The Rio Abajo Conservation Area: A Public Treasure in the Heart of New Mexico

The Rio Abajo Conservation Area (RACA) is a critical part of the Middle Rio Grande that is managed by the Valencia Soil and Water Conservation District (VSWCD) with the long-term goal of protecting native river and grassland ecosystems for the benefit of native species and the public.



Map of Rio Abajo Conservation Area (RACA)

Born in the Rio Grande National Forest of southern Colorado and the Sangre de Cristo Mountains of northern New Mexico, the majestic Rio Grande flows downstream of Albuquerque and past such historic towns as Isleta, Valencia, Belen, and Turn. In NM, this stretch of the river is known as the Middle Rio Grande.

Sitting on the banks of the Middle Rio Grande on a warm summer day with one's feet in the water and a cool breeze ruffling the leaves of the many cottonwood trees that line the river may be the best way to appreciate what

a gem the river is. If sitting long enough, one will see deer, javelina, bobcats, native fish, lizards, toads, birds galore, maybe even elk, and people with big grins on their faces, fishing, paddling, swimming, picnicking, or perhaps just sitting against a tree with their feet in the water.



The Middle Rio Grande near Belen & Rio Communities (RACA Reach)

Importance

Protecting Endangered Ecosystems and Wildlife

RACA supports some of the most endangered plant ecosystems in the world. Once abundant, cottonwood and willow gallery forests are now among the most threatened forest types in the United States, because of the manipulation of water resources, fire, mining, livestock grazing, competition from non-native species, and a variety of other factors. Yet, RACA's cottonwoods and willows have thrived, even with these significant challenges. Mesquite bosques and sacaton grasslands are two other native plant community types that have also become rare but are found at RACA. Together, these critical plant communities support a great diversity of native wildlife species, including Gunnison's Prairie dogs, over 50 identified plants (35 native, 10 exotics),



RACA offers habitat for prairie dogs and other wildlife



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On Saturday May 21st, 10am-to-2pm Come to our <u>PUBLIC LISTENING SESSION</u>: <u>The Future of RACA</u> (address:16 Rio Grande Stables Road) dozens of bird species, and a largely unexplored aquatic life environment along the San Juan Drain.



Exploring RACA

Quality of Life

Outdoor recreation opportunities could be plentiful at RACA and nearby lands, if thoughtfully designed and managed. Recreation activities not only provide an important economic boost to local communities, but also foster improved health as the local community and visitors spend time experiencing the great outdoors. In the 2018 Rio Grande Trail Master Plan, RACA hosts part of the trail section that passes through the Middle Rio Grande. Drawing on its work at the Whitfield Conservation Area, just to the north of RACA, VSWCD expects that RACA will promote healthy outdoor recreation opportunities and ecotourism.

Environmental Education and Research

Environmental education helps to encourage public awareness of the environment, leading to informed and active participation in resolving environmental challenges. Like Whitfield, RACA will become a site of high-quality, outdoor science learning for students from local elementary, middle, and high schools, as well as from nearby universities. At RACA, students will learn about the river's aquatic and riparian environment. RACA also will become part of a long-term scientific monitoring network that tracks river and habitat conditions, providing critical data to help river managers throughout the western United States better understand how to maintain sound river health in the face of a variety of threats.

Groundwater Recharge and Water Quality

RACA will be an opportunity to promote a healthy Middle Rio Grande ecosystem. A healthy river means enhanced recharge to shallow ground water systems and improved water quality, both of which are important for local communities and native species.

Threats

Several key threats to the native ecosystems of the Middle Rio Grande need to be addressed to save our river and its native species for the long term.

Climate Change

What is considered today to be an extremely hot summer day will be normal (or average) by 2050!

Precipitation is also changing. Much of the southwest will become not only hotter, but drier as well. The average amount of precipitation during winter months is expected to decline, with most of the annual precipitation predicted to occur in the summer. This means that most precipitation in the future is predicted to occur during the time of year when



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evapotranspiration rates are highest. Accordingly, there will be less water for native ecosystems during a time of year when they need it most. For the District to protect the native ecosystems at RACA over the long term, the impacts of climate change need to be understood to allow management actions to be adapted to rapidly changing realities.

Wildfire

With warming temperatures, shifting precipitation patterns, and the growing wildland-urban interface, severe and damaging wildfires are increasing around the world. In New Mexico, an average of 306,500 acres have burned each year since 2000. On April 11, 2022, the Big Hole fire burned much of the Whitefield Conservation Area, including many of the area's prized 100-yearold cottonwood trees. RACA is also vulnerable to catastrophic fire and could burn tomorrow—if we do not act today to thin the riparian understory at RACA and nearby lands.



The Big Hole Fire burning the Bosque in April 2022, as seen from Whitfield Conservation Area



An invasive salt cedar burned by the Big Hole Fire at Whitfield

Non-Native Species

The river's altered hydrology has created paradoxical conditions that are not suitable for many native species but do benefit many nonnative species. Non-native fish, such as largemouth bass, carp, and channel catfish, compete with native fish such as the Rio Grande Silvery minnow. Russian olive, Siberian elm, and salt cedar—three non-native species that have invaded riparian ecosystems throughout the western United States—have become dominate in the riparian understory, providing the fuel load for a catastrophic fire.

RACA is Central to Protecting the Middle Rio Grande

Adapting to Climate Change

It is not VSWCD's role to take on global climate change. However, for the District to realize its mission to protect the natural resources on its lands, understanding how climate change will impact temperature and precipitation is critical, with management actions adapted accordingly. In other words, to be viable in the long term, the conservation and restoration actions that VSWCD implements must be climate adapted. At RACA, the District's climate-adaptive conservation response will entail identifying and planting key vegetation species that can thrive in drier and warmer conditions, protecting Rio Grande streamflow, focusing on the prevention of severe wildfires, and conducting scientific research.

Monitoring

RACA will be a long-term sentinel monitoring station for understanding how the river and the ecosystems it supports are changing. VSWCD will collect data on groundwater, water quality, riparian vegetation, and wildlife, becoming a key monitoring hub for the Middle Rio Grande. Collecting such data over the course of many years is essential to implementing conservation actions that will be effective in the long term.



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Involving the Public and Forming Key Partnerships

Addressing threats and realizing VSWCD's long-term conservation goals will require partnerships and public involvement. The Valencia Soil and Water Conservation District cannot do it alone!

Fortunately, forming strong, diverse, and enduring partnerships is a District strength. Over the last three years, VSWCD staff have been:

- Involving local citizens via on-site events and public meetings;
- Providing outdoor science learning for thousands of local students during school visits;
- Maintaining a variety of partnerships with key federal and state agencies, including the Middle Rio Grande Conservancy District (MRGCD), USDA-NRCS, USFWS, USGS, EMNRD-State Forestry, local fire departments, and the New Mexico Game & Fish Department;
- Researching traditional practices of animals on the floodplain, using goats and sheep in a managed rotational grazing program that keeps fuel breaks cleared of excessive vegetation & provides economic opportunities for livestock owners;



 Working with like-minded organizations and volunteers, including the Friends of Whitfield

Summer campers on a field trip to RACA

- volunteers, including the Friends of Whitfield, to realize key priorities;
- Collaborating with numerous scientists and citizen scientists of the Bosque Ecosystem Monitoring Program on a range of natural resource issues;
- Collaborating with the MRGCD to **protect native ecosystems** on MRGCD lands within the RACA reach and throughout the Middle Rio Grande.



Join VSWCD on the road forward:

RACA can be a foundational nexus for forming strong collaborative partnerships that will protect the Middle Rio Grande in the long term, and can represent a powerful demonstration area of what can be done when people link arms with a

My Community Can Do Anything attitude!

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