

HEINE WILDLIFE SANCTUARY

2018 CONSERVATION EASEMENT

BASELINE REPORT



Jefferson County, Colorado

HEINE WILDLIFE SANCTUARY

2018 BASELINE REPORT

January 2018



Jefferson County, Colorado

Prepared for:

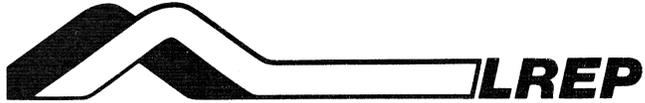
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Cover Photo: Photo Point 16
Inside Cover Photo: Photo Point 4



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January 31, 2018

Jessica Jay
Conservation Law, P.C.
Evergreen, CO

Re: Final Heine Wildlife Sanctuary 2018 Conservation Easement Baseline Report

Dear Jessica,

Enclosed is a pdf version of the final report. Edits made to the January 29, 2018 draft report are per the e-mails from you and Sarah Parmer, Colorado Open Lands, both e-mails dated January 30, 2018. Under this cover letter, I will also deliver the hard copies of the report.

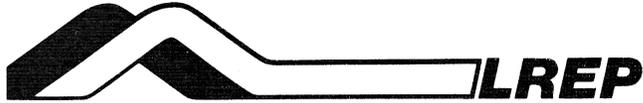
Sincerely,

A handwritten signature in blue ink that reads "Michael G. Figgs". The signature is written in a cursive, flowing style.

Michael G. Figgs

encl.

cc: Sarah Parmer, Colorado Open Lands



Landscape, Resource, Ecosystem Planning, Inc.
P.O. Box 5, Allenspark, CO 80510 mfiggs@indra.com
Phone 303-747-2000 Mobile 303-579-5821

January 29, 2018

Jessica Jay
Conservation Law, P.C.
Evergreen, CO

Re: Heine Wildlife Sanctuary 2018 Conservation Easement Baseline Report

Dear Jessica,

Enclosed is a pdf version of the report for your review. Please review this document and forward your comments to me. The primary changes to the 2016 draft report are : 1) add additional land to the West Heine Parcel, 2) update the Deed of Conservation Easement in Appendix 1, 3) update the title commitment in Appendix 2, and 4) add Section 10 Current Conditions to the report.

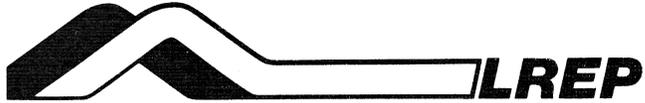
Sincerely,

A handwritten signature in blue ink that reads "Michael G. Figgs". The signature is written in a cursive, flowing style.

Michael G. Figgs

encl.

cc: Sarah Parmer, Colorado Open Lands



Landscape, Resource, Ecosystem Planning, Inc.
P.O. Box 5, Allenspark, CO 80510 mfiggs@indra.com
Phone 303-747-2000 Mobile 303-579-5821

October 28, 2016

Jessica Jay
Conservation Law, P.C.
Evergreen, CO

Re: Heine Wildlife Sanctuary 2016 Baseline Report

Dear Jessica,

Enclosed is a pdf version of the report for your review. Please review this document and forward your comments to me.

Sincerely,

A handwritten signature in blue ink that reads "Michael G. Figgs". The signature is written in a cursive, flowing style.

Michael G. Figgs

encl.

cc: Amanda Nims, Sarah Parmer, Colorado Open Lands

HEINE WILDLIFE SANCTUARY

2018 CONSERVATION EASEMENT BASELINE REPORT

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HEINE WILDLIFE SANCTUARY
2018 CONSERVATION EASEMENT BASELINE REPORT

1.0 PURPOSE OF THE BASELINE REPORT

1.1 Introduction

This document is a natural and cultural resource baseline report (the “Baseline Report”) that establishes the existing condition of the Heine Wildlife Sanctuary 2018 Conservation Easement Property (the "Property"). Karin Heine (Grantor) intends to grant a conservation easement to Colorado Open Lands (Grantee). The Heine Wildlife Sanctuary 2018 Conservation Easement Property, as displayed on Figure 3, is the subject property of this report. The Property is the “New Conservation Area” that is being added to land that was included in a grant of conservation easement in 2003 (the “Existing Conservation Area”). The Existing Conservation Area is described in a previous baseline report (LREP 2003), and is referred to herein as 1) an adjacent parcel, 2) with regard to its management relationship to the Property, and 3) the Conservation Values shared with the Property.

All references herein to the "Deed of Conservation Easement" refer to the draft Heine Wildlife Sanctuary Amended and Restated Deed of Conservation Easement, dated January 30, 2018, provided by Sarah Parmar with Colorado Open Lands, a copy of which is located in Appendix 1 attached to this report. All references herein to the Amended and Restated Deed of Conservation Easement are for reference purposes only, and in the case of all legal interpretations, the language of the final signed and recorded Deed of Conservation Easement is primary, and governs any interpretations, deliberate or accidental, made in this baseline report.

1.2 Conservation Values

The purpose of the Conservation Easement is to preserve and protect the specific Conservation Values of the Property. Accordingly, this report is essential in order to:

1. Establish the characteristics, current use, historical management and status of improvements on the Property.
2. Provide evidence of Conservation Values (as defined in the Conservation Easement).
3. Comply with Internal Revenue Service regulations for charitable gifts.
4. Comply with the standards and practices issued by the Land Trust Alliance, as revised (1993 and 2004) and Colorado Coalition of Land Trusts (Wohlgenant 1997).
5. Establish a baseline condition in order to assure that any future changes in the use of the Property will be consistent with the terms of the Conservation Easement.
6. Contribute to the organizational effectiveness and efficiency of Grantee during its future monitoring visits.

The public interest Conservation Values to be protected by the Conservation Easement, and the location they are described in this report, are:

- Significant Relatively Natural Habitat for Wildlife and Plants (Sections 4-7).
- Open Space, including clearly delineated governmental policy, scenic qualities and agricultural land use (Section 8).

2.0 BASELINE REPORT METHODOLOGY AND FORMAT

The report is specifically designed to describe those resources that support the Conservation Values of the Conservation Easement pursuant to § 1.170A-14 of the Treasury Regulations, and to describe the existing conditions of the Property with respect to the terms of the Amended and Restated Deed of Conservation Easement, particularly Paragraphs 4-6. Report methodology follows the suggested format in Bouplon and Lind (2008) and Beyers and Ponte (2005). This report was compiled and formatted to satisfy the requirements of the Internal Revenue Service (IRS) with respect to charitable contributions as described in Small (1986). This report is also designed to conform to the Land Trust Alliance Standards and Practices (Bouplon and Lind 2008, Bates and Van Ryn 2006, Land Trust Alliance 2017). This report is also designed to conform to the Colorado Coalition of Land Trusts Standards and Practices for the Stewardship of Conservation Easements (Wohlgenant 1997). Conservation Values are documented by means of appropriate maps, project plans, aerial and ground photography, natural resource file searches and literature reviews, and site specific narrative descriptions of the relevant natural and cultural resources. Summaries are found in the text of this report, under the appropriate resource section. Detailed supplemental information for specific resources is placed in the appendices as follows:

Appendix 1: reserved for a copy of the signed and recorded Amended and Restated Deed of Conservation Easement. A draft Amended and Restated Deed of Conservation Easement is temporarily located in this appendix.

Appendix 2: title commitment for the Property.

Appendix 3: aerial photography provided by Digital Globe and ESRI.

Appendix 4: summary of climate data.

Appendix 5: ground photography documentation. Site photographs have been labeled and placed in this appendix, along with a Ground Photography Log describing all Photo Points, and a Photo Point Map recording the location of all Photo Points.

Appendix 6: contact list containing names, addresses, and phone numbers for the Grantor, the Grantee, the report preparers, and specialists in the natural resources discussed in this report.

Appendix 7: soils information from the Natural Resources Conservation Service.

Appendix 8: vegetation resources, including a plant list for the Property.

Appendix 9: wildlife resources, including a potential vertebrate wildlife species list for the Property.

Appendix 10: description of the management of Geographic Information System data collected for this report.

Additional Property information was collected by means of a Grantor Interview conducted with Karen Heine on August 15th, 2016. Field work took place on August 15, 2016 and October 25, 2017 for a total of 3.5 hours of field work. All property condition statements are based upon the field work and Grantor Interview.

3.0 LOCATION AND GENERAL DESCRIPTION OF THE PROPERTY

3.1 Location/Acreage

The Property is located approximately 0.5 mile north of Clear Creek within the corporate boundary of the City of Wheat Ridge in northeastern Jefferson County. The Property is approximately 2.5 miles west and north of the City of Wheat Ridge Civic Center, and 6.5 miles east and north of Golden, the seat of Jefferson County. Figure 1 displays the regional setting of the Property; Figure 2 displays the local setting. Figure 3 is a site plan map of the Property.

The Property is located within the NE 1/4 of the NW 1/4 of Section 21 Township 3 South, Range 69 West of the Sixth Principal Meridian. A complete legal description of the Property is attached to the Deed of Conservation Easement. The Property (New Conservation Area) is comprised of three adjacent parcels, described as follows:

1. 4592 Parfet Street, approximately 1.09 acres in size.
2. 4595 Parfet Street, approximately 6.04 acres in size.
3. 4596 Parfet Street, approximately 1.13 acres in size.

The Property is approximately 8.26 acres in size, more or less.

3.2 Geographic Setting/Surface Features Summary

The Property is in the broad floodplain of Clear Creek in the northwestern portion of metropolitan Denver. The floodplain is the dominant local natural feature, and Clear Creek 0.5 mile to the south of the Property. The topography on the Property is flat, with a slight fall to the east and south. Elevation is approximately 5,385'.

There are no natural drainages on the Property, but there is a network of irrigation ditches (Photo Points 14, 17, 18, 20 and 24).

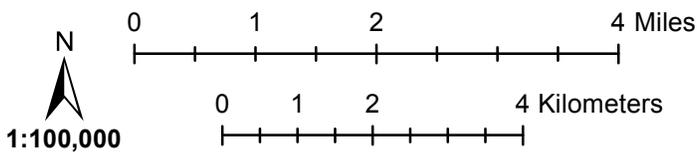
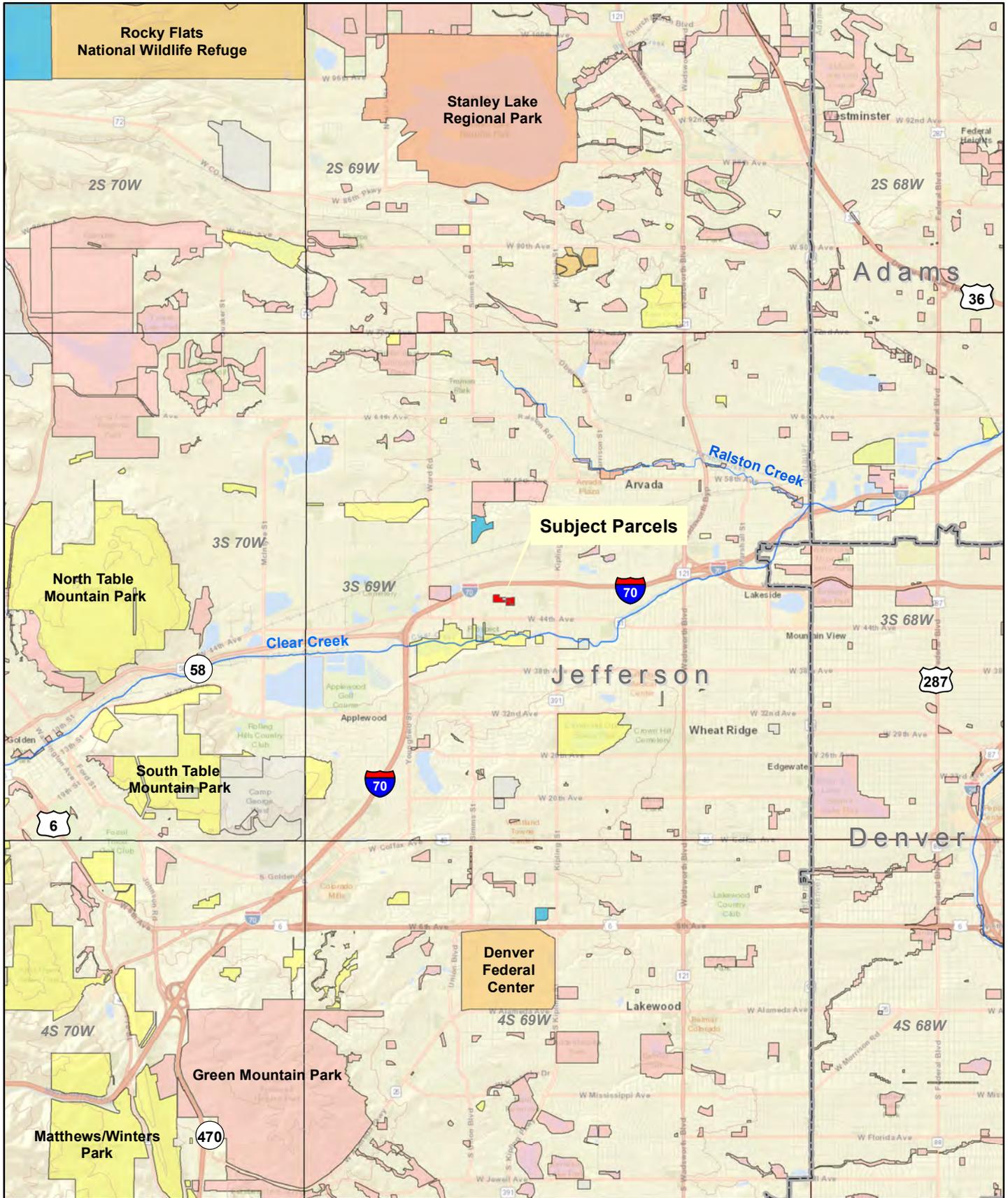
The dominant vegetation on the Property includes stands of *Ditch Riparian/Urban Forest* habitat, including plains cottonwoods, Siberian elm, and many tall shrubs (Photo Points 3-12, 19, 23 and 25). Open areas are classified as *Tame Pasture* planted in common pasture grasses (Photo Points 4, 6-8, 16, 19, 23 and 25).

Each of the three parcels has a residence with residential and agricultural outbuildings (Photo Points 1, 2, 5-10, 13, 15-17, 20 and 22).

3.3 Access

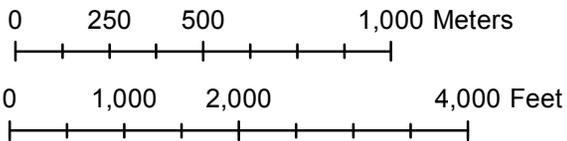
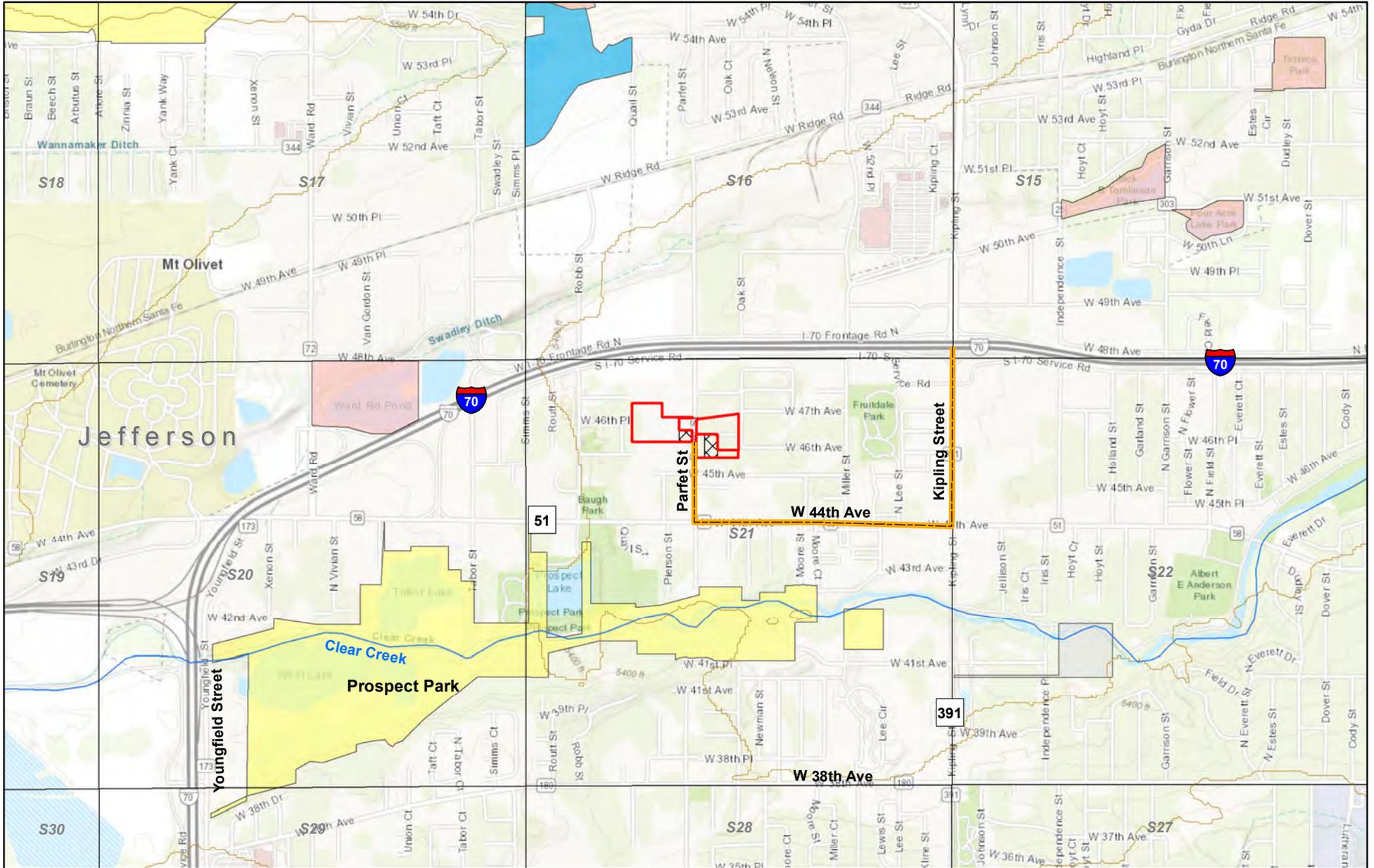
The street address of the Property is 4592, 4595 and 4596 Parfet Street, and all three parcels are accessed from Parfet Street. Figure 2 displays access to the Property from Interstate Highway 70 in the northwest portion of the Denver metropolitan area.

Figure 1. Regional Setting



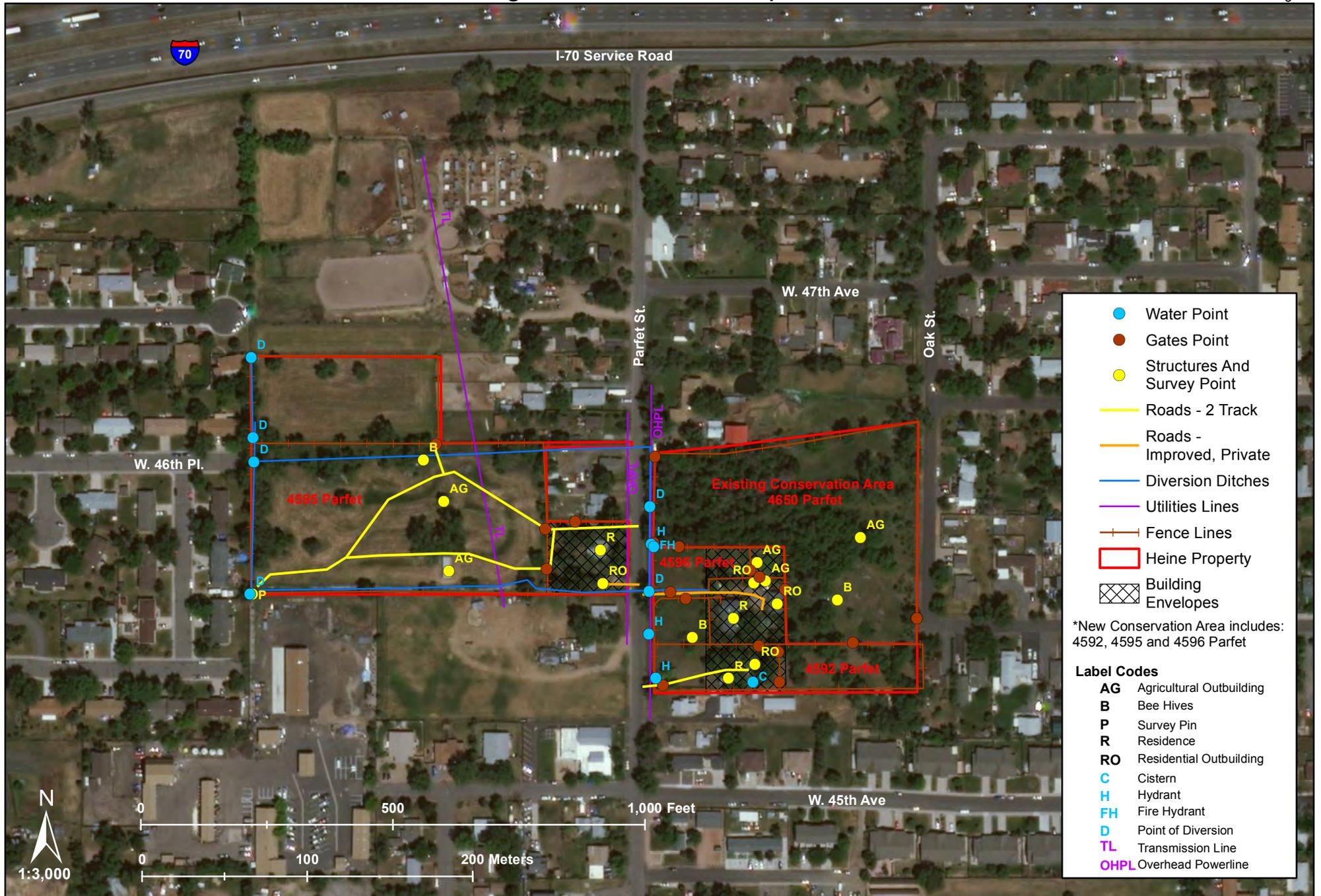
Data Sources: ESRI, USGS, COMaP, NRCS
 Contour Intervals: 500 feet
 Blue parcels are administered by the State of Colorado
 Orange parcels are administered by the US Government
 Yellow parcels are administered by Counties
 Pink parcels are administered by Municipalities

Figure 2. Local Setting



Data Sources: ESRI, USGS, COMaP, NRCS, NCED
 Contours: 100 feet
 Blue parcels are administered by the State of Colorado
 Pink parcels are administered by the City of Arvada
 Yellow parcels are administered by Jefferson County
 Red outlined parcels are the Subject Property (Hatched is the 2003 Grant)
 Orange is access route to property

Figure 3. Site Plan Map



	Water Point
	Gates Point
	Structures And Survey Point
	Roads - 2 Track
	Roads - Improved, Private
	Diversion Ditches
	Utilities Lines
	Fence Lines
	Heine Property
	Building Envelopes

*New Conservation Area includes:
 4592, 4595 and 4596 Parfet

Label Codes

AG	Agricultural Outbuilding
B	Bee Hives
P	Survey Pin
R	Residence
RO	Residential Outbuilding
C	Cistern
H	Hydrant
FH	Fire Hydrant
D	Point of Diversion
TL	Transmission Line
OHPL	Overhead Powerline

3.4 Boundary Description/Adjacent Properties

Adjacent properties are displayed in Figure 3 and listed below. Adjacent parcels to the northeast and northwest corners are included in the north boundary description, and adjacent parcels to the southeast and southwest corners are included in the south boundary description.

North West of Parfet Street are three residences and an agricultural field. East of Parfet Street is the Existing Conservation Area.

East East of 4592 Parfet Street is a residence. East of 4596 Parfet Street is Oak Street, and then several residences.

South West of Parfet Street are four residences and two agricultural fields. East of Parfet Street is two residences and one small commercial property.

West West of 4595 Parfet Street are five residences.

3.5 Climate

The nearest long term weather station with a climate similar to the Property is at Denver (Station Denver WSFO AP, Colorado 052220). Selected climate data since 1948 is displayed in Table 1. Detailed information is available from the Western Regional Climate Center (2016).

Table 1. Climate Data.

Average Annual Max. Temperature (F)	63.7
Average Annual Min. Temperature (F)	36.4
Average Annual Total Precipitation (in.)	16.4
Average Annual Total Snow Fall (in.)	55.3
Average Annual Snow Depth (in.)	1
Warmest Month of the Year	July, followed by August and June
Coldest Month of the Year	January, followed by December and February
Month with the Greatest Precipitation	May, followed by June
Month with the Least Precipitation	January, followed by February and December
Month with the Greatest Snowfall	March, followed by December

4.0 GEOLOGY, SOILS AND MINERAL RESOURCES

4.1 Introduction

Geology, soils and mineral resources are significant components of the existing condition of the Property. Geology and soils support the Conservation Values of the Property. Soils are an important component of the agricultural operations of the Property. Soils and mineral resources are addressed in Paragraphs 5 and 6 in the Amended and Restated Deed of Conservation Easement.

4.2 Surficial Geology

Bedrock geology mapped by Trimble and Machette (1979) includes one mapping unit as described below:

Table 2. Geologic Mapping Units.

<i>Formation/Type</i>	<i>Map Unit Composition</i>	<i>Location on Property</i>
Post-Piney Creek and Piney Creek Alluvium (Upper Holocene)	Gravel, sand, silt and clay of modern stream flood plains and slightly older low terraces.	Entire Property

This unit represents unconsolidated deposits of Pleistocene age (Ice Age) that were deposited as outwash from the mountains to the west. It is the dominant surficial unit in the surrounding area along the floodplain of Clear Creek.

4.3 Soils

Soils have been mapped and described by the USDA Natural Resources Conservation Service (NRCS, 1984, 2016). There is one soil mapping unit on the Property as described in Table 3.

Table 3. Soils.

<i>Soil Type</i>	<i>Vegetation Type and Location</i>
Loveland Variant gravelly sandy loam, 0 to 2 percent slopes	Grass. Entire Property.

This is a deep, somewhat poorly drained soil on alluvial valley floors and low terraces of major streams. This soil formed in calcareous, gravelly, loamy alluvium underlain by a mixture of sand and gravel. Permeability is moderate to a depth of 20 to 40 inches and rapid below that. The available water capacity is low. This soil normally has a seasonal high water table that fluctuates between depths of 24 and 60 inches. However, in most places the soil has been drained by ground water use and the water table is below a depth of 60 inches. Runoff is slow; water erosion and soil blowing are slight hazards. This soil is generally used for irrigated crops, grazing, community development and recreation areas. The main concerns in establishing and maintaining grasses, shrubs, trees, and garden plants on this soil are small stones and the low available water capacity. Of note is that NRCS classifies this soil as Class 3 non-irrigated, and Class 2 irrigated. Class 1-3 soils are considered Prime Farmland under the provisions of the Farmland Protection Policy Act 1981 (7 CFR 658).

4.3.1 Soil Management

Soil Erosion

No soil erosion sites were observed on the Property during the field work conducted for this report. The only soil disturbance noted was work done along the south boundary of the 4595 Parfet Street parcel to improve the irrigation structures for use on the Property (Photo Point 17).

Natural Resources Conservation Service

There are no active soil management programs being executed on the Property in cooperation with the USDA Natural Resources Conservation Service.

Cultivation

All of the area mapped as *Tame Pasture* as described in Section 6.2 below, has been planted in pasture grasses, and may also be grazed and/or hayed. These areas may require intermittent seeding and other cultivation maintenance activities, such as fertilization, harrowing or mechanical raking.

4.3.2 NRCS Ecological Sites

An ecological site (formerly called range site) is a distinctive kind of rangeland that produces a characteristic natural plant community that differs from natural plant communities on other range sites in kind, amount, and proportion of range plants. Ecological site information is useful in determining the potential native vegetation on a given property, assessing range condition, and preparing reclamation and reseeding plans based upon native seed mixes. The one soil mapping unit discussed above is assigned to one major ecological sites with a brief description below.

There is one range site on the Property: Overflow. The soils of this range site receive extra water from floods, which results in a thick stand of grasses. Bluestem is the dominant grass, but decreases with grazing. Other decreaseers that make up a substantial part of the cover are switchgrass, slender wheatgrass, and side-oats grama. Western wheatgrass grows in an almost continuous stand in the understory and is an increaser. Other plants that increase in amount when this site is subjected to repeated close grazing are blue grama, buffalograss, three-awn, and sand dropseed.

4.4 Mining/Mineral Rights

No subsurface or surface mining features were noted on the Property during the field work conducted for this report.

A title commitment for the Property was prepared by Land Title Guarantee Company (Appendix 2). Under Schedule B--Section 2, Exception 7 references non-specific unpatented mining claims. No other mineral related exceptions are listed.

5.0 WATER RESOURCES

5.1 Introduction

Water resources are significant components of the existing condition of the Property and are addressed in Paragraphs 4-6 in the Amended and Restated Deed of Conservation Easement. Use of water rights on the Property require ongoing management decisions.

5.2 Surface Drainage

There are no natural drainage features on the Property. The Property and surrounding neighborhood are located in the historic floodplain of Clear Creek, which is more than a mile wide, north to south. Drainage ditches on either side of Parfet Street are the only man made storm water drainage features noted on the Property.

5.3 Wetlands

No wetlands were observed on the Property during the field work conducted for this report.¹

5.4 Water Rights/Water Improvements

The Grantor has surface water rights for twelve shares of the Brown and Baugh Ditch, and these water rights have been dedicated to the Conservation Easement as referenced in the Amended and Restated Deed of Conservation Easement in Exhibit "C". The Brown and Baugh Ditch runs through the 4595 Parfet Street parcel (Figure 3). There are several headgates and laterals running through the Property (Figure 3; Photo Points 14, 17-20 and 24). The arrangement of ditches allows for irrigation of all of the *Tame Pasture* on the Property. This irrigation infrastructure is important for the maintenance of the agricultural use of the Property.

A Valley Water District water line is located in Parfet Street, and water taps are associated with each of the residences at 4592, 4595 and 4596 Parfet Street.

A cistern equipped with a pump is located immediately east of the residence at 4592 Parfet Street (Figure 3; Photo Point 10). The cistern is currently non-functional.

A title commitment for the Property was prepared by Land Title Guarantee Company (Appendix 2). Under Schedule B--Section 2 Exception 7 references non-specific water rights, claims or title to water. Exceptions 20 and 21 reference the Brown and Baugh Ditch.

6.0 VEGETATION RESOURCES

6.1 Introduction

Vegetation resources are a significant component of the Relatively Natural Habitat Conservation Value. Vegetation resources are addressed in Paragraphs 5 and 6 in the Amended and Restated Deed of Conservation Easement. Vegetation resources are one of the primary components of the existing condition of the Property, and require ongoing management decisions.

The Property was surveyed on August 15, 2016 and October 25, 2017. Fieldwork focused on describing the presence and distribution of plant communities and the common plant species found in these communities. A total of 62 vascular plant species were identified during the fieldwork. A list of all plant species identified is included in Appendix 8A. Plant nomenclature follows USDA Soil Conservation Service (2007). This list is intended to be descriptive, not comprehensive. Field work was conducted in late summer and fall, when many spring species could not be observed or identified. It is likely that many more plant species occur on the Property.

¹ The term "wetlands", as used in this report, is defined by the traditional methods of 1) obligate vegetation, 2) hydric soils, and 3) presence of water. "Wetlands" as used in this report are not necessarily equivalent to US Army Corps of Engineers jurisdictional wetlands.

6.2 Description of Vegetation Communities

Based upon the field work two vegetation communities are described for the Property. These communities are summarized in Table 4 and displayed in Figure 4 below, and described in the text that follows. Community classification generally follows land cover types used by Colorado Parks and Wildlife (CPW 1996 and 2006a).

Table 4. Vegetation Communities.

<i>Vegetation Community</i>	<i>Size in Acres</i>	<i>Location</i>
Ditch Riparian/ Urban Forest	3.33	Throughout the Property
Tame Pasture	4.93	Throughout the Property

6.2.1 Ditch Riparian/Urban Forest

Most forest stands are dominated by plains cottonwood (*Populus deltoides ssp. monilifera*) and Siberian elm (*Ulmus pumila*) (Photo Points 1-4, 6-9, 11-14, 15-20, 23 and 25). Other common tree species are crabapple (*Malus* species), American elm (*Ulmus americana*) and green ash (*Fraxinus pennsylvanicus*). Most of the trees appear healthy and there is little deadwood.

Common shrubs in the *Ditch Riparian/Urban Forest* community include:

<i>Scientific Name</i>	<i>Common Name</i>
Lonicera species	honeysuckle
Parthenocissus quinquefolia	Virginia creeper
Prunus americana	American plum
Prunus virginiana	chokecherry
Quercus gambelii	Gambel oak
Rosa woodsii	Woods' rose
Syringa vulgaris	lilac

Common grasses in the *Ditch Riparian/Urban Forest* community include:

<i>Scientific Name</i>	<i>Common Name</i>
Agropyron cristatum	crested wheatgrass
Bromus inermis	smooth brome
Poa pratensis	Kentucky bluegrass

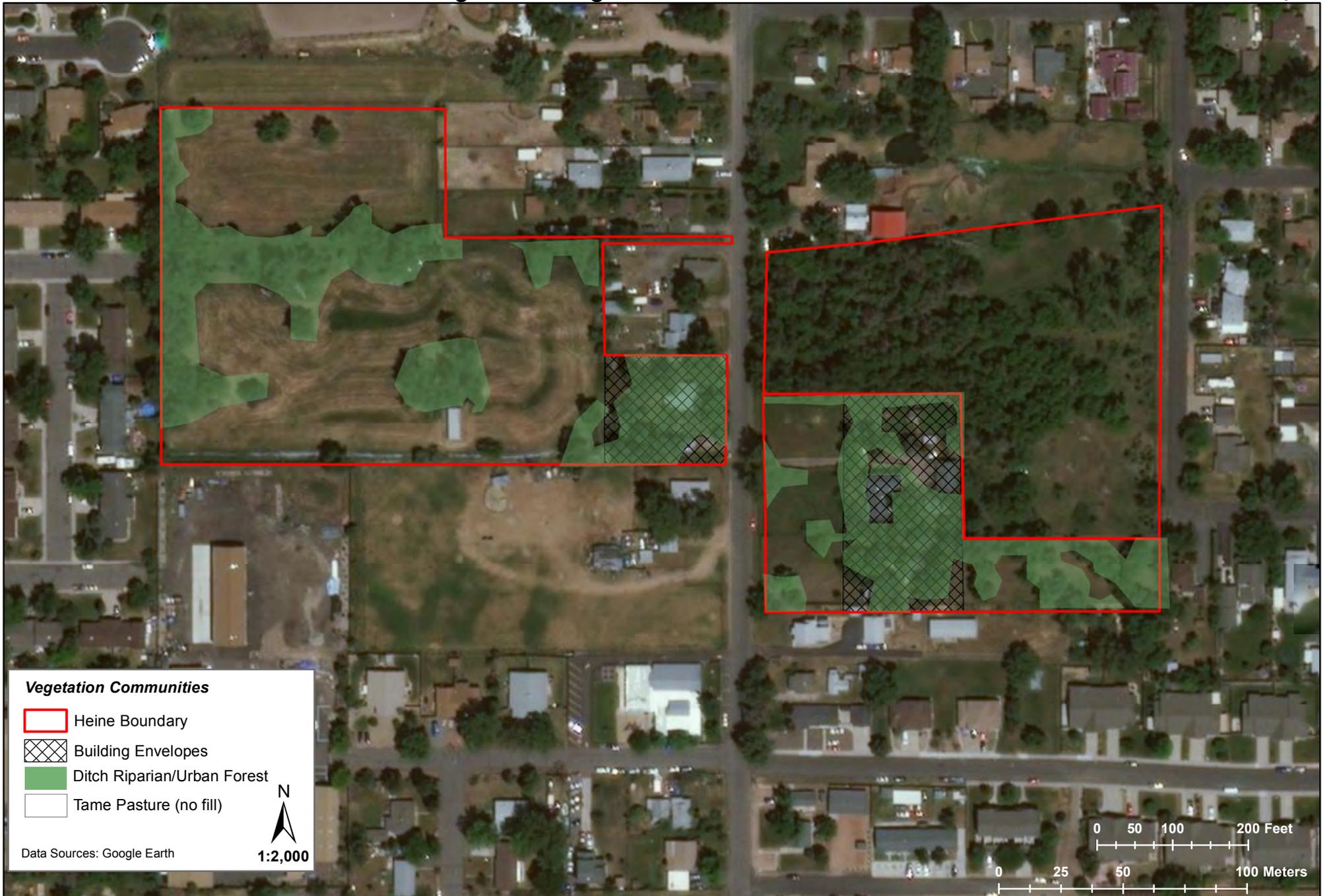
Common forbs in the *Ditch Riparian/Urban Forest* community include:

<i>Scientific Name</i>	<i>Common Name</i>
Glycyrrhiza lepidota	American licorice
Saponaria officinalis	bouncingbet
Taraxacum officinale	common dandelion

6.2.2 Tame Pasture

Tame Pasture occurs throughout the Property (Photo Points 6-8, 16, 17, 19, 21, 23 and 25). Smooth brome (*Bromus inermis*) is the dominant grass. Alfalfa is also dominant at 4595 Parfet, and this pasture is typically hayed (Photo Points 16 and 19).

Figure 4. Vegetation Communities



Common shrubs in the *Tame Pasture* include:

<i>Scientific Name</i>	<i>Common Name</i>
<i>Ericameria nauseosa</i>	rubber rabbitbrush
<i>Rosa woodsii</i>	Woods' rose

Common grasses in the *Tame Pasture* include:

<i>Scientific Name</i>	<i>Common Name</i>
<i>Bromus arvensis</i>	field brome
<i>Bromus inermis</i>	smooth brome
<i>Secale cereale</i>	cereal rye

Common forbs in the *Tame Pasture* include:

<i>Scientific Name</i>	<i>Common Name</i>
<i>Convolvulus arvensis</i>	field bindweed
<i>Glycyrrhiza lepidota</i>	American licorice
<i>Lactuca serriola</i>	prickly lettuce
<i>Medicago sativa</i>	alfalfa
<i>Taraxacum officinale</i>	common dandelion

6.3 Noxious Weeds

The State of Colorado, in conjunction with county and municipal governing bodies, has developed the State Noxious Weed list as required by the Colorado Weed Management Act, § 35-5.5-101 through 119, C.R.S. (2003). This list, current as of this report, is found in Appendix 8B. The state weed list is typically further refined by local weed districts. A weed management plan for Jefferson County is included in Appendix 8B. Noxious weeds are of importance, since severe infestations can conceivably adversely impact the Conservation Values of the Property. A comprehensive inventory of noxious weeds was beyond the scope of work of the baseline report. However, the presence of weeds was noted, as described below in Table 5.

Table 5. Noxious Weeds.

<i>Common Name</i>	<i>Scientific Name</i>	<i>Habitat</i>	<i>Abundance</i>
Russian olive	<i>Elaeagnus angustifolia</i>	Ditch Riparian/ Urban Forest	Uncommon
bull thistle	<i>Cirsium vulgare</i>	Ditch Riparian/ Urban Forest	Uncommon
Canada thistle	<i>Cirsium arvense</i>	Ditch Riparian/ Urban Forest	Uncommon
field bindweed	<i>Convolvulus arvensis</i>	Tame Pasture	Common
bouncingbet	<i>Saponaria officinalis</i>	Ditch Riparian/ Urban Forest, Tame Pasture	Fairly Common
common mullein	<i>Verbascum thapsus</i>	Tame Pasture	Fairly Common

On the state list, Russian olive, Canada thistle and bouncingbet are on List B, well-established species for which management plans are being developed to stop their

continued spread. Field bindweed and common mullein are on List C, widespread species for which management resources will be provided to jurisdictions that choose to require management. No weed species on List A (designated for eradication) were observed on the Property. In the Jefferson County weed plan, management objectives include suppression of Russian olive, Canada thistle and bouncingbet, and elimination of bull thistle by 2022. None of the weed species identified on the Property create significant impacts or are found in large, dense stands at this time.

6.4 Colorado Natural Heritage Program

A records search for the vicinity of the Property was conducted of the online Colorado Natural Heritage Program (CNHP) data base for element occurrence records (EORs) for imperiled ecological communities and for threatened, endangered and sensitive plant species (Colorado Natural Heritage Program 2008 and 2016). This data base was also checked for the presence of sites of biodiversity significance, known as Potential Conservation Areas (PCAs), on or near the Property. The Property is entirely within the Prospect Park PCA (Site ID 1633), which is based on occurrences of rare cottonwood riparian woodland communities (plains cottonwood/chokecherry and plains cottonwood/snowberry), an imperiled plant species Ute ladies' tresses (*Spiranthes diluvialis*), and a critically imperiled earthstar fungus subspecies (*Mycenastrum corium* ssp. *ferrugineum*). No site occurrences for these resources have been documented on the Property. A report on the Prospect Park PCA is included in Appendix 8C.

6.5 Forestry/Forest Pathogens

Forestry practices have been restricted to removing dead wood. No commercial timber harvest was observed on the Property.

6.6 Wildfire Management

Grantor has reduced wildfire hazard through trimming and thinning activities, and by reduction of dead trees and limbs along Property boundaries, adjacent to nearby residences. The Property is served by the Arvada Fire Protection District, although the Property is within the corporate boundary of the City of Wheat Ridge.

7.0 WILDLIFE RESOURCES

7.1 Introduction

This section describes the wildlife resources of the Property. Wildlife resources are among the Conservation Values of the Property. Wildlife resources are addressed in Paragraph 5 in the Amended and Restated Deed of Conservation Easement.

7.2 Wildlife Habitat

Wildlife use of the landscape tends to focus on specific habitats. The plant communities discussed in the vegetation section above are equivalent to major habitat types, and are summarized below.

Ditch Riparian/Urban Forest: breeding habitat for dozens of species of resident and migratory birds (particularly neotropical migrants), important habitat for mammals,

reptiles and amphibians. Essential foraging and cover habitat for deer and fox. Mature trees with nest cavities and hollow cores provide breeding habitat for bats. Riparian ecosystems provide optimum shelter and food for wildlife and therefore function as movement corridors.

Tame Pasture: habitat for small mammals, foraging habitat for deer, red fox and migratory songbirds. Irrigated pasture may be important habitat for amphibians. Pasture planted with alfalfa is important habitat for pollinators, particularly bees.

7.3 Colorado Parks & Wildlife Information

Colorado Parks & Wildlife (CPW) wildlife range maps display the documented ranges and activity areas of various wildlife species, particularly big game and species of concern. Specific geographic areas may be important for a large number of congregating wildlife. The maps, where applicable, depict overall, winter and summer ranges, and other activity areas of importance, including concentration and production areas, and migration corridors. The CPW information included herein was current as of January 2016. The CPW database was searched for wildlife habitat of importance for wide-ranging species, big game species, and species with concentration sites occurring on or near the Property with the following selected results displayed in Table 5. Range maps are located in Appendix 9B.

Table 6. Habitat for Wide Ranging Species, Big Game, and Concentration Sites.

<i>Wildlife Species</i>	<i>Habitat</i>
Birds	
Canada Goose (<i>Branta canadensis</i>)	Foraging Area Winter Range
Mammals	
Mule Deer (<i>Odocoileus hemionus</i>)	Overall Range

Canada geese are common along Clear Creek south of the Property. They are not expected to commonly occur on the Property. **Mule deer** are commonly observed on the Property, and will use all habitats present.

7.3.1 Wildlife Species List

A potential wildlife species list for the property was compiled from the CPW database for Jefferson County for amphibians, birds, mammals and reptiles. This county list was then edited by the report preparers for the habitats present on the Property, and checked with appropriate literature review (Adams 2003, Andrews and Righter 1992, Fitzgerald *et al.* 1994, Kingery 1998, and Hammerson 1999). Based upon this potential wildlife species list, suitable habitat is found on the Property for 3 species of amphibians, 149 species of birds, 32 species of mammals, and 8 species of reptiles. The complete species list is found in Appendix 9A. The "Confirmed" column has been updated to reflect the latest field work on the Property.

7.4 Wildlife Species of Concern

Table 7 is a list of potential federal and state listed endangered and threatened species, other species protected by specific state and federal statutes and State of Colorado listed "Species of Special Concern", that are potentially found on the Property.

Table 7. Potential Wildlife Species of Concern.

<i>Common Name</i>	<i>Scientific Name</i>	<i>Status 1</i>
Mammals		
Preble’s Meadow Jumping Mouse	<i>Zapus hudsonius preblei</i>	FT, ST

The Property is within the historic range of **Preble’s meadow jumping mouse** (refer to the map in Appendix 8C). The US Fish and Wildlife Service maps the Property within the Metropolitan Denver Block Clearance Zone (USFWS 2016a, 2016b). This zone does not require further evaluation of potential habitat, as there are no recent trapping records from within this zone. The nearest suitable habitat is located along Clear Creek south of the Property.

7.5 Wildlife Habitat Improvements

Numerous habitat improvements have been made at the 4596 Parfet Street parcel, including flower beds designed to attract butterflies, hummingbirds and bees (Photo Point 5). In this same area a variety of shrubs that provide food for wildlife have been planted. Nest boxes for birds and bat houses may be located throughout the Property.

8.0 OPEN SPACE, SCENIC AND AGRICULTURAL RESOURCES

8.1 Introduction

This section describes the Open Space, Scenic and Agricultural Conservation Values. The Photo Points completed for the baseline report serve as documentation for the scenic resources of the Property. Site characteristics were evaluated by generally following the Scenery Management System used by the USDA Forest Service (1995).

8.2 Open Space Context

8.2.1 Clearly Delineated Governmental Policy and Significant Public Benefit

This subsection summarizes the land conservation importance of the Property, including intrinsic values, but emphasizing the contextual values, including other land conservation activities in the area of the Property, and local land conservation priorities.

The Property is located in an urban area within the corporate boundary of the City of Wheat Ridge, located in the northwestern quadrant of the Denver metropolitan area. The City of Wheat Ridge has preserved open space along the Clear Creek riparian corridor just under 0.5 mile to the south of the Property (displayed on Figure 2). Fruitdale Park and Prospect Park are developed city parks located within 0.5 mile of the Property. Other than the open space along the Clear Creek corridor, there are few properties with a natural and agricultural setting within the City of Wheat Ridge similar to that found on the Property.

The New Conservation Area (4592, 4595 and 4596 Parfet Street parcels) is adjacent to the Existing Conservation Area (4650 Parfet Street parcel), as displayed on Figure 3. The Existing Conservation Area was created by the donation of a conservation easement by the Grantor in 2003. The Existing Conservation Area is an official “Backyard Wildlife

Habitat” as certified by the National Wildlife Federation (Photo Points 3, 4 and 26; LREP 2003). After the grant of conservation easement in 2003, the City of Wheat Ridge rezoned the Existing Conservation Area to the “Conservation District”. According to the City of Wheat Ridge Zoning Code, the Conservation District is described, as follows:

Purpose: This district is established to provide a zoning classification for natural Areas held by individuals, corporations or governments, individually or in combination, for natural resource and conservation purposes in an undeveloped state.

B. Permitted uses, private property:

- a. Open space.
- b. Wildlife habitat.
- c. Scenic view corridors.
- d. Riparian habitat.
- e. Underground utility lines.
- f. Perimeter fencing.

By means of this seldom used zoning classification, the City of Wheat Ridge has clearly recognized the Conservation Values of the Existing Conservation Area, and the efforts made by the Grantor to preserve this site (City of Wheat Ridge 2016b). The Property is adjacent to the south and west boundaries of the Existing Conservation Area, and the Property will buffer the Existing Conservation Area, and greatly expand and enhance the Conservation Values of the Existing Conservation Area. In particular, the Property will add a significant agricultural preservation function, including preservation of the Class II irrigated prime farmland, preservation of the water rights used for agricultural production, and preservation of the ability to use the Property as a community garden and/or community farm in the future. Preservation of the Property will also expand and enhance the Relatively Natural Habitat Conservation Value of the Existing Conservation Area, in particular by nearly doubling the amount of forested habitat that is important for migratory bird habitat.

Additional local governmental policies supporting the conservation of the Property are found in Paragraph D.2.3.3. in the Amended and Restated Deed of Conservation Easement.

8.3 Scenic Resources

The landscape context of the Property is a relatively natural area comprised of small pastures mixed with forest in an otherwise largely urban setting (Photo Points 4, 6-8, 11, 12, 16, 19, 23 and 25). The Property is mostly natural appearing and the scenic integrity of the Property is rated as fairly high (appears slightly altered). Given the urban setting, the desired landscape character of the Property is retention of the dominant natural values, and the public interest in the visual resources of the Property is considered high.

The extent of the public enjoyment of a given scenic resource is determined by the concept of landscape visibility. Landscape visibility considers two issues:

1. The importance of the views to the public
2. The sensitivity of the viewshed based upon the distance of the observer as follows:

Foreground: views up to one-half mile distant

Midground: views one-half to four miles distant
Background: views more than four miles distant

The Property provides immediate foreground public views from West 46th Avenue, Oak Street and Parfet Street (Photo Points 6-8 and 15). These public view points essentially surround the Property (Figure 3). The sensitivity of the viewshed is also considered high, given the neighborhood identity provided by the Property, and the amount of local governmental policy supporting the conservation of the Property.

8.4 Agricultural Resources

The Property is agriculturally productive, and currently used for raising of livestock, beekeeping and hay production (Figure 3; Photo Points 3, 6, 16, 19, 21-23 and 25). Agricultural water rights will be donated as a part of this conservation easement and tied to the Property (Figure 3; Photo Points 14, 17-20 and 24).

The Property is zoned as Agricultural-1 by the City of Wheat Ridge (City of Wheat Ridge 2016b). This zoning district is described, as follows (City of Wheat Ridge 2016c):

Intent and purpose: This district is established to provide a high quality, safe, quiet and stable residential estate living environment within a quasi-rural or agricultural setting. In addition to large lot, single-family residential and related uses, agricultural uses and activities will exist and be encouraged to continue.

According to the Natural Resources Conservation Service, the Property has Loveland Variant soil, classified as a Class III soil, or Class II soil if irrigated, and much of the Property is irrigated. Loveland Variant soil is further classified by the Natural Resources Conservation Service as a “prime farmland” soil, and as further defined in the Farmland Policy Protection Act of 1981 (7 CFR 658). Protection of the Property by means of a conservation easement will help to ensure continued agricultural use of the land.

All of these agricultural features of the Property are also supportive of retaining the potential use of the Property as a community garden and community farm. The ability to preserve remnant prime farmland within the Front Range Urban corridor, with dedicated water rights and functioning agricultural practices is a rare and unique advancement for land conservation in the Denver Metropolitan area.

9.0 LAND USE

9.1 Introduction

Land uses on the Property are reviewed in the context of comparing conditions on the Property at the time of the grant of Conservation Easement to relevant portions of Paragraphs 4, 5 and 6 in the Amended and Restated Deed of Conservation Easement, and to provide basic real estate information.

9.2 City of Wheat Ridge

The Property is within the corporate limits of the City of Wheat Ridge. The provisions of the City of Wheat Ridge Code of Ordinances apply to all structures and improvements on the Property (City of Wheat Ridge 2016c).

9.3 Land Uses on the Property

Historic land uses include raising of livestock and hay operations, and residential uses. The presence of irrigation improvements provided by the Brown and Baugh Ditch Company indicate that agricultural uses have been in place for many decades.

9.3.1 Utility Lines and Easements

Third party utilities located on the Property are as follows (refer to Figure 3):

1. A Valley Water District waterline runs along Parfet Street. Water taps for the residences at 4592, 4595 and 4596 Parfet Street are located on this line.
2. Overhead powerline along the east side of Parfet Street on the west boundary of 4592 and 4596 Street.
3. Overhead powerline along the west side of Parfet Street on the east boundary of 4595 Parfet Street. These two overhead powerlines supply electric power to all three of the parcels at 4592, 4595 and 4596 Parfet Street.
4. An electric transmission line crosses the 4595 Parfet Street Parcel from north to south in the east-central portion of the parcel. None of the transmission line towers are located on the Property.
5. As described below under Exception 10 of the title commitment, there is a utility easement that includes the eastern edge of 4592 Parfet Street. There may be a buried powerline within this easement, but this line was not observed during the field work conducted for this report.

No other third party utility lines were observed on the Property during the field work conducted for this report.

A title commitment for the Property was prepared by Land Title Guarantee Company (Appendix 2). Under Schedule B--Section 2, Exception 9 references the Fruitdale Sanitation District that services the Property. Exception 10 references a utility easement on the east edge of 4592 Parfet Street. Exception 25 references the easement for the electric transmission line at 4595 Parfet Street.

9.3.2 Structures

Table 8 presents a structure inventory for the Property. There is one single family residence for each of the three parcels. Water is provided by Valley Water District. Electric power and sewer also service the residences.

Table 8. Structure Inventory.

<i>Location</i>	<i>Structure</i>	<i>Square Ft. (projected roof area)</i>	<i>Photo Point</i>
4592 Parfet	Residence	1,320 ground floor, plus 900 second floor	8, 10
4592 Parfet	Garage	780	9
4595 Parfet	Residence	1,350	15
4595 Parfet	Garage	432	
4595 Parfet	Barn	672	16, 17, 19
4595 Parfet	Hay Shed	144	22
4596 Parfet	Residence	1,860 ground floor, plus 900 second floor	5, 7

<i>Location</i>	<i>Structure</i>	<i>Square Ft. (projected roof area)</i>	<i>Photo Point</i>
4596 Parfet	Garage-1	1,200	
4596 Parfet	Garage-2	432	13
4596 Parfet	Stock Shed	176	1
4596 Parfet	Shed	160	2
4650 Parfet	Tree House for wildlife observation	122 (in the Existing Conservation Area)	1B (in LREP, Inc. 2003)

No other structures were observed on the Property during the field work conducted for this report, excepting the water improvements described above in Section 5.4, the utilities described above in Section 9.3.1, and the roads and fences described below in Sections 10.3.3 and 10.3.4. Minor agricultural structures may be located throughout the Property, such as small feed bins or bee hives (Photo Points 1, 3 and 21).

9.3.3 Roads and Trails

Each residence has a driveway connecting to Parfet Street. The gravel driveway at 4592 is now somewhat overgrown, and terminates at a small concrete pad in front of the garage (Figure 3; Photo Point 9). The driveway at 4595 Parfet is paved with concrete (Photo Point 15). The driveway at 4596 Parfet is surfaced with standard road base gravel (Photo Point 5). An additional road is located at 4595 Parfet, running from Parfet Street to the west (on the north side of the residence) in order to access the agricultural field that occupies most of this parcel. After passing through a gate, this road loops through the hay field and runs to the southwest corner where there is an irrigation headgate (refer to Figure 3; Photo Points 18 and 19). A branch of this road runs parallel to the south parcel boundary, and loops back to the north branch west of the residence. No other substantial roads were observed on the Property. Agricultural and land maintenance equipment may be driven off road through any of the *Tame Pasture* on the Property. The Grantor intends to request that the City of Wheat Ridge vacate the West 46th Place easement.

9.3.4 Fencing

Perimeter fences are in place around the entire Property, which are needed to control access to the Property and manage livestock grazing. At 4592 Parfet there is a north-south internal fence east of the residence. At 4595 Parfet there is a north-south internal fence west of the residence. At 4696 Parfet there are internal fences around the residential area, along the driveway, and a pasture division fence at the stock shed. Small amounts of fencing are used to protect some of the tree and shrub plantings from livestock.

9.3.5 Hazardous Materials

No obvious evidence of hazardous materials was observed on the Property during the field visit; however, this baseline report does not fulfill the requirements of a Phase I environmental assessment to ascertain the presence of hazardous materials.

9.3.6 Trash

No trash piles or dump sites were observed, and the Property is quite clean and well kept. There are a few scattered, small piles of tree slash that are used to provide cover habitat for wildlife.

9.3.7 Billboards and Signs

There are no commercial billboards or signs on the Property.

10.0 CURRENT CONDITIONS

This section is a series of paired statements, beginning with individual provisions in Paragraphs 4-6 in the Deed of Conservation Easement, then comparing each provision with what was observed during the field work conducted for this report. Many of these provisions are cited above in the appropriate resource section. However, this section provides a concise review of all of the provisions in this section of the Deed of Conservation Easement.

4. *Property Improvements.* The parties agree that the current use of and improvements to the Property are not inconsistent with the preservation and protection of the Conservation Values and are permitted. Improvements existing as of the date of this Deed are permitted. All other construction or placement of improvements is prohibited except as provided herein. Without limiting the generality of any of the foregoing, Grantor and Grantee hereby acknowledge and agree:

4.1. *Residential and Nonresidential Structures.* The construction, placement, replacement, enlargement, maintenance and repair of residential and nonresidential structures and improvements is permitted pursuant to the limitations set forth herein. For purposes of this Deed, “Residential Improvements” are defined as covered structures containing habitable space, including homes, cabins, guest houses, and any space attached to a home, cabin or guest house such as a garage, and any other structures intended for full or part-time human habitation. For purposes of this Deed, “Nonresidential Improvements” are defined as covered structures and not intended for human habitation and include, but are not limited to free-standing garages, picnic pavilions, and agricultural structures such as barns, pole barns, sheds, or farmstands. Nonresidential Improvements may include commercial structures, provided that such commercial structures are consistent with the Purpose. Permitted commercial structures may include, but are not limited to a nature center, incubation center for urban agriculture, or an office space for organizations which have a Mission consistent with the Purpose.

4.1.1. *Building Envelopes.* There shall be Two (2) building envelopes permitted on the Property (individually referred to herein as “**West Building Envelope**” and “**East Building Envelope**” and collectively referred to herein as the “**Building Envelopes**”), with the West Building Envelope on the parcel west of Parfet Street (referred to as the “**West Heine Parcel**”) and the East Building Envelope on the parcel east of Parfet Street (referred to as the “**East Heine Parcel**”). All Residential Improvements and Nonresidential Improvements (with the exception of Nonresidential Improvements permitted by Section 4.1.2 below) constructed after the date of this Deed shall be located within the Building Envelope(s).

4.1.1.1. *West Building Envelope.* The West Building Envelope consists of 1/2 (one-half) acre. The location of the West Building Envelope is generally depicted on Exhibit B. On the date of this Deed, 2 (two) improvements are located within the West Building Envelope, a Residential Improvement consisting of 1,350

square feet of Footprint, and 1 (one) Nonresidential Improvement consisting of 432 square feet of Footprint.

4.1.1.2. ***West Building Envelope Limitations.*** Grantor may construct, place, replace, or enlarge Residential or Nonresidential Improvements within the West Building Envelope subject to the following limitations.

4.1.1.2.1. The maximum number of Residential Improvements (including attached appurtenances) shall not exceed 1 (one) and shall have a maximum Footprint of 3,000 square feet and a maximum Height, as defined below, of 18 feet.

4.1.1.2.2. The maximum Height for each Nonresidential Improvement shall not exceed 18 feet.

4.1.1.2.3. The total cumulative Footprint for all improvements, including Residential and Nonresidential Improvements, shall not exceed 8,000 square feet.

4.1.1.2.4. Improvements in excess of the foregoing require Grantee approval pursuant to Section 21 (Grantee's Approval) of this Deed.

4.1.1.2.5. Unenclosed improvements having no Footprint, such as corrals, bird watching blinds, wildlife viewing areas, informational and directional signage, trailhead, bedding starts, or temporary season-extender structures (e.g. hoop houses) without a foundation, are permitted if consistent with the Purpose and Intent.

Current Conditions Statement for 4.1.1.1. and 4.1.1.2

Table 8 lists all of the structures on the Property. Within the West Building Envelope there is a residence of 1,350 square feet and approximately 16 feet in height, and a garage of 432 square feet and approximately 9 feet in height.

4.1.1.3. ***East Building Envelope.*** The East Building Envelope consists of 1 (one) acre. The location of the East Building Envelope is generally depicted on Exhibit B. On the date of this Deed, 7 (seven) improvements are located within the East Building Envelope, there are two Residential Improvements consisting of 3,180 square feet of Footprint, and 5 (five) Nonresidential Improvements consisting of 2,748 square feet of Footprint.

4.1.1.4. ***East Building Envelope Limitations.*** Grantor may construct, place, replace, or enlarge Residential or Nonresidential Improvements within East Building Envelope subject to the following limitations.

4.1.1.4.1. The maximum number of Residential Improvements in use at any one time (including attached appurtenances) without approval pursuant to Section 21 (Grantee's Approval) of this Deed, shall not exceed 1 (one) and shall have a maximum Footprint of 3,000 square feet and a maximum Height, as defined below, of 28 feet.

4.1.1.4.2. The maximum Height for each Nonresidential Improvement shall not exceed 28 feet.

4.1.1.4.3. The total cumulative Footprint for all improvements including Residential and Nonresidential Improvements shall not exceed 8,000 square feet..

4.1.1.4.4. Improvements in excess of the foregoing require Grantee approval pursuant to Section 21 (Grantee's Approval) of this Deed.

4.1.1.4.5. Unenclosed improvements having no Footprint, such as corrals bird watching blinds, wildlife viewing areas, informational and directional signage, bedding starts, or temporary season-extender structures (e.g. hoop houses) without a foundation, are permitted if consistent with the Purpose and Intent.

Current Conditions Statement for 4.1.1.3. and 4.1.1.4.

Table 8 lists all of the structures on the Property. Within the East Building Envelope there are two residences, at 4592 Parfet a residence of 1,320 square feet and approximately 18' in height, and at 4596 Parfet a residence of 1,860 square feet and approximately 18' in height. At 4592 Parfet there is a garage of 780 square feet and approximately 10 feet in height. At 4596 Parfet there are two garages: one garage of 1,200 square feet and approximately 14 feet in height, and a second garage of 432 square feet and approximately 10 feet in height. At 4596 Parfet there are two sheds: one shed of 176 square feet and approximately 8 feet in height, and a second shed of 160 square feet and approximately 8 feet in height.

4.1.2. **Outside of the Building Envelope(s).** On the date of this Deed, there are three (3) agricultural improvements located outside of the Building Envelopes, with two (2) on the West Heine Parcel and one (1) on the East Heine Parcel.

4.1.2.1. **Construction Limitations.** Grantor may construct, place, replace or enlarge Nonresidential Improvements outside of Building Envelopes subject to the following:

4.1.2.1.1 The maximum number of Nonresidential Improvements on the Property shall not exceed 6 (six), with no more than 3 (three) apiece on each of the West and East Heine Parcels.

4.1.2.1.2. With one exception, the maximum Footprint for each Nonresidential Improvement shall not exceed 300 square feet. The one exception is for one of the two existing Nonresidential Improvements on the West Heine Parcel, which is a barn consisting of 672 square feet of Footprint. This Nonresidential Improvement may be repaired or may be enlarged or replaced with a Nonresidential Improvement with a maximum Footprint of 800 square feet and provided that such improvement shall continue to be located on the West Heine Parcel.

4.1.2.1.3. The maximum Height for each Nonresidential Improvement shall not exceed 18 feet.

4.1.2.1.4. The total cumulative Footprint for all Nonresidential Improvements on the Property shall not exceed 2,000 square feet, with 1,100 square feet maximum on the West Heine Parcel and 900 square feet on the East Heine Parcels.

4.1.2.1.5. Improvements in excess of the foregoing require Grantee approval pursuant to Section 21 (Grantee's Approval) of this Deed.

4.1.2.1.6. Unenclosed improvements having no Footprint, such as corrals, bird watching blinds, wildlife viewing areas, informational and directional signage, bedding starts, or temporary season-extender structures (e.g. hoop houses) without a foundation, are permitted if consistent with the Purpose.

Current Conditions Statement for 4.1.2.

Table 8 lists all of the structures on the Property. Within the West Heine Parcel there are two structures: a barn of 672 square feet and approximately 10 feet in height, and a hay shed of 144 square feet and approximately 8 feet in height. Within the East Heine Parcel there is one structure on the Existing Conservation Area, a two-story tree house used for wildlife observation of 122 square feet and approximately 18 feet in height (LREP 2003).

4.1.3. **Repair and Maintenance.**

Current Conditions Statement for 4.1.3.

This paragraph pertains to future conditions.

4.1.4. **Notice.**

Current Conditions Statement for 4.1.4.

This paragraph pertains to future conditions.

4.1.5. **Definition of Footprint.**

4.1.6. **Measurement of Height.**

4.2. **Other Improvements.**

4.2.1. **Roads and Parking Areas.** For purposes of this Deed, Improved Roads shall be defined as any road, driveway or parking area that is graded, drained, or has a surface other than the natural earthen material (“Improved Roads”) and Unimproved Roads shall be defined as any track greater than three (3) feet wide where the natural earthen material is the driving surface (“Unimproved Roads”).

4.2.1.1. **Within the Building Envelope(s).** Construction, maintenance, paving (e.g. concrete, asphalt, or other impermeable material) or otherwise surfacing of all Improved and Unimproved Roads is permitted within the Building Envelope(s). Parking areas are permitted in both the East and West Building Envelopes, provided they are consistent with Purpose. Prior to the placement, construction, replacement or enlargement of any parking area, Grantor shall notify Grantee pursuant to Section 21 (Grantee’s Approval).

Current Conditions Statement for 4.2.1.1.

Each residence has a driveway connecting to Parfet Street. The gravel driveway at 4592 is now somewhat overgrown, and terminates at a small concrete pad in front of the garage (Figure 3; Photo Point 9). The driveway at 4595 Parfet is paved with concrete (Photo Point 15). The driveway at 4596 Parfet is surfaced with standard road base gravel (Photo Point 5). An unimproved road is located at 4595 Parfet, running from Parfet Street to the west (on the north side of the residence) in order to access the agricultural field that occupies most of this parcel.

4.2.1.2 **Outside of the Building Envelope(s).**

4.2.1.2.1. **Improved Roads.** No Improved Roads shall be constructed or established outside of the Building Envelope(s) except for those permitted

Improved Roads depicted on Exhibit B or unless Grantee determines that the proposed road is consistent with the Purpose, pursuant to Section 21 (Grantee's Approval) of this Deed. Permitted Improved Roads may be relocated provided that the abandoned road shall be promptly revegetated and restored to a condition that is consistent with the Purpose, pursuant to Section 21 (Grantee's Approval) of this Deed. Improved Roads shall be no wider than physically or legally necessary to provide access.

4.2.1.2.2. **Unimproved Roads.** No Unimproved Roads shall be constructed or established outside of the Building Envelope(s) except for Unimproved Roads that are consistent with the Purpose. No Unimproved Road shall be altered to become an Improved Road unless Grantee determines that the proposed alteration is consistent with the Purpose, determined pursuant to Section 21 (Grantee's Approval) of this Deed.

Current Conditions Statement for 4.2.1.2.

An unimproved road is located at 4595 Parfet, running from Parfet Street to the west (on the north side of the residence) in order to access the agricultural field that occupies most of this parcel. After passing through a gate, this road loops through the hay field and runs to the southwest corner where there is an irrigation headgate (refer to Figure 3; Photo Points 18 and 19). A branch of this road runs parallel to the south parcel boundary, and loops back to the north branch west of the residence. No other substantial roads were observed on the Property.

4.2.2. **Trails.** Multiuse trails for pedestrian, equestrian and bicycle or other non-motorized wheeled use, such as wheelchairs (with or without motors) are permitted subject to the following and provided that they are consistent with the Purpose. Such trails shall be no more than 6 feet in width at any point. Permitted surface materials include crushed rock, wood chips, fine granular stone (also referred to as crusher fines or decomposed granite) or recycled material, or wood, recycled wood or plastic lumber. Access shall be at the owner's discretion pursuant to Section 6.6 (Public Access). Prior to the placement, construction, replacement or enlargement of any trail, Grantor shall notify Grantee pursuant to Section 21 (Grantee's Approval).

Current Conditions Statement for 4.2.2.

No trails were observed on the Property during the field work conducted for this report.

4.2.3. **Fences.** Existing fences may be maintained, repaired and replaced and new fences may be built anywhere on the Property, provided that the location and design of said fences are consistent with the Purpose. Notwithstanding the foregoing, the construction of kennel facilities, or permanent corrals on the Existing Conservation Area is prohibited. For the purposes of this Deed, kennel facilities shall be defined as any enclosed area in which single or multiple domestic or household animals are maintained, boarded, bred, or cared for.

Current Conditions Statement for 4.2.3.

Perimeter fences are in place around the entire Property, which are needed to control access to the Property and manage livestock grazing. At 4592 Parfet there is a north-south internal fence east of the residence. At 4595 Parfet there is a north-south internal fence west of the residence. At 4696 Parfet there are internal fences around the residential area, along the driveway, and a pasture division fence at the stock shed. Small amounts of fencing are used to protect some of the tree and shrub plantings from

livestock. No kennel fencing, as described above, or permanent corrals were observed on the Property during the field work conducted for this report.

4.2.4. **Signs.** Existing signs may be maintained, repaired and replaced (with signs similar in character and size) in their current location. New signs may be placed and maintained on the Property provided that the number and size of the new signs are consistent with the Purpose.

Current Conditions Statement for 4.2.4.

There are no commercial billboards or signs on the Property. The only sign of note that was observed on the Property is a sign certifying the Existing Conservation Area as a “Backyard Wildlife Habitat” on the boundary with the East Heine Parcel (Photo Point 26).

4.2.5. **Utilities.** Existing utilities may be repaired and replaced in their same location with a structure similar to the type they replace without any further permission of Grantee. Grantor may install new utility lines or relocate existing utility lines provided such new or relocated utility lines shall be installed underground in the new or existing roads or driveways as depicted on **Exhibit B**. The addition of utility lines or the relocation or significant upgrading of existing utility lines may be approved by Grantee if Grantee determines said utility lines are not inconsistent with the Purpose. Following the repair, replacement, enlargement or construction of any Utility Improvements, Grantor shall promptly restore any disturbed area to a condition consistent with the Purpose. Any easement, right of way or other interest granted to a third party or otherwise reserved, to be used for Utility Improvements is subject to Section 6.9 (Easements, Rights of Way or Other Interests) of this Deed.

Renewable energy generation systems are permitted for limited use on the Property which shall mean such use is primarily for the purpose of allowing Grantor to offset its energy consumption, subject to the restrictions above. Any such limited renewable energy generated on the Property in accordance with this paragraph that incidentally is in excess of Grantor's consumption may be sold, conveyed, or credited to a provider of retail electric service to the extent permitted by Colorado law.

Current Conditions Statement for 4.2.5.

Third party utilities located on the Property are as follows (refer to Figure 3):

1. A Valley Water District waterline runs along Parfet Street. Water taps for the residences at 4592, 4595 and 4596 Parfet Street are located on this line.
2. Overhead powerline along the east side of Parfet Street on the west boundary of 4592 and 4596 Street.
3. Overhead powerline along the west side of Parfet Street on the east boundary of 4595 Parfet Street. These two overhead powerlines supply electric power to all three of the parcels at 4592, 4595 and 4596 Parfet Street.
4. An electric transmission line crosses the 4595 Parfet Street Parcel from north to south in the east-central portion of the parcel. None of the transmission line towers are located on the Property.

5. As described below under Exception 10 of the title commitment, there is a utility easement that includes the eastern edge of 4592 Parfet Street. There may be a buried powerline within this easement, but this line was not observed during the field work conducted for this report.

No other third party utility lines were observed on the Property during the field work conducted for this report.

5. **Resource Management.** Grantor recognizes the importance of good resource management and stewardship to preserve and protect the Conservation Values. To this end, the following uses of the Property shall be conducted in accordance with the provisions below. If Grantee believes any resource management practice(s) are not consistent with the Purpose, Grantee, in addition to all of its rights under this Deed, may request that the Parties consult with a mutually acceptable resource management professional. This professional will provide written recommendations for said resource management practice(s). The cost of this consultation shall be borne by Grantor. Grantee shall determine whether said recommendations are consistent with the Purpose.

5.1. **Agriculture.** Generally, all agricultural uses shall be conducted using stewardship and management methods that preserve the natural resources upon which agriculture is based. Long term stewardship and management goals include preserving soil productivity, maintaining natural stream channels, preventing soil erosion, minimizing invasive species, avoiding unsustainable livestock grazing practices, and minimizing loss of vegetative cover. Specifically, all agricultural and livestock grazing uses shall be conducted using sound range management practices. The definition of "sound range management" shall be determined by the United States Department of Agriculture's local office of the Natural Resources Conservation Service (or its successor), or a qualified range management specialist mutually agreed upon by Grantor and Grantee. Long term management and stewardship goals include preserving soil productivity, maintaining natural stream channels, preventing soil erosion, minimizing invasive species, avoiding unsustainable livestock grazing practices, and minimizing loss of vegetative cover. All pastures and open range shall be maintained in good condition. During times of drought, grazing shall be managed and if necessary reduced to maintain good grass cover. Hay pastures, both irrigated and dry land, may be replanted, seeded, cut, fertilized, burned, harvested, and maintained. Grantor retains the right to conduct agricultural and livestock operation(s) in a manner consistent with sound range or farming management practices or both, and to lease the Property with appurtenant water rights for agricultural purposes permitted hereunder. Permitted agricultural operations include, but are not limited to livestock grazing, community-based gardening and food production, bee-keeping, and all other agricultural activities consistent with the purpose of the Deed. The storage of agricultural products and byproducts on the Property is permitted, so long as the storage complies with all applicable federal, state, county or local laws, rules, ordinances and regulations. The establishment or maintenance of a commercial feedlot is prohibited as that term is defined and described in Section 6.5 herein. Nothing in this Section 5.1 or Section 6.5 herein shall prevent Grantor from seasonally confining its own livestock into an area, corral or other facility for feeding or calving, or from leasing pasture for the grazing of livestock owned by others.

If agricultural acts or uses are no longer practiced on the Property, either Party may request that the Parties develop a mutually acceptable plan to ensure appropriate land cover that is consistent with the Purpose. The expense of developing and implementing said plan shall be borne by Grantor.

Current Conditions Statement for 5.1.

The Property is agriculturally productive, and currently used for raising of livestock, beekeeping and hay production (Figure 3; Photo Points 3, 6, 16, 19, 21-23 and 25). Agricultural water rights will be donated as a part of this conservation easement and tied to the Property (Figure 3; Photo Points 14, 17-20 and 24).

5.2. **Timber.** On a limited and localized basis, trees may be cut to control insects and disease, to control invasive non-native species, to prevent personal injury and property damage, and for domestic uses on the Property such as firewood and construction of permitted improvements. Tree thinning activities are permitted to maintain the character and nature of the wildlife habitat. Other timber harvesting activities shall be conducted in accordance with a forest management plan prepared by a professional forester at Grantor's expense, provided that Grantee determines that said activities and management plan are consistent with the Purpose, pursuant to Section 21 (Grantee's Approval) of this Deed.

Current Conditions Statement for 5.2.

Forestry practices have been restricted to removing dead wood. Much of the dead wood on the West Heine Parcel has been placed in piles designed to provide wildlife habitat. No commercial timber harvest was observed on the Property.

5.3. **Relatively Natural Habitat.** Habitat management activities that have the potential to negatively impact the Conservation Values such as chaining juniper or sagebrush, constructing or altering ponds, wetlands, or stream channels, and conducting controlled burns may be permitted provided that Grantee determines that said management activities are consistent with the Purpose, pursuant to Section 21 (Grantee's Approval) of this Deed. Grantor may undertake planting flower or vegetable gardens inside the Building Envelope, and planting native trees, shrubs, and wildflowers anywhere on the Property, which activities and uses are permitted by this Deed.

Current Conditions Statement for 5.3.

No evidence of chaining juniper or sagebrush, constructing or altering ponds, wetlands, or stream channels, and conducting controlled burns was observed on the Property during the field work conducted for this report. Much of the dead wood collected on the West Heine Parcel has been placed in piles designed to provide wildlife habitat. Flower gardens have been planted around the residence at 4596 Parfet, and there are numerous native trees and shrubs that have been planted at this location as well.

5.4. **Minerals.** For the purposes of this Deed, minerals shall be defined as soil, sand, gravel, rock, stone, decorative stone, gold and other rare earth elements, oil, natural gas, coalbed methane (including any and all substances produced in association therewith from coalbearing formations), hydrocarbon, fossil fuel, or any other mineral substance, of any kind or description, on, in, under or part of the Property (collectively referred to as "Minerals").

5.4.1. **Ownership of Minerals.** As of the date of this Deed, Grantor owns all of or a controlling interest in the Minerals and mineral rights located on, under, or in the Property or otherwise associated with the Property. Grantor shall not transfer or otherwise separate any mineral rights from the Property.

5.4.2. **Mineral development.** The exploration, development, mining or other extraction or removal of Minerals, conducted on, under, or in the Property or

otherwise associated with the Property by any method is prohibited. Notwithstanding the foregoing, subject to Grantee's approval Section 21 (Grantee's Approval), Minerals may be removed from below the surface of the property provided that the location of all equipment, pumps, storage facilities, pipelines, and any other infrastructure, or other activities necessary for extraction, storage, or transportation is located off of the Property, extraction takes place off the Property, and that the method and means of extraction is consistent with the Purpose.

Current Conditions Statement for 5.4.2.

No subsurface or surface mining features were noted on the Property during the field work conducted for this report.

5.4.3. **Notice Related to Minerals.**

Current Conditions Statement for 5.4.3.

This paragraph and following sub-paragraphs pertain to future conditions.

5.4.4. **Geothermal Resources.**

Current Conditions Statement for 5.4.4.

This paragraph pertains to future conditions.

5.5. **Recreation.** Low-impact recreational uses such as wildlife watching, hiking, horseback riding, cross-country skiing, hunting and fishing are permitted, provided they are consistent with the Purpose. Golf courses are prohibited on the Property. Other buildings and facilities for any other public or private recreational use may only be built on the Property in accordance with Section 4A(1), and then only in a manner that is consistent with the Purpose, except that use of the Property for more than "de minimis" commercial recreation activity is prohibited. The term "de minimis" shall have the meaning as set forth in §2031 (c)(8)(B) of the I.R.C. and the Treasury regulations adopted pursuant thereto.

Current Conditions Statement for 5.5.

No evidence of recreation activities was observed on the Property during the field work conducted for this report.

5.6. **Weeds.** The Parties recognize the potential negative impact of noxious weeds and invasive plant species on the Conservation Values. Grantor shall manage noxious weeds and invasive plant species in a manner consistent with the Purpose, in compliance with applicable federal, state, county or local laws, rules, ordinances and regulations, and in a manner to prevent any adverse impact to the Conservation Values of the Property. Noxious weed management shall not prevent Grantor from planting flower or vegetable gardens anywhere on the Property, or from planting native trees, shrubs and wildflowers anywhere on the Property, which activities and uses are permitted by this Deed. Grantee has no responsibility for the management of noxious weeds and invasive plant species.

Current Conditions Statement for 5.6.

Table 5 on page 13 of this report lists the state listed noxious weeds that were observed on the Property. None of the weed species identified on the Property create significant impacts or are found in large, dense stands at this time.

5.7. **Water Rights.** The Property subject to this Easement includes any and all decreed and undecreed and water rights, ditches and ditch rights, springs and spring rights, reservoir and reservoir rights, wells and groundwater rights, and any other types of rights related to the ownership of water, tributary, non-tributary and not non-

tributary, appurtenant to or customarily or historically used or associated with or upon the Property, together with any and all of the rights associated with the historical and beneficial use of any of the embankments, flumes, headgates, measuring devices or any other structures that are appurtenant to those water rights, along with all easements and rights of way therefor including but not limited to those specifically described in **Exhibit C** attached hereto and made a part of this Deed (collectively, the “Dedicated Water Rights”). Grantor shall not transfer, encumber, sell, lease or otherwise separate the Water Rights from the Property. Grantor shall not change the historic use of the Water Rights without the prior written consent of, and determination by, Grantee that such change is not inconsistent with the Purpose. Pursuant to C.R.S. § 38-30.5-102, which authorizes the inclusion of “water rights beneficially used upon the land...owned by Grantor” in a conservation easement, the Property subject to this Easement includes any and all right, title and interest in and to the water rights described in Exhibit C (“Water Rights”).

5.7.1. ***Permitted Uses of Water Rights.*** The Parties agree that the Water Rights are hereby dedicated and restricted exclusively to be used for the preservation and protection of the Conservation Values (“Permitted Water Uses”), and that Grantor shall continue to maintain their historic beneficial use.

Current Conditions Statement for 5.7.1.

The Grantor has surface water rights for twelve shares of the Brown and Baugh Ditch, and these water rights have been dedicated to the Conservation Easement as referenced in the Amended and Restated Deed of Conservation Easement in Exhibit "C". The Brown and Baugh Ditch runs through the 4595 Parfet Street parcel (Figure 3). There are several headgates and laterals running through the Property (Figure 3; Photo Points 14, 17-20 and 24). The arrangement of ditches allows for irrigation of all of the *Tame Pasture* on the Property. This irrigation infrastructure is important for the maintenance of the agricultural use of the Property.

A cistern equipped with a pump is located immediately east of the residence at 4592 Parfet Street (Figure 3; Photo Point 10). The cistern is currently non-functional.

5.7.2. ***Restrictions on Water Rights.***

Current Conditions Statement for 5.7.2.

This paragraph pertains to future conditions.

5.7.3. ***Protection of Water Rights.***

Current Conditions Statement for 5.7.3.

This paragraph pertains to future conditions.

5.7.4. ***Abandonment of Water Rights.***

Current Conditions Statement for 5.7.4.

This paragraph pertains to future conditions.

5.7.5. ***Ditch or Reservoir Company.***

Current Conditions Statement for 5.7.5.

This paragraph pertains to future conditions.

5.7.6. ***Notice Relating to Water Rights.***

Current Conditions Statement for 5.7.6.

This paragraph pertains to future conditions.

6. ***Restricted Practices.***

6.1. ***Subdivision.***

Current Conditions Statement for 6.1.

This paragraph pertains to future conditions.

6.2. ***Surface Disturbance.*** Except as permitted within this Easement, any alteration of the surface of the Property, including without limitation, the excavation or removal of soil, sand, gravel, rock, peat or sod, that is inconsistent with the Purpose, is prohibited. Surface disturbance associated with vegetation management, wildlife habitat management or enhancement, or to improve the Conservation Values is permitted. Notwithstanding the foregoing, soil, sand, gravel or rock may be extracted from the Property provided that: (i) no more than a 10 foot by 10 foot area of the Property is disturbed at any one time; (ii) such extraction shall have no more than limited, localized impact on the Property; (iii) such extraction shall be associated with permitted acts on and uses of the Property; and (iv) Grantee determines that such extraction is consistent with Purpose pursuant to Section 21 (Grantee's Approval) of this Deed. Once extraction is complete, Grantor shall promptly restore any disturbed area to a condition consistent with the Purpose. This Section shall be interpreted in a manner that is consistent with I.R.C. § 170(h) and the Treasury Regulations adopted pursuant thereto.

Current Conditions Statement for 6.2.

The only surface disturbance noted on the Property was repair work on irrigation ditches taking place on August 15, 2015. During the field visit on October 25, 2017, this work had been completed and the area had been restored to conditions similar to adjacent areas.

6.3. ***Water Improvements.*** The maintenance and repair of existing non-domestic water improvements such as ponds, reservoirs, stock tanks, center pivot sprinklers, irrigation ditches, pipes, headgates, flumes, pumps, or wells is permitted. The construction of new water improvements or enlargement of existing water improvements, excluding ponds and reservoirs, is permitted provided that such activity is consistent with the Purpose. The enlargement of existing ponds or reservoirs, or the construction of new ponds or reservoirs, is permitted provided that Grantee determines that said activities are consistent with the Purpose, pursuant to Section 21 (Grantee's Approval) of this Deed. Any portion of the Property that is disturbed by the maintenance, repair, construction or enlargement of water improvements shall be restored to a condition that is consistent with the Purpose promptly after said activity is completed. Further, Grantor may construct, maintain, repair and replace wells, cisterns, and septic or leach systems within and outside of the Building Envelope to serve the permitted Residential Structures inside the Building Envelope in accordance with applicable regulations of Jefferson County and the State of Colorado.

Current Conditions Statement for 6.3.

This paragraph pertains to future conditions.

6.4. **Commercial or Industrial Activity.** Commercial or industrial uses that are not consistent with the Purpose are prohibited. The Property may be used for agricultural uses, including but not limited to animal husbandry, breeding, raising, grazing and pasturing of bees, poultry, horses, cattle, cows, mules, sheep, goats, and llamas, haying, gardening, vegetable production, and continuation of current agricultural practices in a manner that does not adversely impact the Conservation Values of the Property, and processing or sale of farm, garden, or ranch products predominantly grown or raised on the Property, including the right to lease the Property for such uses, or to allow other uses of the Property such as public or social events including but not limited to fundraisers, educational opportunities, community gardening, when such events (1) are not inconsistent with the Purpose of this Deed; (2) have no permanent, irreversible adverse impact on the Conservation Values of the Property; and (3) conform to applicable federal, state, county or local laws, rules, ordinances and regulations. Notwithstanding the foregoing, all leases shall comply with Section 23 (Lease or Transfer of Property).

Current Conditions Statement for 6.4.

No commercial or industrial activity, as described above, was observed on the Property during the field work conducted for this report.

6.5. **Feed Lot.** The establishment or maintenance of a commercial feed lot is prohibited. For purposes of this Deed, “commercial feed lot” is defined as a confined area or facility within the Property which is not grazed or cropped annually, and which is used to receive livestock that have been raised off the Property for feeding and fattening for market. Nothing in this section or Section 5.1 shall prevent Grantor from temporarily or seasonally confining livestock into an area, corral or other facility for feeding or calving, or from leasing pasture for the grazing of livestock owned by others.

Current Conditions Statement for 6.5.

No feed lot, as described above, was observed on the Property during the field work conducted for this report.

6.6. **Public Access.** Nothing contained herein shall be construed as affording the public other than visual access to any portion of the Property at this time, although the Grantor may permit public access to the Property on such terms and conditions as she deems appropriate, including but not limited to, supervised educational access, such as school field trips, community gardening or farming opportunities, or managed pedestrian or equestrian trail access, provided that such access is consistent with the Purpose. To the extent Grantor permits public access, Grantor shall comply with all applicable requirements of law affording access to persons with disabilities. Unless or until Grantee is the owner of the Property, Grantee does not have the right to grant any public access to the Property without Grantor’s consent.

Current Conditions Statement for 6.6.

No public access, as described above, was observed on the Property during the field work conducted for this report.

6.7. **Trash.** The dumping or permanent accumulation of any kind of trash, sludge, or refuse on the Property is prohibited, except for farm-related trash and refuse produced on the Property, provided that such dumping or accumulation is consistent with the Purpose. The storage or accumulation of agricultural products and by-products on the Property is permitted provided that such activity is conducted in

accordance with all applicable government laws and regulations and is consistent with the Purpose.

Current Conditions Statement for 6.7.

No trash piles or dump sites were observed, and the Property is quite clean and well kept. There are a few scattered, small piles of tree slash that are used to provide cover habitat for wildlife.

6.8. **Hazardous Materials.** Grantor may use agri-chemicals on the Property in accordance with all applicable federal, state or local law. Otherwise, the treatment, permanent storage, disposal or release of hazardous materials on, from or under the Property is prohibited. For purposes of this Deed, "Hazardous Materials" shall mean any "hazardous substance" as defined in §9601(14) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"), "pollutant or contaminant" as defined in § 9601(33) of CERCLA, or any hazardous waste as defined in C.R.S. §25-15-101(6). 40 C.F.R. § 302.4 provides a non-exhaustive list of over 600 substances that qualify as hazardous substances under CERCLA. The use, treatment, storage, disposal, or release of Hazardous Materials shall only be permitted in accordance with applicable, federal, state and local law and regulations.

Current Conditions Statement for 6.8.

No obvious evidence of hazardous materials was observed on the Property during the field visit; however, this baseline report does not fulfill the requirements of a Phase I environmental assessment to ascertain the presence of hazardous materials.

6.9. **Motorized Vehicle Operation.** The operation of motorized vehicles for purposes associated with permitted acts on and uses of the Property is permitted provided that such operation is consistent with the Purpose and Intent.

Current Conditions Statement for 6.9.

Agricultural and land maintenance equipment may be driven off road through any of the *Tame Pasture* on the Property. No use of motorized vehicles that was inconsistent with the Purpose and Intent was observed on the Property during the field work conducted for this report.

6.10. **Easements, Rights of Way or Other Interests.** The conveyance or modification of an easement, right of way, Mineral Document or other similar interest is prohibited unless Grantee determines that the proposed conveyance or modification is consistent with the Purpose and Intent pursuant to Section 21 (Grantee's Approval) of this Deed.

Current Conditions Statement for 6.10.

This paragraph pertains to future conditions.

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12.0 REPORT PREPARERS

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Natural Resources Planner

Professional Interest

Mike has twenty-four years experience in natural and cultural resource management, land use planning and public policy. Public sector experience includes municipal, county, state and federal governments, and private sector experience includes property owners, developers, corporations, environmental organizations, civic and neighborhood organizations, and homeowners associations. Management of natural and cultural resources includes inventory and baseline documentation, development of public planning policies, management plans, impact analysis and mitigation. He has participated in the identification and protection of tens of thousands of acres of ecologically significant land in the State of Colorado.

Conservation Easement Baseline Reports. 1989 to present. Natural and cultural resource inventories conducted on more than four hundred twenty properties on over 754,000 acres of land in thirty-nine Colorado counties. Baseline reports are formatted and conducted to meet Internal Revenue Service regulations with respect to charitable contributions of real property interests for the purposes of land conservation. Reports also follow the recommendations of the Colorado Coalition of Land Trusts Standards and Practices for the Stewardship of Conservation Easement. Inventory reports establish specific resources to be protected by Conservation Easements, and the public interest served by these easements.

ERICA H. GOAD

Natural Resources Planner

Professional Experience

Erica, a native Coloradoan, has worked in wildlife and land conservation for the entirety of her professional career. Prior to working with LREP, Inc., Erica was the Stewardship Coordinator for Estes Valley Land Trust, where she authored over 30 baseline or baseline update reports. She holds a Master's of Science in Ecology from Colorado State University in Fort Collins, Colorado and a Bachelors of the Arts in Biology-Environmental Studies from Whitman College in Walla Walla, Washington. She has worked in private land and wildlife conservation for a variety of organizations, including land stewardship for The Nature Conservancy, wolverine research for Round River Conservation Studies, and mountain lion research for the National Park Service.

NANCY D. LEDERER, Secretary/Treasurer, LREP, Inc.

Botanist, Ecologist

Professional Experience

Nancy has thirty-five years experience in botanical inventory, ecological assessment, rare plant surveys, vegetation sampling, plant identification, and herbarium collection management. Employers have included the University of Colorado Natural History Museum Herbarium, The Nature Conservancy, Colorado Natural Heritage Program, USDA Forest Service, University of Colorado Institute of Arctic and Alpine Research, University of Alaska, and Stoecker-Keammerer and Associates Ecological Consultants. She has contributed to the vegetation and soils chapters on over two hundred conservation easement baseline reports in Colorado.

APPENDIX 1

DEED OF CONSERVATION EASEMENT

**Heine Wildlife Sanctuary
AMENDED AND RESTATED
DEED OF CONSERVATION EASEMENT**

Pursuant to the requirements of Section 13 (Transfer of Property) of this Deed, any time the Property or a permitted portion thereof is transferred by Grantor to any third party, Grantor shall pay a fee of $\frac{1}{4}$ of 1% of the sale price to Grantee and notify Grantee.

THIS DEED OF CONSERVATION EASEMENT (“Deed” and “Easement”) is granted on this ____ day of February, 2018, by Karin Heine, whose address is 4596 Parfet Street, Wheat Ridge, Colorado 80023 (“Grantor”), to COLORADO OPEN LANDS, a Colorado non-profit corporation (“Grantee”), whose address is 1546 Cole Blvd, Suite 200, Lakewood, Colorado 80401 (individually a “Party” and collectively the “Parties”).

The following exhibits are attached hereto and are incorporated by reference:

- Exhibit A: Legal Description
- Exhibit B: Map
- Exhibit C: Dedicated Water Rights
- Exhibit D: Sample Notice of Transfer of Property

RECITALS:

A. **Description of Property.** Grantor is the owner of the fee simple interest in the subject Property legally described in **Exhibit A** and depicted in **Exhibit B**, both attached hereto and made a part of this Deed, which consists of approximately 3.7 acres of land (“Existing Conservation Area”) together with two shares of the Brown and Baugh Ditch and two shares of the Lane Ditch as described in **Exhibit C** (“Existing Dedicated Water Rights”) that are subject to that certain Deed of Conservation Easement recorded on April 11, 2003 at Reception No. F1723481 of the records of the Jefferson County Clerk and Recorder’s Office (“First Conservation Easement”). Grantor is also the owner of the fee simple interest in the subject property legally described in **Exhibit A** and depicted in **Exhibit B**, which consists of approximately 8.26 acres of land (“New Conservation Area”) and additional water rights as further described in **Exhibit C** (“New Dedicated Water Rights”). The Existing Conservation Area and the New Conservation Area, together with existing improvements [as further described in Section 4(A)] and the Existing Dedicated Water Rights and the New Dedicated Water Rights, and mineral rights owned by Grantor located in Jefferson County, State of Colorado shall collectively be known as the “Property”.

B. **Amended and Restated Easement.** This Deed grants a new conservation easement to encumber the New Conservation Area which was not encumbered by the First Conservation Easement. The parties intend that this Deed encumber the Property and amend and restate the First Conservation Easement in its entirety. The parties further intend that upon execution and

recordation of this Deed, the First Conversation Easement will be superseded and replaced in its entirety by this Deed, and will have no further force or effect.

Upon execution and recordation of this Deed, the Original Deed is hereby amended and restated in its entirety by this Deed, and the Original Deed shall be superseded by this Deed and have no further force or effect; provided, however, that such amendment and restatement shall not interrupt the perpetual duration of the Original Deed or the property rights which vested in Grantee upon the recording of the Original Deed.

C. **Qualified Organization.** Grantee is a "qualified organization," as defined in §170(h)(3) of the I.R.C. and Treasury Regulation § 1.170A-14(c) and is a charitable organization as required under § 38-30.5-104 (2) of the Colorado Revised Statutes (C.R.S.), is certified to hold conservation easements for which a state tax credit is claimed by the State of Colorado's Division of Real Estate as outlined in C.R.S. §12-61-724 and in Rule 2.1 of the Code of Colorado Regulations, *Qualifications for Certification to Hold Conservation Easements* (4 CCR 725-4, Rule 2.1), for the current year. Grantee is also accredited by the Land Trust Accreditation Commission, a national accreditation program sponsored by the Land Trust Alliance, at this time. Further, Grantee's mission is to preserve the significant open lands and natural heritage of Colorado through private and public partnerships, innovative land conservation techniques and strategic leadership, and it possesses the resources and commitment to protect and defend the conservation purposes of this grant.

D. **Conservation Values.** The conservation values set forth in this subsection may hereinafter be collectively referred to as the "Conservation Values." The Conservation Values are listed below in order of priority. The Property serves as relatively natural habitat for wildlife and possesses both open space scenic and agricultural qualities. These Conservation Values are of great importance to Grantor, the people of the City of Wheat Ridge, Jefferson County, Colorado, and the people of the State of Colorado:

D1. Relatively Natural Habitat [§ 1.170A-14(d)(3)]. In accordance with the Internal Revenue Code (IRC) and Treasury Regulation 1.170A-14(d)(3) regarding the protection of an environmental system, this Property provides a significant relatively natural habitat in which wildlife lives. Portions of the Property have been planted with vegetation that attracts bees and other pollinators. The presence of irrigation land supports extensive growth of native plains cottonwoods, and other trees and shrubs that provide habitat for wildlife, particularly migratory birds. There are many wildlife species present that are adapted to open, but urban settings, such as mule deer, red fox and red-tailed hawk. The Property is adjacent to, and buffers and enhances a 3.7 acre protected parcel, also owned by the Grantor. This adjacent parcel has been certified by the National Wildlife Federation as an official "Backyard Wildlife Habitat".

D2. Open Space [§ 1.170A-14(d)(4)]. The Property qualifies as Open Space because it is being preserved for the scenic enjoyment of the general public and pursuant to a clearly delineated federal, state or local governmental conservation policy and will yield a significant public benefit.

D.2.1. Scenic Enjoyment. The Property adds to the scenic character of the local suburban landscape in which it lies, contains a harmonious variety of shapes and textures, and provides a degree of openness, contrast and variety to the overall landscape. The Property is readily visible to the general public from adjacent public roads, including both Oak and Parfet Streets in the City of Wheat Ridge which are open to and actively utilized by residents of Jefferson County and the State of Colorado. Preservation of the Property will continue to provide an opportunity for the general public to appreciate the unobstructed scenic views it provides of an open and undeveloped landscape. Further, preservation of the Property will serve to both maintain the wildlife-habitat, agricultural, and scenic characteristics and to provide relief from increasing development in the area. The scenic importance of the Property will also increase over time as the Property's current land uses are developed, and as further development takes place in neighboring portions of the City of Wheat Ridge. Last, the terms of this Deed do not permit a degree of intrusion or future development that would interfere with the essential scenic quality of the land.

D.2.2. Agriculture. A portion of the Property is currently used for agricultural purposes including irrigated and dryland crop production, livestock grazing, and apiary or bee keeping. These uses are compatible with other land use in the vicinity, as several adjacent properties are also used for agricultural production. The Property's conservation adds to the open space character of the landscape in the City of Wheat Ridge, Colorado, particularly by the continuation of agricultural land uses. The Property is currently used for raising of livestock and hay production. The Property is zoned as Agricultural-1 by the City of Wheat Ridge, and has agricultural water rights that will be donated as a part of this conservation easement. According to the Natural Resources Conservation Service, the Property has Loveland Variant soil, classified as a Class III soil, or Class II soil if irrigated, and much of the Property is irrigated. Loveland Variant soil is further classified by the Natural Resources Conservation Service as a "prime farmland" soil, and as further defined in the Farmland Policy Protection Act of 1981 (7 CFR 658).

The provisions of this Deed ensure that the Property will be available for agricultural production in accordance with I.R.C. §170(b)(E)(iv)(II). In particular, although the following land uses are not currently practiced on the Property, permanent protection of the Property will keep this land available for a community garden and community farm, as well as an outdoor education facility.

D.2.3. Clearly Delineated Government Conservation Policy. Protection of the Property furthers the specific objectives of clearly delineated government conservation policies at the federal, state, and local levels and provides a significant public benefit.

D.2.3.1. Federal legislation supports conservation of the Property through the Pension Protection Act and supports the Property's protection through Section 170(b)(1)(E)(iv) of the Internal Revenue Code (I.R.C.), as amended by the 2006 Pension Protection Act and extended to make the incentive permanent, which law creates a greater tax deduction and carry forward period for landowners conserving their properties through the use of perpetual conservation easements, with even greater tax benefits available to agricultural landowners provided that

the conserved property remains available for either agricultural or livestock production, or both. The Property's protection with this Easement for wildlife and agricultural purposes furthers this policy's objective by actively encouraging uses for agriculture, and by requiring that the land remain available for agriculture when not in active use.

The government of the United States provides further support for agriculture conservation through the Agricultural Conservation Easement Program, Title XII, Subtitle H, Section 2401 of the Food, Conservation, and Energy Act of 2014, Public Law 113-79, 16 U.S.C. 3865 and 3865b authorizes the Agricultural Conservation Easement Program under which the Secretary of Agriculture, acting through the Natural Resources Conservation Service, on behalf of the Commodity Credit Corporation, facilitates and provides funding for the purchase of conservation easements for the purpose of protecting agricultural uses and related Conservation Values of eligible land by limiting nonagricultural uses of the land. The Property's protection with this Easement for wildlife and agricultural purposes furthers this policy's objective by protecting agricultural and related uses of the land.

D.2.3.2. State Policy Concerning Conservation Easements. The State of Colorado has provided incentive for Colorado landowners to protect their land with conservation easements created pursuant to C.R.S. §§38-30.5-101 *et seq.*, the enactment of which provides for the creation of conservation easements to maintain land "in a natural, scenic, or open condition, or for wildlife habitat, or for agricultural, horticultural, wetlands, recreational, forest or other use or condition consistent with the protection of open land having wholesome environmental quality or life-sustaining ecological diversity." The State of Colorado has provided further incentive for Colorado landowners to protect their land with conservation easements created pursuant to C.R.S. §§38-30.5-101 *et seq.* and §170(h) of the I.R.C. with the enactment of the Conservation Easement Credit Against Income Taxes, C.R.S. §39-22-522, which provides a transferable tax credit for qualifying grants of conservation easements in gross.

The State of Colorado also has provided incentive for Colorado landowners to protect their land with conservation easements through the enactment of C.R.S. §§33-1-101, *et seq.*, which provides in relevant part that "it is the declared policy of the State of Colorado that the wildlife and their environment are to be protected, preserved, enhanced, and managed for the use, benefit, and enjoyment of the people of this state and its visitors."

The Colorado Department of Agriculture Statutes, C.R.S. §§35-1-101 *et seq.*, provide in part that "it is the declared policy of the State of Colorado to conserve, protect, and encourage the development and improvement of its agricultural land for the production of food and other agricultural products."

D.2.3.3. Local Supporting Government Policy. The City of Wheat Ridge has developed goals and policies that support the voluntary preservation of private lands. Specifically the 2000 City of Wheat Ridge Comprehensive Plan, states as Goal 13 to "Recognize the fragility of the environment by allowing only

those land uses that cause a minimum harm to the environment and adopt policies that protect Wheat Ridge’s dwindling supply of open space and promote its preservation.” In support of this goal, Policy 13.5 provides to “Promote the preservation of open space by private landowners through mechanisms such as acquisition, conservation easements, land trusts, and life estates by accessing programs and funding from non-profit organizations.” Policy 13.6 provides in relevant part to “Develop a system of incentives to include conservation easements ... as a means of preserving open space and agricultural land.” After the grant of conservation easement in 2003, the City of Wheat Ridge rezoned the Existing Conservation Area to the “Conservation District”. According to the City of Wheat Ridge Zoning Code, the Conservation District is described, as follows: Purpose: This district is established to provide a zoning classification for natural areas held by individuals, corporations or governments, individually or in combination, for natural resource and conservation purposes in an undeveloped state.

- B. Permitted uses, private property:
 - a. Open space.
 - b. Wildlife habitat.
 - c. Scenic view corridors.
 - d. Riparian habitat.
 - e. Underground utility lines.
 - f. Perimeter fencing.

By means of this seldom used zoning classification, the City of Wheat Ridge has clearly recognized the Conservation Values of the Existing Conservation Area, and the efforts made by the Grantor to preserve this site (City of Wheat Ridge 2016b).

The 2014 Jefferson County Open Space Master Plan identifies the following as priorities for land preservation:

- 1. Natural Resources
 - a. Critical Biological Resources identified in the Colorado Natural Heritage Program Study
 - b. Habitat for Threatened, Endangered species and species of concern and rare plant communities
 - c. Conservation that creates or sustains continuous wildlife corridors
 - d. Significantly biodiverse areas
 - e. Jeffco Open Space Conservation Study Areas
 - f. Water and mineral rights
- 2. Nature-Based Experiences
 - a. Regional trails that link multiple jurisdictions (e.g., Peaks to Plains Trail)
 - b. Park to Park trails that connect Jeffco Open Space and other public parks (e.g., White Ranch Park to Golden Gate Canyon State Park)
 - c. Additional trails within Jeffco Open Space Parks
 - d. Community and neighborhood access to nature-based experiences, outdoor recreation, open space and parklands

The Property supports 1a, as it is entirely within the Prospect Park Potential Conservation Area identified by the Colorado Natural Heritage Program and will be available to support 2d due to its location in a neighborhood setting.

D.2.3.4. Significant Public Benefit. There is existing and a foreseeable trend of development in the vicinity of the Property in the near future. As such, there is a strong likelihood that the Property would be developed if left unprotected, which would in turn lead to or contribute to the degradation of the scenic, agricultural, and natural character of the Property within the surrounding area. Preservation of the Property will continue to provide an opportunity for the general public to appreciate its scenic values. Further, preservation of the Property will serve to both maintain its natural and agricultural character and provide relief from increasing residential development in the area. Last, the terms of this Deed do not permit a degree of intrusion or future development that would interfere with the essential scenic quality of the land.

E. Documentation of Present Conditions. Pursuant to §1.170A-14(g)(5) of the Treasury Regulations and in order to document the condition of the Property as of the date of this Deed, a report has been prepared by Michael Figgs, and dated April 11, 2003, and updated January, 2017 (“Present Conditions Report”). The Present Conditions Report contains natural resources inventories and also document the Conservation Values and the characteristics, current use, and status of improvements on and development of the Property. The Present Conditions Reports are acknowledged by Grantor and Grantee as an accurate representation of the Property at the time of the transfer. The Present Conditions Reports have been provided to both parties and will be used by Grantee to assure that any future changes in the use of the Property will be consistent with the terms of this Deed. However, the Present Conditions Reports are not intended to preclude the use of other evidence to establish the condition of the Property as of the date of this Deed.

F. Charitable Donation. Grantor intends to create a conservation easement pursuant to §170(h) of the I.R.C. of 1986, as amended; §1.170A-14 of the Treasury Regulations; and §38-30.5-101 of the Colorado Revised Statutes, and hereby makes a charitable gift of the property interest conveyed by this Deed to Grantee.

ACKNOWLEDGEMENT OF PURPOSE AND INTENT

As a guide to the interpretation of this Deed and administration of this Easement, the Parties, for themselves, and for their successors and assigns, expressly declare their agreement and dedication to the following purpose and intent:

- I. **Purpose.** The purpose of this Easement is to preserve and protect the Conservation Values in perpetuity in accordance with I.R.C. §170(h), Treasury Regulation § 1.170A-14, and C.R.S. §38-30.5 (“Purpose”). The Conservation Values are prioritized in order to guide: (1) the perpetual protection and management of potentially conflicting Conservation Values; and, (2) the approval, amendment, and termination requests relating to potentially conflicting Conservation Values. Conservation Values shall be re-prioritized following impossibility or non-existence of protecting a Conservation Value

such that the remaining Conservation Values take the place of the impossible or non-existent Conservation Value in order of their original priority as relates to the remaining Conservation Values, as described hereafter.

The priority of Conservation Values is as follows: the primary purpose of this Easement is to protect the Property's wildlife habitat Conservation Value; the secondary purpose of this Easement is to protect the Property's agricultural Conservation Value, including the potential for community gardens or urban food supply; and the tertiary purpose of this Easement is to protect the Property's scenic Conservation Value. This priority shall be given due regard by Grantee when considering enforcement pursuant to Section 9 herein, amendment pursuant to Section 11 herein, termination pursuant to Section 16 herein, approval pursuant to Section 21 herein, and if or when proposed or existing uses of the Property come into conflict under this Deed.

Should the Property's use for the primary purpose become impossible to achieve, the Property shall continue to be protected for the secondary and tertiary purposes, and remain available for the primary purpose. Should the Property's use for the secondary purpose become impossible to achieve, the Property shall continue to be protected for the tertiary purpose, and remain available for the primary and secondary purposes. Should the Property's use for all of the listed purposes become impossible, the parties shall proceed in accordance with Sections 16 and 17 below, and consistent with applicable laws, to continue to honor the purposes set out for protection by this Deed.

It is also the purpose of this Deed to permit residential, educational, and other uses of the Property that are not inconsistent with the foregoing goals, the preservation and protection of the Conservation Values, or that are not otherwise specifically prohibited by this Deed.

- II. ***Intent.*** The intent of the Parties is for Grantor to voluntarily grant and for Grantee to voluntarily accept an unrestricted gift of real property that makes possible without requiring continued use of the Property for wildlife habitat, open space agricultural, scenic, residential, recreational, or educational, purposes, subject to the limitations described herein, in order of priority as described above ("Intent"). In this Deed, "consistent with the Purpose" shall mean acts on and uses of the Property that do not have significant negative impact or permanent negative impact on the Conservation Values as determined by Grantee in its sole discretion. Nothing in this Deed is intended to require a specific use of the Property, such as agriculture, or public access, although the Property shall remain available for agriculture. It is also the purpose of this Deed to permit other uses of the Property that are consistent with the foregoing goals.
- III. ***Acknowledgment.*** Grantee acknowledges pursuant to IRC Section 170(f)(8) that: (i) this Deed constitutes contribution of a conservation easement in the Property as described herein; and (ii) Grantee provided no goods or services in consideration, in whole or in part, for the contribution.

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein, the Parties mutually agree as follows:

1. **Conveyance of Easement.** Grantor hereby voluntarily grants and conveys to Grantee, and Grantee hereby voluntarily accepts, this Easement, an immediately vested interest in real property, in perpetuity.
2. **Rights Conveyed to Grantee.** To accomplish the Purpose, the following rights are hereby conveyed to Grantee, its employees and its representatives:
 - 2.1. To preserve and protect the Conservation Values;
 - 2.2. To prevent acts on or uses of the Property that are not consistent with the Purpose and, except as limited by Section 7 (Responsibilities of the Parties Not Affected) of this Deed, Grantee may require the restoration of such areas or features of the Property that are damaged by an inconsistent act or use;
 - 2.3. To enter upon the Property in order to monitor Grantor's compliance with the terms of this Deed pursuant to Section 8 (Monitoring) of this Deed, and to enforce the terms of this Deed pursuant to Section 9 (Enforcement) of this Deed.
 - 2.4. To have all Development Rights as defined in Section 14 (Development Rights) of this Deed, except as specifically reserved by Grantor herein.
 - 2.5. To have all other rights conveyed by this Deed.
3. **Rights Retained by Grantor.** Grantor retains the right to perform any act not specifically prohibited or restricted by this Easement, provided that such acts and uses are not inconsistent with the Purpose. These retained rights include, but are not limited to, the retention of the economic viability of the Property, including, but not limited to: the right to lease pastureland and structures on the Property; the right to exclude any member of the public or trespassers from the Property or from trespassing on the Property; the right to sell or otherwise transfer the Property to anyone Grantor chooses, the right to honor existing and to grant additional easements or rights of way across the Property; the right to perform property surveillance and secure the Property by aerial or on the ground means with devices such as cameras and motion sensors; the right to retain, improve, and protect the economic viability of the Property, including its Environmental Attributes, defined below; and the right to engage in or permit or invite others to engage in all uses of the Property that are not: (a) expressly prohibited herein; (b) inconsistent with Section 170(h) of the Internal Revenue Code, or any regulation promulgated thereunder; and (c) inconsistent with the purpose of this Deed. Further, Grantor shall not be required to take any action to restore the condition of the Property as a result of forces beyond Grantor's control, pursuant to Section 7.

Grantor hereby reserves all Environmental Attributes associated with the Property not granted, restricted, or encumbered by this Deed or its terms. "Environmental Attributes" shall mean any and all tax or other credits, benefits, renewable energy certificates, emissions reductions, offsets, and allowances (including but not limited to water, riparian, greenhouse gas, beneficial use, and renewable energy), generated from or attributable to the

conservation, preservation and management of the Property in accordance with this Deed, except for those income tax benefits in the form of federal tax deductions and state tax credits yielded from and obtained as a result of the grant of this Deed. Nothing in this Section shall modify the restrictions imposed by this Deed or otherwise be inconsistent with Purpose.

4. **Property Improvements.** The parties agree that the current use of and improvements to the Property are not inconsistent with the preservation and protection of the Conservation Values and are permitted. Improvements existing as of the date of this Deed are permitted. All other construction or placement of improvements is prohibited except as provided herein. Without limiting the generality of any of the foregoing, Grantor and Grantee hereby acknowledge and agree:

- 4.1. **Residential and Nonresidential Structures.** The construction, placement, replacement, enlargement, maintenance and repair of residential and nonresidential structures and improvements is permitted pursuant to the limitations set forth herein. For purposes of this Deed, "Residential Improvements" are defined as covered structures containing habitable space, including homes, cabins, guest houses, and any space attached to a home, cabin or guest house such as a garage, and any other structures intended for full or part-time human habitation. For purposes of this Deed, "Nonresidential Improvements" are defined as covered structures and not intended for human habitation and include, but are not limited to free-standing garages, picnic pavilions, and agricultural structures such as barns, pole barns, sheds, or farmstands. Nonresidential Improvements may include commercial structures, provided that such commercial structures are consistent with the Purpose. Permitted commercial structures may include, but are not limited to a nature center, incubation center for urban agriculture, or an office space for organizations which have a Mission consistent with the Purpose.

- 4.1.1. **Building Envelopes.** There shall be Two (2) building envelopes permitted on the Property (individually referred to herein as "**West Building Envelope**" and "**East Building Envelope**" and collectively referred to herein as the "**Building Envelopes**"), with the West Building Envelope on the parcel west of Parfet Street (referred to as the "**West Heine Parcel**") and the East Building Envelope on the parcel east of Parfet Street (referred to as the "**East Heine Parcel**"). All Residential Improvements and Nonresidential Improvements (with the exception of Nonresidential Improvements permitted by Section 4.1.2 below) constructed after the date of this Deed shall be located within the Building Envelope(s).

- 4.1.1.1. **West Building Envelope.** The West Building Envelope consists of 1/2 (one-half) acre. The location of the West Building Envelope is generally depicted on Exhibit B. On the date of this Deed, 2 (two) improvements are located within the West Building Envelope, a Residential Improvement consisting of 1,350 square feet of Footprint, and 1 (one) Nonresidential Improvement consisting of 432 square feet of Footprint.

- 4.1.1.2. ***West Building Envelope Limitations.*** Grantor may construct, place, replace, or enlarge Residential or Nonresidential Improvements within the West Building Envelope subject to the following limitations.
- 4.1.1.2.1. The maximum number of Residential Improvements (including attached appurtenances) shall not exceed 1 (one) and shall have a maximum Footprint of 3,000 square feet and a maximum Height, as defined below, of 18 feet.
 - 4.1.1.2.2. The maximum Height for each Nonresidential Improvement shall not exceed 18 feet.
 - 4.1.1.2.3. The total cumulative Footprint for all improvements, including Residential and Nonresidential Improvements, shall not exceed 8,000 square feet.
 - 4.1.1.2.4. Improvements in excess of the foregoing require Grantee approval pursuant to Section 21 (Grantee's Approval) of this Deed.
 - 4.1.1.2.5. Unenclosed improvements having no Footprint, such as corrals, bird watching blinds, wildlife viewing areas, informational and directional signage, trailhead, bedding starts, or temporary season-extender structures (e.g. hoop houses) without a foundation, are permitted if consistent with the Purpose and Intent.
- 4.1.1.3. ***East Building Envelope.*** The East Building Envelope consists of 1 (one) acre. The location of the East Building Envelope is generally depicted on Exhibit B. On the date of this Deed, 7 (seven) improvements are located within the East Building Envelope, there are two Residential Improvements consisting of 3,180 square feet of Footprint, and 5 (five) Nonresidential Improvements consisting of 2,748 square feet of Footprint.
- 4.1.1.4. ***East Building Envelope Limitations.*** Grantor may construct, place, replace, or enlarge Residential or Nonresidential Improvements within East Building Envelope subject to the following limitations.
- 4.1.1.4.1. The maximum number of Residential Improvements in use at any one time (including attached appurtenances) without approval pursuant to Section 21 (Grantee's Approval) of this Deed, shall not exceed 1 (one) and shall

have a maximum Footprint of 3,000 square feet and a maximum Height, as defined below, of 28 feet.

- 4.1.1.4.2. The maximum Height for each Nonresidential Improvement shall not exceed 28 feet.
- 4.1.1.4.3. The total cumulative Footprint for all improvements including Residential and Nonresidential Improvements shall not exceed 8,000 square feet.
- 4.1.1.4.4. Improvements in excess of the foregoing require Grantee approval pursuant to Section 21 (Grantee's Approval) of this Deed.
- 4.1.1.4.5. Unenclosed improvements having no Footprint, such as corrals bird watching blinds, wildlife viewing areas, informational and directional signage, bedding starts, or temporary season-extender structures (e.g. hoop houses) without a foundation, are permitted if consistent with the Purpose and Intent.

4.1.2. ***Outside of the Building Envelope(s).*** On the date of this Deed, there are three (3) agricultural improvements located outside of the Building Envelopes, with two (2) on the West Heine Parcel and one (1) on the East Heine Parcel.

4.1.2.1. ***Construction Limitations.*** Grantor may construct, place, replace or enlarge Nonresidential Improvements outside of Building Envelopes subject to the following:

- 4.1.2.1.1. The maximum number of Nonresidential Improvements on the Property shall not exceed 6 (six), with no more than 3 (three) apiece on each of the West and East Heine Parcels.
- 4.1.2.1.2. With one exception, the maximum Footprint for each Nonresidential Improvement shall not exceed 300 square feet. The one exception is for one of the two existing Nonresidential Improvements on the West Heine Parcel, which is a barn consisting of 672 square feet of Footprint. This Nonresidential Improvement may be repaired or may be enlarged or replaced with a Nonresidential Improvement with a maximum Footprint of 800 square feet and provided that such improvement shall continue to be located on the West Heine Parcel.

- 4.1.2.1.3. The maximum Height for each Nonresidential Improvement shall not exceed 18 feet.
- 4.1.2.1.4. The total cumulative Footprint for all Nonresidential Improvements on the Property shall not exceed 2,000 square feet, with 1,100 square feet maximum on the West Heine Parcel and 900 square feet on the East Heine Parcels.
- 4.1.2.1.5. Improvements in excess of the foregoing require Grantee approval pursuant to Section 21 (Grantee's Approval) of this Deed.
- 4.1.2.1.6. Unenclosed improvements having no Footprint, such as corrals, bird watching blinds, wildlife viewing areas, informational and directional signage, bedding starts, or temporary season-extender structures (e.g. hoop houses) without a foundation, are permitted if consistent with the Purpose.

4.1.3. **Repair and Maintenance.** Grantor may repair and maintain permitted improvements without further consent of Grantee.

4.1.4. **Notice.** Prior to the placement, construction, replacement or enlargement of any Residential Improvement or Nonresidential Improvement as permitted by Section 4.1.1, Grantor shall notify Grantee in writing not less than sixty (60) calendar days prior to the date Grantor intends to undertake the activity in question. The written notice shall describe the proposed improvement in sufficient detail (i.e. location, size, scope, design, nature) to allow Grantee to evaluate the consistency of the proposed improvement with this Section.

4.1.5. **Definition of Footprint.** For purposes of this Deed, Footprint is defined as the total ground area occupied by all Residential Improvements or Nonresidential Improvements, calculated on the basis of the exterior dimensions (whether at or above ground level) including carports or breezeways, but does not include eaves, uncovered decks or patios ("Footprint").

4.1.6. **Measurement of Height.** For purposes of this Deed, Height is defined as the vertical distance from the low point of the grade at the structure perimeter to the high point of the structure, ("Height"). For the purposes of this Deed, "Grade at the structure perimeter" means that either the natural grade or the finished grade, whichever is lower in elevation.

4.2. **Other Improvements.**

4.2.1. **Roads and Parking Areas.** For purposes of this Deed, Improved Roads shall be defined as any road, driveway or parking area that is graded, drained, or has a surface other than the natural earthen material (“Improved Roads”) and Unimproved Roads shall be defined as any track greater than three (3) feet wide where the natural earthen material is the driving surface (“Unimproved Roads”).

4.2.1.1. **Within the Building Envelope(s).** Construction, maintenance, paving (e.g. concrete, asphalt, or other impermeable material) or otherwise surfacing of all Improved and Unimproved Roads is permitted within the Building Envelope(s). Parking areas are permitted in both the East and West Building Envelopes, provided they are consistent with Purpose. Prior to the placement, construction, replacement or enlargement of any parking area, Grantor shall notify Grantee pursuant to Section 21 (Grantee’s Approval).

4.2.1.2. **Outside of the Building Envelope(s).**

4.2.1.2.1. **Improved Roads.** No Improved Roads shall be constructed or established outside of the Building Envelope(s) except for those permitted Improved Roads depicted on Exhibit B or unless Grantee determines that the proposed road is consistent with the Purpose, pursuant to Section 21 (Grantee’s Approval) of this Deed. Permitted Improved Roads may be relocated provided that the abandoned road shall be promptly revegetated and restored to a condition that is consistent with the Purpose, pursuant to Section 21 (Grantee’s Approval) of this Deed. Improved Roads shall be no wider than physically or legally necessary to provide access.

4.2.1.2.2. **Unimproved Roads.** No Unimproved Roads shall be constructed or established outside of the Building Envelope(s) except for Unimproved Roads that are consistent with the Purpose. No Unimproved Road shall be altered to become an Improved Road unless Grantee determines that the proposed alteration is consistent with the Purpose, determined pursuant to Section 21 (Grantee’s Approval) of this Deed.

4.2.2. **Trails.** Multiuse trails for pedestrian, equestrian and bicycle or other non-motorized wheeled use, such as wheelchairs (with or without motors) are permitted subject to the following and provided that they are consistent with the Purpose. Such trails shall be no more than 6 feet in width at any point. Permitted surface materials include crushed rock, wood chips, fine granular

stone (also referred to as crusher fines or decomposed granite) or recycled material, or wood, recycled wood or plastic lumber. Access shall be at the owner's discretion pursuant to Section 6.6 (Public Access). Prior to the placement, construction, replacement or enlargement of any trail, Grantor shall notify Grantee pursuant to Section 21 (Grantee's Approval).

- 4.2.3. **Fences.** Existing fences may be maintained, repaired and replaced and new fences may be built anywhere on the Property, provided that the location and design of said fences are consistent with the Purpose. Notwithstanding the foregoing, the construction of kennel facilities, or permanent corrals on the Existing Conservation Area is prohibited. For the purposes of this Deed, kennel facilities shall be defined as any enclosed area in which single or multiple domestic or household animals are maintained, boarded, bred, or cared for.
- 4.2.4. **Signs.** Existing signs may be maintained, repaired and replaced (with signs similar in character and size) in their current location. New signs may be placed and maintained on the Property provided that the number and size of the new signs are consistent with the Purpose.
- 4.2.5. **Utilities.** Existing utilities may be repaired and replaced in their same location with a structure similar to the type they replace without any further permission of Grantee. Grantor may install new utility lines or relocate existing utility lines provided such new or relocated utility lines shall be installed underground in the new or existing roads or driveways as depicted on **Exhibit B**. The addition of utility lines or the relocation or significant upgrading of existing utility lines may be approved by Grantee if Grantee determines said utility lines are not inconsistent with the Purpose. Following the repair, replacement, enlargement or construction of any Utility Improvements, Grantor shall promptly restore any disturbed area to a condition consistent with the Purpose. Any easement, right of way or other interest granted to a third party or otherwise reserved, to be used for Utility Improvements is subject to Section 6.9 (Easements, Rights of Way or Other Interests) of this Deed.

Renewable energy generation systems are permitted for limited use on the Property which shall mean such use is primarily for the purpose of allowing Grantor to offset its energy consumption, subject to the restrictions above. Any such limited renewable energy generated on the Property in accordance with this paragraph that incidentally is in excess of Grantor's consumption may be sold, conveyed, or credited to a provider of retail electric service to the extent permitted by Colorado law.

5. **Resource Management.** Grantor recognizes the importance of good resource management and stewardship to preserve and protect the Conservation Values. To this end, the following uses of the Property shall be conducted in accordance with the provisions below. If Grantee believes any resource management practice(s) are not consistent with the Purpose, Grantee,

in addition to all of its rights under this Deed, may request that the Parties consult with a mutually acceptable resource management professional. This professional will provide written recommendations for said resource management practice(s). The cost of this consultation shall be borne by Grantor. Grantee shall determine whether said recommendations are consistent with the Purpose.

5.1 ***Agriculture.*** Generally, all agricultural uses shall be conducted using stewardship and management methods that preserve the natural resources upon which agriculture is based. Long term stewardship and management goals include preserving soil productivity, maintaining natural stream channels, preventing soil erosion, minimizing invasive species, avoiding unsustainable livestock grazing practices, and minimizing loss of vegetative cover. Specifically, all agricultural and livestock grazing uses shall be conducted using sound range management practices. The definition of “sound range management” shall be determined by the United States Department of Agriculture’s local office of the Natural Resources Conservation Service (or its successor), or a qualified range management specialist mutually agreed upon by Grantor and Grantee. Long term management and stewardship goals include preserving soil productivity, maintaining natural stream channels, preventing soil erosion, minimizing invasive species, avoiding unsustainable livestock grazing practices, and minimizing loss of vegetative cover. All pastures and open range shall be maintained in good condition. During times of drought, grazing shall be managed and if necessary reduced to maintain good grass cover. Hay pastures, both irrigated and dry land, may be replanted, seeded, cut, fertilized, burned, harvested, and maintained. Grantor retains the right to conduct agricultural and livestock operation(s) in a manner consistent with sound range or farming management practices or both, and to lease the Property with appurtenant water rights for agricultural purposes permitted hereunder. Permitted agricultural operations include, but are not limited to livestock grazing, community-based gardening and food production, bee-keeping, and all other agricultural activities consistent with the purpose of the Deed. The storage of agricultural products and byproducts on the Property is permitted, so long as the storage complies with all applicable federal, state, county or local laws, rules, ordinances and regulations. The establishment or maintenance of a commercial feedlot is prohibited as that term is defined and described in Section 6.5 herein. Nothing in this Section 5.1 or Section 6.5 herein shall prevent Grantor from seasonally confining its own livestock into an area, corral or other facility for feeding or calving, or from leasing pasture for the grazing of livestock owned by others.

If agricultural acts or uses are no longer practiced on the Property, either Party may request that the Parties develop a mutually acceptable plan to ensure appropriate land cover that is consistent with the Purpose. The expense of developing and implementing said plan shall be borne by Grantor.

5.2. ***Timber.*** On a limited and localized basis, trees may be cut to control insects and disease, to control invasive non-native species, to prevent personal injury and property damage, and for domestic uses on the Property such as firewood and

construction of permitted improvements. Tree thinning activities are permitted to maintain the character and nature of the wildlife habitat. Other timber harvesting activities shall be conducted in accordance with a forest management plan prepared by a professional forester at Grantor's expense, provided that Grantee determines that said activities and management plan are consistent with the Purpose, pursuant to Section 21 (Grantee's Approval) of this Deed.

- 5.3. **Relatively Natural Habitat.** Habitat management activities that have the potential to negatively impact the Conservation Values such as chaining juniper or sagebrush, constructing or altering ponds, wetlands, or stream channels, and conducting controlled burns may be permitted provided that Grantee determines that said management activities are consistent with the Purpose, pursuant to Section 21 (Grantee's Approval) of this Deed. Grantor may undertake planting flower or vegetable gardens inside the Building Envelope, and planting native trees, shrubs, and wildflowers anywhere on the Property, which activities and uses are permitted by this Deed.
- 5.4. **Minerals.** For the purposes of this Deed, minerals shall be defined as soil, sand, gravel, rock, stone, decorative stone, gold and other rare earth elements, oil, natural gas, coalbed methane (including any and all substances produced in association therewith from coalbearing formations), hydrocarbon, fossil fuel, or any other mineral substance, of any kind or description, on, in, under or part of the Property (collectively referred to as "Minerals").
- 5.4.1. **Ownership of Minerals.** As of the date of this Deed, Grantor owns all of or a controlling interest in the Minerals and mineral rights located on, under, or in the Property or otherwise associated with the Property. Grantor shall not transfer or otherwise separate any mineral rights from the Property.
- 5.4.2. **Mineral development.** The exploration, development, mining or other extraction or removal of Minerals, conducted on, under, or in the Property or otherwise associated with the Property by any method is prohibited. Notwithstanding the foregoing, subject to Grantee's approval Section 21 (Grantee's Approval), Minerals may be removed from below the surface of the property provided that the location of all equipment, pumps, storage facilities, pipelines, and any other infrastructure, or other activities necessary for extraction, storage, or transportation is located off of the Property, extraction takes place off the Property, and that the method and means of extraction is consistent with the Purpose.
- 5.4.3. **Notice Related to Minerals.** Grantor agrees that by granting this Easement to Grantee, it has given Grantee a portion of its ownership interest in the Property, and by so doing, given Grantee the same legal rights as Grantor to influence and control impacts to the surface of the Property from exploration or development of Minerals. This ownership interest does not include any right for Grantee to receive any income, royalties or lease payments from

exploration or development of Minerals. Grantee's ownership interest requires that if Grantor is contacted verbally or in writing regarding the Minerals, Grantor shall provide written notice, copy, or description to Grantee of said contact within ten (10) days.

5.4.3.1. For purposes of this Deed, the term "Mineral Document" shall mean any lease, pooling agreement, unitization agreement, surface use agreement, no-surface occupancy agreement, or any other instrument related to Minerals.

5.4.3.2. Grantor shall not enter into any Mineral Document without Grantee approval pursuant to Section 21 (Grantee's Approval) to ensure that said document is consistent with the Purpose and this Section, and Grantee shall have the right but not the obligation to be a party to any such agreement, if Grantee chooses, in its sole discretion. Grantee shall have the right to charge a fee to Grantor for time and costs associated with review of any Mineral Document.

5.4.4 ***Geothermal Resources.*** The development and use of geothermal resources is permitted with Grantee approval pursuant to Section 21 (Grantee's Approval).

5.5. ***Recreation.*** Low-impact recreational uses such as wildlife watching, hiking, horseback riding, cross-country skiing, hunting and fishing are permitted, provided they are consistent with the Purpose. Golf courses are prohibited on the Property. Other buildings and facilities for any other public or private recreational use may only be built on the Property in accordance with Section 4A(1), and then only in a manner that is consistent with the Purpose, except that use of the Property for more than "de minimis" commercial recreation activity is prohibited. The term "de minimis" shall have the meaning as set forth in §2031 (c)(8)(B) of the I.R.C. and the Treasury regulations adopted pursuant thereto.

5.6. ***Weeds.*** The Parties recognize the potential negative impact of noxious weeds and invasive plant species on the Conservation Values. Grantor shall manage noxious weeds and invasive plant species in a manner consistent with the Purpose, in compliance with applicable federal, state, county or local laws, rules, ordinances and regulations, and in a manner to prevent any adverse impact to the Conservation Values of the Property. Noxious weed management shall not prevent Grantor from planting flower or vegetable gardens anywhere on the Property, or from planting native trees, shrubs and wildflowers anywhere on the Property, which activities and uses are permitted by this Deed. Grantee has no responsibility for the management of noxious weeds and invasive plant species.

5.7. ***Water Rights.*** The Property subject to this Easement includes any and all decreed and undecreed and water rights, ditches and ditch rights, springs and spring rights, reservoir and reservoir rights, wells and groundwater rights, and any other types of rights related to the ownership of water, tributary, non-tributary and not non-tributary,

appurtenant to or customarily or historically used or associated with or upon the Property, together with any and all of the rights associated with the historical and beneficial use of any of the embankments, flumes, headgates, measuring devices or any other structures that are appurtenant to those water rights, along with all easements and rights of way therefor including but not limited to those specifically described in **Exhibit C** attached hereto and made a part of this Deed (collectively, the “Dedicated Water Rights”). Grantor shall not transfer, encumber, sell, lease or otherwise separate the Water Rights from the Property. Grantor shall not change the historic use of the Water Rights without the prior written consent of, and determination by, Grantee that such change is not inconsistent with the Purpose. Pursuant to C.R.S. § 38-30.5-102, which authorizes the inclusion of “water rights beneficially used upon the land...owned by Grantor” in a conservation easement, the Property subject to this Easement includes any and all right, title and interest in and to the water rights described in Exhibit C (“Water Rights”).

- 5.7.1. ***Permitted Uses of Water Rights.*** The Parties agree that the Water Rights are hereby dedicated and restricted exclusively to be used for the preservation and protection of the Conservation Values (“Permitted Water Uses”), and that Grantor shall continue to maintain their historic beneficial use.
- 5.7.2. ***Restrictions on Water Rights.*** Grantor shall not transfer, encumber, sell, lease or otherwise separate the Water Rights from the Property. Grantor shall not abandon or allow abandonment of the Water Rights by action or inaction. Grantor shall not change the historic beneficial use of the Water Rights unless Grantee determines that said change is consistent with the Purpose, pursuant to Section 21 (Grantee’s Approval) of this Deed. No change of the point of diversion of the Water Rights shall be submitted for judicial approval unless Grantee determines that the proposed change of point of diversion is consistent with the Purpose, pursuant to Section 21 (Grantee’s Approval) of this Deed.
- 5.7.3. ***Protection of Water Rights.*** Grantor shall cooperate with Grantee to help assure the continued historical beneficial use of the Water Rights in order to preserve and protect the Conservation Values. Grantee may request that Grantor report to Grantee annually regarding the nature and extent of Grantor’s use of the Water Rights during the prior year, which report need not be in writing. Grantor shall also provide Grantee with copies of any reports or correspondence submitted to the State or Division Engineer or Water Commissioner. Grantor shall provide Grantee with a copy of any written notice or pleadings received by Grantor from any state water official or any other person concerning the possible abandonment of the Water Rights within 30 days of receipt thereof.
- 5.7.4. ***Abandonment of Water Rights.*** If the Water Rights appear on decennial abandonment list, or if Grantee determines that the Water Rights are subject to a threat of abandonment, Grantee shall give Grantor written notice of such

threat. Grantor shall also be considered notified if Grantor receives notice from any state water official or any other person concerning the possible abandonment of the Water Rights. Upon notification, the Parties shall work in good faith to develop and implement a mutually acceptable strategy to cure the threat of abandonment. Grantor shall have 90-days from notification to demonstrate action to rebut the presumption of abandonment of the Water Rights. If the Parties cannot reach a mutual agreement, or Grantor has failed to take action to cure the threat of abandonment of the Water Rights within 90 days of notification, Grantee shall, in addition to any other remedies available to Grantee under this Deed or by law, have the right to (i) enter upon the Property and undertake any and all actions reasonably necessary to continue the historical use of the Water Rights; (ii) seek removal of the Water Rights from the abandonment list; (iii) defend the Water Rights against any other claim of abandonment; (iv) seek to change the Water Rights to another Permitted Water Use; and (v) require Grantor to convey all or part of the Water Rights to Grantee for continued use on the Property or elsewhere in the same water district or elsewhere consistent with Grantee's mission. Grantor agrees to cooperate in any manner necessary to accomplish Grantee's election, and at Grantee's request, agrees to authorize and appoint Grantee as its agent and attorney-in-fact to file for and obtain any administrative or judicial approvals required to effectuate Grantee's election.

5.7.5. ***Ditch or Reservoir Company.*** C.R.S. §38-30.5-104(5) requires that, when a conservation easement encumbers a water right represented by shares in a mutual ditch or reservoir company, sixty (60) days' notice must be given to said company before the conservation easement may be conveyed. This requirement has been fulfilled.

5.7.6. ***Notice Relating to Water Rights.*** If Grantor receives written notice regarding the Water Rights, including notices from any state water official or ditch company, Grantor shall provide a copy of said notice to Grantee within ten (10) days, or sooner if the notice requires a response or action within that period, exclusive of regular annual meeting notices or assessment invoices.

6. ***Restricted Practices.***

6.1. ***Subdivision.*** The division, partition, subdivision or de facto subdivision of the Property, whether by legal or physical process, into more than two parcels of land or partial or separate interests (including, but not limited to, condominium interests or the partition of undivided interests) is prohibited. The Property or description of the Property may identify or include one or more legal parcels; however, this subdivision restriction shall apply to these separately described parcels of land such that the West Heine and East Heine Parcels can only be subdivided from each other into two parcels, as divided by Parfet Street. Ownership of the West Heine and East Heine Parcels by joint tenancy or tenancy in common is permitted, consistent with Sections 29 (Joint and Several Liability) and 30 (Ownership by Single Entity Consisting of Multiple Parties);

provided, however, that Grantor shall not undertake any legal proceeding to further partition, subdivide or divide in any manner the two undivided interests in the parcels West Heine Parcel and East Heine Parcel. The single division of the Property shall be permitted such that the West Heine Parcel may be sold separately from the East Heine Parcel, provided that at all times both parcels shall remain subject to the terms of this Easement. No other division of the Property is permitted. At the time of the permitted division, the Water Rights identified in **Exhibit C** shall be divided as they have been used historically on the West Heine Parcel and the East Heine Parcel. If an alternative division of the water rights is proposed with the permitted division of the Property, Grantor shall provide a plan which identifies the portion of the Water Rights that are to be allocated to each such parcel, and shall prepare and provide to Grantee such water engineer reports, easements, water sharing agreements, water deeds and other documentation as are necessary to effectuate such plan, for the review by Grantee to determine that the plan adequately protects the Conservation Values of each parcel, and for the approval of Grantee in its reasonable discretion.

- 6.2. **Surface Disturbance.** Except as permitted within this Easement, any alteration of the surface of the Property, including without limitation, the excavation or removal of soil, sand, gravel, rock, peat or sod, that is inconsistent with the Purpose, is prohibited. Surface disturbance associated with vegetation management, wildlife habitat management or enhancement, or to improve the Conservation Values is permitted. Notwithstanding the foregoing, soil, sand, gravel or rock may be extracted from the Property provided that: (i) no more than a 10 foot by 10 foot area of the Property is disturbed at any one time; (ii) such extraction shall have no more than limited, localized impact on the Property; (iii) such extraction shall be associated with permitted acts on and uses of the Property; and (iv) Grantee determines that such extraction is consistent with Purpose pursuant to Section 21 (Grantee's Approval) of this Deed. Once extraction is complete, Grantor shall promptly restore any disturbed area to a condition consistent with the Purpose. This Section shall be interpreted in a manner that is consistent with I.R.C. § 170(h) and the Treasury Regulations adopted pursuant thereto.
- 6.3. **Water Improvements.** The maintenance and repair of existing non-domestic water improvements such as ponds, reservoirs, stock tanks, center pivot sprinklers, irrigation ditches, pipes, headgates, flumes, pumps, or wells is permitted. The construction of new water improvements or enlargement of existing water improvements, excluding ponds and reservoirs, is permitted provided that such activity is consistent with the Purpose. The enlargement of existing ponds or reservoirs, or the construction of new ponds or reservoirs, is permitted provided that Grantee determines that said activities are consistent with the Purpose, pursuant to Section 21 (Grantee's Approval) of this Deed. Any portion of the Property that is disturbed by the maintenance, repair, construction or enlargement of water improvements shall be restored to a condition that is consistent with the Purpose promptly after said activity is completed. Further, Grantor may construct, maintain, repair and replace wells, cisterns, and septic or leach systems within and outside of the Building Envelope to serve the permitted Residential Structures inside the

Building Envelope in accordance with applicable regulations of Jefferson County and the State of Colorado.

- 6.4. **Commercial or Industrial Activity.** Commercial or industrial uses that are not consistent with the Purpose are prohibited. The Property may be used for agricultural uses, including but not limited to animal husbandry, breeding, raising, grazing and pasturing of bees, poultry, horses, cattle, cows, mules, sheep, goats, and llamas, haying, gardening, vegetable production, and continuation of current agricultural practices in a manner that does not adversely impact the Conservation Values of the Property, and processing or sale of farm, garden, or ranch products predominantly grown or raised on the Property, including the right to lease the Property for such uses, or to allow other uses of the Property such as public or social events including but not limited to fundraisers, educational opportunities, community gardening, when such events (1) are not inconsistent with the Purpose of this Deed; (2) have no permanent, irreversible adverse impact on the Conservation Values of the Property; and (3) conform to applicable federal, state, county or local laws, rules, ordinances and regulations. Notwithstanding the foregoing, all leases shall comply with Section 23 (Lease or Transfer of Property).
- 6.5. **Feed Lot.** The establishment or maintenance of a commercial feed lot is prohibited. For purposes of this Deed, “commercial feed lot” is defined as a confined area or facility within the Property which is not grazed or cropped annually, and which is used to receive livestock that have been raised off the Property for feeding and fattening for market. Nothing in this section or Section 5.1 shall prevent Grantor from temporarily or seasonally confining livestock into an area, corral or other facility for feeding or calving, or from leasing pasture for the grazing of livestock owned by others.
- 6.6. **Public Access.** Nothing contained herein shall be construed as affording the public other than visual access to any portion of the Property at this time, although the Grantor may permit public access to the Property on such terms and conditions as she deems appropriate, including but not limited to, supervised educational access, such as school field trips, community gardening or farming opportunities, or managed pedestrian or equestrian trail access, provided that such access is consistent with the Purpose. To the extent Grantor permits public access, Grantor shall comply with all applicable requirements of law affording access to persons with disabilities. Unless or until Grantee is the owner of the Property, Grantee does not have the right to grant any public access to the Property without Grantor’s consent.
- 6.7. **Trash.** The dumping or permanent accumulation of any kind of trash, sludge, or refuse on the Property is prohibited, except for farm-related trash and refuse produced on the Property, provided that such dumping or accumulation is consistent with the Purpose. The storage or accumulation of agricultural products and by-products on the Property is permitted provided that such activity is conducted in accordance with all applicable government laws and regulations and is consistent with the Purpose.

- 6.8. **Hazardous Materials.** Grantor may use agri-chemicals on the Property in accordance with all applicable federal, state or local law. Otherwise, the treatment, permanent storage, disposal or release of hazardous materials on, from or under the Property is prohibited. For purposes of this Deed, "Hazardous Materials" shall mean any "hazardous substance" as defined in §9601(14) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"), "pollutant or contaminant" as defined in § 9601(33) of CERCLA, or any hazardous waste as defined in C.R.S. §25-15-101(6). 40 C.F.R. § 302.4 provides a non-exhaustive list of over 600 substances that qualify as hazardous substances under CERCLA. The use, treatment, storage, disposal, or release of Hazardous Materials shall only be permitted in accordance with applicable, federal, state and local law and regulations.
- 6.9. **Motorized Vehicle Operation.** The operation of motorized vehicles for purposes associated with permitted acts on and uses of the Property is permitted provided that such operation is consistent with the Purpose and Intent.
- 6.10. **Easements, Rights of Way or Other Interests.** The conveyance or modification of an easement, right of way, Mineral Document or other similar interest is prohibited unless Grantee determines that the proposed conveyance or modification is consistent with the Purpose and Intent pursuant to Section 21 (Grantee's Approval) of this Deed.
7. **Responsibilities of Grantor and Grantee Not Affected.** Other than as specified herein, this Deed is not intended to impose any legal or other responsibility on Grantee, or in any way to affect any existing obligations of Grantor as owner of the Property. Additionally, unless otherwise specified below, nothing in this Deed shall require Grantor to take any action to restore the condition of the Property after any Act of God or other event over which Grantor had no control, including without limitation drought, fire, flood, storm, earth movement and insect infestations (which includes spruce beetles and pine beetles) or from any prudent action taken by Grantor under emergency conditions to prevent, abate or mitigate significant injury to the Property resulting from such forces, and the actions of trespassers, third parties, or any persons beyond Grantor's control. Grantor shall continue to be solely responsible and Grantee shall have no obligation for the upkeep and maintenance of the Property and Grantor understands that nothing in this Deed relieves Grantor of any obligation or restriction on the use of the Property imposed by law. Among other things, this shall apply to:
- 7.1. **Taxes.** Grantor shall continue to be solely responsible for payment of all taxes and assessments levied against the Property. If Grantee is ever required to pay any taxes or assessments on its interest in the Property, Grantor will reimburse Grantee for the same. If for any reason Grantor fails to pay any taxes, assessments or similar requisite charges, Grantee may pay such taxes, assessments or similar requisite charges, and may bring an action against Grantor to recover all such taxes, assessments and similar charges plus interest thereon at the rate charged delinquent property taxes by the county assessor's office in which the Property is located.

7.2. **Liability.** Grantor shall indemnify, defend, and hold Grantee and its members, officers, directors, employees, agents, and contractors (collectively, the "Indemnified Parties") harmless from and against any and all loss, damage, cost, or expense, including reasonable attorneys' fees, arising from or in any way related to: (i) the existence, generation, treatment, storage, use, disposal, deposit or transportation of Hazardous Materials in, on or across the Property; (ii) the release or threatened release of Hazardous Materials on, at, beneath or from the Property; (iii) the existence of any underground storage tanks on the Property; or (iv) a violation or alleged violation of, or other failure to comply with, any federal, state, or local environmental law or regulation by Grantor or any other prior owner of the Property.

7.2.1. Notwithstanding anything in this Deed to the contrary, this Deed does not impose any liability on Grantee for Hazardous Materials, nor does it make Grantee an owner of the Property, nor does it require Grantee to control any act on or use of the Property that may result in the treatment, storage, disposal or release of Hazardous Materials, all within the meaning of CERCLA or any similar federal, state or local law or regulation.

7.2.1.1. **Grantor's Liability.** Grantor shall indemnify, defend, and hold the Indemnified Parties harmless from and against any and all loss, damage, cost, or expense, including reasonable attorneys' fees, arising from or in any way related to: (i) injury to or the death of any person, or damage to property, occurring on or about or related to the Property, unless caused solely by the willful and wanton act or omission [as defined by C.R.S. §13-21-102(1)(b)] of the Indemnified Parties; (ii) the obligations under this Section; or (iii) the violation or alleged violation of, or other failure to comply with any state, federal, or local law, regulation, or requirement by any person other than any of the Indemnified Parties, in any way affecting, involving, or relating to the Property.

7.2.1.2. **Grantee's Liability.** Grantee shall indemnify, defend and hold Grantor and its assigns, successors and heirs harmless from and against any and all loss, cost or expense, including reasonable attorney's fees, arising from or in any way related to injury to or death of any person occurring on or about or related to the Property arising out of the Indemnified Parties' actions on the Property.

8. **Monitoring.** In order to monitor Grantor's compliance with the terms of this Deed, Grantee shall have the right to enter upon the Property upon reasonable prior notice to Grantor. Said notice need not be in writing. Grantee may engage such experts or consultants that Grantee deems necessary to assist in monitoring, including conducting aerial flyovers of the Property. Such entry shall not unreasonably interfere with Grantor's use and quiet enjoyment of the Property.

9. **Enforcement. General Provisions.** Grantee shall have the right to prevent and correct or require correction of violations of the terms of this Deed. If Grantee determines that immediate entry is required to inspect for, prevent, terminate, or mitigate a violation of the terms of this Deed, Grantee may enter the Property without advance notice. If such entry occurs, Grantee shall promptly notify Grantor within as soon as possible thereafter. If Grantee determines that a violation caused by Grantor has occurred, Grantee shall notify Grantor of the nature of the alleged violation. Said notice need not be in writing. Upon receipt of said notice, Grantor shall immediately cease the alleged violation and either (i) if necessary, provide a written plan for restoration and remediation of the Property and, once approved, restore or remediate the Property in accordance with the plan; or (ii) provide written documentation demonstrating that the activity is permitted and is not a violation. Grantee's acceptance of Grantor's actions under (i) or (ii) above shall be in Grantee's sole discretion, and shall be confirmed by Grantee in writing. If Grantor is unable or unwilling to immediately cease the alleged violation, and comply with (i) or (ii) above, the Parties agree to resolve the dispute through mediation or judicial processes. At any point in time, Grantee may take appropriate legal action, including seeking an injunction, to stop the alleged violation.

Grantee has the right to proceed against any third party or parties whose actions threaten or damage the Purpose, including the right to pursue all remedies and damages against the violator provided in this paragraph 9. Grantee shall consult Grantor prior to proceeding against any third party violator, and Grantee and Grantor may mutually agree to collaborate to enforce the Deed against the third party violator.

9.2. **Costs of Enforcement.** Any costs incurred by Grantee in enforcing the terms of this Deed against Grantor, including, without limitation, costs and expenses of suit, attorneys' fees and any costs of restoration necessitated by Grantor's violation of the terms of this Deed, shall be borne by Grantor. If the deciding body determines that Grantee has acted in bad faith in seeking to enforce the terms of this Deed, the Parties shall each be responsible for their own costs. If the Parties agree to mediation, the Parties will equally share the cost of the mediator's fees.

9.3. **Grantee's Discretion.** Grantee's remedies described in this Section shall be cumulative and shall be in addition to all remedies now or hereafter existing at law or in equity, including the right to recover any damages for loss of Conservation Values as described in C.R.S. §38-30.5-108. Enforcement of the terms of this Deed shall be at the discretion of Grantee, and the failure of Grantee to discover a violation or to take action shall not waive any of Grantee's rights, claims or interests in pursuing any such action at a later date.

10. **Deed Correction.** The Parties shall cooperate to correct mutually acknowledged errors in this Deed (and exhibits hereto), including typographical, spelling, or clerical errors. Such correction shall be by recorded written agreement signed by the Parties, with all associated costs being apportioned as the Parties may mutually agree.

11. **Amendment.** If circumstances arise under which an amendment to this Deed would be appropriate, as determined by Grantee in its sole discretion, the Parties are free to jointly amend this Deed by mutual written consent. However, no amendment shall be allowed that will (i) confer a private benefit to Grantor or any other individual greater than the benefit to the general public [see Treasury Regulation §1.170A-14(h)(3)(i)]; (ii) result in private inurement for a board member, staff or contract employee of Grantee [see Treasury Regulation §1.501(c)(3)-1(c)(2)]; (iii) affect the qualifications of this Easement under any applicable laws; or (iv) affect the perpetual duration of the Easement. Grantee shall have the right to charge a fee to Grantor for time and costs associated with any amendment. Any amendment must be in writing, signed by the Parties, and recorded in the official records of Jefferson County, Colorado.
12. **Transfer of Easement.** This Easement is transferable by Grantee, provided that (i) the conservation purposes which the contribution was originally intended to advance continue to be carried out; (ii) the transfer is restricted to an organization that, at the time of the transfer, is a qualified organization under I.R.C. §170(h) and authorized to hold conservation easements under C.R.S. §§38-30.5-101, *et seq.* and C.R.S. §12-61-720; and (iii) the qualified organization agrees to assume the responsibility imposed on Grantee by this Deed. Grantee shall notify Grantor in advance of any proposed transfers. If Grantee ever ceases to exist, a court with jurisdiction is authorized to transfer this Easement pursuant to (i), (ii), and (iii) above.
13. **Transfer of Property.** Any time the Property or a permitted portion thereof is transferred by Grantor to any third party, Grantor shall notify Grantee in writing within five (5) business days after closing using the form in Exhibit D, and shall include a copy of the new ownership deed. The document of conveyance shall expressly refer to this Deed. Grantor shall pay a fee of 1/4 of 1% of the purchase price, including the value of non-cash consideration, to Grantee as holder of the real property interest and right of possession represented by this Deed, excluding transfer to Grantor's direct descendants and family members, as defined by the I.R.C., or to Grantee, and excluding transfers for the sole purpose of changing the type of legal entity by which title is held. This provision is intended to run with the land for perpetuity, and to touch and concern the Property burdened by this easement by providing Grantee a contribution toward its stewardship, enforcement and defense of this Easement. If a fee is attributable to a transfer of property classified as "residential real property," as defined in C.R.S. Section 38-35-127(2)(e), then the Grantee covenants and agrees that the fee shall be used for the purposes specified in C.R.S. Section 38-35-127(2)(b)(V) in a manner consistent with the Grantee's mission.
14. **Development Rights.** For purposes of this Deed, "Development Rights" are defined as all present or future rights to (i) construct, place, replace, enlarge, maintain or repair any improvements on the Property; or (ii) receive credit for density for development on or off the Property. By this Deed, Grantor conveys to Grantee all Development Rights associated with the Property except those Development Rights specifically reserved by Grantor, which include the right to make Residential Improvements and Nonresidential Improvements pursuant to Section 4.1 (Residential and Nonresidential Structures) of this Deed. Therefore,

Grantor does not have the right to use or transfer any Development Rights held by Grantee.

15. **Condemnation.** Grantor shall notify Grantee immediately of any communication or notice received concerning any proposed taking or condemnation affecting the Property, and Grantee shall have the right to participate in any proceedings as a real property interest holder. Grantee may pursue any remedies in law or in equity, including opposition to the condemnation of the Property. If the Property or any part thereof or interest therein is sold or conveyed to a condemning authority under threat of condemnation or taken through condemnation or other involuntary conversion, Grantee shall be entitled to compensation determined as provided in Section 17 (Compensation upon Condemnation, Termination, or Extinguishment) of this Deed.
16. **Termination or Extinguishment of Easement.** Except as provided in Section 15 (Condemnation) of this Deed, this Easement or any part hereof may only be terminated or extinguished by judicial proceedings in a court of competent jurisdiction. The only ground upon which this Easement can be terminated or extinguished is the total loss of all Conservation Values. If termination or extinguishment occurs, Grantee shall be entitled to compensation determined as provided in Section 17 (Compensation upon Condemnation, Termination, or Extinguishment) of this Deed.

17. **Compensation upon Condemnation, Termination, or Extinguishment.**

- 17.2. The Parties acknowledge that that (i) an appraisal of the Existing Conservation Area was completed that indicated that the fair market value of the of the property interest conveyed by the First Conservation Easement was eighty percent (80%) of the full fair market value (the “**Existing Conservation Area Percentage**”); (ii) an appraisal of the Amended and Restated Deed of the Heine Conservation Easement was completed which indicated the fair market value of the property interest conveyed by the Amended and Restated Deed is fifty-five percent (55%) of the full fair market value (“**New Conservation Area Percentage**”). For purposes of this Deed, the Existing Conservation Area Percentage and the New Conservation Area Percentage shall collectively be referred to as the “**Proportionate Value Percentages.**” The Proportionate Value Percentages shall remain constant and shall be applied pursuant to Treasury Regulation §1.170A-14(g)(6)(ii).
- 17.3. If the Property is condemned, in whole or in part, pursuant to Section 15 (Condemnation) or if this Easement is terminated or extinguished pursuant to Section 16 (Termination or Extinguishment of Easement), Grantee shall be entitled to a share of the proceeds of such action at least equal to the Proportionate Value Percentage of the full fair market value of the Property unrestricted by this Easement pursuant to Treasury Regulation § 1.170A-14(g)(6)(ii). Grantor shall not voluntarily accept less than full fair market value of the affected Property unrestricted by this Easement without Grantee’s approval.

- 17.4. Grantee's use of its share of such proceeds shall comply with Treasury Regulation § 1.170A-14(g)(6).
- 17.5. Grantee's remedies described in this Section shall be cumulative and shall be in addition to any and all remedies now or hereafter existing at law or in equity, including the right to recover any damages for loss of Conservation Values as described in C.R.S. §38-30.5-108.
18. ***No Merger, Abandonment, Release, or Adverse Possession.*** Should Grantee in the future own all or a portion of the fee interest in the Property, Grantee as successor in title to Grantor, shall observe and be bound by the obligations of Grantor and the restrictions imposed on the Property by this Deed. In addition, this Easement shall not merge with the fee title without the prior written approval of Grantor. The Easement shall not be extinguished, in whole or in part, through the legal doctrine of merger in view of the public interest in its enforcement. This Easement cannot be abandoned, released, or affected by adverse possession.
19. ***Perpetual Duration.*** This Easement shall be a servitude running with the land in perpetuity. The provisions of this Deed that apply to either Party shall also apply to their respective agents, heirs, executors, administrators, assigns, and all other successors as their interests may appear. Notwithstanding the foregoing, each party's rights and obligations under the Easement created by this Deed shall terminate (as to such party, but not as to such party's successor, who shall be bound as provided herein) upon a transfer of the party's entire interest in this Easement or the Property, except that liability of such transferring party for act or omissions occurring prior to such transfer shall survive the transfer.
20. ***Change of Circumstance.*** Grantor has considered that restricted acts or uses may become more economically valuable than permitted acts or uses. It is the intent of the Parties that such circumstances shall not justify the termination or extinguishment of this Easement pursuant to Section 16 (Termination or Extinguishment of Easement) of this Deed. In addition, the inability to carry on any or all of the permitted acts and uses, or the unprofitability of doing so, shall not impair the validity of this Easement or be considered grounds for its termination or extinguishment pursuant to Section 16 (Termination or Extinguishment of Easement) of this Deed.
21. ***Grantee's Approval.*** Where Grantee's approval is required by this Deed, Grantor shall provide written notice to Grantee not less than sixty (60) calendar days prior to the date Grantor intends to undertake the act or use, with sufficient detail (i.e. location, size, scope, design and nature) to allow Grantee to evaluate the consistency of the proposed act or use with the Purpose, giving weight, consideration, and due regard to the prioritization of purposes set out by this Deed. Grantee shall approve or deny Grantor's written request, or notify Grantor of a delay in Grantee's decision, in writing, within forty-five (45) calendar days of receipt of Grantor's written request, unless a different time period is specified herein, or mutually agreed to. If Grantee denies Grantor's request, Grantee shall include with its written determination the reason(s) for its determination set forth with specificity, and any and all possible modifications to the proposal that would make it consistent with the Purpose,

and therefore approvable. Grantee shall only approve acts or uses consistent with the Purpose. Grantor shall not engage in the proposed act or use until Grantor receives Grantee's approval in writing.

22. **Written Notices.** Any written notice that either Party is required to give to the other shall be delivered: (i) in person; (ii) via certified mail, with return receipt requested; (iii) via a commercial delivery service that provides proof of delivery; or (iv) via any delivery method mutually agreed to by the Parties, to the following addresses, unless one Party has been notified by the other Party of a change of address or ownership.

Grantor: Karin Heine
4596 Parfet Street
Wheat Ridge, Colorado 80023
(303) 425-5626

Grantee: Colorado Open Lands
1546 Cole Boulevard, Suite 200
Lakewood, CO 80401
(303) 988-2373

If addresses change, Grantor shall provide updated information to Grantee in a timely manner. If a notice mailed to either Party at the last address on file is returned as undeliverable, the sending Party shall provide notice by regular mail to the other Party's last known address on file with the tax assessor's office of the county in which the Property lies, and the mailing of such notice shall be deemed compliance with this Section. Notice given to the designated representative of a trust or business entity shall be deemed notice to the trust or business entity, and notice given to the designated representative of a common or jointly held ownership shall be deemed notice to all owners.

23. **Subsequent Liens.** No provisions of this Deed should be construed as impairing the ability of Grantor to use the Property as collateral for subsequent borrowing. Any mortgage or lien arising from such a borrowing is and shall remain subordinate to this Easement or any amendments hereto.

24. **Grantor's Representations and Warranties.**

- 24.1 Grantor represents and warrants to the best of its actual knowledge that Grantor: i) has good and sufficient title to the Property, free from all liens and encumbrances securing monetary obligations except ad valorem property taxes for the current year; ii) has the right to grant access to the Property to Grantee for the purposes described in this Deed and has in fact granted said access to Grantee t this grant of conservation easement; and iii) shall defend title to the Property against all claims that may be made against it by any person claiming by, through, or under Grantor.
- 24.2 Grantor represents and warrants that, after reasonable investigation and to the best of Grantor's actual knowledge during her ownership of the Property:

- 24.2.1 No Hazardous Materials exist or have been generated, treated, stored, used, disposed of, deposited, or transported, in, on, or across the Property; there has been no release or threatened release of any hazardous materials on, at, beneath, or from the Property; and there are no underground storage tanks located on the Property;
 - 24.2.2 Grantor and the Property are in compliance with all federal state, and local laws, regulations, and requirements applicable to the Property and its use;
 - 24.2.3 There is no pending or threatened litigation in any way affecting, involving, or relating to the Property; and
 - 24.2.4 No civil or criminal proceedings or investigations have been threatened or are now pending, and no notices, claims, demands, or orders have been received, arising out of any violation or alleged violation of, or failure to comply with, any federal, state, or local law, regulation, or requirement applicable to the Property or its use.
25. **Acceptance.** Grantee hereby accepts without reservation the rights and obligations created by this Deed for which no goods or services were exchanged or provided.

26. **General Provisions:**

- 26.1. **Severability.** If any provision of this Deed, or the application thereof to any person or circumstance, is found to be invalid, the remainder of the provisions of this Deed, or the application of such provision to persons or circumstances other than those as to which it is found to be invalid, as the case may be, shall not be affected thereby.
- 26.2. **Captions.** The captions in this Deed have been inserted solely for convenience of reference and are not a part of this Deed and shall have no effect upon construction or interpretation.
- 26.3. **Waiver of Defenses.** Grantor hereby waives any defense of laches, estoppel or prescription and acknowledges and agrees that the one-year statute of limitation provided under C.R.S. § 38-41-119 does not apply to this Easement, and Grantor waives any rights of Grantor pursuant to such statute. Upon Grantor's request, Grantee shall provide a document of estoppel or an estoppel certificate certifying the degree to which Grantor is at the time in compliance with this Deed.
- 26.4. **Controlling Law.** The provisions of this Deed are subject to the laws of the United States and the State of Colorado as amended (or any successor provision then applicable), and the applicable regulations promulgated thereunder.
- 26.5. **Liberal Construction.** The provisions of this Deed are to be liberally construed in favor of the Purpose, and any ambiguities or questions regarding the validity of

specific provisions shall be interpreted in favor of maintaining the Purpose. Any decisions resolving such ambiguities or questions shall be documented in writing.

- 26.6. **Counterparts.** The Parties may execute this Deed in two or more counterparts which shall, in the aggregate, be signed by all parties. All counterparts, when taken together, shall constitute this Deed, and shall be deemed the original instrument as against any party who has signed it.
- 26.7. **Entire Agreement.** This Deed sets forth the entire agreement of the Parties with respect to the terms of this Deed and supersedes all prior discussions, negotiations, understandings, or agreements relating to the terms of this Deed, all of which are merged herein. Upon execution and recordation of this Deed, the Original Deed is hereby amended and restated in its entirety by this Deed, and the Original Deed shall be superseded by this Deed and have no further force or effect; provided, however, that such amendment and restatement shall not interrupt the perpetual duration of the Original Deed or the property rights which vested in Grantee upon the recording of the Original Deed.
27. **Recording.** Grantor shall record this Deed in a timely fashion in the official records of Jefferson County, Colorado, and Grantee may re-record it at any time as may be required to preserve its rights in this Easement.
28. **No Third Party Enforcement.** This Deed is entered into by and between the Parties, and does not create rights or responsibilities for the enforcement of its terms in any third parties.
29. **Joint and Several Liability.** If Grantor at any time owns the Property in joint tenancy or tenancy in common, Grantor shall be jointly and severally liable for all obligations set forth in this Deed.
30. **Ownership by Single Entity Consisting of Multiple Parties.** If Grantor at any time is an entity which consists of shareholders, partners or members, such Grantor entity is required to include in its operating agreement, bylaws or other documents setting forth the rights and responsibilities of the entity, the right to assess such shareholders, partners or members for any monetary or other obligations set forth in this Deed. Grantor shall provide a copy of such documentation at any time upon Grantee's request.
31. **Authority to Execute.** Each party represents to the other that such party has full power and authority to execute and deliver this Deed, and perform its obligations under this Easement, that the individual executing this Deed on behalf of said party is fully empowered and authorized to do so, and that this Deed constitutes a valid and legally binding obligation of said party enforceable against said party in accordance with its terms.

TO HAVE AND TO HOLD, this Deed of Conservation Easement unto Grantee, its successors and assigns, forever.

IN WITNESS WHEREOF, the Parties, intending to legally bind themselves, have

set their hands on the date first written above.

GRANTOR:

By: _____

Karin Heine

STATE OF COLORADO)
) ss.
COUNTY OF JEFFERSON)

The foregoing instrument was acknowledged before me this ___ day of _____, 2017, by Karin Heine in her individual capacity as owner of the Property.

Witness my hand and official seal.

My commission expires: _____

Notary Public

GRANTEE:

COLORADO OPEN LANDS,
a Colorado non-profit corporation

By _____
Anthony P. Caligiuri, President

STATE OF COLORADO)
) ss.
COUNTY OF JEFFERSON)

The foregoing instrument was acknowledged before me this _____ day of _____, 2017, by Anthony P. Caligiuri as President of Colorado Open Lands, a Colorado non-profit corporation.

Witness my hand and official seal.

My commission expires: _____

Notary Public

EXHIBIT A

Legal Description of the Property

Existing Conservation Area

PARCEL C: LOTS 1, 2 AND 3, BUSH SUBDIVISION, COUNTY OF JEFFERSON, STATE OF COLORADO.

New Conservation Area

PARCEL A: (AS SET FORTH IN ORDER AND DECREE QUIETING TITLE RECORDED SEPTEMBER 2, 2015 UNDER RECEPTION NO. 2015094073):

A PARCEL OF LAND BEING A PORTION OF THE NORTHWEST QUARTER OF SECTION 21, TOWNSHIP 3 SOUTH, RANGE 69 WEST OF THE 6TH P.M. CITY OF WHEAT RIDGE, COUNTY OF JEFFERSON, STATE OF COLORADO. BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF THE NORTHWEST QUARTER OF SAID SECTION 21, WHENCE THE EAST LINE OF THE NORTHWEST QUARTER OF SAID SECTION 21 BEARS N 00° 18' 33" W FORMING THE BASIS OF BEARING FOR THIS DESCRIPTION; THENCE N 00° 18' 33" W ALONG SAID EAST LINE, A DISTANCE OF 1515.50 FEET; THENCE S 89° 30' 13" W A DISTANCE OF 264.04 FEET TO THE POINT OF BEGINNING; THENCE S 89° 21' 17" W A DISTANCE OF 263.96 FEET TO A POINT ON THE EASTERLY RIGHT OF WAY LINE OF PARFET STREET; THENCE ALONG SAID EASTERLY RIGHT OF WAY LINE N 00° 18' 33" W A DISTANCE OF 190.93 FEET; THENCE N 89° 33' 21" E A DISTANCE OF 263.96 FEET; THENCE S 00° 18' 33" E A DISTANCE OF 190.90 FEET TO THE POINT OF BEGINNING.

PARCEL B: (AS SET FORTH IN ORDER AND DECREE QUIETING TITLE RECORDED SEPTEMBER 2, 2015 UNDER RECEPTION NO. 2015094073):

A PARCEL OF LAND BEING A PORTION OF THE NORTHWEST QUARTER OF SECTION 21, TOWNSHIP 3 SOUTH, RANGE 69 WEST OF THE 6TH P.M. CITY OF WHEAT RIDGE, COUNTY OF JEFFERSON, STATE OF COLORADO. BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF THE NORTHWEST QUARTER OF SAID SECTION 21, WHENCE THE EAST LINE OF THE NORTHWEST QUARTER OF SAID SECTION 21 BEARS N 00° 18' 33" W FORMING THE BASIS OF BEARING FOR THIS DESCRIPTION; THENCE N 00° 18' 33" W ALONG SAID EAST LINE, A DISTANCE OF 1423.13 FEET TO THE POINT OF BEGINNING; THENCE S 89° 41' 05" W A DISTANCE OF 528.00 FEET TO A POINT ON THE EASTERLY RIGHT OF WAY LINE OF PARFET STREET; THENCE ALONG SAID EASTERLY RIGHT OF WAY LINE N 00° 18' 33" W A DISTANCE OF 90.00 FEET; THENCE N 89° 21' 17" E A DISTANCE OF 263.96 FEET; THENCE N 89° 30' 13" E A DISTANCE OF 264.04 FEET TO A POINT ON THE EAST LINE OF THE NORTHWEST QUARTER OF SAID SECTION 21, THENCE ALONG SAID EAST LINE, S 00° 18' 33" E A DISTANCE OF 92.35 FEET TO THE POINT OF BEGINNING.

PARCEL D:

A TRACT OF LAND IN THE NORTHEAST 1/4 OF THE NORTHWEST 1/4 SECTION 21, TOWNSHIP 3 SOUTH, RANGE 69 WEST DESCRIBED AS FOLLOWS: BEGINNING AT A POINT 730 5/12THS FEET SOUTH OF NORTHWEST CORNER OF NORTHEAST 1/4 NORTHWEST 1/4, THENCE SOUTH 293 FEET, THENCE EAST AT RIGHT ANGLES TO SAID WEST LINE 742 FEET, THENCE NORTH AT RIGHT ANGLES 293 FEET, THENCE WEST AT RIGHT ANGLES 742 FEET TO PLACE OF BEGINNING. EXCEPT PORTION THEREOF DESCRIBED IN DEED RECORDED OCTOBER 27, 1927 IN BOOK 300 AT PAGE 348,

AND EXCEPT RIGHT OF WAY DESCRIBED IN INSTRUMENT RECORDED DECEMBER 14, 1923 IN BOOK 259 AT PAGE 92, COUNTY OF JEFFERSON, STATE OF COLORADO.

PARCEL E: A PART OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER (NE 1/4 NW 1/4) OF SECTION 21, TOWNSHIP 3 SOUTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:

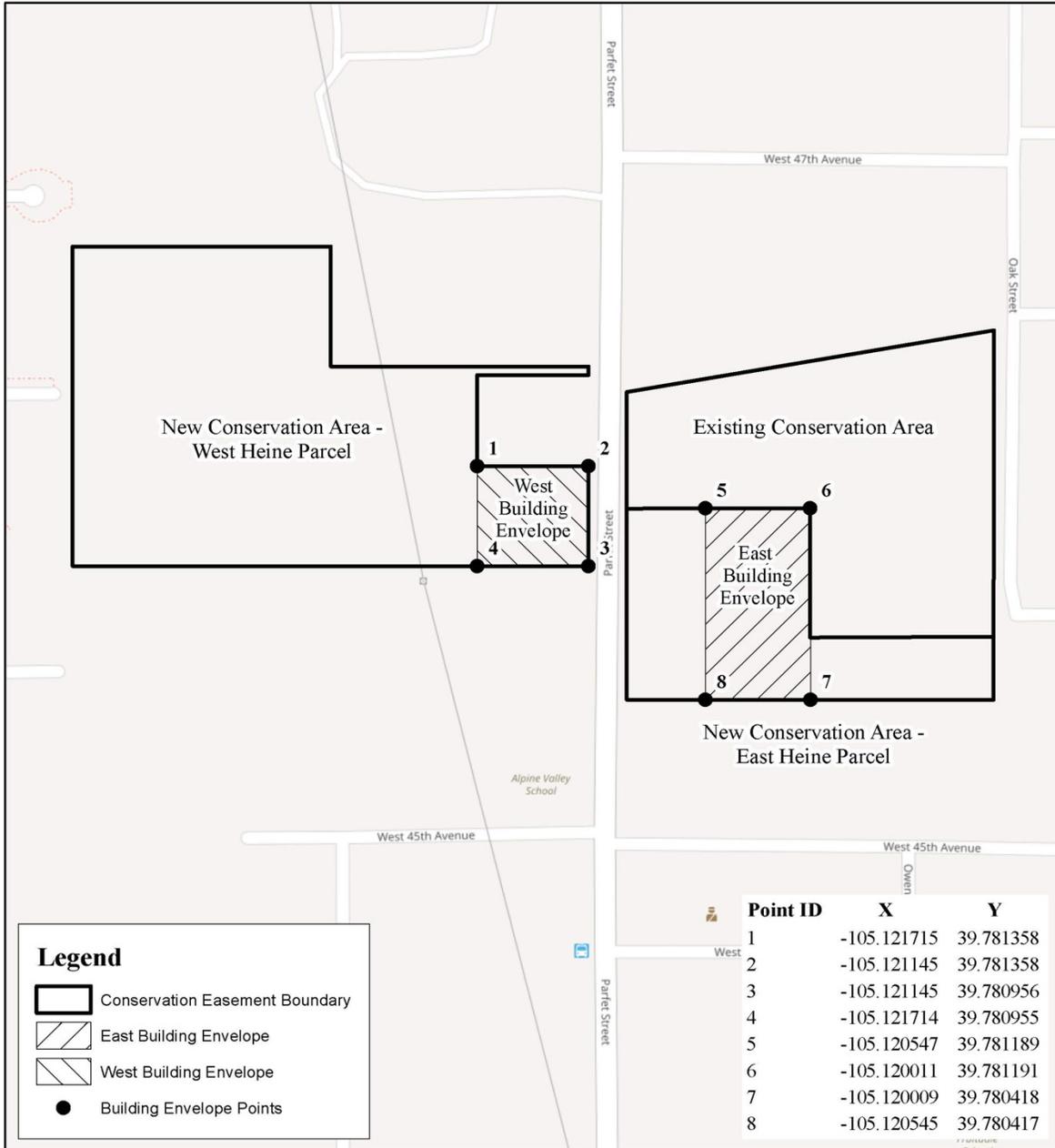
BEGINNING AT THE WEST LINE OF SAID NORTHEAST QUARTER OF THE NORTHWEST QUARTER, 554 2/12THS FEET SOUTH OF THE NORTHWEST CORNER OF SAID NORTHEAST QUARTER OF THE NORTHWEST QUARTER; THENCE SOUTH ON SAID WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER, 176.25 FEET; THENCE AT RIGHT ANGLES EAST, 371 FEET; THENCE AT RIGHT ANGLES NORTH, 176.25 FEET; THENCE AT RIGHT ANGLES WEST, 371 FEET TO THE POINT OF BEGINNING. COUNTY OF JEFFERSON, STATE OF COLORADO.

EXHIBIT B

Map of Property



HEINE WILDLIFE SANCTUARY A&R CONSERVATION EASEMENT JEFFERSON COUNTY



Preparer: Colorado Open Lands Date: 10/17/2017
Public Access should not be inferred from this map. This map is not a survey and should not be construed as one.

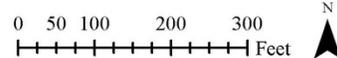


EXHIBIT C

Water Rights

Previously Dedicated Water Rights Historically Used on the East Heine Parcel

Two shares Capital Stock of The Brown and Baugh Ditch Company, represented by share certificate number 306, representing a proportionate interest in 10.0 c.f.s. of water decreed as Clear Creek Priority No. 45, by Decree of the District Court of Arapahoe County on October 4, 1884.

New Dedicated Water Rights – Historically Used on the West Heine Parcel

Ten shares Capital Stock of The Brown and Baugh Ditch Company, represented by share certificate numbers 313, 316, and 331, representing a proportionate interest in 10.0 c.f.s. of water decreed as Clear Creek Priority No. 45, by Decree of the District Court of Arapahoe County on October 4, 1884.

EXHIBIT D

Sample Notice of Transfer of Property

To: Colorado Open Lands (“Grantee”)
From: **[Insert name of fee owner]** (“Grantor”)

Pursuant to Section 10 of the Deed of Conservation Easement, Grantee is hereby notified by Grantor of the transfer of the fee simple interest in the subject Property legally described in **Exhibit A** attached hereto effective **[insert date of closing]** to **[insert name of new Grantor]**, who can be reached at **[insert name, legal address, phone and fax number]**.

GRANTOR:

By:
Title:

STATE OF COLORADO)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this ____ day of _____, 20__, by _____ as _____ of _____.

Witness my hand and official seal.
My commission expires:

Notary Public

Date: _____

APPENDIX 2

TITLE COMMITMENT

ALTA COMMITMENT
Old Republic National Title Insurance Company
Schedule A

Order Number: ABC70496816-6

Customer Ref-Loan No.:

Property Address:

4592 & 4596 PARFET ST, WHEAT RIDGE, CO 80033

1. Effective Date:

01-22-2018 At 05:00:00

2. Policy to be Issued and Proposed Insured:

"ALTA" Owner's Policy 06-17-06

\$646,000.00

Proposed Insured:

COLORADO OPEN LANDS, A COLORADO NON-PROFIT CORPORATION

3. The estate or interest in the land described or referred to in this Commitment and covered herein is:

AN EASEMENT CREATED BY AND SUBJECT TO THE TERMS, CONDITIONS AND PROVISIONS STATED IN THAT CERTAIN "DEED OF CONSERVATION EASEMENT" BY AND BETWEEN KARIN HEINE AND COLORADO OPEN LANDS, A COLORADO NON-PROFIT CORPORATION, DATED _____ AND RECORDED _____, UNDER RECEPTION NO. _____.

4. Title to the estate or interest covered herein is at the effective date hereof vested in:

KARIN HEINE

5. The Land referred to in this Commitment is described as follows:

PARCEL A (AS SET FORTH IN ORDER AND DECREE QUIETING TITLE RECORDED SEPTEMBER 2, 2015 UNDER RECEPTION NO. [2015094073](#)):

A PARCEL OF LAND BEING A PORTION OF THE NORTHWEST QUARTER OF SECTION 21, TOWNSHIP 3 SOUTH, RANGE 69 WEST OF THE 6TH P.M. CITY OF WHEAT RIDGE, COUNTY OF JEFFERSON, STATE OF COLORADO. BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF THE NORTHWEST QUARTER OF SAID SECTION 21, WHENCE THE EAST LINE OF THE NORTHWEST QUARTER OF SAID SECTION 21 BEARS N 00° 18' 33" W FORMING THE BASIS OF BEARING FOR THIS DESCRIPTION; THENCE N 00° 18' 33" W ALONG SAID EAST LINE, A DISTANCE OF 1515.50 FEET; THENCE S 89° 30' 13" W A DISTANCE OF 264.04 FEET TO THE POINT OF BEGINNING; THENCE S 89° 21' 17" W A DISTANCE OF 263.96 FEET TO A POINT ON THE EASTERLY RIGHT OF WAY LINE OF PARFET STREET; THENCE ALONG SAID EASTERLY RIGHT OF WAY LINE N 00° 18' 33" W A DISTANCE OF 190.93 FEET; THENCE N 89° 33' 21" E A DISTANCE OF 263.96 FEET; THENCE S 00° 18' 33" E A DISTANCE OF 190.90 FEET TO THE POINT OF BEGINNING.

PARCEL B (AS SET FORTH IN ORDER AND DECREE QUIETING TITLE RECORDED SEPTEMBER 2, 2015 UNDER RECEPTION NO. [2015094073](#)):

A PARCEL OF LAND BEING A PORTION OF THE NORTHWEST QUARTER OF SECTION 21, TOWNSHIP 3 SOUTH, RANGE 69 WEST OF THE 6TH P.M. CITY OF WHEAT RIDGE, COUNTY OF JEFFERSON, STATE

ALTA COMMITMENT
Old Republic National Title Insurance Company
Schedule A

Order Number: ABC70496816-6

Customer Ref-Loan No.:

OF COLORADO. BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF THE NORTHWEST QUARTER OF SAID SECTION 21, WHENCE THE EAST LINE OF THE NORTHWEST QUARTER OF SAID SECTION 21 BEARS N 00° 18' 33" W FORMING THE BASIS OF BEARING FOR THIS DESCRIPTION; THENCE N 00° 18' 33" W ALONG SAID EAST LINE, A DISTANCE OF 1423.13 FEET TO THE POINT OF BEGINNING; THENCE S 89° 41' 05" W A DISTANCE OF 528.00 FEET TO A POINT ON THE EASTERLY RIGHT OF WAY LINE OF PARFET STREET; THENCE ALONG SAID EASTERLY RIGHT OF WAY LINE N 00° 18' 33" W A DISTANCE OF 90.00 FEET; THENCE N 89° 21' 17" E A DISTANCE OF 263.96 FEET; THENCE N 89° 30' 13" E A DISTANCE OF 264.04 FEET TO A POINT ON THE EAST LINE OF THE NORTHWEST QUARTER OF SAID SECTION 21, THENCE ALONG SAID EAST LINE, S 00° 18' 33" E A DISTANCE OF 92.35 FEET TO THE POINT OF BEGINNING.

PARCEL C:

LOTS 1, 2 AND 3, BUSH SUBDIVISION, COUNTY OF JEFFERSON, STATE OF COLORADO.

PARCEL D:

A TRACT OF LAND IN THE NORTHEAST 1/4 OF THE NORTHWEST 1/4 SECTION 21, TOWNSHIP 3 SOUTH, RANGE 69 WEST DESCRIBED AS FOLLOWS: BEGINNING AT A POINT 730 5/12THS FEET SOUTH OF NORTHWEST CORNER OF NORTHEAST 1/4 NORTHWEST 1/4, THENCE SOUTH 293 FEET, THENCE EAST AT RIGHT ANGLES TO SAID WEST LINE 742 FEET, THENCE NORTH AT RIGHT ANGLES 293 FEET, THENCE WEST AT RIGHT ANGLES 742 FEET TO PLACE OF BEGINNING. EXCEPT PORTION THEREOF DESCRIBED IN DEED RECORDED OCTOBER 27, 1927 IN BOOK 300 AT PAGE [348](#), AND EXCEPT RIGHT OF WAY DESCRIBED IN INSTRUMENT RECORDED DECEMBER 14, 1923 IN BOOK 259 AT PAGE [92](#), COUNTY OF JEFFERSON, STATE OF COLORADO.

PARCEL E:

A PART OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER (NE 1/4 NW 1/4) OF SECTION 21, TOWNSHIP 3 SOUTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: BEGINNING AT THE WEST LINE OF SAID NORTHEAST QUARTER OF THE NORTHWEST QUARTER, 554 2/12THS FEET SOUTH OF THE NORTHWEST CORNER OF SAID NORTHEAST QUARTER OF THE NORTHWEST QUARTER; THENCE SOUTH ON SAID WEST LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER, 176.25 FEET; THENCE AT RIGHT ANGLES EAST, 371 FEET; THENCE AT RIGHT ANGLES NORTH, 176.25 FEET; THENCE AT RIGHT ANGLES WEST, 371 FEET TO THE POINT OF BEGINNING. COUNTY OF JEFFERSON, STATE OF COLORADO.

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ALTA COMMITMENT
Old Republic National Title Insurance Company
Schedule B-1

(Requirements)

Order Number: ABC70496816-6

The following are the requirements to be complied with:

Payment to or for the account of the grantors or mortgagors of the full consideration for the estate or interest to be insured.

Proper instrument(s) creating the estate or interest to be insured must be executed and duly filed for record, to-wit:

1. (ITEM INTENTIONALLY DELETED)
2. DEED OF CONSERVATION EASEMENT FROM KARIN HEINE TO COLORADO OPEN LANDS, A COLORADO NON-PROFIT CORPORATION CONVEYING SUBJECT PROPERTY.

NOTE: UPON APPROVAL OF THE COMPANY AND THE RECEIPT OF A NOTARIZED FINAL LIEN AFFIDAVIT, ITEM NO. 4 OF THE STANDARD EXCEPTIONS WILL BE DELETED.

NOTE: ITEM 5 OF THE STANDARD EXCEPTIONS WILL BE DELETED IF LAND TITLE GUARANTEE COMPANY RECORDS THE INSURED EASEMENT.

Old Republic National Title Insurance Company
Schedule B-2

(Exceptions)

Order Number: ABC70496816-6

The policy or policies to be issued will contain exceptions to the following unless the same are disposed of to the satisfaction of the Company:

1. Any facts, rights, interests, or claims thereof, not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
2. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
3. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.
4. Any lien, or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the Public Records.
5. Defects, liens, encumbrances, adverse claims or other matters, if any, created, first appearing in the public records or attaching subsequent to the effective date hereof but prior to the date of the proposed insured acquires of record for value the estate or interest or mortgage thereon covered by this Commitment.
6. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
7. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water.
8. EXISTING LEASES AND TENANCIES, IF ANY.
9. ANY TAX, LIEN, FEE, OR ASSESSMENT BY REASON OF INCLUSION OF SUBJECT PROPERTY IN THE FRUITDALE SANITATION DISTRICT, AS EVIDENCED BY INSTRUMENT RECORDED OCTOBER 10, 1951, IN BOOK 737 AT PAGE [35](#).

(AFFECTS ALL PARCELS)
10. EASEMENT GRANTED TO PUBLIC SERVICE COMPANY OF COLORADO, FOR UTILITIES, AND INCIDENTAL PURPOSES, BY INSTRUMENT RECORDED JULY 11, 1957, IN BOOK 1069 AT PAGE [282](#).

(AFFECTS PARCELS B; AND LOT 3 OF PARCEL C)
11. CITY OF WHEAT RIDGE, COLORADO CONTROL BASE MAP RECORDED FEBRUARY 12, 1992 UNDER RECEPTION NO. [92015075](#).

(AFFECTS ALL PARCELS)
12. TERMS, CONDITIONS, PROVISIONS, BURDENS AND OBLIGATIONS AS SET FORTH IN CERTIFICATION NOTICE RECORDED JANUARY 09, 2004 UNDER RECEPTION NO. [F1940797](#).

(AFFECTS PARCEL A)
13. TERMS, CONDITIONS, PROVISIONS, BURDENS AND OBLIGATIONS AS SET FORTH IN SPECIAL

Old Republic National Title Insurance Company
Schedule B-2

(Exceptions)

Order Number: ABC70496816-6

The policy or policies to be issued will contain exceptions to the following unless the same are disposed of to the satisfaction of the Company:

WARRANTY DEED RECORDED DECEMBER 17, 2004 UNDER RECEPTION NO. [F2145500](#) AND RE-RECORDED FEBRUARY 11, 2005 UNDER RECEPTION NO. [F2172067](#).

(AFFECTS PARCEL A)

14. CONDITIONS AND NOTES ON THE LAND SURVEY PLAT RECORDED DECEMBER 26, 2007 UNDER RECEPTION NO. [2007139893](#).

(AFFECTS PARCEL A)

15. NOTICE OF OFFICIAL LEGAL DESCRIPTION FOR THE CITY OF WHEAT RIDGE CORPORATE BOUNDARY RECORDED JANUARY 07, 2009 UNDER RECEPTION NO. [2009001396](#).

(AFFECTS ALL PARCELS)

16. TERMS, CONDITIONS, PROVISIONS, BURDENS AND OBLIGATIONS AS SET FORTH IN ORDER AND DECREE QUIETING TITLE RECORDED SEPTEMBER 02, 2015 UNDER RECEPTION NO. [2015094073](#).

17. (ITEM INTENTIONALLY DELETED)

18. TERMS, CONDITIONS, PROVISIONS, BURDENS, OBLIGATIONS AND EASEMENTS AS SET FORTH AND GRANTED IN DEED OF CONSERVATION EASEMENT RECORDED _____ UNDER RECEPTION NO. _____.

19. ANY FAILURE TO COMPLY WITH THE TERMS, CONDITIONS, PROVISIONS, BURDENS AND OBLIGATIONS OF THE DEED OF CONSERVATION EASEMENT REFERRED TO IN SCHEDULE A.

20. ANY CHANGES IN AREA DUE TO THE RELOCATION OR MOVEMENT OF THE BROWN AND BAUGH DITCH, SAID DITCH BEING SHOWN ON THE PLAT OF BUSH SUBDIVISION RECORDED MAY 24, 1960 UNDER RECEPTION NO. [804006](#).

(AFFECTS LOTS 1 AND 2 OF PARCEL C)

21. EASEMENTS, CONDITIONS, COVENANTS, RESTRICTIONS, RESERVATIONS AND NOTES ON THE PLAT OF BUSH SUBDIVISION RECORDED MAY 24, 1960 UNDER RECEPTION NO. [804006](#).

(AFFECTS PARCEL C)

22. TERMS, CONDITIONS, PROVISIONS, BURDENS, OBLIGATIONS AND EASEMENTS AS SET FORTH AND GRANTED IN DEED OF CONSERVATION EASEMENT RECORDED APRIL 11, 2003 UNDER RECEPTION NO. [F1723481](#).

(AFFECTS PARCEL C)

23. TERMS, CONDITIONS, PROVISIONS, BURDENS AND OBLIGATIONS AS SET FORTH IN REZONING ORDINANCE NO. 1283, SERIES OF 2003, RECORDED APRIL 24, 2003 UNDER RECEPTION NO. [F1733489](#).

(AFFECTS PARCEL C)

Old Republic National Title Insurance Company
Schedule B-2

(Exceptions)

Order Number: ABC70496816-6

The policy or policies to be issued will contain exceptions to the following unless the same are disposed of to the satisfaction of the Company:

24. ALL MATTERS SHOWN ON THE RESURVEY OF BUSH SUBDIVISION RECORDED JUNE 26, 2003 UNDER RECEPTION NO. [F1788242](#).

(AFFECTS PARCEL C)

25. EASEMENT GRANTED TO R.J. BARDWELL, FOR CONSTRUCTION AND MAINTENANCE OF A STEEL TOWER ELECTRIC TRANSMISSION LINE, ITS APPURTENANCES, AND INCIDENTAL PURPOSES, BY INSTRUMENT RECORDED DECEMBER 14, 1923, IN BOOK 259 AT PAGES [92](#) AND [93](#).

(AFFECTS PARCEL D)

26. MATTERS AS SHOWN ON SURVEY RECORDED MARCH 8, 1995 UNDER RECEPTION NO. [F0032949](#).

(AFFECTS PARCELS D AND E)

27. (ITEM INTENTIONALLY DELETED)

APPENDIX 3

AERIAL PHOTOGRAPHY

Aerial Photography Map



0 100 200 400 Feet



0 50 100 200 Meters



Data Source:
ESRI, DigitalGlobe, GeoEye, Earthstar Geographics
World Imagery
2016

APPENDIX 4

CLIMATE INFORMATION

APPENDIX 4 CLIMATE DATA

HEINE WILDLIFE SANCTUARY 2018 CONSERVATION EASEMENT BASELINE REPORT

<http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?co4762>

LAKESWOOD, COLORADO (054762)

Period of Record Monthly Climate Summary

Period of Record : 07/28/1962 to 06/10/2016

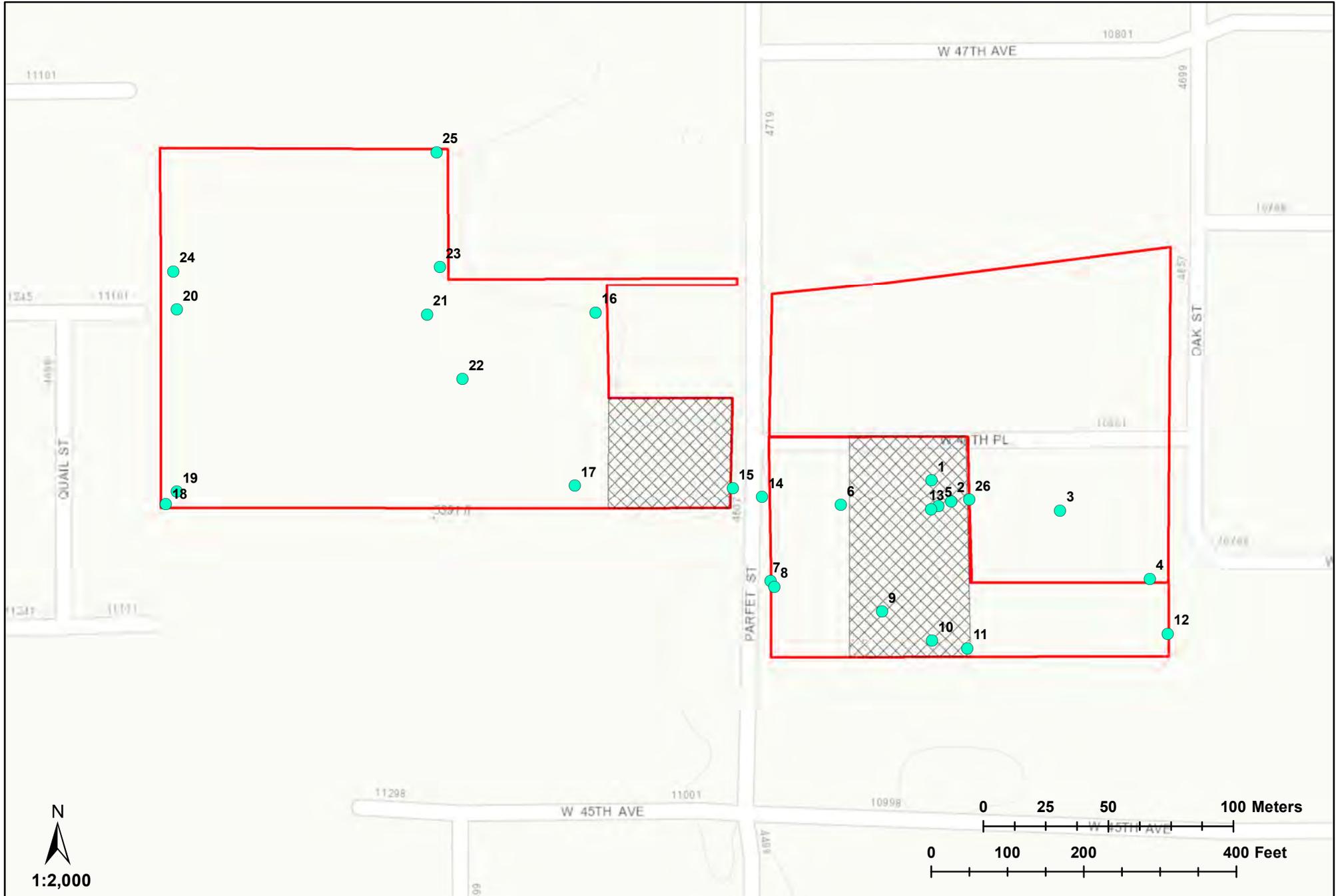
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	44.7	46.6	52.8	60.3	69.4	80	86.8	84.4	76.2	65.1	52.5	45.2	63.7
Average Min. Temperature (F)	18.3	20.5	26.6	33.7	42.7	51.8	58.3	56.2	47.2	36.4	26.3	19.1	36.4
Average Total Precipitation (in.)	0.52	0.54	1.37	1.94	2.49	2.09	1.9	1.65	1.35	1.09	0.9	0.57	16.4
Average Total SnowFall (in.)	7.4	7.7	10.8	7.3	1	0	0	0	0.9	4.1	8	8.2	55.3
Average Snow Depth (in.)	1	1	1	1	0	0	0	0	0	0	1	1	1
Percent of possible observations for period of record.													

Max. Temp.: 99.4% Min. Temp.: 99% Precipitation: 99.6% Snowfall: 96.5% Snow Depth: 96.4%

APPENDIX 5

GROUND PHOTOGRAPHY

Photo Point Map



APPENDIX 5 GROUND PHOTOGRAPHY PHOTO LOG

HEINE WILDLIFE SANCTUARY

2016 BASELINE REPORT

Explanation

Each Photo Point is generally numbered in the order the Points were completed in the field. Photo Point "Frames" are given a letter designation (such as A, B and C for a three exposure Photo Point) and are lettered from left to right (in the example above, the Frame on the left would be "A", the Frame in the middle would be "B", and the Frame on the Right would be "C"). The Photo Point number is labeled on the back of each Frame. Descriptions of specific features generally proceed from left to right, both within a Frame and between multiple Frames. Each Frame was taken in the field in a sequential panning action on each Photo Point in order for adjacent Frames to overlap. This allows for all of the Frames in a Photo Point to be assembled into one composite photograph (a panorama).

The specific narrative for each Photo Point generally proceeds through three steps:

1. Location of the Property boundaries.
2. Description of the significant cultural features (such as structures, improvements, and roads) and natural features (prominent or important topographic features, drainages, and water courses).
3. Location and description of the vegetation communities listed in the text of the report.

Features described in each Frame are further located by the following Frame divisions:

Upper Left	Upper Center	Upper Right
Left Center	Center	Right Center
Lower Left	Lower Center	Lower Right



Photo Point 1

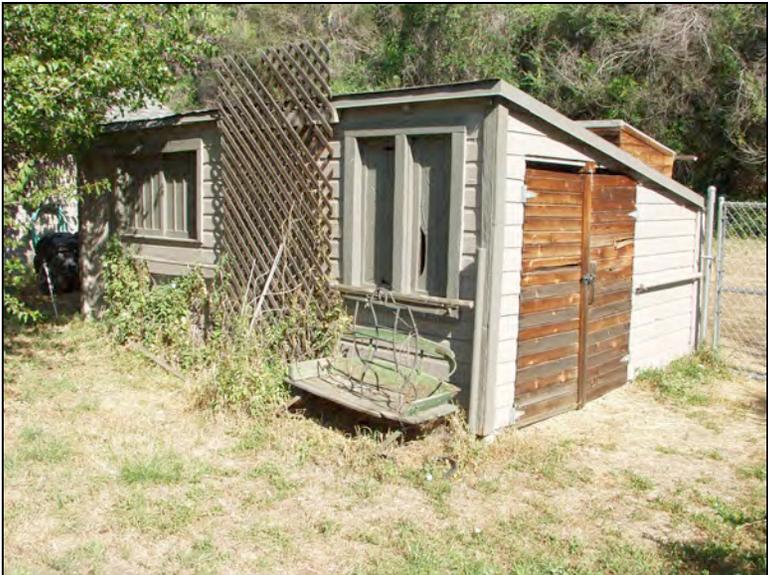


Photo Point 2



Photo Point 3



Photo Point 4

Photo Point: 1

Subject: Stock shed at 4596 Parfet. All of the area displayed is on the Property.

Vegetation Communities

Ditch Riparian/Urban Forest is displayed behind the shed. Trees include Siberian elm (*Ulmus pumila*).

Photo Point: 2

Subject: Shed at 4596 Parfet. All of the area displayed is on the Property.

Vegetation Communities

Ditch Riparian/Urban Forest is displayed behind the shed. Trees include Siberian elm.

Photo Point: 3

Subject: Bee hives at 4650 Parfet. All of the area displayed is on the Existing Conservation Area.

Vegetation Communities

Tame Pasture is displayed in the foreground, with smooth brome (*Bromus inermis*) the dominant grass. *Ditch Riparian/Urban Forest* is displayed behind the hives, with trees including Siberian elm, blue spruce (*Picea pungens*), and twoneedle pinyon pine (*Pinus edulis*).

Photo Point: 4

Subject: Southeast portion of 4650 Parfet. All of the area displayed is on the Existing Conservation Area.

Vegetation Communities

Tame Pasture is displayed in the foreground, with smooth brome the dominant grass. Prickly lettuce (*Lactuca serriola*) is a common forb. There are scattered shrubs of rubber rabbitbrush (*Ericameria nauseosa*) and chokecherry (*Prunus virginiana*). *Ditch Riparian/Urban Forest* is displayed in the background dominated by Siberian elm, with some Rocky Mountain juniper (*Juniperus scopulorum*).



Photo Point 5



Photo Point 6



Photo Point 7



Photo Point 8

Photo Point: 5

Subject: Residence at 4596 Parfet; the driveway is displayed in the foreground. All of the area displayed is on the Property.

Vegetation Communities

Ditch Riparian/Urban Forest is displayed throughout, with plains cottonwood (*Populus deltoides* ssp. *monilifera*) and Siberian elm. There are also lilac shrubs (*Syringa vulgaris*).

Photo Point: 6

Subject: Pasture in the northwest portion of 4596 Parfet. The residence at 4595 Parfet is displayed in the left background.

Vegetation Communities

Tame Pasture is displayed in the foreground, with smooth brome the dominant grass. *Ditch Riparian/Urban Forest* is displayed in the background dominated by Siberian elm.

Photo Point: 7

Subject: Southwest portion of 4596 Parfet. The residence at 4596 Parfet is displayed in the right background. All of the area displayed is on the Property.

Vegetation Communities

Tame Pasture is displayed in the foreground, with smooth brome and the forbs alfalfa (*Medicago sativa*) and prickly lettuce. *Ditch Riparian/Urban Forest* is displayed in the background dominated by plains cottonwood and Siberian elm, with shrubs including chokecherry and Virginia creeper (*Parthenocissus quinquefolia*).

Photo Point: 8

Subject: Western portion of 4592 Parfet. The residence is indicated by the red brick chimney. The residence to the right of the chimney is on an adjacent parcel.

Vegetation Communities

Tame Pasture is displayed in the foreground, with smooth brome the dominant grass. Forbs include field bindweed (*Convolvulus arvensis*), narrowleaf plantain (*Plantago lanceolata*), and common mallow (*Malva neglecta*). *Ditch Riparian/Urban Forest* is displayed in the background dominated by Siberian elm, with Virginia creeper.



Photo Point 9



Photo Point 10



Photo Point 11



Photo Point 12

Photo Point: 9

Subject: Garage at 4592 Parfet. All of the area displayed is on the Property.

Vegetation Communities

Ditch Riparian/Urban Forest is displayed behind the garage, dominated by Siberian elm, with shrubs of lilac.

Photo Point: 10

Subject: Backside of the residence at 4592 Parfet. In the foreground is a pump over a cistern. All of the area displayed is on the Property.

Vegetation Communities

Smooth brome is the dominant grass in the foreground. Trees and shrubs around the residence include Siberian elm, riverbank grape (*Vitis riparia*), and domestic rose (*Rosa species*).

Photo Point: 11

Subject: East-central portion of 4592 Parfet. All of the area displayed is on the Property.

Vegetation Communities

Tame Pasture is displayed in the foreground, with smooth brome, cereal rye (*Secale cereale*), and field brome (*Bromus arvensis*) the dominant grasses. *Ditch Riparian/Urban Forest* is displayed in the background dominated by Siberian elm, with some lilac.

Photo Point: 12

Subject: East portion of 4592 Parfet. All of the area displayed is on the Property.

Vegetation Communities

Tame Pasture is displayed in the foreground, with smooth brome the dominant grass. *Ditch Riparian/Urban Forest* is displayed in the background dominated by Siberian elm.



Photo Point 13



Photo Point 14



Photo Point 15



Photo Point 16

Photo Point: 13

Subject: Garage at 4596 Parfet. All of the area displayed is on the Property.

Vegetation Communities

Ditch Riparian/Urban Forest is displayed behind the shed, with crabapple trees (*Malus species*), vines of clematis (*Clematis species*), and the forb perennial pea (*Lathyrus latifolius*).

Photo Point: 14

Subject: Headgate on an irrigation lateral at 4596 Parfet. All of the area displayed is on the Property.

Vegetation Communities

Ground cover within the *Ditch Riparian/Urban Forest* is displayed.

Photo Point: 15

Subject: Residence at 4595 Parfet. All of the area displayed is on the Property.

Vegetation Communities

Ditch Riparian/Urban Forest is displayed around the residence, with trees including crabapple, maple (*Acer species*), and green ash (*Fraxinus pennsylvanica*).

Photo Point: 16

Subject: Northeast portion of 4595 Parfet. All of the area displayed is on the Property, except the distant background.

Vegetation Communities

Tame Pasture is displayed in the foreground, with smooth brome and the forbs alfalfa and common dandelion (*Taraxacum officinale*). *Ditch Riparian/Urban Forest* is displayed in the background dominated by plains cottonwood (*Populus deltoides* ssp. *monilifera*).



Photo Point 17



Photo Point 18



Photo Point 19



Photo Point 20

Photo Point: 17

Subject: Irrigation lateral being constructed along the south boundary of 4595 Parfet. All of the area to the right of the fence is on the Property.

Vegetation Communities

Tame Pasture in the midground has smooth brome, and alfalfa. *Ditch Riparian/Urban Forest* is displayed in the background dominated by plains cottonwood and Siberian elm.

Photo Point: 18

Subject: Headgate on the Brown and Baugh Ditch and survey pins at the southwest corner of 4595 Parfet. The headgate is just off the Property.

Vegetation Communities

Ground cover within the *Ditch Riparian/Urban Forest* is displayed.

Photo Point: 19

Subject: Southwest portion of 4595 Parfet. Note the irrigation lateral on the far right edge of the Frame. All of the area displayed is on the Property.

Vegetation Communities

Tame Pasture is displayed in the foreground, dominated by alfalfa and smooth brome, with narrowleaf plantain. *Ditch Riparian/Urban Forest* is displayed in the background dominated by plains cottonwood and Siberian elm.

Photo Point: 20

Subject: Headgate on the Brown and Baugh Ditch on the west-central boundary of 4595 Parfet. All of the area displayed is on the Property.

Vegetation Communities

Ground cover within the *Ditch Riparian/Urban Forest* is displayed.



Photo Point 21



Photo Point 22



Photo Point 23



Photo Point 24

Photo Point: 21

Subject: Bee hives at 4595 Parfet. All of the area displayed is on the Property, except the distant background in the upper right of the Frame.

Vegetation Communities

Tame Pasture is displayed in the foreground, with smooth brome the dominant grass. Forbs include field bindweed, alfalfa, and prickly lettuce. Plains cottonwood trees are displayed behind the hives.

Photo Point: 22

Subject: Hay shed near the center of 4595 Parfet. All of the area displayed is on the Property, except the distant background.

Vegetation Communities

Tame Pasture is displayed in the foreground, with alfalfa, prickly lettuce, red clover (*Trifolium pratensis*), and smooth brome. Trees behind the structure are Siberian elm.

Photo Point: 23

Subject: Northwest portion of 4595 Parfet. All of the area displayed in front of the background trees is on the Property, and includes the background trees. The buildings behind the background trees are off the Property.

Vegetation Communities

Tame Pasture is displayed in the foreground, dominated by alfalfa and smooth brome. *Ditch Riparian/Urban Forest* is displayed in the background dominated by plains cottonwood and Siberian elm.

Photo Point: 24

Subject: Headgate on a lateral of the Brown and Baugh Ditch on the west-central boundary of 4595 Parfet. The headgate is buried under leaves, but is marked by the two upright wooden stakes in the center of the Frame. All of the area displayed in front of the fence is on the Property. The building behind the fence is off the Property.

Vegetation Communities

Ground cover within the *Ditch Riparian/Urban Forest* is displayed and includes the grass smooth brome. There are also saplings of green ash (*Fraxinus pennsylvanica*).



Photo Point 25



Photo Point 26

Photo Point: 25

Subject: Northwest portion of 4595 Parfet. All of the area displayed in front of the background trees is on the Property, and includes the background trees. The buildings behind the background trees are off the Property.

Vegetation Communities

Tame Pasture is displayed in the foreground, dominated by alfalfa and smooth brome. *Ditch Riparian/Urban Forest* is displayed in the background dominated by plains cottonwood and Siberian elm.

Photo Point: 26

Subject: Backyard Wildlife Habitat sign at the boundary of 4596 and 4650 Parfet. All of the area displayed is on the Existing Conservation Area.

Vegetation Communities

Ground cover within the *Ditch Riparian/Urban Forest* is displayed.

APPENDIX 6

CONTACTS

APPENDIX 6 CONTACT LIST

HEINE WILDLIFE SANCTUARY

2018 CONSERVATION EASEMENT BASELINE REPORT

Grantor

Karin Heine
4596 Parfet Street
Wheat Ridge, CO 80023
Phone: 303-425-5626

Grantor's Attorney

Jessica E. Jay
Conservation Law, P.C.
Evergreen, CO, 80439
Phone: 303-674-3709
Fax: 303-674-3715
E-mail: conservationlaw@msn.com
Web site: <http://www.conservationlaw.org>

Grantee

Amanda Nims
Colorado Open Lands
355 South Teller Street
Lakewood, Colorado 80226
Phone: 303-988-2373
Fax: 303-988-2383
E-mail: anim@coloradoopenlands.org
Web site: <http://coloradoopenlands.org/>

Baseline Report Preparer

Michael G. Figgs
LREP, Inc.
P.O. Box 5
Allenspark, CO 80510
Phone: 303-747-2000
Cell: 303-579-5821
E-mail: mfiggs@indra.com

2.0 Baseline Report and MethodologyTitle Report

Land Title Guarantee Company
3033 East First Ave., Suite 600
Denver, CO 80206
Phone: 303-321-1880

Aerial Photography

National Aerial Photography Program (NAPP)
US Geological Survey
EROS Data Center Customer Services
Sioux Falls, SD 57198
Phone: 605-594-615
Fax: 605-594-6589

Web Site: <http://eros.usgs.gov/> - /Find Data

TerraServer.com
TerraServer.com, Inc.
5995 Chapel Hill Rd.
Suite 109
Raleigh, NC 27607
E-mail: support@terraserver.com
Web site: <http://www.terraserver.com/>

Google Earth
Web Site: <http://www.google.com/earth/>

4.0 Geology Soils and Mineral Resources

Soils

Natural Resources Conservation Service
Longmont Field Office(including Jefferson County)
9595 Nelson Road, Box D
Longmont, CO 80501-6359
Phone: 303-776-1242
District Conservationist: Karen.Mandujano@co.usda.gov

Jefferson Conservation District
Denver Federal Center
Building 56, Room 2604
PO Box 25426
Denver, CO 80225-0426
Phone: 720-544-2872
E-mail: jeffersonconservationdistrict@gmail.com

5.0 Water Resources

Colorado Division of Water Resources

1313 Sherman St., Room 818
Denver, CO 80203
Phone: 303-866-3581
Records Section
Phone: 303-866-3447
Web site: <http://water.state.co.us/default.htm>

Division 1 Main Office
810 9th St., Suite 200
Greeley, CO 80631
Phone: 970-352-8712
Fax: 970-392-1816

6.0 Vegetation Resources

Noxious Weeds

Alicia Doran, Weed and Pest Management Specialist
Jefferson County Open Space Department
700 Jefferson County Parkway, #100
Golden, CO 80522
Phone: 303-271-5989
E-mail: adoran@jeffco.us

Colorado Department of Agriculture
Division of Plant Industry
700 Kipling St., Room 4000
Lakewood, CO 80215-5894
Phone: 303-239-4182
Web page: <http://www.ag.state.co.us/DPI/weeds/Weed.html>

Colorado State University Cooperative Extension
Web page: <http://www.csuextstore.com/store/pc/viewCategories.asp?idCategory=60>
(Natural resource publications for sale or download, including many publications on weeds.)

Rare Plants and Imperiled Natural Communities
Colorado Natural Heritage Program
Environmental Review Department
College of Natural Resources
Colorado State University
254 General Services Building
Fort Collins, CO 80523
Phone: 970-491-7331
Fax: 970-491-3349
Web site: <http://www.cnhp.colostate.edu/>

Fire Protection
Arvada Fire Protection District
7903 Allison Way
Arvada, CO 80005
Phone: 303-424-3012
Fax: 303-432-7995
Web site: <http://arvadafire.com/>

7.0 Wildlife Resources
Natural Diversity Information Source
Web site: <http://www.ndis.nrel.colostate.edu/>

Colorado Division of Wildlife
Northeast Region
Littleton Office
13787 US Highway 85
Littleton, CO 80125
Phone: 303-791-1954
Web site: <http://cpw.state.co.us/>

Denver Office
6060 Broadway
Denver, CO 80216
Phone: 303-291-7227

10.0 Land Use
Jefferson County
Jefferson County Assessor
100 Jefferson County Parkway, Suite 2500
Golden, CO 80419

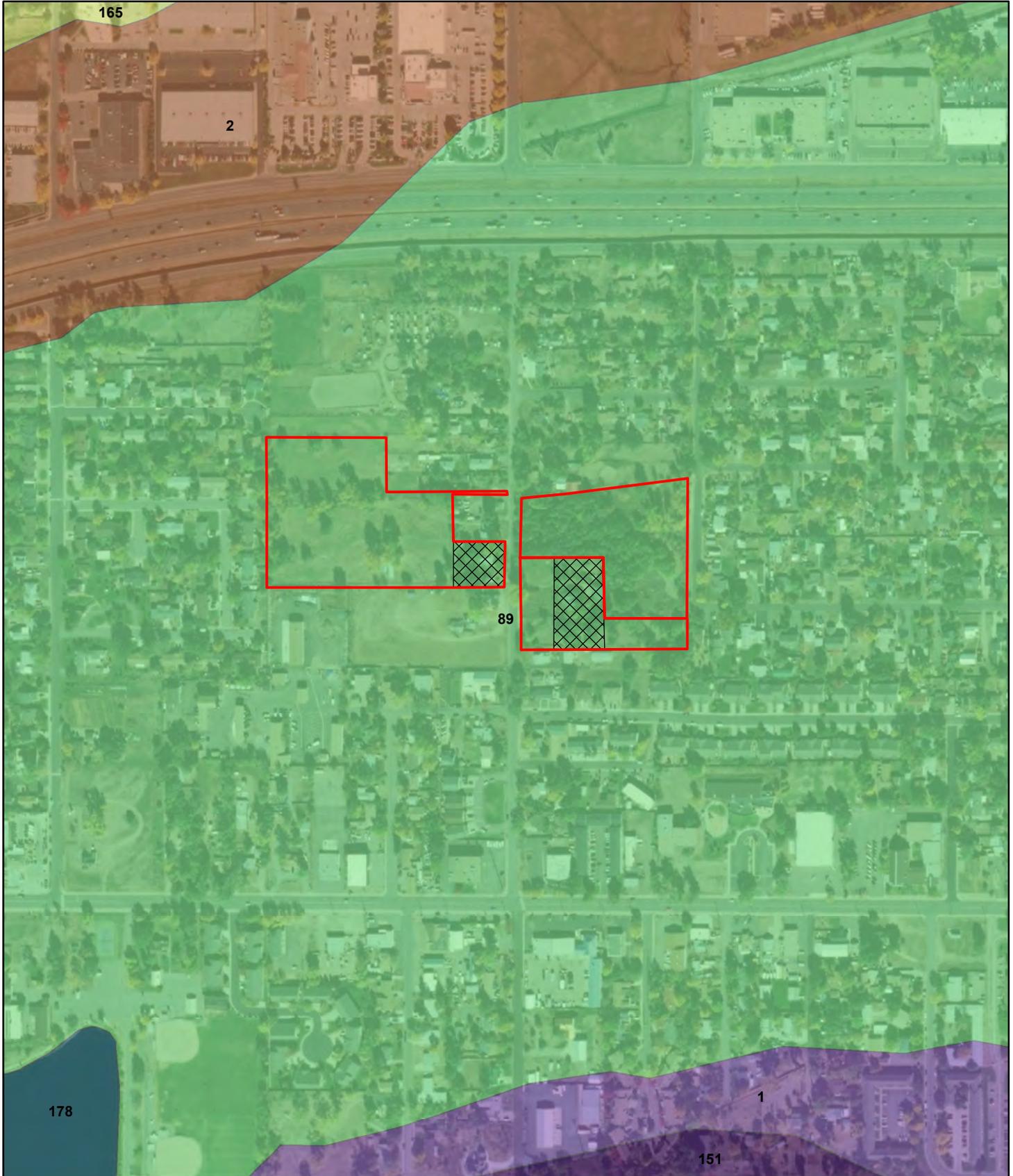
Phone: 303-271-8660
Fax: 303-271-8660
Web site: <http://jeffco.us/assessor/>

City of Wheat Ridge
Community Development Department
7500 W. 29th Ave., 2nd Floor
Phone: 303-235-2846
Fax: 303-235-2857
Web site: <http://www.ci.wheatridge.co.us/277/Community-Development>

APPENDIX 7A

SOILS INFORMATION

Soils Map



 Heine Property Boundary

 Building Envelopes

 1  151  165  178  2  89

N
1:5,000

0 250 500 1,000 Feet

0 100 200 400 Meters

Appendix 7A, Soils Information
Heine Wildlife Sanctuary 2018 Conservation Easement Baseline Report

Map Unit Key¹	Soil Map Unit Name	Ecological Site²
89	Loveland variant gravelly sandy loam, 0-2% slopes	Overflow

¹Map unit key from the soils maps. Soils descriptions are found in Appendix 7 in the digital copy of this report, due to length of document.

²Hyperlinks for ecological site descriptions in the Natural Resources Conservation Service Field Office Technical Guide are included in Table 2 in Section 4.0 of this report (pages 10 and 11).

Map Unit Description (Brief, Generated)

Golden Area, Colorado, Parts of Denver, Douglas, Jefferson, and Park Counties

[Minor map unit components are excluded from this report]

Map unit: 89 - Loveland variant gravelly sandy loam, 0 to 2 percent slopes

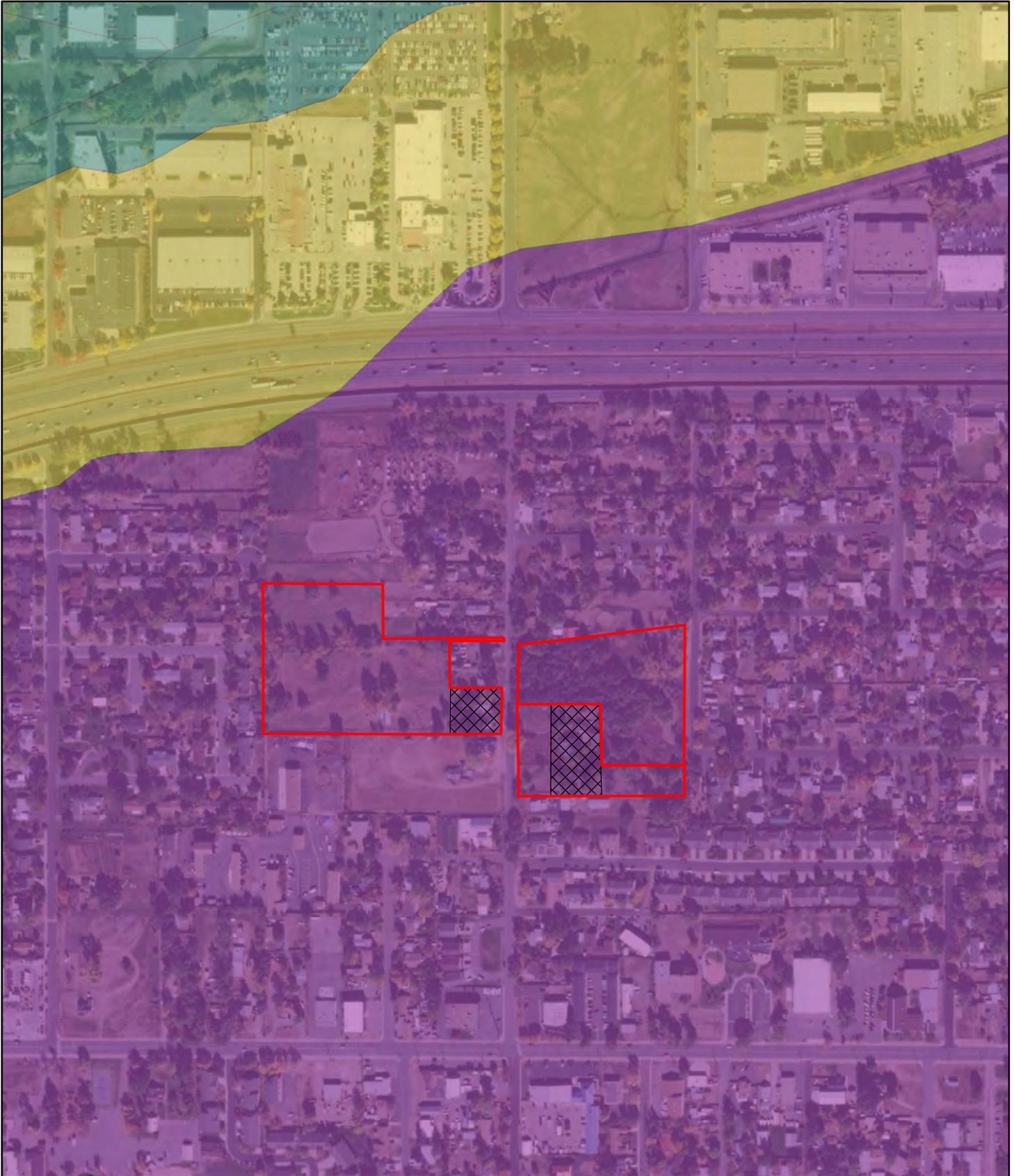
Component: Loveland variant (85%)

The Loveland variant component makes up 85 percent of the map unit. Slopes are 0 to 2 percent. This component is on stream terraces, alluvial valley floors. The parent material consists of calcareous, gravelly, loamy alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is rarely flooded. It is not ponded. A seasonal zone of water saturation is at 42 inches during March, April, May, June. Organic matter content in the surface horizon is about 4 percent. This component is in the R049XY036CO Overflow ecological site. Nonirrigated land capability classification is 3s. Irrigated land capability classification is 2s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 3 percent. There are no saline horizons within 30 inches of the soil surface.

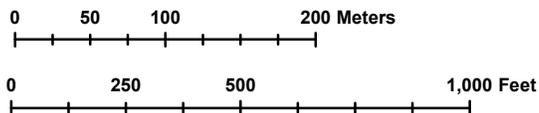
APPENDIX 7B

ECOLOGICAL SITES INFORMATION

Ecological Sites Map



-  Heine Property Boundary
-  Clayey Foothill
-  Wet Meadow
-  Building Envelopes
-  Overflow



United States Department of Agriculture Natural Resources Conservation Service

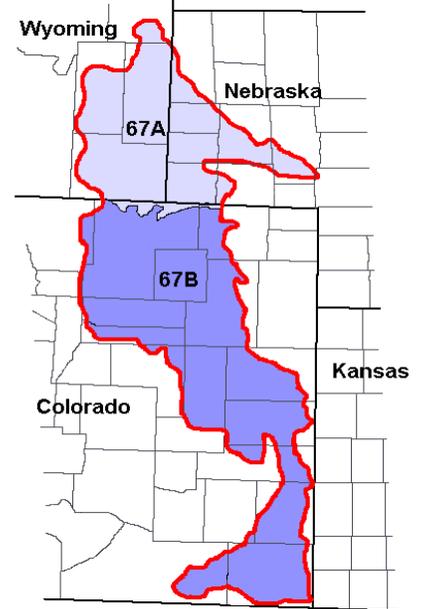
Ecological Site Description

Site Type: Rangeland

Site Name: Overflow

Site ID: R067BY036CO

Major Land Resource Area: 67B – Central High Plains, Southern Part



Physiographic Features

This site occurs on, or parallel to, intermittent or perennial waterways on the plains. These sites receive additional water from channel flooding and from runoff from surrounding areas. These areas are typically frequently or occasionally flooded.

Landform: drainageway, flood plain, draw

Aspect: N/A

	<u>Minimum</u>	<u>Maximum</u>
Elevation (feet):	3800	5600
Slope (percent):	0	3
Water Table Depth (inches):	60	60
Flooding:		
Frequency:	rare	frequent
Duration:	very brief	brief
Ponding:		
Depth (inches):	0	0
Frequency:	none	none
Duration:	none	none
Runoff Class:	low	medium

Climatic Features

The mean average annual precipitation varies from 12 to 16 inches per year depending on location and ranges from less than 8 inches to over 20 inches per year. Approximately 75 percent of the annual precipitation occurs during the growing season from mid-April to late-September. Snowfall can vary greatly from year to year but averages 35 to 45 inches per year. Winds are estimated to average about 9 miles per hour annually, ranging from 10 miles per hour during the spring to 9 miles per hour during late summer. Daytime winds are generally stronger than nighttime and occasional strong storms may bring periods of high winds with gusts to more than 90 miles per hour.

The average length of the growing season is 142 days, but varies from 129 to 154 days. The average date of first frost in the fall is September 28, and the last frost in the spring is about May 9. July is the hottest month and December and January are the coldest. It is not uncommon for the temperature to exceed 100 degrees F during the summer. Summer humidity is low and evaporation is high. The winters are characterized with frequent northerly winds, producing severe cold with temperatures dropping to -35 degrees F or lower.

Growth of native cool season plants begins about March 15 and continues to about June 15. Native warm season plants begin growth about May 15 and continue to about August 15. Regrowth of cool season plants occurs in September and October of most years, depending on moisture.

	<u>Minimum</u>	<u>Maximum</u>
Frost-free period (days):	129	154
Freeze-free period (days):	151	178
Mean Annual Precipitation (inches):	12	16

Average Monthly Precipitation (inches) and Temperature (°F):

	Precip. Min.	Precip. Max	Temp. Min.	Temp. Max.
January	0.32	0.36	12.0	45.1
February	0.26	0.38	15.9	50.9
March	0.83	0.87	22.3	58.9
April	1.28	1.38	30.1	69.1
May	2.32	2.49	39.9	78.0
June	1.93	2.57	49.0	88.7
July	1.42	2.31	55.0	93.9
August	1.07	2.38	53.5	91.9
September	1.02	1.40	43.8	83.8
October	0.89	1.00	32.5	72.9
November	0.52	0.53	20.9	57.4
December	0.34	0.37	11.9	46.9

Climate Stations		Period	
Station ID	Location or Name	From	To
CO0945	Briggsdale	1948	2000
CO4076	Holly	1918	2000
CO9147	Windsor	1948	1990

For local climate stations that may be more representative, refer to <http://www.wcc.nrcs.usda.gov>.

Influencing Water Features

Wetland Description:	<u>System</u>	<u>Subsystem</u>	<u>Class</u>	<u>Sub-class</u>
None	None	None	None	None

Stream Type: None

Representative Soil Features

The soils of this site are very deep, well drained and slowly to moderately permeable. These soils occur on drainageways, flood plains and draws. Some soils have gravel at depths below 40 inches. The available water capacity is typically moderate to high. These soils are typically occasionally or frequently flooded. The soil surface layer is typically 3 to 25 inches thick and is loam, clay loam, or silt loam. The soil moisture regime is aridic ustic. The soil temperature regime is mesic.

The Historic Climax Plant Community (HCPC) should exhibit slight to no evidence of rills, wind scoured areas or pedestaled plants. Water flow paths, if any, are broken, irregular in appearance or discontinuous with numerous debris dams or vegetative barriers. The soil surface is stable and intact. Sub-surface soil layers are non-restrictive to water movement and root penetration.

These soils are susceptible to wind and water erosion where vegetative cover is inadequate. Channel cutting, deposition, and removals may occur adjacent to streams.

Major soil series correlated to this ecological site include: Manzanst, Rago (occasional overflow), Paoli, Haverson, Sampson, Table Mountain, Goshen, and Lohmiller.

Other soil series that have been correlated to this site include: none

Parent Material Kind: alluvium
Parent Material Origin: mixed
Surface Texture: loam, clay loam, silt loam
Surface Texture Modifier: none

Subsurface Texture Group: loamy
Surface Fragments ≤ 3" (% Cover): 0
Surface Fragments > 3" (%Cover): 0
Subsurface Fragments ≤ 3" (% Volume): 0-20
Subsurface Fragments > 3" (% Volume): 0

	<u>Minimum</u>	<u>Maximum</u>
Drainage Class:	well	well
Permeability Class:	slow	moderate
Depth (inches):	80	80
Electrical Conductivity (mmhos/cm)*:	0	2
Sodium Absorption Ratio*:	0	0
Soil Reaction (1:1 Water)*:	6.6	8.4
Available Water Capacity (inches)*:	6	8
Calcium Carbonate Equivalent (percent)*:	0	15

*These attributes represent 0-40 inches in depth or to the first restrictive layer.

Plant Communities

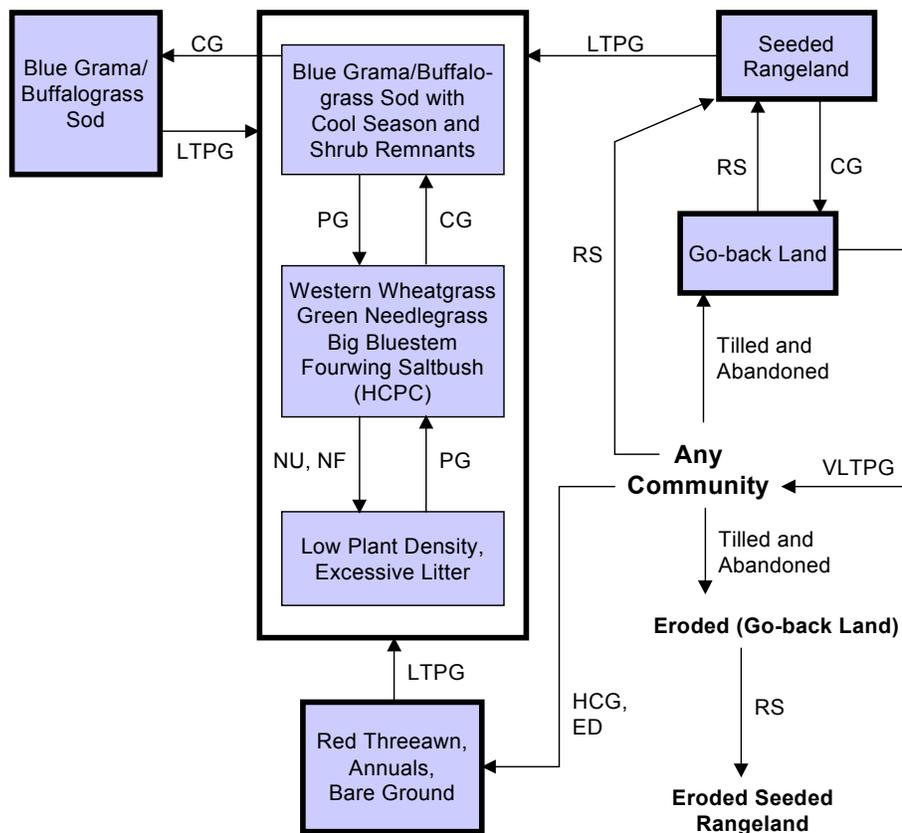
Ecological Dynamics of the Site:

Deterioration of this site, due to continuous grazing without adequate recovery periods following each grazing occurrence, will cause blue grama and buffalograss to increase. Major grass species such as western wheatgrass, green needlegrass, Canada wildrye, big bluestem, switchgrass and yellow Indiangrass will decrease in frequency and production as well as key shrubs such as fourwing saltbush and winterfat. American vetch and other highly palatable forbs will decrease also. Continuous grazing will eventually cause a buffalograss/blue grama sod to develop. Red threeawn, annuals and bare ground will increase with heavy continuous grazing or excessive defoliation. Plant communities subjected to a non-use status or lack of fire will cause excess litter to accumulate, reducing plant density. Much of this ecological site has been tilled and used for crop production.

The historic climax plant community (description follows the plant community diagram) has been determined by study of rangeland relic areas, areas protected from excessive disturbance, seasonal use pastures, short duration/time controlled grazing and historical accounts.

The following diagram illustrates the common plant communities that can occur on the site and the transition pathways (arrows) among communities. Bold lines surrounding each plant community or communities represent ecological thresholds. The ecological processes are discussed in more detail in the plant community descriptions following the diagram.

Plant Communities and Transitional Pathways



CG - continuous grazing without adequate recovery opportunity, **ED** - excessive defoliation, **HCG** - heavy continuous grazing, **HCPC** - Historic Climax Plant Community, **LTCG** - long term continuous grazing (>40 yrs), **LTPG** - long term prescribed grazing (>40 yrs), **NF** - no fire, **NU** - non-use, **PG** - prescribed grazing with adequate recovery period, **RS** - range seeding, **VLTPG** - very long term prescribed grazing (>80 yrs)

Plant Community Composition and Group Annual Production

			Western Wheatgrass, Green Needlegrass, Big Bluestem, Fourwing Saltbush (HCPC)		
COMMON/GROUP NAME	SCIENTIFIC NAME	SYMBOL	Group	lbs./acre	% Comp
GRASSES & GRASS-LIKES			1	1500 - 1800	75 - 90
western wheatgrass	Pascopyrum smithii	PASM	1	700 - 800	35 - 40
green needlegrass	Nassella viridula	NAVI4	1	300 - 500	15 - 25
big bluestem	Andropogon gerardii	ANGE	1	200 - 400	10 - 20
switchgrass	Panicum virgatum	PAVI2	1	200 - 400	10 - 20
blue grama	Bouteloua gracilis	BOGR2	1	100 - 200	5 - 10
Indiangrass	Sorghastrum nutans	SONU2	1	100 - 200	5 - 10
Canada wildrye	Elymus canadensis	ELCA4	1	20 - 140	1 - 7
little bluestem	Schizachyrium scoparium	SCSC	1	20 - 100	1 - 5
buffalograss	Buchloe dactyloides	BUDA	1	20 - 60	1 - 3
sideoats grama	Bouteloua curtipendula	BOCU	1	0 - 100	0 - 5
slender wheatgrass	Elymus trachycaulus	ELTR7	1	0 - 100	0 - 5
needleandthread	Hesperostipa comata ssp. comata	HECOC8	1	0 - 20	0 - 1
prairie junegrass	Koeleria macrantha	KOMA	1	0 - 20	0 - 1
red threeawn	Aristida purpurea var. longiseta	ARPUL	1	0 - 20	0 - 1
sand dropseed	Sporobolus cryptandrus	SPCR	1	0 - 20	0 - 1
sixweeks fescue	Vulpia octoflora	VUOC	1	0 - 20	0 - 1
tall dropseed	Sporobolus compositus var. compositus	SPCOC2	1	0 - 20	0 - 1
sun sedge	Carex inops ssp. heliophila	CAINH2	1	20 - 40	1 - 2
other native grasses		2GP	1	20 - 100	1 - 5
FORBS			2	100 - 200	5 - 10
American vetch	Vicia americana	VIAM	2	20 - 40	1 - 2
rag sumpweed	Iva xanthifolia	IVXA	2	20 - 40	1 - 2
upright prairie coneflower	Ratibida columnifera	RACO3	2	20 - 40	1 - 2
Missouri goldenrod	Solidago missouriensis	SOMI2	2	0 - 40	0 - 2
curlycup gumweed	Grindelia squarrosa	GRSQ	2	0 - 20	0 - 1
false boneset	Brickellia eupatorioides	BREU	2	0 - 20	0 - 1
hairy goldaster	Heterotheca villosa	HEVI4	2	0 - 20	0 - 1
Louisiana sagewort	Artemisia ludoviciana	ARLU	2	0 - 20	0 - 1
Missouri milkvetch	Astragalus missouriensis	ASMI10	2	0 - 20	0 - 1
narrowleaf poisonvetch	Astragalus pectinatus	ASPE5	2	0 - 20	0 - 1
plains larkspur	Delphinium carolinianum ssp. virescens	DECAV2	2	0 - 20	0 - 1
prairie groundsel	Packera plattensis	PAPL12	2	0 - 20	0 - 1
purple prairieclover	Dalea purpurea var. purpurea	DAPUP	2	0 - 20	0 - 1
scarlet gaura	Gaura coccinea	GACO5	2	0 - 20	0 - 1
scarlet globemallow	Sphaeralcea coccinea	SPCO	2	0 - 20	0 - 1
slimflower scurfpea	Psoraleidium tenuiflorum	PSTE5	2	0 - 20	0 - 1
western ragweed	Ambrosia psilostachya	AMPS	2	0 - 20	0 - 1
other native forbs		2FP	2	20 - 100	1 - 5
SHRUBS			3	100 - 300	5 - 15
fourwing saltbush	Atriplex canescens	ATCA2	3	100 - 300	5 - 15
winterfat	Krascheninnikovia lanata	KRLA2	3	20 - 100	1 - 5
fringed sagebrush	Artemisia frigida	ARFR4	3	0 - 20	0 - 1
green plume rabbitbrush	Ericameria nauseosa ssp. nauseosa var. glabrata	ERNAG	3	0 - 20	0 - 1
plains pricklypear	Opuntia polyacantha	OPPO	3	0 - 20	0 - 1
rubber rabbitbrush	Ericameria nauseosa ssp. nauseosa	ERNAN5	3	0 - 20	0 - 1
other native forbs		2SHRUB	3	20 - 60	1 - 3

Annual Production lbs./acre	LOW	RV*	HIGH
GRASSES & GRASS-LIKES	1050	1650	2250
FORBS	75	150	225
SHRUBS	75	200	325
TREES			
TOTAL	1200	2000	2800

This list of plants and their relative proportions are based on near normal years. Fluctuations in species composition and relative production may change from year to year dependent upon precipitation or other climatic factors. *RV - Representative Value.

Plant Community Narratives

Following are the narratives for each of the described plant communities. These plant communities may not represent every possibility, but they probably are the most prevalent and repeatable plant communities. The plant composition table shown above has been developed from the best available knowledge at the time of this revision. As more data is collected, some of these plant communities may be revised or removed, and new ones may be added. None of these plant communities should necessarily be thought of as “Desired Plant Communities”. According to the USDA NRCS National Range and Pasture Handbook, Desired Plant Communities will be determined by the decision makers and will meet minimum quality criteria established by the NRCS. The main purpose for including any description of a plant community here is to capture the current knowledge and experience at the time of this revision.

Western Wheatgrass, Green Needlegrass, Big Bluestem, Fourwing Saltbush Plant Community

This is the interpretive plant community and is considered to be the Historic Climax Plant Community (HCPC). This community evolved with grazing by large herbivores and is well suited for grazing by domestic livestock and can be found on areas that are properly managed with prescribed grazing that allows for adequate recovery periods following each grazing event. The potential vegetation is about 75-90% grasses and grass-like plants, 5-10% forbs and 5-15% woody plants.

Major grasses include western wheatgrass, green needlegrass, big bluestem and switchgrass. Other grasses occurring on this community include blue grama, buffalograss, Canada wildrye and yellow Indiangrass. Major forbs and shrubs include American vetch, upright prairie coneflower, fourwing saltbush and winterfat.

This plant community is diverse, stable and productive. It is well suited to carbon sequestration, water yield, wildlife use by many species, livestock use and is esthetically pleasing. Community dynamics, nutrient cycle, water cycle and energy flow are functioning properly. Plant litter is properly distributed with very little movement off-site and natural plant mortality is very low. This community is resistant to many things except continuous grazing, plowing and/or development into urban or other uses.

Total annual production ranges from 1200 to 2800 pounds of air-dry vegetation per acre and will average 2000 pounds during an average year.

The following is an estimated growth curve of this plant community expected during a normal year. Vegetative growth begins earlier in the southern reaches (Baca, Bent, Kiowa, Las Animas and Prowers counties) of MLRA-67B. Vegetative growth will typically be suppressed during the months of June through August in these counties due to higher evapotranspiration rates.

Growth curve number: CO6701

Growth curve name: Cool season/warm season co-dominant; MLRA-67B; upland fine textured soils.

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	2	8	20	28	15	12	10	5	0	0

(monthly percentages of total annual growth)

Transitions or pathways leading to other plant communities are as follows:

- Continuous grazing without adequate recovery periods between grazing events will shift this plant community to the *Blue grama/Buffalograss Sod with Cool Season and Shrub Remnants Plant Community*.
- Non-use and lack of fire will move this plant community to the *Low Plant Density, Excessive Litter Plant Community*.

- Prescribed grazing that allows for adequate recovery opportunity following each grazing event and proper stocking will maintain the *Western Wheatgrass, Green Needlegrass, Big Bluestem, Fourwing Saltbush Plant Community (HCPC)*.

Blue Grama/Buffalograss Sod with Cool Season and Shrub Remnants Plant Community

This plant community evolved with continuous grazing without adequate recovery periods between each grazing event during the growing season. Recognition of this plant community will enable the land user to implement key management decisions before a significant ecological threshold is crossed.

Western wheatgrass, green needlegrass, fourwing saltbush and winterfat have been reduced to remnant amounts. Big bluestem, switchgrass, yellow Indiangrass, Canada wildrye and American vetch have been significantly reduced and may be missing from the plant community. Blue grama and buffalograss have increased in abundance, dominate the community, and are beginning to take on a sod appearance. Sand dropseed, red threeawn, sixweeks fescue, plains prickly pear and hairy goldaster have also increased. This plant community is at risk of losing key species that were present in the HCPC. Once these species are removed and other plants have increased, it will take a long time to bring them back by management alone. A substantial increase in financial investment will be required to replace the lost species in a shorter period of time.

Total aboveground carbon has been reduced due to decreases in forage and litter production. Reduction of rhizomatous wheatgrass, nitrogen fixing forbs, shrub component and increased warm season shortgrasses has begun to alter the biotic integrity of this community. Water and nutrient cycles are being impaired. This is an early stage of desertification.

Total annual production can vary from 400 to 1200 pounds of air-dry vegetation per acre and will average 800 pounds during an average year.

The following is an estimated growth curve of this plant community expected during a normal year. Vegetative growth begins earlier in the southern reaches (Baca, Bent, Kiowa, Las Animas and Prowers counties) of MLRA-67B. Vegetative growth will typically be suppressed during the months of June through August in these counties due to higher evapotranspiration rates.

Growth curve number: CO6702

Growth curve name: Warm season dominant, cool season sub-dominant; MLRA-67B, upland fine textured soils.

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	2	15	45	20	15	3	0	0	0

(monthly percentages of total annual growth)

Transitions or pathways leading to other plant communities are as follows:

- Continuous grazing without adequate recovery periods between grazing events shifts this plant community across an ecological threshold toward the *Blue Grama/Buffalograss Sod Plant Community*.
- Prescribed grazing with adequate recovery periods after each grazing occurrence during the growing season with a proper stocking rate will return the plant community back to the *Western Wheatgrass, Green Needlegrass, Big Bluestem, Fourwing Saltbush Plant Community (HCPC)*.

Low Plant Density, Excessive Litter Plant Community

This plant community occurs when grazing is removed for long periods of time in the absence of fire. Plant composition is similar to the HCPC, however, in time, individual species production and frequency will be lower. Much of the nutrients are tied up in excessive litter. The semiarid environment and the absence of animal traffic to break down litter slows nutrient cycling. Aboveground litter also limits sunlight from reaching plant crowns. Many plants, especially bunchgrasses die off. Thick litter and absence of grazing or fire reduce seed germination and establishment. This plant community will change rapidly with prescribed grazing which allows animal impact and adequate recovery periods between grazing events.

In advanced stages, plant mortality can increase and erosion may eventually occur if bare ground increases. Once this happens, an ecological threshold has been crossed, and it will require increased energy input in terms of practice cost and management to bring back.

Total annual production can vary from 800 to 2200 pounds of air-dry vegetation per acre and will average 1500 pounds during an average year.

The following is an estimated growth curve of this plant community expected during a normal year. Vegetative growth begins earlier in the southern reaches (Baca, Bent, Kiowa, Las Animas and Prowers counties) of MLRA-67B. Vegetative growth will typically be suppressed during the months of June through August in these counties due to higher evapotranspiration rates.

Growth curve number: CO6703

Growth curve name: Cool season/warm season co-dominant, excess litter; MLRA-67B; upland fine textured soils.

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	10	20	25	15	15	10	5	0	0

(monthly percentages of total annual growth)

Transitions or pathways leading to other plant communities are as follows:

- Prescribed grazing with adequate recovery periods between each grazing event and proper stocking can bring this plant community back to the *HCPC*.

Blue Grama/Buffalograss Sod Plant Community

This plant community evolved with continuous grazing and occurs frequently throughout most of the eastern plains of Colorado. Most, if not all of the key grass, forb and shrub species are absent. Western wheatgrass may persist in trace amounts, greatly reduced in vigor and not readily seen. Blue grama and buffalograss dominate the community with a tight “sodbound” structure. Red threeawn, sand dropseed, sixweeks fescue and hairy goldaster have increased.

This plant community is resistant to change due to grazing tolerance of buffalograss and blue grama. A significant amount production and diversity has been lost when compared to the HCPC. Loss of cool and tall warm season grasses, shrub component and nitrogen fixing forbs have negatively impacted energy flow and nutrient cycling. Water infiltration is reduced significantly due to the massive shallow root system “root pan”, characteristic of blue grama and buffalograss. Soil loss may be obvious where flow paths are connected.

It will take a very long time to restore this plant community back to the HCPC with management. Renovation would be very costly. Desertification is advanced.

Production ranges from 200 to 900 pounds of air day vegetation per acre per year and averages 650 pounds.

The following is an estimated growth curve of this plant community expected during a normal year. Vegetative growth begins earlier in the southern reaches (Baca, Bent, Kiowa, Las Animas and Prowers counties) of MLRA-67B. Vegetative growth will typically be suppressed during the months of June through August in these counties due to higher evapotranspiration rates.

Growth curve number: CO6707

Growth curve name: Warm season dominant; MLRA-67B; upland fine textured soils.

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	3	20	45	20	10	2	0	0	0

(monthly percentages of total annual growth)

Transitions or pathways leading to other plant communities are as follows:

- Heavy continuous grazing or excessive defoliation without adequate recovery periods following each grazing event will shift this plant community toward the *Red threeawn, Annuals, Bare Ground Plant Community*. This transition may take greater than 40 years. Erosion, loss of organic matter/carbon reserves and flooding are concerns.
- Long term prescribed grazing with adequate recovery periods following each grazing event and proper stocking over long periods of time will gradually move this plant community toward the *Blue Grama/Buffalograss Sod with Cool Season Remnants Plant Community* and eventually to the *Western Wheatgrass, Green Needlegrass, Big Bluestem, Fourwing Saltbush Plant Community (HCPC)* if a viable seed/vegetative source is still present. This process may take greater than 40 years.

Red Threeawn, Annuals, Bare Ground Plant Community

This plant community develops with heavy continuous grazing and/or occupation by prairie dogs. Red threeawn is the dominant species with sand dropseed present in lesser amounts. Blue grama may persist in localized areas. Introduced annuals such as kochia, Russian thistle, cocklebur and sunflower are present. Field bindweed can also be present, especially on prairie dog towns.

Litter levels are extremely low due to reduced production. Increased bare ground can cause erosion, off-site runoff and deposition when rainfall events are intense. The nutrient cycle, water cycle and overall energy flow are greatly impaired. Organic matter/carbon reserves are greatly reduced. Desertification is obvious.

Total annual production can vary from 0 to 200 pounds of air-dry vegetation per acre and will average 100 pounds during an average year.

The following is an estimated growth curve of this plant community expected during a normal year. Vegetative growth begins earlier in the southern reaches (Baca, Bent, Kiowa, Las Animas and Prowers counties) of MLRA-67B. Vegetative growth will typically be suppressed during the months of June through August in these counties due to higher evapotranspiration rates.

Growth curve number: CO6707

Growth curve name: Warm season dominant; MLRA-67B; upland fine textured soils.

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	3	20	45	20	10	2	0	0	0

(monthly percentages of total annual growth)

Transitions or pathways leading to other plant communities are as follows:

- Long term prescribed grazing with adequate recovery periods between each grazing event and proper stocking can eventually move this community back to the *Western Wheatgrass, Green Needlegrass, Big Bluestem, Fourwing Saltbush Plant Community (HCPC)* or associated successional plant communities, assuming an adequate seed/vegetative source is available. This transition may 40 to 80 years or more to achieve.

Go-back Land

Go-back land is created when the soil is tilled or farmed (sodbusted) and abandoned. All of the native plants are destroyed, soil organic matter is reduced, soil structure is changed and a plowpan or compacted layer is formed. Residual synthetic chemicals often remain from past farming operations and erosion processes are active.

Go-back land evolves through several plant communities beginning with an early annual plant community, which initiates the revegetation process. Plants such as Russian thistle, kochia and other annuals begin to establish. These plants give some protection from erosion and start to build minor levels of soil organic matter. This early annual plant community lasts for two to several years. Red threeawn, sand dropseed and several other early perennials can dominate the plant community for five to eight years or more. Buffalograss establishes next and dominates for many years. Eventually western wheatgrass, blue grama and other natives become reestablished.

Transitions or pathways leading to other plant communities are as follows:

- Very long term prescribed grazing that allows adequate recovery periods following each grazing event and proper stocking will eventually move the plant communities establishing on *Go-back Land* back to the *HCPC* or *Any Community*, assuming an adequate seed/vegetative source is available. This process takes many years (40-80 years or more).
- Range seeding followed with prescribed grazing can be used to establish and maintain the *Seeded Rangeland Plant Community*.

Go-back Land (eroded)

Eroded go-back land is created where tillage or farming and severe erosion has occurred. If the parent material that the original soil developed from is lost, then another ecosite will evolve. If the same parent material is present, then re-seeding or the slow process of developing soil and vegetation will start by similar processes as shown in the non-eroded *Go-back Land* above. This is a very slow process (100 years or more).

Seeded Rangeland

This plant community can vary considerably depending on how eroded the soil was, the species seeded, the stand that was established, how long ago the stand was established, and the management of the stand since establishment.

Transitions or pathways leading to other plant communities are as follows:

- Continuous grazing without adequate recovery period between grazing events can shift this plant community to a plant community resembling *Go-back Land*.
- Long term prescribed grazing with adequate recovery periods between grazing events will eventually move this plant community toward the *Western Wheatgrass, Green Needlegrass, Big Bluestem, Fourwing Saltbush Plant Community (HCPC)* or associated successional plant communities. This transition can take 40 years or more.

Ecological Site Interpretations

Animal Community – Wildlife Interpretations

Western Wheatgrass, Green Needlegrass, Big Bluestem, Fourwing Saltbush Plant Community (HCPC)

The structural diversity in the plant community found on the HCPC is attractive to a number of wildlife species. Common bird species expected on the HCPC include Cassin's and Brewer's sparrow, chestnut collared longspur, lark bunting, western meadowlark, and ferruginous and Swainson's hawks. The combination of mid-tall grasses and shrubs provides habitat for greater and lesser prairie chicken in the eastern reaches of MLRA-67. Scaled quail may also use this community.

White-tailed and black-tailed jackrabbit, badger, pronghorn, coyote, swift fox, plains pocket gopher, long-tailed weasel, and several species of mice are mammals that commonly use this plant community. Reptiles using this community include western rattlesnake, bullsnake, plains garter snake western hognose snake, racer, western box turtle, and six-lined racerunner.

Blue Grama/Buffalograss Sod with Cool Season and Shrub Remnants Plant Community; Low Plant Density, Excessive Litter Plant Community; Blue Grama/Buffalograss Sod Plant Community; Threawn, Annuals, Bare Ground Plant Community; and Go-back Land

The loss of taller grasses in these plant communities results in a shift of bird species away from the HCPC birds. Lark bunting, chestnut-collared longspur, western meadowlark, and Cassin's and Brewer's sparrow stop using these communities altogether. With the exception of the hawk species, most HCPC bird species would be only occasional users of these communities. On sites with adequate drainage, typical shortgrass prairie species such as horned lark, killdeer, long-billed curlew, McCown's longspur, mountain plover, burrowing owl, black-tailed prairie dog, and ferruginous hawk are dominant species.

Jackrabbit, black-tailed prairie dog, thirteen-lined ground squirrel, and desert cottontail rabbit are frequent users of these communities. All other mammal species from the HCPC may use the community. Reptiles using these communities exclusively are short-horned lizard and lesser earless lizard. Other reptiles using these communities include the species listed for the HCPC.

Seeded Rangeland

The wildlife species expected on seeded rangeland would be those listed for the plant community the seeding most resembles.

Other Potential Species

The plains spadefoot is the only common species of frog or toad inhabiting grasslands in Eastern Colorado. This species requires water for breeding. Tiger salamanders may be found on grassland sites, but require a water body for breeding. Either of these species may be found in any plant community if seasonal water requirements are met. Mule and white-tailed deer may use this ecological site, however the shrub cover is too low to provide escape or hiding cover. On ecological site locations near riparian areas, deer will use the vegetation for feeding. Big brown bats will use any plant community on this ecological site if a building site is in the area. The gray wolf, black-footed ferret, and wild bison used this ecological site in historic times. The wolf and ferret are thought to be extirpated from Eastern Colorado. Bison are currently found only as domestic livestock.

Animal Preferences (Quarterly – 1,2,3,4†)

Common Name	Cattle	Sheep	Horses	Deer	Antelope	Bison	Elk
Grasses and Grass-likes							
big bluestem	U D P D	U D U U	U D P D	U D U U	U D U U	U D P D	U D P D
blue grama	D P P D	D P P D	D P P D	D P P D	D P P D	D P P D	D P P D
buffalograss	D D P D	D D P D	D D P D	D D P D	D D P D	D D P D	D D P D
Canada wildrye	U D U U	N U N N	U D U U	N U N N	N U N N	U D U U	U D U U
green needlegrass	U P D D	U P D D	U P D D	U P D D	U P D D	U P D D	U P D D
Indiangrass	U D P D	U D U U	U D P D	U D U U	U D U U	U D P D	U D P D
little bluestem	U D P U	N D D N	U D P U	N D D N	N D D N	U D P U	U D P U
needleandthread	U P D D	N D N D	U P D D	N D N D	N D N D	U P D D	U P D D
prairie junegrass	U D U D	N D N U	U D U D	N D N U	N D N U	U D U D	U D U D
red threeawn	N N N N	N N N N	N N N N	N N N N	N N N N	N N N N	N N N N
sand dropseed	U D U N	N U D N	U D U N	N U D N	N U D N	U D U N	U D U N
sideoats grama	U D P U	U D P U	U D P U	U D P U	U D P U	U D P U	U D P U
sixweeks fescue	N D N N	N D N N	N D N N	N D N N	N D N N	N D N N	N D N N
slender wheatgrass	U P U U	N D U N	U P U U	N D U N	N D U N	U P U U	U P U U
switchgrass	U D D U	U D U U	U D D U	U D U U	U D U U	U D D U	U D D U
tall dropseed	N U N N	N U N N	N U N N	N U N N	N U N N	N U N N	N U N N
western wheatgrass	U P D D	U P D D	U P D D	U P D D	U P D D	U P D D	U P D D
sun sedge	U P D D	U P D D	U P D D	U P D D	U P D D	U P D D	U P D D
Forbs							
American vetch	D P P D	D P P D	D P P D	D P P D	D P P D	D P P D	D P P D
curlycup gumweed	U U U U	N N N N	U U U U	N N N N	N N N N	U U U U	U U U U
false boneset	U U D U	N D U N	U U D U	N D U N	N D U N	U U D U	U U D U
hairy goldaster	U U D U	N N N N	U U D U	N N N N	N N N N	U U D U	U U D U
Louisiana sagewort	U U U U	U U D U	U U U U	U U D U	U U D U	U U U U	U U U U
Missouri goldenrod	U U D U	N U U N	U U D U	N U U N	N U U N	U U D U	U U D U
Missouri milkvetch	U U U U	U D U U	U U U U	U D U U	U D U U	U U U U	U U U U
narrowleaf poisonvetch	U U U U	U D U U	U U U U	U D U U	U D U U	U U U U	U U U U
plains larkspur	T T T T	T T T T	T T T T	T T T T	T T T T	T T T T	T T T T
prairie groundsel	T T T T	T T T T	T T T T	T T T T	T T T T	T T T T	T T T T
purple prairie clover	U P P D	U P P U	U P P D	U P P U	U P P U	U P P D	U P P D
rag sumpweed	U U U U	N N N N	U U U U	N N N N	N N N N	U U U U	U U U U
scarlet gaura	U U D U	U D D U	U U D U	U D D U	U D D U	U U D U	U U D U
scarlet globemallow	U D D U	U P P U	U D D U	U P P U	U P P U	U D D U	U D D U
slimflower scurfpea	N N N N	N U U N	N N N N	N U U N	N U U N	N N N N	N N N N
upright prairie coneflower	U U D U	U P P U	U U D U	U P P U	U P P U	U U D U	U U D U
western ragweed	U D U U	U D U U	U D U U	U D U U	U D U U	U D U U	U D U U
Shrubs							
fourwing saltbush	P D D P	P D D P	P D D P	P D D P	P D D P	P D D P	P D D P
fringed sagebrush	U N N U	U D D U	U N N U	U D D U	U D D U	U N N U	U N N U
plains pricklypear	N N N N	N N N N	N N N N	N N N N	N N N N	N N N N	N N N N
rubber rabbitbrush	N N N D	D D D D	N N N D	D D D D	D D D D	N N N D	N N N D
winterfat	P P P P	P P P P	P P P P	P P P P	P P P P	P P P P	P P P P

N = not used; **U** = undesirable; **D** = desirable; **P** = preferred; **T** = toxic

† Quarters: 1 – Jan., Feb., Mar.; 2 – Apr., May, Jun.; 3 – Jul., Aug., Sep.; 4 – Oct., Nov., Dec.

Animal Community – Grazing Interpretations

The following table lists suggested initial stocking rates for cattle under continuous grazing (year long grazing or growing season long grazing) under normal growing conditions however, *continuous grazing is not recommended*. These are conservative estimates that should be used only as guidelines in the initial stages of the conservation planning process. Often, the current plant composition does not entirely match any particular plant community (described in this ecological site description). Because of this, a field visit is recommended, in all cases, to document plant composition and production. More precise carrying capacity estimates should eventually be calculated using the following stocking rate information along with animal preference data, particularly when grazers other than cattle are involved. Under more intensive grazing management, improved harvest efficiencies can result in an increased carrying capacity.

Plant Community	Production (lbs./acre)	Stocking Rate (AUM/acre)
W. Wheatgrass, Green Needlegrass, B. Grama, Big Bluestem (HCPC)	2000	0.64
Blue Grama/Buffalograss Sod w/Remnant Cool Seasons/Shrubs	800	0.26
Blue Grama/Buffalograss Sod	650	0.21
Low Plant Density, Excessive Litter	*	*
Red Threeawn, Annuals, Bare Ground	*	*

Grazing by domestic livestock is one of the major income-producing industries in the area. Rangelands in this area provide yearlong forage under prescribed grazing for cattle, sheep, horses and other herbivores. During the dormant period, livestock may need supplementation based on reliable forage analysis.

* Highly variable; stocking rate needs to be determined on site.

Hydrology Functions

Water is the principal factor limiting forage production on this site. This site is dominated by soils in hydrologic group B and D. Infiltration is moderate and runoff potential for this site varies from moderate to high depending on soil hydrologic group and ground cover. In many cases, areas with greater than 75% ground cover have the greatest potential for high infiltration and lower runoff. An example of an exception would be where short grasses form a strong sod and dominate the site. Areas where ground cover is less than 50% have the greatest potential to have reduced infiltration and higher runoff (refer to NRCS Section 4, National Engineering Handbook (NEH-4) for runoff quantities and hydrologic curves).

Recreational Uses

This site provides hunting, hiking, photography, bird watching and other opportunities. The wide varieties of plants that bloom from spring until fall have an esthetic value that appeals to visitors.

Wood Products

No appreciable wood products are present on the site.

Other Products

None noted.

Supporting Information

Associated Sites

- (067BY002CO) – Loamy (formerly Loamy Plains)
- (067BY008CO) – Loamy Slopes

Similar Sites

- (067BY037CO) – Saline Overflow
[moderately saline, alkali sacaton occurs on this site]

Inventory Data References

Information presented here has been derived from NRCS clipping data, numerous ocular estimates and other inventory data. Field observations from experienced range trained personnel were used extensively to develop this ecological site description. Specific data information is contained in individual landowner/user case files and other files located in county NRCS field offices.

Those involved in developing this site include: Harvey Sprock, Rangeland Management Specialist, NRCS; Ben Berlinger, Rangeland Management Specialist, NRCS; James Borchert, Soil Scientist, NRCS; Terri Skadeland, Biologist, NRCS.

State Correlation

This site is specific to Colorado.

Field Offices

Akron, Brighton, Burlington, Byers, Cheyenne Wells, Eads, Flagler, Fort Collins, Fort Morgan, Greeley, Holly, Hugo, Kiowa, Lakewood, Lamar, Longmont, Simla, Springfield, Sterling

Other References

High Plains Regional Climate Center, University of Nebraska, 830728 Chase Hall, Lincoln, NE 68583-0728. (<http://hpccsun.unl.edu>)

USDA, NRCS. National Water and Climate Center, 101 SW Main, Suite 1600, Portland, OR 97204-3224. (<http://wcc.nrcs.usda.gov>)

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Rennicke, J. 1990. Colorado Wildlife. Falcon Press, Helena and Billings, MT and CO Div. Wildlife, Denver CO. 138 pp.

Site Description Approval

/s/

03/25/2004

State Range Management Specialist

Date

APPENDIX 8A

PLANT SPECIES LIST

Field Work August 15, 2016				
SCIENTIFIC NAME-1	COMMON NAME-1	HABITAT-2	AB-3	COMMENTS
TREES				
Acer negundo	boxelder	RP	UC	
Acer species*	maple	RP	FC	
Celtis laevigata var. reticulata	netleaf hackberry	RP	UC	
Elaeagnus angustifolia*	Russian olive	RP	UC	noxious weed, B list
Fraxinus pennsylvanica*	green ash	RP	FC	
Juniperus scopulorum	Rocky Mountain juniper	RP	UC	
Malus species*	crabapple	RP	CM	
Picea pungens	blue spruce	RP	FC	
Pinus edulis	twoneedle pinyon pine	RP	FC	
Pinus ponderosa	ponderosa pine	RP	FC	
Platanus occidentalis*	American sycamore	RP	UC	
Populus deltoides subsp. monilifera	plains cottonwood	RP	CM	
Ulmus americana*	American elm	RP	CM	
Ulmus pumila*	Siberian elm	RP	CM	
SHRUBS & VINES				
Amelanchier utahensis	Utah serviceberry	RP	FC	
Clematis species	clematis	RP	UC	
Crataegus erythropoda	cerro hawthorn	RP, PS	UC	
Ericameria nauseosa	rubber rabbitbrush	RP, PS	FC	
Lonicera sp.*	honeysuckle	RP	CM	
Parthenocissus quinquefolia	Virginia creeper	RP, PS	FC	
Prunus americana	American plum	RP, PS	CM	
Prunus virginiana	chokecherry	RP	FC	
Quercus gambelii	Gambel oak	RP	FC	
Rhus trilobata	skunkbush sumac	RP	FC	
Ribes aureum	golden currant	RP	FC	
Rosa species*	domestic rose	RP	FC	
Rosa woodsii	Woods' rose	RP, PS	CM	
Syringa vulgaris*	lilac	RP	FC	
Toxicodendron rydbergii	western poison ivy	RP	UC	
Vitis riparia	riverbank grape	RP	UC	

FORBS				
<i>Alyssum minus</i> *	alyssum	PS	FC	
<i>Ambrosia psilostachya</i>	Cuman ragweed	PS	UC	
<i>Ambrosia trifida</i> *	giant ragweed	PS	UC	
<i>Artemisia ludoviciana</i>	white sage	PS	UC	
<i>Asparagus officinalis</i> *	garden asparagus	RP	UC	
<i>Cirsium arvense</i> *	Canadian thistle	RP	UC	noxious weed, B list
<i>Cirsium vulgare</i> *	bull thistle	RP	UC	noxious weed, B list
<i>Convolvulus arvensis</i> *	field bindweed	PS	CM	noxious weed, C list
<i>Equisetum arvense</i>	field horsetail	RP, PS	FC	
<i>Equisetum laevigatum</i>	smooth horsetail	RP	UC	
<i>Glycyrrhiza lepidota</i>	American licorice	RP, PS	CM	
<i>Heterotheca villosa</i>	hairy goldenaster	PS	FC	
<i>Lactuca serriola</i> *	prickly lettuce	PS	FC	
<i>Lathyrus latifolius</i> *	perennial pea	RP	UC	
<i>Malva neglecta</i> *	common mallow	PS	FC	
<i>Medicago sativa</i> *	alfalfa	PS	CM	
<i>Opuntia polyacantha</i>	hairspine pricklypear	PS	FC	
<i>Plantago lanceolata</i> *	narrowleaf plantain	PS	FC	
<i>Saponaria officinalis</i> *	bouncingbet	RP, PS	FC	noxious weed, B list
<i>Solidago canadensis</i>	Canada goldenrod	RP	UC	
<i>Symphyotrichum ericoides</i>	white heath aster	RP	FC	
<i>Taraxacum officinale</i> *	common dandelion	RP, PS	CM	
<i>Tragopogon dubius</i> *	yellow salsify	PS	FC	
<i>Trifolium pratensis</i> *	red clover	PS	FC	
<i>Verbascum thapsus</i> *	common mullein	PS	FC	noxious weed, C list
<i>Yucca glauca</i>	yucca, soapweed	RP	FC	
GRASSES				
<i>Agropyron cristatum</i> *	crested wheatgrass	RP	FC	
<i>Bromus arvensis</i> *	field brome	PS	CM	
<i>Bromus inermis</i> *	smooth brome	RP, PS	AB	
<i>Elymus species</i>	wheatgrass	PS	FC	
<i>Poa pratensis</i> *	Kentucky bluegrass	RP	CM	
<i>Secale cereale</i> *	cereal rye	PS	CM	

KEY

1-Nomenclature follows USDA Soil Conservation Service (2007).

2-As described in Section 6.2 of the report. Abbreviations are as follows:

Ditch Riparian/Urban Forest	RP
Tame Pasture	PS

3-Abundance codes are described as follows:

Abundant (AB)--easily found in proper habitat, a dominant cover type forming stands

Common (CM)--easily found in proper habitat, but not a dominant cover type

Fairly CM (FC)--occasionally found in proper habitat

Uncommon (UC)--not easily found even in the expected habitat

The highest level of abundance in any single habitat is noted. A species may be less abundant in other habitat types.

*--Introduced species, non-native, as classified in *A Catalogue of the Colorado Flora: A Biodiversity Baseline*. Vascular Plants: Weber and Wittman, electronic version 11-Mar-00.

APPENDIX 8B

NOXIOUS WEEDS

COLORADO NOXIOUS WEED LIST

Updated December 31, 2015

List A species in Colorado that are designated by the Commissioner for eradication:

African rue (*Peganum harmala*)
Bohemian knotweed (*Polygonum x bohemicum*)
Camelthorn (*Alhagi maurorum*)
Common crupina (*Crupina vulgaris*)
Cypress spurge (*Euphorbia cyparissias*)
Dyer's woad (*Isatis tinctoria*)
Elongated mustard (*Brassica elongata*)
Flowering rush (*Butomus umbellatus*)
Giant knotweed (*Polygonum sachalinense*)
Giant reed (*Arundo donax*)
Giant salvinia (*Salvinia molesta*)
Hairy willow-herb (*Epilobium hirsutum*)
Hydrilla (*Hydrilla verticillata*)
Japanese knotweed (*Polygonum cuspidatum*)
Meadow knapweed (*Centaurea nigrescens*)
Mediterranean sage (*Salvia aethiopsis*)
Medusahead (*Taeniatherum caput-medusae*)
Myrtle spurge (*Euphorbia myrsinites*)
Orange hawkweed (*Hieracium aurantiacum*)
Parrotfeather (*Myriophyllum aquaticum*)
Purple loosestrife (*Lythrum salicaria*)
Rush skeletonweed (*Chondrilla juncea*)
Squarrose knapweed (*Centaurea virgata*)
Tansy ragwort (*Senecio jacobaea*)
Yellow starthistle (*Centaurea solstitialis*)

List B weed species are species for which the Commissioner, in consultation with the state noxious weed advisory committee, local governments, and other interested parties, develops and implements state noxious weed management plans designed to stop the continued spread of these species:

Absinth wormwood (*Artemisia absinthium*)
Black henbane (*Hyoscyamus niger*)
Bouncingbet (*Saponaria officinalis*)
Bull thistle (*Cirsium vulgare*)
Canada thistle (*Cirsium arvense*)
Chinese clematis (*Clematis orientalis*)
Common tansy (*Tanacetum vulgare*)
Common teasel (*Dipsacus fullonum*)
Corn chamomile (*Anthemis arvensis*)
Cutleaf teasel (*Dipsacus laciniatus*)
Dalmatian toadflax, broad-leaved (*Linaria dalmatica*)
Dalmatian toadflax, narrow-leaved (*Linaria genistifolia*)
Dame's rocket (*Hesperis matronalis*)
Diffuse knapweed (*Centaurea diffusa*)

Eurasian watermilfoil (*Myriophyllum spicatum*)
Hoary cress (*Cardaria draba*)
Houndstongue (*Cynoglossum officinale*)
Jointed goatgrass (*Aegilops cylindrica*)
Leafy spurge (*Euphorbia esula*)
Mayweed chamomile (*Anthemis cotula*)
Moth mullein (*Verbascum blattaria*)
Musk thistle (*Carduus nutans*)
Oxeye daisy (*Leucanthemum vulgare*)
Perennial pepperweed (*Lepidium latifolium*)
Plumeless thistle (*Carduus acanthoides*)
Russian knapweed (*Acroptilon repens*)
Russian-olive (*Elaeagnus angustifolia*)
Salt cedar (*Tamarix chinensis*, *T. parviflora*, and *T. ramosissima*)
Scentless chamomile (*Tripleurospermum perforata*)
Scotch thistle (*Onopordum acanthium*, *O. tauricum*)
Spotted knapweed (*Centaurea stoebe*)
Spotted x diffuse knapweed hybrid (*Centaurea x psammogena* = *C. stoebe* x *C. diffusa*)
Sulfur cinquefoil (*Potentilla recta*)
Wild caraway (*Carum carvi*)
Yellow nutsedge (*Cyperus esculentus*)
Yellow toadflax (*Linaria vulgaris*)
Yellow x Dalmatian toadflax hybrid (*Linaria vulgaris* x *L. dalmatica*)

List C weed species are species for which the Commissioner, in consultation with the state noxious weed advisory committee, local governments, and other interested parties, will develop and implement state noxious weed management plans designed to support the efforts of local governing bodies to facilitate more effective integrated weed management on private and public lands. The goal of such plans will not be to stop the continued spread of these species but to provide additional education, research, and biological control resources to jurisdictions that choose to require management of List C species:

Bulbous bluegrass (*Poa bulbosa*)
Chicory (*Cichorium intybus*)
Common burdock (*Arctium minus*)
Common mullein (*Verbascum thapsus*)
Common St. Johnswort (*Hypericum perforatum*)
Downy brome (*Bromus tectorum*)
Field bindweed (*Convolvulus arvensis*)
Halogeton (*Halogeton glomeratus*)
Johnsongrass (*Sorghum halepense*)
Perennial sowthistle (*Sonchus arvensis*)
Poison hemlock (*Conium maculatum*)
Puncturevine (*Tribulus terrestris*)
Quackgrass (*Elymus repens*)
Redstem filaree (*Erodium cicutarium*)
Velvetleaf (*Abutilon theophrasti*)
Wild proso millet (*Panicum miliaceum*)

Colorado Department of Agriculture County Weed Programs

County: Jefferson

Species and Management Objectives (Definitions on page 2)

List B Species

Absinth wormwood: Eliminate by 2018
Black henbane: Eliminate by 2018
Bouncingbet: Suppress
Bull thistle: Eliminate by 2022
Canada thistle: Suppress
Chamomiles (corn, mayweed, scentless): Suppress
Chinese clematis: Eliminate by 2020
Common tansy: Eliminate by 2016
Common teasel: Contain
Cutleaf teasel: Contain
Dalmation toadflax: Suppress
Dames rocket: Suppress
Diffuse knapweed: Suppress
Eurasian watermilfoil: Suppress
Hoary cress: Suppress
Houndstongue: Suppress
Jointed goatgrass: Suppress
Leafy spurge: Suppress
Moth mullein: Eliminate by 2014
Musk thistle: Suppress
Oxeye daisy: Suppress
Perennial pepperweed: Contain
Plumeless thistle: Eliminate by 2020
Russian knapweed: Eliminate by 2021
Russian olive: Suppress
Salt cedar: Eliminate by 2021
Scotch thistle: Suppress
Spotted knapweed: Eliminate by 2020
Sulfur cinquefoil: Suppress
Wild caraway: Suppress
Yellow nutsedge: Suppress
Yellow toadflax: Suppress

“Elimination” means the removal or destruction of all emerged, growing plants of a population of List A or List B species designated for eradication by the Commissioner. It is the first step in achieving eradication and is succeeded by efforts to detect and destroy newly emerged plants arising from seed, reproductive propagule, or remaining root stock for the duration of the seed longevity for the particular species.

"Containment" means maintaining an intensively managed buffer zone that separates infested regions, where suppression activities prevail, from largely uninfested regions, where eradication activities prevail.

"Suppression" means reducing the vigor of noxious weed populations within an infested region, decreasing the propensity of noxious weed species to spread to surrounding lands, and mitigating the negative effects of noxious weed populations on infested lands. Suppression efforts may employ a wide variety of integrated management techniques.

Updated online October, 2016; Effective date January 5, 2016. Source:
https://docs.google.com/spreadsheets/d/1fHXmYI_VY0MGNqe0ZZzJ8NwXON-Lr3Rs8i_KvBY0Vug/edit?pref=2&pli=1#gid=611035992

APPENDIX 8C

CNHP INFORMATION

**APPENDIX 8C
FEDERAL AND COLORADO NATURAL HERITAGE PROGRAM
SPECIES STATUS CODE DEFINITIONS**

Federal Status:

U.S. Fish and Wildlife Service (Endangered and threatened wildlife and plants. 50 CFR 17.11 and 17.12, 1993)

LE Listed Endangered: defined as a species, subspecies, or variety in danger of extinction throughout all or a significant portion of its range.

LT Listed Threatened: defined as a species, subspecies, or variety likely to become endangered in the foreseeable future throughout all or a significant portion of its range.

C Candidate: taxa with sufficient information on biological vulnerability and threat(s) to support proposing to list as endangered or threatened.

Colorado Natural Heritage Program (CNHP) Imperilment Ranks

State imperilment ranks are based on the status of a species in an individual state. These ranks should not be interpreted as legal designations.

S1 Critically imperiled globally/state because of rarity (5 or fewer occurrences in the world/state; or 1,000 or fewer individuals), or because some factor of its biology makes it especially vulnerable to extinction.

S2 Imperiled globally/state because of rarity (6 to 20 occurrences, or 1,000 to 3,000 individuals), or because other factors demonstrably make it very vulnerable to extinction throughout its range.

S3 Vulnerable through its range or found locally in a restricted range (21 to 100 occurrences, or 3,000 to 10,000 individuals).

S4 Apparently secure globally/state, though it may be quite rare in parts of its range, especially at the periphery. Usually more than 100 occurrences and 10,000 individuals.

S5 Demonstrably secure globally/state, though it may be quite rare in parts of its range, especially at the periphery.

SX Presumed extinct globally, or extirpated within the state.

SU Unable to assign rank due to lack of available information.

SH Historically known, but usually not verified for an extended period of time.

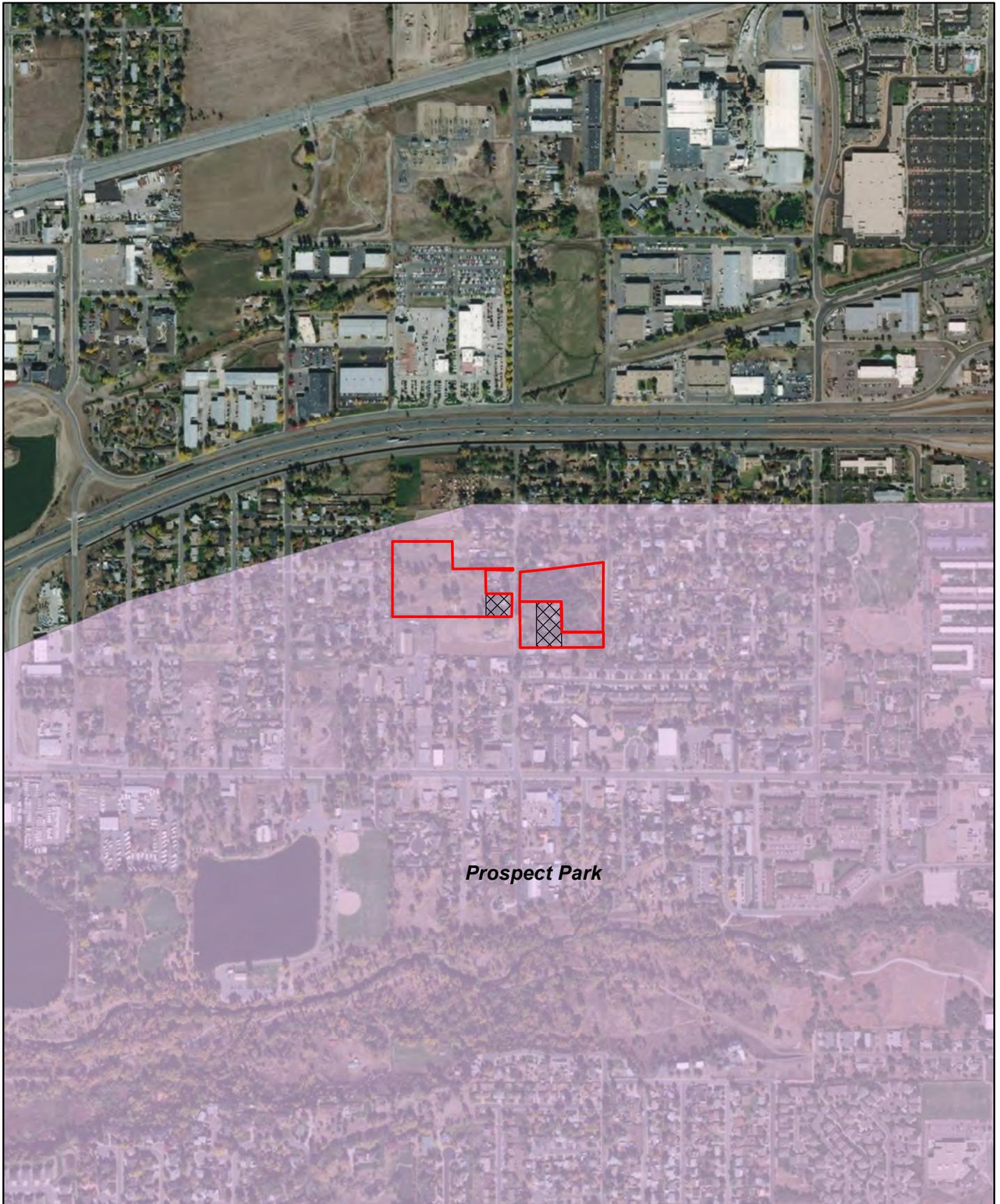
B Refers to the breeding season imperilment of elements that are not permanent residents.

N Refers to the non-breeding season imperilment of elements that are not permanent residents. Where no consistent location can be discerned for migrants or non-breeding populations, a rank of SZN is used.

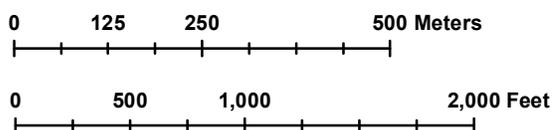
S? Indicates uncertainty about an assigned state rank.

Note: Where two numbers appear in a state or global rank (for example, S2S3), the actual rank of the element falls between the two numbers.

Potential Conservation Areas



Prospect Park



-  Heine Property
-  Building Envelopes
-  B2: Very High Biodiversity Significance

Data Source
Colorado Natural Heritage Program, 2015

Level 4 Potential Conservation Area (PCA) Report

Name Prospect Park

Site Code S.USCOHP*352

IDENTIFIERS

Site ID 1633 Site Class PCA
Site Alias None

Network of Conservation Areas (NCA)

<u>NCA Site ID</u>	<u>NCA Site Code</u>	<u>NCA Site Name</u>
-		No Data

Site Relations No Data

SITE DESCRIPTION

Minimum Elevation	5,280.00 Feet	1,609.00 Meters
Maximum Elevation	5,450.00 Feet	1,661.00 Meters

Site Description

The site is located along Clear Creek about 2.5 air miles east of Golden at the base of the Front Range foothills. The floodplain has been developed extensively upstream and downstream of the site. Gravel pits, urban developments, roads and trails are common throughout. In areas where the floodplains have vegetation and seasonal moisture from flooding, there is a matrix of native plants and remnants of plant communities that likely would have existed on the floodplains pre-development. These areas exist on parts of the Greenbelt where residential development has not proliferated. The dominant vegetation types are cottonwood riparian woodlands and non-native grasslands dominated by smooth brome (*Bromopsis inermis*). Common species in the vegetated parts of the floodplains include Plains cottonwood (*Populus deltoides* subsp. *monilifera*), narrowleaf cottonwood (*Populus angustifolia*), thinleaf alder (*Alnus incana*), water birch (*Betula occidentalis*), coyote willow (*Salix exigua*), narrowleaf cattail (*Typha angustifolia*), slenderleaf false foxglove (*Agalinis tenuifolia*), cutleaf teasel (*Dipsacus laciniatus*), Canada goldenrod (*Solidago canadensis*), arctic rush (*Juncus arcticus*), three-square bulrush (*Schoenoplectus pungens* = *Scirpus americanus*), and redbud (*Agrostis gigantea*). Cottonwood riparian woodlands and habitat for Ute ladies'-tresses (*Spiranthes diluvialis*), a federally Threatened species, are found within the site. A meadow in the Greenbelt supports a newly described subspecies of an earthstar fungus (*Mycenastrum corium* subsp. *ferrugineum* - Miller et al. 2005). There are many former creek channels which are typically dominated by wetland vegetation such as cattails (*Typha* spp.) and coyote willow. Small creeks flow across the floodplain throughout the summer that are fed by seeps along the ridge to the south and by storm water runoff. Many of these creeks flow through dense vegetation that is virtually impenetrable, such as thickets of common buckthorn (*Rhamnus cathartica*), poison ivy (*Toxicodendron rydbergii*) and nightshade (*Solanum dulcamara*). Two areas in the site have components of rare communities. These include the Plains cottonwood - chokecherry woodland and the Plains cottonwood - snowberry (*Symphoricarpos* sp.) woodland. Non-native species are extremely common and include many noxious weed species. Some areas have been surveyed since the 1990's and it is interesting to note that northern green orchid (*Limnorchis hyperborea*), great blue lobelia (*Lobelia syphilitica*), and salt spring checkerbloom (*Sidalcea neomexicana*) were common associates of *Spiranthes diluvialis*. None of these plants were observed during the 2000 or 2010 surveys associated with the orchids. The geology is diverse across the Clear Creek valley including modern and quaternary alluviums some with large amounts of gravels. On the south side of the creek, in the vicinity of the gravel mines, sedimentary rock dominates with sandstones, mudstones, claystones and conglomerates of the Denver and Arapahoe formations (Tweto 1979). The upland soils consist of the Nunn-Urban and Engelwood-Urban land complexes with 0 to 2 percent slopes. The wetland floodplains include gravel pits filled with water (ponds), Torrifluvents, very gravelly with 0 to 3 percent slopes, Alda loam with 0 to 2 percent slopes and Loveland variant gravelly sandy loam with 0-2 percent slopes (USDA NRCS 2008).

Key Environmental Factors

Floodplains that still support native vegetation cover, and other hydrological features that support periodic flooding and intact ecological processes which support the rare plants dependent on them.

Climate Description

Between 1962 and 2012 the nearby weather station at Lakewood recorded an average annual precipitation of 16.43 inches. Snowfall is greatest in March, spring/summer rains peak in April-July. The average annual maximum temperature is 63.6°F (17.6°C) and the average annual minimum temperature is 36.4° F (2.44° C, WRCC 2012).

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Land Use History

This section of Clear Creek has been extensively developed as an urban corridor. Gravel mines, homesteads, factories, farms, city buildings, dense residential developments, roads, trails, city parks and open space are some of the developments that have occurred in the vicinity of the river floodplain.

Cultural Features

No Data

SITE DESIGN

Site Map Y - Yes

Mapped Date 01/17/2001

Designer Anderson, D.G.

Boundary Justification

The boundary encompasses a broad area known to support *Spiranthes*, including potential areas for expansion that include appropriate habitat. Due to the occasional presence of potential habitat along the riparian corridor of Clear Creek, and the presence of several small subpopulations, all of the corridor east to a historically known location for the state-rare *Ribes americana* is included. The extensive cottonwood riparian woodland in the floodplain is circumscribed due to the potential for restoration to high quality natural communities throughout the area. The area west of the Miller Trailhead is included due to the presence of a new to science subspecies of an earthstar fungus (*Mycenastrum corium* subsp. *ferrugineum*). In general, the entire floodplain, both private and public portions, between Youngsfield Street and 44th Street, is included to encompass a functional portion of the riparian system on which the plants depend.

Primary Area 3,860.84 Acres

1,562.43 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B2: Very High Biodiversity Significance

Biodiversity Significance Comments

This site includes a good (B-ranked) occurrence of a globally imperiled (G2G3/S2) and federally Threatened plant species, the Ute ladies' tresses (*Spiranthes diluvialis*). Counts of over 400 individuals have been obtained in past years for two large subpopulations (Smith and Anderson 2010). In addition, a new-to-science subspecies of an earthstar fungus was discovered at the site. The new subspecies was officially described by Miller et. al. in 2005. Currently this is the only known occurrence in the world of this subspecies of earthstar (*Mycenastrum corium* ssp. *ferrugineum*), which is considered to be both globally and state critically imperiled (G5T1/S1).

Other Values Rank No Data

Other Values Comments

Two areas in the site have components of very rare communities. These include the Plains cottonwood (*Populus deltoides* subsp. *monilifera*) - chokecherry (*Prunus virginiana*) woodland and the Plains cottonwood - snowberry (*Symphoricarpos* sp.) woodland. However, these examples may be remnants of the community type that naturally occurred there. Although their quality is poor, these areas could serve as references for restoration of these community types in other parts of the greenbelt where conditions would be appropriate for their establishment. Historically, an occurrence of the state rare American currant (*Ribes americanum*) was documented, but it has not been relocated since the early 1900's. In addition, there are six plants that ranked 7 or above on the Colorado Floristic Quality Index (Rocchio 2007): slenderleaf false foxglove (*Agalinis tenuifolia*), water birch (*Betula occidentalis*), great blue lobelia (*Lobelia syphilitica*), slender green orchid (*Limorchis hyperborea*), Ute ladies' tresses (*Spiranthes diluvialis*), and prairie cordgrass (*Spartina pectinata*). Coefficient of Conservation values range from 0-10 with 10 ranks representing species that are always found in unaltered high quality habitats. The presence of species with high FQI values (7-10) is indicative of the high quality of the habitats where these rare plants were found.

ASSOCIATED ELEMENTS OF BIODIVERSITY

Element State ID	State Scientific Name	State Common Name	Global Rank	State Rank	Driving Site Rank
44191	<i>Mycenastrum corium</i> ssp. <i>ferrugineum</i>	earthstar	G5T1	S1	Y
17998	<i>Spiranthes diluvialis</i>	Ute ladies' tresses	G2G3	S2	Y

Level 4 Potential Conservation Area (PCA) Report

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LAND MANAGEMENT ISSUES

Land Use Comments

Much of the land is part of the Wheat Ridge Greenbelt and is used for recreation including hiking, biking and fishing activities. Residential and urban developments surround the area.

Natural Hazard Comments

Extensive populations of poison ivy and buckthorn that are virtually impenetrable can be encountered off the trail system.

Exotics Comments

B-List exotic species (Colorado Weed Management Association 2009) were found in the impacted wetlands and upland areas: cutleaf teasel (*Dipsacus laciniata*), Russian olive (*Elaeagnus angustifolia*), Canada thistle (*Breca arvensis*), diffuse knapweed (*Acosta diffusa*), yellow toadflax (*Linaria vulgaris*) and leafy spurge (*Euphorbia esula*). C-List: common mullein (*Verbascum thapsus*). Other non-native species include: smooth brome (*Bromopsis inermis*), redtop (*Agrostis gigantea*), bittersweet nightshade (*Solanum dulcamara*), rabbitfootgrass (*Polypogon monspeliensis*), redtop (*Agrostis gigantea*), alfalfa (*Medicago sativa*), plantain (*Plantago major*) and sweetclover (*Melilotus alba*). Many of the noxious weeds occur in the wetlands with the threatened orchids.

Offsite

No Data

Information Needs

No Data

REFERENCES

<u>Reference ID</u>	<u>Full Citation</u>
167313	Anderson, D. and J. Stevens. 2001. Wheat Ridge Open Space Biological Inventory. Prepared for the City of Wheat Ridge.
198884	Colorado Weed Management Association (CWMA). 2009. Noxious weeds of Colorado. 10th Edition.
198925	Miller, O.K. Jr, R. Brace and V. Evenson. 2005. A new subspecies of <i>Mycenastrum corium</i> from Colorado. <i>Mycologia</i> March/April 2005 vol. 97. No. 2 pp. 530-533.
198887	Rocchio, J. 2007. Floristic quality assessment indices for Colorado plant communities. Prepared for the Colorado Department of Natural Resources Division of Wildlife, Wetlands Program, Denver, Colorado and the U.S. Environmental Protection Agency, Region 8, Denver, Colorado. Colorado Natural Heritage Program, Fort Collins, Colorado
198924	Rondeau, R., D.G. Anderson and A. Lavender. 2011. Noxious weed monitoring at the U.S. Air Force Academy - Year 6 results. Prepared for the U.S. Air Force Academy Department of Natural Resources. Colorado Natural Heritage Program, Fort Collins, Colorado.
198851	Sovell, J., P. Smith, D. Culver, S. Panjabi and J. Stevens. 2012. CNHP Final Report: Survey of Critical Biological Resources in Jefferson County, Colorado. Colorado Natural Heritage Program, Fort Collins, CO.
192747	Tweto, O. 1979. Geologic Map of Colorado, 1:500,000. United States Geological Survey, Department of Interior, and Geologic Survey of Colorado, Denver, CO.
198885	USDA Natural Resource Conservation Service. 2008. Soil Survey Geographic (SSURGO) Database for Golden Area, Colorado, Parts of Denver, Douglas, Jefferson and Park Counties, Colorado. Fort Worth, TX: United States Department of Agriculture, Natural Resource Conservation Service.
198883	WRCC. 2011. Western Regional Climate Center. Division of Atmospheric Sciences, Desert Research Institute. Reno, Nevada. < http://www.wrcc.dri.edu >. Accessed 2011.

ADDITIONAL TOPICS

Additional Topics

Original site design by Anderson, D.G. 2001-01-17.

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LOCATORS

Nation United States Latitude 394627N
State Colorado Longitude 1050726W

Quad Code Quad Name

39105-G1 Arvada
39105-G2 Golden

County

Watershed Code Watershed Name

10190004 Clear

VERSION

Version Date 03/21/2012

Version Author Smith, P.F.

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APPENDIX 9A

POTENTIAL VERTEBRATE WILDLIFE

SPECIES LIST

A list of Occurrence and Abundance Classification Criteria are found at the end of this list.				
Common Name	Scientific Name	Occurrence Code	Abundance Code	Confirmed on Property
AMPHIBIANS				
Plains Spadefoot	<i>Spea bombifrons</i>	Known to Occur	Uncommon	
Great Plains Toad	<i>Bufo cognatus</i>	Known to Occur	Unknown	
Western Chorus Frog	<i>Pseudacris triseriata</i>	Known to Occur	Common	
BIRDS				
Turkey Vulture	<i>Cathartes aura</i>	Known to Occur	Uncommon	Yes
Osprey	<i>Pandion haliaetus</i>	Known to Occur	Uncommon	
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Known to Occur	Unknown	
Northern Harrier	<i>Circus cyaneus</i>	Known to Occur	Rare	
Sharp-shinned Hawk	<i>Accipiter striatus</i>	Known to Occur	Uncommon	
Cooper's Hawk	<i>Accipiter cooperii</i>	Known to Occur	Uncommon	
Northern Goshawk	<i>Accipiter gentilis</i>	Known to Occur	Uncommon	
Swainson's Hawk	<i>Buteo swainsoni</i>	Known to Occur	Fairly Common	Yes
Red-tailed Hawk	<i>Buteo jamaicensis</i>	Known to Occur	Fairly Common	Yes
Ferruginous Hawk	<i>Buteo regalis</i>	Known to Occur	Unknown	
Golden Eagle	<i>Aquila chrysaetos</i>	Known to Occur	Uncommon	
American Kestrel	<i>Falco sparverius</i>	Known to Occur	Fairly Common	Yes
Merlin	<i>Falco columbarius</i>	Known to Occur	Rare	
Prairie Falcon	<i>Falco mexicanus</i>	Known to Occur	Rare	
Peregrine Falcon	<i>Falco peregrinus</i>	Known to Occur	Unknown	
Killdeer	<i>Charadrius vociferus</i>	Known to Occur	Common	
California Gull	<i>Larus californicus</i>	Known to Occur	Unknown	
Forster's Tern	<i>Sterna forsteri</i>	Known to Occur	Unknown	
Least Tern	<i>Sterna antillarum</i>	Known to Occur	Unknown	
Black Tern	<i>Chlidonias niger</i>	Known to Occur	Unknown	
Rock Pigeon	<i>Columba livia</i>	Known to Occur	Abundant	Yes
Mourning Dove	<i>Zenaida macroura</i>	Known to Occur	Abundant	Yes
Band-tailed Pigeon	<i>Columba fasciata</i>	Known to Occur	Uncommon	
Eurasian Collared-Dove	<i>Streptopelia decaocto</i>	Known to occur	Common	Yes
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	Known to Occur	Unknown	
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	Known to Occur	Uncommon	
Barn Owl	<i>Tyto alba</i>	Known to Occur	Rare	

Common Name	Scientific Name	Occurrence Code	Abundance Code	Confirmed on Property
Eastern Screech-Owl	<i>Otus asio</i>	Known to Occur	Uncommon	Yes
Great Horned Owl	<i>Bubo virginianus</i>	Known to Occur	Fairly Common	Yes
Long-eared Owl	<i>Asio otus</i>	Known to Occur	Rare	
Short-eared Owl	<i>Asio flammeus</i>	Known to Occur	Rare	
Common Nighthawk	<i>Chordeiles minor</i>	Known to Occur	Fairly Common	
Common Poorwill	<i>Phalaenoptilus nuttallii</i>	Known to Occur	Fairly Common	
Chimney Swift	<i>Chaetura pelagica</i>	Known to Occur	Fairly Common	
White-throated Swift	<i>Aeronautes saxatalis</i>	Known to Occur	Common	
Black-chinned Hummingbird	<i>Archilochus alexandri</i>	Known to Occur	Rare	
Calliope Hummingbird	<i>Stellula calliope</i>	Known to Occur	Rare	
Broad-tailed Hummingbird	<i>Selasphorus platycercus</i>	Known to Occur	Fairly Common	Yes
Rufous Hummingbird	<i>Selasphorus rufus</i>	Known to Occur	Uncommon	Yes
Belted Kingfisher	<i>Ceryle alcyon</i>	Known to Occur	Uncommon	
Lewis' Woodpecker	<i>Melanerpes lewis</i>	Known to Occur	Uncommon	
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	Known to Occur	Uncommon	
Downy Woodpecker	<i>Picoides pubescens</i>	Known to Occur	Uncommon	Yes
Hairy Woodpecker	<i>Picoides villosus</i>	Known to Occur	Uncommon	Yes
Northern Flicker	<i>Colaptes auratus</i>	Known to Occur	Common	Yes
Olive-sided Flycatcher	<i>Contopus cooperi</i>	Known to Occur	Uncommon	
Western Wood-Pewee	<i>Contopus sordidulus</i>	Known to Occur	Common	Yes
Willow Flycatcher	<i>Empidonax traillii</i>	Known to Occur	Uncommon	
Least Flycatcher	<i>Empidonax minimus</i>	Known to Occur	Casual/Accidental	
Hammond's Flycatcher	<i>Empidonax hammondi</i>	Known to Occur	Fairly Common	
Dusky Flycatcher	<i>Empidonax oberholseri</i>	Known to Occur	Uncommon	
Cordilleran Flycatcher	<i>Empidonax occidentalis</i>	Known to Occur	Fairly Common	
Eastern Phoebe	<i>Sayornis phoebe</i>	Known to Occur	Unknown	
Say's Phoebe	<i>Sayornis saya</i>	Known to Occur	Uncommon	
Western Kingbird	<i>Tyrannus verticalis</i>	Known to Occur	Common	
Eastern Kingbird	<i>Tyrannus tyrannus</i>	Known to Occur	Fairly Common	
Horned Lark	<i>Eremophila alpestris</i>	Known to Occur	Common	
Tree Swallow	<i>Tachycineta bicolor</i>	Known to Occur	Fairly Common	
Violet-green Swallow	<i>Tachycineta thalassina</i>	Known to Occur	Common	
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	Known to Occur	Fairly Common	
Bank Swallow	<i>Riparia riparia</i>	Known to Occur	Common	
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	Known to Occur	Abundant	

Common Name	Scientific Name	Occurrence Code	Abundance Code	Confirmed on Property
Barn Swallow	<i>Hirundo rustica</i>	Known to Occur	Abundant	Yes
Blue Jay	<i>Cyanocitta cristata</i>	Known to Occur	Fairly Common	Yes
Black-billed Magpie	<i>Pica pica</i>	Known to Occur	Common	Yes
American Crow	<i>Corvus brachyrhynchos</i>	Known to Occur	Common	Yes
Common Raven	<i>Corvus corax</i>	Known to Occur	Fairly Common	
Black-capped Chickadee	<i>Poecile atricapillus</i>	Known to Occur	Fairly Common	Yes
Mountain Chickadee	<i>Poecile gambeli</i>	Known to Occur	Common	
White-breasted Nuthatch	<i>Sitta carolinensis</i>	Known to Occur	Fairly Common	Yes
Rock Wren	<i>Salpinctes obsoletus</i>	Known to Occur	Fairly Common	Yes
Canyon Wren	<i>Catherpes mexicanus</i>	Known to Occur	Uncommon	
Carolina Wren	<i>Thryothorus ludovicianus</i>	Known to Occur	Unknown	
Bewick's Wren	<i>Thryomanes bewickii</i>	Known to Occur	Common	
House Wren	<i>Troglodytes aedon</i>	Known to Occur	Common	Yes
Ruby-crowned Kinglet	<i>Regulus calendula</i>	Known to Occur	Common	
Eastern Bluebird	<i>Sialia sialis</i>	Known to Occur	Unknown	
Western Bluebird	<i>Sialia mexicana</i>	Known to Occur	Uncommon	
Mountain Bluebird	<i>Sialia currucoides</i>	Known to Occur	Common	Yes
Townsend's Solitaire	<i>Myadestes townsendi</i>	Known to Occur	Fairly Common	
Veery	<i>Catharus fuscescens</i>	Known to Occur	Unknown	
Swainson's Thrush	<i>Catharus ustulatus</i>	Known to Occur	Fairly Common	
Hermit Thrush	<i>Catharus guttatus</i>	Known to Occur	Common	
American Robin	<i>Turdus migratorius</i>	Known to Occur	Common	Yes
Gray Catbird	<i>Dumetella carolinensis</i>	Known to Occur	Uncommon	
Northern Mockingbird	<i>Mimus polyglottos</i>	Known to Occur	Rare	
Sage Thrasher	<i>Oreoscoptes montanus</i>	Known to Occur	Rare	
Brown Thrasher	<i>Toxostoma rufum</i>	Known to Occur	Very Rare	
American Pipit	<i>Anthus rubescens</i>	Known to Occur	Fairly Common	
Bohemian Waxwing	<i>Bombycilla garrulus</i>	Known to Occur	Unknown	
Cedar Waxwing	<i>Bombycilla cedrorum</i>	Known to Occur	Unknown	
Northern Shrike	<i>Lanius excubitor</i>	Known to Occur	Uncommon	
Loggerhead Shrike	<i>Lanius ludovicianus</i>	Known to Occur	Rare	
European Starling	<i>Sturnus vulgaris</i>	Known to Occur	Abundant	Yes
Plumbeous Vireo	<i>Vireo plumbeus</i>	Known to Occur	Fairly Common	
Warbling Vireo	<i>Vireo gilvus</i>	Known to Occur	Common	
Red-eyed Vireo	<i>Vireo olivaceus</i>	Known to Occur	Rare	

Common Name	Scientific Name	Occurrence Code	Abundance Code	Confirmed on Property
Golden-winged Warbler	<i>Vermivora chrysoptera</i>	Known to Occur	Unknown	
Orange-crowned Warbler	<i>Vermivora celata</i>	Known to Occur	Rare	
Virginia's Warbler	<i>Vermivora virginiae</i>	Known to Occur	Fairly Common	
Yellow Warbler	<i>Dendroica petechia</i>	Known to Occur	Fairly Common	Yes
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>	Known to Occur	Casual\Accidental	
Yellow-rumped Warbler	<i>Dendroica coronata</i>	Known to Occur	Common	Yes
Black-throated Gray Warbler	<i>Dendroica nigrescens</i>	Known to Occur	Unknown	
American Redstart	<i>Setophaga ruticilla</i>	Known to Occur	Rare	
Ovenbird	<i>Seiurus aurocapillus</i>	Known to Occur	Very Rare	
Northern Waterthrush	<i>Seiurus noveboracensis</i>	Known to Occur	Unknown	
MacGillivray's Warbler	<i>Oporornis tolmiei</i>	Known to Occur	Uncommon	
Common Yellowthroat	<i>Geothlypis trichas</i>	Known to Occur	Fairly Common	
Hooded Warbler	<i>Wilsonia citrina</i>	Known to Occur	Casual\Accidental	
Wilson's Warbler	<i>Wilsonia pusilla</i>	Known to Occur	Fairly Common	Yes
Yellow-breasted Chat	<i>Icteria virens</i>	Known to Occur	Fairly Common	
Western Tanager	<i>Piranga ludoviciana</i>	Known to Occur	Fairly Common	
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	Known to Occur	Casual\Accidental	
Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	Known to Occur	Fairly Common	
Blue Grosbeak	<i>Guiraca caerulea</i>	Known to Occur	Fairly Common	
Lazuli Bunting	<i>Passerina amoena</i>	Known to Occur	Fairly Common	Yes
Indigo Bunting	<i>Passerina cyanea</i>	Known to Occur	Uncommon	Yes
Green-tailed Towhee	<i>Pipilo chlorurus</i>	Known to Occur	Common	
Spotted Towhee	<i>Pipilo maculatus</i>	Known to Occur	Fairly Common	Yes
Rufous-crowned Sparrow	<i>Aimophila ruficeps</i>	Known to Occur	Unknown	
Chipping Sparrow	<i>Spizella passerina</i>	Known to Occur	Common	Yes
Brewer's Sparrow	<i>Spizella breweri</i>	Known to Occur	Rare	
Field Sparrow	<i>Spizella pusilla</i>	Known to Occur	Unknown	
Vesper Sparrow	<i>Poocetes gramineus</i>	Known to Occur	Common	Yes
Lark Sparrow	<i>Chondestes grammacus</i>	Known to Occur	Fairly Common	
Lark Bunting	<i>Calamospiza melanocorys</i>	Known to Occur	Uncommon	
Savannah Sparrow	<i>Passerculus sandwichensis</i>	Known to Occur	Fairly Common	
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	Known to Occur	Uncommon	
Fox Sparrow	<i>Passerella iliaca</i>	Known to Occur	Uncommon	
Song Sparrow	<i>Melospiza melodia</i>	Known to Occur	Fairly Common	
Lincoln's Sparrow	<i>Melospiza lincolni</i>	Known to Occur	Common	

Common Name	Scientific Name	Occurrence Code	Abundance Code	Confirmed on Property
White-crowned Sparrow	Zonotrichia leucophrys	Known to Occur	Common	Yes
Dark-eyed Junco	Junco hyemalis	Known to Occur	Common	Yes
Bobolink	Dolichonyx oryzivorus	Known to Occur	Uncommon	
Red-winged Blackbird	Agelaius phoeniceus	Known to Occur	Abundant	Yes
Western Meadowlark	Sturnella neglecta	Known to Occur	Common	
Yellow-headed Blackbird	Xanthocephalus xanthocephalus	Known to Occur	Abundant	
Brewer's Blackbird	Euphagus cyanocephalus	Known to Occur	Common	
Common Grackle	Quiscalus quiscula	Known to Occur	Abundant	Yes
Brown-headed Cowbird	Molothrus ater	Known to Occur	Common	
Bullock's Oriole	Icterus bullockii	Known to Occur	Common	
Cassin's Finch	Carpodacus cassinii	Known to Occur	Fairly Common	Yes
House Finch	Carpodacus mexicanus	Known to Occur	Abundant	Yes
Pine Siskin	Carduelis pinus	Known to Occur	Common	
Lesser Goldfinch	Carduelis psaltria	Known to Occur	Fairly Common	
American Goldfinch	Carduelis tristis	Known to Occur	Fairly Common	Yes
Evening Grosbeak	Coccothraustes vespertinus	Known to Occur	Fairly Common	
House Sparrow	Passer domesticus	Known to Occur	Fairly Common	Yes
MAMMALS				
Common Name	Scientific Name	Occurrence Code	Abundance Code	
Virginia Opossum	Didelphis virginiana	Known to Occur	Casual/Accidental	
Least Shrew	Cryptotis parva	Known to Occur	Uncommon	
Western Small-footed Myotis	Myotis ciliolabrum	Known to Occur	Common	
Long-eared Myotis	Myotis thysanodes	Likely to Occur	Undetermined	
Little Brown Myotis	Myotis lucifugus	Likely to Occur	Undetermined	
Fringed Myotis	Myotis thysanodes	Likely to Occur	Undetermined	
Silver-haired Bat	Lasiurus noctivagans	Known to Occur	Common	
Long-legged Myotis	Myotis volans	Likely to Occur	Undetermined	
Hoary Bat	Lasiurus cinereus	Likely to Occur	Undetermined	
Big Brown Bat	Eptesicus fuscus	Likely to Occur	Undetermined	
Townsend's Big-eared Bat	Plecotus townsendii	Likely to Occur	Undetermined	
Eastern Cottontail	Sylvilagus floridanus	Known to Occur	Uncommon	
Spotted Ground Squirrel	Spermophilus spilosoma	Known to Occur	Uncommon	
Thirteen-lined Ground Squirrel	Spermophilus tridecemlineatus	Known to Occur	Common	
Rock Squirrel	Spermophilus variegatus	Known to Occur	Fairly Common	

Common Name	Scientific Name	Occurrence Code	Abundance Code	Confirmed on Property
Fox Squirrel	<i>Sciurus niger</i>	Known to Occur	Common	Yes
Plains Pocket Mouse	<i>Perognathus flavescens</i>	Known to Occur	Fairly Common	
Plains Harvest Mouse	<i>Reithrodontomys montanus</i>	Likely to Occur	Unknown	
Western Harvest Mouse	<i>Reithrodontomys megalotis</i>	Likely to Occur	Unknown	
Deer Mouse	<i>Peromyscus maniculatus</i>	Known to Occur	Abundant	
Northern Grasshopper Mouse	<i>Onychomys leucogaster</i>	Known to Occur	Fairly Common	
Mexican Woodrat	<i>Neotoma mexicana</i>	Known to Occur	Fairly Common	
House Mouse	<i>Mus musculus</i>	Known to Occur	Abundant	Yes
Norway Rat	<i>Rattus norvegicus</i>	Known to Occur	Common	
Meadow Vole	<i>Microtus pennsylvanicus</i>	Known to Occur	Common	
Coyote	<i>Canis latrans</i>	Known to Occur	Abundant	
Red Fox	<i>Vulpes vulpes</i>	Known to Occur	Abundant	Yes
Gray Fox	<i>Urocyon cinereoargenteus</i>	Known to Occur	Uncommon	
Raccoon	<i>Procyon lotor</i>	Known to Occur	Abundant	Yes
Striped Skunk	<i>Mephitis mephitis</i>	Known to Occur	Abundant	Yes
Mule Deer	<i>Odocoileus hemionus</i>	Known to Occur	Abundant	Yes
White-tailed Deer	<i>Odocoileus virginianus</i>	Known to Occur	Common	
REPTILES				
Common Name	Scientific Name	Occurrence Code	Abundance Code	
Racer	<i>Coluber constrictor</i>	Known to Occur	Sparsely Common	
Milk Snake	<i>Lampropeltis triangulum</i>	Known to Occur	Rare	
Smooth Green Snake	<i>Liochlorophis vernalis</i>	Known to Occur	Rare	
Gopher Snake	<i>Pituophis catenifer</i>	Known to Occur	Sparsely Common	Yes
Plains Black-headed Snake	<i>Tantilla nigriceps</i>	Known to Occur	Rare	
Western Terrestrial Garter Snake	<i>Thamnophis elegans</i>	Known to Occur	Fairly Common	Yes
Plains Garter Snake	<i>Thamnophis radix</i>	Known to Occur	Fairly Common	Yes
Lined Snake	<i>Tropidoclonion lineatum</i>	Known to Occur	Rare	

OCCURRENCE CLASSIFICATION CRITERIA

The following are categories used to classify species occurrence on a county basis for the purposes of the NDIS project.

CATEGORY	DEFINITION
Known to Occur	Species or sub-species known to occur in the county from actual records or sightings.
Likely to Occur	No known records or sightings exist for the county, but the species is suspected to occur because of its proximity to adjacent counties having known records or the availability of suitable habitats.

SPECIES CLASSIFICATIONS FOR ABUNDANCE

The following are the abundance classes which will be used to categorize species abundance on a county basis for the purposes of the NDIS project. The categories are intended to be objective in the sense that specific numbers of individuals or groups are used to define the abundance class.

AMPHIBIANS

CATEGORY	DEFINITION
Common	10 or more individual adults or 4 or more breeding aggregations can usually be observed, and the species can usually be found in 75-100% of areas surveyed in a single day by standard techniques and in appropriate seasons and habitats.
Fairly Common	5 to 10 individual adults or 2 to 3 breeding aggregations can usually be observed, and the species can usually be found in 50-75% of areas surveyed in a single day by standard techniques and in appropriate seasons and habitats.

AMPHIBIANS (continued)

Locally Common	10 or more individual adults or 4 or more breeding aggregations can usually be observed, and the species can usually be found in 0-33% of sites surveyed in a single day by standard techniques and in appropriate seasons and habitats.
Sparsely Common	1 individual adult or 1 breeding aggregation can usually be observed in 67-100% of areas surveyed in a single day by standard techniques and in appropriate seasons and habitats.
Uncommon	Fewer than 5 individual adults or at most 1 breeding aggregation can usually be observed, and the species can usually be found in less than 50% of areas surveyed in a single day by standard techniques and in appropriate seasons and habitats.
Rare	Fewer than 5 individual adults or 1 to 2 breeding aggregations can usually be observed, and the species can usually be found in less than 50% of areas surveyed in a single season by standard techniques and in appropriate seasons and habitats.
Very Rare	Fewer than 10 records (including all historic records) for the state.
Extirpated	Known to have historically occurred, but known to no longer be present in a natural and free roaming condition.
Unknown	Can not be placed in any of the abundance categories above due to lack of information.

BIRDS

CATEGORY	DEFINITION
Abundant	Observed daily; >100/day in appropriate season and habitat
Common	Observed daily; 25-100/day in appropriate season and habitat
Fairly Common	Observed daily; 10-25/day in appropriate season and habitat
Uncommon	Usually observed daily in appropriate season and habitat; 1-10/day OR species may be gregarious so that a large group may be observed at one time, but usually only 1-2 groups per day is observed.
Rare	Usually not observed daily in appropriate season and habitat; 1-5/day and 1-10/season OR species may be gregarious so that a large group may be observed at one time, but usually only 1 group is observed.

BIRDS (continued)

Very Rare	10-40 records (includes all historical records) for the state as a whole
Casual/Accidental	1-9 records (includes all historical records)
Extirpated	Known to have historically occurred, but known to no longer be present
Unknown	Known to occur, but can't be placed in any of the abundance categories above

MAMMALS

CATEGORY	DEFINITION
Abundant	Observed daily; >100/day in appropriate season and habitat OR the dominant species (in terms of number) collected by standard techniques in appropriate season and habitat
Common	Observed daily; 25-100/day in appropriate season and habitat OR one of the most common species collected by standard techniques in appropriate season and habitat
Fairly Common	Observed daily; 10-25/day in appropriate season and habitat OR expected to be collected daily in small numbers by standard techniques in appropriate season and habitat
Uncommon	Usually observed daily in appropriate season and habitat; 1-10/day OR species may be gregarious so that a large group may be observed at one time, but usually only 1-2 groups per day is observed OR usually collected daily in appropriate season and habitat
Rare	Usually not observed daily in appropriate season and habitat; 1-5/day and 1-10/season OR species may be gregarious so that a large group may be observed at one time, but usually only 1 group is observed OR usually not collected daily in appropriate season
Very Rare	10-40 records (includes all historical records) for the state as a whole
Casual/Accidental	1-9 records (includes all historical records) for the state as a whole
Extirpated	Known to have historically occurred, but known to no longer be present
Unknown	Known or Likely to occur, but can't be placed in any of the abundance categories above.

REPTILES

CATEGORY	DEFINITION
Common	10 or more individual adults can usually be observed, and the species can usually be found in 75-100% of areas surveyed in a single day by standard techniques and in appropriate seasons and habitats.
Fairly Common	5 to 10 individual adults can usually be observed, and the species can usually be found in 50-75% of areas surveyed in a single day by standard techniques and in appropriate seasons and habitats.
Locally Common	10 or more individual adults can usually be observed, and the species can usually be found in 0-33% of sites surveyed in a single day by standard techniques and in appropriate seasons and habitats.
Sparsely Common	1 individual adult can usually be observed in 67-100% of areas surveyed in a single day by standard techniques and in appropriate seasons and habitats.
Uncommon	Fewer than 5 individual adults can usually be observed, and the species can usually be found in less than 50% of areas surveyed in a single day by standard techniques and in appropriate seasons and habitats.
Rare	Fewer than 5 individual adults can usually be observed, and the species can usually be found in less than 50% of areas surveyed in a single season by standard techniques and in appropriate seasons and habitats.
Very Rare	Fewer than 10 records (including all historic records) for the state.
Extirpated	Known to have historically occurred, but known to no longer be present in a natural and free roaming condition.
Unknown	Can not be placed in any of the abundance categories above due to lack of information.

2-Dimensional Depiction of Amphibian and Reptile Abundance Classes

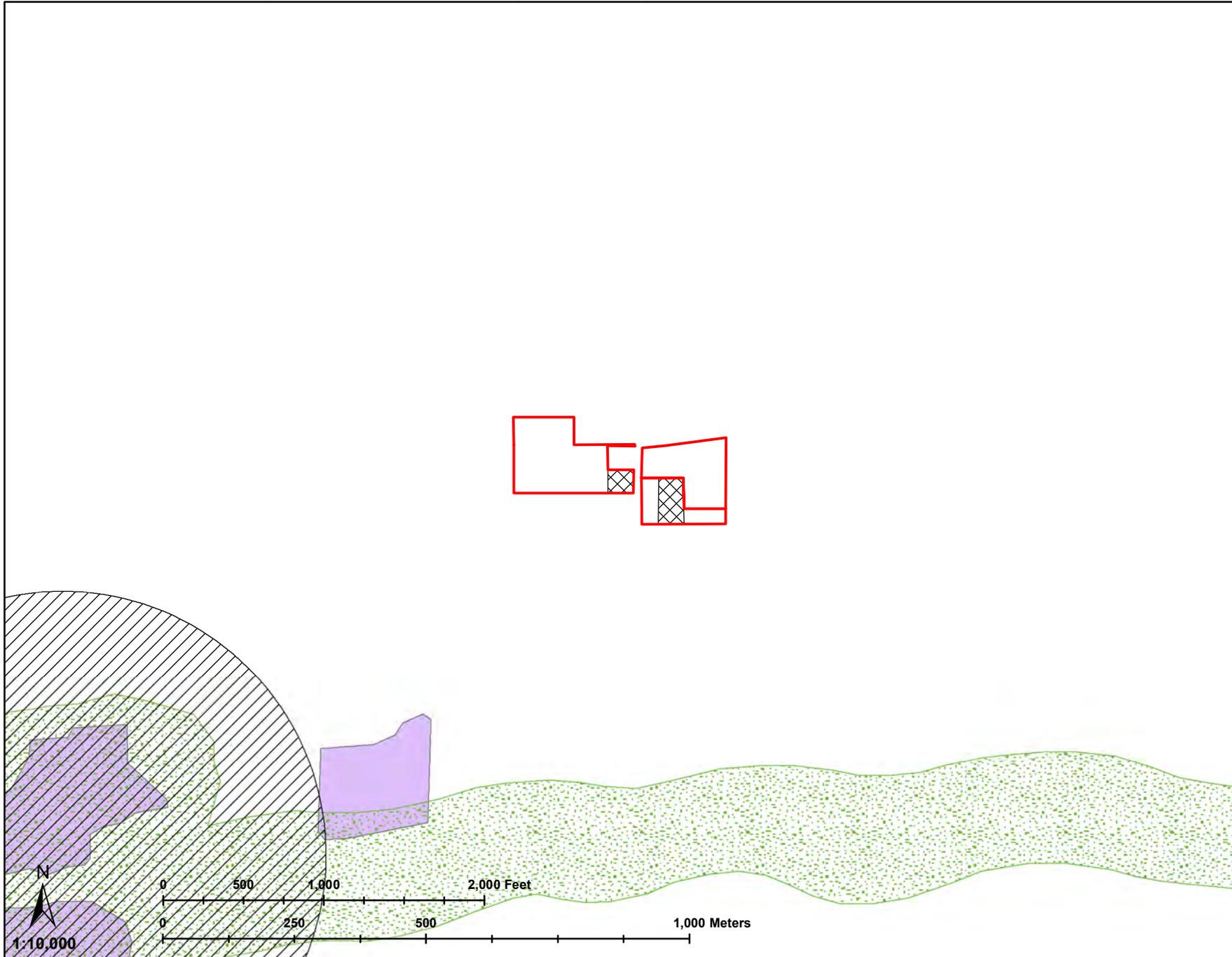
□	0-33% of Sites	34-66% of Sites	67-100% of Sites
10 Individual/Sites	Locally Common	Fairly Common	Common
2-10 Individuals/Sites	Uncommon	Fairly Common	Fairly Common
1 Individual/Site	Rare	Uncommon	Sparsely Common

Note: Above table created by Hammerson to more easily depict Abundance Criteria.

APPENDIX 9B

CPW INFORMATION

Wildlife Habitat Map: Wide Ranging Species, Big Game, and Concentration Sites



- Heine Property Boundary
- Building Envelopes
- Great Blue Heron Nesting Area
- Great Blue Heron Foraging Area
- Canada Geese Production Area

Entire Map Extent:
*Mule Deer Overall Range,
Canada Geese Foraging Area,
Canada Geese Winter Range*

Data Source: CPW 2015



APPENDIX 9C

WILDLIFE SPECIES OF CONCERN

INFORMATION

APPENDIX 9C WILDLIFE SPECIES OF CONCERN

FEDERAL, STATE, AND COLORADO NATURAL HERITAGE PROGRAM SPECIES STATUS CODE DEFINITIONS

Federal Status:

U.S. Fish and Wildlife Service (58 Federal Register 51147, 1993) and (61 Federal Register 7598, 1996)

FE Listed Endangered: defined as a species, subspecies, or variety in danger of extinction throughout all or a significant portion of its range.

FT Listed Threatened: defined as a species, subspecies, or variety likely to become endangered in the foreseeable future throughout all or a significant portion of its range.

State Status:

The Colorado Division of Wildlife has developed categories of imperilment for nongame species (refer to the Colorado Division of Wildlife's Chapter 10 – Nongame Wildlife of the Wildlife Commission's regulations).

SE Endangered: those species or subspecies of native wildlife whose prospects for survival or recruitment within this state are in jeopardy, as determined by the Commission.

ST Threatened: those species or subspecies of native wildlife which, as determined by the Commission, are not in immediate jeopardy of extinction but are vulnerable because they exist in such small numbers, are so extremely restricted in their range, or are experiencing such low recruitment or survival that they may become extinct.

SC Special Concern: those species or subspecies of native wildlife that have been removed from the state threatened or endangered list within the last five years; are proposed for federal listing (or are a federal listing "candidate species") and are not already state listed; have experienced, based on the best available data, a downward trend in numbers or distribution lasting at least five years that may lead to an endangered or threatened status; or are otherwise determined to be vulnerable in Colorado.

Colorado Natural Heritage Program (CNHP) Imperilment Ranks

State imperilment ranks are based on the status of a species in an individual state. These ranks should not be interpreted as legal designations.

S1 Critically imperiled globally/state because of rarity (5 or fewer occurrences in the world/state; or 1,000 or fewer individuals), or because some factor of its biology makes it especially vulnerable to extinction.

S2 Imperiled globally/state because of rarity (6 to 20 occurrences, or 1,000 to 3,000 individuals), or because other factors demonstrably make it very vulnerable to extinction throughout its range.

S3 Vulnerable through its range or found locally in a restricted range (21 to 100 occurrences, or 3,000 to 10,000 individuals).

S4 Apparently secure globally/state, though it may be quite rare in parts of its range, especially at the periphery. Usually more than 100 occurrences and 10,000 individuals.

S5 Demonstrably secure globally/state, though it may be quite rare in parts of its range, especially at the periphery.

SX Presumed extinct globally, or extirpated within the state.

SU Unable to assign rank due to lack of available information.

SH Historically known, but usually not verified for an extended period of time.

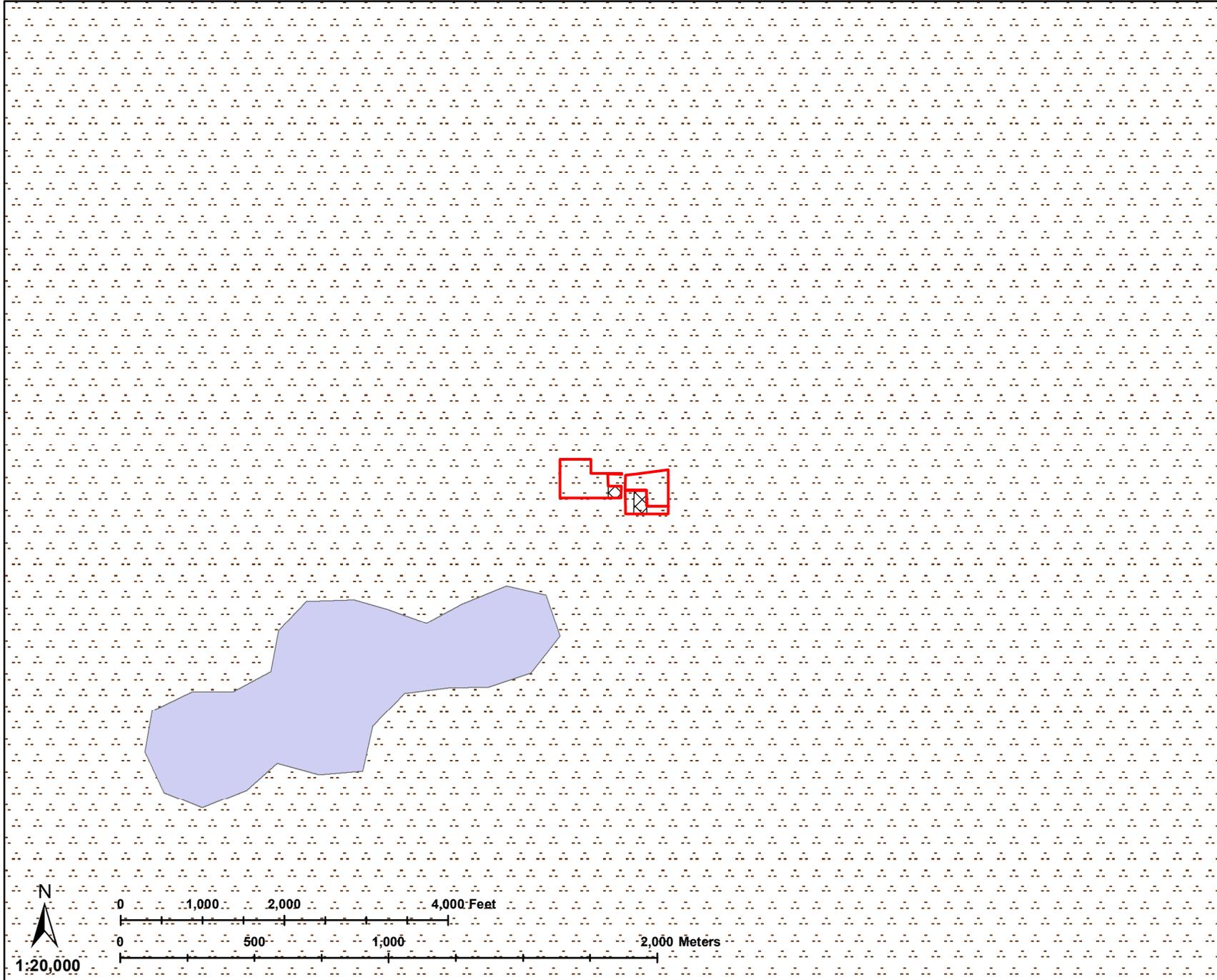
B Refers to the breeding season imperilment of elements that are not permanent residents.

N Refers to the non-breeding season imperilment of elements that are not permanent residents. Where no consistent location can be discerned for migrants or non-breeding populations, a rank of SZN is used.

S? Unranked. Some evidence that species may be imperiled, but awaiting formal rarity ranking.

Note: Where two numbers appear in a state or global rank (for example, S2S3), the actual rank of the element falls between the two numbers.

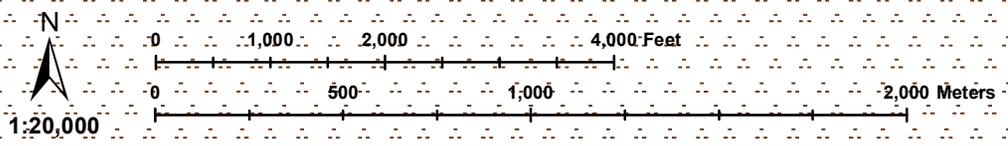
Wildlife Habitat Map: Potential Species of Concern



- Heine Property Boundary
- Building Envelopes
- White Pelican Overall Range
- Prebles Mouse Overall Range

Entire Map Extent:
Overall Range for:
Plains Hog-Nosed Snake,
Short Horned Lizard

Data Source:
CPW and COGCC 2014



APPENDIX 10

GEOGRAPHIC INFORMATION SYSTEM

MANAGEMENT

Appendix 10

Geographic Information System Management

This appendix describes the equipment, software and protocols used to collect geographic information system (GIS) data in support of this easement documentation report.

GIS data is collected during field work using an iPad 4 with Garafa GIS Pro software (<http://garafa.com/wordpress/all-apps/gis-pro>). This software allows collection of standard GIS data (point, line and polygon) with use of cached aerial photography and maps, and imbedded photographs. Data can be exported as shape (.shp) files or Google Earth files (.kmz).

GIS data is collected for the following features and resources, in order of appearance in the easement documentation report.

Section 3.0 Location and General Description of the Property

1. Road data used for accessing the Property from the nearest highways and population centers, as described in Section 3.3.

Section 4.0 Geology, Soils and Mineral Resources

2. Soil erosion sites as described in Section 4.3.1.
3. Areas under cultivation as described in Section 4.3.1.
4. Surface and subsurface mining features as described in Section 4.4.
5. Borrow pits as described in Section 4.4.
6. Oil and gas wells and support facilities as described in Section 4.4.

Section 5.0 Water Resources

7. Man made storm water drainage improvements as described in Section 5.2.
8. Vehicle fords across drainages as described in Section 5.2.
9. Playas as described in Section 5.2.
10. Springs, seeps and natural waterholes as described in Section 5.3.
11. Wetlands, including open water of natural ponds and lakes, are typically mapped as cover types under vegetation communities, and may be cross referenced to those wetlands described in Section 5.3.
12. Irrigation features, including points of diversion, irrigation ditches, headgates, tail water release points, and irrigation wells, as described in Section 5.4

13. Pressurized water system features, including wells, buried waterlines, stock tanks, valves, electric pumps, solar pumps and water storage tanks as described in Section 5.4.
14. Stand alone water improvements such as wells, windmills, stock tanks and gravity fed water lines as described in Section 5.4.
15. Excavated and impounded stock ponds as described in Section 5.4.

Section 6.0 Vegetation Resources

16. Vegetation communities are mapped in Google Earth as described in Section 6.2, with supporting information used from photo points and field descriptions.
17. Significant stands of noxious weeds as described in Section 6.3.1.
18. Forestry and wildfire sites as described in Section 6.3.
19. Rare plant sites, locations of ecoregional targets (both plant species and communities) as described in Section 6.4.

Section 7.0 Wildlife Resources

20. Wildlife habitats are cross referenced to vegetation communities as described in Sections 6.2 and 7.2.
21. Locations of observations of important big game habitat and other notable observations, such as raptor nest sites, as described in Section 7.3.
22. Locations of observations of threatened and endangered species, and species of concern, as described in Section 7.4.
23. Locations of observations of species that are ecoregional targets, as described in Section 7.5. These observations may be cross referenced to Section 3.5 Land Conservation Context, and Section 8.0 Open Space Resources.

Section 9.0 Land Use

24. Utilities as described in Section 9.3.1.
25. Buildings and structures as described in Section 9.3.2. Categories include residential, residential outbuildings, and agricultural outbuildings.
26. Roads as described in Section 9.3.3. Categories include improved, unimproved two-tracks, faint two-tracks, ATV and horse trails, public and private roads.
27. Fences as described in Section 9.3.4. Categories include perimeter, internal, barbed wire, electric, woven, gates and cattle guards.

28. Boundary features such as survey pins as described in Section 9.3.4.
29. Hazardous material sites as described in Section 9.3.5.
30. Trash sites as described in Section 9.3.6.
31. Signage and billboards as described in Section 9.3.7.
32. Miscellaneous land uses and notable features, including airstrips, historic sites, archaeological sites and paleontological sites.

Appendix 5 Ground Photography

33. Location of all Photo Points displayed on the Photo Point Map or any other supporting documentation.

Features and resources considered as primary data are conveyed with each report as shape files. Primary data includes most of the features and resources listed above. Secondary data is retained in project files and is made available upon request. Secondary data is characterized as fine filter detail that may not apply to any restrictions contained in the Deed of Conservation Easement, and may include the fords, details of irrigation features, locations of ecoregional targets (both plant and animal), general plant and wildlife observations, details of improvements and structures, fence types, and locations of miscellaneous features such as historic sites, archaeological sites and paleontological sites.

All data is archived as both shape files and Google Earth files.