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Jelly's Ferry-Battle Creek Grazing Renewal

Preliminary Environmental Assessment

DOI-BLM-CA-N060-2021-0003-EA

October 2020



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1.0 INTRODUCTION

1.1 Background

This Environmental Assessment (EA) has been prepared by the Bureau of Land Management (BLM) Redding Field Office to evaluate the effects of proposed actions on BLM-administered public lands within the Jelly's Ferry – Battle Creek grazing allotment. The proposed action includes a 388 Animal Unit Month (AUM) increase.

This EA assists the BLM in project planning and ensuring compliance with the National Environmental Policy Act (NEPA), and in compliance with other laws and policies affecting the alternatives. This EA is a site-specific analysis of potential impacts that could result from implementation of one of the proposed alternatives. If the BLM determines there may be significant impact, an Environmental Impact Statement (EIS) would be prepared for the project. If it is determined there are no significant impacts, an EIS would not be prepared and a decision would be issued along with a Finding of No Significant Impact (FONSI) documenting the reasons why implementation of the selected alternative would not result in significant environmental impact.

The Jellys Ferry – Battle Creek Allotment is an open annual grassland with patches of oak woodland dispersed throughout and approximately 4,564 acres in size. These lands are located in Tehama County between Battle Creek, Inks Creek and the Sacramento River. The current boundaries of the allotment were realigned in 2008 to protect and restore Battle Creek and the Sacramento River system, which have experienced an increase in recreational use along the river corridor. The allotment houses a heavily used shooting area south of Battle Creek along Spring Branch Road and trail access along the southern boundary of the allotment. The Jellys Ferry – Battle Creek Allotment also hosts several special status plants, sensitive wildlife species, vernal pools, and archaeological sites.

1.2 Project Location

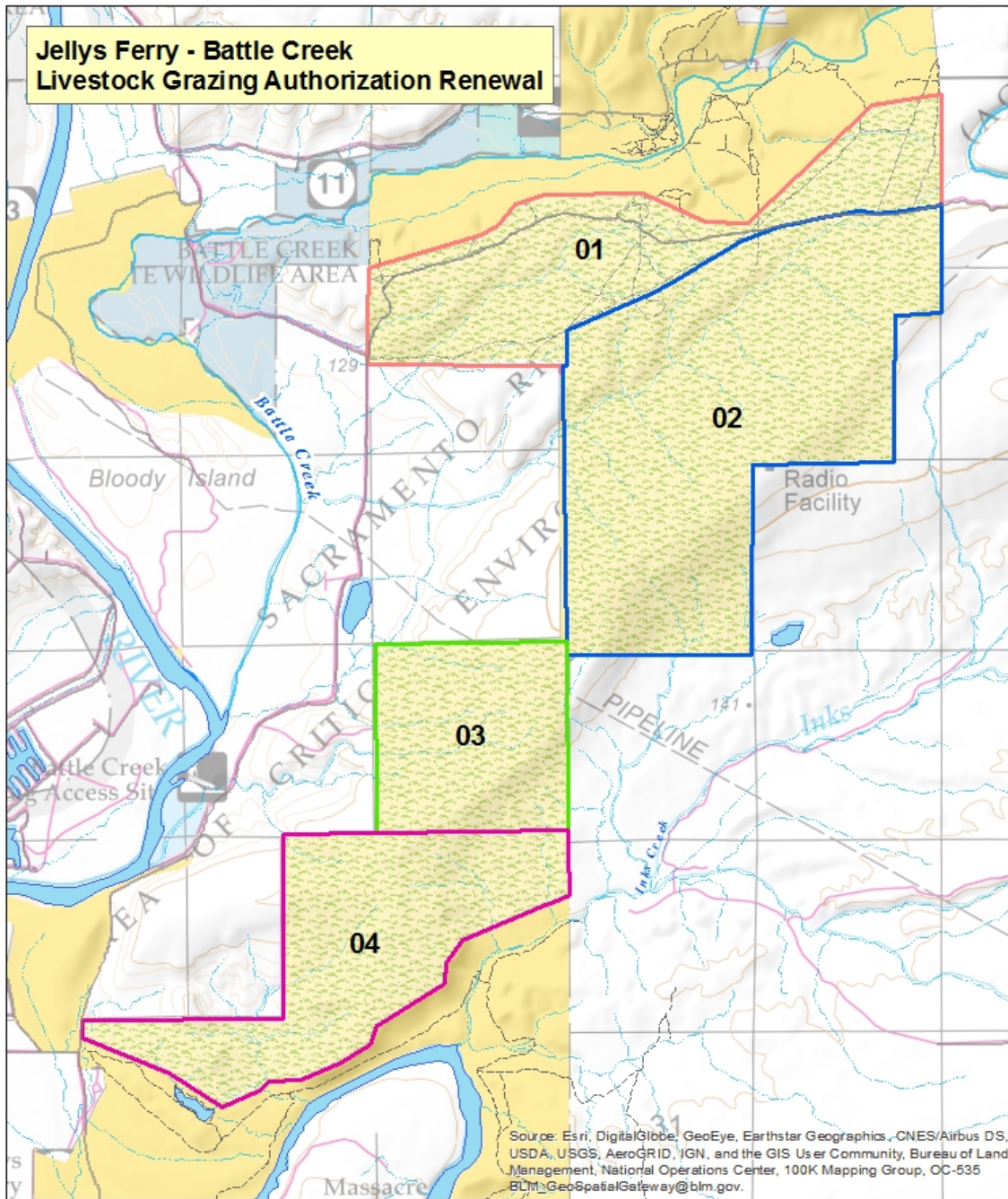
Jellys Ferry-Battle Creek Allotment (Figure 1-1).

Legal Description:

T 29 N., R 2 W., sections: 5, 6, 7, 8, and 18 MDM

T 29 N., R 3 W., sections: 1, 12, 24, 25, 26, 34, and 35 MDM


Figure 1-1: Project Area



Legend

- Pasture 1
- Pasture 2
- Pasture 3
- Pasture 4
- BLM Lands
- Jellys Ferry - Battle Creek Allotment

0 0.5 1 1.5 Miles



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1.3 Purpose and Need

The purpose of the proposed action is to consider re-authorization of grazing on Jellys Ferry in response to the lessee's request to increase AUMs in the Jellys Ferry – Battle Creek allotment.

The need for the proposed action is established under Title IV Range Management of the Federal Land Policy and Management Act (FLPMA) and the regulations at 43 CFR §4130., which requires the BLM to respond to applications to fully process and renew permits to graze livestock on BLM administered public lands. The BLM must respond to an expiring grazing lease and an application requesting a change in AUMs to meet the needs of the permittee. The need for this action is also established by the Taylor Grazing Act, Public Rangelands Improvement Act, the Redding Resource Management Plan (1993) and the Rangeland Health Standards and Guidelines for Northwestern California (1998).

1.3.1 Decision to be Made

Given the purpose and need, the Authorized Officer reviews the proposed action and the other alternatives to make the following decision(s):

- Determine whether to re-authorize the grazing permit for the Jelly's Ferry-Battle Creek allotment. Determine the conditions and limitations on the lease, (including amount of AUMs authorized), to assure that the allotment will continue to meet land health standards and will comply with the BLM's statutory obligations.

1.4 Conformance with Land Use Plans, Laws, Regulations, and Policies

The actions proposed and analyzed in this EA were developed to be consistent with the management objectives for BLM-administered public lands, as identified in the following documents:

Redding Resource Management Plan and Record of Decision (June 1993)

The proposed action is consistent with the land use decisions and resource management goals and objectives of the plan, as described in the RMP on pages 19-20:

“This program operates under the authority of Section 15 of the Taylor Grazing Act, BLM policies and the Redding Livestock Grazing management Environmental Impact Statement. This document was approved in 1984 and subsequently implemented to improve or maintain ecological condition for perennial range and maintain or improve forage production on the annual range. Moreover, grazing leases will be established and/or perpetuated under manageability criteria.”

In addition to the Legislative, Regulatory and Policy Direction for each Management Action outlined in the Redding RMP, the following also apply:

Northwestern California Rangeland Health Standards and Guidelines for Livestock Grazing (1998)

Rangeland health assessment field work was conducted by an interdisciplinary team in 2017. Applicable Rangeland Health Standards were all met. For current Range Health Assessment documentation, refer to Appendix B Jelly's Ferry Rangeland Health Assessment.

Standard 1: Soils - Met

Standard 2: Species - Met

Standard 3: Riparian – Not applicable

Standard 4: Water Quality – Not applicable

1.5 Consultation and Coordination

Endangered Species Act

The allotment is within the range of valley elderberry longhorn beetle, vernal pool fairy shrimp, vernal pool tadpole shrimp, and slender Orcutt grass, all Federally listed as threatened or endangered species. Critical habitat for vernal pool tadpole shrimp and slender Orcutt grass overlaps the project area.

Informal consultation with US Fish and Wildlife Service was undertaken in 2008 for the grazing re-authorization at that time with a no effect or not likely to adversely affect determinations for all the species and critical habitat found in the project area (see concurrence memo 81330-2009-I-001). Because there are no changes to the condition of the species in the project area and no anticipated effects to the species from the changes indicated in the proposed action, no further consultation with US Fish and Wildlife Service was undertaken after informal conversations between the BLM and USFWS indicated this was an option.

Water Quality

Standards and Guidelines reiterated the intent of the Federal Clean Water Act (CWA) and States' water quality plans. Where there is a threat to water quality or where water quality does not meet state standards, coordination must occur with the regional water quality control board(s) and where aquatic or riparian habitat may be impacted, coordination with CDF&G must occur. All allotments that contain any water bodies (streams, lakes, springs, etc.) must have adopted Best Management Practices (BMPs¹) for all activities associated with livestock management that could affect water quality. The BLM has proposed BMPs found within Appendix 10 of the Rangeland Health Standards and Guidelines for California Final EIS. These proposed BMPs are the most current direction provided by the BLM and will be the basis for BMPs by the Redding Field Office and are incorporated into the proposed action by reference (see Appendix B).

¹ BMP - Defined as a practice that is determined by the State to be the most effective means of reducing the amount of pollution generated by non-point sources to a level compatible with water quality goals (Federal Clean Water Act. 1977)

Agreement between State Director and State Historic Preservation Officer Protocol Amendment for Renewal of Grazing Leases

In August 2004, the State Director, California Bureau of Land Management and the California State Historic Preservation Officer (SHPO) addressed the issue of the National Historic Preservation Act (NHPA) Section 106 compliance procedures for processing grazing permit lease renewals for livestock as defined in 43 CFR 4100.0-5. The State Director and the SHPO amended the 2004 State Protocol Agreement between California Bureau of Land Management and The California State Historic Preservation Officer with the 2004 Grazing Amendment, Supplemental Procedures for Livestock Grazing Permit/Lease Renewal. This amendment allows for the renewal of existing grazing permits prior to completing all NHPA compliance needs as long as the 2004 State Protocol direction, the BLM 8100 Series Manual Guidelines, and specific amendment direction for planning, inventory methodology, tribal and interested party consultation, evaluation, effect, treatment, and monitoring stipulations are followed. This amendment has been carried forward with the renewed 2019 Protocol and its extensions.

1.6 Scoping and Issues

The Council on Environmental regulations states that the BLM should focus on “issues that are truly significant to the action in question, rather than amassing needless detail” (40 CFR 1500.1). An “issue” is a point of disagreement, debate, or dispute with the proposed action based on some anticipated environmental effect. Issues identified for analysis in this assessment include issues that could potentially be significantly affected by one of the proposed alternatives. In this scenario, analysis is necessary to determine significance of impacts. If analysis of an issue is necessary, then it would be sound to make a reasoned choice between alternatives. The BLM interdisciplinary team identified resource concerns for the proposed action and alternatives through a preliminary review process and soliciting scoping comments from the public.

No additional public scoping was conducted as there are no known resource issues of general public concern. The environmental consequences section discusses potential impacts associated with the Proposed Action and Alternatives.

1.6.1 Issues for Detailed Analysis

The following resources/issues have been identified for detailed analysis:

Table 1-1.

Issue	Section`
Cultural Resources	Impacts described in Section 3.2
Wildlife including Sensitive and T&E Species	Impacts described in Section 3.3
Vegetation, including residual forage abundance, the health of upland vegetation communities, and fuel accumulation	Impacts described in Section 3.4
Special status plant species	Impacts described in Section 3.5
Livestock Management	Impacts described in Section 3.6

1.6.2 Issues Eliminated from Detailed Analysis

The following resources were considered but eliminated from detailed analysis:

Table 1-2.

Resource	Rationale
Areas of Critical Environmental Concern (ACEC)	<p>The Sacramento River Bend ACEC was designated during the 1993 Redding RMP, it was nominated for rare habitats, special status plants, threaten and endangered wildlife species and important and rare cultural sites. “Special management attention is required... to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources and other natural systems or processes, or to protect life and safety from natural hazards.” Areas of Critical Environmental Concerns are not considered an issue for the Jelly’s Ferry Battle Creek Grazing Renewal because the relevance and importance criteria that it was nominated to protect are not being impacted because they have already been excluded from grazing under previous versions of this Jelly’s Ferry Battle Creek Allotment EA. Through monitoring and following PDFs, the Bend ACEC will continue to provide important multiple uses to the public while providing open pasture for grazing and protecting threaten and endangered wildlife, plants, and cultural resources. If resources start to become inadvertently impacted by grazing, protection measures will quickly be made to protect the resources.</p>
Air Quality/Greenhouse Gas Emissions	<p>Livestock grazing on public lands generally conforms to federal and state air quality standards. Where livestock grazing occurs within an area classified as a federal nonattainment/maintenance area, BLM will make a determination whether the action is in conformance with the applicable State Implementation Plan (SIP) requirement. The Rules and Regulations of the Tehama County Air Pollution Control District is the approved SIP for the allotment area. The proposed action of livestock grazing is in conformance with the SIP.</p>
Environmental Justice	<p>No environmental justice populations will be impacted by the proposed action.</p>

Fuels and Fire	No resources would be impacted by the proposed action.
Floodplains	Only ephemeral drainages are found in the allotment area and no floodplains were identified.
Geology/Minerals	There are no pending or active mining claims, geothermal leases, oil and gas leases, mineral materials disposals, or coal leases within the allotment area. Livestock grazing is not expected to have an effect on the geology and mineral resources within the allotment, eliminating the need for further analysis.
Migratory Birds	There is habitat for big game and migratory birds within the allotment, including BLM Sensitive Species. The proposed terms and conditions, which include following a management plan that implements a deferred grazing rotation, should ensure plants have the ability to complete their growth cycles prior to grazing at least every other year.
Native American Religious Concerns	No concerns have been identified in past grazing permit issuances.
Noxious Weeds	Project Design Features incorporated into the proposed action would limit the introduction or spread of non-native species in the project area. Prevalence of these species on the project site may slightly increase after the treatments but due to their extremely common occurrence in this area, this would not impact the overall distribution or abundance of weeds in the Jelly's Ferry area.
Recreation	The Spring Branch Road Shooting Area is located in Pasture 1 of the allotment. This shooting area can see heavy use at times, particularly on weekends. This recreational activity and active grazing have coincided for over 10 years in the project area with no known issues. It is not expected that the proposed action would have any new impact to recreational activities in the area.
Soil and Biological Crusts	No rare or sensitive soils exist within the project area.
Visual Resources	The project area is managed as VRM Class II. The objective of this class is to retain the existing character of the landscape. The level of change to

	<p>the characteristic landscape should be low. Management activities may be seen but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.</p> <p>The proposed action would not attract the attention of the casual observer and would not change the characteristic landscape. No impacts to visual resources are expected.</p>
Water Quality	<p>Since 2008, only ephemeral streams are found in the Jelly’s Ferry-Battle Creek grazing allotment. As indicated in the 2017 Rangeland Health Assessment, there are no waterways where water quality can be analyzed in the allotment. While constructed stock ponds and vernal pools are found throughout the allotment, no water quality issues have been found in these features. The proposed action of increased livestock grazing is not expected to have an impact on water quality, eliminating the need for further analysis.</p>
Wild and Scenic Rivers	<p>There are no Wild & Scenic Rivers in the project area</p>
Wetlands	<p>Several vernal pools and constructed stock ponds are found in the project area. However, the grazing renewal would not impact the continued function of these pools.</p>
Wilderness Characteristics	<p>The project area does not contain Lands with Wilderness Characteristics.</p>
Wilderness Study Area	<p>There are no Wilderness Study Areas in the project area.</p>
Woodland/Forestry	<p>Vegetation removal is not included in the Proposed Action. Any impacts to oak woodland vegetation community function are analyzed in the vegetation section.</p>

2.0 DESCRIPTION OF ALTERNATIVES

2.1 Alternative A (No Action)

Under the No Action Alternative, the lease would be renewed another 10 years with the same terms and conditions.

Mandatory terms and conditions currently in effect would continue as indicated in the following table.

Allotment Name & Number	Pasture	Livestock Number	Livestock Kind	Grazing Begin	Period End	%PL	Type of Use	AUMs
Jellys Ferry/Battle Creek #CA03083	1	121	Cattle	01/01	03/31	100	Active	358
	2	169	Cattle	01/01	03/31	100	Active	500
	3	40	Cattle	01/01	03/31	100	Active	118
	4	101	Cattle	01/01	03/31	100	Active	299

Total Active AUMs: 1,275

A. Range Improvements

There are no new range improvements proposed.

B. Terms and Conditions of Northwestern California Rangeland Health Standards and Guidelines for Livestock Grazing (July 2000)

- Salt blocks and supplement sites will be located no less than ½ mile from watering locations, vernal pools, and riparian areas. Salt blocks and supplement sites will be located no less than ¼ mile from sensitive cultural resources.
- Trailing in vernal pools and wetlands will be avoided whenever possible.
- Temporary changes may be made to livestock grazing management practices, including decreases in stocking rates and seasons of use, in response to important episodic events (drought, flood, fire, etc.).
- Livestock grazing may be limited or excluded in identified culturally sensitive areas where grazing is detrimental to such sites.
- Grazing will be managed to maintain acceptable minimum residual dry matter levels. The minimum levels shall be 400 lbs per acre on slopes 0-25%, 600 lbs per acre on slopes of 26-45%, and 800 lbs per acre on slopes of 46% and up.

2.2 Alternative B (Proposed Action)

This alternative involves issuing a new lease with terms and conditions revised to reflect the lessee’s desire to increase AUMs to reduce fuels and vulnerability to fire. This Proposed Action is to issue a new 10-year term grazing lease on the Jellys Ferry - Battle Creek grazing allotment with an increase in AUMs and time of use on one pasture. This action would increase the amount of time available for grazing in pasture 1 by 15 days, until April 15th. In addition, this action would increase AUMs in each pasture: (1) 25% increase, (2) 18% increase, (3) 50% increase, and (4) 48% increase.

Mr. Orwick controls about 550 cattle that range on his base property which is about 170 acres of irrigated private pastureland during the late spring, summer, fall, and early winter. In the winter and early spring, cattle range in the “high country” that includes approximately 4,564 acres of BLM land on the Jellys Ferry – Battle Creek allotment.

A. Terms and Conditions

Mandatory terms and conditions proposed are indicated in the following table.

Allotment Name and Number	Pasture	Livestock Number	Livestock Kind	Grazing Begin	Period End	%PL	Type of Use	AUMs
Jellys Ferry/Battle Creek #CA03083	1	130	Cattle	01/01	04/15	100%	Active	449
	2	200	Cattle	01/01	03/31	100%	Active	592
	3	60	Cattle	01/01	03/31	100%	Active	178
	4	150	Cattle	01/01	03/31	100%	Active	444

Proposed Total Active AUMs: 1,663

B. Range Improvements

Fencing may be necessary to protect resources from grazing impacts.

C. Terms and Conditions of Northwestern California Rangeland Health Standards and Guidelines for Livestock Grazing (July 2000)

- Salt blocks and supplement sites will be located no less than ½ mile from watering locations, vernal pools, and riparian areas. Salt blocks and supplement sites will be located no less than ¼ mile from sensitive cultural resources.
- Trailing in vernal pools and wetlands will be avoided whenever possible.
- Temporary changes may be made to livestock grazing management practices, including decreases in stocking rates and seasons of use, in response to important episodic events (drought, flood, fire, etc.).
- Livestock grazing may be limited or excluded in identified culturally sensitive areas where grazing is determined through yearly monitoring to be detrimental to such sites.
- Grazing will be managed to maintain acceptable minimum residual dry matter levels. The minimum levels shall be 400 lbs per acre on slopes 0-25%, 600 lbs per acre on slopes of 26-45%, and 800 lbs per acre on slopes of 46% and up.

Prevention of Unnecessary or Undue Degradation

In addition to the management prescriptions discussed in this EA, including all terms and conditions, BLM may use its authority to close an area of the allotment to grazing use or take other measures to protect resources at any time, if needed. Therefore, issuance of a grazing lease with appropriate terms and conditions is consistent with BLM’s responsibility to manage the public’s use, occupancy, and development of the public lands and prevent unnecessary or undue degradation of the lands. (43 USC 1732(b)).

2.3 Alternative C (Modified Proposed Action)

Alternative C involves issuing a new lease with terms and conditions revised to reflect the BLM’s recommendations for the Jellys Ferry – Battle Creek allotment to remain compliant with the *Northwestern California Rangeland Health Standards and Guidelines for Livestock Grazing* (1998).

This alternative is to issue a new 10-year term grazing lease on the Jellys Ferry – Battle Creek grazing allotment with a ten percent increase in AUMs annually for three-years on three pastures and increased time of use on one pasture. This alternative would increase the amount of time available for grazing in pasture 1 by 15 days, until April 15th. AUMs on authorized in pasture 2 would not increase from the previous grazing authorization, but AUMs in pastures 1, 3, and 4 would increase ten percent annually for three years, totaling a thirty percent increase. Pastures 1,2,3, and 4 would be monitored after the grazing period to ensure compliance with rangeland health standards. If the data collected from annual monitoring shows that the allotment is falling below rangeland health standards, AUMs would be decreased to the previous year’s AUMs.

A. Terms and Conditions:

Mandatory terms and conditions proposed are indicated in the following table.

Allotment Name & Number	Pasture	Livestock Kind	Grazing Begin	Period End	%PL	Type of Use	Year 1 AUMs	Year 1 Livestock Number	Year 2 AUMs	Year 2 Livestock Number	Year 3 AUMs	Year 3 Livestock Number
Jellys Ferry / Battle Creek #CA 03083	1	Cattle	01/01	04/15	100	Active	394	133	433	146	476	161
	2	Cattle	01/01	03/31	100	Active	500	169	500	169	500	169
	3	Cattle	01/01	03/31	100	Active	130	44	143	48	158	53
	4	Cattle	01/01	03/31	100	Active	329	111	362	122	398	134
TOTAL							1,353	457	1,438	486	1,532	518

B. Range Improvements

Fencing may be necessary to protect resources from grazing impacts.

C. Terms and Conditions of Northwestern California Rangeland Health Standards and Guidelines for Livestock Grazing (July 2000)

- Salt blocks and supplement sites will be located no less than ½ mile from watering locations, vernal pools, and riparian areas. Salt blocks and supplement sites will be located no less than ¼ mile from sensitive cultural resources.
- Trailing in vernal pools and wetlands will be avoided whenever possible.
- Temporary changes may be made to livestock grazing management practices, including decreases in stocking rates and seasons of use, in response to important episodic events (drought, flood, fire, etc.).
- Livestock grazing may be limited or excluded in identified culturally sensitive areas where grazing is detrimental to such sites as determined in periodic monitoring. Grazing will be managed to maintain acceptable minimum residual dry matter levels. The minimum levels shall be 400 lbs per acre on slopes 0-25%, 600 lbs per acre on slopes of 26-45%, and 800 lbs per acre on slopes of 46% and up.

Prevention of Unnecessary or Undue Degradation

In addition to the management prescriptions discussed in this EA, including all terms and conditions, BLM may use its authority to close an area of the allotment to grazing use or take other measures to protect resources at any time, if needed. Therefore, issuance of a grazing lease with appropriate terms and conditions is consistent with BLM's responsibility to manage the public's use, occupancy, and development of the public lands and prevent unnecessary or undue degradation of the lands. (43 USC 1732(b)).

2 Alternative D (No Grazing) Alt considered but eliminated

Under Alternative D livestock grazing would not be authorized on the Jelly's Ferry Allotment and the lease would not be renewed. Under this alternative, the BLM would initiate the process in accordance with the 43 CFR parts 4100 and 1600 to eliminate grazing on the allotment and would either initiate a land use amendment or include in the next resource management plan update a proposal to close the lands to livestock grazing as a suitable land use.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL IMPACTS

3.1 Introduction to the Analysis

This section describes the affected environment—the condition and trend of issue-related elements of the human environment that may be impacted by implementing one of the alternatives. This section also describes the environmental consequences to each issue-related resource from the analyzed alternatives. It describes past and ongoing actions that contribute to present conditions, and provides a baseline for analyzing direct, indirect, and cumulative effects. Direct effects are those caused by the action and occurring at the same time and place. Indirect effects are those caused by the action but occurring later or in a different location. Cumulative effects result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. The cumulative effects analysis includes other BLM actions, other federal actions, and non-federal (including private) actions. Reasonably foreseeable future actions are those for which there are existing decisions, funding, formal proposals, or which are highly probable, based on known opportunities or trends.

The following information regarding past, present, and future relevant actions for cumulative effects applies to all alternatives, and for all resource impacts discussed below:

Livestock grazing past and future

Past and Present Relevant Actions

- Livestock grazing has been authorized in the Jellys Ferry-Battle Creek allotment since the late 1970s and will likely continue to be authorized in the future.
- The shooting area on Spring Branch Road has been prescribe burned to prevent wildfire caused by recreational activities.

Reasonably Foreseeable Relevant Actions Not Part of the Proposed Action

- Prescribed burns in the Bend area may include parts of the allotment to prevent wildfires and protect wildlife habitat, lives, private structures, and other resources.
- Juniper and invasive and noxious weeds treatments are reasonable foreseeable relevant actions but are excluded from the proposed action.
- Oak restoration and planting efforts.

Current Relevant and Reasonably Foreseeable Future Cumulative Effects Actions

- Prescribed burning in the Spring Branch Road shooting area

Reasonably Foreseeable Future Actions

- Prescribed burning in the Spring Branch Road shooting area
- Invasive and noxious weeds treatments
- Juniper removal
- Constructing exclosures to protect sensitive resources

3.2 Issue 1: Cultural Resources

3.2.1 Affected Environment

Cultural Resources

After BLM acquired some of the lands in this grazing allotment fencing has been placed to direct cattle away from major drainages and significant archaeological resources, including prehistoric villages and camps. Since more than 75% of the allotment has been inventoried for cultural resources focused on lower slope areas, most locations of cattle use have been examined by a professional archaeologist, including sites where prior to BLM administration there was more cattle use of much of the allotment area.

Those sites currently within the allotment include CA-030-2151 Spring Branch Hopper Mortar Site Midden, CA-030-2150 Stove Dump, CA-030-2136 Inks Creek Ridge Site, CA-030-1953 CR-IS0(Isolate), CA-030-1861 Manton Road Fence, CA-030-1149 Historic Jelly's Ferry to Inks Creek Road, CA-030-0507 Nit Pickers Site, CA-030-0314 Inks Creek # 25, CA-030-0310 Inks Creek # 21 Blue Ridge Flume, CA-030-0302 Inks Creek # 16, CA-030-0101 Battle Creek Reservoir Fence Site, the Lost Emigrant Trail, and CA-030-0007 USFS Jump Site. These sites are small prehistoric campsites, historic road and flume alignments, lithic scatters, a historic artifact dump and barbed wire and post fence, rock wall, and isolated prehistoric tools. Three of these sites are newly recorded and do not exhibit cattle damage. One site is currently fenced to prevent cattle use. The sites with cultural deposits were examined during 2019 and 2020, and these also do not exhibit damage from cattle considering the relatively low numbers of AUMS in the various alternatives proposed.

3.2.2 Environmental Effects

Alternative A (Proposed Action):

The proposed action would lead to minor hoof imprints in wet weather. Historically, more AUM's were grazed over these same regions for a longer period of time and no lasting imprint damage has been documented. Such use is not determined to be detrimental to the sites' integrity based on inventory. The imprints are in essence mixing already disturbed surface deposits. Salt block placement and fencing are away from cultural resources except where fences cross linear features such as historic roads or a former flume alignment. Trailing cattle through this region would not damage these resource.

Direct impacts to cultural resources include minor hoof trampling and possibly minor flaked stone breakage by hoof impacts. Some trailing could occur along the Inks Creek and Lost Emigrant Trail roads, but these roads in places have had vehicle use for years and were formed with wagon and hoofed animal use and, likely, trailing of large and small herds.

There may be incremental increases in surface disturbances to cultural deposits at minor levels that could only be determined through archaeological testing that in itself is damaging to the deposit.

Alternative B (No Action):

Alternative B has no measurable difference from the proposed action. There may be incremental increases in surface disturbances to cultural deposits at minor levels that could only be determined through archaeological testing that in itself is damaging to the deposit.

Alternative C (Modified Proposed Action):

Alternative C has no measurable difference from the proposed action. There may be incremental increases in surface disturbances to cultural deposits at minor levels that could only be determined through archaeological testing that in itself is damaging to the deposit.

3.3 Issue 2: Wildlife including Sensitive Species and T&E Species

3.3.1 Affected Environment

Several Threatened and Endangered Species associated with vernal pools occur on the allotment. These include vernal pool fairy shrimp, vernal pool tadpole shrimp, and slender Orcutt grass, all Federally listed as threatened or endangered species. Critical habitat for vernal pool tadpole shrimp and slender Orcutt grass overlaps the project area.

Vernal pool fairy shrimp have been found in six vernal pools in Pasture 1 on the allotment. Vernal pool tadpole shrimp have been found in four vernal pools in Pasture 1 on the allotment. Slender Orcutt grass has been found in one pool in Pasture 1 on the allotment. This pool near the shooting range has a fence running through it with 10% of the pool open to grazing and 90% with grazing excluded.

A formal consultation was conducted with US Fish and Wildlife Service in 2008. BLM made the determination that grazing on the allotment “may affect but is not likely to adversely affect the vernal pool species. In a letter dated 8 November 2008 US Fish and Wildlife sent BLM a letter of concurrence with that determination.

The allotment is within the range of the Federally Threatened valley elderberry longhorn beetle. However, to date no elderberry bushes, the host plant for this beetle, have been found on the allotment. Mature elderberries with beetle exit holes have been found immediately south of the allotment along Inks Creek. If elderberries are eventually found on the allotment the status and effects on this species will be revisited.

Other sensitive species that may occur on or near the allotment are Bald Eagle and Golden Eagle. Bald Eagle may pass over the allotment or may forage on the allotment, but there are no recent sightings. Golden Eagle undoubtedly occur on the allotment and may nest, but there are no recent sightings and no history of nesting.

3.3.2 Environmental Effects

Alternative A (No Action):

It has been determined that grazing on the allotment is not likely to adversely affect the continued occupancy of the vernal pool species. The continued occupancy of all three species over the past 12 years since the letter of concurrence indicates that the species have not been adversely affected during that time. Continued grazing at the same level will not likely adversely affect these species into the future. In addition, we do not anticipate that this level of grazing will adversely affect the bald and golden eagles.

No cumulative impacts are anticipated.

Alternative B (Proposed Action):

The leasee has proposed an increase of 25% in AUMs for the allotment. This level of increase in AUMs will not have a significant effect on the vernal pool ecosystem. It is not likely to adversely affect the three vernal pool species. In addition, we do not anticipate that this level of grazing will adversely impact bald or golden eagles. No cumulative impacts are anticipated.

Alternative C (Modified Proposed Action):

Direct and Indirect Impacts

After conducting range monitoring, the BLM is proposing a 30% graduated increase in AUMs over 3 years with a break on the increase if range standards are not met in the subsequent years. This level of increase in AUMs will not have a significant effect on the vernal pool ecosystem. It is not likely to adversely affect the three vernal pool species. In addition, we do not anticipate that this level of grazing will adversely impact bald or golden eagles.

No cumulative impacts are anticipated.

3.4 Issue 3: Vegetation, including residual forage abundance, the health of upland vegetation communities, and fuels accumulation

3.4.1 Affected Environment

The vegetation on the Jellys Ferry – Battle Creek allotment is characteristic of an oak woodland with native and invasive annual grasses and forbs in the understory. Juniper and deer brush are common in drainages. Noxious weeds are uncommon within the allotment.

3.3.3 Environmental Effects

Alternative A (No Action):

Under the no action alternative, there would be no change to the terms and conditions of the current lease. It has been determined that renewing the lease as it is will not likely adversely affect the vegetation, residual forage abundance, health of upland vegetation, or fuel structure and composition in the project area. Managed grazing under the current terms and conditions of the lease has not resulted in any negative impacts to the resources described above.

Alternative B (Proposed Action):

Direct and Indirect Impacts

The lessee proposed a 25% AUM increase for the allotment, the increase will have an impact on residual forage abundance, the health of upland vegetation, and fuels accumulation in pasture two. The AUM increase may not affect residual forage abundance, the health of upland vegetation, and fuels accumulation in pastures one, three and four. Residual forage abundance, the health of upland vegetation, and fuels accumulation in pasture two are nearly below the Northwest California Rangeland Health Standard and is likely to adversely affect residual forage abundance, the health of upland vegetation, and fuels accumulation.

No cumulative impacts are anticipated.

Alternative C (Modified Proposed Action):

The modified proposed action is not likely to adversely affect residual forage abundance, the health of upland vegetation, and fuels accumulation for reasons listed above in Alternative B. BLM staff conducted residual dry matter monitoring and are proposing a 30% AUM increase with a 10% increase annually over three years in pastures one, three and four. AUMs in pasture two will remain the same as the no action alternative. During the three-year graduated increase, BLM staff will monitor residual dry matter amounts, and if residual dry matter is below the Northwest California Rangeland Health Standard, AUMs will be suspended to the previous year's AUM amount.

No cumulative impacts are anticipated.

3.5 Issue 4: How will grazing impact special status plant species in the Jelly’s Ferry/Battle Creek grazing allotment?

3.5.1 Affected Environment

Desktop reviews to identify special status plant populations within the project area were completed using the California Natural Diversity Database (CNDDDB) on 08/07/2020. Preliminary field surveys were not completed in the year of 2020. Several special status plants have been reported in the project area, including *Paronychia ahartii*, *Orcuttia tenuis*, *Gratiola heterosepala*, *Cryptantha crinite*, and *Navarretia leucocephala ssp. Bakeri*. This project area is an annual Mediterranean grassland with a mosaic of vernal pools and encroaching invasive annual forbs and grasses. The California rare plant rank and the federal listing status for each species can be found in table below. California rare plant rank and federal listing status of special status plants in the Jelly’s Ferry/Battle Creek grazing allotment.

Scientific Name	California Rare Plant Rank	Federal Listing Status
<i>Paronychia ahartii</i>	1B.1	None
<i>Orcuttia tenuis</i>	1B.1	Threatened
<i>Gratiola heterosepala</i>	1B.2	None
<i>Cryptantha crinite</i>	1B.2	None
<i>Navarretia leucocephala ssp. Bakeri</i>	1B.1	None

Two occurrences of *Paronychia ahartii* have been reported in the project area, one in 1997 and one in 2013. The 1997 occurrence is largely in pasture one and slightly extends (about 5% of the total occurrence in the project area) into the northern boundary of pasture two. The 2013 occurrence was mapped in the vicinity of Coleman vernal pool, and the remaining occurrences are dispersed subpopulations in an annual grassland. The population distribution of this special status species extends into the area surrounding the Jelly’s Ferry/Battle Creek Grazing Allotment.

The *Orcuttia tenuis* is a single occurrence located in pasture one. It is within the Coleman vernal pool and was last updated in 2013. This vernal pool was fenced in 2001, but CNDDDB reports suggest it appears to be grazed. There are other subpopulations of *Orcuttia tenuis* surrounding the Jelly’s Ferry/Battle Creek Grazing allotment, presumably all occurring in seasonal vernal pools.

The *Gratiola heterosepala* subpopulations are in pasture one on the north side of Spring Branch Road. In total, there are three occurrences in annual grassland habitats. The most recent update of these occurrences was in 1997. There are other small and clustered subpopulations of this species in the area surrounding the grazing allotment.

Cryptantha crinite has been reported in pasture one and two in three different occurrences. Large clusters of these plants (between 200 – 1000 individuals) were found in the 1990’s, however there are no recent CNDDDB reports of whether these populations have fluctuated. The most recent update was in 2009. All occurrences are reported in seasonal drainages. The distribution of this species extends outside of the grazing allotment, usually occurring in drainages and riparian areas.

There is one occurrence of *Navarretia leucocephala* ssp. Bakeri that is reported in pasture one and slightly extends into pasture two. The occurrence has been mapped as a “best guess” by CNDDDB. It is suspected that the population is located south of Spring Branch Road. The last update was in 2013. There is a subpopulation of this species outside the project area to the southwest of the grazing allotment, and several subpopulations much further south making up the majority of this species distribution. The occurrence at the Jelly’s Ferry/Battle Creek Grazing allotment is near the northern boundary of this species range.

1.5.2 Environmental Effects

Alternative A (No Action):

Direct and Indirect Impacts

Under the no action alternative there would be no direct grazing impacts to special status species. The populations of *Paronychia ahartii*, *Gratiola heterosepala*, *Cryptantha crinite*, and *Navarretia leucocephala* ssp. Bakeri would remain in their current condition unless environmental conditions drastically changed or invasive species slowly encroached on their habitat. There is potential for these native populations to be degraded over time with the removal of grazing due to non-native, invasive species outcompeting for resources and space. Grazing has reduced competition from these invasive species over several years and special status species have become adapted to the routine disturbance. Removal of managed grazing from the project area would require the BLM to come up with an alternative plan to treat invasive species and avoid negative impacts to these species.

Cumulative Impacts

No cumulative impacts are anticipated.

Alternative B (Proposed Action):

Direct and Indirect Impacts

We do not anticipate that the proposed action will have an impact on special status plants in the Jelly’s Ferry/Battle Creek grazing allotment. The *Orcuttia tenuis* population is fenced and doesn’t begin flowering until May, after cattle will be removed from this grazing allotment. If an unanticipated failure of the fence resulted in cattle having access to the population, the proposed action would not affect the reproductive phase of this species. Field visits should be completed in subsequent years to confirm that the existing fence is intact and functioning properly. Monitoring will be necessary to confirm that grazing is not degrading the habitat or viability of this population.

The proposed action would extend the grazing period into the early flowering periods of the special status plants *Paronychia ahartii*, *Gratiola heterosepala*, *Cryptantha crinite*, and *Navarretia leucocephala* ssp. Bakeri. These species are well adapted to the frequent disturbance that is characteristic of Mediterranean grasslands inundated with non-native, invasive forbs and grasses. This resilience to frequent disturbance, paired with the decline of invasive species from managed grazing, suggests the proposed action will likely benefit these species by freeing up available resources and habitat. Additionally, each of these special status species have existing subpopulations outside of the project area that will continue dispersing seed. Monitoring should be completed periodically to evaluate changes in conditions. The management objective for each of these

species is to maintain or improve habitat at each occurrence, and the proposed action is consistent with these objectives.

Cumulative Impacts

There are no additional actions planned in the project area that have not been listed above. No known projects are planned to occur on adjacent land. No cumulative impacts are anticipated.

Alternative C (Modified Proposed Action):

Direct and Indirect Impacts

Under this alternative there would be no impact to special status species for the same reasons listed in Alternative B.

Cumulative Impacts

No cumulative impacts are expected.

3.6 Livestock Management

A. Affected Environment

For the past 12 years, Mr. Orwick has controlled 431 cattle in the Jellys Ferry – Battle Creek allotment. During the winter and early spring (January through the end of March), the livestock are located on the Jellys Ferry – Battle Creek allotment in four fenced pastures. The livestock are located on private irrigated pastureland near the allotment for the remainder of the year. Mr. Orwick requested to increase to 540 cattle and increased time of use in Pasture one in 2017. After monitoring the allotment, BLM specialists found that pasture two would fall below rangeland health standards if cattle numbers increased. BLM specialists propose increasing cattle numbers to 518 from 431 with 10% increases annually over 3 years (totaling 30%) in pastures one, three and four with annual monitoring.

Livestock management flexibility is provided through the terms and conditions set forth by the Northwestern California Rangeland Health Standards and BLM regulations. The lessee has the ability to request non-use, deferred grazing, or changes to season of use in response to climate variables, lack of forage production, or the need to provide for native perennial grass seeding establishment, for example.

BLM interdisciplinary staff have visited the allotment to visually, quantitatively, and qualitatively assess the protection of resource values. Thus far, current field visits/surveys from 2017, and 2020 (with monitoring) provide data that BLM is meeting resource improvement objectives in the applicable livestock grazing areas. Current grazing practices have resulted in applicable rangeland health standards being met as described in the Jellys Ferry – Battle Creek Rangeland Health Assessment.

B. Environmental Consequences

1. Impacts of Proposed Action

The Proposed Action Alternative would increase time of use in Pasture one and increase grazing use by 109 cattle and 388 AUMs across all four pastures. The increase of grazing pressures would decrease residual dry matter and forage to not meet rangeland health standards.

2. Impacts of Modified Proposed Action

The Modified Proposed Action Alternative would increase time of use in Pasture one and increase grazing use by 87 cattle and 383 AUMs. The Modified Proposed Action would decrease residual dry matter and forage from current livestock management while predicted to continue to meet rangeland health standards.

3. Impacts of No Action

The No Action Alternative would keep the livestock grazing management the same as the past 12 years, and it would not deteriorate the rangeland health of the allotment.

C. References

Jellys Ferry/ Battle Creek Rangeland Health Assessment, July 2017

4.0 CONSULTATION AND COORDINATION

Tribal Consultation letters

Letters describing the proposed actions within this document and initiating consultation with affected federally recognized Native American Tribes, Colusa Rancheria, Pit River Tribe, Redding Rancheria, Grindstone Rancheria, Paskenta Band of Nomlaki Indian were mailed on August 11th, 2020. This consultation also addresses required consultation under the NHPA Section 106 guidelines.

5.0 List of Preparers

Name	Title
Laura Brodhead & Brooke Thompson	Ecologist
Burgess Munyer	Natural Resource Specialist
Alden Neel	Assistant Field Manager/Archaeologist
Stephen Laymon	Wildlife Biologist
Ashley Phillips	Planning and Environmental Coordinator
Kody Shellhouse	Geologist
Eric Ritter	Archaeologist

5.0 REFERENCES

CNDDDB. 2020. Accessed 08/07/2020

USDI BLM, June 1999. Northwestern California Standards and Guidelines for Livestock Grazing.

APPENDIX A

BLM -REDDING FIELD OFFICE

ASSESSMENT AND EVALUATION OF THE UKIAH RAC RANGELAND HEALTH STANDARDS, SIGNIFICANT CONTRIBUTING FACTORS, AND APPROPRIATE ACTIONS

THIS FORM DOCUMENTS, FOR THE INDICATED AREA: (1) DETERMINATIONS AND SUPPORTING RATIONALE REGARDING IF FUNDAMENTAL RANGELAND HEALTH CONDITIONS CITED IN 43 CFR 4180.1 EXIST IN THESE AREAS; (2) DETERMINATIONS, IN CASES WHERE ONE OR MORE CONDITIONS OF FUNDAMENTAL RANGELAND HEALTH DO NOT EXIST, REGARDING THE STANDARD(S) THAT IS (ARE) NOT ACHIEVED; (3) DETERMINATIONS, IN THOSE CASES WHERE ONE OR MORE STANDARDS ARE NOT ACHIEVED, REGARDING THE CONTRIBUTING FACTOR(S) THAT IS (ARE) PREVENTING STANDARD(S) ACHIEVEMENT OR IS (ARE) PREVENTING SIGNIFICANT PROGRESS TOWARDS ITS (THEIR) ACHIEVEMENT; AND, (4) THE INFORMATION THAT WAS EXAMINED THAT SUPPORT THESE DETERMINATIONS.

Date(s) or period the information review occurred: June 15th and July 11th, 2017

PART I – ASSESSMENT AREA

Allotment: Jelly’s Ferry/Battle Creek

Approximate size: 4560 acres.

Landform & vegetative description of evaluated area: Oak grassland. MLRAs: 15, 17, 18. ESDs (Soils): R015XD090CA (NrD, NrE, NrE2), R015XD099CA (ThE), R018XD099CA (TgE,TgD), R017XD094CA (TuB). Reference sheets for ESDs not developed by NRCS.

PART II - INFORMATION REVIEWED

The following information (e.g. monitoring, literature, personal communication, etc.) was considered to determine standards attainment and, if applicable, contributing factor(s) to their non-achievement and failure to make significant progress towards their achievement.

A. **Information relevant to the SOILS HEALTH STANDARD:**

Soils exhibit characteristics of infiltration, fertility, permeability rates and other functional biological and physical characteristics that are appropriate to soil type, climate, desired plant community, and land form.

Meaning that: Precipitation is able to enter the soil surface at appropriate rates; the soil is adequately protected against accelerated erosion; and the soil fertility is maintained at appropriate levels.

The soils indicators listed in the Northwest Standards and Guidelines were evaluated using Technical Reference 1734-6 “Interpreting Indicators of Rangeland Health” and a field office developed evaluation sheet specific for the Northwest Standards and Guidelines for Livestock Grazing Management (2000).

B. **Information relevant to the SPECIES STANDARD:**

Viable, healthy, productive, and diverse populations of native and desired plant and animal species, particularly special status species, are maintained and/or being restored.

The species indicators listed in the Northwest Standards and Guidelines were evaluated using Technical reference 1734-6 “Interpreting Indicators of Rangeland Health” and a field office developed evaluation sheet specific for the Northwest Standards and Guidelines for Livestock Grazing Management (2000).

C. Information relevant to the **RIPARIAN STANDARD:**

Riparian/Wetland vegetation, structure and diversity, and stream channels and floodplains are making significant progress toward functioning properly and achieving late seral stages.

Meaning That:

The vegetation and soils interact to capture and pass sediment, sustain infiltration, maintain the water table, stabilize the channel, sustain high water quality, and promote biodiversity appropriate to soils, climate, and landform.

The riparian indicators listed in the Northwest Standards and Guidelines were evaluated using Technical reference 1734-6 “Interpreting Indicators of Rangeland Health” and a field office developed evaluation sheet.

Structural facilities constructed for livestock/wildlife water or other purposes which are not natural wetland and/or riparian areas will be excepted. Examples are: water troughs, stockponds, flood control structures, tailings ponds, water gaps on fenced or otherwise restricted stream corridors, etc.

D. Information relevant to **UKIAH RAC WATER QUALITY STANDARDS:**

Surface and groundwater complies with objectives of the Clean Water Act and other applicable water quality requirements, including meeting the California State standards.

The water quality indicators listed in the Northwest Standards and Guidelines were evaluated using a field office developed evaluation sheet attached to this Assessment.

PART III - SUMMARY OF STANDARDS ACHIEVEMENT AND RATIONALE

A. STANDARDS ACHIEVEMENT

As of the date of the completion of this form, based on examination of the information listed in Part II and recent field visits, if applicable, the standards achievement for the area identified in Part I are as follows:

Land Health Reporting Categories used for Standard Achievement (from WO IM 2012-124):

Category 1	Met
Category 2a	Not met, significant factor undetermined
Category 2b	Not met, significant factor is Non-BLM or not BLM authorized
Category 2c	Not met, current management or disturbances are affecting land health
Category 2d	Not met, current management or disturbances are affecting land health, but ways to achieve significant progress are unknown
Category 2e	Not met, current management or disturbances have been changed to address significant factors in order to result in significant progress toward achieving
Category 2f	Not met, current management or disturbances are appropriate and monitoring data indicate making significant progress toward achieving

Category 3 Public land where land health standard does not apply

Standard **Conclusion of Standard Achievement**
Soils Met (Cat 1)

NOTE:

The Jelly's Ferry/Battle Creek Allotment covers eight different Ecological Site Descriptions (ESDs), the dominant three were evaluated in this RHA as they are considerably different. Below are the evaluations of the three Major Land Resource Areas (MLRAs) that the dominant evaluated ESDs fall under. Full descriptions and evaluations can be found in the RHA record. Each standard will be evaluated under each MLRA.

MLRA 15

As evaluated in the Interpretation of Rangeland Health (Tech Reference 1734-6) ("17 Indicators"), the soil and site stability rated "None to Slight" departure from expected conditions as 10/10 indicators were evaluated and rated as "None to Slight". Even in intermittent drainages with side slopes exceeding 25% that could be prone to erosion, there was substantial vegetation in the form of RDM from the annual grass crop, with a variety of shrub species to prevent any signs of grazing induced erosion. RDM was visually estimated at over 1000 lb/ac and clippings from a similarly representative area were measured at over 1000 as well. That level of RDM nullifies the contributing factors to any Soils indicator being rated above Slight-moderate associated with erosion. Waterflow patterns were not evident due to substantial vegetation coverage. Bare ground constituted less than 10% and, therefore, there were no wind-scoured, blowouts or depositional areas.

MLRA 17

As evaluated in the Interpretation of Rangeland Health (Tech Reference 1734-6) ("17 Indicators"), the soil and site stability rated "None to Slight" departure from expected conditions as 9/10 indicators were evaluated and rated as "None to Slight"; however the site is very different than what is found in MLRA 15. The rocky soil is much less developed than what is found in sites under MLRA 15 and is characterized as being much lower in vegetative capacity with expected annual production to be between 100-600 lb/ac as opposed to MLRA 15's capacity of 800-1800 lb/ac. Visual inspection of MLRA 17 shows the site supporting the lower end of that spectrum. Poorer soils and associated lower vegetation does lead to increases in erosional potential, bare ground, and waterflow patterns; all indicators which fall under the Soils Standard. Bare ground was the indicator rated as "slight-moderate". While these were noted in the evaluation of the area, it was determined that cattle were not the causal factor for increases, and were a result of the underlying soils found in this MLRA. Additionally, this portion of the lease is the most anthropogenically disturbed site as there is an active shooting range and a well established dirt road (Spring Branch Road) allowing for considerable off road usage. Further, this area is regularly the site of wildland fire starts, the most recent of which was this year, and contributes to the lack of RDM and overall vegetation.

MLRA 18

As evaluated in the Interpretation of Rangeland Health (Tech Reference 1734-6) ("17 Indicators"), the soil and site stability rated "None to Slight" departure from expected conditions as 9/10 indicators were evaluated and rated as "None to Slight"; this site is relatively intermediary between MLRA 15 and 17. The soil is similarly rocky, and has an estimated vegetative capacity of 200-500 lb/ac, with visual inspection supporting the upper end of that range. Similarly to MLRA 17, poorer soils and associated lower vegetation does lead to increases in erosional potential, bare ground, and waterflow patterns; all indicators which fall under the Soils Standard. The site did not show near the percentage bare ground seen in MLRA 17; however, it was still enough to warrant a rating of "slight-moderate".

NWCSG Ratings

Overall, applicable soil standards specific to the 1999 Northwestern California Standards for Rangeland Health and Guidelines for Livestock Grazing Management (NWCSG) were rated as being "Met". It should be noted that

“Met” was not evaluated similarly across the allotment and was adjusted per each MLRA evaluated. As corroborated with the 17 Indicators evaluation, an acceptable level of RDM and vegetative cover contributes to the stability of the soil and reduces any potential for erosion. RDM had been clipped the previous year (2016) measuring anywhere from 100-1400 (average 641 lb/ac), which, depending on the MLRA was within acceptable production levels. There was a relatively reasonable representation of native vegetation; though lacking in perennial grasses, there were native shrubs (ceanothus, coffeeberry) and native forbes (tarweed, brodiaea, turkey mullein, and gumplant). Cages were set up in spring of 2017 and data on production, utilization and RDM will be collected in the in fall of 2017. 641 lb/ac is more than sufficient for the NWCSG RDM upland guideline. Trends for RDM are not available as monitoring plots (cages and photos) were established in spring of 2017 and data has not been collected at the time of this report.



Figure 1: MLRA 15



Figure 2: MLRA 17



Figure 3: MLRA 18

<u>Standard</u>	<u>Conclusion of Standard Achievement</u>
Species	Met (Cat 1)

Rationale:

MLRA 15

Under the 17 Indicators evaluation, the Biotic Integrity Rating ranks as “Slight” departure from expected conditions. Eight of the applicable indicators were rated as “None to Slight” with two, invasive plants and functional/structural groups, rated as “Slight to Moderate”. There is a strong representation of medusahead amongst the naturalized annual oats. Additionally, there are scattered populations of Klamath weed/St. Johns Wort which will likely expand as it is not a preferred forage by cattle. Ecological Site Descriptions were not available for the areas analyzed. The information for expected vegetation types on soil types NrD, NrE, NrE2 (all within ESD R015XD090CA “Gravelly Loam”) was obtained from the soils report generated from the NRCS Web Soil Survey. Medusahead is much greater than the expected 4% dry weight composition, and there was no representation of lupine or manzanita as expected. Functional groups was rated as “Slight to Moderate” due to the lack of perennial vegetation. As with most grazing oak grassland allotments in the lower valley foothills, there is a lack of perennial grasses that might be more expected

in a non-departed ecosystem. Recruitment of juvenile blue and valley oaks were found near established stands, and neither the branches within the browse line or the juvenile oaks showed signs of browsing.

MLRA 17

Under the 17 Indicators evaluation, the Biotic Integrity Rating ranks as “Slight” departure from expected conditions. Eight of the applicable indicators were rated as “None to Slight” with two, plant mortality and functional/structural groups, rated as “Slight to Moderate”. The notable difference between MLRA 17 and 15 was the lack of recruitment oaks. As explained in the Soils standard, MLRA 17 has characteristically low vegetative potential and a much greater anthropogenic and fire disturbance history which may explain the difference in oak regeneration. There was also a lack of variety of shrub as compared to MLRA 18, with buckbrush being the dominant representative species. This portion of the allotment is also the location of two vernal pools with historical populations of the federally protected Slender Orcutt Grass. Both populations were visited and found to be in good health.

MLRA 18

Under the 17 Indicators evaluation, the Biotic Integrity Rating ranks as “Slight” departure from expected conditions. Eight of the applicable indicators were rated as “None to Slight” with two, plant mortality/decadence and invasive plants, rated as “Slight to Moderate”. Medusahead was dominant and there were substantial populations of Klamath weed in the allotment. Notably, there was a lack of regenerating oaks which contributed to the “Slight to moderate” rating for plant mortality/decadence.

NWCSG Standards

Of the applicable NWCSG indicators related to Species, all were rated as “Met”. RDM, though expected to vary widely across the allotment, was sufficient in the areas examined. There were pockets of bare ground, but it is hard to distinguish between poor site conditions and the impact of over grazing, especially in MLRA 17. Similarly, there was greater diversity of plant species in MLRA 18 and 15; however, grazing cannot be singularly attributed to the paucity in MLRA 17 as it has poor soils and a history of disturbance and anthropogenic use. While an increase in the desired plant species of perennial grasses is universally applied to most of the allotments in the Central Valley and adjoining foothills; the focal species on this allotment is the vitality of oak species. Though MLRA 18 did not have a good representation of juvenile oaks, MLRA 15, which is grazed similarly to the rest of the allotment did have a strong recruitment of juvenile oaks with little indication of browse. This supports the observation that there is sufficient forage in the allotment in the manner in which it is being grazed to not force browse of oak by either the cattle or native ungulates. For the size of the allotment, and the extensive use and access by the public, there is not a substantial problem with invasive weeds and very little if any yellow star thistle. This allotment is unique as it has three federally protected species within the boundaries. Two populations of Slender Orcutt grass has been continually monitored for multiple years. One is fenced off in an exclusion which seems to be very effective as the population is thriving. The other is partially fenced off, but there has not been any indication of anthropogenic or cattle impacts on the unfenced portion of the pool. Special status vernal pool invertebrates have been found at six ponds along Spring Branch Road. The Endangered Vernal Pool Tadpole Shrimp (*Lepidurus packardi*) and the Threatened Vernal Pool Fairy Shrimp (*Branchinecta lynchi*) have been found on the allotment. Both of these species have been found during 2016 and 2017 in the same ponds as the Slender Orcutt Grass. Both species have also been found in one additional pond in the same vicinity. Vernal Pool Tadpole Shrimps were found at a 4th pond in the area during 2017. Vernal Pool Fairy Shrimp were also been found in two additional small ponds in 2014. Grazing per se has not been found to be detrimental to vernal pool invertebrates and the fact that they are found in these ponds is an indication that the current grazing intensity is compatible with continued survival and occupancy of these species.

Standard **Conclusion of Standard Achievement**
Riparian N/A (Cat 3)

Rationale:

There are no riparian features on the allotment. There are ephemeral drainages which presumably flow during rain events, but they lack the vegetation and flow to be considered riparian. As such, Riparian standards were not evaluated under the NWCSG. As stated in the Standards, stock ponds are exempted from evaluation.

The 17 Indicators evaluates Hydrologic Function; however, the indicators are shared primarily with the Soil and Site Stability rating. Without riparian features, the indicators are not applicable to evaluating hydrologic function in a riparian context. There is only one indicator which pertains to hydrologic function solely: plant community composition and distribution relative to infiltration and runoff. This indicator pertains to whether or not infiltration is affected by changes in the plant community. While a greater presence of perennial grasses would be ideal, it is not a realistic expectation. Perennial grasslands in California are greatly diminished from their natural extent, and arguably, may not be historically appropriate in lower elevation valley allotments. The indicator was rated “Slight to Moderate” across all the MLRAs as there was a relative lack of species (either perennial grasses or shrubs) that could functionally replace the perennial grasses that would contribute to infiltration.

Standard **Conclusion of Standard Achievement**
Water N/A (Cat 3)

Similar to the rationale for the lack of evaluation of riparian standards, there is no impact of the grazing to water standards. None of the management objectives in the NWCSG apply to the allotment and there is no indication that grazing practices would hinder the BLM’s compliance to the Clean Water Act.

B. RATIONALE SUPPORTING STANDARDS ACHIEVEMENT DETERMINATION:

A rangeland health assessment (RHA) was conducted by an interdisciplinary team in accordance with the Northwestern California Standards for Rangeland Health and Guidelines for Livestock Grazing. All relevant indicators for the soil health, species, and water quality standards were found to be within acceptable and proper levels or not applicable. Observations for the RHA were made in in June and July 2017; detailed rationale for each standard is explained in the previous section.

This is the third RHA completed on the allotment spanning 30 years. The 1998 RHA determined all Standards were met, notable was the inclusion that mulch (=RDM) levels have “always met or well exceeded guidelines” and that this was when the riparian pastures along Battle Creek and the Sacramento River were closed. Species recorded matched what was found in the 2017 RHA and matched in evaluation of health and vigor. Three special status plants were recorded as being present in the 1998 RHA: *Cryptantha crinita*, *Gratiola heterosepala* and *Paronychia ahartii*, the later of which are riparian or vernal pool species and were likely in the sections of the allotment that were subsequently closed. *C. crinita* was not observed this RHA, but targeted surveys should be completed prior to lease renewal. The 2008 RHA determined that the Riparian/Wetland Standard was the only standard “Not Met” with the rational being the evaluation of the condition of Osprey Pond, which is within the allotment. As documented in a memo to the file attached to the Lentic Standard Checklist, Osprey Pond is a “shallow, man made fishing pond”. This would constitute an exempted “structural facility” as described in the NWCSG and it is unclear as to why it was evaluated similarly to a “natural wetland and/or riparian area”. Aside from the unnecessary evaluation of the Riparian Standard, the other Standards were “Met” and reported similar descriptions as the 2017 RHA. Of note is that throughout the 30 years of RHAs, observations of blue oak vitality appears to be maintaining with documentation of

juveniles and good vigor.

PART IV - ID TEAM’S MANAGEMENT RECOMMENDATIONS AND SUGGESTED APPROPRIATE ACTION(S)

A. DETERMINATION ON CONTRIBUTING FACTORS

As of the date of the completion of this form, an examination of the information listed in Part II and recent field visits, if applicable, indicate that the following are contributing factors for failing to achieve the standards as indicated in Part III for the area identified in Part I:

Non-achieved Standard (s) (from Part III): **None, all are achieved**

PART V - BLM STAFF WHO REVIEWED THE INFORMATION AND RECOMMENDED PRIORITY FOR DEVELOPMENT AND IMPLEMENTATION OF APPROPRIATE ACTION TO MAKE SIGNIFICANT PROGRESS TOWARDS ACHIEVING THE STANDARD(S)

The following staff have participated in examining the information listed in Part II and in making the standard(s) achievement and contributing factor determination(s):

Kendra Fallon, Ecologist
Dr. Steve Laymon, Wildlife Biologist

Archeology staff was included for evaluation of the impacts of grazing on culturally sensitive sites. The area has not been fully inventoried. One previously unknown prehistoric site and isolate was discovered during the RHA and other known sites were evaluated. The archeology staff made the determination that current management of the Jellys Ferry/Battle Creek allotment is not having an adverse impact on cultural sites.

Dr. Eric Ritter, Archaeologist

SIGNATURES

TITLES

Ecologist
Biologist
Archaeologist

PART VI - DOCUMENTATION OF THE INVOLVEMENT OF LESSEES, STATE AGENCIES AND THE INTERESTED PUBLIC IN MAKING STANDARDS CONFORMANCE DETERMINATION AND CONTRIBUTING FACTORS DETERMINATION

Indicate the occurrence of public participation (e.g. lessee, interested public, other Federal or State /local agency), or opportunities for public participation that pertains to the review of standards achievement and contributing factors (who, when, and conversation or meeting summary):

The lessee, Chuck Orwick, helped coordinate and facilitated access across his private land to get to the BLM parcel, but did not participate in the on the ground assessment.

PART VII - AUTHORIZED OFFICER'S ACKNOWLEDGEMENT

I have reviewed and concur with the determinations and supporting rationale regarding the achievement or lack thereof of rangeland health standards documented herein and, in the cases where standards are not achieved, the determination and rationale regarding the contributing factor(s) for failure to achieve the standards. I have determined that the priority for developing and implementing appropriate action to achieve significant progress to achieve standards for the area identified in Part I is (check one)

high medium low

Staff is directed to develop appropriate action for my consideration and implementation in accordance with this priority.

REDDING FIELD MANAGER

DATE

If this Evaluation Report documents that standards are not achieved in the assessment area, then the authorized officer will determine (in a separate signed Determination Document) the significant causal factors for non-achievement. If existing grazing management practices or levels of grazing use on public lands are significant factors, then an appropriate action must be developed and implemented in accordance with 43 CFR subpart 4180.2(c).

REFERENCES

Bureau of Land Management. 1999. Record of Decision for Northwest California Standards for Rangeland Health and Guidelines for Livestock Grazing Management. USDI Bureau of Land Management, Sacramento, CA.

Bureau of Land Management. 1993. Redding Resource Area Management Plan and Record of Decision. USDI Bureau of Land Management, Redding, CA.

Pellant, M., P. Shaver, D.A. Pyke, and J.E. Herrick. 2005. Interpreting indicators of rangeland health, version 4. Technical Reference 1734-6. USDI, Bureau of Land Management, National Science and Technology Center, Denver, CO.

Wildland Solutions. (2008). Monitoring Annual Grassland Residual Dry Matter: A Mulch Manager's Guide for Monitoring Success. (2nd ed.)

Appendix 1: Photos and Images

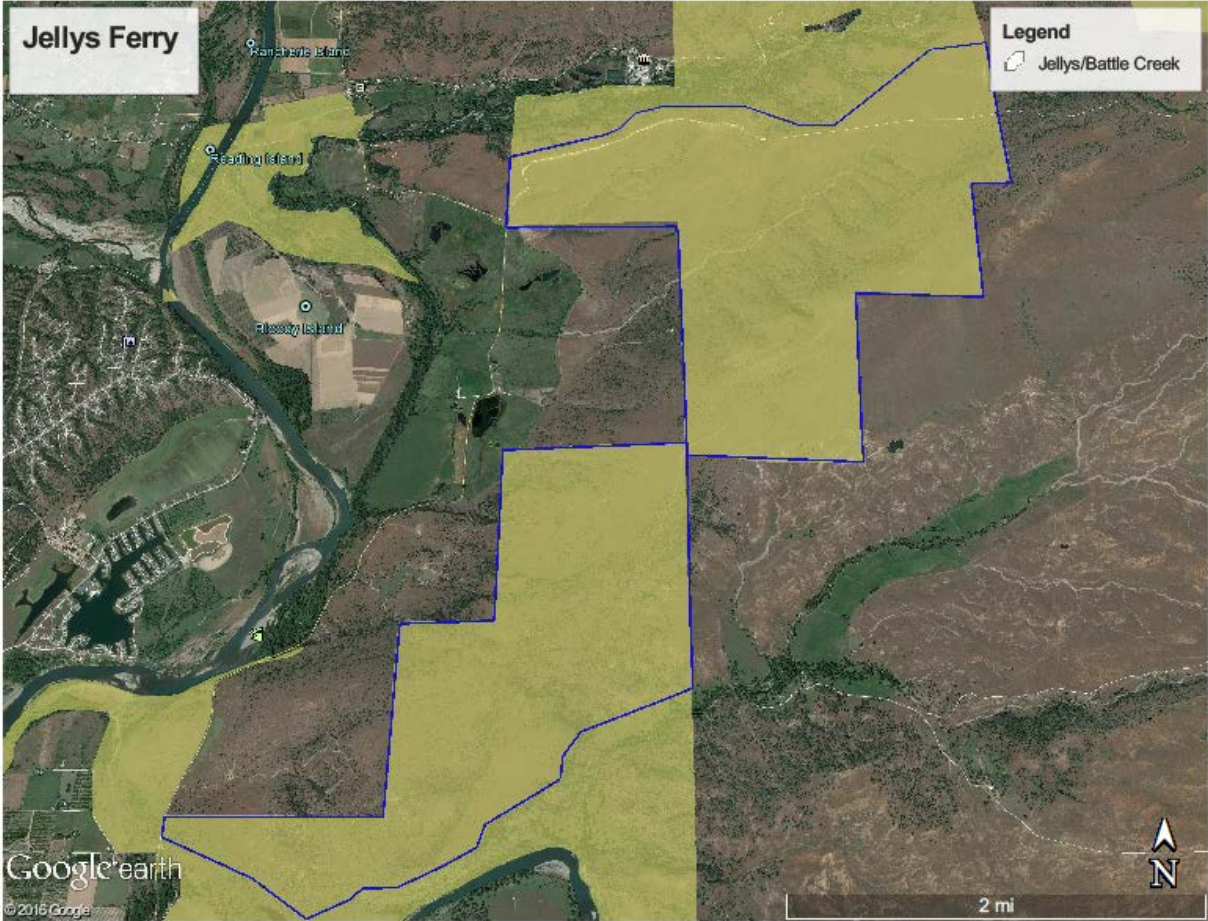


Figure 4: Allotment Overview

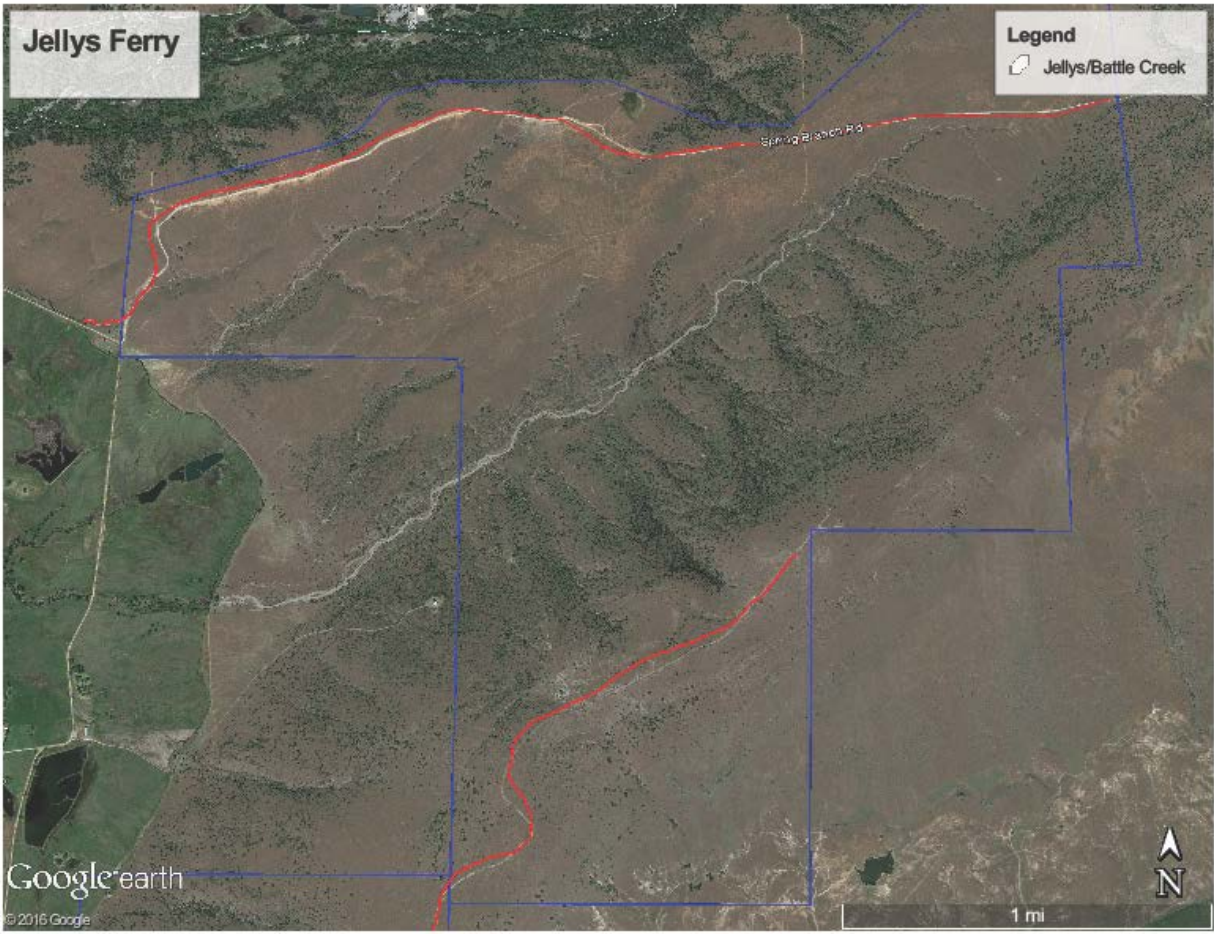
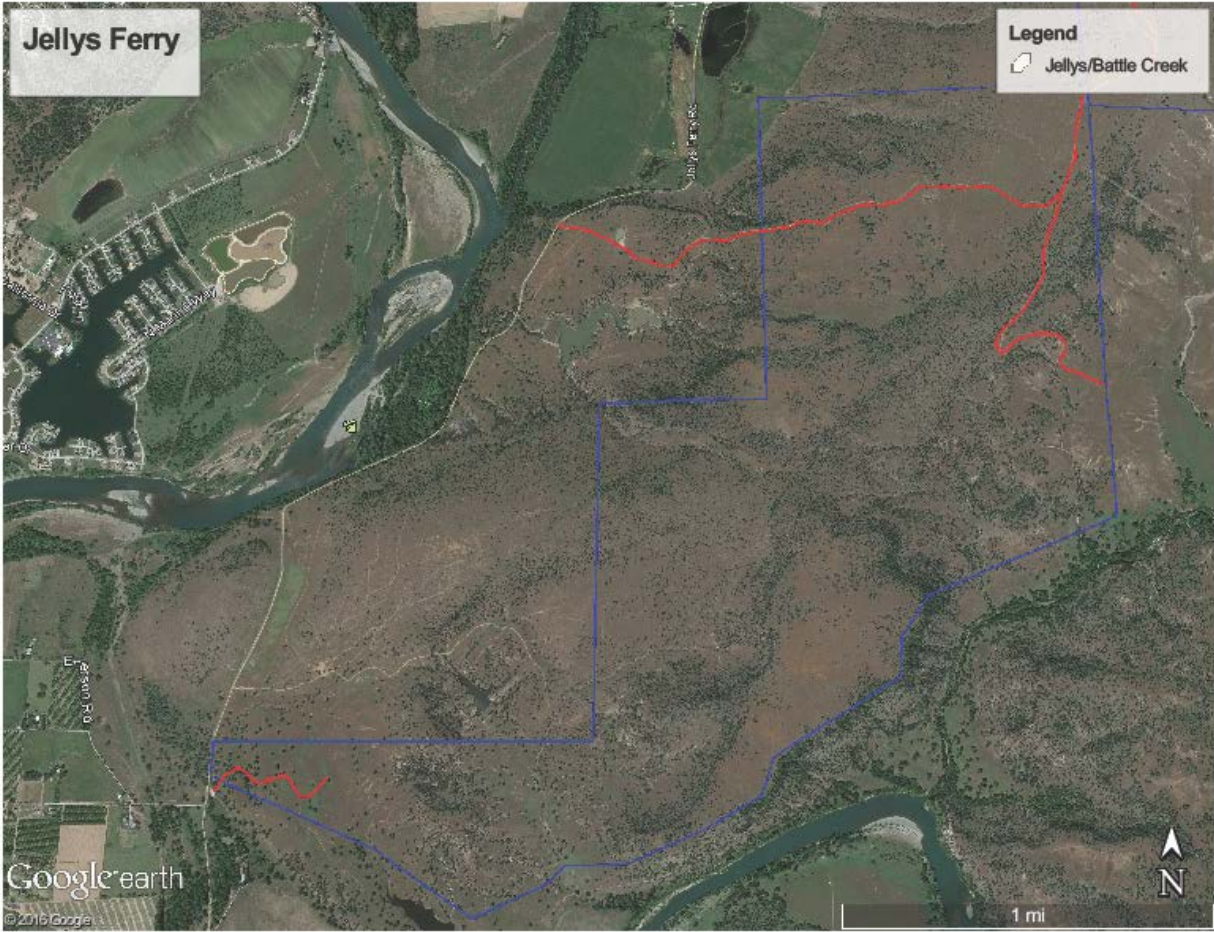


Figure 5: survey path in North Section of the allotment



Survey Path in the south section of allotment