Celebrating the 50th Anniversary of the U.S. Fish and Wildlife Service's National Wetlands Inventory

Andy Robertson, Saint Mary's University of Minnesota NAWM Wetland Mapping Consortium 06/24/2025





GeoSpatial Services – Saint Mary's



Who We Are

And integration of academic apprenticeship with focused professional development applying spatial technologies. Largest national producer of NWI over the past 20 years



New Mexico Wetland Jewels





What Are NM Wetland Jewels





- Comprised of either a single wetland or a complex of several wetlands occurring in a distinct geographic area.
- Provide several important ecological functions to the terrestrial and aquatic landscape as well as to downstream communities.
- A tool to build ecological and community resilience in the face of climate change.

Why Protect Wetland Jewels



Wetland Jewels are a keystone element of action to foster resilient, interconnected, landscape-scale ecological and community systems.

- Maintain stream flow essential for irrigation and wildlife
- Create habitat for wildlife & ranchland use
- Provide clean water for downstream communities
- Mitigate the risk of flooding
- Reduce climate impacts drought, earlier runoff, wildfire







An Adaptive Mapping Process



New mapping technologies are just one of the tools available with National Wetland Inventory data production

Mapping process key elements:

- Derived layers and surfaces (automation)
- Ancillary spatial datasets
- Productivity tools
- Collaboration and quality control





Stakeholder Engagement

Facilitate stakeholder engagement meetings and outreach:

- Discussion and educational materials used to ensure understanding
- A Dot-Voting approach was used to gain consensus
- Online Survey Monkey and Spanish translation
- Results were tallied and presented for final consensus





What do you think are the most important functions/characteristics of wetlands in the Santa Fe National Forest? Please check your top 4 wetland characteristics.



Applications of Wetland Jewel Data



- Prioritize maintenance and restoration actions.
- Prohibit activities (motorized recreation, mining, new roads, transmission lines)
- Prioritize reclamation of non-system roads/trails
- Coordination with livestock grazing and identify opportunities to leverage Wetland Jewel protections to improve rangeland health and productivity.
- Develop, implement, and enforce amplified standards and guidelines.



Carson National Forest Wetland Jewels

Take time to click through the pages on the left (scroll down to see all 17 pages) and learn about the Wetland Jewels inside the Carson National Forest. Absorb the landscape through photos, explore the wetlands using interactive maps, and learn about why the Carson National Forest wetlands are a vital component to the surrounding ecosystem!



What are Wetland Jewels?

Wetland Jewels can be comprised of either a single wetland or a complex of several wetlands occurring in a discrete geographic area of national forest lands. These wetlands provide several important ecological functions to the terrestrial and aquatic landscape.

Due to their critically important ecological and community role, we have identified Wetland Jewels in the Carson National Forest to not only bring attention to their importance but to secure their long-term protection and restoration.

Ultimately, Wetland Jewels can be used as a tool to build ecological and community resilience in the face of climate change.







What are Priority Wetland Functions?

How Were Wetland Jewels Identified?



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Serpent Lake

Valle Vidal

Valle Vidal Area: 9,794.49 acres Total Wetland Area inside Valle Vidal: 761.37 acres

Click on a wetland to access its pop-up window for more information such as wetland classification and total functionality.

Several dense stands of decades-old aspen crown bold domes of rock overlooking the Valle Vidal AOI. The view looking south across the iris-dotted meadows are some of the highest peaks in New Mexico including snow-capped Wheeler and blue Touch-Me-Not, creating a stunning backdrop to this broad wet meadow. Ricegrass and grama grass on the edges of the meadow mix with penstemons, columbines, and paintbrush. Sedges, marsh marigold, yellow buttercup, and clover can all be found in the sponge-like meadows that flow towards Vidal Creek.

The Valle Vidal Unit of the Carson National Forest has been called the Yellowstone of the Southwest' due to its abundance of wildlife and the broad open meadows. Over 2,500 elk roam the area as do black bear, turkey, bobcat, mountain lion, and bison. Bird-life includes the bald eagle, peregrine falcon, northern goshawk, three-toed woodpecker, and dozens of other species that help make this a top bird-watching area. The Valle Vidal is also home to the endangered northern leopard frog and the rare Rio Grande cutthroat trout. There are several threatened or sensitive wildlife species found among this nearly 800-

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Explore the Carson National Forest Wetland Jewels











"Dating back to the tribe's earliest years, environmental stewardship included wide-ranging efforts to protect, preserve, and conserve groundwater and surface

water resources."

"Our lives are aligned with the changing seasons"

"A culture that is intertwined with

its natural surroundings"















Uses of Plants by the Hidatsas of the Northern Plains

GILBERT LIVINGSTON WILSON Edited and annotated by Michael Scullin



University of Nebraska Press Lincoln & London





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