

Building Capacity for Wetland Restoration: The East Fork Jemez River Restoration Project in Northern New Mexico.

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Headwater slope wetlands play a critical role in sustaining watershed health, regulating streamflows, filtering pollutants, and supporting diverse wildlife habitats. These systems in northern New Mexico have been degraded by historic land uses, livestock grazing, poorly designed roads, and the impacts of climate change. The East Fork Jemez River project, within the Valles Caldera National Preserve of northern New Mexico, demonstrated innovative, low-cost, and ecologically appropriate techniques to restore slope wetlands and address these stressors.

The project implemented restoration practices such as contour swales, sod bowls, and sod berms. These practices were designed to slow, spread, and infiltrate water across degraded wetland landscapes. These methods relied on native sod and soils to successfully re-wet drained wetland areas, promote sheet flow, and support wetland vegetation recruitment. Restoration efforts expanded functional wetland areas from 33 acres to 98 acres, significantly enhancing ecological resilience and buffering downstream systems from erosion, sedimentation, and warming stream temperatures.

In addition to on-the-ground implementation, the project developed tools to extend its reach and foster capacity building. A Wetland Action Plan was created to guide future restoration and protection efforts across the watershed, and a Technical Guide documented design approaches and lessons learned to inform practitioners in New Mexico and across the Rocky Mountain region. Outreach through workshops, volunteer programs, and stakeholder engagement further amplified the project's impact by integrating community involvement and technical transfer.

The East Fork Jemez River project illustrates how innovative sod-based restoration strategies can cost-effectively restore wetland hydrology and ecological function on public lands. By linking practical techniques with stakeholder collaboration and long-term planning, this work offers a scalable model for advancing watershed resilience and climate adaptation across headwater landscapes.