

City of Rocklin

Grazing Plan



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INTRODUCTION

This Grazing Plan was developed from grazing plans of individual Open Space Preserves as part of the implementation of unified active management in the Open Space Preserves in the City of Rocklin. The City of Rocklin currently manages over 700 acres of Open Space according to the General Open Space Management Plan (GOSMP). This grazing plan shall apply to all current and future properties subject to the GOSMP.

In the absence of grazing, plant matter has the opportunity to accumulate and can adversely affect the habitat function of the Preserves. This accumulation of plant matter also increases the risk of detrimental fires. Grazing of the Preserve is an excellent way to reduce this accumulated plant matter, as well as provide management and control of a number of non-native, invasive plant species.

PRESERVE AREA DESCRIPTION

Location

The Preserves currently encompass over 700 acres, located within the City of Rocklin, California. The preserves correspond to portions of Sections 14 and 15 of Township 11 North, Range 6 East of the "Roseville, California" 7.5-minute quadrangle (U.S. Geological Survey 1967, Photo-revised 1987).

Habitat Description

The Preserves consist primarily of annual grassland, oak woodland, and riparian communities with scattered vernal pools in some Preserves.

There are several waters of the U.S. types that occur within the Preserves, including creeks, stock ponds, drainage swales, intermittent drainage, vernal pools, and seasonal wetlands.

Topography and Soils

Typical topography within the City of Rocklin, Placer County, California includes gently rolling to hilly topography with periodic pronounced slopes and flat floodplains. Elevations within these areas range from approximately 120 feet above mean sea level (MSL) to 350 MSL.

According to the *Soil Survey of Placer County, California Western Part* (U.S. Department of Agriculture, Soil Conservation Service 1980) there are several soil types found within the Preserves with a moderate to high potential for erosion. These soil types are: (145) Exchequer rock outcrop complex, 2-30% slopes; (152) Inks cobbly loam, 2-30% slopes; (153) Inks cobbly loam, 30-50% slopes; and (194) Xerofluvents, frequently flooded. Area susceptible to erosion will be monitored and may be fenced to preclude problems from developing.

GRAZING PLAN

Goals

There are several goals that can be accomplished through a successfully managed grazing program. For the City's Preserves the following goals have been established:

Goal One: Reduce the amount of accumulated plant matter to allow for better nutrient cycling. Much of the Preserve is an annual grassland community which is dominated by naturalized non-native annual grasses. Many of these grasses contain a high level of silica which does not easily break down readily thus causing a buildup of plant matter. This buildup of plant matter decreases the ability of new plants to germinate due to lack of sunlight penetrating through the dead plant matter (Marty 2005). Additionally, the increase in plant matter shortens hydrologic inundation periods of vernal pools thus reducing the vernal pool's suitability for native plants and animals (Marty 2005).

Goal Two: Improving endangered species habitat suitability. Several areas of the Preserves contain vernal pools. Vernal pools support a variety of plant and invertebrate species some of which are protected by the Endangered Species Act. Reducing the amount of vegetation, especially invasive vegetation, within and immediately adjacent to the vernal pools will improve the overall health of the vernal pools and provide more favorable conditions for the survival of the native plant and invertebrate species.

Goal Three: Invasive plant control. The removal of grazers from annual grassland communities often results in a decrease of plant diversity (Marty 2005). Non-native, invasive plants out compete native vegetation. Careful timing of grazing to target invasive plant populations can reduce competition between native and non-native plants.

Goal Four: Reduce the amount of accumulated plant matter present within the preserve to reduce fire fuel loads. Grazing can reduce fuel loads both through the ingestion and trampling action of the grazing animals (Nader et al 2007).

Roles and Responsibilities

City Staff/Property Owner

- Issuing grazing contracts and ensuring contracts include a copy of this Grazing Plan;
- Issuing a grazing permit per the Rocklin Municipal Code 6.36.050; and
- Working with the contracted grazer (Grazing Contractor) and contracted monitoring biologist (Monitoring Biologist) to ensure the goals of this Grazing Plan are met.

Grazing Contractor

- Notifying Monitoring Biologist and City Staff prior to initiation of grazing;
- Following the requirements and restrictions laid out in this Grazing Plan and in the grazing contract;
- Working with the Preserve Manager and Monitoring Biologist to determine appropriate grazing regimes;
- Installing grazing fencing;
- Protecting sensitive habitats during grazing; and
- Restricting grazing animals from specific areas if erosion is observed.

Monitoring Biologist

- Coordinating with Preserve Manager and Grazing Contractor regarding grazing regime;
- Conducting post grazing monitoring;
- Reporting any changes to this Grazing Plan to the Corps; and
- Summarizing results of grazing in the annual open space monitoring reports.

Stocking Rates and Timing

Due to the size and configuration of the Preserves, goats and/or sheep shall be utilized. Before the animals are brought on-site, City staff will meet with the Monitoring Biologist and grazing contractor to determine appropriate stocking rates and the length of time the grazing shall occur.

Grazing should occur prior to the fire season when there is a high availability of green forage (e.g., between November and June). The exact timing of grazing will be dependent upon site and weather conditions. Grazing should not be initiated without the approval of the Monitoring Biologist in coordination with the City and property owners.

During the first year of grazing on a site, a short-term, high intensity grazing regime will be used to encourage the grazing animals to graze down the less desirable thatch, in addition to that year's growth. The Grazing Contractor, with input from the Monitoring Biologist, will determine the stocking rate following the first season of grazing. The Grazing Contractor and Monitoring Biologist will meet two days after the initiation of grazing to evaluate the thatch levels and to determine whether the current stocking rate adequately meets the goals of this Grazing Plan.

The Monitoring Biologist will make the Grazing Contractor aware of the protected status of the Preserves, the goals of this Grazing Plan, and the requirement to preserve waters of the U.S. and riparian communities within the Preserves. The Preserve Manager will be responsible for ensuring that the Preserves receive an appropriate level of grazing pressure. Since grazing is used as a tool for long-term maintenance of the Preserve, the Preserve Manager, in consultation with the Monitoring Biologist and Grazing Contractor, may make changes to the

grazing regime. Any changes will be summarized in a letter to the Corps for approval. Future changes to the grazing regime may include, but are not limited to:

- 1) Excluding animals for one or more years from a Preserve (e.g., because of wildfire occurrences);
- 2) Excluding animals from specific areas of a Preserve to protect certain wetlands or areas with erosion potential;
- 3) Changes in stocking rate; and
- 4) Changes in grazing intensity.

The Monitoring Biologist and Grazing Contractor will monitor the Preserves for erosion resulting from grazing activities. Should erosion be observed, these areas may be fenced to prevent further erosion.

Water Sources and Supplemental Feed

The grazing animals will have access to water from various drainages and ponds within the Preserves. Supplemental feed and/or water will be supplied by the Grazing Contractor as necessary. Any supplemental feed and/or water will be placed away from preserved waters of the U.S. or any sensitive habitats. Placement of supplemental feed and/or water can also be used as a tool to encourage the animals to target a particular area. Supplemental feed will be “weed free” to prevent the introduction of invasive species.

Fencing

The Grazing Contractor will have the responsibility to make improvements to the Preserves to facilitate the grazing. Improvements may include the installation of fencing, gates and/or locks to facilitate the placement and removal of the animals. These responsibilities will be written into the grazing contract or lease.

Temporary grazing fencing will be installed by the grazing contractor. In some locations, temporary grazing fencing may be installed as close as 4 to 6 feet to the existing perimeter fencing and/or Preserve boundary. This will allow for regular maintenance to occur along the Preserve boundaries and to provide a setback from the development. The grazing contractor will determine areas where this offset is necessary.

Maintenance or upgrading of the existing fencing and gate to control grazing will be the responsibility of the grazing contractor under the terms of the grazing contract and must be approved by the City and/or property owner. Fencing will not be installed within any preserved or created wetland or stream feature.

Restrictions

At this time, grazing is planned to occur throughout the Preserve areas. Some exclusion fencing may be installed in portion of the riparian areas to preclude grazing of native plantings or seedlings. The Preserve manager as well as the Monitoring Biologist will work together to determine if site conditions warrant further restrictions to certain areas as grazing continues. Areas that may warrant exclusion in the future may include areas where erosion is possible, native plantings have been recently installed, or site conditions are where the animals will be unsafe.

Monitoring

In order to ensure that the management goals of grazing are being met, the Monitoring Biologist will assess the amount of accumulated plant matter to determine the effectiveness of the grazing effort and if any changes need to be made.

During the first regular monitoring visit after grazing animals have been removed, a visual assessment of the Preserves will be conducted. This monitoring will serve to evaluate the effectiveness of grazing to maintain accumulated plant matter to appropriate levels, as well as to identify any areas of potential overuse or damage. Monitoring will take place for several years, until a stocking rate that achieves the goals of managing the grassland is established. Every few years after the stocking rate is established, monitoring should be conducted to ensure that the goals presented in this Grazing Plan continue to be met. In addition, if specific areas within the Preserve appear to be overused or subject to erosion, temporary fencing will be placed around those damaged areas to restrict animal access. This fencing will remain in place long enough for that area to recover.

During the first monitoring visit of a Preserve, the Monitoring Biologist will establish eight photo monitoring locations. At least three of these locations will be permanent monitoring locations. The photo locations will be utilized to conduct an assessment of the amount of residual dry matter (RDM) on-site. The methodology described in the *Monitoring Annual Grassland Residual Dry Matter A Mulch Manager's Guide for Monitoring Success* by Wildland Solutions (2008) will be utilized. Additionally, vernal pool cover monitoring and notation of dominant vernal pool species will also be used to assess positive and negative impacts on vernal pools.

Finally, to meet the goals of the Grazing Plan, regular communication between the Preserve Manager, the Monitoring Biologist and the grazing contractor is imperative. Coordination of grazing practices with the other long-term Preserve management activities will enhance the overall long-term viability of the Preserves.

REFERENCES

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