SFPUC Alameda Creek Watershed Paloma (Grazing Unit 13) Alameda County, California

Hetch Hetchy
Regional Water System
Services of the San Francisco Public Utilities Commission

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February 3, 2026

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Table of Contents

Tables

Figures

Acronyms

AUM	animal unit month
AUY	animal unit year
BMPs	Best Management Practices
Cal-IPC	California Invasive Plant Council
CNDDB	California Natural Diversity Database
EDRR	Early Detection and Rapid Response
FR	Federal Register
GU	Grazing Unit
GU-13	Paloma
GUMP	grazing unit management plan
IPM	Integrated Pest Management
NNIP	non-native invasive plant
NRCS	Natural Resources Conservation Service
RDM	residual dry matter
RMP	Rangeland Management Plan
SFPUC	San Francisco Public Utilities Commission
USFWS	United States Fish and Wildlife Service
WMP	Watershed Management Plan

1. Introduction

1.1 Purpose of the Grazing Unit Management Plan

This grazing unit management plan (GUMP) outlines the existing conditions and rangeland management goals for the Paloma (Grazing Unit 13 [GU-13]) lease. This document establishes management expectations between the San Francisco Public Utilities Commission (SFPUC) and the tenant for the grazing unit and guides program operations and capital improvements to achieve the SFPUC's Rangeland Management Plan goals. This GUMP is consistent with and informed by the watershed-wide Rangeland Management Plan (RMP), the Alameda Watershed Management Plan (WMP), and the Water Enterprise Environmental Stewardship Policy in which SFPUC commits to proactively managing the watersheds in a manner that maintains the integrity of natural resources, restores habitats for native species, and enhances ecosystem function.

1.2 Rangeland Management Program

The SFPUC developed the Alameda Creek Watershed RMP to document the rangeland management program for livestock grazing applied across the SFPUC-owned and -managed grazing units of the Alameda Creek Watershed. The RMP establishes a rangeland management program that is consistent with plans and policies that apply to management of SFPUC watershed lands, as well as with current best practices in rangeland management.

The goals of the SFPUC rangeland management program are to:

- Protect and improve water quality;
- Preserve and enhance the health of ecological systems;
- Reduce the threat of wildland fire by decreasing fuel densities;
- Adaptively manage the RMP lands based on new information and conditions;
- Provide a basis for consistent management of the RMP lands; and
- Support an economically and ecologically sustainable grazing operation.

1.3 Rangeland Management Plan Objectives

To achieve these goals, the RMP outlines broad management objectives to protect water quality and natural resources. These objectives include the following:

- Maintain sufficient vegetative residual dry matter (RDM) to protect soil and water quality.
- Minimize negative impacts to sensitive aquatic habitats such as riparian and spring systems.
- Implement rangeland management practices that preserve and protect special-status species and their habitats.
- Maintain or improve native species biodiversity.
- Monitor and control non-native invasive plant (NNIP) and wildlife populations.
- Reduce the risk of introduction or spread of plant diseases, particularly from human activities.

- Reduce sediment sources to riparian habitats associated with road systems and insufficient vegetative cover.
- Reduce risk of introducing livestock- and wildlife-related pathogens into waterways of the RMP lands.

The RMP also includes the following objectives to promote effective administration of the grazing units:

- Use the results of monitoring and routine inspections to adaptively manage the RMP lands.
- Effectively communicate and implement rangeland management goals and expectations with the RMP grazing tenant(s).
- Consult with SFPUC rangeland staff and RMP grazing tenant(s) during the development of any policies that would change the management of RMP lands.
- Implement cost-sharing rangeland improvement projects between the SFPUC and its grazing tenant(s) in the RMP lands.
- Use grazing to manage wildland fuel loads.

2. Lease Overview

2.1 Paloma Lease, Grazing Unit 13

The Paloma lease covers Grazing Unit 13 (GU-13), which consists of approximately 157 acres west of the Interstate 680/Highway 84 interchange in the northern portion of the SFPUC Alameda Creek Watershed grazing unit lands (Figure 1). GU-13 is bounded by Interstate 680 to the east, Pleasanton Sunol Road to the west, and Highway 84 to the south. The hilltop of the grazing unit has cellular phone communication tower installations and several large water tanks lower on the hill that provide water to the town of Sunol.

2.2 Environmental Conditions

The Paloma grazing unit includes one large prominent hill and a secondary lower hill to the north that is bisected by Vallecitos Creek. Elevation in GU-13 ranges from 243 feet to 470 feet above sea level. The moderate hillslopes predominantly have a southwest and northeast aspect, with the northeast slopes a little steeper than the southwestern slopes. Vallecitos Creek, an intermittent to perennial creek, meanders through the grazing unit, flowing from east to west toward Arroyo de la Laguna. Vallecitos Creek receives augmented flow releases from the Alameda County Flood Control Agency for the purpose of delivering added flow to Alameda Creek so it can be diverted for groundwater recharge.[1]

2.3 Easements

Metro PCS, AT&T, Nextel of California, Sprint, and Verizon telecommunications companies have lease permits from the SFPUC to operate and maintain their infrastructure located at the top of the Paloma hill. In addition, the East Bay Regional Park District has a lease permit to

[1] Gunther, A.J., J. Hagar, and P. Salop, An assessment of the potential for restoring a viable steelhead trout population in the Alameda Creek Watershed. Alameda Creek Fisheries Restoration Workgroup, February 7, 2000.

operate and maintain a police radio base station on the hill. These entities routinely access the road to the top of the hill to operate and maintain their infrastructure.

2.4 Managed Riparian Areas

The grazing unit also includes a Managed Riparian Area associated with Vallecitos Creek shown in Figure 2. Originally adopted in the 1997 Grazing Resources Management Plan and the 2001 Alameda Watershed Management Plan, Managed Riparian Areas are buffers around streams that are restricted from grazing to protect water quality for both habitat and source water protection. The SFPUC's Watershed Resources Manager may approve seasonal prescribed grazing in Managed Riparian Areas to protect the watershed and natural resources, for example to reduce wildfire risk, control non-native invasive plants, and support special-status species.

2.5 Grazing Operation

As of 2016, GU-13 is grazed seasonally from approximately November to June with heifers and a few bulls. There is only one field in the lease and the cattle are not rotated.[2]

2.6 Stocking Rates

Estimated grazing capacity and stocking rates for the Paloma grazing unit were determined using Natural Resources Conservation Service (NRCS) soil productivity rates adjusted by vegetative cover and a fall RDM target of 1,000 pounds per acre. The baseline grazing capacity for the Paloma grazing unit is 108 AUMs and will be adjusted annually by the SFPUC based on forage productivity, infrastructure updates, RDM levels, and vegetation condition.

Recorded stocking rates for the lease from 1998 to 2015 averaged approximately 201 animal unit month (AUM), or 0.8 acre per AUM (9.3 acres per animal unit year [AUY]).

3. Biological Conditions

3.1 Habitat Conditions

The Paloma grazing unit is dominated by non-native grasslands dotted with coast live oaks, with Vallecitos Creek running through the center. Riparian trees include mature sycamore, willow, buckeye, and elderberry. There are some oak recruits in the riparian corridor, but it is heavily incised in places and eroded with cattle trails. Large willows have died and toppled in several places. The controlled flow regime may be detrimental to the health of the riparian vegetation in Vallecitos Creek. Himalayan blackberry (*Rubus armeniacus*) and poison hemlock (*Conium maculatum*) are extremely thick in some places. Native snowberry is also present onsite, along with some buckeye seedlings. Small oaks on the upper banks of the creek are stunted from continuous browsing, and oaks are similarly stunted along the road.

A sheer slump is eroding into the riparian corridor near the center of the grazing unit. A small stand of sage scrub covers another steep slope and may contribute to its stabilization. Some native forbs, including yarrow and gum plant, occur on the upper slopes. Invasive milk thistle patches cover the understories of large oaks where cattle are likely loafing. Old tree cages are

[2] Correia, D. 2015. In person communication with former URS Rangeland Ecologist Dina Robertson and SFPUC Sheep Camp Creek Lease grazing tenant David Correia.

present onsite and some are now empty. There is a younger oak stand (20 to 50 years old) near the top of the hill.

3.2 Special-Status Species

The species known to occur in the grazing unit that are subject to regulation by the state of California and the federal government are listed in Table 1. Although there is only a small area of shrub habitat likely to support the Alameda whipsnake (*Masticophis lateralis euryxanthus*), the Paloma grazing unit is located within the Niles Canyon-Sunol Corridor (Recovery Unit 7) proposed by the United States Fish and Wildlife Service (USFWS)[3] to establish connectivity between the Alameda whipsnake recovery unit on Hayward-Pleasanton Ridge (Unit 3) and the Sunol-Cedar Mountain Recovery Unit (Unit 5). Vallecitos Creek is within the limit of anadromy for rainbow trout/ steelhead – central California coast Distinct Population Segment (*Oncorhynchus mykiss irideus*). The species has not been documented in the grazing unit.

Table 1 Special-status Species Observed in Paloma (GU-13)

Common Name	Scientific Name	Listing Status[1]
Wildlife/Fisheries		
Alameda whipsnake	*Masticophis lateralis euryxanthus*	FT, ST
Western pond turtle	*Actinemys marmorata*	FPT, SSC
Plants		
Narrowleaf milkweed	*Asclepias fascicularis*	Host plant for the FPT monarch butterfly

[1] Listing Status

California Natural Diversity Database [CNDDB], "Special Animals List," California Department of Fish and Wildlife, Sacramento, CA, July 2025

Federal Status:
FT = Federally listed as threatened
FPT = Federally proposed for listing as threatened
Western pond turtle is proposed to be listed as threatened as of October 2023; pending finalization (88 Federal Register [FR] 68370)
Monarchs are proposed to be listed as threatened as of December 2024; pending finalization (89 FR 100662)

California (State) Status:
ST = State listed as threatened
SSC = California Species of Special Concern

3.3 Native Vegetation Objectives

The Alameda Watershed Management Plan outlines general native vegetation goals that include the following:

- Protect, conserve, and enhance wetlands and riparian communities.
- Protect and restore unique, local, and/or indigenous plant species to maintain biodiversity and specialized habitat values.
- Manage grasslands and rangelands to balance, wherever possible, wildlife habitat values, the restoration of native perennial species, and the reduction of fuel loads and noxious weeds.

[3] U.S. Fish and Wildlife Service, Draft Recovery Plan for Chaparral and Scrub Community Species East of San Francisco Bay, California, Region 1, Portland, OR, xvi + 306 pp., 2002.

- Manage shrub communities to reduce fuel loads, prevent soil erosion and sedimentation, improve wildlife habitat access and use, and control invasive plants.
- Manage woodlands and forests to maintain healthy, vigorous, and diverse stands with a multiplicity of age and size classes.

Specific native vegetation strategies that apply to this grazing unit are listed in Table 2.

Table 2 Objectives and Strategies for Managing Native Vegetation

Objectives from the RMP	Grazing Unit Strategy
OBJECTIVE 1: Maintain sufficient RDM to protect soil and water quality.	• Evaluate options to address erosional features; consider temporary fencing and planting to stabilize slopes. • Allow sufficient time for vegetation to recover prior to resuming grazing.
OBJECTIVE 2: Minimize negative impacts to sensitive aquatic habitats such as riparian and spring systems.	• Add tank and trough system to distribute cattle. Minimize trampling and herbivory along Vallecitos Creek by fostering oak recruitment (shade) in the uplands and redistributing cattle water and minerals.
OBJECTIVE 4: Maintain or improve native species biodiversity	• Increase recruitment of oak and sycamore trees by caging seedlings to protect them from browsing.

RMP = Rangeland Management Plan

3.4 Non-Native Invasive Plants

The SFPUC's Integrated Pest Management (IPM) program focuses on:

- Protecting rangeland productivity by reducing NNIPs that negatively impact forage quality; and
- Protecting high value habitat and ecosystem services by reducing the introduction or spread of NNIPs and plant pathogens.

A reconnaissance-level survey of NNIP species was conducted in 2009 and 2020 in the watershed.[4] This survey was spatially limited to select areas (along roads and other places more easily reached by foot) and not all species were identifiable at the time of the surveys. In 2025, SFPUC staff conducted a survey to update occurrences and priorities for management. Table 3 lists NNIPs identified in the grazing unit during the 2009 and 2020 surveys, the 2025 staff survey, and discussions with the current tenant and SFPUC grazing manager. Species detections noted during periodic site visits may or may not have coincided with the optimal timing to identify certain NNIP species. The table also includes the California Invasive Plant Council (Cal-IPC) rating and the invasion curve level.[5] The SFPUC prioritizes NNIP

[4] Nomad Ecology, *Non-indigenous Plant Species Inventory and Mapping Alameda Watershed, Alameda and Santa Clara Counties, California*, Prepared for the SFPUC, 2009; and Nomad Ecology, *2020 Alameda Watershed Invasive Plant Report*, Prepared for the SFPUC, 2020.

[5] Department of Primary Industries, *Invasive plants and animals: policy framework*, Victoria Department of Primary Industries, Melbourne, Australia, 2010.

management actions (i.e., prevention, eradication, or containment) based on invasion curve levels 1 through 3, which depict the area infested over time.

GU-13 contains several species of NNIPs, including substantial patches of stinkwort (*Dittrichia graveolens*), Himalayan blackberry, and poison hemlock throughout the Vallecitos Creek riparian corridor. Medusahead (*Elymus caput-medusae*) and yellow starthistle (*Centaurea solstitialis*) also occur in various upland locations across the grazing unit. The proximity to the Highway 84, Pleasanton Sunol Road, and Interstate 680 provides an ongoing potential seed source from which NNIPs could spread.

Table 3 Non-Native Invasive Plants Managed in Paloma (GU-13)

Common Name	Scientific Name	GU-13 Invasion Curve Level[1]	Cal-IPC Rating[2]
Bermuda buttercup	*Oxalis pes-caprae*	1	High
Cape ivy	*Delairea odorata*	1	Moderate
Fennel	*Foeniculum vulgare*	2	High
Harding grass	*Phalaris aquatica*	1	High
Himalayan blackberry	*Rubus armeniacus*	3	High
Jubata grass	*Cortaderia jubata*	1	Limited
Medusahead	*Elymus caput-medusae*	3	Moderate
Oleander	*Nerium oleander*	1	none
Poison hemlock	*Conium maculatum*	3	Moderate
Purple starthistle	*Centaurea calcitrapa*	1	Moderate
Stinkwort	*Dittrichia graveolens*	2	Moderate
Tree of heaven	*Ailanthus altissima*	1	Moderate
Yellow starthistle	*Centaurea solstitialis*	3	High

IPM = Integrated Pest Management
SFPUC = San Francisco Public Utilities Commission
[1] Non-Native Invasive Plants (NNIP) Management Approach by Level on Invasion Curve:
1. Prevention: SFPUC IPM will conduct Early Detection and Rapid Response (EDRR) surveys.
2. Eradication: SFPUC IPM will treat to eradicate.
3. Containment: SFPUC IPM will treat to protect high value resources or to eradicate isolated populations.

[2] California Invasive Plant Council (Cal-IPC) ratings (Cal-IPC 2024) rate NNIPs based on dispersal rate and environmental impact (https://www.cal-ipc.org/plants/inventory/).

To help reduce NNIPs, expectations of tenants include the following:

- Attend an annual SFPUC training regarding NNIP Best Management Practices (BMPs).
- Report to the SFPUC any new observations of fennel (*Foeniculum vulgare*), stinkwort, or barb goatgrass (*Aegilops triuncialis*).
- When cattle are transported onto the grazing unit, notify the SFPUC and where feasible implement appropriate BMPs such as:
    - Provide weed-free forage or pelletized feed (approved by the SFPUC) to cattle for at least three days before transport onto the grazing unit
    - Utilize a transitional pasture within the grazing unit

- Decontaminate vehicles and equipment entering the grazing unit according to SFPUC's decontamination policy

3.5 Nuisance Wildlife

California ground squirrel (*Otospermophilus beechyi*) populations in the grazing unit have multiplied and become problematic, particularly in the northwest and northeastern portions of the grazing unit. Wild pig disturbance or sightings are not common for this grazing unit.

4. Rangeland Infrastructure

A detailed grazing infrastructure survey was conducted from 2013 to 2015 in the watershed (Figure 2). Staff updated infrastructure data in 2025. The number, condition, and location of various types of infrastructure such as barns, corrals, springs, and troughs were assessed and are summarized in this section. This section of the GUMP also outlines recommendations for rangeland improvements.

4.1 Roads

Roads – GU-13 has 1.2 miles of vehicle-accessible paved and unpaved road. Primary access to the southern portion of the grazing unit is via a gate off Pleasanton Sunol Road. There is a single paved road to the water tanks and communications infrastructure at the top of the hill. Primary access to the portion of the grazing unit north of Vallecitos Creek is via an unimproved dirt road from Pleasanton Sunol Road. The gate entrance is located just north of Vallecitos Creek.

Recommendations – The current access to GU-13 via Pleasanton Sunol Road poses a safety concern. A new gate is needed farther south at the Y intersection of Pleasanton Sunol Road and Highway 84 to provide safer access for moving cattle in and out of the grazing unit.

4.2 Fences

Fences – New perimeter fencing was installed in 2009 on the southern and western grazing unit boundaries. The fences are well maintained and in good condition around the remainder of the grazing unit boundary. There is no cross fencing.

Recommendations – The perimeter fence line appears to be in fair condition but should be routinely checked and promptly repaired before cattle are brought onto the grazing unit, and under tree canopies following large storm events. Ongoing, routine maintenance is completed by the SFPUC and the grazing tenant.

4.3 Corrals and Barns

Corrals and Barns – There is a corral in the southwest corner of the lease in moderate condition.

Recommendations – Gates and corrals should be periodically checked, adjusted, lubricated, and painted as needed. Improvements to the existing corrals include rebuilding a portion of the fence damaged by a contractor. Ongoing, routine maintenance is completed by the SFPUC and the grazing tenant.

4.4 Water Sources

Water Sources – GU-13 does not contain any ponds or springs. Vallecitos Creek used to be perennial but in the last five years is dry most of the year due to upstream water diversions. A trough located in the center of the lease adjacent to the Sunol water tanks has recently been installed to provide cattle water, augmenting the reduced flow in Vallecitos Creek.

Recommendations – Water developments on GU-13 will help reduce impacts to Vallecitos Creek and encourage cattle to distribute more evenly and utilize forage. A tank should be installed at the top of the hill, and three troughs should be distributed across the grazing unit.

5. Grazing Unit Management

This GUMP outlines the existing conditions and management goals for the Paloma lease to guide the long-term rangeland management of the grazing unit. Annual monitoring, inspections, and tenant meetings will be used to adapt the management based on seasonal variation and rangeland health. The SFPUC will conduct annual inspections of each grazing unit to evaluate infrastructure condition, rangeland health, and biological considerations relative to the goals of the RMP. In addition, the SFPUC will conduct rangeland monitoring, including periodic composition monitoring and RDM monitoring in specified plots. The annual inspection and monitoring data will be summarized to share with the tenant and inform the Annual Operating Plan.

Each year, the SFPUC Rangeland Management Team will meet with the tenant to review the rangeland condition, document issues, and discuss goals for the grazing unit. The Rangeland Management Team includes the Rangeland Manager, the Watershed Resources Manager, the Senior Integrated Pest Management Specialist, the Senior Biologist, and the Watershed Forester. Based on this discussion, the SFPUC will develop an Annual Operating Plan that outlines specific management objectives for the following year. The Annual Operating Plan will document current monitoring and rangeland assessment data, outline stocking rates based on forage production and rangeland condition, and summarize annual management objectives for grazing infrastructure improvements, Managed Riparian Areas, NNIP management, and environmental stewardship. The SFPUC will prioritize investments in infrastructure and operations based the RMP goals and conditions in the grazing units across the watershed.

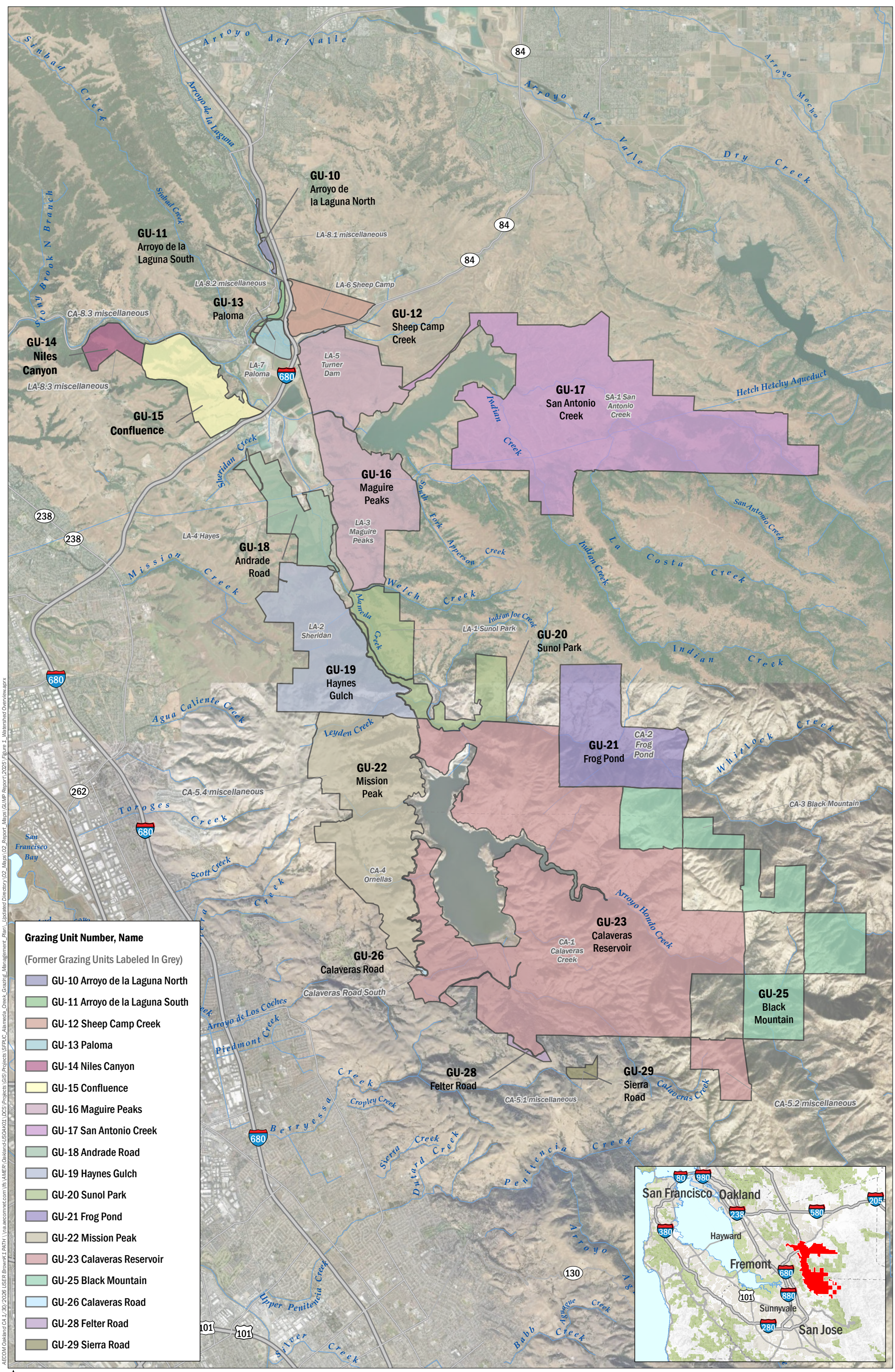

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Figure 1: SFPUC Alameda Creek Watershed Grazing Unit Overview

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Feet

SFPUC Grazing Unit Boundary
Managed Riparian Area
Fence
Unpaved road
Intermittent stream

Grazing Infrastructure
Corral
Trough (non-functioning or unknown)

Sources: AECOM, 2025; ESRI Imagery, 2025; SFPUC, 2025; Rangeland Conservation Science, 2025.

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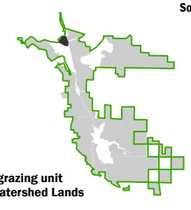

Location of grazing unit within SFPUC Watershed Lands

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Figure 2: GRAZING UNIT 13 PALOMA

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