

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

Prepared for—

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Open Space and Mountain Parks
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SUMMARY

WALDORF PROPERTY		
APPROXIMATE SIZE	ACQUISITION DATE	CURRENT ZONING
65 acres	April 15, 2002	Agricultural
MANAGEMENT DESIGNATION		PUBLIC ACCESS
Natural Area		Closed

GENERAL DESCRIPTION OF SITE RESOURCES

The property consists of a central pasture area surrounded by a mesa escarpment to the west and a shale ridge to the east. This shale ridge provides habitat for Bell’s twinpod (*Physaria bellii*) a rare plant species. The Lake Ditch traverses the hillside on the west end of the property, while a small, unnamed drainage and a parallel lateral ditch cross the southeast corner. These areas support diverse riparian habitat. Most of the property has been altered by grazing and prairie dogs. A long shed and corral area in the north-central portion of the property provides an indication of past agricultural uses.

OPEN SPACE VALUES BASED ON RESOURCE ASSESSMENT

The property is important for open space because it maintains—

- Documented habitat for the Preble’s meadow jumping mouse (*Zapus hudsonius preblei*), a federally-listed threatened species
- Potential habitat for Bell’s twinpod (*Physaria bellii*), a rare plant species
- Foraging habitat for various raptor species, including red-tailed hawk and American kestrel
- Potential for cultural resources along the shale ridge
- Potential for agricultural use
- Wildlife habitat and scenic integrity along the U.S. 36 corridor

MANAGEMENT ISSUES BASED ON RESOURCE ASSESSMENT

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

- Known population of Mediterranean sage, a highly invasive noxious weed
- Double fence along east boundary may create an unnecessary impediment for wildlife movement
- Degraded condition of grassland areas due to livestock and prairie dog grazing

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 65-acre Waldorf 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 4, 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 65 acres characterized by open grassland and pasture, a lush riparian corridor, and a shale ridgeline.

LOCATION AND ACCESS

The property is located in central Boulder County about 10 miles north of downtown Boulder (Figure 1). Specifically, the property is located in Section 32 in Township 3 North, Range 70 West of the 6th P.M. (Figure 2).

Primary access is from Saint Vrain Road along the northern edge of the property. From downtown Boulder, travel north on Highway 36, turning right onto Saint Vrain Road. The property is located south of Saint Vrain Road about ¼ east of Highway 36.

Both general and emergency access is from a gate along the northern boundary of the property (along Saint Vrain Road), near the old livestock barn and corral.

ACQUISITION

The City of Boulder acquired the Waldorf Property on April 15, 2002. The total price for 65 acres was \$1,300,000.

LAND USE

Most of the property shows evidence of agricultural use, including irrigated and non-irrigated pasture and livestock grazing. 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 rural Boulder County, and is surrounded primarily by agricultural lands and rural residential areas along the Highway 36 corridor north of Boulder. The mountain backdrop foothills begin about ½ mile to the west of the property. A small unnamed drainage and associated lateral ditch support a riparian corridor in the southeastern corner of the property.

NEIGHBORING PROPERTIES

NEIGHBORING AGRICULTURAL AND COMMERCIAL PROPERTIES

Agricultural 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
Last Ditch Llc. 4560 St. Vrain Rd. Longmont, CO 80503 Parcel No. 131705000014	East of property Agriculture – farm/ranch residence
Loukonen, Leonard E. & Reino E. (49%) & Int. & Loukonen Family Llc. (51%) 9050 N. Foothills (12993 N. Foothills Hwy.; Longmont, CO 80503 Parcel No. 131705000002	South & West of property Agriculture – complaint filed stating that grading on property would degrade ditch Mediterranean sage and scotch thistle reported on property
Guercio, James W. St. Vrain Road (1300 Walnut St.; Suite 200 Boulder, CO 80302) Parcel No. 120333001022 <i>Outlot B Caribou Springs Ranch Exemption Plat.</i>	North of property Agriculture – site plan review to create 20 lots on approximately 125 acres; conservation easements on approximately 589 acres, and grading in excess of 500 Cu. Yds.

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

The topography on the property generally slopes to the east. The property is located in a shallow drainage valley near the base of the foothills. Elevations on the property range from about 5,520

feet to about 5,440 feet along the western and eastern edges of the valley respectively. Elevations along the valley floor range from about 5,440 feet to 5,420 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 sedimentary rocks of Cretaceous age. Generally the area includes Colorado Group rocks. Colorado Group rocks contain areas of shale and limestone (Tweto 1979).

SOILS

The Natural Resources Conservation Service (NRCS) has mapped six 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 LaE. Laporte very fine sandy loam (5 to 20 percent slopes). These areas consist of loamy soils derived from limestone and limy shale. Small areas of Manvel loam and rock outcrop are found in places. Runoff is medium to rapid and the erosion hazard is high. Principal native vegetation is blue grama, western wheatgrass, needle-and-thread grass, Russian-thistle, yucca, and cactus.

Mapping Unit SaD. Samsil clay (3 to 12 percent slopes). This soil includes small areas of shale outcrop, a few areas of Shingle loam, and a few small areas of Renohill silty clay loam. In places this soil has scattered gravel and cobbles on the surface. Runoff is rapid and the erosion hazard is high. Native vegetation is mainly little bluestem, western wheatgrass, sideoats grama, blue grama, green needlegrass, sedges, and forbs.

Mapping Unit Te. Terrace escarpments. These areas consist of undifferentiated shallow soils that have many cobbles and stones on the surface. In many places there is merely a thin layer of cobbles over sandstone or shale. Only limited moisture is available for plants because these undifferentiated soils are shallow. Runoff is rapid and the erosion hazard is high.

Mapping Unit VcC. Valmont cobbly clay loam (1 to 5 percent slopes). This soil includes areas of Valmont clay loam and Nunn clay loam. The surface layer is about 8 inches of cobbly clay loam and the subsoil is about 14 inches of cobbly clay loam or cobbly clay. Runoff is medium and the erosion hazard is slight to moderate. Native vegetation is blue grama, western wheatgrass, and cactus.

Mapping Unit Me. Manvel Loam (1 to 3 percent slopes). This soil includes small areas of Laporte very fine sandy loam and larger areas well-drained loamy alluvium with limestone at a depth of less than 40 inches. Runoff is medium and the erosion hazard is moderate. Native vegetation is mainly blue grama, sage, galleta, cactus, and needlegrass.

Mapping Unit NuC. Nunn clay loam (3 to 5 percent slopes). This soil includes small areas of Kim soils and Nunn clay loam. In a few places scattered gravel and cobbles cover the surface. Runoff is medium, permeability is slow, and the erosion hazard is moderate. Native vegetation is blue grama, buffalograss, needlegrass and wheatgrass.

HYDROLOGY

SURFACE HYDROLOGY

An ephemeral drainage near the eastern edge of the property flows east from a depressional area which was previously a stock pond, while a small unnamed stream crosses the southeast corner of the property. The property is not located within a designated floodplain (Boulder County 2008a).

According to topographic information from the USGS 7.5 minute quadrangle map, most of surface water on property flows northeast towards the Foothills Reservoir and Saint Vrain Creek. Lake Ditch traverses the northwestern portion of the property, while an unnamed lateral ditch parallels the riparian corridor in the southeastern corner of the property (USGS 1968, photorevised 1979; USGS 1963, photorevised 1978).

SUBSURFACE HYDROLOGY

Based on a review of the USGS Hygiene and Lyons quadrangles, shallow ground water would flow in a northeasterly direction towards the Foothills Reservoir and the Saint Vrain Creek drainage (USGS 1968, photorevised 1979; USGS 1963, photorevised 1978). There are no permitted water wells on the property (CDWR 2008), and no seeps or springs were identified on the property.

WETLANDS

Wetlands were not delineated during the site visit but wetland vegetation was observed and mapped south of the Lake Ditch in the western section of the property. Dominant wetland vegetation in the area is Baltic rush (*Juncus arcticus* ssp. *ater*), clustered field sedge (*Carex praegracilis*), Nebraska sedge (*Carex nebrascensis*), and sandbar willow (*Salix exigua*). Wetlands were also found adjacent to the small drainage in the southern portion of the property.

VEGETATION

GENERAL VEGETATION DESCRIPTION

Most of the property is former agricultural land and consists of both irrigated pasture and dryland meadow areas. Several small clusters of plains cottonwood (*Populus deltoids* ssp. *monilifera*), skunkbush sumac (*Rhus aromatica* ssp. *trilobata*) and occasional sandbar willow are found along the Lake Ditch. The upper portions of the property are dominated crested wheatgrass (*Agropyron desertorum*), disturbed areas dominated by perennial forbs, and native areas along the slopes on either side of the Lake Ditch. Many of the grassland areas are degraded from years of livestock and prairie dog grazing. Vegetation communities are described below and shown in Figure 5. A list of plant species identified during the field visit appears in Appendix B.

CRESTED WHEATGRASS HERBACEOUS (CWH)

The northernmost areas of the property are dominated by crested wheatgrass. Other introduced perennial cool season grasses such as smooth brome (*Bromopsis inermis*), orchardgrass (*Dactylis glomerata*), and intermediate wheatgrass (*Thinopyrum intermedium*); and introduced annual/biennial forbs such as littlepod false flax (*Camelina microcarpa*), common mullein (*Verbascum thapsus*), and tall tumbled mustard (*Sisymbrium altissimum*) are also found scattered within this community type.

PERENNIAL FORB DISTURBANCE COMMUNITY (PFDC)

In the central portion of the property and in the west and northeast, the perennial forb disturbance community is present. This community is dominated by introduced perennial forbs, introduced annual/biennial forbs, native perennial forbs, and introduced annual and perennial grasses. Field bindweed (*Convolvulus arvensis*) is the most dominant introduced perennial forb but other species such as horehound (*Marrubium vulgare*) are present. Redstem stork's bill (*Erodium cicutarium*) is present scattered throughout the property but is mainly found within the PFDC community type. Perennial cool season grasses such as smooth brome and western wheatgrass (*Pascopyrum smithii*) are both dominants.

SNAKEWEED DWARF-SHRUBLAND ALLIANCE (SDS)

Along the slopes in the eastern portion of the property and in the central areas, a snakeweed dwarf-shrubland alliance is present. This community type is dominated by broom snakeweed, a native subshrub, and a mixture of native perennial cool and warm season grasses such as western wheatgrass, Indian ricegrass (*Achnatherum hymenoides*), blue grama grass (*Chondrosium gracile*), and purple threeawn (*Aristida purpurea*). Native perennial forbs such as Howard's evening-primrose (*Oenothera howardii*), hairy false goldenaster (*Heterotheca villosa*), and shaggy dwarf morning-glory (*Evolvulus nuttallianus*) are also present.

WESTERN WHEATGRASS HERBACEOUS ALLIANCE (WWH)

The western wheatgrass herbaceous alliance is present in the south eastern portion of the property as well as the western portion along the slopes and rocky areas. Western wheatgrass is the dominant grass in this community but other native grass species such as needle-and-thread (*Hesperostipa comata*), purple threeawn, and Indian ricegrass are present. Native perennial forbs such as Kansas gayfeather (*Liatris punctata*), prairie flax (*Adenolinum lewisii*), scarlet globemallow (*Sphaeralcea coccinea*) are present.

NEEDLE-AND-THREAD – BLUE GRAMA HERBACEOUS ALLIANCE (NTH)

The needle-and-thread – bluegrama herbaceous alliance is present in the northwest and the south east of the property. This alliance is dominated by needle-and-thread, blue grama grass. The soapweed yucca (*Yucca glauca*), an agavoid, and twistspine pricklypear, a succulent species, is dominant in this community type.

ILL-SENTED SUMAC INTERMITTENTLY FLOODED SHRUBLAND ALLIANCE (TSIS)

Along the Lake Ditch in the northwest corner of the property the ill-sented sumac intermittently flooded shrubland alliance is present. This community is dominated by skunkbush sumac, a native shrub. Other shrubby species that are dominant in this community type are American plum (*Prunus Americana*), black chokecherry (*Padus virginiana* ssp. *melanocarpa*), and sandbar willow.

SMOOTH BROME HERBACEOUS ALLIANCE (SBH)

The smooth brome herbaceous alliance is present in the south of the property. This alliance is dominated by smooth brome with very little diversity. The most dominant species occurring in this community type are crested wheatgrass and some species found within the crested wheatgrass herbaceous alliance.

BALTIC RUSH SEASONALLY FLOODED HERBACEOUS ALLIANCE (BRSH) & CLUSTERED FIELD SEDGE SEASONALLY FLOODED HERBACEOUS ALLIANCE (CFSH)

In the western section of the property, seepage from Lake Ditch has created areas with extra moisture where wetland vegetation is present. Two areas are dominated with Baltic rush, while two areas are dominated by clustered field sedge.

EASTERN COTTONWOOD TEMPORARILY FLOODED WOODLAND ALLIANCE (ECTW)

In the southeast of the property along the small drainage eastern cottonwood is the dominant overstory species. Understory species such as black chokecherry, American plum, and peachleaf willow (*Salix amygdaloides*) are present

THREE-LEAVED SUMAC UPLAND SHRUBLAND ALLIANCE (TSUS)

In the southeast corner of the property, a patch of three-leaved sumac upland shrubland alliance is present. This community type is dominated by skunkbrush sumac. Other species such as smooth brome and cheatgrass (*Anisantha tectorum*) are present.

RARE PLANTS AND PLANT COMMUNITIES

No rare plants or plant communities have been identified by CNHP on the property (CNHP 2006) and none were observed during the site visits. However, the lower shale-dominated slopes in the eastern section of the property are known to provide habitat for Bell's twinpod (*Physaria bellii*), a species that is believed to be imperiled globally or in the state of Colorado (G2/S2).

STATE NOXIOUS WEEDS

Based on the site visits, one List A species, Mediterranean sage (*Salvia aethiopsis*), five List B, and five list C noxious weed species occur on the property. Mediterranean sage was located in the eastern portion of the property and locations are displayed on Figure 3.

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>Breca 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 burdock	<i>Arctium minus</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
Mediterranean sage	<i>Salvia aethiopsis</i>	High	not listed	A
Musk thistle	<i>Carduus nutans</i>	Low	x	B
quackgrass	<i>Elytrigia repens</i>	None	not listed	B
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

The Colorado Noxious Weed Act §§ 35-5.5-101 through 119, C.R.S. (2003) states that “List A species are species for which the Commissioner of Agriculture has designated for eradication. 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 prairie, agricultural lands, and riparian corridors in Boulder County. Large cottonwoods along the riparian corridor and Lake 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 (*Poocetes gramineus*), western meadowlark (*Sturnella neglecta*), potentially grasshopper sparrow (*Ammodramus savannarum*), savannah sparrow (*Passerculus sandwichensis*), and lark sparrow (*Chondestes grammacus*), and various species of raptors (described below).

Small rodents that probably occur along the ditch and riparian corridor include deer mouse (*Peromyscus maniculatus*), house mouse (*Mus musculus*), and western harvest mouse (*Reithrodontomys megalotis*). The general vicinity is known to support habitat for wintering elk (*Cervus elaphus*). 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.

Prairie dogs. Several portions of the property have supported black-tailed prairie dog (*Cynomys ludovicianus*) colonies in recent years. An inactive prairie dog colony was observed in the southwest corner of the property, while two other colonies with limited activity were observed in the north-central and northeast areas. Two prairie dogs were observed in these areas during the site visit. Prairie dog colonies also have potential to support burrowing owl (*Athene cunicularia*).

Raptors. The riparian habitat in the southeast corner of the property and along the Lake Ditch provides nesting habitat and perch trees for raptors, while the remainder property provides foraging habitat for various raptor species associated with the nearby riparian corridor. During the site visit, a red-tailed hawk (*Buteo jamaicensis*) was observed.

THREATENED, ENDANGERED, OR CANDIDATE WILDLIFE SPECIES

Preble’s meadow jumping mouse (*Zapus hudsonius preblei*), a federally listed threatened species, was found on or near the property along Lake Ditch (northwest corner of the property) in 1997 (USFWS 2007). (The exact location of the survey is not known). According to the Colorado

Division of Wildlife Natural Diversity Information Source (NDIS) and CNHP databases for the area, no other threatened or endangered species exist on the property (NDIS 2008).

COLORADO DIVISION OF WILDLIFE DESIGNATIONS

According to the NDIS database, the property is considered to be within both winter range and a winter concentration area for elk, winter range for mule deer (*Odocoileus hemionus*), and a human conflict area for mountain lion (*Puma concolor*) (NDIS 2008).

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 (OAHF 2008). This database contains information on documented federal or state studies or findings regarding any cultural resources. According to the search, six surveys have been conducted on the property (OAHF 2008). These surveys were generally associated with the ditches on the property, the shed/corral area, the old road bed, the earthen dam, and two sites along the shale ridgeline. Other potential unidentified cultural resources may exist within the property boundaries.

OTHER RESOURCES AND DESIGNATIONS

The property is not located within any areas designated for cultural resources in the Boulder County Comprehensive Plan (Boulder County 2008b).

AGRICULTURE

AGRICULTURAL USE

The property has not been used for agricultural purposes since its acquisition by OSMP. Several lateral ditches could be used to irrigate the central pasture area (as they appear to have done in the past). The property includes 10 shares of water from the Left Hand Ditch Company.

INFRASTRUCTURE

The property is bounded on all sides by barbed-wire fences. These fences are described in greater detail below.

BOULDER COUNTY COMPREHENSIVE PLAN DESIGNATIONS

The Boulder County Comprehensive Plan has identified portions of the property to be Significant Agricultural Land – Lands of Local Importance (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 indications or public access or use were observed during the site visit.

PROPERTY INFRASTRUCTURE

STRUCTURES

A long (30'x80') shed, open to one side, is located in the north-central portion of the property, near a fenced-in corral area. No other structures were observed on the property.

INFRASTRUCTURE AND UTILITIES

The Lake Ditch traverses the northwest corner of the property, while an unnamed lateral ditch crosses the southeast corner. Several small lateral ditches have provided water to the central pasture area.

An earth and stone dam is located in the east-central portion of the property at a low point in the shale ridgeline. The small pond area behind the dam was dry during the site visit.

The property is bounded on all sides by barbed-wire fences. The fences on the north and east sides are in good condition, while the fences along the south and west boundaries are older and are falling into disrepair in some areas (but remain functional). The fence along the eastern boundary has electric wires and is reinforced with chicken wire (to keep out prairie dogs). This eastern fence parallels, within about 2 feet, the neighboring fence, creating a barrier that is difficult to cross or is impassible for many larger wildlife species.

No utilities were observed on the property.

ROADWAYS AND TRAILS

An old road bed traverses the western side of the property from north to south. This road bed is completely revegetated and has not been used in many years. No other roads or trails were observed on the property.

LEGAL CONSIDERATIONS

WATER RIGHTS

Purchase of the 65 acres (2002) included 10 shares of Left Hand Ditch Company water. The water rights are valued at \$25,000.00.

MINERAL RIGHTS

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

EASEMENTS AND RIGHTS-OF-WAY INFORMATION

See OSMP property file.

LOCAL PLANNING DESIGNATIONS

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

Boulder County Comprehensive Plan designations on the property include—

- Environmental Conservation Area – South St. Vrain/Foothills
- Significant Agricultural Land – Lands of Statewide Importance

The property is also 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: Closed

There no evidence of existing public access or use on the property.

The property will remain closed because it is isolated and not connected to a larger open space area, there is no visitor infrastructure, and property infrastructure is not complete. 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 several noxious weed infestations, including Mediterranean sage, an A-list (state priority) species. The deposition of spoils along portions of the Lake Ditch (resulting from ditch clearing) could provide a foothold for additional weed infestations. While ongoing management of most weed species should be implemented, aggressive control of Mediterranean sage should be a priority.

Grassland management/restoration. The grassland areas of the property, including the central pasture area, are degraded from years of livestock grazing and prairie dog use. The prescriptive use of irrigation, grazing, and other management practices could help restore and enhance these areas for long-term agricultural use and wildlife habitat. Since most of the prairie dog colonies on the property are currently inactive, a window of opportunity exists to initiate a grassland restoration effort.

Fencing. The fence along the east boundary is immediately adjacent (within 2 feet) of the neighboring fence (which is reinforced with chicken wire to limit prairie dogs). This double fence may create an unnecessary impediment to some wildlife species, including deer and elk.

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.

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.

Objective 2: Eliminate or improve the double fence along the east boundary.

Action: Work with the neighboring land owner to identify opportunities for a single fence that improves wildlife movement while also meeting management goals.

VEGETATION

Objective 1: Target and control Mediterranean sage on the property, with the goal of eradication.

Action: Implement efforts to aggressively control Mediterranean sage.

Action: Conduct follow-up monitoring and treatments to ensure effectiveness.

Objective 2: 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: Work with ditch maintenance entity to manage ditch debris in a manner that reduces the potential for noxious weeds.

Action: Monitor irrigation ditch clearing for impacts to vegetation and noxious weed spread.

Action: Provide follow-up monitoring and weed control.

Objective 3: Consider management practices to restore the degraded portions of the property consistent with long-term system-wide grassland management priorities and prairie dog management needs.

Action: Consider re-initiating irrigation practices on the property as part of a broader restoration strategy.

Action: Consider using grazing or mowing as a prescriptive management tool.

Action: Designate and manage prairie dog colonies in accordance with criteria included in the Grassland Ecosystem Management Plan.

Objective 4: Identify and protect any occurrences of Bell's twinpod (*Physaria bellii*) or other rare plant species on the property.

Action: Conduct targeted surveys to confirm the presence of Bell's twinpod (or other species) on the property.

Action: If Bell's twinpod is found on the property, consider additional measures (e.g., additional use restrictions/enforcement, habitat management/restoration) to protect the population.

WILDLIFE

Objective 1: Protect and enhance potential Preble's meadow jumping mouse habitat along the Lake Ditch.

Action: Work with ditch management entity to identify habitat protection/management opportunities.

Action: Avoid and minimize potentially disturbing open space management activities along the Lake Ditch, particularly from early May through October.

Objective 2: Coordinate grassland management with sensitive breeding periods for wildlife.

Action: Minimize disturbance (burning, mowing, grazing, and chemical spraying) during the nesting season for grassland birds.

Action: Spray weeds on a spot-by-spot basis, and delay spraying until after the peak nesting season for grassland birds.

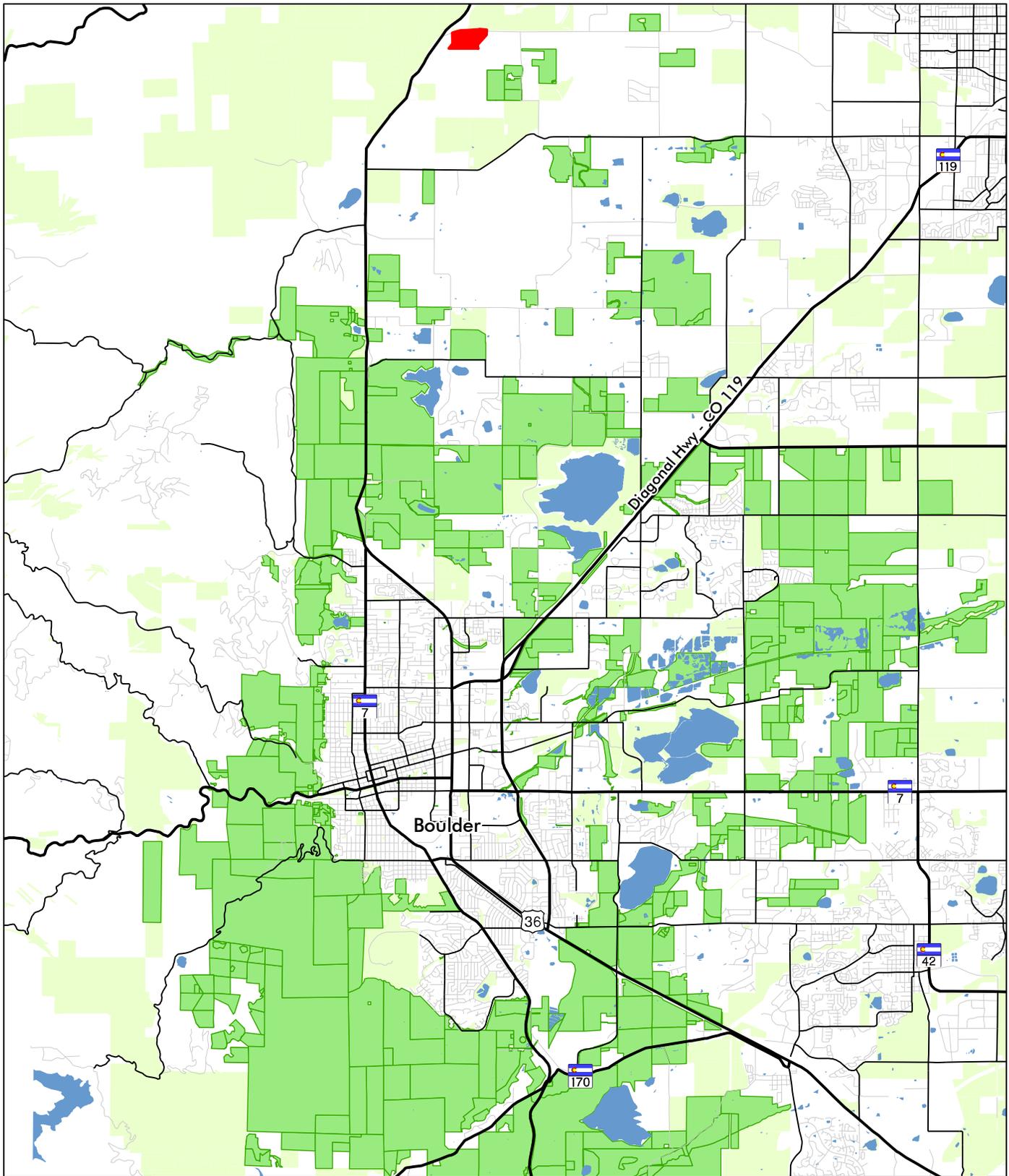
AGRICULTURAL MANAGEMENT

Objective 1: Consider implementing agricultural practices in the central portion of the property for the purposes of vegetation, noxious weed, and prairie dog management.

Action: Identify opportunities for irrigation, grazing, and other management practices.

Action: Develop a management regime that is consistent with overall agricultural management and grassland restoration strategies.

FIGURES



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Waldorf Property RRA and Management Plan

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

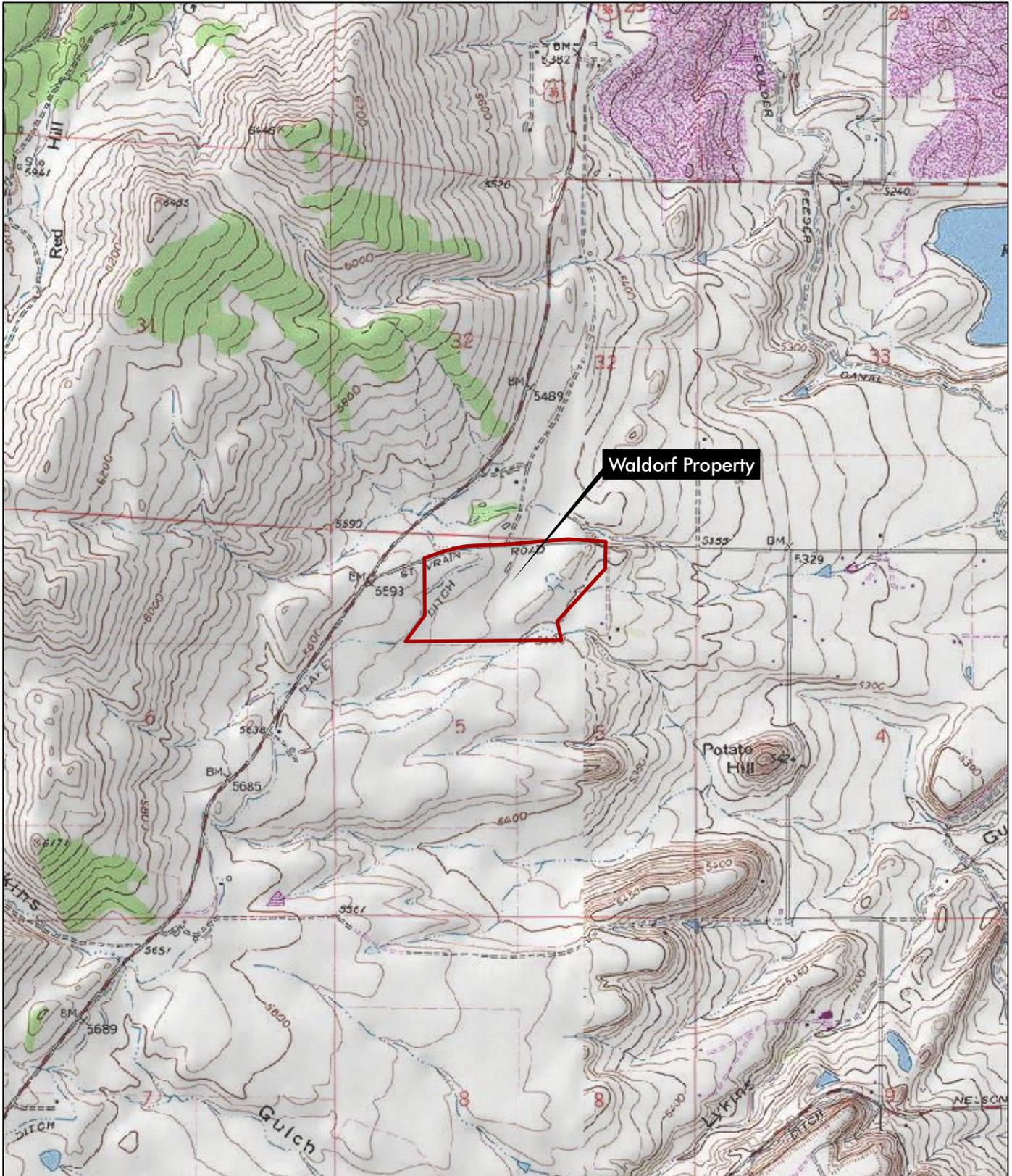


1 inch = 2 miles



**Figure 1
 Vicinity Map**

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



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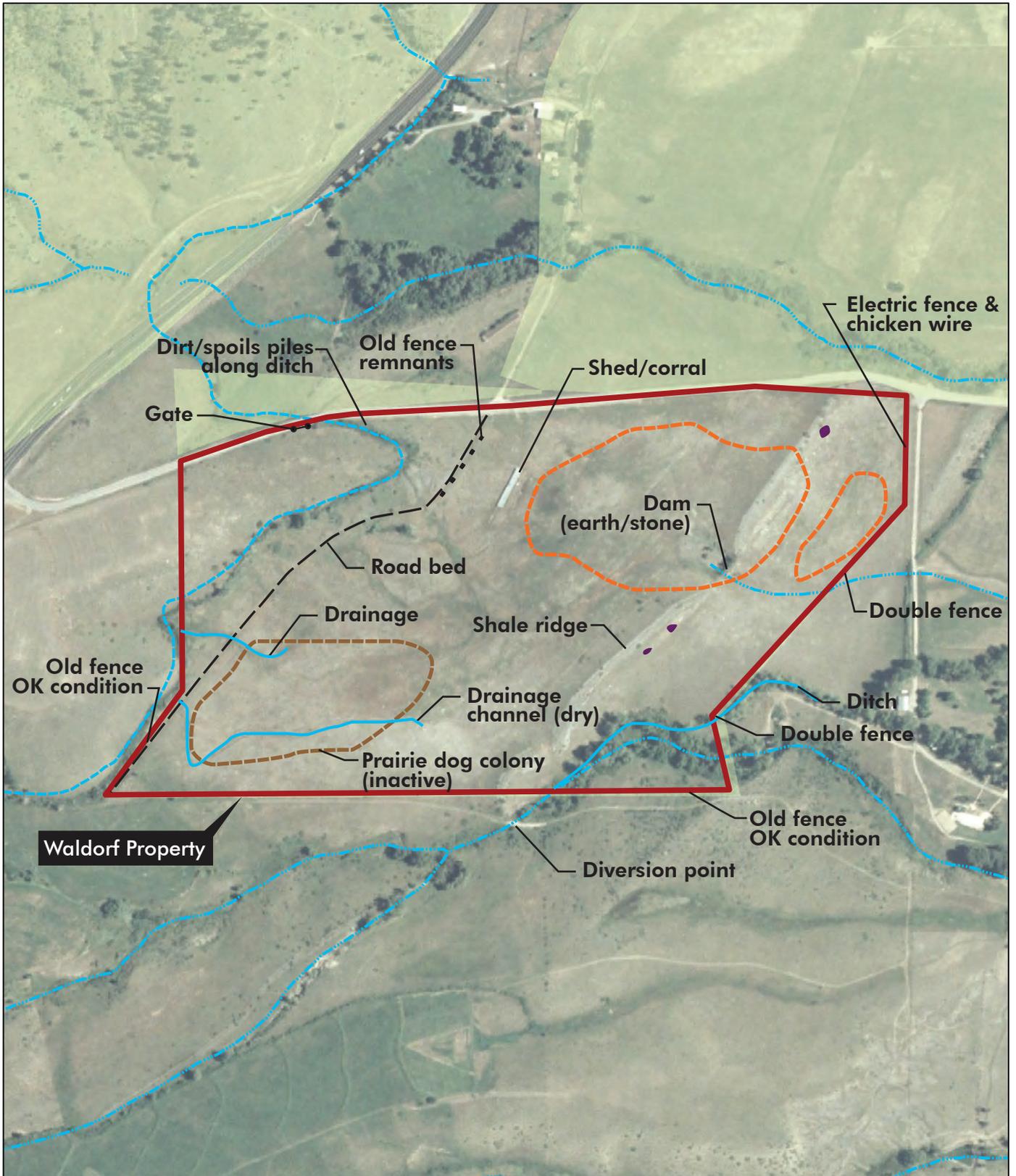
Waldorf Property RRA and Management Plan
 Section 5, T2N, R70W and Section 32, T3N, R70W
 UTM NAD83 Coordinate Zone 13N; 478326mE, 4446951mN
 USGS Lyons and Hygiene CO, Quadrangles
 Boulder County, Colorado

0 2,000 4,000 Feet
 1 inch = 2,000 feet

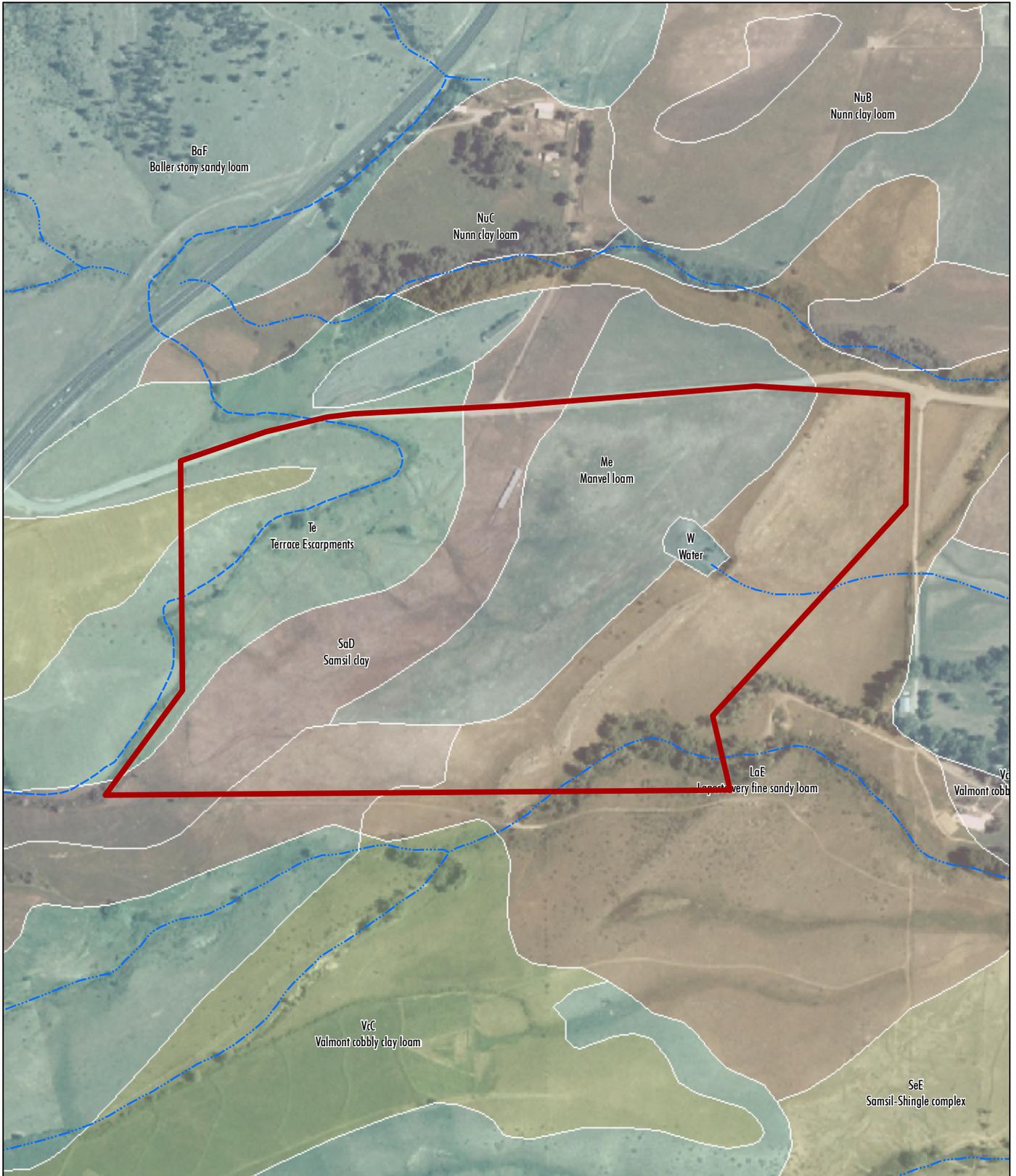


Figure 2
Location

Prepared for: City of Boulder Open Space
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 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>Waldorf Property RRA and Management Plan</p> <ul style="list-style-type: none"> City of Boulder Open Space Other Open Space Weed patch Active prairie dog colony Inactive prairie dog colony <p>0 500 1000 Feet</p> <p style="text-align: right;">1 inch = 500 Feet</p> <div style="text-align: right;"> <p>N</p> </div>	<p>Figure 3 Property Features</p> <p>Prepared for: City of Boulder Open Space and Mountain Parks File: 4089 Figure Waldorf.pdf July 2008</p>
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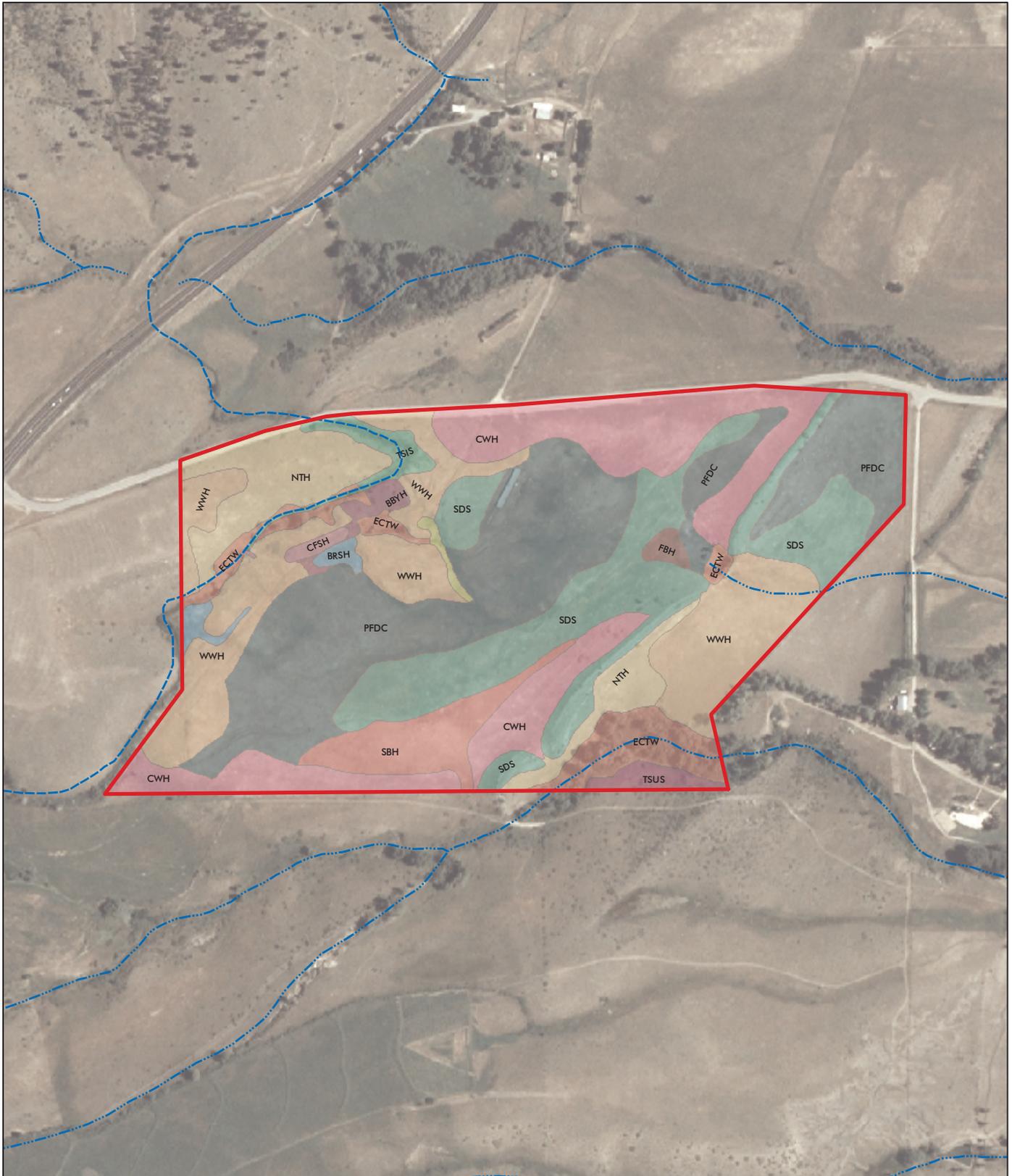


1 inch = 500 Feet



**Figure 4
 Soils**

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



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Waldorf Property RRA and Management Plan
 (See following page for for vegetation community names)



1 inch = 500 Feet



Figure 5
Vegetation Communities

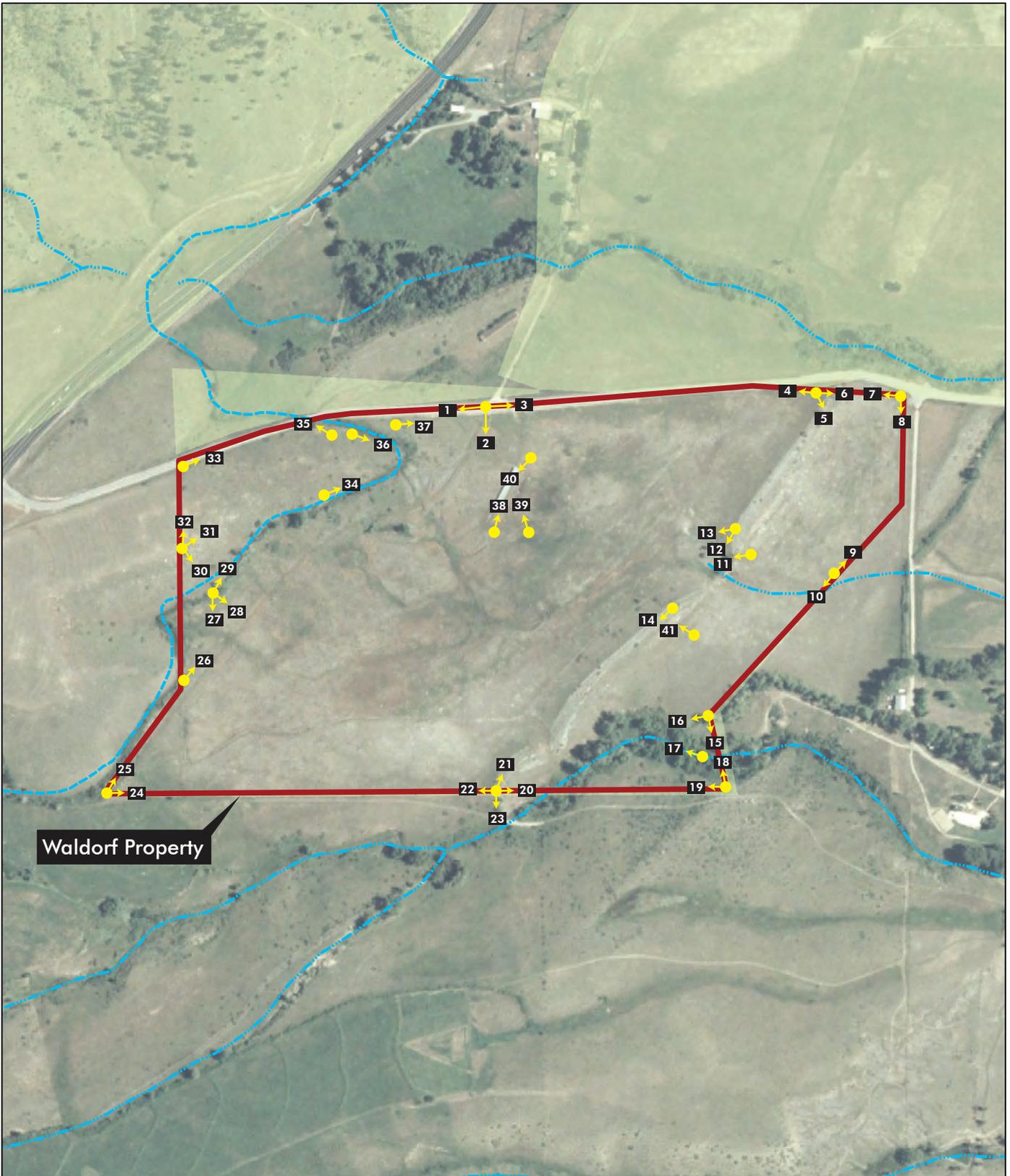
Prepared for: City of Boulder Open Space
 and Mountain Parks
 File: 4089 Figure 5.mxd
 June 2008

Vegetation Communities

Acronym, CmnName

	ADUD, Annual-dominant Upland Disturbance
	APS, American Plum Shrubland Alliance
	BBYH, Big Bluestem - (Yellow Indiangrass) Herbaceous Alliance
	BRSF, 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



Waldorf Property



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Waldorf Property RRA and Management Plan

●➔■ Photo Point



1 inch = 500 Feet



Appendix A
 Photo Points

Prepared for: City of Boulder Open Space
 and Mountain Parks
 File: 4089 Figure 3.mxd
 June 2008

APPENDIX B
PLANT SPECIES

APPENDIX B PLANT SPECIES

Species Name	Synonym	Common Name	Western Wheatgrass Herbaceous Alliance (WWH)	Three- leaved Sumac Shrub Savannah Herbaceous Alliance (TSSH)	Crested Wheatgrass Semi- Natural Herbaceous Alliance (CWH)	Cultivated Alfalfa/ Smooth Brome Hay (GAH)	Needle- and- Thread - Blue Grass Herbaceous Alliance (NTH)	Soapweed Yucca Shrub Savannah Herbaceous Alliance (SYSH)	Smooth Brome Semi- Natural Herbaceous Alliance (SBH)	Introduced Species Agricultural Pasture (ISAP)
Native Annual/Biennial Forbs										
Cirsium undulatum		wavyleaf thistle	■				■			
Erigeron divergens		spreading fleabane	■	■				■		
Grindelia squarrosa		curlycup gumweed	■				■		■	■
Introduced Annual/Biennial Forbs										
Alyssum parviflorum	Alyssum simplex	smallflowered alyssum	■	■	■		■	■	■	■
Camelina microcarpa		littlepod false flax	■							■
Erodium cicutarium		redstem stork's bill	■		■	■			■	■
Lappula redowskii		flatspine stickseed	■							■
Podospermum laciniatum	Scorzonera laciniatum	cutleaf vipergrass	■							■
Salsola australis	Salsola iberica	prickly Russian thistle								
Salvia aethiopsis		Mediterranean sage	■				■	■		■
Sisymbrium altissimum		tall tumbled mustard	■		■			■		■
Verbascum thapsus		common mullein	■						■	■
		Introduced Annual Grasses								
Anisantha tectorum	Bromus tectorum	cheatgrass								
Native Perennial Forbs										
Thermopsis rhombifolia		prairie thermopsis								
Adenolinum lewisii	Linum lewisii	prairie flax	■					■		

APPENDIX C
REFERENCES

APPENDIX C

REFERENCES

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**PHOTO POINTS
WALDORF**



Photo 1 - View west from access gate along north boundary.



Photo 2 - View south from access gate along north boundary.

**PHOTO POINTS
WALDORF**



Photo 3 - View east from access gate along north boundary.



Photo 4 - View of north boundary from shale ridge near northeast corner.

PHOTO POINTS
WALDORF



Photo 5 - View of east area from shale ridge near northeast corner.



Photo 6 - View of northeast corner.

PHOTO POINTS
WALDORF



Photo 7 - View west from northeast corner.



Photo 8 - View south from northeast corner.

PHOTO POINTS
WALDORF



Photo 9 - View northeast along double fence line on east side.



Photo 10 - View southwest along double fence line on east side.

PHOTO POINTS
WALDORF



Photo 11 - Old dam in east portion of the property, looking west.



Photo 12 - Pond area (dry) behind dam in east portion of the property.

PHOTO POINTS
WALDORF



Photo 13 - View west from shale ridge near old pond and dam.



Photo 14 - View along shale ridge, looking southwest.

PHOTO POINTS
WALDORF



Photo 15 - Ditch and riparian corridor along east boundary, looking south.



Photo 16 - View along lateral ditch, looking west.

PHOTO POINTS
WALDORF



Photo 17 - Small stream in riparian corridor along the east boundary, looking west.



Photo 18 - View north from southeast corner.

PHOTO POINTS
WALDORF



Photo 19 - View west from southeast corner.



Photo 20 - View east from along the south boundary.

PHOTO POINTS
WALDORF



Photo 21 - View north from south-central boundary.



Photo 22 - View west along the south-central boundary.

**PHOTO POINTS
WALDORF**



Photo 23 - Ditch diversion point immediately south of the property.



Photo 24 - View east from southwest corner.

PHOTO POINTS
WALDORF



Photo 25 - View northeast from southwest corner.



Photo 26 - Old road bed near west boundary, looking north.

**PHOTO POINTS
WALDORF**



Photo 27 - View south from west boundary.



Photo 28 - View east from west boundary.

PHOTO POINTS
WALDORF



Photo 29 - View north along lateral ditch near west boundary.



Photo 30 - View southeast from west boundary.

PHOTO POINTS
WALDORF



Photo 31 - View northeast from west boundary.



Photo 32 - View north from west boundary.

PHOTO POINTS
WALDORF



Photo 33 - View east from northwest corner.



Photo 34 - View northeast along ditch in northwest portion of property.

PHOTO POINTS
WALDORF



Photo 35 - Access gate near northwest corner of property.



Photo 36 - View along ditch from north boundary.

**PHOTO POINTS
WALDORF**



Photo 37 - View east along north boundary.



Photo 38 - Old livestock shed, looking north.

PHOTO POINTS
WALDORF



Photo 39 - Corral area and shed, looking northwest.



Photo 40 - Old livestock shed, looking southwest.