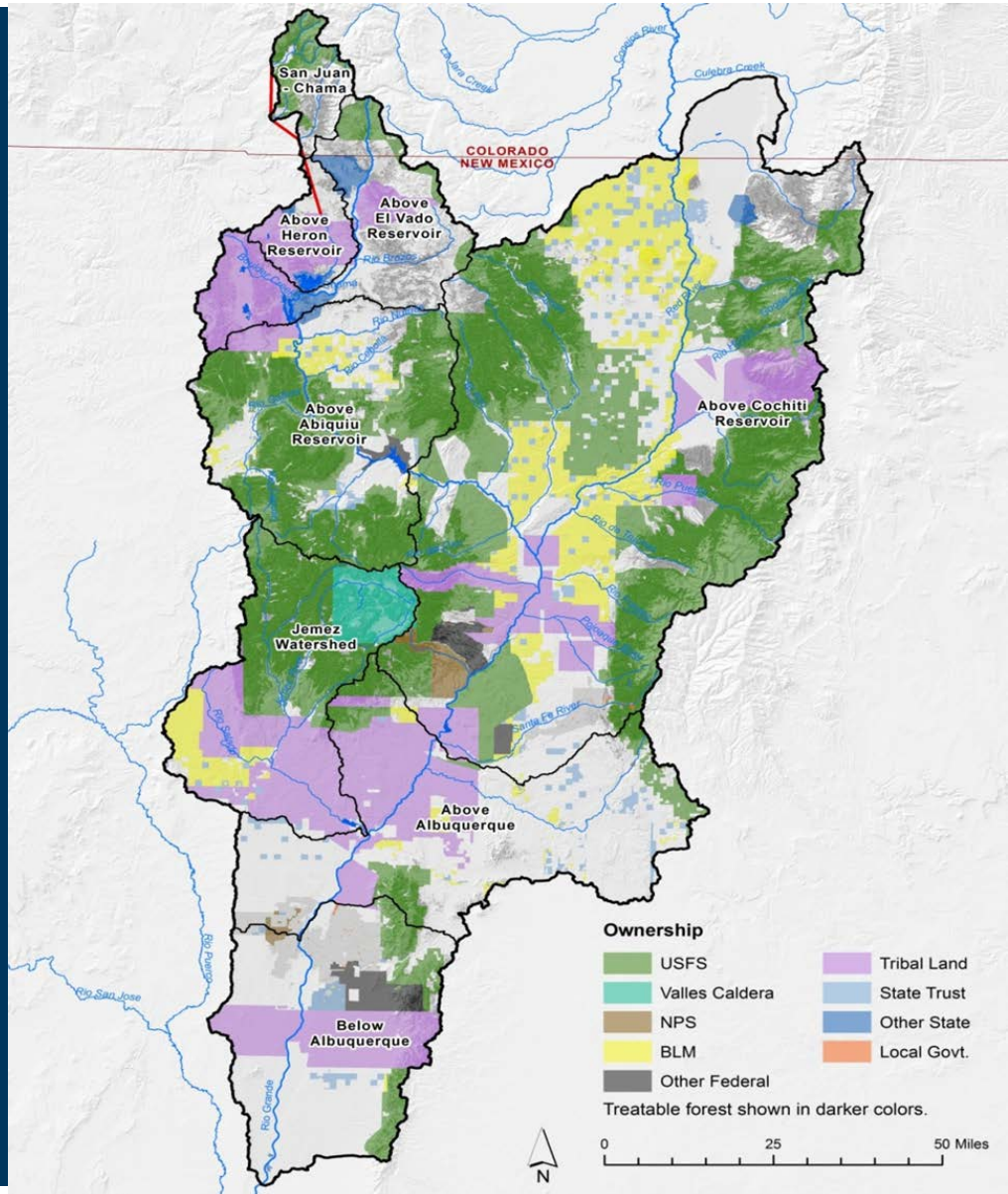
30,000 acres annually

$7-15 million annually

Statewide Goals:

50,000-100,000 acres or more treated annually

$30 - 40 million annually



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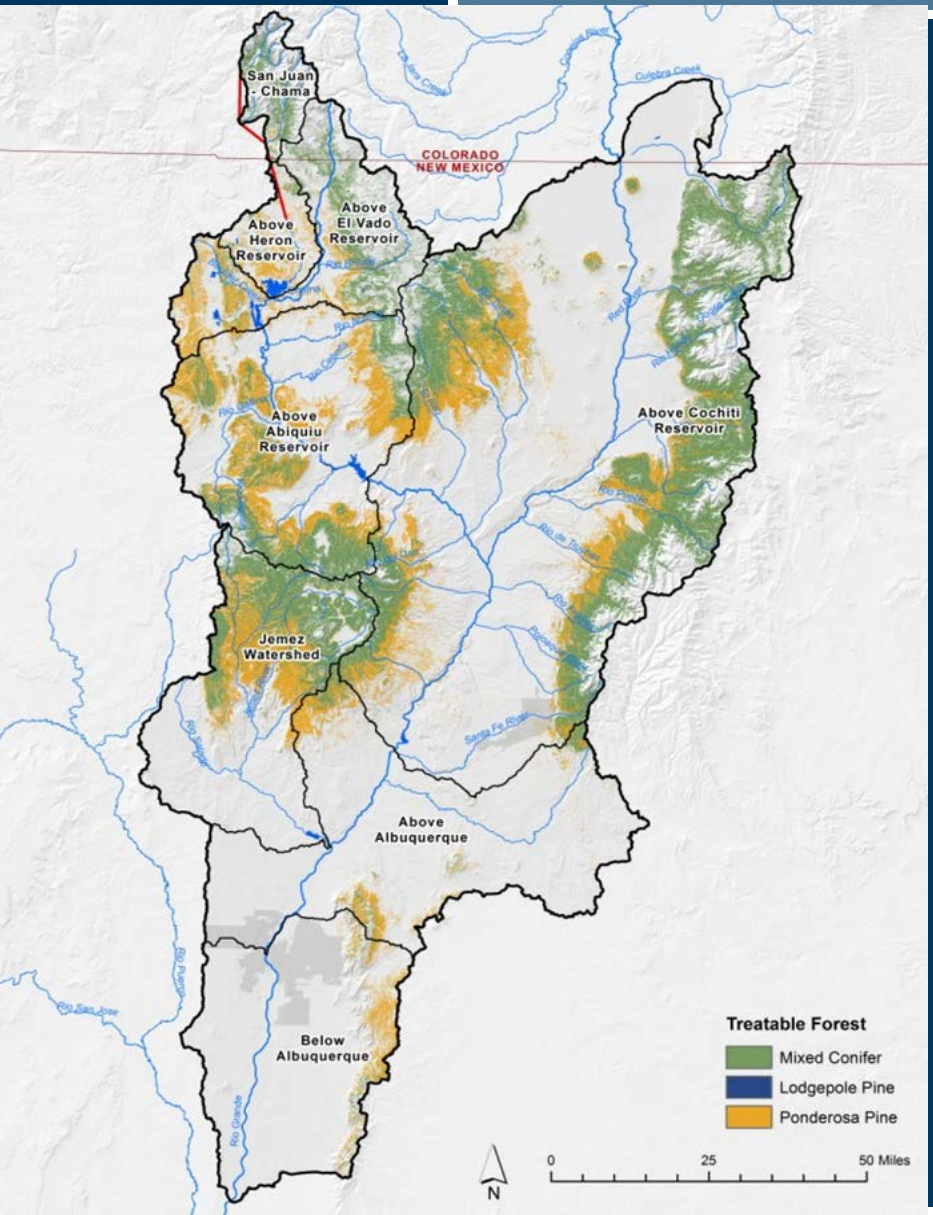
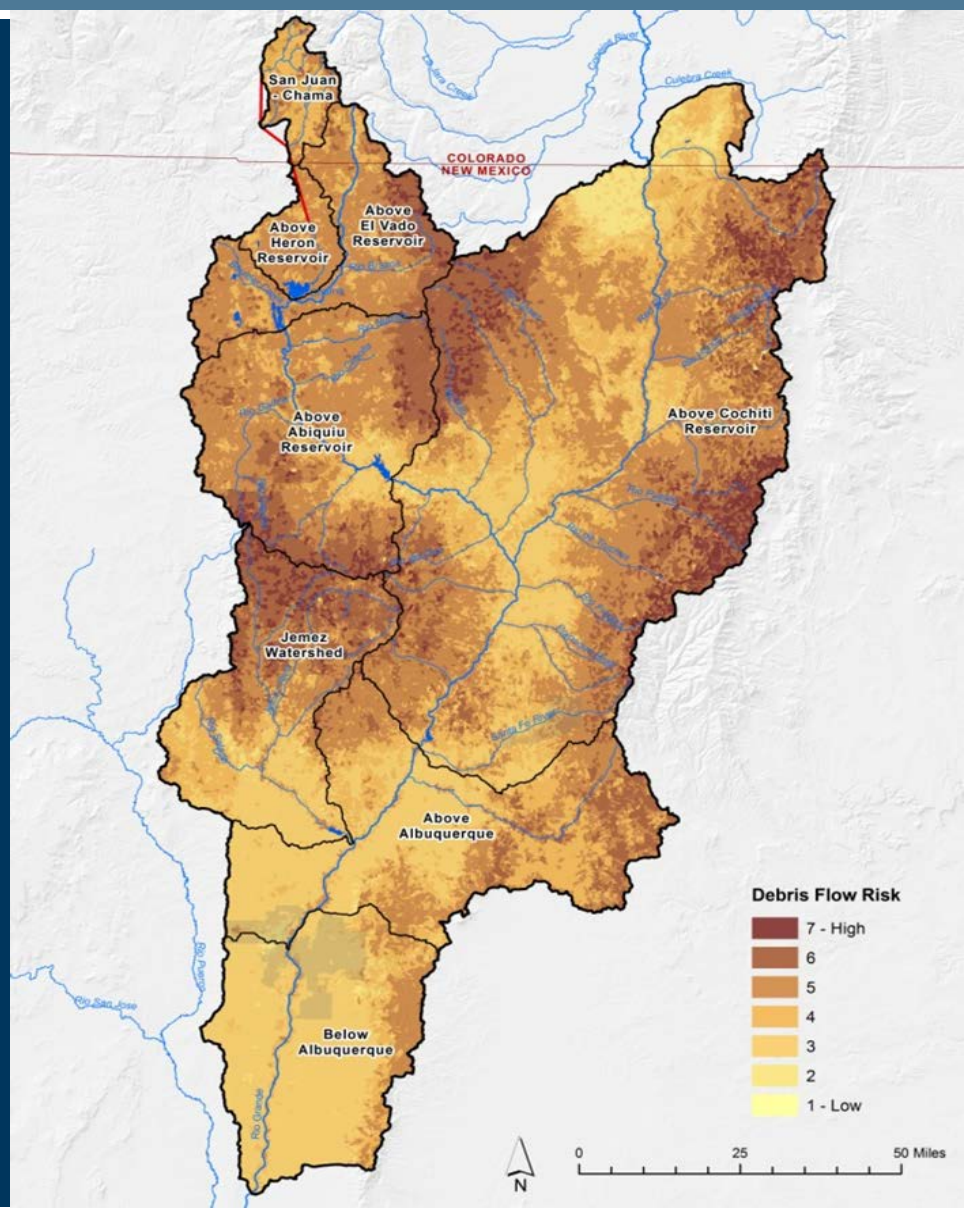
Treatable Forest and Probability of Fire and Debris Flow





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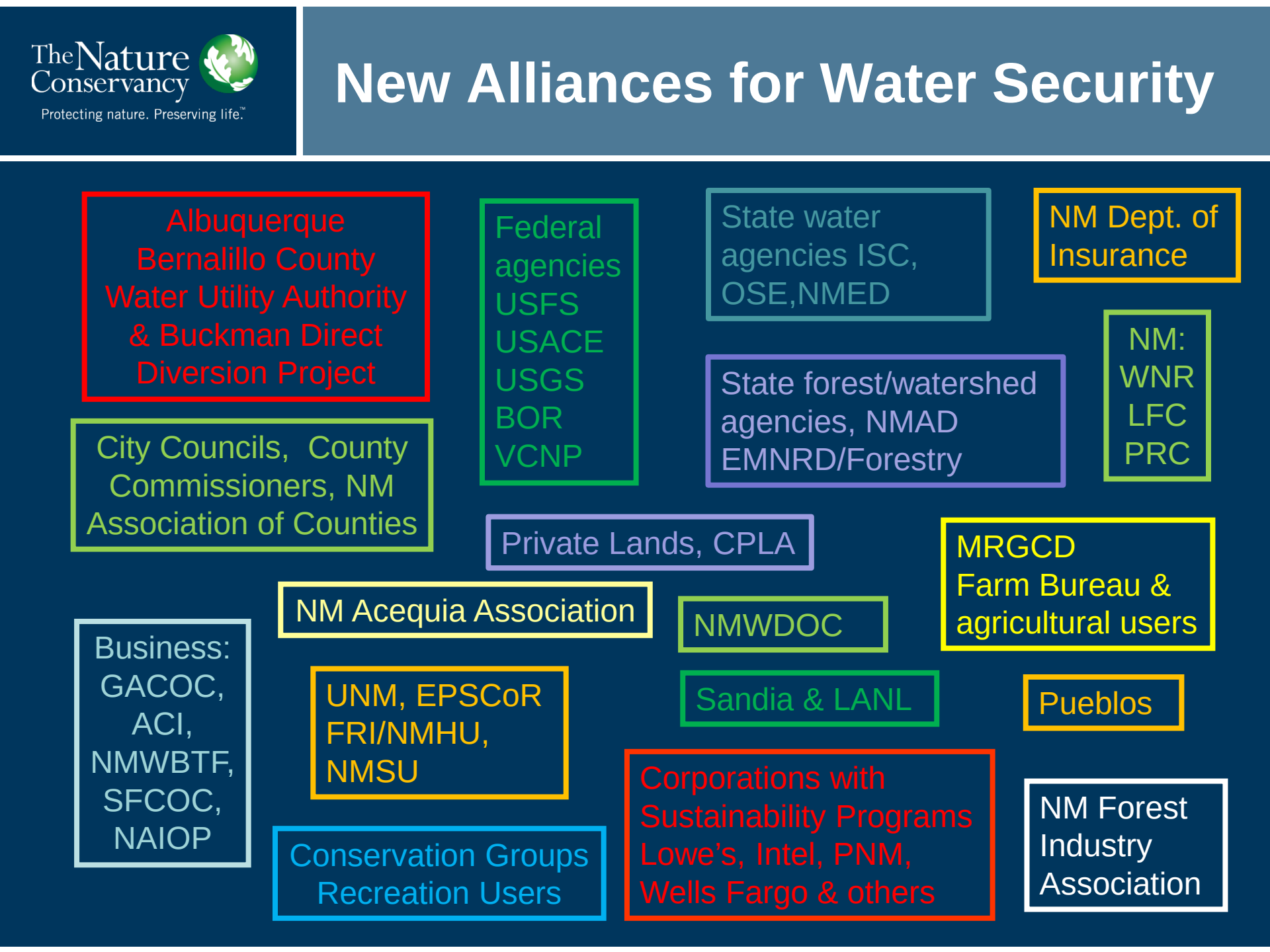
New Alliances for Water Security



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TNC Roles

1. Convene Advisory Board
2. Organize studies & partnerships
3. Establish water fund/ private sector
4. Facilitate comprehensive planning
5. Organize outreach & marketing

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Working Groups

1. Debris Flow Technical Team
2. Monitoring Working Group
3. Water Yield Working Group
4. Governance and Structure Working Group
5. Economic Development Planning Team
6. Education and Outreach Working Group
7. Forest Operations Working Group
8. Flood mitigation

A Proposed Burned Area Learning Network

A network of partners engaged in studying and implementing work in severely burned watersheds

- Address both short and long-term objectives
- Evaluate and build from available science
- Consider the potential for “green infrastructure “ to contribute to flood mitigation
- Provide rationale for active post-fire management OR letting systems recover on their own
- Help communities understand and plan for post-fire impacts.

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What is a learning network?

Partners who:

- Conduct collaborative planning, and implementation
- Share lessons learned
- Create an environment for true adaptive management

With a common set of objectives in mind

Participants have a common desire to learn, to overcome barriers to sustainable and integrated ecological, economic and social solutions.

Current steps- through June 30th

Gather management recommendations from the SW Fire Science Consortium Resilience Ecology Workshop

Become familiar with existing research and practices in the Southwest.

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Suggestions/ Questions

Thanks!

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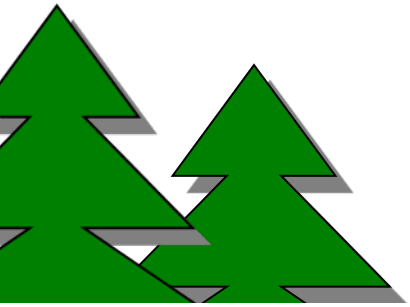
Watershed Studies

- Where are the highest risk forests and streams?
- How much restoration treatment is needed?
- What is the expected water yield?

Possible Uses of Low-Quality Wood from Forest Treatments



ELECTRIC

Biofuels

Mulch and Compost

Shavings, posts and poles

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Lumber and SW Construction

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Advisory Board Roles

Involve local, state, federal, and tribal government and water managers, the business sector, foresters, conservation organizations and other stakeholders in the creation of a water fund that connects the Rio Grande and Rio Chama to surrounding forested watersheds.

Provide direction for the creation of a water fund including guidance about studies needed, creation of a comprehensive water security plan, determination of the water fund structure and governance and fund raising.