

**RAPID RESOURCE ASSESSMENT
AND MANAGEMENT PLAN
HODGES OPEN SPACE
BOULDER COUNTY, COLORADO**

Prepared for—

City of Boulder
Open Space and Mountain Parks
66 S. Cherryvale Road
Boulder, Colorado 80303

Prepared by—

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ERO Project #4089

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SUMMARY

HODGES PROPERTY		
APPROXIMATE SIZE	ACQUISITION DATE	CURRENT ZONING
10.23 acres	January 16, 2007	Rural Residential
MANAGEMENT DESIGNATION	PUBLIC ACCESS	
Natural Area	Allowed, but not encouraged	

GENERAL DESCRIPTION OF SITE RESOURCES

The property includes sloping grasslands, wet meadows, and lowland pasture. The South Boulder and Bear Creek ditch provides scattered riparian habitat as it crosses the property. While most of the grassland vegetation communities to the north have been altered by nonnative species the southern half of the property has a diverse tallgrass prairie area. The tall cottonwoods and willow stands in the south provide good nesting habitat for raptor species.

OPEN SPACE VALUES BASED ON RESOURCE ASSESSMENT

The property is important for open space because it maintains—

- The visual integrity of the Highway 93 corridor, a southern gateway to Boulder
- Wetland and riparian habitat for raptors and other wildlife
- Agricultural potential for grazing and haying

MANAGEMENT ISSUES BASED ON RESOURCE ASSESSMENT

Some management issues that could adversely affect the open space values on the property include—

- Noxious weeds including Canada thistle, Russian olive, and redstem stork's bill
- Existing house is not consistent with open space values
- Several areas of fencing along the east boundary are in poor condition

INTRODUCTION

PURPOSE

The City of Boulder Open Space and Mountain Parks Department (OSMP) retained ERO Resources Corporation (ERO) to conduct a rapid resource assessment and develop a property management plan for the 10.23-acre Hodges Property (“property”) near the city of Boulder in Boulder County, Colorado (Figure 1). The conditions on the property have generally been documented through photo points (Appendix A). The purpose of this rapid resource assessment and management plan for the property is to—

- Summarize the physical/ecological characteristics and conditions
- Document and record existing conditions and open space values
- Identify and prioritize management needs and opportunities
- Prescribe management actions
- Classify the property into a management area

The OSMP Visitor Master Plan directs that plans be completed for properties before they are opened and that visitor access be considered. Specific guidance for new properties is as follows:

New Property Planning and Facilities. Complete planning and infrastructure improvements in a timely manner, prior to opening newly acquired properties to public access. However, as appropriate, preserve existing public access during the planning and improvement process. Open Space and Mountain Parks will complete a site management plan recommending appropriate locations, types of uses and visitor infrastructure, and how to provide adequate visitor infrastructure and services.

Property plans direct immediate planning and improvement needs, while Trails Study Areas (TSA) planning will be used to periodically update visitor access needs based on conditions at the time.

METHODS

OSMP supplied records, documents, and GIS data applicable to the property. On June 15, 2008, a team of natural resource planners and ecologists from ERO walked the extent of the property documenting ecological and physical characteristics and identifying management needs and opportunities.

ERO consulted several organizations, agencies, and databases including the Colorado Natural Heritage Program (CNHP), Colorado Office of Archeology and Historic Preservation (OAHP), the Colorado Natural Diversity Information Source (NDIS), and Boulder County pertaining to resources on the property. Published information, such as U.S. Geological Survey (USGS) and Natural Resources Conservation Service (NRCS) maps, also was used to prepare the inventory.

REPORT ORGANIZATION

This report presents a summary of the information gathered for the rapid resource assessment and describes the results of ERO's evaluation of the resources and open space values on the property. The report is organized into five narrative sections and three appendices. Following the *Summary* and *Introduction*, the *General Description* section provides information on the setting. The *Site Resources* section summarizes the ecological and cultural resources; existing trails and access; land use and management; and improvements and legal considerations on the property. The *Property Management Plan* describes short- and long-term management needs, management actions, and Management Area designation.

Appendix A contains photographs of the property with narrative descriptions and a corresponding photo point map. Appendix B presents plant and animal species identified during the site visit, and Appendix C includes report references.

GENERAL DESCRIPTION

The property is located near the western edge of the Great Plains physiographic province. The property encompasses about 10 acres characterized by sloping grasslands, wet meadows, and lowland pasture adjacent to the Highway 93 corridor in south Boulder.

LOCATION AND ACCESS

The property is located in south Boulder County about 4 miles south of downtown Boulder (Figure 1). Specifically, the property is located in Section 16 in Township 1 South, Range 70 West of the 6th P.M. (Figure 2).

Primary access is from Marshall Road along the eastern edge of the property. From downtown Boulder, travel south on Broadway Street (Highway 93), turning left onto Marshall Road. The property is located between Marshall Road and Highway 93.

Both general and emergency access to the northern section of the property is through a gate north of the driveway. Access to the southern section of the property is through a gate in the southwest corner of the property.

ACQUISITION

The City of Boulder acquired the Hodges Property on January 16, 2007. The total price for 10.23 acres was \$824,000.

LAND USE

The property has historically been used for agriculture, including irrigated and non-irrigated pasture. The property has not been managed for agricultural use since its acquisition by OSMP, and is currently managed by OSMP as undeveloped open space land. There is currently no grazing or active management.

LANDSCAPE CONTEXT

The property is located in south Boulder, along the Highway 93 corridor and the southern gateway to the city. South Boulder Creek is located about ¼ mile to the southeast, while OSMP lands (Shanahan grassland area) are located across the highway to the west.

NEIGHBORING PROPERTIES

NEIGHBORING AGRICULTURAL, RESIDENTIAL, AND COMMERCIAL PROPERTIES

Agricultural, residential, or commercial properties and basic land uses identified near the property during the site visit and with a property record search available through the Boulder County Assessor’s Office (Boulder County 2008a) are summarized below.

OWNER	LOCATION AND LAND USE
Miltzer, Patricia P. & John W. 1190 Marshall Rd. Boulder, CO 80305-7326 Parcel No. 157716200009	East of property Farmland/rural residence
Webster, Christopher J. & Pamela L. 1251 Marshall Rd. Boulder, CO 80303-7365 Parcel No. 157716000013	Southeast of property Farmland/rural residence
Trilling, Lawrence H. (70% Int.) & Robb, Priscilla (30% Int.) 1275 Marshall Rd. Boulder, CO 80303-7365 Parcel No. 157716000014	Southeast of property Farmland/rural residence
Sober, Scott E. 1303 Marshall Rd. Boulder, CO 80305 Parcel No. 157716000015	Southeast of property Farmland/rural residence

NEIGHBORING GOVERNMENT PROPERTIES

Government-owned properties and basic land uses identified near the property during the site visit and with a property record search available through the Boulder County Assessor’s Office (Boulder County 2008a) are summarized below.

OWNER	LOCATION AND LAND USE
City of Boulder 1740 S. Foothills (PO Box 791; Boulder, CO 80306-0719) Parcel No. 1557716200006	Northeast of property Undeveloped land

City of Boulder 1050 Marshall Rd. (PO Box 719; Boulder, CO 80306-0791) Parcel No. 157716200011	East of property Undeveloped land
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SITE RESOURCES

This section documents in more detail the basic physical and ecological characteristics and conditions that directly support the open space values of the property. Key features are shown on Figure 3.

TOPOGRAPHY

Topography on the property generally slopes to the northeast. Elevations range from about 5,455 feet in the south end of the property to about 5,440 feet in the northeast corner. Bear Creek Ditch flows across the southern portion of the property in a northeasterly direction at an elevation of about 5,450 feet. The USGS Topographical map of the property is shown in Figure 2.

GEOLOGY

The property occurs along the western margin of the Denver Basin of northeastern Colorado, which contains unconsolidated surficial deposits and rocks of Quaternary age. Generally the area includes Modern Alluvium. Modern Alluvium contains Piney Creek Alluvium as well as younger deposits (Tweto 1979).

SOILS

The Natural Resources Conservation Service (NRCS) has mapped three soil types on the property. Each mapping unit is described below and Figure 4 shows the NRCS soil mapping. All soil information was gathered from the NRCS soil survey (NRCS 1975).

Mapping Unit VaB. Valmont clay loam (1 to 3 percent slopes). This soil includes small areas of Valmont cobbly clay loam and Nunn clay loam. The surface layer is about 9 inches of clay loam and the subsoil is about 6 inches of clay that grades into limy clay loam about 14 inches thick. Runoff is medium and the erosion hazard is moderate. Unless water is available for both irrigation and leaching of salts, this land is barren.

Mapping Unit NdD. Nederland very cobbly sandy loam (1 to 12 percent slopes). This soil includes small areas of Valmont cobbly clay loam. These soils lack a sandy clay loam subsoil and are very stony and cobbly sandy loam throughout the profile. Runoff is slow to medium and the erosion hazard is slight. Native vegetation is big bluestem, little bluestem, needlegrass, and side-oats gramma.

Mapping Unit Nh. Niwot soils (0 to 1 percent slopes). This soil includes small almost barren gravel bars and small areas of Loveland soils. Also included are unnamed soils that are sandy. Runoff is slow and the erosion hazard is slight except for back cutting near channels. These soils

are frequently flooded and typically have a high seasonal water table. Native vegetation includes Indiangrass, switchgrass, big bluestem, and little bluestem.

HYDROLOGY

SURFACE HYDROLOGY

Mapped streams or drainages located on the property include lateral from the South Boulder and Bear Creek Ditch, which crosses the northern portion of the property, and the South Boulder and Bear Creek Ditch across the southern portion of the property. The property is located within a designated floodplain (Boulder County 2008a).

According to topographic information from the USGS 7.5 minute quadrangle map, surface water on property flows northeast towards South Boulder Creek (USGS 1965, revised 1994).

SUBSURFACE HYDROLOGY

Based on a review of the USGS Louisville quadrangle, shallow ground water would flow in a northeasterly direction towards the South Boulder Creek drainage (USGS 1965; revised 1994). There are no permitted water wells on the property (CDWR 2008), and no seeps or springs were identified on the property.

WETLANDS

Wetland vegetation was observed in the northern and southern section of the property. Wetland vegetation lines drainages and low swales in the property. Dominant wetland species include Emory's sedge (*Carex emoryi*), coyote willow (*salix exigua*), Baltic rush (*Juncus articus* ssp. *ater*), and broad and narrowleaf cattail (*Typha latifolia*, *T. angustifolia*).

VEGETATION

GENERAL VEGETATION DESCRIPTION

The northern section of the property is dominated by wetland vegetation while the central and southern section is dominated by upland short and tallgrass prairie species. The wetland alliances are coyote willow (sandbar willow) temporarily flooded shrubland alliance, Baltic rush seasonally flooded herbaceous alliance, and Emory sedge seasonally flooded herbaceous alliance. The upland short and tallgrass prairie alliances include smooth brome semi-natural herbaceous alliance, big bluestem herbaceous alliance, and western wheatgrass herbaceous alliance. Vegetation communities are described below and shown in Figure 5. A list of plant species identified during the field visit appears in Appendix B.

COYOTE WILLOW (SANDBAR WILLOW) TEMPORARILY FLOODED SHRUBLAND ALLIANCE (CWTS)

The northernmost portion of the property consists of a coyote willow temporarily flooded shrubland alliance. This area is dominated by coyote willow, a native shrub. Dominant understory species include broad and narrowleaf cattail, Fuller's teasel (*Dipsacus fullonum*) an introduced annual/biennial forb, and Baltic rush, a native graminoid.

CATTAIL HERBACEOUS SEMIPERMANENTLY FLOODED HERBACEOUS ALLIANCE (CHSH)

A small strip of broad and narrowleaf cattail is present lining the small drainage in the north of the property.

BALTIC RUSH SEASONALLY FLOODED HERBACEOUS ALLIANCE (BRSH)

In the northern section of the property a Baltic rush seasonally flooded herbaceous alliance is present. Baltic rush, an obligate wetland plant, is dominant within this community type. Emory's sedge, a native graminoid, is also dominant in this community type.

SMOOTH BROME HERBACEOUS ALLIANCE (SBH)

The smooth brome herbaceous alliance dominates the north central portion of the property. This alliance is dominated by smooth brome (*Bromopsis inermis*) an introduced grass. Other dominant species in this community type include western wheatgrass (*Pascopyrum smithii*) a native grass, Queen Anne's lace (*Daucus carota*) an introduced forb, yellow salsify (*Tragopogon dubius* ssp. *major*) an introduced forb, and curlycup bumweed (*Grindelia squarrosa*) a native forb.

EMORY'S SEDGE SEASONALLY FLOODED HERBACEOUS ALLIANCE (ESSH)

Lining a small swale in the center of the property a Emory's sedge seasonally flooded herbaceous alliance is present. This community is dominated by Emory's sedge but Baltic rush and clustered field sedge (*Carex praegracilis*) are also present.

BIG BLUESTEM HERBACEOUS ALLIANCE (BBYH)

In the south central section of the property a big bluestem herbaceous alliance is present. This alliance is dominated by big bluestem (*Andropogon gerardii*), a native perennial warm season grass. Other warm season grasses such as buffalograss (*Buchloe dactyloides*), blue grama grass (*Chondrosium gracile*), and purple threeawn (*Aristida purpurea*) are common. Brittle pricklypear (*Opuntia fragilis*), twistspine pricklypear (*Opuntia macrorhiza*), and nylon hedgehog cactus (*Echinocereus viridiflorus*) are dominant succulents within this community type. Native perennial forb species such as Kansas gayfeather (*Liatris punctata*), hairy false goldenaster (*Heterotheca villosa*), and trailing gleabane (*Erigeron flagellaris*) are common.

EASTERN COTTONWOOD TEMPORARILY FLOODED WOODLAND ALLIANCE (ECTW)

The southern section of the property is periodically flooded and patches of plains cottonwood are present. Plains cottonwood (*Populus deltoids* ssp. *monilifera*) is the dominant overstory species. Understory species such as coyote willow, broad and narrowleaf cattail, and common threesquare (*Schoenoplectus pungens*) are present.

WESTERN WHEATGRASS HERBACEOUS ALLIANCE (WWH)

The western wheatgrass herbaceous alliance is present in the southern portion of the property. Western wheatgrass, a native perennial cool season grass, is the dominant grass in this community but other grass species such as needle-and-thread (*Hesperostipa comata*), smooth brome, and purple threeawn are present. Introduced annual/biennial forbs such as small flower alyssum (*Alyssum parviflorum*), redstem stork's bill (*Erodium cicutarium*), and tall tumble mustard (*Sisymbrium altissimum*) are common.

RARE PLANTS AND PLANT COMMUNITIES

The property contains potential habitat for Ute ladies’-tresses orchid (*Spiranthes diluvialis*), which is known to occur on nearby properties. No rare plants or plant communities have been identified by CNHP on the property (CNHP 2006) and none were observed during the site visits. The property is contained within the CNHP-designated Colorado Tallgrass Prairie Potential Conservation Area, which is considered to have very high biodiversity significance (B2) (CNHP 2007).

STATE NOXIOUS WEEDS

Based on the site visits, four noxious weeds from List B were observed. Canada thistle (*Breea arvensis*) was found in low densities in the northern section of the property. Redstem stork’s bill (*Erodium cicutarium*) was found near the residential areas and in disturbed areas near the central portion of the property. Russian olive (*Elaeagnus angustifolia*) was found in the riparian areas in low densities. A small patch of sulfur cinquefoil (*Potentilla recta*) was found in the southwestern edge of the property in medium densities. Five list C noxious weed species occur on the property. Cheatgrass (*Anisantha tectorum*) was found scattered throughout the upland areas in low to medium densities. Chicory (*Cichorium intybus*) was found scattered throughout the wetland areas in low densities. Common mullein (*Verbascum thapsus*) was found scattered throughout the smooth brome herbaceous alliance in low densities. Field bindweed (*Convolvulus arvensis*) was found along the road and disturbed areas in the property. Fuller’s teasel was found in medium to high densities in the wetland areas in the northern section of the property. Smooth brome is not listed on the Colorado noxious weed list but is listed as an OSMP priority weed. Smooth brome was found in high densities and scattered throughout the property.

Table 1. Noxious weeds present on the property.

Common Name	Scientific Name	OSMP Priority	Boulder County Weed List	State of Colorado Noxious Weed List
Canada thistle	<i>Breea arvensis</i>	Moderate	x	B
cheatgrass (downy brome)	<i>Anisantha tectorum</i>	Moderate	not listed	C
chicory	<i>Cichorium intybus</i>	none	not listed	C
common mullein	<i>Verbascum thapsus</i>	none	not listed	C
field bindweed	<i>Convolvulus arvensis</i>	none	not listed	C
Fuller’s teasel	<i>Dipsacus fullonum</i>	High	x	C
redstem stork’s bill	<i>Erodium cicutarium</i>	none	not listed	B
Russian olive	<i>Elaeagnus angustifolia</i>	High	not listed	B
smooth brome	<i>Bromopsis inermis</i>	Moderate	not listed	not listed
sulfur cinquefoil	<i>Potentilla recta</i>	High	not listed	B

The Colorado Noxious Weed Act §§ 35-5.5-101 through 119, C.R.S. (2003) states that “List B noxious weed species are species for which the Commissioner of Agriculture, 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. 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.”

WILDLIFE

GENERAL DESCRIPTION

The property provides habitat for a variety of wildlife species associated with shortgrass and tallgrass prairie and agricultural lands in Boulder County. Bear Creek ditch and grasslands on the property contain potential habitat for a variety of wildlife species. Large cottonwoods along the ditch provide potential nesting sites for raptors, as well as denning sites for mid-sized mammals such as raccoon (*Procyon lotor*). Typical bird species likely include song sparrow (*Melospiza melodia*), vesper sparrow (*Pooecetes gramineus*), western meadowlark (*Sturnella neglecta*), and various species of raptors.

Small rodents that probably occur along the ditch include deer mouse (*Peromyscus maniculatus*), house mouse (*Mus musculus*), and western harvest mouse (*Reithrodontomys megalotis*). Other mammals that occur or are likely to occur on the property include coyote (*Canis latrans*), red fox (*Vulpes vulpes*), and raccoon. All of these species probably frequent the areas along the ditch, although coyote may be more common in open areas.

Raptors. The property provides foraging habitat and perch trees for various raptor species associated with the nearby South Boulder Creek riparian corridor.

THREATENED, ENDANGERED, OR CANDIDATE WILDLIFE SPECIES

According to the Colorado Division of Wildlife Natural Diversity Information Source (NDIS) and CNHP databases for the area, there are no threatened or endangered species on the property (NDIS 2008). Preble’s meadow jumping mouse (*Zapus hudsonius preblei*) is known to occur nearby along South Boulder Creek.

COLORADO DIVISION OF WILDLIFE DESIGNATIONS

According to the NDIS database, the property is considered to be within a resident population area for mule deer (*Odocoileus hemionus*).

BOULDER COUNTY COMPREHENSIVE PLAN DESIGNATIONS

The property does not contain any county-designated Critical Wildlife Habitats or other designations related to wildlife.

CULTURAL RESOURCES

OFFICE OF ARCHAEOLOGY AND HISTORIC PRESERVATION FILE SEARCH

The Colorado Historical Society Office of Archaeology and Historic Preservation conducted a search of the Colorado Inventory of Cultural Resources database for the property (OAHP 2008). This database contains information on documented federal or state studies or findings regarding any cultural resources. According to the search, two sites are located near the property and a

portion of one of these sites occurs on the property (OAHF 2008). (These sites are associated with the Highway 93 corridor and the Bear Creek Ditch) Other potential unidentified cultural resources may exist within the property boundaries.

OTHER RESOURCES AND DESIGNATIONS

The property is located adjacent to a Travel Route designated in the Boulder County Comprehensive Plan (Boulder County 2008b).

AGRICULTURE

AGRICULTURAL USE

The property has historically been used for agriculture, including grazing and haying.

INFRASTRUCTURE

The property is bounded on all sides by barbed-wire fences. Several portions of the barbed-wire fence along the south eastern boundary are in need of repair. A gate is present in the southwestern corner of the property (off of Highway 93). The gate was down during the site visit. The South Boulder and Bear Creek Ditch, with its associated headgates and culverts, winds through the northern half and southern half of the property.

BOULDER COUNTY COMPREHENSIVE PLAN DESIGNATIONS

The property does not contain any designations related to agriculture (Boulder County 2008c).

RECREATION

Public access is not permitted on the property. Prior to public ownership, the property was privately owned and was not open to public access. No public access or use was evident during the site visit.

PROPERTY INFRASTRUCTURE

STRUCTURES

A 1,150 square-foot house is located in the center of the property. OSMP is evaluating whether to keep or remove the house.

INFRASTRUCTURE AND UTILITIES

The South Boulder and Bear Creek ditch enters the property in the north and the south. Two culverts transport water from west to east under Highway 93. One small unnamed lateral ditch cuts from north to south across the property towards the residential structures.

Overhead electrical lines run along the east and west boundaries of the property. Electrical lines connect to the house from the eastern side of the property.

ROADWAYS AND TRAILS

A driveway provides access to the house on the property from the west boundary and Highway 93. No other roadways or trails were observed on the property.

LEGAL CONSIDERATIONS

WATER RIGHTS

Purchase of the property included all surface and subsurface water rights.

MINERAL RIGHTS

Purchase of the property included all mineral rights, including oil, gas, coal, coal bed methane, sand, and gravel owned by seller.

EASEMENTS AND RIGHTS-OF-WAY INFORMATION

See OSMP property file.

LOCAL PLANNING DESIGNATIONS

The entire property is currently zoned Rural Residential (Boulder County 2008d).

No Boulder County Comprehensive Plan designations occur on the property.

The property is considered to have minor to moderate geologic constraints due to expansive soils or the potential for landslides, mudslides, mudfalls, or debris fans.

PROPERTY MANAGEMENT PLAN

MANAGEMENT AREA DESIGNATION

Recommended management area designation: Natural Area.

The location and features of the property are generally consistent with the characteristics, goals, and strategies outlined for Natural Areas in the OSMP Visitor Master Plan, including variable condition of natural ecosystems, varying levels of visitor use opportunities, and compatibility with adjacent land uses (OSMP 2005). This management area designation is consistent with the historic and current uses of the property and its primary open space values, and with the management designation of other nearby OSMP properties.

PUBLIC ACCESS

Recommended status: Allowed, but not encouraged.

While there is little evidence of existing recreational use on the property, periodic informal access is not likely to result in resource damage. However, should public use monitoring or surveys reveal potential resource impacts, incremental measures should be implemented to re-direct, restrict, or close public access to the property.

The goal of this access status is to allow limited informal access if it should occur, but to prevent a pattern of passive recreational use from forming that is detrimental to natural, agricultural and cultural resources. Should public access result in a Class 2 undesignated trail: (trail obvious; vegetation cover lost and/or organic litter pulverized in primary use area – see Manning et al. 2006), the property may be closed at the sole discretion of the OSMP department. External gates will be locked to prevent unauthorized vehicle access. Public access and facilities on this property will be evaluated further in a future Trail Study Area or other planning processes.

MANAGEMENT ISSUES

The following management issues were identified on the property based on observations during the site visit, existing documentation, and input from OSMP staff.

Noxious weeds. The property contains three List B noxious weeds species and five List C species. Most of these noxious weed species are typical of agricultural and open space properties in the region.

Existing house. The existing residence in the center of the property is not consistent with the visual and ecological values of the property, and should be removed. In addition, it could attract trespass, vandalism, transients, or other illegal use.

Fencing. Several portions of the barbed-wire fence along the eastern boundary are in poor condition.

MANAGEMENT STRATEGIES

Management objectives and recommended management actions for various resources on the property are outlined below. In general, management objectives are a concise statement of what OSMP wants to achieve in protecting open space values, addressing management issues related to a particular resource type. Management actions are the specific tasks or tools that can be used to fulfill the objective and address the issue.

VEGETATION

Objective 1: Prevent the spread of other noxious weeds from current conditions documented in the resource assessment.

Action: Continue control efforts for noxious weeds identified on the property.

Action: Conduct proactive weed control, monitoring, and management during the home removal and revegetation process.

Action: Provide follow-up monitoring and weed control.

Objective 2: Identify opportunities for habitat restoration on the property.

Action: Evaluate potential for restoring/enhancing wet meadows to provide habitat for Ute ladies'-tresses orchid.

FENCING AND SIGNING

Objective 1: Identify property as OSMP land through clear and defined fencing and signing of the property boundary.

Action: Install OSMP signs along property boundary.

Action: Evaluate boundary fence to ensure that it meets OSMP standards for resource management and wildlife passage.

STRUCTURE

Objective 1: Evaluate house on the property to determine whether it should be retained, moved, or deconstructed.

Action: Secure and patrol vacant structures to minimize trespass, vandalism, or illegal use.

Action: If house is removed or deconstructed, revegetate site with native species.

Action: Provide follow-up monitoring and weed management to ensure successful revegetation.

AGRICULTURE

Objective 1: Lease property for grazing and haying.

Action: Develop agricultural management strategies that are compatible with vegetation and wildlife management objectives.

CONSERVATION AND COORDINATION

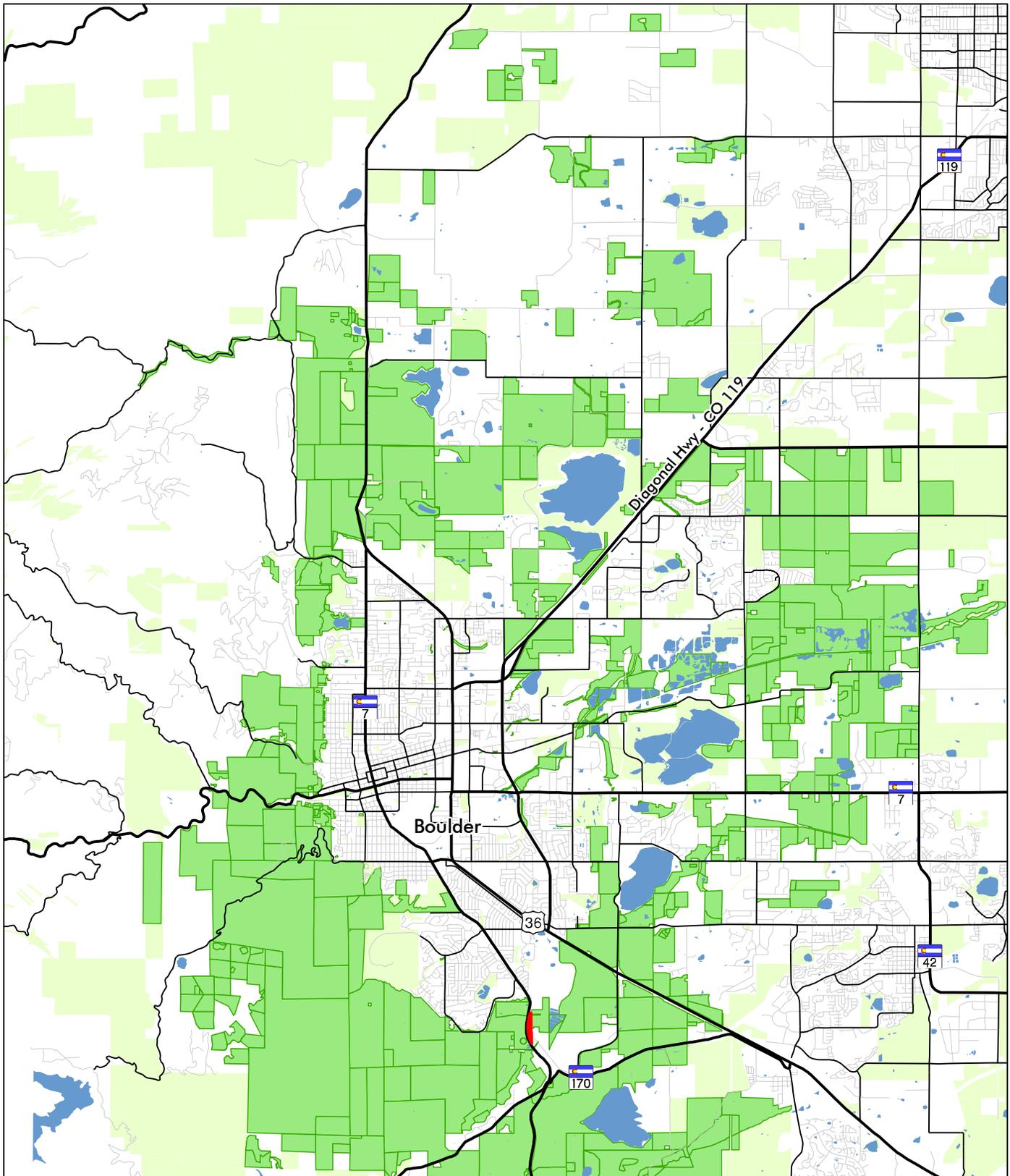
Objective 2: Work with adjacent landowners to provide consistent, sustainable management to the surrounding area.

Action: Establish and maintain lines of communication with adjacent landowners.

Action: Monitor resource conditions (e.g., weeds) on adjacent properties and identify potential issues or opportunities.

Action: Allow OSMP to become a resource for landowners seeking knowledge or advice on various land management topics.

FIGURES



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Hodges Property RRA and Management Plan

- Hodges Property
- City of Boulder Open Space
- Other Open Space

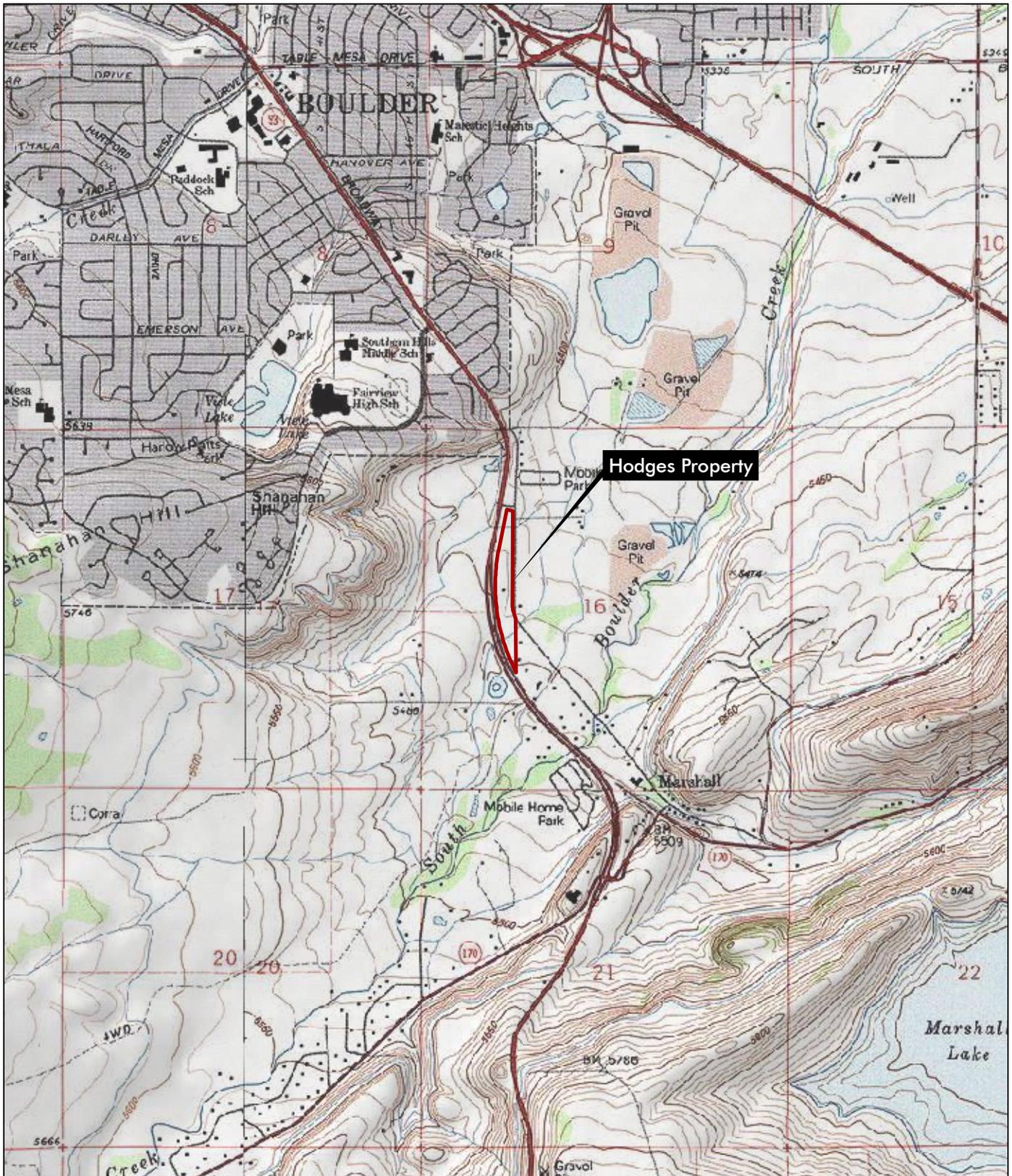


1 inch = 2 miles



**Figure 1
 Vicinity Map**

Prepared for: City of Boulder Open Space
 and Mountain Parks
 File: 4089 Figure1.mxd
 March 2008



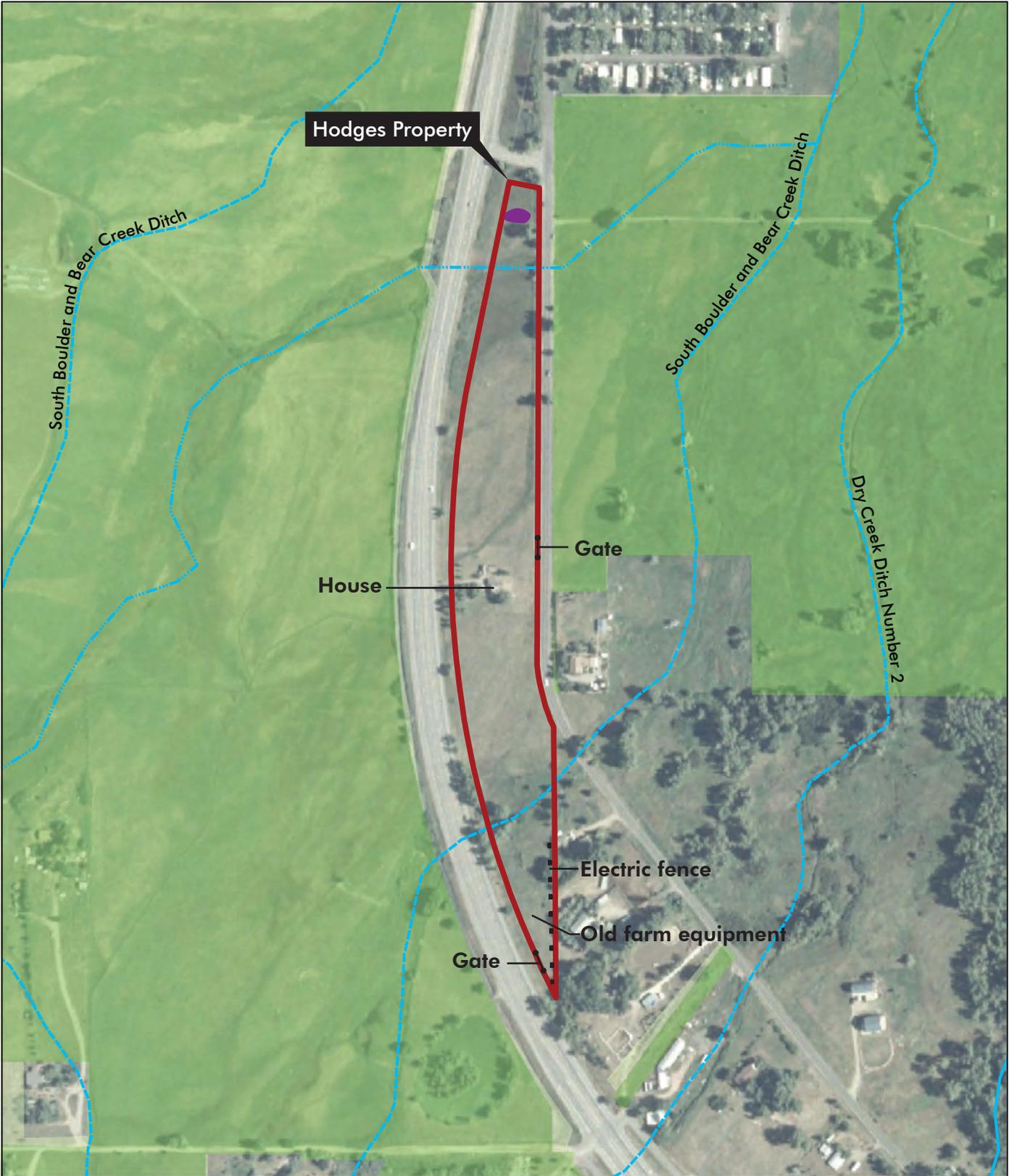
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Hodges Property RRA and Management Plan
 Section 16, T1S, R70W
 UTM NAD83 Coordinate Zone 13N; 479760mE, 4423911mN
 USGS Louisville CO, Quadrangle
 Boulder County, Colorado

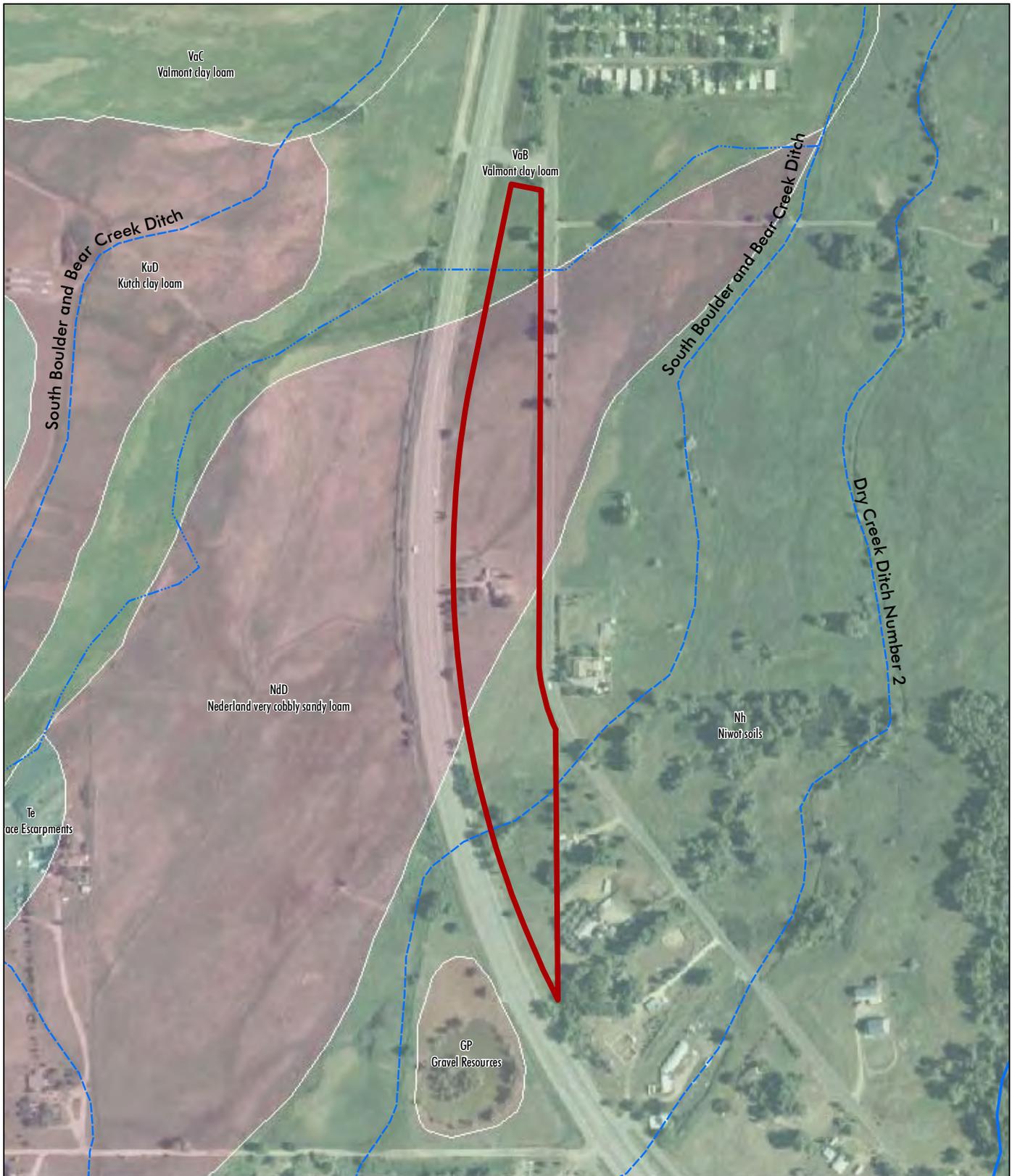


Figure 2
Location

Prepared for: City of Boulder Open Space
 and Mountain Parks
 File: 4089 Figure 2.mxd
 February 2008



<p>ERO ERO Resources Corp. 1842 Clarkson Street Denver, CO 80218 (303) 830-1188 Fax: (303) 830-1199</p>	<p>Hodges Property RRA and Management Plan</p> <ul style="list-style-type: none"> ■ City of Boulder Open Space ■ Other Open Space ■ Weed patch <p>0 400 800 Feet</p> <p>1 inch = 400 Feet</p> <p style="text-align: right;">N </p>	<p>Figure 3 Property Features</p> <p>Prepared for: City of Boulder Open Space and Mountain Parks File: 4089 Figure 3 Hodges.pdf August 2008</p>
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 Fax: (303) 830-1199

Hodges Property RRA and Management Plan

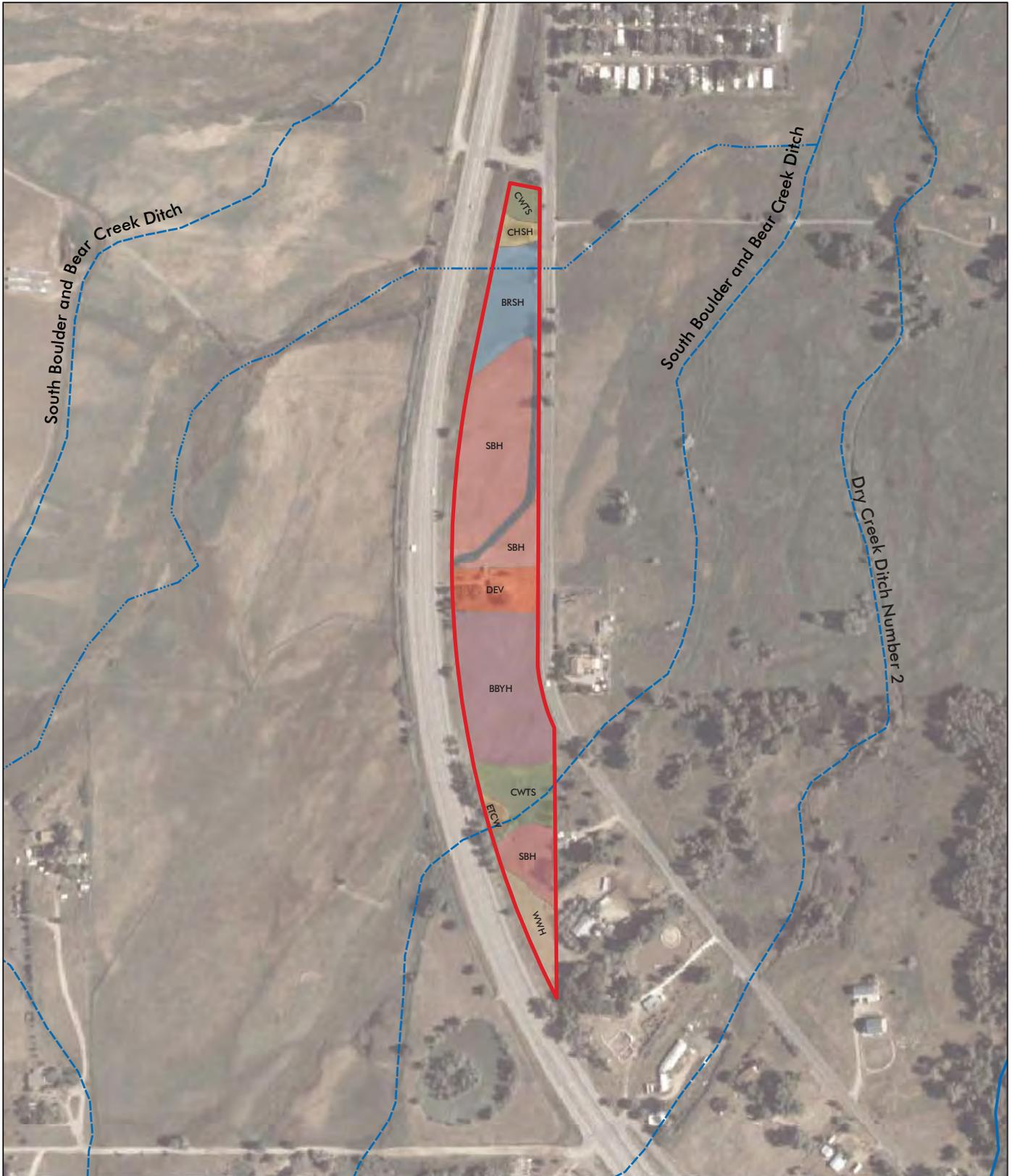


1 inch = 400 Feet



**Figure 4
 Soils**

Prepared for: City of Boulder Open Space
 and Mountain Parks
 File: 4089 Figure 4.mxd
 February 2008



ERO Resources Corp.
 1842 Clarkson Street
 Denver, CO 80218
 (303) 830-1188
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Hodges Property RRA and Management Plan
 (See following page for for vegetation community names)



1 inch = 400 Feet



Figure 5
Vegetation Communities

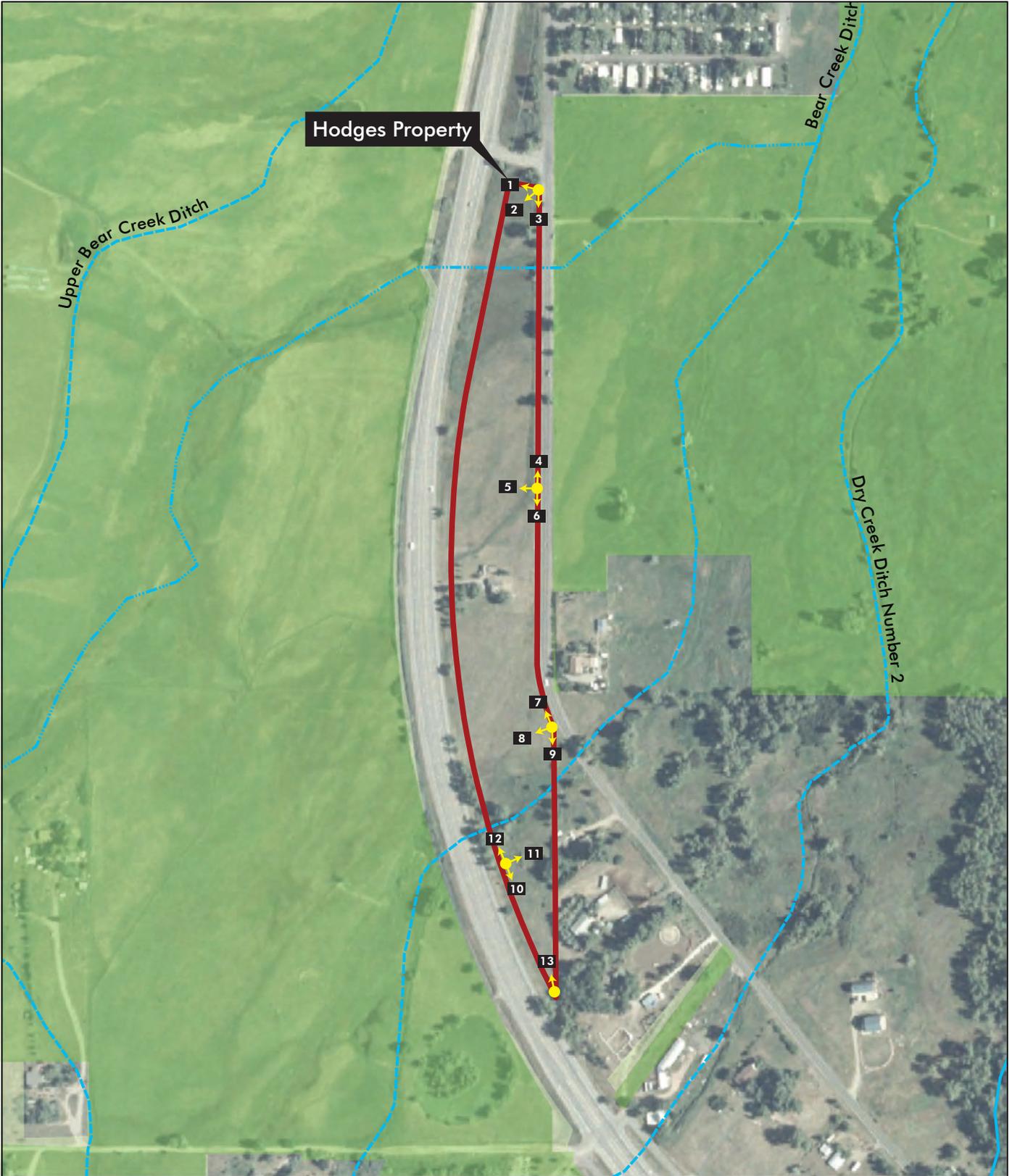
Prepared for: City of Boulder Open Space
 and Mountain Parks
 File: 4089 Figure 5.mxd
 June 2008

Vegetation Communities

Acronym, CmnName

	ADUD, Annual-dominant Upland Disturbance
	APS, American Plum Shrubland Alliance
	BBYH, Big Bluestem - (Yellow Indiangrass) Herbaceous Alliance
	BRSR, Baltic Rush Seasonally Flooded Herbaceous Alliance
	CFSH, Clustered Field Sedge Seasonally Flooded Herbaceous Alliance
	CHSH, Cattail Herbaceous Semipermanently Flooded Alliance
	CTH, Canada Thistle Weedy Forb Great Plains Herbaceous Vegetation [Provisional]
	CWH, Crested Wheatgrass Semi-Natural Herbaceous Alliance
	CWTS, (Coyote Willow, Sandbar Willow) Temporarily Flooded Shrubland Alliance
	CWW, Crack Willow (introduced) Temporarily Flooded Woodland Alliance
	DCAP, Disturbed Cultivated Agricultural Pasture
	DEV, Developed
	DFF, Douglas Fir Forest Alliance
	DFW, Douglas-fir Woodland Alliance
	ECTW, Eastern Cottonwood Temporarily Flooded Woodland Alliance
	ESSH, Emory Sedge Seasonally Flooded Herbaceous Alliance
	ETCW, Eastern Cottonwood Temporarily Flooded Woodland Alliance
	FBH, Foxtail Barley Temporarily Flooded Herbaceous Alliance
	FH, (Tall Fescue, Meadow Fescue) Herbaceous Alliance
	FSBH, Fourwing Saltbush Herbaceous Alliance
	GAH, Cultivated Alfalfa / Smooth Bromegrass Hay
	GH, Cultivated Grass Hay
	IC, Irrigated Cropland
	ISAP, Introduced Species Agricultural Pasture
	KBH, Kentucky Bluegrass Semi-Natural Herbaceous Alliance
	NNH, New Mexico Needlegrass Herbaceous Alliance
	NSH, Nebraska Sedge Seasonally Flooded Herbaceous Alliance
	NTH, Needle-and-Thread - Blue Grama Herbaceous Alliance
	OT, Ornamental Trees
	PDFF, Ponderosa Pine - Douglas-fir Forest Alliance
	PDFW, Ponderosa Pine - Douglas-fir Woodland Alliance
	PFDC, Perennial Forb Disturbance Community
	PMTH, Ponderosa Pine Wooded Mixed Herbaceous Alliance (Savannah)
	PPF, Ponderosa Pine Forest Alliance
	PPW, Ponderosa Pine Woodland Alliance
	PTSH, Ponderosa Pine Tallgrass Savannah Herbaceous Alliance
	PTW, Ponderosa Pine Temporarily Flooded Woodland Alliance
	QADF, Quaking Aspen - Douglas-fir Forest Alliance
	ROW, Russian Olive Semi-Natural Woodland Alliance
	SBH, Smooth Bromegrass Semi-Natural Herbaceous Alliance
	SDS, Snakeweed Dwarf-shrubland Alliance
	SKBH, Sun Sedge-Agassiz Kentucky Bluegrass Herbaceous
	SYS, Soapweed Yucca Evergreen Shrubland
	SYSH, Soapweed Yucca Shrub Savannah Herbaceous Alliance
	THA, Threesquare Herbaceous Alliance
	TSIS, Ill-scented Sumac Intermittently Flooded Shrubland Alliance
	TSSH, Three-leaved Sumac Shrub Savannah Herbaceous Alliance
	TSUS, Three-leaved Sumac Upland Shrubland Alliance
	WATER, Water
	WBSS, Water Birch Seasonally Flooded Shrubland Alliance
	WTFH, Western Wheatgrass Temporarily Flooded Herbaceous Alliance
	WWH, Western Wheatgrass Herbaceous Alliance

APPENDIX A
PHOTO POINT MAP AND DOCUMENTATION



<p>ERO ERO Resources Corp. 1842 Clarkson Street Denver, CO 80218 (303) 830-1188 Fax: (303) 830-1199</p>	<p>Hodges Property RRA and Management Plan</p> <p>●➔■ Photo Point</p> <p>0 400 800 Feet</p> <p>1 inch = 400 Feet</p> <p>N</p>	<p>Appendix A Photo Points</p> <p>Prepared for: City of Boulder Open Space and Mountain Parks File: 4089 Hodges photo points.pdf July 2008</p>
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Plant Species Observed during the June 15, 2008 Site Visit

Species Name	Synonym	Common Name	Coyote Willow Temporarily Flooded Shrubland Alliance (CWTS)	Baltic Rush Seasonally Flooded Herbaceous Alliance (BRSH)	Smooth Brome Semi-Natural Herbaceous Alliance (SBH)	Emory Sedge Seasonally Flooded Herbaceous Alliance (ESSH)	Big Bluestem Herbaceous Alliance (BBYH)	Eastern Cottonwood Temporarily Flooded Woodland Alliance (ECTW)	Western Wheatgrass Herbaceous Alliance (WWH)
Native Annual/Biennial Forbs									
Cirsium undulatum		wavyleaf thistle					■		
Erigeron divergens		spreading fleabane					■		■
Erysimum asperum		western wallflower					■		■
Grindelia squarrosa		curlycup gumweed			■				
Pterogonum alatum	Eriogonum alatum	winged buckwheat					■		
Introduced Annual/Biennial Forbs									
Alyssum parviflorum	Alyssum simplex	smallflowered alyssum			■		■		■
Camelina microcarpa		littlepod false flax							■
Conyza canadensis		Canadian horseweed			■				■
Dipsacus fullonum	D. sylvestris	Fuller's teasel	■	■	■	■		■	
Lactuca serriola		prickly lettuce	■	■		■		■	
Melilotus officinalis		yellow sweetclover		■			■		
Podospermum laciniatum	Scorzonera laciniatum	cutleaf vipergrass		■					
Sisymbrium altissimum		tall tumbled mustard							■
Tragopogon dubius ssp. major		yellow salsify			■		■		
Verbascum thapsus		common mullein							

Species Name	Synonym	Common Name	Coyote Willow Temporarily Flooded Shrubland Alliance (CWTS)	Baltic Rush Seasonally Flooded Herbaceous Alliance (BRSH)	Smooth Brome Semi-Natural Herbaceous Alliance (SBH)	Emory Sedge Seasonally Flooded Herbaceous Alliance (ESSH)	Big Bluestem Herbaceous Alliance (BBYH)	Eastern Cottonwood Temporarily Flooded Woodland Alliance (ECTW)	Western Wheatgrass Herbaceous Alliance (WWH)
Introduced Annual Grasses									
Anisantha tectorum	Bromus tectorum	cheatgrass			■		■		■
Bromus japonicus	Bromus arvensis	Japanese brome, field brome			■				
Panicum capillare		witchgrass		■					
Native Perennial Forbs									
Ambrosia psilostachya var. coronopifolia		Cuman ragweed			■		■		■
Artemisia ludoviciana		white sagebrush					■		
Asclepias speciosa		showy milkweed	■	■		■		■	
Asclepias viridiflora		green comet milkweed		■					
Aster laevis var. geyeri		Geyer's aster		■					
Comandra umbellata ssp. pallida		pale bastard toadflax					■		
Epilobium ciliatum		fringed willowherb				■			
Eremogone fendleri	Arenaria fendleri	Fendler's sandwort					■		
Erigeron flagellaris		trailing fleabane					■		
Eriogonum umbellatum		sulphur-flower buckwheat					■		
Erysimum capitatum		sanddune wallflower					■		
Evolvulus nuttallianus		shaggy dwarf morning-glory					■		
Gaillardia aristata		common gaillardia					■		
Gaura coccinea		scarlet beeblossom					■		

Species Name	Synonym	Common Name	Coyote Willow Temporarily Flooded Shrubland Alliance (CWTS)	Baltic Rush Seasonally Flooded Herbaceous Alliance (BRSH)	Smooth Brome Semi-Natural Herbaceous Alliance (SBH)	Emory Sedge Seasonally Flooded Herbaceous Alliance (ESSH)	Big Bluestem Herbaceous Alliance (BBYH)	Eastern Cottonwood Temporarily Flooded Woodland Alliance (ECTW)	Western Wheatgrass Herbaceous Alliance (WWH)
<i>Helianthus pumilus</i>		little sunflower					■		
<i>Heterotheca villosa</i>		hairy false goldenaster					■		
<i>Hymenopappus filifolius</i>		fineleaf hymenopappus					■		
<i>Liatris punctata</i>		Kansas gayfeather					■		
<i>Lomatium orientale</i>		Northern Idaho biscuitroot					■		
<i>Mentha arvensis</i>		wild mint		■					
<i>Musineon divaricatum</i>		leafy wildparsley							■
<i>Oenothera villosa</i>	<i>Oenothera strigosa</i>	hairy evening-primrose		■	■			■	
<i>Oligoneuron rigidum</i>	<i>Solidago rigidum</i>	stiff goldenrod		■					
<i>Oligosporus dracunculus</i> ssp. <i>glaucus</i>	<i>Artemisia dracunculus</i> ssp. <i>glaucus</i>	wild tarragon							■
<i>Onosmodium molle</i> ssp. <i>occidentale</i>	<i>Onosmodium bejariense</i> var. <i>occidentale</i>	western marbleseed					■		
<i>Oxalis dillenii</i>		slender yellow woodsorrel					■		
<i>Oxybaphus linearis</i>	<i>Mirabilis linearis</i>	narrowleaf four o' clock					■		
<i>Paronychia jamesii</i>		James' nailwort					■		
<i>Penstemon angustifolius</i>		broadbeard beardtongue					■		
<i>Psoralidium tenuiflorum</i>	<i>Psoralea tenuiflora</i>	slimflower scurfpea					■		

Species Name	Synonym	Common Name	Coyote Willow Temporarily Flooded Shrubland Alliance (CWTS)	Baltic Rush Seasonally Flooded Herbaceous Alliance (BRSH)	Smooth Brome Semi-Natural Herbaceous Alliance (SBH)	Emory Sedge Seasonally Flooded Herbaceous Alliance (ESSH)	Big Bluestem Herbaceous Alliance (BBYH)	Eastern Cottonwood Temporarily Flooded Woodland Alliance (ECTW)	Western Wheatgrass Herbaceous Alliance (WWH)
Ratibida columnifera		upright prairie coneflower					■		
Sphaeralcea coccinea		scarlet globemallow					■		■
Thermopsis divaricarpa		spreadfruit goldenbanner		■		■			
Introduced Perennial Forbs									
Asparagus officinalis		garden asparagus	■						
Breca arvensis	Cirsium arvense	Canada thistle	■	■					
Cichorium intybus		chicory	■	■	■	■		■	
Convolvulus arvensis		field bindweed			■				
Daucus carota		Queen Anne's lace	■	■	■				
Elaeagnus angustifolia		Russian olive						■	
Linaria genistifolia ssp. dalmatica	Linaria dalmatica	dalmation toadflax							■
Potentilla recta		sulphur cinquefoil							■
Rumex crispus		curly dock		■	■				
Taraxacum officinale		common dandelion			■				
Native Perennial Cool Season Grasses and Grass Like									
Carex emoryi		Emory's sedge		■		■			
Carex nebrascensis		Nebraska sedge				■			
Carex pensylvanica ssp. heliophila	Carex heliophila, Carex inops ssp. heliophila	sun sedge					■		
Carex praegracilis		silver sedge,		■		■			

Species Name	Synonym	Common Name	Coyote Willow Temporarily Flooded Shrubland Alliance (CWTS)	Baltic Rush Seasonally Flooded Herbaceous Alliance (BRSH)	Smooth Brome Semi-Natural Herbaceous Alliance (SBH)	Emory Sedge Seasonally Flooded Herbaceous Alliance (ESSH)	Big Bluestem Herbaceous Alliance (BBYH)	Eastern Cottonwood Temporarily Flooded Woodland Alliance (ECTW)	Western Wheatgrass Herbaceous Alliance (WWH)
		clustered field sedge							
Carex sp.		sedge				■			
Dichanthelium oligosanthes var. scribnerianum		Scribner's rosette grass		■					
Eleocharis palustris	Eleocharis macrostachya	common spikerush				■			
Elymus trachycaulus	Agropyron trachycaulum	slender wheatgrass	■					■	
Hesperostipa comata	Stipa comata	needle and thread					■		■
Juncus arcticus ssp. ater	Juncus balticus	Baltic rush	■	■	■	■	■	■	
Juncus interior		inland rush					■		
Juncus saximontanus		Rocky Mountain rush				■			
Koeleria macrantha	Koeleria gracilis	prairie Junegrass			■				
Nassella viridula	Stipa viridula	green needlegrass					■		
Pascopyrum smithii	Agropyron smithii	western wheatgrass					■		■
Schoenoplectus lacustris ssp. creber	Scirpus validus, Schoenoplectus tabernaemontani	softstem bulrush						■	
Schoenoplectus pungens	Scirpus pungens, S. americanus	common threesquare	■	■				■	
Typha angustifolia		narrowleaf cattail	■						
Typha latifolia		broadleaf cattail	■						

Species Name	Synonym	Common Name	Coyote Willow Temporarily Flooded Shrubland Alliance (CWTS)	Baltic Rush Seasonally Flooded Herbaceous Alliance (BRSH)	Smooth Brome Semi-Natural Herbaceous Alliance (SBH)	Emory Sedge Seasonally Flooded Herbaceous Alliance (ESSH)	Big Bluestem Herbaceous Alliance (BBYH)	Eastern Cottonwood Temporarily Flooded Woodland Alliance (ECTW)	Western Wheatgrass Herbaceous Alliance (WWH)
Introduced Perennial Cool Season Grasses									
Agropyron desertorum	A. cristatum	crested wheatgrass							■
Agrostis gigantea	A. alba	redtop		■					
Bromopsis inermis	Bromus inermis	smooth brome			■		■	■	■
Dactylis glomerata		orchardgrass			■				
Festuca arundinacea	Schedonorus phoenix	tall fescue			■				
Native Perennial Warm Season Grasses									
Andropogon gerardii		big bluestem					■		
Aristida purpurea		purple threeawn					■		
Bouteloua curtipendula		sideoats grama					■		
Buchloe dactyloides	Bouteloua dactyloides	buffalograss					■		
Chondrosum gracile	Bouteloua gracilis	blue grama grass					■		
Muhlenbergia montana		mountain muhly					■		
Panicum virgatum		switchgrass	■						
Schizachyrium scoparium	Andropogon scoparium	little bluestem					■		
Sorghastrum avenaceum	Sorghastrum nutans	Indiangrass					■		
Spartina pectinata		prairie cordgrass		■		■			
Sporobolus cryptandrus		sand dropseed					■		

Species Name	Synonym	Common Name	Coyote Willow Temporarily Flooded Shrubland Alliance (CWTS)	Baltic Rush Seasonally Flooded Herbaceous Alliance (BRSH)	Smooth Brome Semi-Natural Herbaceous Alliance (SBH)	Emory Sedge Seasonally Flooded Herbaceous Alliance (ESSH)	Big Bluestem Herbaceous Alliance (BBYH)	Eastern Cottonwood Temporarily Flooded Woodland Alliance (ECTW)	Western Wheatgrass Herbaceous Alliance (WWH)
Native Trees									
Negundo aceroides	Acer negundo	box elder						■	
Populus deltoides ssp. monilifera		plains cottonwood						■	
Salix amygdaloides		peachleaf willow						■	
Native Shrubs and Subshrubs									
Artemisia frigida		prairie sagewort					■		■
Gutierrezia sarothrae		broom snakeweed					■		
Padus virginiana ssp. melanocarpa	Prunus virginiana ssp. melanocarpa	black chokecherry						■	
Prunus americana		American plum						■	
Rosa woodsii		Woods' rose						■	
Salix exigua		sand bar willow, coyote willow	■					■	
Symphoricarpos occidentalis		western snowberry						■	
Native Succulents and Agavoids									
Echinocereus viridiflorus		nylon hedgehog cactus					■		
Opuntia fragilis		brittle pricklypear					■		
Opuntia macrorhiza		twistspine pricklypear					■		
Opuntia polyacantha		plains pricklypear					■		
Yucca glauca		soapweed yucca					■		■

APPENDIX C
REFERENCES

APPENDIX C

REFERENCES

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**PHOTO POINTS
HODGES**



Photo 1 - View west from northeastern corner.



Photo 2 - View southwest from northeastern corner.

**PHOTO POINTS
HODGES**



Photo 3 - View south from northeastern corner.



Photo 4 - View north from eastern property edge.

**PHOTO POINTS
HODGES**



Photo 5 - View west from eastern property edge.



Photo 6 - View south from eastern property edge.

**PHOTO POINTS
HODGES**



Photo 7 - View north from southeastern corner.



Photo 8 - View west from southeastern corner.

PHOTO POINTS
HODGES



Photo 9 - View south from southeastern corner.



Photo 10 - View south from western property edge.

**PHOTO POINTS
HODGES**



Photo 11 - View east from western property edge.



Photo 12 - View north from western property edge.

PHOTO POINTS
HODGES



Photo 13 - View north from southern property corner.