# 2021 Open Space Management Plan

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# Executive Summary

*Genesee's 1,200 acres of open space is intrinsic to the identity of the community and cherished by residents. Genesee Foundation Open Space provides stewardship to maintain this land in a natural, healthy, ecologically diverse state that promotes resilience to threats from extended drought, wildfire and the effects of disease and insects on plant species, trees, other vegetation, and continued use by residents. Our location in a biologically diverse elevation imposes a unique responsibility to protect the health of the land around us. This is done through effective utilization and application of professional forestry and ecological management standards and practices. The Foundation works with committee members, and others to evaluate needs, develop targets and standards, and then execute actions on the ground and monitor activities, follow up mitigation or reparation of damaged areas helps ensure a continued co-existence in harmony with the views and quiet surroundings of our area's beautiful natural landscape.*

# Background

- Genesee Open Space has been managed for 30+ years for a healthy forest, noxious weed control, trails, and erosion
- 1200 acres of open space. ~70% is forest dominated by ponderosa pine and douglas fir
- Rich biological diversity of vegetation from riparian to lower montane
- Located in a high priority watershed for the state
- One of the highest wildfire risk Wildland Urban Interface (WUI) areas in the state and the country (sources: USFS, CSFS)

*Elephant Butte Fire from Genesee Vista Drive. July 13, 2020*

# Budget

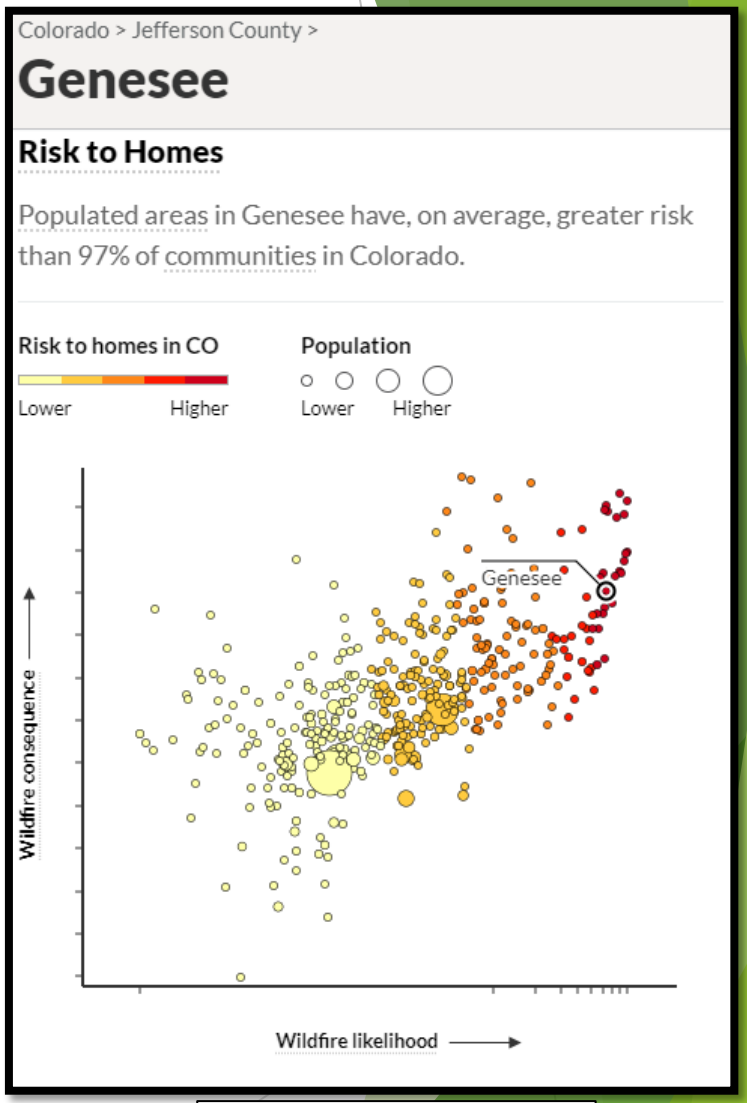
*Forest Management activities includes thinning operations, dwarf mistletoe control, meadow restoration, aspen regeneration, and forest inventory. Genesee Foundation actively holds a grant from the Colorado State Forest Service and will be completing the contracted work with these funds.

**The Open Space Crew consists of four seasonal, natural resource professionals dedicated to projects on Open Space at the direction of the Open Space Manager.

| Category | Budget |
|---|---|
| **Forest Management*** | $40,000+ in-house labor |
| **Erosion Control** | $3,000 |
| **Weed Management** | $13,500 + in-house labor |
| **Insect and Disease Management** | In-house labor |
| **Trails** | $6,000 + in-house labor |
| **Misc. Operating Budget** | $11,300 + in-house labor |
| **Total OS Budget** | $73,800 |
| ***ADDITIONAL OPEN SPACE COSTS*** | |
| **Seasonal Labor** | $57,500 |
| **Capital Expense** | $55,000 |
| **Estimated Crew Hours* *** | 3280 |

# Forest Management

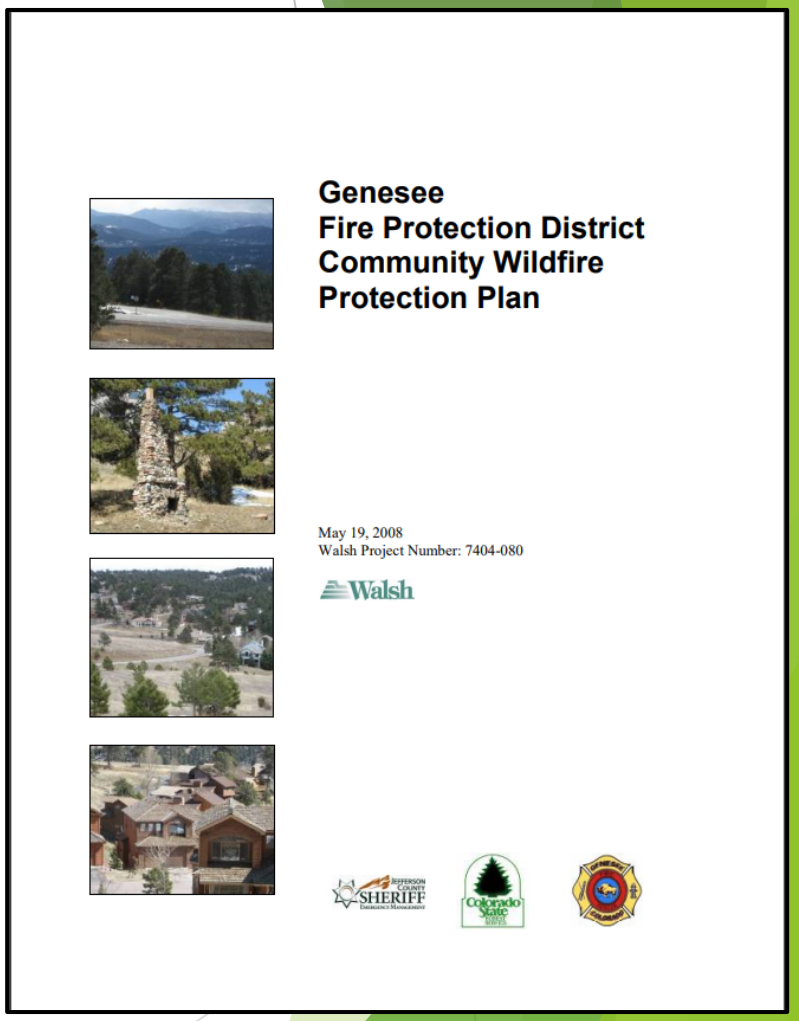
- Wildfire fuels reduction has evolved as a priority for forest management on the Front Range of Colorado
  - ❖ Genesee is at high risk due to its topography, dense vegetation, and climate.
- Forest health objectives are intrinsic to fuel reduction; achieved through thinning projects to restore forests closer to historic conditions (*before fire exclusion*)
  - o Maintaining species diversity supports a resilient forest
- Access and biomass disposal are biggest obstacles
- Creating and updating inventories to guide management
- **Estimated Total Crew Hours = 1800**




Credit: "Wildfire Risk To Communities" USFS, 2020. www.wildfirerisk.org

# Forest Management

- Community Wildfire Protection Plan (CWPP)
  - Last updated in 2008
  - *Genesee Fire Protection District* hired *Forest Stewards Guild* to author a new CWPP coming out sometime this Spring
  - It will discuss evacuation routes and other priorities concerning wildfire risk
- Creating a plan to reduce flammable vegetation along Jeffco roads and private drives
  - Mixed ownership



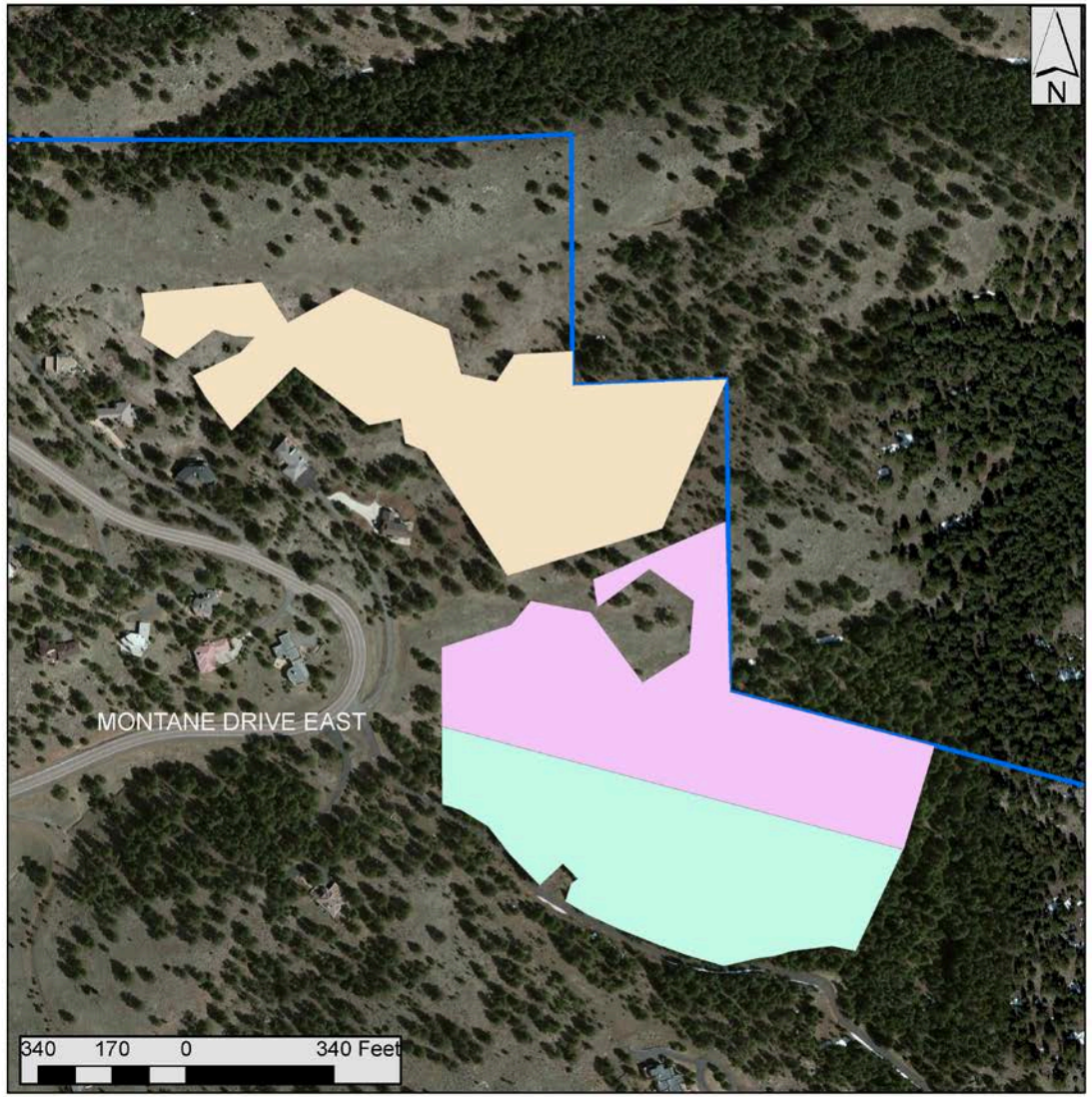
# Forest Management

Example:

- Juniper Court is a mix of private ownership
- Improving evacuation route through thinning will require Genesee Resident input, participation and/or consent to remove flammable vegetation

# Forest Management

## Forestry Map 1

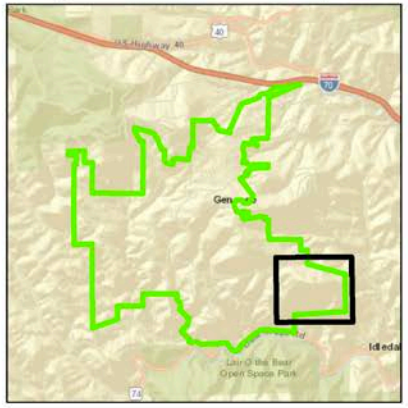



Objectives:
-Conifer thinning on 23.7 acres to reduce basal area to between 40 - 80 square feet per acre

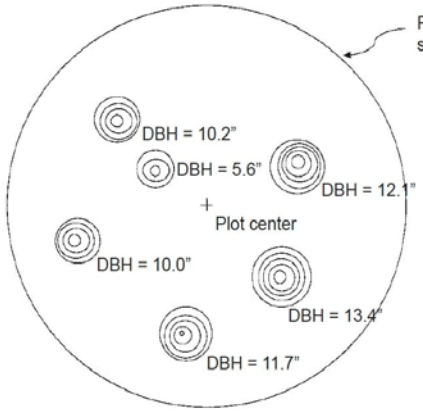
Outcomes:
-Alter potential fire behavior to benefit surrounding community
-Increase forest health and vigor

**Legend**

- Montane_Unit_1
- Montane_Unit_5
- Montane_Unit_6
- GeneseeBorder



Montane Unit 1 Pre-Project Photo. Basal area is ~ 140 sq.ft. per acre

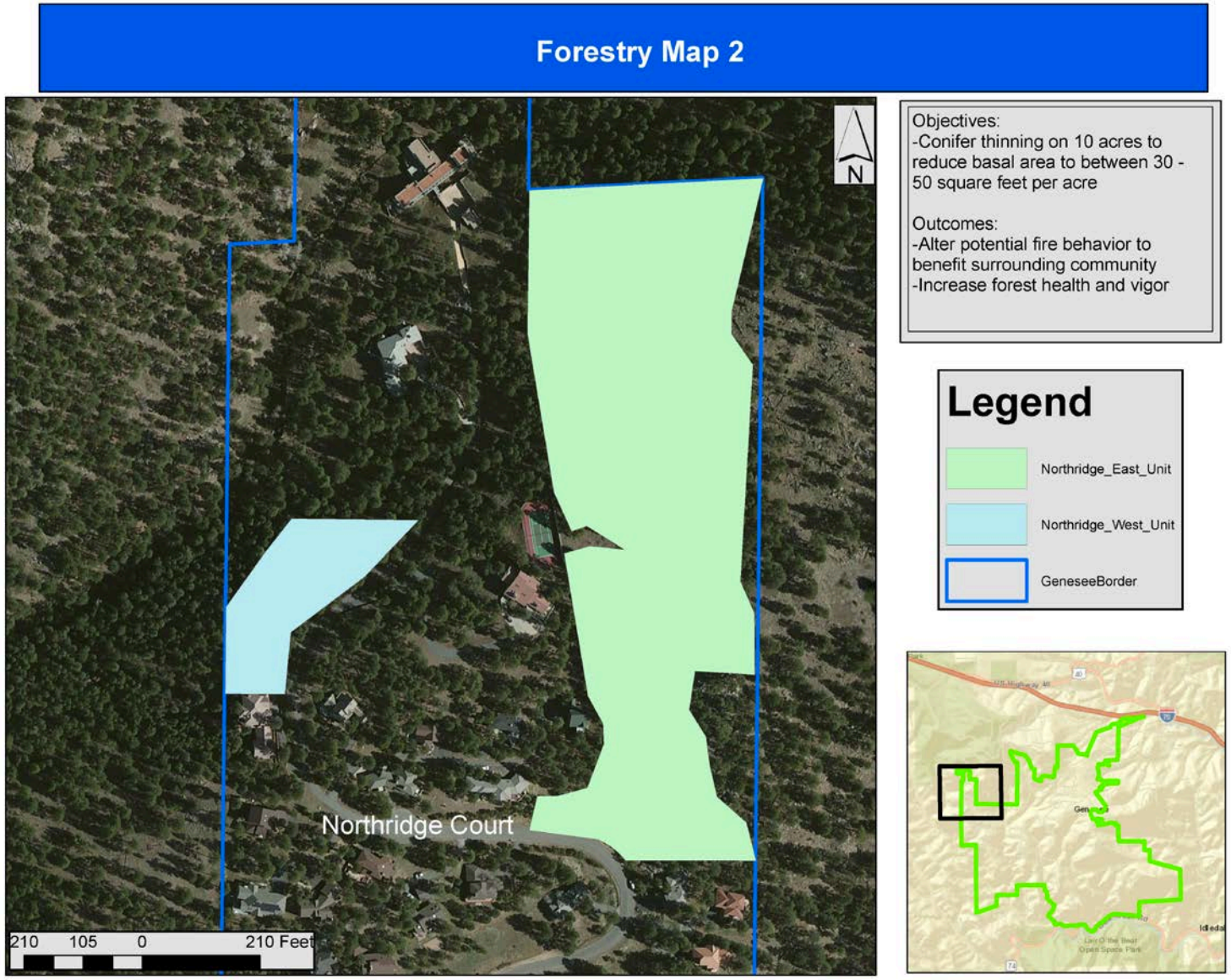



| DBH (inches) | Basal Area (square feet) |
|---|---|
| 10.2 | 0.567 |
| 5.6 | 0.171 |
| 12.1 | 0.799 |
| 8.4 | 0.385 |
| 13.4 | 0.979 |
| 11.7 | 0.747 |
| 10.0 | 0.545 |
| Sum | 4.193 |

Basal area on one 1/10-acre plot = 4.193 sq ft

Basal area per acre (BA/ac) = 4.193 sq ft per 1/10 acre or 41.93 sq ft/ac

# Forest Management



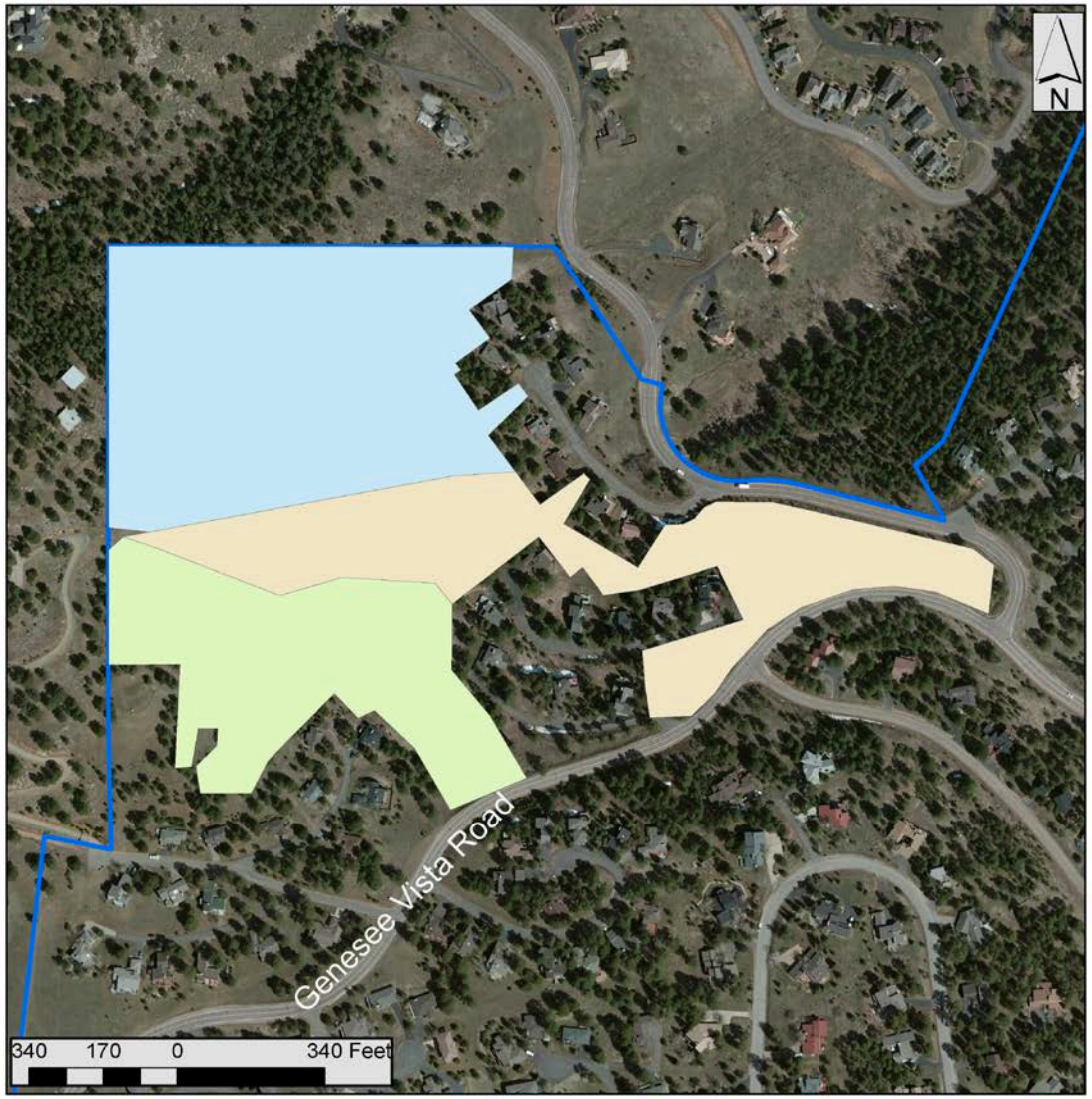

Objectives:
-Conifer thinning on 10 acres to reduce basal area to between 30 - 50 square feet per acre

Outcomes:
-Alter potential fire behavior to benefit surrounding community
-Increase forest health and vigor

Northridge East Unit Pre-Project Photo.
Basal area is ~ 90 sq.ft. per acre

# Forest Management

## Forestry Map 3

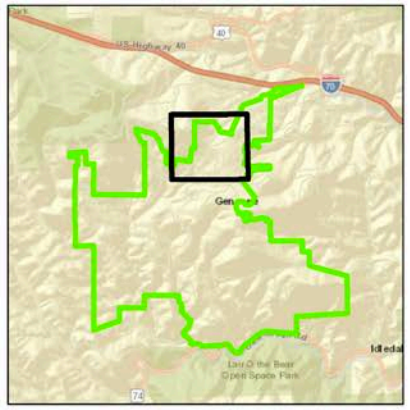



Objectives:
-Conifer thinning on 27.4 acres to reduce basal area to between 40 - 80 square feet per acre

Outcomes:
-Alter potential fire behavior to benefit surrounding community
-Increase forest health and vigor

**Legend**

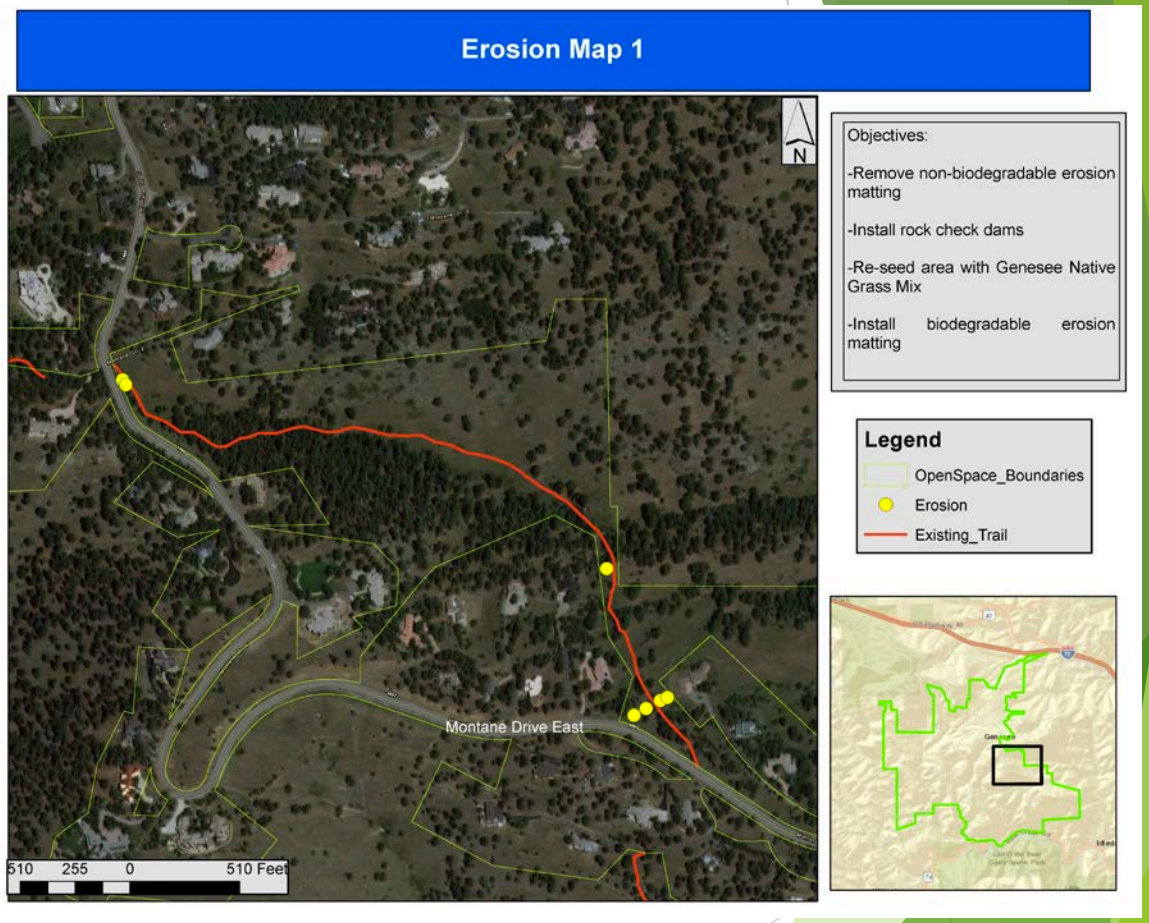
- Chokecherry_Unit_1
- Chokecherry_Unit_2
- Chokecherry_Unit_3
- GeneseeBorder



Chokecherry Unit 1 Pre-Project Photo.
Inventory Incomplete

# Erosion Control

- Erosion is the loss of soil or sediment due to excessive run-off or a similar disturbance. Exposing bare soil where there previous was not can negatively impact surrounding vegetation.
- Important before, during, and after any natural resource management action
  - ❖ Including forestry, weed management, and trail management
- Can have negative local and downstream effects
- Using natural materials for remediation and mitigation is preferable
- **Estimated Total Crew Hours = 100**



# Weed Management

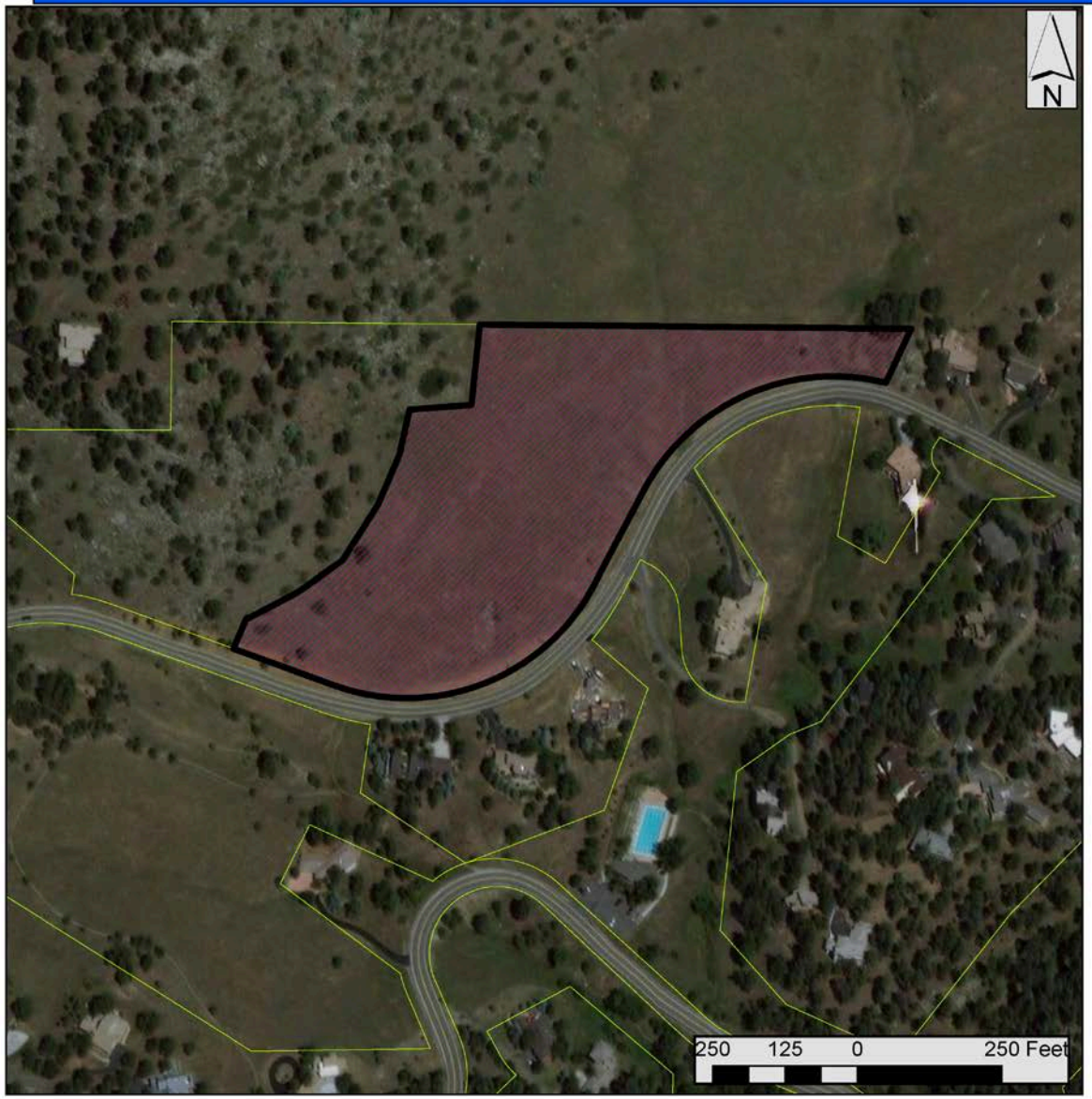
- A weed is a non-native, invasive plant introduced to local environments from outside. They tend to outcompete native vegetation and can alter the landscape
- Some of the major weed Species managed in Genesee include: cheatgrass, thistle varieties, knapweed varieties, toadflax varieties, myrtle spurge, and wooly mullein.
- Primary methods of control are mechanical and chemical
  - When using or hiring a contractor to apply herbicide, signs are posted in the area and chemical is mixed with blue dye to make it readily apparent
  - Most chemical used for weed management is applied at a 1% solution or less and becomes inert shortly after application. The biggest risk is taken on by the applicator
- **Estimated Total Crew Hours = 700**

Canada Thistle rosettes
Credit: Jefferson County Open Space. www.Jeffco.us

Canada Thistle blooming
Credit: Jefferson County Open Space. www.Jeffco.us

# Weed Management

## Weed Map 1



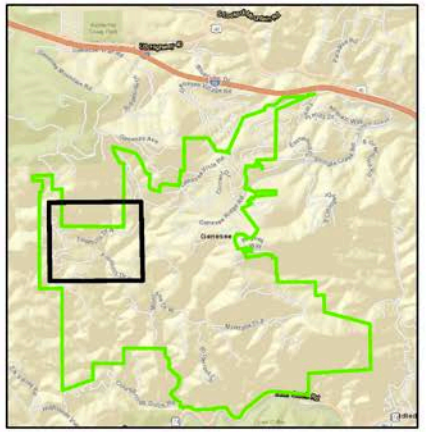

Objectives:
-Hire contractor to mow cheat grass in the spring and treat with herbicide shortly after

-Return after 3 weeks and re-seed the treated area with Genesee Native Grass Mix using a drill-seeder or hydro-seeder

**Legend**

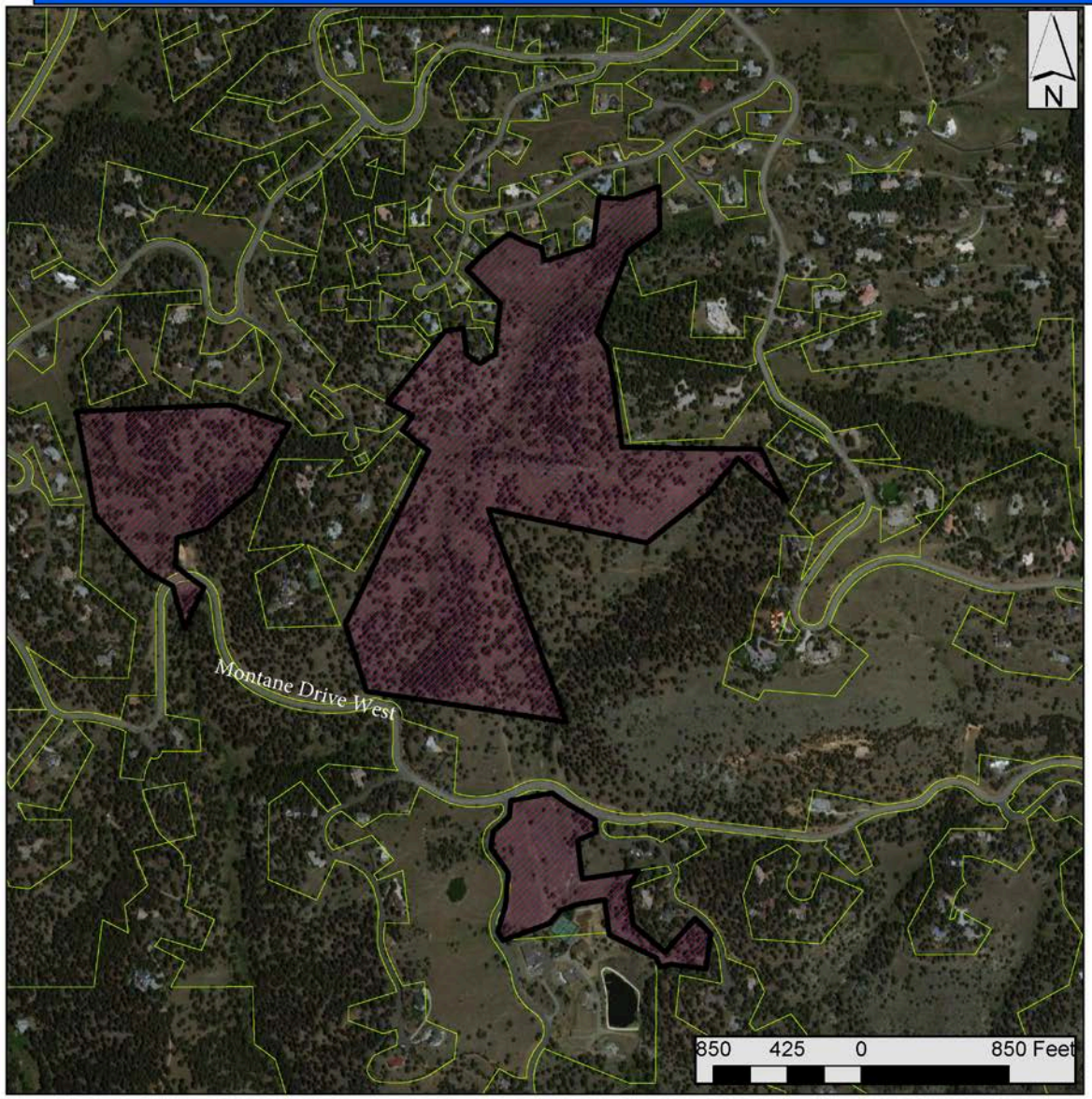
OpenSpace_Boundaries

Cheatgrass_Treatment *7.4 Acres*



# Weed Management

## Weed Map 2



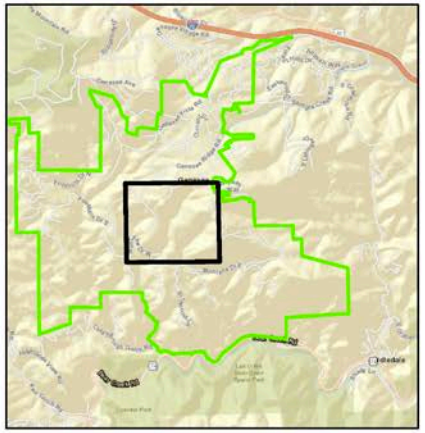

Objectives:
-In late spring 2021, Open Space Manager will identify sub-areas within the highlighted area where canada thistle will bloom

-Hire a contractor in early summer to apply herbicide in the sub-areas

-Return in mid-summer with Open Space Crew to remaining areas with blooming canada thistle

**Legend**

- OpenSpace_Boundaries
- Thistle_Treatment

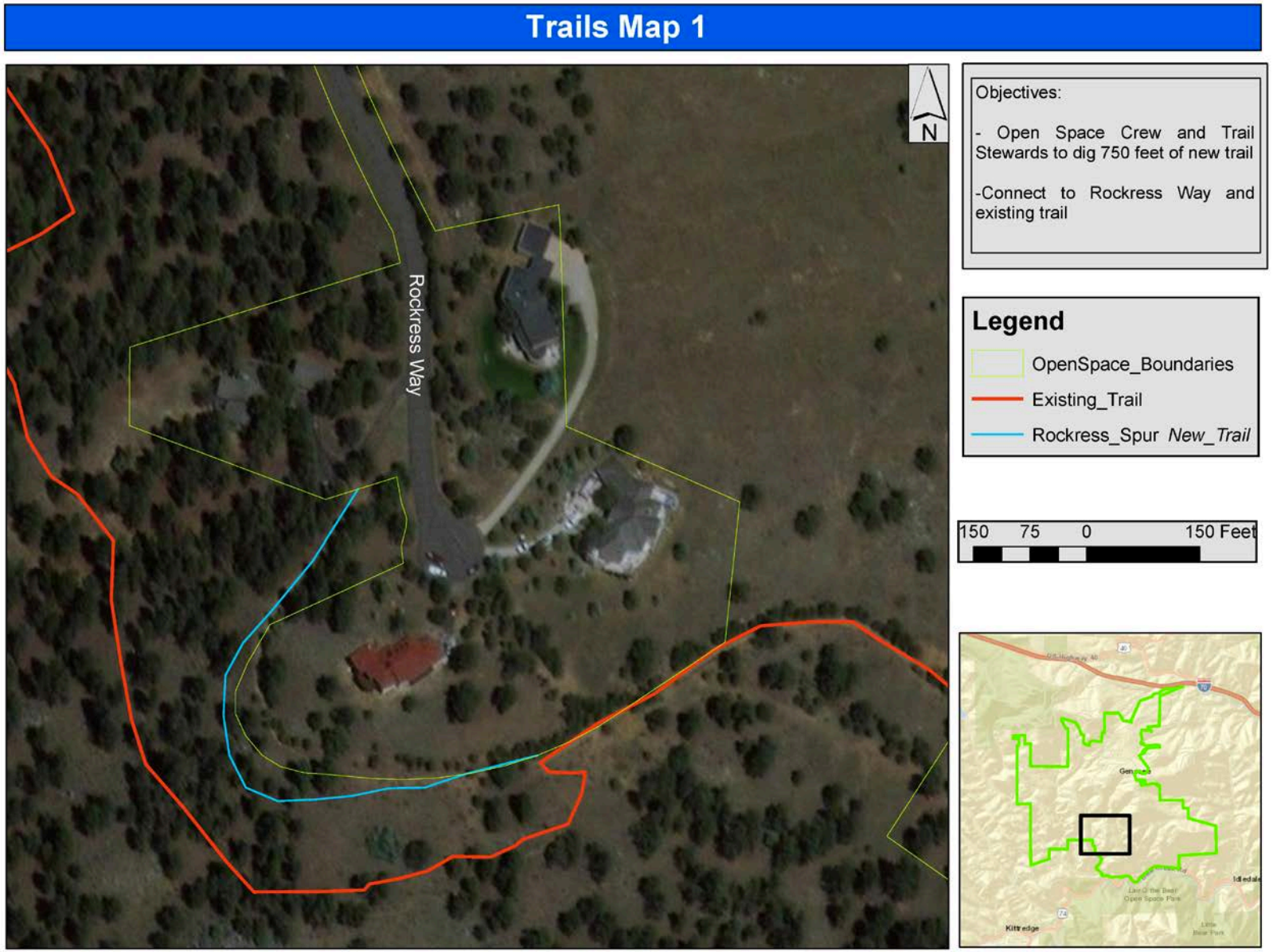


# Trails Management

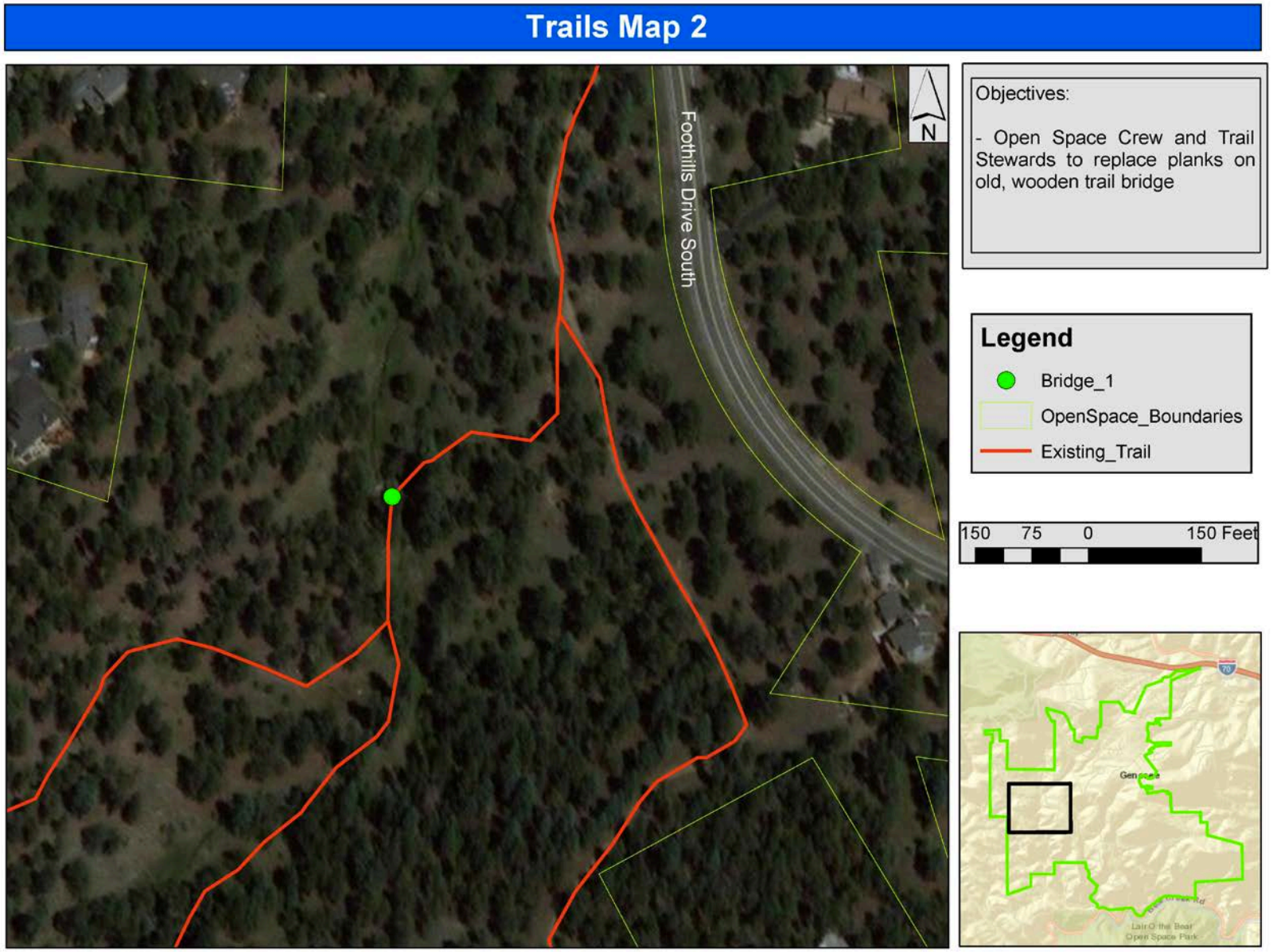
- Genesee maintains 11.5 miles of trails
  - Work completed by volunteers, trail stewards, trails committee, and Open Space Crew
- Open Space Manager relies on the Trails Committee input for management guidance
- Each year Trails Committee trains new volunteer trails stewards on how to maintain our trails
  - A lot of volunteer work goes into maintaining our trails and keeping them sustainable
- Trails Committee recently published a white paper on shared use trails (mountain bikes) on Genesee trails
- **Estimated Total Crew Hours = 700**

Open Space Crew repairing Plainsview Trail. July 2020.

# Trail Management

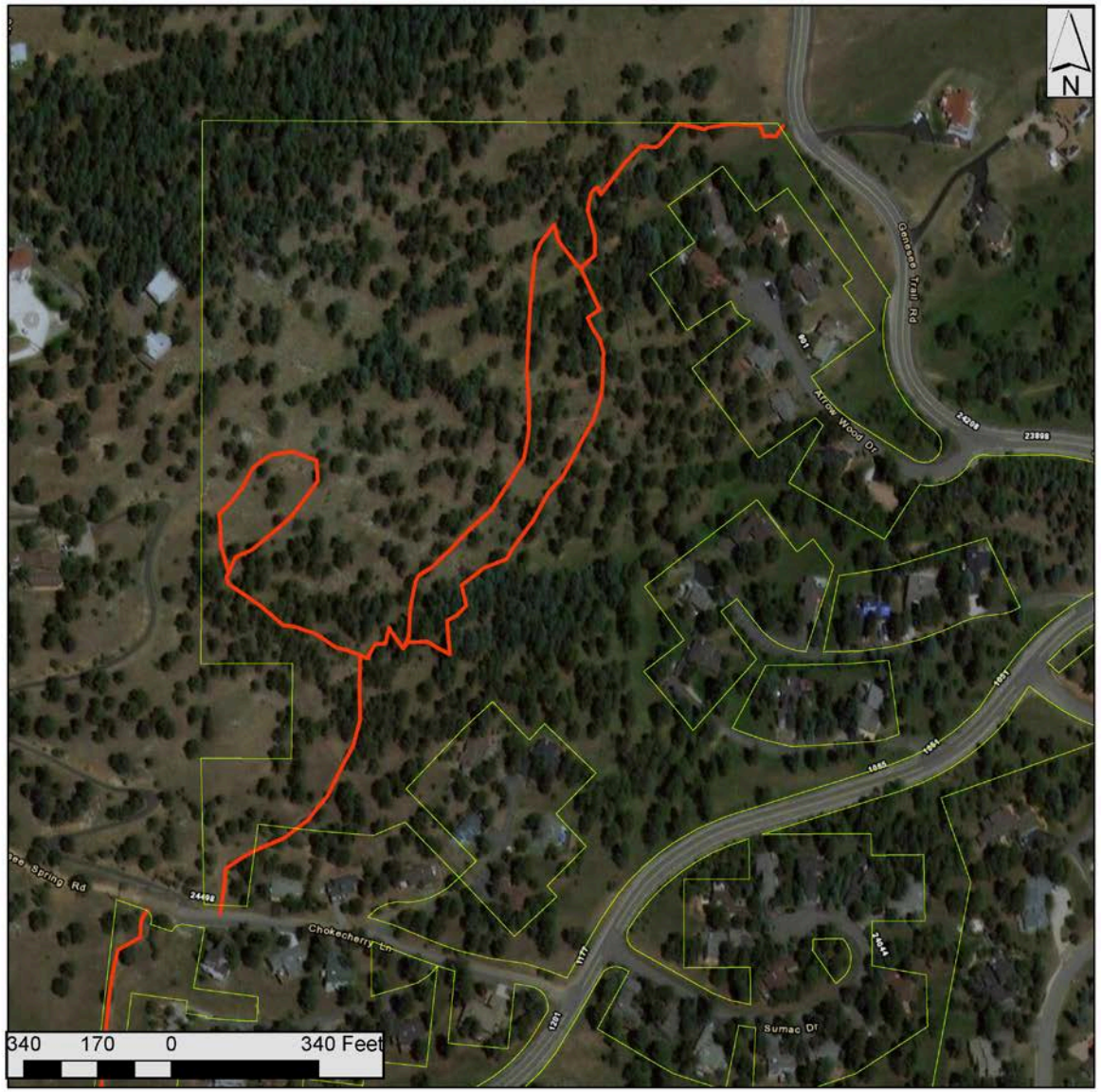


# Trail Management



# Trail Management

## Trail Map 3




Objectives:

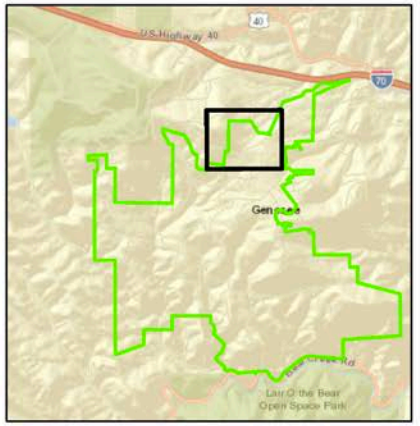
-Close down various social trails using natural materials

-Install erosion control structures in existing trail

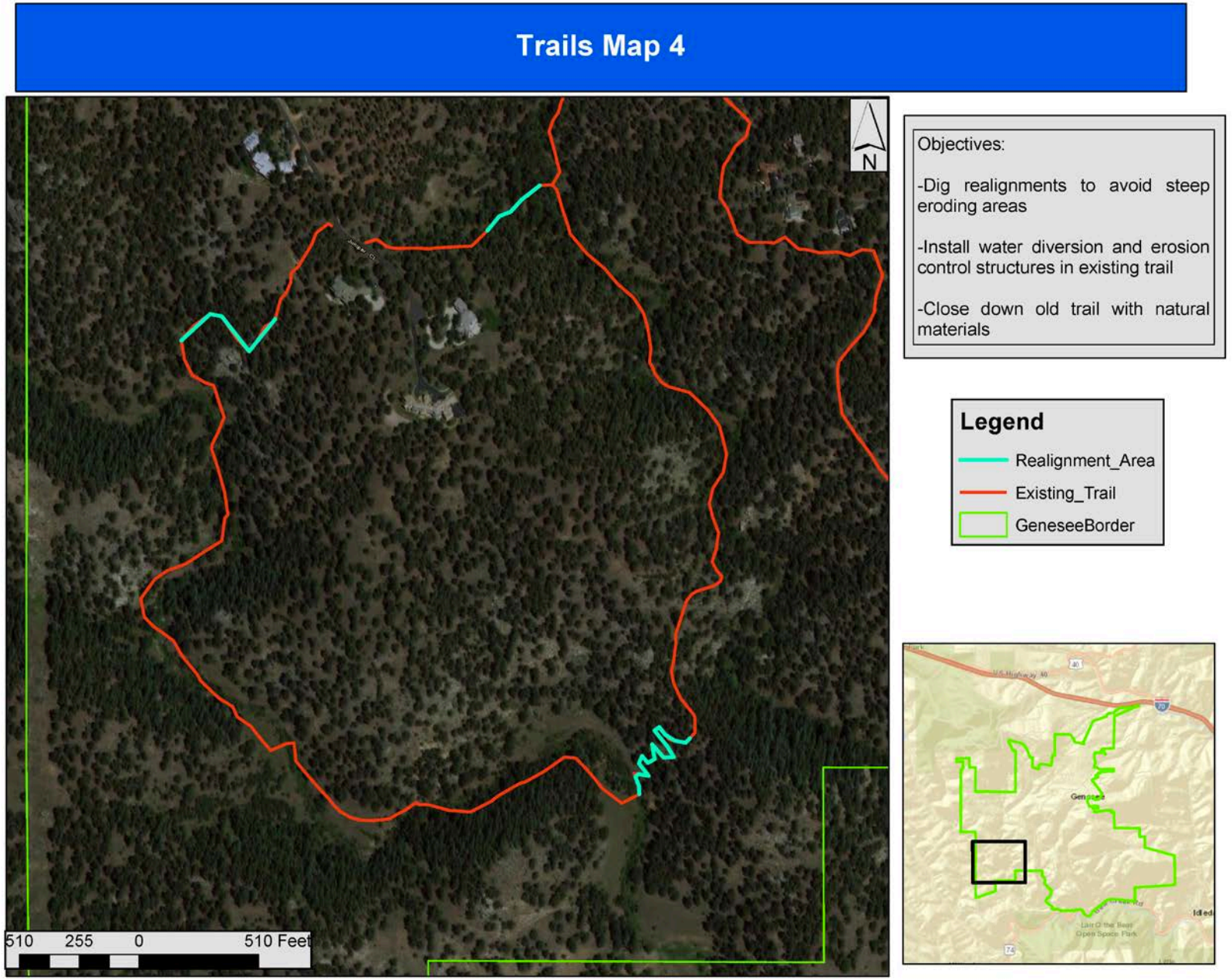
-Reroute existing trail at locations of severe erosion

**Legend**

- OpenSpace_Boundaries
- Existing_Trail



# Trail Management




Objectives:

-Dig realignments to avoid steep eroding areas

-Install water diversion and erosion control structures in existing trail

-Close down old trail with natural materials

**Legend**

- Realignment_Area
- Existing_Trail
- GeneseeBorder

# Questions?

Contact: Brian@GeneseeFoundation.org