

Riparian/ Aquatic Habitat

Threats



PJ Encroachment

Conifer trees replacing cottonwoods and alder along streams removes understory vegetation causing erosion and decreasing stream flow.



Invasive species

Invasive species displace native plants, eliminate food and cover for wildlife and livestock, and threaten rare plants and animals.

Excessive recreational use (i.e. fishing, camping, hiking...) and ungulate grazing along streams, wetlands, and lakes removes protective vegetation cover from underlying soils and results in increased sedimentation, altered peak run-off flows, and greater habitat fragmentation. But these activities are also management considerations and all are extremely important to the Carson NF and surrounding communities.

Land Uses



Floods

Floods are natural events that can cause damage to infrastructure and to riparian and fish habitats. Floods also temporarily reduce water quality. Both a threat and a management consideration.



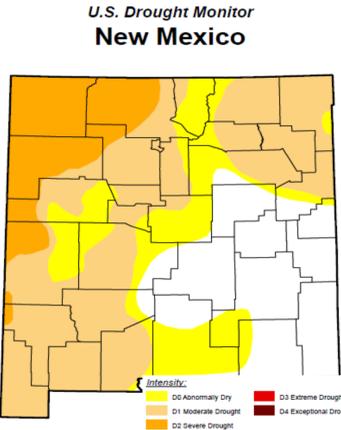
Before



After

Stream Improvement Partnership

Stream improvement projects decrease sedimentation and erosion and enhance riparian vegetation along streambanks.



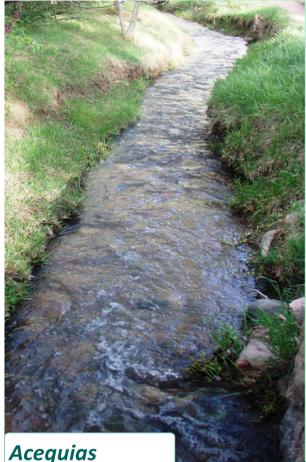
Drought

Is a threat and a management consideration. Decreasing water supply impacts ecosystem health.

USGS Gauge #	Name/Location	Data Record Period	Pre 1996 Annual Mean Flow (cfs)	Post 1996 Annual Mean Flow (cfs)	Annual Mean Flow Reduction (%)
9365000	San Juan River at Farmington, NM	1931-2013	2,097	1,526	-27.2
8248000	Rio Los Pinos near Ortiz, CO	1915-2013	117	92.5	-20.9
8247500	Rio San Antonio at Ortiz, CO	1940-2012	24.6	17.9	-27.2
8286500	Rio Chama above Abiquiu Reservoir	1971-2013	522	425	-18.6
8289000	Rio Ojo Caliente at La Madera, NM	1932-2013	67.5	50.3	-25.5
8313000	Rio Grande at Otowi, NM	1971-2013	1,580	1,177	-25.5
8265000	Red River near Questa NM	1966-2012	41.7	36.8	-11.8
8266820	Red River below State Fish Hatchery near Questa, NM	1978-2012	76.7	63.1	-17.7
8267500	Rio Hondo near Valdez, NM	1953-2012	34.5	27.8	-19.4
7207500	Ponil Creek near Cimarron, NM	1916-2012	11.7	11.07	-5.4
8255500	Costillo Creek near Costilla, NM	1942-2012	45.2	39.5	-12.6
8275500	Rio Grande del Rancho near Talpa, NM	1953-2012	19.1	13	-31.9
8277470	Rio Pueblo near Peñasco, NM	1992-2012	44	33.4	-24.1
8279000	Embudo Creek at Dixon, NM	1924-2013	81	62.1	-23.3

Stream Flows

Stream flows have decreased since 1996 due to climate change and drought.



Acequias

Acequias provide water for irrigation and are foundational to the history and culture of Northern New Mexico

Desired Conditions



Yellow-billed Cuckoo

This endangered species lives in Cottonwood habitat



A Healthy Riparain Ecosystem

A healthy riparian ecosystem provides clean water for human uses, habitat for wildlife and aquatic species, fire breaks, and water storage.



Beavers

Beavers contribute to ecosystem health by creating wetlands and decreasing sedimentation downstream .

Management Considerations

Potential Solutions

- 1) In anticipation of reduce water availability, there is a need for updating plan direction on managing for sustainable water supply for multiple uses (wildlife, livestock, recreation, mining) and public water supplies.
- 2) There is a need for restoring and maintaining appropriate composition and amount of riparian vegetation.
- 3) There is a need for restoring and maintaining wetland condition and function.