

FEATHER RIVER LAND TRUST

SPECIAL USE PERMIT APPLICATION FOR
SIERRA VALLEY PRESERVE

BECKWOURTH, PLUMAS COUNTY, CALIFORNIA

FEB 13 2020
REVISION: NOV 13 2020

ARKIN · TILT ARCHITECTS
Ecological Planning & Design

P·R DESIGN & ENGINEERING INC.
Sustainable • Civil • Landscape
www.prdei.com

EXHIBIT 1

ARKIN · TILT ARCHITECTS
Ecological Planning & Design

February 13, 2020

Plumas County Planning & Building Services
Rebecca Herrin, Senior Planner
555 Main Street
Quincy, CA 95971

D R A F T – Special Use Permit Application for Sierra Valley Preserve

Dear Ms. Herrin /Plumas County Agencies:

We are pleased to present this application for a Special Use Permit for Public Access and Recreation activities at lands owned by the Feather River Land Trust near Beckwourth in Sierra Valley, collectively known as the Sierra Valley Preserve.

Feather River Land Trust is requesting approval of a Special Use Permit to allow lands currently zoned Rural (R-10) at the Preserve Headquarters Entrance and Agricultural Preserve (AP) at the East and West Entrances to include further public recreation access and supporting facilities.

For the East and West Entrances, per the AP zoning ordinance, 'The following uses shall be permitted subject to the issuance of a special use permit: Recreational uses, but not limited to walking, hiking, picnicking, camping, … boating, … or other outdoor games or sports for which facilities are provided for public participation.' These lands are used for limited public recreation and seasonal grazing.

For the Preserve Headquarters Entrance, per the R-10 zoning ordinance, existing residential and wildlife management uses are by right (already approved); 'The following uses shall be permitted subject to the issuance of a special use permit: … places of assembly … public service facilities, recreation facilities, schools; ' This parcel currently features a residence and two significant agricultural buildings, a few smaller structures and infrastructure supporting these buildings.

Our consultant team has worked closely with the Land Trust to craft facilities appropriate to the setting and resources, and provide the enclosed information which we believe is a complete application sufficient for environmental, zoning and other necessary review. Please contact us if there are any questions or concerns regarding any of this information.

Sincerely,



David Arkin, AIA, LEED AP
cell: 510-418-9786

Sierra Valley Preserve – Special Use Permit Application

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Sierra Valley Preserve

Narrative Description

Project Description:

The Sierra Valley Preserve consists of 11 parcels: 025-220-024 (331.0ac.), 025-060-021 (76.24ac.), 025-060-022 (640.00ac.) 025-080-045 (328.64ac.), 025-080-044 (500.78ac.), 025-080-043 (84.67ac.), 010-030-004 (442.35ac.), 140-070-024 (29.37ac.) 140-070-025 (92.91ac.), 025-220-025 (32.20ac.), 025-220-006 (0.84 ac.) for a total of 2,558.68 acres (See 'Parcel Map'). The proposed project seeks to improve public access and enjoyment of the Preserve though construction of limited trails, wildlife viewing blinds, picnic areas, signage, improved parking and infrastructure, renovations to existing buildings and construction of new facilities. At the east and west entrances, proposed facilities include permanent restrooms. At the proposed preserve headquarters entrance, improvements include removal of a dilapidated barn (3,000 sf) and large metal storage building (4,070 sf) to erect a new (up to 4,000 sf) multi-purpose building including permanent exhibits, aka the 'Barn', (up to 2,000 sf) building for meetings and events, aka the 'Shed', and (up to 4,000) sf Shop/maintenance building aka the 'Shop'. The Barn will include space for an office as well as for permanent exhibits highlighting the history, culture, geology, flora and fauna of Sierra Valley as well as rotating exhibits. The Shed will be used for events, lectures and school groups. The Shop will include a wood shop, as well as storage for equipment and supplies used to maintain the Preserve; up to 2,000 sf will be in the vicinity of the existing building pad. In addition to the new facilities, the fire damaged single-family home will be rebuilt to increase energy efficiency and function as a care taker residence, and feature a second dwelling unit (ADU) for seasonal staff and visiting researchers.

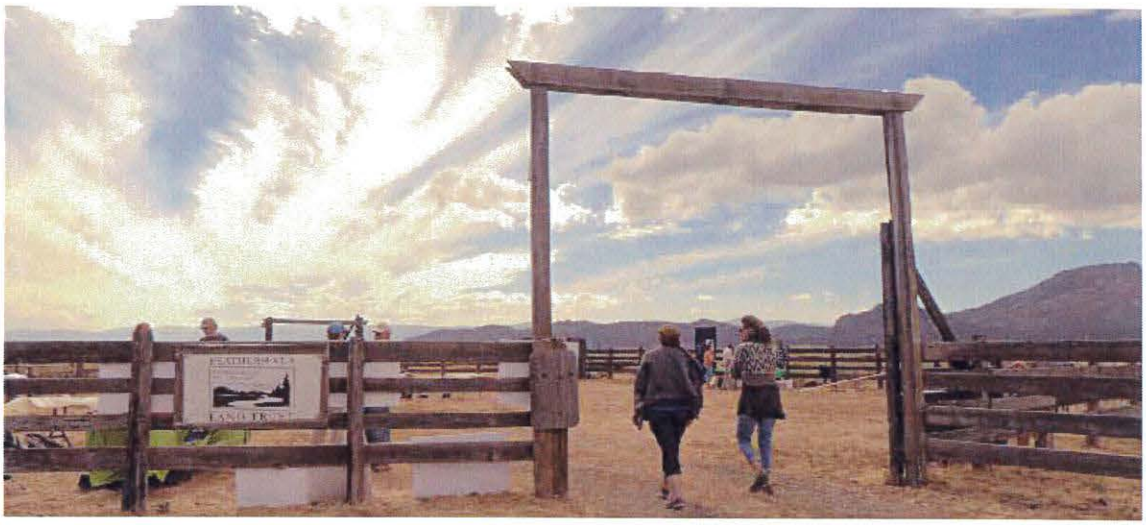


Existing Site Characteristics:

Preserve Headquarters Entrance

Parcels 025-220-025 and 025-220-006

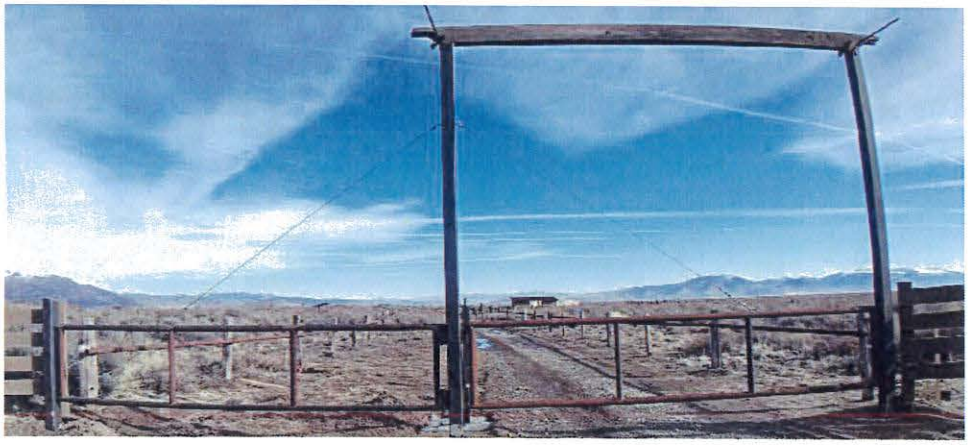
The proposed Preserve Headquarters entrance is located off of A23. The site is bisected by the now abandoned Auston road. Existing structures on the site consists of a 4,070 sf metal storage building, 3,000 sf dirt floor barn in disrepair, 2,303 sf modular home, corrugated metal silo and well pump storage building. The land around the existing agricultural structures is heavily disturbed.



East Entrance

Parcel 010-030-04

A corral marks the East Entrance off of A24, where the public currently accesses the Preserve year-round. From the parking area, guests enter the corrals through an unsigned gate. On the far side of the corral, a stile-type entrance allows pedestrian access to two trails: one that leads west to the edge of the wetlands and another that leads south to a mobile wildlife-viewing platform. Interpretative signs begin after the visitor has passed through the stile gate. Port-a-potties are located in the corral and are serviced during the spring, summer and fall months only. This entrance provides public access to the northeast portions of the Preserve via mowed service trails, where cattle also graze. A portion of the site near the edges of the wetlands is being restored as wet meadows.



West Entrance

Parcels 025-060-021, 025-060-022, 025-080-045, 025-080-044 and 025-080-043

A gate and corral located off of A23 are currently used for guided tours of the Preserve only. A gravel road leads to the remains of an old farmhouse in a state of 'arrested decay' (Bulson House) that overlooks the wetlands. Portable toilets for use by staff and visitors are located in the corrals next to the parking area. The corral also serves as a material staging area for temporary storage of mulch, gravel, and other restoration materials. A little valley between the parking area and the Bulson House is sometimes used as a camping area for stargazing groups and other small event gatherings. The West Entrance provides excellent public access to uplands habitat, with beautiful views over the wetlands, as well as sensitive nesting areas and lithic scatter. The botanical trail leads north from the parking area through uplands habitat to a bench, and then crosses the gravel road and continues south and east to a bluff overlooking the wetlands. Interpretive signage along the trail will highlight the botanical diversity of Sierra Valley. The property is in the process of constructing a trail overlooking the wetlands that will be ADA accessible.

North Access Gate

Parcel 140-070-025

A portion of the property is located north of the Western Pacific Railroad tracks, within the Beckwourth Community Service Area (BCSA). This area is accessed via a public road off of CA-70 along the west side of the BCSA. For public safety reasons, this gate is for administrative access only as there is no legal access across the railroad tracks to the rest of the Preserve.

Existing Recreation:

Hiking, birdwatching, photography, picnicking, boating, cross country skiing, hunting (limited)

Existing Access:

The public can currently access the Preserve from the East Entrance and from the West Entrance, the latter via guided tours and special events only. Visitors can also access the Preserve in kayaks or canoes.

Existing Zoning:

Site is zoned as AP – Agricultural Preserve and R-10 – Rural Residential

Proposed Land Uses:

i. Interpretive Community Gathering Space, Restroom and other facilities.
ii. Recreation - Hiking, birdwatching, photography, picnicking, boating, cross country skiing, hunting (limited), classes/lectures, special events, primitive group camping
iii. Conservation - FRLT Mission: To conserve the lands and waters of the Feather River region and steward their ecological, cultural and educational values for current and future generations. They accomplish their mission through three programs:
    - *Land Protection Program*: Conserves publicly important lands and waterways
    - *Land Stewardship Program*: Maintains, restores, and enhances land health and other publicly important conservation values like historic buildings and cultural resources
    - *People and Land Program*: Nurtures and restores people's relationship to land through nature-based education, recreation, and stewardship activities. Building on already impacted site, removing existing roadway, green features
iv. Education - Public access, Learning Landscapes (school groups), Maidu Land Stewardship, Agricultural outreach, interpretative trails, permanent and rotating exhibits, new structures as teaching example of energy-efficient, low carbon construction.

Sierra Valley Preserve – Statement of Current and Future Use Projections

Current Users

The primary public access to the Sierra Valley Preserve is currently via the East Entrance. The West Entrance (under construction) is currently used for guided tours and special events only but we hope to open it to the public on or around April 1, 2020. Visitors also access the Preserve via water in kayaks or canoes.

Current Peak number of vehicle trips/day = 64, with approximately 20 vehicle trips by individual visitors + 44 vehicle trips by visitors participating in special events

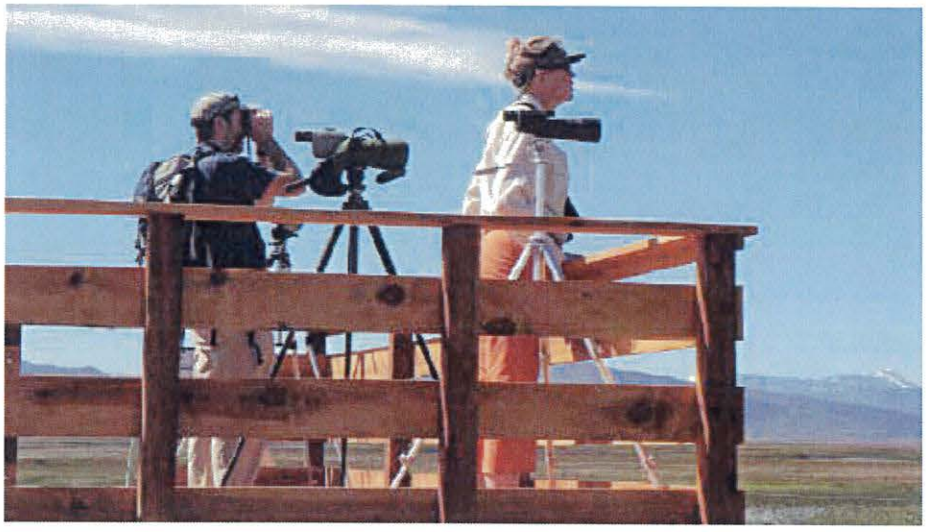
Current Daily Use

Peak Daily Individual Visitors: 30-40 people/day (May)
Average Daily Individual Visitors: 5-15 people/day (Year-round)

Current Special Events (10 events/year)

Typical events:	30-60 people/day (4 events/year)
	e.g. Star-gazing, Dawn chorus +2 more events/year
School groups:	30-60 people/day – 1-2 buses (3 groups/year)
Larger events:	60-100 people/day (3-events/year)
	e.g. Art & Ag (September), Birding/boating event (May), and Agony Ride (July)

Average Stay 2 hrs.



Projected Future Users

Growth in use is expected as the Preserve becomes more visible with new signage and facilities. The below numbers represent an estimate. The projected number of users will be capped by what the natural resources on the site can support.

Projected Peak number of vehicle trips/day = 100

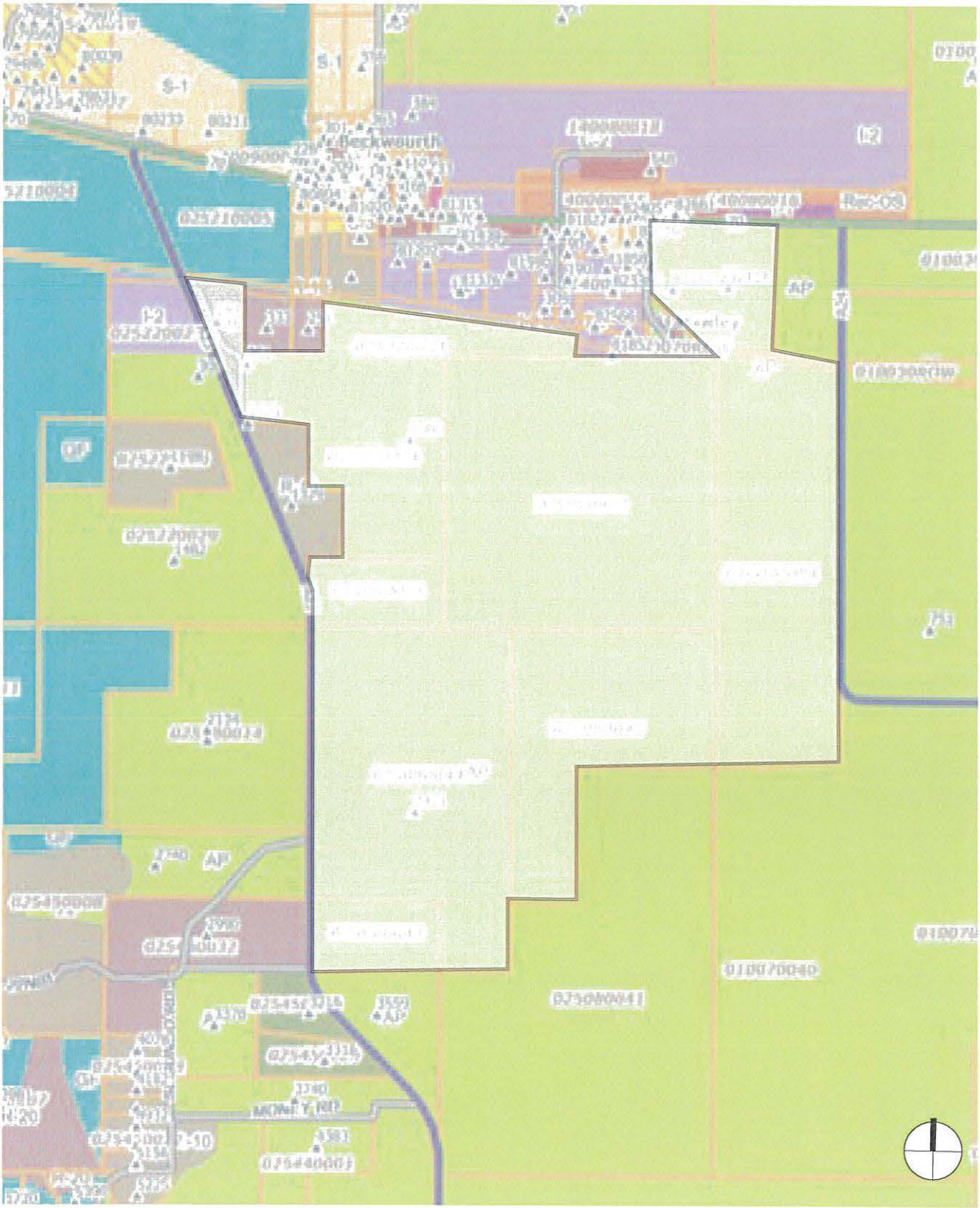
Projected Daily Use

Peak Daily Individual Visitors: 60-80 people/day (May)
Average Daily Individual Visitors: 15-30 people/day (Year-round)

Projected Special Events (21 events/year)

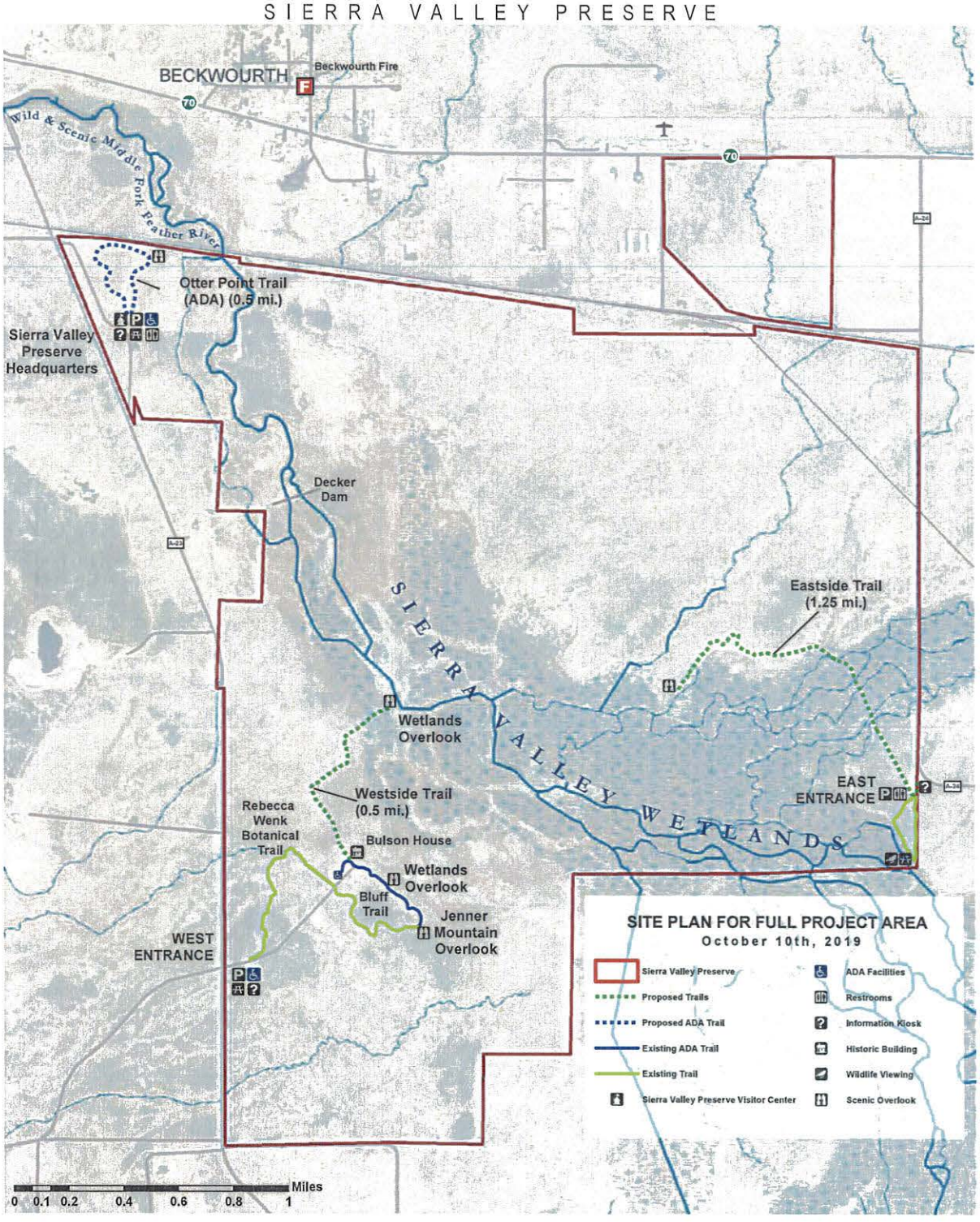
Typical events:	30-60 people/day (12 events/year)
School groups:	60-90 people - 1-3 buses (4 groups/year)
Larger events:	100-150 people/day (5 events/year)
Primitive group camping:	3-5 times/year

Average Stay 3 hrs.



PARCEL MAP

EXISTING SITE MAP



FEATHER RIVER LAND TRUST

Northern Sierra Partnership

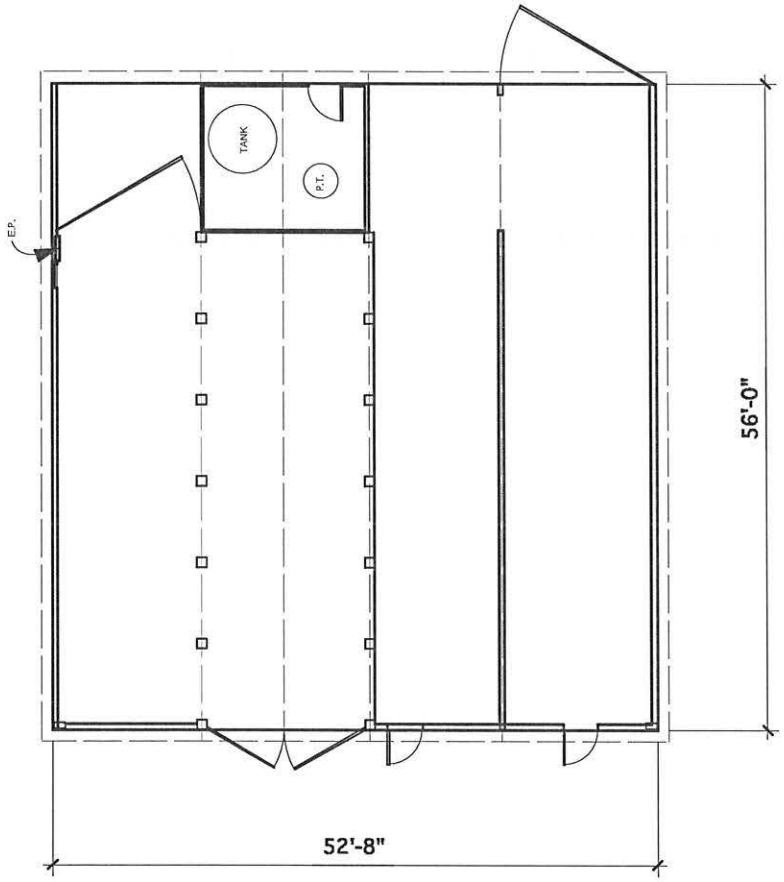
The Nature Conservancy



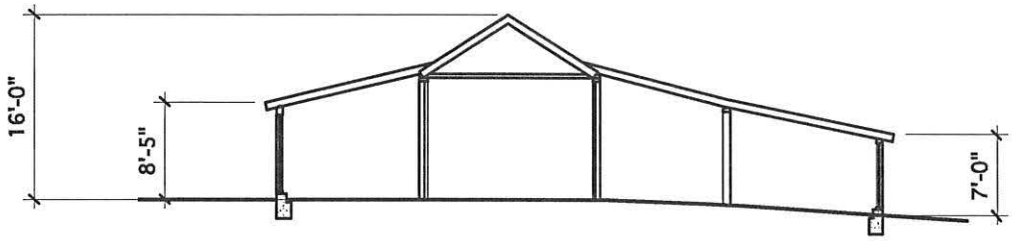




EXISTING CONDITIONS FOR PROPOSED HEADQUARTER SITE



Plan



Section

EXISTING CATTLE BARN (in disrepair) - DRAWINGS Scale 1/16" = 1'-0"



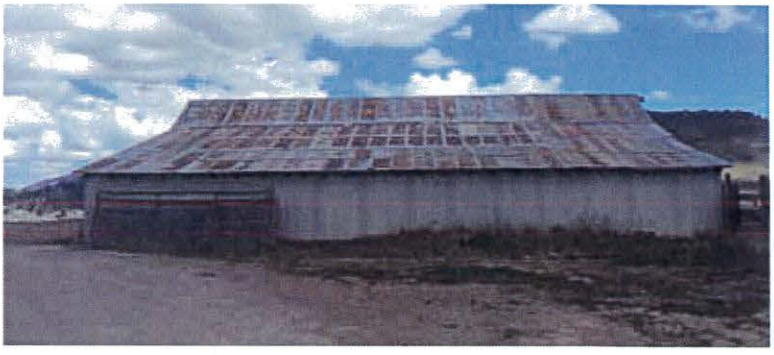
West Elevation



North Elevation

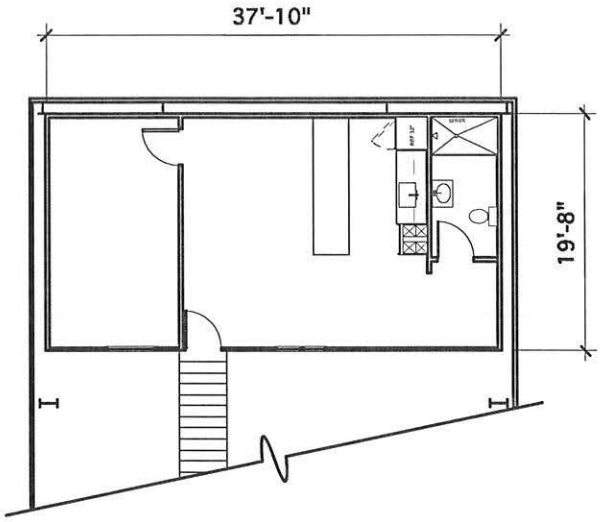


East Elevation

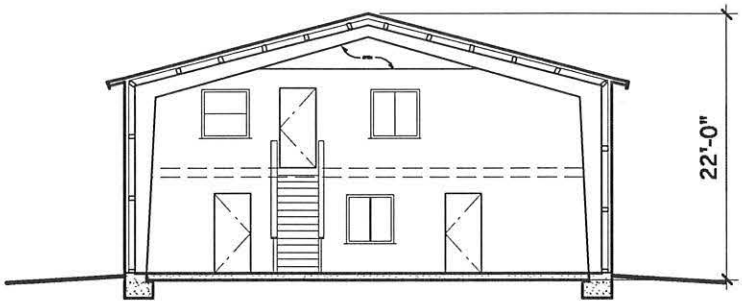


South Elevation

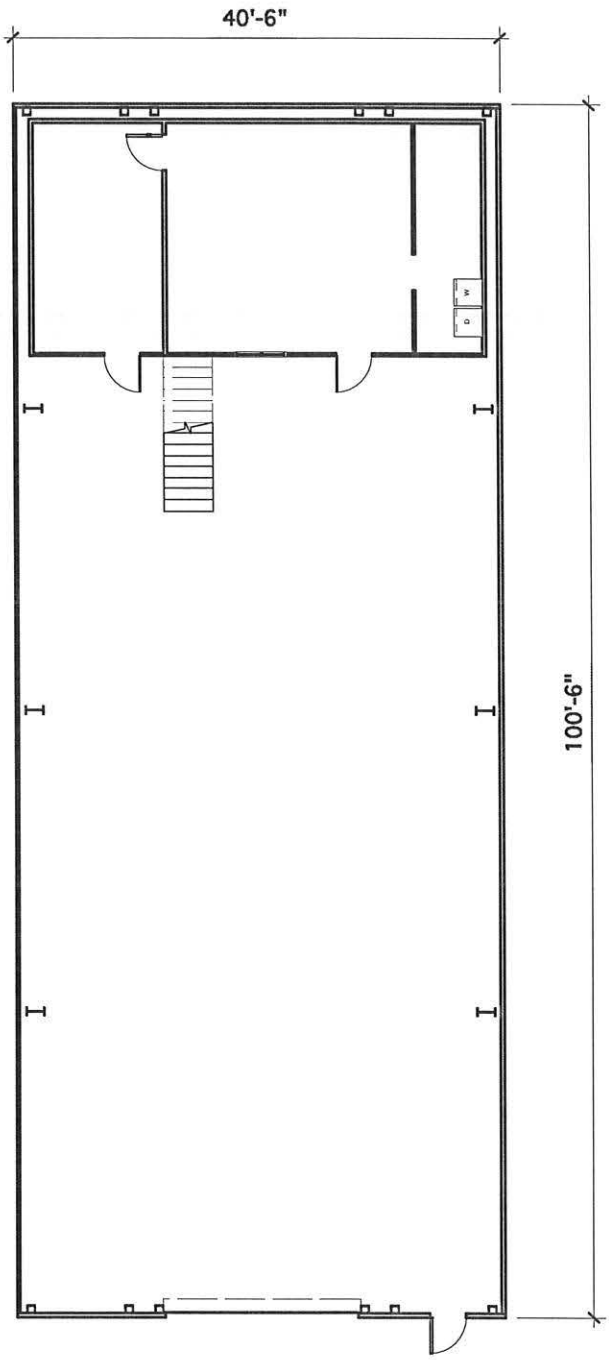
EXISTING CATTLE BARN - ELEVATION PHOTOS



Plan - Loft



Section



Plan - First Floor

EXISTING SHOP - DRAWINGS

Scale 1/16" = 1'-0"



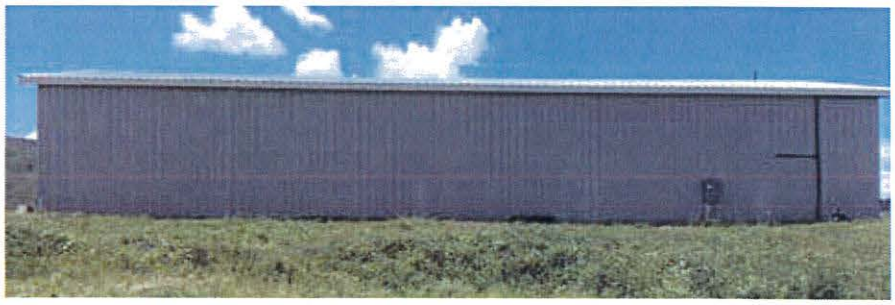
North Elevation



West Elevation



South Elevation

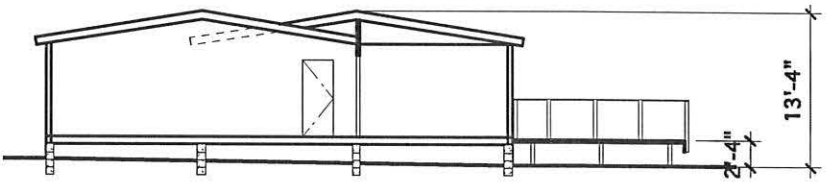


East Elevation

EXISTING SHOP - ELEVATION PHOTOS



Plan



Section

EXISTING HOUSE - DRAWINGS

Scale 1/16" = 1'-0"

SVP: MODULAR HOME - Existing Plans + Section
1/16" = 1'-0" 01/20/2020



North Elevation



West Elevation

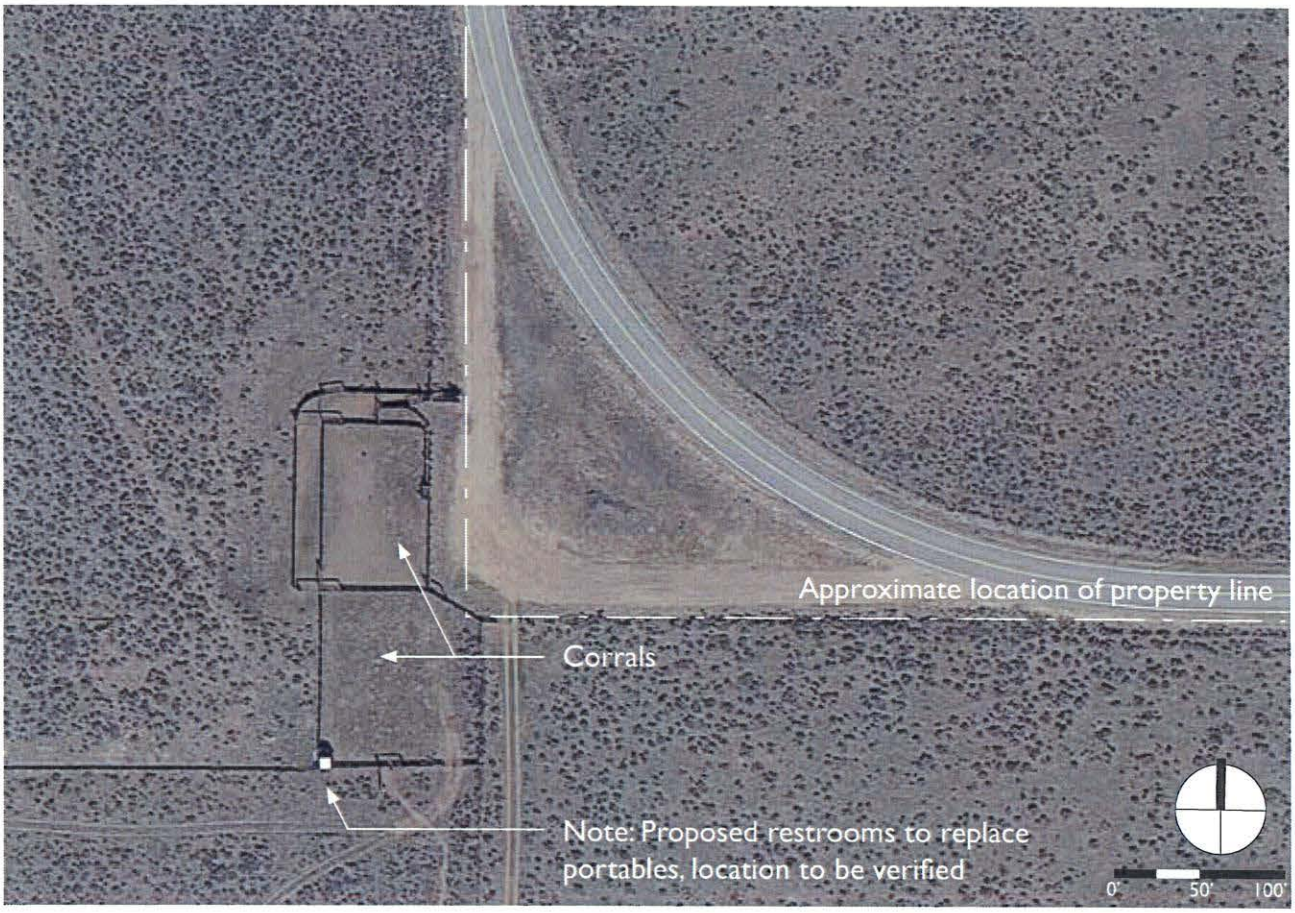


South Elevation

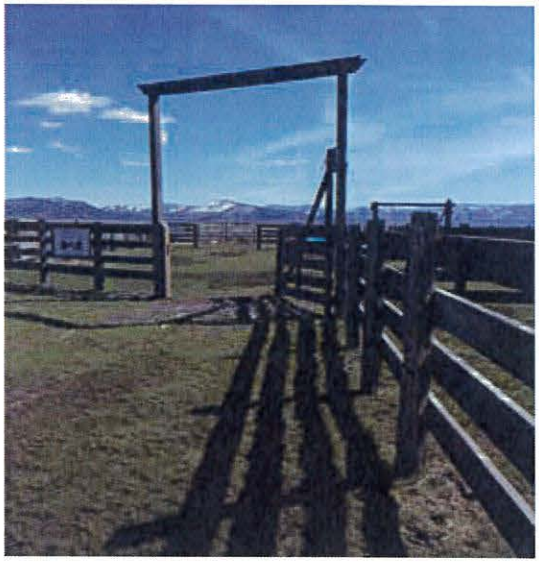


East Elevation

EXISTING HOUSE - ELEVATION PHOTOS



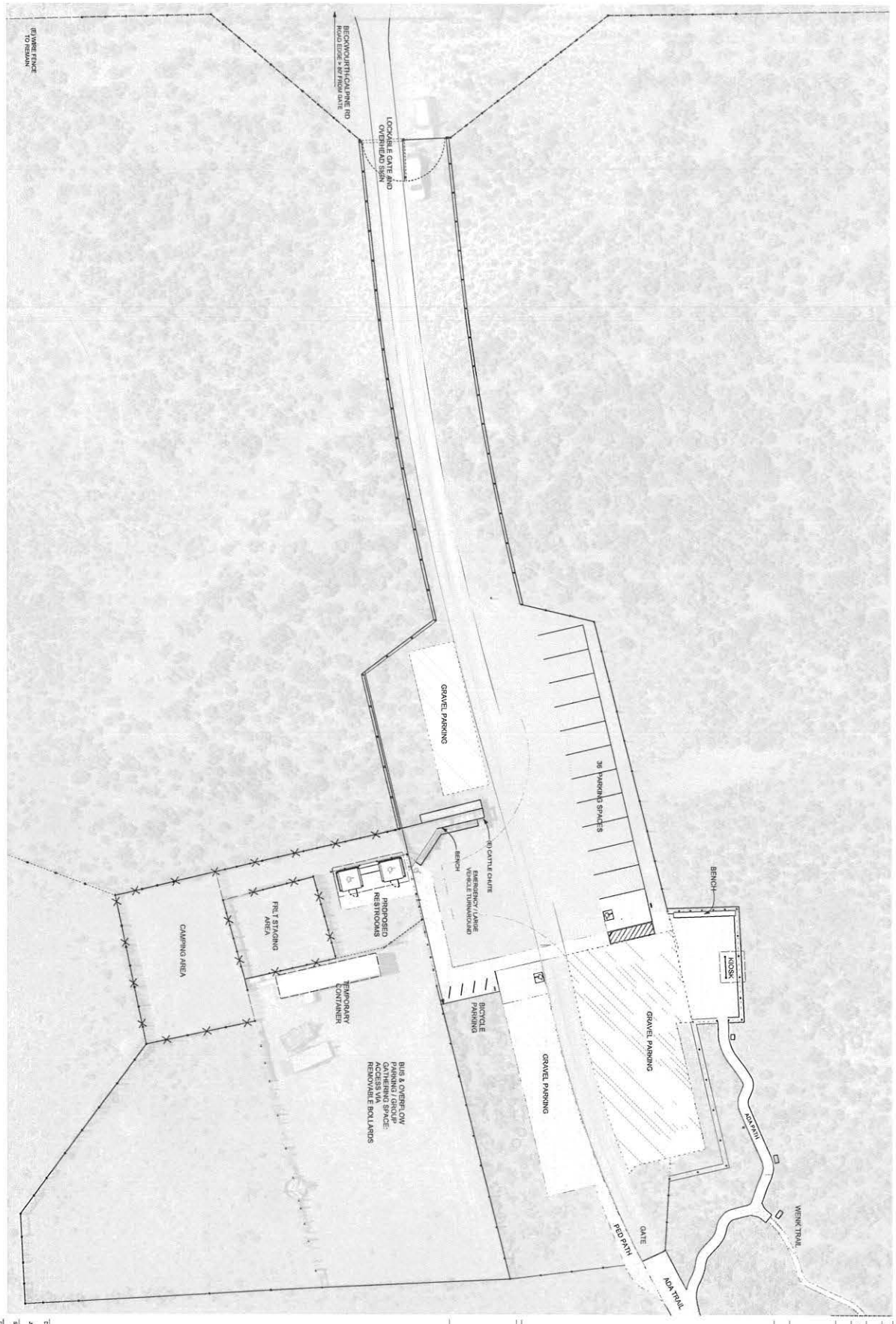




View from corrals

EXISTING EAST ENTRANCE - AERIAL + ON-SITE PHOTOS

EXISTING WEST ENTRANCE - SITE PLAN



WEST ENTRY SITE PLAN
SCALE: 1/16" = 1'-0"

SURVEY INFORMATION FROM MORAN ENGINEERING (9/25/2020)

Revision Date	I.D.
06.13.19	1

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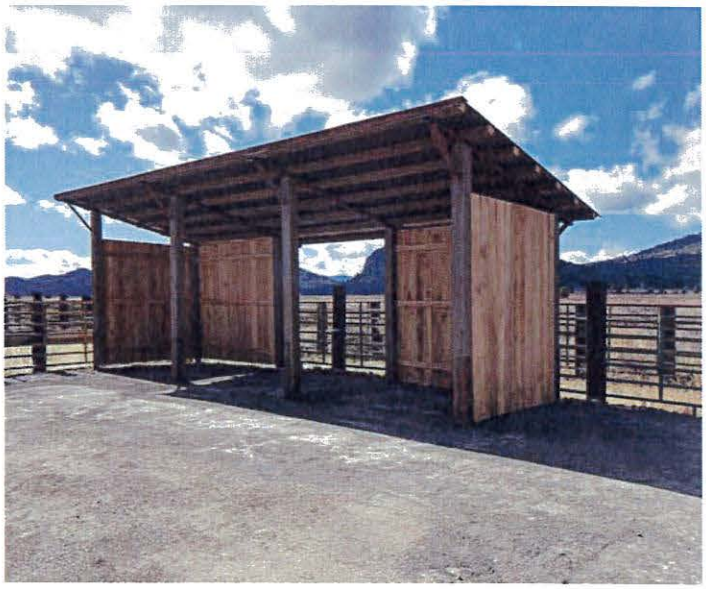
DATE 02.11.2020
JOB BVP
SCALE AS NOTED
DRAWN AT
SHEET A1.1

West Entry Site Plan

Sierra Valley Preserve
Beckwourth, CA

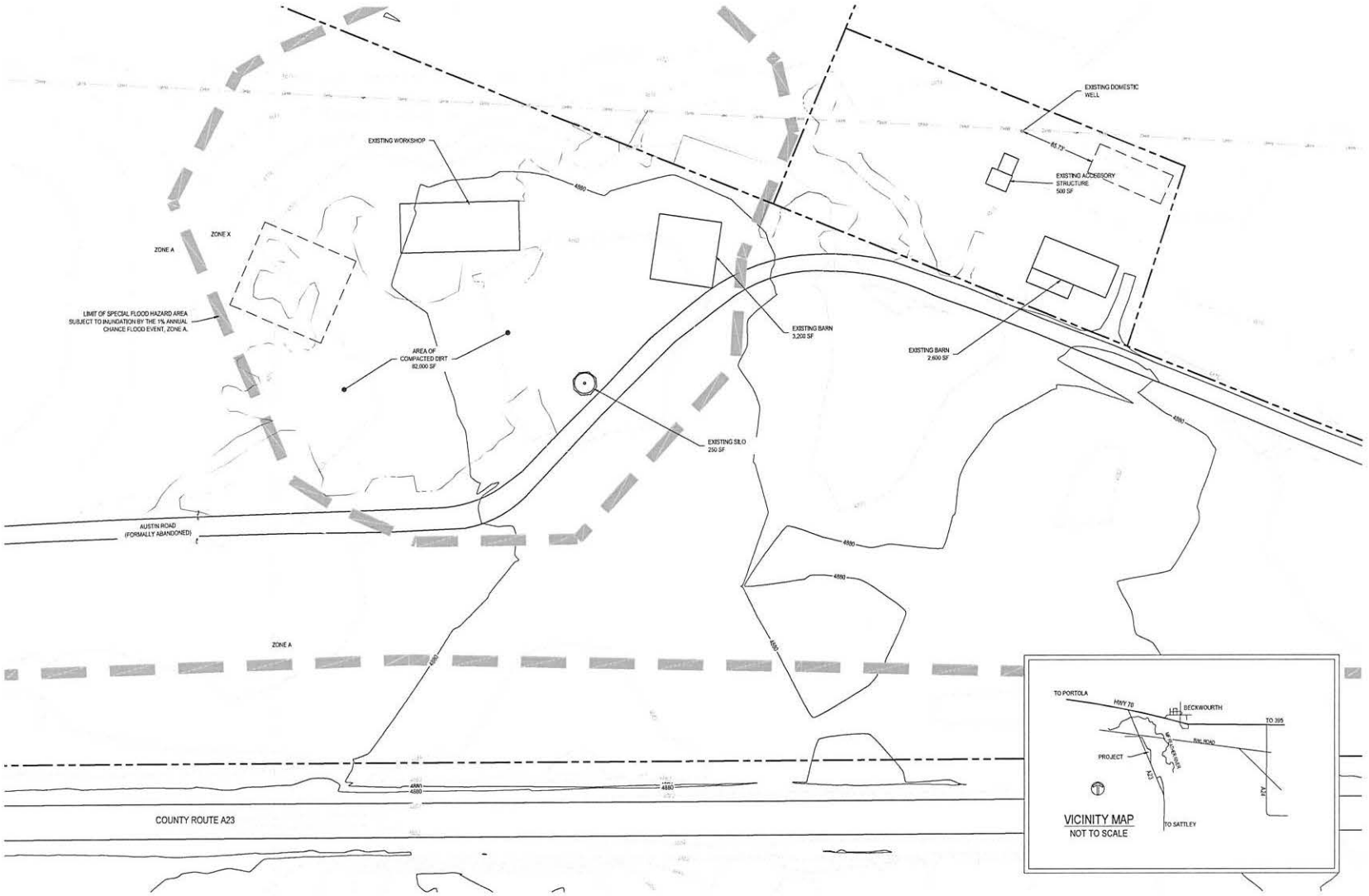






EXISTING WEST ENTRANCE - ON-SITE PROGRESS PHOTOS

PROPOSED HEADQUARTERS - EXISTING SITE PLAN



PROPOSED SITE PLAN
1" = 40'

NOTES:
1. TOPOGRAPHIC SURVEY PROVIDED BY DUNDAS GEOMATICS, INC. ON JUNE 19, 2019.
2. FLOODPLAIN BASED ON FIRM NUMBER 06063C1325E, EFFECTIVE MARCH 2, 2005.

SHALL BE ONE INCH AT FULL SCALE
IF NOT ONE INCH SCALE ACCORDINGLY

NO.	DATE	DESCRIPTION	APPROVED	DATE
1				
2				
3				

PLOT INFORMATION
DATE: FEBRUARY 4, 2020
SCALE: HORIZONTAL: VERTICAL:
FILE: F:\SIERRA VALLEY PRESERVE

PRELIMINARY NOT FOR CONSTRUCTION
DATE SIGNED:

SIERRA VALLEY PRESERVE
FEATHER RIVER LAND TRUST

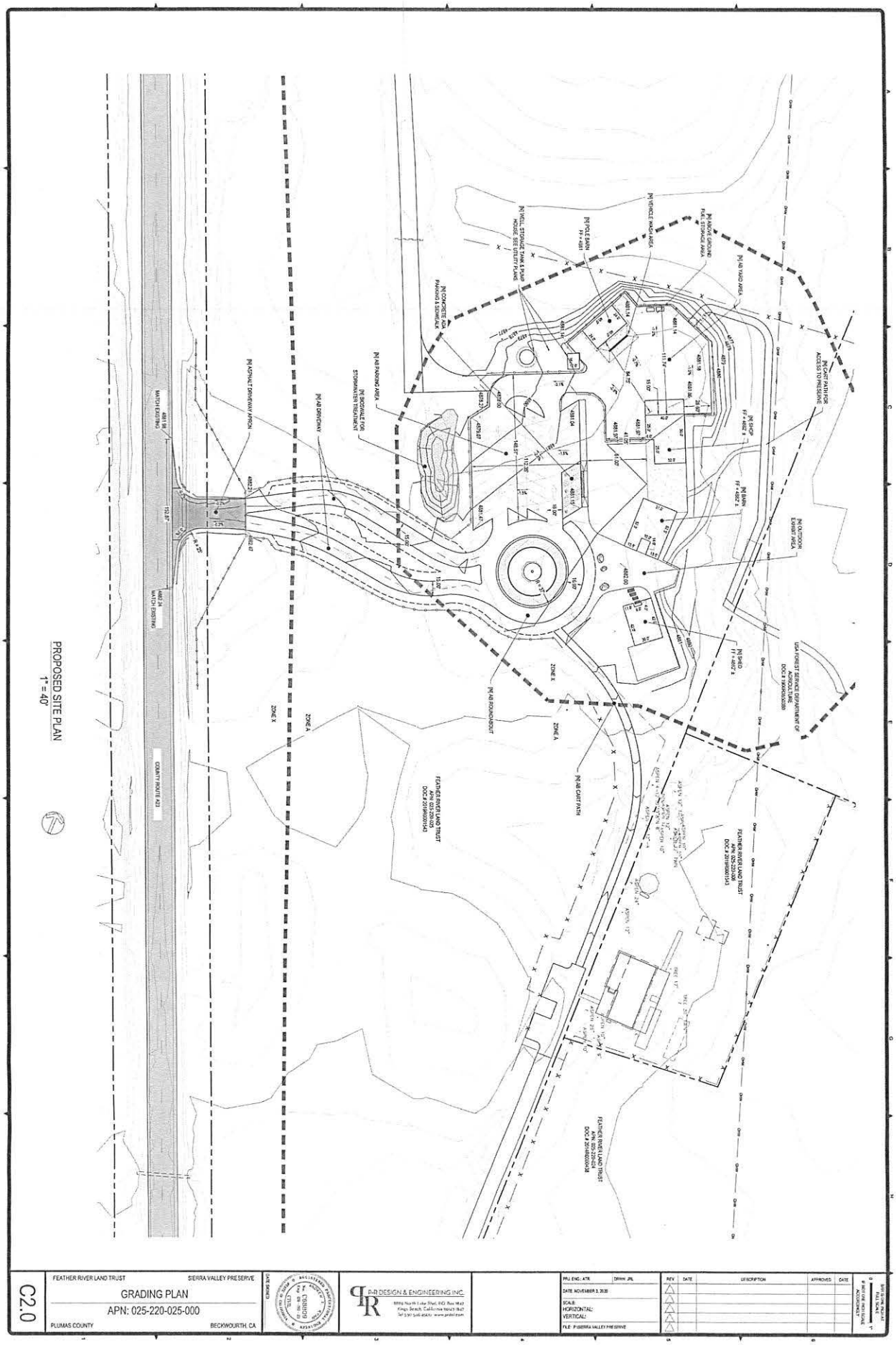
EXISTING SITE PLAN
APN: 025-220-025-000

BECKWOURTH, CA
PLUMAS COUNTY

C1.0

PROPOSED HEADQUARTERS - SITE PLAN

REVISION: NOV 06 2020



PROPOSED SITE PLAN
1" = 40'

C2.0

FEATHER RIVER LAND TRUST — SIERRA VALLEY PRESERVE

GRADING PLAN

APN: 025-220-025-000

PLUMAS COUNTY — BECKWOURTH, CA

P-R DESIGN & ENGINEERING INC.

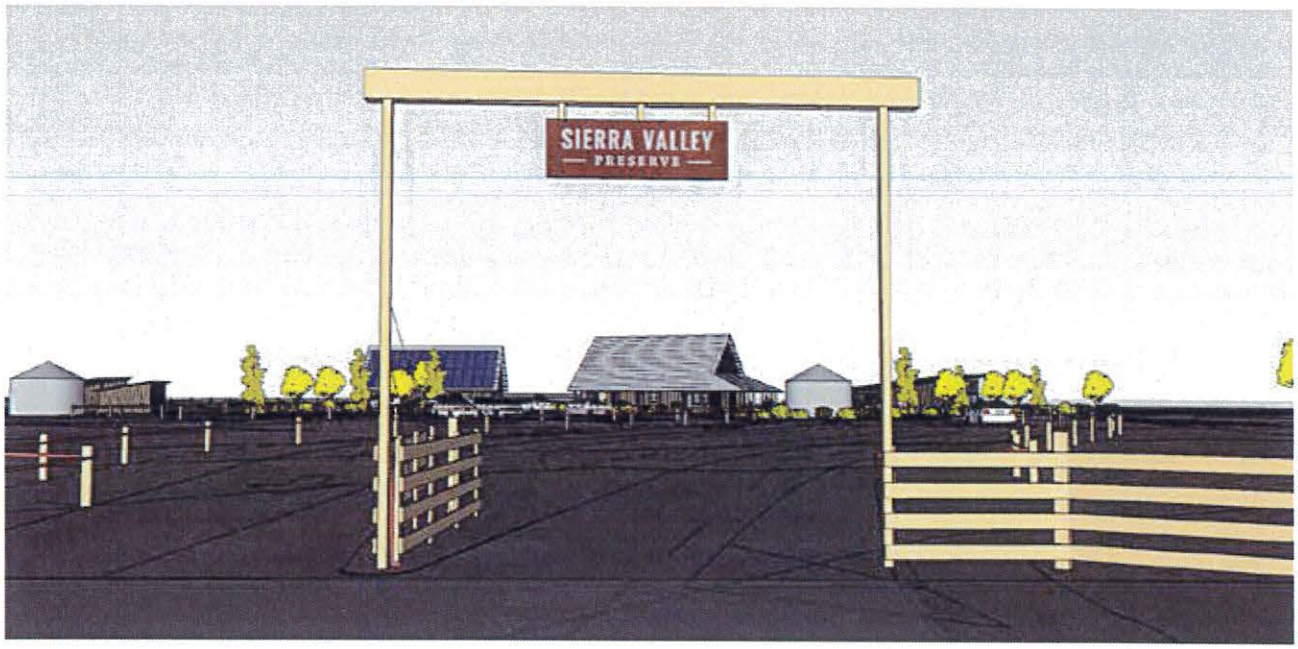
PRJ. ENG.: ATR | DRWN: JRL

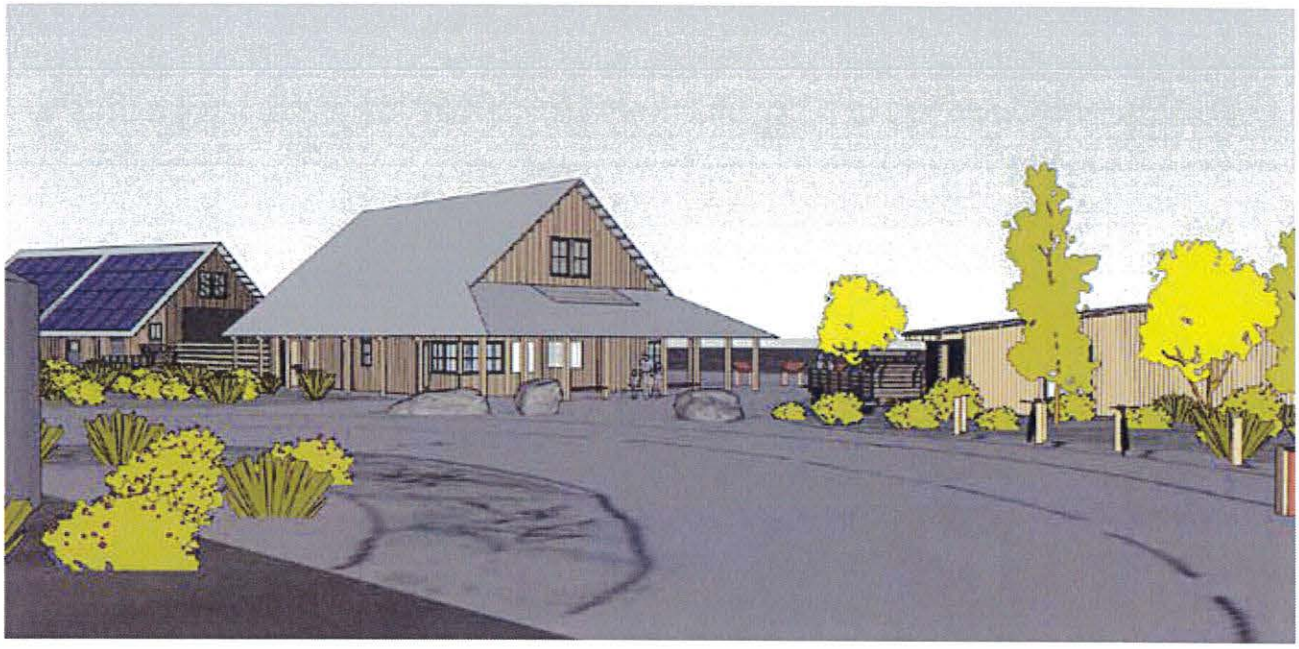
DATE: NOVEMBER 3, 2020

SCALE:
HORIZONTAL:
VERTICAL:

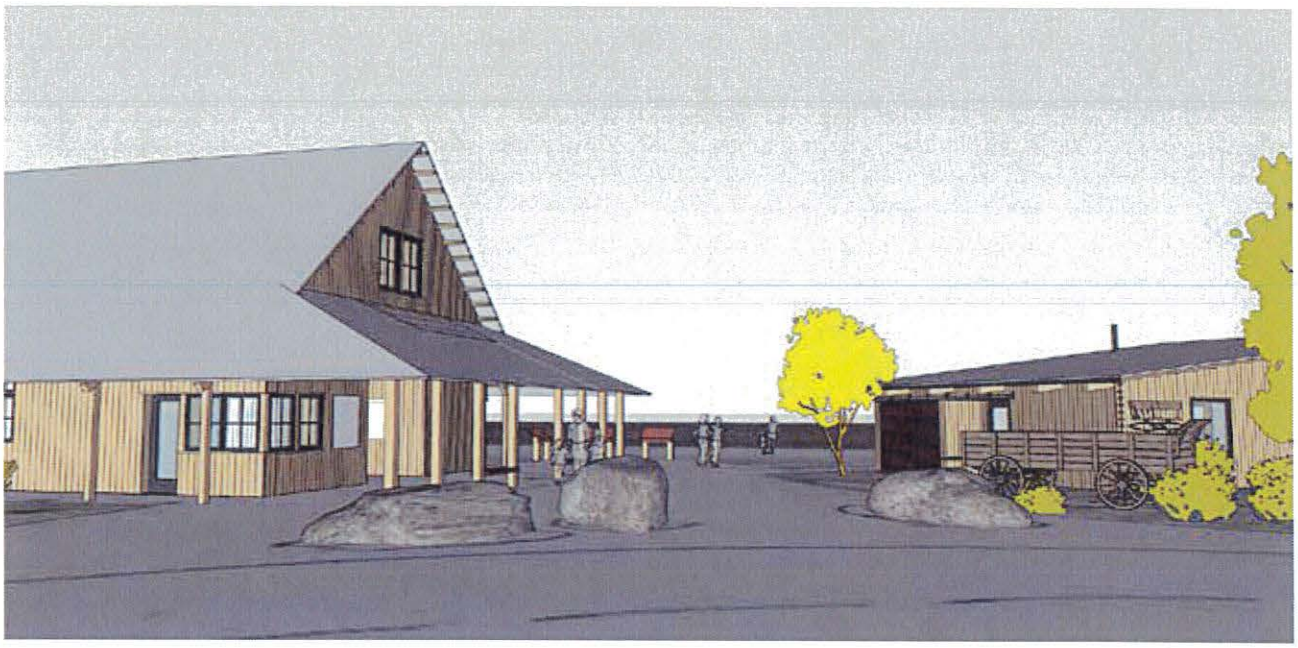
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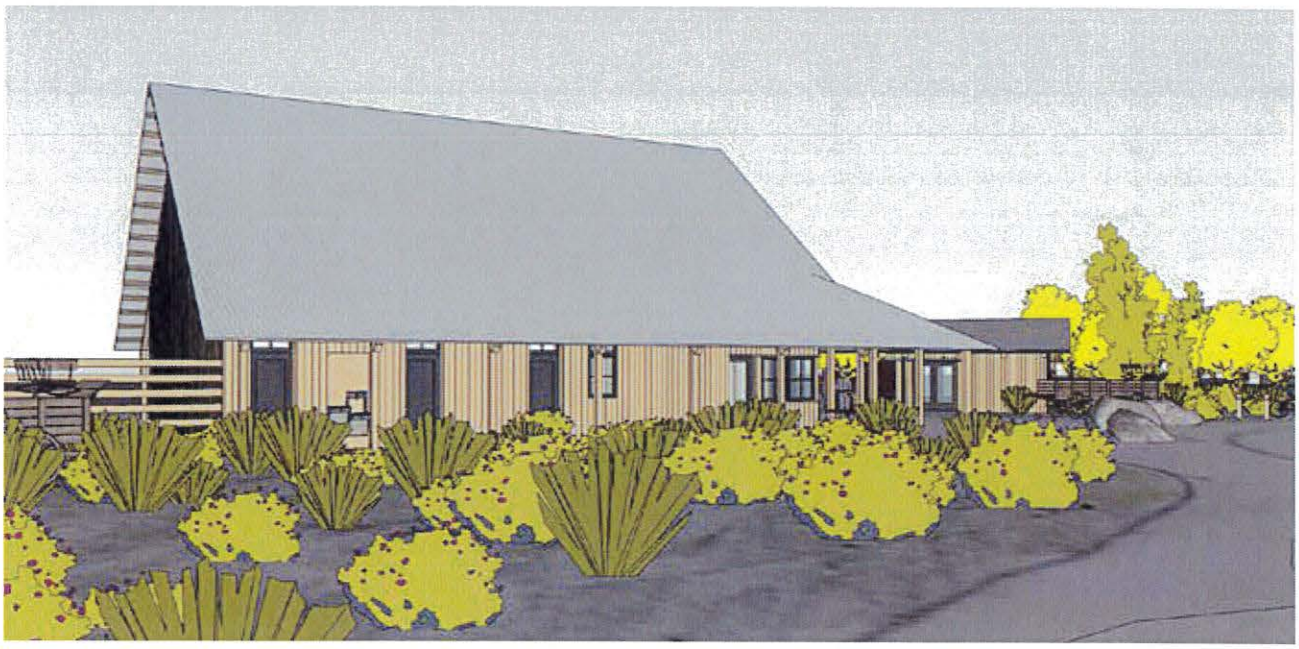
REV	DATE	DESCRIPTION	APPROVED	DATE





HEADQUARTERS SITE - PERSPECTIVES

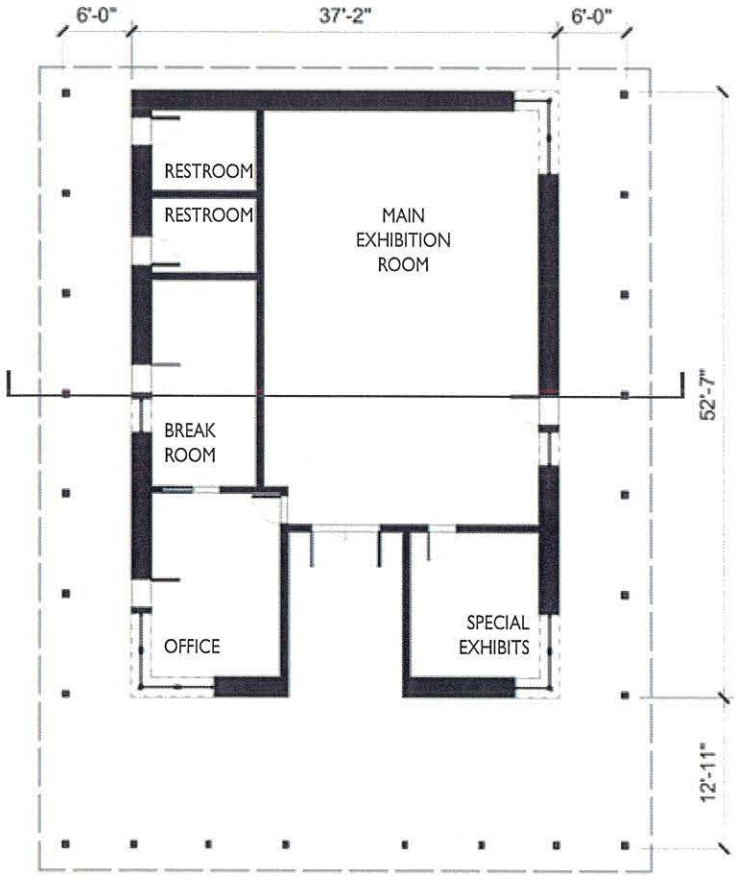




PROPOSED VISITOR CENTER - PERSPECTIVES



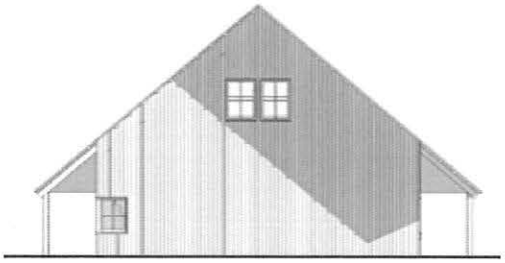
Section (looking North)



Plan (1802 sf)

PROPOSED VISITOR CENTER: 'THE EXHIBIT BARN'
DRAWINGS

Scale 1/16" = 1'-0"



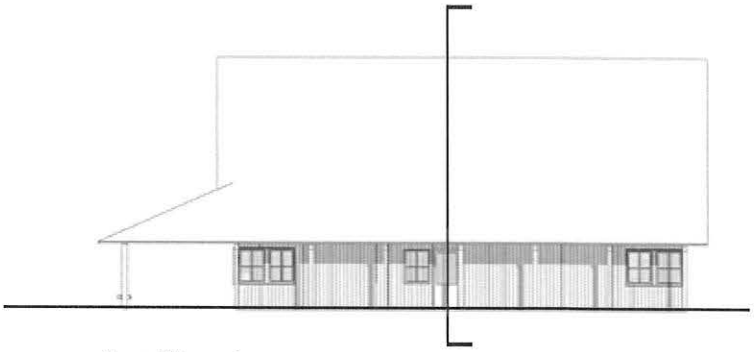
North Elevation



West Elevation



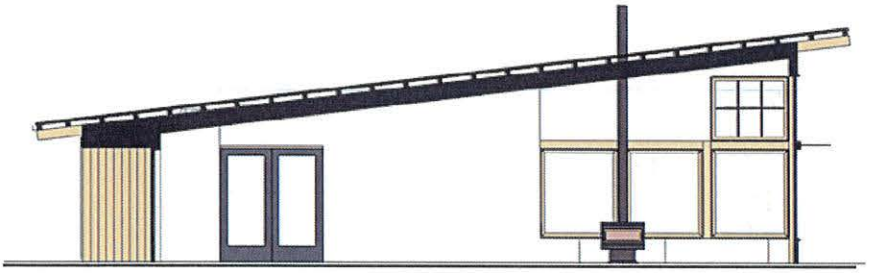
South Elevation



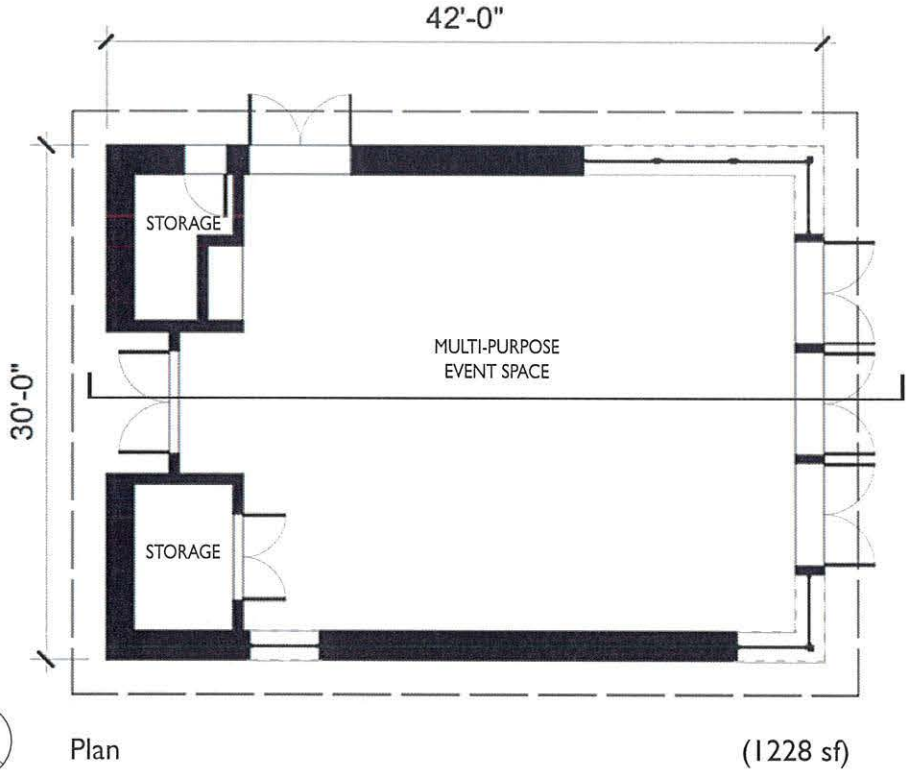
East Elevation

PROPOSED VISITOR CENTER: 'THE EXHIBIT BARN'
ELEVATIONS





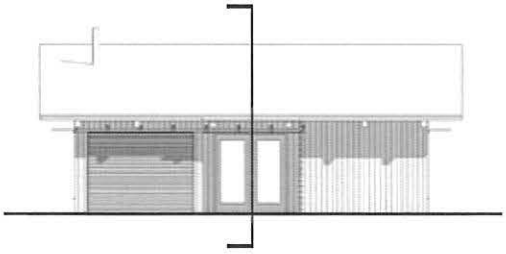
Section (looking Southeast)



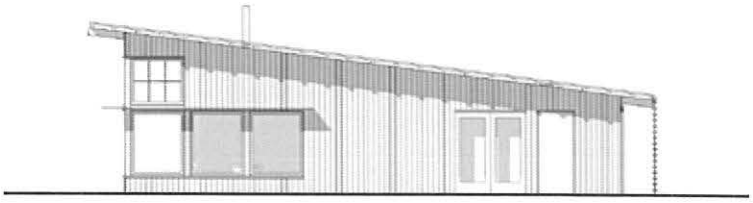
Plan (1228 sf)

PROPOSED VISITOR CENTER: 'THE EVENT SHED'
DRAWINGS

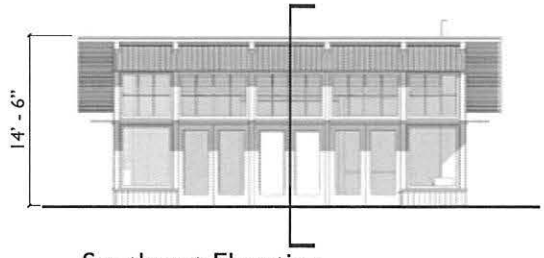
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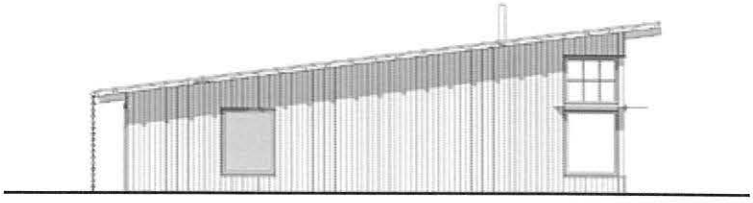
Northwest Elevation



Northeast Elevation



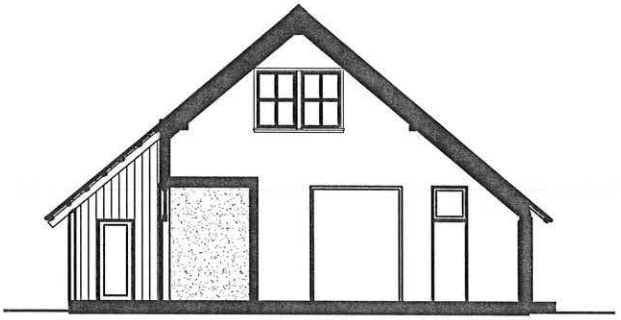
Southeast Elevation



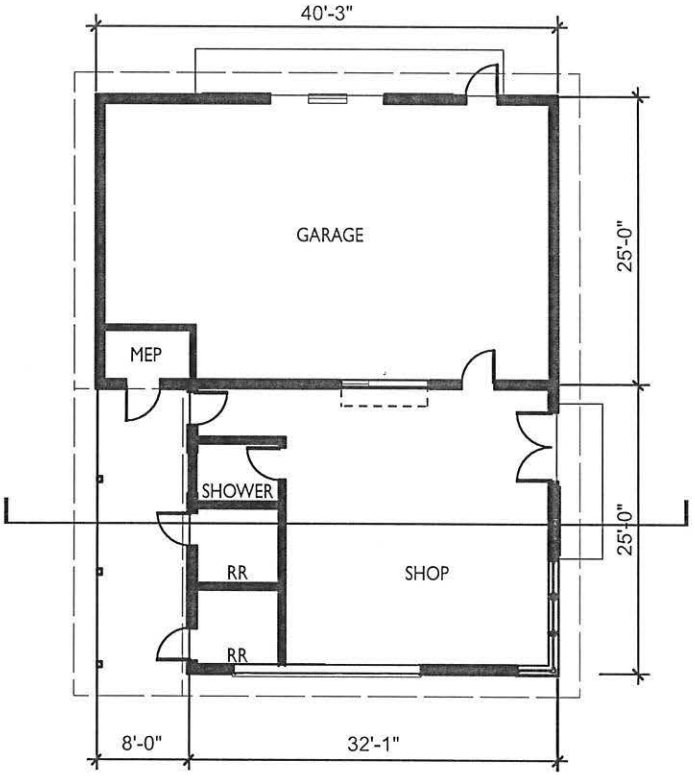
Southwest Elevation

PROPOSED VISITOR CENTER: 'THE EVENT SHED'
ELEVATIONS





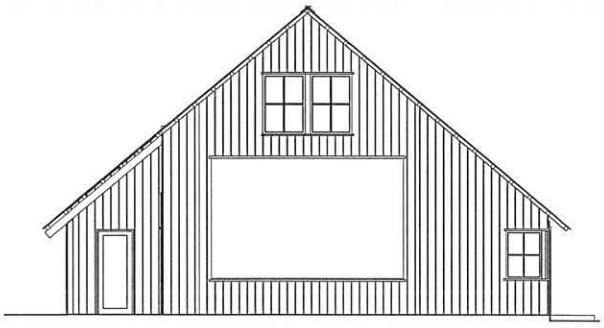
Section (looking North)



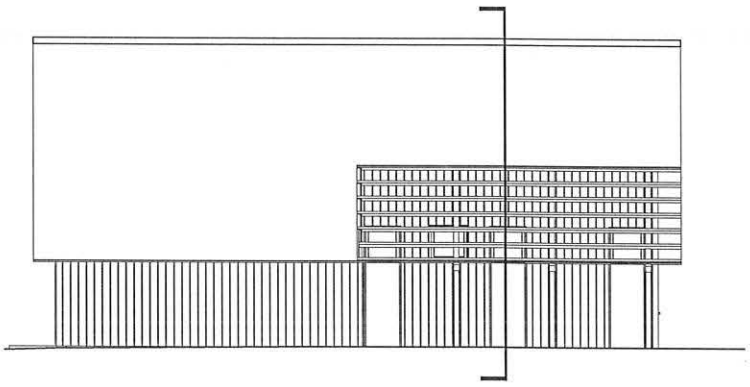
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PROPOSED VISITOR CENTER: 'THE SHOP'
DRAWINGS

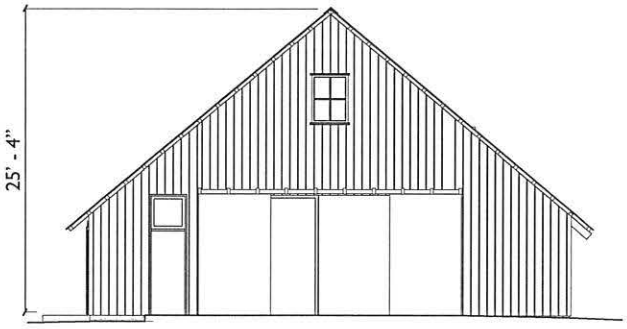
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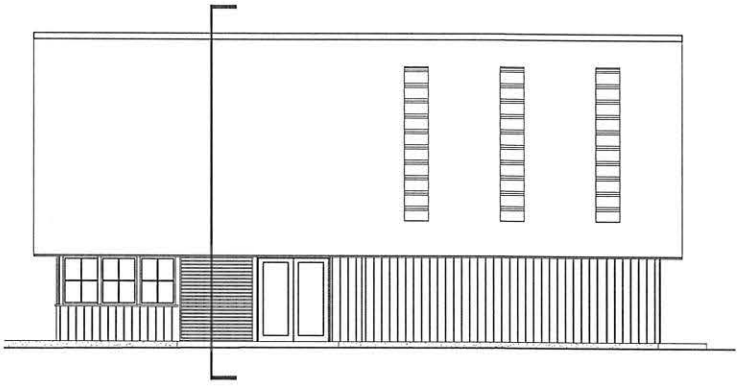
South Elevation



West Elevation



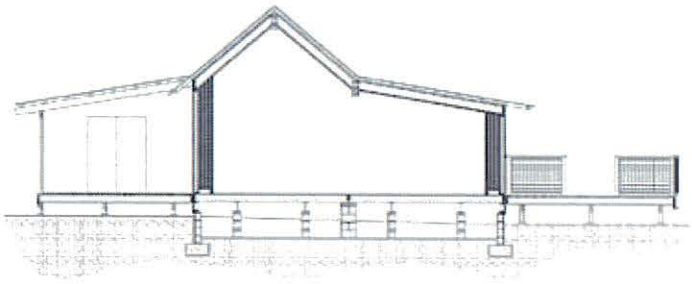
North Elevation



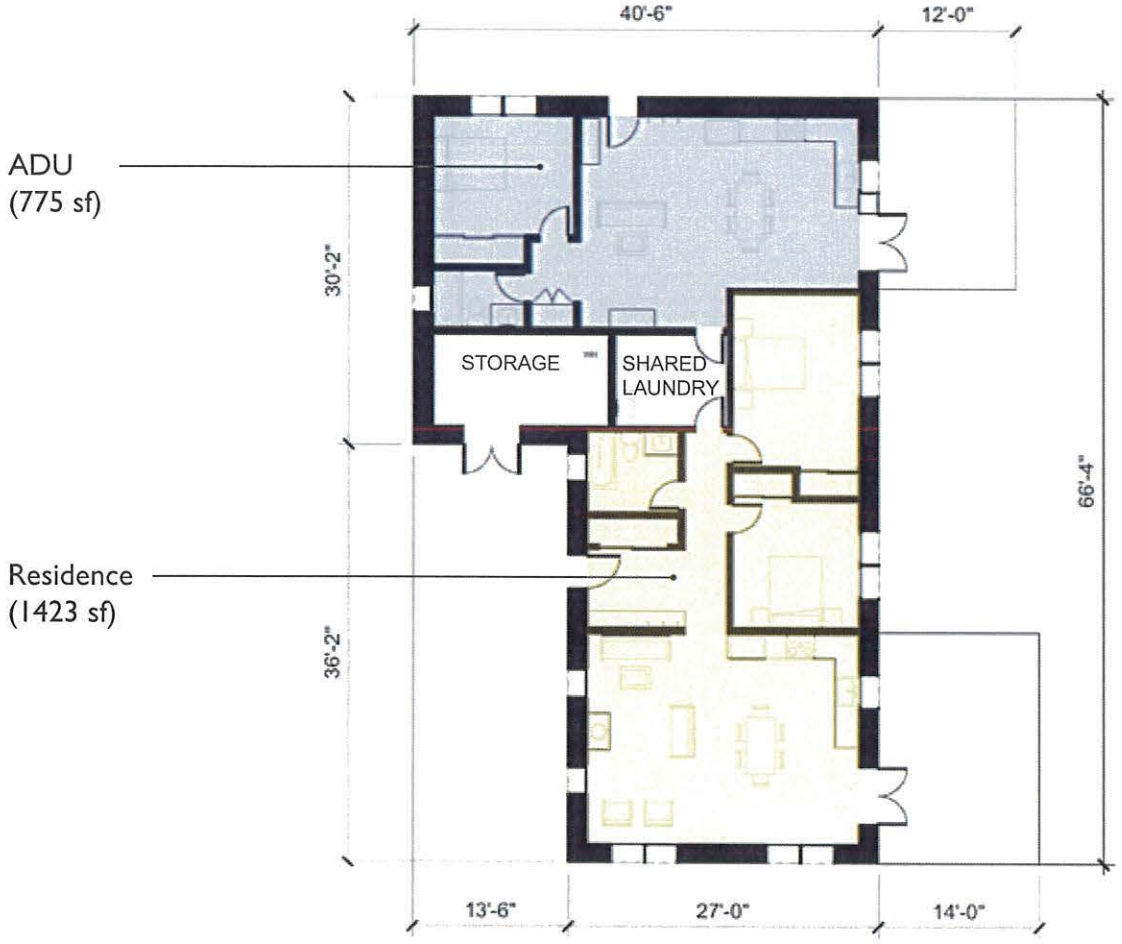
East Elevation

PROPOSED VISITOR CENTER: 'THE SHOP'
ELEVATIONS

0 4 10 20



Section



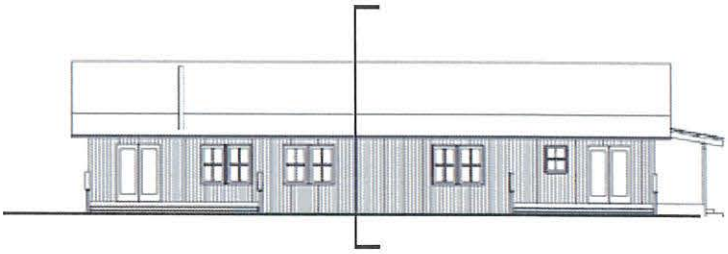
Plan

PROPOSED FIRE-REBUILD OF RESIDENCE & ADU
DRAWINGS

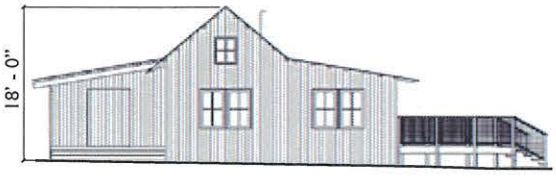
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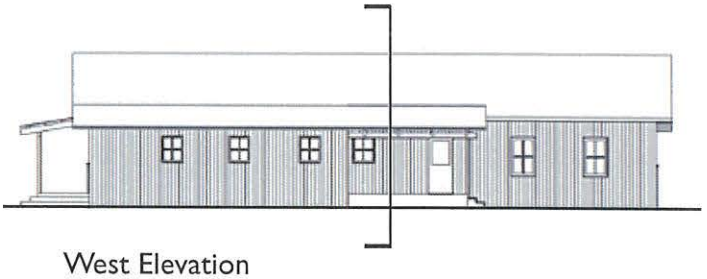
North Elevation



East Elevation



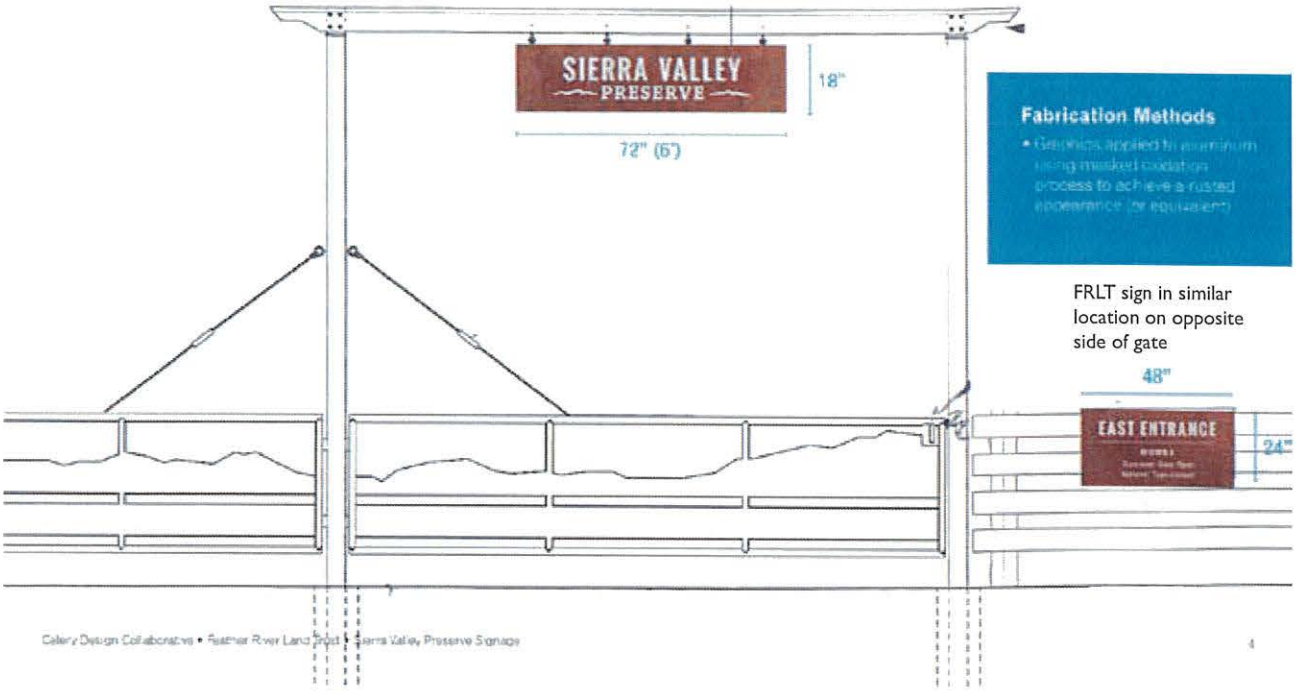
South Elevation



West Elevation

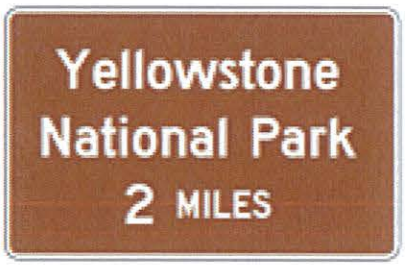
PROPOSED FIRE-REBUILD OF RESIDENCE & ADU
ELEVATIONS

0 4 10 20





PROJECT SIGNAGE: ENTRANCE - DRAWINGS





Note: Total signage at each frontage not to exceed 32 sf per Sec. 9-2.2207

PROJECT SIGNAGE: WAYFINDING - EXAMPLES

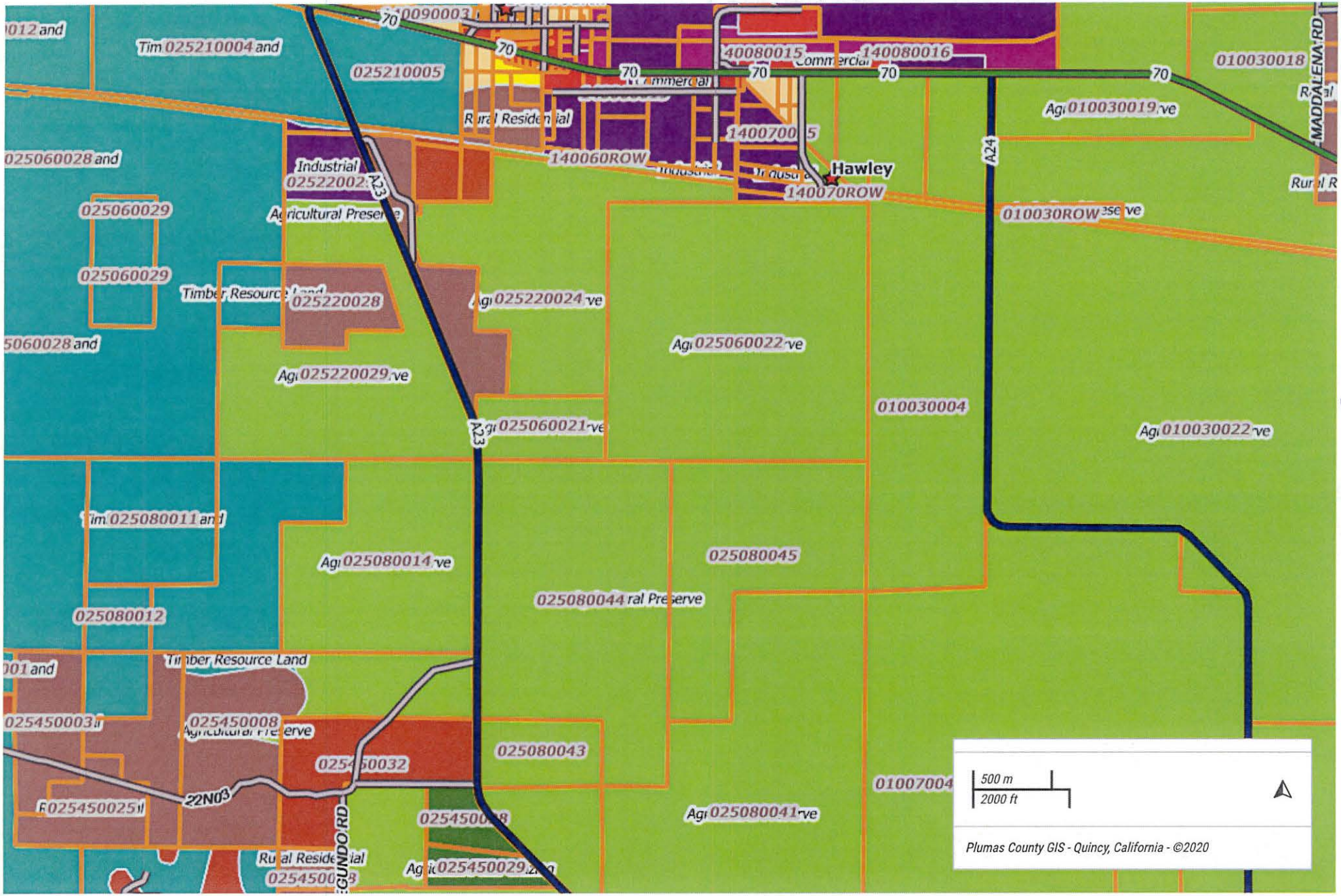

Hawley
Industrial
Rural Residential
Agricultural Preserve
Timber Resource Land
Commercial
025210004 and
025210005
025060028 and
025060029
025060029
025220028
025220024 ve
025060022 ve
025220029 ve
025060021 ve
010030004
010030022 ve
025080011 and
025080014 ve
025080045
025080044 ral Preserve
025080012
025080043
025450008
025450032
025450025
025450029
01007004
025080041 ve
140080015
140080016
010030018
010030019 ve
140070015
140060ROW
140070ROW
010030ROW
A24
A23
22N03
MADDALENA RD
EGUNDO RD
500 m
2000 ft
Plumas County GIS - Quincy, California - ©2020

EXHIBIT 2

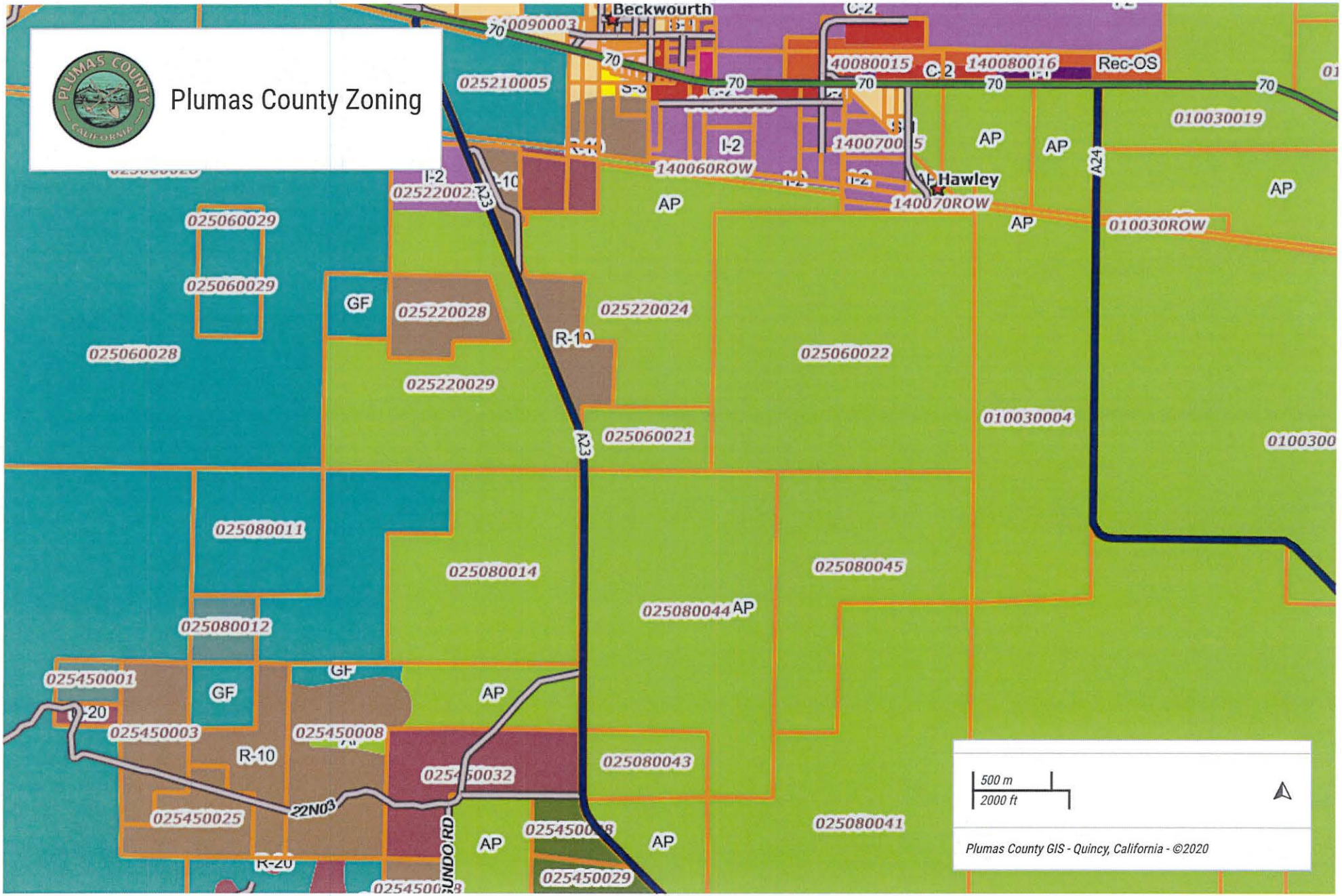
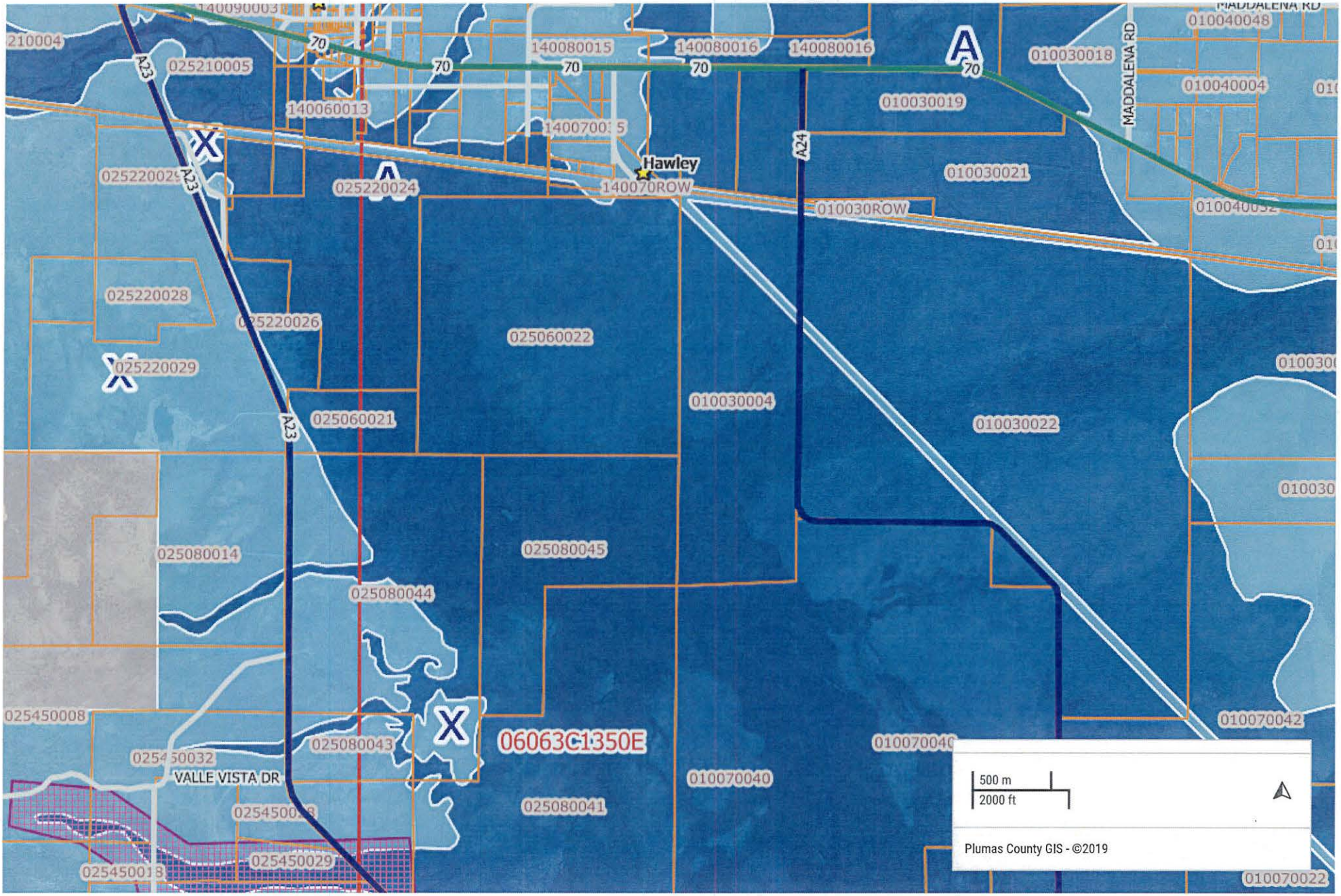

Plumas County Zoning
Beckwourth
Hawley
Rec-OS
C-2
I-2
AP
GF
R-10
R-20
A23
A24
70
140060ROW
140070ROW
010030ROW
025210005
025060029
025060028
025220028
025220024
025220029
025060022
025060021
010030004
025080011
025080014
025080044
025080045
025080012
025450001
025450003
025450008
025450032
025450025
025080043
025080041
025450029
22N03
500 m
2000 ft
Plumas County GIS - Quincy, California - ©2020

EXHIBIT 3


MADDALENA RD
010040048
010030018
010040004
010030019
140080015
140080016
140080016
140060013
140070015
Hawley
140070ROW
010030021
010030ROW
025220029
025220024
025220028
025220026
025060022
025220029
025060021
010030004
010030022
025080014
025080045
025080044
025450008
025080043
06063C1350E
025450032
VALLE VISTA DR
010070042
010070040
025080041
025450029
025450018
010070022
A23
A24
70
500 m
2000 ft
Plumas County GIS - ©2019

CALIFORNIA
Water Boards

GAVIN NEWSOM
GOVERNOR

JARED BLUMENFELD
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Central Valley Regional Water Quality Control Board

8 April 2020

Rebecca Herrin
Plumas County Planning & Building Services
555 Main Street
Quincy, CA 95971

COMMENTS ON THE PRELIMINARY REVIEW & CONSULTATION, SPECIAL USE PERMIT U 2-19/20-04, FEATHER RIVER LAND TRUST SIERRA VALLEY PRESERVE, APN NUMBERS 025-220-024-000, 025-060-021-000, 025-060-022-000, 025-080-045-000, 025-080-044-000, 025-080-043-000, 010-030-004-000, 140-070-024-000, 140-070-025-000, 025-220-025-000 AND 025-220-006-000, BECKWOURTH, PLUMAS COUNTY

The Central Valley Regional Water Quality Control Board (Central Valley Water Board) is a responsible agency for this project, as defined by the California Environmental Quality Act (CEQA). On 30 March 2020, we received your request for comments on the Preliminary Review & Consultation, Special Use Permit U 2-19/20-04, Feather River Land Trust Sierra Valley Preserve (Project).

The proposed project seeks to improve public access and enjoyment of the Preserve through construction of limited trails, wildlife viewing blinds, picnic areas, signage, improved parking and infrastructure, and renovations to existing buildings and construction of new facilities. At the east and west entrances, proposed facilities include permanent restrooms. At the proposed preserve headquarters entrance, improvements include removal of a dilapidated barn and large metal storage building to erect a new 3,000 square foot multi-purpose building, a shop/maintenance building, and a building for permanent exhibits. The Project site is located at 181 Austin Road in Beckwourth.

Based on our review of the information submitted for the proposed project, we have the following comments:

Clean Water Act (CWA) Section 401, Water Quality Certification

The Central Valley Water Board has regulatory authority over wetlands and waterways under the Federal Clean Water Act (CWA) and the California Water Code, Division 7 (CWC). Discharge of dredged or fill material to waters of the United States requires a CWA Section 401 Water Quality Certification from the Central Valley Water Board. Typical activities include any modifications to these waters, such as stream crossings, stream bank modifications, filling of wetlands, etc. 401 Certifications are issued in

EXHIBIT 4

combination with CWA Section 404 Permits issued by the Army Corps of Engineers. The proposed project must be evaluated for the presence of jurisdictional waters, including wetlands and other waters of the State. Steps must be taken to first avoid and minimize impacts to these waters, and then mitigate for unavoidable impacts. Both the Section 404 Permit and Section 401 Water Quality Certification must be obtained prior to site disturbance. Any person discharging dredge or fill materials to waters of the State must file a report of waste discharge pursuant to Sections 13376 and 13260 of the California Water Code. Both the requirements to submit a report of waste discharge and apply for a Water Quality Certification may be met using the same application form, found at Water Boards 401 Water Quality Certification Application (http://www.waterboards.ca.gov/centralvalley/water_issues/water_quality_certification/wqc_application.pdf)

General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (CGP)
Construction activity, including demolition, resulting in a land disturbance of one acre or more must obtain coverage under the CGP. The Project must be conditioned to implement storm water pollution controls during construction and post-construction as required by the CGP. To apply for coverage under the CGP the property owner must submit Permit Registration Documents electronically prior to construction. Detailed information on the CGP can be found on the State Water Board website Water Boards Stormwater Construction Permits (https://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml)

Isolated wetlands and other waters not covered by the Federal Clean Water Act
Some wetlands and other waters are considered "geographically isolated" from navigable waters and are not within the jurisdiction of the Clean Water Act. (e.g., isolated wetlands, vernal pools, or stream banks above the ordinary high-water mark). Discharge of dredged or fill material to these waters may require either individual or general waste discharge requirements from the Central Valley Water Board. If the U.S. Army Corps of Engineers determine that isolated wetlands or other waters exist at the project site, and the project impacts or has potential to impact these non-jurisdictional waters, a Report of Waste Discharge and filing fee must be submitted to the Central Valley Water Board. The Central Valley Water Board will consider the information provided and either issue or waive Waste Discharge Requirements. Failure to obtain waste discharge requirements or a waiver may result in enforcement action.

Any person discharging dredge or fill materials to waters of the State must file a report of waste discharge pursuant to Sections 13376 and 13260 of the CWC. Both the requirements to submit a report of waste discharge and apply for a Water Quality Certification may be met using the same application form, found at Water Boards

Adopted Orders for Water Quality
(http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2004/wqo/wqo2004-0004.pdf)

If you have any questions or comments regarding this matter, please contact me at (530) 224-4784 or by email at Jerred.Ferguson@waterboards.ca.gov.

Lynn Costa for

Jerred Ferguson
Environmental Scientist
Storm Water & Water Quality Certification Unit

JTF: db

cc: David Arkin, AIA/Arkin Tilt Architects, Berkeley
Shelton Douthit, Feather River Land Trust, Quincy

Tim W. Gibson
Agricultural Commissioner
Sealer of Weights & Measures
timgibson@countyofplumas.com

Plumas-Sierra Counties
Department of Agriculture

Agricultural Commissioner
Sealer of Weights and Measures

208 Fairgrounds Road
Quincy, CA 95971
Phone: (530) 283-6365
Fax: (530) 283-4210

April 24, 2020

To: Rebecca Herrin, Assistant Planning Commissioner

From: Tim Gibson, Agricultural Commissioner, Sealer of Weights and Measures

RE: Preliminary Review & Consultation
Special Use Permit
U 2-19/20-04
Feather River Land Trust
Sierra Valley Preserve

Thank you for the opportunity to make suggestions on how this project might be modified to reduce or avoid any significant effects. After careful review of the presented documents regarding this project, I have no comment at this time.

Sincerely,

Tim Gibson

Tim Gibson

Plumas-Sierra Counties Agricultural Commissioner
Sealer of Weights & Measures

EXHIBIT 5

Herrin, Becky

From: Grundy, Farl@DOC <Farl.Grundy@conservation.ca.gov>
Sent: Monday, April 06, 2020 10:41 AM
To: Herrin, Becky
Subject: Special Use permit U 2-19/20-04

Ms. Herrin,

The Department of Conservation has reviewed the Special Use Permit regarding the recreational facility located on the Sierra Valley Preserve. As the project is proposed at this time, the Department has no comment. Please provide this Department with notices of any future hearing dates as well as any staff reports pertaining to this project.

Sincerely,

Farl Grundy
Associate Environmental Planner
Division of Land Resource Protection

California Department of Conservation
801 K Street, MS 14-15, Sacramento, CA 95814
T: (916) 324-7347
E: Farl.Grundy@conservation.ca.gov

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PLUMAS COUNTY PLANNING & BUILDING SERVICES
555 Main Street, Quincy, CA 95971 **www.countyofplumas.com**
(530) 283-7011

23 March 2020

TO: Chuck White, Building Official

FROM: Rebecca Herrin, Assistant Planning Director

RE: Preliminary Review & Consultation
Special Use Permit
U 2-19/20-04
Feather River Land Trust
Sierra Valley Preserve

We have received an application from the Feather River Land Trust for a recreational facility encompassing the area known as the Sierra Valley Preserve. This project is located at 181 Austin Road, Beckwourth, unincorporated Plumas County, CA; APNs 025-220-024-000, 025-060-021-000, 025-060-022-000, 025-080-045-000. 025-080-044-000, 025-080-043-000, 010-030-004-000, 140-070-024-000, 140-070-025-000, 025-220-025-000 and 025-220-006-000 for a total of 2,558.68 acres.

The proposed project seeks to improve public access and enjoyment of the preserve through construction of limited trails, wildlife viewing blinds, picnic areas, signage, improved parking and infrastructure, renovations to existing buildings and construction of new facilities.

Enclosed is information on this project. I am reviewing this project to determine if the application is complete and to determine if the project may have a significant effect on the environment. I would appreciate any suggestions you could make as to how the project might be modified to reduce or avoid any significant effects. Also, I would appreciate any recommendations you can make regarding approval or conditions of approval. **If you need more information, let me know. Please be as specific as you can, as that will assist me in obtaining information you might need.**

If you have no comment on this project, I would appreciate being told. Return of this memo with a "no comment" written on it will do. **Please respond by April 24, 2020,** whether or not you have a comment. If you intend to respond but cannot do so by **April 24, 2020,** please call me at (530) 283-6213.

Thank you for your assistance.

Building Permits Required for any new structures, Alterations to existing structures and any accessibility elements

3/30/20

Herrin, Becky

From:	Sam Longmire <saml@myairdistrict.com>
Sent:	Friday, January 22, 2021 8:53 AM
To:	Herrin, Becky
Cc:	Gretchen Bennitt; Julie Ruiz; Melissa Klundby; Joe Fish
Subject:	Re: Sierra Valley Preserve special use permit U 2-19/20-04
Attachments:	Dust Control Conditions - Standard.doc; Feather RIver Land Trust, Sierra Valley Preserve.pdf

Good morning Becky,

I have not sent you any comments for the project. Here's some compliance assistance information.

The Northern Sierra AQMD (NSAQMD) has reviewed the Preliminary Review and Consultation document for the proposed Sierra Valley Preserve at 181 Austin Road, Beckwourth. In the interest of compliance assistance, the NSAQMD would like to mention 3 items:

1) If any open burning is proposed for vegetation management or disposal, it must be done under the authority of an Air Pollution Permit issued by the NSAQMD. The applicant may contact Julie Ruiz of our Portola office (julier@myairdistrict.com or 530-832-0102) for a permit or with questions about open burning.

2) A Dust Control Plan is required for the disturbance of more than 1 acre of surface. I am attaching a standard template that may be modified to fit the project.

3) If any diesel generator engine greater than 49 bhp is proposed, the applicant should contact Joe Fish of the NSAQMD regarding the likely need for an operating permit (joef@myairdistrict.com or 530-274-9360 x503).

Please contact me with any questions.

Sincerely,

Sam Longmire, APCS

On Thu, Jan 21, 2021 at 3:53 PM Herrin, Becky <BeckyHerrin@countyofplumas.com> wrote:

> Good afternoon, Sam,
>
> I am working on the CEQA document for the Sierra Valley Preserve project for Feather River Land Trust. I am not finding the usual email from you in my files.
>
> Do you have anything in your records? As it is construction of trails and an interpretive/educational facility, I assume that the standard condition re: dust control plan would be the only comment on this.
>
> Please let me know if I am missing a comment email.
>
> Thanks,
>
> Becky

EXHIBIT 6

--
NORTHERN SIERRA AIR QUALITY MANAGEMENT DISTRICT
Sam Longmire, MSES
Air Pollution Control Specialist
Phone: (530) 274-9360 x506

Sierra Valley Preserve:
Avian Surveys and Stewardship Recommendations 2017

October 13, 2017

Prepared for:
Feather River Land Trust
75 Court Street
Quincy, CA 95971

Prepared by:
Kelly Cruce, Wildlife Ecologist
on behalf of
Plumas Audubon Society
429 Main Street
Quincy, CA 95971

EXECUTIVE SUMMARY

The Plumas Audubon Society conducted wildlife surveys on the Sierra Valley Preserve (Maddalena, Smith, and Noble properties) from 2013 through 2017. Wildlife surveys conducted in May and June of 2017 consisted of avian point-counts along transects in wetland and upland areas as well as surveys for Virginia Rail and Sora (secretive marsh birds), nest searching, and documenting other wildlife and plant species. The 2017 survey data augments prior years' wildlife diversity and distribution research.

Based on the survey results, stewardship recommendations are provided to help conserve wildlife populations and their habitats that are compatible with the Feather River Land Trust's management priorities for the Preserve. The primary Stewardship Recommendations provided in October 2016 remain the same into 2017. In addition, further detail and strategies as related to the conservation needs of focal or species of concern, habitat restoration within the preserve, and climate change adaptation are offered in this 2017 update. Stewardship recommendations as reported in 2016 include expanding and enhancing the riparian-wetland area, preserving historic features "as-is", developing resource- compatible public access, and interpretation of the wildlife diversity and habitats found on the Preserve. We also recommend habitat enhancements including cottonwood planting, raptor perches, nest boxes, owl burrows and grazing management that leads to improved vegetation structure and ground cover diversity.

Please refer to the Plumas Audubon Society 2016 report "*Wildlife Surveys, Habitat Mapping, and Stewardship Recommendations*" (PAS 2016 report) for more detailed information on the research and findings from 2013-2016, including mammal surveys.

EXHIBIT 7

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INTRODUCTION

The Feather River Land Trust, in partnership with The Nature Conservancy and Northern Sierra Partnership, has acquired three large properties totaling approximately 2,540 acres (Figure 1), now known as the Sierra Valley Preserve (Preserve). The Preserve encompasses a large wetland complex, and along with the surrounding high quality sagebrush and grassland habitats, provides outstanding opportunities to observe a diverse assemblage of wildlife. Sierra Valley is the largest montane wetland in the Sierra Nevada and is a designated "Important Bird Area" by the National Audubon Society. An Important Bird Area (IBA) is a site that has been selected for its exceptional habitat value and the critical role it plays in hosting birds, for breeding, migrating, or over-wintering. The Sierra Valley IBA, as described by Audubon, "contains what is probably the largest freshwater marsh in the Sierra Nevada, and supports several breeding species not found on managed wetlands (e.g. impoundments), including Black Tern, Wilson's Phalarope, Willet and 13 species of waterfowl."

The Plumas Audubon Society has appreciated the opportunity to study and help steward the Preserve. We hope that what we have learned will help the public to enjoy and appreciate this area while protecting and enhancing wildlife and their habitats.

METHODOLOGY

Survey protocols and data recording in the California Avian Data Center for avian point count surveys, nest searching, and rail surveys in 2017 followed the same protocols utilized for all survey years between 2013 and 2016, described in detail in the Methodology of the PAS 2016 report.

Avian Point Counts

In May and June of 2017, we conducted point count surveys along 5 survey transects with a total of 31 survey points (2 transects on the Noble upland areas - east and west of the channel - with 14 points, 1 on the Noble channel with 8 points, 1 on the Smith channel with 6 points, and 1on the Maddalena property with 3 of 8 points accessible due to flood conditions; Figure 1). Two surveys were conducted on each transect in May and June with two weeks between each survey site allowing observations of the breeding and nesting season (Appendix D includes all of the point count survey data forms and a list of all survey dates).

The Sierra Valley Preserve has been subjected to severe drought conditions from 2012 to 2015, and extreme precipitation and flooding in 2017. Precipitation was recorded as more than 300 percent of average across the Sierra as of early 2017, which transformed many areas within the Preserve.

Wetlands within Maddalena ranch were flooded causing the water to rise into the surrounding sagebrush and over existing fence lines along property boundaries. Point-count surveys along the Maddalena transect were attempted, unsuccessfully, weekly for 5 weeks beginning May 10, 2017. A partial point-count survey was conducted and recorded to provide some data on the avian species inhabiting Maddalena this year. When flood waters were higher than 3 feet, surveys could not be conducted due to safety issues in navigating the sagebrush underfoot; researchers and equipment were at risk of tripping and inundation.

The same flooded wetland channels flow into the east side of the Noble property, and over existing point-count survey upland transects. The sagebrush "uplands" here were also inundated with as much as 4 feet of flood water in some areas. The Noble upland transect on the east side of the channel was attempted for point-count survey on 4 occasions in May. The first survey successfully completed for this transect occurred on June 6, although required navigation in 2-3 feet of flood water over the sagebrush for some points.

Rail surveys

Virginia Rail and Sora (a species of rail) are secretive marsh birds often not detected during point count or other wildlife surveys. Therefore, we conducted playback calling surveys, which consisted of playing Virginia Rail 'grunt' and 'kick-it' calls and Sora 'whinny' and 'kerr-wee' calls and listening for responses for ten minutes at 10 survey points on the Noble Property in 2017. Rail and Sora were also detected during some point count surveys. Rail surveys were conducted in 2015, 2016, and 2017 along 3 unique transects in different areas within the Preserve wetlands (Figure 2).

RESULTS

Wildlife

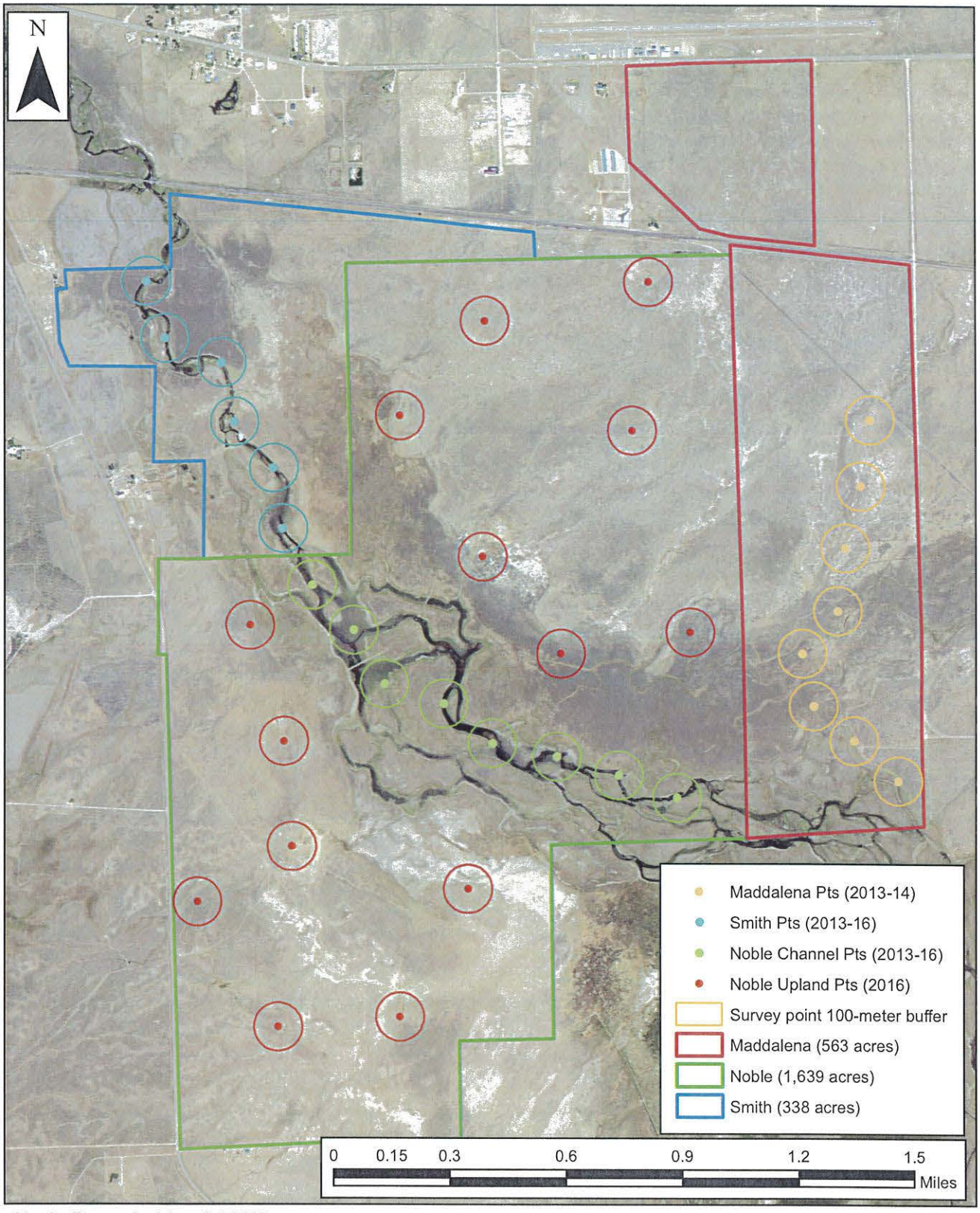
The Sierra Valley Preserve supports a high diversity of wildlife. A total of 98 bird species, 17 mammal species, and 9 species of amphibians, reptiles, and fish have been detected between 2013-2017. The 2017 surveys were limited to avian research, and the species identified in this season are identified separately in Table 1 for comparison. Three new species of waterfowl were observed in the Preserve wetlands this year including a pair of Blue-winged Teal, one Clark's Grebe seen throughout the season, and a Common Goldeneye. Of the birds, 26 species have been confirmed as breeding on the Preserve and at least an additional 13 are probable breeders (high likelihood of breeding on the Preserve, but not yet directly confirmed).

While surveying for birds on the Preserve in 2017, a number of other wildlife species were noted including Pronghorn antelope, mule deer, coyote, and jackrabbit, as well as 10 species of butterflies. More information on the wildlife encountered in 2017 can be found in Appendix A - Wildlife of SVP, 2017.

Wildlife habitats (Figure 3) were classified based on plant groupings identified during a botanical survey by Terri Rust and Bill and Nancy Harnach and include: Wet meadow, Wetland, Sagebrush, Grassland, and Alkali.

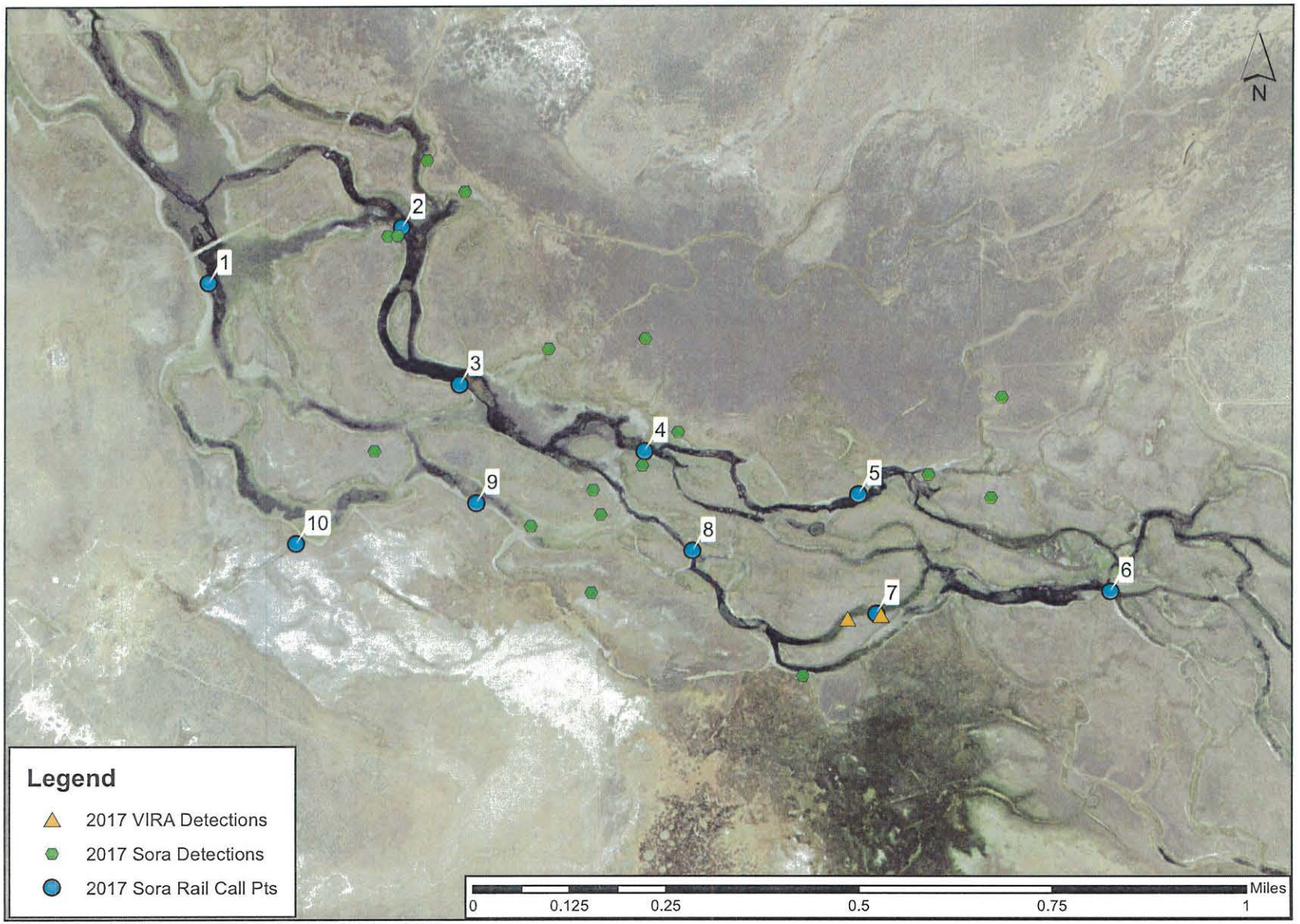
Please see the PAS 2016 report, "Wildlife Surveys, Habitat Mapping, and Stewardship Recommendations," for more detail on wildlife species detected on the Preserve and habitat designations.

Figure 1. Map of the Sierra Valley Preserve showing the property boundaries for the Maddalena, Smith and Noble properties as well as the location of point count stations.



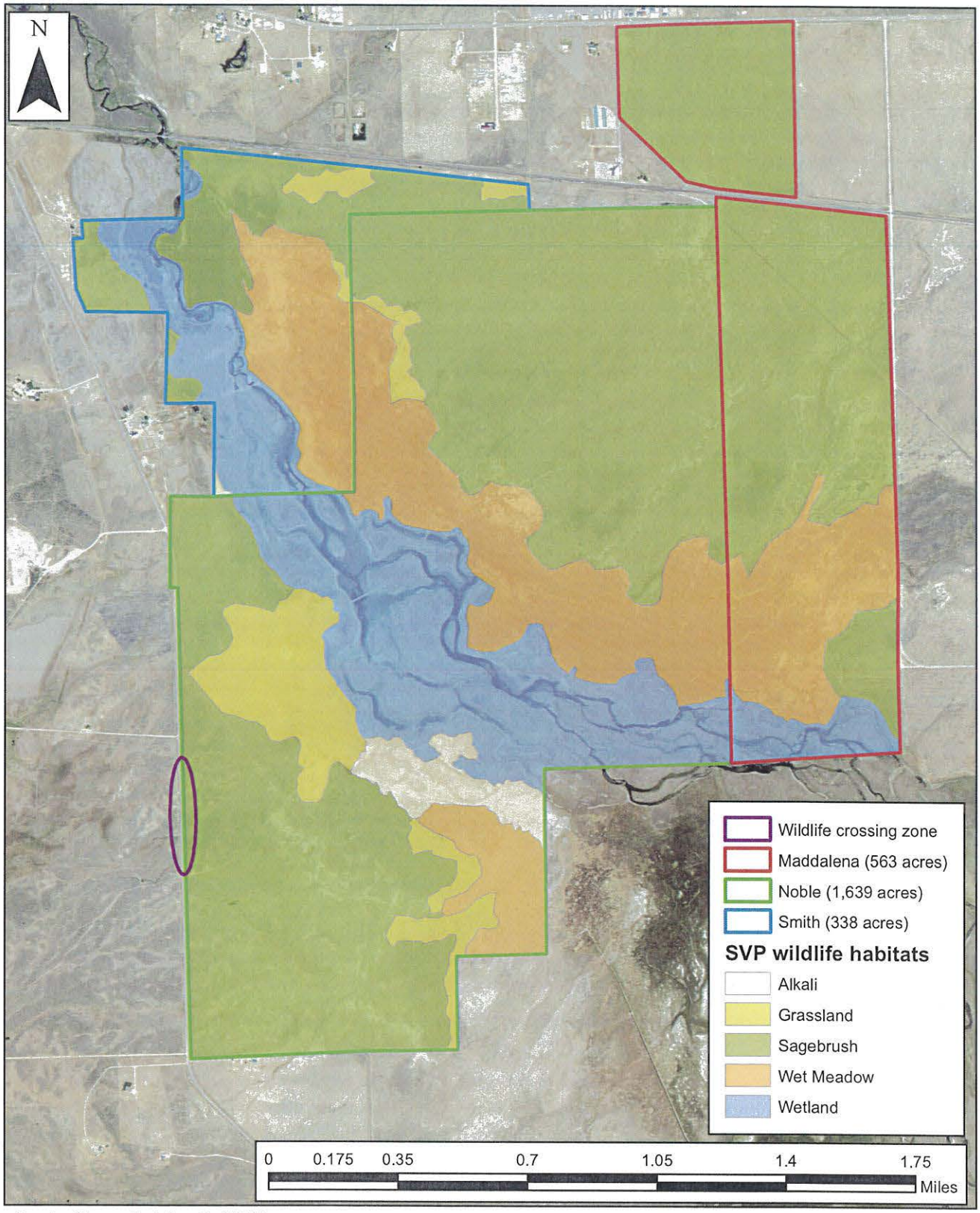
Map by Plumas Audubon Oct 2016

Figure 2. Rail survey points on the Smith and Noble properties and locations of Virginia Rail and Sora detections in 2017.



Map produced by Plumas Audubon Society October 2017

Figure 3. Wildlife habitats mapped on the Sierra Valley Preserve



Map by Plumas Audubon Oct 2016

Table 1. Avian species observed on Sierra Valley Preserve 2013-2017 with Special Concern and Threatened/ Endangered (T/E) status indicated.

Species by FAMILY	2013-2016	2017	Audubon Designated Climate T/E	CA Species of Special Concern	CA State T/E
WATERFOWL					
Greater White-fronted Goose	x		x	x	
Canada Goose	x	x			
Tundra Swan	x		x		
Wood Duck	x		x		
Gadwall	x	x	x		
American Wigeon	x		x		
Mallard	x	x	x		
Blue-winged Teal		x	x		
Cinnamon Teal	x	x	x		
Northern Shoveler	x	x	x		
Northern Pintail	x	x			
Green-winged Teal	x				
Redhead	x	x	x	x	
Ring-necked Duck	x		x		
Bufflehead	x	x			
Common Goldeneye		x	x		
Barrow's Goldeneye	x				
Ruddy Duck	x				
GROUSE, QUAIL, & ALLIES					
California Quail	x				
LOONS & GREBES					
Pied-billed Grebe	x	x			
Eared Grebe	x	x	x		
Clark's Grebe		x	x		
CORMORANTS & PELICANS					
Double-crested Cormorant	x		x		
American White Pelican	x	x	x	x	
HERONS, IBIS, & ALLIES					
American Bittern	x	x	x		
Great Blue Heron	x	x			

Great Egret	x				
Snowy Egret	x	x			
Black-crowned Night-Heron	x	x	x		
White-faced Ibis	x	x	x		
VULTURES, HAWKS, & ALLIES					
Turkey Vulture	x	x			
Osprey	x	x	x		
Golden Eagle	x		x		
Northern Harrier	x	x	x	x	
Cooper's Hawk	x				
Bald Eagle	x	x	x		x
Swainson's Hawk	x	x	x		x
Red-tailed Hawk	x				
Ferruginous Hawk	x		x		
Rough-legged Hawk	x				
RAILS, GALLINULES, & ALLIES					
Virginia Rail	x	x			
Sora	x	x			
American Coot	x	x			
CRANES					
Sandhill Crane	x	x	x	x	x
SHOREBIRDS					
Black-necked Stilt	x	x			
American Avocet	x	x	x		
Killdeer	x				
Spotted Sandpiper	x	x	x		
Willet	x	x	x		
Wilson's Snipe	x				
Wilson's Phalarope	x	x	x		
GULLS & TERNS					
Ring-billed Gull	x	x	x		
Caspian Tern	x		x		
Black Tern	x		x	x	
Forster's Tern	x		x		
PIGEONS & DOVES					
Rock Pigeon	x				

Eurasian Collared-Dove	x				
Mourning Dove	x				
OWLS					
Barn Owl	x		x		
Great Horned Owl	x				
Short-eared Owl	x		x	x	
FALCONS					
American Kestrel	x	x	x		
Merlin	x		x		
Peregrine Falcon	x		x		
Prairie Falcon	x		x		
TYRANT FLYCATCHERS					
Say's Phoebe	x				
Western Kingbird	x				
SHRIKES					
Loggerhead Shrike	x				
Northern Shrike	x				
CORVIDS					
Black-billed Magpie	x		x		
Common Raven	x	x	x		
LARKS					
Horned Lark	x	x			
MARTINS & SWALLOWS					
Northern Rough-winged Swallow	x				
Tree Swallow	x	x	x		
Violet-green Swallow	x		x		
Bank Swallow	x	x	x		x
Barn Swallow	x				
Cliff Swallow	x	x			
WRENS					
Rock Wren	x				
House Wren	x				
Marsh Wren	x	x	x	x	

THRUSHES					
Mountain Bluebird	x		x		
American Robin	x				
THRASHERS & MOCKINGBIRDS					
Sage Thrasher	x	x	x		
STARLINGS					
European Starling	x	x			
SPARROWS					
Spotted Towhee	x	x			
Brewer's Sparrow	x	x	x		
Vesper Sparrow	x	x	x	x	
Savannah Sparrow	x	x			
Song Sparrow	x				
White-crowned Sparrow	x				
BLACKBIRDS					
Red-winged Blackbird	x	x			
Western Meadowlark	x	x			
Yellow-headed Blackbird	x	x	x	x	
Brewer's Blackbird	x	x	x		
Great-tailed Grackle	x				
Brown-headed Cowbird	x	x			
Bullock's Oriole	x		x		

Birds of Concern

California Avian Species of Special Concern

A number of avian species on the Preserve are recognized by California Department of Fish and Wildlife as "Species of Special Concern." California Species of Special Concern includes those experiencing population declines or range retractions that, if continued or resumed, could qualify it for State threatened or endangered status. The species that have been identified from 2013 through 2017 wildlife surveys on the Sierra Valley Preserve that are also classified as California Species of Special Concern[1] include:

[1] California Dept. of Fish and Wildlife. 2017. Special Animals List.

- American White Pelican
- Black-Crowned Night Heron
- Black Tern
- Greater White Fronted Goose
- Loggerhead Shrike
- Northern Harrier
- Redhead
- Short-eared Owl
- Sandhill Crane (also California Threatened/Endangered status)
- Vesper Sparrow
- Yellow-headed blackbird

California Threatened species

Species designated as "Threatened" by the California Department of Fish and Wildlife are protected under the California Endangered Species Act. These species have been determined to be threatened with extinction and/or experiencing a significant decline in the state. Sandhill crane (*Antigone canadensis*), Swainson's Hawk (*Buteo swainsoni*), and Bank Swallow (*Riparia riparia*) are classified as Threatened in California and have been found in the Preserve.

Focal Species: Sandhill Crane

Two pair of Sandhill Crane *(Antigone canadensis)* were heard regularly within the preserve during the survey season. Cranes generally nest in shallow water up to three feet deep with marsh vegetation, and occasionally on dry ground near the water's edge. Nests may be built upon from the vegetation on the bottom or floating and anchored to standing plants.

On June 14, 2017 a pair of sandhill cranes was seen during an upland survey on the Noble property - foraging along an active wetland area (very active with waterfowl, isolated deep pool north end of Noble property). The lush vegetation in this wetland zone appears to match their nest site preferences. The pair was foraging very slowly—a behavior indicative of a possible fledgling nearby, though unconfirmed due to tall marsh grasses inhibiting direct observation of any young.

Focal Species Strategy: Survey vegetation around all wetland channels for presence of native marsh grasses needed for nesting materials and foraging with young. Consider marsh and shore habitat restoration initiatives to promote more viable habitat for Sandhill cranes.

Focal Species: Swainson's Hawk

One Swainson's Hawk *(Buteo swainsoni)* was observed repeatedly on the Noble property, perching on tall poles near the historic Noble house - presumably utilizing the vantage point to hunt for prey in the field below. While known to nest in grassland habitat and sage flats, a second individual or pair was not observed during any surveys on the Preserve to indicate breeding. Swainson's Hawks will typically build a nest in a tree within the otherwise open habitat.

Focal Species Strategy: Install raptor perches and restore cottonwood stands to the Preserve to provide nesting habitat for Swainson's Hawk. More detail on this recommended strategy can be found in the Stewardship Recommendations section at the end of the report.

Rails

Rallids (Family Rallidae) on the Preserve include Virginia Rail (*Rallus limicola*) and Sora (*Porzana carolina*), which are difficult to detect visually in their dense marsh habitat. In 2017 we conducted a call-broadcast survey of 10 survey points along a southern portion of the wetland channels on the Noble property. Sora were vocalizing in response to the call-broadcast as well as on their own, and were detected at 5 of the 10 points along the transect. Virginia rail responded at one of ten survey points. This detection rate for the Virginia rail is average relative to those conducted in other wetland surveys. Call- broadcast surveys have been found to increase the detection rate of the Virginia Rail to 10-15% over the average number detected for these otherwise elusive birds. [2]

Sora were detected audibly during every point-count survey in 2017. Superficially this suggests a healthy breeding population of Sora within the Preserve.

Virginia Rail were also encountered at a higher rate without the use of call-broadcast when being inadvertently flushed while moving through flooded sage on upland surveys east of the Noble channel. The unprecedented flooding of the watershed in the spring of 2017 led to 1-4 feet of water over the upland sagebrush habitat along the channel's edge. This dramatic change in the landscape moved some avian species from their typical marsh vegetation into the flooded sagebrush zone. Four rail were flushed over two survey days and locations were documented.

Avian Breeding and Nesting

Breeding behavior was observed and recorded during all surveys in the Sierra Valley Preserve from May - June, 2017 (see Appendix B - SVP Avian Breeding and Nesting for more detail). Indicators of breeding noted in 2017 includes the demonstration of pair bonds, displays such as aggression toward intrusion, nest material carry, food delivery to nestlings, and actual nests found.

Based on these indicators, breeding on the preserve was likely for the following species in 2017: Gadwall, Mallard, Cinnamon Teal, Northern Pintail, Northern Shoveler, Green-winged Teal, White-faced Ibis, Sandhill Crane, Black-necked Stilts, Willet, European Starling, Spotted Towhee, Red-Winged Blackbird, Brewer's Blackbird, and Brown-headed Cowbird.

In addition, in 2017 nests were located and identified for Common Raven, Marsh Wren, Brewer's Sparrow, Vesper Sparrow and Yellow-headed blackbird. Four other nests were encountered in the bulrush and aquatic vegetation in deeper waters of the Noble channels. Based on size and location, these nests likely belong to waterfowl or White-faced Ibis.

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[2]Conway, C. and Gibbs, J. 2005. *Effectiveness of call-broadcast surveys for monitoring marsh birds.* The Auk 122(1):26-35.

Avian Disturbances

Disturbances were recorded primarily during Noble and Smith channel point count surveys, to reflect concerns about the effects of public use and boating in the wetland (see Appendix C – Avian Disturbances 2017 for detailed observations of the species disturbed and location of occurrences). Birds of the upland sagebrush habitat were regularly disturbed during surveys as well, but not documented. All three species of sparrows found in the upland areas were commonly flushed during surveys including Brewer's, Savannah, and Vesper Sparrows.

Repeated disturbances were observed near the boat launch on the Noble property, which is currently not open to the public. A man-made irrigation or drainage ditch created a narrow channel that allows access to the open wetland waters. This channelized area was subject to repeated flooding and in turn created a zone of mudflats along the northern edge that appeared to be supporting a large number of species as of 2017. The mudflats were observed to have constant activity, similar to the northern end of the Smith channel, beyond the dam. Many birds, sometimes dozens, were observed and disturbed on every occasion when kayaking into this channel.

Mudflats are extremely productive areas for invertebrates and provide rich foraging grounds for shorebirds or wading birds. In turn, residents of the Preserve including Black-necked stilts, Willets, and White-faced Ibis did not appear as easily disturbed or willing to leave the area when kayaks move through. Waterfowl on the other hand, such as pairs of ducks including Northern Pintails, Mallards, and Cinnamon Teals were readily disturbed, and flew off as soon as an intruder was sighted. However, the same species—possibly the same pairs—were found repeatedly in this area, indicating site fidelity as they continued to stay even after being flushed by kayak multiple times during the nesting season.

The majority of disturbances were recorded during point count surveys from a kayak, and indicate that waterfowl, primarily, are flushed and therefore affected by a single kayak entering their habitat. The anticipated increased recreational use of the Preserve, particularly canoeing and kayaking, should be balanced with potential impacts to wildlife by limiting access to specific trails and waterways.

Public Access Strategies:

1. Limit boating tour size (number of boats, participants) and frequency. We recommend no more than one tour per week, with fewer than approximately 5 kayaks at a time in order to limit number of disturbances on a site, nest or nester.

2. If the Noble boat launch is to be open to the public or used for donor tours it is recommended that multi-day use or repeated access in the same day to the same area is not allowed as this access channel is very busy with birds. It can, however, sustain light use for research or recreational purposes.

3. Rotate or switch between Maddalena access and Noble launch when conducting tours. Switching authorized boating access between these east and west side launch areas may allow two weeks between boating disturbances in one area. If planning to allow public access on the Noble side, we recommend opening this access on weekdays only early in the breeding season as to have less intrusion during early nesting.

DISCUSSION

Habitat Restoration - Alkali/Mudflats

Restoring native wetland habitat involves restoring the area's hydrology with the establishment or enhancement of micro- and macro-topography across the wetland landscape. This topographic complexity creates a diversity of water regimes, or hydro-periods, which can help to establish more diverse vegetation, increase water quality, and provide flood storage - creating a variety of habitats.

The most activity or avian observations during point-count surveys in the Preserve were recorded within shallow ponds, channel edges, and mudflats. Shallow ephemeral wetlands house an abundance of aquatic invertebrates, which provide a critical food source for shorebirds or wading birds - such as Avocets, Stilts, and Willet. Shorebirds will utilize wetland habitats with water depths from 0-3 inches, and will rarely forage in water depths greater than 6 inches.[3]

These same shallow basins provide important invertebrate forage for waterfowl, therefore supporting a large number of species found within the Preserve. For example, according to the Cornell Lab of Ornithology, Blue-winged Teal eat aquatic insects such as midge larvae, crustaceans, and snails that are abundant in mudflats; and they nest among grasses or herbaceous vegetation and forage in summer in shallow ponds or pond-marsh mixes. A pair of blue-winged teal was recorded on the Preserve for the first time in June 2017, and were found in the shallow waters along a channel of the Noble property.

Restoration Strategy: Healthy shorebird and waterfowl habitat in the Preserve includes areas of receding water with large area-to depth ratio, or flat side slopes, creating seasonally flooded mudflats. In a wetland restoration plan that enhances variety in topography, maximize areas which provide conditions from mudflats through 3 inches deep during spring and late summer.

Habitat Restoration - Upland Sagebrush

The upland sagebrush areas of the Preserve were surveyed in 2016 and 2017. This research revealed a healthy complexity of bird species utilizing this habitat across both years including American Kestrel, Swainson's Hawk, Tree Swallow, Sage Thrasher, Spotted Towhee, Brewer's Sparrow, Vesper Sparrow, Savannah Sparrow, Western Meadowlark, Brewer's Blackbird, and Brown-headed Cowbird.

In addition, a high diversity of vegetation and flowering plants were observed within the sagebrush uplands. Approximately 35 species of wildflowers were found and photographed on the Preserve across the upland sagebrush habitat (Supplement I).

The Sierra Valley Preserve provides a significant opportunity for conserving and enhancing an intact sagebrush ecosystem that is less common than generally perceived. Healthy sagebrush habitat is declining across the region due to a history of development, over-grazing, introduction of invasive species, and wildfire.

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[3]USDA Natural Resources Conservation Service. 2003. *Wetland Restoration, Enhancement, and Management*. III D 6.1-6.3.

The recent increase in severe droughts has also negatively impacted the health of native grasses found in this ecosystem. While sagebrush is somewhat resilient to climatic extremes, the diversity of vegetation found in this habitat is less so.

In addition, the survival of shrublands and grasses is at risk while being rapidly replaced by exotic annual grasses and other invasive species after disturbances such as over-grazing. Aggressive invasive non-native grasses including bulbous bluegrass and cheatgrass were found in the Preserve.

Invasive Species

Focal invasive species: bulbous bluegrass

Bulbous bluegrass *(Poa bulbosa)* is a hardy, persistent, aggressive grass that easily outcompetes many other plants and becomes the dominant species in disturbed habitat types, such as overgrazed fields.[4] It has become more prevalent across the Sierras in recent years, and has been observed in extensive swaths across the upland regions of the Smith and Noble properties in 2017. Invasive plants can quickly degrade wildlife habitat as it out-competes native grasses. This invasive can rapidly take over large areas as seed-like bulblets provide the primary means of reproduction, which is asexual for this species. These structures can germinate immediately without a period of dormancy; in essence, each bulblet is a mini-plant that can form roots and grow once it falls to the soil surface.

Methods considered most effective for bulbous bluegrass removal include chemical control through herbicides, intensive grazing for several growing seasons, early season tillage, or hand-pulling. We do not suggest or support the use of chemical treatment, or intensive grazing across this sensitive wildlife habitat. Hand-pulling or tillage in early spring before the seeded bulblets drop to the ground has been found to effectively control this "noxious weed."

Invasives Strategy: Disturbance promotes bulbous bluegrass, so avoid overgrazing and other disturbances that reduce vigor of native vegetation on Preserve uplands.

Invasives Strategy: Consider targeted removal of this invasive grass, and others, with non-chemical control methods before further encroachment across the Preserve. Weeding by hand-removal provides an opportunity for a community engagement program with volunteer stewardship and environmental education components.

Focal invasive species: cheatgrass

In the eastern Sierra Nevada the spread of the invasive annual grass commonly known as cheatgrass or downy brome (*Bromus tectorum*) is of grave concern, as this "noxious weed" is known to invade and subsequently dominate native grasses. Currently, cheatgrass growth appears patchy across the Preserve, which may be due

[4] Novak, S. J. & A. Y. Welfley. (1997). Genetic diversity in the introduced clonal grass *Poa bulbosa*(Bulbous bluegrass). *Northwest Science* 71:4 271-80.

to cooler temperatures of higher elevation limiting its expansion thus far. As climate change warms the region, there is potential for this invasive to spread rapidly – which has been documented in recent years across the Sierra.[5] Once established, cheatgrass control can be incredibly costly and difficult. Therefore containment or limiting the invasion now is imperative to retain the natural diversity and integrity of the Preserve's sagebrush habitat.

Invasives Strategy: Cheatgrass was not observed in ubiquitous swaths across the uplands, and can be targeted for manual removal. According to the California Invasive Plant Council, cheatgrass is not competitive with well-established perennials, particularly grasses. Biological control by restoring native perennials is a cost-effective and ecologically safe method that can be employed after cheatgrass is removed by other control methods.

Focal invasive species: European Starlings

European Starlings (*Sturnus vulgaris*) were seen nesting in the historic Noble house, carrying nesting materials and later carrying food to their nestlings into multiple holes on the house in May. On June 14, 2017, 35-40 starlings were seen on or flying around the house. Localized starling populations can quickly outpace native blackbirds and other passerine species' population growth, and in turn outcompete native species for food sources. Starlings utilize cavities for nesting, and also compete with native cavity-nesting birds such as kestrels, bluebirds, and swallows for these nesting opportunities. The Sierra Valley Preserve has few existing cavities to support this nesting strategy.

The following recommendation was made in the 2016 report about the starlings and kestrels utilizing the Noble house: "*The historic ranch house provides the only American Kestrel breeding habitat on the Preserve. Kestrel breeding habitat can be created in other areas with nest boxes. However, because European Starlings also breed in the house, they will compete with Kestrels for nest boxes and may need to be periodically removed.*"

Invasives Strategy: Consider manual removal and termination of starling eggs or nestlings. Nest-box traps may be used near the Noble House to remove nesting starlings before they successfully propagate, although traps must be closely monitored for capture and release of native species also using the area, such as kestrels.

Climate Change

Impacts on Birds

The National Audubon Society produced the *Audubon's Birds and Climate Report*[6] in 2015. This report presents the results of a seven year scientific study predicting the potential impact of climate change on 588

[5]Concilio, A. 2013. *The spread of cheatgrass into the Eastern Sierra*. Fremontia. 41(2): 10-13
[6] National Audubon Society. 2015. Audubon's Birds and Climate Change Report: A Primer for Practitioners. National Audubon Society, New York. <http://climate.audubon.org/sites/default/files/NAS_EXTBIRD_V1.3_9.2.15 lb.pdf>

North American bird species. Of the 588 North American bird species Audubon studied, more than half, or 314 species, will lose more than 50 percent of their current climatic territory range by 2080.

The 314 species identified as the most vulnerable to the impacts of climate change were categorized as "Climate Threatened" or "Climate Endangered" –defined as those expected to lose more than 50 percent of their current range by 2080, or by 2050, respectively. Some, like the American Avocet—a species found on the Preserve—could lose more than 99% of their livable range, thus putting them at extreme risk of extinction. The bird species identified during wildlife surveys within the Sierra Valley Preserve that are also considered Climate Threatened or Climate Endangered by the Audubon Society are indicated in Table 1.

Extreme Weather

Climate change models predict that temperature will increase significantly and drought conditions will continue in the Sierra Nevada over the next century. More frequent extreme weather events are also anticipated, along with unpredictable precipitation patterns. The Sierra Valley Preserve has been subjected to severe drought conditions from 2012 to 2015, and extreme precipitation and flooding in 2017. Precipitation was recorded as more than 300 percent of average across the Sierra as of early 2017, which transformed many areas within the Preserve.

Extreme climatic and weather conditions can have severe impacts on wildlife and habitat. Drought conditions, extreme heat, and flooding limits suitable habitat, plant diversity, and food supply, for example. Flooding can inundate limited healthy marsh habitat and suitable nesting areas for many bird species. Fecundity and survival rates of offspring can be lowered by any of these impacts.

Climate Change Strategies:

1. Begin to analyze the projected impacts of climate change on the Preserve by conducting a Climate Change Impact Assessment. Consider starting with a baseline assessment for the Preserve's wetlands utilizing the California Rapid Assessment Method (CRAM) developed by California Wetland Monitoring Workgroup and San Francisco Estuary Institute. "CRAM is a cost-effective and scientifically defensible rapid assessment method for monitoring the conditions of wetlands throughout California."

2. Utilizing results from a baseline assessment, a climate impact assessment can be developed with recognition of existing strengths and weaknesses of the wetland ecosystem. Researchers from the University of California, Los Angeles have recently completed downscaled climate modeling for the Sierra Nevada. (See Dr. Alex Hall modeling project, UCLA Center for Climate Science). Impacts can be more accurately assessed with these fine-scale climate change projections.

3. Begin to develop a Climate Change Adaptation Plan. Adaptation planning involves such actions as preparing for localized climate impacts through habitat management and restoration, determining the species most likely impacted for conservation efforts, and acquiring and protecting more viable habitat. An adaptation plan can establish habitat restoration and enhancement priorities by utilizing current baseline indicators of both wetland and sagebrush habitat health, along with projected climate impacts to these systems.

CONCLUSION

Stewardship Recommendations

Plumas Audubon Society developed recommendations for the short and long-term stewardship of the Preserve in 2016. These recommendations are based on observations, data analysis and habitat assessment over four years of surveys. Data collection and analysis in 2017 further supports these findings and recommendations.

We recommend six principal stewardship actions:

1. Preserve, expand and enhance the riparian-wetland area;
2. Preserve historic features (2 fallen barns and 1 historic ranch house) "as-is";
3. Develop resource-compatible public access;
4. Enhance habitats through cottonwood planting, grazing management for improved vegetation structure and ground cover diversity, and installing raptor perches, nest boxes, and owl burrows; and
5. Interpret the wildlife diversity and habitats for public/youth education.
6. Remove invasive grasses.

Please see the PAS 2016 report, "Wildlife Surveys, Habitat Mapping, and Stewardship Recommendations," for more detail on the first five recommended stewardship actions outlined above. All of the habitat management and restoration strategies discussed in the PAS 2016 report for the first five stewardship actions are supported by observations and assessments across all surveys on the Preserve from 2013-2017. The sixth stewardship action listed above is supported by observations and assessments from 2017 and is discussed below.

Immediate Actions

Prohibit kayaking from the Maddalena viewing platform through the dense bulrush/cattail habitat in front of the platform, as this area is highly diverse and a breeding territory for the Yellow-headed blackbird. Signage can instruct visitors to avoid this area and indicate a proper zone for kayak launch.
There is potential for the invasive cheatgrass (and bulbous bluegrass) to spread rapidly across the Preserve, and once established, cheatgrass control can be incredibly costly and difficult. Therefore containment or limiting the invasion now is imperative, and we recommend a targeted removal plan to be implemented starting in Spring of 2018 before further dissemination.

Replacing or repairing the Decker Dam is also a short-term stewardship priority because of the dam's importance to managing the Preserve's wetland area. We also recommend that designated parking areas and hiking/boating trails be established prior to allowing public access.

Long-term Actions/Outcomes

Our remaining recommendations should be implemented with a long-term vision. This includes climate change adaptation strategies, habitat enhancements such as cottonwood planting, interpretation, fencing, and other stewardship actions outlined throughout this (2017) and the PAS 2016 report.

Adaptive Management

It will be important to continue monitoring wildlife and habitats to determine how management actions can be adapted to better accomplish long-term goals and conservation outcomes.
Additionally, climate change adaptation requires assessment and planning in the short-term, in order to ensure climate resiliency in the long-term.

ACKNOWLEDGEMENTS

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[1] California Dept. of Fish and Wildlife. 2017. Special Animals List.

[2] Conway, C. and Gibbs, J. 2005. *Effectiveness of call-broadcast surveys for monitoring marsh birds.* The Auk 122(1):26-35.

[3] USDA Natural Resources Conservation Service. 2003. *Wetland Restoration, Enhancement, and Management.* III D 6.1-6.3.

[4] Novak, S. J. & A. Y. Welfley. (1997). Genetic diversity in the introduced clonal grass *Poa bulbosa* (Bulbous bluegrass). *Northwest Science* 71:4 271-80.

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Appendix A. Wildlife of Sierra Valley Preserve 2017

BUTTERFLIES

Butterflies found on Sierra Valley Preserve, May - June, 2017. Date listed per species is the date of which it was first observed.

1. Western Tailed Blue (*Cupido amyntula*) - May 6, 2017
2. Sagebrush Checkerspot (*Chlosyne acastus*) - May 11
3. Silvery Blue (*Glaucopsyche lygdamus*) - May 11
4. Common Ringlets (*Coenonympha tullia*) - May 18
5. Ruddy Copper (*Lycaena rubidus*) - May 26
6. Queen Alexandra's Sulphur (*Colias alexandra*) - June 1
7. Western White (*Pontia occidentalis*) - June 6
8. Painted Lady (*Vanessa cardui*) - June 15
9. Western Tiger Swallowtail (*Papilio rutulus*) - June 19
10. Mylitta Crescent (*Phyciodes mylitta*) - June 21

Notable sighting: 16 Common Ringlets observed together, 25 total - on June 6, near Point #11 on Noble Upland East; on grasses near edge of flooded zone.

MAMMALS

Coyote (*Canis latrans*)

- 3 Dens total; Observed coyote pups near all 3 locations
- 2 Dens found on Noble Upland East, 3rd Noble Upland West
- All dens mapped by GPS, many photos of pups available
- 4 newborn pups observed close to den 1, found in an earthen dam near point #2 of Noble East
- 2 small pups found near den 2, near end of small marshy pond near point #14 Noble East

- On June 6th, a train went by and and 2 packs of coyotes responded to the train whistle. Two packs were near the tracks and howling with the train multiple times. Approximately 1 km distance was estimated between the packs. This was the only event in which coyote packs were observed.

Pronghorn (*Antilocapra americana*)

A lone pronghorn was sighted on May 25, 2017 within the Preserve. It was found on the Noble property near the entrance for the historic Noble house and moving quickly toward the highway. Pronghorn tracks were later photographed in this area for further evidence of the sighting.

Mule deer (*Odocoileus hemionus*)

- 5 mule deer were observed traveling together through the preserve for a few days in mid-June.

- June 13th all 5 had walked out into Noble channel area, what looked like a peninsula into the channels, and were near Noble Channel Point #4. 4 of 5 had short antlers coming in (males)
- Observed them twice in this area which became exposed over the season as waters recessed; has emergent vegetation for them to browse. Vegetation here is mixed into sage, not the same as the mudflats habitat/zone observed being used by shorebirds.

Black-tailed jackrabbit (*Lepus californicus*)
One jackrabbit was observed on June 6, 2017 on way from survey Point #9 to point #8 on the east side of the Noble Upland area.

BIRDS

Bird species observed outside of point-count surveys

- 2 Common Nighthawks
  June 13, 2017: In kayak in Noble channel, fog rolling in and out, nighthawks were hawking insects above the channel vegetation; both coming very close to me and the kayak because I was moving through the bull grass and forcing insects up into the air. Excellent close views of these birds commonly seen at or after dusk

- 2 Northern Shovelers (Pair)
  Observed when on Noble Upland transect, West side; flew over near point #6

- Ruddy Duck - Maddelena (June 15)

- Common Goldeneye - Noble channel

- Bufflehead - Smith channel (May 19)

- Snowy Egret - over Noble channel (June 21)

- Tree swallow - many near Maddelena and Noble entrances; competing for nest boxes

- Swainson's Hawk - 2 sightings, May 18 and June 6, on post near Noble house

- Northern Harrier - hunting ducks in fog on water's edge of Maddelena (May 18)

- Bald Eagle - view from Noble Upland West (May 23)

- Osprey - view from Smith channel (June 6)