

2023

CITY OF PETALUMA

Animal Grazing Pilot Program



Chasin Goat Grazing

City of Petaluma
Parks & Recreation Department

INTRODUCTION

In 2023 The City of Petaluma Parks and Recreation Department initiated an innovative animal grazing pilot program in alignment with the City's 2030 carbon neutrality goals, the City's upcoming Integrated Pest Management Program (IPMP), and the community's interest in transitioning towards more restorative land maintenance practices. This pilot program focused on utilizing animal grazing as an alternative method for vegetation management within the city's urban landscape.

PROGRAM OBJECTIVES

- Advance the City of Petaluma's commitment to achieving carbon neutrality by 2030 through sustainable practices.
- Evaluate the effectiveness, economic viability, and environmental benefits of employing animal grazing for vegetation management.
- Mitigate dense vegetation contributing to wildfire risk, particularly in areas prone to such hazards to align with the City's efforts to enhance fire safety and resilience within the urban landscape.
- Minimize use of chemical herbicides in compliance with the City's upcoming Integrated Pest Management Program.
- Mitigate vegetation growth without relying on gas powered small off-road engines.



METHODOLOGY



1

Preliminary Research:

Conducted comprehensive preliminary research into animal grazing practices for vegetation management. Analyzed case studies, academic literature, and best practices from regions employing similar methods on public lands. Explored the ecological, economic, and social implications of animal grazing as an alternative to mechanical vegetation management and chemical herbicides.

2

Engagement with Other Jurisdictions:

Collaborated with neighboring jurisdictions and municipalities that have successfully implemented grazing programs for vegetation management. Facilitated knowledge exchange, learning from their experiences, challenges, and successes. Leveraged shared insights to tailor an approach suitable for Petaluma's unique landscape and regulatory context.

3

Expert Consultant Engagement:

Enlisted the expertise of local consultant, Sarah Keiser of Wild Oat Hollow, whom specializes in sustainable land management and animal grazing practices. Sarah provided invaluable guidance, offering insights into optimal animal selection, grazing techniques, rotational strategies, and ecological considerations. Advised on the design and implementation of the program based on established best practices.

METHODOLOGY



4

Animal Selection and Site Identification:

Based on consultant recommendations and local conditions, selected sheep known for their browsing habits and adaptability. Identified specific park sites within the City of Petaluma, considering vegetation density, topography, and environmental sensitivity, ensuring alignment with the city's carbon neutrality objectives and wildfire mitigation strategies.

5

Grazing Management Plan:

Developed a comprehensive grazing management plan integrating consultant advice and research findings. Established grazing schedules, rotational patterns, and site-specific management strategies to optimize vegetation control while ensuring animal welfare, minimizing environmental impact, and preserving public access to Petaluma City parks during grazing periods.



OUR GRAZING PARTNER



Chasin Goat Grazing is a family business that has been serving Sonoma County residents since 2015 and provides services to individuals, businesses and government agencies.

Chasin Goat Grazing offers animal grazing services to clear vegetation and aid in fire prevention. All fencing is provided and water for the animals can be trucked in if needed. An on-site manager is available to oversee the project, around the clock when necessary.

Goats & sheep offer superior land management options. This environmentally friendly option can offer effective results clearing all types of vegetation such as grass, weeds, blackberries, poison oak and overgrown brush.

Benefits of this 'climate-first' approach include restoring native plant species, eliminating emissions of traditional land management methods, fire prevention and goats provide fertilization while they graze.

SCOPE OF WORK



Oak Hill Park

Dates Grazed: August 28-31, 2023

Acreage Grazed: 5.50 acres

Mannion Knoll Park & Open Space

Dates Grazed: September 01-18, 2023

Acreage Grazed: 9.32 acres



Westridge Park & Open Space

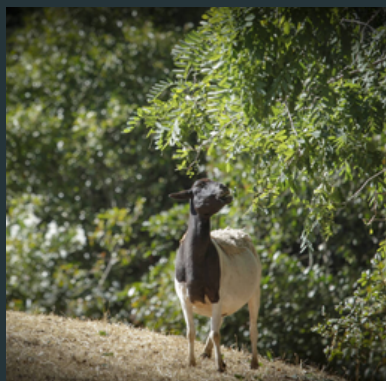
Dates Grazed: September 18-25, 2023

Acreage Grazed: 3.20 acres

Country Club Open Space

Dates Grazed: September 25-October 05, 2023

Acreage Grazed: 4.70 acres



Arroyo Park & Open Space

Dates Grazed: October 05-10, 2023

Acreage Grazed: 9.80 acres

KEY FINDINGS



Vegetation Control and IPMP Synergy:

Grazing animals effectively managed targeted vegetation, indicating the potential synergy between animal grazing and the forthcoming Integrated Pest Management Program (IPMP). Observations suggest a reduction in targeted plant species without the use of chemical herbicides, setting a precedent for natural pest control methods within Petaluma's urban landscape.



Environmental Impact and Carbon Neutrality Progress:

Preliminary findings indicate positive environmental impacts, including improved soil health and biodiversity in areas where grazing occurred. These initial outcomes align with Petaluma's 2030 carbon neutrality objectives, demonstrating early signs of reduced carbon emissions associated with minimized use of machinery and chemical treatments.



Reduction in Fire Risk and Hazard Mitigation:

Grazing activities have aided in reducing fire hazards by effectively controlling the growth of combustible vegetation. By mitigating dense vegetation, the program contributes to wildfire risk reduction, particularly in areas prone to such hazards. This aligns with the city's efforts to enhance fire safety and resilience within the urban landscape.

KEY FINDINGS



Cost-Efficiency and Long-Term Sustainability:

Initial cost analyses suggest that the grazing program demonstrates promising cost-efficiency compared to traditional mechanical and chemical-based methods. While initial setup costs may be comparable, the long-term sustainability and reduced reliance on ongoing maintenance expenses indicate the economic viability of the program over time. This financial feasibility aligns with Petaluma's goals of sustainable resource management.



Community Support and Engagement:

The pilot program garnered significant support and engagement from the local community, showcasing a strong interest in sustainable land management practices. Community members expressed enthusiasm for environmentally friendly approaches, underscoring the importance of public involvement in shaping future strategies for urban vegetation management.

LOOKING AHEAD



1

Ecosystem Monitoring and Research:

Expand monitoring efforts to comprehensively assess the long-term impacts of grazing on ecosystem resilience and biodiversity. Conduct further research to quantify the specific contributions to native species promotion and habitat enhancement resulting from grazing practices.

2

Soil Health Assessment and Carbon Sequestration Studies:

Conduct in-depth soil health assessments to quantify improvements resulting from grazing activities. Initiate dedicated carbon sequestration studies to accurately measure and monitor the program's contribution to carbon storage in grazed areas.

3

Operational Efficiency:

Continually refine grazing management practices by adapting to site-specific challenges. Implement advanced logistical strategies and grazing techniques to optimize vegetation control while maintaining animal welfare standards.

4

Fire Risk Mitigation Strategies:

Collaborate with fire management authorities to integrate grazing practices into comprehensive fire risk reduction strategies. Identify high-risk areas where grazing can be strategically implemented to mitigate fire hazards, enhancing overall urban resilience against wildfires.

LOOKING AHEAD



5

Cost-Benefit Analysis:

Conduct a detailed cost-benefit analysis encompassing the long-term financial viability of the program. Explore opportunities for optimizing resource allocation and cost-effectiveness to ensure sustainable funding and continued success.

6

Enhanced Community Engagement and Education:

Develop targeted educational programs focusing on the ecological and societal benefits of grazing, as well as the upcoming integrated pest management strategies. Strengthen community involvement through workshops, demonstrations, and outreach activities to foster a more engaged and informed populace.



WANT TO WORK WITH US?



Chasin Goat Grazing is a family business that has been serving Sonoma County residents since 2015 and provides services to individuals, businesses, and government agencies.

Phone: (707) 326-4467

Email: chasingoatgrazing@gmail.com.



Sarah Keiser is an innovative community builder who facilitates the development of community grazing cooperatives and collaborative land stewardship projects. These community-based, sustainable land stewarding concepts empower private landowners and public entities with the skills and support to use grazing ruminants, planned burns and community education to steward their land and commons to a healthy fire ecosystem. As we continue to see large, annual wildfires in California and throughout the west, Sarah has expanded her collaboration to policy makers, fire marshals, Calfire and Indigenous Fire Ecologists to build out County and region wide land stewardship projects. The way forward is paved with flexibility and community, Sarah is a leader in developing this pathway.

Phone: (707) 332-5969

Email: sarah.keiser@wildoathollow.com



Delana Bradford, MBA
Management Analyst, II

(707) 331-6262

DBradford@CityofPetaluma.org