



# **Habitat Enhancement & Restoration**

**October 25, 2019**

**New Mexico State Game Commission Meeting**

**Farmington, NM**

# Non-Federal Habitat Restoration Funds

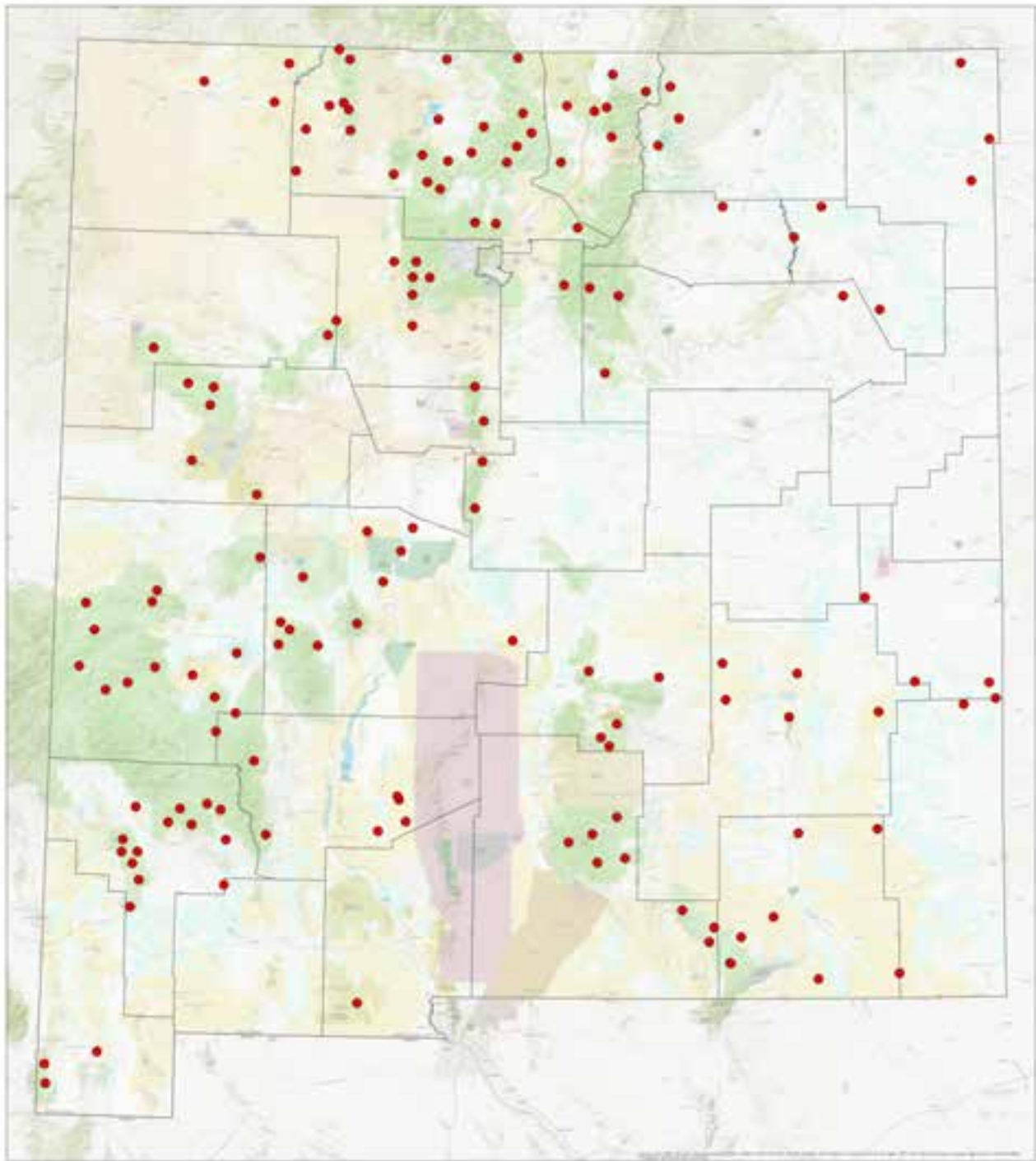
- **Habitat Management & Access Validation (HMAV) Fund**
  - Revenue from HMAV Stamp Sales
  - Restoration on Game Commission owned properties
- **Habitat Stamp Program (HSP) Fund**
  - Revenue from Habitat Stamp Sales
  - Restoration on US Forest Service and Bureau of Land Management properties
- **Big Game Habitat Enhancement (BGE) Fund**
  - Revenue from auction and raffle of special hunt authorizations
  - Big game habitat enhancement, conservation, and protection statewide
- **External Agency, NGO, and Private Funds**
  - NM State Forestry, NM Water Trust Board, National Fish & Wildlife Foundation
  - Coca Cola Company, NM Trout Unlimited

The background of the slide features three white cranes in flight against a clear blue sky. The cranes are captured in a dynamic pose, with their wings fully extended, showing the intricate structure of the feathers. They are flying from the lower left towards the upper right of the frame. The text is overlaid on this image.

# **Federal Wildlife & Sportfish Restoration Funds -- USFWS**

## **Pittman-Robertson, Dingell-Johnson, and State Wildlife Grant**

- 75% federal / 25% non-federal match
- Internal and/or external non-federal funds used as match
- Significantly Increases scope and scale of restoration efforts



*Wildlife Management Division*



## Riparian, Aquatic and Wetland Restoration on the Carson, Cibola and Santa Fe National Forests and Kiowa National Grasslands



### Background

The Carson, Cibola and Santa Fe National Forests in New Mexico occupy 4.7 million acres that range in elevation from 5,000 feet to more than 13,000 feet above sea level. Riparian areas occupy approximately 2 percent of these acres (not including historic riparian areas within the forests and grasslands); however, the majority of the biodiversity on the Forests are dependent on these areas.

Riparian areas are associated with a range of ecosystem services that are valued by humans and provide human welfare benefits, including recreation, grazing, and natural beauty (National Research Council 2002 and 2004; Covich et al. 2004; Giller et al. 2004). Riparian zones are among the most heterogeneous and diverse landscape elements, with habitats harboring the highest plant, bird, insect, reptile-amphibian, and mammal biodiversity of any terrestrial ecosystem. For example, in the Southwest it has been estimated that up to 70 percent of threatened and endangered vertebrate species are riparian obligates (species that require riparian habitat to complete some portion of their life cycle) (Johnson 1989). In the arid Southwest, riparian areas offer unique services that have long been recognized for the disproportionate benefits they provide relative to the small area they occupy on the landscape (Nauman and Décampis 1997).

Riparian areas in the Southwest have been impacted by numerous stressors, including dams, diversions, groundwater pumping, loss of keystone species, channelization, conversion to agricultural uses, urbanization, grazing, roads, recreational development and use, fires, mining, fuel wooding, logging, and invasive species. Many of these stressors result in altered flow regimes and less frequent connection between the stream and its floodplain. Between 30 and 50 percent of Southwest wetlands have been lost and converted (Mitch and Gosselink 1993) which has also resulted in species declines and increased

# Planning & Compliance

- A limiting factor to getting more restoration work completed is often compliance related activities and the lack of associated funding.

**Archeological Clearances for Landscape-Scale Prescribed Fire – All National Forests in New Mexico**



**Lesser Prairie Chicken Restoration Analysis  
BLM, NM State Land Office, NRCS, NMACD**



**Sacramento Mountains Forest Restoration Analysis  
Lincoln National Forest**



**Three-Forest Wetland Restoration Environmental Assessment  
Carson, Cibola, and Santa Fe National Forests**

# Forest & Woodland Restoration

- Fire is a key ecological process across most forest types in NM
- Thinning is often needed pre-RX fire
- Natural Range of Variability
- DGF supports thousands of acres annually

**Luera Mountains RX Burn  
Restoration -- 2019**

# Reduce the Risk of Catastrophic Wildfire







**Ute Park Wildfire – June 2018**  
**Colin Neblett WMA**



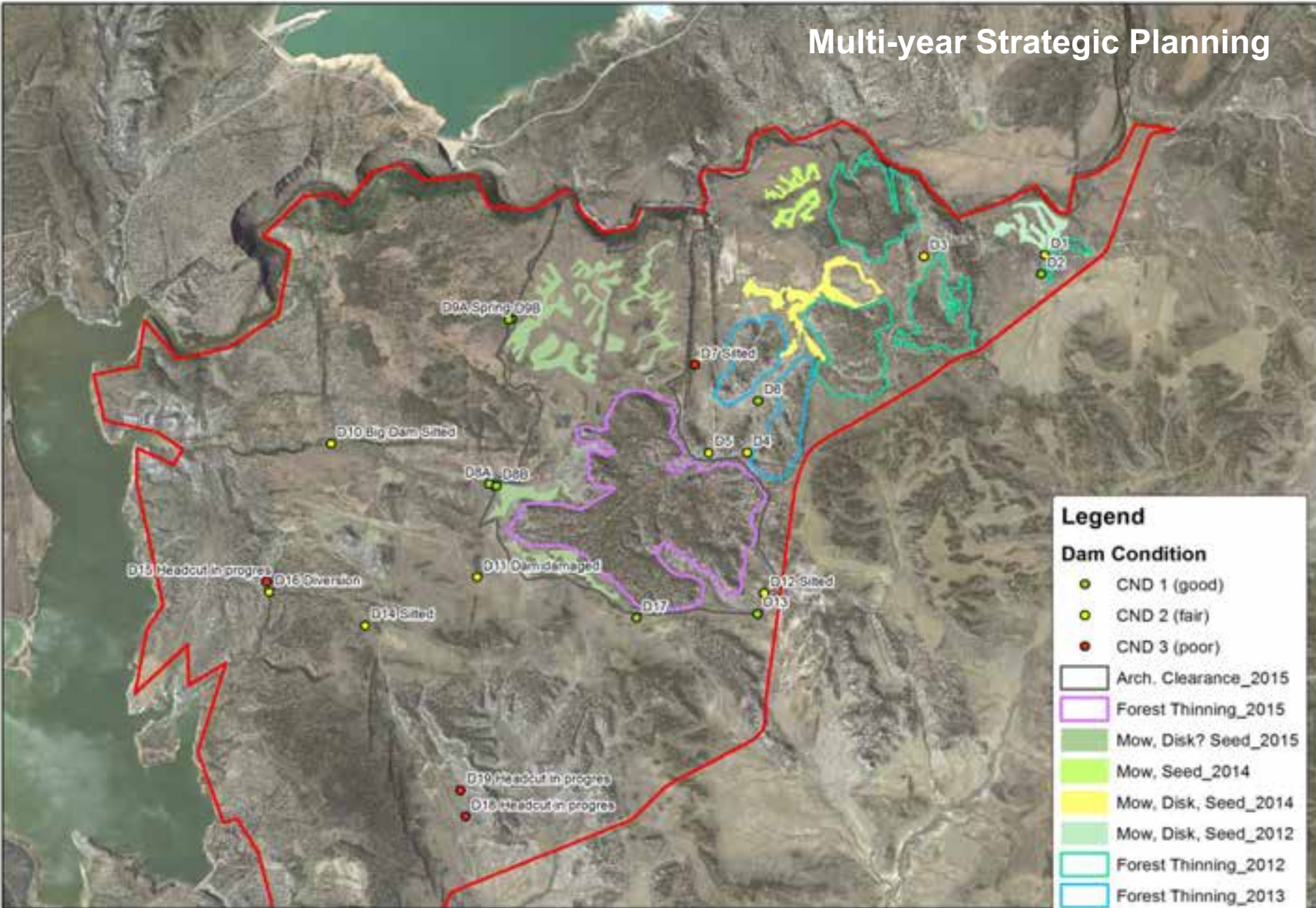
**Colin Neblett WMA Forest Thinning & Pile Burning**



**Rio Chama WMA Woodland & Forest Thinning**



# Multi-year Strategic Planning



### Legend

**Dam Condition**

- CND 1 (good)
- CND 2 (fair)
- CND 3 (poor)

▭ Arch. Clearance\_2015

▭ Forest Thinning\_2015

▭ Mow, Disk? Seed\_2015

▭ Mow, Seed\_2014

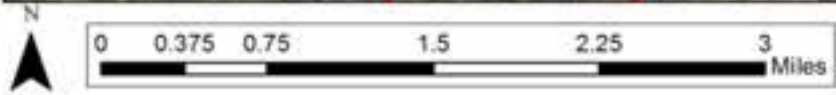
▭ Mow, Disk, Seed\_2014

▭ Mow, Disk, Seed\_2012

▭ Forest Thinning\_2012

▭ Forest Thinning\_2013

▭ NMDGFprops



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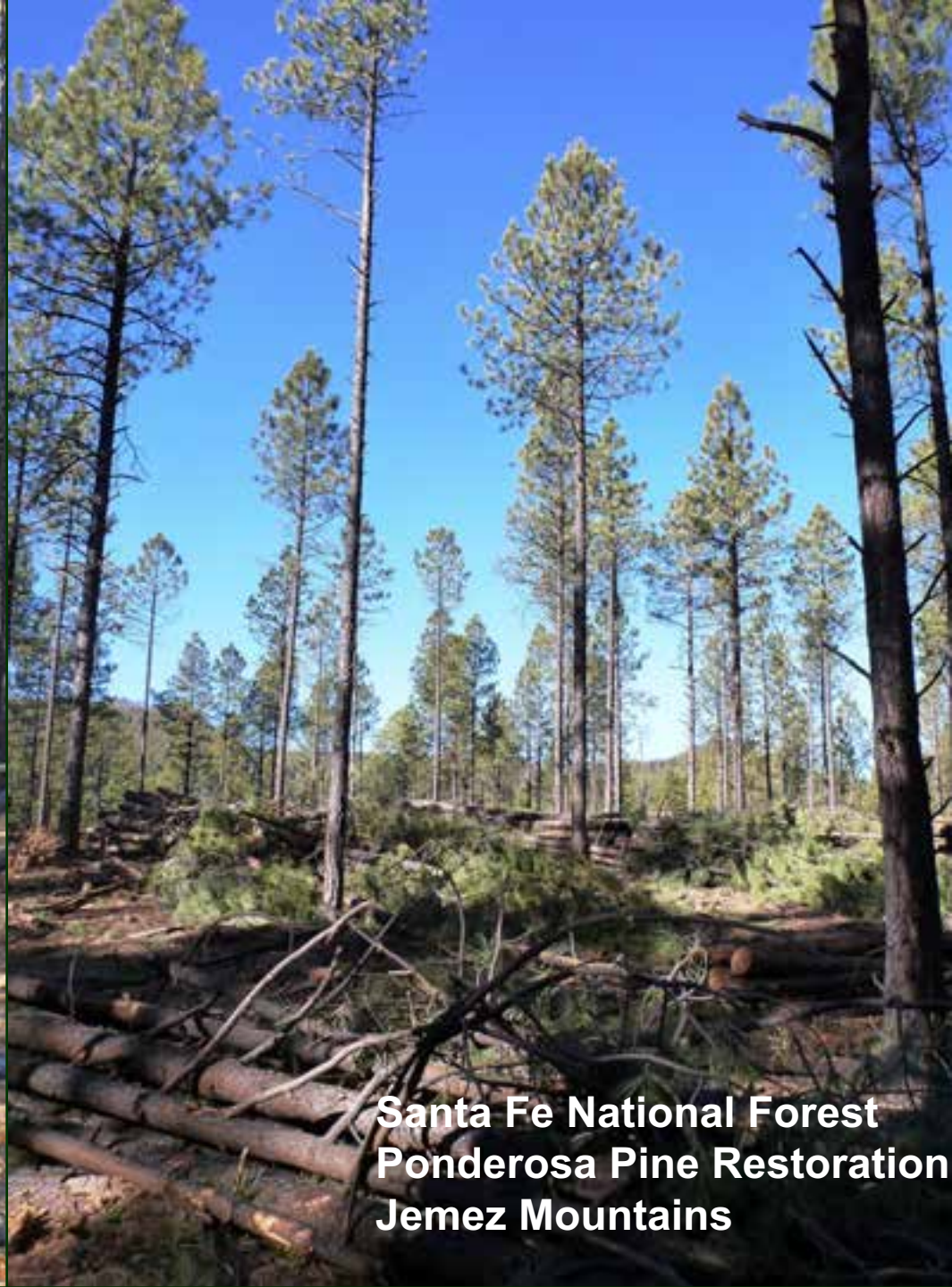


**Slaughter Mesa RX Fire  
Gila National Forest  
March 2015**





**Rio Tusas/San Antonio Landscape Area**  
Carson National Forest  
160,000 acre project area



**Santa Fe National Forest  
Ponderosa Pine Restoration  
Jemez Mountains**



# Wetland & Riparian Habitat Restoration

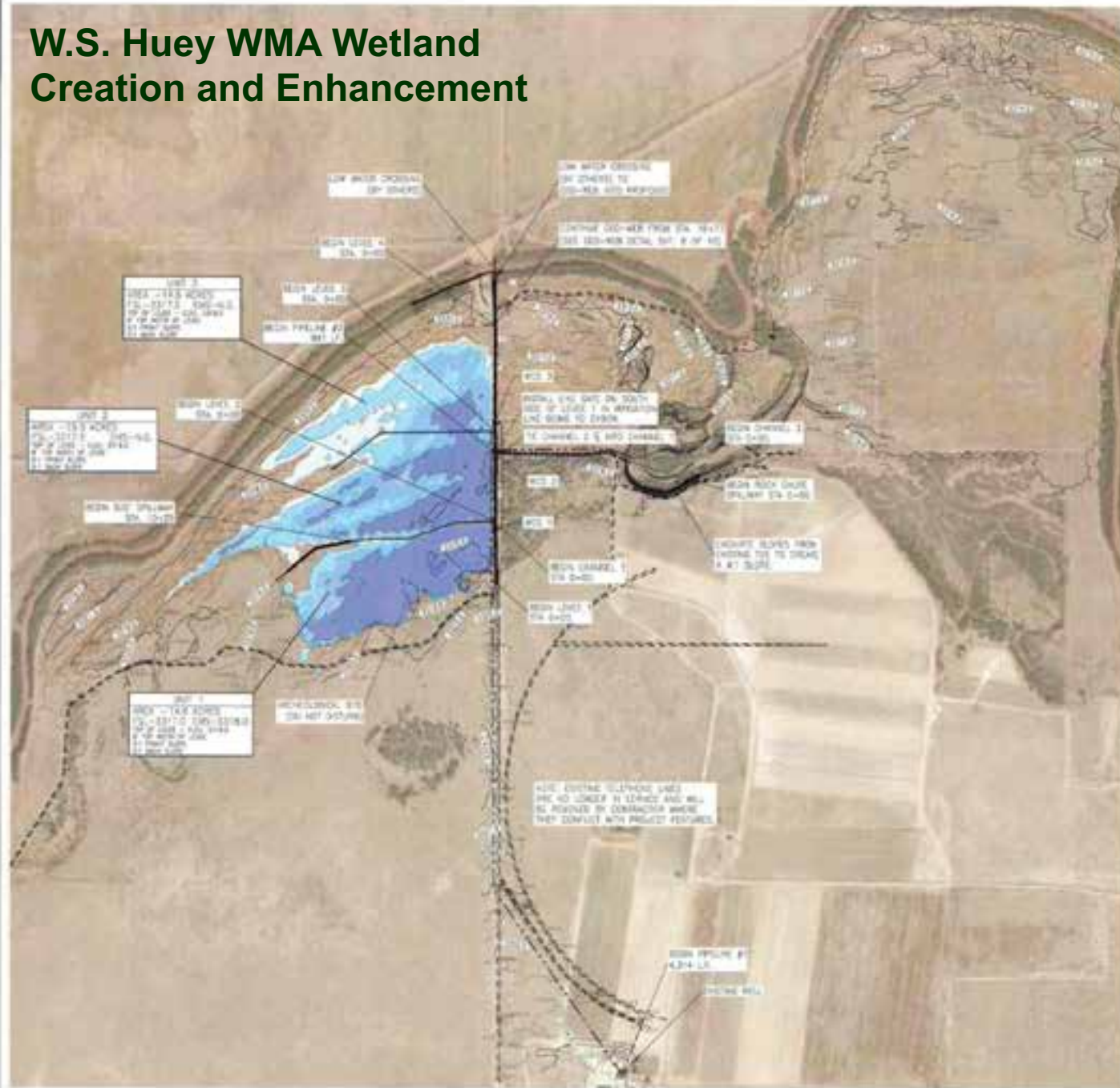
- Substantial focus on Game Commission owned properties
- Additional support for restoration on USFS and BLM lands
- Work with partners to increase scope and scale of restoration across the state

*Management Division*



**Valle Vidal Wetland  
Restoration -- 2019**

# W.S. Huey WMA Wetland Creation and Enhancement



- WETLAND LEVELS**
- 0' - 1'
  - 1' - 2'
  - 2' - 3'
  - 3' +
- LEGEND**
- EXISTING EDGE OF ROAD
  - EXISTING TELEPHONE POLE
  - EXISTING WELL
  - EXISTING FENCE
  - PROPOSED LEVEE
  - PROPOSED DITCH
  - PROPOSED FURROW
  - ▶ PROPOSED STRUCTURE



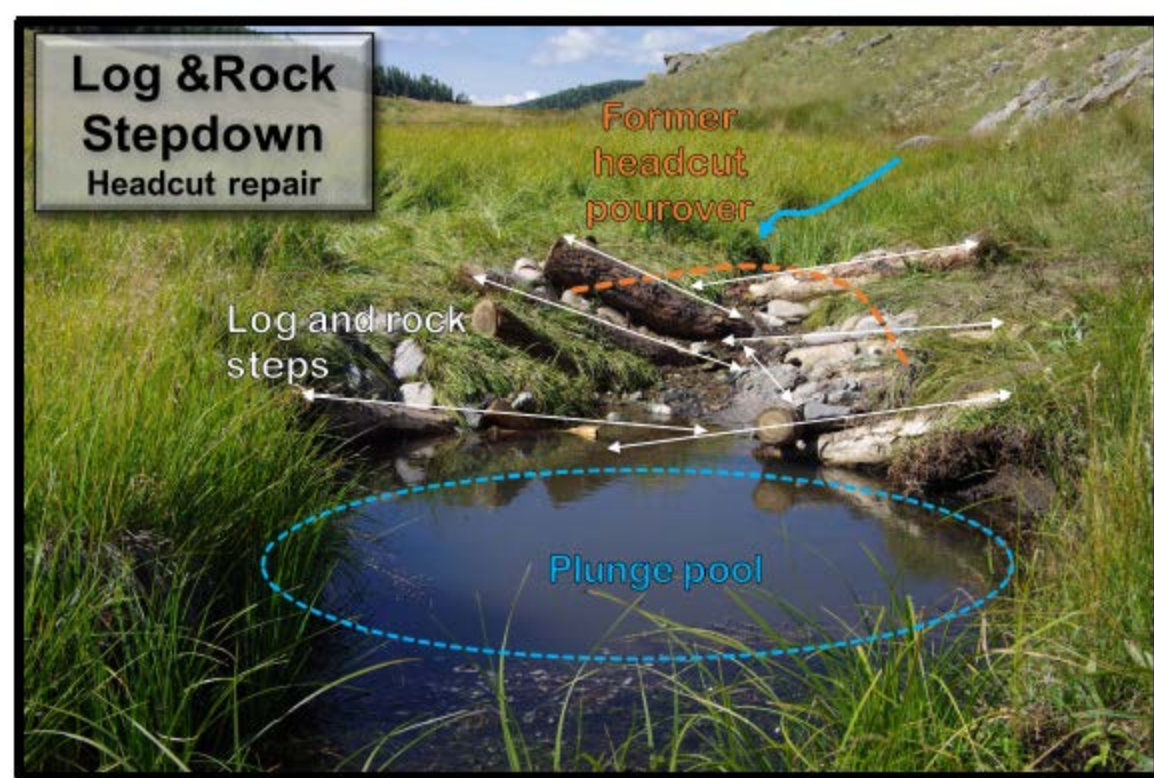
# Ladd S. Gordon WMA Wetland Creation and Enhancement





*Division*

**Valle Vidal Wetland  
Enhancement  
Carson National Forest**



# Canadian River Riparian Vegetation Enhancement Kiowa National Grasslands



# Playa Lakes Restoration Collaborative Eastern New Mexico



# Grassland & Shrubland Restoration

- Maintain species diversity
- Increase connectivity
- Reduce shrub density for specific wildlife objectives (i.e. mesquite and LPC)

**Grassland Enhancement – SE New Mexico  
Bureau of Land Management  
LPC Management Areas**



**Sand Ranch LPC Focal Area RX Fire**



**Grassland Habitat Connectivity  
Roswell Bureau of Land Management**

**Fence Modifications**



# **Native Grassland Restoration / Cheatgrass Control**

Rangeland Reseeding

Farmington BLM & Jicarilla Ranger District USFS



## Northeastern NM Grassland Restoration



...a diversity of food and cover types over short distances across a large area.



# Aquatic / Fisheries Habitat Restoration

- 2016 Statewide  
Fisheries Management  
Plan



**Mimbres River  
TNC and Game Commission Properties**

**Rio de los Pinos WMA Stream  
Enhancements  
North-Central New Mexico**





**Pecos River Fisheries Enhancement**

# San Juan Tailwater Trout Fishery Improvements Northwestern New Mexico





# Questions



# Habitat Restoration Program Goals

Partner with land management agencies, NGOs, and other entities to prioritize landscape restoration projects on a *STATEWIDE* level and consolidate financial and material restoration resources.

Position the Department at the forefront of the prioritization, planning, and implementation of habitat restoration projects in important habitats for wildlife.

Concentrate available financial and material resources over multiple years within priority habitat types and landscape areas.

- ❖ *Improve habitat for both game and non-game wildlife and fish species over large landscapes across the state*
- ❖ *Enhance ecosystem and watershed health*
- ❖ *Reduce the threat of catastrophic wildfire*