Salt River Flash Grazing Assessment 2021

Salt River Watershed Council Property

29 December 2021

Prepared by:
Humboldt County Resource
Conservation District
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BACKGROUND

The Salt River Ecosystem Restoration Project is a large estuary and riverine restoration project located in coastal Humboldt County, CA. The project has restored over 300 acres of tidal estuary marsh and over six miles of an aggraded river. The river corridor was excavated, reestablished floodplains, and replanted with native riparian species.

In the riverine portion of the SRERP, the local non-profit Salt River Watershed Council owns a 22-acre property that spans nearly 0.4 miles along the river corridor. Sixteen acres of this property is managed as a grazing pasture outside of the river corridor. In 2019, the Salt River Watershed Council developed a grazing management (demonstration) plan to manage the vegetation in the river corridor to assist with limiting vegetation growth between planted riparian and help to control invasive vegetative species.

The grazing management (demonstration) plan consisted of flash-grazing with a limited number of lightweight livestock (heifers) for two to three days across three acres of the river corridor. Flash-grazing would occur two to three times a year (spring, summer, and fall) within a temporary paddock which avoids any sensitive vegetative species. Grazing will be confined to the floodplain (Figure 1). No livestock access will be allowed to the top of the active bank immediately adjacent to the river channel. This plan was reviewed and approved by the California Coastal Commission.

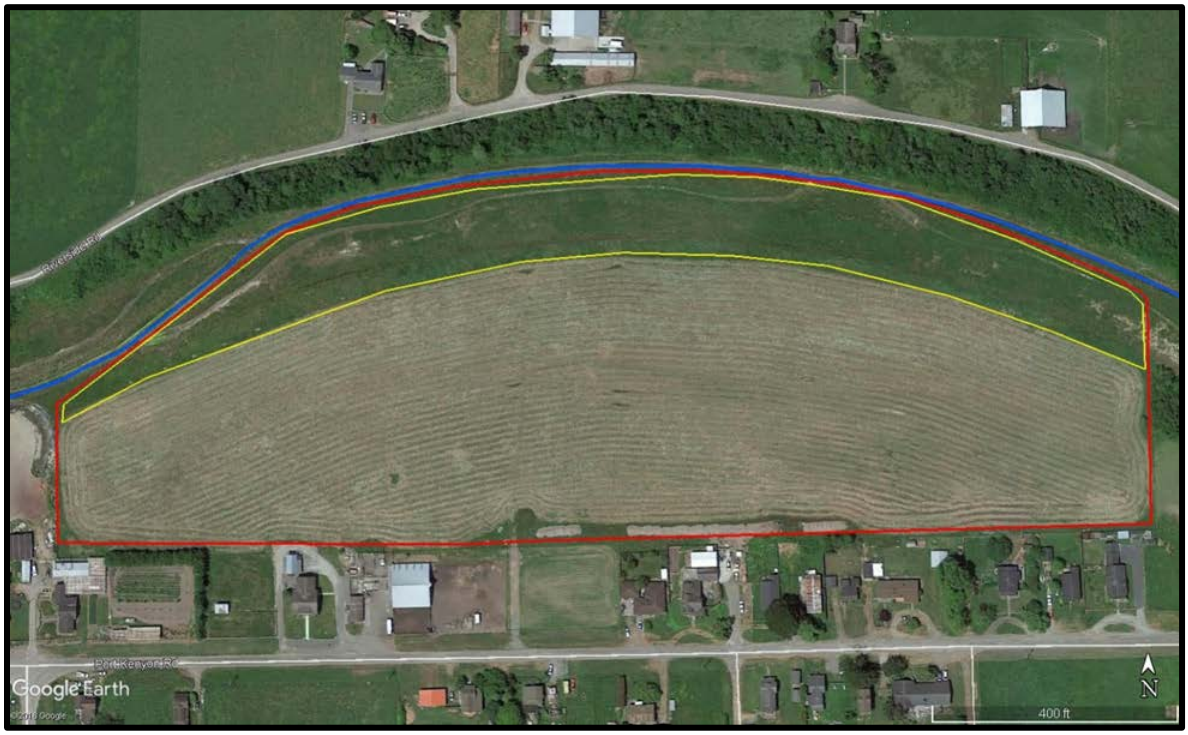


Figure 1. Aerial of Port Kenyon property and grazing management area. Areas are approximate.

2021 GRAZING MANAGEMENT

Though the 2019 grazing management plan indicated that flash-grazing would occur in 2020, due to the world pandemic beginning in March of 2020, implementation of the plan did not occur until 2021. Additionally, only one period of grazing occurred in the fall; spring and summer grazing periods did not occur. Modification of the grazing management plan was proposed by the Salt River Watershed Council's Board Chair, who was running the livestock on the property.

The modification of the grazing management plan consisted of the following: The three acre channel corridor area proposed for flash-grazing was divided in half into two separate paddocks to concentrate grazing efforts. Each paddock would be grazed consecutively. Each paddock was roughly one acre in size. Approximately 50 head of light weight livestock (approximately 1- to 2-year-old heifers) were allowed access to the paddock(s) from a larger pasture so grazing efforts were not as intensive (Figure 2). However, livestock were allowed to roam in and out of

the river corridor paddocks for up to eight days for each paddock (Figure 4). Grazing of the first acre began on September 1, 2021. The second acre was grazed beginning September 27th. The vegetation in the channel corridor consisted primarily of native bunch grasses (*Deschampsia cespitosa*) (Figure 3), invasive Reed Canary grass (Phalaris arundinacea), and native trees and shrubs such as Sitka spruce (*Picea sitchensis*), Twinberry (*Lonicera involucrata*), Pacific Willow (*Salix lucida*). Many of the larger trees and shrubs were unprotected from the livestock, though smaller plants were caged.

Figure 2. Lightweight livestock entering paddock on Day 1

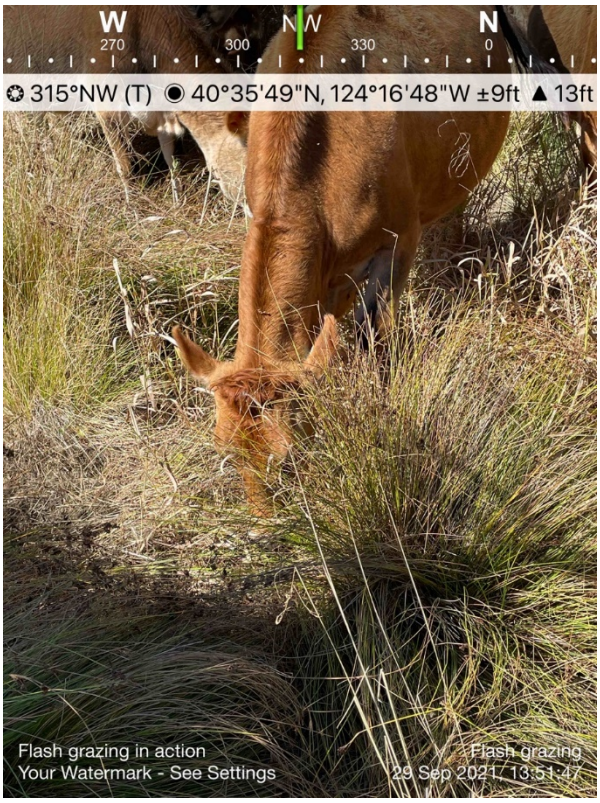


Figure 3. Livestock grazing around native bunch grass

Figure 4. Livestock in second paddock on Day 2

RESULTS OF THE 2021 GRAZING MANAGEMENT

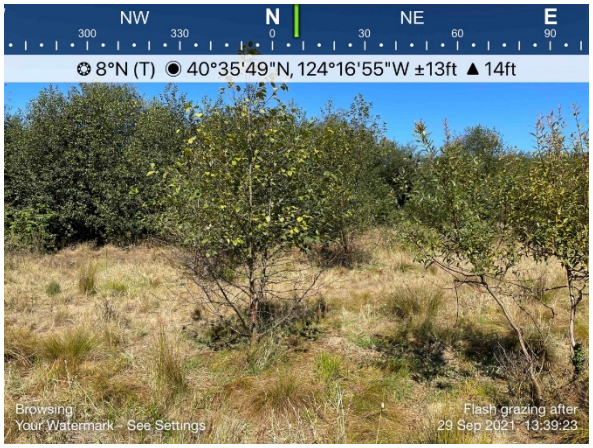
The vegetation on the river floodplain, prior to grazing, mainly consisted of up to 4.5' tall stalks of Reed Canary grass with individual native trees and shrubs emerging above (Figure 5 & 6).

Vegetation in the channel corridor paddocks is of poor vegetative forage for livestock. However, livestock endeavored to browse the area. During the September grazing period, the forage in the corridor paddock appeared to be past its prime and was primarily standing dry matter. The livestock grazed some of the green vegetation, effectively trampled down the stalks and debris of the invasive reed canary grass, and lightly grazed on the native bunch grass (Figures 7 & 8). Other planted native riparian, such as California rose (*Rosa californica*), was revealed through the grazing activity (Figure 9). It was noted that undergrowth beneath larger trees and shrubs was pushed and grazed down. Leaves and small branches of various species of trees were browsed. Two Pacific willows and a Sitka spruce had some bark stripped from the trunk but were not girdled (Figures 10 & 11). This behavior is unusual, however, since these are young cows, they tend to be curious and experiment with browsing opportunities.


Figures 5 & 6. Corners of the paddock prior to livestock grazing

Ultimately, the HCRCD grazing specialist and botanist felt that grazing in the paddocks met goals to reduce vegetation growth that inhibit planted native riparian as well as help control invasive species. However, if the same paddock and pasture access is retained for future grazing management, it is recommended that the days livestock have access to the paddocks be reduced to three to five days to limit curious browsing and impacts to planted native riparian. It is also recommended that the livestock producer ensure more frequent observation of livestock activities.

Further monitoring will continue in the floodplain. Tiles will be placed inside and outside the grazed paddocks in the river floodplain. The tiles will collect sediment and will provide information on whether removed or down vegetation affects the deposition of sedimentation across the floodplains during high water.



Figures 7 & 8. Result of livestock grazing in first grazed paddock. Vegetation primarily trampled around planted riparian.

Figure 9. California rose revealed after grazing management.

Figures 10 and 11. Pacific willow (left photo) and Sitka spruce (right photo) with bark stripped due to grazing activity.