United States Department of the Interior
Bureau of Land Management

Environmental Assessment

DOI-BLM-CO-S050-2013-0025-EA

September 2013

West End Uncompahgre Field Office
Livestock Crossing Permits

Location: *West Montrose County, West San Miguel County*

U.S. Department of the Interior
Bureau of Land Management
Uncompahgre Field Office
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ENVIRONMENTAL ASSESSMENT

NUMBER: DOI-BLM-CO-S050-2013-0025-EA

PROJECT NAME: West End Uncompahgre Field Office Livestock Crossing Permits

LEGAL DESCRIPTION: New Mexico Principal Meridian, portions of:

T. 43N., R. 14W., Sec. 06, 17-18;
T. 44N., R. 11W., Sec. 13, 23-24, 26, 34-35;
T. 44N., R. 12W., Sec. 03-04, 08-09, 17, 20, 29, 32-33;
T. 44N., R. 14W., Sec. 04, 07-09, 16-21, 28-31, 33;
T. 44N., R. 15W., Sec. 05-06, 08, , 35;
T. 44N., R. 16W., Sec. 01;
T. 45N., R. 12W., Sec. 20-21,
T. 45N., R. 13W., Sec. 01, 19, 30;
T. 45N., R. 14W., Sec. 06, 09, 15-16, 25-27, 33-34;
T. 45N., R. 15W., Sec. 02, 05-06, 11, 16, 20-21, 29, 31-32;
T. 45N., R. 17W., Sec. 02-04, 09, 16-17;
T. 46N., R. 13W., Sec. 18-21, 36;
T. 46N., R. 14W., Sec. 01-06, 09-15, 23-25, 28, 33;
T. 46N., R. 15W., Sec. 01-04, 10-14, 17-18, , 25, , 31-32, 36;
T. 46N., R. 16W., Sec. 09,11, 13,16, 19, 20,34-36;
T. 46N., R. 17W., Sec. 15, 17-22, 24-25, 28-29, 33-36;
T. 46N., R. 18W., Sec. 02, 11-13;
T. 47N., R. 14W., Sec. 28, 31-33, 36;
T. 47N., R. 15W., Sec. 18-20, 26-27, 29, 31-32, 34-36;
T. 47N., R. 16W., Sec. 01, 03, 10-13, 15, , 21-23, 28-30, 32-33;
T. 47N., R. 17W., Sec. 01-02, 24, 31;
T. 47N., R. 18W., Sec. 03, 09-10, 16, 2326, 29, 35;
T. 48N., R. 18W., Sec. 04-05, 07-08;
T. 48N., R. 19W., Sec. 05, 07-09, 16, 21-22, 30-31;
T. 48N., R. 20W., Sec. 25, 34-36.

APPLICANT: BLM and Livestock Grazing Permittees

INTRODUCTION and BACKGROUND

Livestock Crossing Permits would authorize the movement of livestock across Public Lands, and would occur outside of existing grazing permits. The project area is in west end of the Uncompahgre Field Office (UFO), including portions of Montrose and San Miguel Counties, Colorado.

In February 2012, the BLM UFO solicited the local community for their knowledge of livestock crossing routes which include Public Land in the west end of the UFO, and their interest in applying for crossing permits in future grazing seasons. Grazing permittees and other livestock operators frequently move livestock across BLM managed lands for a variety of reasons. These reasons primarily include (1) moving livestock to and from grazing allotments on BLM managed lands and (2) moving livestock to and from grazing allotments on state, private, or other federally managed lands. In response to its request, the BLM UFO received maps of regularly used and historic crossing routes within the project area.

Again in January 2013, livestock operators in the local area, including current BLM grazing permittees, were asked to submit applications for livestock crossing routes that they expect to use in the future so that the BLM could prepare to respond to such requests.

Past practices for issuing livestock crossing permits have been inconsistent. In July of 2012 the Bureau of Land Management, Colorado State Office, issued Instructional Memorandum 2012-031. The purpose of this Instruction Memorandum (IM) is to provide guidance concerning the issuance of livestock crossing permits resulting from applications to cross public lands from current livestock grazing permittees/lessees and non permittees/lessees. The management guidance establishes a consistent approach to the review and issuance of livestock crossing permits. As part of the guidance outlined in this IM, the BLM needs to establish for its offices a standardized system for the application, issuance, and/or denial of crossing applications in the future.

PURPOSE AND NEED FOR THE ACTION

This action is to respond to livestock grazing permittees' applications for permits to cross public lands administered by the Uncompahgre Office. In many instances, livestock producers must move their livestock across BLM administered lands to facilitate proper grazing management of BLM grazing allotments, as well as to facilitate movement of livestock to and from private, state, or other federally administered lands. The BLM is required, under the 43 CFR 4130.6-3 and 4160 grazing regulations, Federal Land Policy and Management Act and the Taylor Grazing Act, to respond to requests for livestock trailing/crossing across BLM administered lands. The 43 Code of Federal Regulations (CFR) 4130.6-3 states: "A crossing permit may be issued by the authorized officer to any applicant showing the need to cross the public land or other land under BLM control, or both, with livestock for proper and lawful purposes. A temporary use authorization for trailing livestock shall contain terms and conditions for the temporary grazing use that will occur as deemed necessary by the authorized officer to achieve the objectives of this

part". This Environmental Assessment will make a decision on whether or not to issue crossing permits for applications which the BLM UFO has received.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

General Information

In this document, livestock crossing is defined as the supervised, active movement of livestock from one location to another. Active movement means livestock are continually walking and stay within the confines of the route, as much as possible. Horses, dogs, or motorized vehicles would be used to herd livestock so that they do not wander off the route or stop to rest, but move continuously to their destination. Cattle can move up to 10 miles in one day. For longer routes, corrals and holding traps are used so that cattle may rest, eat, and water overnight.

Complete, start-to-finish crossing routes contain a combination of paved, gravel, and dirt roads, non-road trails, drainages and rights-of-way such as powerlines and pipelines. In addition, there are route segments that are part of multiple comprehensive routes and used by multiple operators at different times with different livestock numbers. In order to achieve an appropriate level of analysis for start-to-finish crossing routes, trails have been split based on the trail type and differences in livestock numbers and crossing events, and analyzed as stand-alone route segments.

Since the BLM does not control and is not responsible for public activities which occur on Colorado State or County roadways in places where there is no directly adjacent Public Land, it is not appropriate for the BLM to issue crossing permits for those livestock crossing activities that occur solely on State and County roadways and on private land (BLM IM CO-2012-031). Colorado State highway right-of-ways are generally 200 feet wide (100 feet either side of centerline). Livestock crossing that occurs on state highways is not expected to extend beyond the right-of-way onto adjacent BLM administered lands. Therefore, state highways where adjacent Public Land exists have not been included in this analysis.

It should be noted that the route segments in Table 1 represent the maximum number of livestock and the maximum number of events that ***could*** occur in 1 year. ***It is unlikely that these numbers will ever be reached***. Some of the start-to-finish routes for which livestock operators applied are not regularly used, and the application was submitted as a back-up plan to trucking or out of a desire to preserve potential use of a historic route for future generations.

The total number of crossing route segments is also inflated because operators have applied for multiple routes which end at the same destination. This is because different routes are used from year to year depending on range management goals. Total livestock numbers per year is further inflated because operators applied for the maximum number of cattle their operation can carry, which is generally higher than the average number of cattle they own from year to year and higher than the number of cattle they are likely to actually request to move on identified routes. The inflation in numbers of livestock and numbers of routes has been included to allow for

maximum flexibility, so that the BLM may consider a wide spectrum of annual crossing applications in the future, based on this analysis.

Proposed Action

BLM UFO is proposing to issue crossing permits with special stipulations to livestock operators who submit applications to move livestock across BLM-administered lands within the west end of the Uncompahgre Field Office. The proposed action only considers crossing events where operators have submitted an application for future crossings, and that occur on allotments where livestock operators either do not have a grazing permit for the allotment they are crossing through and/or operators who need to cross an allotment they hold a permit for outside of their permitted grazing dates.

Livestock crossing permits would be issued for one-time annual use, as applied for, for up to 10 consecutive years on route segments analyzed in this Environmental Assessment, unless resource conditions on the ground substantially change. 43 CFR 4130.6 states that "…crossing permits ... have no priority for renewal and cannot be transferred or assigned". Therefore, crossing permits will not be considered a part of, or a special Term and Condition of, of any BLM issued Grazing Permit which holds transferable Preference.

Grazing permittees or other livestock producers requesting to trail livestock across BLM-administered lands would be required to submit an application and pay all applicable fees prior to crossing. The BLM would issue one-time crossing permits which would specify the livestock crossing route, the period of use (dates) during which livestock crossing would be permitted, locations where livestock will be permitted to overnight and the maximum number of livestock which will cross the route during the permitted event. Additionally, special Terms and Conditions specific to each crossing route would be included as needed for resource protection. Prior to issuing any crossing permit, the BLM would ensure that the annual number of livestock and annual number of times a route (or route segment) has been used does not exceed what has been analyzed in the Proposed Action, and is fully compliant with the associated Decision Record.

Because current livestock use in the area is cattle (only), the crossing events analyzed are for cattle only. Crossing by other classes of livestock such as sheep and goats would not be allowed under this analysis.

Routes have been split into segments to ease analysis. Map 1 depicts all livestock trail segments being considered. Table 1 illustrates route segments which are analyzed.

BLM roads and non-road trails and drainages are analyzed using a different buffer width due to differences in the way livestock behave and may be controlled on different surfaces. Where established roads exist there is a wider surface of existing disturbance, and in some cases fences which confine cattle to the right-of way, making it easier for livestock herders to keep animals from drifting. Where no roads exist, it is more likely that cattle will spread out slightly and drift onto a wider surface area; therefore a wider analysis buffer is needed.

- Crossing routes which are along county roads directly adjacent to public land are analyzed using a 160 foot corridor, which is 80 feet each side of the centerline; 30 feet each side of the centerline is assumed to be the county road right of way, and the additional 50 feet each side is analyzed for impacts to BLM lands outside of the road right of way that would occur from livestock crossing activity.
- Crossing routes which are along BLM managed roads are analyzed using a 100 foot corridor; 50 feet each side of the road centerline.
- Crossing routes which are along non-road, 2-track, 4WD trails, powerlines and pipelines, and along drainages are analyzed using a 300 foot corridor; 150 feet each side of the centerline of the trail or drainage.

County Roads with Public Land directly adjacent comprise 59% of all route segments. BLM roads comprise16%, and 2 track and/or 4WD trails comprise 15%, of all route segments. Drainages are 10% of all route segments. Route segments total about 132 linear miles; using the corridors described above, the total area of analysis is 2,323 acres.

Table 1 lists the crossing route segments, total number of cattle permitted per year for each segment, a breakdown of livestock crossing events per segment (which shows individual cattle numbers per crossing event multiplied by the number of times those cattle use the route segment in a year), and the total number of times the segment is used in one year.

Some route segments in Table 1 include overnight locations. Crossing events which utilize these segments would have the option of allowing cattle to rest overnight at the corrals and holding traps identified. Corrals are generally small (approximately 1 acre) confinements, and holding traps are larger (between 1 and 5 acres) confinements. Overnighting of cattle would come with the stipulations that cattle are kept confined by the boundary of the trap or corral and not allowed outside of the confinement, and livestock operators would be required to provide feed and water to their livestock. Feed and water would not be provided by the BLM where overnight locations are on Public Land.

BLM would approve applications for livestock crossing permits on the specified route segments listed in Table 1 for any time of year, unless resource protection measures prevent crossing during certain seasons or during specific, defined, on-the-ground conditions (see Design Features). Annual authorizations to cross livestock would not exceed the total livestock numbers per year or the maximum route segment uses per year described in Table 1.

Resource protection stipulations specific to each route would be incorporated based on analysis. This means that individual Terms and Conditions for each crossing permit would be included as needed for items such as special status species and their habitat, wildlife, cultural sites eligible for the National Register of Historic Places, and standards for rangeland health.

Map 1: Route segments to be analyzed under the Proposed Action

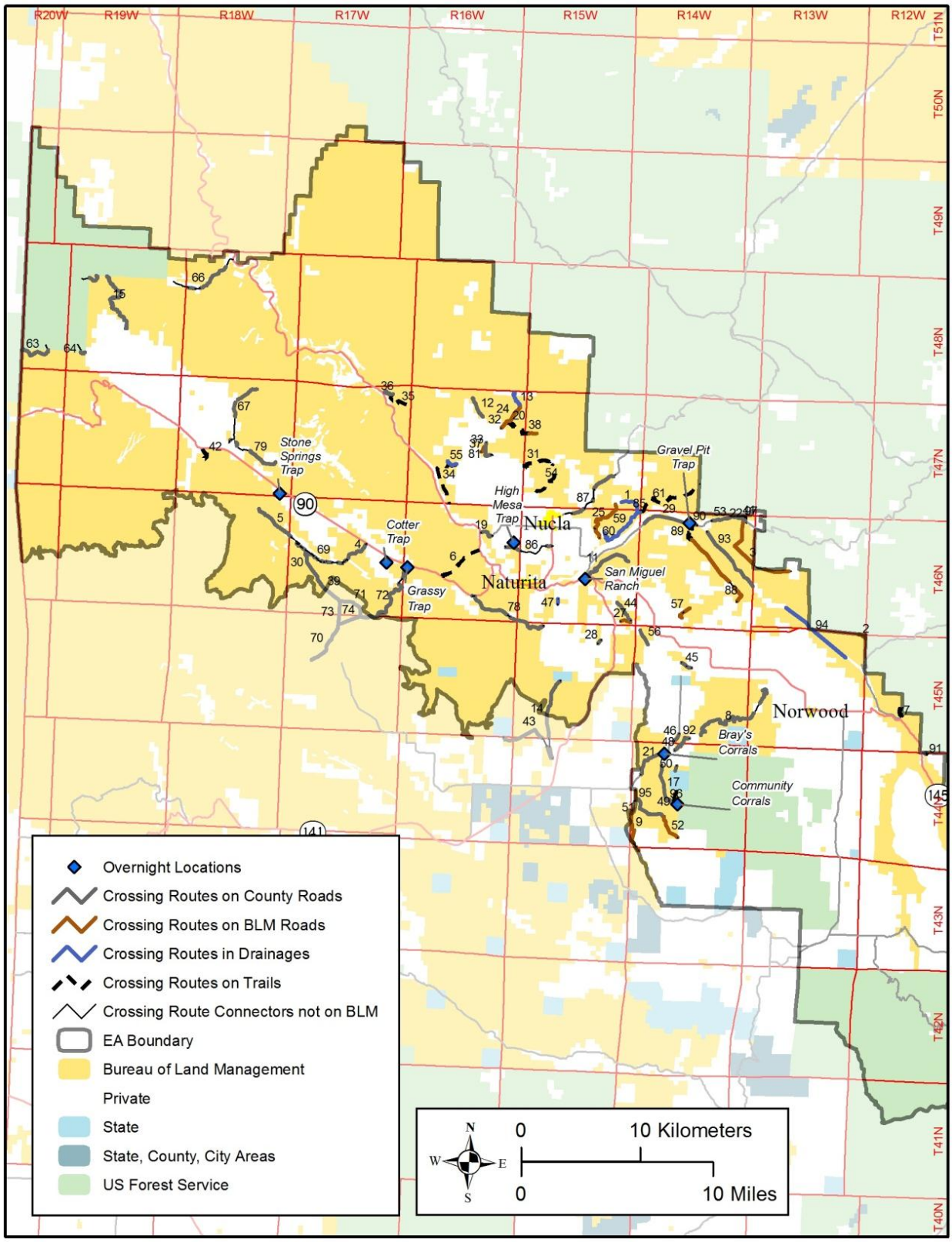


Table 1: Route segments

Route ID	Total Livestock/ Year	Event Breakdown (number of livestock for individual crossing events multiplied by number of crossing events per year)	Total Times Used/ Year	Overnight Location	Type of Trail*	Miles	Acre	Permit Stipulations
1	800	400*2	2	N/A	Drainage	1.3	48.2	General, Cultural , Soils, Surface waters
2	110	110*1	1	N/A	BLM Road	0.5	5.4	General, Cultural
3	575	575*1	1	N/A	BLM Road	4.3	51.6	General, Cultural
4	200	100*2	2	N/A	County Road	1.4	16.6	General, Cultural
5	200	100*2	2	N/A	County Road	2.3	29.0	General, Cultural
6	3100	180*2, 55*2, 575*2, 200*4, 140*2, 400*1	13	N/A	Trail	2.5	90.9	General, Cultural, Soils
7	1000	100*1	1	N/A	Trail	0.6	20.9	General, Cultural
8	1740	220*2, 500*2, 150*2	6	N/A	County Road	6.1	72.7	General, Cultural
9	1220	200*3, 20*1	4	N/A	BLM Road	2.8	33.2	General, Cultural
11	210	155*2	2	N/A	County Road	3.1	37.7	General, Cultural
12	720	360*2	2	N/A	County Road	1.1	14.2	General, Cultural
13	720	360*2	2	N/A	Drainage	1.0	37.0	General, Cultural. Surface waters
14	1380	190*2, 200*5	7	N/A	County Road	3.8	46.2	General, Cultural
15	200	100*2	2	N/A	County Road	5.4	63.7	General, Cultural
17	1620	220*1, 100*2, 200*3	6	FS Community Corrals	County Road	2.4	28.2	General, Cultural
19	4060	180*4, 55*2, 575*2, 200*4, 140*2, 400, 500,100	17	N/A	County Road	0.7	9.0	General, Cultural
20	569	569*1	1	N/A	Trail	1.5	53.4	General, Cultural
21	2640	500*2, 220*2, 200*6	10	Bray's pvt corrals	County Road	1.8	21.4	General, Cultural

Route ID	Total Livestock/ Year	Event Breakdown (number of livestock for individual crossing events multiplied by number of crossing events per year)	Total Times Used/ Year	Overnight Location	Type of Trail*	Miles	Acre	Permit Stipulations
22	620	110*2, 170*2 , 30*2	6	N/A	Trail	0.5	18.8	General, Cultural, Surface waters
24	720	360*2	2	N/A	BLM Road	1.0	12.7	General, Cultural
25	800	400*2	2	N/A	BLM Road	2.7	32.9	General, Cultural
27	200	100*2	2	N/A	BLM Road	0.5	6.3	General, Cultural
28	580	190*2, 100*2	4	N/A	County Road	0.2	2.8	General, Cultural
29	2940	575*2, 400*3, 110*2, 170*2, 30*2	11	Gravel Pit Trap	County Road	2.8	32.9	General, Cultural
30	1000	100*2, 400*2	4	N/A	County Road	1.9	22.3	General, Cultural
31	569	569	1	N/A	Trail	1.6	57.1	General, Cultural
32	1289	360*2, 569	3	N/A	BLM Road	0.5	5.6	General, Cultural
33	360	180*2	2	N/A	BLM Road	0.4	5.2	General, Cultural
34	360	180*2	2	N/A	Trail	3.3	115.9	General, Cultural, Soils, Surface waters
35	180	180	1	N/A	Trail	1.3	48.2	General, Cultural, Soils, Surface waters
36	180	180	1	N/A	County Road	0.6	7.7	General, Cultural
37	2658	569*2, 360*3, 220*2	7	N/A	County Road	0.2	2.0	General, Cultural
38	569	569	1	N/A	BLM Road	0.4	5.1	General, Cultural
39	200	100*2	2	N/A	County Road	1.7	21.1	General, Cultural
41	575	575	1	N/A	County Road	0.2	1.3	General, Cultural
42	60	60	1	N/A	Trail	0.8	27.5	General, Cultural
43	350	175*2	2	N/A	County Road	3.1	37.9	General, Cultural
44	500	150*2, 100*2	4	N/A	County Road	1.2	15.0	General, Cultural

Route ID	Total Livestock/ Year	Event Breakdown (number of livestock for individual crossing events multiplied by number of crossing events per year)	Total Times Used/ Year	Overnight Location	Type of Trail*	Miles	Acre	Permit Stipulations
45	600	300*2	2	N/A	County Road	0.6	6.7	General, Cultural
46	2300	150*2, 100*2, 200*6, 300*2	12	Bray's pvt corrals	County Road	0.5	5.6	General, Cultural
47	150	150	1	N/A	Drainage	0.3	9.1	Surface waters,
48	3540	220*2, 500*2, 150*2, 200*6, 300*2	14	Bray pvt corrals	County Road	0.4	5.0	General, Cultural
49	1800	200*6, 300*2	8	FS Community Corrals	Trail	0.8	29.5	General, Cultural, Soils
50	1800	200*6, 300*2,	8	N/A	County Road	0.4	4.2	General, Cultural
51	1220	200*6, 20	7	N/A	County Road	2.2	26.6	General, Cultural
52	1220	200*6, 20	7	N/A	BLM Road	1.4	16.9	General, Cultural
53	1805	575, 400*3, 110*2, 170*2, 30*2	10	N/A	County Road	1.7	20.4	General, Cultural
54	569	569	1	N/A	Trail	2.2	79.5	General, Cultural
55	200	200	1	N/A	Drainage	0.6	20.4	General, Cultural, Surface waters
56	500	150*2, 100*2	4	N/A	County Road	0.9	10.7	General, Cultural
57	210	155*2	2	N/A	BLM Road	0.8	9.8	General, Cultural
59	400	400	1	N/A	Drainage	2.3	84.6	General, Cultural, Soils, surface waters
60	800	400*2	2	N/A	Drainage	0.6	22.3	General, Cultural, Soils, Surface waters
61	400	400	1	N/A	Trail	4.2	150.8	General, Cultural, Soils, Surface waters
63	200	100*2	2	N/A	County Road	1.8	21.6	General, Cultural
64	200	100*2	2	N/A	County Road	0.3	4.2	General, Cultural

Route ID	Total Livestock/ Year	Event Breakdown (number of livestock for individual crossing events multiplied by number of crossing events per year)	Total Times Used/ Year	Overnight Location	Type of Trail*	Miles	Acre	Permit Stipulations
66	100	50*2	2	N/A	County Road	2.2	26.5	General, Cultural
67	1240	120*2, 500*2	4	N/A	County Road	2.1	25.3	General, Cultural
69	1000	100*2, 400*2	4	N/A	County Road	1.5	17.4	General, Cultural
70	360	180*2	2	N/A	County Road	2.5	30.8	General, Cultural
71	360	180*2	2	N/A	County Road	1.6	19.6	General, Cultural
72	360	180*2	2	N/A	County Road	4.6	55.7	General, Cultural
73	200	100*2	2	N/A	County Road	1.2	14.1	General, Cultural
74	360	180*2	2	N/A	County Road	1.2	14.2	General, Cultural
78	1500	100*2, 150*2, 200*5	9	N/A	County Road	4.4	53.9	General, Cultural
79	1150	575*2	2	N/A	County Road	2.0	24.4	General, Cultural
81	2289	569*2, 360*2, 220*2	6	N/A	County Road	0.8	9.7	General, Cultural
85	400	400	1	N/A	Drainage	0.2	5.9	General, Cultural, Surface waters
86	2820	180*2, 55*2, 575*2, 200*2, 400*2	10	High Mesa Trap	County Road	1.1	11.8	General, Cultural
87	809	569	1	N/A	County Road	2.2	26.6	General, Cultural
88	575	575	1	N/A	BLM Road	4.0	48.6	General, Cultural
89	575	575	1	N/A	Trail	1.3	45.8	General, Cultural
90	2940	575*2, 400*3, 110*2, 170*2, 30*2	11	N/A	County Road	0.2	1.9	General, Cultural
91	1000	500*2	2	N/A	County Road	0.1	1.5	General, Cultural
92	3540	220*2,500*2, 150*2, 200*6, 300*2	14	N/A	County Road	0.7	8.5	General, Cultural
93	60	30*2	2	N/A	County Road	3.8	46.3	General, Cultural
94	60	30*2	2	N/A	Drainage	3.9	141.3	General, Cultural, Surface waters, WSR

Route ID	Total Livestock/ Year	Event Breakdown (number of livestock for individual crossing events multiplied by number of crossing events per year)	Total Times Used/ Year	Overnight Location	Type of Trail*	Miles	Acre	Permit Stipulations
95	1220	200*3, 20	4	N/A	BLM Road	0.4	4.2	General, Cultural
96	1620	220, 100*2, 200*3	6	FS Community Corrals	County Road	0.3	3.2	General, Cultural
97	575	575	1	N/A	County Road	0.0	0.6	General, Cultural
					TOTAL	131.8	2,323	

* County Roads and their 60 foot right of ways are not analyzed or would not require a crossing authorization from BLM; however an additional 50 feet of public land beyond the County right of way has been analyzed to ensure resource values are adequately considered and incorporated into Terms and Conditions as needed.

Design Features

Under the Proposed Action, livestock crossing routes will be subject to special stipulations based on resource protection needs. Below is a list of the Terms and Conditions which will apply to the routes identified in Table 1. All routes will be subject to General Terms and Conditions and Terms and Conditions for the protection of Cultural Resources.

General Terms and Conditions—Includes all route ID numbers:

- Livestock operators will adhere to the route described in the Crossing Permit. No deviations from this route will be authorized.
- Livestock will only cross during the time frame designated in the Crossing Permit.
- Livestock will be kept moving and will not be permitted to stop or rest except at designated pre-determined corrals or holding traps identified in the Crossing Permit.
- Livestock operators are asked to make a courtesy call to their BLM rangeland management specialist several days before a permitted crossing event is to occur.
- Livestock will feed and water only at the locations designated in the Crossing Permit.
- Additional watering sites may be required to reduce impacts to riparian, sensitive vegetation or other resources, as identified by BLM.
- Livestock will be managed in a way that does not encourage the establishment or spread of weeds or other invasive plants and does not conflict with efforts to treat such weeds and invasive plants. Hay for feeding will follow the guidelines outlined in BLM CO IM 1997-005 for noxious weed management.

Terms and Conditions for Cultural Resources—Includes all route ID numbers:

- If historic or archaeological materials are uncovered during permitted activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the Authorized Officer (AO). Within five working days the AO will inform the operator as to:

    1) whether the materials appear eligible for the National Register of Historic Places;

2) the mitigation measures the operator will likely have to undertake before the activity may proceed.

- Pursuant to 43 CFR 10.4(g) the holder of the authorization must notify the AO, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer

Terms and Conditions for Soils and Sensitive Plants—Includes route ID numbers 1, 6, 34, 35, 49, 59, 60, 61:

- Avoid crossing during wet conditions. If depth of hoof prints exceed 2 inches, find alternate routes on existing roads. This applies to routes in drainages and trails with severe erosion hazard.
- Avoid crossing during "exceptional (D4)" drought conditions as defined by the USDA drought monitor. Alternate routes on roads should be used to prevent pulverization of soil aggregates, soil structure, and biological soil crusts. This applies to routes in drainages and trails with severe erosion hazard.

Terms and Conditions for Surface Water -- Includes route ID numbers 1, 13, 22, 34, 35, 47, 55, 59, 60, 61, 85, 94:

- If unplanned overnight stays are needed, locate livestock bed grounds at least 1,000 feet away from water sources such as ponds, streams, wetlands, springs, and seeps.
- Livestock trailing routes should be on benches/terraces above narrow drainages or at least 50 feet from streams and drainages that support riparian zones.

Terms and Conditions for Wild and Scenic River Resources -- Includes route ID number 94. May also apply to future WSR designated routes:

- On livestock crossing routes within the study corridors of eligible or suitable sections of river classified as "wild" and managed under the Wild and Scenic River Act, no trail building, modifications to the stream banks or mechanical removal of vegetation would be allowed.

Terms and Conditions for Rights-of-Ways:

- ROWs will be avoided to the extent possible (does not apply to road rights-of-way). If they cannot be avoided, caution will be taken to ensure disruption of use or impacts to the facilities do not occur.

No Action Alternative

Crossing permits would not be issued in response to applications, and livestock would not be permitted to cross BLM-administered lands within the west end of the UFO. It is assumed that applicants would find alternate means to transport their livestock other than crossing public land. For the purposes of analysis, it is assumed that most, if not all, applicants would truck their livestock to and from their allotments. In some cases, failure of the BLM to issue crossing permits as applied for would alter an operator's grazing program, as the only way to graze

isolated portions of private, State or federal lands is to trail livestock to them because either there are no roads or the roads that may exist are not passable in a semi-truck.

ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD

Permits with No Terms & Conditions
The UFO considered the alternative to issue crossing permits as applied for with no stipulations for resource protection. This alternative was not analyzed in detail because it does not meet the purpose and need statement. Terms and Conditions are needed on crossing permits in order to protect resource values.

Current Management
An alternative which would continue current management (allowing livestock crossing with no formal permit) was considered but not carried forward because current management is inconsistent with Instructional Memorandum 2012-03. Current management also fails to address and mitigate for potential adverse resource consequences associated with livestock crossing.

Routes through Gunnison Sage Grouse Priority Nesting Habitat
Routes which were applied for in an initial application and include crossing through Gunnison sage grouse priority nesting habitat were not included in this analysis. At this time, Gunnison sage grouse are proposed for listing as endangered under the Endangered Species Act, with final listing decision due in March 2014. The BLM will consider any proposed routes through Gunnison sage grouse priority nesting habitat, if requested, after the final listing decision is published in the Federal Register and subsequent NEPA analysis is completed.

Trucking
The BLM also considered requiring applicants to truck livestock instead of authorizing crossing permits. This alternative was considered but was eliminated from analysis because trucking livestock would be a likely result of the No Action alternative. The effects of this alternative would be similar to the effects of the No Action alternative.

SCOPING, PUBLIC INVOLVEMENT AND ISSUES

Livestock operators who hold BLM permits on the west end of the UFO, and other known livestock operators in the community who do not hold BLM permits, were contacted via letter by BLM in 2012-2013 to obtain proposed trailing needs.

PLAN CONFORMANCE REVIEW: The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5-3, BLM 1617.3):

Name of Plan: San Juan-San Miguel Resource Management Plan
Date Approved: September 5, 1985
Decision Number/Page: Page 26
Decision Language: Although not specifically mentioned, livestock crossing is clearly consistent with the terms, conditions, and decisions of the RMP. Crossing is a vital

component of livestock grazing. The RMP management guidance states "Management direction will emphasize increasing forage and livestock production on a sustained yield basis. Emphasis is upon increasing forage, red meat and animal fiber production …"

Standards for Public Land Health: In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. A finding for each standard will be made in the environmental analysis (next section).

Standard	Definition/Statement
#1 Upland Soils	Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, land form, and geologic processes. Adequate soil infiltration and permeability allows for the accumulation of soil moisture necessary for optimal plant growth and vigor, and minimizes surface runoff.
#2 Riparian Systems	Riparian systems associated with both running and standing water, function properly and have the ability to recover from major surface disturbances such as fire, severe grazing, or 100-year floods. Riparian vegetation captures sediment, and provides forage, habitat and bio-diversity. Water quality is improved or maintained. Stable soils store and release water slowly.
#3 Plant and Animal Communities	Healthy, productive plant and animal communities of native and other desirable species are maintained at viable population levels commensurate with the species and habitat's potential. Plants and animals at both the community and population level are productive, resilient, diverse, vigorous, and able to reproduce and sustain natural fluctuations, and ecological processes.
#4 Threatened and Endangered Species	Special status, threatened and endangered species (federal and state), and other plants and animals officially designated by the BLM, and their habitats are maintained or enhanced by sustaining healthy, native plant and animal communities.
#5 Water Quality	The water quality of all water bodies, including ground water where applicable, located on or influenced by BLM lands will achieve or exceed the Water Quality Standards established by the State of Colorado. Water Quality Standards for surface and ground waters include the designated beneficial uses, numeric criteria, narrative criteria, and anti-degradation requirements set forth under State law as found in (5 CCR 1002-8), as required by Section 303(c) of the Clean Water Act.

Land Health Assessments to determine compliance with the above Standards have been conducted for the west end of the UFO within the last 10 years. In 2006 the UFO completed the Mesa Creek Land Health Assessment; in 2006 the Norwood LHA was completed; in 2009 the West Paradox Land Health Assessment was completed; 2011 the East Paradox LHA was completed.

AFFECTED ENVIRONMENT and ENVIRONMENTAL CONSEQUENCES

This chapter provides a description of the human and environmental resources that could be affected by the Proposed Action and presents comparative analyses of the direct, indirect and cumulative effects on the affected environment stemming from the implementation of the Proposed Action.

Potential effects to the resources/concerns in the table (below) were evaluated to determine if detailed analysis is necessary. Consideration of some elements is to ensure compliance with laws, statutes, regulation or Executive Orders that impose certain requirements upon all Federal

actions. Other items are relevant to the management of public lands in general, the Standards for Public Land Health, or to the BLM Uncompahgre Field Office (UFO) in particular.

Cumulative impacts of the proposed action are shown in the analysis of each element.

Elements	Not Applicable or Not Present	Present, But No Impact	Applicable & Present; Brought Forward for Analysis
Air Quality		X	
ACEC			X
Wilderness	X		
Lands with Wilderness Characteristics	X		
Wild and Scenic Rivers			X
Cultural			X
Native American Religious Concerns			X
Farmlands, Prime/Unique	X		
Soils			X
Vegetation			X
Invasive, Non-native Species			X
Threatened and Endangered Species			X
Migratory Birds			X
Wildlife, Terrestrial			X
Wildlife, Aquatic			X
Wetlands & Riparian Zones			X
Floodplains			X
Water -- Surface			X
Water -- Ground		X	
Wastes, Hazardous or Solid	X		
Environmental Justice		X	
Socio-Economics			X
Access		X	
Transportation			X
Realty Authorizations			X
Range Management			X
Fire	X		
Noise	X		
Recreation			X
Visual Resources		X	
Paleontology	X		

There are no proposed crossing segments in or adjacent to Wilderness Study Areas, Wilderness or the Tabeguache Area. There are no proposed crossing segments in or adjacent to lands with wilderness characteristics. There would not be any hazardous or solid wastes generated. There would not be an impact, or negligible impact, to fire, noise, or paleontology.

AIR QUALITY

Affected Environment: Air quality in this area complies with federal air quality standards according to the most recent Colorado Air Quality Control Commission's Report to the Public (CDPHE 2012). Air quality concerns in this area are primarily from motor vehicles, oil and gas development, Nucla coal-fired power plant, coal mines, sand and gravel operations, windblown dust, wildfires, and prescribed fires.

There are no sensitive airsheds involving any routes in this EA, however there are two routes that are located directly adjacent to a sensitive airshed. Route 66 is adjacent to the Sewemup Wilderness Study Area and Route 38 is located adjacent to the Tabeguache Area. No overnight locations are proposed within a mile and a half of a sensitive airshed.

Environmental Consequences:

Proposed Action – The Proposed Action does not involve livestock confinement over extended periods of time. Gaseous emissions and fugitive dust may be produced at locations where livestock may congregate, such as overnight locations; however, concentrations of fugitive dust and/or gaseous emissions are expected to quickly dissipate by wind and topographic features. For these reasons, livestock crossing within the project area is not expected to exceed air quality standards. Air quality would not be affected beyond a negligible amount.

Cumulative Impacts – Any cumulative impacts to air quality would generally add incrementally for only short periods of time (<12 hours at overnight locations, <3 hours at any point on routes) with no measurable cumulative impacts beyond localized areas.

No Action Alternative – Under the no action alternative, there would be no immediate impacts to air quality by cattle crossing on the routes under their own power. However, assuming that applicants would truck their livestock to and from their allotments, there would be an increase in combustion engine emissions and fugitive dust along the routes suitable for truck travel. Dust abatement measures would not be required along dirt or gravel roadways. Emissions and dust from the additional truck traffic are expected to quickly dissipate once cattle transportation is completed.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN

Affected Environment: The project area includes one Area of Critical Environmental Concern. The San Miguel Area of Critical Environmental Concern is located along the San Miguel River, between Horsefly and Leopard Creek. It was designated for the protection of

unique riparian resources, protection of scenic values, and recreation management. Route numbers 94 and 7 pass through parts of the ACEC. Route 7 is a trail which follows a draw up the side of the Plateau across from Norwood Hill, well away from the riparian area along the river. Route 94 is an approximately 1.6 mile long stretch located in the San Miguel River riparian corridor, at the north end of the ACEC.

Environmental Consequences:

Proposed Action – Permitting of existing livestock crossing activities should not affect the values for which this ACEC was established. The unique riparian vegetation will not be affected by route 7. Thirty head of livestock passing along route 94 twice a year are unlikely to affect the vegetation in this resilient habitat type, particularly since the riparian vegetation has been coexisting with the trailing activity for many years. Scenic qualities in the ACEC should remain unchanged. One route is obscured from the main river corridor by the draw it follows, while the other route carries low numbers of livestock and is largely hidden by the tree canopy. Recreational values are primarily linked to the river and river corridor. Conflicts between recreation use and livestock crossing are very unlikely for route 7 because of its location. The low livestock numbers on route 94 reduce chances for conflict with recreationists along the popular river corridor. Furthermore, livestock crossing has been occurring alongside recreation for many years, without substantive conflict. This situation would be expected to continue.

Cumulative Impacts – Many activities are occurring in and around the San Miguel ACEC that potentially affect the values for which it was established. These include livestock grazing, wildlife use, recreation use, gold panning and placer mining, weed spread, wildfire, insects and disease the affect the vegetation, rights of ways and water diversions. Livestock crossing is an activity that has occurred for decades. Authorizing this existing activity will not add to the current level of impacts to riparian vegetation, scenic or recreational values.

No Action Alternative – There would be a very low reduction in effects to the recreational, scenic and riparian vegetation values within the San Miguel ACEC.

WILD AND SCENIC RIVERS

Affected Environment: As part of the revision of the Uncompahgre Resource Management Plan (ongoing), BLM inventoried its rivers and streams to determine their eligibility for inclusion in the National Wild and Scenic Rivers System (NWSRS). The study and designation of watercourses consists of a multi-step process: eligibility → suitability → congressional action. In order to be determined as eligible, they must be free-flowing and possess one or more Outstandingly Remarkable Value (ORV). Additionally, each eligible segment is assigned a preliminary classification of "wild," "scenic," or "recreational". The classifications are generally based on the level of streamside development present at the time of the eligibility determination. Wild segments are free from impoundments and have a very low level of development, usually just primitive trails or campsites; scenic segments are free from impoundments and may be accessible in places by roads; recreational segments are usually easily accessible by road, may have obvious development along the shorelines, and may have undergone some impoundment or diversion in the past.

In June 2010 the Final Wild and Scenic Eligibility Report for the Uncompahgre Planning Area was released: http://www.blm.gov/co/st/en/fo/ufo/wild_and_scenic_river.html . The Resource Management Plan (RMP) will recommend which segments, from among the eligible segments, are suitable for protection under the WSRA. Until the RMP is finalized, BLM manages eligible to protect the free-flow of the streams, water quality and the ORVs so as to prevent the segment from losing its eligibility. Also, BLM manages for the protection of the preliminary classification, so that sections classified as "wild" do not degrade to "scenic," and sections classified as "scenic" do not degrade to "recreational."

Environmental Consequences:

Proposed Action – Approximately 17.5 miles of the proposed crossing routes are within the river study corridors of segments determined to be eligible for inclusion in the NWSRS (Table 2 and Map 2).

Table 2: Affected WSR Eligible Segments

WSR Eligible Segment Name	Preliminary Classification	Miles	Outstandingly Remarkable Values
Dolores River Segment 1	Recreational	0.16	scenic, recreation, geology, fish, wildlife, vegetation, archaeology
Dolores River Segment 2	Recreational	2.27	scenic, recreation, geology, fish, wildlife, vegetation
Naturita Creek	Scenic	1.76	fish
San Miguel River Segment 1	Recreational	0.37	scenic, recreation, wildlife, historic, vegetation, paleontology
San Miguel River Segment 2	Wild	3.70	scenic, recreation, wildlife, vegetation
San Miguel River Segment 3	Scenic	4.40	recreation, fish, wildlife, vegetation
San Miguel River Segment 5	Recreational	2.98	recreation, fish, historic, vegetation
Tabeguache Creek Segment 2	Recreational	1.81	cultural, vegetation
Total		**17.46**	

All of the proposed crossing routes within the WSR study corridors are limited to either one or two uses per year. None are proposed for overnight use. Of the approximately 17.5 miles of crossing routes, approximately 9.5 miles are on county roads, 5 miles are along natural drainages, and 3 miles are on existing trails.

Crossing route numbers 8, 11, 12, 19, 36, 44, 45, 67, 91, and 93 are all on county roads. These routes are in segments with preliminary classifications of "recreational" and "scenic". Impacts to WSR eligible segments along these routes from infrequent crossing use (1-2 times per year) of short duration (less than one day per use) would be negligible. Since livestock would be crossing on county roads, the impacts of livestock crossing use would be largely masked by the impact of the roads. Potential impacts to water quality and vegetation would be low, and there would be no effect on preliminary classification.

Crossing route numbers 7, 34, 35 and 42 are on existing trails. These routes are in segments with preliminary classifications of "recreational" and "scenic". While there may be some impacts to

the soil surface from hoof action and some trampling and incidental foraging of vegetation, the overall effect would be low due to infrequent use (1-2 times per year) and short duration (less than one day per use). Impacts are not anticipated to affect preliminary classifications of stream segments, nor threaten ORVs.

Route number 13 follows a natural drainage and affects less than ½ mile of Tabeguache Creek Segment 2, which has a preliminary classification of "recreational". The route ends in Tabeguache Creek itself and would have a moderate, temporary impact on water quality (see the Water – Surface and Soils sections). Impacts from the infrequent use (2 times per year) and short duration (less than one day per use) are not anticipated to affect the preliminary classification of the stream segment, nor threaten ORVs.

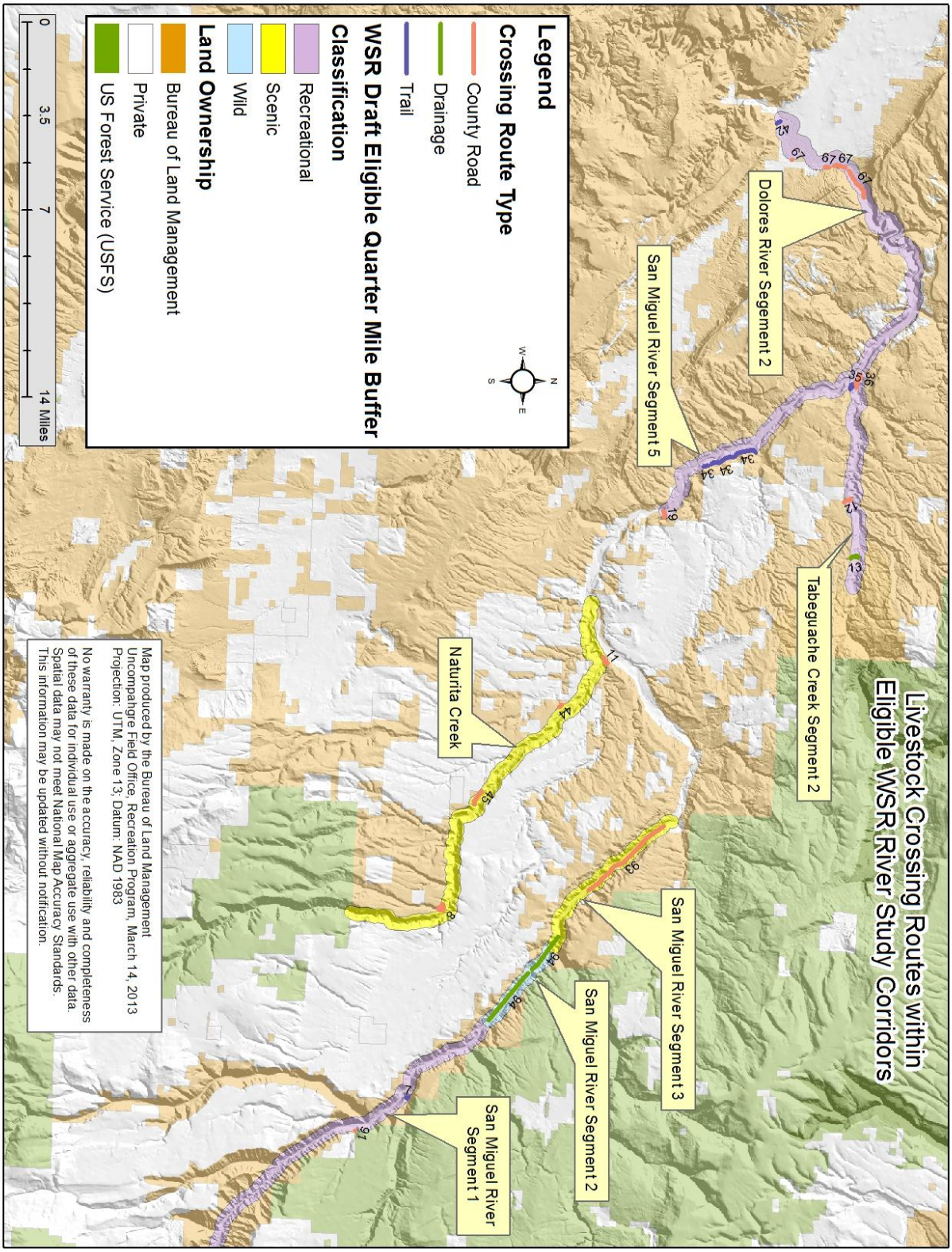
Route number 94 follows the San Miguel River along its south bank. It is almost entirely within the San Miguel River Segment 2 study corridor, which has a "wild" preliminary classification. As such it must be managed so there is little or no evidence of human activity. A limited amount of livestock use is acceptable; the proposed livestock crossing use would be 30 animals crossing on this route twice annually, with no overnight use. In addition to these limits, a design feature in the proposed action stipulates that within "wild" corridors no trail building, modifications to the stream banks or mechanical removal of vegetation would be allowed. With these restrictions in place, the WSR values would be adequately protected along this route.

Design features in the proposed action crafted for the general protection of cultural resources, sensitive/riparian vegetation, soils, and surface water would also protect the ORVs and preliminary classifications of eligible WSR segments.

Cumulative Impacts **–** The immediate effects of active livestock crossing use would be low to moderate, and would be expected to recover adequately between uses. Cumulative impacts to eligible segments would not be noticeable.

No Action Alternative – Livestock permittees would truck livestock instead of trailing. Since loading/unloading areas could be sited outside the eligible WSR corridors, there would be no impact to WSR values from moving livestock to or from allotments.

Map 2: Affected Eligible WSR Study Corridors



CULTURAL RESOURCES

Affected Environment: The proposed cattle crossings are situated at various elevations and in a variety of ecological zones. Most trails conform to existing roads and tracks, with few being used on a "cross-country" basis. Most proposed trails were dropped from inventory requirements under the provisions of BLM 8100 manual .23B2 which does not require survey in human altered environments (such as roadways). Twenty-two individual trail segments were identified as requiring inventory, since these routes were either cross country, in gullies or washes, or along un-fenced roadways.

Environmental Consequences:

Proposed Action – A BLM archaeologist inventoried all of these routes in May 2013. With the exception of three trails, all trail segments were negative. The three exceptions are the Paradox Stock Driveway, the Monogram Stock Driveway and the Ketchemup Trail. All three of these trails are historic resources and have been recorded as such. The Monogram and Paradox Stock Driveways have been determined to be ineligible for nomination to the National Register. The Ketchemup Trail is considered to be Eligible for Nomination to the National Register, but since the trail itself is the site, and since cattle crossing fits the historic purpose of the trail, crossing cattle on this trail will have no adverse effect to the resource. No National Register or otherwise eligible cultural properties will be affected by the issuance of these crossing permits.

Cumulative Impacts –There are no cumulative effects to Historic Properties as considered.

No Action Alternative – There will be no impacts to Cultural Resources.

NATIVE AMERICAN RELIGIOUS CONCERNS

Affected Environment: During the Cultural Resource inventory of the proposed trails, there were no prehistoric sites not any evidence of Traditional Cultural properties encountered. There are no known or anticipated effects to and Native American Religious Concerns from the issuance of these permits.

Environmental Consequences:

Proposed Action – There are no impacts. Should future Tribal Consultations reveal the presence of any concerns which may be impacted by cattle trailing, the appropriate mitigation measures will be implemented in consultation with the Native American Tribes concerned.

Cumulative Impacts – There are no known cumulative impacts.

No Action Alternative – There are no impacts.

FARMLANDS, PRIME AND UNIQUE

Several Crossing Routes pass through soils classified as Prime, Unique or of Statewide Importance on BLM lands. The soils classified by the NRCS as Prime, Unique or of Statewide Importance that occur on BLM lands are generally situated above the existing irrigation system in the valley or are not irrigated. When these soils exist in areas with a developed irrigation water supply, only those soils that are irrigated are considered Prime, Unique or of Statewide Importance (National Soil Survey Handbook, 622.04(a)(3)). Since none of the soils on BLM are irrigated, soils classified as Prime, Unique or of Statewide Importance will not be analyzed further.

SOILS (includes a finding on Standard 1)

Affected Environment: The soils impacted by crossing routes are described in the 1986 Soil Survey of San Miguel Area (USDA, Natural Resources Conservation Service). In general, the sedimentary sandstone and shale formations that dominate the surface geology of the area produce soils having textures dominated by loams and fine sandy loams. The soils in the lower and more arid portions of the area are mostly classified in the soil orders Aridisols (soils of dry climate regimes) and Entisols (soils with very limited development), and have little organic matter throughout their vertical profile. At the higher elevations, soils are mostly in the soil order Mollisols (soils having darkened, organic matter enriched surfaces).

Four Land Health Assessments cover the area of interest and have more detailed descriptions of the soils present and specific health conditions. The Land Health Assessments for West Paradox (2009), East Paradox (2010), Norwood (2006) and Mesa Creek (2004), and can be found here: http://www.blm.gov/co/st/en/fo/ufo/land_health.html.

One of the important components of arid soils in this area is biological soil crusts (BSC). BSC help stabilize the soil and inhibit wind and water erosion by forming a blanket or mat covering and binding the soil surface. BSC is a complex mosaic of cyanobacteria, green algae, lichens, mosses, microfungi, and other bacteria. The crusts also serve a critical role in nutrient cycling, water infiltration, and seedling germination (USDI 2001).

Environmental Consequences:

Proposed Action – The majority of the crossing routes are concentrated on existing roads. On trails and within drainages, livestock crossing can directly impact soil conditions by concentrating hoof action and reducing vegetative cover and biological soil crust. These two factors are critical in maintaining soil health and moisture content. The table below shows the crossing routes that are located in drainages or on trails where cows are likely to disperse into a larger area of disturbance. These are also the routes located on the soils most susceptible to erosion.

Table 3

Route ID	Route Type	Cattle (Head)	Historic Season	Distance (Miles)	Texture	Erosion Hazard (Trails)	Land Feature
1	Drainage	800	Spring/Fall	1.3	cobbly clay loam	Severe	landslides, structural benches, terraces
6	Trail	3100	Spring/Fall/Winter	2.5	cobbly clay loam	Severe	landslides, structural benches, terraces
34	Trail	360	Spring/Winter	3.3	very gravelly clay loam	Severe	terraces, valley sides
35	Trail	180	Winter	1.3	cobbly clay loam	Severe	landslides, structural benches, terraces
49	Trail	1800	Spring/Fall/	0.8	loam	Severe	mesas, terraces
59	Drainage	400	Fall	2.3			
60	Drainage	800	Spring/Fall	0.6	loam	Severe	hills, ridges
61	Trail	800	Fall	4.2	cobbly clay loam	Severe	landslides, structural benches, terraces

Erosion Hazard in the table above is a factor determined by the NRCS in the soil survey. It is a combination of the soil's susceptibility to erosion (k factor), slope, and content of rock fragments. These three variables are combined to arrive at an overall rating. In the drainages and trails above, the "severe" rating would indicate the potential for substantial erosion, and that these trails may need frequent maintenance or erosion control measures.

In a field review of selected routes in table 3, however, impacts were not found to differ from nearby grazed areas. It appears that the current number of livestock using the crossing routes does not create any more impact than the current grazing practices. There was evidence of increased rates of erosion such as rilling and channeling on the steeper slopes of bare clay hillsides along the crossing routes. However, the erosion didn't appear to be increased by the livestock traffic. It appeared to be naturally occurring as seen in other similar soils with steep slopes and high clay content.

If conditions are wet or exceptionally dry, the impacts to soils during crossing could vary dramatically. If soils become severely impacted during wet or dry periods and native perennial vegetation and soil crust is degraded, annual weeds such as cheat grass can become dominant. Annual vegetation provides soil stabilization for a short period of time compared to perennials and prevents soil crust establishment by forming a dense monoculture of tightly spaced plants (Rosentreter 1994; Kaltenecker 1997).

Design features of the proposed action, including limitations on crossing during wet conditions or during exceptional drought, should help prevent soil loss by protecting perennial vegetation and reducing the impact to soil structure and biological soil crust when it's most vulnerable.

Cumulative Impacts – This action, when combined with the past, present and reasonably foreseeable actions, could add to impacts from other activities on private and federal lands in the watershed and could contribute to generally decreased soil health. Other activities causing impacts to soils on BLM and Forest Service lands in the watershed include historical uranium mining, rights of ways, recreation and travel infrastructure. The types of impacts expected from other actions in the watershed would be similar to those described for the proposed action.

No Action Alternative – No impacts to soil resources are anticipated from the No Action Alternative. There could be a small localized improvement to soil health within crossing routes.

Finding on the Public Land Health Standard for upland soils: The BLM completed four Land Health Assessments (LHAs) in the crossing area. Assessment of soil health is conducted using the following indicators: evidence of excessive rills and pedestals, active gullies, appropriate groundcover and plant canopy cover (including BSC), adequate plant litter accumulation, minimal litter movement, appropriate soil organic material, and plant species diversity and presence of vigorous, desirable plants. Much of the area's soils were rated as meeting the soil standard but with problems, meaning at least two of the above soil surface indicators were not adequate for the site. More detailed information can be found in West Paradox (2009), East Paradox (2010), Norwood (2006) and Mesa Creek (2004) LHAs. Crossing routes existed at the time of these assessments, and with the proposed design features in the proposed action, the overall soil health would be expected to improve slightly. Because the crossing routes are narrow corridors which pass through much larger land health polygons, neither alternative would result in enough changes to soil over a large enough area to affect the current Standard 1 rating. Standard 1 would continue to be identified as met until further assessed.

VEGETATION (includes a finding on Standard 3)

Affected Environment: Livestock crossing on public lands in the project area affects a variety of vegetation types. The primary types include pinyon-juniper woodland, sagebrush, saltdesert shrub, grass-forb rangeland, and mountain shrub. Small areas of ponderosa pine, montane woodland, and riparian vegetation are also affected. Detailed descriptions of these plant communities can be found in the Mesa Creek, Norwood, and East Paradox Land Health Assessments (BLM 2004, 2006, and 2010 http://www.blm.gov /co/st/en/fo/ufo/ land_health.html).

The livestock crossing routes pass through native plant communities, many of which are in relatively good condition. Some routes, however, pass through communities which are known to have ecological problems. The following types of problems have been noted in the vicinity of some of the crossing routes, in order from most to least prevalent: exotic plants, low perennial forb cover, low perennial cool season grass cover, low plant species diversity, noxious weeds, low shrub vigor, low warm season grass cover, and heavy hedging on shrubs.

Because of their global scarcity, there are some plant communities which are of special interest. Less than 1.4 miles of crossing routes pass through documented rare upland communities. These involve: Needleandthread grass Great Basin herbaceous vegetation, and Utah juniper/Salina wildrye woodland. Additional crossing routes pass through rare riparian communities, which are discussed under the Wetlands Section. Plant communities which are in extremely good condition with little evidence of human disturbance are also considered of special interest. Around 1.1 miles of crossing routes pass through uplands where the vegetation has been documented to be in extremely good condition. Crossing routes 6 and 11 pass through upland areas which support excellent condition and/or rare vegetation.

Environmental Consequences:

Proposed Action – Livestock crossing can cause direct plant damage or death, or result in the removal of vegetation on heavily travelled paths within the crossing route. Typically these paths occupy only a very small proportion of the width of the crossing route. The majority of vegetation within a crossing route receives lesser impacts associated with occasional trampling, incidental grazing, dust or sediment deposition, or increased competition from weeds. These lesser impacts usually result in a slightly degraded vegetation community as compared with outside the crossing route. The degradation is often in the form of slightly higher level of weeds and invasive species, fewer woody species, and more annual or rhizomatous herbaceous species. Because the Proposed Action authorizes the crossing activities which have been ongoing for many years, but with terms and conditions, no to slight positive change to the current vegetation conditions are expected to occur within most routes.

Fifty-seven miles of crossing routes pass through lands with documented land health problems that concern vegetation. Livestock crossing activities may be contributing to some of these vegetation concerns. However, the scale of the land health problems extends far beyond the narrow corridor that encompasses the crossing activity. Under the Proposed Action, design features which include active livestock movement and overnighting only in designated corrals and traps will represent an improvement over current practices. Less vegetation will receive incidental grazing, and there is likely to be slightly less trampling as livestock are actively moved. Vegetation conditions in these areas are expected to stay stable, or slightly improve as a result.

The same vegetation impacts are expected to occur in the vegetation communities of special interest. In cases where excessive vegetation damage associated with livestock crossing is occurring, the BLM may designate additional watering sites within the crossing route located away from these sensitive communities in order to reduce pressure on them. Appropriately located livestock water could increase the speed and orderliness of livestock movement, and reduce incidental grazing and trampling.

Cumulative Impacts – This action, when combined with past, present and reasonably foreseeable actions, will have negligible impact to vegetation at the watershed level. Slightly more intensively managed livestock crossing in the West End of Montrose and San Miguel Counties could result in very small improvements in vegetation along the crossing routes, but the effects will be so small scale as to be negligible. Vegetation at the watershed scale is experiencing a variety of impacts on federal lands such as those associated with wildfire, vegetation treatments, livestock grazing, wildlife use, rights of ways, recreation, adjacent private inholdings, and travel infrastructure. Impacts to vegetation resulting from activities on private property in the watershed include cultivation, irrigation, livestock production, residential and commercial land development, and mining. The scale and scope of these other impacts further reduces the degree to which vegetation changes resulting from this alternative would affect overall vegetation health in the watershed.

No Action Alternative – This alternative would not impact plants in the crossing routes through trampling or incidental grazing. In the absence of livestock crossing, vegetation along the crossing routes would likely gradually transition to become more similar to vegetation

outside of the crossing routes. There would likely be incremental improvements to vegetation health in the crossing routes.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic; Wildlife, Terrestrial; and Invasive, Non-native Species): Currently, 56 miles of crossing routes pass through lands which meet Standard 3, 41 miles pass through lands meeting Standard 3 with problems, and 16 miles pass through lands which do not meet Standard 3. Because the crossing routes are narrow corridors which pass through much larger land health polygons, neither alternative would result in enough vegetation changes over a large enough area to affect the current Standard 3 ratings. Improved crossing practices as outlined in the design criteria will be compatible with improving vegetation conditions in the areas with land health problems.

INVASIVE, NON-NATIVE SPECIES (includes a finding on Standard 3)

Affected Environment: Noxious weeds and invasive plants are found in varying degrees throughout the west end of the Uncompahgre Field Office. State listed noxious weeds and BLM weeds of concern are scattered in isolated infestations across the project area. Russian knapweed (*Acroptylon repens*) is the most common in disturbed areas at lower elevations. Tamarisk (*Tamarix chinensis*) is present in most of the lower elevation drainages, and Canada thistle (*Cirsium arvense*) is also found along some drainages and in higher elevation disturbances. Musk thistle (*Carduus nutans*) occurs sporadically throughout the area. Frequent occurrences of whitetop (*Cadaria draba)* have been documented, particularly on private lands adjacent to BLM. Most infestations occur along roadways, drainage corridors or are associated with new ground disturbance activities. A systematic survey of the area has not been completed to date.

Environmental Consequences:

Proposed Action – Vegetation within crossing routes could have short-term degraded vegetation potentially resulting in slightly higher level of weeds and invasive species (see the Vegetation section). While crossing, livestock could introduce and spread noxious weeds. If infestations around crossing routes are allowed to establish without intervention and allowed to persist, they have the potential to serve as points of spread into currently non-infested parts of Public Land. The proposed action, complete with permit terms and conditions, should not cause a widespread increase in noxious weed infestations. Active noxious weed control by the BLM, and cooperative weed treatment agreements with County, State and other Federal agencies would continue.

Cumulative Impacts – Cumulative impacts of the proposed action, when considered within the larger region, or across a longer time period, may occur. Other contributors to cumulative impacts could be through soil disturbance from road construction, construction of range improvements, and the use of roads and improvements by other visitors. Noxious and invasive species throughout the area will likely continue to establish at current rates.

No Action Alternative –The No Action alternative would have no impact to noxious weeds.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic; Wildlife, Terrestrial; and Vegetation): See the Vegetation section for additional information. The proposed action would not contribute to the area not meeting land health standards for plant and animal communities.

THREATENED, ENDANGERED, AND SENSITIVE WILDLIFE (includes a finding on Standard 4)

Affected Environment: The Endangered Species Act (ESA), as amended (16 U.S.C. 1531-1534) mandates the protection of species listed as threatened or endangered of extinction and the habitats on which they depend. Section 7 of the ESA clarifies the responsibility of federal agencies to utilize their authorities to carry out programs for the conservation of listed species. In addition, federal agencies must consult with the U.S. Fish and Wildlife Service (Service) to ensure that any action authorized, funded or carried out by the agency is "…not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species…". The Uncompahgre Field Office (UFO) utilizes the U.S. Fish and Wildlife Service *Information, Planning, and Conservation* System (IPaC) to generate the most current species list to analyze the effects of a Proposed Action on threatened, endangered and candidate species and designated critical habitat for these species (USFWS, 2013). Additionally, the BLM has a state-wide list of Sensitive Species for management consideration. In accordance with BLM Manual 6840, the goal of management of these species is to prevent a trend toward federal listing or loss of viability.

Table 4: Routes intersecting TES species habitat

Species	Route IDs	Habitat	Route Miles*
Canada Lynx	2, 94	LAU	4.6
Gunnison Prairie Dog (Prairie)	8, 11	Known colonies	9.8
Gunnison Sage Grouse	9, 14, 30, 39, 43, 70, 71, 72, 73, 74	Proposed Critical Habitat	26.3
	14, 43	CPW Production Habitat	8.0
Desert Bighorn	30, 39, 42, 66, 67, 73, 79	CPW Winter/Summer Range	16.3
Long-billed curlew, White-faced ibis	3, 7, 12, 13, 19, 22, 34, 35, 36, 41, 45, 52, 53, 55, 61, 66, 67, 78, 91, 93, 94, 97	Riparian Vegetation	115.5
Northern leopard frog, Canyon Treefrog	1, 2, 6, 8, 13, 14, 19-22, 31, 36, 38, 41, 43, 49-55, 61, 66, 67, 72, 78, 81, 85, 87, 91, 92, 94	Perennial streams	68.8

Canyon Treefrog	5, 42, 67, 79	CNHP known occurrences	10.1
Bald Eagle	61, 94	CPW winter roost sites	8.3
	1, 19, 29, 45, 59, and 85	Within 0.5 miles of CPW winter roost sites	8.1
	1, 19, 29, 34, 52, 57, 59, 78, 86, 87	CPW winter concentration habitat	18.8
Peregrine Falcon	15, 64, 66, 67, 79	Potential nesting habitat	16.8
Ferruginous Hawk	All	Potential winter foraging/roosting habitat	
Burrowing Owl	12, 32, 33, 37, 43, 66, 67, 79, 81, 86	Potential nesting habitat	20.5
Northern Goshawk	7, 9, 15, 21, 49, 51, 52, 63, 96	Potential nesting habitat	18.6
Colorado River Cutthroat Trout	66	Known occurrence in Roc Creek	4.02
Roundtail chub, Bluehead sucker, and Flannelmouth sucker	1, 2, 6, 8, 13, 14, 19, 20 , 21, 22, 31, 36, 38, 41, 43, 49, 50-55, 61, 66, 67, 72, 78, 81, 85, 87, 91, 92, 94	Known occurrences from CPW & BLM sampling	68.8

*If a route passes through TES species habitat, the entire route segment was used to calculate the miles of route.

Federally Listed Species

According to IPaC, the project area has potential for 12 federally listed species. Of these, only Canada lynx, Gunnison prairie dog, Gunnison sage grouse and Western yellow-billed cuckoo are expected in the project area based on habitat and known occurrences. The remaining species (Mexican spotted owl, bonytail chub, Colorado pikeminnow, greenback trout, humpback chub, razorback sucker, black-footed ferret, and North American wolverine) are not expected within the project area based on habitat and current range/location information; No effect is expected to these species and there is no further discussion of these species. Appendix A lists potentially occurring federal status species and habitats within the UFO and provides assessments for their occurrence within the project area.

Canada lynx (Threatened)

Canada lynx was listed as threatened in 2000. Lynx were extirpated from Colorado, but in 1999 Colorado Parks and Wildlife (CPW) began an ambitious program of lynx restoration in the San Juan Mountains. By 2005 more than 200 animals had been released, a number of litters of kittens had been born, and lynx were expanding throughout the high country and occasionally beyond. Lynx are found in dense subalpine forest and willow-choked corridors along mountain

streams and avalanche chutes, the home of its favored prey species, the snowshoe hare. Crossing routes 2 and 94 (4.6 miles) cross through the Little Cone Lynx Analysis Unit (LAU) (Table 4), however there are no suitable habitats within the analysis area for this project.

Gunnison prairie dog (Candidate)
Gunnison prairie dog was determined to be warranted but precluded from listing in 2008 within the montane portion of their range (73 FR 6678). Gunnison prairie dogs within the project area are considered part of the prairie population. Since prairie dogs within the project area are not part of the montane portion, this project will have no effect to the montane portion of Gunnison prairie dogs.

Gunnison sage grouse (Proposed Endangered)
In 2000, the Gunnison sage grouse was recognized as a distinct species by American Ornithological Union. In 2013, Gunnison sage grouse was proposed as endangered (78 FR 2485) and critical habitat was also proposed (78 FR 2539). The project area contains portions of proposed critical habitat associated with the San Miguel population of the Gunnison sage grouse. Routes 9, 14, 30, 39, 43, 70, 71, 72, 73 and 74 pass through portions of proposed critical habitat (26.3 miles) (Table 4). There are known lek areas within and adjacent to the project area. While no routes pass through lek areas, routes 14 and 43 pass through CPW mapped Production habitat (8.0 miles) and no routes pass through what is considered Priority Nesting Habitat. Priority Nesting Habitat is defined as the area within 2 miles of known lek sites. The Gunnison Sage Grouse Rangewide Conservation Plan (2005) indicates that "70-80% of all nests often occur within 2 miles of an active lek."

Western yellow-billed cuckoo (Candidate)
Yellow-billed cuckoo was determined to be warranted but precluded from listing in 2001 within the western portion of their range (66 FR 38625). In the West, it nests in tall cottonwood and willow riparian woodland. Western subspecies appear to require patches of at least 25 acres of dense riparian forest with a canopy cover of at least 50 percent in both the understory and overstory. All routes are within the range of the species, however, no routes could be considered to be within or adjacent to potential nesting habitat for the western yellow-billed cuckoo.

BLM Sensitive Species
Appendix B identifies BLM sensitive species that are known or have potential to occur within the UFO along with occurrence assessments for the area. Numerous sensitive species are known or have the potential to occur in the project area.

Desert Bighorn – *Ovis canadensis*
An effort to establish desert bighorn sheep into probably historic desert bighorn range was initiated in 1974. Within the project area, there is currently a population of desert bighorn sheep along the Dolores River. CPW has mapped bighorn habitat (winter and summer range) within the project area, but not any critically important habitats. Within the project area routes 30, 39, 42, 66, 67, 73 and 79 pass through winter/summer range (16.3 miles). Generally these routes do not pass through typical steep, remote habitat that bighorn sheep tend to occupy. Crossing activities should generally not be in proximity to desert bighorn sheep.

Sensitive Bat Species
BLM sensitive bat species that may occur within the project area include Allen's big-eared bat, big free-tailed bat, spotted bat, Townsend's big-eared bat, and fringed myotis.

Fringed myotis - *Myotis thysanodes*
The fringed myotis is a species of coniferous forest and woodland at moderate elevations in Colorado. Typical vegetation of their habitat includes ponderosa pine, pinyon/juniper, greasewood, saltbush and scrub oak. They roost in rock crevices, caves, mines, and buildings, and trees. Hibernation occurs in caves and buildings. Maximum elevation of known populations is 7,500 feet.

The planning area is within the known range of this species, and suitable habitat is present. Fringed myotis have been detected within the project area. However, site-specific surveys have not been conducted to determine the presence of roost sites for this species. They may forage at night throughout much of the project area.

Spotted bat - *Euderma maculatum*
Spotted bats are found at scattered locations in western North America and are apparently one of the rarest bats in the United States. The spotted bat has been found in a variety of habitats including ponderosa pine, pinyon and juniper woodland, and shrub desert. They will roost in crevices of rocky cliffs and canyons and forage over a variety of habitats. They have been known to have maternity roosts in cliffs in desert habitat, traveling long distances (25 miles) and up in elevation (4500-6000 feet increase) to forage in high elevation meadows (Rabe et al 1998, Siders et al 1999).

Suitable habitat is present within the planning area. The spotted bat is rare in western Colorado but may possibly occur within the planning area. Surveys have not been conducted to determine roost sites for this species, but acoustic detections have been documented for the Paradox Valley within the project area. They may forage at night throughout much of the project area.

Big free-tailed bat - *Nyctinomops macrotis*
The big free-tailed bat occurs mainly in southern California, Arizona, New Mexico, Texas and Mexico. Long thought to be an accidental wanderer in Colorado, recent preliminary data now suggest the presence of breeding colonies in southern Utah and adjacent Colorado.
The big free-tailed bat frequents rocky canyons and rugged terrain in desert and woodland habitats. For roosting, they prefer rock crevices in high cliffs, but also uses buildings, caves, and occasionally tree holes.

Suitable habitat is present within the planning area. Surveys have not been conducted to determine roost sites for this species, but acoustic detections have been documented for the Paradox Valley within the project area. They may forage at night throughout much of the project area.

Allen's big-eared bat - *Idionycteris phyllotis*
The Allen's big-eared bat is considered to be rare in western Colorado. They are most often associated with ponderosa pine, pinyon-juniper, pine-oak woodland, and riparian habitats above

3,000 feet. Maternity colonies of 30 to 150 individuals have been found in cracks in cliff faces, mine shafts, boulder piles, lava beds, and beneath the loose bark of large ponderosa pine snags.

Suitable habitat is present within the planning area. Surveys have not been conducted to determine roost sites for this species, but acoustic detections have been documented for the far western portions of the project area. They may forage at night throughout much of the project area.

Townsend's big-eared bat - *Corynorhinus townsendii*
Townsend's big-eared bats can be found throughout Colorado except in the eastern plains. In Colorado they occur in mines, caves and structures in woodlands and forests up to elevations above 9,500 feet.

Suitable habitat is present within the planning area. Surveys have not been conducted to determine roost sites for this species, but acoustic detections have been documented for the Paradox Valley within the project area. They may forage at night throughout much of the project area.

Riparian Species
Riparian areas are the primary type of wetland vegetation across the project area (See Wetland & Riparian section). BLM sensitive species that would be considered tied to riparian habitat and may occur within the project area include long-billed curlew, and white-faced ibis.

Long-billed curlew - *Numenius americanus*
In Colorado the heaviest concentrations of long-billed curlew are in southeastern Colorado, with smaller populations in northeastern and northwestern Colorado. A small contingent apparently nests on the Western Slope, definitely in Mesa County and possibly Moffat County. The long-billed curlew is highly associated with healthy native grassland habitats, primarily shortgrass prairie, with nearby shallow lakes, playas, or ponds for feeding, bathing or drinking. Presence in the project area is unknown.

Within the planning area, crossing routes occur within 18.4 miles of riparian habitat, and numerous routes (115.5 miles) intersect riparian habitat that may contain suitable habitat for this species. The presence of long-billed curlew in southwestern Colorado is very rare. There are no records of breeding pairs in this area of the State.

White-faced ibis - *Plegadis chihi*
White-faced ibis are primarily found along the Gulf Coast, through the Great Basin, and in other isolated colonies in the plains and southwest. In Colorado, breeding occurs mainly in the San Luis Valley, with some records near Gunnison, Cortez, Greeley, and Browns Park in the northwestern corner of the State.

The white-faced ibis is a colonial nester utilizing wetland habitats and flooded agricultural fields. Most ibises nesting in Colorado favor tall emergents such as bulrush and cattail growing as islands surrounded by shallow water. The planning area is within the range of white-faced ibis. Crossing routes occur within 18.4 miles of riparian habitat, and numerous routes (115.5 miles)

intersect riparian habitat that may contain suitable habitat for this species. The Colorado Breeding Bird Atlas includes a record of a white-faced ibis observed in the Norwood SE Atlas Block. However, it does not include the exact location of this observation.

Wetland/Ephemeral Water Associated Species
Wetland habitats are areas that are saturated with water, either permanently or seasonally. Ephemeral habitat consists of springs, streams, rivers, or ponds which only exist for a short period of time following precipitation or snowmelt. BLM sensitive species that would be considered tied to wetland and/or ephemeral aquatic habitat and may occur within the project area include Northern leopard frog, and canyon tree frog.

Northern leopard frog - *Lithobates pipiens*
The northern leopard frog occurs throughout Colorado, excluding most of the southeastern and east-central portions of the state. NDIS data records indicate that the northern leopard frog occurs in both San Miguel and Montrose Counties. Typical habitats include wet meadows and the banks and shallows of marshes, ponds, glacial kettle ponds, beaver ponds, lakes, reservoirs, streams, and irrigation ditches.

The planning area is within the range of the northern leopard frog and numerous routes (68.8 miles) intersect perennial streams that may contain wetland/riparian habitat that may be suitable for this species. Additional ephemeral wet habitat (ponds, washes, etc.) may also be present in the project area. There are no records of this species occurring within the planning area but site specific surveys have not been conducted to determine the presence of this species.

Canyon treefrog - *Hyla arenicolor*
The canyon treefrog occurs along the Dolores River and its tributaries from near the Utah border south into San Miguel County, mainly at elevations of about 4,500–6,300 feet. The canyon treefrog occurs along intermittent streams in deep, rocky canyons.

The project area is within the range of the canyon treefrog and numerous routes (68.8 miles) intersect perennial streams that may contain wetland/riparian habitat that may be suitable for this species. Additional ephemeral wet habitat (ponds, washes, etc.) may also be present in the project area. Routes 5, 42, 67 and 79 are adjacent to known occurrences from CNHP data. Site specific surveys have not been conducted to determine the presence of this species.

Aquatic Species

Colorado River cutthroat trout (*Oncorhynchus clarki pleuriticus*)
CPW and the Forest Service consider Roc Creek as occupied habitat by Colorado River Cutthroat Trout (CRCT). Recent surveys published by the CRCT Conservation Task Group suggest that the genetic purity of the CRCT in Roc Creek is less than 80%.

The entire planning area is within the range of the CRCT however, the only crossing route occurring within or adjacent to an occupied stream is near Roc Creek. Route 66 parallels Rock Creek for approximately 4.02 miles.

Roundtail chub (*Gila robusta*), Bluehead sucker (*Catostomus discobolus*), and Flannelmouth sucker (*Catostomus latipinnis*)
Nearly every perennial stream with connectivity to the San Miguel (below approximately Beaver Creek) and Dolores river systems, with moderately functional riparian systems and flows, provides suitable habitat for various life stages of all three species. Where barriers do not preclude movement spawning activity, fry, and sub-adult fish can be found within these perennial systems. Streams where either CPW or BLM sampling has documented these species include: San Miguel River, Dolores River, Roc Cr., La Sal Cr., Tabeguache Cr., Cottonwood Cr., Beaver Cr., and Mesa Creek. The three species typically breed in spring and early summer.

GIS analysis suggests that 68.8 miles of crossing routes either occur adjacent to or intersect perennial streams that support all or portions of these species life processes. Only those portions of the crossing routes that occur within the riparian zone or involve stream crossings would be expected to influence sensitive fish resources.

Sensitive Raptors
BLM sensitive raptors that may occur within the project area include bald eagle, American peregrine falcon, Ferruginous hawk, burrowing owl and Northern goshawk.

Bald eagle - *Haliaeetus leucocephalus*
The bald eagle was removed from the Colorado list of threatened and endangered species in 2009, but continues as a BLM Sensitive Species. There are no known nest sites within the project area, however CPW mapped winter roost sites are located within the planning area and routes 61, and 94 pass through these areas (8.3 miles) (Table 4). Additionally, routes 1, 19, 29, 45, 59, and 85 pass within 0.5 miles of winter roost sites (8.1 miles). The project area contains CPW mapped winter concentration habitat, and routes 1, 19, 29, 34, 52, 57, 59, 78, 86, 87 pass through this habitat (18.8 miles). From early December through early April, wintering bald eagles forage throughout the project area.

American peregrine falcon – *Falco peregrines anatum*
The peregrine falcon are located in the mountainous areas of the central and western areas of the State. The highest concentrations occur along the Dolores and Colorado River canyons in Mesa and Montrose Counties, and in the Dinosaur National Monument.

Peregrines usually nest on ledges of high cliffs near a reliable source of prey. The eyrie is most often near water and receives little disturbance. Pairs generally arrive at the nesting area in March and will begin incubating 3-4 eggs in April. After hatching, the young remain in the nest through May and early July. The young typically fledge by the end of July or early August. Both the adults and young will remain in the vicinity of the eyrie until they migrate to wintering areas south of Colorado.

Canyons and cliffs within the planning area contains suitable habitat for the peregrine falcon, but has no known eyries. Within the project area, known breeding pairs are located in the Dolores River Canyon and Paradox valley. None of the proposed routes are within disturbance distance of any known eyrie locations. However, routes 15, 64, 66, 67, and 79 are in areas of potential nesting habitat (16.8 miles) (Table 6).

Ferruginous hawk – *Buteo regalis*

In Colorado, ferruginous hawks are found primarily on the eastern plains, in the grassland and lowland riparian habitat types. Small numbers of these hawks nest in northwestern Colorado and the San Luis Valley. Ferruginous hawks nest in isolated trees or small groves of trees, and on other elevated sites such as rock outcrops, buttes, large shrubs, haystacks, and low cliffs. Nests are situated adjacent to open areas such as grassland or shrubsteppe. In Colorado, nesting is initiated as early as mid-March, and young fledge during late June and July. Although they do breed in Colorado, Ferruginous Hawks are more common during winter (November to March). Rabbits and hares are the most important prey items by biomass, but prairie dogs and ground squirrels are the most important numerically.

Ferruginous hawks are not known to breed in the project area and there are no known nest locations, however may winter in open habitats associated with prairie dog colonies.

Burrowing owl – *Athene cunicularia*

In Colorado, Burrowing Owls breed throughout the eastern plains and in river valleys and mountain parks elsewhere. Some uncertainty surrounds the timing of specific breeding events by this species, due to the relative difficulty of studying their underground nests. The owls arrive in Colorado at the end of March and early April, and probably initiate nesting by early May. Fledged young appear at the burrow opening from May through July. The birds leave for their wintering grounds in the Southwest, Mexico, and Central America by mid-October. The breeding season diet consists primarily of insects, but small mammals are also taken (COPIF 2013b). Burrowing owls are considered rare to uncommon in western Colorado. Populations are presently declining in Colorado; however, Colorado Breeding Bird Survey sample sizes are insufficient to reliably predict population trends (CPW 2013b).

Within the project area, there are known historic occurrences on routes 12, 32, 33, 37, 43, 66, 67, 79, 81, and 86 with potential habitat (20.5 miles) elsewhere in the project area associated with prairie dog colonies (Table 4).

Northern goshawk - *Accipiter gentilis*

Throughout their range, goshawks utilize primarily coniferous and deciduous forest habitat, especially in mountains. Preferred nesting habitat in this part of Colorado includes mature to old growth aspen and ponderosa pine forest. Nest trees are large, opened crowned trees with large limbs which can provide a base for their stick nest. Goshawks reuse the same nesting territory year after year and may use the same nest for several seasons. They may have several alternate nest sites within a territory.

The northern goshawk is known to breed throughout the adjacent GMUG National Forests, but no known nests are found with the project area. Site-specific surveys have not been conducted within the planning area to determine the presence of this species. Potential habitat (ponderosa pine) is located along routes 7, 9, 15, 21, 49, 51, 52, 63, and 96 (18.6 miles) (Table 4).

Sensitive Birds

BLM sensitive bird species that may occur within the project area include Brewer's sparrow.

Brewer's sparrow - Spizella berweri

The Brewer's sparrow is a sagebrush obligate species. Habitat characteristics correlated with dense populations include a dominance of stands of moderate-density big sagebrush of mid-height, with high forb cover, low grass cover, and some horizontal diversity. Natural Diversity Information Source (NDIS) data records indicate the Brewer's sparrow occurs in both Montrose and San Miguel Counties. Breeding Bird Atlas (Kingery 1998, Breeding Bird Atlas II) records document the presence of this species in Montrose County as well. There are no known nests of Brewer's sparrow within the project area.

Brewer's sparrows are summer residents of the mesas and foothills of western Colorado. They start to arrive in Mid-April with full numbers at the end of the month, and depending on weather conditions, they begin nesting late (mid-May to late June) and nest only once each season. Incubation takes 16-17 days and young fledge in 21-24 days.

The project area is within the known range of this species, and suitable habitat is present. Site-specific surveys have not been conducted to determine the presence of this species within the planning area.

Sensitive Reptiles

BLM sensitive reptiles that may occur within the project area include long-nosed leopard lizard, midget faded rattlesnake and milksnake.

Midget-faded rattlesnake - *Crotalus oreganus concolor*

The midget-faded rattlesnake is one of the smallest rattlesnakes in the Colorado Plateau region of the United States. They are known to occur in San Miguel, Delta and Montrose Counties.

Midget-faded rattlesnakes prefer rocky outcrops in areas dominated by sage, but will also utilize riparian, salt shrub, mountain shrub, and pinyon-juniper habitats. The rock outcrops are focal points in their habitat that provide cover and hibernacula. Suitable outcrops typically provide several den sites. Suitable habitat is present within the planning area. Midget-faded rattlesnakes may occur within the planning area but site specific surveys have not been completed to determine species presence.

Milk snake - *Lampropeltis triangulum taylori*

There are three milk snake subspecies recognized in the State of Colorado. They occur throughout most of eastern and southern Colorado at elevations below 8,000 feet and in west-central Colorado below about 6,000 feet.

The milk snake occurs in a wide variety of habitats in Colorado including shrubby hillsides, canyons, pinyon-juniper woodland, and open stands of ponderosa pine. They hibernate in rock crevices, under logs or other debris. After emergence in June they will remain active until September or October.

Suitable habitat is present within the planning area. They are considered to be unusual but locally common in San Miguel and Montrose counties. Site-specific surveys have not been conducted

to determine the presence of this species in the planning area.

Environmental Consequences:

Proposed Action – Refer to the Migratory Birds, Terrestrial and Aquatic Wildlife sections for a general discussion of crossing impacts on migratory birds/wildlife and habitat.

General Consequences

The most likely impact of the proposed action is minor forage utilization along the crossing corridor. Livestock being moved tend to eat small amounts of forage as they walk (see Range Management Section). The level of impact to sensitive species will change depending on the route surface, the width of the corridor and whether individuals of the species are present within or immediately adjacent to the crossing corridor. The highest likelihood of impacts (direct and indirect) will be on crossing routes along non-road trails and drainages where livestock have the ability to spread out. However this impact is reduced due to the fact that livestock will be kept in constant motion and not allowed to stop and freely graze (see design features).

For those routes that are along drainages or non-road 2-track 4WD (300 ft corridor), impacts could be both direct and indirect. Because these corridors are more generally in a "wild" condition, and are generally not used on a frequent basis, these corridors are the most likely to have species present. Crossing activities on these routes may have direct impacts to species from trampling and/or take of individuals or nests/burrows. Crossing activities may have indirect impacts from noise and activity associated with movement of livestock (e.g. noise and contact with route surface by livestock, humans, dogs and vehicles), as well as the limited incidental grazing by livestock during travel. These indirect impacts could cause short-term modification of habitat and/or stress to individuals within or adjacent to the travel corridor. If crossing activities take place during the breeding season of some species, even short-term indirect impacts could cause individuals to abandon nests, burrows, or young during a critical period, which could result in loses in reproductive effort.

For those routes that are along BLM managed roads (100 ft corridor) and County Roads (160 ft corridor), direct impacts to species would be reduced due to the route surface. Because these corridors are more established routes, generally have more regular use, and have a more developed surface (gravel, bare dirt), these corridors are less likely to have species present within the route surface. Only within the remaining shoulder portions of the crossing route would there be found potential habitat for sensitive species. Along the shoulder portions of these routes, direct impacts (as described above) could occur to sensitive species. Crossing activities within described routes will have similar indirect impacts as described above for drainages or non-road 2-track 4WD routes. Where fences run adjacent to roadways, as is the case with many State and County roads, direct impacts of crossing activities will be further reduced due to the fact that livestock are confined to the roadway and the right-of-way, and may not tread at all on the Public Land that is directly adjacent.

Where overnighting occurs, livestock are not permitted to freely graze outside of corrals or holding traps, and livestock are fed hay and water is hauled to the overnight location. Corrals or holding traps are generally well used areas and would not contain suitable habitat for sensitive species. By containing livestock activities within a corral or holding trap, there should be no

direct impacts to sensitive species. If sensitive species habitat is adjacent to corrals or holding traps, indirect impacts may occur as described above.

Design features listed in the proposed action of this document will reduce impacts from activities associated with livestock crossing, and minimize incidental grazing impacts on sensitive species. Generally, individuals of sensitive species may be affected, but livestock crossing activities are not expected to have a measurable impact on populations or species viability. Crossing activities have been ongoing for many years; overall, conditions are expected to improve slightly because of the proposed addition of permit terms and conditions.

Consequences to Federally Listed Species
Four federally protected terrestrial wildlife species or habitats occur within the project area (Table 4 and Appendix A). Canada lynx analysis unit (LAU) is mapped within the project area, but no suitable/important habitats are mapped within areas of crossing activities. Therefore, the proposed action would have no effect on the threatened Canada lynx. Since Gunnison prairie dogs within the project area are not part of the montane population, this project will have no effect to the montane population of Gunnison prairie dogs (candidate). Crossing routes cross through proposed endangered Gunnison sage grouse proposed critical habitat and CPW mapped production habitat, however no routes pass through priority nesting habitat. Crossing activities are unlikely to overlap with sage grouse life processes in these areas and will not jeopardize the continued existence of Gunnison sage grouse. All routes are within the range of the western yellow-billed cuckoo (candidate); however, no routes could be considered to be within or adjacent to potential nesting habitat for the western yellow-billed cuckoo. Crossing related activities will have no effect to yellow-billed cuckoo.

Consequences to BLM Sensitive Species
Nineteen BLM sensitive terrestrial wildlife species or habitats occur within the project area (Table 4 and Appendix B). Based on the assessments provided above in Affected Environment and in Appendix B, the proposed action would have no effect on desert bighorn sheep, Allen's big-eared bat, big free-tailed bat, spotted bat, Townsend's big-eared bat, and fringed myotis. Desert bighorn sheep are not expected to be in proximity to crossing activities. Sensitive bat species may forage in habitats used for crossing activities during the night, but crossing activities should not be disruptive to their life activities.

For the remaining, BLM sensitive terrestrial wildlife species, the proposed action would have incidental direct and indirect impacts as described in General Consequences. If crossing activities occurring during breeding seasons for these species, short-term impacts could result to reproductive success. For bald eagle and Ferruginous hawk, winter activities may be of greater consequences since these species generally are winter inhabitants. Based on the analysis above and the design features provided, the proposed crossing activities may affect, but would not be likely to result in a trend toward federal listing for bald eagle, American peregrine falcon, northern goshawk, Ferruginous hawk, burrowing owl, long-billed curlew, white-faced ibis, Brewer's sparrow, longnose leopard lizard, midget faded rattlesnake, milk snake, Northern leopard frog, and canyon treefrog. Overall, the proposed changes in management of crossing activities should result in improved conditions for special status and rare species.

Consequences to BLM Sensitive Fish

Environmental consequences to streams occupied by Colorado River Cutthroat trout, Roundtail chub, Bluehead sucker, and Flannelmouth sucker would be similar in nature to what has been analyzed in the Floodplains, Wetlands and Riparian sections. In addition, crossing that occurs in spring, typically May through mid-June, could disrupt spawning activity while the herded animals cross the stream. Impacts could also occur to those gravel beds where spawning has already occurred and eggs are present in the form of direct trampling or from sediment deposition, immediately downstream, which could inhibit egg development. Keeping overnight livestock water locations at least 1000 feet from water sources such as rivers and streams and requiring livestock crossing routes be located on benches or terraces above narrow drainages or at least 50 feet from streams and drainages that support riparian zones will serve to reduce impacts to sensitive aquatic species. Given the limited number of direct stream crossings proposed, expected improvement in current practices, and the relatively short duration of these impacts from livestock crossing through an area impacts are expected to be minor in nature with limited impact to stream channels, bank stability, and riparian vegetation. Based on the analysis above and the design features provided, the proposed crossing activities may affect, but would not be likely to result in a trend toward federal listing for Colorado River Cutthroat trout, Roundtail chub, Bluehead sucker, and Flannelmouth sucker. The mitigation set forth in the Soils section would have direct benefit in mitigating impacts to fish bearing stream systems.

Cumulative Impacts – The proposed livestock crossing routes generally occur within existing allotments where cattle currently graze and are herded on an annual basis. These allotments contain water developments and fences that provide the infrastructure necessary for livestock management. Cattle that graze on these allotments are routinely herded in a manner much like the crossing that is proposed, as they are moved between pastures and to various locations within an allotment throughout the grazing season.

In addition to the impacts described for each of the alternatives, other reasonably foreseeable actions that could affect TES species and habitat in the foreseeable future on private and public lands include livestock grazing, big game management by Colorado Parks and Wildlife, habitat improvement and fuels management projects, county road maintenance and upgrades, utility corridor maintenance and upgrades, new road rights-of-ways, oil and natural gas exploration and/or development, and continued residential growth and development of private lands in and around the towns of Norwood, Redvale, Nucla, Naturita, and Paradox. Cumulative impacts to TES species from these activities would be long-term and ongoing within the region including the planning area.

No Action Alternative – The No Action Alternative would have no effect on federally protected and BLM sensitive species. Under the no-action alternative livestock crossing through BLM managed lands would not be authorized. Direct and indirect affects described under the proposed alternative would not take place on BLM lands if crossing activities did not occur.

Operators with a recurring need to move livestock between allotments would have to trail livestock along public rights-of ways where no Public Land is intermingled, including county, state, and federal roadways, or transport animals via truck. Additionally overnight stops would be limited to private land. These activities, since not authorized by BLM, would not have the

design features included in the proposed action, and impacts on non-BLM lands would be similar but greater than that described for the proposed action.

Finding on the Public Land Health Standard for Threatened & Endangered species: The project area is part of the West Paradox, East Paradox, Mesa Creek and Norwood Land Health Assessments (LHAs)[1]. Healthy plant communities typically translate to healthy habitats for wildlife and plants, particularly for wide-ranging or generalist species. However, because endemic and special status wildlife are typically restricted in their range and have more specific habitat requirements, those portions or samples of the polygon containing habitat for these species were evaluated independently. For all four LHAs, a majority of the area was meeting Land Health Standards for Standard 3 (native animal communities) and Standard 4 (Special Status Species), but approximately 30% of all LHAs were meeting with problems for Standard 4 [more detailed information can be found in West Paradox (2009), East Paradox (2010), Norwood (2006) and Mesa Creek (2004) LHAs]. Causal and contributing factors to "not meeting" or "meeting with problems" for these LHAs included both current and historic livestock grazing, noxious or invasive weeds, BLM roads and Road ROWs. Additionally corrals, exclosures and stock ponds were listed as associated with impacts to land health indicators. Since proposed crossing routes and overnight locations are within areas that are already used for livestock grazing and existing corrals/holding traps, these activities should not contribute additionally to decline in Land Health ratings.

THREATENED, ENDANGERED, AND SENSITIVE PLANTS (includes a finding on Standard 4)

Affected Environment:

Federally Listed Species
According to IPaC, the project area does not contain plants listed as threatened or endangered under the Endangered Species Act (ESA). ESA protected plant species are not known to occur within the project area based on habitat and current range/location information. No effect is expected to these species and there is no further discussion of these species. Appendix A lists potentially occurring federal status species and habitats within the UFO and provides assessments for their occurrence within the project area.

BLM Sensitive Species
Appendix B identifies BLM sensitive species that are known or have potential to occur within the UFO along with occurrence assessments for the project area. Numerous sensitive species are known or have the potential to occur in the project area. Only those species with known occurrences or potential habitat within 0.5 miles of identified crossing routes will be analyzed in detail. The Dolores skeleton plant, Eastwood's monkey-flower, Fragile (slender) rockbrake, and Kachina daisy do occur within the project area; however, the proposed action is expected to have no impact to all four species. The Eastwood's monkey-flower, Fragile (slender) rockbrake, and Kachina daisy occur in habitats that are not accessible to livestock, and the Dolores skeleton plant is only known to occur within the Dolores River Canyon south of Bedrock where no

[1] Available: http://www.blm.gov/co/st/en/fo/ufo/land_health.html

permitted livestock crossing has been proposed.

San Rafael milkvetch *Astragalus rafaelensis*
San Rafael milkvetch is endemic to Utah and Colorado. In Colorado the species is only known to occur within western Montrose County in the Dolores River Valley. Most populations occur within gullied hills, washes, and talus slopes under cliff bands or other seasonally moist locations in seleniferous clayey, silty, or sandy soils. Crossing routes 35, 36, and 66 occur within proximity to known populations of this species.

Sandstone milkvetch *Astragalus sesquiflorus*
Sandstone milkvetch is known to occur in Arizona, Utah, and Colorado. In Colorado the species is only known to occur within western Montrose County on Martin Mesa, south of CO highway 90 just east of the Utah boarder, and the western edges of Atkinson Mesa. Habitat includes sandstone rock ledges, fissures of domed slickrock, talus slopes under cliffs, and occasionally in sandy washes associated with drainage of erosional material from previously described habitats. Crossing route 67 occurs within proximity to known populations of this species.

Naturita milkvetch *Astragalus naturitensis*
Naturita milkvetch is found in northwestern New Mexico, southeastern Utah, and southwest Colorado. In Colorado the species is found in Mesa, Montezuma, San Miguel, and western Montrose counties. Habitat includes sandstones mesas, ledges, crevices and slopes in pinyon-juniper woodlands. In all cases habitat is very shallow accumulations of soil overlying sandstone parent material. This species is widespread and in appropriate habitat somewhat common within the planning area. Routes 11, 87, and 88 occur within proximity to known populations of this species.

Paradox Valley (Payson's) lupine *Lupinus crassus*
Paradox Valley lupine is endemic to Colorado and is only known to occur in western Montrose County. Habitat for this species consists of pinyon-juniper woodlands or clay barrens derived from Chinle or Mancos formation shales. In addition, draws or washes that have erosional deposits of overlying Chinle or Mancos shales formations down gradient can also support the species. Most known locations occur in washes and other seasonally moist locations where additional water resources are available relative to the surrounding pinyon-juniper woodlands or barrens. Habitat for Paradox Valley lupine commonly overlaps Aromatic Indian breadroot and both species can occur in the same washes or flow paths on barrens. Routes 12, 15, 33, 37, 79, 81, and 86 occur within proximity to known populations of this species.

Paradox (Aromatic Indian) breadroot *Pediomelum aromaticum*
Aromatic Indian breadroot occurs in Arizona, Utah, and west central Colorado. In Colorado the species is only known to occur in western Mesa and Montrose counties. In the Uncompahgre Field Office, populations do not occur outside the Paradox Valley. This species occupies similar habitats as Paradox Valley lupine in open pinyon-juniper woodlands, or clay barrens derived from Chinle or Mancos formation shales as well as in sandy soils or adobe hills. Like Paradox Valley lupine most known locations occur in washes and other seasonally moist locations where additional water resources are available relative to the surrounding piñon-juniper woodlands or barrens. Routes 15, 42, 67, and 79 occur within proximity to known populations of this species.

Environmental Consequences:

Proposed Action – Known BLM sensitive plant populations are in proximity to 17 crossing routes. Spring is anticipated to be the time of the year when the most impacts to special status plants and their habitats could potentially take place due to seasonally moist conditions and potential for soil compaction and disturbance, which can impede growth and development of plants, plus create a niche for invasive plants to establish and compete. This potential impact to BLM sensitive plant species is minimized by following existing roads, two track routes or well utilized cross country routes.

The most likely impact of the proposed action is minor forage utilization and/or trampling along the crossing corridor. Livestock being moved tend to eat small amounts of forage as they walk and trample plants that occur along the route. The level of impact to sensitive species will change depending on the route surface, the width of the corridor and whether individuals of the species are present within or immediately adjacent to the crossing corridor. The highest likelihood of impacts (direct and indirect) will be on crossing routes along non-road trails and drainages where livestock have the ability to spread out. However this impact is reduced due to the fact that livestock will be kept in constant motion and not allowed to stop and freely graze (see Design Features). Additional design features such as not allowing crossing activities on routes that are in drainages or erosive soils when soils are saturated will also serve to minimize impacts to sensitive plant species that occur adjacent to or within the routes.

Specific Species:

<u>San Rafael milkvetch</u>

Crossing routes 35 & 36 are not expected to have impacts to this species as the routes occur on the north side of the San Miguel River and the known populations occur on the south side of the river in the steep washes above the river. Route 66 occurs on the south side of Roc Creek along an existing county road. The known locations of San Rafael milkvetch occur on the north side of Roc Creek in the mouth of Garvey Gulch approximately 0.26 miles off the designated route. Design features placed on the crossing permit make it highly unlikely that impacts from livestock crossing would occur to this population. Regarding undocumented populations, given the preferred habitat types, it is highly unlikely that livestock crossing could occur in habitats for this species, as the habitat type is not conducive to uniform livestock movement. Based on the analysis above and the design features provided, the proposed crossing activities <u>may affect, but would not be likely to result in a trend toward federal listing</u> for San Rafael milkvetch.

<u>Sandstone milkvetch</u>

Crossing route 67 does have some potential to impact this species as the route enters the Dolores River canyon on the north side of Paradox Valley. There are several known locations on both sides of the river at the base of the cliffs and rock outcrops of the canyon. Those populations that occur near county road Y11 (crossing route) would have the greatest potential to be impacted. Impacts would likely occur in the form of trampling, soil disturbance and compaction. Grazing of the species is unlikely given its small stature and tendency to sequester elements like selenium which are somewhat poisonous to livestock. Most populations occur on benches elevated above the county road, but a few individual plants could occur close to the road prism and accessible to

livestock. Overall, impacts from straying animals are expected to be very minor and likely not substantial at the population level. Design features to keep livestock in constant motion and not allowed to stop and freely graze can be expected to further minimize impacts to the species. Based on the analysis above and the design features provided, the proposed crossing activities may affect individuals, but would not be likely to result in a trend toward federal listing for Sandstone milkvetch.

Naturita milkvetch

Crossing routes 11 and 87 are not expected to have impacts to this species as the routes are confined to the existing county roads. In addition, route 11 is away from the shallow rocky ledges along the San Miguel River Canyon on the north side of the route and the washes and swales where the species is located on the south side of the route. Route 87 is unlikely to result in impacts to the species because the known location occurs on the rocky ledges above the county road where livestock are not expected to stray during a crossing event.

Route 88 has numerous populations present along the route, often with plants growing within the BLM road where it crosses the washes and approaches the canyon rim. A field inspection of this route suggests that populations are doing well as there is no evidence that past livestock crossing or vehicle use of the road has extirpated populations that were first identified in 2008. Primary impacts to plants along this route occur in the form of trampling and soil disturbance. The stated desired use of this route is in the fall when plants are dormant, thus impacts would be diminished. Should spring crossing be authorized, impacts would be expected to be greater. Field observation of this route would suggest that at current crossing numbers, impacts do occur at the individual level however population level impacts are minor. The BLM and the Colorado Natural Heritage Program (CNHP) have surveyed a very small portion of the range for this species thus it is likely that numerous other routes have populations of Naturita milkvetch within or adjacent to them. Impacts to those populations are likely similar in nature and extent as those described for route 88. Based on the analysis above and the design features provided, the proposed crossing activities may affect, but would not be likely to result in a trend toward federal listing for Naturita milkvetch.

Cumulative Impacts – Livestock crossing, when combined with the past, present and reasonably foreseeable actions is not expected to decrease the functionality of sensitive plant habitats and populations. Additional activities on BLM and Forest Service lands in the project area include grazing, rights of ways, recreation and travel infrastructure. Potential impacts that could influence sensitive plant species habitats associated with private property in the area include cultivation, irrigation, livestock production, residential and commercial land development, mining and mineral extraction.

No Action Alternative – Under the no-action alternative livestock crossing through BLM managed lands would not be authorized. Direct and indirect affects described under the proposed alternative would not take place on BLM lands if crossing activities did not occur.

Operators with a recurring need to move livestock between allotments would have to trail livestock along public rights-of ways where no Public Land is intermingled, including county, state, and federal roadways, or to transport animals via truck. Additionally overnight stops

would be limited to private land. These activities, since not authorized by BLM, would not have the design features included in the proposed action, and impacts on non-BLM lands would be similar but greater than that described for the proposed action.

Finding on the Public Land Health Standard for plant and animal communities
See Public Land Health Standards discussion under the Threatened, Endangered, and Sensitive Wildlife section for findings on all sensitive species within the planning area.

MIGRATORY BIRDS

Plant communities within the analysis area provide habitats for a variety of migratory bird species. The U.S. Fish and Wildlife Service list of Birds of Conservation Concern was used to complete this analysis (USFWS 2008, Table 14, p.32, BCR 16 [Southern Rockies/Colorado Plateau]). Appendix C identifies the species from this list which are known or have potential to occur in the UFO and which are protected under the Migratory Bird Treaty Act (MBTA), and assesses their potential for suitable habitat, species occurrence and likely effects to each species within the planning area. See Threatened, Endangered and Sensitive species section for those species that overlap both lists.

Affected Environment: Plant communities within the analysis area provide habitats for a variety of migratory bird species. The U.S. Fish and Wildlife Service list of Birds of Conservation Concern was used to complete this analysis (USFWS 2008, Table 14, p.32, BCR 16 [Southern Rockies/Colorado Plateau]). Appendix C identifies the species from this list which are known or have potential to occur in the UFO and which are protected under the Migratory Bird Treaty Act (MBTA), and assesses their potential for suitable habitat, species occurrence and likely effects to each species within the planning area. See Threatened, Endangered and Sensitive species section for those species that overlap both lists.

Within the planning area, crossing routes and overnight locations are within habitats for migratory birds. Nesting locations for many of these species are unknown within the planning area and site specific surveys have not been completed to determine presence of these species. The likelihood of species presence within the planning area was determine by assessing BLM survey data, Land Health Assessments and Breeding Bird Atlas data, professional knowledge of BLM biologists and the likelihood of occurrence based on habitat associations. Twenty two species are expected in the project area. Of those, 11 show population declines for the Rocky Mountain Region and/or Colorado (Appendix C). These include Gunnison sage grouse, golden eagle, yellow-billed cuckoo, burrowing owl, Lewis' woodpecker, willow flycatcher, pinyon jay, juniper titmouse, Grace's warbler, chestnut-collared longspur, and Cassin's finch. Four species do not have data on population trends.

Migratory birds can be categorized by the vegetation cover, but also by nesting and foraging substrate that they use. Of the migratory birds species that are expected within the planning area, four species nest in grasslands, three in riparian, two in sagebrush, three on cliffs and eight in trees; one species nests in a burrow, three in tree cavities, three on cliffs, five on the ground,

three in shrubs and six in trees; six species are aerial foragers, five are foliage gleaners, six are ground foragers, one is probing, three are soarers and one is stalking (Table 5).

Table 5: Nesting and foraging habits of Birds of Conservation Concern for planning area (CLO 2013).

Species	Nesting Vegetation	Nesting	Foraging
American bittern	Riparian	Ground	Stalking
Bald eagle*	Tree	Tree	Soaring
Black rosy-finch	--	--	Ground
Brewer's sparrow*	Sagebrush	Ground/shrub	Foliage gleaner
Brown-capped rosy-finch	--	--	Ground
Burrowing owl*	Grassland	Burrow	Aerial dive
Cassin's finch	Tree	Tree	Ground
Chestnut-collared longspur	Grassland	Ground	Ground
Ferruginous hawk*	Grassland	Tree	Soaring
Flammulated owl	Tree	Cavity	Flycatching
Golden eagle	Cliff	Cliff	Soaring
Grace's warbler	Tree	Tree	Foliage gleaner
Gray vireo	Tree	Shrub	Foliage gleaner
Gunnison sage grouse*	Sagebrush	Ground	Ground
Juniper titmouse	Tree	Cavity	Foliage gleaner
Lewis' woodpecker	Tree	Cavity	Aerial
Long-billed curlew*	Grassland	Ground	Probing water/mud
Peregrine falcon*	Cliff	Cliff	Aerial dive
Pinyon jay	Tree	Tree	Ground
Prairie falcon	Cliff	Cliff	Aerial forager
Willow flycatcher	Riparian	Shrub	Flycatching
Yellow-billed cuckoo*	Riparian	Tree	Foliage gleaner

* Species covered under Threatened, Endangered and Sensitive Species section.
-- Winter resident only

A wide variety of migratory birds fulfill reproductive functions in the planning area from late May through mid-July. The abundance and composition of nesting birds are anticipated to be appropriate to these vegetation types in their current successional state. There have not been any site-specific surveys conducted within the planning area to determine the presence of migratory bird species. As such, known nesting locations for most species are unknown. However, a review of existing data provides some information on presence, or potential habitat for a few species (Table 6). The remaining species are likely present, but quantifying potential habitat is more problematic.

Table 6: Routes intersecting Migratory Bird species habitat

Species	Route IDs	Habitat	Route Miles*
Riparian Species (American bittern, willow flycatcher)	3, 7, 12, 13, 19, 22, 34, 35, 36, 41, 45, 52, 53, 55, 61, 66, 67, 78, 91, 93, 94, 97	Riparian Habitat	115.5
Golden Eagle	64	Known occurrence	0.8
Flammulated owl	7, 9, 15, 21, 49, 51, 52, 63, 96	Potential nesting habitat	18.6

*If a route passes through migratory bird species habitat, the entire route segment was used to calculate the miles of route.

Environmental Consequences:

Proposed Action – The proposed action is expected to have similar effects as described in Threatened, Endangered and Sensitive Species section. The level of impact to migratory bird species will change depending on the route surface, the width of the corridor and whether individuals of the species are present within or immediately adjacent to the crossing corridor. The highest likelihood of impacts (direct and indirect) will be on crossing routes along non-road trails and drainages where livestock have the ability to spread out.

Activities associated with livestock crossing may affect migratory birds through direct disturbance during the breeding season of nests, eggs, adult birds, or fledglings. This results in destruction, disruption, and/or abandonment of the nest or nesting substrate, thereby influencing reproductive success. Livestock crossing activities may have indirect effects to migratory birds by changing habitat structure and function over time and/or a change in prey base species or habitats. These indirect effects are reduced through the implementation of design features that restrict the level of incidental grazing during crossing. Direct and indirect effects are greater for those species which nest in vegetation types that are more prone to grazing (e.g., sagebrush communities, grasslands, riparian) and reduced for those which breed and/or nest in areas that receive little or no use by cattle (e.g., pinyon-juniper woodland, mountain shrub, cliffs). Additionally, direct impacts would be greater for those species that are ground/shrub nesting or ground/shrub forager. There would be no direct impacts to those species that are tree or cliff nesting species.

Design features listed in the proposed action of this document will reduce impacts from activities associated with livestock crossing, and minimize incidental grazing impacts on migratory birds. With these design features, impacts on migratory birds are expected to be minimal and immeasurable on a landscape scale. Individual birds may be affected, but livestock crossing activities are not expected to have a measurable impact on populations or species viability. Overall, conditions are expected to improve slightly with the proposed addition of permit terms and conditions.

Cumulative Impacts – The proposed livestock crossing routes occur within existing allotments where cattle currently graze and are herded on an annual basis. These allotments contain water developments and fences that provide the infrastructure necessary for livestock

management. Cattle that graze on these allotments are routinely herded in a manner much like the crossing that is proposed, as they are moved between pastures and to various locations within an allotment throughout the grazing season.

In addition to the impacts described, other reasonably foreseeable actions that could affect migratory bird species and habitat in the foreseeable future on private and public lands include livestock grazing, big game management by Colorado Parks and Wildlife, habitat improvement and fuels management projects, county road maintenance and upgrades, utility corridor maintenance and upgrades, new road rights-of-ways, oil and natural gas exploration and/or development, and continued residential growth and development of private lands in and around the towns of Norwood, Redvale, Nucla, Naturita, and Paradox. Cumulative impacts to migratory bird species from these activities would be long-term and ongoing within the region including the planning area.

No Action Alternative – The No Action Alternative would have no effect on migratory bird species. Under the no-action alternative livestock crossing through BLM managed lands would not be authorized. Direct and indirect affects described under the proposed alternative would not take place on BLM lands if crossing activities did not occur.

Operators with a recurring need to move livestock between allotments would have to trail livestock along public rights-of ways where no Public Land is intermingled, including county, state, and federal roadways, or to transport animals via truck. Additionally overnight stops would be limited to private land. These activities, since not authorized by BLM, would not have the design features included in the proposed action, and impacts on non-BLM lands would be similar but greater than that described for the proposed action.

WILDLIFE, TERRESTRIAL (includes a finding on Standard 3)

Affected Environment: The planning area supports a variety of terrestrial wildlife species including reptiles, small mammals, carnivores, birds, and big game (table 7). Example species include garter snake, cottontail rabbit, least chipmunk, prairie dogs, coyote, bobcat, black bear, mountain lion, elk, mule deer, red-tailed hawk, and a large number of songbird species. Terrestrial wildlife species of concern are addressed in the Threatened, Endangered, and Sensitive Species and Migratory Bird Sections.

Table 7. Most Common or Noted Terrestrial Wildlife Species, Groups of Species, Their Occurrence, and Basic Habitat Type Associations in Planning Area (West Paradox, East Paradox, Mesa Creek and Norwood Land Health Assessments[2]).

Species (Common Name)	Habitat Type	Occurrence
Mule deer	Mixed conifer/Douglas fir and spruce-fir, aspen/mesic mountain shrub mix, alpine meadow, pinyon-juniper, oak-mountain shrub, riparian, sagebrush, grassland.	Common, year-long with seasonal altitude and habitat type variation
Elk	Mixed conifer/Douglas fir and spruce-fir, aspen/mesic mountain shrub mix, alpine	Mostly winter use of Paradox Valley and Wray Mesa, move

[2] Available: http://www.blm.gov/co/st/en/fo/ufo/land_health.html

	meadow pinyon-juniper, oak-mountain shrub, riparian, sagebrush, grassland.	down from La Sal Mts. in Utah
Bighorn Sheep	Canyon benches, mesa tops, and valley bottoms	Uncommon, small herd present in the Dolores River Canyon, Martin Mesa edge
Cougar	All types, mostly along rim-rock areas.	Common, year-long
Bobcat	All types	Uncommon, year-long
Canada lynx	Mixed conifer/ Douglas fir and spruce-fir, aspen/mesic mountain shrub mix, riparian, alpine meadow	Rare
Coyote	All types	Common, year-long
Jackrabbit, White-tailed	All types	Infrequent, year-long
Cottontail, Mountain	All types	Common, year-long
Porcupine	Pinyon-juniper, riparian	Common, year-long
Prairie Dog (Gunnison)	Sagebrush, desert shrub, grassland	Common, year-long; Prairie population
Raptor; Eagles, Hawks, Falcons.	All types	Common, year-long
Merriam's Turkey	Riparian forests, pinyon-juniper, oak-mountain shrub	Riparian communities and PJ in the winter and oak-mtn. shrub spring and fall.
Blue grouse	Oak/Serviceberry	Common, year-long
Chukar	Salt desert	Uncommon, year-long
Birds	All types	Common, warm season
Small mammals	All types	Common, year-long
Amphibians-Reptiles	All types	Common year-long
Bats	All types	Common, mostly warm season

Big Game: Desert bighorn sheep are found within the area and are discussed in the Threatened, Endangered and Sensitive Species section. Both mule deer and elk are the most recognized wildlife species found in the planning area. Mule deer are present year-round, but use much of the area as winter range. Elk use the area primarily as winter range although year-round use in the higher elevations of the area has been increasing. There are small areas of CPW mapped production habitat. Mule deer and elk come from the higher elevation summer ranges toward Lone Cone Mt. to the east, the La Sal Mts. to the west, and from the Uncompahgre Plateau to the North and East. Much of the area is classified by Colorado Parks and Wildlife (CPW) as winter range for mule deer and elk. Intensity of deer and elk use varies some from year to year and is controlled primarily by the variation in timing and amount of snowfall at higher elevations. During most winters there is a high degree of overlap in mule deer and elk use on several of the wintering areas.

Merriam's turkey: Merriam turkey habitat within this planning area is found mostly on the higher mesas with woody habitat, and along the major stream drainages. They use the larger canyon bottoms at lower elevations as winter range and the pinyon-juniper, oak/serviceberry areas at higher elevations for breeding, nesting, and brood rearing. The turkey population suffered a decrease after the long cold winter of 2008, but is considered generally stable and abundant.

Carnivores: Large predators, such as coyotes, bobcats, and mountain lion are present in the area and use it regularly. Of the predators, coyotes are the most numerous and widespread. Black bear populations are probably limited to primarily the major drainages with well-developed riparian vegetation during years of low food production at the higher elevations. Mountain lion

likely use almost all of this area at some time or another during the year while hunting, or raising young. Bobcats may also be found throughout most of the area.

Prairie dogs: Gunnison prairie dog was discussed briefly in the TES section. Prairie dogs within the planning area are considered part of the prairie portion of this species and are not currently being considered for listing under ESA. Gunnison prairie dogs are found in the lower elevation areas of the planning area. Generally, they occur in areas characterized by open grassland, grass/sagebrush, or salt desert shrub where soils are conducive for building burrow systems. These populations have been shown to have periodic die-offs, likely due to sylvatic plague. Other factors such as shooting, habitat fragmentation and drought may also contribute to population fluctuations. Several colonies are located within the planning area, but only crossing routes 8 and 11 (9.8 miles) pass through known prairie dog colonies (Table 4).

Environmental Consequences:

Proposed Action – The proposed action is expected to have similar effects to terrestrial wildlife as described in Threatened, Endangered and Sensitive Species, and Migratory Bird sections. The level of impact to terrestrial wildlife species will change depending on the route surface, the width of the corridor and whether individuals of the species are present within or immediately adjacent to the crossing corridor. The highest likelihood of impacts (direct and indirect) will be on crossing routes along non-road trails and drainages where livestock have the ability to spread out.

Cumulative Impacts – In addition to the impacts described for each of the alternatives, other reasonably foreseeable actions that could affect terrestrial wildlife species and habitat in the foreseeable future on private and public lands include livestock grazing, big game management by Colorado Parks and Wildlife, habitat improvement and fuels management projects, county road maintenance and upgrades, utility corridor maintenance and upgrades, new road rights-of-ways, oil and natural gas exploration and/or development, and continued residential growth and development of private lands in and around the towns of Norwood, Redvale, Nucla, Naturita, and Paradox. Cumulative impacts to terrestrial wildlife species from these activities would be long-term and ongoing within the region including the planning area.

No Action Alternative – The No Action Alternative would have no effect on terrestrial wildlife species. Under the no-action alternative livestock crossing through BLM managed lands would not be authorized. Direct and indirect affects described under the proposed alternative would not take place on BLM lands if crossing activities did not occur.

Operators with a recurring need to move livestock between allotments would have to trail livestock along public rights-of ways where no Public Land is intermingled, including county, state, and federal roadways, or to transport animals via truck. Additionally overnight stops would be limited to private land. These activities, since not authorized by BLM, would not have the design features included in the proposed action, and impacts on non-BLM lands would be similar but greater than that described for the proposed action.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation; Invasive, Non-native Species; and Wildlife, Aquatic):

The project area is part of the West Paradox, East Paradox, Mesa Creek and Norwood Land Health Assessments (LHAs) . Healthy plant communities typically translate to healthy habitats for wildlife and plants, particularly for wide-ranging or generalist species. For all four LHAs, a majority of the area was meeting Land Health Standards for Standard 3 (native animal communities), however approximately one-third of the areas were considered "meeting with problems" [more detailed information can be found in West Paradox (2009), East Paradox (2010), Norwood (2006) and Mesa Creek (2004) LHAs]. Causal and contributing factors to "not meeting" or "meeting with problems" for these LHAs included both current and historic livestock grazing, noxious or invasive weeds, BLM roads and Road ROWs. Additionally corrals, exclosures and stock ponds were listed as associated with impacts to land health indicators. Since proposed crossing routes and overnight locations are within areas that are already used for livestock grazing and existing corrals/holding traps, these activities should not contribute additionally to decline in Land Health ratings.

WILDLIFE, AQUATIC (includes a finding on Standard 3)

Affected Environment: The U FO contains habitat for numerous fish and aquatic invertebrate species. Habitats for fish and aquatic invertebrate species within the field office range from small cold-water streams to large rivers and lakes to reservoirs. Non-sensitive native fish species known to occur within the planning area include Mountain sucker, speckled dace, and molted sculpin. Several introduced fish species also inhabit or are actively stocked in the planning area including rainbow trout, brook trout, brown trout, white sucker, carp, channel catfish, green sunfish, fathead minnow, and large and small mouth bass.

Environmental Consequences:

Proposed Action – See Threatened, Endangered, and Special Status Species for analysis regarding aquatic wildlife. Effects for non-special status aquatic species would be similar as described for sensitive aquatic species. In addition impacts that could influence aquatic species habitats are analyzed in the Riparian and Wetlands, Soils, and Floodplains sections.

Cumulative Impacts – Livestock crossing, when combined with the past, present and reasonably foreseeable actions may only slightly decrease the functionality of aquatic species habitats associated with rivers and creeks by accelerating sediment inputs to aquatic systems, or damage to riparian vegetation which both provides and protects aquatic habitats. Additional activities on BLM and Forest Service lands in the watershed include grazing, rights of ways, recreation and travel infrastructure. Potential impacts that could influence aquatic species habitats associated with private property in the watershed include cultivation, irrigation, livestock production, residential and commercial land development, mining and mineral extraction, and urban runoff.

No Action Alternative – Under the no-action alternative livestock crossing through BLM managed lands would not be authorized. Direct and indirect affects described under the proposed alternative would not take place on BLM lands if crossing activities did not occur.

Operators with a recurring need to move livestock between allotments would have to trail

livestock along public rights-of ways where no Public Land is intermingled, including county, state, and federal roadways, or to transport animals via truck. Additionally overnight stops would be limited to private land. These activities, since not authorized by BLM, would not have the design features included in the proposed action, and impacts on non-BLM lands would be similar but greater than that described for the proposed action.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation; Wildlife, Terrestrial; and Invasive, Non-native Species): See the findings for Riparian and Wetlands for streams and wetlands which provide habitat for aquatic species.

WETLANDS & RIPARIAN ZONES (includes a finding on Standard 2)

Affected Environment: Riparian areas are the primary type of wetland vegetation across the project area. Crossing routes occur within 18.4 miles of riparian habitat. These areas are associated with the following rivers and streams: San Miguel River, Upper Dolores River, Tabeguache Creek, Roc Creek, North Fork of Cottonwood Creek, Naturita Creek, McKenzie Creek, Hamilton Creek, Goat Creek, Dry Creek, Cottonwood Creek, Big Bucktail Creek, and Beaver Creek. Crossing routes 3, 7, 12, 13, 19, 22, 34, 35, 36, 41, 45, 52, 53, 55, 61, 66, 67, 78, 91, 93, 94 and 97 are entirely or partially located within riparian habitat. The lower elevation riparian areas (below 6,000') are characterized by one or more of the following species: sandbar willow, Fremont cottonwood, skunkbush sumac, New Mexico privet, or tamarisk. The upper elevation riparian area typically has one or more of these wetland species: thinleaf alder, narrowleaf cottonwood, blue spruce, Douglas fir, or Drummond, Geyer's or mountain willow.

The livestock crossing routes pass through many riparian areas which are in relatively good condition. Some routes, however, pass through riparian areas which are known to have ecological problems. While a wide variety of problems have been noted along streams in the vicinity of some of the crossing routes, the most common are listed in order from most to least prevalent: exotic plants, noxious weeds, inadequate vegetation to withstand flooding or to protect banks, and lack of wetland species. About 0.7 miles of crossing routes pass through areas considered to have stream health problems.

Although BLM has not completed a wetland inventory for the project area, livestock ponds form the primary lentic wetlands on BLM where inventory has occurred. These are generally artificial wetlands which do not have the full range of wetland function, and are often degraded in terms of hydrology and vegetation. Two ponds are documented along crossing routes within the project area.

Environmental Consequences:

Proposed Action – Livestock crossing can cause direct damage or death to riparian plants, or result in damage to the streambank within the crossing route. Typically livestock create a few barren paths which receive the highest level of trampling within a crossing route. Vegetation is generally absent from these paths, and the streambank is destabilized within them, and subject to increased erosion.

The majority of riparian vegetation and streambank area within a crossing route receives lesser impacts associated with occasional trampling, incidental grazing, dust or sediment deposition and erosion, and increased competition from weeds. These lesser impacts usually result in a slightly degraded vegetation community and stream channel as compared with outside the crossing route. The degradation is often in the form of slightly higher level of weeds and invasive species, fewer woody species, more annual or rhizomatous herbaceous species, and slightly increased rates of bank erosion. Because the Proposed Action authorizes the crossing activities which have been ongoing for many years, little to slightly positive change in riparian conditions are expected to occur.

Less than one mile of crossing routes pass along streams with documented health problems. Livestock crossing activities may be contributing to some of these concerns. However, the scale of the stream health problem extends beyond the short reaches that encompass the crossing activity. Under the Proposed Action, design features which include active livestock movement and overnighting only in designated corrals and traps will represent an improvement over current practices. Less vegetation will receive incidental grazing, and there is likely to be slightly less trampling as livestock are actively moved. In addition, the BLM may designate additional watering sites within the crossing route located away from riparian areas in order to reduce pressure on them if crossing activities are observed to be causing excessive bank or vegetation damage. Appropriately located livestock water could increase the speed and orderliness of livestock movement, and reduce incidental grazing and trampling in the riparian area. Vegetation conditions in these areas are expected to stay stable, or slightly improve as a result.
The same vegetation impacts are expected to occur in the vegetation communities of special interest.

Trampling and grazing impacts around the two livestock ponds are expected to continue unchanged. As a result, there should be no changes to wetland condition.

Cumulative Impacts – This alternative, when combined with past, present and reasonably foreseeable actions, will have negligible impact on riparian or wetland areas at the watershed level. Slightly more intensively managed livestock crossing activities across the West End of Montrose and San Miguel Counties could result in very small improvements in riparian vegetation along the crossing routes, but the effects will be so small scale as to be negligible. Riparian areas at the larger, watershed scale are experiencing more substantive impacts on federal and private lands. On federal lands, these include water depletion, flow alterations, livestock grazing and wildlife use, rights of ways, recreation and travel infrastructure, and placer mining. Additional impacts arise from activities on private property in the region. These include cultivation, irrigation, mining, livestock production, residential and commercial land development, placer and gravel mining, and road construction and maintenance.

No Action Alternative – This alternative would not impact riparian plants or stream channels in the crossing routes through trampling or incidental grazing. In the absence of livestock crossing, riparian areas along the crossing routes would likely gradually transition to become more similar to riparian areas outside of the crossing routes. There would likely be incremental improvements to vegetation health in the crossing routes. The conditions around the artificially created wetlands associated with the livestock ponds would also likely improve.

Finding on the Public Land Health Standard for riparian systems: Currently, 17.7 miles of streams in the project area meet standard 2, while the remaining 0.7 miles meet Standard 2 with problems. The Proposed Action will likely result in slightly improved livestock crossing practices that would be compatible with improving riparian conditions. However, because crossing affects a small portion of individual stream segments, it is unlikely that the improved management will result in a change to the land health status for Standard 2.

FLOODPLAINS

Affected Environment: Floodplain areas are associated with numerous rivers and streams in the crossing area. Some of the larger floodplains mapped by FEMA include the San Miguel River, Dolores River, and Tabeguache Creek.

The BLM is required to meet the objectives of federal floodplain policy. Executive Order 11988 (21), as amended, established this policy and directs agencies to "avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practical alternative". The objectives of avoiding development and modification of floodplains are to 1) reduce the hazard and the risk of flood loss, 2) minimize the impact of floods on human safety, health, and welfare, and 3) restore and preserve the natural and beneficial floodplain values.

The existing floodplains vary in condition due to various private and public land use processes. The San Miguel River has one of the most intact riparian habitats in Southwest Colorado. It benefits from seasonal flooding flows that replenish the sediment and water necessary to sustain the native shrub and tree species. The Dolores River, however, has a floodplain that suffers from the effects of a large scale upstream dam.

Environmental Consequences:

Proposed Action – There are 10 crossing routes located in or near drainages. Native vegetation provides the appropriate cover to stabilize sediments on floodplains and capture new sediments during flooding events. See the Environmental Consequences section in Riparian and Vegetation for a more detailed description of potential impacts to native riparian vegetation. Hoof action from livestock can sheer banks and remove woody vegetation from banks. The absence of dense, flexible woody stems on the banks of the floodplain can increase the shear stress at the toe of the banks and lead to fluvial erosion, bank undercutting and mass failure (Vincent and others, 2009).

The existing livestock crossing routes are generally located on benches above the riparian corridor. The greatest potential for bank sheering would typically occur at watering sites or during overnight stays. The design features in this plan require that livestock are contained in corrals or holding pens and water is provided in the pen during overnight stays. This would prevent most of the potential impacts to floodplains and preserve the flood buffering capacity

and heath of the floodplains. Additional mitigation measures in both the soils and water quality sections add further protections.

Cumulative Impacts – This crossing plan, when combined with the past, present and reasonably foreseeable actions could continue to slightly impact the functionality of the natural floodplains associated with rivers and creeks by accelerating sediment aggradation. Additional activities on BLM and Forest Service lands in the watershed include grazing, rights of ways, recreation and travel infrastructure. Potential sediment related impacts associated with private property in the watershed include cultivation, irrigation, livestock production, residential and commercial land development, mining and mineral extraction, and urban runoff.

No Action Alternative – No impacts to floodplains are anticipated from the No Action Alternative. There could be a small improvement in floodplain function when livestock do not use these areas for crossing.

WATER -- SURFACE (includes a finding on Standard 5)

Affected Environment:

Hydrology

Average annual precipitation ranges from 12 inches in the Paradox Valley to 26 inches in Beaver Canyon. Much higher precipitation falls in the form of snow at the higher surrounding elevations. Precipitation from frontal events occurs during winter and spring months. These events are typically low intensity but can last for several days. In contrast, summer precipitation is commonly associated with the southwest monsoon air flow pattern producing short duration, high intensity rain events. These monsoonal events have the greatest potential to mobilize sediments and nutrients in the riparian corridors.

Standards and Classifications

It is BLM policy that agency projects should meet or exceed water quality standards established by the State of Colorado for all water bodies located on or influenced by BLM-administered lands.

The impaired surface waters table below shows the surface waters in the area that are on Colorado's impaired waters, 303(d) or Monitoring and Evaluation list (CDPHE, Water Quality Control Commission, 5 CCR 1002-93).

Impaired Surface Waters in the Crossing EA Area

Segment Description	Portion	Colorado's Monitoring & Evaluation Parameter(s)	Clean Water Act Section 303(d) Impairment	303(d) Priority
COGUSM10 Mainstem of Naturita Creek from the Uncompahgre National Forest boundary to its confluence with the San Miguel River, and Gurley Reservoir;	Naturita Creek	D.O., *E. coli*		

Tabeguache Creek from its source to the confluence with San Miguel River.				
COGUSM12 All tributaries to the San Miguel River from the confluence of Leopard Creek to the Dolores	Calamity Draw, Specie Creek	D.O.		
All tributaries to the San Miguel River from the confluence of Leopard Creek to the Dolores	Maverick Draw		Aquatic Life (provisional)	L
COGUSM12 All tributaries to the San Miguel River from the confluence of Leopard Creek to the Dolores	Mesa Creek	Se		
COGULD04 Mainstem of West Paradox Creek from the source to the confluence with the Dolores River. Mainstem and all tributaries to Blue Creek from the source to the confluence with the Dolores River.	West Paradox Creek	*E. coli*, Fe(Trec)		
COGULD05 Mainstem of West Creek from the source to the confluence with the Dolores River; Roc Creek; La Sal Creek and Mesa Creek from their sources to their confluences with Dolores River.	Roc Creek	*E. coli*	Cu, Fe(Trec)	H
COGULD02 Dolores River from Little Gypsum Valley bridge to Colorado/Utah border	all	*E. coli*	Fe(Trec)	H

The non-point source pollutants from various land uses on public and private property likely contribute to the E. Coli, Dissolved Oxygen, and Aquatic Life listings. E. Coli sources include human, wildlife, and livestock waste. Once E.Coli enter the aquatic environment they can persist for long periods of time. Sediment in streams may present a favorable environment for bacteria attachment to soil particles. Very little is known about the extent and mechanisms of this attachment (Ferguson et al., 2003).

Environmental Consequences:

Proposed Action – There are 12 crossing routes that have a greater potential to contribute bacteria, nutrients, and sediment to the impaired segments shown in the table below. These crossing routes either have a stream crossing or follow routes with close proximity to water bodies.

Route ID	Cattle (Head)	Historic Season	Overnight Location	Max Times Route Used/Yr	Type	Livestock Breakdown (Number of Animals * Number of Uses per Year)	Distance (miles)
1	800	Spring/Fall	N/A	2	Drainage	400*2	1.3
13	720	Spring/Fall	N/A	2	Drainage	360*2	1.0
22	620	Spring/Fall	N/A	6	Trail	110*2, 170*2 , 30*2	0.5
34	360	Spring/Winter	N/A	2	Trail	180*2	3.3

35	180	Winter	N/A	1	Trail	180*1	1.3
47	150	Spring/Fall/Winter	N/A	1	Drainage	150*1	0.3
55	200	Spring	N/A	1	Drainage	200*1	0.6
59	400	Fall	N/A	1	Drainage	400*1	2.3
60	800	Spring/Fall	N/A	2	Drainage	400*2	0.6
61	800	Fall	N/A	1	Trail	400*1	4.2
85	400	Fall	N/A	1	Drainage	400*1	0.2
94	30	Spring/Fall	N/A	2	Drainage	30*2	4.1

Storm events associated with the monsoon season generally occur during mid-July to mid-August. These events typically generate enough overland flow to mobilize sediment, nutrients, and E. Coli into water features. The historic season of use is typically spring and/or fall for each of the crossing routes. Fecal coliforms may survive up to two months in soil, but in the protective medium of feces, can persist up to a year (Bohn and Buckhouse 1985). It is likely that pathogens such as E. Coli could be transported during monsoonal events after spring crossing routes are used.

Riparian buffer strips can reduce the transport of sediment, nutrients and bacteria to water bodies. A 10-m wide grass strip was sufficient to reduce fecal coliform contents in runoff by as much as 70% (Young et al., 1980; Walker et al.,1990). The design features requiring confinement during overnight stays would help reduce impacts to riparian buffer strips. The requirement to keep livestock moving would also prevent animals from loitering in water crossings and damaging riparian vegetation. Additional design features requiring bed grounds 1,000 feet from water features and keeping crossing routes on benches and terraces at least 50 feet from streams and riparian areas would reduce runoff of sediment and bacteria into water features.

Cumulative Impacts – This action, when combined with the past, present and reasonably foreseeable actions, could continue to contribute a small amount to the deterioration of water quality. Other activities causing impacts to water quality on BLM and Forest Service lands in the watershed include historical uranium mining, grazing, rights of ways, recreation and travel infrastructure. The types of impacts expected from other actions in the watershed would be similar to those described for the proposed action.

No Action Alternative – No impacts to water quality are anticipated from the No Action Alternative. Similar to the proposed action, there would be reduced runoff of sediment and bacteria into water features.

Finding on the Public Land Health Standard for upland soils: The BLM conducted four Land Health Assessments (LHAs) in the crossing area. Water quality exceedences were found in Mesa Creek for selenium as well as Fecal Coliforms in the Dolores River (the representative bacteria used prior to E. Coli). More detailed information can be found in West Paradox (2009), East Paradox (2010), Norwood (2006) and Mesa Creek (2004) LHAs. Crossing routes have historically existed and could be a contributor to some of the impaired stream segments on the State 303d list. This proposed action could slightly improve water quality with the implementation of design features to reduce impacts to water quality. However, the

improvements if any would likely be small given the scope of the impacts to water quality occurring on private and public lands in the region. Standard 1 would continue to be identified as met until further assessed.

ENVIRONMENTAL JUSTICE

The proposed action is based on the identified need to issue a permit for livestock grazing permittees to trail their livestock to or from their allotments. The routes have been used historically. Neither the proposed action nor the no-action alternative is expected to disproportionately affect low income groups or minorities. Environmental justice would not be affected.

SOCIO ECONOMICS

Affected Environment: Grazing has been a viable part of the local economy for a century. Permitted grazing and livestock crossing on public lands is a large factor in keeping local family owned ranches and the cattle industry viable. This in turn has an effect on maintaining the stability of the local economy. The economic benefit of ranching generally increases as community size decreases. This means that small communities in the planning area are much more economically dependent on ranching and agriculture than larger communities with more diverse economic bases. Currently there are up to 15 local ranchers that use the routes in the Proposed Action for livestock crossing, and rely on this public access for the viability of their operations as there is a strong interdependence between grazing on private and Public Lands. This is influenced to a degree by elevation and the need to move livestock from low lying winter ranges to higher elevation summer pastures. Historically, trailing livestock has been a means to accomplish this transition between grazing areas.

Environmental Consequences:

Proposed Action – Issuing Crossing Permits under the Proposed Action would continue to ease the burden on ranchers to run their livestock operations, which could include grazing on federally, state, and privately owned rangelands within the project area. The proposed action would continue the practice of trailing livestock, which is an integral part of many ranchers' grazing operations; this would be a positive benefit for local social and economic values.

Cumulative Impacts **–** Income derived from ranching operations would continue to flow into the local economy, and add cumulatively to other social and economic values.

No Action Alternative – There would be negative impacts to local ranchers under the No Action alternative. The ability of ranchers who have historically used crossing routes to safely and efficiently move livestock between allotments or pastures would be greatly reduced. Operators with a recurring need to move livestock between allotments would have to trail livestock along public rights-of ways where no Public Land is intermingled, including county, state and federal roadways, and overnight stops would be limited to private land. Another option for livestock operators would be to transport animals via truck. Trucking livestock is the most cost-effective method when transporting livestock over very long distances, such as to market.

As proposed, livestock crossing occurs between seasonal pastures or allotments and over relatively short distances. The costs involved in obtaining trucks and subsequently transporting livestock over such short distances (under 100 miles) would impart an economic burden to the applicants.

There are some routes which cannot be accessed by truck or via non-Public Land. In the case of these routes, grazing would cease or the BLM may potentially become engaged in issues revolving around private land access. Ranchers may be unable to graze the Public Land they hold Grazing Permits for, or be unable to access grazing permits on the National Forest or their own private land. This would force them to buy hay to feed cattle or sell their cattle, which both are negative impacts to the operators and the local economy.

ACCESS and TRANSPORTATION

Affected Environment: Some of the proposed trailing corridors are located in remote and/or isolated areas where few, if any, BLM roads are present or only primitive roads or trails exist, but many of the routes utilize county or existing BLM roads and trails for moving livestock. Traffic from other users is generally light to moderate on these routes. The livestock crossings have occurred over a period of many decades.

Environmental Consequences:

Proposed Action – Direct effects from the proposed action would include temporary interruption of traffic along roads or trails being used for crossing corridors. Delays would affect a small number of people due to the light traffic on most of the routes proposed for crossing. Crossing during wet conditions could result in impacts to roads and trails. This impact would affect a larger number of people since it would last beyond the crossing period.

Cumulative Impacts – Other past, present, and foreseeable developments and uses in the project area with impacts to transportation and access include but are not limited to energy project developments, energy transmission lines and pipelines, recreation development, and grazing operations. The cumulative effects of this alternative to transportation and access would be slightly less than the no action alternative since it would not require increased truck traffic to transport livestock between grazing areas.

No Action Alternative – Livestock operators would likely resort to alternate means of transporting livestock between grazing areas. Trucking livestock between grazing areas would result in periodic short-term increases in traffic on routes connecting grazing areas. Direct effects of increased truck traffic could include road damage, especially during wet conditions, and increased likelihood of collisions.

REALTY AUTHORIZATIONS

Affected Environment: Various land use authorizations are present throughout the project area. Types of right-of-way (ROW) facilities include the following: power lines including transmission and distribution lines (both aerial and buried); associated substations; water or gas

pipelines; telephone and fiber optic lines; irrigation ditches and canals; state highways and county roads; and access roads to private property.

Environmental Consequences:

Proposed Action – Livestock crossing would occur on some powerline and pipeline ROWs, which would be similar to current use, but with terms and conditions. One term and condition would be that ROWs will be avoided to the extent possible; if they cannot be avoided, caution will be taken to ensure no impacts to the facilities or disruption of use occurs. Livestock use potentially creates issues with maintaining vegetation and controlling weeds in a ROW. As explained in the proposed action, permittees typically would use different routes from year to year; not using the same route each year would reduce impacts to ROWs.

Cumulative Impacts – Other past, present and foreseeable future uses that could impact ROWs include motorized and mechanized vehicle use, foot traffic, equestrian use, livestock grazing and wildlife use. Provided terms and conditions are adhered to, there should be little cumulative impact to land use authorizations resulting from livestock crossing.

No Action Alternative – No impacts would occur to existing land use authorizations under the No Action Alternative.

RANGELAND MANAGEMENT

Affected Environment: The west end of the UFO consists of approximately 325,000 acres of Public Land grazing allotments, which is interspersed and intermingled with privately owned, state, and other federally managed land. There are 80 allotments on the west end of the UFO. Some of the intermingled state and private lands are cooperatively managed with Public Land. Of the 80 grazing allotments which are in the west end of the UFO, the BLM has received applications to cross 47 allotments. Appendix D shows a complete list of grazing allotments where livestock crossing may occur under the Proposed Action.

Permitted active grazing use in the project area is about 12,500 AUMs. Depending on the allotment, its location and prescribed management, timing of permitted grazing may occur during the spring, summer, fall, winter or any combination of these seasons. Livestock crossing occurs at different times throughout the year but mostly in the spring or early summer and again in the fall to facilitate grazing that is moving onto or off of BLM lands from National Forest Service lands or between BLM allotments, private or state land. The timing of livestock crossing within a given season may vary from year to year because of the current year's resource conditions, weather, wildfire, vegetation treatments, individual livestock operation needs, or seasonal forage production.

Livestock crossing has occurred annually within the project boundary for decades. Prior to train stock cars and semi-trucks, all BLM grazing allotments had some form of livestock crossing events. Many historic crossing events have been replaced with semi-trucks, but livestock crossing is still a necessity throughout the project area because many BLM roadways are not engineered for semi-trucks. Other challenges to trucking cattle include steep and rocky terrain, the expense associated with trucking, and livestock safety concerns related to trucking. Livestock

injuries and deaths can occur during trucking when conducted off of paved roads.

Each crossing event varies depending on the individual livestock operator. Generally, cattle are herded by individuals on horseback; however, motorcycles or ATV's are also used by some operators, usually on roaded surfaces and rights-of-way. Cattle are gathered into a herd and then moved in the direction of the intended route. Once cattle are on the route they tend to spread out into a formation of 6 to 10 abreast, allowing them to travel in a relatively narrow area. Large herds are frequently broken into smaller groups of up to 200 cattle in order to facilitate control and increase speed. On paved county roads livestock operators frequently use a pilot car to warn oncoming traffic of the event. Where there is a high frequency of livestock crossing events or where there are large numbers of cattle that use a given route, it is common practice to have livestock take different routes at different times of year or different routes from year to year in order to reduce negative impacts and to facilitate management strategies.

Environmental Consequences:

Proposed Action – The most likely impact of the proposed action is minor forage utilization along the crossing corridor. Livestock being moved tend to eat small amounts of forage as they walk. Utilization levels that could occur during a livestock crossing event are typically very low (0-5% utilization) as opposed to the moderate utilization levels that occur under active livestock grazing (30-50% utilization for native vegetation). In the case of county roadways, which total 59% of all crossing routes, the impact will be primarily within the 60 foot right-of way. Where fences run adjacent to roadways, as is the case with many county road rights-of-way, impacts of incidental grazing will be further lessened due to the fact that livestock are confined to the roadway and the right-of-way, and may not tread at all on the Public Land that is directly adjacent. The highest likelihood of noticeable incidental forage utilization will be on non-road trails and drainages where livestock have the ability to spread out. However this impact is still considered negligible due to the fact that livestock will be kept in constant motion and not allowed to stop and freely graze. Where overnighting occurs, livestock would be fed hay and water hauled to the overnight location. Cattle would not be permitted to freely graze outside of corrals or holding traps at overnight locations.

Where proposed routes cross allotments that may be being actively grazed via a Grazing Permit, the potential exists for livestock owned by different operators to mix. While these crossing activities have historically occurred without major conflict, the UFO would continue to review annual applications for crossing use to ensure that conflicts in scheduling do not exist. The UFO would also ensure crossing events by operators utilizing the same routes do not coincide to prevent livestock mixing.

Cumulative Impacts – The proposed livestock crossing routes occur within existing allotments where cattle currently graze and are herded on an annual basis. Continued livestock crossing is not expected to impact future appropriate management of livestock within allotments that contain crossing routes.

Cumulative impacts are not expected to be noticeable. Forage utilization of actively grazing cattle and incidental grazing of cattle crossing a route, when combined, could be slightly higher than the utilization of active grazing alone. However, because consumption of forage by cattle

who are being quickly moved through an area is generally 5% or less, the ability to detect the difference between what is consumed by grazing cattle versus what is consumed by crossing cattle would be very difficult. Estimates regularly used by BLM staff (including key forage species method, ocular estimates, and height/weight curves) to determine forage utilization have a margin of error of at least 10%. Therefore detecting a difference of 5% increased utilization would be unreliable. Additionally, any minor cumulative impacts potentially seen in increased forage utilization would be confined to proportionally small areas. The proposed crossing events would not add appreciably to any ongoing impacts associated with currently permitted livestock activities.

No Action Alternative – Under the no-action alternative livestock crossing through BLM managed lands would not be authorized. There will be no negative impacts associated with incidental livestock grazing along the route corridor.

RECREATION

Affected Environment: Recreation opportunities in the areas of the proposed trailing routes include river (i.e. rafting and kayaking), camping, equestrian, hiking, scenic touring along the Dolores River and San Miguel River Special Recreation Management Areas including the Unaweep-Tabeguache Scenic Byway, OHV riding, mountain biking, rock climbing/bouldering, and big game hunting. Developed recreation facilities lie in the immediate vicinity of trailing routes along the San Miguel River, although no specific visitor use data (traffic counters) is available for those areas.

Livestock crossing has occurred historically in conjunction with recreation activities throughout the UFO. Reports of conflicts between recreation activities and livestock trailing have been rare. However, complaints about livestock impacts in general have been more prevalent. Complaints have typically been about road or trail damage due to livestock use during wet conditions, livestock use and evidence of use (trampling, manure) in campsites or other high use recreation areas, and compromised recreation setting characteristics due to the presence of livestock.

Environmental Consequences:

Proposed Action – Direct effects of livestock crossing to recreation include: road or trail impacts due to livestock use during wet conditions which causes rutted or pock-marked routes that diminish recreation experiences; livestock use and evidence of use (trampling, manure) in campsites or other high use recreation areas, which can displace recreational use, or diminish recreation experiences; and compromised recreation setting characteristics due to the presence of livestock.

By clearly defining detailed parameters for livestock crossing operations, the proposed action would reduce the overall impacts to recreation that have historically resulted from livestock crossing. Impacts to roads and trails would continue to occur if crossing operations take place when soils are saturated. However with stricter enforcement of crossing permit terms and conditions, impacts would likely be avoided during wet conditions. The crossing permit process would implement a higher level of permittee accountability, allowing for stricter enforcement of crossing terms and conditions, thus reducing the adverse effects to recreation. The proposed

action would likely have greater adverse impacts to recreation than the no action alternative since livestock crossing operations would continue to occur, however, it would reduce the impacts that have occurred from historic and current trailing practices.

Cumulative Impacts – Other past, present, and foreseeable developments and uses in the project area with impacts to recreation include but are not limited to energy project developments, energy transmission lines and pipelines, changes to travel management designations, recreation facility developments, increasing recreational use and grazing operations. Impacts from crossing would continue, but would be more strictly regulated than it has been historically.

No Action Alternative – Under this alternative livestock crossing would not occur on the proposed corridors. Recreation would benefit since the adverse impacts associated with historic livestock crossing along these routes would be eliminated. Those adverse effects to recreation that would be eliminated by this alternative include the direct impacts identified in the proposed action. For some recreationists, the presence of livestock can be an important component of their recreation experience. This alternative would eliminate the livestock component of the recreation character setting for those visitors. Indirect effects to recreation from this alternative could result from short-term increased truck traffic on routes used to truck livestock between grazing areas. If this alternative resulted in the elimination of trailing on these routes, it would provide greater benefit to recreation opportunities than the proposed action.

VISUAL RESOURCES

Crossing operations would create only transient visual contrast during specified time periods. Primary viewers would be personnel involved in the trailing operations. Short term visual impacts would be negligible.

CUMULATIVE IMPACTS SUMMARY

Cumulative impacts for each element or resource are discussed within each of the sections above. Cumulative impacts are the environmental impacts that could result from the implementation of the Proposed Action, when added to the impacts from all other past, present, and reasonably foreseeable activities, regardless of who is conducting such activities. Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time. The cumulative effects analysis considers the geographic scope of the cumulative effects and past, present, and reasonably foreseeable actions.

PERSONS / AGENCIES CONSULTED

The BLM UFO consulted the local ranching community and current BLM Grazing Permit holders on the west end of the Field Office.

INTERDISCIPLINARY REVIEW: The following BLM personnel have contributed to and have reviewed this environmental assessment.

Name	Title	Area of Responsibility
Kelly Homstad	Fire Use Specialist	Air Quality, Fire, Forestry
Jedd Sondergard	Hydrologist	Farmlands, Soils, Floodplains, Surface water quality
Amanda Clements	Ecologist	Vegetation, Riparian
Melissa Siders	Wildlife Biologist	TES Species, Migratory Birds, Terrestrial Wildlife
Angela LoSasso	Rangeland Management Specialist	Rangeland Management, Noxious Weeds
Ken Holsinger	Botanist	TES Plants, Aquatic Wildlife
Edd Franz	Outdoor Recreation Planner	Wilderness, Wild and Scenic Rivers, Lands w/ Wilderness Characteristics
Glade Hadden	Archaeologist	Cultural, Native American Religious Concerns
Linda Reed	Realty Specialist	Realty Authorizations, Access
Julie Jackson	Outdoor Recreation Planner	Recreation, VRM, Transportation
Bruce Krickbaum	Environmental Coordinator	NEPA Compliance, Review

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Appendix A

THREATENED AND ENDANGERED SPECIES OF THE UFO [1]									
SPECIES	STATUS	HABITAT DESCRIPTION [2]	CRITICAL HABITAT (Y/N)? [3]	KNOWN? [4]	RANGE (Y/N)? [5]	HABITAT (Y/N)? [6]	NO EFFECT (X)? [7]	MENLAE (X) [8]	MELAE (X) [9]
FISH									
Bonytail *Gila elegans*	E	Warm-waters of the Colorado River mainstem and tributaries, some reservoirs; flooded bottomlands for nurseries; pools and eddies over rocky substrates with silt-boulder mixtures for spawning	No	None	Y	N	X		
Humpback chub *Gila cypha*	E	Warm-water, canyon-bound reaches of Colorado River mainstem and larger tributaries; turbid waters with fluctuating hydrology; young require low-velocity, shoreline habitats such as eddies and backwaters	No	None	N	N	X		
Razorback sucker *Xyrauchen texanus*	E	Warm-water reaches of the Colorado River mainstem and larger tributaries; some reservoirs; low velocity, deep runs, eddies, backwaters, sidecanyons, pools, eddies; cobble, gravel, and sand bars for spawning; tributaries, backwaters, floodplain for nurseries	No	None	Y	N	X		

THREATENED AND ENDANGERED SPECIES OF THE UFO [1]									
SPECIES	STATUS	HABITAT DESCRIPTION [2]	CRITICAL HABITAT (Y/N)? [3]	KNOWN? [4]	RANGE (Y/N)? [5]	HABITAT (Y/N)? [6]	NO EFFECT (X)? [7]	MENLAE (X) [8]	MELAE (X) [9]
Colorado pikeminnow *Ptychocheilus lucius*	E	Warm-waters of the Colorado River mainstem and tributaries; deep, low velocity eddies, pools, runs, and nearshore features; uninterrupted streams for spawning migration and young dispersal; also floodplains, tributary mouths, and side canyons; highly complex systems	No	None	Y	N	X		
Greenback cutthroat trout *Oncorhynchus clarki stomias*	T	Cold water streams and lakes with adequate spawning habitat (riffles), often with shading cover; young shelter in shallow backwaters	No	None	N	N	X		
MAMMALS									
Black-footed ferret [10] *Mustela nigripes*	E	Prairie dog colonies for shelter and food; >200 acres of habitat with at least 8 burrows/acre	No	None	N (extirpated)	N	X		
Canada lynx *Lynx canadensis*	T	Spruce-fir, lodgepole pine, willow carrs, and adjacent aspen and mountain shrub communities that support snowshoe hare and other prey	No	None	Y	Y (Route ID 2, 93; LAU only)	X		

THREATENED AND ENDANGERED SPECIES OF THE UFO [1]									
SPECIES	STATUS	HABITAT DESCRIPTION [2]	CRITICAL HABITAT (Y/N)? [3]	KNOWN? [4]	RANGE (Y/N)? [5]	HABITAT (Y/N)? [6]	NO EFFECT (X)? [7]	MENLAE (X) [8]	MELAE (X) [9]
North American Wolverine[13] *Gulo gulo luscus*	P	Alpine and arctic tundra, boreal and mountain forests (primarily coniferous). Limited to mountains in the south, especially large wilderness areas.	No	None	N	N	X		
Gunnison's prairie dog *Cynomys gunnisoni*	C	Level to gently sloping grasslands, semi-desert shrublands, and montane shrublands, from 6,000'-12,000 in elevation	No	None	Y (Prairie Population; Route 11)	Y	X		
BIRDS									
Mexican spotted owl [11] *Strix occidentalis*	T	Mixed-conifer forests and steep-walled canyons with minimal human disturbance	No	None	Y	N	X		
Southwestern willow flycatcher [11] *Empidonax traillii extimus*	E	For breeding, riparian tree and shrub communities along rivers, wetlands, and lakes; for wintering, brushy grasslands, shrubby clearings or pastures, and woodlands near water	No	None	N	N	X		

THREATENED AND ENDANGERED SPECIES OF THE UFO [1]									
SPECIES	STATUS	HABITAT DESCRIPTION [2]	CRITICAL HABITAT (Y/N)? [3]	KNOWN? [4]	RANGE (Y/N)? [5]	HABITAT (Y/N)? [6]	NO EFFECT (X)? [7]	MENLAE (X) [8]	MELAE (X) [9]
Gunnison sage grouse [12] *Centrocercus minimus*	P	Sagebrush communities (especially big sagebrush) for hiding and thermal cover, food, and nesting; open areas with sagebrush stands for leks; sagebrush-grass-forb mix for nesting; wet meadows for rearing chicks	No	None	Y	Y (CH Route ID 9,14,30, 39, 43, 68, 69, 70, 71, 72; Production/Winter 14, 43)		X	
Western yellow-billed cuckoo *Coccyzus americanus*	C	Riparian, deciduous woodlands with dense undergrowth; nests in tall cottonwood and mature willow riparian, moist thickets, orchards, abandoned pastures	No	None	Y	Y (Potential habitat Route ID 85)	X		
PLANTS									
Clay-loving wild buckwheat *Eriogonum pelinophilum*	E	Mancos shale badlands in salt desert shrub communities, often with shadscale, black sagebrush, and mat saltbush; 5200' – 6400' in elevation	No	None	N	N	X		
Colorado hookless cactus *Sclerocactus glaucus*	T	Salt-desert shrub communities in clay soils on alluvial benches and breaks, toe slopes, and deposits often with cobbled, rocky, or graveled surfaces; 4500' – 6000' in elevation	No	None	N	N	X		

THREATENED AND ENDANGERED SPECIES OF THE UFO [1]									
SPECIES	STATUS	HABITAT DESCRIPTION [2]	CRITICAL HABITAT (Y/N)? [3]	KNOWN? [4]	RANGE (Y/N)? [5]	HABITAT (Y/N)? [6]	NO EFFECT (X)? [7]	MENLAE (X) [8]	MELAE (X) [9]
INVERTEBRATES									
Uncompahgre fritillary butterfly [11] *Boloria acrocnema*	E	Restricted to moist, alpine slopes above 12,000' in elevation with extensive snow willow patches; restricted to San Juan Mountains	No	None	N	N	X		

[1] U.S. Fish and Wildlife Service. 2009. Federally listed species in Colorado. Official correspondence, February.
[2] Van Reyper G. 2006. Bureau of Land Management TES [threatened, endangered, sensitive] species descriptions. Uncompahgre Field Office, Montrose, CO, updated 2009/2010.Unpublished document.
[3] Designated Critical Habitat in Planning area?
[4] Potential and/or known occurrences in Planning area? Assessment based on UFO files and GIS data, partner data, and local knowledge.
[5] Planning area is within the current known range of the species?
[6] Planning area contains suitable habitat for the species?
[7] Project activities will have "No Effect" to the species or it's habitat
[8] Project activities "May Effect, Not Likely to Adversley Effect" to the species or it's habitat
[9] Project activities "May Effect, Likely to Adversley Effect" to the species or it's habitat
[10] Black-footed ferret believed to be extirpated from this portion of its range.
[11] Species not known to occur within UFO boundaries, but known to occur in close proximity.
[12] U.S. Fish and Wildlife Service. 2013. 78FR2486 Proposed Listing, 78FR7540 Proposed Critical habitat.
[13] U.S. Fish and Wildlife Service. 2013. 78FR7864 Proposed Listing, 78FR7890 Establishment of a Nonessential Experimental Population

Appendix B

BLM SENSITIVE SPECIES OF THE UFO [1]							
SPECIES	HABITAT DESCRIPTION [2, 3]	KNOWN [4]	RANGE? [5]	HABITAT? [6]	NO EFFECT? [7]	MAI [8]	LFL [9]
FISH							
Roundtail chub *Gila robusta*	Warm-water rocky runs, rapids, and pools of creeks and small to large rivers; also large reservoirs in the upper Colorado River system; generally prefers cobble-rubble, sand-cobble, or sand-gravel substrate	None	Y	Y		X	
Bluehead sucker *Catostomus discobolus*	Large rivers and mountain streams, rarely in lakes; variable, from cold, clear mountain streams to warm, turbid streams; moderate to fast flowing water above rubble-rock substrate; young prefer quiet shallow areas near shoreline	None	Y	Y		X	
Flannelmouth sucker *Catostomus latipinnis*	Warm moderate- to large-sized rivers, seldom in small creeks, absent from impoundments; pools and deeper runs often near tributary mouths; also riffles and backwaters; young usually in shallower water than are adults	None	Y	Y		X	
Colorado River cutthroat trout *Oncorhynchus clarki pleuriticus*	Cool, clear streams or lakes with well-vegetated streambanks for shading cover and bank stability; deep pools, boulders, and logs; thrives at high elevations	None	Y	Y		X	
MAMMALS							
Desert bighorn sheep *Ovis canadensis nelsoni*	Steep, mountainous or hilly terrain dominated by grass, low shrubs, rock cover, and areas near open escape and cliff retreats; in the resource area, concentrated along major river corridors and canyons	None	Y	Y (Route ID 39, 42, 64, , 77)	X		

BLM SENSITIVE SPECIES OF THE UFO [1]							
SPECIES	HABITAT DESCRIPTION [2, 3]	KNOWN [4]	RANGE? [5]	HABITAT? [6]	NO EFFECT? [7]	MAI [8]	LFL [9]
White-tailed prairie dog [14] *Cynomys leucurus*	Level to gently sloping grasslands and semi-desert grasslands from 5,000' – 10,000' in elevation	None	N	N	X		
Kit fox *Vulpes macrotis*	Semi-desert shrublands of saltbrush, shadscale and greasewood often in association with prairie dog towns	None	N	N	X		
Allen's (Mexican) big-eared bat *Idionycteris phyllotis*	Ponderosa pine, pinyon-juniper woodland, oak brush, riparian woodland (cottonwood); typically found near rocky outcrops, cliffs, and boulders; often forages near streams and ponds. Thought to be in the West End.	None	Y	Y	X		
Big free-tailed bat *Nyctinomops macrotis*	Rocky areas and rugged terrain in desert and woodland habitats; roosts in rock crevices in cliffs and in buildings caves, and occasionally tree holes	None	Y	Y	X		
Spotted bat *Euderma maculatum*	Desert shrub, ponderosa pine, pinyon-juniper woodland, canyon bottoms, open pasture, and hayfields; roost in crevices in cliffs with surface water nearby	None	Y	Y	X		
Townsend's big-eared bat *Corynorhinus townsendii*	Mesic habitats including coniferous forests, deciduous forests, sagebrush steppe, juniper woodlands, and mountain; maternity roosts and hibernation in caves and mines; does not use crevices or cracks; caves, buildings, and tree cavities for night roosts	None	Y	Y	X		
Fringed myotis *Myotis thysanodes*	Desert, grassland, and woodland habitats including ponderosa pine, pinyon/juniper, greasewood, saltbush, and scrub oak; roosts in caves, mines, rock crevices, and buildings	None	Y	Y	X		

BLM SENSITIVE SPECIES OF THE UFO [1]							
SPECIES	HABITAT DESCRIPTION [2, 3]	KNOWN [4]	RANGE? [5]	HABITAT? [6]	NO EFFECT? [7]	MAI [8]	LFL [9]
BIRDS							
Bald eagle [5] *Haliaeetus leucocephalus*	Nests in forested rivers and lakes; winters in upland areas, often with rivers or lakes nearby	None	Y	Y (Winter Concentration Route ID 1, 19, 29, 34, , 52, 57, , 59, 78, , 86, 87		X	
American peregrine falcon [5] *Falco peregrines anatum*	Open country near cliff habitat, often near water such as rivers, lakes, and marshes; nests on ledges or holes on cliff faces and crags	None	Y	Y (Potential nesting habitat Route ID 15, 64, 65, 77)		X	
Northern goshawk *Accipiter gentilis*	Nests in a variety of forest types including deciduous, coniferous, and mixed forests including ponderosa pine, lodgepole pine, or in mixed-forests with fir and spruce; also nest in aspen or willow forests; migrants and wintering individuals can be observed in all coniferous forest types	None	Y	Y		X	
Ferruginous hawk *Buteo regalis*	Open, rolling and/or rugged terrain in grasslands and shrubsteppe communities; also grasslands and cultivated fields; nests on cliffs and rocky outcrops. Winter migrant.	None	Y	Y		X	
Burrowing owl [15] *Athene cunicularia*	Level to gently sloping grasslands and semi-desert grasslands; Prairie dog colonies for shelter and food	None	Y	Y (Known occurrence Route ID 12, 32, 33, 37, 43, 64, 66, 77, 79, 84		X	

BLM SENSITIVE SPECIES OF THE UFO [1]							
SPECIES	HABITAT DESCRIPTION [2, 3]	KNOWN [4]	RANGE? [5]	HABITAT? [6]	NO EFFECT? [7]	MAI [8]	LFL [9]
Columbian sharp-tailed grouse *Tympanuchus phasianellus columbian*	Native bunchgrass and shrub-steppe communities for nesting; mountain shrubs including serviceberry are critical for winter food and escape cover. Thought to be extirpated from UFO.	None	N		X		
Long-billed curlew *Numenius americanus*	Lakes and wetlands and adjacent grassland and shrub communities. Rare occurance.	None	Rare	Y		X	
White-faced ibis *Plegadis chihi*	Marshes, swamps, ponds and rivers	None	Y	Y		X	
American white pelican *Pelecanus erythrorhynchos*	Typically large reservoirs but also observed on smaller water bodies including ponds; nests on islands	None	Y	N	X		
Brewer's sparrow *Spizella berweri*	Breeds primarily in sagebrush shrublands, but also in other shrublands such as mountain mahogany or rabbitbrush; migrants seen in wooded, brushy, and weedy riparian, agricultural, and urban areas; occasionally observed in pinyon-juniper	None	Y	Y		X	
Black swift [15] *Cypseloides niger*	Nests on precipitous cliffs near or behind high waterfalls; forages from montane to adjacent lowland habitats. Rare.	None	Y	N	X		
REPTILES AND AMPHIBIANS							
Longnose leopard lizard *Gambelia wislizenii*	Desert and semidesert areas with scattered shrubs or other low plants; e.g., sagebrush; areas with abundant rodent burrows, typically below 5,000' in elevation	None	Y	Y		X	
Midget faded rattlesnake [13] *Crotalus oreganus concolor*	Rocky outcrops for refuge and hibernacula, often near riparian; upper limit of 7500'-9500' in elevation	None	Y	Y		X	

BLM SENSITIVE SPECIES OF THE UFO [1]							
SPECIES	HABITAT DESCRIPTION [2, 3]	KNOWN [4]	RANGE? [5]	HABITAT? [6]	NO EFFECT? [7]	MAI [8]	LFL [9]
Milk snake *Lampropeltis triangulum taylori*	Variable types including shrubby hillsides, canyons, open ponderosa pine stands and pinyon-juniper woodlands, arid river valleys and canyons, animal burrows, and abandoned mines; hibernates in rock crevices	None	Y	Y		X	
Northern leopard frog [14] *Lithobates pipiens*	Springs, slow-moving streams, marshes, bogs, ponds, canals, flood plains, reservoirs, and lakes; in summer, commonly inhabits wet meadows and fields; may forage along water's edge or in nearby meadows or fields	None	Y	Y		X	
Canyon treefrog *Hyla arenicolor*	Rocky canyon bottoms along intermittent or perennial streams in temporary or permanent pools or arroyos ; semi-arid grassland, pinyon-juniper, pine-oak woodland, scrubland, and montane zones; elevation 1000' - 10,000'	None	Y	Y (Known Occurences Route ID 5, 42, 63, 65, 66, 77)		X	
Boreal toad *Anaxyrus boreas boreas*	Mountain lakes, ponds, meadows, and wetlands in subalpine forest (e.g., spruce, fir, lodgepole pine, aspen); feed in meadows and forest openings near water but sometimes in drier forest habitats	None	N		X		
PLANTS							
Debeque milkvetch *Astragalus debequaeus*	Varicolored, fine-textured, seleniferous, saline soils of the Wasatch Formation-Atwell Gulch Member; elevation 5100' – 6400'	None	N	N			
Grand Junction milkvetch *Astragalus linifolius*	Sparsely vegetated habitats in pinyon-juniper and sagebrush communities, often within Chinle and Morrison Formation and selenium-bearing soils, only known to occur on the eastern base of the Uncompahgre Plateau; elevation 4800' – 6200'	None	N	N	X		
Naturita milkvetch *Astragalus naturitenis*	Cracks and ledges of sandstone cliffs and flat bedrock area typically with shallow soils, within pinyon-juniper woodland; elevation 5400' – 6700'	None	Y	Y (Known Occurences Route ID 11, 87, 88)		X	

BLM SENSITIVE SPECIES OF THE UFO [1]							
SPECIES	HABITAT DESCRIPTION [2, 3]	KNOWN [4]	RANGE? [5]	HABITAT? [6]	NO EFFECT? [7]	MAI [8]	LFL [9]
San Rafael milkvetch *Astragalus rafaelensis*	Banks of sandy clay gulches and hills, at the foot of sandstone outcrops, or among boulders along dry watercourses in seleniferous soils derived from shale or sandstone formations; elevation 4500'– 5300'	None	Y	Y (Known Occurences Route ID (35, 36, 66, 98)		X	
Sandstone milkvetch *Astragalus sesquiflorus*	Sandstone rock ledges (Entrada formation), domed slickrock fissures, talus under cliffs, sometimes in sandy washes; elevation 5000' – 5500'	None	Y	Y (Known Occurences Route ID, 67)		X	
Gypsum Valley cateye *Cryptantha gypsophila*	Confined to scattered gypsum outcrop and grayish-white, often lichen-covered, soils of the Paradox Member of the Hermosa Formation; often the dominant plant at these sites; elevation 5200' – 6500'	None	N	N	X		
Fragile (slender) rockbrake *Cryptogramma stelleri*	Cool, moist, sheltered calcareous cliff crevices and rock ledges	None	Y	N	X		
Kachina daisy (fleabane) [15] *Erigeron kachinensis*	Saline soils in alcoves and seeps in canyon walls; elevation 4800' – 5600'	None	Y	N	X		
Montrose (Uncompahgre) bladderpod *Lesquerella vicina*	Sandy-gravel soil mostly of sandstone fragments over Mancos Shale (heavy clays) mainly in pinyon-juniper woodlands or in the ecotone between it and salt desert scrub; also in sandy soils derived from Jurassic sandstones and in sagebrush steppe communities; elevation 5800' – 7500'	None	N	N	X		
Colorado (Adobe) desert parsley *Lomatium concinnum*	Adobe hills and plains on rocky soils derived from Mancos Formation shale; shrub communities dominated by sagebrush, shadscale, greasewood, or scrub oak; elevation 5500' – 7000'	None	N	N	X		
Paradox Valley (Payson's) lupine *Lupinus crassus*	Pinyon-juniper woodlands, or clay barrens derived from Chinle or Mancos Formation shales, often in draws and washes with sparse vegetation; elevation 5000' – 5800'	None	Y	Y (Known Occurences Route ID 12, 15, 33, 37, 79, 81, 86)		X	

BLM SENSITIVE SPECIES OF THE UFO [1]							
SPECIES	HABITAT DESCRIPTION [2, 3]	KNOWN [4]	RANGE? [5]	HABITAT? [6]	NO EFFECT? [7]	MAI [8]	LFL [9]
Dolores skeleton plant [15] *Lygodesmia doloresenis*	Reddish purple, sandy alluvium and colluviums of the Cutler Formation between the canyon walls and the river in juniper, shadscale, and sagebrush communities; elevation 4000' – 5500'	None	Y	N	X		
Eastwood's monkey-flower *Mimulus eastwoodiae*	Shallow caves and seeps on steep canyon walls; elevation 4700' – 5800'	None	Y	N	X		
Paradox (Aromatic Indian) breadroot *Pediomelum aromaticum*	Open pinyon-juniper woodlands in sandy soils or adobe hills; elevation 4800' – 5700'	None	Y	Y (Known Occurences Route ID 15, 42, 67, 79)		X	
INVERTEBRATES							
Great Basin silverspot butterfly *Speyeria nokomis nokomis*	Found in streamside meadows and open seepage areas with an abundance of violets	None	Y	N	X		

[1] Based on Colorado BLM State Director's Sensitive Species List (Last update: April 15, 2011).
[2] Van Reyper G. 2006. Bureau of Land Management TES [threatened, endangered, sensitive] species descriptions. Uncompahgre Field Office, Montrose, CO, updated 2009/ 2010. Unpublished document.
[3] Spackman SB, JC Jennings, C Dawson, M Minton, A Kratz, C Spurrier. 1997. Colorado rare plant field guide. Prepared for the BLM, USFS, and USFWS by the Colorado Natural Heritage Program.
[4] Potential and/or known occurrences in Planning area? Assessment based on UFO files and GIS data, partner data, and local knowledge.
[5] Planning area is within the current known range of the species?
[6] Planning area contains suitable habitat for the species?
[7] Project activities will have no effect to the species or it's habitat
[8] Project activities may effect individuals of the species or it's habitat, but not likely to result in a trend toward federal listing
[9] Project activities are l ikely to result in a trend toward federal listing for the species
[10] ESA delisted species.
[11] Federal candidate species; in accordance with BLM policy and Manual 6840, candidate and proposed species are to be managed and conserved as BLM sensitive species. For the Gunnison prairie dog, candidate status includes only those populations occurring in the "montane" portion of the species' range.
[12] Species not known to occur in UFO.
[13] Validity of subspecies designation is in question by taxonomists.

[14]Species was petitioned for listing and is currently under status review by FWS, and a 12-month finding is pending; i.e., listing of the species throughout all or a significant portion of its range may be warranted.

[15] Species not on BLM Colorado State Director's Sensitive List; included at the Field Office level to account for recent sightings, proximate occurrences, and/or potential habitat.

Appendix C

	BIRDS OF CONSERVATION CONCERN OF THE UFO [1]								
SPECIES	HABITAT DESCRIPTION [2]	RANGE/STATUS [2, 3]	Populations Trends[4]	KNOWN [5]	RANGE [6]	HABITAT? [7]	NO EFFECT? [8]	MAI[9]	LFL[10]
Gunnison sage grouse *Centrocercus minimus*	Sagebrush communities (especially big sagebrush) for hiding and thermal cover, food, and nesting; open areas with sagebrush stands for leks; sagebrush-grass-forb mix for nesting; wet meadows for rearing chicks	Year-round resident, breeding.	-5.5 (-6.1) -7.5 (-10.1) Note: *Centrocercus sp.*	See assessment under Sensitive Species Section					
American bittern *Botaurus lentiginosus*	Marshes and wetlands; ground nester	Spring/ summer resident, breeding confirmed in the region but not within the UFO	No data	None	Y	Y	X		
Bald eagle [11] *Haliaeetus leucocephalus*	Nests in forested rivers and lakes; winters in upland areas, often with rivers or lakes nearby	Fall/winter resident, no confirmed breeding	+14.3 (+15.2) +14.3 (+15.2)	See assessment under Sensitive Species Section					
Ferruginous hawk *Buteo regalis*	Open, rolling and/or rugged terrain in grasslands and shrubsteppe communities; also grasslands and cultivated fields; nests on cliffs and rocky outcrops	Fall/ winter resident, non-breeding	+2.5 (+4.0) +0.7 (+0.8)	See assessment under Sensitive Species Section					

	BIRDS OF CONSERVATION CONCERN OF THE UFO [1]								
SPECIES	HABITAT DESCRIPTION [2]	RANGE/STATUS [2, 3]	Populations Trends[4]	KNOWN [5]	RANGE [6]	HABITAT? [7]	NO EFFECT? [8]	MAI[9]	LFL[10]
Golden eagle *Aquila chrysaetos*	Open country, grasslands, woodlands, and barren areas in hilly or mountainous terrain; nests on rocky outcrops or large trees	Year-round resident, breeding	-1.4 (-0.9) -0.2 (+0.8)	None	Y	Y (Known Occurences Route ID 64)		X	
Peregrine falcon [11] *Falco peregrinus*	Open country near cliff habitat, often near water such as rivers, lakes, and marshes; nests on ledges or holes on cliff faces and crags	Spring/summer resident, breeding	+1.5 (+6.3) +28.1 (+21.7)	See assessment under Sensitive Species Section					
Prairie falcon *Falco mexicanus*	Open country in mountains, steppe, or prairie; winters in cultivated fields; nests in holes or on ledges on rocky cliffs or embankments	Year-round resident, breeding	+1.7 (+6.3) +3.0 (+2.6)	None	Y	Y		X	
Long-billed curlew *Numenius americanus*	Lakes and wetlands and adjacent grassland and shrub communities	Spring/ fall migrant, non-breeding	+0.1 (+0.3) -4.4 (-3.5)	See assessment under Sensitive Species Section					
Snowy plover [12] *Charadrius alexandrines*	Sparsely vegetated sand flats associated with pickleweed, greasewood, and saltgrass	Spring migrant, non-breeding	No Data	None	N	N	X		

	BIRDS OF CONSERVATION CONCERN OF THE UFO [1]								
SPECIES	HABITAT DESCRIPTION [2]	RANGE/STATUS [2, 3]	Populations Trends[4]	KNOWN [5]	RANGE [6]	HABITAT? [7]	NO EFFECT? [8]	MAI[9]	LFL[10]
Mountain plover *Charadrius montanus*	High plain, cultivated fields, desert scrublands, and sagebrush habitats, often in association with heavy grazing, sometimes in association with prairie dog colonies ; short vegetation	Spring/ fall migrant, non-breeding	-3.4 (-2.5) -1.3 (-0.2)	None	N	N	X		
Yellow-billed cuckoo [13] *Coccyzus americanus*	Riparian, deciduous woodlands with dense undergrowth; nests in tall cottonwood and mature willow riparian, moist thickets, orchards, abandoned pastures	Summer resident, breeding	-1.0 (-2.6)	See assessment under Sensitive Species Section					
Flammulated owl *Otus flammeolus*	Montane forest, usually open and mature conifer forests; prefers ponderosa pine and Jeffrey pine	Summer resident, breeding	No Data	None	Y	Y		X	
Burrowing owl *Athene cunicularia*	Open grasslands and low shrublands often in association with prairie dog colonies; nests in abandoned burrows created by mammals; short vegetation	Summer/ fall resident, breeding	-0.1 (+0.4) -0.9 (-0.6)	See assessment under Sensitive Species Section					

	BIRDS OF CONSERVATION CONCERN OF THE UFO [1]								
SPECIES	HABITAT DESCRIPTION [2]	RANGE/STATUS [2, 3]	Populations Trends[4]	KNOWN [5]	RANGE [6]	HABITAT? [7]	NO EFFECT? [8]	MAI[9]	LFL[10]
Lewis's woodpecker *Melanerpes lewis*	Open forest and woodland, often logged or burned, including oak, coniferous forest (often ponderosa), riparian woodland, and orchards, less often in pinyon-juniper	Year-round resident, breeding	-2.0 (-1.4) -0.9 (+0.8)	None	Y	Y (Known Occurrences Route ID 11, 25, 53, 57, 84, 85)		X	
Willow flycatcher [12] *Empidonax traillii*	Riparian and moist, shrubby areas; winters in shrubby openings with short vegetation	Summer resident, breeding	-2.6 (-1.8) -3.1 (-2.8)	None	Y	Y (Known Occurrences Route ID 64)	X		
Gray vireo *Vireo vicinior*	Pinyon-juniper and open juniper-grassland	Summer resident, breeding	+1.7 (+1.4) +0.6 (+1.6)	None	Y	Y (Known Occurrences Route ID 5, 11, 25, 42, 53, 57, 66, 67, 77, 84, 85)		X	
Pinyon jay *Gymnorhinus cyanocephalus*	Pinyon-juniper woodland	Year-round resident, breeding	-3.6 (-3.3) -3.0 (-3.4)	None	Y	Y		X	
Juniper titmouse *Baeolophus griseus*	Pinyon-juniper woodlands, especially juniper; nests in tree cavities	Year-round resident, breeding	+0.3 (+1.5) -0.5 (-0.2)	None	Y	Y		X	
Veery *Catharus fuscescens*	Deciduous forests, riparian, shrubs	Possible summer resident, observed recently in Gunnison County, possible breeding	-4.9 (-7.7) -5.7 (-5.8)	None	N		X		

	BIRDS OF CONSERVATION CONCERN OF THE UFO [1]								
SPECIES	HABITAT DESCRIPTION [2]	RANGE/STATUS [2, 3]	Populations Trends[4]	KNOWN [5]	RANGE [6]	HABITAT? [7]	NO EFFECT? [8]	MAI[9]	LFL[10]
Bendire's thrasher *Toxostoma bendirei*	Desert, especially areas of tall vegetation, cholla cactus, creosote bush and yucca, and in juniper woodland	UFO is outside known range	-4.7 (-4.6)	None	N	N	X		
Grace's warbler *Dendroica graciae*	Mature coniferous forests	Summer resident, breeding	-1.6 (+1.9) +6.1 (+5.2)	None	Y	Y		X	
Brewer's sparrow *Spizella breweri*	Sagebrush-grass stands; less often in pinyon-juniper woodlands	Summer resident, breeding	-1.7 (-0.1) -2.0 (-1.6)	See assessment under Sensitive Species Section					
Grasshopper sparrow *Ammodramus savannarum*	Open grasslands and cultivated fields	UFO is outside known range	-1.9 (-8.1) -3.0 (-1.1)	None	N	N	X		
Chestnut-collared longspur *Calcarius ornatus*	Open grasslands and cultivated fields	Spring migrant, non-breeding	+0.4 (-3.4)	None	Y	Y		X	
Black rosy-finch *Leucosticte atrata*	Open country including mountain meadows, high deserts, valleys, and plains; breeds/ nests in alpine areas near rock piles and cliffs	Winter resident, non-breeding	No Data	None	Y	Y		X	
Brown-capped rosy-finch *Leucosticte australis*	Alpine meadows, cliffs, and talus and high-elevation parks and valleys	Summer residents, breeding	No Data	None	Y	Y (Winter habitat only)		X	

	BIRDS OF CONSERVATION CONCERN OF THE UFO [1]								
SPECIES	HABITAT DESCRIPTION [2]	RANGE/STATUS [2, 3]	Populations Trends[4]	KNOWN [5]	RANGE [6]	HABITAT? [7]	NO EFFECT? [8]	MAI[9]	LFL[10]
Cassin's finch *Haemorhous cassinii*	Open montane coniferous forests; breeds/ nests in coniferous forests	Year-round resident, breeding	-0.6 (+0.3) +0.4 (+2.2)	None	Y	Y		X	

[1] U.S. Fish and Wildlife Service. 2008. Birds of Conservation Concern 2008. United States Department of Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Arlington, Virginia. 85 pp. [Online version available at <http://www.fws.gov/migratorybirds/>].

[2] Cornell Lab of Ornithology. All about birds: bird guide. < http://www.allaboutbirds.org/guide/> Accessed 05/15/2009.

[3] Status within the UFO. San Juan Institute of Natural and Cultural Resources. Colorado Breeding Bird Atlas. Fort Lewis College, Durango, Colorado. <http://www.cobreedingbirdatlasii.org/> Accessed: 05/15/2009.

[4] Populations trends based on Patuxent Breeding Bird Survey Results for the Southern Rockies Region and Colorado for 1966-2010 (2000-2010). Accessed 10/30/2012 <http://www.mbr-pwrc.usgs.gov/cgi-bin/atlasa10.pl?S16&2&10>

[5] Potential and/or known occurrences in Planning area? Assessment based on UFO files and GIS data, partner data, and local knowledge.

[6] Planning area is within the current known range of the species?

[7] Planning area contains suitable habitat for the species?

[8] Project activities will have no effect to the species or it's habitat

[9] Project activities may effect individuals of the species or it's habitat, but not likely to result in a trend toward federal listing

[10] Project activities are l ikely to result in a trend toward federal listing for the species

[11] ESA delisted species.

[12] Non-listed subspecies/ population.

[13] ESA candidate species.

Appendix D

Grazing allotments where livestock crossing may occur under the Proposed Action

Route Segment ID	Allotment Number	Allotment Name
9	07303	Barkelew Draw
17		
21		
49		
50		
51		
52		
95		
96		
1	17061	Big Bucktail
59		
61		
85		
78	07235	Bramier Draw
27	17199	Broad Canyon
44		
15	17033	Buckeye
8	17022	Burn Canyon
15	17100	Carpenter Ridge
31	17107	Coal Canyon
54		
18	17027	Coke Ovens
78		
5	17037	Davis Mesa
67	17004	Dolores Canyon
79		
3	07300	Dry Park
22		
41		
53		
97		
4	17101	East Paradox
6		
18		
68		
69		
72		
75		
76		
77		
79		
29	07063	Gravel Pit
89		
90		
52	07209	Hamilton Mesa
45	07201	Home Ranch
46		
48		

50		
92		
2	07301	Horsefly Com
68	07076	Houser
72		
75		
30	07075	Lavender
68		
69		
78	17024	Lillylands/West
63	17044	Lion Cr Basin
56	07234	Lower Hamilton
66	07216	Lower Roc Creek
57	17001	Mailbox Park
88		
89		
5	17014	Mesa Cr
30		
35		
36		
39		
69		
86		
98		
8	07230	Mud Springs
16	17023	North Wickson Draw
28		
47		
12	17030	Park
11	17062	Parkway
11	02660	Radio Tower
47		
82		
84		
45	07227	Redvale
93	07200	River Allotment
94		
66	17020	Roc Cr
64	17080	Rowher Canyon
6	17032	Sawtooth
18		
98		
19	17105	Second Park
12	17031	Tabeguache Cr
13		
35		
34	17106	Tuttle Draw
55		
98		
1	07008	Twenty Five Mesa South
25		
59		
60		

87		
13	07007	Uncompahgre Bench
20		
24		
32		
33		
37		
38		
81		
57	07202	Upper Maverick Draw
14	17010	Wickson Draw