

Wild Horses, Livestock, and Wildlife Use of Springs and Riparian Areas on the Devil's Garden

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ABSTRACT: In Modoc County, located in northeastern California there is a unique rangeland area heavily populated by wild horses and managed primarily by United States Forest Service known as the Devil's Garden. Wild horses have significantly exceeded (4000 horses) appropriate management levels (206-402 horses) in recent years and expanded their range outside of the wild horse territory (258,000 acres) and on to private and tribal lands (over 450,000 acres). This increase has prompted concern about resource degradation particularly associated with riparian areas. In otherwise arid sage steppe rangelands, springs provide critical watering sources as well as wildlife habitat for sage grouse, deer, elk, pronghorn, and other wildlife. Our objective is to quantify the relative frequency, duration, and timing of use by horses, permitted livestock, and wildlife at spring locations. We correlate how varying levels of horse and/or livestock use affects spring site vegetation and riparian health standards. Ten representative study locations were selected on the Devil's Garden and motion sensitive cameras were deployed at each location for 14-day sampling periods during the spring, summer and fall of 2015-2017. All photos were visually assessed to record species present, number of each species, and the time, date, and location of the observation. We present preliminary occupancy data, as well as results of corresponding vegetative cover, plant community, and bank alteration sampling. Implications for management and on-going research are discussed.

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