

Vulnerability of American White Pelican nesting in Northern Nevada to Climate Change

Submitted by: Donna Withers, Wildlife Refuge Specialist
Stillwater NWR Complex, Fallon, Nevada
donna_withers@fws.gov
775-423-5128 ext 231

Location:

Anaho Island NWR, Pyramid Lake, Pyramid Lake Paiute Reservation, Washoe County, Nevada

Scale/Focus:

Anaho Island NWR (approximately 500 acres currently) was established in 1913 to provide secure nesting habitat for American white pelicans (AWPE). Anaho supports one of the two largest AWPE nesting colonies in the western United States. The other large colony is on Gunnison Island, Great Salt Lake, Utah. Additional smaller colonies exist to the north in Idaho, Oregon, Washington, and Canada. AWPE overwinter in the extreme southern United States & Mexico and migrate back to nesting grounds beginning in early March. AWPE are large piscivorous birds, which require large quantities of fish and other aquatic organisms in shallow (less than 3 feet deep) wetlands and other waters to satisfy their nutritional needs and successfully rear young. AWPE nesting at Anaho Island NWR forage at the Pyramid Lake / Truckee River delta if spawning occurs (otherwise fish in the lake are too deep for AWPE to prey on), and at other lakes, and shallow wetlands within 100 miles to the east and southeast of Anaho Island NWR.

Objective:

Assess the vulnerability of American white pelican nesting to:

Changes in overwintering habitat/foraging area and migration foraging area conditions which affect condition of adults at start of migration through arrival at breeding habitats.

Declining levels of Pyramid Lake to the point that a land bridge is exposed resulting in access to the island by mammalian predators

Changes in timing of AWPE spring migration to Anaho Island

Changes in fish populations and fish spawning timing which reduce the availability of adequate quantities of forage fish - will prey base decrease to the point where number of breeding AWPE nesting and fledging rate at Anaho Island NWR declines; will the AWPE shift to existing or new nesting areas to the north?

Changes in ambient air temperatures and surface temperature of the island which affect incubating adults and nestling survival.

Changes in avian predator (California gull, common raven) nesting populations on Anaho Island

Status: Vulnerability assessment not started