

California Department of Parks & Recreation

Hollister Hills State Vehicular Recreation Area

4x4s and ATVs meet cattle where the California Department of Parks & Recreation seeks to reduce fire risk at this multi-use park on the San Andreas fault. Adaptive planned grazing increases perennial grasses and listed species, keeps the neighbors happy, and saves the land management agency time and money.

Credit: Point Blue Conservation Science



Hollister Hills at a glance

RAINFALL

13-16 inches per year

PROPERTY DESCRIPTION

Oak-Savannah Rangeland

PROPERTY SIZE

6000 acres

ACRES IN GRAZING LANDS

1600 acres

PLANNED GRAZING SINCE

1994

SPECIES

350-400 head of cattle

GRAZING SEASON

December-mid-April or May

PARTNERS

5-year bidding contracts with private grazier; work-trade is part of this partnership

DOES THIS SAVE YOU MONEY?

Yes, by avoiding costs associated with mowing and burning

GRAZING PERIOD

2-5 days based on the size of the field

LENGTH OF RECOVERY

Varies, mostly 66-139 days, but sometimes shorter

MANAGING FOR

- Multi-use public access
- Reducing fuel loads / fire danger
- Increasing the health of the grassland
- Improving the cycling of water, carbon, and other nutrients
- Improving the community of native plants, including blue oak trees
- Protecting tiger salamander and bird populations



Savannah Sparrow. Credit: Point Blue Conservation Science

*“There is virtually no risk to the public with
the animals we are grazing”* —JOE MORRIS

A Google search for “Hollister Hills State Park” won’t show photos of livestock. Instead, you’ll find images of ATVs climbing rock piles and Jeeps driving through pits filled with water. This park was created as an off-road vehicle playground, yet today, adaptive planned grazing is used to manage the grassland buffer zone that surrounds the off-highway vehicle (OHV) park. Given the prevalence of fire in this coastal ecosystem, the cattle play a valuable role in preventing the buildup of fuel on 1600 acres of the 6,000 acre rolling oak-savannah rangeland. The site hosts 400 “snowbird” cattle who graze during California’s spring growing season (December to May) before returning to their home ranges where spring comes much later.

HISTORY

Hollister Hills State Park (HHSP) was established in 1975 and expanded with the purchase of neighboring ranches in the 1980s and 1990s. Most of this site has a history of continuous grazing over many years by large herds of cattle. When the Parks Department proposed using prescribed burns to manage fire danger, the neighbors were opposed. In 1994, however, a rangeland ecologist suggested that planned grazing might be an effective alternative that could also enhance the health of the land. That year, planned grazing began as a trial and has been used ever since, including as a buffer to protect neighbors from the noise and dust of the OHV park.

While the park is managed primarily for 4x4s, dirt bikes, ATVs, and OHVs, in 2013 trails for non-motorized access including hiking, biking, and horseback riding were added. Thanks to a strong working relationship between the grazier and the park staff, the transition went well. Today, the planned grazing program plays an important role in reducing fire risk for neighboring properties, improving the natural ecological cycles of the land, and connecting the people of this ranching region to the diverse landscape.

WHY GRAZING?

Scott Soares, an Environmental Scientist with the California Department of Parks & Recreation (CDPR), uses grazing to control fire risk at HHSP. He also uses grazing to improve ecosystem function, including the water and mineral cycles that help extend the growing season for the grazier as well as improve the resilience of the land in the face of extreme weather. As grassland ecosystems evolved with grazing, Scott believes animal impact is needed to convert the energy of growing plants into soil-protecting litter and nutrients to feed soil microbes that in turn stimulate plant growth or break down dead plants that would otherwise oxidize. In dry years, the grazing manager at the site may slow the movement of the herd, keep some areas as drought reserves, or reduce stocking rates to avoid overgrazing. These strategies help assure that the cattle don’t create areas of bare ground which would shed water during the rainy season and create challenging conditions for plant growth.

WHO GRAZES?

In 1994, HHSP approached local grazier Joe Morris of Morris Grassfed to see if he would be interested in grazing cattle at the park; this partnership continues to this day. Through

five-year contracts awarded through a bidding process, Joe's contract includes a commitment to work on infrastructure and special management tasks for HHSP in exchange for a low-cost lease.

Joe provides contract grazing—which means he is paid to manage someone else's herd—specifically herds escaping long winters in western states. When the rain stops in California and the grass stops growing, the herds he manages are shipped to green pastures in Nevada, Idaho, and Oregon to finish the grazing season in other climates.

Joe was trained in the Savory-style of grazing (also called Holistic Planned Grazing) that favors long recovery periods for the plants and frequent moves of the herd. A detailed grazing plan helps him achieve his goal of creating a “longer green season” with associated benefits to the land, livestock, and people in partnership with the HHSP.

SUCCESSSES:

Joe works closely with Scott Soares from the C DPR. Scott's peers and supervisors at the department “absolutely, without a doubt” believe that Joe's managed grazing has been a success at HHSP. Monitoring shows a significant reduction in dry matter at the property as well as increased health for the salamander population, 80 bird species, and blue oak tree regeneration. Thanks to the results Joe has created with

his program, grazing has expanded to 1600 acres with further expansion anticipated in the years ahead.

CHALLENGES

- Finding a grazer willing to move animals every few days: “It is hard to find the kind of management we are looking for.”
- Expanding water infrastructure as the grazing area expands.
- This site experiences a range of annual precipitation, which results in varying levels of forage production.
- Adapting grazing to changes in the park priorities, including new areas open to hiking, horseback riding and mountain biking.

CHANGES & MONITORING

Scott's primary focus is on reducing fire risk and he tracks that risk by monitoring residual dry matter (RDM) each fall to gauge the effectiveness of grazing to reduce fuel loads. So far he has seen that grazing has successfully reduced RDM on each site where it was used.

Additional monitoring steps were also added to track overall land health. In 2016, transects were started to measure species composition, and Point Blue Conservation Science began intensive annual monitoring of soil carbon, species composition, and grassland birds. Photo monitoring was also recently added at set points that will be

Off Road Vehicles at Hollister Hills



Benefits of adaptive grazing



Reduced Fire Risk

Joe's grazing has successfully reduced fire risk on each site where it was used.



Neighbor Relations

Much of the grazed area abuts neighbors who prefer grazing to prescribed burning.



Amphibian Populations

Studies show grazing benefits California tiger salamander populations.



Efficiency & Cost Savings

Without grazing, Parks staff would spend considerable time and money mowing or burning.



Perennial plants

A visual inspection indicates increased perennial grass stands, plant diversity, and oak tree regeneration in sites with grazing.

monitored twice a year to see changes over time. It is too early to see measurable results from this recent monitoring.

For grazier Joe Morris, “the goal is to use grazing to convert photosynthesizing plants into soil carbon, biodiversity, beauty, high-quality visitor experiences, and additional resiliency of the landscape.”

Salamanders: Cattle ponds in the park provide healthier tiger salamander habitat by reducing vegetation density in the ponds where salamanders live. Research elsewhere has demonstrated that in the absence of disturbance, salamander breeding success declines as ponds get choked with vegetation.

Blue Oaks: These trees are rare in this area; grazing here has demonstrated that intensive grazing can be done without hurting blue oaks. Anecdotally, the propagation of blue oaks on this site has increased over time.

Perennial Plants: Anecdotally, there has been a “quantum leap in the number of perennial plants” found over the last few years; 120 different plant species are found in the grazed areas. In addition, the amount of litter laid down to retain moisture, build carbon in the soil and improve overall soil health and ecological function, has increased.

Birds: While grassland bird populations are in decline across California and the USA, Hollister Hills hosts several species of special concern, including the loggerhead shrike, the grasshopper sparrow, and an additional 80 bird species that have been found on the site. Looking ahead, Scott anticipates more monitoring in partnership with Point Blue Conservation Science and expanding the grazing onto more acreage over time. ■

Advice to other Agency Staff considering using grazing, from Scott Soares:

“If you can demonstrate specific goals, it makes a better case for why you want to use grazing on a site.”

“Success is measured on a long-term scale.”

“A successful partnership between grazier and manager is key; it is important to relay your goals to the grazier.”

Rancher Joe Morris with his herd. Credit: Thomas Leyde, BenitoLink



“It doesn’t cost us anything to implement the grazing”

—SCOTT SOARES



The Profiles in Land and Management Series features the work of innovative ranchers and land managers who are achieving economic and ecological benefits on working lands.

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