

New Mexico Forest & Watershed Restoration Institute Fiscal Year 2024 Summary Federal Work Plan

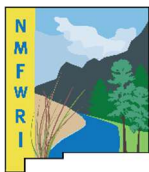
Congressional Annual Appropriations to SWERI for FY24

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April, 2024

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SWERI Southwest Ecological
Restoration Institutes

Northern Arizona University | Colorado State University | New Mexico Highlands University



NEW MEXICO FOREST & WATERSHED RESTORATION INSTITUTE

Staff

May 2024



Administration and Coordination

Administration



Alan Barton

Director

2015



Buddy Rivera

Deputy Director

2023



Kris Bellmore

Budget & Finance Manager

2023



Maria Martinez

Administrative Coordinator

2022

Coordination



Open

Educ. & Outreach Coordinator



Raymundo Melendez

Educ. & Outreach Assistant

2018



Staci Matlock

Public Information Specialist

2021

Civic and Community Action Programs

Research Associate



Michael Roberts

Research Associate

2023

Collaboration Program



Crystal Medina

Program Manager

2023



Alejandro Collins

Technician

2023



Eleanor Ludwig

Specialist/VISTA

2023

Conservation Science Center Program



Shantini Ramakrishnan

Program Manager

2020



Faith Purvey

Assistant Manager

2023

Technical and Applied Science Programs

Monitoring Program



Kathryn Mahan

Program Manager

2014



Carmen Melendez

Assistant Manager

2019



Corey Beinhart

Data Manager/Analyst

2022



Emily Yannayon

Specialist

2024



Alex Makowicki

Technician/Crew Lead

2021



Courtney Lewis

Technician/Crew Lead

2024



Clay Goetsch

Tech./Asst. Crew Lead

2022



Zoe Ahrens

Technician Assistant

2023



Alex Withnall

Technician Assistant

2023

Research Associate



Nathan Tomczyk

Research Associate

2023

GIS Program



Patti Dappen

Program Manager & Admin.

2007



Katie Withnall

Specialist & Data Manager

2012



Dana Heusinkveld

Research Specialist

2022



Elizabeth Becker

Technician

2023

NMFWR Mission Statement

The NMFWR works to reduce catastrophic wildfires and restore resilient, fire- and climate-adapted ecosystems. We collaborate with partners and engage communities to bridge scientific and local knowledge and build capacity in landscape-scale adaptive management.

NMFWR Vision Statement

The NMFWR envisions a fire- and climate-adapted New Mexico that prioritizes cross-boundary collaboration for healthier human and ecological communities, sustainable economies, and social justice.

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List of Acronyms

BIA = Bureau of Indian Affairs	NICRA = Negotiated Indirect Cost Rate Agreement
BIL = Bipartisan Infrastructure Law	NIFC = National Interagency Fire Center
BLM = Bureau of Land Management	NLGCA = Non-Land-Grant Colleges of Agriculture
CAMINOS = Cultivating Access to Manifest Intentional Outcomes in STEM	NMED = New Mexico Environment Department
CDC = Centers for Disease Control & Prevention	NMFIA = New Mexico Forest Industry Association
CEUs = Continuing Education Units	NMFWRI = New Mexico Forest & Watershed Restoration Institute
CFRI = Colorado Forest Restoration Institute	NM MESA = New Mexico Mathematics, Engineering & Science Achievement
CFLRP = Collaborative Forest Landscape Restoration Program	NMSFD = New Mexico State Forestry Division
CFRP = Collaborative Forest Restoration Program	NMSU = New Mexico State University
CREST = Centers of Research Excellence in Science & Technology	NOAA = National Oceanic & Atmospheric Administration
CSU = Colorado State University	NPS = National Park Service
DGF = Dept. of Game and Fish	NRCS = Natural Resources Conservation Service
EDI = Ecological Data Initiative	NRM = Natural Resource Management
EMNRD = Energy, Minerals & Natural Resources Dept.	NSF = National Science Foundation
ENIPC = Eight Northern Indian Pueblos Council	OSE = Office of the State Engineer
ERI = Ecological Restoration Institute	PPE = Personal Protective Equipment
FAP = Forest Action Plan	P-J = Piñon-Juniper
FEMA = Federal Emergency Management Agency	RC&D = Resource Conservation & Development Council
FORT = Forest Restoration Triangle	RGWF = Rio Grande Water Fund
F&WHCG = Forest & Watershed Health Coordinating Group	SAF = Society of American Foresters
FWS = Fish & Wildlife Service	SFE = Summer Field Experience
FY = Fiscal Year	SLO = State Land Office
GIS = Geographic Information Systems	STEM = Science, Technology, Engineering & Mathematics
GPS = Global Positioning System	STEAMM = Science, Technology, Engineering, Arts, Mathematics & Music
GRGWA = Greater Rio Grande Watershed Alliance	SWCD = Soil & Water Conservation District
GSFFC = Greater Santa Fe Fireshed Coalition	SWCSN = Southwest Collaboratives Support Network
HSI = Hispanic Serving Institution	SWERI = Southwest Ecological Restoration Institutes
HPCC = Hermit's Peak-Calf Canyon Wildfire	SWERI Act = Southwest Forest Health & Wildfire Prevention Act of 2004
HPGA = High Plains Grasslands Alliance	TEK = Traditional Ecological Knowledge
HU = Highlands University	TNC = The Nature Conservancy
IC = Incident Command	UNM = University of New Mexico
IIJA = Infrastructure Investment & Jobs Act	USDA = United States Dept. of Agriculture
ITC = Intertribal Timber Council	USDOI = United States Dept. of the Interior
LANL = Los Alamos National Laboratory	USFS = United States Forest Service
LCC = Luna Community College	VISTA = Volunteers in Service to America
LIFT = Leadership in Forestry Training	WCCN = Western Collaborative Conservation Network
MISD = Mora Independent School District	WRTC = Wildfire Resiliency Training Center
NAFWS = Native American Fish & Wildlife Society	
NAU = Northern Arizona University	
NFF = National Forest Foundation	
NGO = Non-Governmental Organization	

New Mexico Forest & Watershed Restoration Institute Summary Federal Work Plan, Fiscal Year 2024

Introduction

The New Mexico Forest and Watershed Restoration Institute (NMFWRI)¹ is a federal-state partnership, with a diverse staff that works to promote adaptive management practices that encourage healthy forests, and to support technologies and land management practices that reduce the risk of high-intensity and catastrophic wildfires in the Southwestern United States. The NMFWRI is based at Highlands University (HU)² in Las Vegas, NM. NMFWRI staff with expertise in geospatial information systems, ecological monitoring, outreach and education, workforce development, and collaboration work alongside partnering organizations and affected entities around New Mexico and the Southwest to build capacity and develop projects that lead to healthier and more resilient ecosystems and communities.

The NMFWRI is one of three Southwest Ecological Restoration Institutes (SWERI) authorized by the Southwest Forest Health and Wildfire Prevention Act of 2004 (SWERI Act).³ The NMFWRI collaborates with our sister institutes, the Ecological Restoration Institute (ERI)⁴ located at Northern Arizona University (NAU) and Colorado Forest Restoration Institute (CFRI)⁵ located at Colorado State University (CSU). In addition to the federal funding to support this work plan, the NMFWRI also receives funding from the New Mexico State Legislature, external contracts, and in-kind support from HU.

NMFWRI Programs, Positions and Staff

NMFWRI staff are organized into three programmatic areas: Administration, Coordination and Organizational Development; Technical and Applied Science Programs; and Civic and Community Action Programs. The NMFWRI staff consists of the following positions:

Administration, Coordination and Organizational Development

- Administration
 - NMFWRI Director, Dr. Alan Barton
 - Deputy Director, Gilbert “Buddy” Rivera
 - Budget and Finance Manager, Kristine Bellmore
 - Administrative Coordinator, Marla Martinez
- Coordination
 - Public Information Specialist, Staci Matlock
 - Education and Outreach Assistant, Raymundo Melendez
 - Student Workers
- Research Associates
 - Civic & Community Action, Dr. Michael Roberts
 - Technical and Applied Science, Dr. Nathan Tomczyk

Technical and Applied Science Programs

- Geospatial Information Systems (GIS) Program
 - GIS Program Manager and Administrator, Patti Dappen
 - GIS Specialist and Data Manager, Katie Withnall
 - GIS Research Specialist, Dana Heusinkveld
 - GIS Technician, Elizabeth Becker

¹ New Mexico Forest & Watershed Restoration Institute; See <https://nmfwri.org/>.

² New Mexico Highlands University; See <https://www.nmhu.edu/>.

³ Southwest Forest Health and Wildfire Prevention Act of 2004, Pub. L. No. 108-317, 118 Stat. 1204 (Oct. 5, 2004), codified as amended at 16 U.S.C. §§ 6701 to 6707 (2022).

⁴ Ecological Restoration Institute; See <https://eri.nau.edu/>.

⁵ Colorado Forest Restoration Institute, See <https://cfri.colostate.edu/>.

- Monitoring Program
 - Monitoring Program Manager, Kathryn Mahan
 - Assistant Program Manager/Crew Logistic Support, Carmen Melendez
 - Data Manager and Analyst, Corey Beinhart
 - Ecological Monitoring Specialist, Emily Yanayon
 - Monitoring Technician/Crew Lead, Alex Makowicki, Courtney Lewis
 - Monitoring Technician/Assistant Crew Lead, Clay Goetsch
 - Monitoring Technician Assistants, Zoe Ahrens, Alex Withnall
 - Student Workers, including Summer Field Crew

Civic and Community Action Programs

- Collaboration Program
 - Collaboration Program Manager, Crystal Medina
 - Collaboration Technician, Alejandro Collins
 - Collaboration Specialist (VISTA), Eleanor Ludwig
- Conservation Science Center (CSC) Program
 - Conservation and Restoration Education Program Manager, Shantini Ramakrishnan
 - Assistant Program Manager, Faith Purvey

NMFWRI Statutory Purposes and Duties

The SWERI Act defines the general purposes and conditions of the SWERI:

- (1) To promote the use of adaptive ecosystem management;
- (2) To reduce the risk of high-intensity wildfires;
- (3) To restore the health of forest and woodland ecosystems in the interior West;
- (4) To promote the use of collaborative processes;
- (5) To prepare an Annual Work Plan that ensures the proposed work of the Institute serves the informational needs of affected entities

The specific duties of the three Institutes as defined in the SWERI Act⁶ are:

- (1) Develop, conduct research on, transfer, promote, and monitor restoration-based hazardous fuel reduction treatments to reduce the risk of severe wildfires and improve the health of dry forest and woodland ecosystems in the interior West;
- (2) Synthesize and adapt scientific findings from conventional research to implement restoration-based hazardous fuel reduction treatments on a landscape scale using an adaptive management framework;
- (3) Translate for and transfer to affected entities any scientific and interdisciplinary knowledge about restoration-based hazardous fuel reduction treatments;
- (4) Assist affected entities with the design of adaptive management approaches (including monitoring) for the implementation of restoration-based hazardous fuel reduction treatments; and
- (5) Provide peer-reviewed annual reports.

Project Formulation

The projects and deliverables in the NMFWRI's FY24 work plan respond to needs identified from various sources, including the U.S. Forest Service (USFS) and other federal agencies, including the Fish and Wildlife Service, the Bureau of Land Management, the Natural Resources Conservation Service, the Bureau of Indian Affairs, and the National Park Service; the New Mexico State Forestry Division (NMSFD) and other state agencies, including the Department of Game and Fish, the State Land Office and the N.M. Environment Department; Tribal natural resource agencies; Offices of municipal, county, state and federal elected officials; Soil and water conservation districts and resource conservation and

⁶ SWERI Act § 5(c), *op. cit.*, footnote 3.

development councils; Non-governmental organizations; academic institutions; local forestry collaboratives and watershed groups; individual stakeholders; the Forest Restoration Triangle (FORT) Board;⁷ The leadership and staffs at CFRI and ERI.

This NMFWR FY24 Work Plan continues themes and specific projects initiated over the last several years in GIS, monitoring, collaboration, and outreach. In addition, this plan incorporates new themes and projects, reflecting the growth that NMFWR has undergone over the past year in staffing and capacity.

The administration and staff at the NMFWR and HU and our partners throughout New Mexico and the West are thankful for the annual funding provided by Congress through the USFS. We are proud to serve the United States and New Mexico and are excited to continue our partnerships and projects, and to scale up our work and accomplishments in FY24.

Summary of Programmatic Themes for FY 2024

■ **Theme 1 – Community Engagement, Science Communication, and Restoration Education:** The NMFWR's Conservation Science Center and Education and Outreach staff increase awareness and understanding of ecological processes within forested ecosystems and watersheds throughout New Mexico and the related impacts of wildfire, including managed wildfires. Through collaborative work, projects aim to build capacity of community stakeholders and remove barriers to adaptive management to land managers. Project focus areas include: Tribal outreach, K-16 education, coordination and implementation of technical trainings, development of materials and handbooks for supported learning of up-to-date science; and support of federal-state shared stewardship.

■ **Theme 2 – Geospatial Analysis and Support:** The NMFWR GIS team represents an important center of restoration-based GIS, remote sensing, and GPS expertise in northern New Mexico, offering technological solutions to restoration-based issues while strengthening connections to affected entities. Projects include GIS support to collaborative groups, geospatial technology training for land managers and natural resource professionals, and continued development and maintenance of the New Mexico Fire Viewer.⁸ The NMFWR's New Mexico Vegetation Treatment Geodatabase⁹ paved the way a nationwide wildfire and fuels treatment database and viewer,¹⁰ made possible by the Infrastructure Investment and Jobs Act of 2021. NMFWR GIS experts also use remote sensing to monitor and visualize forests in New Mexico. Technologies such as drones and 360-degree cameras offer a unique perspective to capture and assess forest conditions and adaptive management applications.

■ **Theme 3 – Monitoring Ecosystem Response and Reducing Barriers to Adaptive Management:** The NMFWR's Monitoring team collects and analyzes data on ecosystem response to restoration, providing a scientific basis for restoration treatments and adaptive management practices. Monitoring staff train partners and affected entities in monitoring practices, and each summer the Monitoring Program prepares New Mexico's future forestry work force by employing student interns and offering them training and valuable practical experience in forest restoration. The NMFWR also maintains a growing archive of monitoring data collected in New Mexico as a valuable resource for the state.

■ **Theme 4 – Collaboration and Partnerships:** The NMFWR's Collaboration team advances collaborative conservation by promoting and coordinating partnerships, developing collaborative capacity in rural communities, creating and facilitating networks of collaborative organizations, improving communications among collaborative groups and the public, and supporting administrative needs of

⁷ FORT is an alliance between the NMFWR, the HU Forestry Department, and the John T. Harrington Forestry Research Center in Mora, NM, operated by New Mexico State University (NMSU). These three entities share an advisory board that meets periodically to review the plans and projects of alliance members.

⁸ See <https://www.nmfireviewer.org>.

⁹ See <https://www.vegetationtreatments.org>.

¹⁰ See <https://www.reshapewildfire.org>.

volunteer groups. The Collaboration Program employs AmeriCorps-VISTA volunteers who work closely with community-based collaborative groups on projects that create greater economic opportunities.

■ **Theme 5 – Communication and Public Information:** The NMFWRI's Public Information staff craft and disseminate strategic and effective multimedia communications to inform and engage the public and partners in the Institute's work. The Public Information Specialist develops videos, audio, story maps, briefing papers, slideshows, posters, and articles that describe and highlight NMFWRI projects, and communicates regularly with media outlets, partners and affected entities to share knowledge and information on adaptive management and forest restoration. The Public Information Specialist manages and promotes public events such as resource fairs and workshops. The Public Information Specialist connects NMFWRI staff and promotes NMFWRI projects to print, broadcast and online reporters. The NMFWRI also supports effective internal communication between NMFWRI and SWERI staff, and with colleagues at HU.

■ **Theme 6 – Forest Operations, Economics and Utilization:** NMFWRI staff support effective forest operations and a sustainable, restorative and regenerative economy, and promotes an effective wood utilization industry as an agent of forest restoration. Operations, Economics and Utilization seeks to enhance business capacity, reduce barriers to trade, develop uses for small diameter timber, and plan and implement outreach on forest restoration protocols and treatment effectiveness. Forest Operations also includes developing and promoting forest restoration protocols, and studying treatment effectiveness and the effects of managed and prescribed fire.

■ **Theme 7 – Research Coordination and Communication:** The NMFWRI's Research Associates increase the Institute's capacity at translating and communicating scientific and traditional knowledge to a wide range of affected entities. Research associates conduct research that supports the work of all NMFWRI programs, and collaborate with staff to develop research and policy briefs, white papers, and scientific manuscripts rooted in the NMFWRI's projects.

■ **Theme 8 – Professional and Organizational Development:** The NMFWRI supports professional development opportunities for staff members to increase capacity and maintain a healthy and productive workplace. Organizational development includes shared leadership, regular staff meetings, occasional staff field trips and retreats, and inter-SWERI collaborations, workshops and annual summits.

Cross-Cutting Themes

In addition to our programmatic themes, which guide our project development and implementation, our Program of Work also draws on cross-cutting themes that tie together several of the NMFWRI's programs and projects. These include Post-Fire Recovery and Management, Integrating Scientific and Traditional Knowledge, and Community and Economic Development.

Theme 1: Community Engagement, Science Communication and Restoration Education

Budget: \$361,884

Purpose: Theme 1 projects share holistic approaches to natural resources management, workforce development, technical training, partnership cultivation, leadership growth, and career exploration.

Staff: Theme 1 projects are primarily staffed through the Conservation Science Center Program, Education and Outreach Coordination, and the Research Associate for Civic and Community Action.

Outcomes: Successful implementation of Theme 1 leads to:

- Meaningful engagement of K-12 youth in STEM and increased understanding of New Mexico's forest and woodland ecosystems through practical instruction and field experiences

- Increased workforce capacity for post-graduates in the fields of forestry, ecological restoration, fire ecology, and natural resource management, through interventions that increase understanding and accessibility of STEM disciplines and careers
- Community members demonstrate greater knowledge and understanding of natural resource issues and engage more actively in their communities, resulting in fire-adapted communities and increased community capacity in post-fire recovery

Theme 1. Community Engagement, Science Communication and Restoration Education	
FY24 Projects	Audiences/Outcomes/Funding
1.1 Wood for Life/Northern New Mexico Fuel Wood Working Group	<u>Audiences:</u> Tribal communities; private landowners; Northern NM communities <u>Outcomes:</u> Supporting transition to project 4.4, Supporting local economies through collaboration <u>Funding Sources:</u> Federal & State appropriations
1.2 Landowner Engagement	<u>Audiences:</u> Private landowners <u>Outcomes:</u> Increased participation in landowner-led and community-based organizations; Improved capacity to leverage relationships to facilitate coordination on working lands; Support for outreach efforts for project 4.5 in engaging landowners within the Claunh Pinto SWCD <u>Funding Sources:</u> Federal & State appropriations; WRTC; Quivira Coalition; HPGA; Claunh Pinto SWCD; other state agencies, NRCS & SWCDs
1.3 Outreach on Monitoring & Forest Restoration Protocols	<u>Audiences:</u> Public land managers; NGOs; NMSFD; Private landowners; Firewood dealers; NRCS; Sub-contractors; General public <u>Outcomes:</u> Continued implementation of desired conditions in P-J, ponderosa pine and mixed conifer; Increased collaboration with forest industry and natural resource employers in facilitating standards for protocols training; Continued support on project 3.2 in identifying needs and opportunities related to statewide ecological monitoring as part of the NMSFD's FAP <u>Funding Sources:</u> Federal & State appropriations; WRTC
1.4 Forest Action Plan & Shared Stewardship	<u>Audiences:</u> NMSFD; USFS; Regional interests <u>Outcomes:</u> Coordination in federal-state-private partnerships <u>Funding Sources:</u> Federal & State appropriations; Grants
1.5 Knowledge Transmission: Publications, Guides, Manuals	<u>Audiences:</u> Public land managers; NGOs; NMSFD; Private landowners; General public <u>Outcomes:</u> Increased understanding of post-fire impacts and mitigation methods; Improved communication and sharing of knowledge to diverse audiences on topics related to forest restoration, post-fire landscapes, and monitoring protocols; Library of print, audio and video materials to be housed on the NMFWR website, HPCC Hub site, NMFWR YouTube channel, NMFWR social media sites, other relevant locations <u>Funding Sources:</u> Federal & State appropriations; NRCS; WRTC; Grants
1.6 K-12 Education & Outreach	<u>Audiences:</u> K-12 students; Formal and informal educators; Outdoor learning providers; Regional higher education institutions <u>Outcomes:</u> Increased public support for forest and watershed restoration; Increased capacity for outdoor educators, pre-service and in-service teachers

	to serve youth communities; Increased college readiness and preparedness; Recruitment of youth into conservation careers <u>Funding Sources:</u> Federal & State appropriations; USDA-HSI LIFT grant; LANL Foundation; Albuquerque Community Foundation; Environmental Education NM; NSF CREST grant; Private donors; Grants
1.7 Tribal Education & Capacity Building	<u>Audiences:</u> Tribal nations; Partnering agencies <u>Outcomes:</u> Enhanced support to Tribal communities for improved local management of tribal lands on and off reservation; Recruitment of tribal youth into conservation or STEM careers; Increased opportunities for tribal professionals to share lessons learned and practices with other land managers in pre- and post-fire landscapes <u>Funding Sources:</u> Federal & State appropriations, Private donors; Grants
1.8 Undergraduate & Graduate Student Support	<u>Audiences:</u> HU undergraduate & graduate students; HU faculty; Community college partners; Regional higher education institutions <u>Outcomes:</u> Increased opportunities to introduce students to future STEM employers/mentors, explore STEM careers in forestry, ecology, biology, and related fields, and build related skill sets; Increased coordination between STEM programs at HU; Increased life skills development for workforce persistence; Increased cultivation of high-impact practices among higher-ed practitioners <u>Funding Sources:</u> Federal & State appropriations; USDA-HSI LIFT grant; USDA-NLGCA grant; Alliance for Minority Participation; NSF Somos STEM grant; NSF CAMINOS grant; NSF CREST grant; Private donors; Grants
1.9 Technical Trainings & Workforce Development	<u>Audiences:</u> Public land managers; NGOs; NMSFD; Private landowners; Firewood dealers; NRCS; Sub-contractors; General public <u>Outcomes:</u> Increased involvement with partnering agencies to address community and partner needs; Improved skills to address challenges associated with forest restoration, monitoring, and post-fire restoration; Framework for pathways that mitigate workforce shortages in natural resources and build capacity through trainings and certifications; Increased responsiveness to post-fire recovery jobs and skillsets <u>Funding Sources:</u> Federal & State appropriations; WRTC; Grants

Theme 2: Geospatial Analysis and Support

Budget: \$209,972

Purpose: Theme 2 projects offer technological solutions to restoration-based questions.

Staff: Theme 2 projects are primarily carried out by GIS Program staff and the Research Associate for Technology and Applied Science.

Outcomes: Successful implementation of Theme 2 leads to:

- NMFWRRI stakeholders able to make more informed decisions in planning and fire suppression or management by using effective decision-support tools such as the New Mexico Vegetation Treatment Geodatabase, the NM Fire Viewer, and the HPCC HUB site
- Increased understanding and informed use of GIS and technology applications in natural resource management and adaptive management

- Web-based maps and forest visualization tools to encourage landowners to embrace forest restoration activities

Theme 2. Geospatial Analysis and Support	
FY24 Projects	Audiences/Outcomes/Funding
2.1 New Mexico Fire Viewer	<u>Audiences:</u> NMFWRI affected entities; Federal, State & Tribal agencies; Landowners & interested public <u>Outcomes:</u> Continued development and updating to the NM Fire Viewer; Provide service and outreach to land managers and interested parties in the use of our web-based maps identifying current and historical fire perimeters <u>Funding Sources:</u> Federal & State appropriations
2.2 HPCC Post-Fire Resource ArcGIS Hub	<u>Audiences:</u> NMFWRI affected entities; Federal, State & Tribal agencies; NGOs; Landowners & interested public <u>Outcomes:</u> Updates to the HPCC Hub site including such things as: interactive maps, survey forms, links, videos, photo collection and viewer, as well as a screening tool used to produce reports and maps showing relevant data; Develop templates so that this model can potentially be used on other fires across the state <u>Funding Sources:</u> Federal & State appropriations, FEMA grant
2.3 New Mexico Vegetation Treatment GeoDatabase	<u>Audiences:</u> USFS & other land managers; Tribal agencies; NGOs; Collaboratives & watershed associations; Landowners & interested public <u>Outcomes:</u> Working collaboratively with and receiving data from agencies across the state; Developing user-friendly GIS tools and providing training and outreach <u>Funding Sources:</u> Federal & State appropriations
2.4 HPCC Post Fire GIS Applications and Outreach	<u>Audiences:</u> USFS, NMSFD & other land managers; NGOs; Collaboratives & watershed associations; Landowners & interested public <u>Outcomes:</u> Develop geospatial tools to monitor vegetation change over time within the HPCC burn scar; Provide instruction on using newly developed post-fire datasets, including from new LiDAR data collection; Provide outreach regarding how these tools can be used at small and large scales <u>Funding Sources:</u> Federal & State appropriations
2.5 Develop Geospatial Tools for Ecological Monitoring and Assessments	<u>Audiences:</u> NMFWRI Monitoring & CSC Program staff; NMSFD & other agency personnel; Collaboratives & watershed associations; Landowners <u>Outcomes:</u> Identify and design geospatial applications; Provide outreach and training to land managers and interested parties in the use of field-based tools; Provide training and webinars in the use of web-based applications to monitor long term vegetation trends <u>Funding Sources:</u> Federal & State appropriations

2.6 Forest Visualization of Desired Conditions	<u>Audiences:</u> NMSFD & other land managers & agency personnel; NGOs; Ranchers and other private landowners <u>Outcomes:</u> Ability to showcase desired conditions to a much larger stakeholder group online with no in-person contact or travel required <u>Funding Sources:</u> Federal & State appropriations
2.7 Geospatial Technology Training for Landowners, Natural Resource Professionals, Tribal Agencies & Collaborative Groups	<u>Audiences:</u> NMFWRRI affected entities; NMSFD & other agency personnel; Tribal agencies, individuals, and students; Place-based collaborative groups & watershed associations <u>Outcomes:</u> Improved application of geospatial technology to coordinate and implement conservation and restoration programs and projects; Develop new training materials on geospatial data creation, management, and sharing techniques that will allow partners in collaborative groups to work together more easily; Provide outreach to Tribal agencies, Native individuals, & Tribal students in the use of GPS/GIS/Drone technologies for natural resource management applications; Attend and sponsor the Tribal GIS Conference <u>Funding Sources:</u> Federal & State appropriations

Theme 3: Monitoring Ecosystem Response and Reducing Barriers to Adaptive Management

Budget: \$658,304

Purpose: Theme 3 projects produce data that provide the scientific basis for restoration treatments and are critical for adaptive management.

Staff: Theme 3 projects are primarily carried out by the Monitoring Program staff, student field crews, consultants, and the Research Associate for Technology and Applied Science.

Outcomes: Successful implementation of Theme 3 leads to:

- A unique and high-quality long-term dataset to better understand fire interaction with treatments, treatment longevity, treatment effectiveness and response to disturbance, and how to produce and maintain resilient, fire adapted ecological and human communities
- A strong and competent workforce in natural resources, as college graduates in forestry and conservation management with training and practical experience in field methods can transfer these skills directly to work in agencies and organizations
- Databases with quality data to use in planning, research, and adaptive management decision-making
- Trainings to raise awareness of the importance of monitoring data, and capacity to develop, implement and learn from monitoring strategies, including strategies that address needs identified in the Forest Action Plan monitoring survey
- Increased knowledge of restoration practices and challenges among NMFWRRI staff and affected entities

Theme 3. Monitoring Ecosystem Response and Reducing Barriers to Adaptive Management	
FY24 Projects	Audiences/Outcomes/Funding
3.1 Monitoring ecosystem response to restoration treatments and disturbances	<u>Audiences:</u> USFS, NMSLO, NMSFD & other land managers; NGOs; Private landowners; Students <u>Outcomes:</u> High-quality ecological monitoring data on treatment effectiveness and response to disturbance; Trained students and workforce development; Skilled professional crew well-informed of on-the-ground conditions <u>Funding Sources:</u> Federal & State appropriations; USFS RMRS grant; GRGWA; River Stewards Network
3.2 Identification of Statewide & Regional Needs & Opportunities	<u>Audiences:</u> USFS, NMSLO, NMSFD & other land managers; NGOs; Private landowners; F&WHCG <u>Outcomes:</u> Statewide collection and use of consistent, robust monitoring data for adaptive management decision-making; Draft strategies to address needs identified in the forest action plan monitoring survey <u>Funding Sources:</u> Federal & State appropriations
3.3 Capacity-building & technical support	<u>Audiences:</u> USFS, NMSLO, NMSFD & other land managers; Tribal agencies; NGOs working in monitoring & adaptive management <u>Outcomes:</u> Coordination across programs and partners for trainings and awareness of the importance of monitoring data; Capacity to develop, implement and learn from monitoring strategies <u>Funding Sources:</u> Federal & State appropriations; GRGWA; River Stewards; WRTC
3.4 NMFWRI Monitoring Data Repository	<u>Audiences:</u> USFS, NMSLO, NMSFD & other land managers; Tribal agencies; NGOs working in monitoring & adaptive management <u>Outcomes:</u> Use of our monitoring data, tools, and data synthesis for adaptive management decision-making <u>Funding Sources:</u> Federal & State appropriations; GRGWA; River Stewards; WRTC
3.5 Share & Build Capacity in the Practice of Restoration Treatments	<u>Audiences:</u> NMFWRI staff; Land managers; Congress <u>Outcomes:</u> Increase knowledge of restoration practices and challenges among NMFWRI staff and affected entities <u>Funding Sources:</u> Federal & State appropriations; River Stewards; WRTC
3.6 Lessons Learned from Two Decades of NMFWRI Ecological Monitoring	<u>Audiences:</u> NMFWRI staff; Land managers; Private landowners; NGOs; Partners and affected entities <u>Outcomes:</u> Improved and more efficient monitoring practices <u>Funding Sources:</u> Federal & State appropriations

Theme 4: Collaboration and Partnerships

Budget: \$249,493

Purpose: Theme 4 projects serve place- and project-based collaborative groups, watershed associations, and networks as a resource to build and expand collaborative and organizational capacity.

Staff: Theme 4 projects are carried out by Collaboration Program staff, the NMFWR Director, and the Research Associate for Civic and Community Action.

Outcomes: Successful implementation of Theme 4 leads to:

- Increased capacity to build relationships and partnerships among affected entities focused on a common landscape
- Improved local and regional capacity in the understanding of collaborative processes
- A wider range of tools, including increased use of technology, available to collaborative groups to improve collaborative capacity and increase opportunities for collaboration
- Capacity for collaborative leadership in conservation through community-engaged workshops and trainings

Theme 4: Collaboration and Partnerships	
FY24 Projects	Audiences/Outcomes/Funding
4.1 Statewide Operational Support to Collaborative Groups	<u>Audiences:</u> Collaborative groups & partnering organizations <u>Outcomes:</u> Improved local and regional capacity in the understanding of collaborative processes; Improved capacity for relationship building, facilitation and conflict resolution to accomplish group goals; Improved focus on new collaborative groups and organizations with greater social, environmental, and operational vulnerability <u>Funding Sources:</u> Federal & State appropriations; Claunch-Pinto SWCD
4.2 Regional Collaborative Networking and Initiatives	<u>Audiences:</u> Collaborative groups, networks & partnering organizations; Community residents and leaders <u>Outcomes:</u> Increased interaction among statewide and regional collaborative groups and networks; Better understanding, access, creation and utilization of resources and strategies to address the needs of collaborative groups and their local communities; Improved support, communication, coordination and leveraging of resources among stakeholders, private landowners and other partners to improve forest health <u>Funding Sources:</u> Federal & State appropriations
4.3 Collaborative Maps and Technological Applications	<u>Audiences:</u> Collaborative groups & partnering organizations, Funders & support entities; General public <u>Outcomes:</u> Roster and information hub (e.g., purposes and locations) of collaborative groups and support organizations; Increased ability for collaborative groups to share information and strategies with each other <u>Funding Sources:</u> Federal & State appropriations

4.4 Supporting Local Economies Through Collaboration	<u>Audiences:</u> Collaborative groups & partnering organizations, Community residents & leaders, Funding entities, Land management & regulatory agencies <u>Outcomes:</u> Strengthened and expanded community connections; Increased economic resources for communities in New Mexico; Better understanding of how to build capacity to increase local economic development; Greater support to local timber and other forest product industries for regenerative, restorative, and resilient economies, especially to benefit under-served populations (See also Project 1.1 Wood for Life/Northern New Mexico Fuel Wood Working Group) <u>Funding Sources:</u> Federal & State appropriations
4.5 Planning and Design of Events to Build Collaborative Capacity	<u>Audiences:</u> Collaborative groups & networks, Land management & regulatory agencies, Community residents & leaders <u>Outcomes:</u> Improved capacity for collaborative leadership in conservation through community-engaged workshops and trainings <u>Funding Sources:</u> Federal & State appropriations; Claunch-Pinto SWCD

Theme 5: Communications & Public Information

Budget: \$167,503

Purpose: Communications and Public Information staff craft strategic and effective multimedia communications and coordinate and promote public events to inform and engage the public in the NMFWRI's work.

Staff: Theme 5 is carried out by the Public Information Specialist, students and consultants.

Outcomes: Successful implementation of Theme 5 leads to:

- Increased awareness among partners and the public about the NMFWRI's purpose, programs and goals
- Increased participation by the public in efforts to build wildfire resilient communities, forests, and watersheds

Theme 5: Communications and Public Information	
FY24 Projects	Audiences/Outcomes/Funding
5.1 Expand library of communications products	<u>Audiences:</u> NMFWRI staff; Partnering agencies and organizations; General public <u>Outcomes:</u> A comprehensive and easy-to-use archive of NMFWRI multimedia products, research papers and information, with copies available online and in print <u>Funding Sources:</u> Federal & State appropriations
5.2 Build knowledge of the NMFWRI through public information	<u>Audiences:</u> General public; Partnering agencies <u>Outcomes:</u> Increased understanding of the NMFWRI's mission and goals; Increased engagement by the public in NMFWRI events, surveys, and workshops <u>Funding Sources:</u> Federal & State appropriations

5.3 Enhance inter-SWERI communications	<u>Audiences:</u> SWERI; Partnering organizations; Federal and state land management and regulatory agencies; General public <u>Outcomes:</u> Enhanced consistent communications between the SWERI; Increased understanding of the purpose and mission of the SWERI <u>Funding Sources:</u> Federal & State appropriations
5.4 Media support to NMFWRRI programs and partners	<u>Audiences:</u> NMFWRRI staff; Community groups; Partnering agencies; Lawmakers <u>Outcomes:</u> Produce printed materials and promote events, workshops, meetings, trainings, and grant opportunities in support of all NMFWRRI projects, including the WRTC at LCC, and collaborative work with NMFWRRI partnering organizations <u>Funding Sources:</u> Federal & State appropriations; USDA
5.5 Maintain and enhance the NMFWRRI's social media presence	<u>Audiences:</u> General public, partners, <u>Outcomes:</u> Maintain NMFWRRI Website and social media accounts <u>Funding Sources:</u> Federal & State appropriations

Theme 6: Forest Operations, Economics and Utilization

Budget: \$144,048

Purpose: Theme 6 addresses the NMFWRRI's support to New Mexico's forest industry, building capacity to process small diameter timber and develop markets and uses that advance restoration economies in the state and communities.

Staff: Currently unstaffed, and supported by contractors; The NMFWRRI will seek additional support from contractors and potentially a full-time staff member for this program in FY24.

Outcomes: Successful implementation of Theme 6 leads to:

- A better understanding of the barriers facing forest industry in New Mexico strategy to integrate utilization and processing of New Mexican timber to achieve economic and restoration objectives

Theme 6: Forest Operations, Economics and Utilization	
FY24 Projects	Audiences/Outcomes/Funding
6.1 Examination of the economic needs of industry and agencies	<u>Audiences:</u> NMFWRRI Director and staff; Forest industry and the New Mexico Forest Industry Association (NMFIA); Federal, State, Local and Tribal land management agencies including USFS and NMSFD <u>Outcomes:</u> White paper on business development opportunities among forest industry and operators in New Mexico; Development of a NMFWRRI program aimed at improving the capacity of local industry to utilize small diameter timber from New Mexico forests <u>Funding Sources:</u> Federal & State appropriations
6.2 Priority Landscapes mechanisms for forestry-based economic development	<u>Audiences:</u> Priority Landscape partners and affected entities <u>Outcomes:</u> Strategy for place-based forest industry and community economic development in CFLRP and Priority Landscape area communities <u>Funding Sources:</u> Federal & State appropriations

6.3 Sustainable forest operations & economic development program	<u>Audiences:</u> NMFWRI Director and staff, affected entities and partners <u>Outcomes:</u> Hiring a NMFWRI program manager in forest operations and economic/business development <u>Funding Sources:</u> Federal & State appropriations
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Theme 7: Research Coordination and Communication

Budget: \$221,178

Purpose: Theme 7 leads the NMFWRI's research, providing technical analysis of restoration and ecosystem management, and translating scientific knowledge into actionable community strategies.

Staff: Theme 7 staff includes two Research Associates, Dr. Michael Roberts and Dr. Nathan Tomczyk

Outcomes: Successful implementation of Theme 7 leads to:

- Quantifying the ecological impact of watershed and forest restoration
- Advancing understanding and practice of collective action in the arenas of fire management, fire mitigation, and postfire restoration with an emphasis on community-level needs and priorities

Theme 7. Research Coordination and Communication	
FY24 Projects	Audiences/Outcomes/Funding
7.1 New Mexico Vegetation Treatment Database Data Paper	<u>Audiences:</u> Scientific community. <u>Outcomes:</u> Create and publish a scientific article describing the NMFWRI's New Mexico Vegetation Treatment Database to increase awareness and usability in the scientific community <u>Funding Sources:</u> Federal & State appropriations
7.2 Quantifying the ecological impact of watershed/riparian restoration	<u>Audiences:</u> Scientific community; Federal & State agencies; Landowners & interested public <u>Outcomes:</u> Working with the NMFWRI Monitoring Program, quantify the ecological impacts of watershed and riparian restoration and communicate those findings to affected entities and the scientific community <u>Funding Sources:</u> Federal & State appropriations; Biophilia Foundation; New Mexico River Stewards
7.3 Quantifying the ecological impacts of forest restoration	<u>Audiences:</u> Collaborators at CFRI; Land managers; General public <u>Outcomes:</u> Working with NMFWRI staff and SWERI alliance partners, understand the ecological impacts of fuel reduction treatments, including projects conducted as part of the CFRP <u>Funding Sources:</u> Federal & State appropriations
7.4 Refining management of mixed conifer forests	<u>Audiences:</u> Scientific community; Collaborators at CFRI & HU Forestry Dept.; USFS Forest Inventory Analysis <u>Outcomes:</u> Facilitate the management of mixed conifer forests by categorizing the variety of forest types within mixed conifer forests <u>Funding Sources:</u> Federal & State appropriations

7.5 Assessing collaborative governance of the CFLRP program	<u>Audiences:</u> USFS Washington Office; SWERI alliance partners <u>Outcomes:</u> Contribute to the longitudinal assessment of the CFLRP program using a collaborative governance assessment tool developed by the SWERI; The long-term outcome is to provide feedback at the local, state, and federal level to inform the ongoing implementation of the CFLRP program <u>Funding Sources:</u> Federal & State appropriations
7.6 Shedding light on community-level wildfire mitigation and post-fire restoration	<u>Audiences:</u> USFS; NMSFD; NM Rural Water Association; Public Water Systems; New Mexico Acequia Association and local acequia groups; Land Grant communities; Climate Adaptation Science Centers; UNM; NMSU; HU; Landowners and interested public <u>Outcomes:</u> Facilitate the co-production of frameworks for community-engaged source water protection planning and community-level post-fire recovery; These frameworks may be shared as white papers and communicated at academic conferences, workshops, and town halls; A long-term outcome of this project is to build stronger community relationships in the Enchanted Circle Priority 1 Landscape, the communities impacted by the HPCC fire, and to create a network of community-engaged scholars and practitioners in New Mexico <u>Funding Sources:</u> Federal & State appropriations
7.7 Communicating Research Results	<u>Audiences:</u> Researchers, agencies, partners, affected entities <u>Outcomes:</u> Presentations, publications, white papers, research briefs <u>Funding Sources:</u> Federal & State appropriations

Theme 8: Professional and Organizational Development

Budget: \$187,618

Purpose: Theme 8 addresses the well-being and professional development of NMFWRI staff and of the organization itself.

Staff: The NMFWRI Administration is primarily responsible for implementing Theme 8.

Outcomes: Successful implementation of Theme 8 leads to:

- An increased ability for the NMFWRI to put into practice effective organizational and institutional functioning, and increased recognition of the NMFWRI as a key center of excellence in New Mexico and the Southwest
- NMFWRI staff members that are better prepared, more knowledgeable and better connected to other professionals in their fields by taking advantage of opportunities for professional development, including travel to professional conferences, and NMFWRI and SWERI retreats and workshops
- Increased means of communication and opportunities for cross-program collaboration among NMFWRI staff, resulting in stronger ties and coordination across NMFWRI programs and projects, better understanding of each of the NMFWRI programs, a strong staff esprit-de-corps, and staff retention
- Increased collaboration and communication with SWERI and FORT alliance partners

Theme 8. Professional and Organizational Development	
FY24 Projects	Audiences/Outcomes/Funding
8.1 Staff Professional Development	<u>Audiences:</u> NMFWRI staff <u>Outcomes:</u> Increased disciplinary knowledge and connections with other professionals; Presentations at professional conferences; Participation in 20 webinars and trainings <u>Funding Sources:</u> Federal & State appropriations
8.2 Organizational Development	<u>Audiences:</u> NMFWRI staff, partners & affected entities <u>Outcomes:</u> Increased coordination and organizational capacity; FY24 Work Plan and Budget; Monthly updates for partners & affected entities; Coordinating planning with partners & affected entities; 2024 Annual Report; NMFWRI Staff and SWERI retreats <u>Funding Sources:</u> Federal & State appropriations
8.3 Organizational Health and Well-Being	<u>Audiences:</u> NMFWRI staff <u>Outcomes:</u> Staff participation in educational field days and learning events; Staff represent the NMFWRI with clothing and items bearing the NMFWRI logo; Staff use safety equipment and take training to conduct their work safely; NMFWRI provides staff with tools and equipment for safe and healthy working environments <u>Funding Sources:</u> Federal & State appropriations
8.4 Inter-SWERI and FORT Coordination	<u>Audiences:</u> NMFWRI staff & institutional alliances <u>Outcomes:</u> Stronger relationships among SWERI staff and partnerships among SWERI programs; Regular NMFWRI participation in SWERI workshops, leadership meetings, coordination meetings, and planning; Co-produced materials and resources by SWERI staff; NMFWRI participation in FORT Board meetings; NMFWRI staff teaching courses/guest lectures in the HU Forestry Dept.; HU Forestry faculty collaborating with NMFWRI staff <u>Funding Sources:</u> Federal & State appropriations

NMFWRI Fiscal Year 2024 Summary Federal Budget

Item	Cost	Item	Cost
Salaries	\$1,002,674.96	Equipment	\$0.00
Fringe Benefits	\$377,785.70	Supplies	\$163,578.69
Student Wages	\$109,524.00	Travel	\$178,436.65
Consultants	\$168,000.00	Indirect @ 10%	\$200,000.00
		TOTAL	\$2,200,000.00

The overall budget includes four categories of personnel costs and three categories of operational costs. Personnel-related budget categories include salaries for regular, term and temporary full- and part-time NMFWRI staff, fringe benefits provided by HU to employees, student wages for HU and other students employed as interns, and temporary consultants hired for specific projects. Operational categories include equipment over \$5,000 in value, materials and supplies, and travel. The funder provides 10 percent of the total budget to HU for overhead costs.

Breaking down the budget by category, approximately 45% of the FY24 federal grant goes to salaries, 17% to fringe, 5% to student intern wages, 8% to consulting services, 7% to materials and supplies, 8% to travel, and 10% to HU overhead.