

After Action Report: Operation Mighty Goats

Summary: Two goat herding services, Firehouse Farms and Goat Mowers LLC, were hired to mitigate Lyons-owned properties that were susceptible to wildfire activity and invasive weeds. Both services performed well in reducing the potential for a high rate of spread during a wildfire event.

Parcel Report

#120318455002, The “Stacy” Parcel. Firehouse Farms (8/14-9/14) was utilized for this parcel that contains a combination of ladder and wildfire fuels as well as a high number of invasive weeds, including myrtle spurge, knapweed, and thistle. By the end of the 28-day contract, I believe the goats successfully mitigated for fire fuels and weeds across 3.0 acres of the 5.5-acre lot.

#120318120009, “Horizon Drive” Parcel. Goat Mowers LLC (9/6-9/10) was utilized for approximately 4.0 acres of this lot between Horizon Drive and Steamboat Springs Road. The goats ate fire fuels, vegetation, and ladder fuels from various trees in the area. On day 3 of 4, Goat Mowers requested an additional day of mitigation work and the request was granted by the Town of Lyons. By the end of the 5-day agreement, I believe the goats successfully mitigated for fire fuels and weeds across 3.0 acres of the 4-acre lot.

Notes regarding first use of goat herding services in Town of Lyons

- While researching and scheduling goat services, we were advised that goats will not eat as effectively during high temperature days. While assuming this risk, the temperature during both scheduled services was unforeseeably high, and this may be one primary reason the goats did not eat as expected.
- Despite providing pictures of both parcels to both herding groups, each herding group owner said they were surprised to see each parcel’s type of vegetation, variety of fuels, and thickness of unmitigated areas.
- Time of year plays a large factor in the taste and tenderness of plants and leaves for the goats. As the seasons change, so does the sugar content and greenness of the plants. For example, Rabbit Brush will be “tastier” to the goats in Spring versus Summer and Fall.

Suggestions for Future Proposals

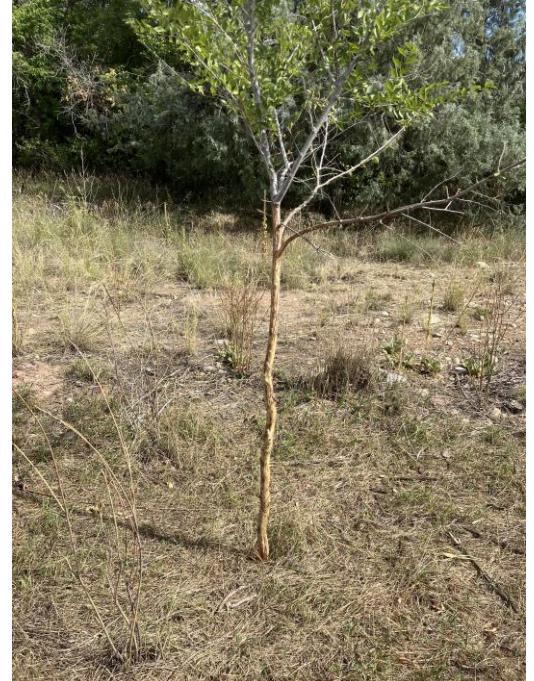
- Propose project by overall parcel size, independent of predicted number of days. This will reduce the potential for an incomplete project.
- Require active daily management from goat owners instead of utilizing volunteers.
- Accept goat herds that, on average, consist of fully grown, “adult” goats. Accept goat breeds that are known to be larger breeds.
- Schedule goat services for April/early springtime services for better efficiency
- Confirm with other town staff availability to assist with providing water, emptying trash cans nearby, providing a daily observation, etc.

1) Firehouse Farms Mitigation (Cynthia & Don Koogle) provided 11 goats (one more than quoted, consisted of milk/meat/pet goats), fencing, and night-time goat pens. Goats ate less than the expected 1 acre per week. Doug Miller, property owner of 377 Park Drive, volunteered to assist goat herd with night assistance and watering 2x per day.

Suggested use: Stacy Parcel. Approximate Dates August 15th-September 15th (Up to 28 Days Total).

Costs: \$300 herd rental per week + \$300 per week for fencing management + \$100 total for fuel.

Total cost predicted: \$2,500 Total cost actual: \$2,500



From FHF: *The goats ate all the thistles except scotch thistle. They ate the mullein, but not the milkweed (which is poisonous to them) or much of the myrtle spurge. They love the locust trees and the broad leaf grasses. What you noticed is they thinned most of area but did not take anything to the ground.*

Locust trees stripping/elimination



(Left) Left side of path is mitigated, right side of path is not mitigated. (Right) Ladder fuels stripped, weed mitigation

2) Goat Mowers LLC (Kimberly Jones): Provided 36 goats (35-40 goats quoted, common “meat”/Boer goats), fencing, day/night shepherding. Goats will eat approximately 1 acre per day. Required 15 gallons of water per day for their goats.

Suggested use: Horizon Drive Parcel, Tuesday September 6th – Friday, September 9th (4 days total).

Costs: \$1500 per day + \$500 total for fuel.

Total cost predicted: \$6,500 Total cost actual: \$7,500

From Kimberly Jones, Goat Mowers LLC: *The goats ate Native Grass, Cheatgrass, Ragweed, dead undergrowth of Yucca plants, Elm tree leaves, Rocky Mountain Sumac, Staghorn Sumac, Mountain Mahogany. The goats also ate some rabbit brush.*



Hillside mitigated. Some unmitigated grasses in foreground



Left side of tree is mitigated, right side of tree is not mitigated



Tall grasses eliminated; ladder fuels removed