
New Mexico EMNRD

Fenton Lake Fishing Enhancement with Beaver Dam Analogs

Jemez Springs, New Mexico



Beaver Dam Analogs restore ecological function and benefits to New Mexico's state parks.

SERVICES

Climate Adaptation & Resilience
Conservation Planning
Ecological Restoration
Nature Based Solutions
Water Strategies

Before being nearly extirpated in the 1800s, beavers sculpted many of the world's stream valleys, waters, and wetlands, achieving conditions often sought by today's conservation and restoration practitioners. For that reason, structures mimicking the beaver dams are often useful in ecological restoration.

The State Parks Division of New Mexico's Energy, Minerals, and Natural Resources Department (EMNRD) wanted to determine if BDAs could be used to regenerate degraded aquatic ecosystems within its state parks. Biohabitats conducted a GIS suitability analysis examining state park properties with overlays of historic beaver ranges and previously documented beaver habitat. Biohabitats also visited completed beaver-based projects in the state to gain insight on how they functioned over time. The analysis revealed that BDAs held strong potential to jumpstart the restoration of ecosystem function and stability at five state parks.

The top priority site, 700-acre Fenton Lake State Park, is bisected by the Rio Cebolla. Beaver had existed in the park and created an ecologically rich ponded water environment that was popular for fishing, but high spring flows due to heavy rains blew out their dams. With changing weather patterns in mind, and in collaboration with EMNRD, wildlife agencies, and community stakeholders, Biohabitats developed a three-phase design approach to adaptively integrate beaver-based restoration into the Rio Cebolla valley downstream of Fenton Lake. It includes both BDAs and Post-Assisted Log Structures (PALS) that spread heavy flows out into the floodplain while adding habitat complexity.