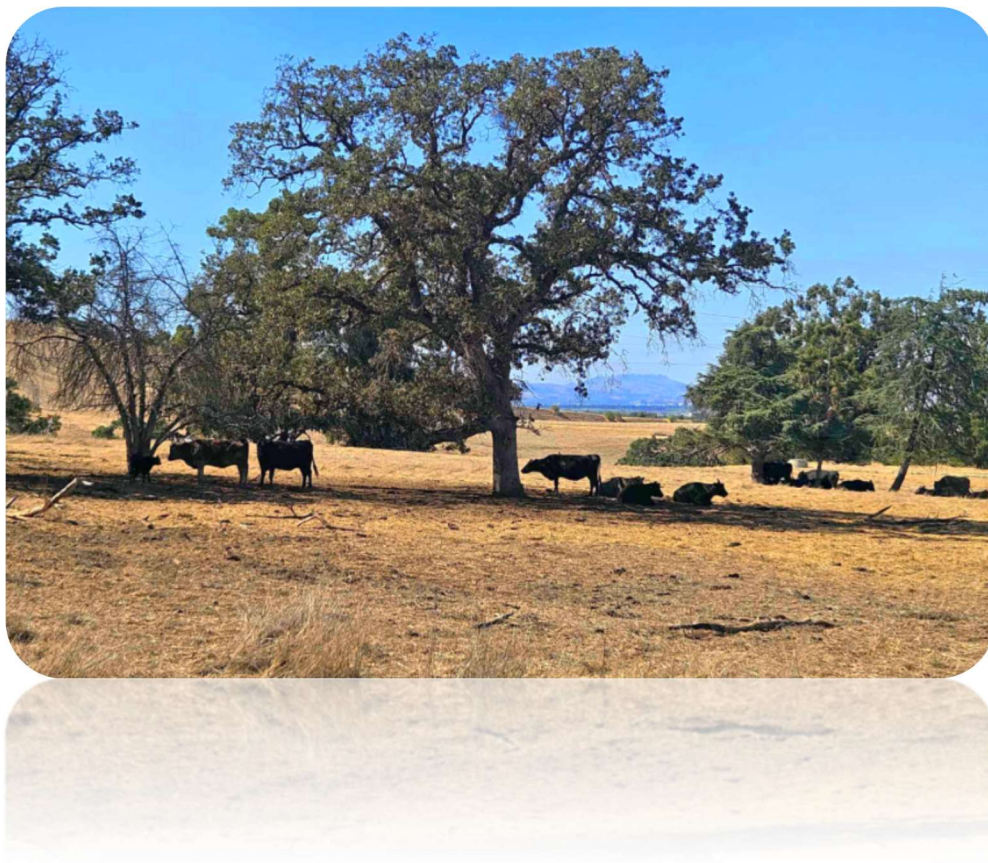


Sycamore Grove Park

Upper Livestock Grazing Management Zone

Fall RDM Monitoring Report - 2025



PREPARED FOR:

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CRM #M-100
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BACKGROUND:

The Livermore Area Park and Recreation District (LARPD) originally acquired the 364-acre Sycamore Grove Park property in 1975 and later expanded in 1999 and 2015 to include a total of 847-acres. Sycamore Grove Park (Park) is located at 1051 Wetmore Road on the southern edge of the town of Livermore in Alameda County, California. Throughout the years, the primary focus of the Park has been to provide low-intensity public recreation opportunities including hiking, biking, and equestrian use while working to conserve and enhance natural resource values within the Park. Natural resource objectives prioritized by LARPD include reducing the presence of Medusahead, mitigating for wildfire by reducing fine fuels, and enhancing habitat for special status wildlife species including the California tiger salamander (CTS) and California red-legged frog (CRLF).

While the Park property was historically grazed with livestock prior to 1975, livestock grazing has not occurred on the property since the LARPD acquisition. LARPD has conducted controlled burns annually on upper portions of the Park. In an effort to more efficiently achieve the natural resource objectives within the Park, LARPD has opted to commence grazing with beef cattle on the upper portion of the Park, encompassing an area of approximately 400-acres (Figure-1). Grazing within the Park will adhere to recommendations and prescriptions in a Grazing Management Plan prepared by Lisa Bush, California Certified Rangeland Manager, in 2010. LARPD recently installed new fencing and gates to accommodate livestock grazing and entered into a grazing lease agreement with Flynn Road Ranches to graze cattle in the Park beginning in April of 2025.

GRAZING MANAGEMENT GOALS & OBJECTIVES:

In April of 2025 livestock grazing was reintroduced to the Park to assist in meeting the resource and vegetation management objectives prescribed in the Grazing Management Plan (GMP) (Bush, Lisa. 2010). Grazing Management Goals and Objectives identified in the GMP include:

- Goal 1: Reduce Medusahead area coverage.
 - Objective 1a: Reduce seed output of Medusahead using high-intensity, short-duration grazing in spring as soon as the flag leaf (the last leaf to emerge before the flower head) thickens.
- Goal 2: Improve conditions for native grasses and wildflowers.

- Objective 2a: Provide seasonal grazing, allow a non-grazing period each year during which native perennial grasses can develop carbohydrate reserves and recover from grazing impacts.
- Objective 2b: Provide grazing during the rapid spring growth period to reduce the canopy height of, and competitive ability of, non-native annual grasses.
- Objective 2c: Provide grazing to prevent thatch buildup and create small openings, exposing soil for germination and growth of small-statured flowers.
- Goal 3: Improve habitat conditions for CTS.
 - Objective 3a: Provide grazing to encourage ground squirrel colonization in non-high use public areas.
- Goal 4: Improve habitat conditions for CRLF.
 - Objective 4a: Allow livestock partial access to all ponds that provide habitat or potential habitat for CRLF, to ensure a mix of emergent vegetation and open water.
- Goal 5: Reduce long-term and short-term fire hazard.
 - Objective 5a: Prevent brush invasion into grasslands by annual grazing.
 - Objective 5b: Reduce wildfire by slowing its spread, shortening flame length, and reducing fire intensity by significantly reducing herbaceous fire fuels through annual grazing.

As part of the grazing management on the property, annual rangeland monitoring is required to ensure that grazing activity is effective and forage levels remain within the prescribed, target Residual Dry Matter (RDM) standards. RDM monitoring also allows the grazing operator an opportunity to assess the efficacy of livestock grazing and to make adaptive management decisions in subsequent grazing seasons to more accurately meet the prescribed forage standards. RDM monitoring and rangeland assessments should be conducted in the fall of each year, prior to the first fall/winter rainfall (ideally in late September or early October). In addition to fall RDM monitoring, a spring phytomass assessment is required to determine annual forage production estimates.

Recommended RDM standards in the grazing management plan, and dually noted within the grazing lease agreement between LARPD and Flynn Road Ranches, require:

“Grazing shall be conducted so as to leave standing no less than an average of 800 pounds per acre of residual dry matter (RDM) on the Property throughout the grazing season, as determined by the Lessor. Excluded from the RDM calculations are pastures that are burned, roads and rock outcroppings. Notwithstanding the average RDM requirement set forth in the paragraph, in no event shall the Lessee permit grazing that leaves at the conclusion of a Grazing Season less than 400 pounds per acre RDM on any portion of the Property. Failure to meet the average of 800 pounds per acre RDM or the minimum of 400 pounds per acre on any portion of the Property shall constitute overgrazing.”

[illegible]

2025 RANGELAND RDM MONITORING METHODS:

The Fall 2025 RDM monitoring is the first rangeland assessment to occur on the Sycamore Grove property following the reintroduction of livestock grazing. Koopmann Rangeland Consulting strategically identified five locations within the grazed pasture to assess forage conditions prior to the commencement of grazing (Monitoring Points 1-5 identified below). These five locations represent the various terrain and vegetation types within the grazing parcel. The five monitoring points should be repeated annually for RDM measurements and used as photo-point monitoring to visually compare RDM levels from year to year and to identify long-term trends within the grazing parcel.

Methods used to determine RDM levels within the Sycamore Grove grazing pasture in 2025 were ocular estimations in combination with “clip and weigh” measurements of dry weight forage. The five monitoring points established within the Sycamore Grove grazing pasture are identified below and shown on the map in Figure-2:

Monitoring Point-1:

- Coordinates: 37°37'57.4"N, 121°46'31.0"W
- Aspect: Northwest
- Elevation: 449 feet
- Pre-Grazing Photo Date: 08 Apr 2025



Monitoring Point-2:

- Coordinates: 37°38'31.0"N, 121°51'22.0"W
- Aspect: North
- Elevation: 607 feet
- Pre-Grazing Photo Date: 08 Apr 2025



Monitoring Point-3:

- Coordinates: 37°37'30.7"N, 121°46'31.0"W
- Aspect: North
- Elevation: 817 feet
- Pre-Grazing Photo Date: 08 Apr 2025



Monitoring Point-4:

- Coordinates: 37°37'41.2"N, 121°46'54.1"W
- Aspect: North
- Elevation: 528 feet
- Pre-Grazing Photo Date: 08 Apr 2025



Monitoring Point-5:

- Coordinates: 37°37'38.6"N, 121°47'09.2"W
- Aspect: Northwest
- Elevation: 525 feet
- Pre-Grazing Photo Date: 08 Apr 2025



Clip and Weigh

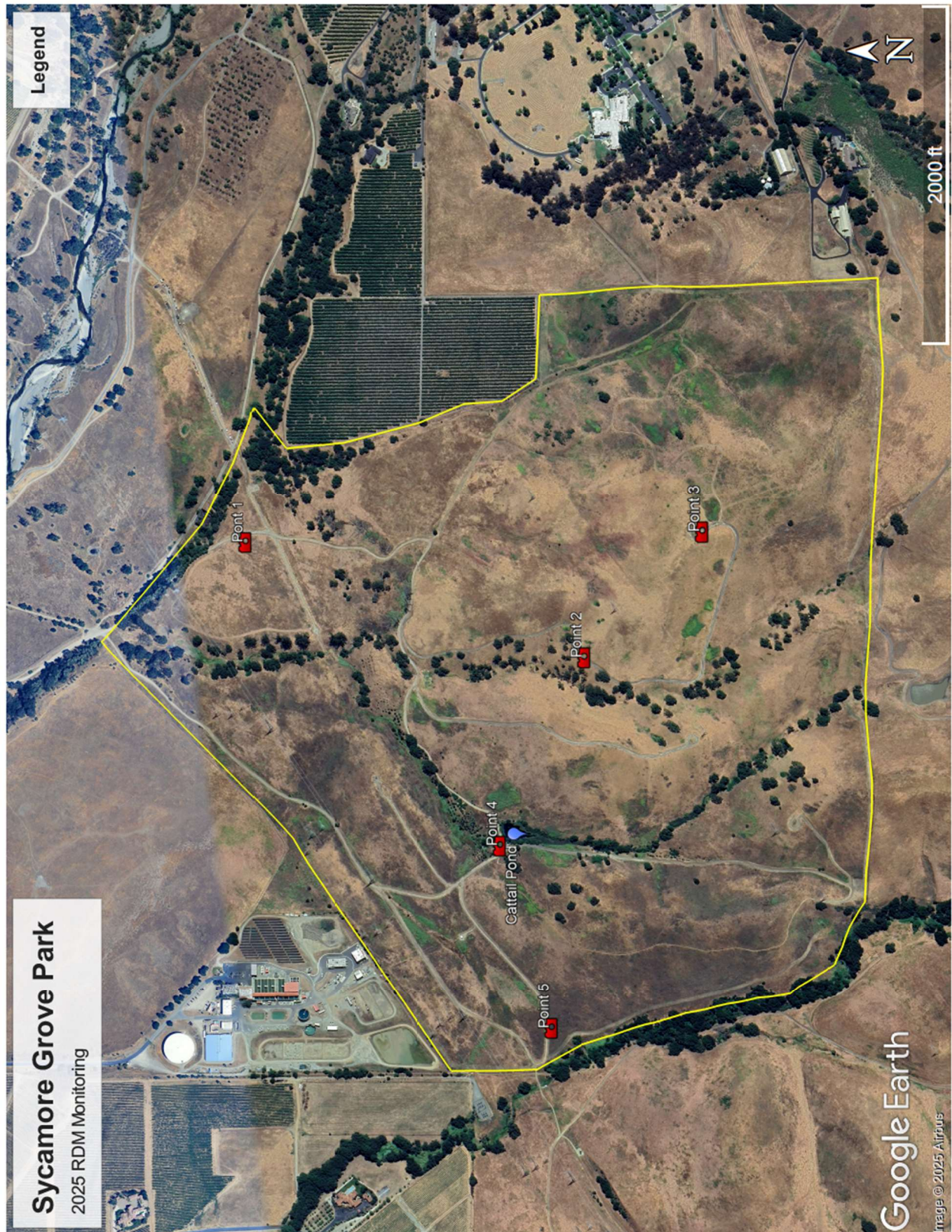
The “clip and weigh” method we implemented to determine RDM levels consists of several steps:

1. **Define a sample area:** A standard-sized hoop or frame is used to define a consistent area for sampling. The specific size, like 1.00 square feet, simplifies the math for scaling up to a per-acre measurement.
2. **Clip vegetation:** All plant material within the hoop is clipped as close to the ground as possible. Only plants with roots inside the hoop are included.
3. **Weigh the sample:** The clipped material is placed in a bag and weighed. The weight of the bag is subtracted from the total.
4. **Repeat sampling:** The hoop is moved to several other locations within the same pasture or "key area," and the clipping and weighing process is repeated. Averaging the weights across these multiple samples provides a more accurate representation of the area.
5. **Dry and reweigh (optional for greater accuracy):** To calculate the exact dry matter percentage, the clipped material can be dried in an oven and weighed again. This removes the moisture content from the calculation, resulting in a highly precise measurement. *The Sycamore Grove forage samples were collected at the end of summer resulting in naturally dry forage. As such, we did not oven dry and re-weigh samples.*
6. **Calculate yield:** The average weight from the samples is used to estimate the overall forage production per acre. For example, using a 1.00 square foot hoop, the weight in grams is multiplied by a conversion factor to estimate pounds per acre.

Ocular (Visual) Estimation

Ocular (visual) estimation of RDM involves visually estimating the amount of dried grass (RDM) left on the ground at the conclusion of the grazing season by comparing the area to reference points. In this case, we used our “clip and weigh” points as a reference to calibrate our eyes to more accurately determine RDM across a broad landscape. Ocular RDM estimation are less accurate than the “clip and weigh” method but are more time efficient and provide a landscape level assessment of forage conditions. Based on our ocular estimates we were able to develop an RDM map (Figure-3) showing estimated RDM levels across the entire grazing unit.

Figure-2: Sycamore Grove Rangeland Monitoring Point Locations



The 2024-2025 grazing season extends from November 1, 2024 through October 31, 2025; however, grazing did not commence on the Sycamore Grove park until late April of 2025. The total Animal Unit Months (AUM) stocking of the Upper Sycamore Grove Park grazing pasture for the 2024-2025 grazing season was 415.87 AUMs. The below table shows the stocking rate and pasture rotation for the 2024-2025 grazing season.

Ranch Location: LIVERMORE, CA Date: 2024-2025 SEASON

2024-2025 PRECIPITATION & FORAGE PRODUCTION:

The Sycamore Grove property, absent from grazing for decades, boasted an abundance of old forage and a dense thatch accumulation at the commencement of grazing in April 2025. The 2024-2025 winter provided well below average rainfall for the region (14.68" of rainfall compared to a historic average of 20.00"). While precipitation was below average, the timing of the rainfall coupled with above average seasonal temperatures led to an above average forage production/growth year.

2025 RDM MONITORING DATA – UPPER SYCAMORE GROVE:

RDM data was collected utilizing “clip and weigh” measurements as well as ocular estimation to determine standing dry forage. RDM assessments were conducted at the monitoring point with consideration given to surrounding terrain, within immediate eyeshot, to best estimate RDM levels. Monitoring was conducted on September 19, 2025. Overall livestock distribution and forage utilization was fairly uniform across the entire pasture with all RDM measurements falling within the prescribed target RDM range. Forage levels appeared to be lower near Cattail Pond and the northern flats, which is to be expected due to high traffic from cattle watering at the pond and the easier to access terrain. The southern portion of the grazing pasture, furthest from the water trough, received lower grazing use and had higher RDM levels. A fenced enclosure area just south of Cattail Pond was ungrazed and RDM levels were well above the prescribed RDM standards outlined in the Grazing Management Plan.

UPPER SYCAMORE GROVE – RDM DATA 2025		
MONITORING POINT	RDM – SLOPES <40%	RDM – SLOPES >40%
Sample Location 1	1,250 lbs. / acre	N/A
Sample Location 2	1,150 lbs. / acre	1,925 lbs. / acre
Sample Location 3	850 lbs. / acre	1,400 lbs. / acre
Sample Location 4	900 lbs. / acre	1,525 lbs. / acre
Sample Location 5	1,625 lbs. / acre	N/A

Sample Location-1:



Sample Location-2:



Sample Location-3:



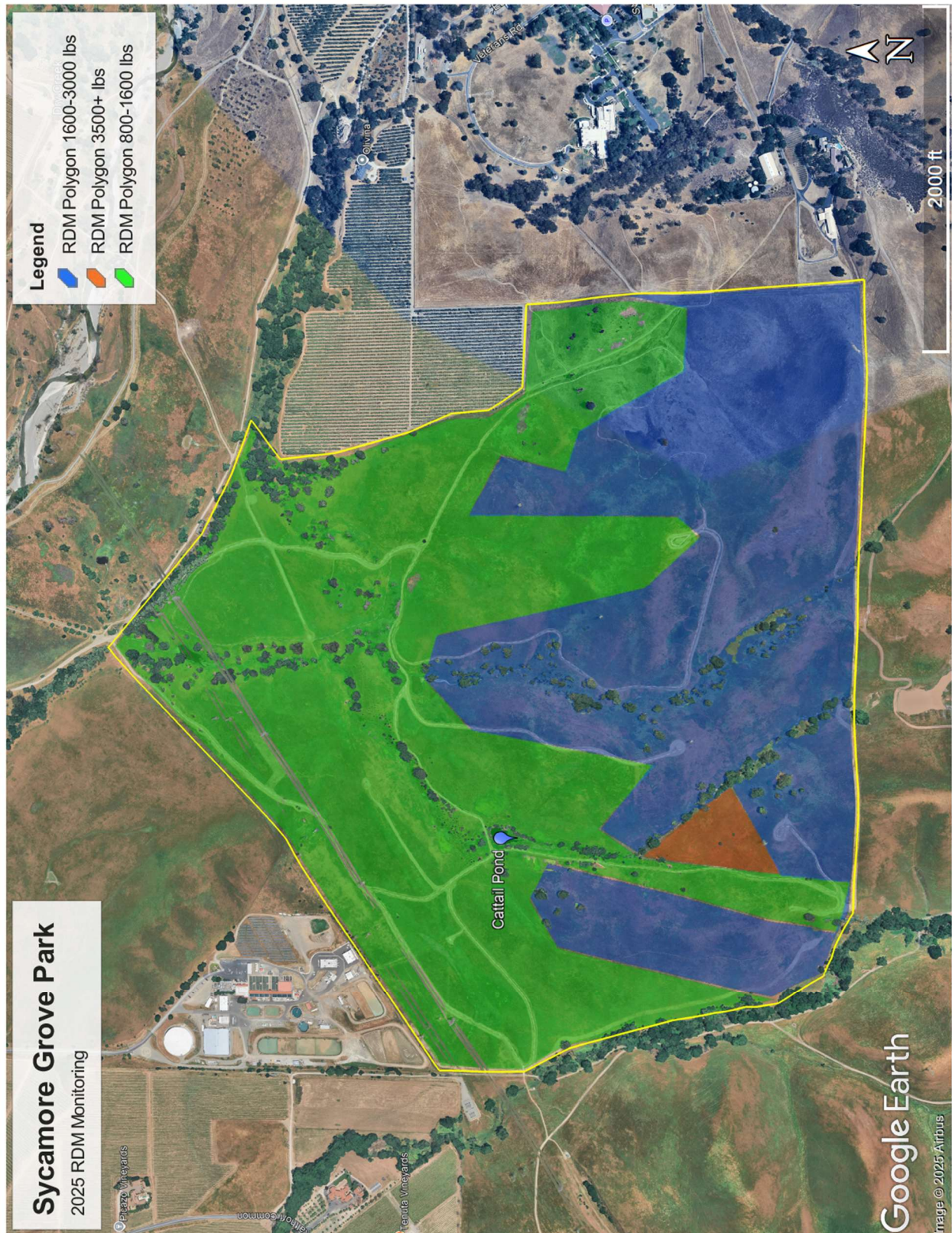
Sample Location-4:



Sample Location-5:



Figure-3: Upper Sycamore Grove RDM Map – 2025



ADDITIONAL MONITORING – UPPER SYCAMORE GROVE PARK:

▪ GRAZING INFRASTRUCTURE

- All perimeter fences and gates located within or around the perimeter of the grazing pasture were in excellent condition. Fencing and gates were installed new in 2024. Wires on the fences were all tight and the gates functioned correctly with the exception of the pedestrian gates near the northeast boundary of the grazing pasture where the Wagon Road Loop Trail intersects the Winery Loop Trail. The pedestrian gates fail to “self-close” and do not latch properly which may allow cattle to access the non-grazed area of the Park. These gates should be checked and adjusted frequently to ensure proper function.
- Cattle rely solely on the Cattail Pond for a water source. It is important to develop alternative water sources within the grazing area to ensure cattle do not run out of water, reduce grazing pressure around Cattail Pond, and to enhance livestock distribution throughout the entire pasture to graze the uplands and southern portion of the pasture. LARPD and the grazing tenant should prioritize water development.

▪ TRAIL CONDITIONS

The Upper Sycamore Park grazing area has historically and continues to be used frequently by park visitors for low intensity recreation including hiking, dog-walking, mountain biking, and equestrian use. The extensive trail system is in good condition and shows minimal impacts from the presence of livestock with the exception of the occasional cow on the trail. It will be important to monitor trail conditions throughout the wet winter months to mitigate any impacts to trail condition or hoofprints/rutting associated with cattle use. If trails become saturated from winter rains, it may be necessary to temporarily reduce the stocking rate to minimize trail damage. Park visitors are accustomed to well groomed trails, and it is important to maintain a quality trail system within the grazed pasture. Development of alternative water sources may also alleviate some of the cattle concentrating on trails around Cattail Pond.

▪ NON-NATIVE INVASIVE PLANTS

Non-native invasive plant species continue to be a concern on the Upper Sycamore Grove property. Italian thistle, milk thistle and yellow starthistle are notable species found

sporadically throughout the grazed pasture in varying densities. Much of the taller, dense stands of mustard and poison hemlock were knocked down/trampled by the cattle throughout the spring and early summer months. LARPD staff should continue to monitor the extent of mustard and poison hemlock within the grazed pastures and note any changes in quantity and distribution following the reintroduction of livestock grazing.