# Granite Falls Subdivision Natural Area Management Plan

Prepared by

Natural Area Subcommittee of the Beautification Committee

Granite Falls Homeowners Association, Inc., Grand Junction, Colorado (LLC)

Adopted by

Natural Area Subcommittee, July 12, 2023

Granite Falls Homeowners Association Board of Directors, August 16, 2023

GRANITE FALLS

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# Executive Summary

The Granite Falls Homeowners Association, Inc., Grand Junction, Colorado (LLC) developed this plan to guide the management of the subdivision's associated 7.22 acre parcel of open space referred to as Natural Area.

The Granite Falls Subdivision and associated Natural Area are in Grand Junction, Mesa County, Colorado. The Natural Area occurs at the northwest corner of the Granite Falls Subdivision bordered on the east and south sides by Granite Falls Way and Sieber Canyon Court (latitude and longitude centroid about 39.0658, –108.6515 decimal degrees N and W). The Natural Area is accessible from the end of Sieber Canyon Court.

The fundamental objective for the Natural Area is to

> **Mitigate fire hazards, benefit wildlife with useful habitat, and provide an enjoyable and useful natural area for the maximum benefit of the Granite Fall Subdivision residents with the least cost in management and annual maintenance to the Granite Fall Subdivision HOA members**

There are multiple means objectives including

1) Maintain a 20 feet wide short-grass fire break along the east and south border of the Natural Area and reduce volume and extent of continuous stands of trees and shrubs for wildfire mitigation,
2) Enhance wildlife habitat diversity, quality, and edge and minimize disturbance to attract the greatest diversity (species richness) and number (abundance) of vertebrate birds and mammals,
3) Enhance utility of the Natural Area for HOA member enjoyment,
4) Manage the Natural Area to enhance the existing four habitat types, promote natural ecosystem functions, promote native vegetation of the area, reduce or eliminate exotic vegetation to the extent practicable, and improve aesthetics of the Natural Area, and
5) Minimize cost of initial management and annual maintenance to the HOA members.

Because there are multiple and potentially competing objectives, management actions for each objective must be carefully considered holistically along with the other objectives to best balance the desired multiple uses and achieve the maximum benefit for the HOA members.

The plan offers recommended management actions and a suggested management priority timeline. Fiscal and priority constraints influence the level and timing of management activities. Management and maintenance of the Natural Area may be possible within a budget of about $4,000 plus inflation allotment per year, but work progress may be slow and require substantial neighborhood voluntary involvement in projects. Ideally, government grants and other non-government organization contributions (e.g., Audubon Society, CMU wildlife Club, Boy Scouts of America) would be sought to facilitate rapid and more extensive management of the Natural Area, particularly for wildfire risk management (mitigation).

This management plan should be periodically reviewed and updated to address current information, needs, and desires of the HOA members. This plan was generally established on a five-year planning horizon.

# Plan Contributors

Members of the Granite Falls Natural Area Subcommittee (hereafter, Subcommittee) contributed to the vision and writing of this plan and included the following:

Rich Bradfield, Chairperson
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The Subcommittee collectively brings hundreds of years of life and professional work experience in project and people management, HOA management, family planning and management, fiscal planning and budget management, contracting and contract management, engineering, landscape management, gardening, floristics, park design and management, and wildlife research and management. We are especially grateful to each volunteer Subcommittee member who shared their time, expertise, and passion for team work, sustainable community development, wildlife conservation, and quality of life.

Many individuals provided information, ideas, and review as this plan was being developed. We are thankful for the contributions of those kind individuals too numerous to identify.

# Background

The first meeting of the Natural Area Subcommittee was on May 9, 2023. At that time, the name "Natural Area Subcommittee" was chosen and an initial vision for the Granite Falls Subdivision Natural Area was adopted.

**Vision:** The Granite Falls seven acre Natural Area will be managed to mitigate fire hazards, benefit wildlife with useful habitat, and provide an enjoyable and useful natural area for Granite Falls subdivision residents.

This will be an ongoing effort with an initial mitigation and remediation effort of approximately five years. We will seek grant funding to improve the area, focusing on BLM fire mitigation funds initially.

The initial vision statement was adopted by the Granite Falls Homeowners Association (hereafter, HOA) at the meeting of the Board on June 6, 2023.

# Area Description

## Location

The Granite Falls Subdivision and associated Natural Area are in Grand Junction, Mesa County, Colorado. The Natural Area is at the northwest corner of the Granite Falls Subdivision bordered on the east and south sides by Granite Falls Way and Sieber Canyon Court (latitude and longitude centroid about 39.0658, –108.6515 decimal degrees N and W; Figure 1). The west side is bordered by the Lime Kiln Wash. The Natural Area is accessible from the end of Sieber Canyon Court.

## Characteristics

The Natural Area is identified by Mesa County Assessor's Office as Parcel Number: 2947-263-38-090. It is 7.22 acres and approximately rectangle in shape measuring 705 (north-south) by 480 (east-west) feet. Elevation is about 4,700 feet. Topography is flat to gently sloping to the west and north. Dominant vegetation is Russian olive, tamarisk (salt cedar), and grasses. There are four habitat types represented including: riparian (associated with Lime Kiln Wash, about 0.5 acres, 8%), upland grass (about 3.0 acres, 41%), tree-shrub dominated (about 3.0 acres, 41%), and wet meadow (about 0.7 acres, 10%) created by one or two natural springs on the property and a drain (Figure 2). Associated with the wash in the northwest corner of the Natural Area is a small area classified by the Federal Emergency Management Agency (FEMA) as a potential flood hazard area in a non-regulatory floodplain (Figure 3). There is a planned 20 feet wide short-grass fire break about 935 feet in length along the east and south border of the Natural Area (Figure 4).

## Juxtaposition

The juxtaposition of the Natural Area increases its value for wildlife and natural area enjoyment (Figure 5). The Natural Area is bordered on the west by a largely undeveloped parcel (Parcel Number: 2947-352-00-068) about 70 acres in size in unincorporated Mesa County. This parcel includes upland habitat and most of the wash and associated riparian habitat shared between this property and the Natural Area. Further to the west is Bureau of Land Management public lands and the Colorado National Monument, which provide habitat and refuge to wildlife. To the north of the Natural Area is undeveloped parcel (Parcel Number: 2947-263-06-000) about 5.8 acres in size in unincorporated Mesa County. It is casually managed by Monument Meadows Subdivision as a natural area and for wildlife. At the northwest corner of the Natural Area is a largely undeveloped parcel (Parcel Number: R074669) about 23 acres in size in unincorporated Mesa County. This property has a 0.6 acre pond with water year around and aerators to keep the water at least partially ice free during winter. The Natural Area sits between this pond to the north about 330 feet and the Redlands Second Lift Canal to the south about 270 feet and connected by the wash. So although there is not enough standing water on the Natural Area to support waterfowl and other wetland associated birds, these birds can frequently be seen as they pass between the wetlands north and south of the Natural Area.

## Wildlife

Vertebrate wildlife expected to inhabit the Natural Area includes mule deer, small mammals and migratory (e.g., passerines, doves, raptors, hummingbirds) and resident (e.g., quail) birds. Waterfowl (e.g., mallards, and Canada geese) and other wetland associated birds can commonly be seen passing over the Natural Area between wetland features immediately north and south of the Natural Area. Mammals reported observed in the Natural Area include mule deer, coyotes, and bobcats. These species likely pass through the Natural Area periodically, but habitat is too limited to support these mammals on this property alone. Bird species reported observed in the Natural Area include northern flickers, lazuli buntings, yellow warblers, yellow-rumped warblers, swallows, red-wing blackbirds, mourning doves, American robins, black-billed magpies, black-headed grosbeaks, western meadowlarks, Cooper's hawks, screech owls, and Gamble's quail, but many others are possible. Bird species nesting on the Natural Area include ground, bulrush-cattail, shrub, mid-tree, and upper-tree nesting species. Habitat for primary and secondary cavity nesters is limited due to the few cottonwood trees associated with the wash and limited snags and cavities provided by Russian olive. Cavities for nesting birds could be provided by hanging nest boxes in the trees or on posts. Russian olive is an exotic species, but there is some value to wildlife as the olives are edible to birds and other wildlife and can provide good shelter in thick stands for calving and hiding cover for deer.

## Scoping

In February 2023, the HOA Board solicited input from the HOA members on ideas for the Granite Falls subdivision Natural Area. Written comments were received from 10 home owners/families outside of the Subcommittee members at that time (Appendix 1). All respondents generally suggested the same ideas; that the open space should remain as a natural area for wildlife and the enjoyment of the HOA members with management of the area to: 1) enhance wildlife value (e.g., enhance existing habitat types, replace exotic plant species with native plants, thin, and create edge), 2) enhance utility for HOA member enjoyment (i.e., create a trail, install benches and a picnic table, remove trash and abandoned car and repair or remove the obsolete fence), 3) reduce fuel loads to reduce wildfire risk to the Subdivision, and 4) minimize cost of initial management and annual maintenance.

## Management Objectives

The management objectives for the Granite Falls Subdivision Natural Area are as follows. There is one fundamental objective and multiple means objectives. The means objectives are necessary to accomplish the fundamental objective. Means objectives are presented in priority order.

**Fundamental objective**—Mitigate fire hazards, benefit wildlife with useful habitat, and provide an enjoyable and useful natural area for the maximum benefit of the Granite Fall Subdivision residents with the least cost in management and annual maintenance to the Granite Fall Subdivision HOA members.

**Means objectives**—

1) Establish and maintain a 20 feet wide short-grass fire break along the east and south border of the Natural Area and reduce volume and extent of continuous stands of trees and shrubs for wildfire mitigation
    a. Establish the 20 feet wide short-grass fire break such that it can be maintained efficiently and at minimal cost. Consideration should be given to ease of future maintenance by grazing or mowing with relatively small equipment and without risk of fire and rock or other object damage to mowing equipment, people, and property
    b. Establish a plan for periodic or regular maintenance of the 20 fee wide short-grass fire break to maintain its effectiveness. Possibly the fire break could be mowed by the same contractor that maintains the rest of the Subdivision so that special or additional visits, equipment, and contracts are not needed
    c. Reduce tree understory volume, particularly dead branches on the eastern side of the Natural Area, and extent of continuous stands of trees and shrubs across the Natural Area for improved wildfire mitigation, wildlife habitat, and aesthetics
2) Enhance wildlife habitat diversity, quality, and edge and minimize disturbance to attract the greatest diversity (species richness) and number (abundance) of vertebrate birds and mammals in the Natural Area. Vertebrate wildlife are more visible than some other wildlife and management for vertebrate species will benefit other native small wildlife species seen and unseen including butterflies, beneficial insects, etc.
    a. Break up extensive, thick, and continuous stands of trees and shrubs to create edge
    b. Consider adding bird nesting boxes, but only if there is a plan for regular servicing and maintenance
    c. Consider adding a few small brush piles for small mammal and bird escape cover and nesting
    d. Add signs and enforce dog leash rules to the extent practicable via friendly reminders and encouragement to minimize disturbance to wildlife and bird nest destruction

3) Enhance utility of the Natural Area for HOA member enjoyment
    a. Remove obsolete barbed wire fencing along adjacent properties to the north and east (or restore for property line identification), the abandoned car, and any other debris from the Natural Area to promote safety and aesthetics of the Natural Area
    b. Create and maintain a walking trail two to three feet wide that is covered with woodchips and wheelchair friendly to the extent practicable and that meanders around the property to extend the trail length and allow viewing and visitation of each of the four habitat types and the full extent of the Natural Area
    c. Add two or three durable, low-maintenance benches along the trail. Possible locations for the benches may be near the north and south ends of the Natural Area and another along the fire break overlooking the Natural Area, in scenic areas surrounded by wildlife habitat to provide resting areas for elderly persons and places to sit and enjoy wildlife, habitat, and aesthetic values of the Natural Area
    d. Add at least one durable, low-maintenance picnic table (and consider a shelter or tree cover for shade), near Sieber Canyon Court to balance distance to carry food and picnic supplies, minimize attraction to non Granite Falls Subdivision residents , and setting for wildlife, habitat, and aesthetic values. Consider adding a second table along the fire break overlooking the Natural Area, which provides exceptional views of the Colorado National Monument visible over the trees in the Natural Area
    e. Consider adding one durable, low-maintenance platform near the middle of the wash to promote star gazing and possible family camping by Granite Falls Subdivision residents
    f. Encourage appropriate use by Granite Falls Subdivision residents of the Natural Area through walking, wildlife viewing, star gazing, camping, picnics, and other events and activities
4) Manage the Natural Area to enhance the existing four habitat types, promote natural ecosystem functions, promote native vegetation of the area, reduce or eliminate exotic vegetation to the extent practicable, and improve aesthetic values
    a. Strive over the long term to work towards planting native grasses, perennials, shrubs and trees and remove exotic plant species to the extent practicable
    b. Removal of tree and shrub materials should be via a combination of grinding into small chips and left on site for mulch and trail surfacing, and small piles of limbs to provide beneficial micro climate and protection from browsing for native plant establishment via strategic seedling placement
    c. Generally prohibit use of chemicals in the Natural Area unless approved by the Subcommittee on a case by case basis depending on demonstrated value of use and minimal risk to HOA members, wildlife, and non-target plant species
    d. Seek funding sources and native plant seed and sapling stock sources to promote establishment of native vegetation across the Natural Area
    e. Periodically remove accumulating debris from the drain and wet meadow areas
    f. Work with adjacent landowners to the north and west to enhance the riparian habitat type along the wash and near the wet meadow
5) Minimize cost of initial management and annual maintenance
    a. Seek government grants to support the Natural Area management objectives
    b. Promote HOA member voluntary involvement in projects on a regular periodic basis
    c. Promote HOA member youth involvement in special projects
    d. Promote non-government organization contributions (e.g., Audubon Society, CMU wildlife Club, Boy Scouts of America)

e. Seek cost effective solutions to manage and maintain the Natural Area to best achieve the management objectives and at an appropriate rate for the priorities

Because there are multiple and potentially competing objectives, management actions for each objective must be carefully considered holistically along with the other objectives to best balance the desired multiple uses and achieve the maximum benefit for the HOA members.

This management plan should be periodically reviewed and updated to address current information, needs, and desires of the HOA members. This plan was generally established on a five-year planning horizon.

## Examples of Desired Future Condition

There are some local examples of successful management outcomes for the desired state of the Granite Falls Subdivision Natural Area. These areas serve as models for successful management for objectives similar to those of the Granite Fall Subdivision Natural Area.

The Grand Valley Audubon Society wetland improvement project at the Audubon Nature Preserve, located at 610 Dike Road in Grand Junction, is managed for wetland habitat restoration, birds and other wildlife, natural ecosystem function, and enjoyment by people. Visit the project website at https://www.audubongv.org/wetland-improvement-project.html.

Kindred Reserve, located at 2064 S. Broadway in Grand Junction, is the city's first open space park. This park is 37-acres and has a natural feel with 1.75-miles of dirt trails, views of the Colorado National Monument, Book Cliffs, and the Grand Mesa. The park is a unique location for users to enjoy walking, running, bird watching, and being out in nature surrounded by wildlife. Visit the project website at https://www.gjcity.org/1087/Kindred-Reserve-Open-Space-Park.

## Recommended Management Actions

Fiscal and priority constraints influence the extent and timing of management activities. Management and maintenance of the Natural Area may be possible within a budget of about $4,000 plus inflation allotment per year, but work progress may be slow and require substantial neighborhood voluntary involvement in projects. Ideally, government grants and other non-government organization contributions (e.g., Audubon Society, CMU wildlife Club, Boy Scouts of America) would be sought to facilitate rapid and more extensive management of the Natural Area, particularly for wildfire risk management (mitigation).

Grazing by goats should be considered among the management alternatives (e.g., hand pulling, herbicides, biological agents, and mechanical treatments) for helping to control noxious and invasive plants as benefits may be environmental, economical, and social (Lamming 2001). Goat grazing may also be an effective treatment for reducing vegetation volume and extent of continuous and dense stands of grass, shrubs, and trees for wildfire mitigation and wildlife habitat enhancement.

Recommendations for management actions and priority timing follow.

### High Priority

The most immediate priority management actions should be to first establish the 20-feet wide short-grass fire break and second to reduce vegetation volume and extent of continuous stands of trees and

shrubs for wildfire mitigation. Wildfires are a natural part of Colorado's landscapes, and the Natural Area is juxtaposed against rural properties and public lands. Planning ahead and taking actions to reduce fire hazards can increase your safety and help protect your property (Colorado State Forest Service, 2012). Firefighters always do their best to protect people and property, but ultimately, it is your responsibility to protect your life, family, animals and property from wildfire.

The short-grass fire break should be established as soon as practical, but ideally no later than summer-fall 2024. If funds and support are too limiting, then the wildfire fuel volume reduction component could take place section by section as resources permit. At the same time of treatment for wildfire fuel volume reduction, efforts should also enhance wildlife habitat diversity, quality, and edge and minimize disturbance to attract wildlife and improve the aesthetics of the Natural Area.

A maintenance plan should be developed for maintaining the effectiveness of the short-grass fire break. Grazing or mowing may be needed at least once per year, possibly in late summer or fall (this timing is best to minimize disturbance to wildlife, especially birds nesting on the ground). Initial and periodic searches for rocks and removal should occur on the fire break because rocks can damage mowing equipment (e.g., mover blades, engine shafts, mowing decks), blade and rock strikes can create sparks and ignite dry grasses, and rocks can be thrown by mowing equipment causing risks to people and property.

Russian olive should be removed strategically to reduce volume and break up thick continuous stands of to create fire breaks and edge habitat to increase wildlife habitat values. Possibly continuous stands can be separated into about six separate stands of Russian olive in the Natural Area. A priority should be to eliminate a 20–30 yard section of Russian olive toward the center of the Natural Area (section where several of the trees have already been topped) to create a break in the existing large grove and a connection of the wet meadow habitat types. Any new open areas should be replanted to a combination of native grasses, perennial, and shrubs as appropriate.

### Moderate Priority

The next management priority should be to enhance utility of the Natural Area for HOA member enjoyment by removing or restoring obsolete fencing, the abandoned car, and any other debris and establishing a trail, benches, signage, picnic table, etc. to facilitate HOA member use and enjoyment.

### Low Priority

The lowest priority management action, but still highly important to achieve the fundamental objective, should be to manage the Natural Area to enhance the existing four habitat types, promote natural ecosystem functions, promote native vegetation of the area, reduce or eliminate exotic vegetation to the extent practicable, and improve aesthetics of the Natural Area.

Removal of exotic vegetation and establishment of native vegetation will require continuous management inputs over the long-term to be successful. Russian olive trees should largely be left in place for the immediate future and replaced gradually because of their role in providing at least some value for wildlife and aesthetics of the Natural Area. Tree replacement should include multi-aged stands for longevity and diversity and promote native trees that may produce cavities for bird nesting (e.g., cottonwoods) and insect and mast production for bird foraging. Shrubs and grass replacement can occur more rapidly as resources allow, but like tree replacement, should occur over time to maintain overall desired floristic structure and composition of grass, shrub, and tree cover to maintain or improve

wildlife habitat, ecosystem function, and aesthetic values. Consider restoration of native plant species as identified in Table 1 considering available vegetation, microsites, and the multiple management objectives for the Natural Area. Priority should be given to establishment of native vegetation species over exotic species. Priority should also be given to establishment of a diversity of native perennials, grass, and mast producing shrubs (e.g., Serviceberry, chokecherry, western sandcherry, oaks) to enhance value to wildlife and because grass, perennial, and shrub establishment can generally be achieved relatively quickly compared to large trees. Additional resources for identification of appropriate native grasses, perennials, shrubs, and trees can be found in Colorado State University Extension (2004, 2018a, 2018b, and 2018c) and Gardening Guide Committee (2017) publications.

Dead, strategically placed tamarisk and Russian olive limbs could be used to provide shade for the newly planted trees and shrubs (planted early spring or late fall) and to minimize risk of wildlife browsing on the seedlings and saplings. When the shrubs and trees are better established, limb piles could be removed or left to provide cover for small mammals, birds, and other critters.

The Natural Area contains several varieties of native shrubs including rabbitbrush and sagebrush. These species should be maintained and augmented with other native shrub species. As the upland grass area nears the end of the northern portion of the Natural Area, there are some well-established native grasses, perennials (e.g., mallow), and sedges and should be maintained or increased in distribution and abundance. In some areas, large stands of cheatgrass and foxtail exists and should be replaced to the extent practicable over time and resources allow.

The grassy area to the east of the Russian olives, which is somewhat of a misnomer, is an area of disturbed land in which noxious weeds, but also pioneer species (colonizer species) are growing, especially toward the center of the area.

In the spring, seeding a mixture of native grasses (such as blue grama, Indian rice grass and little bluestem, or something similar) and mixed perennials could be explored to encourage natural succession, wildlife habitat, plant community types, and aesthetics. Seeding could also occur in the fall just before the first snow. Eventually (hopefully) the native species should get established and crowd out some of the noxious weeds. It should be recognized that a successful replacement process is a significant management challenge, especially with cheatgrass and foxtails, but is possible with careful, persistent, and periodic management over multiple years. Chemical treatments and burning to eliminate or discourage the exotic grass species (e.g., cheatgrass, foxtail) are generally not recommended as often unintended consequences occur such as damaging or killing non-target plant species and harming wildlife, people, and property.

The northeast corner area of the Natural Area, where the drain enters just behind the homes, may need periodic management. About 50 feet of the drainage area is somewhat clogged with cattails, shrubs, and debris. Periodically, debris may need to be removed and cattails may need to be reduced in abundance/density and seeded with native sedges, rushes, and grasses.

## Management Timeline

Below is a potential management priority timeline on a five-year planning horizon. Adjustments may be needed based on available resources and support.

**Year 1**

- Establish a 20 feet wide short-grass fire break and remove potential rock and other object hazards
- Maintain effectiveness of the short-grass fire break by grazing or mowing as needed, possibly at least once a year in late summer or fall (this timing is best to minimize disturbance to wildlife, especially birds nesting on the ground). Continue maintenance on a regular schedule each year as needed to maintain effectiveness
- In any disturbed area that may exist from creation of the fire break, seed with native grasses in early spring and/or just before first snow in the fall. Continue to seed with native grasses annually as needed
- Initial reduction of vegetation volume and extent of continuous stands of trees and shrubs. At minimum, eliminate a 20–30 yard section of Russian olive toward the center of the Natural Area (section where several of the trees have already been topped) to create a break in the existing large grove to connect the wet meadow habitat types. The new open area should be replanted to a combination of native grasses, perennials, and shrubs
- Remove obsolete barbed wire fencing along adjacent properties to the north and east (or restore for property line identification), remove the abandoned car, and any other debris from the drain, wetland, and other parts of the Natural Area
- Initial efforts to reduce tree understory volume, particularly dead branches
- Plant as many as possible native trees (e.g., cottonwood, oaks, ash, and birch), and shrubs (e.g., willows, serviceberry, choke cherry, oaks) in disturbed and other strategic area especially along the wash/riparian area
- Create at least a primitive (mowed) walking trail through the Natural Area
- Install up to two or three total benches in the Natural Area strategically placed along the trail and fire break
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**Year 2**

- Continue to maintain the effectiveness of the short-grass fire break by grazing or mowing as needed and as described in year 1
- Remove any debris from the drain, wetland, and other parts of the Natural Area
- Complete reduction of volume and extent of continuous stands of trees and shrubs
- Continue planting native grasses, perennials, shrubs, and tree (especially the disturbed areas lacking pioneer natives)
- Complete any other outstanding management actions not yet completed in the previous year
- Continue to develop and maintain the walking trail including adding a woodchip surface
- Consider adding bird nesting boxes, but only if there is a plan for regular servicing and maintenance
- Consider adding a few brush piles for small mammal and bird escape cover and nesting
- Add signs and enforce dog leash rules to the extent practicable via friendly reminders and encouragement
- Promote involvement by Granite Falls Subdivision residents in the management and use of the Natural Area

**Year 3**

- Continue to maintain the effectiveness of the short-grass fire break by grazing or mowing as needed and as described in year 1

- Remove any debris from the drain, wetland, and other parts of the Natural Area
- Review necessity for reduction of volume and extent of continuous stands of trees and shrubs
- Continue planting native grasses, perennials, shrubs, and trees (especially the disturbed areas lacking pioneer natives) as needed and resources allow
- Complete any other outstanding management actions not yet completed in the previous years
- Continue to develop and maintain the trail system
- Continue to develop and maintain all other aspects of the Natural Area for enjoyment by Granite Falls Subdivision residents
- Servicing existing bird nesting boxes and consider adding additional boxes, but only if there is a plan for regular servicing and maintenance
- Maintain and consider adding a few brush piles for small mammal and bird escape cover and nesting
- Maintain and or add signs and enforce dog leash rules to the extent practicable via friendly reminders and encouragement
- Promote involvement by Granite Falls Subdivision residents in the management and use of the Natural Area

**Year 4**

- Continue to maintain the effectiveness of the short-grass fire break by grazing or mowing as needed and as described in year 1
- Remove any debris from the drain, wetland, and other parts of the Natural Area
- Review necessity for reduction of volume and extent of continuous stands of trees and shrubs
- Continue planting native grasses, perennials, shrubs, and trees (especially the disturbed areas lacking pioneer natives) as needed and resources allow
- Complete any other outstanding management actions not yet completed in the previous years
- Continue to develop and maintain the trail system
- Continue to develop and maintain all other aspects of the Natural Area for enjoyment by Granite Falls Subdivision residents
- Servicing existing bird nesting boxes and consider adding additional boxes, but only if there is a plan for regular servicing and maintenance
- Maintain and consider adding a few brush piles for small mammal and bird escape cover and nesting
- Maintain and or add signs and enforce dog leash rules to the extent practicable via friendly reminders and encouragement
- Promote involvement by Granite Falls Subdivision residents in the management and use of the Natural Area

**Year 5**

- Continue to maintain the effectiveness of the short-grass fire break by grazing or mowing as needed and as described in year 1
- Remove any debris from the drain, wetland, and other parts of the Natural Area
- Review necessity for reduction of volume and extent of continuous stands of trees and shrubs
- Continue planting native grasses, perennials, shrubs, and trees (especially the disturbed areas lacking pioneer natives) as needed and resources allow
- Complete any other outstanding management actions not yet completed in the previous years
- Continue to develop and maintain the trail system

- Continue to develop and maintain all other aspects of the Natural Area for enjoyment by Granite Falls Subdivision residents
- Servicing existing bird nesting boxes and consider adding additional boxes, but only if there is a plan for regular servicing and maintenance
- Maintain and consider adding a few brush piles for small mammal and bird escape cover and nesting
- Maintain and or add signs and enforce dog leash rules to the extent practicable via friendly reminders and encouragement
- Promote involvement by Granite Falls Subdivision residents in the management and use of the Natural Area
- Conduct management plan review and update to address current information, needs, and desires of the Granite Falls Subdivision residents

## Notes about Greasewood, Tamarisk, and Knapweed

Greasewood (*Sarcobatus vermiculatus*, aka black greasewod or chico or chicowood), tamarisk (*Tamarix spp.*, aka salt cedar), and Russian knapweed (*Acroptilon repens*) deserve special management consideration. These plants offer little value to wildlife and can quickly dominant landscapes pushing out other species and reducing diversity of flora and fauna in an area. Even worse, these plants alter soil chemistry and can make subsequent establishment of native species especially difficult. Greaswood and Tamarisk grow on and contribute to dry alkaline or saline soils. Russian knapweed exudes toxins into the soil so that no other plant species can grow around. These species, but also other other invasive and exotic plant species (e.g., Russian olive, cheatgrass, foxtail), should be replaced with native species to the greatest extent and rate practicable.

The US Department of Agriculture maintains the National Invasive Species Information Center, which provides information and resources in managing invasive species (see https://www.invasivespeciesinfo.gov).

Most of the invasive plant information that follows was copied from various online resources.

### Greasewood

Sacrobatus is from the Greek sarco meaning "flesh" and batos meaning "bramble or thorn," referring to the succulent leaves and spiny branches of the plant. The family name "Chenopodiaceae" translates to "goose foot," referring to some members of this family's leaf shape, which resembles the foot of a goose. Greasewood plants are native to western Colorado and grow in alkaline or saline soils, and is the dominant vegetation of the dry alkaline soils of the western states. Often, sodium or potassium salts accumulate beneath the plant. Greasewood grows in association with other alkaline plants such as shadscale (*Atriplex spp.*), saltbush (*Atriplex spp.*), halogeton (*Halogeton glomeratus*) and salt grass (*Disticalis spicata*). Some wildlife species, such as jackrabbits and prairie dogs, forage on the plant. The plant provides burrowing or resting sites for small mammals or birds. Greasewood can be toxic to livestock. The toxic principle is sodium oxalate (10–22% dry matter). The leaves contain the highest concentration of oxalate. Toxicity occurs when 1.5–5.0% of an animal's weight of the plant is ingested over a short period of time.

## Tamarisk

Tamarisk species that are present in the U.S. include *Tamarix ramosissima*, *T. parviflora*, *T. aphylla*, *T. chinensis*, and *T. canariensis*, and several hybrid forms between the different species. Tamarisk is non-native to the United States. Because of the plant's resistance to heat and drought, the Army Corps of Engineers used it in the mid-19th century to stabilize riverbanks against erosion. Then, during the severe drought of the 1930s on the Great Plains, farmers deployed it and its companion, invasive Russian olive, to provide windbreaks.

Tamarisk often grows in impenetrable thickets along waterways, cutting off the natural processes that promote native tree populations and becoming a wildfire hazard. It holds salt in its tissues, so fallen leaves increase soil surface salinity making it difficult for native plants to establish. Native plant and bird species, such as the southwestern willow flycatcher and their related pollinators, have been displaced from native populations. Dense populations change water flow, widening floodplains by catching sediment and lowering water tables. It offers little food to wildlife. Dense stands support lower biodiversity than the native communities they displace. They have severely limited the number of germination sites that are suitable to cottonwood and other riparian species leading to a decline in native cottonwoods, willows, and other native riparian vegetation. The plant robs other plants of water. The plants are considered to be among the world's 100 top invaders and one of the most damaging invasive weeds in the western US. Tamarisk is readily flammable even when healthy and green, increasing the incidence of wildfires, but tamarisk is then able to recover and dominate a recently burned area. A single plant's blossoms produce thousands of seeds, which easily take root. Tamarisk control is difficult as it re-sprouts after damage to the crown, stems, roots and root pieces. Control strategies include mechanical removal of the crown and room system and hand pulling seedlings. Research is being done on biological controls. USDA began introducing leaf-eating beetles (*Diorhabda elongata*) in 2007 to reduce populations. Beetles defoliate Tamarisk trees throughout the growing season. It can often take more than one year for shrubs to die. Fires don't work, since this is a fire-adapted species and will re-grow after fire.

Many have taken up the cause of tamarisk eradication: government agencies, nonprofits and thousands of volunteers, as well as scientists and researchers, including a Colorado College botany professor and his students. Congress even adopted a law in 2006 ordering the Interior and Agriculture departments to get involved, though significant funding was never allocated. Some of those eradication efforts were undertaken along the Dolores and Colorado rivers with the help of Troy Schnurr, a ranger with the Bureau of Land Management in Grand Junction. The stretch Schnurr and others worked on isn't accessible by heavy equipment, so crews had to raft down the river, work by hand with chainsaws and apply herbicides to stumps. The project covered 25 miles and took 15 years. "It can be overwhelming when you start," Schnurr says. "There's a lot of repair work, reseeding, replacement because the tamarisk has been there so long. That plant's gonna be around for quite a while." Shelly Simmons, assistant district forester with the Colorado State Forest Service, explains it like this. "What happens is resprouting," she says. "Tamarisk has an aggressive root system. Once it does get established, you're going to have to watch it for five years and treat it for regrowth. It's rare if you get 100 percent control the first time you try to control it."

## Knapweed

Russian knapweed is a native of Eurasia, probably introduced to North America about 1898 (Colorado State University Extension 2013). Russian knapweed is an aggressive perennial (lasts several years) weed that reproduces from seed and adventitious buds on a creeping root system. This plant is

allelopathic, which means it exudes toxins into the soil so that no other plant species can grow around it. Russian knapweed displaces native vegetation. Russian knapweed invades open, disturbed land, cultivated fields, along ditch banks, fence rows, roadsides, and in waste places. Once established, it tends to form a single-species stand and is very difficult to control or eradicate. Russian knapweed infestations reduce forage for livestock, and greatly reduce biodiversity for wildlife habitat. Plants ingested as fresh or dried forage are toxic to horses, causing a nervous disorder called "chewing disease".

## Acknowledgments

R.R.J. Mohler, Ph.D., developed the initial draft of the management plan. The subcommittee and management plan also benefited from the helpful personal communication in March 2023 with Ellis Thompson-Ellis, Community Outreach Specialist, Grand Junction Fire Department (ellist@gjcity.org), and in May 2023 with Nic Korte, Board Member, Conservation, Grand Valley Audubon Society (nkorte1@hotmail.com).

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Table 1. Vegetation considerations for the Natural Area, all with low water requirements, unless noted and all suitable for various wildlife.

| Class/Species | Comments | Native to western Colorado |
|---|---|---|
| Grasses | | |
| Big Bluestem (*Andropogon gerardii*) | 4–6' tall, tolerates most soils and most water regimes | Native |
| Blue Grama (*Boutleloua gracilis*) | 1' tall, most soils | Native |
| Buffalo Grass (*Buchloe dactyloides*) | 2–8" tall, prefers clay soils | Native |
| Indian rice grass (*Achnatherum hymenoides*) | 1–2' tall, well-drained soils | Native |
| Little Bluestem (*Schizachyrium scoparium*) | 1–2' tall, dry sandy soils | Native |
| Perennials | | |
| Jones' Bluestar (*Amsonia jonesii*) | 18" tall, blue flowers | Native |
| Butterfly Milkweed (*Asclepias tuberosa L.*) | 18" tall, orange flowers | Native |
| Colorado Four O'clock (*Mirabilis multiflora*) | 30" tall, magenta flowers | Native |
| Blue Flax/Lewis Flax (*Linum lewisii*) | 18" tall, blue flowers | Native |
| Prairie Coneflower (*Ratibida columnifera*) | 24" tall, yellow flowers | Native |
| Scarlet Globemallow (*Sphaeralcea coccinea*) | 36" tall, orange flowers | Native |
| Bush sunflowers (*Helianthus pumilus*) | 36" tall, yellow flowers | Native |
| Shrubs | | |
| Utah Serviceberry (*Amelanchier utahensis*) | 12' tall, part shade in medium water requirements, white flowers | Native |
| Serviceberry (*Amelanchier alnifolia*) | | Native |
| Western Chokecherry (*Prunus virginiana*) | | Native |
| Western Sandcherry (*Prunus besseyi*) | | Native |
| Mormon Tea (*Ephedera viridis*) | 3' tall, yellow flowers | Native |
| Rabbitbrush (*Ericameria nauseosa*) | 5' tall, yellow flowers | Native |
| Panchito Manzanita (*Arctostaphylos coloradoensis*) | 2' tall, white to pink flowers | Native |
| Big Sagebrush (*Artemisia tridentata*) | 6' tall, yellow flowers | Native |
| Trees | | |
| Singleleaf Ash (*Frazinus anomala*) | 12' tall | Native |
| Gambel's Oak (*Quercus gambelii*) | 25' tall | Native |
| Peachleaf Willow (*Salix amygdaloides*) | 40' tall, along streams | Native |
| Western Water Birch (*Betula occidentalis*) | 45' tall, along streams | Native |
| Rio Grande Cottonwood (*Populus deltoides*) | 80' tall, along streams | Native |
| Narrowleaf Cottonwood (*Populus acuminata*) | 60' tall, found in the Monument | Native |
| American Sycamore (*Platanus occidentalis*) | 100' tall, along streams | Non native |


Figure 1. Granite Falls Subdivision Natural Area (central polygon) in Grand Junction, Mesa County, Colorado (latitude and longitude centroid about 39.0658, –108.6515 decimal degrees N and W). The west side is bordered by Lime Kiln Wash. The natural area is accessible from the end of Sieber Canyon Court. The Natural Area is 7.22 acres and approximately rectangle in shape measuring 705 (north-south) by 480 (east-west) feet.

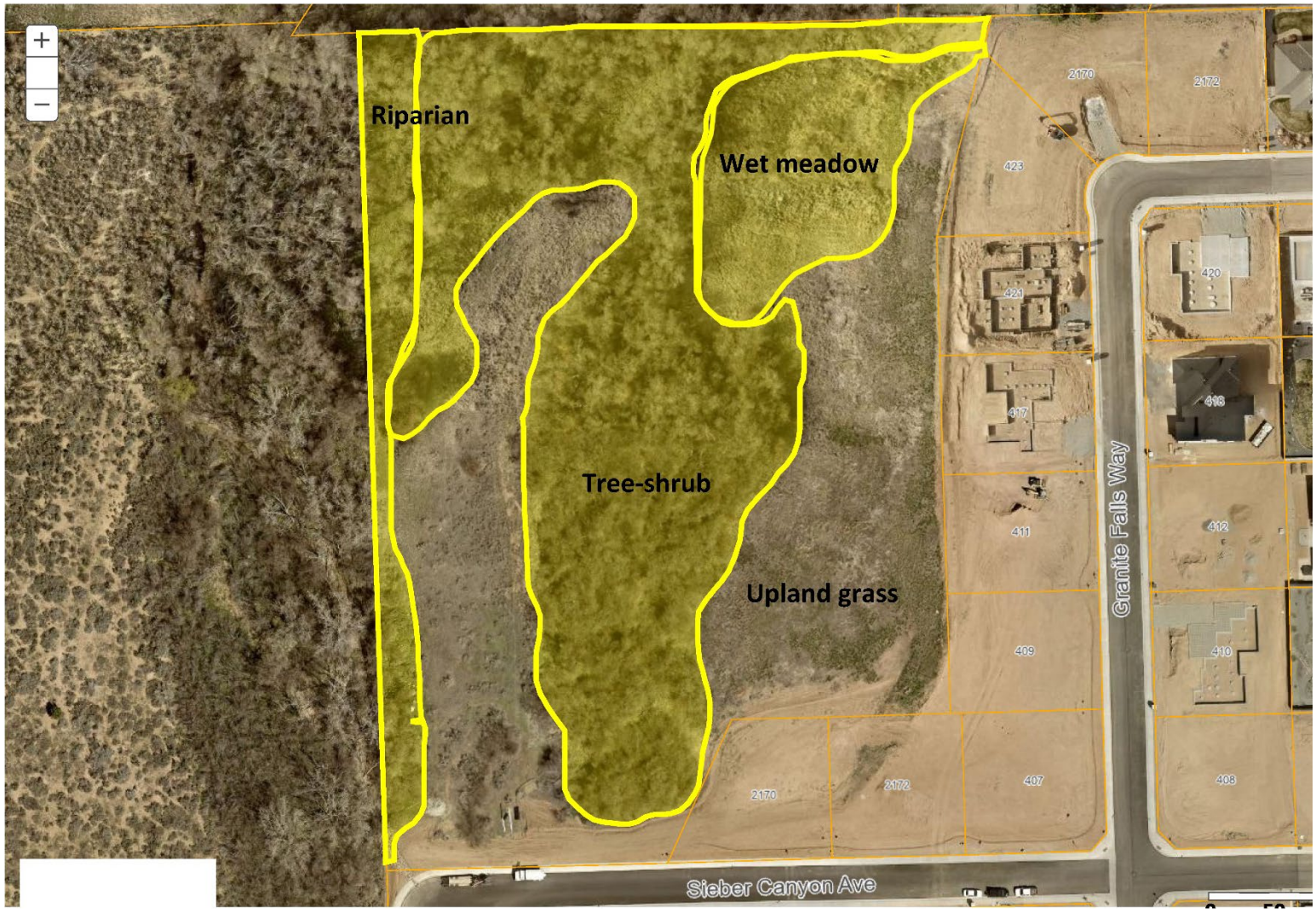


Figure 2. Granite Falls Subdivision Natural Area comprises four habitat types including: riparian (associated with Lime Kiln Wash, about 0.5 acres, 8%), upland grass (about 3.0 acres, 41%), tree-shrub dominated (about 3.0 acres, 41%), and wet meadow (about 0.7 acres, 10%) created by one or two natural springs on the property and a drain.


Figure 3. Associated with Lime Kiln Wash in the northwest corner of the Granite Falls Subdivision Natural Area is a small area classified by the Federal Emergency Management Agency (FEMA) as a potential flood hazard area in a non-regulatory floodplain.


Figure 4. Planned 20 feet wide short-grass fire break about 935 feet in length along the east and south border of the Granite Falls Subdivision Natural Area.

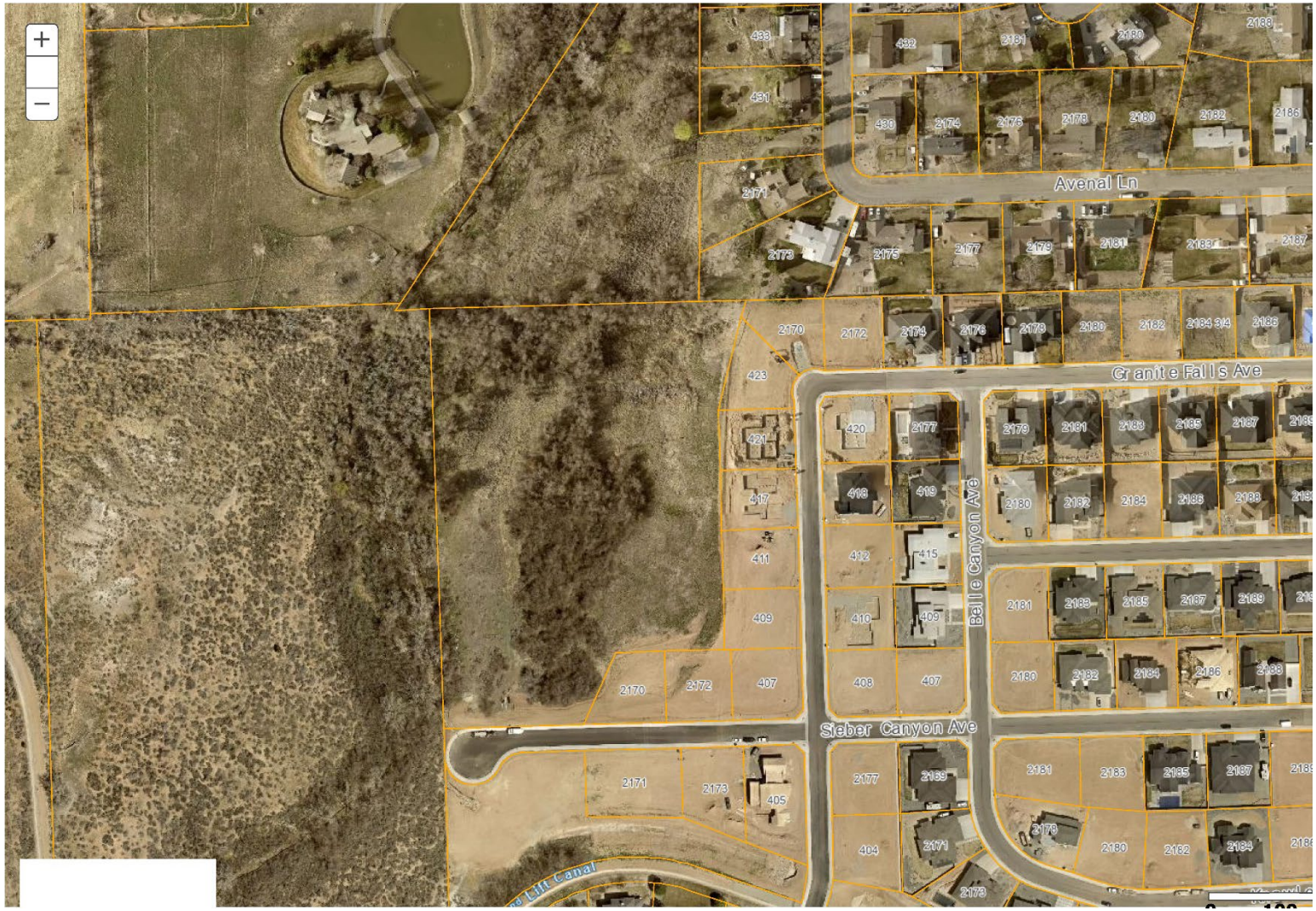


Figure 5. Juxtaposition of the Granite Falls Subdivision Natural Area.

Appendix 1. Solicited written comments from HOA members submitted to the HOA Board in February 2023regarding input on ideas for the Granite Falls Subdivision open space (now called the Natural Area).

| Source | Sender | Comment |
|---|---|---|
| Card | Anon | Open area should remain relatively wild. Put in several permanent park benches so we can enjoy the wildlife and birds. Maybe add a dog-pooper-bag dispenser. Keep the area as natural as possible - a wildlife corridor! It is impossible to get rid of Russian Olives, if one is cut down, forty suckers come up from the stump and roots. Build walking trails. Get rid of some of the litter. Mitigate for wild fires. |
| Email | Roger Smith | Hi - With the weather and general business of getting settled after our recent move, I haven't been able to fully explore the tract. But based on what I heard at the meeting, I think that safety comes first. We should mitigate fire hazards. After that, my preference would be to leave it a natural, low maintenance state. I wonder though if there's a potential to connect the trail to one in the next neighborhood? I thought I heard something about that. As for the junk, I'm not too worried about the environmental impacts, but if it's a safety hazard or in a place that's highly visible, I think we should look into removal. Let me know if there's an opportunity to participate in discussions and planning for the area. As a recent retiree and a new resident, I've have nothing but time at this point! |
| Email | Todd Sanders | Dear Granite Falls HOA: Please consider this input for the seven acres of open space. I suggest that we restore the riparian area to native vegetation (remove the car, Russian olive, and other exotics and plant native trees (e.g., cottonwood), shrubs, and grass. We could enhance the pond, riparian areas, and upland areas to attract wildlife associated with these three important habitat types. We could seek funding and support from the CMU wildlife club and other organizations for riparian and wetland restoration. Trials could be constructed to maximize HOA member enjoyment of the wildlife and habitat types, we could also install placards that identify the various vegetation species and wildlife. I would be very interested to assist in the restoration of this important riparian area to more natural conditions for wildlife and the enjoyment by people. Please let me know how I may be able to help. Sincerely, Todd |
| Email | Bill Trubey | - low cost solutions - benches made by homeowners - discourage public monies - 4 ft wild life fencing for safety? - pathing solutions using breeze/DG crushed rock - minimize public non GF homeowners use |

Appendix 1. Continued.

| Source | Sender | Comment |
|---|---|---|
| Email | Rodney Asbury | I would be in favor of getting a tree service to remove ALL of the Russian olives to the West and those on the South of the cul de sac. Let the rest of the grass area go undisturbed in wild grass with no additional irrigation. Have landscape company mow the grass 2-3 times per year. No goats at a cost of $7000. |
| Email | Lenny Lang | My thoughts for the open space is to turn it into a wildlife/picnic area. If we get about about 10 volunteers and a large dumpster we can clean up the area according to a plan. Colorado State forest service would mark trees for us that need cutting. As russian olives are cut they can be treated with tordon which will prevent regrowth. Actually I'd keep a few of the russian olive as they do make good wildlife habitat (berries are a food source) and trunks can be trimmed. Trails could continue for a loop trail or tie into sub division to the north. As for old car that could be easily moved, it's really not that large as it's just part of the shell. Weeds could be sprayed, shrubs trimmed, more desirable species could be planted, place a couple of picnic tables in selected areas and maintain with volunteers a few times per year as needed. |
| Email | Bridget and Steve Zastrow | The 7 acres that is designated as a trail and drainage easement should stay the way it is. Even though Russian Olives are an invasive species they provide a wonderful habitat for many species that are desirable. Russian Olives are a part of the southwestern region and they are here to stay. Goats can clear an area quickly but are also going to eat the all the herbaceous plants plus the lower area of all the trees leaving the area looking stripped of much of its natural beauty. I personally don't think this is the right area for a playground. When we moved into this neighborhood we were told that this seven acres was designated as a nature preserve for all of us to explore the trails. Providing the area for the flora and fauna that already exist can benefit everyone by having a nature preserve that has trails for all of us to enjoy. Thank you for your time, Bridget Zastrow |
| Email | Erin and Evan Solida | After reading the suggested usage for the open space on west side of Granite Falls, we strongly feel it should remain as a wildlife refuge. It's home to so many wonderful creatures and we shouldn't disturb them or displace them further. From a safety aspect, there are plenty of coyotes that pose danger to loose dogs and children, so if a playground is requested for the community, suggest that's located on the open lot at southwest end of cul-de-sac. |

Appendix 1. Continued.

| Source | Sender | Comment |
|---|---|---|
| Email | Rhonda and Bill Richardson | Thank you for the presentation on the Open Space. We would like to see it remain an open Wildlife Preserve. We have already displaced the beautiful deer herd that was here – let's leave them some space. A natural walkway would be pleasant and not too disruptive to the various animals that are back there. The mitigation work is necessary for a safety concern and should be conducted. The picnic and playground designations would bring potential liability and maintenance issues and costs that the HOA is not financially able to incur. On another note – there has been talk about a dog park in the grassy area on the cul-de-sac. Although we have dogs, we oppose that idea. There is no way to prevent parties that don't live in our neighborhood using the facility and we have no way to supervise waste material pick up from our own neighbors or outside parties. We don't want to pay an outside business to keep the area clean. |
| Email | Elizabeth Brookmeyer | Here are a few bullet points as discussed among some of us with kids in the neighborhood regarding the open space: *Generally enjoy the space as is *Would love if the barbed wire could be cleaned up *How about making a more defined loop trail (I could see kids building jumps and all back there too, group should define whether or not that is ok) *a covered table or bench area would be nice *a couple moms liked the idea of a grill area to hang out for bbqs (personally wouldn't think a grill would be safe) *seeding the area within the trail with some (more) native grasses Probably need to consider some signage about picking up after dogs and humans down there, I wouldn't want to get into a trash can situation because then someone has to be responsible for it. If anything else comes up after we start our bike gang in the cul de sac I will let you know. Thank you for working on this, your efforts are appreciated. |