



# Friends of Bosque del Apache National Wildlife Refuge

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San Antonio, New Mexico 87832

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## Preserve Bosque del Apache: An Irreplaceable NM and US Treasure

It's not easy to convey the majesty of our Bosque del Apache National Wildlife Refuge, nor its inestimable value. Encompassing 57,331 acres at the northern edge of the Chihuahuan Desert, it is a mosaic of grassland, wetland, riparian, and cottonwood forest habitats whose fauna have unique needs. It is a beautiful and fragile wetland in the New Mexico high desert, a rare section of the Rio Grande that now performs much like it did historically, before man altered the river, although this requires intense management to do so. Furthermore, the refuge transforms itself for every season, offering new wonders in each. Refuge staff works year-round to maintain varying habitats for the birds that migrate to the Middle Rio Grande valley in spring to breed or simply rest for a while, the thousands of birds that winter here, and the refuge's permanent residents.

The refuge's value extends beyond the environmental. Bosque del Apache and indeed the entire Middle Rio Grande region of New Mexico is a growing hotspot for birding ecotourism. New Mexico is the fifth most visited US state for birdwatching and Bosque del Apache alone currently hosts 409 avian species – more than any other location in the continental USA, as well as four endangered species of fauna. The extraordinary diversity and concentration of wildlife in a desert environment draws people from around the world to observe and photograph nature. US Fish and Wildlife Service's latest *Banking on Nature* report (2019) found that Bosque del Apache drives \$17.4 million in economic output. The contribution of recreational spending in local communities was associated with 181 jobs, \$4 million in employment income, and \$2.4 million in total tax revenue. In 2024, Bosque del Apache was voted #4 out of 570 National Wildlife Refuges (List of Top 10 Best Refuges resulting from a USA Today poll) and #2 in Top 10 Best Places to Birdwatch (Country Living). Our refuge is known nationally and even internationally, but this oasis in the desert needs protection. It faces many threats to its survival, not least of which is a shrinking water supply from the Rio Grande.

Bosque del Apache is magical, ever-changing and special, but at the same time it is fragile due to its dependence on groundwater, as the Rio Grande is unable to cope with the twin burdens of increased temperatures and demand for water from upstream users. And it is costly to maintain due to the myriad of habitats and the effort and infrastructure required to manage water from above and below ground. Federal funding for the refuge is woefully insufficient to protect this precious and irreplaceable jewel.

**We must act now to save this invaluable riparian area and the wildlife it supports. Please work to support important research and project implementation that addresses the needs of the Rio Grande and addresses water supply and habitat improvements for our unique natural resource gems.**

Best regards,

Deborah Caldwell  
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## **Collaborative Solutions Needed: LFCC Effects to Ecosystem & Refuge Water Management**

The Low Flow Conveyance Channel (LFCC) is an established infrastructure feature in the Socorro Valley, San Acacia Reach of the Middle Rio Grande. The LFCC has served as a large delivery ditch and a drain at varying times over the past seventy years. I have come to understand its benefits and its impacts on my community and our state, and on the plants and wildlife that call the Rio Grande Valley home.

The LFCC delivered much needed water to downstream users during the drought of the 1950s and contributed to New Mexico meeting its debt to Texas after those low water years. I say “contributed” because without the wet years that followed the drought, and the river itself which provided safe conveyance of the resulting higher flows, we wouldn’t have met that requirement. In other words, the LFCC did not replace the river; it complemented it during that time. Both must function in order to meet this purpose.

For the past forty years, the LFCC has been a large drain, capturing seeped river water and agricultural return flows and delivering that captured shallow groundwater to farms, Bosque del Apache National Wildlife Refuge (refuge), and Elephant Butte Reservoir. During the growing season, when the river is dry and the LFCC has limited inputs, the refuge gains limited surface water from that legal diversion point. In dry years, the refuge also receives limited surface water from the Middle Rio Grande Conservancy District works – when the farmers upstream have limited water, so does the refuge. But in the winter, the LFCC is the refuge’s only surface water source. The refuge has a senior water right in the state but is last on the landscape of diverted water deliveries before Elephant Butte Reservoir. This makes water and land management for the refuge extremely difficult. **Please direct state agencies to work with the refuge to develop and commit to strategies to better manage surface water deliveries to all water users in the Socorro valley, including the refuge.**

The refuge is a part of the larger Middle Rio Grande ecosystem. The LFCC, acting as a drain and the lowest point in the valley, makes it difficult to provide low water flows to the perched Rio Grande through the valley and maintain a shallow groundwater table. Extended river drying periods will stress native plants and will most likely impact the many wildlife species that depend on the currently diverse and viable river corridor habitats. More research is needed into the thresholds where negative impacts to riparian habitats are felt. The refuge is working with New Mexico Tech and others to better understand its present and potential future water budget. However, we need a better understanding of the entire system to protect the Rio Grande ecosystem and manage water and sediment. This will take a long-standing commitment from all parties to determine how the natural system can conserve water (remove invasive trees and restore diverse, more fire-resistant habitat types) and how infrastructure can be altered to benefit the ecosystem. If the LFCC continues to operate in some capacity, we must better understand and limit its negative impacts to the bosque and river.

Because the LFCC is of special concern to many stakeholders, **please appoint a diverse task force to work with state and federal agencies to 1) develop research to better understand the Rio Grande San Acacia Reach ecosystem water needs into the future and 2) design projects to meet those water needs while addressing our shared water obligations under state and federal law.**

**Thank you for the opportunity.**



**Riparian Ecologist**

**Member and Advocate, Friends of Bosque del Apache NWR**