

WATER CONSERVATION AND RE-USE

Five-Year Lease of Water Rights for Environmental Flows Along the Rio Chama

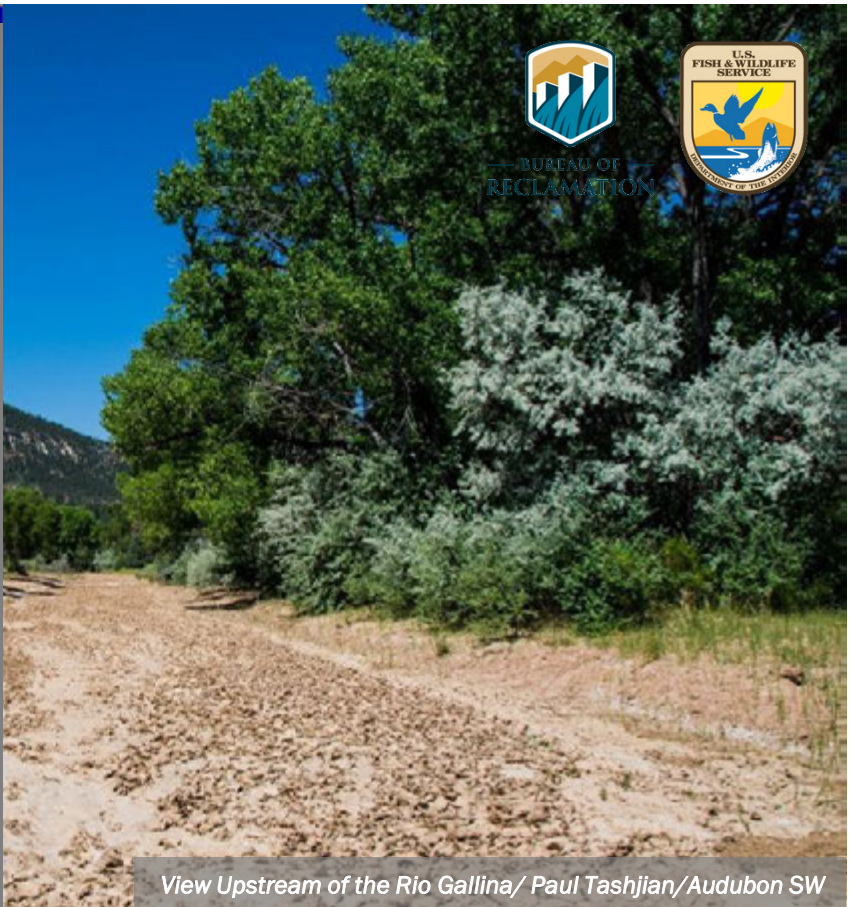


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The Rio Chama, a tributary of the Rio Grande, is an ephemeral river located in northern New Mexico. Flows in the Rio Chama serve to replenish groundwater, support regional flood protection, foster important cultural and recreational uses, and provide important natural habitat for endangered species. Under pressures from drought and legacy water agreements, existing water supplies within the Rio Chama have dwindled. In response, Audubon Southwest (Audubon) and the New Mexico Office of the State Engineer (NMOSE) created an experimental, five year water lease agreement designed to keep water in stream, while protecting individual water rights holders and providing multi benefit in stream use.



Project Location



BUREAU OF
RECLAMATION



View Upstream of the Rio Gallina/ Paul Tashjian/Audubon SW

KEY ISSUES ADDRESSED

In the Rio Chama, over-prescription of net annual flow is a primary reason for the river's dry periods. Legacy water lease agreements encourage lease holders to pump water from the system as a way to secure their water rights, under the premise of "use it or lose it." This process results in diversions from the Rio Chama even during periods of drought, when no crops are planted or when crops are not likely to produce a compensatory economic benefit. A dry river threatens the persistence of riparian habitat and diminishes the co-benefits of a functioning riparian ecosystem, such as flood mitigation, groundwater recharge, and opportunity for recreation. Because the tactic is new and stakeholders represent a vast diversity of water users, awareness of potential conflict, effective communication, and uniting goals are essential.

PROJECT GOALS

- Demonstrate leased agricultural water right was left for in-stream use
- Create replicable permitting process for in-stream-flow leases and accurate, economical, and easy measurement and reporting criteria
- Effectively communicate project goals and impacts to water users

H-2- O-PTIMUM

Environmental flow programs work within state water laws to ensure both the river and water users benefit from solutions.



Downstream Plate Measurement/Paul Tashjian/Audubon SW

PROJECT HIGHLIGHTS

Historic Permit Acquisition: This permit is New Mexico's first privately-owned water rights permit to keep water in-stream. It supports a shift in thinking about water appropriation that historically incentivized water diversion. This permit protects a river's right to flow and the value that a flowing river provides for important ecosystem functions. The team worked directly with NMOSE staff to develop streamlined guidelines for future in-stream flow permits, creating a framework for the State to implement.

In-Stream Beneficial Use: Through use of a staff plate and associated measurement devices, the team demonstrated that the water right is being applied for in-stream use and no longer being consumed by the former agricultural operations. This flexibility allowed for the water right to remain in-stream at critical times, especially for bird nesting periods.

Conflict Mediation: Initially, this project garnered concern from downstream water right holders who feared the new program was an infringement on their existing senior water rights. Through mediation, the team demonstrated that the project improved inflow to these farmers. Successful communication of this prevented any litigation from occurring.

Collaborators

- Audubon Southwest
- New Mexico Office of the State Engineer
- Environmental NGOs

CCAST Authors: Michael Mayfield, Johns Hopkins University, Maude Dinan, USDA Southwest Climate Hub, October 2022. For more information on CCAST, contact Genevieve Johnson (gjohnson@usbr.gov) or Matt Grabau (matthew_grabau@fws.gov).

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LESSONS LEARNED

Developing measurement and reporting criteria that are accurate, but not costly or overly difficult to implement, posed as a challenge for the team. Many factors, such as making sure water gets to a certain stretch of the river or ensuring water rights holders do not take what should stay in-stream, complicate the development of measurement and reporting criteria.

Originally, NMOSE had suggested the best way to verify this amount was kept in-stream would be by conducting robust stream flow measurement techniques as a criterion for the permit. Considering that 40 acre/feet can come from a few rain events, Audubon and NMOSE determined that a more simplistic methodology of a staff plate was not only easier in practice, but an adequate measurement in its own right. A staff plate is a type of gauge used to measure water surface elevation or just to determine the rise/fall of the water surface over time.

Given the uncertainty of and opposition to the permit by some water rights holders, the team determined that public outreach and consensus-building was needed earlier in the project development. More information on the co-benefits of in-stream-flows to all water users would help alleviate the concern among stakeholders.

NEXT STEPS

- Develop a State-based program with State agency staff assisting with the process
- Develop a long-term strategy of lease ownership through NGOs working in concert with the NMOSE
- Explore upstream for opportunities to acquire more water rights

For more information on this project, contact Paul Tashjian:

paul.tashjian@audubon.org



Riparian Grasslands Along the Rio Gallina/Paul Tashjian/Audubon SW