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Forests to farm then table & tap

Laura McCarthy New Mexico State Forester

Energy, Minerals and Natural Resources Department
February 2022





Credit: B. Klieson



Credit: J. Haffey



Credit: C. Allen









Credit: NMDA



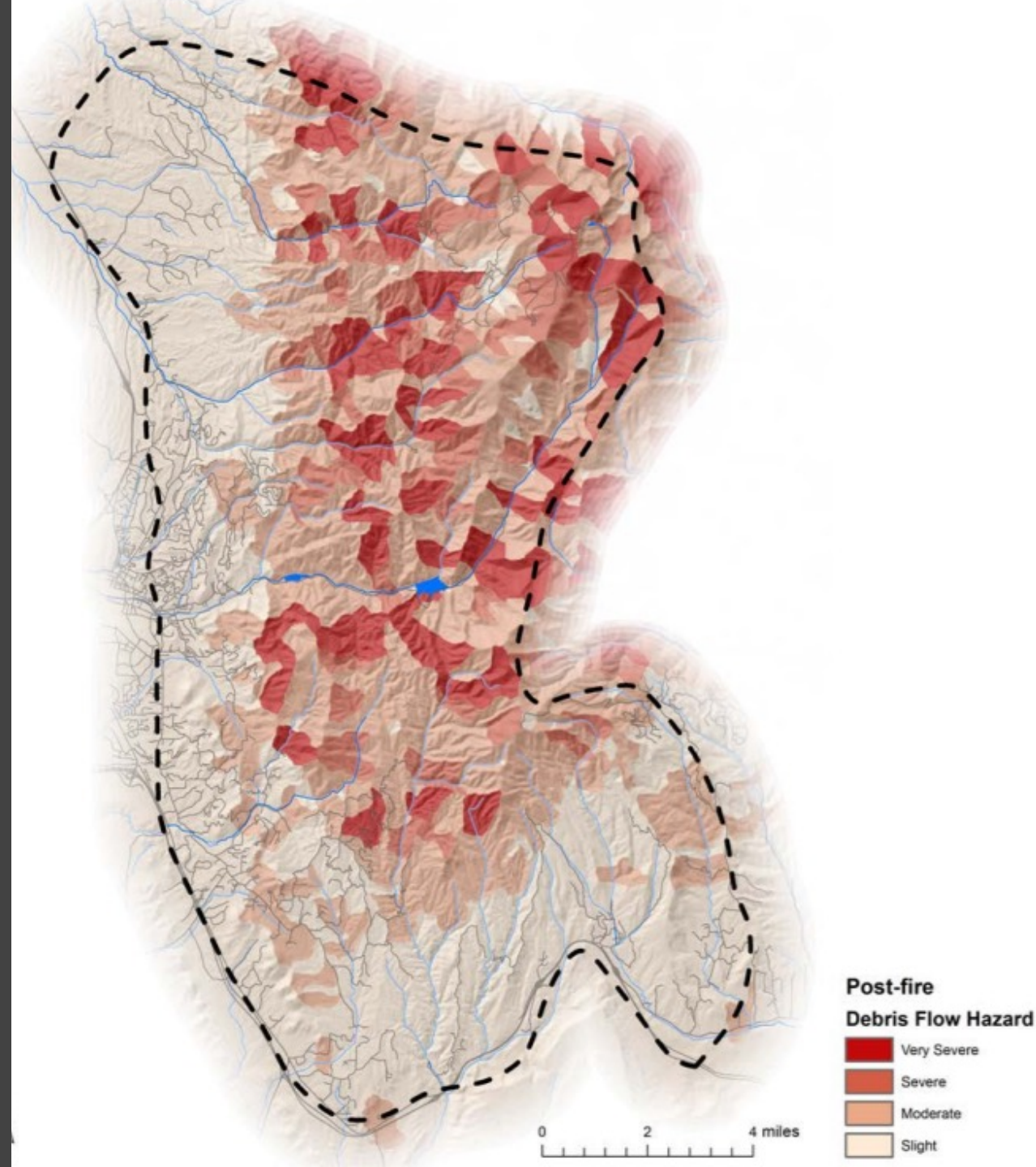
Credit: Alan Eckert

50-70% of the municipal and agricultural water originates in forests.

NM EMNRD

Pilot: Santa Fe Fireshed

- Used peer-reviewed method to analyze risks to area surrounding Santa Fe
- Collaboratively driven
- Led to several actions and strategies (e.g., landscape scale NEPA)



New Mexico | Rio Grande Water Fund

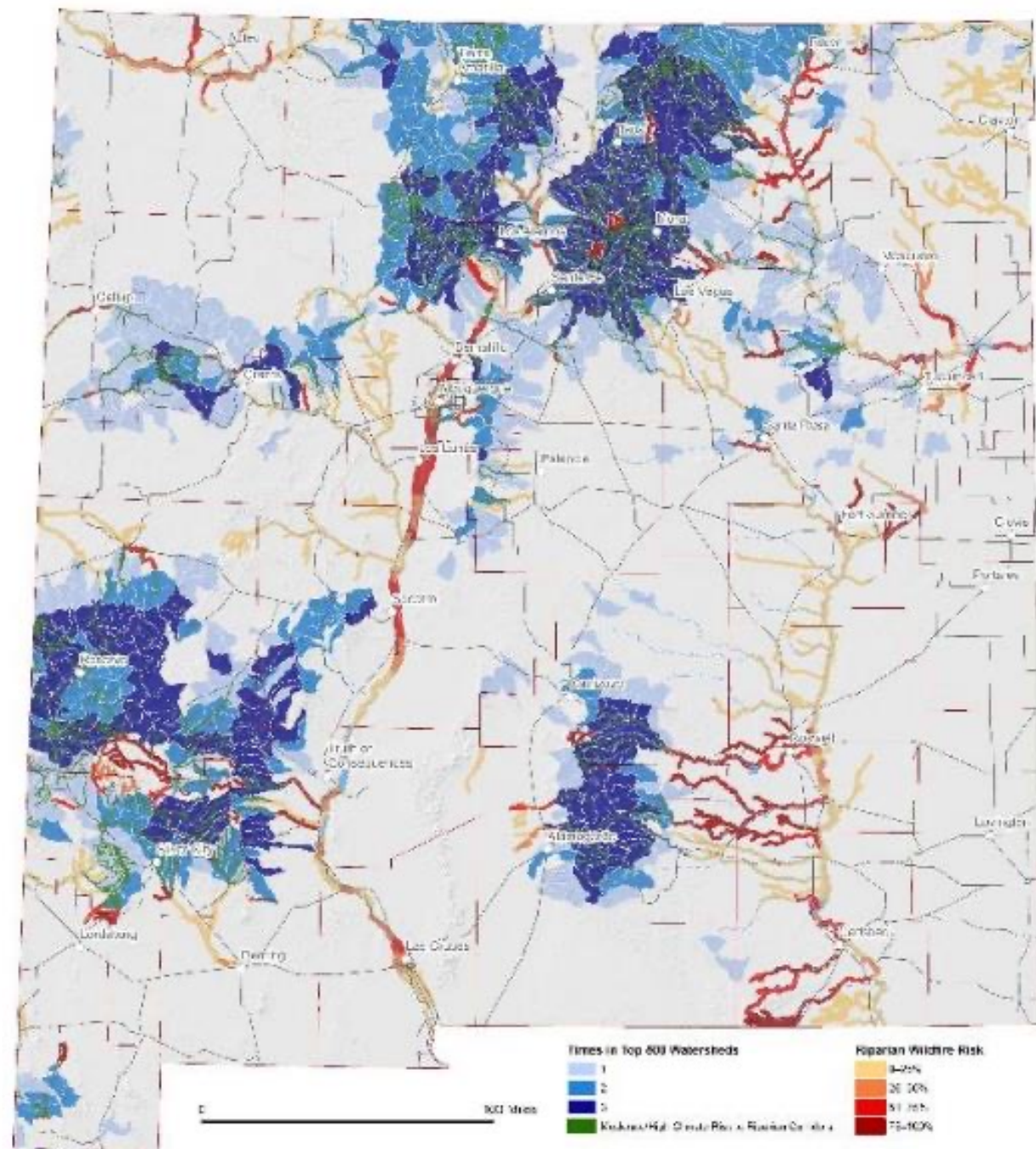
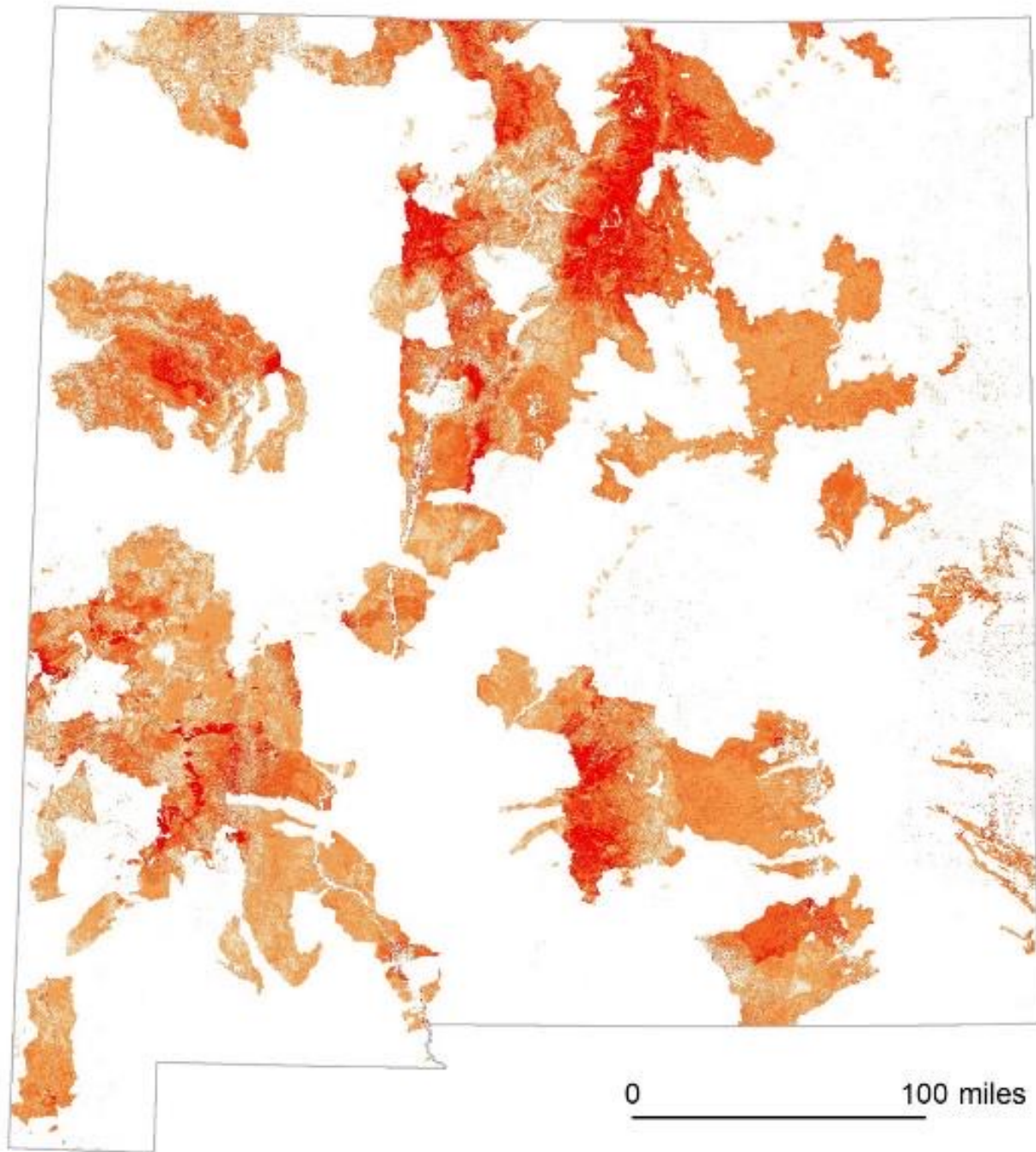
Restoring essential forested lands upstream will ensure a continuous supply of clean water downstream

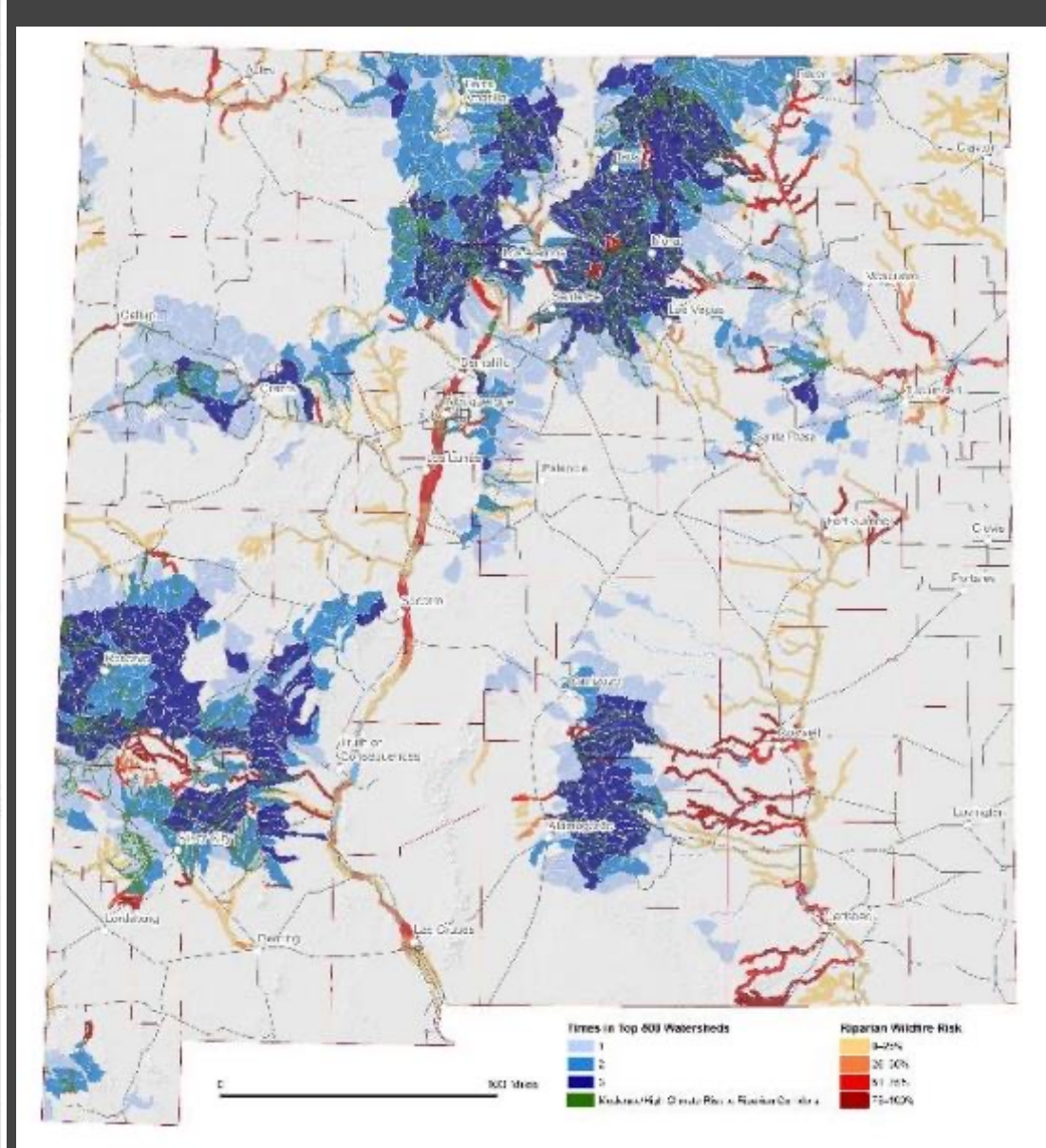
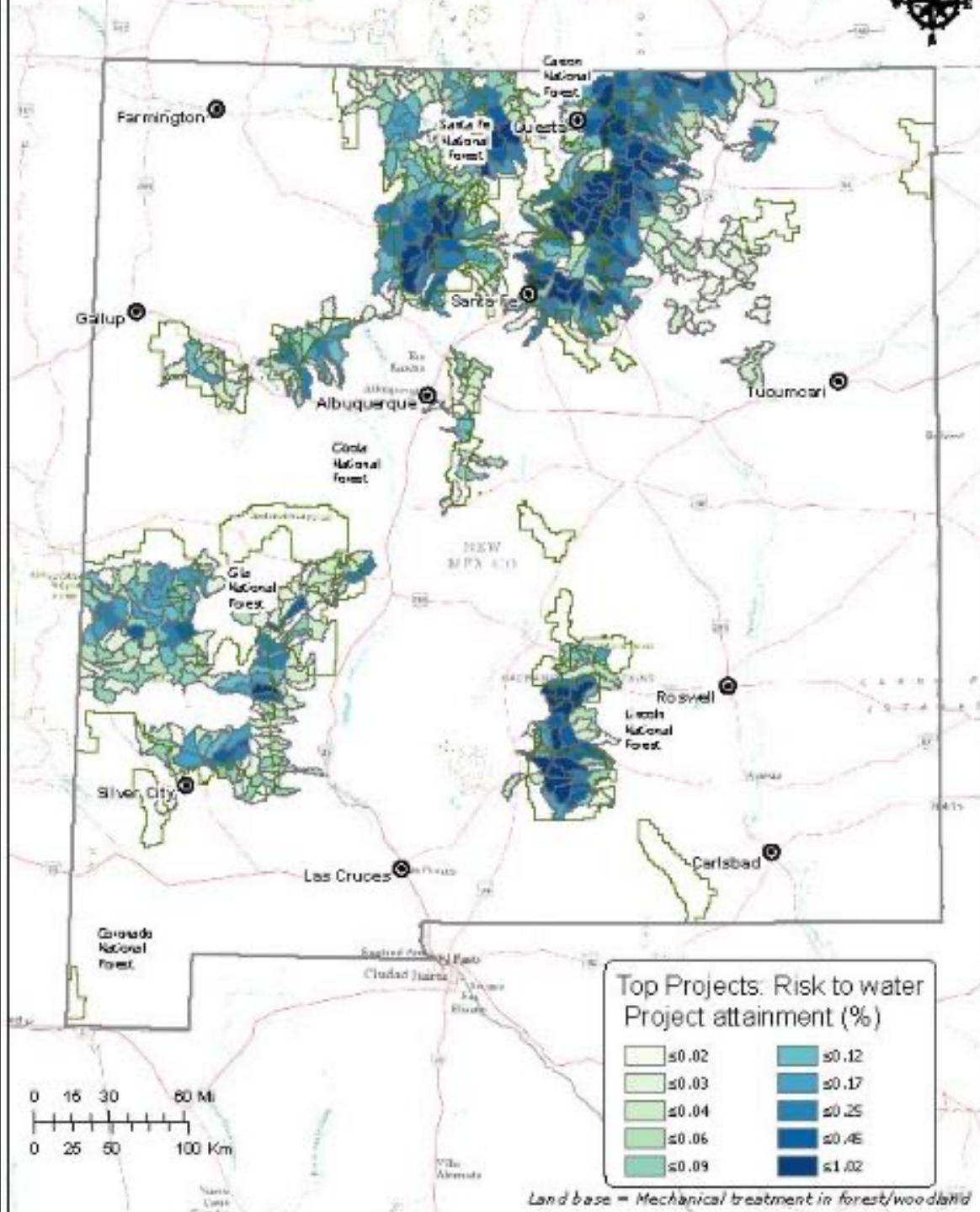
The Nature Conservancy



RIO GRANDE
WATER FUND
A Wildfire and Water Source
Protection Project







All Lands Shared Stewardship Priorities – Top 500

10 Forest Action Plan Strategies

1. Restore Forests and Watersheds
2. Fire Management
3. Private Land Stewardship
4. Utility Rights of Way
5. Rare Plants
6. Reforestation
7. Urban Forests and Communities
8. Restoration Economy
9. Land Conservation
10. Outdoor Recreation

Forest and Watershed Restoration Act

- Dedicated non-federal funding for restoration
- Tied to Forest Action Plan
- Must be landscape scale and benefit downstream water users

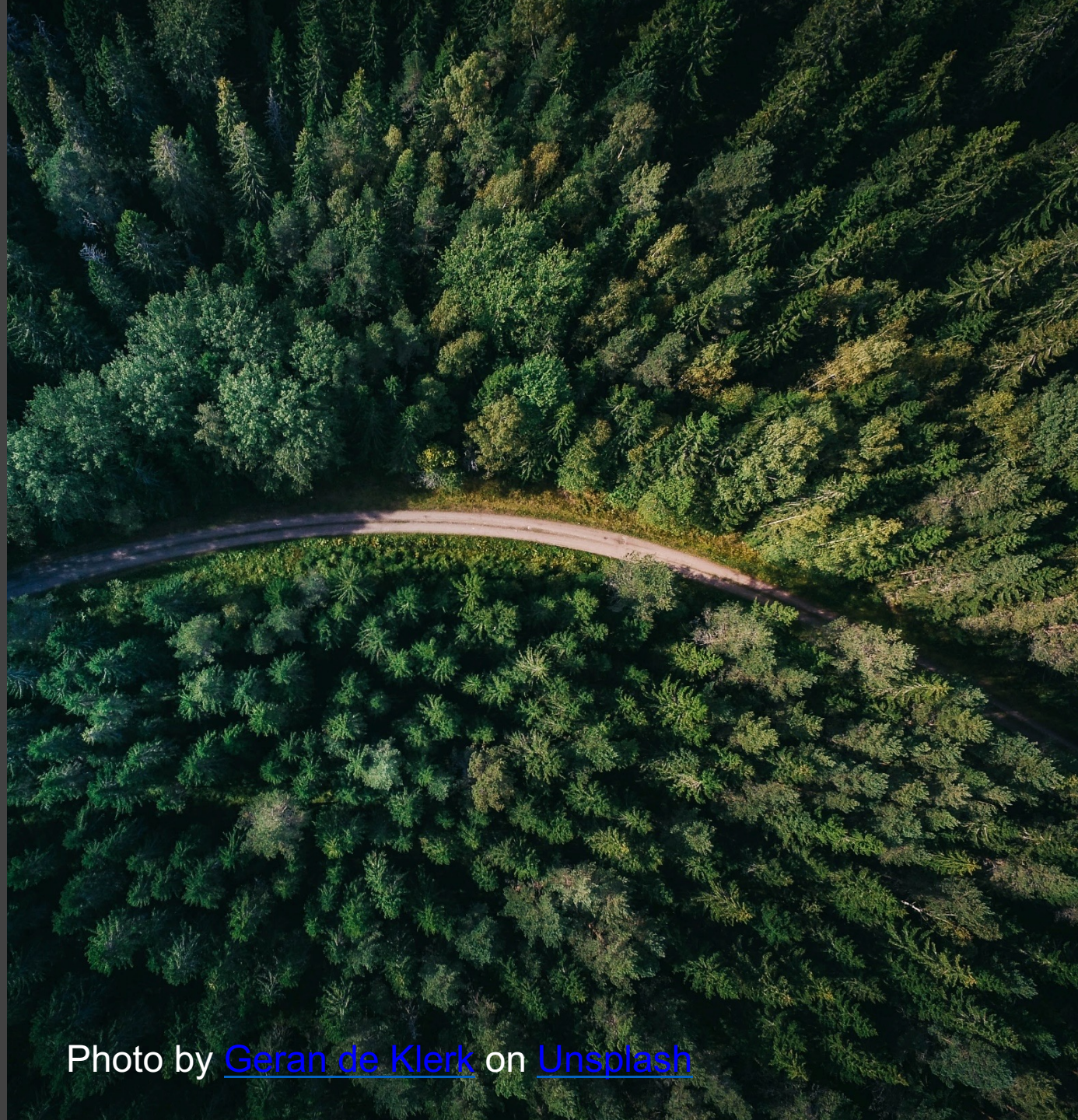


Photo by [Geran de Klerk](#) on [Unsplash](#)

FAWRA can fund: Treatments, Planning and Economic Development



Photo courtesy of Esme Cadiente



26 jobs and \$5M of
economic impact for every
\$1M spent on restoration

Huber et al., USGS Open-File Report 2019–1108

Focus: Workforce Development

- Youth and professional education
- Jobs and skills training
- Business incentives
- Increase local contractor capacities



52 weeks of fire

- Planning season
- Training season
- Suppression season
- Rx fire season



Fire effects not fence lines

- Driven by landowner goals
- Utilizes Potential Operational Delineations to maximize fire fighter safety
- Increases operational decision space
- Avoids inefficient suppression efforts



Getting more *good* fire on the ground

- 2021 passed the prescribed fire act creating the “right to burn” for private landowners
- Reduces liability by defining standards
- Creates certified burner program



Pile Burn Certificate

- Low complexity
- Burn activity fuel from property
- A good entry into Rx fire



Broadcast Burn Certification

- Higher complexity
- Larger scale land management
- Opportunity for contractors and business development



Reforestation after fires

- New Mexico State Univ., NM Highlands Univ., UNM, NM Forest and Watershed Restoration Institute (SWERI)
- 3 Parts
 - Nucleation Planting
 - Field research on reforestation and climate change
 - Research to improve seedling stock



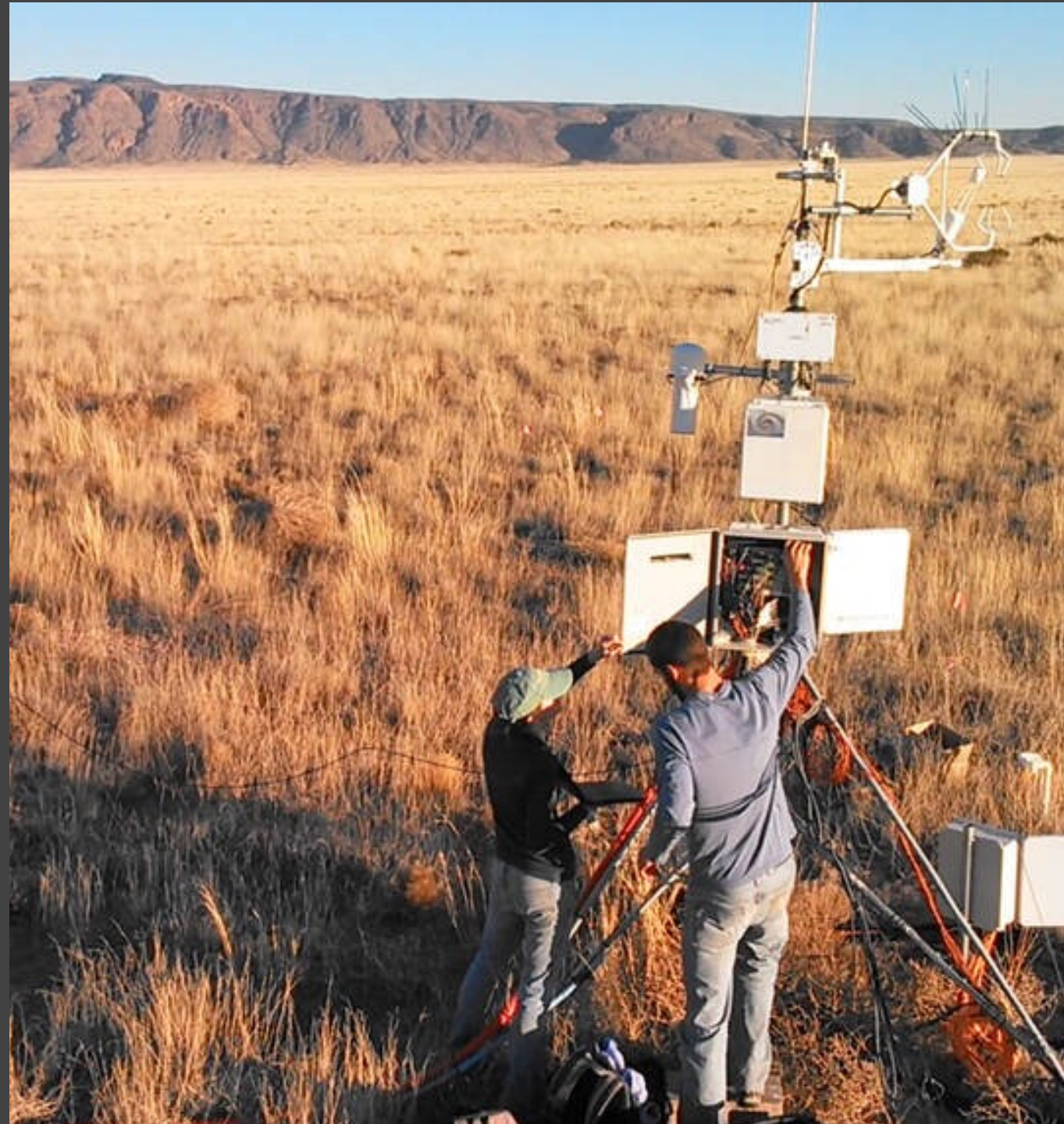
NM Reforestation Center

- Collaborative agreement between Forestry Division and Universities
- Focus on post-fire reforestation
- Addresses the reforestation pipeline challenges
 - Seed
 - Nursery
 - Planting
 - Post-planting



Working lands and carbon flux

- Working with landowners to pilot efforts that stabilize or increase carbon on working lands
- Creating place-specific carbon accounting models for New Mexico's arid environment
- Collaborating across a network of scientists, landowners, and managers. Includes NMDA, SW Climate Hub, Climate Adaptation Science Center and NM Univs.



Credit: Litvak Lab

Looking forward: Challenges

- Funding is coming – this will stretch our collective capacity to the max
- Persistent dry conditions – moving into an ignition limited season
- Bureaucracy isn't keeping pace with drying conditions – hiring, procurement, environmental regulations, all need to be rethought to meet the challenge
- Capacity building needs



Looking forward: Enabling Conditions

- Funding is coming – dollars for days
- Strong support from leadership for proactive fire management -- our bosses “get it”
- Partners willing and able to innovate and work together





Thank you!