

Wetland and Riparian Areas

Importance

Wetlands are vital to the short-grass prairie ecosystem of Sand Creek Massacre National Historic Site and eastern Colorado, providing significant ecological functions and wildlife habitat. Although less than 2% of Colorado is comprised of wetlands, they are disproportionately important and support over 75% of the state's wildlife species by providing essential wildlife habitat, including forage and resting areas for migrating waterfowl. Wetlands reduce the extent and duration of flooding by slowing or diverting peak flows, affect groundwater recharge, stream bank stabilization, and removal of sediments and nutrients. Wetlands have distinct vegetation and soil characteristics and may be periodically influenced by flooding. Recreational opportunities, such as hunting, fishing, and wildlife viewing, provide revenue to local economies.

Status and Trends in Sand Creek

Most of the Big Sandy Creek channel and surface waters in the Sand Creek Massacre site are wetlands. Cottonwood groves, stream morphology, and wetland areas in the immediate floodplain and channel appeared to be stable and properly functioning in 2005. The cottonwood stands that line Big San-

dy Creek are grouped in three age classes, the earliest dating to approximately 1865-1885. It is possible some cottonwood trees were present during the 1864 massacre as seedlings or saplings. Willow saplings occur along the Big Sandy Creek channel, though it is unlikely they were ever an important part of the riparian system. Sedges have been present since the mid-1800s, which suggests the continuous presence of at least moist soil. Cattail, a wetland species, appears to have been present since around 1950.

Discussion

Many wetlands similar to those in the Sand Creek Massacre site have changed from their original exposed sand, grasslands, and occasional trees to woodlands of native and exotic species. This change in community structure benefits some species, but may be detrimental to others. The establishment of three age classes of cottonwoods along the creek bed after 1864 may be associated with flooding events and is consistent with the prevailing flood-driven model of cottonwood establishment in western North America. Park managers considered impacts on wetland and riparian areas during planning for a future visitor center and administrative site.



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Wetland at Sand Creek Massacre NHS.



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