

FINAL
**Environmental Assessment/
Habitat Conservation Plan**
For the
Issuance of an Incidental Take Permit
Under Section 10(a)(1)(B) of the
Endangered Species Act
For the Construction of a Single Family
Residence at
The Harding Property

Prepared by—
ERO Resources Corporation (Consultant)

With assistance from—
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February 2001

Title Page

Lead Agency: U.S. Fish and Wildlife Service, Department of Interior

Legal Authority: Endangered Species Act of 1973, as amended,
Section 10(a), as implemented by
50 CFR 17.32(b)(1) and 17.22(b)(1)

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ENVIRONMENTAL ASSESSMENT/HABITAT CONSERVATION PLAN FOR THE ISSUANCE OF AN INCIDENTAL TAKE PERMIT UNDER SECTION 10(A)(1)(B) OF THE ENDANGERED SPECIES ACT FOR THE CONSTRUCTION OF A SINGLE FAMILY RESIDENCE AT THE HARDING PROPERTY

SEPTEMBER 2000

Introduction

Susan K. Harding, hereinafter referred to as "Applicant," has applied to the U.S. Fish and Wildlife Service (Service) for a permit to allow the incidental take of Preble's meadow jumping mouse (*Zapus hudsonius preblei*), a species listed as threatened under the Endangered Species Act of 1973, as amended (ESA). The incidental take would be in the form of potential disturbance to and loss of habitat potentially used by Preble's meadow jumping mouse (PMJM). The proposed action involves the construction of a single-family home in an area potentially used by PMJM. The property is located within NW ¼ SE ¼ Section 11, Township 8 S, Range 68 W in Douglas County, Colorado (Figure 1).

This document provides an Environmental Assessment (EA) as documentation of National Environmental Policy Act (NEPA) compliance and a habitat conservation plan (HCP) as required by Section 10 of the ESA in support of the Incidental Take Permit application. The intent of the HCP is to minimize and mitigate the potential incidental take of PMJM. No other federally-listed species are known to be adversely affected by the proposed project.

The Applicant or its contractor will monitor the HCP and prepare an annual report on the progress of habitat improvement measures for three growing seasons, or until success criteria are met. Four alternatives have been identified: 1) the Proposed (Preferred) Alternative, 2) Alternate Site Location, 3) Wait for Regional 10(A)(1)(B) Permit, and 4) No Action Alternative.

Background

Susan K. Harding purchased the 35.55-acre parcel located at 101 Allis Ranch Road, Sedalia, Colorado, on January 14, 1997. Construction of existing facilities at the site occurred according to the following schedule:

- Studio2Design of Boulder, Colorado was hired to design the site master plan for the property on May 4, 1997.
- A 48 x 48 foot pole barn was built at the site between May 14 and August 5, 1997.
- The driveway and septic system were installed at the site during the summer of 1997. The septic system was designed to accommodate the barn and a future single-family residence at the site.
- A well was permitted on June 16, 1997, and drilled during the summer of 1997.
- Electricity was supplied to the barn between September 9 and October 21, 1997.
- Fencing and cross fencing to allow cyclical grazing of pastures was installed in early spring, 1998.
- Horses were moved the property on May 21, 1998.

The Preble's meadow jumping mouse came under the full protection of the Endangered Species Act as a threatened species on June 12, 1998. The Applicant had a builder under contract to construct a single-family residence at the site during summer 2000. Because the proposed building site is within potential habitat for the mouse, construction at the site has been postponed until an incidental take permit for the mouse can be obtained. The Applicant originally planned to begin construction by June or July 2000.

Purpose and Need

The purpose of this EA/HCP is to evaluate the environmental impacts of the proposed action and to obtain an incidental take permit for the Preble's meadow jumping mouse, a federally threatened species. The EA component of this report is required to document compliance with NEPA. Section 10 of the ESA requires an HCP in support of the Incidental Take Permit application. The intent of the HCP is to minimize and mitigate the potential incidental take of PMJM to the maximum extent practicable and to reduce the likelihood that the proposed project will negatively affect the survival and recovery of PMJM.

Description of the Affected Environment

Vegetation

Figure 2 shows the existing structures and habitat characteristics at the site. West Plum Creek flows through the northwest portion of the property. Dense stands of sandbar willow (*Salix exigua*) and other riparian vegetation cover a low bench above the creek. Grasses and scattered shrubs such as three-leaved sumac (*Rhus trilobata*), golden currant (*Ribes aureum*), hawthorn (*Crataegus erythropoda*), and wild plum (*Prunus americana*) cover a low terrace next to the creek. This low terrace is within the 100-year floodplain and is protected by an existing conservation easement that designates this area as "wildlife corridor." The wildlife corridor designation covers 16.14 acres of the site, including West Plum Creek and its associated floodplain. A second terrace occurs approximately 10 feet higher and is covered by prairie species such as blue grama (*Bouteloua gracilis*) and smooth brome (*Bromus inermis*). This terrace also includes the existing barn, septic system, corrals, driveway, and the proposed building site.

To the south, the property rises up to form a low bluff. This bluff is covered by shortgrass prairie and scattered stands of scrub oak (*Quercus gambelii*), and is currently used as pasture. Another significant feature that occurs at the site is a natural spring that occurs near the northeast corner of the parcel. The spring is bordered by a dense stand of sandbar willow, wild plum, chokecherry (*Prunus virginiana*) and other shrubs. A wet meadow and small cattail marsh occur near the eastern edge of the site, just south of the natural spring. Plant species in this area include cattails (*Typha latifolia*), sandbar willow, Nebraska sedge (*Carex nebraskensis*), crested wheatgrass (*Agropyron cristatum*), and smooth brome.

Wildlife

The property has high quality wildlife habitat along West Plum Creek and the surrounding oak scrublands. Small mammal species likely to occur at the property include deer mouse, meadow vole, prairie vole, western harvest mouse, hispid pocket mouse, and Mexican woodrat. Other mammal species that may frequent the property include mule deer, elk, coyote, mountain lion, bobcat, striped skunk, raccoon, muskrat, beaver, and porcupine. Common bird species that may occur at the property include red-

tailed hawk, great-horned owl, northern harrier, western meadowlark, American goldfinch, great blue heron, black-billed magpie, American robin, broad-tailed hummingbird, common grackle, European starling, northern flicker, western kingbird, and many others. Reptiles that have the potential to occur at the site include fence lizard, bull snake, plains garter snake, and prairie rattlesnake. Amphibians that have the potential to occur at the property include northern leopard frog, bullfrog, chorus frog, Woodhouse's toad, and tiger salamander.

Threatened or Endangered Species

Two threatened species, Preble's meadow jumping mouse and Ute ladies'-tresses orchid, and one species proposed for listing as threatened, the Colorado butterfly plant, have the potential to occur in riparian areas in this part of Douglas County.

Preble's meadow jumping mouse, a federally threatened species, is known to occupy the riparian habitat associated with the flood plain of West Plum Creek, which flows through the property. PMJM is known to occur at the Pine Cliff Ranch, a privately owned ranch immediately adjacent to the property to the north at the confluence of West Plum Creek and Garber Creek. The Colorado Division of Wildlife (CDOW) conducted trapping and radio telemetry research on PMJM at Pine Cliff in 1998 and 1999. No trapping has been conducted at the Harding Property, but due to the close proximity to a known population of PMJM at Pine Cliff Ranch and similar continuous habitat, PMJM is assumed to be present in potentially suitable habitat at the site. Research by CDOW estimated the population density of PMJM at Pine Cliff Ranch to be 57.35 mice/km of stream in 1998, and 53.79 mice/km in 1999 (White and Shenk, 2000). The short reach of West Plum Creek at the Harding Property could potentially support a similar density of PMJM. The proposed project area could potentially be used as foraging or hibernation habitat by PMJM.

Potentially suitable habitat for the Ute ladies'-tresses orchid (*Spiranthes diluvialis*) occurs both along the creek and in the wet meadow in the eastern portion of the site. Ute ladies'-tresses orchid (ULTO) occurs at elevations below 6,500 feet in moist to wet alluvial meadows, floodplains of perennial streams, and around springs and lakes. Occurrences of ULTO have been documented in Colorado, Wyoming, Idaho, Nevada,

and Utah. Once thought to be fairly common in low elevation riparian areas in Colorado, Utah, and Nevada, currently only sixteen populations are reported to occur in Colorado with most populations occurring along the Front Range. Generally, the vegetative cover is relatively open; dense, overgrown sites are not conducive to ULTO establishment. Where the ULTO is found, soils are typically alluvial deposits of sandy, gravelly material that are saturated to within 18 inches of the surface for at least part of the growing season. Vegetation at sites where the orchid is found typically includes species that are considered Facultative Wetland or Obligate Wetland species. There are no known populations of ULTO in Douglas County. No potential habitat for the orchid will be disturbed by the proposed project.

The Colorado butterfly plant (*Gaura neomexicana* ssp. *coloradensis*) is a short-lived perennial herb found in moist areas of floodplains within a small area in southeastern Wyoming, western Nebraska, and north-central Colorado. It occurs on subirrigated, alluvial soils on level or slightly sloping floodplains and drainage bottoms at elevations of 1,524 to 1,951 meters (5,000 to 6,000 feet). Colonies are often found in low depressions or along bends in wide, active, meandering stream channels a short distance upslope of the actual channel. It commonly occurs in communities dominated by redtop (*Agrostis stolonifera*), Kentucky bluegrass (*Poa pratensis*) on wetter sites and wild licorice (*Glycyrrhiza lepidota*), Flodman's thistle (*Cirsium flodmanii*), curlycup gumweed (*Grindelia squarrosa*), and smooth scouring rush (*Equisetum laevigatum*) on drier sites. These areas are usually intermediate in moisture between wet, streamside communities dominated by sedges, rushes, and cattails, and dry upland shortgrass prairie. Typical Colorado butterfly plant habitat is relatively open without dense or overgrown vegetation. No potential butterfly plant habitat occurs within the proposed project area.

Wetlands

Jurisdictional wetlands at the Harding Property occur in the floodplain next to West Plum Creek and in the wet meadow complex on the eastern edge of the site. These wetlands have not been mapped in detail, so the exact acreage of wetlands at the site is not known. West Plum Creek and all its associated wetlands are protected by a conservation easement that prevents development or fencing in these areas. The wet

meadow is currently used as pasture. No wetlands occur within the area proposed for development.

Geology/Soils

The soils within the project area are primarily Kassler gravelly sandy loam and Newlin gravelly sandy loam (SCS, 1974). Kassler gravelly sandy loam consists of somewhat excessively drained soils that formed in alluvium derived from arkosic sedimentary rock. Kassler soils have rapid permeability and low water availability. Newlin gravelly sandy loam consists of well-drained soils formed from alluvial materials derived from mixed sources. Permeability is moderate and available water capacity is low.

Land Use

Existing land use at the site is shown in Figure 2. A conservation easement is currently in place for the property. The conservation easement covers the entire property and designates three levels of protection (Elizabeth Richardson, Colorado Open Lands, personal communication). The most restrictive land use designation covers West Plum Creek and most of the 100-year floodplain. This "Wildlife Corridor" area covers 16.14 out of 35.55 acres of the parcel, including West Plum Creek and most of its riparian habitat. The conservation easement prevents future development or fencing in this area (refer to Appendix 2: Conservation Easement). Land use in this area is wildlife habitat and preservation. The remaining 19.41 acres of the parcel includes a 3-acre building envelope and existing pasture. The proposed project site is located within the 3-acre building envelope.

Surrounding land use is agricultural. The Harding Property is located in the Allis Ranch Preserve, which includes nine other 35-acre lots. The conservation easement designates West Plum Creek and its riparian habitat within these ten 35-acre lots as a wildlife corridor. The conservation easement designates the 830 acres of Allis Ranch Preserve as follows: ten 35-acre lots including wildlife corridor (350 acres), meadow (196 acres), pasture (247 acres), and ranch headquarters (35 acres).

Air Quality

The property is located in a rural portion of Douglas County that meets all relevant air quality standards.

Water Resources and Water Quality

The water supply for the proposed home will come from the existing, privately permitted well located on the property. West Plum Creek traverses the northwest corner of the property. A portion of the property lies within the 100-year floodplain of the creek. A natural spring and wetland complex is located in the eastern portion of the property. This spring flows into West Plum Creek.

Cultural Resources

Before its purchase by the Applicant in 1997, the property was part of a cattle ranch. In order to be eligible for listing on the National Register of Historic Places, a structure must be at least 50 years old. The Church of Saint Philip-in-the-Field and Bear Canyon Cemetery are located east of the Harding Property and are listed on the National Register of Historic Places. The Harding Property is located within the Bear Canyon Agricultural District, which is also listed on the National Register of Historic places and includes approximately 12 square miles of the surrounding area. There were no buildings or other structures on the property at the time of purchase.

Alternatives Considered

The alternatives considered include: 1) build the residence at the proposed site (preferred), 2) locate the proposed residence at an alternate site, 3) wait for the regional Section 10(a)(1)(B) permit, and 4) no action. This section describes each alternative. The environmental consequences of the alternatives are discussed in the "Environmental Consequences" section, below.

Alternative 1 - Proposed (Preferred) Alternative

The proposed action is the issuance of a permit under Section 10(a)(1)(B) of the Endangered Species Act to allow the incidental take of Preble's meadow jumping mouse during the construction of a single family residence at the site. The proposed alternative would allow the Applicant to construct a home at the site as originally planned. The

proposed project will directly affect approximately 0.294 acres of potential habitat for PMJM. The project would not adversely affect the continued existence of PMJM on the property due to the small area of habitat affected.

The proposed home and associated facilities will consist of a single-family residence (permanent disturbance consisting of 1,874.5 square feet), a garage and bridge (permanent disturbance of 969.5 square feet), an enclosed garden and patio (permanent disturbance of 1,027 square feet), exterior wood decks (permanent disturbance of 434 square feet), an enclosed dog run (permanent disturbance of 112 square feet), and a concrete driveway apron (permanent disturbance of 640 square feet). Figure 3 shows the construction impact area plan for the site.

An HCP has been developed as part of the preferred alternative. The proposed HCP will allow for the incidental take of PMJM by permitting the house to be constructed in an area that may be periodically used by the mouse as foraging habitat. The incidental take permit application is attached (refer to Figure 4). Construction will result in about 0.12 acres of permanent habitat loss and another 0.18 acres of temporary effects to the habitat associated with localized disturbance. Preserving and enhancing a 0.59-acre area of similar foraging habitat for the mouse in the northeast corner of the property will compensate for this loss of habitat at a 2 to 1 ratio.

The proposed project minimizes potential effects to PMJM and its habitat while meeting the Applicant's needs. The proposed alternative would result in minimal impacts to potential habitat (Table 1).

Table 1. Areas disturbed by project features (proposed alternative)

Feature	Area of Disturbance	
	Square feet	Acres
Proposed residence	1874.5	0.043
Garage and bridge	969.5	0.022
Enclosed garden and patio	1027.0	0.024
Wood decks	434.0	0.010
Enclosed dog run	112.0	0.003
Concrete driveway apron	640.0	0.015
Sub-total of hard surface areas[†]	5057.0	0.116
Temporary construction disturbance [‡]	7753.0	0.178
Total	12810.0	0.294

[†]Permanent effects are based on the footprint of the feature.

[‡]Temporary effects are based on a 20-foot setback from all sides of permanent features.

Alternative 2 - Alternate Site Location

This alternative involves relocating the house to a new site, further away from the creek corridor on top of the bluff to the south. This alternative would relocate the residence more than 300 feet from the 100-year floodplain associated with West Plum Creek. This alternative would require removing and replacing existing fencing and replacing the already installed septic system and domestic well. In addition, this alternative would not conform to the Allis Ranch Preserve’s 3-acre building envelope requirement. Under this alternative, no application for incidental take would be submitted.

Alternative 3 - Wait for Regional 10(a)(1)(B) Permit

This alternative involves waiting for approval of the Douglas County regional 10(a)(1)(B) Permit. The proposed construction of the residence might be able to proceed under a countywide HCP. It is unknown when this regional HCP will take affect, or if it will address the proposed project. This alternative assumes that the Applicant could wait for several years for the regional HCP to be approved and implemented.

Alternative 4 - No Action Alternative

The no action alternative consists of not constructing the home and its associated facilities. This alternative would avoid any incidental take of PMJM at the site. This alternative would not allow the applicant to use the property and the completed infrastructure for a home site as originally intended. Under this alternative, no application for incidental take would be submitted.

Environmental Consequences

Alternative 1 - Proposed (Preferred) Alternative

Vegetation

The proposed action will result in the alteration of approximately 0.294 acres of mixed grassland vegetation during construction. Of this total, 0.178 acres will be temporary disturbance that will be replaced with appropriate species after completion of construction. Planting additional shrubs will enhance an additional 0.59-acre area as mouse habitat. The attached planting plan describes a detailed planting plan for the shrub enhancement area (refer to Appendix 3: Planting Plan).

Wildlife

The small amount of disturbance associated with the proposed project should have little direct affect on wildlife. A few rodents or birds may be directly displaced by the proposed project. Some increased competition for nesting or foraging habitat may result. The majority of the property will remain in its current state, including the riparian area along the creek that is preserved by a conservation easement. The proposed project includes an HCP that will result in additional areas added to the existing conservation easement, and shrub plantings to enhance 0.59 acres as habitat for the Preble's meadow jumping mouse. These preservation and enhancement measures should compensate for impacts to wildlife habitat.

Threatened and Endangered Species

Preble's meadow jumping mice typically inhabit areas characterized by well-developed plains riparian vegetation with relatively undisturbed grassland and a water source in close proximity (Armstrong et al. 1997). Recent studies have suggested that

PMJM may have a wider ecological tolerance than previously thought, and that the requirement for diverse vegetation and well-developed cover can be met under a variety of circumstances (Meaney et al. 1997). Radio-tracking studies conducted near the project site by the Colorado Division of Wildlife have documented PMJM using upland habitat adjacent to wetlands and riparian areas (Shenk and Sivert 1999). The most recent U.S. Fish and Wildlife Service (FWS) survey guidelines for PMJM define PMJM habitat as riparian areas within 300 feet of the 100-year floodplain of a stream (FWS 1999). Based on this definition, the proposed residence site is located within potential habitat. The proposed project could result in the incidental take of PMJM and affect PMJM that inhabit the property by disturbing 0.294 acre of potential foraging or hibernation habitat. Preserving and enhancing an additional 0.59 acre as habitat for PMJM will mitigate these impacts.

No other threatened or endangered species will be affected by the proposed project. No potential habitat for the threatened Ute ladies'-tresses orchid or the Colorado butterfly plant (a proposed species) will be affected by the proposed action.

Wetlands

No wetlands will be affected by the proposed project.

Geology/Soils

No significant alterations to geology or soils at the site are expected to result from the project.

Land Use

This area of Douglas County is zoned agricultural, allowing one residence per 35 acres. The proposed residence has been approved by Douglas County. The proposed residence will not significantly change land use in the area.

Air Quality

Air quality will not be significantly affected because of the small construction area and limited duration of construction. Emissions from construction-related activities would be localized and limited to short periods of time.

Water Resources and Water Quality

Water quality of the area should not be affected because ground-disturbing activities will not be conducted in West Plum Creek or its flood plain. Standard best management practices (BMPs) including sediment barriers, such as silt fencing or hay bales, will be used to minimize any sediment associated with construction from reaching West Plum Creek.

Cultural Resources

No known cultural sites exist on the 0.294 project site; therefore, no impacts to cultural resources are anticipated.

Cumulative Effects

There will be no significant adverse cumulative effects to resources due to the small area of disturbance (about 0.294 acres) and short period of construction. The 830 acres of Allis Ranch Preserve are already covered by a conservation easement that will limit the type and amount of development that can occur on this reach of West Plum Creek. Single-family residences may be developed on some of the other 35-acres lots in the future, but the building sites for the future residences occur more than 300 feet from the 100-year floodplain and outside the conservation easement. No other cumulative impacts in this reach of the creek are expected.

Recreation and Visual Resources

The property is not open to public access, so the proposed project will have no affect on recreational resources. The proposed single-family residence will not be visible from either Perry Park Road or Allis Ranch Road. The residence will be visible from a short reach of Pine Cliff Road.

Indirect Effects

No indirect effects to PMJM or its potential habitat are expected. Standard BMP measures will reduce the potential for affects to the West Plum Creek in the form of increased sedimentation or runoff during construction.

Alternative 2 - Alternate Site Location

The Applicant purchased the property with the intent to develop it according to the proposed alternative. While it is possible to construct a single family residence at a location other than the preferred site that would be further from the creek and thus have less potential to affect PMJM, the Applicant has invested considerable financial resources in the existing site location. Construction at an alternate site would require abandoning the existing septic system and well, re-fencing the site to allow rotation of grazing, and would require a lengthy approval process to alter the approved 3-acre building envelope. For these reasons, this alternative was considered non-practicable.

Alternative 3 - Wait for Regional 10(a)(1)(B) Permit

This alternative was considered non-practicable because of uncertainties about the timing of the Douglas County Regional HCP. It is unknown when the regional HCP will take effect, or if it will address the proposed project.

Alternative 4 - No Action Alternative

This alternative would not result in any disturbance at the site or potential take of PMJM. This alternative was considered non-practicable because it would not allow the Applicant to develop a home site on her property. Without the ability to build on the property, the Applicant would not have purchased the property.

Habitat Conservation Plan

Conservation Measures

As part of the proposed project, an HCP has been proposed to avoid or minimize potential adverse effects of the proposed project on PMJM and its habitat. The following measures are already in place to protect and preserve wildlife habitat, including PMJM, at the site —

- **The Applicant's property and the surrounding Allis Ranch Preserve are protected by a conservation easement limiting the type and amount of development.** The Applicant's 35.55-acre property includes 16.14 acres (45 percent) that is designated by the conservation easement as "Wildlife Corridor" that will not be fenced or grazed in the future.

The Applicant will implement the following additional measures to assure that the proposed action does not reduce the potential for survival and recovery of PMJM in the wild —

- **The loss of 0.294 acres of potential PMJM habitat will be compensated by the protection and enhancement of approximately 0.59 acres of potential habitat.** Research by CDOW has suggested that habitat quality of PMJM can be predicted by the amount of shrub cover available at a site (White and Shenk 2000). A 0.59-acre area in the northeast corner of the property will be fenced off to restrict grazing, and will be enhanced as PMJM habitat by planting clumps of shrubs. This area is currently low-quality pasture dominated by crested wheatgrass. Approximately 140 shrubs will be planted in five clumps with 28 shrubs per clump. Within clumps, shrubs will be planted on 3-foot centers. Shrubs will be watered for the first 2 growing seasons, or until they become established, whichever is longer. Shrubs will be considered to be established when they show signs of new growth and are not wilting between watering. Table 2 shows the species of shrubs that will be used. Appendix 3 shows the planting plan that will be used.
- **Construction activities will be carried out using standard best management practices to minimize the potential for impacts to West Plum Creek.** Standard BMPs include use of silt fencing during construction to minimize the amount of sediment from construction activities that reaches the creek.

Table 2. Shrubs planted for habitat enhancement

Common Name	Latin Name	Size	Quantity
Wild plum	<i>Prunus americana</i>	1 gallon	28
Chokecherry	<i>Prunus virginiana</i> (syn. <i>Padus virginiana</i>)	1 gallon	28
Three-leaved sumac (skunkbrush)	<i>Rhus trilobata</i> (syn. <i>Rhus aromatica</i> var. <i>trilobata</i>)	1 gallon	28
Golden currant	<i>Ribes aureum</i>	1 gallon	28
Snowberry	<i>Symphoricarpos occidentalis</i>	1 gallon	28
Total			140

Maintenance, Monitoring, and Reporting

A monitoring period will be in effect for three full growing seasons. At the end of each growing season, a brief letter report will be submitted to the Service describing the status of any remedial work performed. The shrub planting will be considered successful when 67 percent of shrubs are established. The shrubs will be considered established when 67 percent of the planted shrubs survive a full growing season without supplemental irrigation. This letter report will include photographs of the site.

Additionally, the adjoining area west of the mitigation area will be monitored to ensure that the woody vegetation is not degraded by horse grazing or trampling. Monitoring will be qualitative and consist of set photographic points and descriptions that will be included in the annual monitoring reports.

Unforeseen or Extraordinary Circumstances

Unforeseen or extraordinary circumstances are defined as “changes in circumstances surrounding an HCP that were not or could not have been anticipated to occur by the HCP participants (landowner) or the Service, that result in a substantial and adverse change in the status of a covered species.” Consistent with the Department of Interior’s “No Surprises” policy, the Service will not require the Applicant to provide additional mitigation measures in the event of unforeseen or extraordinary circumstances affecting Preble’s meadow jumping mouse.

This HCP does not authorize incidental take for any species other than the Preble’s meadow jumping mouse. In the event any other currently listed species, or species that is listed in the future, is impacted by implementation of this HCP, the Applicant will consult with the Service and take appropriate action, as necessary, to comply with the Endangered Species Act.

Funding Availability

The Applicant will provide the funding necessary for the completion of the activities and conservation measures required under this HCP. Due to the short term (3 years) of this HCP, long-term funding assurances will not be required. Funding assurances for habitat mitigation and monitoring will be met by the Applicant.

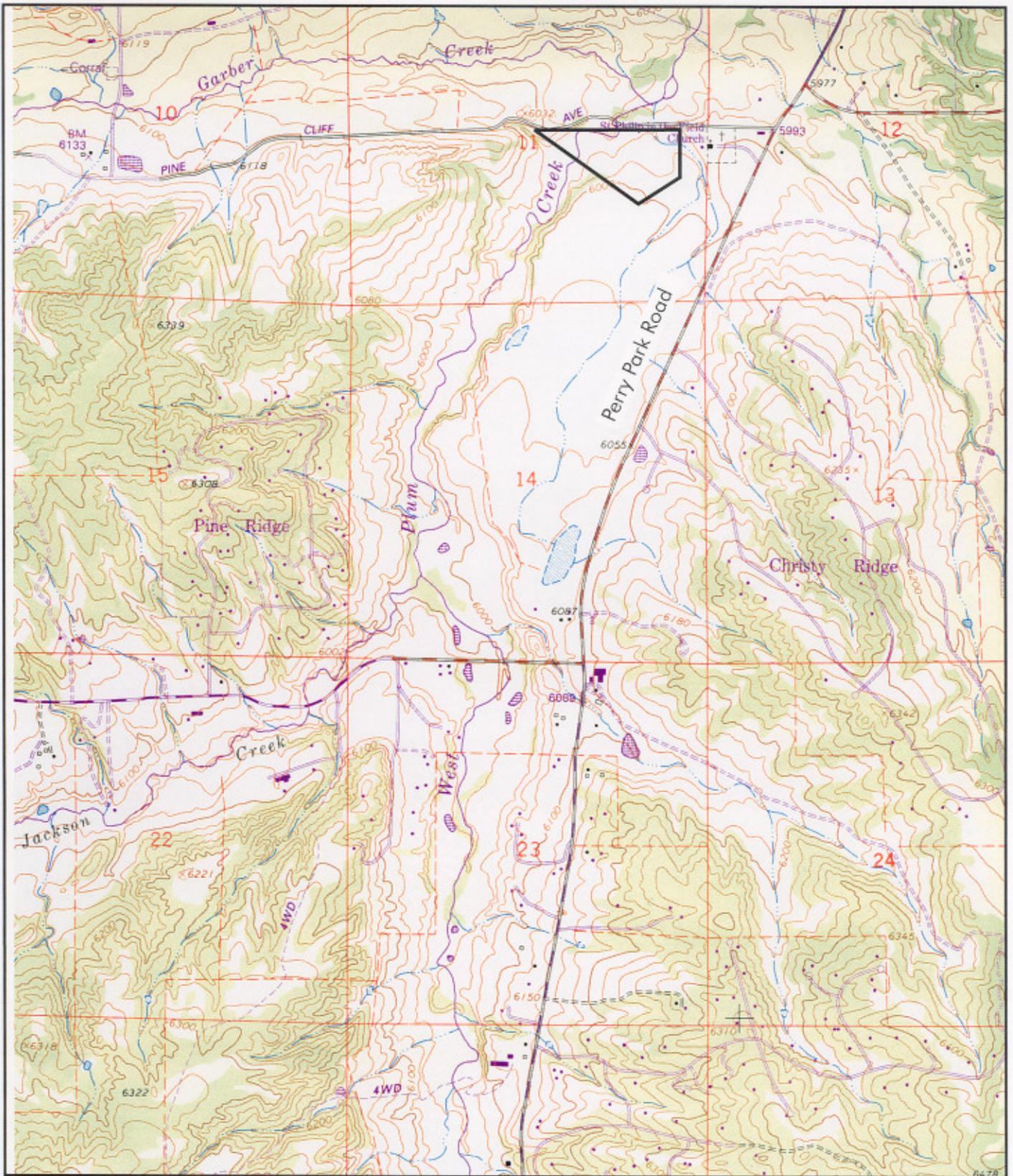
Additional Measures and Concerns

There are no additional measures or conditions being proposed under this HCP.

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The Harding Property
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Dawson Butte Quadrangle
 Douglas County, Colorado

Figure 1
 Site Location

Prepared for: Susan Harding
 File: 1203Fig1.cdr
 May 2000

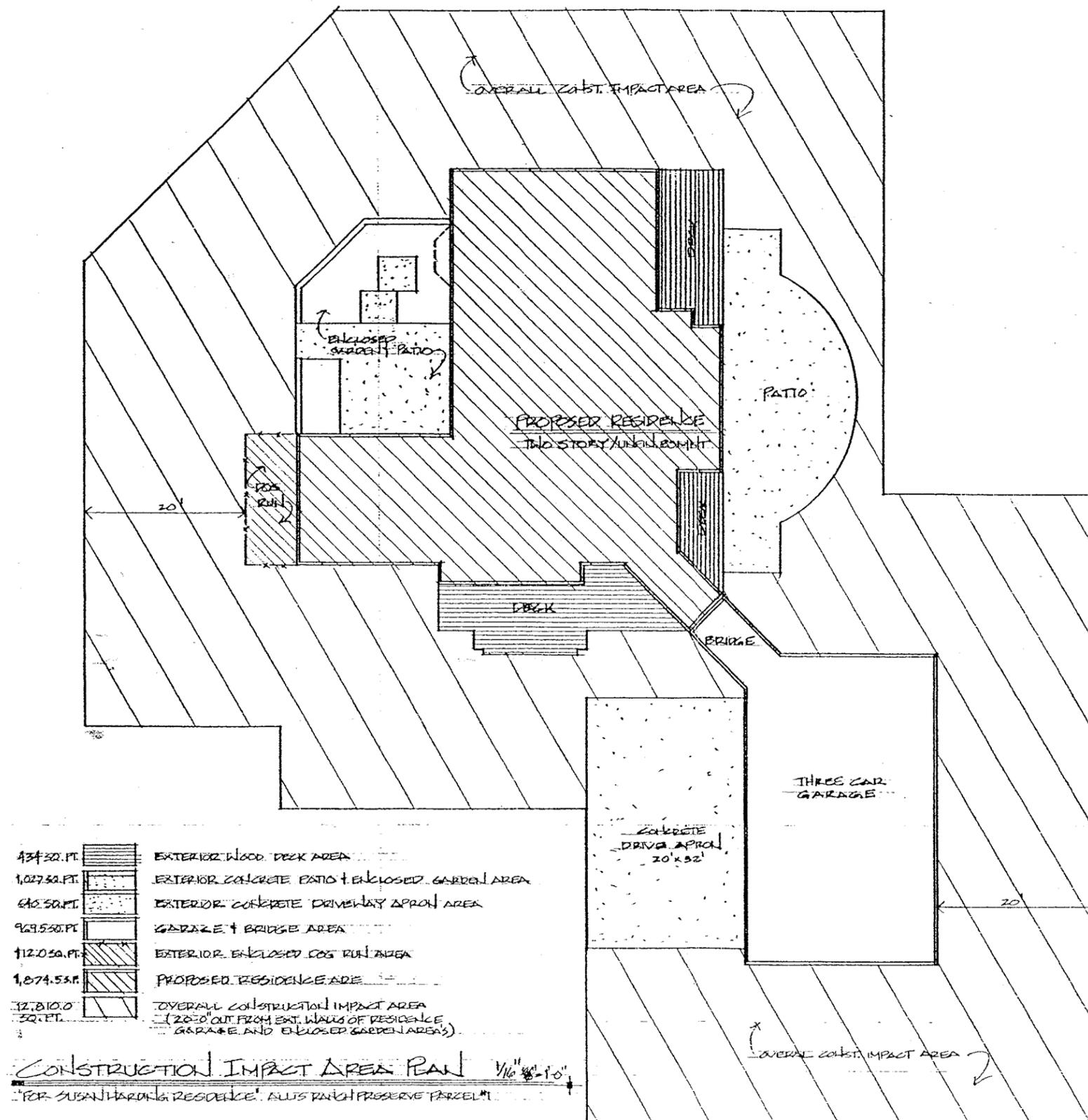
1 inch = 2,000 Feet 

Figure 3
Harding Residence
Construction Impact Area

434 sq. ft. Exterior wood deck
 1027 sq. ft. Enclosed garden & patio
 640 sq. ft. Concrete driveway apron
 969.5 sq. ft. Garage & bridge
 112 sq. ft. Enclosed dog run
 1874.5 sq. ft. Proposed residence
 5057 sq. ft. Subtotal permanent impacts

12,810 sq. ft. Overall impact area

Design by Mark E. Miller, Colorado
 Custom Homes.



Prepared for: Susan Harding
 Figure 2.cdr
 May 2000

ERO
 ERO Resources Corp.
 1842 Clarkson Street
 Denver, CO 80218
 (303) 830-1188
 Fax: 830-1199



1/16 inch = 1 Foot

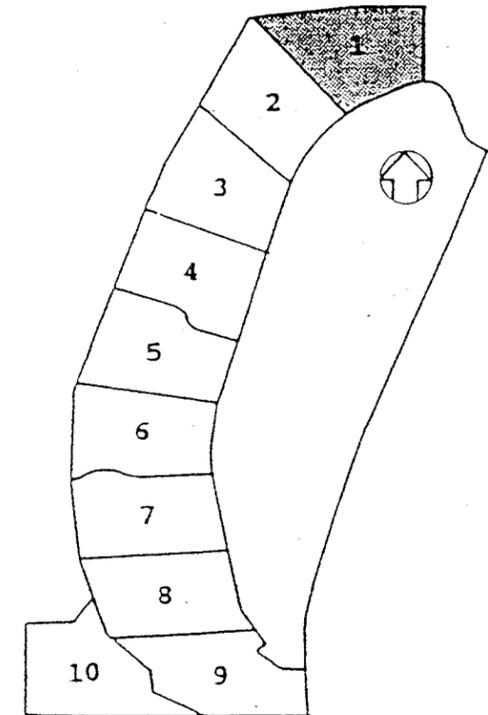
Figure 2

ALLIS RANCH PRESERVE

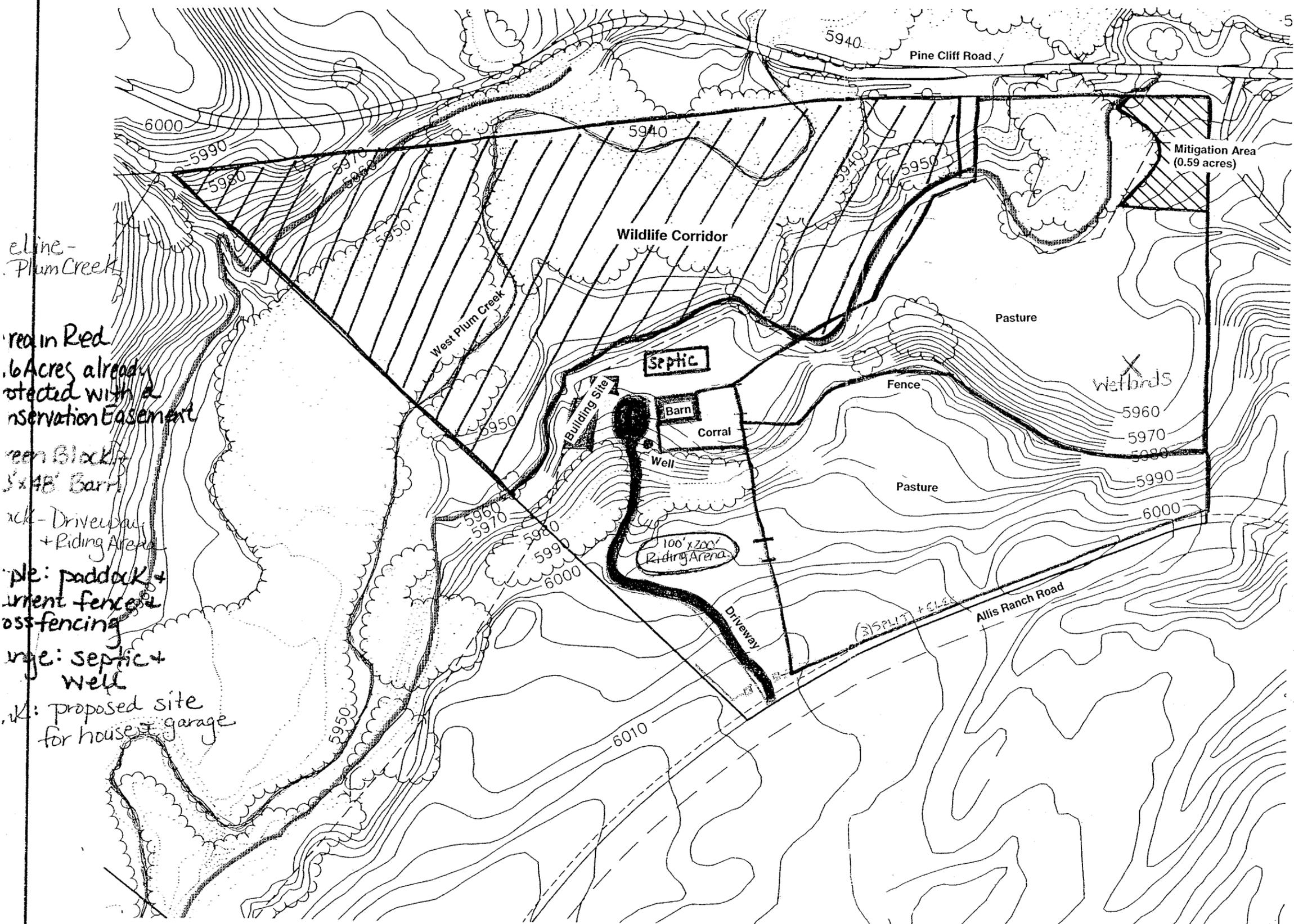
ON WEST-PLUM CREEK

PARCEL I

TOTAL ACRES = 35.552
 HOMESTEAD ACRES = 19.410
 WILDLIFE CORRIDOR ACRES = 16.142



SCALE: 1" = 200'



Line-Plum Creek
 Area in Red
 1.6 Acres already protected with a Conservation Easement
 Green Black
 3 x 48' Barri
 Black- Driveway + Riding Area
 Blue: paddock + current fence + cross-fencing
 Orange: septic + well
 Pink: proposed site for house + garage



UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. FISH AND WILDLIFE SERVICE

FEDERAL FISH AND WILDLIFE
LICENSE/PERMIT APPLICATION

1. APPLICATION FOR (Indicate only one)

IMPORT OR EXPORT LICENSE

PERMIT

2. BRIEF DESCRIPTION OF ACTIVITY FOR WHICH REQUESTED LICENSE OR PERMIT IS NEEDED.

Applicant requests a Section 10 permit for the incidental take of Preble's meadow jumping mouse associated with construction of a single-family residence as described in the habitat conservation plan submitted.

3. APPLICANT. (Name, complete address and phone number of individual, business, agency, or institution for which permit is requested)

Susan K. Harding
6058 Blue Ridge Dr., Apt. D
Highlands Ranch, CO 80126
(303) 346-6786

4. IF "APPLICANT" IS AN INDIVIDUAL, COMPLETE THE FOLLOWING:

<input type="checkbox"/> MR.	<input type="checkbox"/> MRS.	<input type="checkbox"/> MISS	<input checked="" type="checkbox"/> MS.	HEIGHT	WEIGHT
				5'5"	125 lbs
DATE OF BIRTH		COLOR HAIR		COLOR EYES	
03-05-60		Brown		Hazel	
PHONE NUMBER WHERE EMPLOYED			SOCIAL SECURITY NUMBER		
303-788-7888			513-48-6807		
OCCUPATION					
PHYSICIAN					

ANY BUSINESS, AGENCY, OR INSTITUTIONAL AFFILIATION HAVING TO DO WITH THE WILDLIFE TO BE COVERED BY THIS LICENSE/PERMIT

5. IF "APPLICANT" IS A BUSINESS, CORPORATION, PUBLIC AGENCY, OR INSTITUTION, COMPLETE THE FOLLOWING:

EXPLAIN TYPE OR KIND OF BUSINESS, AGENCY, OR INSTITUTION

Not Applicable

NAME, TITLE, AND PHONE NUMBER OF PRESIDENT, PRINCIPAL OFFICER, DIRECTOR, ETC.

IF "APPLICANT" IS A CORPORATION, INDICATE STATE IN WHICH INCORPORATED

6. LOCATION WHERE PROPOSED ACTIVITY IS TO BE CONDUCTED

101 Allis Ranch Road
Sedalia, CO
NW 1/4 SE 1/4 Section 11,
Township 8 South, Range 68 W
Douglas County, CO

7. DO YOU HOLD ANY CURRENTLY VALID FEDERAL FISH AND WILDLIFE LICENSE OR PERMIT? YES NO
(If yes, list license or permit numbers)

8. IF REQUIRED BY ANY STATE OR FOREIGN GOVERNMENT, DO YOU HAVE THEIR APPROVAL TO CONDUCT THE ACTIVITY YOU PROPOSE? YES NO
(If yes, list jurisdictions and type of documents)

No State approval required

9. CERTIFIED CHECK OR MONEY ORDER (if applicable) PAYABLE TO THE U.S. FISH AND WILDLIFE SERVICE ENCLOSED IN AMOUNT OF

\$25.00

10. DESIRED EFFECTIVE DATE

April 1, 2001

11. DURATION NEEDED

3 years

12. ATTACHMENTS. THE SPECIFIC INFORMATION REQUIRED FOR THE TYPE OF LICENSE/PERMIT REQUESTED (See 50 CFR 13.12(b)) MUST BE ATTACHED. IT CONSTITUTES AN INTEGRAL PART OF THIS APPLICATION. LIST SECTIONS OF 50 CFR UNDER WHICH ATTACHMENTS ARE PROVIDED.

An Environmental Assessment/Habitat Conservation Plan is included as part of this application.

CERTIFICATION

I HEREBY CERTIFY THAT I HAVE READ AND AM FAMILIAR WITH THE REGULATIONS CONTAINED IN TITLE 50, PART 13, OF THE CODE OF FEDERAL REGULATIONS AND THE OTHER APPLICABLE PARTS IN SUBCHAPTER B OF CHAPTER I OF TITLE 50, AND I FURTHER CERTIFY THAT THE INFORMATION SUBMITTED IN THIS APPLICATION FOR A LICENSE/PERMIT IS COMPLETE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF. I UNDERSTAND THAT ANY FALSE STATEMENT HEREIN MAY SUBJECT ME TO THE CRIMINAL PENALTIES OF 18 U.S.C. 1001.

SIGNATURE (In ink)

Susan K Harding

DATE

9/10/00

INCIDENTAL TAKE PERMIT APPLICATION
ENDANGERED OR THREATENED WILDLIFE

1. A complete description of the activity sought to be authorized.
2. Species: (List protected wildlife and plants)

Quantity	Common Name	Scientific Name
_____	Preble's meadow jumping mouse	Zapus hudsonius preblei
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

If known, include age and sex of such species.

3. A Habitat Conservation Plan that specifies:
 - A. The impact that will likely result from such taking.
 - B. The steps you will take to monitor, minimize, and mitigate such impacts, the funding that will be available to implement such steps, and the procedures to be used to deal with unforeseen circumstances;
 - C. What alternative actions to such taking the applicant considered and the reasons why such alternatives are not proposed to be utilized; and
 - D. Such other measures that the U.S. Fish and Wildlife Service may require as being necessary or appropriate for purposes of the plan.

The rest of the requested information is addressed in the Environmental Assessment/Habitat Conservation Plan.

APPENDICES

APPENDIX 1: SITE PHOTOGRAPHS



Photo 1 - Harding property overview, view northwest.



Photo 2 - Existing barn and corral, view west.



Photo 3 - Proposed building site.

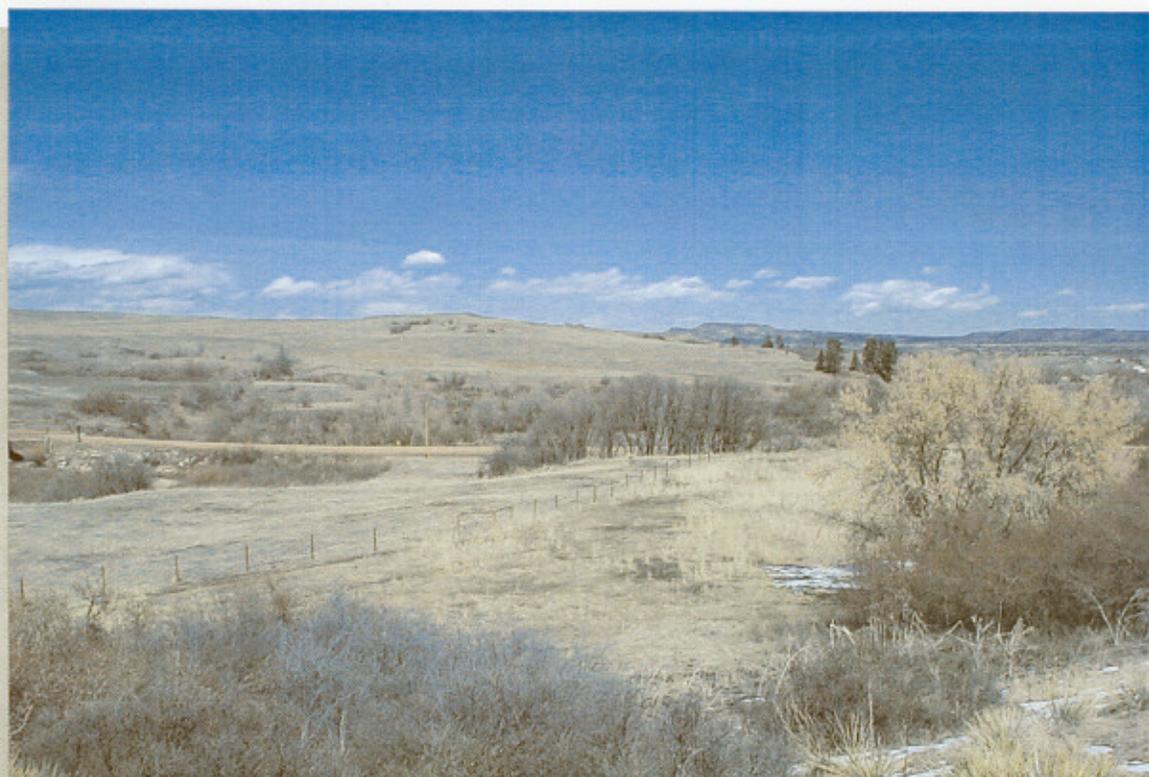


Photo 4 - Riparian and shrub habitat at the Harding property, view north.



Photo 5 - Proposed mitigation area, view north.



Photo 6 - Proposed mitigation area, view northeast.

APPENDIX 2: CONSERVATION AGREEMENT

(2)

GP
DF
A

FIRST AMENDMENT
TO
DEED OF CONSERVATION EASEMENT

DC9703435

THIS FIRST AMENDMENT TO DEED OF CONSERVATION EASEMENT ("Amendment") is made as of the 15th day of December 1996 under the following recitals:
Recitals

A. On or about April 30, 1996, C O L Foundation, a Colorado nonprofit corporation, as "Grantor", executed that certain Deed of Conservation Easement in favor of Colorado Open Lands, a Colorado nonprofit corporation, as "Grantee", which deed was recorded May 2, 1996 at reception number 9623252, Book 1337, Page 2109 in the records of the Clerk and Recorder of Douglas County, Colorado (the "Conservation Easement"). All defined terms used herein shall have the same meaning as set forth in the Conservation Easement unless expressly provided to the contrary herein.

B. Grantor and Grantee desire to amend the Conservation Easement and the Plat referenced therein to revise the boundaries of the Homestead and Wildlife Corridor areas within Parcel 1 shown on the Plat.

NOW, THEREFORE, in accordance with the foregoing, the covenants and conditions contained herein, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged and agreed, the undersigned hereby amends the Conservation Easement as follows:

1. The boundaries of the Homestead and Wildlife Corridor areas for Parcel 1 as originally depicted in the Plat recorded on May 2, 1996 in Plat Book No. 9623251, on Film 1337, Reception No. 2108 and in the Conservation Easement are hereby amended as set forth in Exhibit A attached hereto and incorporated herein by this reference.

2. In the event of a conflict between the terms and provisions of this Amendment and the terms and provisions of the Conservation Easement, this Amendment shall govern and control.

3. This Amendment may be executed in counterparts, each of which shall be an original but all of which when taken together shall constitute one Amendment.

122444

IN WITNESS WHEREOF, this Amendment is executed as of December 15, 1996.

C O L Foundation, a Colorado nonprofit corporation

By: M. Lee Dusa
Title: President

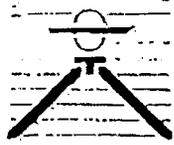
STATE OF COLORADO)
COUNTY OF Arapahoe) ss.

The foregoing First Amendment to Deed of Conservation Easement was acknowledged before me this 30 day of December 1996, by M. Lee Dusa as President of C O L Foundation, a Colorado nonprofit corporation.

WITNESS my hand and official seal.

My commission expires Dec. 11, 2000.

Lita M. Thompson
Notary Public



Drexel Barrell & Co.

Exhibit "A"

Engineers/Surveyors

December 18, 1996

Boulder,
Colorado Springs

4840 Pearl East Circle
Suite 114
Boulder, Colorado 80301-2475

A description of a portion of Parcel 1, ALLIS RANCH PRESERVE, for the expansion of the Homestead Area, for Colorado Open Lands.

LEGAL DESCRIPTION

303 442 4338

All that portion of Parcel 1, ALLIS RANCH PRESERVE as recorded at Reception No. 9623251 of the records of Douglas County, Colorado, located in the SE1/4 of Section 11, T8S, R68W of the 6th P.M., described as follows:

Commencing at the Southeast Corner of said Section 11, from which the Southeast Corner of Section 14, T8S, R68W of the 6th P.M. bears S02°36'56"E, thence N11°54'29"W, 2557.30 feet to the Northeast Corner of said Parcel 1; thence S89°25'00"W, 57.93 feet along the North line of said Parcel 1 and along the Northerly line of the Homestead Area located in said Parcel 1 to the TRUE POINT OF BEGINNING;

Thence S28°55'51"W, 313.76 feet along the Northerly line of said Homestead Area;

Thence S75°00'34"W, 123.28 feet along the Northerly line of said Homestead Area;

Thence N36°03'50"W, 178.71 feet along the Northerly line of said Homestead Area;

Thence S67°43'55"W, 137.93 feet along the Northerly line of said Homestead Area;

Thence N32°53'16"W, 247.46 feet to the North line of said Parcel 1;

(K. Albers - 5175-3 - 2906L.XA)

Legal Description (Continued)

December 18, 1996

Page 2

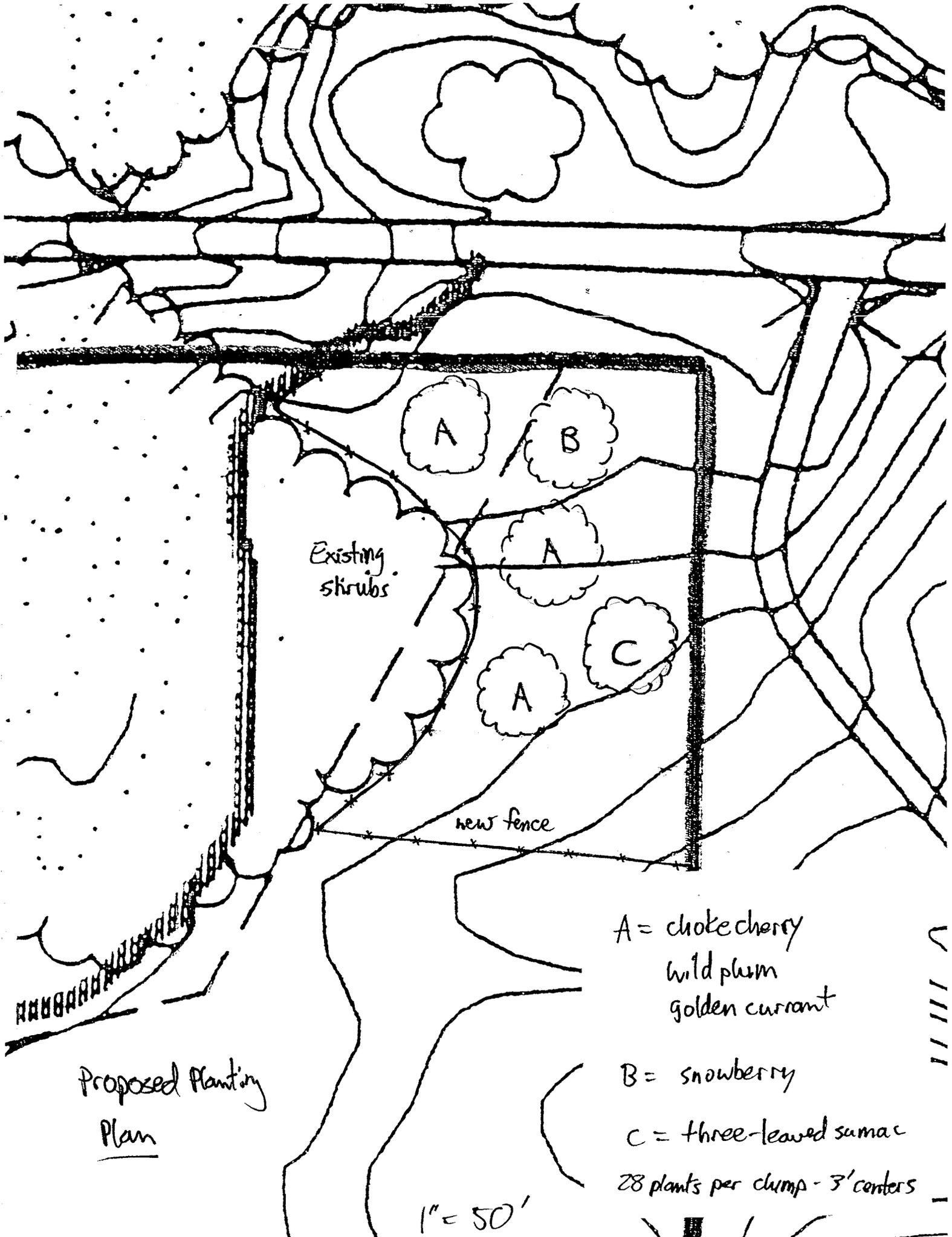
Thence N89°25'00"E, 638.11 feet along the North line of said Parcel 1 to the TRUE POINT OF BEGINNING.

Area = 2.683 acres, more or less.

Legal Description Prepared By:
Kent S. Albers
Drexel Barrell & Company
4840 Pearl East Circle #114
Boulder, Colorado 80301-2475
(303) 442-4338

(K. Albers - 5175-3 - 2906L.KA)

APPENDIX 3: PLANTING PLAN



Existing shrubs

new fence

Proposed Planting
Plan

1" = 50'

A = choke cherry
wild plum
golden currant

B = snowberry

C = three-leaved sumac

28 plants per clump - 3' centers