From Fen to Floodplain: Steps in a Successful Landscape Level Wetland Inventory in Northeastern New Mexico

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and

Saint Mary's University of Minnesota
GeoSpatial Services

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Wetlands Program Development Grant

Program Core Elements

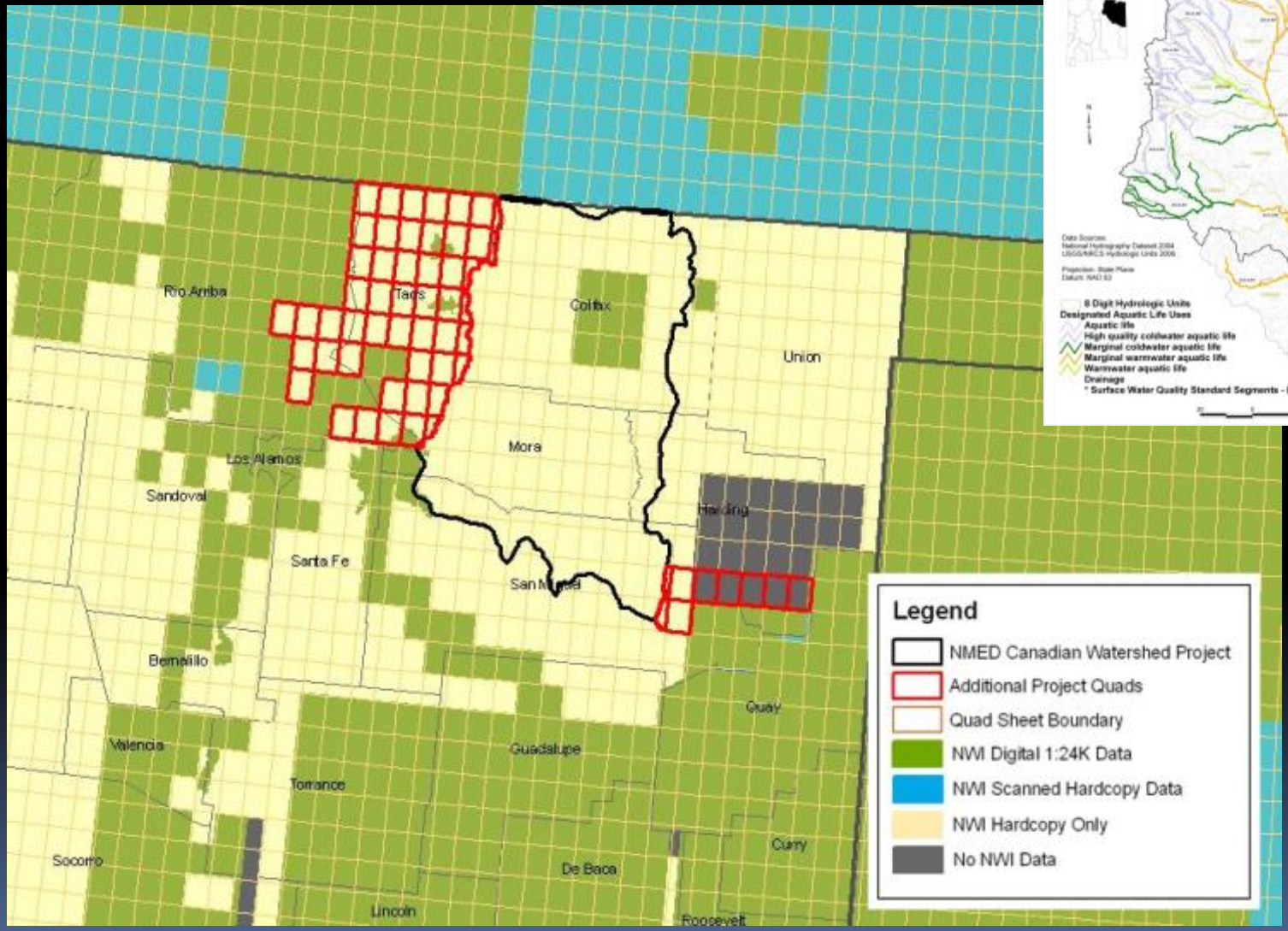
Guided by Wetlands Program Plan

*Guided by our New Mexico Wetlands Assessment and Monitoring Strategy

New Mexico Wetlands Program Goals

- ✓ **Promote wetland protection and restoration as a goal of established watershed groups.**
- ✓ **Increase wetland area (no net loss) as well as restore wetland functions and ecological services, and develop a system for tracking gains and losses by wetland type.**
- ✓ **Assist communities, agencies, tribes, stakeholders, local governments and others with wetlands technical information, project design and planning, training and other guidance.**
- ✓ **Develop protection, adaptation and mitigation strategies for wetland resources threatened by climate change effects in the west, including loss of mountain snowpack, increased catastrophic fires and increased flooding, scour and sediment delivery.**
- ✓ **Develop and refine narrative water quality standards for wetlands and for specific wetland types, and use these standards to promote more effective CWA §401 Certification.**
- ✓ **Develop a toolbox of successful restoration techniques that are specific to wetland types and ecoregions.**

Example of limited mapping coverage in New Mexico in 2010

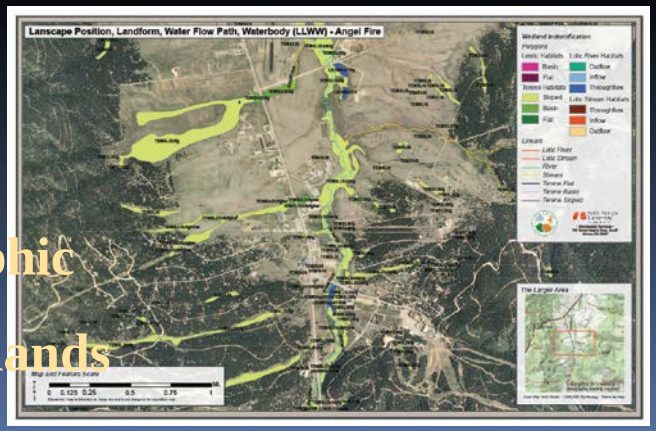


Elevation Range
>13,161 abs – 4,295 abs

Project Objectives

1. **Mapping of all wetlands within the project area.**
   - Establish a baseline using the Cowardin classification for NWI
   - Update to FGDC National Wetland Mapping Standard
   - Use Riparian Classification to map adjacent riparian areas
   - Use current imagery and collateral layers now available
   - Include linear wetlands for confined wetland types

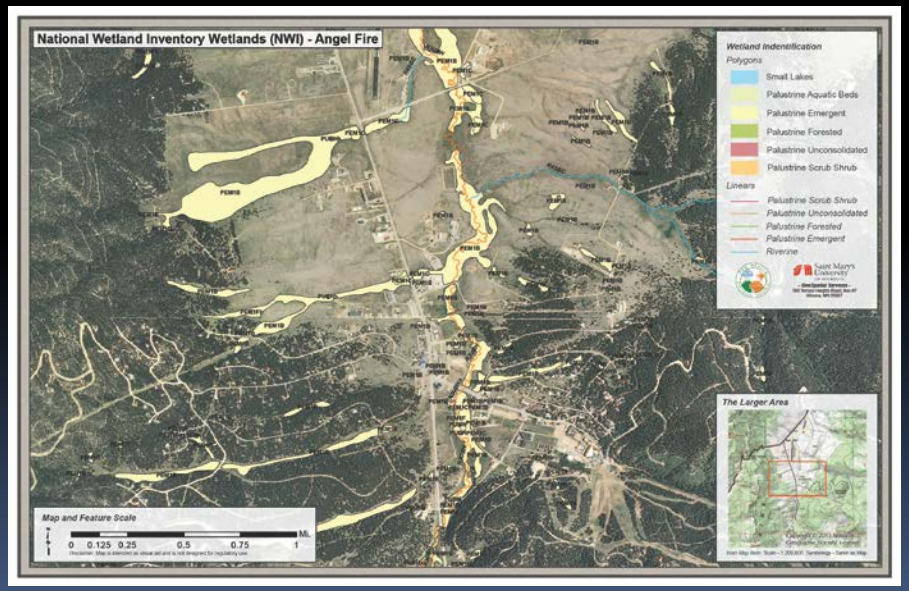
2. **Enhance wetland characterization using LLWW descriptors.**
   - Landscape position, landform, water flow path, waterbody type
   - Develop additional modifiers for the arid west for the 4 basic attributes
   - Use for cross-correlation with hydrogeomorphic (HGM) subclasses established for NM wetlands

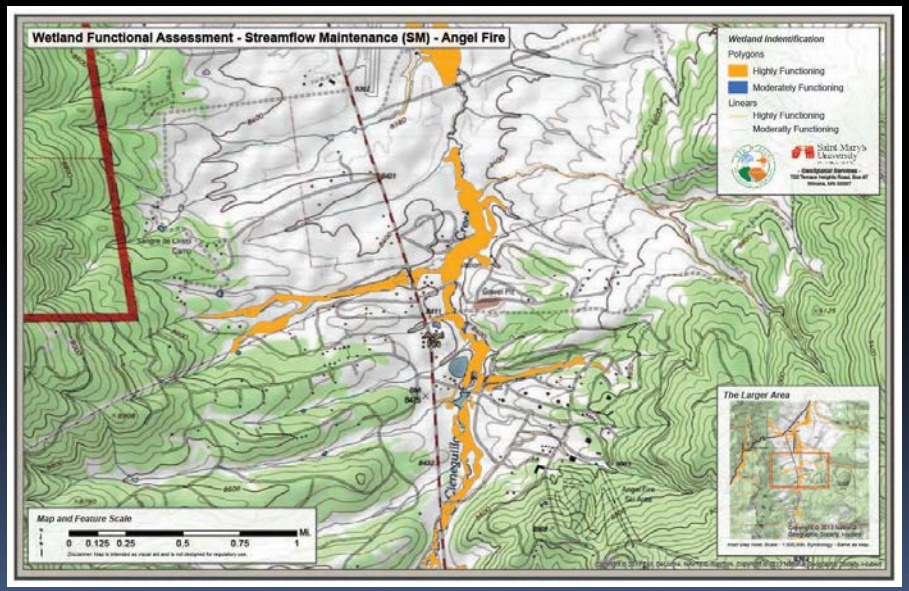


Project Objectives

3. Assign and map functions for identified wetland types.

- **Assign a set of wetland functions to wetland types**
- **Assign wetlands to moderate or high functioning for wetland type**



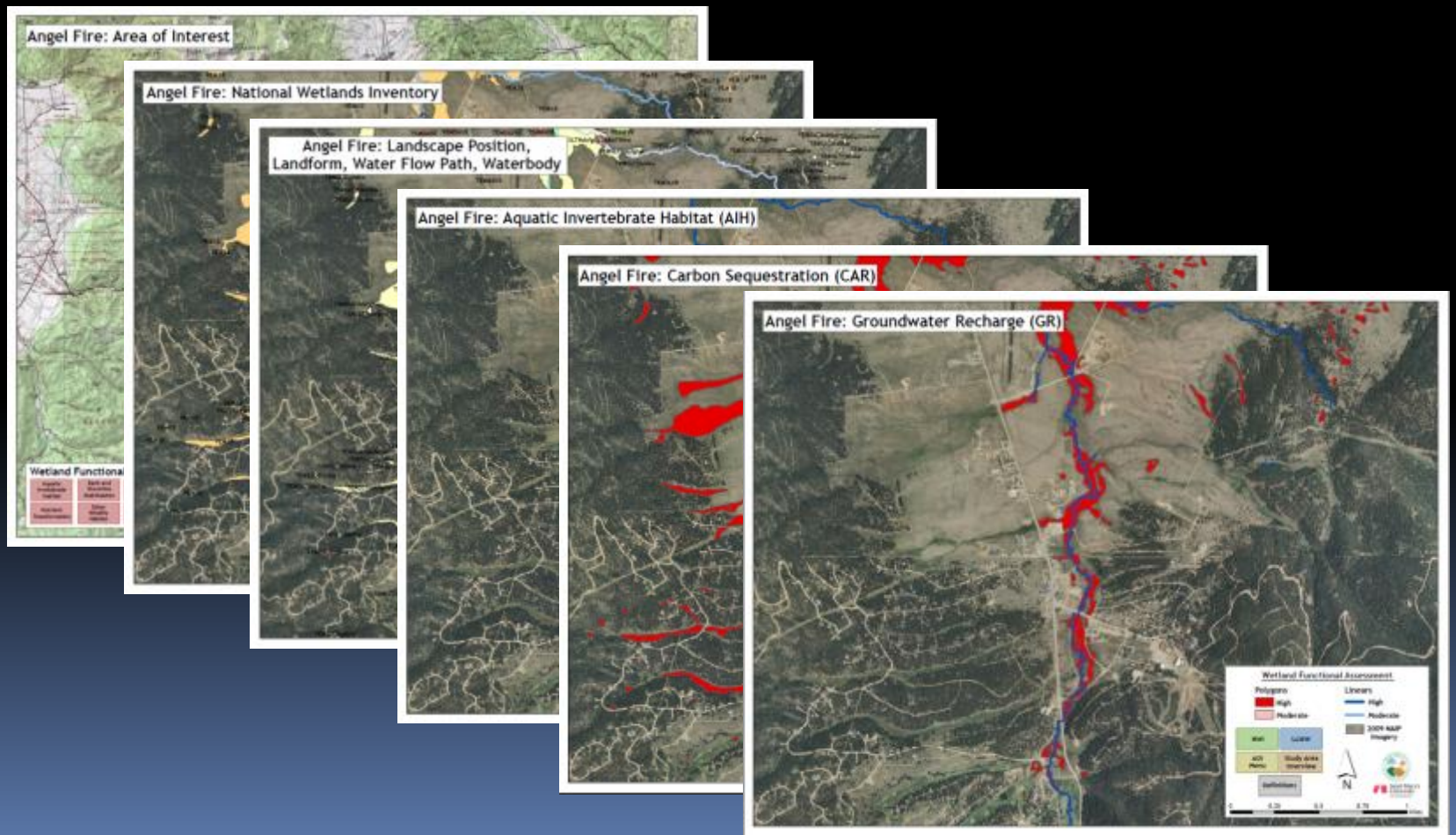


Project Objectives

4. Map Hydrogeomorphic (HGM) subclasses

- **Prepare for future NMRAM data collection**

5. Prepare "Map Books" for select locations



Current Applications

Wetlands Action Plan Program (Watershed Approach)

- Engage stakeholders in the process
- Identification and inventory of local wetland types
- Restoration reconnaissance
- Identify and protect reference standard wetlands
- Data collection
- Selection of mitigation sites

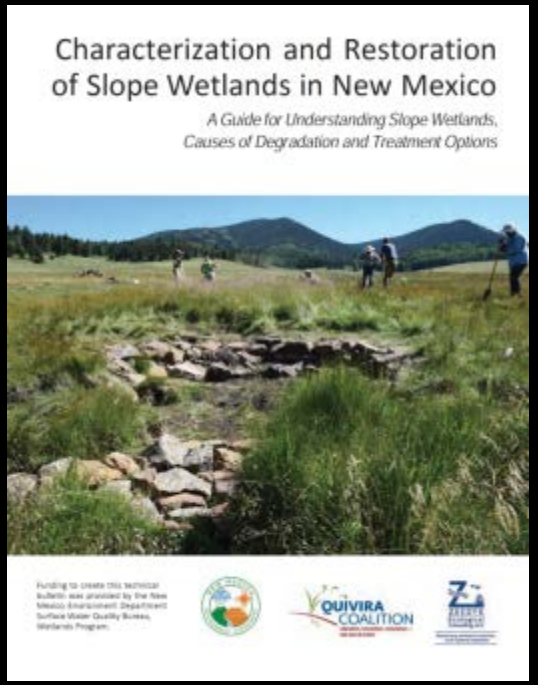
Wetlands Rapid Assessment

- Identification of NMRAM reference domain and sites by subclass
- Compare wetland condition to suite of functions wetland is expected to provide
- Web-accessible database development

Current Applications

Wetland Restoration

- Identify sites
- Identify other sites where similar methods can be used
- Locate reference standard sites
- Restore wetlands with functionality in mind



Wetland Regulations

- Mitigation and CWA Section 401 Certification

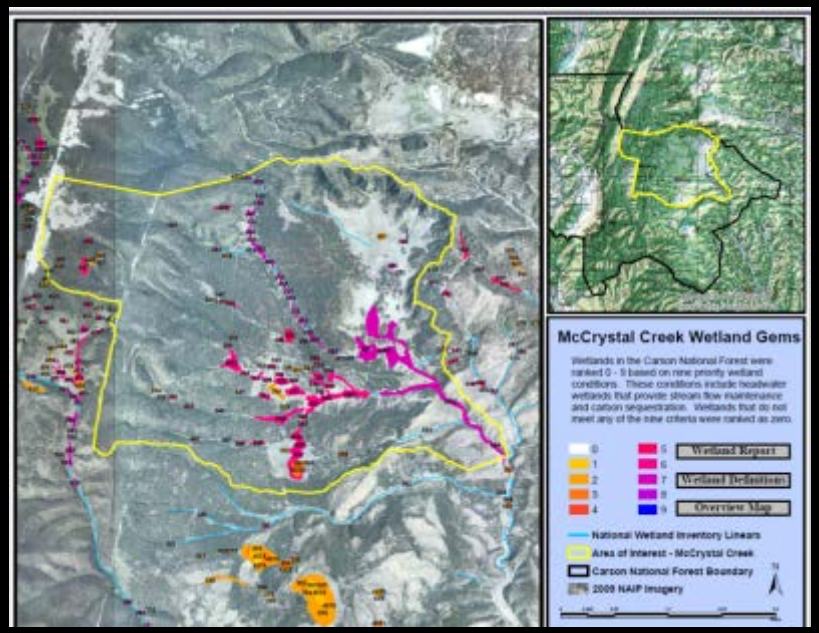
Wetland Standards

- Standards applicable to suites of wetlands
- Assign Assessment Units
- Designated uses

Current Applications

Coordination with Other Agencies, NGOs

- Wetland Gems
- National Forest Plan Revisions
- Army Corps of Engineers



http://amigosbravos.org/on-the-ground-restoration

Long Term

- Changes in quantity, distribution
- Monitor wetlands for trends, climate change
- Develop Wetlands WQS for each threatened subclass
- Nominate more wetlands for ONRW protection
- Select sites for data collection
- Apply more relevant mitigation ratios

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Thank you from the New Mexico Wetlands Program!

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