



UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Kremmling Field Office
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FINAL ENVIRONMENTAL IMPACT STATEMENT for the Blue Valley Ranch Land Exchange VOLUME 2: APPENDICES

DOI/BLM/CO/PL-18/001



April 2021

BLM Mission Statement

It is the mission of the Bureau of Land Management to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.

DOI/BLM/CO/PL-18/001

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Table 1-1. Federal and Federal Parcels Involved in the Exchange

Parcel	County	Legal Description	Acres
Federal Parcels			
BLM-A	Grand	(NW Sheephorn Mountain) T. 1 S., R. 81 W., Sixth Principal Meridian sec. 9, S½SW¼	80
BLM-B	Grand	(North Sheephorn Mountain) T. 1 S., R. 81 W., Sixth Principal Meridian sec. 15, SE¼NW¼, NE¼SW¼, and NW¼SE¼	120
BLM-C	Grand	(SW Sheephorn Mountain) T. 1 S., R. 81 W., Sixth Principal Meridian sec. 15, SW¼ SW¼, sec. 21, lots 1-6, inclusive, and NE¼NE¼; sec. 22, NW¼NW¼	330
BLM-D		Removed by BLM July 2015	0
BLM-E		Removed by BLM July 2015	0
BLM-F	Grand	(Southern Parcel) T. 1 S., R. 80 W., Sixth Principal Meridian section 26, S½SE¼	80
BLM-G	Grand	(East Blue River) T. 1 S., R. 80 W., Sixth Principal Meridian section 28, lot 5, SE¼NE¼	79
BLM-H	Grand	(West Blue River) T. 1 S., R. 80 W., Sixth Principal Meridian sec. 28, lot 3, SE¼NW¼ and E½SW¼; sec. 33, lot 3, SW¼NE¼ and E½NW¼	273
BLM-I	Grand	(Blue River North) T. 1 N., R. 80 W., Sixth Principal Meridian sec. 29, Lots 1, 4, 5 and 8; sec. 30, Lot 6; sec. 31, E½SE¼, SE¼ NE¼, Lots 5, 7, 10 and 12, sec. 32, NE¼NW¼ and W½NW¼	397
BLM-J	Grand	(Palmer Meadows) T. 1 N., R. 79 W., sec. 7, Parcel B sec. 8, Parcel F, Parcel B, and Parcel C. sec. 17, Parcel B together with 5 cubic feet per second (cfs) of water rights from Sophronia Day Ditch	90
BLM-K	Grand	(Blue Valley Metropolitan District) T. 1 S., R. 80 W., sec. 34, SE¼NW¼	40
Total – Federal Parcels			1,489

Table 1-1. Federal and Non-Federal Parcels Involved in the Exchange (cont.)

Parcel	County	Legal Description	Acres
Non-Federal Parcels			
BVR-1	Grand	Township 1 North, Range 80 West, Sixth Principal Meridian Section 30, Lot 4 Section 31, Lots 1 and 2, NE1/4NW1/4 Except that portion of the NE1/4NW1/4 of said Section 31 conveyed to The County of Grand by deed recorded November 22, 1913 in Book 50 at Page 193 Township 1 North, Range 81 West, Section 36, All Together with 3.0 cfs (50% owned by the Yust family) of water rights on Dry Creek No.1 Ditch; 3.0 cfs of water rights on Dry Creek No. 2 Ditch; and 2.0 cfs of water rights on Dry Creek No. 3 Ditch.	657
BVR-2	Summit	Township 2 South, Range 80 West, Sixth Principal Meridian Section 3, Lot 1, Lot 2, SW1/4/NE1/4, SE1/4NW1/4, E1/2SW1/4, W1/2SE1/4 Section 10, E1/2E1/2, NW1/4NE1/4, NE1/4NW1/4 Section 11, W1/2 of Lot 9 Section 14, Lot 4	622
BVR-3	Summit	Township 2 South, Range 80 West, Sixth Principal Meridian Section 2, S1/2NE1/4, and that part of the SE1/4 lying Northerly and Easterly of the Right of Way of Colorado State Highway No. 9 as disclosed by Deed recorded September 11, 1958 in Book 153 at Page 14.	187.4
BVR-4	Grand	Township 1 South, Range 80 West, Sixth Principal Meridian Section 35, SE1/4.	160
BVR-5	Grand	Township 1 North, Range 79 West, Sixth Principal Meridian Section 7, that portion of Lot 3 and the NE1/4SW1/4 lying north of U.S. Highway 40, and known as Parcel A, North of 40 Outright Exemption, according to the plat recorded October 31, 2000 at Reception No. 2000- 010217.	2
BVR-6		Removed by BLM July 2015	0
BVR-7	Grand	A perpetual, non-exclusive, 30-foot-wide access easement located in the N1/2NE1/4 of Section 8, Township 1 South, Range 81 West of the 6th P.M., for ingress and egress purposes, being further described as follows: A 30-foot easement, being 15 feet on either side of the centerline of an existing traveled way, lying in Section 8, Township 1 South, Range 81 West of the 6th P.M., and beginning at a point, whence the NW corner of said Section 8, bears S 89°45'13" E" for a distance of 1333.69 feet; Thence South 47°51'37" East for a distance of 366.10 feet, to a point; Thence South 42°59'42" East for a distance of 184.10 feet, to a point; Thence South 58°25'58" East for a distance of 227.84 feet to the POINT OF TERMINUS.	1

Table 1-1. Federal and Non-Federal Parcels Involved in the Exchange (cont.)

Parcel	County	Legal Description	Acres
BVR-8	Grand	<p>A tract of land located in the NE1/4 of Section 19, Township 1 North, Range 80 West of the 6th P.M., described as the YUST TRACT 2 SUBDIVISION EXEMPTION, according to the plat recorded February 14, 2006 at Reception No. 2006-001504, together with 7.12 cfs and being more particularly described as follows:</p> <p>Beginning at the North 1/16 corner between Sections 19 and 20 of said T1N, R80W, from which the ¼ corner between said Sections 19 and 20 bears S 02°09'33"W, a distance of 1326.35 feet (basis of bearing); thence S 02°09'33" W along the Section line between said Sections 19 and 20 for 892.00 feet to a point on the right bank of the Blue River;</p> <p>Thence S 02°09'33" W and continuing along said Section line for 79.14 feet to a point on the median line of said Blue River;</p> <p>Thence along said median line for the following courses:</p> <p>Thence N 55°01'17" W for 51.42 feet;</p> <p>Thence N 52°29'02" W for 53.67 feet;</p> <p>Thence N 47°54'29" W for 60.64 feet;</p> <p>Thence N 50°46'13" W for 27.23 feet;</p> <p>Thence N 55°38'44" W for 89.27 feet;</p> <p>Thence N 58°42'53" W for 32.37 feet;</p> <p>Thence N 61°03'45" W for 64.01 feet;</p> <p>Thence N 86°11'19" W for 31.56 feet;</p> <p>Thence N 80°11'20" W for 18.11 feet;</p> <p>Thence S 88°35'38" W for 53.11 feet;</p> <p>Thence S 86°16'54" W for 12.31 feet;</p> <p>Thence S 86°17'51" W for 55.38 feet;</p> <p>Thence S 81°31'47" W for 19.08 feet;</p> <p>Thence S 68°56'55" W for 69.26 feet;</p> <p>Thence S 44°48'54" W for 65.63 feet;</p> <p>Thence S 36°20'14" W for 23.15 feet;</p> <p>Thence S 32°59'38" W for 13.90 feet;</p> <p>Thence S 04°21'52" E for 11.71 feet;</p> <p>Thence S 08°07'16" E for 60.57 feet;</p> <p>Thence S 11°30'04" E for 8.95 feet;</p> <p>Thence S 10°36'06" E for 75.23 feet;</p> <p>Thence S 15°33'15" E for 43.01 feet;</p> <p>Thence S 08°12'53" E for 117.94 feet;</p> <p>Thence S 08°37'21" E for 109.00 feet;</p> <p>Thence S 02°51'09" E for 34.90 feet to a point on the east-west centerline of said Section 19;</p> <p>Thence N 88°38'12" West along said east-west centerline for 69.07 feet to a point on the right bank of said Blue River;</p> <p>Thence N 88°38'12" W and continuing along said east-west centerline for 731.69 feet to the center-east 1/16 corner of said Section 19 and being a standard U.S.B.L.M. aluminum pipe and cap;</p> <p>Thence N 88°42'37" W and continuing along said east-west centerline for 92.90 feet to a point on the right bank of said Blue River;</p> <p>Thence N 88°42'37" W for 78.28 feet to a point on the median line of said Blue River;</p>	67

Table 1-1. Federal and Non-Federal Parcels Involved in the Exchange (cont.)

Parcel	County	Legal Description	Acres
BVR-8 (cont.)	Grand	<p>Thence along said median line for the following courses: Thence N 32°10'41" W for 68.93 feet; Thence N 32°52'28" W for 97.07 feet; Thence N 31°28'58" W for 55.68 feet; Thence N 35°31'14" W for 165.10 feet; Thence N 30°29'39" W for 146.44 feet; Thence N 28°11'39" W for 34.06 feet; Thence N 29°48'17" W for 105.79 feet; Thence N 43°12'58" W for 175.37 feet; Thence N 42°32'07" W for 48.87 feet; Thence N 24°23'45" W for 86.42 feet; Thence N 01°31'40" E for 34.73 feet; Thence N 02°02'17" W for 76.82 feet; Thence N 08°55'41" E for 71.50 feet; Thence N 15°33'21" E for 53.96 feet; Thence N 22°34'36" E for 61.79 feet; Thence N 25°26'34" E for 95.02 feet; Thence N 29°31'22" E for 38.94 feet; Thence N 34°32'47" E for 47.33 feet; Thence N 35°41'05" E for 58.18 feet; Thence N 39°38'35" E for 113.71 feet; Thence N 47°25'29" E for 86.48 feet; Thence N 55°19'51" E for 45.25 feet; Thence N 61°10'49" E for 68.71 feet; Thence N 64°31'39" E for 61.71 feet; Thence N 68°46'54" E for 49.00 feet; Thence N 73°53'06" E for 101.69 feet; Thence N 78°36'06" E for 162.35 feet; Thence N 81°01'47" E for 86.79 feet; Thence N 89°58'27" E for 79.51 feet; Thence N 87°39'42" E for 49.59 feet; Thence N 81°46'26" E for 44.06 feet; Thence N 75°21'48" E for 68.71 feet; Thence N 67°49'18" E for 30.91 feet; Thence N 65°48'11" E for 56.10 feet; Thence N 39°55'33" E for 25.46 feet; Thence N 35°46'58" E for 23.07 feet; Thence S 66°00'47" E for 77.98 feet to a point on the right bank of said Blue River; Thence S 66°00'47" E for 927.60 feet to a point on the section line between said Sections 19 and 20; Thence S 02°09'33" W along said section line for 32.67 feet to the point of beginning.</p> <p>Blue River North Tract 2: A tract of land located in the NW1/4SW1/4 of Section 20, Township 1 North, Range 80 West of the 6th P.M., and being described as follows: Commencing at the W1/4 corner of said Section 20, a standard U.S.B.L.M. pipe and brass cap, thence S 84°14'37" E for 1332.99 feet (basis of bearings) to the center-west 1/16 corner of said Section 20, a standard U.S.B.L.M. aluminum pipe and cap and the point of beginning for this description;</p>	

Table 1-1. Federal and Non-Federal Parcels Involved in the Exchange (cont.)

Parcel	County	Legal Description	Acres
BVR-8 (cont.)	Grand	<p>Thence S 04°38'59" W for 630.97 feet to a U.S.B.L.M. Witness Point Marked "WP-3 S20" from which the SW 1/6 corner of said Section 20 bears S 04°52'14" W for 656.73 feet;</p> <p>Thence S 04°52'14" W for 50.28 feet to a point on the right bank of the Blue River;</p> <p>Thence S 04°52'14" W for 192.31 feet to a point on the median line of said Blue River; Thence along said median line for the following courses:</p> <p>Thence N 10°30'14" W for 9.03 feet;</p> <p>Thence N 13°33'20" W for 139.20 feet;</p> <p>Thence N 17°56'54" W for 56.56 feet;</p> <p>Thence N 11°46'10" W for 47.01 feet;</p> <p>Thence N 17°47'32" W for 46.49 feet;</p> <p>Thence N 30°38'47" W for 16.25 feet;</p> <p>Thence N 34°20'56" W for 128.13 feet;</p> <p>Thence N 34°05'57" W for 28.74 feet;</p> <p>Thence N 42°54'03" W for 68.63 feet;</p> <p>Thence N 44°40'13" W for 194.32 feet;</p> <p>Thence N 44°26'36" W for 73.95 feet;</p> <p>Thence N 40°55'51" W for 24.45 feet;</p> <p>Thence N 43°19'23" W for 72.17 feet;</p> <p>Thence N 21°53'05" W for 30.87 feet;</p> <p>Thence N 40°38'01" W for 39.32 feet;</p> <p>Thence N 50°11'55" W for 74.98 feet;</p> <p>Thence N 47°12'44" W for 65.44 feet;</p> <p>Thence N 56°02'32" W for 94.49 feet to a point on the east-west centerline of said Section 20;</p> <p>Thence S 84°14'37" E and leaving said median line for 116.96 feet along said east-west centerline to a point on the right bank of the Blue River;</p> <p>Thence S 84°14'37" E for 652.60 feet to the point of beginning.</p> <p>TO BE KNOWN AS THE FOLLOWING:</p> <p>YUST TRACT 2 SUBDIVISION EXEMPTION, according to the plat recorded February 14, 2006 at Reception No. 2006-001504.</p>	
BVR-9	Summit	Township 2 South, Range 80 West, Sixth Principal Meridian Section 3, SE1/4NE1/4 and E1/2SE1/4	120
BVR-10	Summit	Township 2 South, Range 80 West, Sixth Principal Meridian Section 3, a metes and bounds description of a parcel to be created out of lot 3	15
Total – Non-Federal Parcels			1,830

Notes:

Parcel acreages are rounded to the nearest whole number. Numbers may not total due to rounding.

The parcels described are all included in the Proposed Action. All legal descriptions would apply to Alternative 3; however, this alternative would not include parcels BVR-3 and BVR-4 and therefore the legal descriptions of these parcels would not apply. In addition, the size of BLM-I included in Alternative 3 would be reduced by 76 acres.

Table 2-1. Federal Parcels Involved in the Exchange – Alternative 2

Parcel	County	Acres
BLM-A	Grand	80
BLM-B	Grand	120
BLM-C	Grand	330
BLM-F	Grand	80
BLM-G	Grand	79
BLM-H	Grand	273
BLM-I	Grand	397
BLM-J	Grand	90
BLM-K	Grand	40
Total		1,489

Table 2-2. Non-Federal Parcels Involved in the Exchange – Alternative 2

Parcel	County	Acres
BVR-1	Grand	657
BVR-2	Summit	622
BVR-3	Summit	187
BVR-4	Grand	160
BVR-5	Grand	2
BVR-7	Grand	1
BVR-8	Grand	67
BVR-9	Summit	120
BVR-10	Summit	15
Total		1,830

Table 2-3. Federal Parcels Involved in the Exchange – Alternative 3

Parcel	County	Acres
BLM-A	Grand	80
BLM-B	Grand	120
BLM-C	Grand	330
BLM-F	Grand	80
BLM-G	Grand	79
BLM-H	Grand	273
BLM-I	Grand	321
BLM-J	Grand	90
BLM-K	Grand	40
Total		1,413

Table 2-4. Non-Federal Parcels Involved in the Exchange – Alternative 3

Parcel	County	Acres
BVR-1	Grand	657
BVR-2	Summit	622
BVR-5	Grand	2
BVR-7	Grand	1
BVR-8	Grand	67
BVR-9	Summit	120
BVR-10	Summit	15
Total		1,484

Table 3B-1. Summary of BLM Vehicle Count Data by Month (2012)

Location	May	June	July	August	September
BLM-I	502	315	713	527	527
Confluence Site	530	790	248 ^a	1,526	1,197
Pumphouse Recreation Area	7,639	1,801 ^a	27,675 ^b		7,970

Source: BLM KFO

Notes:

^a Appears to be an error in this data point

^b Pumphouse was not read in July 2012; average figure is for two months

Table 3C-1. Population Totals 1985–2015

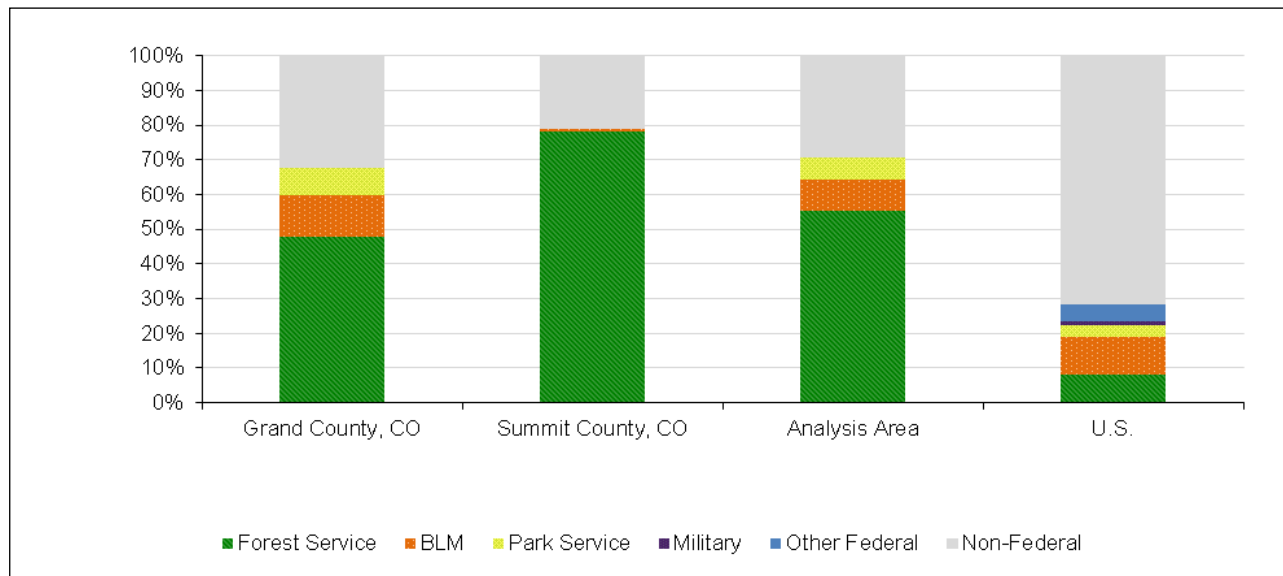
County	1985	1990	1995	2000	2005	2010	2015	% Change 1985–2015
Grand	9,212	8,006	9,953	12,853	13,897	14,790	14,615	59%
Summit	12,865	12,940	18,270	25,709	26,623	28,073	30,299	135%
Analysis Area	22,077	20,946	32,167	38,562	40,520	42,863	44,914	103%

Source: Colorado State Demography Office, 2016

Table 3C-2. Population Projections 2015–2050

County	2015	2020	2025	2030	2035	2040	2045	2050	% Change 2015–2050
Grand	14,615	16,322	18,490	20,621	22,668	24,577	26,345	28,069	92%
Summit	30,299	33,750	38,197	42,193	45,809	49,133	52,265	55,284	83%
Analysis Area	44,914	50,072	56,687	62,814	68,477	73,710	78,610	83,353	86%

Source: Colorado State Demography Office, 2016

Chart 3C-1. Federal and Non-Federal Land, Percent of Total Land Area

Source: USGS, 2016

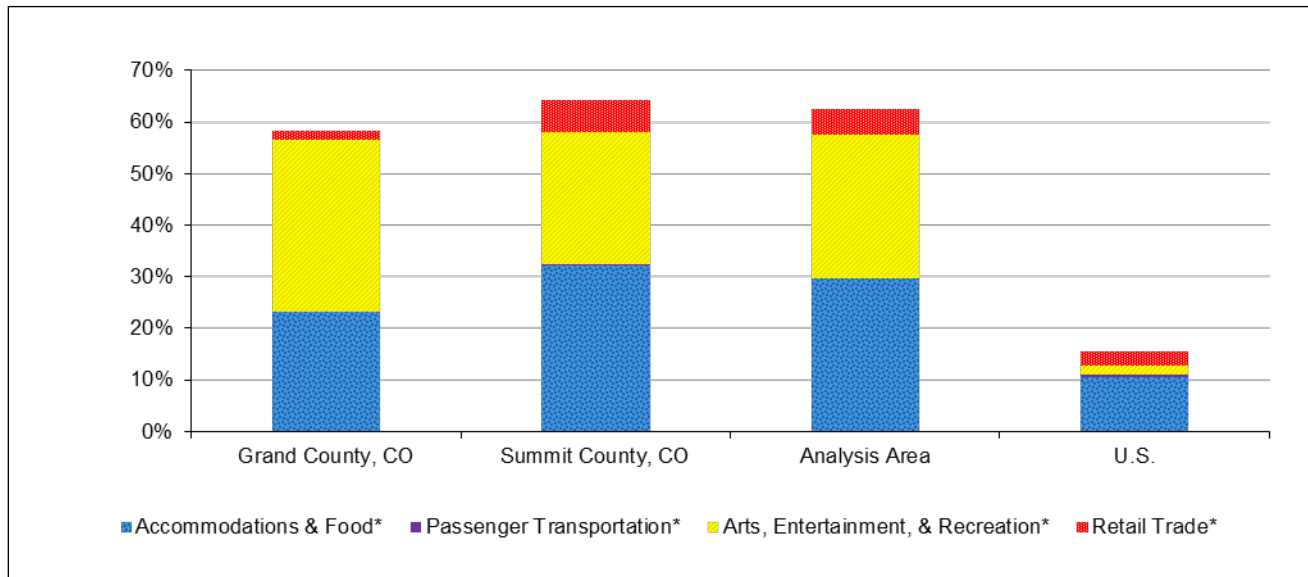
Table 3C-3. Total Acres of Federal Land by County Under the Action Alternatives

County	BLM	Total Federal Lands	Net Gain/Loss of Federal Lands		Total Acres of BLM Land Post Exchange		Total Acres of Federal Land Post Exchange		% Change of BLM Land Acreage		% Change of Federal Land Acreage	
			Alt 2	Alt 3	Alt 2	Alt 3	Alt 2	Alt 3	Alt 2	Alt 3	Alt 2	Alt 3
Grand County	143,474	811,679	- 602	-686	142,872	142,788	811,077	810,993	-0.4%	-0.5%	-0.07%	-.08%
Summit County	2,232	312,404	+ 943	+756	2,875	2,688	313,347	313,160	29%	20.4%	0.3%	0.24%
Total	145,706	1,124,083	+ 341	+70	145, 747	145,476	1,124,424	1,124,153	0.03%	-0.16%	0.03%	0.01%

Table 3C-4. Recreation Opportunities on the Blue River – Alternatives 1, 2, and 3

Changes to Recreation Resources	Alternative 1	Alternative 2	Alternative 3
Maximum Distances between rest stops (Blue River Floating)	6.38 miles (BLM-H to BLM-I)	6.91 miles (Pump Station Rest Stop to Lower Blue Take-Out)	8.06 miles (Spring Creek Bridge BLM-I)
Blue River walk-in public fishing access (mileage of riverfront)	BLM-I (0.3 mile) Total: 0.3 mile	BVR-8 (0.7 mile) Chevron (0.2 mile) Easement adjacent BVR-10 (0.2 mile) Total 1.1 miles	BLM-I (0.3) BVR-8 (0.7) Total: 1 mile

**Chart 3D-1. Industries that Include Travel and Tourism,
Percent of Total Private Employment – 2015**



Source: U.S. Department of Commerce, 2015

Table 3D-1. Total Acres of Federal Land by County

County	BLM	Forest Service	Total Federal Lands
Grand County	143,474	571,546	811,679
Summit County	2,232	310,172	312,404
Analysis Area	145,706	881,718	1,124,083

Source: USGS, 2016

Table 3D-2. Breakdown of Total General Revenue by Source in FY 2017 in Thousands of Dollars

Revenue Source	Grand County	Summit County	Analysis Area
Total General Revenue	32,190	61,994	94,184
Taxes	20,216	39,119	59,336
Intergovernmental Revenue	3,300	3,042	6,342
Total Charges	4,632	17,700	22,332
All Other (Miscellaneous)	4,042	2,132	6,174
Federal Land Payments (FY 2011)	2,047	1,120	3,167
Percent of Total			
Taxes	62.8%	63.1%	63.0%
Intergovernmental Revenue	10.3%	4.9%	6.7%
Total Charges	14.4%	28.6%	23.7%
All Other (Miscellaneous)	12.6%	3.4%	6.6%
Federal Land Payments (FY 2011)	6.4%	1.8%	3.4%

Source: U.S. Department of Commerce, 2018

Table 3E-1. BLM Grazing Allotments

Parcel	Allotment Number/Name	Permittee	AUMs	Season of Use
BLM-A	None	--	--	--
BLM-B and BLM-C	#07535 (Trough Road)	BVR	171	6/01 to 10/31: 189 Cattle
BLM-F	#0754 (Knorr-Stafford Pasture)	BVR	43 51 54	6/01 to 7/07: 160 Cattle 7/08 to 10/15: 70 Cattle 10/15 to 11/30: 160 Cattle
BLM-G	#07545 (Knorr-Meadow Pasture) #07573 (Blue Valley) ^a	BVR	9 in Knorr	6/01 to 6/08: 100 Cattle
BLM-H	#07545 (Knorr-Bell Pasture)	BVR	101	6/01 to 9/10: 100 Cattle
BLM-I	#07543 (Loback)	BVR	50	5/16 to 7/30 ^b : 100 Cattle
BLM-J	None	--	--	*
BLM-K	None	--	--	**
Total AUMs			479	

Source: BLM and BVR

Notes:

^a This allotment was turned into a reserve allotment with the signing of the 2015 RMP and does not have any AUM's assigned to it.

^b 2017/18 late summer/early fall.

* The south part of this parcel is irrigated and is hayed by Skylark Ranch.

** Not grazed due to its proximity to nearby subdivision and lack of fencing.

Table 3E-2. Standards for Public Land Health

Standard	Description
1	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.
3	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	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.

Source: BLM, 2008b

Table 3E-3. Rangeland Health Summary (Standards 1, 3, and 4)

Parcel	Standard 1	Standard 3	Standard 4
Federal Parcels			
BLM-A	Meeting	Meeting	Meeting
BLM-B	Meeting	Meeting	Meeting
BLM-C	Meeting	Meeting	Meeting
BLM-	Meeting	Meeting	Meeting
BLM-G	Meeting	Not Meeting	Not Meeting
BLM-H	Meeting	Meeting	Meeting
BLM-	Meeting	Meeting	Meeting
BLM-J	Meeting	Meeting	Meeting
BLM-K	Meeting	Not Meeting	Not Meeting
Non-Federal Parcels			
BVR-1	Meeting	Meeting	Meeting
BVR-2	Meeting	Meeting	Meeting
BVR-3	Meeting	Meeting	Meeting
BVR-4	Meeting	Meeting	Meeting
BVR-5	Meeting	Not Meeting	Not Meeting
BVR-7	Not Meeting	Not Meeting	Not Meeting
BVR-8 North	Meeting	Not Meeting	Not Meeting
BVR-8 South	Not Meeting	Not Meeting	Not Meeting
BVR-9	Meeting	Meeting	Meeting
BVR-10	Meeting	Meeting	Meeting

Source: Petterson, 2013

Note: This table has not been updated to reflect Alternative 3 and a similar table specific to this Alternative has not been created. Because Alternative 3 is similar to the Proposed Action, with the exception of certain parcels and part of a parcel, information about Alternative 3 have been extrapolated from this table.

Table 3E-4. Range Improvements on BLM Grazing Allotments in the Analysis Area

Allot. #	Project #	Project Name	Auth. Type	Legal Location				
				Meridian	Twtnshp	Range	Sec	Subdiv
07535	001013	Inspiration Point Fuels Management & Habitat Improvement Project	BLM, no agreement	6th Principal	001 S	081 W	5,8	
07535	200121	Inspiration Point Chain Seed	BLM, no agreement	6th Principal	001 S	081 W	006	SESE
07558	203860	Witness Corner Res	BLM, no agreement	6th Principal	003 S	081 W	022	NWNE

Source: Assignment of Range Improvements Report, Supplementary Page, BLM Form 4120-8 as provided by BLM KFO

Table 3G-1. Forest Service Sensitive Species

Species (Common Name, <i>Scientific Name</i>)	Habitat Association	Habitat Present in Analysis Area?	Considered in Detail?
Mammals			
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	Widespread across shrublands and montane forests, needs caves, mines or structures for roosts/hibernacula	Yes	Yes
Spotted bat (<i>Euderma maculata</i>)	Wide range of habitats	Yes	Yes
Hoary bat (<i>Lasiurus cinereus</i>)	Deciduous woodlands, roosts in dense foliage	Yes	Yes
River otter (<i>Lontra canadensis</i>)	Larger streams and rivers with higher prey bases (fish)	Yes	Yes
American marten (<i>Martes americana</i>)	Montane and boreal forests with higher amounts of coarse woody debris	Yes	Yes
Fringed myotis (<i>Myotis thysanodes</i>)	Ponderosa pine/pinyon-juniper woodlands	Yes	Yes
Pygmy shrew (<i>Sorex hoyi</i>)	Mesic forests and riparian areas	Yes	Yes
Birds			
Northern goshawk (<i>Accipiter gentilis</i>)	Montane and boreal forests	Yes	Yes
Olive-sided flycatcher (<i>Contopus cooperi</i>)	Montane and boreal forests around openings	Yes	Yes
American peregrine falcon (<i>Falco peregrinus anatum</i>)	Widespread, needs large cliffs for nesting	Yes	Yes
Bald eagle (<i>Haliaeetus leucocephalus</i>)	Summers near larger rivers and reservoirs/lakes, winters along larger open rivers	Yes	Yes
Lewis's woodpecker (<i>Melanerpes lewis</i>)	Montane deciduous woodlands (aspen & cottonwood), in ponderosa pine as well	Yes	Yes
Flammulated owl (<i>Otus flammeolus</i>)	Ponderosa pine woodlands, aspen stands on western slope	Yes	Yes
Brewer's sparrow (<i>Spizella breweri</i>)	Sagebrush shrublands	Yes	Yes
Amphibians			
Northern leopard frog (<i>Lithobates pipiens</i>)	Grassy wetlands in montane areas	Yes	Yes
Fishes			
Bluehead sucker (<i>Catostomus discobolus</i>)	Montane streams	Yes	Yes
Flannelmouth sucker (<i>Catostomus latipinnis</i>)	Montane and larger lower elevation streams	Yes	Yes
Colorado River cutthroat (<i>Oncorhynchus clarkii pleuriticus</i>)	Montane streams	Yes	Yes
Insects/Invertebrates			
Western bumblebee (<i>Bombus occidentalis</i>)	Wide variety of habitats	Yes	Yes
Monarch butterfly (<i>Danaus plexippus plexippus</i>)	Wide variety of habitats	Yes	Yes

Table 3G-2. Threatened, Endangered, and Proposed Wildlife Species

Species & Status (Common Name, Scientific Name)	Habitat Association	Species Range or Suitable Habitat in Analysis Area?	Designated Critical Habitat Present or could be Affected?	Acres of Habitat within the Special Status Wildlife Area	Percent of the Special Status Wildlife Area
Canada Lynx (FT) (<i>Lynx canadensis</i>)	High mountain areas with large expanses of spruce/fir forests, sometimes aspen, lodgepole forests in Colorado	Yes	No	0 acre on private parcels, trails would cross some habitat	<1% of LAU acres
North American Wolverine (PT) (<i>Gulo gulo luscus</i>)	Remote mountainous areas with little human activity	Yes	No	Marginal habitats	No designated habitat in state
Greenback Cutthroat Trout (FT) (<i>Oncorhynchus clarki stomias</i>)	Clear, cold running mountain streams, Recent genetic testing has indicated that this species occurs on the western side of the Continental Divide	Yes	No	1.43 river miles	5% of river miles in Blue and Green River

Notes: FE = federal endangered, FT = federal threatened, PT = proposed threatened

Table 3G-3. BLM Sensitive Species in Analysis Area

Species (Common Name, Scientific Name)	Habitat Association	Occurrence in Analysis Area
Birds		
Bald eagle (<i>Haliaeetus leucocephalus</i>)	Summers near larger rivers and reservoirs/lakes, winters along larger open rivers	Occurs along Blue River, and in surrounding uplands
Northern goshawk (<i>Accipiter gentilis</i>)	Coniferous and aspen forests	May occur in conifer forests on Green Mountain,
Golden eagle (<i>Aquila chrysaetos</i>)	Usually nests on cliffs, most common in sagebrush and desert shrublands, grasslands, alpine habitats	Sagebrush and mixed-mountain shrublands throughout Analysis Area
Ferruginous hawk (<i>Buteo regalis</i>)	Grasslands and desert shrublands	Sagebrush shrublands
Greater sage-grouse (<i>Centrocercus urophasianus</i>)	Large areas of sagebrush	Sagebrush shrublands
Peregrine falcon (<i>Falco peregrinus anatum</i>)	Nests on cliffs, wide-ranging hunting habitats	May nest on Green Mountain, forage over Analysis Area
Long-billed curlew (<i>Numenius americanus</i>)	Grasslands and wetlands	Wet meadows and hay fields
White-faced ibis (<i>Plegadis chihi</i>)	Marshy wetlands	Wet meadows and wetlands
Brewer's sparrow (<i>Spizella breweri</i>)	Sagebrush shrublands	Sagebrush shrublands
Columbian sharp-tailed grouse (<i>Tympanuchus phasianellus Columbianus</i>)	Mixed mountain shrublands	Mixed mountain shrublands

Table 3G-3. BLM Sensitive Species in Analysis Area (*cont.*)

Species (Common Name, <i>Scientific Name</i>)	Habitat Association	Occurrence in Analysis Area
Amphibians		
Northern leopard frog (<i>Lithobates pipiens</i>)	Grassy wetlands in montane areas	Wetlands and irrigated hay fields
Fishes		
Bluehead sucker (<i>Catostomus discobolus</i>)	Montane streams	Blue and Colorado Rivers
Flannelmouth sucker (<i>Catostomus latipinnis</i>)	Montane and larger lower elevation streams	Blue and Colorado Rivers
Colorado River cutthroat trout (<i>Oncorhynchus clarkii pleuriticus</i>)	Montane streams	Blue and Colorado Rivers
Mammals		
Rocky Mountain Bighornsheep (<i>Ovis canadensis</i>)	Montane areas with escape cover (cliffs)	Occurs on Green Mountain

Table 3G-4. BLM Parcels-Sage-Grouse Habitat

Parcel	Habitat	Acres
F	PHMA	81
H	PHMA	277
I	PHMA	396
J	PHMA	13
J	GHMA	73

Note: Under Alternative 3, there would be 320 acres of sage-grouse habitat located on BLM-I, because this parcel is reduced by 76 acres under this alternative.

Table 3G-5. BVR Parcels-Sage-Grouse Habitat

Parcel	Habitat	Acres
Chevron	PHMA	7
BVR-1	PHMA	497
BVR-2	PHMA	128
BVR-3	PHMA	187
BVR-4	PHMA	160
BVR-5	PHMA	2
BVR-8	PHMA	61
BVR-8	GHMA	6
BVR-9	PHMA	66
BVR-10	PHMA	497

Note: under Alternative 3, BVR-3 and BVR-4 would not be included in the exchange and, therefore, would not include the sage-grouse habitat on these parcels.

Table 3G-6. Big Game Habitat Designations by Parcel

Winter Range Categories	Federal Parcels	Acres	Private Parcels	Acres
Mule Deer				
Winter Range	F, G, H, I, K	888	1–5, 8–10	1,498
Winter Concentration Area	F	80.5	2–5, 9, 10	726
Severe Winter Range	F	80.5	2, 4	37.5
Critical Winter Range	F, G	145	2–5, 9, 10	730
Elk				
Winter Range	All	1,610	All	1,883
Winter Concentration	F, I	462	4, 5	54
Severe Winter Range	F	80	4, 5	54
Production (calving)	B, C	253	1	246
Pronghorn				
Winter Range	I	188	1, 5	261

Note: This table has not been updated to reflect Alternative 3 and a similar table specific to this Alternative has not been created. Because Alternative 3 is similar to the Proposed Action, with the exception of certain parcels and part of a parcel, information about Alternative 3 has been extrapolated from this table.

Table 3G-7. Alternative 1 Impacts to Sensitive Wildlife Species

Species	Regulating Agency	No Action Determination
Townsend's big-eared bat	Forest Service	No Impact
Spotted bat	Forest Service	No Impact
Hoary bat	Forest Service	No Impact
River otter	Forest Service	No Impact
American marten	Forest Service	No Impact
Fringed myotis	Forest Service	No Impact
Pygmy shrew	Forest Service	May Impact Individuals
Bald eagle	BLM, Forest Service	No Impact
Northern goshawk	BLM, Forest Service	No Impact
Golden eagle	BLM	May Impact Individuals
Ferruginous hawk	BLM	No Impact
Peregrine falcon	BLM, Forest Service	No Impact
Olive-sided flycatcher	Forest Service	No Impact
Greater sage-grouse	BLM, Forest Service	May Impact Individuals
Lewis's woodpecker	Forest Service	No Impact
Cassin's finch	Forest Service	No Impact
Flammulated owl	Forest Service	No Impact
Long-billed curlew	BLM	No Impact
White-faced ibis	BLM	No Impact
Brewer's sparrow	BLM, Forest Service	May Impact Individuals
Columbian sharp-tailed grouse	BLM	May Impact Individuals
Northern leopard frog	BLM, Forest Service	May Impact Individuals
Bluehead sucker	BLM, Forest Service	No Impact
Flannelmouth sucker	BLM, Forest Service	No Impact
Colorado River cutthroat trout	BLM, Forest Service	No Impact
Western bumblebee	Forest Service	No Impact
Monarch butterfly	Forest Service	No Impact

Table 3G-8. Impacts to Sensitive Wildlife Species – Alternatives 2 and 3

Species	Regulating Agency	Alternative 2 Determination
Townsend's big-eared bat	Forest Service	No Impact
Spotted bat	Forest Service	No Impact
Hoary bat	Forest Service	No Impact
River otter	Forest Service	No Impact
American marten	Forest Service	No Impact
Fringed myotis	Forest Service	No impact
Pygmy shrew	Forest Service	May Impact Individuals
Bald eagle	BLM, Forest Service	No Impact
Northern goshawk	BLM, Forest Service	No Impact
Golden eagle	BLM	May Impact Individuals
Ferruginous hawk	BLM	No Impact
Peregrine falcon	BLM, Forest Service	May Impact Individuals
Olive-sided flycatcher	Forest Service	No Impact
Greater sage-grouse	BLM, Forest Service	May Impact Individuals
Lewis's woodpecker	Forest Service	No Impact
Cassin's finch	Forest Service	No Impact
Flammulated owl	Forest Service	No Impact
Long-billed curlew	BLM	May Impact Individuals
White-faced ibis	BLM	No Impact
Brewer's sparrow	BLM, Forest Service	May Impact Individuals
Columbian sharp-tailed grouse	BLM	May Impact Individuals
Northern leopard frog	BLM, Forest Service	May Impact Individuals
Bluehead sucker	BLM, Forest Service	No Impact
Flannelmouth sucker	BLM, Forest Service	No Impact
Colorado River cutthroat trout	BLM, Forest Service	No Impact
Western bumblebee	Forest Service	May Impact Individuals
Monarch butterfly	Forest Service	No Impact
Bighorn sheep	BLM, Forest Service	May Impact Individuals

Table 3G-9. Alternative 2 Impacts to Sage-Grouse Habitat Allocations

Habitat Designation	Private (BVR) Parcel Acres Pre-Exchange		Federal (BLM) Parcel Acres Pre-Exchange		Habitat Balance to BLM after Exchange (acres)	
	Alt 2	Alt 3	Alt 2	Alt 3	Alt 2	Alt 3
PHMA	1,605	1,258	767	691	838	567
GHMA	6		73		-67	
Total (ADH)	1,611	1,264	840	764	771	500

Table 3H-1. Vegetation Types (acres) – Federal Parcels (BLM)

Vegetation Type	A	B	C	F	G	H	I	J	K	Total
Mixed Conifer Forest	45.7	43.4	206.8	0.0	0.0	4.7	0.0	0.0	0.0	300.6
Mixed Conifer Forest/Aspen Mix	26.9	43.1	73.7	0.0	0.0	0.0	0.0	0.0	0.0	143.8
Aspen	7.3	27.8	9.3	0.0	0.0	0.0	0.0	0.0	0.0	44.4
Sagebrush Shrubland	0.0	0.0	34.2	48.0	56.1	159.0	289.5	0.0	29.1	616.0
Sagebrush/Non-Native Grass Mix	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.1	10.1
Mountain Shrubland	0.0	0.0	0.0	29.1	18.0	59.4	61.2	0.0	0.0	167.8
Barrenlands	0.0	0.0	0.0	2.8	1.8	21.3	13.2	0.0	0.8	39.8
Grass Dominated	0.0	4.2	2.4	0.0	0.0	8.3	17.6	0.0	0.0	32.6
Irrigated Agriculture	0.0	0.0	0.0	0.0	0.5	4.5	0.0	30.8	0.0	35.7
Riparian Habitat	0.0	0.0	0.0	0.0	1.8	3.3	5.8	0.0	0.0	10.9
Wetlands	0.0	1.5	3.9	0.0	0.7	6.6	5.5	59.2	0.0	77.3
Aquatic Habitat (River and Ponds)	0.0	0.0	0.0	0.0	0.0	6.2	4.1	0.0	0.0	10.4
Non-Vegetated (Road)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grand Total	80.0	120.0	330.4	80.0	78.8	273.2	397.0	90.0	40.0	1,489.4

Notes:

Total column is based on the sum of unrounded acreages per parcel. The acreages in the total column may differ from other reported acreages because habitat resources are mapped and calculated in GIS, while land exchange acreage is based on the legal description of parcels, which has been calculated through cadastral survey work.

This table has not been updated to reflect Alternative 3 and a similar table specific to this Alternative has not been created. Effects to vegetation associated with Alternative 3 were extrapolated from this table.

Table 3H-2. Vegetation Types (acres) – Non-Federal Parcels (BVR)

Vegetation Type	1	2	3	4	5	7	8	9	10	Total
Mixed Conifer Forest	0.0	302.4	0.0	0.0	0.0	0.0	0.0	23.1	4.3	329.8
Mixed Conifer Forest/Aspen Mix	147.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	147.5
Aspen	69.5	3.5	0.0	0.0	0.0	0.0	0.0	0.2	0.0	73.1
Sagebrush Shrubland	364.5	195.9	167.6	121.8	0.0	0.3	0.0	86.7	5.4	942.2
Sagebrush/Non-Native Grass Mix	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0
Mountain Shrubland	2.9	36.4	6.0	25.6	0.0	0.0	9.3	7.3	5.0	92.5
Barrenlands	13.3	83.4	4.5	11.8	0.0	0.0	0.0	1.7	0.0	114.7
Grass Dominated	27.2	0.0	6.7	0.0	0.0	0.0	3.9	1.0	0.0	38.8
Irrigated Agriculture	20.8	0.0	0.0	0.0	0.0	0.0	41.0	0.0	0.0	61.8
Riparian Habitat	1.3	0.0	0.0	0.6	0.0	0.0	3.3	0.0	0.0	5.3
Wetlands	9.4	0.0	4.2	0.2	0.0	0.0	2.0	0.0	0.0	15.9
Aquatic Habitat (River and Ponds)	0.1	0.0	0.0	0.0	0.0	0.0	7.1	0.0	0.0	7.2
Non-Vegetated (Road)	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.0	0.0	0.8
Grand Total	656.6	621.6	189.0	160.0	2.0	0.5	67.3	120.0	14.6	1,831.6

Notes:

Total column is based on the sum of unrounded acreages per parcel. The acreages in the total column may differ from other reported acreages because habitat resources are mapped and calculated in GIS, while land exchange acreage is based on the legal description of parcels, which has been calculated through cadastral survey work.

This table has not been updated to reflect Alternative 3 and a similar table specific to this Alternative has not been created. Effects to vegetation associated with Alternative 3 were extrapolated from this table.

Table 3H-3. Federally Listed Plant Species Considered for Analysis

Species (Common Name, Scientific Name) Listing	Habitat Description and Colorado Range	Known from Action Area	Suitable Habitat Present?	Rationale for Exclusion
Osterhout milkvetch (<i>Astragalus osterhoutii</i>) Endangered	Barren shale soils rich in selenium. Known from near the Town of Kremmling, Grand County, Colorado.	No	Yes	Species Analyzed
Penland penstemon (<i>Penstemon penlandii</i>) Endangered	Barren shale soils. Narrowly restricted to the Troublesome Creek drainage east of the Town of Kremmling, Grand County, Colorado.	Yes	No	Species Analyzed
Ute ladies'-tresses orchid (<i>Spiranthes diluvialis</i>) Threatened	Riparian point bars and stream sides, meadows with subsurface hydrology, up to 7,000' elevation. Boulder, Eagle, El Paso, Garfield, Jefferson, Larimer, Moffat, Pitkin, Weld counties, Colorado.	No	No	Known elevation range of the species is below that of exchange parcels and associated Recreation Design Features.

Source: USFWS IPAC, 2016

Notes: No critical habitats for plants are present within the Analysis Area.

Table 3H-4. BLM Sensitive Plant Species for the KFO

Species (Common Name, Scientific Name)	Habitat Description and Colorado Range	Known from Analysis Area?	Suitable Habitat Present?	Rationale for Exclusion
Crescent bugseed (<i>Corispermum navicular</i>)	Sand dunes, 8,235–8,727' elevation. Jackson County, Colorado.	No	Yes	Not known from Analysis Area and no suitable habitats present.
Fragile rockbrake (<i>Cryptogramma stelleri</i>)	Crevice of moist, shaded limestone cliffs, often associated with waterfalls and under shallow rock overhangs, 7,825–13,458' elevation. Archuleta, Conejos, Grand, Gunnison, San Juan, San Miguel, Summit, and Ouray counties, Colorado.	No	Yes	No suitable habitats present.
Harrington penstemon (<i>Penstemon harringtonii</i>)	Sagebrush communities, often on calcareous substrates; 6,800–9,000'; endemic to Eagle, Garfield, Grand, Pitkin, Routt, and Summit counties, Colorado.	Yes	Yes	Species Analyzed
Pale blue-eyed grass (<i>Sisyrinchium pallidum</i>)	Margins of streams, wet meadows and fens. 6,322–9,708'. East of the Continental Divide in Chaffee, El Paso, Fremont, Gilpin, Jackson, Larimer, Park, Saguache, and Teller counties, Colorado.	No	Yes	Not known from Analysis Area, occurs only east of Continental Divide.

Source: Colorado BLM State Director's Sensitive Species List dated June 22, 2015

Table 3H-5. Rare Plant Survey Results for Harrington Penstemon

Parcel	Observation Year	Data Source and Description
BLM-G (Federal)	2003 2016	Villa – 41 plants in two locations Orthner – 3 plants observed in one location Acres occupied habitat = 0.2
BLM-H (Federal)	2003 2016	Villa – 230 plants observed on terraces above river Orthner – 18 plants observed; same location Acres occupied habitat = 1.3
BLM-I (Federal)	2003 2005 2016	Villa – 41 plants counted in three locations Orthner – 1 plant in one location Acres occupied habitat = 2.9
BLM-K (Federal)	2003 2016	Villa – 1 plant observed in one location Orthner – 18 plants observed in two locations Acres occupied habitat = 2.9
BVR-3 (Non-Federal)	2016	Orthner – 5 plants observed in one location Acres occupied habitat = 0.3

Source: CNHP, 1997; WER, 2016b; Villa, 2004

Note: This table has not been updated to reflect Alternative 3 and a similar table specific to this Alternative has not been created. Effects to rare plants associated with Alternative 3 were extrapolated from this table.

Table 3H-6. Forest Service Sensitive Plant Species Carried Forward in the Analysis

Species (Common Name, Scientific Name)	Habitat Description and Colorado Range	Known from Analysis Area?	Suitable Habitat Present?	Rationale
Park milkvetch (<i>Astragalus leptaleus</i>)	Ecotone of saturated and dry soils; moist swales and meadows; 6,000–10,000'; Chaffee, Custer, Eagle, Fremont, Gunnison, Jackson, Larimer, Park and Summit counties, Colorado.	No	Yes	Species Analyzed
Colorado tansyaster (<i>Machaeranthera coloradoensis</i>)	Gravelly areas in mountain parks, slopes and rock outcrops up to dry tundra; 7,600–13,000'; Dolores, Gunnison, Hinsdale, La Plata, Lake, Mineral, Park, Pitkin, Gunnison, Rio Grande, Saguache and San Juan counties, Colorado.	No	Yes	Species Analyzed
Harrington's penstemon (<i>Penstemon harringtonii</i>)	Sagebrush communities, often on calcareous substrates; 6,800–9,000'; endemic to Eagle, Garfield, Grand, Pitkin, Routt, and Summit counties, Colorado.	No	Yes	Species Analyzed

Source: USDA Forest Service, 2015b

Note: The Analysis Area for Forest Service sensitive plants is limited to the NFS lands adjacent to BVR-10, where recreational improvements are proposed.

Table 3H-7. Noxious Weeds Present on Federal Exchange Parcels

Parcel	Species	State Rank	General Location
A	Houndstongue	List B	Mainly found in beetle-killed lodgepole pine
B	Houndstongue	List B	Mainly found in beetle-killed lodgepole pine
C	Houndstongue Canada thistle	List B List B	Mainly found in beetle-killed lodgepole pine Scattered in drainage ways
F	None noted	--	--
G	Canada thistle Quackgrass	List B List C	Along drainage area, irrigated meadows At one seepage area
H	Canada thistle Cheatgrass Quackgrass	List B List C List C	NE part of parcel, wetlands, next to roadway Minor component on veg along southeast ridge Irrigated meadows in northeast portion
I	Canada thistle Houndstongue Cheatgrass	List B List C List C	On river point bar (east bank), and along irrigation ditch In riparian areas Along two-track road
J	Canada thistle	List B	SW corner of northern parcel and on south parcel
K	Cheatgrass	List C	Scattered in disturbed sagebrush shrublands

Source: URS, 2014; CEC, 2007; Villa, 2004; WER, 2016

Notes:

List B species are those for which the State develops and implements management plans to stop their continued spread. List C species are those for which the State provides resources to support more effected integrated weed management.

This table has not been updated to reflect Alternative 3 and a similar table specific to this Alternative has not been created.

Noxious weed information related to Alternative 3 was extrapolated from this table.

Table 3H-8. Noxious Weeds Present on Non-Federal Exchange Parcels

Parcel	Name	State Rank	General Location
1	Canada thistle Houndstongue White top Quackgrass	List B List B List B List C	Along drainage ways and wetlands, along old logging road Along old logging road In lower meadow In/adjacent to irrigated meadows
2	None noted	--	--
3	Canada thistle Musk thistle Cheatgrass	List B List B List C	Along drainage ways and wetlands Scattered in southwest Prevalent
4	Canada thistle White top Diffuse knapweed Cheatgrass	List B List C List B List C	Prevalent In small numbers Small 15-foot diameter patch, north of access road Prevalent
5	None noted	--	--
7	None noted	--	--
8	Canada thistle Houndstongue Quackgrass	List B List B List C	In riparian areas along the river In riparian areas along the river In swales and hay meadows
9	Canada thistle	List B	Around old homestead
10	None noted	--	--

Source: URS, 2014; CEC, 2007; Villa, 2004; WER, 2016

Note: This table has not been updated to reflect Alternative 3 and a similar table specific to this Alternative has not been created. Noxious weed information related to Alternative 3 was extrapolated from this table.

Table 3H-9. Change in Ownership of Vegetation Types – Proposed Action

Vegetation Type	Federal Parcels (acres)	Non-Federal Parcels (acres)	Change in BLM Ownership (acres)
Mixed Conifer Forest	300.6	329.8	+29.2
Mixed Conifer Forest/Aspen Mix	143.8	147.5	+3.8
Aspen	44.4	73.1	+28.7
Sagebrush Shrubland	616.0	942.2	+326.2
Sagebrush/Non-Native Grass Mix	10.1	2.0	- 8.1
Mountain Shrubland	167.8	92.5	-75.3
Barrenlands	39.8	114.7	+74.9
Grass Dominated	32.6	38.8	+6.2
Irrigated Agriculture	35.7	61.8	+26.1
Riparian Habitat	10.9	5.3	- 5.6
Wetlands	77.3	15.9	- 61.4
Aquatic Habitat (River and Ponds)	10.4	7.2	- 3.2
Non-Vegetated (Road)	0.0	0.8	+0.8
Grand Total	1,489.4	1,831.6	342.2^a

Notes:

^a The net gain of 342.2 acres of habitat resources differs from the net gain in 341 acres of public lands because habitat resources are mapped and calculated in GIS, while land exchange acreage is based on the legal description of parcels, which has been calculated through cadastral survey work.

Non-Federal BVR-7 is included in acreage calculations although there would not be a transfer of land ownership, only an easement granted to BVR.

This table has not been updated to reflect Alternative 3 and a similar table specific to this Alternative has not been created. Effects to vegetation associated with Alternative 3 were extrapolated from this table.

Table 3H-10. Effect Determination Summary for TES Plants – Alternative 2 and 3

Species (Common Name, Scientific Name)	Status	Alternative 1 No Action	Alternative 2 Proposed Action
Federally Listed Plants			
Osterhout milkvetch (<i>Astragalus osterhoutii</i>)	Endangered	No Effect	No Effect
Penland penstemon (<i>Penstemon penlandii</i>)	Endangered	No Effect	No Effect
BLM Listed Plants			
Harrington penstemon (<i>Penstemon harringtonii</i>)	BLM Sensitive	No Impact	Transfer of 7 acres of occupied habitat to private ownership. Potential adverse impacts to plants, but no effects to species as a whole.
Forest Service Listed Plants			
Park milkvetch (<i>Astragalus leptaleus</i>)	Forest Service Sensitive	No Impact	No Impact
Colorado tansyaster (<i>Machaeranthera coloradoensis</i>)	Forest Service Sensitive	No Impact	No Impact
Harrington penstemon (<i>Penstemon harringtonii</i>)	Forest Service Sensitive	No Impact	No Impact

Notes: The Analysis Area for Forest Service plants only includes those NFS lands that would be indirectly affected by the Proposed Action, namely the proposed trail from non-Federal BVR-10 to the Blue River at the proposed Green Mountain Recreation Area.

Table 3I-1. Existing Water Right and Use Summary for Parcels in the Land Exchange

Parcel	Source	Ditch	Total Flow of Ditch (cfs)	Flow to be Transferred (cfs)	Percentage of Total Flow to be Transferred	Owner	Adjudication Date	Priority Date	Use	Average Annual Diversion of Ditch (acre-feet) ^c	Estimate of Average Annual Diversions to be Transferred (acre-feet) ^c	Primary Months of Use	Average # of Days Used
Federal Parcels													
BLM-I ^a	Blue River	None – instream flow	N/A	0.002	100%	BLM	01/01/1881	01/01/1881	Fishing, wildlife and other recreational uses.	N/A	N/A	Year Round	365
BLM-J	Colorado River	Sophronia Day Ditch	24.125	2.125	22%	BLM	08/03/1911	05/11/1909	Flood irrigate south part of BLM-J and adjoining field for hay production	4,295.90	945.10	Mid-May–Mid-July	94
		Sophronia Day Ditch No. 2		3.25		BLM	08/11/1906	06/03/1891					
		TOTAL		5.375									
Non-Federal Parcels													
BVR-1	Dry Creek	Dry Creek Ditch No. 1	3.0	3.0	100%	Galloway Inc. ^b	03/10/1952	10/06/1949	The Galloway water right is used to irrigate approximately 22 acres north of the ditch.	148.50	148.50	April-June	66
	Dry Creek	Dry Creek Ditch No. 2	3.0	3.0	100%	Galloway Inc. ^b	03/10/1952	05/31/1910	Flood irrigate 25 acres of pasture south of the ditch.	110.42	110.42	April-June	60
	Dry Creek	Dry Creek Ditch No. 3	2.0	2.0	100%	Galloway Inc. ^b	03/10/1952	10/06/1949	Ditch in disrepair and not currently used. Historically used to flood irrigate 25–30 acres downslope (north) of the ditch.	89.68	89.68	April-June	59

Table 3I-1. Existing Water Right and Use Summary for Parcels in the Land Exchange (cont.)

Parcel	Source	Ditch	Total Flow of Ditch (cfs)	Flow to be Transferred (cfs)	Percentage of Total Flow to be Transferred	Owner	Adjudication Date	Priority Date	Use	Average Annual Diversion of Ditch (acre-feet) ^c	Estimate of Average Annual Diversions to be Transferred (acre-feet) ^d	Primary Months of Use	Average # of Days Used
BVR-8	Colorado River	Loback Ditch	75.80	1.79	9%	Galloway Inc. ^b	10/26/1937	05/01/1881	Flood irrigate 41 acres for hay production on BVR-8, 3 miles north of the head-gate.	6,224.89	560.24	June and July	75
		Loback Ditch		1.75			03/10/1952	12/31/1899					
		Loback Ditch		3.58			12/31/1974	12/31/1930					
		TOTAL		7.12				08/07/1973					

Source: Warranty Deeds and water rights owners; Colorado Division of Water Resources

Notes:

^a Under Alternative 3, the water rights of parcel BLM-I would not be included in the exchange.

^b Owner of BVR

^c This figure was derived by reviewing annual diversion records for the ditch that are available from Colorado Division of Water Resources.

^d This figure was derived by multiplying the average annual diversion of the ditch by the percentage of water rights to be transferred.

Table 3J-1. River, Stream and Drainage Segments, Federal Parcels

Parcel	Stream Name	Seasonality (Perennial/Intermittent)	Segment Length (ft)
BLM-B	Unnamed – North	Intermittent	522
	Unnamed – Central	Intermittent	1,493
	Unnamed – South	Intermittent	1,697
BLM-C	Corduoy Canyon Creek	Intermittent	3,261
	Beaver Creek Tributary	Intermittent	984
BLM-G	Blue River	Perennial	586
	King Creek	Perennial	1,480
BLM-H	Blue River – Southeast	Perennial	1,415
	Blue River – Northeast	Perennial	2,697
	Unnamed – South	Intermittent	2,782
BLM-I	Blue River – North	Perennial	110
	Blue River – East	Perennial	1,598
	Dry Creek	Intermittent	1,712
	Unnamed – Middle	Intermittent	1,417
	Unnamed – South	Intermittent	755
Total Length		Perennial	7,886
		Intermittent	14,623
Total			22,509

Source: USGS mapping, aerial photography, wetland delineation, and CDOT data

Notes:

This table has not been updated to reflect Alternative 3 and a similar table specific to this Alternative has not been created.

Effects to river, stream and drainage segments associated with Alternative 3 were extrapolated from this table.

The unnamed intermittent streams on BLM-I (Middle and South) are within the modified BLM-I boundary included in Alternative 3. The segments of Blue River and Dry Creek on BLM-I are excluded from exchange under the Alternative 3 parcel boundary.

Table 3J-2. Watershed Conditions, Federal Parcels

Parcel	Size (acres)	Vegetation Type	Vegetation Standard 3	Soil Standard 1	Land Use	Road Disturbance (acres)
BLM-A	80	Conifer/Aspen Forest	Meeting	Meeting	Open space	---
BLM-B	120	Conifer/Aspen Forest, Grassland	Meeting	Meeting	Livestock grazing	0.3
BLM-C	330	Conifer/Aspen Forest, Shrubland, Grassland, Wetlands	Meeting	Meeting	Open space	---
BLM-F	80	Sagebrush Shrubland, Mountain Shrubland, Barrenlands	Meeting	Meeting	Livestock grazing	---
BLM-G	79	Riparian & Wetlands, Sagebrush Shrubland, Mountain Shrubland, Barrenlands	Not meeting due to introduced vegetation types	Meeting	0.5 acre flood irrigated	0.2
BLM-H	273	Mixed Conifer Forest, Mountain Shrubland, Barrenlands, Grassland, Irrigated Agriculture, Riparian Habitats, Wetlands	Meeting	Meeting	4.5 acres flood irrigated, Livestock grazing	1.2
BLM-I	397	Sagebrush Shrubland, Mountain Shrubland, Barrenlands, Grassland, Riparian Habitat, Wetlands	Meeting	Meeting	Livestock grazing	1.2
BLM-J	90	Irrigated Agriculture, Wetlands	Meeting	Meeting	Hay production, 31 acres flood irrigated	---
BLM-K	40	Sagebrush Shrubland, Barrenlands, Sagebrush-Non-native Grass Mix	Not meeting due to introduced vegetation types	Meeting	Open space	0.2

Notes: This table has not been updated to reflect Alternative 3 and a similar table specific to this Alternative has not been created. Under Alternative 3, BLM-I would only be 321 acres and effects to watershed associated with Alternative 3 were extrapolated from this table.

Table 3J-3. River and Drainage Segments, Non-Federal Parcels

Parcel	Stream Name	Seasonality (Perennial/Intermittent)	Segment Length (ft)
1	Dry Creek & Tributaries Dry Creek Tributary – Northeast	Intermittent Intermittent	8,952 167
4	Unnamed	Intermittent	2,315
8 North	Blue River – East Blue River – West	Perennial Perennial	1,212 2,693
8 South	Blue River	Perennial	1,164
Total Length		Perennial Intermittent	5,069 11,434
Total			16,503

Source: USGS mapping, aerial photography, wetland delineation, and CDOT data

Note: This table has not been updated to reflect Alternative 3 and a similar table specific to this Alternative has not been created. Effects to river, stream and drainage segments associated with Alternative 3 were extrapolated from this table.

Table 3J-4. Watershed Conditions, Non-Federal Parcels

Parcel No.	Size (acres)	Vegetation Type	Vegetation Standard 3	Soil Standard 1	Land Use	Road Disturbance (acres)
BVR-1	657	Mixed Conifer/Aspen Forest, Aspen Forest, Sagebrush Shrubland, Mountain Shrubland, Barrenlands, Grass-dominated Riparian Habitat, Wetlands	Meeting	Meeting	25 acres irrigated, Livestock grazing	1.9
BVR-2	622	Mixed Conifer Forest, Aspen Forest, Sagebrush Shrubland, Mountain Shrubland, Barrenlands	Meeting	Meeting		1.0
BVR-3	187	Sagebrush Shrubland, Mountain Shrubland, Barrenlands, Grass-dominated, Wetlands	Meeting	Meeting		---
BVR-4	160	Sagebrush Shrubland, Mountain Shrubland, Barrenlands, Riparian Habitat, Wetlands	Meeting	Meeting		1.0
BVR-5	2	Sagebrush/Non-native Grass Mix	Not meeting due to introduced vegetation types	Meeting		0.6
BVR-7	1	Sagebrush Shrubland, Road	Not meeting due to introduced vegetation types	Not meeting		0.2
BVR-8	67	Mountain Shrubland, Grass-dominated, Irrigated Hay Grasses, Riparian Habitat, Wetlands	Not meeting due to introduced grassland	South part not meeting	41 acres irrigated, Livestock grazing	0.3
BVR-9	120	Mixed Conifer Forest, Aspen Forest, Sagebrush Shrubland, Mountain Shrubland, Barrenlands, Grass-dominated	Meeting	Meeting		0.2
BVR-10	15	Mixed Conifer Forest, Sagebrush Shrubland, Mountain Shrubland	Meeting	Meeting		---

Table 3K-1. Federal Parcel Summary – Wetlands, Streams, and Riparian Habitat

Parcel	Wetlands (acres)	Fens	Riparian Habitat (acres)	Aquatic Habitat (acres)	Streams & Drainages
BLM-B	1.5	--	--	--	Intermittent – 3,712 LF
BLM-C	3.9	0.08 acre	--	--	Intermittent – 4,245 LF
BLM-G	0.7	--	1.8	--	Perennial – 2,066 LF
BLM-H	Total 6.9 (Irrigated ~4.9)	--	2.9	6.2	Perennial – 4,112 LF Intermittent – 2,782 LF
BLM-I	Total 5.5 (Irrigated ~ 0.65)	--	5.8	4.1	Perennial – 1,708 LF Intermittent – 3,884 LF
BLM-J	Total 59.2 (Irrigated ~ 12.4)	--	--	--	--

Note: Under Alternative 3 approximately 4 acres of wetlands on BLM-I would be retained in federal ownership due to the modified parcel boundary associated with this alternative.

Table 3K-2. Non-Federal Parcel Summary – Wetlands, Streams, and Riparian Habitat

Parcel	Wetlands (acres)	Fens (acres)	Riparian Habitat (acres)	Aquatic Habitat (acres)	Streams & Drainages
BVR-1	Total 9.4 (Irrigated ~ 1.3)	--	1.9	0.1	Intermittent – 9,119 LF
BVR-3	4.2	0.05	--	--	--
BVR-4	0.2	--	0.6	--	Intermittent – 2,315 LF
BVR-8	Total 2.0 (Irrigated ~ 0.06)	--	3.3	7.1	Perennial – 5,069 LF

Note: Under Alternative 3 approximately 4.4 acres of wetlands on BVR-3 and BVR-4 would be retained in private ownership due to the modified parcel configuration associated with this alternative.

Table 3K-3. Change in Ownership of Wetlands and Riparian Habitats – Proposed Action

Resources	Federal Parcels (acres)	Non-Federal Parcels (acres)	Change in BLM Ownership (acres)
Wetlands	77.7	15.9	- 61.8
Fens*	0.08	0.05	- 0.03
Irrigated Wetlands	17.95	1.36	-16.59
Riparian Habitat	10.5	5.9	- 4.6
Aquatic Habitat (River and Ponds)	10.4	7.2	- 3.2
Blue River Aquatic Habitat	9.3	7.1	- 2.2
Seasonal Ponds	1.1	0	- 1.1
Perennial Ponds	0	0.1	+0.1

*Fens are defined by the limits of organic-rich soil (Histosols)

Note: This table has not been updated to reflect Alternative 3 and a similar table specific to this Alternative has not been created. Effects to wetlands associated with Alternative 3 were extrapolated from the previous tables.

Table 3K-4. Change in Ownership of Wetlands and Riparian Habitats, Land Use, and Regulatory Oversight – Proposed Action

Parcel	Water Resources	Anticipated Future Land Uses	Development Proposed by Proponent, including mineral estate (Y/N)	Development Possible on Parcel (Y/N)^a	Protective Measures (federal, state, and local) applicable to potential land use development by private parties^b	Parcel Conveyed with Deed Restrictions (Y/N)
BLM-B	Wetlands: 1.5 acres Intermittent stream: 3,712 LF	Grazing (currently grazed under allotment from BLM)	N	Y	<ul style="list-style-type: none"> • CWA/USACE • Colorado Law for State Waters • Grand County Zoning 	N
BLM-C	Wetlands: 3.9 acres Fens: 0.08 acre Intermittent stream: 4,245 LF	Grazing (Southern portion currently grazed under allotment from BLM)/Hunting	N	N	<ul style="list-style-type: none"> • CWA/USACE • Colorado Law for State Waters • Grand County Zoning 	Y ^c
BLM-G	Wetland: 0.7 acre Riparian Habitat: 1.8 acres Perennial stream: 2,066 LF	Grazing (currently grazed under allotment from BLM)	N	Y	<ul style="list-style-type: none"> • CWA/USACE • Colorado Law for State Waters • Grand County Zoning 	N
BLM-H	Wetlands: 6.9 acres (total) (Irrigated ~4.9) Riparian Habitat: 2.9 acres Aquatic Habitat: 6.2 acres Perennial stream: 4,112 LF Intermittent stream: 2,782 LF	Grazing (currently grazed under allotment from BLM)	N	Y	<ul style="list-style-type: none"> • CWA/USACE • Colorado Law for State Waters • Grand County Zoning 	N
BLM-I	Wetlands: 5.5 acres (total) (Irrigated ~ 0.65) Riparian Habitat 5.8 acres Aquatic Habitat: 4.1 acres Perennial stream: 1,708 LF Intermittent stream: 3,884 LF	Grazing (currently grazed under allotment from BLM)	N	Y	<ul style="list-style-type: none"> • CWA/USACE • Colorado Law for State Waters • Grand County Zoning 	N

Table 3K-4. Change in Ownership of Wetlands and Riparian Habitats, Land Use, and Regulatory Oversight – Proposed Action (cont.)

Parcel	Water Resources	Anticipated Future Land Uses	Development Proposed by Proponent, including mineral estate (Y/N)	Development Possible on Parcel (Y/N) ^a	Protective Measures (federal, state, and local) applicable to potential land use development by private parties ^b	Parcel Conveyed with Deed Restrictions (Y/N)
BLM-J	Wetlands: 59.2 acres (total) (Irrigated ~ 12.4)	Grazing (not currently grazed)	N	Y	<ul style="list-style-type: none"> • CWA/USACE • Colorado Law for State Waters • Grand County Zoning 	N

Notes:

^a It is important to note that there is no development proposed on any of these parcels; the information in this column speaks to the fact that development could (in most cases) occur under private ownership.

^b It is important to note that the following protective measures have exemptions. To the extent possible, exemptions are described; however, unknown exemptions may also exist.

CWA/USACE: Under the CWA, waters of the U.S. (including wetlands) are regulated and those who impact them (through either dredging or fill materials being placed in the wetland or adding a point source of pollution to the water) are required to obtain a permit from the USACE. Normal farming and ranching activity impacts are exempt (i.e., cow manure leaking into water) but the conversion of the wetland to upland or farmland would not be exempt and would be required to obtain a permit. Specific to wetlands themselves is the Highly Erodible Land Conservation and Wetland Conservation Compliance provisions, which prohibits producers from planting on converted wetlands or converting wetlands for crop production. In the context of Blue Valley Ranch, this likely means that if the livestock owner wanted to plant grazing crops on the wetland, they would be regulated under this provision and would either be prevented from doing so or required to obtain a permit. In general, under CWA/USACE regulations, impacts to wetlands may be allowed with appropriate on-site or off-site mitigation. It is important to note that, USACE classifies fens as “Resource Category 1” and that destruction and mitigation of fens is not allowed; therefore, even after transfer into private ownership, there would be no impact to fens.

State of Colorado: The State of Colorado does not have any specific laws or regulations that address wetlands. The State of Colorado recognizes wetlands under the definition of “state waters” and are, therefore, subject to basic standards for water quality (refer to CWA/USACE discussion).

Grand County: All of the exchange parcels discussed in this table are located within the Forestry and Open Zone The purpose of the Forestry and Open Zone District is to protect lands suitable for agricultural and related uses including uses related to forestry, mining and recreation after additional permitting. Higher impact uses are allowed when permitted and mitigated properly. Low density single-family residential uses are permitted in this zone district. Grand County zoning generally prohibits locating facilities/structures within wetlands and defers to USACE guidance on the subject (Grand County 2017).

^c The sales agreement for BLM-C from BVR to Sheephorn Ranch, restricts development (as a deed restriction) and a condition of closing is that this sales agreement restricting development needs to be in escrow. This condition restricts all types of development.

Under Alternative 3 approximately 4 acres of wetlands on BLM-I would be retained in federal ownership due to the modified parcel boundary associated with this alternative. A table specific to Alternative 3 is not provided as it relates to the change in ownership of wetlands and riparian habitats, land use, and regulatory oversight.

Table 3L-1. River, Stream and Drainage Segments – Federal Parcels

Parcel	Stream Name	Seasonality (Perennial/ Intermittent)	Segment Length (ft)	Estimated Floodplain Width on Parcel (ft)	Condition of Floodplain
BLM-B	Unnamed – North	Intermittent	522	<5	Undeveloped
	Unnamed – Central	Intermittent	1,493	<5	
	Unnamed – South	Intermittent	1,697	<5	
BLM-C	Corduoy Canyon Creek	Intermittent	3,261	<5	Undeveloped
	Beaver Creek Tributary	Intermittent	984	<5	
BLM-G	Blue River	Perennial	586	10–100	Undeveloped
	King Creek	Perennial	1,480	25–50	
BLM-H	Blue River – Southeast	Perennial	1,415	15–25	Undeveloped
	Blue River – Northeast	Perennial	2,697	20–300	
	Unnamed – South	Intermittent	2,782	10–20	
BLM-I	Blue River – North	Perennial	110	50–300	Undeveloped
	Blue River – East	Perennial	1,598	30–500	
	Dry Creek	Intermittent	1,712	20–50	
	Unnamed – Middle	Intermittent	1,417	10–70	
	Unnamed – South	Intermittent	755	5–30	
BLM-J	Colorado River*	Perennial	0.00	40–130	Undeveloped
Total Length		Perennial	7,886		
		Intermittent	14,623		
Total			22,509		

Source: USGS mapping, aerial photography, wetland delineation, and CDOT data

Notes:

* Colorado River is located adjacent to the parcel.

This table has not been updated to reflect Alternative 3 and a similar table specific to this Alternative has not been created. Effects to river, stream and drainage segments associated with Alternative 3 were extrapolated from this table.

The unnamed intermittent streams on BLM-I (Middle and South) are within the modified BLM-I boundary included in Alternative 3. The segments of Blue River and Dry Creek on BLM-I are excluded from exchange under the Alternative 3 parcel boundary.

Table 3L-2. River and Drainage Segments – Non-Federal Parcels

Parcel	Stream Name	Seasonality (Perennial/ Intermittent)	Segment Length (ft)	Estimated Floodplain Width on Parcel (ft)	Condition of Floodplain
BVR-1	Dry Creek & Tributaries	Intermittent	8,952	10–90	Undeveloped
	Dry Creek Tributary – Northeast	Intermittent	167	5–25	
BVR-4	Unnamed	Intermittent	2,315	5–15	Undeveloped
BVR-8 North	Blue River – East	Perennial	1,212	1,400	Undeveloped
	Blue River – West	Perennial	2,693	1,400	
BVR-8 South	Blue River	Perennial	1,164	20–40	Undeveloped
Total Length		Perennial	5,069		
		Intermittent	11,434		
Total			16,503		

Source: USGS mapping, aerial photography, wetland delineation, and CDOT data

Note: This table has not been updated to reflect Alternative 3 and a similar table specific to this Alternative has not been created.

River and drainage segments on BVR-4 would be excluded from Alternative 3 in their entirety.

Table 3L-3. Federal Water Resources – Change in Ownership, Land Use, and Regulatory Oversight under the Proposed Action

Parcel	Water Resources	Estimated Floodplain Width on Parcel (ft)	Anticipated Future Land Uses	Development Proposed by Proponent, including mineral estate (Y/N)	Development Possible on Parcel (Y/N) ^a	Protective Measures (federal, state, and local) applicable to potential land use development by private parties ^b	Parcel Conveyed with Deed Restrictions (Y/N)
BLM-B	Unnamed – North: 522' Unnamed – Central: 1,493' Unnamed – South: 1,697'	<5 <5 <5	Grazing (currently undeveloped)	N	Y	<ul style="list-style-type: none"> • CWA/Executive Order 11988 • Colorado Water Conservation Board • Grand County Zoning 	N
BLM-C	Corduroy Canyon Creek: 3,261' Beaver Creek Tributary: 984'	<5 <5	Grazing/Hunting (currently undeveloped)	N	N	<ul style="list-style-type: none"> • CWA/Executive Order 11988 • Colorado Water Conservation Board • Grand County Zoning 	Y ^c
BLM-G	Blue River: 586' King Creek: 1,480'	10–100 25–50	Grazing (currently undeveloped, but contains access road)	N	Y	<ul style="list-style-type: none"> • CWA/Executive Order 11988 • Colorado Water Conservation Board • Grand County Zoning 	N
BLM-H	Blue River – Southeast: 1,415' Blue River – Northeast: 2,697' Unnamed – South: 2,782'	15–25 20–300 10–20	Grazing (currently undeveloped, but contains access road)	N	Y	<ul style="list-style-type: none"> • CWA/Executive Order 11988 • Colorado Water Conservation Board • Grand County Zoning 	N
BLM-I	Blue River – North: 110' Blue River – East: 1,598' Dry Creek: 1,712' Unnamed – Middle: 1,417' Unnamed – South: 755'	50–300 30–500 20–50 10–70 5–30	Grazing (currently undeveloped, but contains access road)	N	Y	<ul style="list-style-type: none"> • CWA/Executive Order 11988 • Colorado Water Conservation Board • Grand County Zoning 	N

Table 3L-3. Federal Water Resources – Change in Ownership, Land Use, and Regulatory Oversight under the Proposed Action (cont.)

Parcel	Water Resources	Estimated Floodplain Width on Parcel (ft)	Anticipated Future Land Uses	Development Proposed by Proponent, including mineral estate (Y/N)	Development Possible on Parcel (Y/N) ^a	Protective Measures (federal, state, and local) applicable to potential land use development by private parties ^b	Parcel Conveyed with Deed Restrictions (Y/N)
BLM-J	0 ^d	40–130	Grazing (currently undeveloped)	N	Y	<ul style="list-style-type: none"> • CWA/Executive Order 11988 • Colorado Water Conservation Board • Grand County Zoning 	N

Notes:

^a It is important to note that there is no development proposed on any of these parcels; the information in this column speaks to the fact that development could (in most cases) occur under private ownership.

^b It is important to note that the following protective measures have exemptions. To the extent possible, exemptions are described; however, unknown exemptions may also exist.

CWA/Executive Order 11988: As stated by Executive Order 11988, “when property in floodplains is proposed for lease, easement, right-of-way, or disposal to non-Federal public or private parties, the Federal agency shall (1) reference in the conveyance those uses that are restricted under identified Federal, State or Local floodplain regulations; and (2) attach other appropriate restrictions to the uses of properties by the grantee or purchaser and any successors, except where prohibited by law; or (3) withhold such properties from conveyance” (FEMA 2015). This table serves to address (1) and (2) by describing the existing floodplain regulations on the parcels and discussing how “harm to lives and property and to floodplain values is identified, and such harm is minimized while floodplain values are restored and preserved.” The below regulations and requirements, by both the State of Colorado and Grand County itself, provide appropriate and adequate protection to ensure that harm to lives, property, and floodplain values are identified and minimized in compliance with Executive Order 11988.

State of Colorado: The State of Colorado has the Rules and Regulations for Regulatory Floodplains In Colorado, as written by the Colorado Water Conservation Board. These rules require that “each community in the State of Colorado shall comply with the minimum floodplain criteria set forth in the FEMA regulation ‘Criteria for Land Management and Use’ (44 CFR §§ 60.3–60.5)” (CWCB 2010).” Should community floodplain guidelines have more stringent protections, the community guidelines take precedence. In addition, these rules and regulations have stipulations beyond what is described in the FEMA regulations for regulatory floodplains.

Grand County: In addition to the zoning regulations stated above for wetlands, Grand County Zoning Section 14.3 (Supplementary Regulations—Major Flood Channels) states that “buildings or other structures, except a flood control dam or irrigation structure, shall not be constructed in areas subject to inundation unless and until the plans for such building or structure are first approved by the Board of County Commissioners” and are subject to a series of other conditions laid out in the document (Grand County 2017). The Grand County Storm Drainage Design and Technical Criteria Manual Section 3.3.5 also states that “the policy of the county shall be to leave floodplains in a natural state whenever possible” (Grand County 2006). It is important to note that there is no development proposed on any of these parcels; the information in this column speaks to the fact that development could (in most cases) occur under private ownership.

^c The sales agreement for BLM-C from BVR to Sheephorn Ranch restricts development (as a deed restriction) and a condition of closing is that this sales agreement restricting development needs to be in escrow. This condition restricts all types of development.

^d Colorado River is located adjacent to the parcel.

This table has not been updated to reflect Alternative 3 and a similar table specific to this Alternative has not been created. Effects federal water resources associated with Alternative 3 were extrapolated from this table.

The unnamed intermittent streams on BLM-I (Middle and South) are within the modified BLM-I boundary included in Alternative 3. The segments of Blue River and Dry Creek on BLM-I are excluded from exchange under the Alternative 3 parcel boundary.

Table 3M-1. Land Exchanges in the Analysis Area from 1984 to 2016

Name of Land Exchange	Year Closed	Federal Agency	Non-Federal Party	Non-Federal Lands Acquired by U.S. (acres)	County: Acquired Lands	Federal Lands Conveyed to non-Federal Ownership (acres)	County: Conveyed Lands
Grand River Ranch	1994	BLM/ Forest Service	The Daniel L. Ritchie Corp	3,352.3	Grand and Jackson	5,196.4	Grand and Jackson
Eagle Pass Ranch	1999	BLM	Galloway, Inc.	2,520	Grand	2,352.49 surface & subsurface; 6,152.89 subsurface only ^a	Grand
State of Colorado, et al.	2002	BLM	State of Colorado and others	1,023	Grand, Routt, Jackson	4,782.86	Grand
Windy Gap	2008	BLM	NCWCD	342	Grand	Easement only	Grand
Total Exchanges	4		Total Non-Federal Lands	7,237.30	Total Federal Lands	12,331.75	

Notes:

Conveyances under the Small Tracts Act are not included in this table because the acres conveyed are very small and in many cases the United States Government received cash rather than land.

^a The 6,152.89 acres of “subsurface only” are not included in the total acreage of Federal lands conveyed to non-federal ownership.

APPENDIX B. REFERENCES

In Text	Reference
16 U.S.C. § 470aaa(4)	16 U.S.C. § 470aaa(4). Title 16 – Conservation Chapter 1c – Paleontological Resources Preservation Sec. 470aaa-4 – Curation of resources.
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APPENDIX C. VALUATION PROCESS FOR BLM LAND EXCHANGES

The Federal Land Policy and Management Act (FLPMA) requires the value of exchanged Federal and non-Federal lands “to be of approximately equal value;” however, adjustments for any difference in value by cash equalization payments may be made up to 25 percent of the value of the federal lands to be disposed.¹ The USDI Appraisal and Valuation Services Office (AVSO) is responsible for all of BLM’s real estate valuation functions including management, oversight, and valuation policy. The proposed land exchange includes the surface and subsurface mineral estates associated with both the BLM and BVR parcels. The contributory value of the minerals to the whole estate associated with each parcel (as controlled by either BLM or BVR) is a component of the appraisals. The valuation process is a separate administrative process that is conducted concurrently with the NEPA process, both of which will culminate in the Record of Decision issued by the BLM. If the value of the BVR parcels exceeds the value of the BLM parcels, BVR would donate the excess value to the United States as provided by Section 205a of FLPMA and the BLM Land Exchange Handbook (H-2200-1). Thus, under the Proposed Action, all the BVR parcels would be conveyed to the public regardless of results of the appraisal process.

Federal regulations require that the exchange parcels be appraised to determine their fair market value. The appraisal regulations define “market value” as:

“[T]he most probable price in cash, or terms equivalent to cash, that lands or interests in lands should bring in a competitive and open market under all conditions requisite to a fair sale, where the buyer and seller each acts prudently and knowledgeably, and the price is not affected by undue influence.”²

Federal and non-Federal exchange parcels are to be valued as if they are available for sale on the open market (versus sold to a neighbor); zoned consistent with other private lands (if the parcel is in federal ownership); and in their existing condition, including access (unless otherwise instructed). In estimating fair market value, the appraiser will:

- (1) Determine the highest and best use of the property to be appraised;
- (2) Estimate the value of the lands and interests as if in private ownership and available for sale in the open market;
- (3) Include historic, wildlife, recreation, wilderness, scenic, cultural, or other resource values or amenities that are reflected in prices paid for similar properties in the competitive market; and
- (4) Consider the contributory value of any interest in land such as minerals, water rights, or timber to the extent they are consistent with the highest and best use of the property.³

Once BLM officials have entered into an Agreement to Initiate (ATI), an appraisal request is sent to AVSO. The AVSO review appraiser assigned to the case prepares appraisal instructions. These instructions are the basis for the appraisal reports, which may be completed by other AVSO appraisers or contractors. Upon completion, the appraisal reports are submitted to the AVSO review appraiser for review and approval. The review appraiser is responsible for ensuring that the appraisal report and its conclusions are reasonably supported by market information and comply with the Uniform Appraisal Standards for Federal Land Acquisitions (commonly referred to as “the Yellow Book”) and the Uniform Standards of Professional Appraisal Practice, as well as other agency regulations.

The appraisal process is a method by which the facts that bear upon the value of real estate are systematically analyzed and interpreted into an opinion of value. In determining an opinion of market value, typically three approaches to value are considered—the *Direct Sales Comparison Approach*, the *Cost Approach*, and the *Income Approach*.

¹ Because all acres are not equal in terms of public use/resources or financial value, FLPMA requires that dollar values be equal so that no party benefits financially.

² 43 CFR § 2200.0–5(h)

³ 43 CFR § 2201.3-2(a)

- The *Direct Sales Comparison Approach* to value is based primarily upon the principle of substitution. This principle implies no prudent and informed person will pay more for a property than it would cost to acquire an equally desirable substitute property. In the application of this approach, a property's "highest and best use" must be determined prior to identifying comparable properties. Once the highest and best use is determined, actual sales of similar properties are analyzed, and the value is estimated based upon the similarities and dissimilarities which the market has been recognizing in the subject's neighborhood. The reliability of this approach is directly related to the quantity and quality of available data, and the application of this approach requires analysis of similar properties which have sold in the marketplace. An indicated value for the subject property is based upon the values given for the various land types.
- The *Cost Approach* is an appraisal technique by which the value of a property is derived by estimating the current replacement cost of the improvements, and then deducting the estimated accrued depreciation from all sources, and finally adding the value of the land as determined from comparable sales value allocation analysis.
- The *Income Approach* estimates the subject's value based on the income that the property will likely produce under typical management. The income-producing ability of the subject property will be analyzed to arrive at an estimate of net operating income before income taxes, debt services, or cash flow to the owner. The property's estimated net income under typical management is converted into an estimate of value by using a market-derived capitalization rate. This rate reflects an acceptable return to owners of similar income-producing properties.

In some cases, one or more of these approaches are deemed unnecessary and consequently not used in the appraisal process. Only the *Direct Sales Comparison Approach* is being used in the proposed land exchange. The *Cost Approach* was not necessary because there are no improvements on the subject parcels and the *Income Approach* was not used because the income which might be generated has no correlation to the potential land value. The appraisals are contained in the project file.

APPENDIX D. RESERVATION OF FEDERAL RIGHTS OR INTERESTS

The BLM has the authority to reserve rights and restrict activities in land exchanges. As explained in the BLM Land Exchange Handbook (H-2200-1), “The regulations under 43 CFR § 2200.0-6(i) provide that the public interest may be protected through the use of reserved rights or interests in the federal land. In general, mitigation in the form of deed restrictions on federal land conveyed into non-federal ownership should only be used where required by law or executive order, clearly supported by the environmental documentation, and closely coordinated with the Field or Regional Solicitor. It is the BLM’s policy to limit reservations to those supported by the environmental documentation, public benefit determination process and fully considered in the appraisal process. Environmental mitigation in the form of reserved federal rights or interests should be evaluated for appropriateness as part of analysis of alternatives in the environmental documentation.” The proposed land exchange does not entail mitigation in the form of reserved federal rights. The need to reserve certain federal rights in order to move forward with the land exchange was not identified by BLM as part of its Phase 2 Feasibility Analysis. Accordingly, since it was not necessary for the initial public benefit determination, a reservation of federal rights was not considered in the appraisal process.

The term “reserved federal rights” as utilized in this document does not refer to federal reserved water rights, and instead refers only to federal interests in land that are not related to water rights ownership.

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APPENDIX E. ALTERNATIVES AND DESIGN COMPONENTS CONSIDERED BUT ELIMINATED FROM DETAILED ANALYSIS

The following alternatives were identified during scoping and internal interdisciplinary meetings, but have been eliminated from further analysis.

Use of the Land and Water Conservation Fund to Meet BLM’s Purpose and Need for the Land Exchange: At the start of the land exchange process, an alternative that would utilize funds appropriated by Congress from the Land and Water Conservation Fund (LWCF). Ultimately, as detailed in the Draft EIS, this alternative was eliminated from detailed analysis on the basis that all acquisitions are made on a “willing seller” basis and BVR had informed BLM that its lands were only available for exchange to the United States, and that they would not be for sale. As it stands now the LWCF has expired and appropriated funds have not been included in the FY 2019 budget; therefore, eliminating the practicality of this alternative.

Use of the Federal Land Transaction Facilitation Act: This alternative would utilize the Federal Land Transaction Facilitation Act (FLTFA) for the sale of BLM parcels suitable for disposal. However, the program has expired and needs to be reauthorized by Congress. Prior to its expiration, FLTFA was a western Federal lands program that facilitated strategic Federal land sales by the BLM in order to provide funding for high-priority land conservation within or adjacent to Federal lands in the eleven contiguous western states and Alaska, as well as funds costs associated with strategic BLM land sales. The sale of certain BLM parcels included in the exchange would meet, at least partially, BVR’s objectives for the exchange; however, it is unlikely such sales would meet the BLM’s Purpose and Need of unifying boundaries associated with, and improve management of public lands while minimizing and reducing conflict. Funds generated by the sale of Federal lands under FLTFA were retained for acquisition of suitable non-Federal lands. However, such lands were required to be either an in-holding, be located adjacent to a federally designated area such as national monument, an area of critical environmental concern or a national conservation area, and contain exceptional resources. While some of the non-Federal parcels fit the acquisition criteria, the funds generated would not be available to acquire all of the non-Federal parcels to the extent that this could be achieved through the currently proposed land exchange. Thus, this alternative is not a practical alternative for accomplishing BLM’s Purpose and Need as described in Chapter 1 of this Final EIS.

Use of Alternative Methods Aside from a Land Exchange to Resolve Stated Conflicts: This alternative would use other methods besides a land exchange to resolve the conflicts described in the Purpose and Need section. These methods could involve increased signage, additional parking on BLM property, and/or increased monitoring of conflict areas by BLM personnel. Coupled with the nature and frequency of these conflicts, in addition to the additional staff resources that would be required, this alternative was eliminated because it would not achieve the other components of the Purpose and Need to the extent that the proposed land exchange would.

Use of Conservation Easements, Patent, Deed. and/or Use Restrictions on Federal Land to be Exchanged: Under this alternative, the BLM would use instruments such as conservation easements, patent, deed. and/or use restrictions to protect against perceived threats to public interest and restrict uses on certain portions of the federal lands that would be exchanged. This alternative was eliminated because the authorized officer has not identified a situation where rights or interests must be retained, through something like a conservation easement, to protect the public interest. Although BLM has the authority to use instruments such as conservation easements under 43 CFR § 2200.0-6(i), the elimination of this alternative is consistent with the BLM Land Exchange Handbook (H-2200-1), which states that,

“Federal land or interest in land should be conveyed with a minimum of encumbrances. All encumbrances authorized as rights-of-way, leases, permits, and/or easements affecting Federal land that are a part of an exchange proposal must be reviewed to determine the validity and continued need for the authorization...” and that, “Patent and deed use restrictions, covenants, and reservations should be kept to the absolute minimum and used only where needed to protect the public interest. Where needed, the effect of such encumbrances on market value and their future

administrative costs are to be considered as a part of evaluating the exchange proposal. Where there is a need to reserve such ownership as a Federal interest in land, the reservation should be for as short a time period as reasonable.”

In addition, the establishment of conservation easements, patent, deed, and/or use restrictions under the proposed land exchange would not be possible as BVR would not be willing to exchange lands under these conditions.

Inclusion of only BLM parcels that are solely of interest to BVR: Under this alternative, parcels BLM-J and BLM-K would not be included as part of the exchange. BVR has no interest in obtaining these parcels, but in the interest of agreeing on an exchange that best met the Purpose and Need of both parties, BVR agreed to include them in the exchange. Both BLM-J and BLM-K are difficult to manage as they are surrounded by non-federal lands owned by Skylark Ranch and Blue Valley Acres #2 subdivision, respectively. Upon successful completion of the exchange, BLM-J and BLM-K would be conveyed by BVR to their adjacent landowners (Skylark Ranch and Blue Valley Metropolitan District). BLM-J is setback 100 feet from the Colorado River, which would continue to provide public access along the northern bank of the Colorado River for those floating the Colorado River or from the large tract of BLM land abutting the southern bank of the river. This alternative was eliminated from detailed analysis because removal of the remaining BLM-J and BLM-K from the exchange would not meet the BLM’s Purpose and Need of unifying boundaries associated with, and improve management of, public lands while minimizing and reducing conflict.

Alternate Exchange including BLM-D and BLM-E, and BVR-6: Under this alternative, two parcels on Dice Hill, BLM-D and BLM-E, would be included in the exchange, coupled with BLM receiving patented lode mining claims west of the project area (in BVR-6). However, this alternative was eliminated because BVR-6 was determined to have potential environmental and physical safety hazards associated with its patented mining claims, and BLM determined that conveyance of Federal parcels BLM-D and BLM-E would not be in the public interest.

“Department of the Interior manual 602, Chapter 2, states that real property can be acquired by BLM only if: ‘no evidence of hazardous substance or other environmental liability is found.’ Regulations under 43 CFR § 2200.0-60(2) and 43 CFR § 2201.1(c)(S) address requirements for disclosure of hazardous materials and can be used in BLM’s decision to exclude properties with hazardous materials under BLM’s discretion in 43 CFR § 2200.0-6. BLM Handbook H-2200-1, Chapter 6, under Environmental Site Assessments, also states that ‘information from [hazmat] reports may lead to a decision to abandon or modify an exchange proposal.’ The patented mining claims in BVR-6 pose both environmental and physical safety hazards that pose a substantial liability for the federal government and BLM. Therefore, in accordance with Departmental Manual 602 and the implementing regulations for exchanges, BLM cannot consider the patented mining claims (BVR-6) for exchange. Federal parcels D and E will also be removed from consideration, because they hold important public resource values for timber and wildlife habitat, and because these parcels were to be exchanged for the patented mining claims in Parcel 6.”

Alternate Exchange of BVR-10: This alternative proposed a trail easement across BVR lands in the current location of BVR-10 as opposed to acquisition of all of BVR-10. This alternative was eliminated from further analysis when BVR offered to convey the land within the currently figured BVR-10 rather than just a trail easement to BLM. The current alternative includes the full acquisition of BVR-10 as well as fishing and pedestrian access easements that provide improve access to the Blue River. Additionally, this alternative would not fully meet the BLM’s Purpose and Need of unifying boundaries associated with, and improve management of, public lands while minimizing and reducing conflict.

Alternate Exchange Options of Parcels Abutting Blue Valley Acres: Federal parcels BLM-K and BLM-G abut Blue Valley Acres subdivision. In an effort to address concerns expressed by members of the public, who live in this area and use the public access to BLM land, BVR considered different options for the future use of these parcels once exchanged out of BLM ownership (i.e., donating, easement, etc.). BVR has decided to convey BLM-K to Blue Valley Metropolitan District as detailed in the Proposed Action. BLM-G, however, is integral to BVR’s agricultural operations and is important for the Ranch’s objectives, thus an alternative removing it from the exchange or

encumbering its use would be rejected by BVR. Summarily, these alternatives were eliminated from detailed analysis as BVR would not be willing to accept the proposed exchange under either of these conditions. Consequently, the exchange would not go forward and thus these alternatives would have substantially similar effect to the “No Action” alternative analyzed herein, and would not meet the BLM’s Purpose and Need.

Alternate Recreation Design Features: Some of the public comments that were received provided recommendations and variations to the Recreation Design Features currently proposed in the exchange. These variations suggested the addition or removal of specific Recreation Design Features with different user groups in mind. Of particular consideration was the removal of in-stream additions associated with the river restoration component of the proposal as they could potentially hinder the experience of rafters and kayakers. With regard to this particular recommendation, it was eliminated on the basis that the in-stream additions are not anticipated to hinder the experience of kayakers, as many in-stream structures currently exist in this stretch of the Blue River and the location of the proposed Recreation Design Features is downstream of the take-out and upstream of the put-in for the popular Gore Canyon float. Aside from the fact that a limited number of boaters would float all the way from Green Mountain through Gore Canyon, the in-stream features would be completely passable with sufficient flows that allow for legal access. Other recommendations and variations to the proposed Recreation Design Features were eliminated on the grounds that they were either not technically feasible, not financially feasible, or would not be as effective as the proposed Recreation Design Features in providing comparable recreation opportunities for those that would be lost in the transfer of Federal lands. However, an additional Recreation Design Feature was incorporated into the analysis following the close of the Draft EIS comment period, and the Green Mountain Recreation Design Features were modified to enhance public access.

Specifically, the Pump Station Rest Area, was added to the Proposed Action alternative and would provide the public with an additional rest stop on the Blue River. For floaters of the Blue River this feature is intended to off-set the loss of BLM-G and BLM-H which are currently used as rest stops for floaters traveling from the below Green Mountain Reservoir to the Lower Blue River Take-Out near the confluence of the Blue and Colorado Rivers. This new rest stop would be located approximately 3.1 miles downstream of the Spring Creek Bridge Take-Out and Rest Stop and about 6.8 miles upstream of the take-out near the confluence of the Blue and Colorado Rivers. Under existing conditions, floaters can stop on BLM-H and BLM-I which are located approximately 6.5 miles apart. Coupled with the Spring Creek Bridge Take-Out and Rest Stop, the Pump Station Rest Stop is intended to provide floaters desiring a rest stop with similar, if not more frequent, rest stop opportunities than are available under existing conditions.

Additionally, Since the publication of the Draft EIS, the Recreation Design Features located in the Green Mountain Recreation Area have been modified in two ways to enhance public access. First, additional public access for fishing in the lower Green Mountain Canyon west of BVR-10 would be granted through a fishing easement in perpetuity for public use of the 0.18-mile segment of river on BVR property that lies between NFS lands to the south and BLM lands to the north. This fishing easement would result in a total of 1.65 miles of contiguous bank and wade fishing access on the Blue River. Secondly, to allow anglers to more easily reach the fishing easement, BVR would also grant a perpetual pedestrian-only access easement following the route of the existing BVR ranch road, which extends westerly from the boundary of BVR-10, and then following a trail, which would be created starting from a point where the road ends, to extend the pedestrian-only access easement to the edge of the fishing easement

The Recreation Design Features are further discussed in Chapter 2 of this Final EIS and analyzed on a resource by resource basis in Chapter 3.

Potential Trails in the Green Mountain Area: Early planning efforts included variations of potential trail alignments in the Green Mountain area before determining that the current trail alignment through NFS lands to the eastern banks of the Blue River was most appropriate. In particular, a trail alignment heading upland towards adjacent BLM lands was also considered. This potential trail alignment along with others that extended further into the surrounding area, were ultimately eliminated from analysis as it was determined they were not as capable of providing the desired recreation experience as the direct route to the Blue River and could result in management challenges for the WRNF and BLM. An additional trail has been developed in the Green Mountain Area within the pedestrian access easement on the BVR land west of BVR-10.

Future Management of the Spring Creek Take-Out Area: Some of the public comments that were received provided recommendations for the future management of the Spring Creek take-out area. Many of these options were considered; however, as disclosed in Chapter 2 of this Final EIS, the Spring Creek Bridge take-out area would be managed, “through conveyance of an easement from BVR to either an existing governmental entity or a suitable not-for-profit entity in perpetuity, of a permanent take-out and rest-stop with the right to re-entry for floaters with picnic tables (2 tables), a seasonal toilet (portable restroom with enclosure), informational signage (1 sign), and improvements related to parking (0.25 acre existing graded area, accommodating 10 spaces) and access on existing BVR property at the Spring Creek Bridge.”

Alternate Exchange Options of River Frontage Parcels: Alternatives that would preserve public access on riverfront parcels were explored in response to these parcels having been identified as facilitating existing recreation opportunities (i.e., fishing and floating) during the public scoping process. Potential alternatives included a proposal without parcels BLM-G, BLM-H, and BLM-I; or a proposal that included these parcels with easements retaining public access for a limited distance set back from the riverbank. Ultimately, Alternative 3 was driven by these comments and retains the riverfront portion of BLM-I through a modified boundary and 76-acre reduction of the parcel. Additionally, the Pump Station Rest Stop Recreation Design Feature was added to the Proposed Action Alternative to off-set the loss of BLM-G and BLM-H (refer to discussion under *Alternate Recreation Design Features* for additional details). As Recreation Design Features are a proponent donation to offset the loss of riverfront opportunities, and BLM-I river frontage would be retained in Alternative 3, Recreation Design Features would no longer be included in this Alternative. As far the range of Alternatives, there is not an Alternative that both includes the BLM-I river frontage and the Recreation Design Features incorporated into this analysis. Additionally, there is not an Alternative that would preserve public access on all of the riverfront parcels included in this analysis (either through easements or exclusion of these parcels from the exchange). Accordingly, there are alternate exchange options of parcels with river frontage eliminated from analysis, despite certain changes being considered through the Proposed Action Alternative and the creation of Alternative 3.

Refer to the description of the alternatives located in Chapter 2 of the Final EIS for a full description of how the Proposed Action Alternative and Alternative are structured.

APPENDIX F. PLAN CONFORMANCE REVIEW

The proposed land exchange under either of the action alternatives is subject to and has been reviewed for conformance with the 2015 RMP. The 2015 RMP provides management direction in the form of “Decisions.” Decisions in RMPs guide future land management actions and subsequent site-specific implementation decisions. These Decisions fall into two categories:

- 1) Desired outcomes, or goals and objectives, and
- 2) Allowable uses, actions, and restrictions on uses anticipated to achieve desired outcomes.

Although the 2015 RMP provides management direction for the full range of resources and activities on BLM lands managed out of the KFO, only Decisions related to land tenure adjustments are reviewed below. Conformance with the Colorado Standards for Public Land Health (discussed below), which are included in the 2015 RMP, is also reviewed below.

KFO 2015 RECORD OF DECISION AND APPROVED RESOURCE MANAGEMENT PLAN (2015 RMP)

Decisions related to land tenure adjustments are found under the “Lands and Realty” Decision in Chapter 2 – Plan Decisions, on pages 52–55 of the 2015 RMP. The decision language for land tenure adjustments is as follows:

Goals

- Provide for public ownership of lands (or interests in lands) with high-value resources or public values, or both, that facilitate effective BLM land management.

Objectives

Apply the following criteria when considering land tenure adjustments:

- Retain all public lands or interests in lands (such as easements) that enhance multiple-use and sustained-yield management;
- Acquire lands or interests in lands that complement important resource values and further management objectives; and
- Dispose of lands or interests in lands that are difficult or uneconomical to manage or no longer needed for federal purposes.

Allocations and Management Actions

A complete list of Allocations and Management Actions related to Lands and Realty begins on page 52 of the 2015 RMP; however, not all are included in this document. The following criteria were extracted and included for their relevance to the proposed land exchange:

- Retain the following BLM-managed public lands for long-term management:
 - Special Recreation Management Areas (SRMAs) (50,000 acres);
 - Colorado River segments 4 and 5 for inclusion in the National Wild and Scenic River (Recreational classification – 2,677 acres);
 - Wildlife critical winter range (229,200 acres);
 - Access points to BLM-managed public lands;
 - Major river corridors (0.5 mile on either side of the following rivers: Colorado, Blue, Fraser [Grand County], and North Platte [Jackson County]) (19,900 acres);
- Exception Criteria for Retention Areas – Retain the areas above for long-term management unless:
 - The resource values and the public objectives that the Federal lands or interests to be conveyed may serve if retained in federal ownership are not more than the resource values of the non-

Federal lands or interests and the public objectives they could serve if acquired (43 CFR § 2200.0-6[1]);

- Lands on the list of Retention Areas included in a proposed land exchange for which an agreement to initiate an exchange was approved before the date of the Notice of Intent to prepare the DRMP/DEIS; or
- Lands in trespass, where it would be in the public interest to allow for a sale.
- Consider acquisitions for BLM-managed public lands inside, and outside, of Retention Areas through exchanges, boundary adjustments, donations, or purchases that meet any of the following criteria:
 - Provide public access;
 - Consolidate existing BLM-managed public lands, including parcels that make management easier or reduce trespass occurrences;
 - Are suitable for public purposes adjacent to, or of special importance to, local communities and to state and/or federal agencies for purposes including, but not limited to, community expansion, extended community services, or economic development;
 - Areas near communities that provide open spaces and preserve agriculture; protect wildlife and critical habitat;
 - Enhance recreation opportunities; and, generally, serve the public good;
- Consider disposals through exchanges, State selections, boundary adjustments, Recreation and Public Purpose Act leases and patents, leases under Section 203 and 209 of the FLPMA, and sales under FLTFA for BLM-managed public lands outside of Retention Areas. Apply the following criteria to disposals:
 - Lands that contain important wetland or riparian wildlife habitat, other water resources, significant cultural resources, recreational values, or are essential to candidate, listed, or proposed threatened or endangered species would be evaluated on a case-by-case basis;
 - Disposal of the land will not adversely impact the manageability of remaining BLM-managed public lands or minerals;
 - Disposal of the land will not adversely impact the public's access to remaining BLM-managed public lands;
 - Disposal of the land is deemed to be in the local public's interest; and
 - Existing public access at the time of disposal would be reserved, as needed, if the lands are transferred out of public ownership.

CONFORMANCE OF THE PROPOSED LAND EXCHANGE WITH THE 2015 RMP

The BLM has determined that the proposed land exchange under either of the action alternatives is consistent with the Lands and Realty Decision set forth in the 2015 RMP. The Federal parcels have been identified as suitable for exchange, in part due to the *Exception Criteria for Retention Areas* clause, as direction for *Retention Areas* included in the 2015 RMP would require that some parcels be retained. The *Exception Criteria for Retention Areas* clause included in the 2015 RMP will be discussed in detail in the following paragraph as it relates to specific exchange parcels. The non-Federal parcels meet the acquisition criteria specified in the 2015 RMP. The proposed exchange is consistent with one the 2015 RMP's goals, "provide for public ownership of lands (or interests in lands) with high-value resources or public values, or both, that facilitate effective BLM land management." Under the *Exception Criteria for Retention Areas* clause, the proposed exchange is also consistent with the objectives of, "acquire lands or interests in lands that complement important resource values and further management objectives; and dispose of lands or interests in lands that are difficult or uneconomical to manage or no longer needed for federal purposes."

The Federal parcels BLM-A–C and BLM-F–K, proposed for disposal under either action alternative, are not classified as "retention" areas (refer to previous section).¹ As stated under *Exception Criteria for Retention Areas*, "lands

¹ Note: the boundary of BLM-I varies between the two alternatives. Refer to Chapter 2 for additional details.

included in a proposed land exchange for which an agreement to initiate an exchange was approved before the date of the Notice of Intent to prepare the [Kremmling] DRMP/DEIS” are exempt from the requirement in the 2015 RMP that lands within 0.5 mile of either side of the Blue River be “retained” by the BLM. As has been previously discussed, the Blue Valley Ranch Land Exchange was originally initiated in 2005. The Notice of Intent to prepare the [Kremmling] DRMP/DEIS was published in the Federal Register in 2006. As such, Federal parcels included in this exchange within 0.5 mile of the Blue River are excluded from retention status. Surveys, included in this document are being conducted for important wetland or riparian wildlife habitat, other water resources, significant cultural resources, recreational values, or are essential to candidate, listed, or proposed threatened or Endangered Species, which will be evaluated on a case-by-case basis prior to completion of the exchange.

The non-Federal parcels BVR-1–5 and BVR-7–10 are suitable for acquisition as outlined in the 2015 RMP.² All of the non-Federal parcels would serve the outlined Allocations and Management Actions of “provide public access; and consolidate existing BLM-managed public lands, including parcels that make management easier or reduce trespass occurrences.” Further, some of the proposed non-Federal parcels would function to, “enhance recreation opportunities; and, generally, serve the public good,” as they would include the previously discussed Recreation Design Features included in the Proposed Action.

Some of the Federal parcels, particularly BLM-G, BLM-H, BLM-I, and BLM-K, are located within 0.5 mile of either side of the Blue River. Additionally, BLM-J is located within 0.5 mile of either side of the Colorado River. As stated under Allocations and Management Actions of the 2015 RMP, these parcels would classify as “retention” areas because they are in, “[m]ajor river corridors [0.5 mile on either side of the following rivers: Colorado, Blue, Fraser (Grand County), and North Platte (Jackson County)] (19,900 acres).” However, as stated under Exception Criteria for Retention Areas of the 2015 RMP, “Lands on the list of Retention Areas included in a proposed land exchange for which an agreement to initiate an exchange was approved before the date of the Notice of Intent to prepare the DRMP/DEIS.” Thus, BLM-G, BLM-H, BLM-I, BLM-J and BLM-K are not classified as retention areas because the currently proposed exchange was initiated in 2005 and the Notice of Intent to prepare the [Kremmling] DRMP/DEIS was published in the Federal Register in 2006.

BLM-J and BLM-I are also overlapped by the Upper Colorado Special Recreation Management Area (Upper Colorado SRMA), which is classified as a retention area. However, both BLM-I and BLM-J are excluded on the same grounds stated under the Exception Criteria for Retention Areas of the 2015 RMP. It is important to note that Alternative 3 contains a modified parcel boundary for BLM-I that retains river frontage and public access to this land. Similarly, only the upland portion of BLM-J is proposed to be exchanged to BVR under either of the action alternatives. The property boundary of this parcel includes frontage along the Colorado River and the river itself through a 100-foot setback. The 100-foot setback of this parcel from the Colorado River is intended to facilitate public use and enjoyment in public ownership. None of the other Federal parcels are classified as being located in “retention” areas.

NORTHWEST COLORADO GREATER SAGE-GROUSE APPROVED RESOURCE MANAGEMENT PLAN AMENDMENT (2015)

The Sage-Grouse ARMPA was completed in September of 2015. The Sage-Grouse ARMPA amended the 2015 RMP to identify and incorporate appropriate measures to conserve, enhance, and restore sage-grouse habitat by avoiding, minimizing or compensating for unavoidable impacts on sage-grouse habitat in the context of the BLM’s multiple use and sustained yield mission under the FLPMA (1976, as amended). Decision language applicable to the proposed exchange is detailed below:

- **Objective SSS-1:** Maintain and enhance populations and distribution of sage-grouse by protecting and improving sagebrush habitats and ecosystems that sustain sage-grouse populations.

² Note: BVR-3 and BVR-4 are only proposed for exchange under the Proposed Action Alternative. Refer to Chapter 2 for additional details.

- **Objective LR-1:** Manage the Lands and Realty program to avoid, minimize and compensate for loss of habitat and habitat connectivity through the authorizations of right-of-ways, land tenure adjustments, proposed land withdrawals, agreements with partners and incentive programs.
- **MD LR-11:** Retain public ownership of sage-grouse PHMA. Consider exceptions where it can be demonstrated that:
 1. Disposal of the lands, including land exchanges, will provide a net conservation gain to sage-grouse; or
 2. The disposal of the lands, including land exchanges will have no direct or indirect adverse impact on sage-grouse conservation.

There is mixed ownership and land exchanges would allow for additional or more contiguous federal ownership patterns within sage-grouse PHMA.

MD LR-13: For lands in GHMA that are identified for disposal, the BLM would only dispose of such lands consistent with the goals and objectives of the ARMPA, including, but not limited to, the ARMPA objective to maintain or increase sage-grouse abundance and distribution.

BLM COLORADO PUBLIC LAND HEALTH STANDARDS

In January 1997 the Colorado State Office of the BLM approved the Standards for Public Land Health and amended all RMPs in the state and were incorporated into the 2015 RMP. Standards describe the conditions needed to sustain public land health and apply to all uses of public lands. The Colorado Standards for Public Land Health are as follows:³

- *Standard 1:* Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, land form, and geologic processes.
- *Standard 2:* Riparian systems associated with both running and standing water function properly and have the ability to recover from major disturbance such as fire, severe grazing, or 100-year floods.
- *Standard 3:* 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.
- *Standard 4:* 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.
- *Standard 5:* 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.

Conformance of the Proposed Action with Public Land Health Standards is discussed throughout Chapter 3 and Appendix G. Within the main body of this Final EIS, please refer to Chapter 3, Sections G – Wildlife, H – Vegetation, J – Water Quality Surface and Ground, K – Wetlands and Riparian Habitats, L – Floodplains, and within Appendix G, Section H – Soils.

³ BLM, 1997 pp. 6–7

APPENDIX G. RESOURCES WITH NEGLIGIBLE DIRECT AND INDIRECT EFFECTS

Chapter 3 of this Final EIS provides a description of the existing human, physical and biological resources throughout the Analysis Area, and presents comparative analyses of the direct, indirect and cumulative effects on those resources. As described Chapter 1, Section I – Issues for Analysis of this Final EIS, Chapter 3 includes the analysis of resources that were determined to have issues. Specifically, these resources include: Lands and Realty; Access and Traffic; Recreation; Social and Economic Resources; Livestock Grazing Management; Paleontological Resources; Wildlife; Vegetation; Water Rights and Use; Water Quality – Surface and Ground; Wetlands and Riparian Habitats; and Floodplains.

As described in Chapter 1, Section J – Issues Identified That Have No or Negligible Impacts, certain issues that were analyzed in the Draft EIS were identified as having no or negligible impacts. As a result, these issues and their accompanying analysis were removed from the Chapter 3 resource analysis and can be found in this appendix. These issues include: Visual Resources; Cultural Resources; Native American Religious Concerns; Environmental Justice; Law Enforcement; Wastes, Hazardous and Solid; Geology and Minerals; Water Rights and Use; and Soils. For a brief rationale explaining the “no or negligible impacts” determination for these resources, the reader is referred to Chapter 1, Section J of this Final EIS.

SCOPE OF THE ANALYSIS

For each resource analyzed in detail in Chapter 3 of this Final EIS, the Scope of the Analysis is defined. The Scope of the Analysis varies by resource (e.g., it is not the same for recreation resources and wildlife), and in some cases, is larger than the project area. Background information regarding the resources analyzed or the nature of the analysis is also provided under the Scope of the Analysis heading.

AFFECTED ENVIRONMENT

The Affected Environment defines the existing conditions for a particular resource or resource use. The Affected Environment provides the baseline conditions for which the effects of the No Action and Proposed Action alternatives are analyzed and disclosed.

ENVIRONMENTAL EFFECTS

An environmental effect is defined as a modification of, or change in, the Affected Environment brought about by an action. Effects can vary in degree, ranging from only a slightly discernible change to a drastic alteration in the environment. Effects can be direct, indirect, or cumulative in nature. For this environmental analysis, the following definitions of direct, indirect and cumulative effects are used.

- *Direct effects* are caused by the action and occur at the same time and place.¹ For the purposes of this analysis, direct effects include the exchange of federal and private lands (and subsequent management/ownership) and the proposed Recreation Design Features that would be funded by the Proponent.
- *Indirect effects* are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the patterns of land use, population density, or growth rate, and related effects on water and air and other natural systems, including ecosystems.² For the purposes of this analysis, indirect effects are disclosed for the agreements between BVR and other land owners in the area; the management of Recreation Design Features; and WRNF environmental review of the proposed hiking trail. Individual resource analyses may include other resource specific indirect effects and only discuss components of the aforementioned topics as relevant to the resource being analyzed.

¹ 40 CFR § 1508.8(a)

² 40 CFR § 1508.8(b)

A. VISUAL RESOURCES

SCOPE OF THE ANALYSIS

The Bureau of Land Management (BLM) ensures that the scenic values of the public lands managed by the agency are considered before allowing uses that may have negative visual impacts. The BLM accomplishes this through its Visual Resource Management (VRM) system. The VRM system involves inventorying scenic values and establishing management objectives for those values through the resource management planning process. The inventorying process involves rating the scenic values of an area by evaluating the scenic quality, analyzing the public's concern for that scenic quality (visual sensitivity levels), and determining the visibility of the tract of land (distance zones). Proposed projects and activities are evaluated to determine whether they conform to the VRM objectives and to identify mitigating measures that can be taken to minimize adverse visual impacts. The VRM system helps to ensure that proposed actions on BLM lands today would benefit the landscape and adjacent communities in the future.

The visual resource Analysis Area includes both the Federal and non-Federal parcels and the surrounding areas from which these parcels can be viewed, including the adjacent public lands (BLM, CPW, WRNF), private lands, the Colorado Headwaters National Scenic Byway, Colorado Scenic and Historic Byways, and SH 9 and U.S. Highway 40.

AFFECTED ENVIRONMENT

As it relates to visual resources, specific goals and objectives are provided under the “Visual Resources” Decision in Chapter 2 – Plan Decisions, on page 37 of the 2015 RMP. The following paragraphs include information regarding the *Allocations and Management Actions* outlined in the 2015 RMP, and specifically the designated VRM classes that overlap the parcels proposed for exchange.

Federal Parcels

Parcels BLM-A, BLM-B and BLM-C

BLM-A, BLM-B, and BLM-C are visible from surrounding private lands (to the east) and public lands (to the west). The majority of the private land is owned by Blue Valley Ranch (BVR), except for a small portion owned by Sheephorn Ranch adjacent to BLM-C on the western boundary. Adjacent public lands are managed by the BLM and CPW. Portions of these parcels may be visible from Trough Road, which is designated as a Scenic Byway at the national and state level. These parcels are approximately 0.5 to 1.5 miles from Trough Road, which would classify them as being in the foreground distance zone from this travel route.³

At the national level, Trough Road is the western segment of the 80-mile Colorado Headwaters National Scenic Byway. Trough Road winds its way over the Gore Range, including the Inspiration Point overlook above the Gore Canyon of the Colorado River, and was designated by the U.S. Secretary of Transportation as a National Scenic Byway in 2005. National Scenic Byways are designated based on their archeological, cultural, historic, natural, recreational and scenic qualities.⁴

At the state level, Trough Road is designated as a Colorado Scenic and Historic Byway. The Colorado Scenic and Historic Byways program is a statewide partnership intended to provide recreational, educational, and economic benefits to Coloradans and visitors. This system of outstanding touring routes in Colorado affords the traveler interpretation and identification of key points of interest and services while providing for the protection of significant resources. Scenic and Historic Byways are nominated by local partnership groups and designated by the Colorado Scenic and Historic Byways Commission for their exceptional scenic, historic, cultural, recreational, and natural features.⁵

³ BLM, 1986 p. 5

⁴ Matrix Design Group, 2013

⁵ Ibid.

BLM-A, BLM-B, and BLM-C are within VRM Class II. The description of Class II scenic lands as defined in the BLM's Manual H-8410-1 – Visual Resource Inventory is as follows:

“The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.”⁶

BLM-A, BLM-B, and BLM-C are consistent with the scenic rural landscape of the area. The characteristic landscape consists of rolling and steep hillsides and open terrain dominated by sagebrush steppe, native grasslands, pinyon-juniper forests, and interspersed with rocky knolls. Colors on these parcels are predominantly mottled shades of dark green created by the pinyon-juniper vegetation, along with lighter shades of green, tan and grey, creating a medium mottled texture on the landscape.

Parcel BLM-F

BLM-F abuts and is visible from BVR private property as well as BLM managed public lands. BLM-F is approximately 1 mile east of SH 9, and 1 mile west of WRNF lands. Thus, BLM-F would be classified as being in the foreground-middleground distance zone from these adjacent features.

BLM-F is within VRM Class III. The description of Class III scenic lands is defined in the BLM's Manual H-8410-1 – Visual Resource Inventory is as follows:

“The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.”⁷

BLM-F is consistent with the scenic rural landscape of the area. However, this parcel is generally steeper and hillier than the other parcels, and has a lower density of vegetation as it is upland of the river corridor. Colors on this parcel are predominantly mottled shades of green and grey created by the sparse vegetation, along with other shades of green, tan and grey where different type of vegetation or bare ground are present, creating a medium mottled texture on the landscape.

Parcels BLM-G, BLM-H, and BLM-K

BLM-G and BLM-H abut the Blue River, and BLM-K is approximately 700 feet from the river, located in the Blue Valley Acres neighborhood. BLM-H is entirely surround by BVR private property and BLM-K is surrounded by private property in the Blue Valley Acres subdivision. BLM-G is abutted by Blue Valley Acres private land on the north and eastern side of the property boundary, and BVR private property on the south and east sides of the property. All of these parcels are within the foreground-middleground distance zone of SH 9 and the Blue Valley Acres subdivision, as well as an area of BLM managed public lands to the south east.

BLM-G, BLM-H, and BLM-K all have portions of their properties that are classified as VRM Class II and III. Generally, the portions of these parcels closest the Blue River are classified as VRM Class II. The description of Class II scenic lands is described above under the discussion of parcels BLM-A, BLM-B and BLM-C. The description of Class III scenic lands is described above under the discussion of BLM-F.

BLM-G, BLM-H, and BLM-K are consistent with the scenic rural landscape of the area, which consists of rolling and steep hillsides and open terrain dominated by sagebrush steppe, native grasslands, pinyon-juniper forests, and interspersed with rocky knolls. The Blue River intersects BLM-G and BLM-H and is near BLM-K. As such, moving water also has a large presence in the scenery of these parcels. Colors on these parcels are predominantly mottled shades of dark green created by the denser, lush vegetation along the river corridor along with lighter shades of green, tan and grey, further from the river creating a medium mottled texture on the landscape.

⁶ BLM, 1986 p.6

⁷ Ibid.

Parcel BLM-I

BLM-I is visible from surrounding private lands, primarily BVR to the east and south, as well as other private and public lands to the north and east. The adjacent public lands are managed by the BLM. This parcel is accessed via Trough road, which as previously mentioned is designated as part of the Colorado Headwaters National Scenic Byway (at the national level) and is also designated as a Colorado Scenic and Historic Byway at the state level (refer to the discussion under parcels BLM-A, BLM-B, and BLM-C for a detailed description of these designations). The parcel abuts Trough Road, which would classify it as being in the foreground-middleground distance zone from this travel route.⁸

BLM-I is primarily within VRM Class III, although the portion closest the Blue River (approximately 12 acres) is within VRM Class II. The description of Class II scenic lands is described above under the discussion of parcels BLM-A, BLM-B, and BLM-C. The description of Class III scenic lands is described above under the discussion of BLM-F.

BLM-I is consistent with the scenic rural landscape of the area. The Blue River intersects BLM-I and as such, moving water has a large presence in the scenery of this parcel. Farther from the river corridor, the characteristic landscape consisting of rolling and steep hillsides and open terrain dominated by sagebrush steppe, native grasslands, pinyon-juniper forests, and interspersed with rocky knolls takes on more of a presence. Colors on these parcels are predominantly mottled shades of dark green created by the denser, lush vegetation along the river corridor along with lighter shades of green, tan and grey, further from the river creating a medium mottled texture on the landscape.

Parcel BLM-J

BLM-J is visible from surrounding private lands north of the Colorado river, as well as public lands on the south side of the river. The adjacent public lands are managed by the BLM and a portion of the surrounding private land is owned by Skylark Ranch, who would ultimately obtain the parcel if the exchange were approved. This parcel abuts U.S. Highway 40, which would classify it as being in the foreground-middleground distance zone from this travel route.⁹

BLM-J is classified as VRM Class II. The description of Class II scenic lands is described above under the discussion of parcels BLM-A, BLM-B, and BLM-C.

BLM-J is consistent with the scenic rural landscape of the area. The characteristic landscape consists of rolling and steep hillsides and open terrain dominated by sagebrush steppe, native grasslands, pinyon-juniper forests, and interspersed with rocky knolls. The Colorado River is adjacent BLM-J and as such, moving water has a large presence in the scenery of this parcel. Colors on these parcels are predominantly mottled shades of dark green created by the denser, lush vegetation along the river corridor along with lighter shades of green, tan and grey, further from the river creating a medium mottled texture on the landscape.

Non-Federal Parcels

Parcel BVR-1

BVR-1 is visible from surrounding private lands other than those owned by BVR, BLM lands (including BLM-I), and Trough Road. As previously mentioned, Trough Road is designated as part of the Colorado Headwaters National Scenic Byway (at the national level) and is also designated as a Colorado Scenic and Historic Byway at the state level (refer to the discussion under parcels BLM-A, BLM-B, and BLM-C for a detailed discussion of these designations). BVR-1 is within a mile of Trough road and which would classify it as being in the foreground-middleground distance zone. It is also within the foreground-middleground distance zone of surrounding private and BLM lands.

⁸ BLM, 1986 p.5

⁹ Ibid.

Although BVR-1 is currently private land and, therefore, does not have a BLM VRM Class, the adjacent BLM lands (including BLM-I) are within VRM Class III. The description of VRM Class III scenic lands is described above under the discussion of BLM-F.

BVR-1 is consistent with the scenic rural landscape of the area of rolling and steep hillsides and open terrain dominated by sagebrush steppe, native grasslands, pinyon-juniper forests, and interspersed with rocky knolls. Colors on these parcels are predominantly mottled shades of dark green created by the pinyon-juniper vegetation, along with lighter shades of green, tan and grey, creating a medium mottled texture on the landscape.

Parcels BVR-2, BVR-9, BVR-10

BVR-2, BVR-9, and BVR-10 are surrounded by BVR, BLM, WRNF, and Summit County Open Space lands. To some degree, portions of these parcels would be visible in the foreground-middleground distance zone of these features and adjacent lands; however, the natural topography may screen views of these features depending where one would be in the parcel.

Under the Proposed Action, BVR-10 would accommodate a parking area and hiking trail accessing Green Mountain Canyon on adjacent WRNF managed lands. Additionally, the approximately 300-acre southern half of BVR-2 would be transferred into management by the WRNF. Both the proposed hiking trail on WRNF lands and the portion of BVR-2 that would fall under management by the WRNF would be located adjacent to areas rated as Low and Moderate per the Forest Service Scenery Management System, which the WRNF uses to characterize the scenic integrity of its lands. The Low Forest Service Scenic Integrity Objective is defined as:¹⁰

The valued landscape character “appears moderately altered.” Deviations begin to dominate the valued landscape character being viewed but they borrow valued attributes such as size, shape, edge effect and pattern of natural openings, vegetative type changes or architectural styles outside the landscape being viewed. They should not only appear as valued character outside the landscape being viewed but compatible or complimentary to the character within.

The Moderate Forest Service Scenic Integrity Objective is defined as:¹¹

The valued landscape character “appears slightly altered.” Noticeable deviations must remain visually subordinate to the landscape character being viewed. See section below on meeting integrity levels.

Potential impacts to Forest Service Scenery Integrity Objectives associated with the proposed land exchange and Recreation Design Features will be discussed under the Environmental Effects section.

BVR-2, BVR-9, and BVR-10 are currently private land and, therefore, do not have a BLM VRM Class; however, the adjacent BLM lands are within VRM Classes II and III. Generally, areas closer to the Blue River are classified as VRM Class II. The description of Class II scenic lands are described above under the discussion of parcels BLM-A, BLM-B, and BLM-C. The description of VRM Class III scenic lands is described above under the discussion of BLM-F.

The area of BVR-2, BVR-9, and BVR-10 has high scenic integrity with large areas of these parcels providing outstanding views of Green Mountain, Green Mountain Canyon and the Blue River. These areas are distinctly different from the scenic rural landscape of the area, with unique geologic formations and steep canyon walls in the Green Mountain Canyon area. Portions of the parcels that are further upland of the Blue River have the typical rolling and steep hillsides and open terrain dominated by sagebrush steppe, native grasslands, pinyon-juniper forests, and interspersed with rocky knolls. Colors on these parcels are predominantly mottled shades of dark green created by the pinyon-juniper vegetation, along with lighter shades of green, tan and grey, creating a medium mottled texture on the landscape.

¹⁰ USDA Forest Service, 1995

¹¹ Ibid.

Parcels BVR-3 and BVR-4

BVR-3 and BVR-4 both have adjacent public and private lands. BVR-4 is almost entirely surrounded by BLM lands except for a portion of the northwest corner of the property boundary that abuts BVR private property. BVR-4 is approximately 0.5 mile from SH 9 and as such would be visible in the foreground-middleground of this roadway as well as the previously mentioned private and public lands. BVR-3 is bordered by BLM lands to the north, private lands to the east, WRNF land to the south and Summit County Open Space land across from SH 9 on the southwest corner.

BVR-3 and BVR-4 are currently private land and, therefore, do not have a BLM VRM Class; however, the adjacent BLM lands are within VRM Class II. The description of Class II scenic lands is described above under the discussion of parcels BLM-A, BLM-B and BLM-C.

BVR-3 and BVR-4 are consistent with the scenic rural landscape of the area of rolling and steep hillsides and open terrain dominated by sagebrush steppe, native grasslands, pinyon-juniper forests, and interspersed with rocky knolls. Colors on these parcels are predominantly mottled shades of dark green created by the pinyon-juniper vegetation, along with lighter shades of green, tan and grey, creating a medium mottled texture on the landscape.

Parcel BVR-5

Adjacent properties to BVR-5 include BLM managed land and private ranch land. Across the highway, to the south is the Colorado River and lush area of river valley. BVR-5 is in the foreground-middleground distance zone of the Colorado River and adjacent public and private lands.

BVR-5 is currently private land and, therefore, does not have a BLM VRM Class; however, the adjacent BLM lands are within VRM Class III. The description of Class III scenic lands is described above under the discussion of BLM-F.

BVR-5 is consistent with the scenic rural landscape of the area of rolling and steep hillsides and open terrain dominated by sagebrush steppe, native grasslands, pinyon-juniper forests, and interspersed with rocky knolls. Colors on these parcels are predominantly mottled shades of dark green created by the pinyon-juniper vegetation, along with lighter shades of green, tan and grey, creating a medium mottled texture on the landscape. Views to the south of the highway are lush with more dominating shades of green as well as moving water.

Parcel BVR-7

BVR-7 is located off Trough Road, which as previously mentioned is designated as part of the Colorado Headwaters National Scenic Byway (at the national level) and is also designated as a Colorado Scenic and Historic Byway at the state level (refer to the discussion under parcels BLM-A, BLM-B and BLM-C for a detailed discussion of these designations). The parcel abuts Trough Road, which would classify it as being in the foreground-middleground distance zone from this travel route, as well as adjacent public and private lands.¹² However, due to the small size of this parcel it is not necessarily recognizable from adjacent areas.

BVR-7 is currently a private parcel and does not have a BLM VRM Class. However, surrounding BLM lands and lands that could be accessed via the easement created by this parcel are classified as within VRM Class II. The description of Class II scenic lands is described above under the discussion of parcels BLM-A, BLM-B, and BLM-C.

The Inspiration Point area is known for its natural beauty, expansive views of the Colorado River Valley, and is popular amongst wildlife viewers. The views of this valley diverge from the characteristic scenic rural landscape of the area. This area is an important scenic resource, already managed by the KFO, in the Upper Colorado SRMA. BVR-7 itself, being of limited area, primarily serves as access to an existing highly valued scenic area, rather than contributing to the scenery of the area itself.

¹² BLM, 1986 p.5

Parcel BVR-8

BVR-8 is located in Grand County off Trough Road near the confluence of the Blue and Colorado Rivers. As previously mentioned, Trough Road is designated as part of the Colorado Headwaters National Scenic Byway (at the national level) and is also designated as a Colorado Scenic and Historic Byway at the state level (refer to the discussion under parcels BLM-A, BLM-B and BLM-C for a detailed discussion of these designations). BLM managed public lands and private ranch lands are also adjacent to the parcel, which is in the foreground-middle ground distance zone of these lands, as well as the Colorado River and Trough Road.

Additionally, a Recreation Design Feature proposed on BVR-8 would include in-stream and riparian habitat improvements, a new take-out for floaters, Americans with Disabilities Act (ADA) accessible fishing access points and day-use recreational amenities (picnic benches, trails, and a parking lot).

BVR-8 is currently a private parcel and does not have a BLM VRM Class. However, surrounding BLM lands are classified are within VRM Class II. The description of Class II scenic lands is described above under the discussion of parcels BLM-A, BLM-B and BLM-C.

BVR-8 is consistent with the scenic rural landscape of the area, including pastures and ranchlands within and adjacent to its boundaries. The characteristic landscape consists of rolling and steep hillsides and open terrain dominated by sagebrush steppe, native grasslands, pinyon-juniper forests, and interspersed with rocky knolls. The Blue River weaves through BVR-8 and as such, moving water has a large presence in the scenery of this parcel. Colors on these parcels are predominantly mottled shades of dark green created by the denser, lush vegetation along the river corridor along with lighter shades of green, tan and grey, further from the river creating a medium mottled texture on the landscape.

ENVIRONMENTAL EFFECTS

Alternative 1 – No Action

Under the No Action Alternative, the Federal parcels would remain under BLM management. The Federal parcels could be leased for mineral and/or energy development, which could affect visual resources, although this is unlikely to occur, as this would not be the highest and best use in an area with an existing presence of recreation and parcels with river frontage. The non-Federal parcels would remain private lands and could remain as they currently exist or they could be sold and/or developed for residential or commercial purposes, consistent with county zoning and land use regulations. No impacts to visual resources would be expected to occur.

Direct and Indirect Effects

Federal Parcels

Under the No Action Alternative, the Federal parcels would remain under BLM management and little change would be expected to occur to visual resources on the parcels. Any mineral and/or energy development that may occur on the Federal parcels would impact visual resources, but this is unlikely to occur given the low mineral development potential. The Federal parcels would continue to be managed under their current VRM classes.

Non-Federal Parcels

If the No Action Alternative is selected, the non-Federal parcels would remain private lands. It is anticipated that the non-Federal parcels would retain a similar visual character as in their current state, as there is no development that is reasonably foreseeable at this time. However, given their retention in private ownership under the No Action Alternative, the non-Federal parcels could feasibly be sold and/or developed for residential or commercial purposes, consistent with county zoning and land use regulations, which, would introduce an undetermined visual contrast to the landscape.

Alternative 2 – Proposed Action

Direct Effects

Federal Parcels

The proposed land exchange would not directly affect the visual values of the Federal parcels. Future uses of the Federal parcels, should they become private land, are expected to resemble ranching practices currently taking place on surrounding BVR lands. At this time, there is no development proposed or reasonably foreseeable on any of the Federal parcels that would be transferred to private ownership. However, given their transfer into private ownership under the Proposed Action Alternative, the Federal parcels could feasibly be sold and/or developed for residential or commercial purposes, consistent with county zoning and land use regulations, which, would introduce an undetermined visual contrast to the landscape.

Additionally, the Colorado Headwaters National Scenic Byway and Colorado Scenic and Historic Byways both of which include Trough Road and its views of the Gore Range and the Inspiration Point Overlook would not be impacted by the Proposed Action. As discussed under the Affected Environment, BLM-A, BLM-B, BLM-C and BLM-I are visible in the foreground-middleground distance zone from Trough Road. Development is not proposed on any of the Federal parcels included in this land exchange, and it is reasonably foreseeable that they would remain almost identical to their current state. Therefore, it is not anticipated that the Colorado Headwaters National Scenic Byway and Colorado Scenic and Historic Byways would be impacted by the proposed land exchange.

Non-Federal Parcels

If the proposed land exchange is approved, the non-Federal parcels would be transferred to the BLM for management, which would preclude residential or commercial development. Under BLM management, visual resources on the non-Federal parcels would fall under the BLM's VRM system. This would ensure that the scenic values of the non-Federal parcels would be considered before allowing uses that may have negative visual impacts. Proposed projects and activities would be analyzed in subsequent NEPA analysis. It is anticipated that all the non-Federal parcels would achieve the VRM designation of Class II or III, which is the VRM Class of the BLM lands surrounding non-Federal parcels (refer to the discussion of VRM classes under the Affected Environment of this section).

The proposed Recreation Design Features on BVR-8 and BVR-10 would also be consistent with the VRM designations of surrounding BLM lands. BVR-8 is adjacent to VRM class II areas, one of which is the existing Confluence site that already includes many of the same recreation features that are proposed. The only structural improvements at this site would be the ADA accessible fishing access points, which are wood decks and bridges along the riverbank. These features would remain subordinate to the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape. Other Recreation Design Features proposed at this location would primarily include grading and in-stream developments for the construction of parking, trails, and river improvements that would retain the existing character of the landscape.

The Recreation Design Features at BVR-10 would only include minor earth-moving activities, including maintenance to the existing road accessing the parcel, construction of parking area, and the construction of a hiking trail. These features are anticipated to be consistent with the nearby VRM class II areas already managed by the BLM. Additionally, these features as well as the approximately 300-acre southern half of BVR-2 would be transferred into management by the WRNF are anticipated to be consistent with the adjacent Low and Moderate Forest Service scenic integrity objectives. None of the features would alter the appearance of the area to appear more than "slightly" altered.

BVR-1, BVR-7, and BVR-8, are visible within the foreground-middleground distance zone of Trough Road. As previously mentioned, Trough Road is a section of the Colorado Headwaters National Scenic Byway and Colorado Scenic and Historic Byway. Transfer of these non-Federal parcels into BLM management would preclude future development of these parcels in a way that would infringe on the scenic integrity of these byways. During the construction of Recreation Design Features on BVR-8, machinery could be visible from Trough Road and would need to be stored in an area screened from the road while not being used. Impacts related to construction on the Colorado Headwaters National Scenic Byway and Colorado Scenic and Historic Byways would be temporary and are not anticipated to have lasting impacts to these scenic resources. Therefore, the proposed transfer of non-Federal parcels

BVR-1, BVR-7, and BVR-8 would not result in adverse impacts to the Colorado Headwaters National Scenic Byway and Colorado Scenic and Historic Byway.

Indirect Effects

Agreements Between BVR and Sheephorn Ranch

BVR has stated that upon closing of the exchange, it would convey approximately the southern half of BLM-C to Sheephorn Ranch that currently hunts in this area, and it is reasonably foreseeable that hunting would continue to be the primary use. The agreement between the Proponent and Sheephorn Ranch does not include any development and, therefore, would not directly affect visual resources.

Agreements Between BVR and Skylark Ranch

BVR has stated that upon closing of the exchange, parcel BLM-J would likely be sold to the adjoining Skylark Ranch. It is reasonably foreseeable that this parcel would remain as agriculture. The agreement between the Proponent and Skylark Ranch would not directly affect visual resources of the area, as lands would likely continue to be used for ranching.

Agreements Between BVR and Blue Valley Acres

BLM-K is surrounded non-Federal land within Blue Valley Acres #2 subdivision. BVR has offered to convey this parcel to the Blue Valley Metropolitan District, provided that future use of the property serves some form of community purpose such as continuation of open space, ball fields, a community meeting hall, etc. The agreement between the Proponent and Blue Valley Metropolitan District would likely alter the visual characteristics of parcel, but due to its location within an existing subdivision would not impact adjacent areas in a way that would directly affect the visual resources managed by the KFO.

WRNF Environmental Review of the Proposed Hiking Trail

If the proposed land exchange is approved, the WRNF would have to initiate environmental review of the proposed hiking trail down to the eastern bank of the Blue River immediately below BVR-10. BVR would fund the construction of this proposed Recreation Design Feature, but because this trail would occur on NFS lands, additional environmental review and authorization by the WRNF would be necessary. The WRNF would analyze the environmental impacts, including those to visual resources, of constructing a short hiking trail in a separate document subsequent to the potential approval the proposed land exchange.

Alternative 3

Direct and indirect effects to visual resources associated with Alternative 3 would be similar to the Proposed Action Alternative. The major difference between the two alternatives as it relates to visual resources is that there would be no Recreation Design Features proposed under Alternative 3. As mentioned in the previous section, the Recreation Design Features are anticipated to be consistent with the direction for nearby BLM lands; therefore, it is anticipated that Alternative 3 would also be consistent, and would not introduce any new impacts, as it has a reduced footprint compared to the Proposed Action Alternative.

Subsequent transfer of lands to Sheephorn Ranch, Skylark Ranch, and Blue Valley Acres would also occur under Alternative 3, as described under the *Indirect Effects* discussion of the previous section. WRNF review of a hiking trail is not analyzed as an indirect effect as there are no Recreation Design Features proposed under this alternative.

As this alternative is equal to or less than the intensity of the Proposed Action Alternative it is assumed that the determinations made in the previous section would apply to this alternative as well. The reader is referred to the previous section for additional details.

B. CULTURAL RESOURCES

SCOPE OF ANALYSIS

Section 106 of the National Historic Preservation Act (NHPA) of 1966 requires that Federal agencies take into account the effects of a Federal undertaking on any cultural resource that is included in or eligible for inclusion in the

National Register of Historic Places (NRHP). Cultural resources are features with valued archaeological, historic, and socio-cultural properties as outlined by NHPA.

The cultural resources assessment performed for the proposed land exchange is based on a Class III cultural resources inventory by Metcalf Archaeological Consultants, Inc., which included new surveys conducted on approximately 96 acres, and files searches of previous inventories on the entire Analysis Area including all Federal and non-Federal parcels proposed for the land exchange since 2005. Metcalf previously conducted a Class III inventory for this land exchange in 2004, which covered all of the Federal parcels proposed for exchange except for the 96 acres surveyed for the current project.¹³ The full Class III inventory report is in progress by Metcalf and will be submitted under separate cover. Section 106 consultation with the SHPO is ongoing and consultation will continue until the full Class III inventory report is completed by Metcalf and the SHPO concurs with the determination of effect for the undertaking.

The cultural resources inventory entailed intensive field surveys on two Federal parcels (BLM-managed lands to be traded to BVR)—the northern tract of parcel labeled BLM-J and BLM-K. These two parcels total approximately 54 acres, and had not been previously inventoried for cultural resources. Three additional parcels are proposed for Recreation Design Features to enhance public recreation of the area: the Confluence Recreation Area and the “Chevron Parcel” near BVR-8, which are situated on BLM and private lands; and a connected action that consists of a hiking trail to the Blue River below BVR-10, which is situated on private and NFS lands. Because development is proposed within these three areas (totaling approximately 42 acres), Class III cultural resource inventory was required for these areas as well.

All five parcels were inventoried to Class III standards by professional archaeologists walking the area of potential effect (APE) with the intent of locating and recording all historic items and sites. The APE includes the acreage of all Federal parcels, the Recreation Design Features and the hiking trail connected action; and it defines the scope of the cultural resources analysis for this Final EIS. The following analysis is a summary of the full cultural resource inventories, which are contained in their entirety in the project file.

Note that no official cultural resources inventory was completed on the non-Federal parcels included in the proposed land exchange—other than BVR-8, the Chevron Parcel, and BVR-10, where development is proposed—because the lands would be managed by the BLM or Forest Service and would, therefore, either be protected from development or required to pursue a cultural resource inventory if future development occurred. The proposed land exchange would not affect any cultural resources that may be present on the remaining non-Federal parcels, except that they would be managed by the BLM or Forest Service.

AFFECTED ENVIRONMENT

Metcalf conducted Class I files searches of the entire proposed land exchange area including all of the Federal and non-Federal parcels proposed for the land exchange to gain information on previous inventories and recorded cultural resources. In particular, Metcalf Archaeological Consultants, Inc. conducted a Class III cultural resources inventory in 2004 of ten Federal parcels for the land exchange managed by the KFO.¹⁴ This inventory resulted in the documentation of 26 sites and 19 isolated finds. Of these sites, 23 were recommended not eligible for inclusion on the NRHP and no further work was recommended. One site (5GA3027), located in BLM-I, was recommended eligible to the NRHP and avoidance or data recovery efforts were recommended. The remaining two sites (5GA9 and 5GA2286) were recommended as unevaluated and needing further testing. These two sites are also located within BLM-I. Metcalf returned to these three sites to conduct further evaluative testing later in 2004.¹⁵ Further testing facilitated a change in eligibility for sites 5GA2286 and 5GA3027 to not eligible, with no further work required. The Office of Archaeology and Historic Preservation (OAHP) online Compass database currently lists these two sites as officially not eligible. In addition, Metcalf conducted data recovery at site 5GA9, which produced a recommendation that the BLM portion of the site does not support the potential eligibility of the overall unevaluated site, which extends onto

¹³ Metcalf, 2004

¹⁴ Ibid.

¹⁵ Ibid.

private property.¹⁶ No further work was recommended for site 5GA9 on BLM-administered land. The official results of that work, however, are not reflected in OAHP's database as site 5GA9 is currently still listed as officially unevaluated or "needs data." Consultation with BLM and State Historic Preservation Office (SHPO) dated June 5, 2007 included an agreement with SHPO that the portion of the site on BLM-administered land is not eligible for the NRHP because the area lacks integrity and does not have the potential to provide information that would substantially contribute to our understanding of the prehistory or history of the region. Further evaluation of that portion of the site located on private land is needed to make a determination of eligibility to the NRHP for site 5GA9 under criteria D. Criteria D includes properties that may be eligible for the NRHP if they have yielded, or may be likely to yield, information important in prehistory or history. Because SHPO has determined that site 5GA9 may be eligible to the NRHP, the SHPO does not concur with a finding of "no historic properties affected."

The Class I files searches indicated that numerous prehistoric and historic cultural resources are located in and surrounding the proposed land exchange area. Within the APE, cultural resources are located within BLM-F, BLM-G, BLM-H, BLM-I, and BLM-K. The majority of these resources have been recommended not eligible to the NRHP and no further work is required. Only one site is officially unevaluated or "needs data" and that is site 5GA9, that portion on private land. Mitigation for this site is not proposed because the portion of 5GA9 that is impacted by the land exchange has been determined to be not eligible and is not contributing to the overall eligibility of the site that spans both federal and non-federal lands. Site 5GA2914 is now site 5GA2286, which has been determined to be not eligible to the NRHP. Site 5GA2915 is part of site 5GA9 and overlaps a portion of that area of the site located on private land classified as "needs data" outside BLM-I. Site 5GA2623 which is located in BLM-H is still unevaluated and classified as "needs data" and is, therefore, eligible to the NRHP.

As expected because of their status as private lands, few cultural resource inventories have been conducted on the non-Federal parcels; therefore, there are few officially documented cultural resources in OAHP records. However, files searches did indicate that there are known resources in parcels (BVR) 2, 3, 4, 5, and 9. The vast majority of these resources have been recommended not eligible to the NRHP. One site, 5GA262, is located on BVR-4 and is listed as unevaluated for the NRHP.

In August of 2016, Metcalf conducted Class III inventory on the five parcels that had not been previously covered by survey (parcels BLM-J (northern tract) and BLM-K and three parcels proposed for Recreation Design Features, totaling approximately 96 acres). The current survey of these five parcels located four new cultural resources, all segments of historic ditches. These sites are located within the Confluence Recreation Area, BLM-K, and the proposed hiking trail on the WRNF. The four new segments of these historic ditch sites are recommended not eligible or non-supporting of the overall potential eligibility of the resource. No cultural resources were located within BLM-J. A determination of "no historic properties affected" is recommended for the 2016 inventory and no further work is required.

In summary, no new eligible cultural resources were located in the 2016 Class III inventory, and files searches indicate that two previously recorded unevaluated or "needs data" cultural resource sites, 5GA9 and 5GA2623, are located within Federal parcels BLM-H and BLM-I.

A final Class III cultural resource inventory was conducted in May 2017, and the results of the correspondence and determination effect with the Colorado SHPO on BLM-F, BLM-G, BLM-H, BLM-I, BLM-J, and BLM-K is dated June 13, 2017. The SHPO concurred with the eligibility of sites 5GA2395/5ST1029, 5GA2286, 5GA2623, 5GA9, 5GA4533.1, 5GA4534.1, 5GA4535.1, and 5ST1529. Sites 5GA2914 and 5GA2915 are retired and are assigned to previously recorded sites 5GA2286 and 5GA9, respectively. SHPO concurrence dated June 13, 2017, gives a finding of no historic properties affected (36 CFR § 800.4(d)(1)) as appropriate for sites 5GA2395/5ST1029, 5GA2286, 5GA2623, 5GA4533, 5GA4535, and 5ST1529. The SHPO also concurred with a finding of no adverse effect (36 CFR § 800.5(b)) for site 5GA9 and the Blue Valley Ranch Land Exchange undertaking as a whole.

¹⁶ Scott et al., 2007

ENVIRONMENTAL EFFECTS

Alternative 1 – No Action

Direct and Indirect Effects

Under the No Action Alternative, the lands would not be exchanged and cultural resources on the Federal parcels would remain protected through BLM management and NHPA. No Class III cultural resource inventories have been completed on the non-Federal parcels that are part of the proposed exchange, but they were included in Class I files searches. Those searches indicate that there are known resources on BVR-2, BVR-3, BVR-4, BVR-5, and BVR-9. Any known or unidentified cultural resources on non-Federal parcels would remain unprotected by NHPA.

The 2016 Class III cultural resources inventory found no NRHP qualifying cultural resources on newly inventoried Federal parcels BLM-J and BLM-K, the Recreation Design Features, and the hiking trail connected action, and a determination of “no historic properties affected” was recommended. However, two unevaluated or “needs data” sites were found in the Class I records search on previously inventoried Federal parcels BLM-H and BLM-I.

Under the No Action Alternative, current land uses on the Federal parcels would likely continue, including livestock grazing and leasing for mineral and/or energy development. The potentially NRHP-qualifying resources, as well as any non-qualifying cultural resources that are present on the Federal parcels may be susceptible to vandalism and unauthorized collection under the No Action Alternative, but this is limited by the currently difficult public access to the Federal parcels. These activities could have adverse effects on cultural resources, but generally cultural resources would be protected through BLM management and NHPA.

Alternative 2 – Proposed Action

Under the Proposed Action, the land exchange would not have direct, indirect, or cumulative effects on cultural resources in the APE. This determination is supported by the SHPO, which concurred with a finding of no adverse effect (36 CFR § 800.5(b)) for site 5GA9 and the Blue Valley Ranch Land Exchange undertaking as a whole.

Direct and Indirect Effects

Federal Parcels

Under the Proposed Action, cultural resources that are present on the current Federal parcels would no longer be protected by Federal cultural resource laws as a direct result of the exchange. The private ownership of the Federal parcels; however, would eliminate the already limited public access, thereby increasing protections from vandalism and unauthorized collection of known or unidentified cultural resources.

Non-Federal Parcels

The potential cultural resources that would be transferred from private ownership to public management on the non-Federal parcels would become more accessible to the public as a result of this exchange, but would also receive protection from Federal cultural resource laws that are not present on private lands.

Alternative 3

Aside from the modified parcel configuration included in this alternative, that would result in slightly less land (76 acres) of BLM-I being transferred into private ownership, and less potential cultural resources that would be transferred from private ownership to public management due to the lack of BVR-3 and BVR-4 being included in this alternative, there is no difference between Alternative 3 and the Proposed Action Alternative. Alternative 3 would not differ from the Proposed Action Alternative in its overall direct, indirect, or cumulative effects on cultural resources in the APE. The reader is referred to the previous section for additional details. As this alternative is equal to or less than the intensity of the Proposed Action Alternative it is assumed that the determinations made in the previous section would apply to this alternative as well. The reader is referred to the previous section for additional details.

C. NATIVE AMERICAN RELIGIOUS CONCERNS

SCOPE OF THE ANALYSIS

Native American religious concerns are legislatively considered under several acts and Executive Orders, namely the American Indian Religious Freedom Act of 1978 (Public Law [PL] 95-341), the Native American Graves Protection and Repatriation Act of 1990 (PL 101-601), and Executive Order 13007, *Indian Sacred Sites*. In concert with other provisions such as those found in NHPA, these regulations require that the Federal Government carefully and proactively take into consideration traditional and religious Native American culture and life. This ensures, to the degree possible, that access to sacred sites, the treatment of human remains, the possession of sacred items, the conduct of traditional religious practices, and the preservation of important cultural properties are considered and not unduly infringed upon. In some cases, these concerns are directly related to “historic properties” and “archaeological resources.” In other cases, elements of the landscape without archaeological or other human material remains may be involved. Identification of these concerns is normally completed during the land use planning efforts, reference to existing studies, or via direct consultation on the project specific undertaking.

An important consideration in the fulfillment of the BLM’s mission is the trust relationship the agency has with American Indians and the potential impact BLM policies, programs, and project decisions may have on tribes. The KFO manages lands that contain the traditional territory of a number of American Indian peoples, including:

- Northern Arapaho Tribe
- Eastern Shoshone Tribe
- Ute Mountain Ute Tribe
- Southern Ute Indian Tribe
- Ute Indian Tribe

The scope for this analysis of Native American Religious Concerns includes all of the BLM lands managed by the KFO, including the Federal parcels.

AFFECTED ENVIRONMENT

The Native American tribes in the KFO have a generalized concept of spiritual significance that is not easily transferred to Euro-American models or definitions. The BLM recognizes that there are identified sites that are of concern because of their association with Native American occupation of the area as part of their traditional lands. Government-to-government consultation between the Native American Tribes in the KFO and the BLM has been initiated. The letter requested the tribes to identify issues and areas of concern within the proposal. A follow-up with the tribes occurred in April 2017, at which time a face-to-face consultation with the tribes took place. No comments were provided during face-to-face consultation and no traditional properties or areas of long-term spiritual use were identified in the land exchange area. No comments from any tribal government were received subsequent to the release of the Draft EIS.

The types of sites of cultural and religious significance to Native Americans that have been identified in proposed land exchange area include long-term and short-term camp sites long the Blue River where tribal people came to hunt, gather minerals, and perform other daily activities. The landscape of the proposed land exchange area is broad, characterized by vast shrublands that occupy the entire drainage of the Blue River valley. While tribes were traditionally known to use sites in this area and occupy the landscape, none of the tribes have identified areas of long-term spiritual use in the proposed land exchange area.

ENVIRONMENTAL EFFECTS

Alternative 1 – No Action

Direct and Indirect Effects

No comments were received from any tribal government nor was any request for additional information or consultation received. Thus, no Native American religious concerns were raised in relation to the No Action Alternative, and the BLM is not aware of any issues related to the Federal and non-Federal parcels.

Alternative 2 – Proposed Action

No comments from any tribal government were received subsequent to the release of the Draft EIS.

No Native American religious concerns were raised in relation to the Proposed Action, and the BLM is not aware of any issues related to the Federal and non-Federal parcels. Therefore, there are no direct or indirect effects to Native American religious concerns.

There would be no known impacts to sites and landscapes of cultural and religious significance to Native Americans in the proposed land exchange area.

Alternative 3

Alternative 3 would not introduce any impacts that are outside the scope and scale of the Proposed Action Alternative. Accordingly, it is assumed that the determinations made in the previous section would apply to this alternative as well. The reader is referred to the previous section for additional details.

D. ENVIRONMENTAL JUSTICE

SCOPE OF THE ANALYSIS

Environmental justice involves concerns that Federal decisions could disproportionately impact people of a particular ethnic or cultural heritage group, or people with low incomes. Environmental Justice is an executive order (12898) that requires, in brief, that each Federal Agency make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations. Executive Order 12898 also applies to Native American Indian tribes. The KFO manages lands that contain the traditional territory of the Northern Arapaho Tribe, Eastern Shoshone Tribe, Ute Mountain Ute Tribe, Southern Ute Indian Tribe, and Ute Indian Tribe. Further details regarding government-to-government consultation between the Native American Tribes in the KFO and the BLM is included in Section C of this appendix.

The CEQ provides the following definitions in order to provide guidance for compliance with environmental justice requirements in NEPA:

- “Minority populations should be identified where either: (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.”¹⁷
- “Low-income populations in an affected area should be identified with the annual statistical poverty thresholds from the Bureau of the Census’ Current Population Reports, Series P-60 on Income and Poverty. In identifying low-income populations, agencies may consider as a community either a group of individuals living in geographic proximity to one another, or a set of individuals (such as migrant workers or Native Americans), where either type of group experiences common conditions of environmental exposure or effect.”¹⁸

¹⁷ CEQ, 1997

¹⁸ Ibid.

The Analysis Area for this Environmental Justice analysis includes Grand and Summit counties. The first part of the Council on Environmental Quality (CEQ) guidance on minority population provides a numeric measure: “over 50 percent of the affected area.” The remainder of the guidance calls for the analyst to use his or her best judgment in evaluating the potential for Environmental Justice concerns (i.e., “population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis”).¹⁹ For this analysis the “affected area” is defined as the combined populations of Grand and Summit County, which comprise the Analysis Area. The threshold of “meaningfully greater” is set by the minority population percentage of the general population of the United States (approximately 28 percent).²⁰

AFFECTED ENVIRONMENT

Minority Populations

No minority populations, as defined by CEQ above, have been identified in the Analysis Area.²¹ The minority makeup of each county is presented in Table 1, which provides U.S. Census Bureau data based on a period estimate from 2011–2015.²² The total minority population within the Analysis Area is 7,176, and the total population within the Analysis Area is 43,306. Therefore, the minority population does not exceed 50 percent, and the minority population percentage within the Analysis Area (approximately 16 percent) is not meaningfully greater than the minority population percentage of the general population (approximately 28 percent).²³

Table 1. Minority Populations of the Analysis Area, Period Estimate 2011 to 2015

County	White		Hispanic or Latino		Black or African American		American Indian and Alaska Native		Asian		Native Hawaiian and Other Pacific Islander		Some Other Race		Two or More Races	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Summit County	23,454	81.0	4,266	14.7	334	1.2	53	0.2	268	0.9	110	0.4	300	1.0	155	0.5
Grand County	12,679	88.0	889	6.2	203	1.4	26	0.2	273	1.9	108	0.7	105	1.0	83	0.6
Analysis Area	36,133	83.4	5,155	11.9	537	1.2	79	0.2	541	1.2	218	0.5	405	0.9	238	0.5

Source: U.S. Census Bureau, 2015a

Note: The data provided in this table is based on a U.S. Census Bureau period estimate from 2011–2015

Low-Income Populations

Low-income populations, as defined above, are identified in Table 2. Nationwide, the 2015 poverty rate was 13.5 percent, down 1.2 percent from 2014.²⁴ Therefore, the Analysis Area has a slightly lower poverty rate than the nationwide threshold.

Despite Summit County having a higher percentage of people below the poverty level than the nationwide poverty rate of 13.5 percent (2015), there were no communities or groups of individuals living in geographic proximity to one another, or a set of individuals that experience common conditions of environmental exposure or effect, identified as being directly or indirectly affected by the proposed land exchange. The transfer of private BVR parcels into federal ownership in Summit County would not disproportionately negatively impact low-income populations. There are no public lands being transferred into private ownership in Summit County.

¹⁹ EPA, 1998

²⁰ U.S. Census Bureau, 2015a

²¹ Ibid.

²² U.S. Census Bureau, 2016

²³ Ibid.

²⁴ U.S. Census Bureau, 2015b

Table 2. Percentage of Population Below the Poverty Level, 2011 to 2015

County	Percentage of People below the Poverty Level
Summit County	13.7%
Grand County	10.8%
Analysis Area	12.3%
United States	13.5%

Source: U.S. Census Bureau, 2015b

Note: The data provided in this table is based on a U.S. Census Bureau period estimate from 2011–2015

ENVIRONMENTAL EFFECTS

Alternative 1 – No Action

Direct and Indirect Effects

Under the No Action Alternative, no changes or modifications would be approved that would directly or indirectly affect minority or low-income populations in the Analysis Area and the baseline conditions presented in the Affected Environment section above would be expected to continue into the future.

Alternative 2 – Proposed Action

Direct and Indirect Effects

The Proposed Action is not expected to directly or indirectly create disproportionately high and adverse human health or environmental effects on minority populations or low-income populations. This conclusion is based on the following:

- No minority populations were identified in the Analysis Area where either: (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.
- The proposed land exchange would not have a disproportionate effect on any minority or low-income communities as the effects of the exchange would be spread throughout the Analysis Area and would not disproportionately affect any particular group or community in a negative way.

Alternative 3

Alternative 3 would not introduce any impacts that are outside the scope and scale of the Proposed Action Alternative. Accordingly, it is assumed that the determinations made in the previous section would apply to this alternative as well. The reader is referred to the previous section for additional details.

E. LAW ENFORCEMENT

SCOPE OF THE ANALYSIS

The Federal Land Policy and Management Act of 1976 (FLPMA) granted BLM law enforcement authority to encourage public safety and to protect resources on BLM-managed public lands.²⁵ BLM officers accomplish this in partnership with other federal, state, and local law enforcement agencies. BLM law enforcement officers patrol the 377,860 acres of the KFO and are tasked with a variety of services, including: educating the public on the rules and regulations, providing security at recreation sites, preventing theft of and damage to biological and cultural resources, assisting in emergency response situations, enforcing the rules and regulations through the issuing of warning and citations and by making arrests. BLM KFO law enforcement officers enforce both state and federal regulations in the

²⁵ BLM, 1976

planning area. Law enforcement in the planning area is also supported by CPW and local units of government, including the Sheriff's Offices of the surrounding counties.

AFFECTED ENVIRONMENT

Personnel

The KFO has one delegated law enforcement officer (LEO) who conducts regular patrols. In general, the KFO can be characterized as a rural area that is sparsely populated, with areas of remoteness. Although the population density of the KFO is low, it covers a large area and receives large volumes of visitors throughout the year. As such, the KFO LEO relies on supporting agencies to effectively manage the area and respond to incidents. Supporting agencies include the Grand, Eagle, and Summit County Sheriff's Offices; CPW; the Forest Service; and the Colorado State Patrol.

Of the previously mentioned supporting agencies, interaction with CPW and the Grand County Sheriff's Office is most frequent. Due to the vast opportunities for fishing and hunting in the KFO, CPW and the LEO cooperatively support one another in responding to fish and game related incidents. The CPW Hot Sulphur Springs Office, which is in closest proximity to the KFO, is comprised of one Area Wildlife Manager and six District Wildlife Managers (four of which are in Grand County, two of which are in Summit County with one that is split between Eagle County). CPW's jurisdiction primarily covers, but is not limited to, the wildlife related incidents that occur within the KFO.

The Grand County Sheriff's Office is typically relied on for issues requiring an immediate response, such as search and rescue operations or crimes against individuals. Including animal control, the Grand County Sheriff's Office has nine patrolling officers whose jurisdiction overlaps the KFO. The patrolling officers of the Grand County Sheriff's Office have access to a variety of resources to handle a broader range of incidents. Both the BLM and CPW have similar law enforcement resources to the Grand County Sheriff's Office; however, typically to a lesser degree.

Incidents

The majority of incidents on the KFO requiring response by the LEO and other supporting agencies can be characterized as petty or misdemeanor offenses and are typically void of any dangerous or severe threats to people or resources.²⁶ Aside from fish and game regulation violations, which occur throughout the KFO (often in remote areas), incidents most frequently occur in areas with developed recreation opportunities.

On the KFO developed recreation sites are most often associated with river access and include watercraft put-ins/take-outs, fishing access, and trails for hiking/sight-seeing along river corridors. Typically, these areas offer amenities for recreationists such-as picnic tables, restrooms, and infrastructure associated with different opportunities. The incidents associated with these areas are often related to vandalism of the aforementioned amenities, trespass into areas beyond the recreation site, some drug and alcohol abuse, and improper use of the site (e.g., camping in parking areas, not paying fees).²⁷ Larger recreation areas like the existing Pumphouse Recreation site along the Colorado River require greater attention by the LEO as its higher concentrations of users has been found to result in a higher frequency of incidents.²⁸ This trend is particularly visible on holiday weekends when use is highest. Other recreation sites (e.g., the nearby existing Confluence site) also require attention from the LEO, but to a substantially lesser degree than the Pumphouse Recreation site. Comparatively, visitation to the existing Pumphouse Recreation site is approximately 7,000 to 14,000 visitors per month (during the summer) and visitation to the existing Confluence site is 500 to 1,500 visitors per month (during the summer).²⁹ The existing Pumphouse Recreation site also includes twenty camping spaces; the confluence site does not permit camping.

Although substantial damage to infrastructure has occurred at recreation sites in the past, incidents both at recreation sites and within the KFO as whole are effectively managed by the LEO and supporting agencies.

²⁶ Entrican, 2016

²⁷ Ibid.

²⁸ Ibid.

²⁹ RRC Associates LLC, 2013

ENVIRONMENTAL EFFECTS

Alternative 1 – No Action

Direct and Indirect Effects

Under the No Action Alternative, no changes or modifications would be approved that would directly or indirectly affect the current state of law enforcement capacity in the KFO and the baseline conditions presented in the Affected Environment section above would be expected to continue into the future.

Alternative 2 – Proposed Action

Direct and Indirect Effects

The Proposed Action is not expected to directly or indirectly affect the capacity of law enforcement within the KFO. This conclusion is based on personal communication with the LEO of the KFO.³⁰

Population growth and demand for recreation is growing independently of the proposed land exchange, creating a higher concentration of users and visitors of the KFO. As discussed in the Affected Environment, higher concentrations of users, particularly at developed recreation sites, has been found to result in higher frequencies of incidents. It is anticipated that with continued support from agencies in the area, the KFO would be able to effectively oversee law enforcement alongside growing demand and visitation within the planning area.

Additionally, the proposed Recreation Design Features (particularly around the confluence) included in Alternative 2, which would provide more formalized opportunities and infrastructure, could reduce the number of incidents that are expected to occur more frequently commensurate with population growth. By increasing the number of developed recreation sites, the growing number of users would be spread between more areas and it would be less likely that incidents related to user density would occur.

The sites of the proposed Recreation Design Features may experience similar incidents to those that have been recorded at existing sites like Pumphouse Recreation site and the Confluence site. The proposed Confluence Recreation Area is anticipated to generate approximately 3,000 to 4,000 visitors per month during the summer season (refer to the recreation section for more detail). Thus, the range of visitation at the proposed Confluence Recreation Area is between the ranges in visitation at the existing Confluence site (500 to 1,500 visitors per month) and the existing Pumphouse Recreation site (7,000 to 14,000 visitors per month). The improved Spring Creek Bridge and Green Mountain areas are not anticipated to generate more than 1,000 visitors per month, resembling a visitation trends closer to or below, that of the existing Confluence site (500 to 1,500 visitors per month). None of the proposed sites have a camping component. As such, these sites would require attention by law enforcement and may result in cases of vandalism or improper use but not to a degree that is not already present on the KFO.

By consolidating land ownership boundaries and providing adequate infrastructure for recreation, it is anticipated that the proposed land exchange would have a positive effect on law enforcement when considered with growing visitation and demand for recreation on the KFO.

Alternative 3

Alternative 3 would not introduce any impacts that are outside the scope and scale of the Proposed Action Alternative. As this alternative does not include Recreation Design Features it is likely that this alternative may generate less incidents than the Proposed Action Alternative. Conversely, the lack of formalized opportunities and infrastructure associated with this alternative, could in some instances increase the number of incidents that are expected to occur more frequently commensurate with population growth

As this alternative is equal to or less than the intensity of the Proposed Action Alternative it is assumed that the determinations made in the previous section would apply to this alternative as well. The reader is referred to the previous section for additional details.

³⁰ Entrican, 2016

F. WASTES, HAZARDOUS AND SOLID

SCOPE OF THE ANALYSIS

Wastes, both hazardous and solid, can have adverse effects on soil, groundwater, and surface water. A Phase I Environmental Site Assessment (ESA) is used to inspect a site for indications of current or past uses that could have caused contamination of the land with hazardous materials or petroleum products. A review of government records, site reconnaissance, and interviews with persons knowledgeable of the site are used to assess environmental issues present on a site.

The Analysis Area for wastes includes both Federal and non-Federal parcels. The BLM completed ESAs for both the Federal and non-Federal parcels to determine if there were any Recognized Environmental Conditions (RECs). In the context of an ESA, a REC is defined as the presence or likely presence of any hazardous substances or petroleum products on a property under circumstances that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimus conditions that generally do not present a threat to human health or the environment and would not generally be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.³¹

AFFECTED ENVIRONMENT

Federal Parcels

The Phase I ESA completed for Federal parcels (BLM) A, B, C, F, G, H, I, J, and K determined that no RECs exist on the parcels or any facilities or sites in the vicinity of the parcels that would negatively impact the properties.³² No Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) listed hazardous substance or petroleum products were observed on any of the parcels.³³ None of the following indicators of the potential existence of RECs were noted, including but not limited to: underground storage tanks, above ground storage tanks, strong or noxious odorous odors, suspected polychlorinated biphenyl (PCB)-containing equipment, stained soil, stressed vegetation, wastewater, or wells.

Non-Federal Parcels

The Phase I ESA completed for non-Federal parcels (BVR) 1, 2, 3, 4, 5, 7, 8, 9 and 10 determined that no RECs exist on the parcels or any facilities or sites in the vicinity of the parcels that would be expected to negatively impact the properties.³⁴ No CERCLA listed hazardous substance or petroleum products were observed on any of the parcels. None of the following indicators of the potential existence of RECs were noted, including but not limited to: underground storage tanks, above ground storage tanks, strong or noxious odorous odors, suspected PCB-containing equipment, stained soil, stressed vegetation, wastewater, or wells.

ENVIRONMENTAL EFFECTS

Alternative 1 – No Action

Direct and Indirect Effects

Under the No Action Alternative existing land ownership patterns, land management activities and responsibilities would continue. A Phase I ESA determined that there are no RECs on any of the exchange parcels. The BLM would continue to be responsible for maintaining the health of the public lands and the Proponent would continue to be responsible for maintaining the health of the private lands.

³¹ ASTM, 2012

³² Kraus, 2016a

³³ EPA, 2002

³⁴ Kraus, 2016b

Alternative 2 – Proposed Action

Direct Effects and Indirect Effects

The Phase I ESA determined that there are no RECs on the non-Federal parcels that would bar acquisition by the BLM. Furthermore, the BLM would not transfer any Federal parcel that has RECs to private ownership. The BLM would be responsible for maintaining the health of the lands on the acquired non-Federal parcels and the Proponent would be responsible for maintaining the health of the acquired Federal parcels. There are no reasonably foreseeable developments for any of the Federal parcels to be acquired by the Proponent.

Alternative 3

As this alternative is equal to or less than the intensity of the Proposed Action Alternative it is assumed that the determinations made in the previous section would apply to this alternative as well.

G. GEOLOGY AND MINERALS

SCOPE OF THE ANALYSIS

The BLM recognizes that public lands contain geologic and mineral resources important locally and to the United States. Therefore, the BLM manages the mineral estates on these public lands to enhance the quality of life for present and future generations of Americans under a mandate of multiple use as described in the FLPMA. The BLM makes public lands available for the orderly and efficient development of these resources under the principles of multiple use management. In the case of a land exchange, the BLM monitors locatable, salable and leasable minerals to ensure proper resource recovery and evaluation, production verification, diligence, and enforcement of terms and conditions. In order to monitor these resources the BLM produces mineral reports in response to specific actions or applications.

The BLM prepared Mineral Reports for Federal parcels (BLM) A, B, C, F, G, H and I in March 2003, for BLM-K in April 2003, and for BLM-J in December 2003 to document the mineral resources potentially present.³⁵ The following geology and minerals analysis for the Federal parcels is based on the Mineral Reports, which describe the geologic formations present on the parcels and identify leasable, locatable and salable minerals that may potentially be present on the parcels. While the Analysis Area for geology and minerals includes both the nine Federal and the nine non-Federal parcels, the Minerals Reports exclude the non-Federal parcels. The geologic condition of the non-Federal parcels is described from existing data.³⁶ Additionally, a Geologic Evaluation and Mineral Valuation Report was prepared by the USDI Appraisal and Valuation Services Office (AVSO)-Department of Minerals Evaluation (DME) for the Federal parcels in April of 2017 and is incorporated into this analysis by reference.³⁷

The BLM manages the Federal mineral estate on all Federal parcels and BVR owns the mineral estate on all non-Federal parcels except for BVR-9, which is owned by Summit County.

AFFECTED ENVIRONMENT

Federal Parcels

Parcels BLM-A, BLM-B and BLM-C

Local Geology

BLM-A (80 acres), BLM-B (120 acres) and BLM-C (330 acres) are all located southwest of Kremmling in rugged terrain north of Sheephorn Mountain in the Gore Range, south of the Colorado River and west of the Blue River. All three parcels are characterized by Precambrian metamorphic rocks consisting of biotite gneiss, quartz-feldspar and mica schist and migmatite. BLM-A has outcrops of schist and BLM-B consists mainly of granite, while BLM-C largely consists of granitic and gneissic bedrock but with some quartz-rich migmatite-like coarse gneiss.

³⁵ BLM, 2003a,b,c

³⁶ Colorado Geological Survey, 2016b; Tweto, 1979

³⁷ USDI Appraisal and Valuation Services Office-Division of Minerals Evaluation, 2017

Leasable Minerals

No leases for oil, gas, coal, or other leasable minerals have occurred in the township and range of these parcels. Furthermore, the absence of sedimentary rocks in which leasable minerals occur excludes the presence of leasable minerals on these parcels. These parcels have no potential for geothermal resources.

Locatable Minerals

According to the 2003 Mineral Reports, there is no record of mining claims on any these parcels.³⁸ No exploration or mining activity was seen during the preparation of these reports, and no evidence of any valuable mineralization was found in the reconnaissance visit to the parcels.³⁹ Furthermore, there is no evidence of any valuable mineralization present on the parcels and they have little value as a source of locatable minerals.

Salable Minerals

The absence of terrace gravel and recent alluvium excludes the presence of salable minerals. Furthermore, there is no evidence of sand and gravel or decorative stone observed on these parcels or in the published literature. These parcels have little value as a source of salable minerals.

Parcel BLM-F***Local Geology***

This 80-acre parcel is located on a moderately steep, west sloping ridge of the Williams Fork Mountains about 1.5 miles east of SH 9 and about 2.5 miles north of Green Mountain Reservoir. This parcel is characterized by the Cretaceous Pierre Shale, Undivided. Differential erosion of the sedimentary rock has exposed interbedded sandstone and shale beds.

Leasable Minerals**Oil & Gas Resources**

Oil and gas production exists in the area, but no oil and gas leases occur or have occurred on this parcel. However, the Morrison, Dakota and Niobrara Formations, oil and gas bearing formations in the region, likely exists below the parcel, but there has been no exploration to document oil and gas reserves. The lack of a favorable geologic structure and the absence of a leasing history suggest that only minimal values for oil and gas exist on this parcel.

Coal Resources

Coal occurs in the Middle Park Formation in the Middle Park region. However, this overlying formation has been eroded off or faulted out of this parcel. Therefore, no value for coal exists on BLM-F.

Geothermal

This parcel has no potential for geothermal resources.

Locatable Minerals

According to the 2003 Mineral Reports, no records could be found for any mining claims at this tract.⁴⁰ Additionally, BLM records indicate that no mining claims have existed in the section that contains the parcel and no evidence of any prospecting, exploration or mining activity was found in the tract area.⁴¹ BLM-F has no significant value for locatable minerals.

Salable Minerals

No sand or gravel deposits occur on this parcel. There is Precambrian boulder-size granite material, but not of a sufficient quality or size to have a significant value.

³⁸ BLM, 2003a

³⁹ Ibid.

⁴⁰ Ibid.

⁴¹ Ibid.

Parcels BLM-G, BLM-H and BLM-K

These three parcels are all located near the Blue River and west of SH 9, about 3.5 miles north of Green Mountain Reservoir. BLM-G (79 acres) and BLM-K (40 acres) are located east of the Blue River, and BLM-H (273 acres) is located west of the Blue River. Cretaceous Pierre Shale and Colorado Group occur on these parcels. Much of BLM-G has a gravel terrace underlain by Pierre Shale and the Niobrara Formation of the Colorado Group. Gravel deposits of varying depths occur on this parcel. BLM-H consists of several old gravel capped river terrace levels cut into the shale bedrock of the Niobrara and Benton Shale Formations of the Colorado Group. Small areas of limestone likely of the Niobrara Formation and Dakota Sandstone are also present. Extensive gravel deposits of varying thickness also occur on BLM-H. BLM-K has a broad gravel terrace over bedrock of Pierre Shale and the Benton and Niobrara Formations of the Colorado Group. No river or terrace alluvium is present, but there is a dike of Tertiary age.

Leasable Minerals

Oil & Gas Resources

The oil and gas bearing Morrison, Dakota and Niobrara Formations underlie these three parcels and oil and gas production exists in the area. Only BLM-H and BLM-K have a potential hydrocarbon trapping structure; an anticline. This indicates that some oil and gas potential exists on these parcels. No exploration has occurred on these parcels to assess their potential as a source of oil and gas. In summary, some oil and gas is potentially present on portions of BLM-H and BLM-K, but the value is unknown. The value of oil and gas production on BLM-G is minimal.

Coal Resources

Coal beds occur in the Middle Park Formation in Middle Park. However, the Middle Park Formation has been eroded from these parcels and hence there is no potential for coal.

Geothermal

These parcels have no potential for geothermal resources.

Locatable Minerals

BLM records and reports show no mining claims, prospecting or mining activity on these parcels. Zinc, with lead and minor silver, copper and gold were mined about 4 miles south of these parcels in the Big Four Mine at Green Mountain in the historic past. The U.S. Bureau of Mines considers the deposit to no longer hold any resources. The lack of prospecting, mining claims or any alteration on these parcels suggests that they have little locatable mineral value.

Salable Minerals

Through general field mapping, BLM visually estimated approximately 2.5 million cubic yards of gravels within BLM-G.⁴² No drilling or exploration was performed to verify the extent and quality of the deposit. BLM mapped this tract with two primary gravel deposits, one on the north half and one on the south half. From an operational and development perspective, it is highly unlikely that the deposit on the south half would be developed due to its proximity to residential areas; however, the mineral material on the northern portion of BLM-G does hold some mineral development potential.⁴³ Although there are some residential units adjacent to this part of the tract, it is much less dense than that of the southern portion of the tract.

Portions of BLM-H are within the immediate floodplain of the Blue River, but the primary gravel deposits identified within the previous BLM reporting are located in terrace deposits above the current river corridor.⁴⁴ BLM mapped several gravel deposits across the entire length of the parcel. In total, BLM estimated approximately 3.7 million cubic yards of material where present on the tract. After reviewing aerial photographs and geologic maps of the property, the AVSO-DME concluded that the deposits with development potential are located in the western and northern terrace deposits of the tract.⁴⁵ BLM reports that the terrace deposits on BLM-H are approximately 2.9 million cubic

⁴² Ibid.

⁴³ USDI Appraisal and Valuation Services Office-Division of Minerals Evaluation, 2017

⁴⁴ BLM, 2003a

⁴⁵ USDI Appraisal and Valuation Services Office-Division of Minerals Evaluation, 2017

yards in total.⁴⁶ Feasibility of mining the Quaternary alluvium in the flood plain does not appear to be likely, as none of these deposits are mined anywhere in the county; this is likely due to permitting restrictions (floodplain/riparian) or lack of quality material in the zones. Therefore, AVSO-DME concludes that these portions of the tract do not contain any mineral development potential.⁴⁷

After a review of aerial photographs, geologic maps of the area, as well as considering the placement of existing BLM and commercial pits in the vicinity, the AVSO-DME concludes that the deposits on BLM-K do not have any development potential.⁴⁸ Feasibility of mining the Quaternary alluvium in this smaller tract, immediately adjacent to residential lots, does not appear likely. None of the examined mining operations in the county are situated as close to dense residential housing; this is likely due to permitting restrictions.

Parcel BLM-I

Local Geology

The irregular-shaped 397-acre parcel BLM-I is located southeast of Trough Road about 2 miles south of Kremmling and immediately west of the Blue River. This parcel is characterized by the Cretaceous Dakota Sandstone, Benton (Colorado Group), Niobrara and Pierre Shale Formations. Areas of river terrace gravel parallel the Blue River on high and low terraces and there is recent alluvium and colluvium.

Leasable Minerals

Oil and Gas Resources

The Morrison, Dakota and Niobrara Formations underlying this parcel are oil and gas bearing elsewhere in the region, and minimal oil and gas production values exist in the area. A potential hydrocarbon trapping structure with a favorable stratigraphy occurs in the southern part of the parcel. Thus, some oil and gas potential exists on the southern part of the parcel, but the northern part of the parcel has only a minimal value for oil and gas production.

Coal Resources

Coal beds occur in the Middle Park Formation in Middle Park. However, the overlying Middle Park Formation has been eroded from this parcel and thus there is no potential for coal.

Geothermal

This parcel has no potential for geothermal resources.

Locatable Minerals

The PCRM #11 mining claim was located on BLM-I in 1978, and was abandoned in 1992. The companion PCRM #12 mining claim was located near the PCRM #11, just to the north and has a similar history.⁴⁹ Additionally, Phillips Uranium located dozens of mining claims in the general area from 1978 through 1979, but none occurred within BLM-I. The P J2 #6–#31 were also located about 4 miles southeast of the tract by the Colorado Exploration Energy Development Corp. in 1979 through 1983.⁵⁰ All these claims have been abandoned, and no evidence of any prospecting, exploration or mining activity was found at the tract. The 2003 Mineral Report concluded that minimal values are likely to occur in the locatable mineral estate at BLM-I.⁵¹

Salable Minerals

Portions of BLM-I include elevated terrace deposits, which BLM cites as having the potential for aggregate resources.⁵² These deposits, being geologically similar to other aggregate operations in the area, do contain at least some mineral development potential. In total, BLM estimates that there is approximately 5 million cubic yards of

⁴⁶ Ibid.

⁴⁷ Ibid.

⁴⁸ Ibid.

⁴⁹ BLM, 2003a

⁵⁰ Ibid.

⁵¹ Ibid.

⁵² Ibid.

aggregates on this tract.⁵³ The Colorado Division of Reclamation, Mining, and Safety reports a withdrawn construction permit for an aggregate operation just within the parcel boundary on the northern most edge. This withdrawn application may or may not have been on BLM-I as the GIS records are not highly accurate; regardless of exact location, this indicates that there is development potential near, and likely on, the parcel.⁵⁴

Parcel BLM-J

Local Geology

The two parts of this parcel total 90 acres in size and are located about 4.5 miles east of Kremmling. The northern part is located along U.S. Highway 40 and the southern part is located to the south near the Colorado River. Both parts of this parcel are characterized exclusively by Quaternary alluvium and there is no exposed bedrock. The nearest bedrock consists of Tertiary Troublesome Formation to the north and south, and Precambrian biotite gneiss and quartz monzonite further distant.

Leasable Minerals

Oil and Gas Resources

There is low oil and gas potential on this parcel as the Troublesome Formation and the Precambrian igneous and metamorphic rocks, which likely underlie this parcel, are unsuitable as a reservoir rock and have no oil and gas trapping structures. Thus, this parcel has only a minor potential for the production of oil and gas.

Coal Resources

This parcel has no value as a source of coal as it lacks the coal-bearing Middle Park Formation, a minor source of coal in Middle Park.

Geothermal

Hydrothermal activity occurs in hot springs at Hot Sulphur Springs 9 miles east of the parcel. The Hot Sulphur Springs activity is isolated to a major, deep-seated fault in the Dakota Formation, and this fault does not occur on the parcel; hence, it has no geothermal resource.

Locatable Minerals

The only known mineralized locations within 10 miles of this parcel are for trace uranium in the contact of the Basal Troublesome Formation with Precambrian bedrock, and within 2 miles to the north with organic material at the contact of the Precambrian and Middle Park Formation rocks. Past uranium claims on adjacent Federal lands have been abandoned without any work occurring on them.⁵⁵ The lack of a suitable bedrock, prospecting or mining claims indicate that there is no significant value in the mineral estate.

Salable Minerals

The 2003 Minerals Report estimated that this tract contains approximately 2.8 million cubic yards of sand and gravel resources.⁵⁶ After reviewing aerial photographs, geologic maps of the area, as well as considering the placement of existing BLM and commercial pits in the vicinity, the AVSO-DME concludes that the deposits on this tract do not have any mineral development potential.⁵⁷ Feasibility of mining the Quaternary alluvium in the floodplain does not appear likely, as none of these deposits are mined anywhere in the county; this is likely due to permitting restrictions (floodplain/riparian) or lack of quality material in the zones.⁵⁸

⁵³ USDI Appraisal and Valuation Services Office-Division of Minerals Evaluation, 2017

⁵⁴ Ibid.

⁵⁵ BLM, 2003c

⁵⁶ Ibid.

⁵⁷ USDI Appraisal and Valuation Services Office-Division of Minerals Evaluation, 2017

⁵⁸ Ibid.

Non-Federal Parcels

Local Geology

Parcel BVR-1

The 657-acre non-Federal parcel BVR-1 is located both north and west of Trough Road on the lower slopes of the Gore Range about 2 miles south of Kremmling. The geology of this parcel is characterized by Cretaceous sedimentary rocks of the Benton Formation and landslide deposits.

Parcels BVR-2, BVR-9 and BVR-10

BVR-2 (622 acres), BVR-9 (120 acres), and BVR-10 (15 acres) are all located north of Green Mountain Reservoir between the Colorado River and SH 9. BVR-9 and BVR-10 are characterized by the Cretaceous sedimentary rocks of the Colorado Group and landslide deposits, and BVR-2 is also characterized by these formations but includes an area of Middle Tertiary intrusive rocks, and the Dakota Sandstone and Morrison Formation, Undivided.

Parcels BVR-3 and BVR-4

BVR-3 (187 acres) and BVR-4 (160 acres) are located north of Green Mountain Reservoir and east of SH 9 on the lower slopes of the Williams Fork Mountains. Both parcels are characterized by Pierre Shale, a marine Cretaceous sedimentary unit.

Parcel BVR-5

BVR-5 (2 acres) is located along U.S. Highway 40 east of Grand County Road 2 and Troublesome Creek. BVR-5 is characterized by a Quaternary sand and gravel terrace deposit.

Parcel BVR-7

BVR-7 (1 acre) is located on Trough Road approximately 7 miles southwest of Kremmling. BVR-7 is characterized by Precambrian metamorphic rocks including gneiss, schist and migmatite.

Parcel BVR-8

BVR-8 (67 acres) is located along the Blue River just south of its junction with the Colorado River. BVR-8 is characterized by Quaternary modern alluvium.

ENVIRONMENTAL EFFECTS

Alternative 1 – No Action

Direct and Indirect Effects

Under the No Action Alternative, ownership of the mineral estate on the Federal and non-Federal parcels would not change and hence the BLM would continue to own and manage the mineral estate on the Federal parcels. The mineral estate on the non-Federal parcels would continue to be owned by BVR, except for BVR-9, which is owned by Summit County and they would continue to own the mineral estate.

The mineral estate on the Federal parcels would remain open to mineral development, which is currently allowed under BLM management. The Federal parcels are unlikely to be leased for leasable minerals as BLM-A–C have no potential for oil and gas production and BLM-F–K have a minor leasing value. Furthermore, none of the parcels has resources of coal. None of the BLM parcels has a significant value for locatable minerals. Because of the relatively rural location and overall low demand, there is relatively little value associated with the salable minerals on any of the Federal parcels. Most aggregate demand would be driven by large, independent construction and/or highway maintenance projects, none of which have been identified as pending.⁵⁹ The various currently permitted operations appear to supply the aggregate demand in the region. Therefore, the AVSO-DME has determined that while BLM-G, BLM-H, BLM-I, and BLM-J have the potential to contain deposits of mineral materials (i.e., sand and gravel), the net present value of the royalty interest income of these parcels is \$0.00, due to the fact that it is unlikely these tracts

⁵⁹ Ibid.

would be developed under current market conditions as a source of mineral materials.⁶⁰ Any potential future development of minerals on these parcels would require a site-specific analysis and approval by the BLM.

Alternative 2 – Proposed Action

Direct and Indirect Effects

Federal Parcels

Under the Proposed Action, the mineral estate on the Federal parcels would be transferred to private ownership. Thus, these parcels would no longer be open to mineral and/or energy development, which are currently allowed under BLM management. Given the low development potential for leasable and locatable minerals on the Federal parcels, the loss of these mineral rights represents a negligible effect. As is the case for the No Action Alternative, the relatively rural location and overall low demand, creates relatively little value associated with the salable minerals on any of the Federal parcels. Most aggregate demand would be driven by large, independent construction and/or highway maintenance projects, none of which have been identified as pending.⁶¹ The various currently permitted operations appear to supply the aggregate demand in the region. Therefore, the AVSO-DME has determined that while BLM-G, BLM-H, BLM-I, and BLM-J have the potential to contain deposits of mineral materials (i.e., sand and gravel), the net present value of the royalty interest income of these parcels is \$0.00, due to the fact that it is unlikely these tracts would be developed under current market conditions as a source of mineral materials.⁶² Because BLM-K has a potential hydrocarbon trapping structure and some potential for oil and gas production, the Mineral Potential Report recommends that the leasable mineral estate be retained until the potential for oil and gas production is evaluated.⁶³

It is the intention of BVR to incorporate these parcels into the ranching operation. There is no proposed nor reasonably foreseeable plan to develop the mineral estate on any of the Federal parcels transferred to private ownership. If the mineral estate is exchanged and transferred to private ownership for all parcels, the salable mineral (sand and gravel) reserves with a net present value of \$0.00 would be lost to potential public and/or commercial use.

Upon completion of the land exchange, it is the intention of BVR to convey BLM-J to Skylark Ranch, approximately 50 percent of BLM-C would be conveyed to the Sheephorn Ranch, and BLM-K would be donated to the Blue Valley Metropolitan District. Skylark Ranch and Sheephorn Ranch would incorporate the acquired land into their ranching operations and the Metropolitan District would likely use BLM-K as open space and for recreation.

Non-Federal Parcels

Under the Proposed Action, the mineral estate on the non-Federal parcels transferred to the BLM would be managed in accordance with the 2015 RMP. The BLM would complete minerals reports on the acquired non-Federal parcels in conjunction with future management plans. Minerals on all parcels have, and would continue, to be evaluated consistent with the 2015 RMP established guidelines to provide opportunities for leasing, exploration and development using balanced, multi-use and sustained-yield management in order to meet local and national resource needs.

Alternative 3

Aside from the modified parcel configuration included in this alternative, that would result in slightly less land (76 acres) of BLM-I being transferred into private ownership, and less mineral estates that would be transferred from private ownership to public management due to the lack of BVR-3 and BVR-4 being included in this alternative, there is no difference between Alternative 3 and the Proposed Action Alternative.

As this alternative is equal to or less than the intensity of the Proposed Action Alternative it is assumed that the determinations made in the previous section would apply to this alternative as well.

⁶⁰ Ibid.

⁶¹ Ibid.

⁶² Ibid.

⁶³ Ibid.

H. SOILS

SCOPE OF THE ANALYSIS

A goal of the RMP is to ensure that upland soils exhibit infiltration and permeability rates that are appropriate to soil types, climate, landform and geologic processes. The Objectives of the RMP are to “Ensure that surface disturbances do not cause accelerated erosion (such as rills, soil pedestals, and actively eroding gullies) on a watershed scale,” and to “Ensure that on a landscape scale (as defined by Public Land Health Standard 1), canopy cover and ground cover are appropriate for the soil type based upon guidelines, reference sheets and soil surveys.” Refer to Appendix F of this Final EIS for a complete list of the BLM Colorado Public Land Health Standards.

This section describes the soil resources present on the Federal and non-Federal exchange parcels, and documents the potential environmental effects to soil resources under the proposed land exchange and the No Action Alternative. In addition, it addresses the BLM Colorado Public Land Health Standard 1 for Soils.⁶⁴ The Analysis Area for soil resources includes the nine Federal and nine non-Federal parcels. The Federal parcels encompass 1,489 acres, and the non-Federal parcels encompass 1,830 acres.

AFFECTED ENVIRONMENT

Soils within the exchange parcels vary greatly in soil texture, rockiness, thickness, and parent material. The information on soil resources presented below was summarized from data in the Soil Survey of Summit County Area, Colorado and Soil Survey of Grand County Area, Colorado.⁶⁵ These are general Order 3 soil surveys, of which map units have a minimum size of about 4 to 40 acres; therefore, smaller-sized features such as small drainages and wetlands were not mapped separately and were included with larger soil/geomorphic features. Many of the parcels contain hydric soils, which commonly support wetland plant communities. Hydric soils are not discussed further in this section, but wetlands present on the exchange parcels are identified in Chapter 3, Section K – Wetlands and Riparian Habitats of this Final EIS.

The Soil Conservation Service (SCS) identified 45 soil map units within the exchange parcels.⁶⁶ For comparative purposes and to simplify the discussion in this report, these soil map units are grouped into nine generalized units, as identified in Table 3. These units were assembled based on similar soil depth, soil texture, rockiness, parent material, vegetation, and land use. The nine generalized soil units are described below. It is important to note that the soil map unit descriptions represent the entire soil survey area of Grand and Summit counties, and are not site-specific descriptions.

Table 3. Soil Map Units on the Federal and Non-Federal Parcels

Soil Map Unit	Parcels	Soil Description
1. Deep Farmland Soils	Federal: F, G, H, I, K Non-Federal: 1, 2, 3, 4, 5, 9, 10	These soils are considered Farmland of Statewide Importance. Generally, farmlands of statewide importance include those that are nearly prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. ^a This generalized unit includes soil map units 12, 13, 45, 46, 64*, 81, 82, and 94 in Grand County ² and 3D and 4 in Summit County ³ . Soils in this generalized map unit are deep (greater than 40 inches to bedrock), somewhat excessively to poorly drained, formed in alluvium, and most have a loamy texture with very few rock fragments, except the Tine soils (map units 81 and 82) are sandy and rocky. The soils have slow to rapid permeability, moderate to very high available water holding capacity, slow to medium runoff, and slight to moderate hazard of water erosion. They occur on terraces, fans, flood plains, gently sloping mountainsides, and colluvial aprons with slopes ranging from 0–15%. This unit is suited for rangeland, hay production, recreation, and wildlife habitat.

⁶⁴ BLM, 1997

⁶⁵ SCS, 1980; SCS, 1983

⁶⁶ Ibid.

Table 3. Soil Map Units on the Federal and Non-Federal Parcels (cont.)

Soil Map Unit	Parcels	Soil Description
2. Deep Flood Plain Soils	Federal: G, H, I, J Non-Federal: 8	These soils are deep, poorly drained, have variable textures in the upper 20 inches, and are very rocky below to a depth of 60 inches. They occur on flood plains with slopes ranging from 0–2%, are subject to annual flooding, and formed in alluvium. The soils have high available water holding capacity, slow runoff, and slight water erosion hazard. This generalized unit includes soil map unit 25 in Grand County ² . Soil map unit 4 in Summit County also occurs on flood plains but is considered Farmland of Statewide Importance, and is, therefore, included with the Deep Farmland Soils. The soils support grasses, sedges and rushes and are suited for rangeland, hay production, recreation, and wildlife habitat.
3. Deep Loamy Shrubland Soils	Federal: F, G, H, I, K Non-Federal: 1, 2, 3, 4, 8, 9, 10	These soils are deep, well drained, have loamy to fine textures, and some soils may have rock fragments up to 35%. They formed in alluvium, colluvium, or glacial drift and occur on mountainsides, ridges, terraces, and fans with slopes ranging from 6–55%. The soils have slow to moderate permeability, high to very high available water holding capacity, medium to rapid runoff, and moderate to high hazard of water erosion. This unit supports grass/shrub communities and is suited for rangeland, recreation, and wildlife habitat. Included in this generalize unit are soil map units 8, 14, 16, 17, 18, 38, 39, 47 and 95 in Grand County ² and 3F, 12D, and 20F in Summit County ³ .
4. Deep Rocky Shrubland Soils	Federal: A, C, F, G, H, I, J Non-Federal: 1, 2, 5, 7, 9	These soils are deep, well drained, have loamy to sandy textures, and are very rocky throughout most the profile. They formed in glacial drift, colluvium, or alluvium and occur on mountainsides, ridges, moraines, and fans with slopes ranging from 2–60%. The soils have moderate to rapid permeability, low to very high available water holding capacity, medium to rapid runoff, and moderate to high hazard of water erosion. This unit supports grass/shrub communities and is suited for rangeland, recreation, and wildlife habitat. Included in this generalized unit are soil map units 65, 66, 80, and 83 in Grand County ² and 16E in Summit County ³ .
5. Deep Farmland Soils	Federal: F, G, H, I, K Non-Federal: 1, 2, 3, 4, 5, 9, 10	These soils are considered Farmland of Statewide Importance. Generally, farmlands of statewide importance include those that are nearly prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. ^a This generalized unit includes soil map units 12, 13, 45, 46, 64*, 81, 82, and 94 in Grand County ² and 3D and 4 in Summit County ³ . Soils in this generalized map unit are deep (greater than 40 inches to bedrock), somewhat excessively to poorly drained, formed in alluvium, and most have a loamy texture with very few rock fragments, except the Tine soils (map units 81 and 82) are sandy and rocky. The soils have slow to rapid permeability, moderate to very high available water holding capacity, slow to medium runoff, and slight to moderate hazard of water erosion. They occur on terraces, fans, flood plains, gently sloping mountainsides, and colluvial aprons with slopes ranging from 0–15%. This unit is suited for rangeland, hay production, recreation, and wildlife habitat.
6. Moderately Deep Loamy/Clayey Shrubland Soils	Federal: H Non-Federal: 1	These soils are moderately deep to bedrock (20–40 inches), well drained, and have loamy textures at the surface and clayey textures below with few rock fragments. They formed in material weathered from shale and occur on mountainsides with slopes ranging from 6–50%. The soils have slow permeability, moderate available water holding capacity, rapid runoff, and moderate to high hazard of water erosion. It supports grass/shrub communities and is suited for rangeland, recreation, and wildlife habitat. This unit is limited in acreage and extent and occurs on one Federal parcel (H) and one non-Federal parcel (1). This generalized unit includes soil map units 52 and 53 in Grand County ² .

Table 3. Soil Map Units on the Federal and Non-Federal Parcels (cont.)

Soil Map Unit	Parcels	Soil Description
7. Moderately Deep Rocky Shrubland Soils	Federal: H, I Non-Federal: 1	These soils are moderately deep, well drained, and have loamy textures at the surface and loamy textures with high rock fragment contents below. They formed in material weathered from sandstone or basalt and occur on mountainsides and ridges with slopes ranging from 6–50%. The soils have moderate permeability, moderate available water holding capacity, rapid runoff, and moderate to high hazard of water erosion. It supports grass/shrub communities and is suited for rangeland, recreation, and wildlife habitat. This generalized unit includes map units 91 and 92 in Grand County ² This unit is limited in acreage and extent and occurs on two Federal parcels (H and I) and on one non-Federal parcel (1).
8. Shallow Loamy Shrubland Soil	Federal: I Non-Federal: 2, 3, 4, 8, 9, 10	These soils are shallow to bedrock (less than 20 inches), well drained, and have loamy textures at the surface and loamy or clayey textures below the surface layer. They formed in material weathered from shale, mudstone, or slate, and occur on mountainsides and ridges with slopes ranging from 6–50%. The soils have slow to moderate permeability, very low to moderate available water holding capacity, medium to rapid runoff, and moderate to high hazard of water erosion. It supports grass/shrub communities and is suited for rangeland, recreation, and wildlife habitat. This generalized unit includes soil map units 71, 72, and 90 in Grand County ² and 21F in Summit County ³ .
9. Shallow Rocky Shrubland Soils	Federal: F, G, H, I, K Non-Federal: 1, 2, 4, 10	These soils are generally shallow to bedrock, well drained, have a loamy texture, and are very rocky throughout the soil profile. Rock outcrops of shale, sandstone, mudstone, granite, or basalt can make up to 80% of the unit. The soils formed in residuum derived from shale, sandstone, mudstone, granite or basalt, and occur on escarpments, mountainsides and ridges with slopes ranging from 30–99%. The soils have variable permeability, very low available water holding capacity, and moderate to severe hazard of water erosion. There are some moderately deep soils (20–40 inches to bedrock) included in this unit. This unit supports grass/shrub communities and is suited for wildlife habitat. This is the dominant map unit of the non-Federal parcels, and includes map units 24 and 68 in Grand County ² and 18 in Summit County ³ .

Notes:^a NRCS, 2000

* The NRCS has soil map unit 64-Pergelic Cryorthents-Rock outcrop complex, extremely steep, mapped near the Blue River in Federal parcel BLM-I, which is at an elevation of about 7,500 feet. This map unit occurs above 11,400 feet in elevation, and Pergelic Cryorthents are soils of very cold environments. This is an obvious typographical error. Based on the aerial photograph and proximity to other soil map units, this unit should be, and was changed to, soil map unit 94 and is included in Deep Farmland Soils

Federal Parcels

Acreages of the soil map units for each Federal parcel are shown in Table 4 and described in this section. The Federal parcels were evaluated by Petterson in 2013 and were determined that all parcels met Public Land Health Standard 1.⁶⁷ Summaries of Public Land Health Standard 1 assessments are included in the descriptions. All Federal parcels are located in Grand County and their locations are shown in Figure 1 in Chapter 5 of this Final EIS.

Table 4. Federal Parcel Soil Types (acres)

Soil Unit	BLM-A	BLM-B	BLM-C	BLM-F	BLM-G	BLM-H	BLM-I	BLM-J	BLM-K	Total Acres
1. Deep Farmland Soils				29.3	48.1	75.4	118		21.6	292.4
2. Deep Flood Plain Soils					5.8	14.5	15.4	90		125.7
3. Deep Loamy Shrub Land Soils				5.6	8.2	16.7	57.7		8.7	96.9
4. Deep Rocky Shrub Land Soils	0.1		38.5	4.4	6.2	36.4	41.7			127.3
5. Deep Rocky Forest Soils	79.9	120	291.9				6.1			497.9
6. Moderately Deep Loamy/Clayey Shrub Land Soils						40				40
7. Moderately Deep Rocky Shrub Land Soils						0.3	48.4			48.7
8. Shallow Loamy Shrub Land Soils							90.2			90.2
9. Shallow Rocky Shrub Land Soils				40.7	10.5	85.2	16.3		9.7	162.4
Water						4.7	3.2			7.9
Total	80	120	330.4	80	78.8	273.2	397	90	40	1,489.4

Notes: The acreages in the total column may differ from other reported acreages because soil resources are mapped and calculated in GIS, while land exchange acreage is based on the legal description of parcels, which has been calculated through cadastral survey work.

Parcel BLM-A

BLM-A encompasses 80 acres and consists of Deep Rocky Forest Soils that makes up most of the parcel (79.9 acres), and Deep Rocky Shrub Land Soils makes up about a tenth of an acre. It is located about 0.6 mile south of Trough Road and about 5 miles west of the Blue River. This parcel meets Public Land Health Standard 1. Erosion and bare ground match what is expected for the site, but there is some lodgepole mortality from mountain pine beetle, annual production is less than expected due to patchy overstory and lodgepole pine mortality, and there are some scattered invasive plants throughout the parcel.

Parcel BLM-B

BLM-B encompasses 120 acres and consists entirely of Deep Rocky Forest Soils. It is located about 0.6 mile south of Trough Road and about 6 miles west of the Blue River. This parcel meets Public Land Health Standard 1. Erosion and bare ground match what is expected for the site, but there is some lodgepole mortality from mountain pine beetle and some aspen decline; annual production is less than expected due to patchy overstory, lodgepole pine mortality, and poor aspen vigor; and there is some scattered houndstongue throughout the parcel. In addition, a road has disturbed about 0.3 acre.

⁶⁷ Petterson, 2013

Parcel BLM-C

BLM-C encompasses 330 acres and is dominated by Deep Rocky Forest Soils that makes up about 88 percent of the parcel (291.9 acres). The rest of the parcel (38.5 acres) consists of Deep Rocky Shrub Land Soils. The parcel is located about 1.3 miles south of Trough Road and about 4.5 miles west of the Blue River. This parcel meets Public Land Health Standard 1. Erosion and bare ground match what is expected for the site, but there is some lodgepole mortality and some aspen decline; annual production is less than expected due to lodgepole pine and subalpine fir mortality, and poor aspen vigor; and there is some scattered houndstongue throughout the parcel.

Parcel BLM-F

BLM-F encompasses 80 acres and is dominated by Shallow Rocky Shrub Land Soils, which makes up 51 percent of the parcel (40.7 acres), and Deep Farmland Soils, which makes up 37 percent of the parcel (29.3 acres). The rest of the parcel consists of 5.6 acres of Deep Loamy Shrub Land Soils and 4.4 acres of Deep Rocky Shrub Land Soils. It is located about 1 mile north of the Grand-Summit county line and 1 mile east of SH 9. This parcel meets Public Land Health Standard 1. Erosion, plant mortality and decadence, and annual production match what is expected for the site, but bare ground is moderately higher than expected for the site due to grazing pressure, and invasive plants are present primarily in disturbed areas.

Parcel BLM-G

BLM-G encompasses 79 acres and is dominated by Deep Farmland Soils that makes up 61 percent of the parcel (48.1 acres). About 5.8 acres of Deep Flood Plain Soils occur along King Creek, a tributary to the Blue River. The rest of the parcel is made up of 10.5 acres of Shallow Rocky Shrub Land Soils, 8.2 acres of Deep Loamy Shrub Land Soils, and 6.2 acres of Deep Rocky Shrub Land Soils. It is located about 1.2 miles north of the Grand-Summit county line between SH 9 and the Blue River. This parcel meets Public Land Health Standard 1. Erosion, bare ground, plant mortality and decadence, and annual production match what is expected for the site, but there are some invasive plants scattered throughout the parcel, and a road has disturbed about 0.2 acre.

Parcel BLM-H

BLM-H encompasses 273 acres and is dominated by Shallow Rocky Shrub Land Soils, which makes up 31 percent of the parcel (85.2 acres), and Deep Farmland Soils, which makes up about 28 percent of the parcel (75.4 acres). About 14.5 acres of Deep Flood Plain Soils occur along the Blue River. The rest of the parcel consists of 40 acres of Moderately Deep Loamy/Clayey Shrub Land Soils, 36.4 acres of Deep Rocky Shrub Land Soils, 16.7 acres of Deep Loamy Shrub Land Soils, 0.3 acre of Moderately Deep Rocky Shrub Land Soils, and 4.7 acres of the Blue River. The parcel is located about 0.5 mile north of the Grand-Summit county line and immediately west of the Blue River. This parcel meets Public Land Health Standard 1. Erosion, bare ground, plant mortality and decadence, and annual production match what is expected for the site, but there are some invasive plants in disturbed areas, and a road has disturbed about 1.2 acres.

Parcel BLM-I

BLM-I encompasses 397 acres and is dominated by Deep Farmland Soils, which makes up about 30 percent of the parcel (118 acres), and Shallow Loamy Shrub Land Soils, which makes about up 23 percent of the parcel (90.2 acres). About 15.4 acres of Deep Flood Plain Soils occur along the Blue River and Dry Creek. The rest of the parcel consists of 57.7 acres of Deep Loamy Shrub Land Soils, 48.4 acres of Moderately Deep Rocky Shrub Land Soils, 41.7 acres of Deep Rocky Shrub Land Soils, 16.3 acres of Shallow Rocky Shrub Land Soils, 6.1 acres of Deep Rocky Forest Soils, and 3.2 acres of the Blue River. The parcel is located about 2 miles south of Kremmling and immediately west of the Blue River. This parcel meets Public Land Health Standard 1. Erosion, bare ground, plant mortality and decadence, and annual production match what is expected for the site, but there is some Canada thistle in disturbed areas, and a road has disturbed about 1.2 acres.

Parcel BLM-J

BLM-J encompasses 90 acres and consists entirely of Deep Flood Plain Soils. It is bounded by the Colorado River on the southeast portion of the parcel and is located about 5 miles east of Kremmling and 0.4 mile south of U.S. Highway 40. This parcel meets Public Land Health Standard 1. Erosion, bare ground, plant mortality and decadence, and annual

production match what is expected for the site, but there are some pasture grasses and Canada thistle scattered throughout the parcel.

Parcel BLM-K

BLM-K encompasses 40 acres and is composed predominately of Deep Farmland Soils that makes up about 54 percent of the parcel (21.6 acres). The rest of the parcel consists of Shallow Rocky Shrub Land Soils (9.7 acres) and Deep Loamy Shrub Land Soils (8.7 acres). It is located about 0.5 mile north of the Grand-Summit county line and just west of SH 9. This parcel meets Public Land Health Standard 1. Erosion, bare ground, plant mortality and decadence, and annual production match what is expected for the site, but there are some invasive plants in disturbed areas and crested wheatgrass is planted in areas. In addition, a road has disturbed about 0.2 acre.

Non-Federal Parcels

Acreages of the soil map units for each non-Federal parcel are shown in Table 5 and described in this section. The non-Federal parcels were evaluated by Petterson in 2013 and were determined that all non-Federal parcels met Public Land Health Standard 1 except for BVR-7 and the south part of BVR-8.⁶⁸ Summaries of Public Land Health Standard 1 assessments are included in the descriptions. The non-Federal parcels are located in both Grand and Summit counties and their locations are shown in Figure 1 in Chapter 5 in this Final EIS.

Table 5. Non-Federal Parcel Soil Types (acres)

Soil Type	BVR-1	BVR-2	BVR-3	BVR-4	BVR-5	BVR-7	BVR-8	BVR-9	BVR-10	Total Acres
1. Deep Farmland Soils	39.9	4.6	82.3	26.9	1.7			14	0.2	169.6
2. Deep Flood Plain Soils							55.4			55.4
3. Deep Loamy Shrub Land Soils	52	74.4	66.4	87.3			4.9	41.3	1.0	327.3
4. Deep Rocky Shrub Land Soils	237.6	59.8			0.3	0.5		25		323.2
5. Deep Rocky Forest Soils	183.4	59.8						0.4		243.6
6. Moderately Deep Loamy/Clayey Shrub Land Soils	33.4									33.4
7. Moderately Deep Rocky Shrub Land Soils	70									70
8. Shallow Loamy Shrub Land Soils		64.3	40.3	31.5			0.6	39.3	5.4	181.4
9. Shallow Rocky Shrub Land Soils	40.2	358.7		14.3					8.0	421.2
Water							6.4			6.4
TOTAL	656.6	621.6	187	160	2	0.5	67.3	120	14.6	1,831.5

Note: The acreages in the total column may differ from other reported acreages because soil resources are mapped and calculated in GIS, while land exchange acreage is based on the legal description of parcels, which has been calculated through cadastral survey work.

Parcel BVR-1

BVR-1 encompasses 657 acres in Grand County. It is composed predominately of Deep Rocky Shrub Land Soils, which makes up 36 percent of the parcel (237.6 acres) and Deep Rocky Forest Soils, which makes up about 28 percent of the parcel (183.4 acres). The parcel also contains 39.9 acres of Deep Farmland Soils, 70 acres of Moderately Deep Rocky Shrub Land Soils, 52 acres of Deep Loamy Shrub Land Soils, 40.2 acres of Shallow Rocky

⁶⁸ Ibid.

Shrub Land Soils, and 33.4 acres of Moderately Deep Loamy/Clayey Shrub Land Soils. The parcel is located about 3 miles southwest of Kremmling and 0.9 mile west of the Blue River. This parcel meets Public Land Health Standard 1. Erosion, bare ground, and annual production match what is expected for the site, but there are some dead lodgepole pines, and there is some houndstongue, Canada thistle, and clasping pepperweed scattered throughout the parcel. In addition, a road has disturbed about 1.9 acres.

Parcel BVR-2

BVR-2 encompasses 622 acres in Summit County. It is composed predominately of Shallow Rocky Shrub Land Soils that makes up about 58 percent of the parcel (358.7 acres). It also contains 74.4 acres of Deep Loamy Shrub Land Soils, 59.8 acres of Deep Rocky Forest Soils, 59.8 acres of Deep Rocky Shrub Land Soils, 64.3 acres of Shallow Loamy Shrub Land Soils, and a minor amount of Deep Farmland Soils (4.6 acres). It is located immediately south of the Grand-Summit county line and just west of SH 9. This parcel meets Public Land Health Standard 1. Erosion, bare ground, and annual production match what is expected for the site, but there are some dead Douglas fir, and some invasive plants primarily in disturbed areas. In addition, a road has disturbed about 1 acre.

Parcel BVR-3

BVR-3 encompasses 187 acres in Summit County. It contains a significant amount of Deep Farmland Soils (82.3 acres) that makes up about 44 percent of the parcel. It also contains 66.4 acres of Deep Loamy Shrub Land Soils and 40.3 acres of Shallow Loamy Shrub Land Soils.⁶⁹ It is located about a quarter mile south of the Grand-Summit county line and immediately east of SH 9. This parcel meets Public Land Health Standard 1. Erosion, bare ground, plant mortality and decadence, and annual production match what is expected for the site, but there is some Canada thistle and musk thistle scattered throughout the parcel.

Parcel BVR-4

BVR-4 encompasses 160 acres in Grand County. It is dominated by Deep Loamy Shrub Land Soils making up about 55 percent of the parcel (87.3 acres). It also contains 26.9 acres of Deep Farmland Soils, 31.5 acres of Shallow Loamy Shrub Land Soils, and 14.3 acres of Shallow Rocky Shrub Land Soils. It is located immediately north of the Grand-Summit county line and about 0.5 mile east of SH 9. This parcel meets Public Land Health Standard 1. Erosion, bare ground, plant mortality and decadence, and annual production match what is expected for the site, but there is some Canada thistle and knapweed scattered throughout the parcel, and a road has disturbed about 1 acre.

Parcel BVR-5

BVR-5 is a small parcel consisting of 2 acres, of which 1.7 acres are Deep Farmland Soils and the remaining 0.3 acre are Deep Rocky Shrub Land Soils. BVR-5 is located in Grand County about 4 miles east of Kremmling and immediately north of U.S. Highway 40. This parcel meets Public Land Health Standard 1. Erosion, bare ground, plant mortality and decadence, and annual production match what is expected for the site, but there are some invasive species scattered throughout the parcel, and a road has disturbed about 0.6 acre.

Parcel BVR-7

BVR-7 would be a perpetual 30-foot-wide easement consisting of less than an acre in Grand County. The entire parcel consists of Deep Rocky Shrub Land Soils. It is located about 6 miles southwest of Kremmling and immediately north of Trough Road. This parcel is not meeting Public Land Health Standard 1 because of disturbances associated with a two-track road, which makes up 0.2 acre. There is slight active rill erosion, bare ground is moderately higher than expected for the site, soil surface resistance to erosion is reduced, and soil surface loss or degradation is moderate to extreme, which is related to the two-track road. Plant mortality and decadence and annual production match what is expected for the site, and there are some invasive plants scattered along the two-track road.

⁶⁹ Acreages of soil resources do not match the total acreage of the parcel as these resources are mapped and acreages are calculated in GIS, while land exchange acreage is based on the legal description of parcels, which has been calculated through cadastral survey work.

Parcel BVR-8

BVR-8 encompasses 67 acres consisting of two parcels in Grand County, the north parcel (61.5 acres) and south parcel (5.8 acres). The north parcel is dominated by Deep Flood Plain Soils, which make up about 82 percent of the parcels (55.4 acres). The rest of the parcels are made up of minor amounts of Deep Loamy Shrub Land Soils (4.9 acres) and Shallow Loamy Shrub Land Soils (0.6 acre). The Blue River makes up the remaining 6.4 acres. BVR-8 is located just south of the confluence of the Colorado and Blue Rivers.

BVR-8 north meets Public Land Health Standard 1. Erosion, bare ground, plant mortality and decadence, and annual production match what is expected for the site, but there are some invasive plants primarily in disturbed areas. BVR-8 South is not meeting Public Land Health Standard 1 because of disturbances associated with a two-track dirt road and grazing pressure. The two-track road makes up 0.3 acre. Bare ground is moderately higher than expected for the site at sagebrush interspaces and soil surface resistance to erosion is reduced. Plant mortality and decadence and annual production match what is expected for the site, and there are some invasive plants primarily in disturbed areas.

Parcel BVR-9

BVR-9 encompasses 120 acres in Summit County. It is composed primarily of Deep Loamy Shrub Land Soils, which makes up about 34 percent of the parcel (41.3 acres), and Shallow Loamy Shrub Land Soils, which makes up about 33 percent of the parcel (39.3 acres). It also contains 14 acres of Deep Farmland Soils, 25 acres of Deep Rocky Shrub Land Soils, and a minor amount (0.4 acre) of Deep Rocky Forest Soils. It is located about a quarter mile south of the Grand-Summit county line and just west of SH 9. This parcel meets Public Land Health Standard 1. Erosion, bare ground, plant mortality and decadence, and annual production match what is expected for the site, but there are some invasive plants primarily in disturbed areas, and a road has disturbed about 0.2 acre.

Parcel BVR-10

BVR-10 is a small parcel consisting of 15 acres in Summit County and is made up primarily of Shallow Rocky Shrub Land Soils (8 acres). It also contains 5.4 acres of Shallow Loamy Shrub Land Soils, 1 acre of Deep Loamy Shrub Land Soils, and about 0.2 acre of Deep Farmland Soils. BVR-10 is immediately south of the Grand-Summit county line and about 0.5 mile west of SH 9. This parcel meets Public Land Health Standard 1. Erosion, bare ground, plant mortality and decadence, and annual production match what is expected for the site, but there are some invasive plants primarily in disturbed areas.

ENVIRONMENTAL EFFECTS

Alternative 1 – No Action

Direct and Indirect Effects

Under the No Action Alternative, the BLM would continue to own and manage the soil resources of the Federal parcels under multiple use principles in accordance with the 2015 RMP.⁷⁰ Similarly, BVR and Summit County (BVR-9), the owners of the non-Federal parcels, would continue to own and be responsible for managing the soil resources of their parcels.

The land uses of the Federal parcels would likely remain the same, at least for the foreseeable future. Changes in land uses would likely involve NEPA and other applicable laws and regulations. Federal parcels (BLM) A, B, C, F, G, H and I are grazed by livestock, the southern part of BLM-J is hayed, and there is no grazing or haying on BLM-K. The land uses of non-Federal parcels would likely be the same in the near future, as there are no foreseeable development plans for these parcels. Livestock grazing does not occur on non-Federal parcels (BVR) 2, 3, 4, 5, 7, 9 or 10. BVR-1 is grazed and the north part of BVR-8 is hayed. Under these land uses, the current soil conditions, such as soil compaction, erosion, and changes in soil productivity would likely continue at current rates on all exchange parcels. However, any change in the land uses of the exchange parcels, such as grazing intensity or seasons of use, could adversely or beneficially affect soil conditions.

⁷⁰ BLM, 2015a

The BLM owns the mineral estate on all of the Federal parcels, which would likely remain open to mineral and energy development. Any mineral or energy development on the Federal parcels would likely involve NEPA and other applicable laws and regulations. As discussed in Section G of this appendix, the potential for leasable minerals is non-existent or low, and none of the parcels has a significant value for locatable minerals. However, salable minerals including sand and gravel exist in considerable quantities on parcels BLM-G–K. However, only BLM-I and BLM-J have public access and are potentially developable. Any development of the salable mineral estate would impact soil resources, and increase the potential for erosion, soil compaction, sedimentation, and reduce soil productivity. These potential adverse impacts would be managed and mitigated by BMPs and standard operating procedures to meet Public Land Health Standard 1.

As described in Chapter 2, the non-Federal parcels could be sold, or subdivided and/or developed, with corresponding impacts to soil resources. There are no foreseeable development plans, however, for any of the non-Federal parcels.

Alternative 2 – Proposed Action

Direct Effects

The net effect of the Proposed Action as it relates to a change in ownership of soil resources managed by the Federal government is summarized in Table 6. As a result of the land exchange, there would be a net gain of approximately 342.1 acres of soil resources under federal management. Most of the acres gained are Shallow Rocky Shrub Land Soils (258.8 acres), Deep Loamy Shrub Land Soils (230.4 acres), Deep Rocky Shrub Land Soils (195.9 acres), and Shallow Loamy Shrub Land Soils (91.2 acres). The Shallow Rocky Shrub Land Soils and Shallow Loamy Shrub Land Soils map units likely contain a significant amount of rock outcrop. The Federal government would have a net loss of approximately 122.8 acres of the more productive Deep Farmland Soils, which are considered to be Farmland of Statewide Importance. It also would have a net loss of 70.3 acres of Deep Flood Plain Soils, which are commonly used for hay production.

The BLM would have to manage about 6.3 acres (BVR-7 and BVR-8) that are not meeting Public Land Health Standard 1, which is primarily the result of disturbances associated with dirt roads on the two parcels and also from grazing pressure on BVR-8 South. The BLM would manage these parcels to meet Public Land Health Standard 1.

Correspondingly, with the land exchange BVR and Summit County (BVR-9) would have 342.1 acres of soil resources transferred from private to Federal ownership.

Table 6. Change in Ownership of Soil Resources under the Proposed Action (acres)

Soil Types	Federal Parcel Total	Non-Federal Parcel Total	Change in Soil Resources Managed by Federal Government
1. Deep Farmland Soils	292.4	169.6	-122.8
2. Deep Flood Plain Soils	125.7	55.4	-70.3
3. Deep Loamy Shrub Land Soils	96.9	327.3	+230.4
4. Deep Rocky Shrub Land Soils	127.3	323.2	+195.9
5. Deep Rocky Forest Soils	497.9	243.6	-254.3
6. Moderately Deep Loamy/Clayey Shrub Land Soils	40	33.4	-6.6
7. Moderately Deep Rocky Shrub Land Soils	48.7	70	+21.3
8. Shallow Loamy Shrub Land Soils	90.2	181.4	+91.2
9. Shallow Rocky Shrub Land Soils	162.4	421.2	+258.8
Water	7.9	6.4	-1.5
Total	1,489.4	1,831.5	+342.1

Note: The acreages in the total column may differ from other reported acreages because soil resources are mapped and calculated in GIS, while land exchange acreage is based on the legal description of parcels, which has been calculated through cadastral survey work.

Indirect Effects

Federal Parcels

With the land exchange, ownership of all Federal parcels would be transferred to BVR. However, it is anticipated that BVR would convey the southern portion (approximately 50 percent) of BLM-C to Sheephorn Ranch, BLM-J would be sold to Skylark Ranch, and BLM-K would be donated to Blue Valley Metropolitan District. It is reasonably certain that BVR would continue existing land uses and management practices on Federal parcels (BLM) A, B, F, G, H and I. BLM-C would likely be used by Sheephorn Ranch to graze livestock, and Skylark Ranch would likely continue existing land management practices, which include hay production on the south part of BLM-J, and would remain as part of the agricultural base of Grand County. BLM-K would likely be used for open space, ball fields, a community meeting hall, or other community use. These potential developments on BLM-K would have adverse impacts to the soil resources, including increases in erosion, compaction, and sedimentation, reduction in soil productivity, and have a permanent loss of soil resources from being replaced with structures and roads. No particular future use has been proposed and is thus not reasonably foreseeable. However, the types of impacts associated with such development would be mitigated with BMPs and standard operating procedures.

It is not reasonably foreseeable that BVR would develop the salable mineral estate on BLM-G, BLM-I and BLM-J as the acquired parcels would be used as rangeland. Similarly, it is not reasonably foreseeable that the leasable mineral estate on BLM-J and K would be developed in the foreseeable future, but if there were mineral development, it would likely involve mining reclamation laws and regulations and other applicable laws and regulations. Refer to Section G of this appendix for further details on the mineral estates.

Non-Federal Parcels

With the land exchange, the non-Federal parcels would be transferred to the BLM and they would be responsible for managing the soil resources. Currently, all of these parcels meet Public Land Health Standard 1 except 7 and 8 South, which are both Functioning at Risk. The BLM would evaluate the acquired non-Federal parcels to determine the appropriate land uses in accordance with the 2015 RMP. All parcels, irrespective of the designated land use, would be managed to meet Public Land Health Standard 1.

In-stream improvements proposed for the Confluence Recreation Area and Recreation Design Features proposed for the Confluence, Green Mountain and Spring Creek Bridge areas, including enhanced public access to the Blue River in the form of a trail for fishing access, wheelchair access facilities, parking lots, picnic tables, seasonal toilets, and take-out facilities for rafts, have the potential to result in soil compaction and erosion and result in reduced soil productivity. Structures such as parking lots would result in an increase in soil compaction, the loss of soil productivity, and the potential loss of soil resources. The development of such improvements on BLM land would be subject to best management practices per BLM management requirements.

Alternative 3

Aside from the modified parcel configuration included in this alternative, that would result in slightly less soil resources (76 acres) of BLM-I being transferred into private ownership, and soil resources that would be transferred from private ownership to public management due to the lack of BVR-3 and BVR-4 being included in this alternative, there is no difference in effects between Alternative 3 and the Proposed Action Alternative. Neither of the parcels (BVR-7 and BVR-8) that are not meeting Public Land Health Standard 1 are altered under this alternative; therefore, these effects would be the same as described in the previous paragraph.

Indirect effects associated with in-stream improvements proposed for the Confluence Recreation Area and Recreation Design Features proposed for the Confluence, Green Mountain and Spring Creek Bridge areas are not applicable as these features are not proposed under this alternative.

As this alternative is equal to or less than the intensity of the Proposed Action Alternative it is assumed that the determinations made in the previous section would apply to this alternative as well. The reader is referred to the previous section for additional details.

APPENDIX H. CUMULATIVE EFFECTS TO RESOURCES WITH NEGLIGIBLE IMPACTS

The following cumulative effects analyses are presented for resources that were moved from Chapter 3 of this Final Environmental Impact Statement (EIS) to Appendix H of this Final EIS on the basis that no or negligible impacts would occur to these resources. These issues include: Visual Resources; Cultural Resources; Native American Religious Concerns; Environmental Justice; Law Enforcement; Wastes, Hazardous and Solid; Geology and Minerals; and Soils. For a brief rationale explaining the “no or negligible impacts” determination for these resources, the reader is referred to Chapter 1, Section J of this Final EIS.

A. VISUAL RESOURCES

The direct effects of the proposed land exchange, under either of the action alternatives, to visual resources have been identified previously (refer to Section A of Appendix G in this Final EIS), as have the indirect effects (related to agreements between Blue Valley Ranch (BVR) and other landowners in the area and a proposed hiking trail on White River National Forest [WRNF] lands). Future uses of the Federal parcels, should they become private land, would be consistent with ranching practices currently taking place on surrounding BVR lands, which are not anticipated to directly affect visual values. The transfer of non-Federal parcels would retain, and in some cases benefit, the scenic quality on the non-Federal parcels, as transfer into BLM management would preclude any future development that would infringe on the scenic integrity of nearby public lands and scenic byways. None of the indirect effects associated with either of the action alternatives of the proposed land exchange are anticipated to impact adjacent areas in a way that would directly affect the visual resources managed by the KFO. While past, present, and reasonably foreseeable future actions and conditions within the Analysis Area—including wildlife fires, timber harvesting, energy and mineral development, continued urbanization, noxious weed invasion, and others—could have widespread and long-term effects on visual resources, the Proposed Action itself is not anticipated to cumulatively impact these visual resources. Therefore, there are no negative cumulative effects to visual resources in the Analysis Area.

However, the non-Federal parcels in Summit County that would be transferred to BLM ownership under either of the action alternatives would cumulatively benefit the previously mentioned efforts of the Summit County Open Space and Trails Department to acquire land in the Green Mountain area, and in turn support the vision of the Summit County Lower Blue Master Plan. Thus, a positive cumulative effect of the Proposed Action would be greater protection of landscape’s visual characteristics consistent with these ongoing efforts.

B. CULTURAL RESOURCES

Direct and indirect effects of the proposed land exchange under either of the action alternatives are documented in Appendix G, Section B. As described in the aforementioned section, the land exchange would not have direct or indirect effects on cultural resources in the area of potential effect (APE); therefore, there would be no cumulative effect associated with the Proposed Action. This determination is supported by the State Historic Preservation Office (SHPO), which concurred with a finding of no adverse effect (36 CFR § 800.5(b)) for site 5GA9 and the Blue Valley Ranch Land Exchange undertaking as a whole. Existing trends impacting cultural resources, including population growth and increases in development, as well as past, present and reasonably foreseeable actions like loss of setting and incremental disturbance from use or access are likely to continue; however, these impacts would not be compounded by No Action, Proposed Action alternative, or Alternative 3.

C. NATIVE AMERICAN RELIGIOUS CONCERNS

No comments were received from any tribal government. Thus, no Native American religious concerns were raised in relation to the Proposed Action Alternative or Alternative 3, and the BLM is not aware of any issues related to the Federal and non-Federal parcels. Therefore, there are no cumulative effects to Native American religious concerns.

D. ENVIRONMENTAL JUSTICE

Neither of the action alternatives are expected to directly or indirectly create disproportionately high and adverse human health or environmental effects on minority and low-income populations. This conclusion is based on the following:

- No minority populations were identified in the Analysis Area where either: (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.
- The proposed land exchange would not have a disproportionate effect on any minority or low-income communities as the effects of the exchange would be spread throughout the Analysis Area and would not disproportionately affect any particular group or community in a negative way.

Therefore, the proposed land exchange would not cumulatively affect minority and low-income populations as there are no direct or indirect effects associated with either action alternative. Refer to the previous section, Native American Religious Concerns, for a discussion of potential cumulative impacts to tribes with traditional lands overlapping the proposed land exchange area.

E. LAW ENFORCEMENT

Neither of the action alternatives are expected to directly or indirectly affect the capacity of law enforcement within the KFO. Therefore, the proposed land exchange would not cumulatively affect the capacity of law enforcement within the KFO managed portion of the Analysis Area as there are no direct or indirect effects associated with either action alternative.

F. WASTES, HAZARDOUS OR SOLID

The direct and indirect effects of the proposed land exchange under either action alternative have been identified previously (refer to Section F in Appendix G of this Final EIS). The Phase I Environmental Site Assessment (ESA) determined that there are no Recognized Environmental Conditions (RECs) on the non-Federal parcels that would bar acquisition by the BLM. Furthermore, the BLM would not transfer any Federal parcel that has RECs to private ownership. There are no anticipated cumulative effects to hazardous or solid wastes stemming from the direct and indirect effects of either action alternative.

G. GEOLOGY AND MINERALS

As a result of past, present and reasonably foreseeable future projects in the cumulative effects Analysis Area, mineral resources and rights from Federal parcels transferred to private ownership are no longer open to mineral and/or energy development. The same is true for the Federal parcels included in the proposed land exchange. There is low development potential for leasable and locatable minerals on the Federal parcels; however, Federal parcels (BLM) G, H, I, J, and K have significant salable mineral estates (sand and gravel resources). However, Federal parcels BLM-G, BLM-H and BLM-K have no public access for mineral development. The mineral report recommends that salable mineral estates either be retained or exchanged with fair market value received, in either case mitigating the loss of these resources to private ownership and representing a negligible cumulative effect.

H. SOILS

As discussed in Appendix G of this Final EIS (refer to Section G), there would be a net gain of approximately 342.1 acres of soil resources under Federal management as a result of the proposed land exchange. Most of the acres gained are *Shallow Rocky Shrub Land Soils* (258.8 acres), *Deep Loamy Shrub Land Soils* (230.4 acres), *Deep Rocky Shrub Land Soils* (195.9 acres), and *Shallow Loamy Shrub Land Soils* (91.2 acres). The *Shallow Rocky Shrub Land Soils* and *Shallow Loamy Shrub Land Soils* map units likely contain a significant amount of rock outcrop. There would be a net loss of approximately 122.8 acres under Federal management of the more productive *Deep Farmland Soils*, which are considered to be Farmland of Statewide Importance. It also would have a net loss of 70.3 acres of *Deep Flood Plain Soils*, which are commonly used for hay production. Despite a net loss of more productive farmland soil resources, the proposed land exchange would result in a net gain of soil resources under Federal Management. Ultimately, the

proposed land exchange, under either action alternative, would include gains and losses of individual soil types; however, the end result would be a negligible effect to soil resources as future uses of the exchange parcels would be subject to best management practices. While minimal development associated with the Recreation Design Features that are included in the Proposed Action Alternative would occur, it would occur on BLM lands under the direct supervision of the BLM. Considered alongside the overall net gain in soils resources, impacts associated with the construction of the two Recreation Design Features that occur on BLM lands are largely outweighed and direct and indirect effects are considered negligible.

In addition, all lands acquired by the United States Government through land exchanges in the cumulative effects Analysis Area have been incorporated into either BLM or Forest Service management plans, as appropriate. These management plans include management of, and protection for, soils commensurate with law, regulation and policy. Therefore, the cumulative effects to soils resources are considered minimal and discountable as a result of either action alternative. Past, present, and reasonably foreseeable future actions that are expected to have an impact on the soils in the Analysis Area include mineral development, livestock grazing, recreation and more; however, these impacts are not expected to be compounded by either action alternative.

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APPENDIX I. GLOSSARY OF TERMS

Acre-foot: The amount of water necessary to cover 1 acre to a depth of 1 foot; equals 43,560 cubic feet or 325,851 gallons.

Agreement to Initiate (ATI): An agreement to initiate outlines the property and interests to be transferred, assigns responsibility for various actions and costs, and sets a schedule for completing various actions. The ATI is a nonbinding agreement that is signed by the land exchange Proponent and the BLM.

Affected environment: The physical, biological, social, and economic environment that would or may be changed by actions proposed and the relationship of people to that environment.

Allotment: An area of land where one or more individuals graze their livestock. An allotment generally consists of federal rangelands, but may include intermingled parcels of private, state or federal lands. BLM and the Forest Service stipulate the number of livestock and season of use for each allotment.

Alternative: One of several conceptual development plans described and evaluated in the EIS.

Analysis Area: The geographical area and/or physical, biological, and social environments that are analyzed for specific resources in the EIS.

Animal Unit Month (AUM): The amount of forage needed to sustain one cow, five sheep, or five goats for a month. A full AUMs fee is charged for each month of grazing by adult animals if the grazing animal (1) is weaned, (2) is 6 months old or older when entering public land, or (3) will become 12 months old during the period of use. For fee purposes, an AUM is the amount of forage used by five weaned or adult sheep or goats or one cow, bull, steer, heifer, horse, or mule. The term AUM is commonly used in three ways: (1) stocking rate as in X acres per AUM, (b) forage allocation as in X AUMs in allotment A, and (3) utilization as in X AUMs consumed from Unit B.

Annual Average Daily Traffic (AADT): Annual average two-way daily traffic volume represents the total traffic on a section of roadway for the year, divided by 365. It includes both weekday and weekend traffic volumes.

Army Corps of Engineers (USACE): The federal agency charged with enforcing the Clean Water Act by regulation of dredge and fill activities in waters of the United States, including wetlands.

Artifact: A simple object (such as a tool or ornament) showing early human workmanship or modifications.

Average Daily Traffic (ADT): Average daily two-way traffic volume represents the total traffic on a section of roadway for a given day or sampling period, but not necessarily for a given year.

Background distance zone: A landscape viewing area visible to a viewer from approximately 3 to 5 miles to infinity.

Baseline condition: The existing dynamic conditions prior to development, against which potential effects are judged.

Base Property: Land or water sources on a ranch that are owned by, or under long-term control of the operator.

Base Property Leases: On BLM-administered lands, the long-term lease of base property.

Best Management Practices (BMPs): Methods, measures, and practices specifically adopted for local conditions that minimize or avoid impacts to resources. BMPs include, but are not limited to, construction practices, structural and nonstructural controls, operations protocol, and maintenance procedures.

Biological Evaluation: An evaluation conducted to determine whether a proposed action is likely to affect any species which are listed as sensitive (Forest Service), candidate (Forest Service), or other special designations.

Bureau of Land Management: The Bureau of Land Management is an agency within the United States Department of Interior that administers public lands.

Clean Water Act: An act that was enacted by the U.S. Congress in 1977 to maintain and restore the chemical, physical, and biological integrity of the waters of the United States. This act was formerly known as the Federal Water Pollution Control Act (33 U.S.C. 1344).

Cooperating agency: A federal agency, other than a lead agency, which has jurisdiction by law or special expertise with respect to any environmental impact associated with the proposed action or one of the alternatives. A state or local agency or an Indian tribe may be a cooperating agency with agreement from the lead agency.

Corridor: A linear strip of land identified for the present or future location of transportation or utility rights-of-way within its boundaries. Also, a contiguous strip of habitat suitable to facilitate animal dispersal or migration.

Council on Environmental Quality (CEQ): An advisory council to the President established by the National Environmental Policy Act of 1969. It reviews federal programs for their effect on the environment, conducts environmental studies, and advises the President on environmental matters.

Cover: Vegetation used by wildlife for protection from predators and weather conditions, or in which to reproduce.

Critical habitat: A formal designation pursuant to the Endangered Species Act which may be applied to a particular habitat that is essential to the life cycle of a given species, and if lost, would adversely affect that species. Critical habitat can have a less formal meaning when used outside the context of the Endangered Species Act.

Cubic feet per second (cfs): Unit measure of streamflow or discharge, equivalent to 449 gallons per minute or about 2 acre-feet per day.

Cultural resource: Cultural resources are the tangible and intangible aspects of cultural systems, living and dead, that are valued by a given culture or contain information about the culture. Cultural resources include, but are not limited to sites, structures, buildings, districts, and objects associated with or representative of people, cultures, and human activities and events.

Cumulative impact: The impact on the environment that results from the incremental impact of the action when added to other past, present and reasonable foreseeable future actions regardless of what agency or person undertakes such other actions. Each increment from each project may not be noticeable but cumulative impacts may be noticeable when all increments are considered together.

Day Visitor: Visitors that arrive in the morning and drive back home at the end of the day (as opposed to a “Destination Visitor”).

Developed recreation site: An area with characteristics that enable to accommodate, or be used for intense recreation. Such sites are often enhanced to augment the recreational value. Improvements range from those designed to provide great comfort and convenience to the user to rudimentary improvements in isolated areas.

Direct impact: An effect which occurs as a result of an action associated with implementing the proposal or one of the alternatives, including construction, operation, and maintenance.

Dispersed recreation: Recreation that occurs outside of a developed recreation site and includes such activities as mountain biking, hiking, backpacking, fishing, boating and recreation activities in primitive environments.

Distance zone: One of three categories used in the visual management system to divide a view into near and far components. The three categories are (1) foreground, (2) middleground, and (3) background. See individual entries.

Diversity: The distribution and abundance of different plant and animal communities and species within the area covered by a land and resource management plan.

Ecosystem: The system formed by the interaction of a group of organisms and their environment, for example, marsh, watershed, or lake.

Effects: Results expected to be achieved from implementation of the alternatives relative to physical, biological, economic, and social factors. Effects can be direct, indirect, or cumulative and may be either beneficial or detrimental.

Endangered species: An official designation for any species of plant or animal that is in danger of extinction throughout all or a significant portion of its range. An endangered species must be designated in the Federal Register by the appropriate Federal Agency Secretary.

Environmental analysis: An analysis of alternative actions and their predictable short- and long-term environmental effects, which include physical, biological, economic, social and environmental design factors and their interactions.

Environmental Assessment (EA): A concise public document required by the regulations implementing the National Environmental Policy Act which briefly provides sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact.

Environmental Impact Statement (EIS): A disclosure document required by the National Environmental Policy Act (NEPA) that documents the anticipated environmental effects of a proposed action that may significantly affect the quality of the human environment.

Environmental Protection Agency (EPA): The federal agency charged with lead enforcement of multiple environmental laws, including review of Environmental Impact Statements.

Erosion control: Materials, structure, and techniques designed to reduce erosion. Erosion control may include rapid revegetation, avoiding steep or highly erosive sites, and installation of cross-slope drainage structures.

Erosion hazard: Soil ratings to predict the erosion hazard or potential to be eroded.

Erosion: The detachment and movement of soil from the land surface by wind, water, ice, or gravity.

Fen: Fens are wetlands characterized by the accumulation of organic-rich soils and are primarily fed by groundwater sources. For the purposes of this document, the limit of the fens is defined as the outer limit of the organic-rich soils. Organic-rich soils, or Histosols, are characterized by more than 40 cm (16 inches) of organic matter accumulation in the upper 32 inches.

Floodplain: A relatively flat landform adjacent to a stream that is composed of primarily unconsolidated depositional material derived from the stream and that is subject to periodic flooding. The floodplain is inundated at least once or twice (on average) every three years.

Floodway: The channel of a river or other water course and the adjacent land areas that must be preserved in order to discharge the base flow without cumulatively increasing the water surface elevation more than a designated height.

Forage: All browse and non-woody plants used for grazing or harvested for feeding livestock or game animals.

Forb: Any non-grass-like plant having little or no woody material on it. A palatable, broadleaved, flowering herb whose stem, above ground, does not become woody and persistent.

Foreground distance zone: The landscape area visible to an observer from the immediate area to 0.5 mile.

Forest Plan: A comprehensive management plan prepared under the National Forest Management Act of 1976 that provides standards and guidelines for management activities specific to each National Forest. The WRNF Forest Plan was approved in 2002.

Forest Service: The agency of the United States Department of Agriculture responsible for managing National Forests and Grasslands.

Functioning at Risk: These riparian areas are in limited functioning condition; however, existing hydrologic, vegetative, or geomorphic attributes make them susceptible to impairment.

GIS: Geographic information system, a computer mapping system composed of hardware and software.

GPS: Global Positioning System, a satellite-based surveying system.

Grading: The practice of moving or re-contouring earthen materials to achieve a specified slope in the landform.

Groundwater: Subsurface water in the part of the ground that is wholly saturated.

Guideline: Is a preferred course of action designed by policy to achieve a goal, respond to variable site conditions, or respond to an overall condition.

Habitat type: A classification of the vegetation resource based on dominant growth forms. The forested areas are more specifically classified by the dominant tree species.

Habitat: The sum of environmental conditions of a specific place that is occupied by an organism, a population, or a community.

Impacts: See effects.

Indicator species: An animal species used to represent a group of species that utilize the same habitat. For monitoring purposes, the well-being of the indicator species is assumed to reflect the general health of the community.

Indirect impact: Secondary consequences to the environment resulting from a direct impact. An example of an indirect impact is the deposition of sediment in a wetland resulting from surface disturbance in the upland.

Interdisciplinary Team (ID Team): A group of individuals each representing specialty resource areas assembled to solve a problem or perform a task through frequent interaction so that different disciplines can combine to provide new solutions.

Intermittent system: A stream system that flows only at certain times when it receives water from springs or gradual and long, continued snowmelt. The intermittent character of streams of this type is generally due to fluctuations of the water table whereby part of the time the streambed is below the water table and part of the time it is above the water table. An intermittent stream may lack the biological and hydrological characteristics commonly associated with the continuous conveyance of water. The channel may or may not be well defined.

Management emphasis: Long-term management direction for a specific area or type of land.

Management practice: A specific activity, measure, course of action, or treatment.

Middleground distance zone: The landscape area visible to a viewer from 0.5 mile to about 3 to 5 miles.

Mitigation: Actions taken to avoid, minimize, or compensate for adverse environmental impacts.

National Environmental Policy Act (NEPA): A law enacted by Congress in 1969 that requires federal agencies to analyze the environmental effects of all major federal activities that may have a significant impact on the quality of the human environment.

National Forest System (NFS) lands: National Forests, National Grasslands, and other related lands for which the Forest Service is assigned administrative responsibility.

National Historic Preservation Act (NHPA): An act that was enacted by the U.S. Congress in 1966 to protect historic sites and artifacts (16 U.S.C. 470). Section 106 of the Act requires consultation with members and representatives of Indian tribes.

National Register of Historic Places: A listing maintained by the National Park Service of areas that have been designated as historically significant. The register includes places of local and state significance, as well as those of value to the nation in general.

No action alternative: The management direction, activities, outputs, and effects that are likely to exist in the future if the current trends and management would continue unchanged. Under NEPA, it means following the current approved Forest Plan management direction and guidance.

Nonfunctional: These riparian areas clearly are not providing adequate vegetation, landform, or woody material to dissipate stream energy associated with moderately high flows, and thus are not reducing erosion, improving water quality, etc.

Riparian habitat: A transition area between aquatic and terrestrial (upland) environments influenced by the high-water table associated with a stream or river. Riparian habitats are commonly recognized by the combination of high species diversity, high species density and high productivity.

Objective: A concise, time-specific statement of measurable planned results that respond to pre-established goals. An objective forms the basis for further planning to define the precise steps to be taken and the resources to be used in achieving identified goals.

Perennial system: A stream system that flows continuously in all or most years. It is generally fed in part by springs, and the streambed is often located below the water table for most of the year. Ground water supplies the baseflow for perennial streams during dry periods, but flow is also supplemented by stormwater runoff and snowmelt. A perennial stream exhibits the typical biological, hydrological, and physical characteristics commonly associated with the continuous conveyance of water.

Preferred alternative: The alternative selected from the range of alternatives that is favored by the lead agency.

Project area: The area encompassed by the development proposal including base area and the permit area.

Proper functioning condition: A lotic riparian area is considered to be in proper functioning condition, or “functioning properly,” when adequate vegetation, landform, or woody material is present to: 1) dissipate stream energy associated with high waterflow, thereby reducing erosion and improving water quality; 2) capture sediment and aid floodplain development; 3) improve floodwater retention and ground-water recharge; 4) develop root masses that stabilize streambanks against erosion; and 5) maintain channel characteristics. A riparian area in proper functioning condition will, in turn, provide associated values, such as wildlife habitat or recreation opportunities.

Record of Decision: A document prepared within 30 days after the final EIS is issued which states the agency’s decision and why one alternative was favored over another, what factors entered into the agency’s decision, and whether all practicable means to avoid or minimize environmental harm have been adopted, and if not, why not.

Revegetation: The re-establishment and development of self-sustaining plant cover. On disturbed sites, this normally requires human assistance such as seedbed preparation, reseeding, and mulching.

Riparian habitat or area: Land situated along the bank of a stream or other body of water and directly influenced by the presence of water (e.g., streamsides, lakeshores, etc.).

Scenery management: The art and science of arranging, planning and designing landscape attributes relative to the appearance of places and expanses in outdoor settings.

Scenic Integrity Objectives (SIOs): The objectives that define the minimum level to which landscapes are to be managed from an aesthetics standpoint. There are five objectives that describe the landscape in varying degrees from naturalness: Very High (Unaltered), High (Appears Unaltered), Moderate (Slightly Altered), Low (Moderately Altered), Very Low (Heavily Altered).

Scenic integrity: State of naturalness or, conversely, the state of disturbance created by human activities or alteration. Integrity is stated in degrees of deviation for the existing landscape character in a national forest.

Scoping process: A process that determines the issues, concerns, and opportunities that should be considered in analyzing the impacts of a proposal by receiving input from the public and affected agencies. The depths of analysis for these issues identified are determined during scoping.

Sediment: Solid material, both organic and mineral, that has been transported from its site of origin by air, water, or ice.

Sensitive species: Species which have appeared in the Federal Register as proposed additions to the endangered or threatened species list; those which are on an official State list or are recognized by the Regional Forester to need special management in order to prevent them from becoming endangered or threatened.

Short-term: In this analysis, short-term describes the period from construction up to five years after project completion.

Significant impact: A somewhat subjective judgment based on the context and intensity of the impact. Generally, a significant impact is one that exceeds a standard, guideline, law, or regulation.

Soil productivity: The capacity of a soil for producing plant biomass under a specific system of management. It is expressed in terms of volume or weight/unit area/year.

Soil: A dynamic natural body on the surface of the earth in which plants grow, composed of mineral and organic materials and living forms.

Stand: A community of trees or other vegetation, which is sufficiently uniform in composition, constitution, age, spatial arrangement, or condition to be distinguishable from adjacent communities and to thus, form a management entity.

Standard: A course of action that must be followed; *adherence is mandatory*.

Threatened species: Any species which is likely to become an endangered species within the foreseeable future and which has been designated in the Federal Register as a threatened species.

U.S. Fish and Wildlife Service (USFWS): The agency of the Department of the Interior responsible for managing wildlife, including non-ocean-going species protected by the Endangered Species Act.

Understory: Low-growing vegetation (herbaceous, brush or reproduction) growing under a stand of trees. Also, that portion of trees in a forest stand below the overstory.

Vehicle trips: The number of times vehicles use a segment of road.

Vehicles Per Day: The total two-way daily traffic volume on a section of roadway.

Visual resource: The composite of basic terrain, geologic features, water features, vegetative patterns, and land use effects that typify a land unit and influence the visual appeal the unit may have for visitors.

Water rights: The legal right to use water.

Watershed: The entire area that contributes water to a drainage system or stream.

Winter Range: That part of the home range of a species where 90 percent of the individuals are located during the winter at least five out of ten winters.

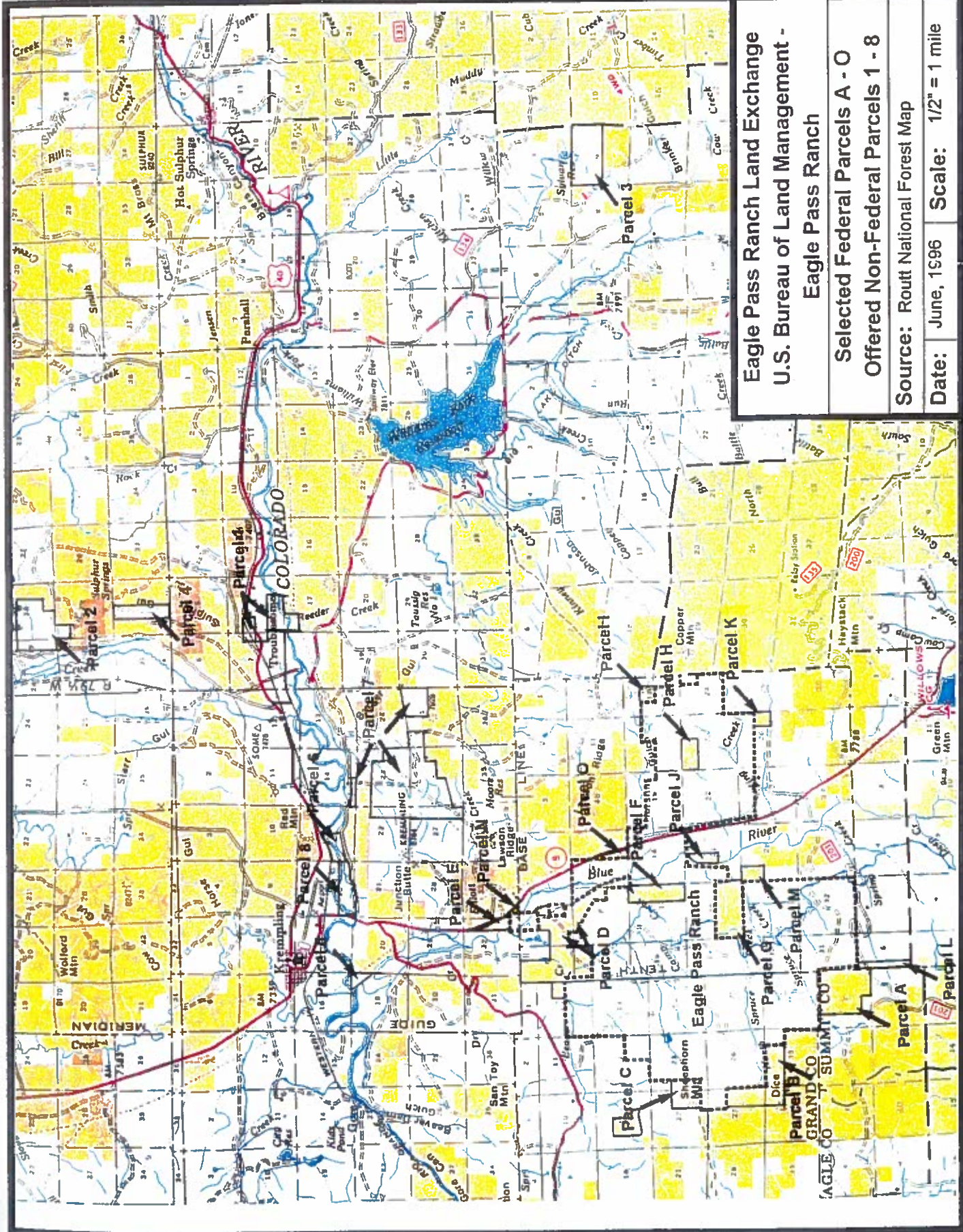
APPENDIX J. ACRONYMS AND ABBREVIATIONS

AADT	Average Annual Daily Traffic	ESA	Environmental Site Assessment
ACEC	Areas of Critical Environmental Concern	FEIS	Final Environmental Impact Statement
ADA	Americans with Disabilities Act	FEMA	Federal Emergency Management Act
ADH	All Designated Habitats	FLPMA	Federal Land Policy and Management Act
ADT	Average Daily Traffic	FLTFA	Federal Land Transaction Facilitation Act
APE	Area of Potential Effect	FOIA	Freedom of Information Act
ARMP	Approved Resource Management Plan	FSM	Forest Service Manual
ARMPA	Approved Resource Management Plan Amendment	FY	Fiscal Year
ATI	Agreement to Initiate	GHMA	General Habitat Management Areas
AUM	Animal Unit Months	ID Team	Interdisciplinary Team
AVSO	Appraisal and Valuation Services Office	IPAC	Information, Planning, and Consultation System
BA	Biological Assessment	KFO	Kremmling Field Office
BCC	Birds of Conservation Concern	KFOPA	Kremmling Field Office Planning Area
BCI	Biotic Condition Index	LAU	Lynx Analysis Unit
BE	Biological Evaluation	LCHMA	Linkage/Connectivity Habitat Management Areas
BLM	Bureau of Land Management	LEO	Law Enforcement Officer
BMP	Best Management Practices	LEX	Land Exchange
BVR	Blue Valley Ranch	LF	Linear Feet
CCR	Code of Colorado Regulations	LWCF	Land and Water Conservation Fund
CDOT	Colorado Department of Transportation	MBTA	Migratory Bird Treaty Act
CDPHE	Colorado Department of Public Health and Environment	MOU	Memorandum of Understanding
CEQ	Council on Environmental Quality	MPB	Mountain Pine Beetle
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	NCWCD	Northern Colorado Water Conservancy District
CFR	Code of Federal Regulations	NEPA	National Environmental Policy Act
cfs	cubic feet per second	NFS	National Forest System
CNHP	Colorado Natural Heritage Program	NHPA	National Historic Preservation Act
CPW	Colorado Parks and Wildlife	NMFS	National Marine Fisheries Service
DAU	Data Analysis Unit	NRCS	Natural Resource Conservation Service
DEIS	Draft Environmental Impact Statement	NRHP	National Register of Historic Places
DME	Department of Minerals Evaluation	OAHP	Office of Archaeology and Historic Preservation
DMNS	Denver Museum of Nature and Science	OHV	Off-highway Vehicle
DRMP	Draft Resource Management Plan	PCB	Polychlorinated biphenyl
EA	Environmental Assessment	PFYC	Potential Fossil Yield Classification
EIS	Environmental Impact Statement	PHMA	Priority Habitat Management Areas
EPA	Environmental Protection Agency	PILT	Payments in Lieu of Taxes
ERMA	Extensive Recreation Management Area		

PL	Public Law
PLH	Public Land Health
PLHS	Public Land Health Standard
REC	Recognized Environmental Conditions
RMP	Resource Management Plan
RMZ	Recreation Management Zone
ROD	Record of Decision
RPC	Ranch Preservation Community
SCS	Soil Conservation Service
SH	State Highway
SHPO	State Historic Preservation Office
SOLC	Species of Local Concern
SRMA	Special Recreation Management Area
SVC	Species of Viability Concern
TES	Threatened, Endangered and Sensitive
U.S.C.	United States Code
UASFLA	Uniform Appraisal Standards for Federal Land Acquisitions
UCM	University of Colorado Museum
USACE	United States Army Corps of Engineers
USDI	United States Department of the Interior
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VRM	Visual Resource Management
WP	Witness Point
WRNF	White River National Forest
WSA	Wilderness Study Area

APPENDIX K. EAGLE PASS LAND EXCHANGE PARCELS MAP AND NOTICE OF DECISION

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Eagle Pass Ranch Land Exchange **U.S. Bureau of Land Management -** **Eagle Pass Ranch**

Selected Federal Parcels A - O
Offered Non-Federal Parcels 1 - 8

Source: Routt National Forest Map

Date: June, 1996 **Scale:** 1/2" = 1 mile

Boundaries are approximate

NOTICE OF DECISION
EXCHANGE OF LANDS IN GRAND COUNTY, COLORADO
SERIAL NO. CC-58589

UNITED STATES DEPARTMENT OF THE INTERIOR, Bureau of Land Management, Grand Junction District, 2815 H Road, Grand Junction, Colorado, 81506.

Notice is hereby given that on September 17, 1998, Mark T. Morse, District Manager, Grand Junction District, Bureau of Land Management, issued a decision to approve a proposed land exchange with Western Land Group, Inc., 507 S. Sherman, Denver, Colorado, 80209.

The following described public lands have been determined to be suitable for disposal by exchange pursuant to Section 206 of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1716), as amended:

SELECTED PUBLIC LANDS*

Parcel A

Township 2 South, Range 81 West, 6th P.M., Summit County

Section 1:	Lot 1	40.00 acres
	Lot 2	40.00 acres
	Lot 3	40.00 acres
	SE $\frac{1}{4}$	160.00 acres
	SE $\frac{1}{4}$ NE $\frac{1}{4}$	80.00 acres
	SE $\frac{1}{4}$ NW $\frac{1}{4}$	40.00 acres
	NE $\frac{1}{4}$ SW $\frac{1}{4}$	40.00 acres

Parcel B

Township 1 South, Range 81 West, 6th P.M., Grand County

Section 27:	SE $\frac{1}{4}$ NE $\frac{1}{4}$	40.00 acres
	E $\frac{1}{2}$ SE $\frac{1}{4}$	80.00 acres
Section 34:	Lot 1	37.44 acres
Section 35:	N $\frac{1}{2}$ NW $\frac{1}{4}$	80.00 acres
	NW $\frac{1}{4}$ NE $\frac{1}{4}$	40.00 acres

Parcel C

Township 1 South, Range 81 West, 6th P.M., Grand County

Section 23:	NE $\frac{1}{4}$ SE $\frac{1}{4}$	40.00 acres
	SE $\frac{1}{4}$ NE $\frac{1}{4}$	40.00 acres
Section 23:	NW $\frac{1}{4}$ SW $\frac{1}{4}$	40.00 acres
	SW $\frac{1}{4}$ NW $\frac{1}{4}$	40.00 acres

Parcel D

Township 1 South, Range 80 West, 6th P.M., Grand County

Section 5:	Lot 6	28.00 acres
	Lot 12	27.00 acres
	Lot 14	8.94 acres
	N $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$	120.00 acres
	SE $\frac{1}{4}$ NW $\frac{1}{4}$	40.00 acres
Section 6:	Lot 2	30.05 acres
	Lot 9	9.52 acres
	Lot 10	10.86 acres
	Lot 12	14.87 acres
	Lot 13	20.09 acres
	Lot 14	19.62 acres
	SW $\frac{1}{4}$ NE $\frac{1}{4}$	40.00 acres
	N $\frac{1}{2}$ SE $\frac{1}{4}$	80.00 acres
Section 8:	Lot 3	27.55 acres
	Lot 4	33.05 acres
	Lot 6	13.65 acres
Section 9:	Lot 5	15.65 acres

Township 1 South, Range 81 West, 6th P.M., Grand County

Section 12:	Lot 4	28.11 acres
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Parcel E

Township 1 North, Range 80 West, 6th P.M., Grand County

Section 32:	Lots 2, 3, 6	59.04 acres
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Parcel F

Township 1 South, Range 80 West, 6th P.M., Grand County

Section 17: E½E½ 160.00 acres

Parcel G

Township 1 South, Range 80 West, 6th P.M. Grand County

Section 20: S½ 320.00 acres

Parcel H

Township 1 South, Range 80 West, 6th P.M. Grand County

Section 23: N½NW¼ 80.00 acres

Parcel I

Township 1 South, Range 80 West, 6th P.M. Grand County

Section 13: SE¼NW¼ 40.00 acres

Parcel J

Township 1 South, Range 80 West, 6th P.M. Grand County

Section 21: Lot 4 28.00 acres

Parcel K

Township 1 South, Range 80 West, 6th P.M. Grand County

Section 26: SE¼NE¼ 40.00 acres

Parcel L

Township 2 South, Range 80 West, 6th P.M. Summit County

Section 6:	Lot 8	20.68 acres
	Lot 9	20.61 acres
	Lot 10	20.53 acres
	Lot 11	20.46 acres

Parcel M

Township 1 South, Range 80 West, 6th P.M. Summit County

Section 28: NW¼NW¼ 40.00 acres

Parcel N

Township 1 North, Range 80 West, 6th P.M. Grand County

Section 33: Lots 2, 4, 6 23.61 acres

Parcel O

Township 1 South, Range 80 West, 6th P.M. Grand County

Section 9: Lots 7, 10, 11 35.12 acres

All Totalling approximately 2352.49 acres*

* These parcels will also include the underlying mineral estate.

Also to be exchanged would be approximately 6152.89 acres of mineral estate underlying existing Eagle Pass Ranch.

There are no oil and gas leases or mining claims on any of the public parcels. All minerals will transfer with the surface estate for all the public parcels with the exception of Parcel O. Parcel O will be valued at its mineral value for the land exchange.

All title transfers are subject to existing valid rights for permits, leases or rights-of-ways.

Ditches and canals constructed by the authority of the United States will be reserved on all selected public land parcels.

The lands to be acquired by the United States are located adjacent to existing public lands and would include fishing access along the Colorado and Blue Rivers, a more desirable kayak and raft access to Gore Canyon, lands containing federally listed endangered plant, wetlands, waterfowl habitat and deer and elk winter range. The majority of the public land parcels to be disposed of are isolated parcels, surrounded by Eagle Pass Ranch or other private landowners, making them difficult and uneconomical to manage. It has been concluded that the exchange could create more coherent ownership patterns in the area and improve the efficiency and effectiveness of management by both the Bureau and Eagle Pass Ranch.

The public lands to be exchanged have remained the same throughout the exchange and environmental assessment process. These lands were listed in the Notice of Exchange Proposal, published in June 1996. However, based on value, public comment and resource evaluation, portions of the private lands have been deleted from the exchange. Private Parcel 3 (Sylvan Reservoir) has been eliminated in its entirety and private Parcel 1 (Palmer) has been reconfigured to delete most of the irrigated hay meadow from consideration.

A copy of the decision may be obtained from the Kremmling Resource Area, P O Box 68, Kremmling, Colorado, 80459, (970) 724-3437.

For a period of 45 days from the date of publication of this notice, interested parties may submit written comments or objections concerning this decision to the Area Manager, Kremmling Resource Area at the above address. Please specify parcel letter or number when making your comments.

Dated: September 17, 1998


Mark T. Morse,
District Manager

APPENDIX L. RESPONSE TO COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

INTRODUCTION

As required by Bureau of Land Management's (BLM) National Environmental Policy Act (NEPA) regulations, public involvement occurs throughout the Environmental Impact Statement (EIS) process.¹ A Notice of Availability for the Draft EIS was published in the Federal Register on May 11, 2018, initiating the Draft EIS comment period that remained open until June 25, 2018. Notification of the Draft EIS's availability was mailed to approximately 125 residents of various communities in proximity to exchange parcels, interested individuals, government officials, public agencies, and other organizations, in addition to two federal agencies as specifically directed under NEPA. This letter was specifically designed to summarize the contents of the Draft EIS and elicit public comments during the 45-day comment period, providing instructions for public involvement and resources for additional information. Government-to-government consultation between Native American Tribes in the KFO and the BLM has been initiated. The letter requested the tribes to identify issues and areas of concern within the proposal. A follow-up with the tribes occurred in April 2017, at which time a face-to-face consultation with the tribes took place. No comments were provided during face-to-face consultation and no traditional properties or areas of long-term spiritual use were identified in the land exchange area.

During the Draft EIS comment period, two public open houses were held by the KFO. The first open house was held on June 4, 2018 at the Summit County Library in Silverthorne, Colorado. The second public meeting was held two days later on June 6, 2018 at the Grand County Extension Office of the Fairgrounds in Kremmling, Colorado. Attendees of the open house engaged BLM staff in an open house format that allowed visitors to review figures and maps detailing the different Federal and non-Federal parcels proposed in the exchange. Formal comments were accepted at these open houses.

Additional information was available on the BLM website and comment submissions were accepted via the following sources: email, web submission, letter, public meetings, fax, and phone. During the Draft EIS comment period, the KFO received 52 comment submittals. All comment letters were reviewed for substantive comments, and contact information for each commenter was entered into a master database. These substantive comments provide the foundation for which this Response to Comments is based. A total of 106 substantive comments were extracted from the letters across twenty broad categories. Comments were grouped further by subcategory and theme in order to facilitate the recording and response process. Similar comments were combined to be representative of common themes that were expressed by numerous individuals. Comments that resulted in an update to a particular component of the analysis between the Draft EIS and Final EIS are indicated as such.

Names of those who submitted comments on the Draft EIS are listed on the following page. Copies of the comment letters received by tribes, federal, state and local agencies and elected officials are included as Appendix M of this Final EIS.

Jim Beall	Steve Cooper	Franz Froelicher
Robert Bibb	Dan Corray	Perry Handyside
Scott Boyatt	Mark Cousins	Danny Hassan
Joe Brooks	Mike Crosby	Rex Hastings
Flip Brumm	David Cunningham	Jesse Hill
Gary Bumgarner	Thomas Davidson	Andy Horn
Dan Campbell	Anna Drexler-Dreis	B Ker
Chuck Cesar	Robert Firth	Kirk Klancke

¹ 40 CFR Parts 1500–1508

Chris Krupp	Mike Ritschard	Erica Stankelis
Megan Ledin	Bill Ritter, Jr.	Philip Strobel
Merrit Linke	Tom Rosh	Patrick Tooley
Scott Linn	Carol Saade	Lurline Underbrink Curran
Larry Lunceford	Steve and Martha Schake	Tim Vermeer
Jim Morgan	Thad Scholl	Brett Wamsley
Doug and Karen Moses	Lyle Sidener	Daniel Watson
Richard O'Connell	Jesse Smith	Hank Wiethakes
George and Kathryn Resseguie	Laura Snow	

RESPONSE TO COMMENTS

The BLM has provided the following comment responses to the best of its ability and where comment responses were deemed appropriate consistent with NEPA Handbook 6.9.2.1. If a specific portion of a comment was not responded to, it is because it was not a “substantive comment,” meaning that it did not do one or more of the following:

1. Question, with reasonable basis, the accuracy of information in the EIS or EA.
2. Question, with reasonable basis, the adequacy of, methodology for, or assumptions used for the environmental analysis.
3. Present new information relevant to the analysis.
4. Present reasonable alternatives other than those analyzed in the EIS or EA.
5. Cause changes or revisions in one or more of the alternatives.
6. A comment is not substantive, and thus no response is warranted, where they:
 - a. are in favor of or against the Proposed Action or alternatives without reasoning that meet the criteria listed above (an example of a not substantive comment is “we disagree with Alternative Two and believe the BLM should select Alternative Three”).
 - b. only agree or disagree with BLM policy or resource decisions without justification or supporting data that meet the criteria listed above (such as “more grazing should be permitted”).
 - c. don’t pertain to the project area or the project (such as “the government should eliminate all dams,” when the project is about a grazing permit).
 - d. take the form of vague, open-ended questions.

1.0 PURPOSE AND NEED

1.1 *Description of current management challenges and alternative solutions - One of the purposes of the proposed LEX is to “improve management of public lands while minimizing and reducing conflict.”(DEIS ES-1). The DEIS mentions current conflicts with the public and the private landowners but does not provide documentation of the details of the management challenges. Specific details should be provided as to where and how often these conflicts occur. Following documentation of the challenges, the BLM should consider alternative methods of resolving the conflicts besides exchanging land; for example, could signs be placed, additional parking provided on current BLM property, etc. Provide an estimate of annual costs of managing “difficult to manage lands” and an estimated cost savings from consolidation thru LEX. The DEIS must consider all reasonable alternatives including purchase of private lands.*

While alternative methods of resolving conflicts as described by commenter may be capable of achieving a portion of the Purpose and Need for the Proposed Action, these methods would not be capable of achieving other components of the Purpose and Need to the extent that the proposed land exchange would. For a complete list of alternatives and design components considered but eliminated from detailed analysis, the commenter is referred to Chapter 2, Section D.

2.0 ALTERNATIVES

- 2.1** *BVR should provide a guarantee to allow float access at flows as low as 350 cfs if this plan is approved. Over the years BVR has continued to build river improvements limiting access to recreational floaters. They build rock “improvements” that make traveling on the river without trespassing harder and harder. Most recently about two years ago they shut off a long channel of the river to floating at any flow.*

It is the responsibility of the public to determine if the section of the Blue River referenced has sufficient flows to support lawful floating (i.e., rafts and other crafts do not touch the bottom of the river channel). The proposed land exchange would include in-stream river improvements on lands that the BLM would acquire; however, these would not limit the public’s ability to float as long as flows are sufficient. As it relates to recreational access, existing and future instream improvements on Blue Valley Ranch (BVR) property are beyond the scope of this analysis.

- 2.2** *The EIS states there will be improvements done at Spring Creek Road. What are these improvements? Who will maintain these improvements? Who will pay for this maintenance? There should be a detailed plan attached to the EIS similar to the plan for the confluence improvements as well as a forever deed allowing for public use and an agreement of how this will be maintained and funded. This all needs to be clarified prior to a decision being made about the land exchange.*

Specific components of the Spring Creek Bridge improvements are detailed in Chapter 2, Section B – Alternatives Considered in Detail of this Final EIS, in the Recreation Design Features discussion. As stated in this section, “Establishment, through conveyance of an easement from BVR to either an existing governmental entity or a suitable not-for-profit entity in perpetuity, of a permanent take-out and rest-stop with the right to re-entry for floaters with picnic tables (2 tables), a seasonal toilet (portable restroom with enclosure), informational signage (1 sign), and improvements related to parking (0.25-acre existing graded area, accommodating 10 spaces) and access on existing BVR property at the Spring Creek Bridge” (Final EIS p. 18). Additionally, the following information has been added to the same section of Chapter 2 of this Final EIS, “To ensure that the Spring Creek Bridge Recreation Design Feature would be implemented, the closing of the land exchange would be conditioned on a perpetual easement being in place. Under this Recreation Design Feature, BVR’s land at Spring Creek Bridge would not be conveyed to BLM. Like the other proposed Recreation Design Features, the construction of improvements at Spring Creek Bridge would be part of a binding exchange agreement, with funding for the construction of the proposed improvements covered by a bond and funding for future management of the proposed improvements set aside by BVR for use by the holder of the easement. Following construction, the management of the Spring Creek Bridge Recreation Design Feature would be the responsibility of either an existing governmental entity or a not-for-profit entity created to hold and manage the easement” (Final EIS p. 20).

In addition to the information provided in Chapter 2, Section B, supplemental information related to the stream restoration projects within the Confluence Recreation Area is contained in Appendix N.

- 2.3** *While the agency’s assertion that the uses that occur on the lands in the exchange will not likely change very much, it is also true that there are fewer requirements for protections of natural resources on private property. A major flaw in this proposed land exchange is the lack of required conservation easements or other instruments to protect some of the valuable, and even unusual, public resources the land exchange will convey into private ownership.*

Although BLM has the authority to use instruments such as conservation easements under 43 CFR § 2200.0-6(i), the authorized officer has not identified a situation where rights or interests must be retained to protect public interest and restrict the use of federal lands to be exchanged. Further, establishment of conservation easements on federal lands that would be exchanged under the proposed land exchange would not be possible as BVR has made clear that it would not be willing to exchange lands under these conditions. The Final EIS has been updated to include this information in its discussion of alternatives and design components considered but eliminated from detailed analysis, which can be found in Appendix E.

- 2.4** *Since under the proposed land exchange, the BLM lands are being conveyed with no requirements for conservation on them, there is potential for residential development. This could impact water quality*

through improper well use, soil erosion from construction, and point source pollution from landscaping. While it is unlikely that the current owner of the BVR would undertake residential development, this potential is the primary driver of the BVR lands' value and future owners may wish to take advantage of this.

With regard to the placement of conservation easements on federal lands to be exchanged the commenter is referred to the response to the previous comment (2.3). As it relates to potential for future development, there are no plans for development and details such as the number of units, timing, and construction do not exist, and creation of such details would be purely speculative. In accordance with Council on Environmental Quality guidance, the BLM has made a good faith effort to explain effects that are not known at this time, acknowledging that resources on federal lands would lose current protections afforded under existing BLM management.

2.5 *We suggest that as only two alternatives exist currently, Alternative 1 - No Action would better serve the public interest, as BLM Parcels G, H and I, which would all be traded away, have high natural values and critical locations in maintaining current public use of the Blue River. This land exchange has been under development for several years now and the proponent has included additional features at each step. We recognize increased hunting opportunities through the exchange. We recognize the public benefit of increased water rights and the ability to use them in the stream. However, there is simply no comparable experience to that provided through public ownership of G, H and I. This is a legendary stretch of trout stream in the State of Colorado, and we do not think the loss of these three parcels serves the public interest.*

The commenter is referred to Chapter 3, Section B – Access and Traffic, which discusses the impacts to public access of BLM-G, BLM-H, and BLM-I under the Proposed Action. It articulates that although the public's access to walk-in fishing on BLM-I would be lost, the public's ability to float this stretch would not be relinquished. Furthermore, the public would gain access to the Blue River below Green Mountain Reservoir. BLM-G and BLM-H provide an opportunity for floaters to rest currently when flows allow; however, these parcels do not provide walk-in access themselves and their role as providing a rest-stop would be mitigated by the proposed improvements at Spring Creek Bridge as well as the Pump Station Rest Stop. The Pump Station Rest Stop Recreation Design Feature was added to the Proposed Action Alternative to off-set the loss of BLM-G and BLM-H following the close of the Draft EIS comment period, in response to comments such as this. In both action alternatives, the effects from the loss of public access on BLM-G and BLM-H are described as minimal, as access is limited to those who have the ability to float this section of the river and that would not change. With consideration of the additional Recreation Design Feature at the Pump Station Rest Stop, the loss of public access on BLM-G and BLM-H is largely off-set. The commenter is referred to Chapter 2, Section B – Alternatives Considered in Detail for a detailed description of the Pump Station Rest Stop.

Further, the proposed Recreation Design Feature at the Confluence Recreation Area and the Green Mountain Recreation Area, including construction of a parking lot and fishing and pedestrian access easements to the Blue River, are intended to mitigate the impacts associated with the loss of legal public access at BLM-I. In addition, Alternative 3 has been added to the analysis presented in the Final EIS to address concerns over the loss of river access on BLM-I. As discussed under Chapter 2, Section B – Alternatives Considered in Detail, Alternative 3 would not include a 76-acre section of BLM-I adjacent the river and would therefore retain the river access provided by the parcel. Refer to Chapter 3, Section B – Access and Traffic and Chapter 3, Section C – Recreation for analysis of the impacts to traffic and recreation resources by both alternatives. Additional context provided by the commenter regarding the BLM-G, BLM-H, and BLM-I, along with the analysis for all of the action alternatives contained in the Draft EIS and Final EIS, will be considered by the decision maker.

2.6 *The DEIS offers no context for why Parcel BLM-J should be traded away due to it now being difficult to manage when the public interest was well-served by acquiring this parcel less than twenty years ago. The DEIS states that it is difficult for BLM to manage Parcel BLM-J because it is surrounded by lands owned by the Skylark Ranch. The DEIS does not state whether BLM-J was similarly surrounded by private lands when it was acquired by the agency as part of the 1999 Eagle Pass Ranch Land Exchange; if it was, BLM needs to document why the public values that were well-served when the parcel was acquired in 1999 are*

now outweighed by the agency's difficulty in managing it. The DEIS offers no explanation for how or why the parcel is difficult to manage. The public must be told why either the resource values of the parcel have decreased or the management difficulties have increased. The DEIS notes that the exchange proponent has no interest in acquiring Parcel BLM-J and would subsequently sell it to Skylark Ranch after the exchange were completed. If the proponent is not interested in the parcel then the rationale for including it in the trade must be even stronger to justify including it in the trade, given FLPMA's general directive that public lands be retained in Federal ownership. See 43 U.S.C § 1701(a)(l).

The commenter is correct in their assertion that BLM-J was previously acquired by the BLM during the 1999 Eagle Pass Ranch Land Exchange; however, it is important to note that any land acquired by exchange comes back to the U.S. as public lands (not acquired lands) open to all the public land laws and mining laws, which include disposal. Section 203 of FLPMA 43 U.S.C. § 1713, which serves as the BLM's sale authority, describes lands that are available for disposal. As stated under Section 203(a), "A tract of the public lands (except land in units of the National Wilderness Preservation System, National Wild and Scenic Rivers Systems, and National System of Trails) may be sold under this Act where, as a result of land use planning required under section 202 of this Act, the Secretary determines that the sale of such tract meets the following disposal criteria:...(2) such tract was acquired for a specific purpose and the tract is no longer required for that or any other Federal purpose..." The point that is highlighted in the cited text, is that while BLM-J is actually under BLM sale authority, it clearly allows for disposal of land acquired previously. When the BLM acquired BLM-J, the objective was to acquire ownership of the riparian habitat along the Colorado River and to provide greater access to the Colorado River. When the parcel was acquired it was one parcel and the riparian habitat couldn't be separated from the large acreage of irrigated lands. Furthermore, at the time of acquisition, the BLM had no experience with irrigation of lands in the area and since acquisition, a variety of issues have arisen related to the irrigated issues. These include the lack of a sufficient budget to manage the wetland grasses that grow as a result of the irrigation, the inefficient management of the parcel due to its distance from other irrigated BLM land, and the lack of public interest in accessing the irrigated pastures. Through this exchange, the BLM now has ability to keep the riparian area through a setback of 100 feet from the northern bank of the Colorado River and dispose of the upland portion of the parcel that BLM which was not part of the specific purpose the parcel previously acquired to serve north of the Colorado River. Further, that fact that the land is public land subject to all the public land laws, is in itself sufficient to provide for the disposal of this parcel.

2.7 *The Chevron parcel is a proposed donation from the proponent to the BLM: this suggests the appraisals are likely complete and values agreed upon. If this is the case, the appraisals should have been included as appendices to the DEIS. Secondly, there is little discussion about the characteristics of the parcel and its resource value. This parcel needs to have the same analysis as the other BVR parcels to provide assurance there are no negative impacts.*

The Chevron parcel is considered a part of BVR-8 for the purposes of resource analysis under the Proposed Action. Alternative 3 would not include the donation of the Chevron parcel and the parcel is not included in the resource analysis of Alternative 3. A review of final appraisals was not completed by the USDI Appraisal and Valuation Services Office prior to the release of the Draft EIS. As directed by the BLM Land Exchange Handbook (H-2200-1) Chapter 7, Section K – Appraisal Availability to the Public, the BLM has determined it is not appropriate to release the appraisals to the public prior to the Notice of Decision. As stated in the handbook, "approved ASD appraisals and review reports are official records used by the BLM in setting the price and reaching agreement on realty transactions. They are internal documents and are not subject to public release until the BLM has taken an action utilizing the information in the report. The appraisal report and appraisal review must be made available when the Notice of Decision is issued pursuant to 43 CFR § 2201.7-1(a)." Following this direction, the BLM will release the appraisals once the agency has taken an action utilizing the information in the report (i.e., at the time the Record of Decision documents are made available to the public).

2.8 *Descriptions of the proposed recreation improvements and the related future ownership, easements, funding and management plan are unclear -These need to be more specific including type, amounts and layout of facilities, costs, locations and especially future funding and management, in order to be evaluated and provide the public assurance of the commitments. The DEIS states that the proponent has agreed to*

enter an MOU with the BLM (DEIS: 2-6, 2-7). This should have been drafted and included in the document.

The commenter is referred to Chapter 2, Section B, which now states, “Future management of these features, once implemented, would be the responsibility of BLM in the case of the Confluence Recreation Area, and the BLM in cooperation with the WRNF in the case of the Green Mountain Recreation Area, and either an existing governmental entity or a not-for-profit entity in the case of the proposed Spring Creek Bridge Take-Out and Rest Stop and the Pump Station Rest Stop (perpetual easements located on private lands). Management of activities on NFS lands would be the responsibility of the Forest Service. Management of the fishing access easement and the trail through the pedestrian access easement on private land would be the responsibility of BVR. To ensure that the Recreation Design Features would be implemented, the closing of the land exchange would be conditioned on certain measures specific to each Recreation Design Feature being in place. In general, the provision for construction and operation of the Recreation Design Features would be part of a binding exchange agreement, with the assured construction of the proposed improvements covered by a bond that BVR would provide, and funding for future management of the proposed improvements set aside in the nature of an endowment funded by BVR” (Final EIS p. 17). This same section describes the configuration of proposed Recreation Design Features. In addition, Figures 3–6 detail the specific components of each Recreation Design Feature and show their locations. For the purpose of NEPA review of this land exchange, the current description of anticipated planning objectives for the lands that would be acquired by the United States is appropriate for the assessment of environmental impacts. There is an element of field fitting that will occur should implementation of the proposed Recreation Design Features be approved; however, adjustments made during field fitting will not exceed the range of potential impacts analyzed and disclosed in the Final EIS.

3.0 NEPA PROCESS

3.1 *Based on our review of the DEIS, the EPA has rated this document as EC-2, Environmental Concerns-Insufficient Information This rating is based on wetland and floodplain impacts and mitigation, and opportunities for further clarification.*

The Final EIS has been updated to include additional information regarding wetland and floodplain impacts. In particular, wetland impacts are disclosed in this Final EIS in terms of consistency with Executive Order 11990, *Protection of Wetlands*. Furthermore, BLM allotment information has been reviewed for BLM-C and BLM-J and related impacts analysis has been provided. Specific changes that were made to this Final EIS are further described in the Response to Comment 7.1.

3.2 *The EIS indicates that construction of the trail entering the lower canyon below Parcel 10 is contingent upon the USFS undertaking an environmental analysis of this trail. Given this contingency, we request that the USFS endeavor to undertake this analysis promptly after closing as consideration for the land that the USFS will be receiving in the land exchange.*

The BLM anticipates the Forest Service would proceed with analysis for the proposed trail departing from BVR-10 and on to Forest Service managed lands in a timely manner. This Recreation Design Feature, which is included under the Proposed Action and would not be included under Alternative 3, has been developed through close collaboration with all parties involved in the land exchange, and aligns with the goals and objectives of both the BLM and the Forest Service.

3.3 *The governing statute for BLM land exchanges, the Federal Land Policy and Management Act, declares the following policy: the public lands be retained in Federal ownership, unless as a result of the land use planning procedure provided for in this Act, it is determined that disposal of a particular parcel will serve the national interest. 43 U.S. C. 1701(a)(1). This act also states that the values of federal land to be traded away must not be more valuable than the lands to be acquired. 43 U.S. C. 1716. This is further detailed in BLM’s land exchange regulations: ... [Commenter cites 43 CFR 2200.0-6(b)] ... We suggest that as the two alternatives exist currently, Alternative 1- No Action, is the alternative that would best serve the public interest, as BLM Parcels G, H and I have high natural values and critical locations in maintaining current public access to and use of the Blue River. We recognize that the proponent has done additional work and*

included further mitigation measures in this proposal. In particular, we commend placing a permanent easement for the Spring Creek bridge take-out and associated facilities. Should the work on the proposed exchange move forward, we have included recommendations regarding further study of resources, and obtaining permanent assurances for proposed resource protection, public access, use, recreation facilities and management, as discussed below.

The commenter is referred to the *Alternatives and Design Components Considered but Eliminated from Detailed Analysis* discussion in Chapter 2, Section D, which describes an Alternative that considered alternate exchange options of river frontage parcels. Potential alternatives included a proposal without parcels BLM-G, BLM-H, and BLM-I; or a proposal that included these parcels with easements retaining public access for a limited distance set back from the riverbank. Ultimately, these alternatives were eliminated from detailed analysis; however, the Pump Station Rest Stop was added to the Proposed Action alternative to offset the loss of BLM-G and BLM-H and Alternative 3 was developed and incorporated into the analysis of the Final EIS in response to concerns regarding public access to BLM-I. The discussion contained in Appendix E – *Alternatives and Design Components Considered but Eliminated from Analysis* further explains these changes and why certain alternatives, like those suggested by the commenter were not incorporated into the analysis. Refer to Chapter 3, Section B – Alternatives Considered in Detail for a full description of the Pump Station Rest Stop and Alternative 3, which would exclude a 76-acre section of BLM-I from the exchange to allow continued public access to that section of river. Impacts to traffic and access and to recreation as a result of this alternative are discussed in Chapter 3, Section B – Traffic and Access and Chapter 3, Section C – Recreation, respectively.

3.4 ***Include the costs to the BLM and the costs to the proponent of all work related to this land exchange to this point including scoping, meetings, coordination and preparation of reports and DEIS. This information is in the Feasibility Analysis, which should have been posted to the weblink along with the DEIS. However, this information is from no later than December 2004 (when the FA was signed), so updated information on the agency's costs is needed.***

The commenter is referred to the cover sheet of this Final EIS, which now includes a summary of costs incurred by both the BLM and Proponent to this point. This addition is consistent with recent BLM mandates to include cost information on environmental review documents.

3.5 ***In early June 2018, Colorado Wild Public Lands submitted FOIA requests for further information that have not yet been received at the time of submittal. Not having the detailed qualitative information from the requested documents has hampered our ability to thoroughly analyze the impacts of the proposed exchange. The DEIS described many of the documents we requested as “in the project file”, suggesting that the agency has ready access to them.***

The BLM responded to the Freedom of Information Act (FOIA) request submitted by Colorado Wild Public Lands. Although Colorado Wild Public Lands did not receive the requested information prior to the submittal of their DEIS comments, the BLM diligently processed the request consistent with the Department of Justice’s guidance for agency processing of FOIA requests (5 U.S.C. § 552).

3.6 ***There is no response to the scoping comments submitted in May-June of 2016.***

The commenter is referred to Chapter 1, Section H – Scoping and Public Involvement of this Final EIS, which summarizes how scoping comments were considered. As stated in this section, “An internal and external scoping process was used to identify potentially significant issues in preparation for impact analysis. The principal goals of scoping are to allow public participation to identify issues, concerns, and potential impacts that require detailed analysis” (Final EIS p. 7). Comments were categorized by resource and were used to develop the following issues and indicators, but were not responded to individually consistent with 40 CFR Part 1503 and more specifically 40 CFR § 1503.4, which states that an agency preparing a Final EIS shall assess and consider comments both individually and collectively, and shall respond by: modifying alternatives including the proposed action; developing and evaluating alternatives not previously given serious consideration by the agency; supplementing, improving, or modifying its analyses; making factual corrections; or, explaining why the comments do not warrant further agency response,

recognizing that agencies are not required to respond to each comment. The following responses in this appendix address comments in accordance with direction provided in 40 CFR § 1503.4.

4.0 PLANNING DOCUMENTS – GENERAL

4.1 *“Standards describe the conditions needed to sustain public land health ... “(DEIS 2-14). These standards address things like soil permeability, healthy plant communities and water quality. PLH Standards 1, 2, 3 and 5 all affect the overall water quality of watersheds and aquatic resources. The PLH standards help to guide management policies for the RMP, and the agency has the responsibility and the authority to apply them to grazing, recreation and resource extraction management. Public Land Health Standard 2 This is a measurement of the health of riparian ecosystems: “... riparian systems associated with both running and standing water function properly, and have the ability to recover from major disturbance (such as fire, severe grazing, or 100 year floods). Riparian vegetation captures sediment, and provides forage, habitat and biodiversity. Water quality is improved or maintained. Stable soils store and release water slowly.” DEIS 3-172 Standard 2 describes habitat that is essential to the water quality and subsequent biodiversity of a given watershed. It is affected by PLH Standards 1 and 3, soil permeability and healthy plant communities, respectively. Under the status quo, “Most of the federal parcels meet PLH Standard 2 ... they are largely dominated by native plants that are vigorous and desirable, with appropriate structural diversity, adequate composition, cover and density.” (DEIS 3-173) Because the status quo includes more wetlands and riparian habitats under federal stewardship than the proposed action would, larger acreages of public lands currently benefit from the RMP’s direction to achieve proper functioning condition and meet PLHS 2. RMP at 14.*

Conformance of the Proposed Action with Public Land Health Standards is discussed throughout Chapter 3 and Appendix G. Within the main body of this Final EIS, please refer to Chapter 3, Sections G – Wildlife, H – Vegetation, J – Water Quality Surface and Ground, K – Wetlands and Riparian Habitats, L – Floodplains, and within Appendix G, Section H – Soils.

4.2 *BLM acquired Parcel J through a previous land exchange. According to Section 205 of FLPMA: (c) Except as provided in subsection (e) of this section [P.L. 99-632, 1986], lands and interests in lands acquired by the Secretary pursuant to this section or section 206 shall, upon acceptance of title, become public lands, and, for the administration of public land laws not repealed by this Act, shall remain public lands. 43 USC 1715(c) Parcel j’s conveyance is contrary to this section of FLPMA; the DEIS does not include any details as to why BLM accepted this parcel in the previous exchange; thus it is not possible to assess whether its disposition, even if allowed through exception, is in the public interest.*

The commenter is referred to the response to Comment 2.6.

4.3 *The DEIS notes that Parcel BLM-J was acquired via the Eagle Pass Ranch Land Exchange, a 1999 trade between BLM and the Blue Valley Ranch (“BVR”). The Federal Land Policy and Management Act (“FLPMA”) generally prohibits the disposal of lands BLM has acquired by land trade. See 43 U.S.C § 1715(c) (“... lands acquired by the Secretary pursuant to ... section 1716 of this title, shall, upon acceptance of title, become public lands and ... shall remain public lands.”). There is an exception to this general prohibition but the DEIS provides no evidence of its applicability here. See 43 U.S.C § 1715(e). The FEIS must make clear whether BLM is prohibited by law from trading public land Parcel BLM-J.*

The commenter is referred to the response to Comment 2.6.

4.4 *There are significant natural values associated with the BLM parcels located close to the river. The 2015 RMP, (pages 53 and 54) identifies BLM lands with important values as being retention areas. This means that such lands would NOT be available for exchange. One of the criteria for identifying retention areas is “all lands within 0.5 mile of the Blue and Colorado Rivers”. Parcels G, H and I are within this zone, being located on the Blue River. Parcels J also meets this criteria, being next to the Colorado River. However, per the 2015 RMP, exceptions may include: lands on the list of Retention Areas included in a proposed land exchange for which an agreement to initiate an exchange was approved before the date of the Notice of*

Intent to prepare the DRMP/DEIS. Per the DEIS, the Blue Valley Land Exchange was originally initiated in 2005. The Notice of Intent to prepare the [Kremmling] DRMP /DEIS was published in the Federal Register in 2006. Thus, despite recognition of the values that would make Parcels G, H, I, J and K retention areas, they were removed from that status due to a dating rule.

As noted by the commenter, the inclusion of BLM-G, BLM-H, BLM-I, and BLM-J in the Proposed Action is consistent with the 2015 RMP. As described in Appendix F of this Final EIS, “lands included in a proposed land exchange for which an agreement to initiate an exchange was approved before the date of the Notice of Intent to prepare the [Kremmling] DRMP/DEIS are exempt from the requirement in the 2015 RMP that lands within 0.5 mile of either side of the Blue River be ‘retained’ by the BLM” (Final EIS App. F p. F-3). BLM-K is not classified as being within a retention area.

In addition, Alternative 3 has been added to the Final EIS to address resource concerns around BLM-I. As discussed in Chapter 2, Section B – Alternatives Considered in Detail, Alternative 3 would exclude a 76-acre portion of BLM-I from the land exchange to continue to provide public access to the Blue River. This alternative would also be consistent with the 2015 RMP.

5.0 VEGETATION

5.1 The DEIS states that “there are no federally threatened or endangered plants ... on any of the exchange parcels” (DEIS 3-126). However, there is Harrington Penstemon, a species identified by both BLM and the Forest Service as “sensitive”, on federal parcels G, H, I and K. According to the document, “the exchange would result in a net loss of 7 acres of Penstemon Harringtonii habitat for lands managed by the BLM.” (DEIS 3-129) While the agency’s assertion that the uses that occur on the lands in the exchange will not likely change very much, it is also true that there are fewer requirements for protections of natural resources on private property compared to BLM lands. While these 7 acres of sensitive plant habitat are under federal jurisdiction, the BLM has the authority to manage them and the surrounding lands in a manner that protects the plants; the land exchange would leave this entirely to the discretion of the landowners. BLM G, H, I and K should only be conveyed with a requirement for protective conservation easements.¹ Additionally, the DEIS does not include discussion of the cumulative loss of Penstemon habitat over multiple agency actions. (See Section for more about cumulative effects.)

The commenter is correct in their understanding of potential direct impacts to Harrington Penstemon. Impacts of the Proposed Action on the species is described in Chapter 3, Section H – Vegetation as “The exchange would result in the net loss of ownership and management of occupied Harrington penstemon habitat for the BLM. Approximately 7.3 acres of occupied habitat on Federal parcels BLM G, BLM H, BLM I and BLM K would be exchanged for 0.3 acre of occupied habitat on non-Federal BVR 3. Thus, the exchange would result in a net loss in the number of acres under BLM ownership of approximately 7.0 acres of Harrington penstemon habitat” (Final EIS p. 103).

Further, this Final EIS states that under the Proposed Action, “It is reasonably foreseeable that BVR would continue existing grazing practices on BLM-G, BLM-H, and BLM-I, and hence no new adverse indirect impacts to these plants are anticipated as a result of the exchange. BLM-K, however, would likely be transferred to Blue Valley Metropolitan District and could potentially be developed for community-based facilities. Most likely any facilities would be constructed on the level western portion of the parcel, which does not support any Harrington penstemon plants or potential habitat. However, there is a possibility of adverse impacts to these plants if development occurs on the sagebrush shrublands of this parcel. Overall, however, the loss of 2.9 acres of occupied Harrington penstemon habitat on BLM-K, if it occurred, would not result in the overall decline of this species as a whole and would not trend the species toward federal listing” (Final EIS pp. 98–99). In discussion of Alternative 3, the Final EIS states “It is important to note that 2.9 acres of the occupied Harrington penstemon habitat occurs on BLM-I. It is undetermined if the modified boundary associated with Alternative 3 would overlap the area of occupied habitat. In other words, there is a chance that some of the Harrington penstemon habitat would be retained under federal management based on the modified BLM-I boundary included in Alternative 3; however, it would not change the overall determination from what was reported under the Proposed Action Alternative for this species as it is reasonably foreseeable that BVR

would continue existing grazing practices on BLM-G, BLM-H, and BLM-I, and hence no new adverse indirect impacts to these plants are anticipated as a result of the exchange” (Final EIS p. 100).

The BLM would not require a conservation easement be placed on the 2.9 acres of occupied Harrington penstemon habitat on BLM-K that would be indirectly impacted by the proposed land exchange, as these impacts would not result in the overall decline of this species as a whole and would not trend the species toward Federal listing under either alternative. Cumulative effects related to the loss of Harrington penstemon are discussed in Chapter 3, Section M – Cumulative Effects, which states that “Cumulatively, the effects of the proposed land exchange under either of the action alternatives are not large enough in scale to generate impacts that would compound impacts to vegetation that have resulted from the previous land exchanges in the Analysis Area” (Final EIS p. 138). An analysis of agency actions outside of the Analysis Area is beyond the scope of this analysis.

6.0 WILDLIFE

6.1 *First in regards to the Green Mountain area, currently labeled BVR 2, 9, and 10. Nowhere in your EIS do you mention the resident herd of bighorn sheep. This is most concerning. If this area is opened to the public, I can pretty much guarantee that within the first year or two, a hunter will accidentally kill a sheep, mistaking it for a deer. In case you don't know, the sheep inhabit the upper portion of the mountain and down into the canyon.*

Chapter 3, Section G – Wildlife of this Final EIS has been updated to include additional analysis related to bighorn sheep that was completed subsequent to the release of the Draft EIS. This section describes the following impacts specific to this species, available on page 69 of this Final EIS.

6.2 *CPW [Colorado Parks and Wildlife] supports these exchanges to improve public hunting access on Green Mountain. Hunting is very popular in this area, and the current mixed land ownership is not well marked and very confusing to the public. CPW believes this exchange will improve access and opportunity for hunters. CPW recommends that if the new boundaries are to be marked, that they are posted with signs or markers but not with fences, which can impede wildlife movement. CPW also encourages the removal of old grazing fences on/between any of the parcels on Green Mountain. Green Mountain provides year-round wildlife habitat, including summer and winter range for elk, and summer range, winter range and winter concentration area for mule deer. Bighorn sheep also move through the area. Unmaintained fences are a hazard to animals, as they can become entangled in loose wire. CPW would be happy to assist in future fence removal efforts. CPW recommend that post-exchange, no additional roads or trails are to be created in the Green Mountain area. A few existing dirt roads and trails exist, some of which are open to motorized use and others that are not. CPW recommends restricting motorized use to roads that are currently open. Additional roads and trails and subsequent recreational use will negatively impact animals on summer and winter ranges.*

These comments support the analysis described in Chapter 3, Section G – Wildlife. As it relates to CPW's suggestions regarding trails and roads in the Green Mountain area, there are no additional roads and trails included in the proposed land exchange aside from the 0.3 mile of new trail associated with the Green Mountain Recreation Area Recreation Design Feature included in the Proposed Action. No new trail would be included in Alternative 3, as no Recreation Design Features are included in this alternative. All exchange parcels in the Green Mountain Area would be transferred to the United States and CPW's recommendations regarding motorized use and maintenance of existing roads would be considered in the agency's future management of these parcels. At this time the BLM's intended management of these parcels aligns with CPW's recommendations. For additional information specific to Bighorn sheep the commenter is referred to the previous response to Comment 6.1.

6.3 *This parcel [parcel BVR-8] is a 67.3 acre hay meadow currently owned by Blue Valley Ranch and leased to a neighboring ranch. The ranch cuts and puts up hay from this meadow every year. CPW strongly encourages BLM to keep this meadow in agricultural production through grazing or haying. If this is not feasible, CPW would like to recommend a partnership with BLM to perform a habitat project. When hay meadows are no longer used for hay production, the potential for the parcel to be overtaken by weeds is*

very high. This puts neighboring properties at risk for noxious weed infestation and reduces the quality of vegetation available for wildlife species. In addition, the parcel has a valuable water right that could be put to use for waterfowl nesting habitat or wetland conservation if it is not used for irrigation. The neighboring landowner has placed the adjacent land into a conservation easement held by Colorado Cattleman's Agricultural Land Trust. This land will be conserved for historical use in perpetuity. The acquisition of BLM-8 by the BLM will conserve this land and its important historic and wildlife values. Post-exchange public access to this stretch of the Blue River would make walk-in bank or wade fishing possible. Public access for such opportunities is currently limited south of Spring Creek Road. The Blue River from Green Mountain dam to the Confluence with the Colorado River holds the Gold Medal Water designation and is popular with anglers who float the River. The confluence of the Blue River, Colorado River and Muddy Creek is a popular spot for duck hunters. Waterfowl hunting access would also be increased in this river stretch and on the hay meadows post exchange. Blue Valley Ranch has proposed the funding of in-stream river work to improve the trout fishery in this stretch of the Blue River. If J-Hook vanes, "bankfull" benches, and toewood structures are put into this stretch, the angling experience would be greatly enhanced. This section of the Blue River is wide and shallow with little cover available for trout. The creation of trout habitat would disperse fish through the channel and allow for increased and a wider variety of fishing access than the current float access.

These comments support the analysis described in Chapter 3, Sections C – Recreation, E – Livestock Grazing Management, G – Wildlife, and I – Water Rights and Use of this Final EIS. As it relates to weed management, upland and riparian habitat restoration, water rights, and public access on BVR-8, the BLM is working with agency partners (i.e., CPW) to consider the most effective future management of this parcel to maintain current use. Any arrangement, agreement, or lease under either action alternative would allow for continued irrigation of BVR-8 for the production of wetlands and wetland plants for waterfowl, while also preventing noxious weed infestation.

6.4 *These BLM parcels [parcels BLM-G and BLM-H] are proposed to become private property in the exchange. These parcels are currently only legally accessible to neighboring private property owners or by floating the Blue River. These parcels provide an opportunity for floating fishermen to beach their rafts and wade fish or get out of their rafts. The Blue River would become all private property from the Grand County/Summit County line south to the lower Blue River takeout post-exchange. This would reduce trespass onto the private land, but wouldn't change the current float access to the Blue. Parcel H is not accessible from Spring Creek Road, and gets very little hunting use. Parcel G does provide opportunity for deer harvest during the hunting seasons. The conversion of these parcels to private land would be considered a loss for the public, but CPW feels this loss is outweighed by benefits to sportsmen and wildlife when the whole exchange is considered.*

These comments support the analysis described in Chapter 3, Sections C – Recreation and G – Wildlife regarding the sum of the impacts on recreation and wildlife from the Proposed Action. As discussed in those sections, the Recreation Design Features included in the Proposed Action would enhance recreation opportunities for the public along the Blue River and in some instances would benefit wildlife.

6.5 *In addition to being an avid fisherman, I am also concerned about the impact opening up the access to the public would have on the environment. This part of the Blue River is already accessible to the public by going to the dam. This limits the amount of people fishing on the river and benefits the wildlife by keeping a large amount of people from entering their habitat. The fishing is one of the best in the world. I am concerned that making our private access available to the public would create a scenario where it would be over-fished and would damage the quality and life of the trout and other animals that depend on the river.*

The proposed land exchange would have overall net benefits to aquatic life and wildlife in general. Substantial changes to fishing pressure on trout are not anticipated from either action alternative. The commenter is referred to Chapter 3, Section G – Wildlife for more detail.

6.6 *This 89.7 acre parcel [parcel BLM-J] was acquired by BLM in a past land exchange. CPW supports the trade of this property back into private ownership. This parcel was a hay meadow pre-exchange, and CPW recommends grazing, haying, or both be conducted on the parcel post-exchange.*

CPW's suggestions regarding agricultural use of the property after exchange have been noted but would be implemented at the discretion of the private owner should the proposed land exchange be approved.

6.7 *The DEIS does not mention bighorn sheep, yet this species is known to be present in the general area of Green Mountain. It is possible that sheep come down to the river for watering. If so, they could be affected by public use, particularly for hunting, of the now-private parcels that would be transferred to the BLM, and by the proposed trail from BVR 10. This potential effect, and any other impacts to sheep, should be addressed in the EIS. There is elk winter range on all parcels involved in the proposed exchange. DEIS at 3-86. The exchange would result in a net gain of 273 acres of this habitat in public ownership. Ibid. However, there would be a considerable (408 acres) loss of winter concentration area, and smaller losses of severe winter range and production (calving) area. Ibid. For mule deer, there would be sizable gains of winter range, winter concentration area, and critical winter range, and a loss of severe winter range. Ibid. The bottom line would be a net gain for deer winter range, but a loss for elk, as there would be a decrease of the latter's most important winter ranges in public ownership. The proposed exchange would appear to be a net gain for wildlife because of the gain of 299 acres of habitat for the sensitive (both Forest Service and BLM) species greater sage grouse. See DEIS at 3-104. But it would be helpful if the EIS analyzed and disclosed the relative values of the habitat involved in the exchange. The DEIS does note that both priority habitat management areas (PHMA) and general habitat management areas (GHMA) would be exchanged. Ibid. However, not all PHMA or GHMA are necessarily equal, as the value of the habitat depends in part of how big of a block it is part of. Or stated another way, small, isolated parcels of habitat would not be very valuable to the species. Thus an analysis of the sage grouse habitat in the parcels proposed for exchange (both ways) would be helpful in assessing the public interest. We have requested from the BLM documents relating to the proposed land exchange, including the biological assessment and biological evaluation. Once we receive and review these documents, we may have additional comments on impacts to wildlife based on the qualitative information within those documents which has not been available to us for this comment period.*

As it relates to bighorn sheep, the commenter is referred to the response to Comment 6.1. The commenter accurately describes portions of the analysis contained in Chapter 3, Section G – Wildlife of this Final EIS for elk, deer, and sage grouse.

The additional information requested by the commenter is not necessary for the decision maker to make a determination of whether or not the land exchange is in the public interest as the determination for sage grouse is already that under either action alternative the exchange, "may adversely impact individuals, but is not likely to result in a loss of viability in the planning area, nor cause a trend toward federal listing" (Final EIS p. 87). In essence this determination provides a worst-case scenario for impacts to this species, assuming effects associated with potential use of lands that would become private and anthropogenic disturbance on lands near the proposed Recreation Design Features that are included in the Proposed Action Alternative. Further, as sage grouse are a BLM and Forest Service sensitive species, they were analyzed in a Biological Evaluation. This report contains additional information about wildlife species that was is not included in the Draft EIS or Final EIS in an effort to cover substantive topics simply and concisely, consistent with 33 CFR § 230.13. As stated in the Biological Evaluation, BVR-1, BVR-3, and BVR-4 provide the best habitats for sage grouse, with BVR-2 and BVR-9 providing good habitats, but negatively impacted by their proximity to SH 9. BVR-5, BVR-8, and BVR-10 would not likely see any sage-grouse use due to habitats and proximities to anthropogenic disturbance areas. BLM-F, BLM-H, and BLM-I provide the best habitats; BLM-G and BLM-K do not likely see much sage-grouse use due to their proximity to anthropogenic disturbances, and BLM-A, BLM-B, BLM-C, and BLM-J do not support suitable habitats (and thus may only see very rare use). For additional information regarding sage grouse habitat, the commenter is referred to the BE.

Elk and deer are not protected species, and as the EIS discloses, the Proposed Action is expected to have little impact on these species.

6.8 *This parcel [parcel BVR-1] is currently private property. As part of the proposed land exchange, this 656.58 acre parcel would become BLM land. In addition, this would provide legal public access to a currently landlocked 480 acre parcel of BLM on San Toy Mountain. Increased legal access to San Toy post-exchange would especially benefit hunters. This area provides important habitat for mule deer and elk throughout the year. In addition, Rocky Mountain bighorn sheep, pronghorn, black bear, and mountain lion utilize the resources on the mountain during all or part of the year. The entrance of this parcel into the public trust would protect greater sage-grouse habitat including mapped breeding, production, and brood-rearing habitat. CPW encourages continued good grazing practices on Parcel BVR-1 for the benefit of rangeland health and wildlife habitat. The eastern portion of San Toy is in the Engle grazing allotment and the allotment is well managed. Currently a minimal number of roads exist on these parcels. CPW stresses the importance of this habitat for wildlife, and acknowledges that where road access is decreased, hunter success increases. CPW strongly recommends that no additional roads be created in these parcels post-exchange, CPW also recommends that existing roads be assessed to determine if closure to motorized use would be appropriate, especially to protect breeding sage grouse in spring and wintering deer and elk.*

These comments support the analysis described in Chapter 3, Section G – Wildlife. As it relates to CPW’s additional comments regarding road access and potential impacts on wildlife in the San Toy area, there are no additional roads and trails included in the proposed land exchange aside from the 0.3 mile of new trail associated with the Green Mountain Recreation Area Recreation Design Feature. As BVR-1 would be transferred to BLM, CPW’s recommendations regarding motorized use would be considered in the agency’s future management of these parcels. At this time the BLM’s intended management of these parcels aligns with CPW’s recommendations.

7.0 WATER/WETLANDS

7.1 *In addition, page 1-13 of the DEIS states the BLM’s policy is that mitigation in the form of deed restrictions can be used when required by executive order, clearly supported by the environmental documentation and closely coordinated with the Field or Regional Solicitor. The BLM’s policy also states that environmental mitigation in the form of reserved federal rights or interests should be evaluated for appropriateness as part of analysis of alternatives in the environmental documentation. Based on EO 11990 and BLM’s policy, we recommend that the FEIS evaluate, as part of the alternatives analysis, whether there are restrictions that are appropriate to place on the uses of the parcels acquired by BVR to protect those wetlands and their beneficial functions, such as restricting livestock grazing and prohibiting destruction of non-jurisdictional wetlands. Also consistent with EO 11990 and the BLM’s policy, we recommend that the EIS consider factors (including those listed in the EO and on page 3-156 of the DEIS) relevant to this proposal’s effect on the survival and quality of the wetlands. Finally, we recommend that the FEIS describe the grazing impacts to wetlands that could occur as a result of the proposed land exchange, especially in BLM-J, which is not currently grazed but could be in the future by Skylark Ranch, and in the western half of BLM-C, where a use of “open space” (Table 3Q-2) would likely be changed to an intended use by Sheephorn Ranch of livestock grazing. We note, however, that other sections of the DEIS indicate that BLM-C is already grazed; therefore, we recommend that the FEIS clarify if the eastern and western halves of BLM-C are currently grazed.*

The commenter is referred to Chapter 3, Section K – Wetlands and Riparian Habitats of this Final EIS, which has been updated to describe the proposed land exchange’s consistency with Executive Order 11990. Specially, as it relates to wetland impacts on BLM-J and changes in wetland functionality, this Final EIS has been updated to describe that the proposed transfer of BLM-J is consistent with Executive Order 11990, as local controls are in place that would preclude the destruction of wetlands on this parcel once transferred to private ownership.

As stated on page 119 of this Final EIS, “while there are no proposed or reasonably foreseeable plans for development on those parcels, and BVR has a demonstrated history of conservation and stewardship, the proposal of any unforeseen future development within the wetlands of those parcels would trigger 1) the stringent requirements of Section 404 of the Clean Water Act and 2) protective restrictions in the Grand County Planning and Zoning Regulations.” The Final EIS describes in detail that “any unforeseen attempts to develop the wetlands, either by BVR or the third parties eventually acquiring BLM-J and half of BLM-C, would require review and approval from the

USACE pursuant to Section 404 of the CWA. Essentially, this section and the accompanying regulations prohibit the discharge or dredged or fill materials into wetlands if (1) a practicable alternative exists that is less damaging to the aquatic environment or (2) the nation's water would be significantly degraded. Therefore, there is a significant regulatory scheme in place to protect the wetlands involved in the exchange" (Final EIS p. 119). Furthermore, local Grand County Zoning Regulations protect wetlands as "the parcels in question lie with the Forestry and Open Zone District pursuant to Section VI of the Grand County Zoning Regulations. The purpose for this district is to 'to protect land suitable for agricultural and related uses.' This subjects any development to the following restrictions relevant to wetlands protections:

- Other than the permitted uses listed in Section VI 6.1 [of the Grand County Zoning Regulations], any other "higher impact uses" such as camping, cemeteries, and public facilities are only permitted by special review of the Planning Commission and Board of County Commissioners, in which they consider, among other facts,
 - The visual, environmental, physiographic and socioeconomic characteristics of the land to be used [and];
 - Evaluation of the broad ecosystems, topography, soils, hydrology, geology, vegetation, wildlife, climate, and unique fractures so that approved special use shall result in the least possible adverse impacts within any zoning district (Section 11.2, p. 21)."

Together, the national and Grand County regulations are sufficient to protect wetlands that are transferred to private lands.

As it relates to BLM-C, this Final EIS has been updated to state that, "The sales agreement for BLM-C from BVR to Sheephorn Ranch, restricts development (as a deed restriction) and a condition of closing is that this sales agreement restricting development needs to be in escrow" (Final EIS p. 119). This deed restriction thus protects wetlands on BLM-C from potential impacts associated with development.

As described in Chapter 3, Section E – Livestock Grazing Management of this Final EIS, "It is reasonably foreseeable that BVR would continue existing grazing practices on the acquired Federal parcels BLM-A–C and BLM-F–I. It is anticipated that the southern portion (approximately 50 percent) of BLM-C would be conveyed to Sheephorn Ranch, and the acquired portion would likely be grazed. It is also anticipated that following the land exchange, BLM-J would be sold to the adjacent landowner, Skylark Ranch. The ranch would likely continue existing land management practices" (Final EIS p. 60). As discussed above, under the CWA, waters of the U.S. (including wetlands) are regulated and those who impact them (through either dredging or fill materials being placed in the wetland or adding a point source of pollution to the water) are required to obtain a permit from the USACE. Normal farming and ranching activity impacts are exempt (i.e., cow manure leaking into water) but the conversion of the wetland to upland or farmland would not be exempt and would be required to obtain a permit. Specific to wetlands themselves is the Highly Erodible Land Conservation and Wetland Conservation Compliance provisions, which prohibits producers from planting on converted wetlands or converting wetlands for crop production. In the context of Blue Valley Ranch, this would mean that continued grazing would be permissible on the non-Federal exchange parcels. The conversion of wetlands on the non-Federal parcels to upland or farmland would not occur subsequent to the transfer of the non-Federal lands into private ownership, and grazing practices of the private landowners typically utilize fencing designed to keep cattle out of riparian areas wherever possible.

7.2 *The land exchange would result in a net loss of: 6006 linear feet (>1 mile) of stream frontage (DEIS 3-147, 151); 61.8 acres of wetlands (DEIS 3-167); 4.6 acres of riparian habitat (DEIS 3- 171); 0.03 acres of fen habitat (DEIS 3-170); 3.2 acres of aquatic habitat (DEIS 3-171) This would adversely affect recreational opportunities. Recreation, especially fishing and boating, is a major use of the area of the land exchange. See further discussion in section III below. This loss of wetlands and riparian areas is in conflict with: "an important RMP goal to maintain proper functioning condition of riparian vegetation with management actions focused on ... protection of wetlands ... "(DEIS 3-157) The loss of wetlands, with no conditions requiring their protection, appears to violate at least the spirit of Executive Order 11990: When Federally-owned wetlands or portions of wetlands are proposed for lease, easement, right-of-way or disposal to non-Federal public or private parties, the Federal agency shall (a) reference in the conveyance those uses that*

are restricted under identified Federal, State or local wetlands regulations; and (b) attach other appropriate restrictions to the uses of properties by the grantee or purchaser and any successor, except where prohibited by law; or (c) withhold such properties from disposal. E. O. 11990, May 24, 1977, 42 Fed Reg 26961, section 4. Fens are a particularly rare and important type of wetland. As the Environmental Protection Agency (EPA) notes, Because of the large historical loss of this ecosystem type, remaining fens are that much more rare, and it is crucial to protect them. EPA's wetlands website at: <https://www.epa.gov/wetlands/wetlands-classification-and-types#fens>. This site also notes that "up to 10,000 years are required to form a fen naturally." Ibid. There are five fens included in the proposed land exchange, four on BLM C and one on BVR 3. These are very unique resources, and they receive special protections by the U.S. Army Corps of Engineers, charged with enforcing Section 404 of the Clean Water Act. Under the status quo, two of the four fens on BLM C do not comply with PLH Standard 2 due to grazing. However, federal ownership could allow future BLM restrictions on livestock grazing and other public uses, based on future assessments; the land exchange would eliminate this opportunity. There may be no immediate threat of loss of, or damage to, fens and other wetland types by the proposed land exchange, but adverse impacts to wetlands are much more likely to occur on private lands in the long term. The BLM should either not incur a net loss of wetlands, especially fens, in the land exchange, or place restrictions on the use of those wetlands exchanged to private. See footnote 1 and discussion in section V below.

As described in Chapter 3, Section J – Water Quality, there would be a net loss of 6,006 feet of river, perennial stream and intermittent drainages under BLM management under the Proposed Action. There would be a net loss of 4,901 linear feet of river, perennial stream, and intermittent drainages under BLM management under Alternative 3. The commenter correctly cites Chapter 3, Section K – Wetlands and Riparian Habitat, which describes the Proposed Action's net loss in ownership of approximately 4.6 acres of riparian habitat, 0.03 acre of fens, and 3.2 acres of aquatic habitat for the BLM. Alternative 3 would result in the loss of 1.2 acres of riparian habitat and 0.08 acre of fens and the net gain of 0.9 acre of aquatic habitat. As it relates to the net loss of wetlands under BLM ownership, additional information related to Executive Order 11990 has been added to Section J, stating that the proposed land exchange is consistent with Executive Order 11990 and details related to specific parcels are provided. Although BLM has the authority to use instruments such as conservation easements under 43 CFR § 2200.0-6(i), the authorized officer has not identified a situation where rights or interests must be retained to protect public interest and restrict the use of federal lands to be exchanged. As mentioned in the response to the previous Comment 7.1, federal and local regulations are in place that preclude the destruction of wetlands, and in the instance of BLM-C, BVR would convey the parcel to Sheephorn Ranch with a deed restriction that precludes development on this parcel. Also described in the response to Comment 7.1 is the fact that normal farming and ranching activity impacts to wetlands are exempt under the CWA. Further, establishment of conservation easements on federal lands that would be exchanged under the proposed land exchange would not be possible as BVR has made clear that it would not be willing to exchange lands under these conditions.

7.3 *Water, wetlands and riparian - DEIS at 3-174. Alt 2 would result in a net loss of 61.8 acres of wetlands, 4.6 acres of riparian habitat, and 3.2 acres of aquatic habitat. DEIS at 3-168. The DEIS states: "the USACE policy generally requires mitigation for wetland impacts greater than 0.10 acre". Mitigation can include the construction of new wetlands to replace those that were lost ... the restoration of a degraded wetland, or a combination of these." DEIS 3-17 4 Absent this mitigation, Executive Order 11990 "directs federal agencies to ... withhold such properties from disposal." (DEIS 3-156; see also E. O. 11990 section 4) Similar to the protection for fens discussed above, the recipients of the federal land containing wetlands should be required to restore and protect wetlands as appropriate, as a condition of receiving these properties. BVR should be required to have conservation easements on Parcels G, H, I and J to discourage livestock grazing in riparian areas, protect H. penstemon plants and habitat, prohibit the separation of water rights from the parcels, prohibit residential development in riparian areas and view planes, and prohibit the development of leasable and salable mineral resources.*

The commenter is referred to the responses to the previous Comment 7.1 and Comment 7.2.

7.4 *The proposed public improvements (in-stream fishery improvements, accessible fishing platforms, boating put-in/take-out, trails, parking areas and day use areas) within BVR Parcel Ba will provide a tremendous benefit to the public and will likely result in a direct economic benefit to the Town of Kremmling. We have been provided a copy of the current BLM Access Easement to the existing public land near the confluence and understand it allows for permanent access to BVR Parcel 8a, as well. Perfecting a public high water mark easement now or in the future on the west bank of the Blue River along the common boundary between BVR Parcel 8a and Sand Toy Land Company would eliminate any future trespass issues from wade fisherman in this section, as the property line is depicted to be the middle of the river.*

The commenter is referred to the analysis described in Chapter 3 of this Final EIS and its appendices regarding the sum of the impacts on recreation and social and economic resources from the Proposed Action. The commenter's additional suggestions are beyond the scope of this analysis but would be considered by the BLM should BVR-8 and the Chevron parcel be acquired in the proposed land exchange.

7.5 *Page 3-150 of the DEIS states that the section of the Blue River that passes through the Analysis Area is impaired for temperature. The DEIS also states that USGS data from 1984-2007 for that section of the Blue River documented that almost all water temperature measurements and dissolved oxygen concentrations met the CDPHE [Colorado Department of Public Health and Environment] standard for aquatic life protection. It is not clear what these data indicate about the impairment since the description of the data appears inconsistent with a temperature impairment. We recommend that the FEIS reconcile this information.*

The commenter correctly references Chapter 3, Section J – Water Quality. The discrepancy identified by the commenter is a result of two different data sources providing different assessments of this stretch of the Blue River. The documents cited showed that while the CDPHE (2016) listed the Lower Blue River as being “impaired at a high priority for temperature,” the USGS Analysis of Water Quality in the Blue River Watershed, Colorado, 1984 through 2007 (2013) data showed that, “Almost all water temperature measurements and dissolved oxygen concentrations met the CDPHE standard for aquatic life protection.” CDPHE may consider water temperature a possible concern for the Lower Blue River through the project site due to the upstream impoundments at Dillon and Green Mountain Reservoirs.

7.6 *The DEIS states that the proposed land exchange would result in a net loss by BLM of 61.8 acres of wetlands, 71% of which are natural (i.e., not irrigated). The DEIS does not, however, include a discussion of the consistency of the proposed land exchange with EO 11990. When federally owned wetlands or portions of wetlands are proposed for disposal to non-federal public or private parties, EO 11990 directs federal agencies to (a) reference in the conveyance those uses that are restricted under identified federal, state or local wetlands regulations; and (b) attach other appropriate restrictions to the uses of properties by the grantee or purchaser and any successor, except where prohibited by law; or (c) withhold such properties from disposal.*

The commenter is referred to the response to Comment 7.1, which describes updates that were made to this Final EIS related to Executive Order 11990.

7.7 *The proposed land exchange would result in a net loss of streams and rivers by the BLM and would be exempt from the requirement in the Kremmling Field Office's Resource Management Plan that lands within 0.5 mile of either side of the Blue River or Colorado River be retained by the BLM. In addition to the information provided in Table 3S-1, it may be helpful to estimate the acres of floodplain that would be exchanged under the proposal, in order to make it clear which party would gain more or less of this resource. Similar to EO 11990, EO 11988 requires that when federal property in floodplains is proposed for disposal to non-federal public or private parties, the federal agency shall (1) reference in the conveyance those uses that are restricted under identified federal, state or local floodplain regulations; and (2) attach other appropriate restrictions to the uses of properties by the grantee or purchaser and any successors, except where prohibited by law; or (3) withhold such properties from conveyance. Therefore, we recommend that the FEIS evaluate, as part of the analysis of alternatives, whether there are restrictions*

that are appropriate to place on the uses of the parcels acquired by BVR to protect those floodplains and their beneficial functions, including flood water storage and conveyance, water quality protection, groundwater recharge, biological productivity and diversity, and wildlife habitat. To facilitate ease of understanding, in the section on Environmental Effects, we recommend separating the subsections into federal and non-federal parcels, as was done for other resources in the EIS.

The commenter is referred to Chapter 3, Section L – Floodplains of this Final EIS, which discusses the direct effects to floodplains associated with the proposed land exchange under both action alternatives. There would be no effect to floodplains as there is no development proposed on any of the parcels including floodplains and applicable Grand County, Colorado land use regulations would apply to any future developments to protect watershed resources and floodplains. The following additional information was added to this Final EIS on pages 134–135, stating that “applicable Grand County, Colorado land use regulations would apply to any future developments to protect watershed resources and floodplains that would be transferred into private ownership. The Federal parcels located within floodplains are all in Grand County, which has regulations in place that require permitting for recreation and higher impact uses that could be pursued on parcels with floodplains. While there are no foreseeable plans for development on those parcels, if any unforeseen development within the floodplains of those parcels is proposed once they are no longer in federal ownership, it would be subject to protective restrictions in the Grand County Planning and Zoning Regulations as follows:

- Section 3.3.5 (“Floodplain Management”) of the Storm Drainage Design and Technical Manual states: ‘in general, floodplains should be left in historic condition whenever possible. The policy of the county shall be to leave floodplains in a natural state whenever possible.’ (Grand County 2006)
- Section 14.3 (Supplementary Regulations—Major Flood Channels) of the Zoning Regulations states: ‘Buildings or other structures, except a flood control dam or irrigation structure, shall not be constructed in areas subject to inundation unless and until the plans for such building or structure are first approved by the Board of County Commissioners subject to the following special conditions: (1) Any building or structure which is approved shall be located so as to offer minimum obstruction to the flow of flood water, and shall not cause lands outside of the natural flood channel to be flooded; (2) No dwellings shall be permitted; (3) No schools, churches, or other places of public assembly shall be permitted; and (4) No storage of materials which could be moved by flood waters shall be permitted’ (Grand County 2017).”

The section also states that “further, in-stream improvements proposed for the Confluence Recreation Area and Recreation Design Features proposed for the Confluence, Green Mountain and Spring Creek Bridge areas, including enhanced public access to the Blue River in the form of a trail for fishing access, fishing and access easements, wheelchair access facilities, parking lots, picnic tables, seasonal toilets, and take-out facilities for rafts, many of which would be located in the floodplain of the Blue River have been designed to minimize the effects of dispersed human use at river access locations. As dispersed use at public lands that are popular amongst recreationists creates erosion, compacts soils, and removes vegetation, the proposed Recreation Design Features would provide for the enjoyment of these lands in a way that is not anticipated to negatively impact floodplains as a result of their formalized nature. By encouraging human access at designated access points, this would minimize the creation of informal trails and roads to access the river elsewhere. Additionally, the proposed Recreation Design Features would be constructed to minimize impacts on floodplain function, such as placement of structures so as to not impede flood flows, permeable parking lots to encourage water infiltration, placement away from wetland and riparian areas, replanting of areas de-vegetated by dispersed use, and other necessary measures that may become applicable as these sites are used over-time” (Final EIS p. 134). As discussed in the Final EIS, Alternative 3 would not include any Recreation Design Features, a portion of BLM-I, or BVR-3 and BVR-4, but otherwise overall impacts to floodplains would be similar to those discussed under the Proposed Action.

The requested organizational edits were not made to this section, as the current structure of the Environmental Effects discussion is believed to cover substantive topics simply and concisely, consistent with 33 CFR § 230.13.

7.8 *We suggest clarifying in the FEIS whether development may occur in the floodplain of the Blue River, and if it may, explain how such development would be consistent with EO 11988, which requires federal*

agencies to avoid direct or indirect support of floodplain development wherever there is a practicable alternative.

There is no development currently proposed in the floodplain of the Blue River. As stated in Section H – Floodplains of this Final EIS, “The floodplains on the acquired non-Federal parcels would be managed by the BLM in accordance with Executive Order 11988 and other federal laws. The 2015 RMP has stipulations that require BMPs for the areas that buffer all streams and drainages. Any future development on the floodplains of streams and rivers on the acquired parcels would require a NEPA analysis of potential impacts to floodplain functionality and an assessment of the risk of flood hazards” (Final EIS p. 129). This statement is applicable to the Recreation Design Features (take-out, fishing access, and other day-use amenities) that would be constructed at the Confluence Recreation Area, which can be constructed within a floodplain as long as the provisions of Executive Order 11988 are adhered to. In addition, Alternative 3 would not include the development of the Recreation Design Features and would therefore not impact floodplains through these features.

8.0 LANDS AND REALTY

8.1 The proposed Blue Valley Ranch land exchange is a transaction between the BLM and Blue Valley Ranch; however, because the assets involved in the transaction are public, there are collateral impacts to parties outside of the exchange and the valuation of the public lands should take this into consideration. The most obvious impact is the loss of public lands along a gold medal trout stream. BLM G, H, and I offer the same amenities whether they are in public or private ownership - access to the river and enjoyment of the recreational resources the access allows. In conveying these parcels to the Blue Valley Ranch, the BLM eliminates the general public’s ability to enjoy this stretch of river, unless individuals are able and willing to pay the private guides that enjoy leases with the Blue Valley Ranch. In this respect, not only does the land exchange enrich the owners of the Blue Valley Ranch, but it enriches the professional guides who hold leases with BVR for access to this long stretch of the Gold Medal Blue River. Effectively, the land exchange makes a formerly public asset exclusive to those who have the connections or the financial means to access it. Another collateral impact from the land exchange is the taking of the enjoyment of BLM G from the residents of the 200 homesites in the subdivisions above. Colorado Wild Public Lands has had discussions with homeowners there who bought their property because of the access to BLM G and its location on the river; the homeowners use G extensively as an open space amenity, including the river access. The land exchange would remove this amenity from the neighborhood, negatively impacting their property values. The appraisal of BLM G should acknowledge this impact. One must infer that the purpose of the BLM K “gift” to the Blue Valley Acres #2 subdivision is an attempt to replace this amenity; but, the upland sagebrush habitat on K is not in any way comparable to the river access provided by BLM G. Moreover, the subdivision is already the primary, if not only, beneficiary of BLM K due to its location between the subdivision and adjoining BLM land. In fact, rather than conveying BLM K to BVR, the public might be better served by selling it for residential development.

As directed by the BLM Land Exchange Handbook (H-2200-1) Chapter 7 Section K – Appraisal Availability to the Public, the BLM has determined it is not appropriate to release the appraisals to the public prior to the Notice of Decision. As stated in the handbook, “approved ASD appraisals and review reports are official records used by the BLM in setting the price and reaching agreement on realty transactions. They are internal documents and are not subject to public release until the BLM has taken an action utilizing the information in the report. The appraisal report and appraisal review must be made available when the Notice of Decision is issued pursuant to 43 CFR § 2201.7-1(a).”

The commenter has highlighted a number of features on certain Federal parcels that may or may not have had influence in the valuation of exchange parcels. This is largely conjecture and does not warrant a change to this Final EIS or the valuation of parcels described in its analysis. Valuation of the exchange parcels have been approved by the USDI Appraisal and Valuation Services Office and were completed consistent with Federal regulations described in Appendix C of this Final EIS. USDI Interior Department of Land Appeals upholds that a third-party who disagrees with a federal appraisal must demonstrate that there was a flaw in appraisal analysis and do so by submitting an appraisal of their own.

Chapter 3, Section D – Social and Economic Resources of this Final EIS has been updated to provide the following information with regard to the exchange of BLM-G and the potential effect this would have on homeowners in the Blue Valley Metropolitan District by saying “BLM acknowledges that access to this parcel and the Blue River via this parcel may be the reason that individuals purchased property in Blue Valley Metropolitan District. While there may have been a perception that this land would exist in BLM ownership in perpetuity, this parcel is described as being appropriate for disposal in the 2015 RMP.” (Final EIS p. 59) The Lands and Realty discussion in Appendix F provides additional details around the RMP direction. As described in the RMP and disclosed in Appendix F, refer to the Lands and Realty discussion in Appendix F for additional details around the RMP direction. As described in the RMP and disclosed in Appendix F, “Some of the Federal parcels, particularly BLM-G, BLM-H, BLM-I, and BLM-K, are located within 0.5 mile of either side of the Blue River. Additionally, BLM-J is located within 0.5 mile of either side of the Colorado River. As stated under Allocations and Management Actions of the 2015 RMP, these parcels would classify as “retention” areas because they are in, “[m]ajor river corridors [0.5 mile on either side of the following rivers: Colorado, Blue, Fraser (Grand County), and North Platte (Jackson County)] (19,900 acres).” However, as stated under Exception Criteria for Retention Areas of the 2015 RMP, “Lands on the list of Retention Areas included in a proposed land exchange for which an agreement to initiate an exchange was approved before the date of the Notice of Intent to prepare the DRMP/DEIS.” Thus, BLM-G, BLM-H, BLM-I, BLM-J and BLM-K are not classified as retention areas because the currently proposed exchange was initiated in 2005 and the Notice of Intent to prepare the [Kremmling] DRMP/DEIS was published in the Federal Register in 2006” (Final EIS App. F p. F-3). Therefore, it is evident that this parcel has been clearly designated as being appropriate for disposal.

As it relates to BLM-K, the commenter is referred to Appendix E of this Final EIS, which describes an alternative in which BLM-K would not be included as a part of the exchange. BVR has no interest in retaining this parcel and propose that it would be better suited under the ownership of Blue Valley Metropolitan District. Exchange of the BLM-K parcel for other parcels in order to unify boundaries associated with, and improve management of, public lands while minimizing and reducing conflict helps achieve the Purpose and Need of the Proposed Action.

In addition, Alternative 3 excludes a 76-acre portion of BLM-I that provides public access to the Blue River. Additional details of parcel configuration included in Alternative 3 can be found in Chapter 2, Section B – Alternative Considered in Detail.

8.2 *When one looks at these parcels on a map, their assemblage value is obvious; they are surrounded by or adjacent to the Blue Valley Ranch; this is also true of BLM A, B, and C and F. Moreover, once included with the BVR and no longer available to the public, they become exponentially more valuable. BVR is already a very large and exclusive property and the land exchange will render it even more so. If the BLM parcels were in private ownership, they would be priced in a manner that would reflect their value to the Blue Valley Ranch; the smart willing seller, would bet that BVR would spend a lot of money to ensure that no one else would become the owner of those properties and the appraisals should consider the value of this exclusivity. A large part of the real estate appeal in the area of the BVR is the exclusive fishing opportunities available to owners of riverfront property along this Gold Medal trout stream. The length of riverfront included on one of these properties directly affects the value of that property; even owners in the subdivision adjacent BLM G considered the access to the river from BLM G in their decision to purchase their property. It would be erroneous to assume that the proponent is not aware of this aspect of the BLM riverfront parcels; though the current value of BVR's large assemblage of real estate is exclusivity to the proponent, he is aware of the future potential of subdividing the property. An unconventional highest and best use is a Ranch Preservation Community (RPC)³, This is a large acreage, limited lot subdivision, in which smaller, deeded acreages are sold as homesites, but include a common interest in a much larger acreage. The appraiser writing the article found that acreage marketed this way sold for substantially more than similar properties marketed as ranch property. Typically, these homesites are marketed for their privacy, exclusivity, natural beauty, recreational opportunities such as hunting and fishing, cultural resources, biodiversity and contiguity to large blocks of public lands - a little like Blue Valley Ranch. Inclusion of G, H, and I not only imbues these parcels with all this potential value, but creates a mini-*

feedback loop in which the parcels make the Ranch more valuable because there is no longer public access to the river, and that in turn makes the parcels themselves more valuable.

Valuation of the exchange parcels have been approved by the USDI Appraisal and Valuation Services Office and were completed consistent with Federal regulations described in Appendix C of this Final EIS. USDI Department of Land Appeals upholds that a third-party who disagrees with a federal appraisal must demonstrate that there was a flaw in appraisal analysis and do so by submitting an appraisal of their own. The commenter has highlighted a number of features on certain Federal parcels that may have influenced the valuation of exchange parcels. This is largely conjecture and does not warrant a change to this Final EIS or the valuation of parcels described in the analysis.

8.3 *It is likely that the BLM parcels will be (or perhaps already have been) appraised as not publicly accessible. First of all, that is not quite true, as public access to G and H is the base of most opposition to this exchange; they are both accessible from the river, which is a public thoroughway. Secondly, while it is true that there is no motorized access pre-exchange, their assemblage with BVR will provide motorized access. Consideration of these parcels as inaccessible will artificially deflate their value as the exchange will make them accessible. Under UASFLA [Uniform Appraisal Standards for Federal Land Acquisitions], the Highest and Best Use analysis requires detailed consideration of not only the present use of a property, but also any future potential uses.*

The valuation of the parcels considered for the exchange has been conducted under the Uniform Appraisal Standards for Federal Land Acquisitions *Highest and Best Use* analysis, which may or may not have considered the features identified by the comment. For more information about the valuation process in general, the commenter is referred to response to Comment 8.2

8.4 *The appraisals should avoid errors of attribution, or potential errors in attribution, resulting from the use of summation appraisal methodology. Adding together the market values of various portions of a proposed land exchange to reach a value conclusion may not appropriately represent the value of the whole. In some instances the use of summation methodology may be appropriate, but this should be clearly supported by market evidence where possible. The appraisals should pay close attention to the individual values of the smaller public parcels in the exchange, A, 8, C, F, and J. Whether they are home to unique resources can impact their individual values. For example, the fens on BLM C are a unique habitat that has both natural and aesthetic values. The DEIS identifies the presence of cultural resources on the BLM lands; their presence could impact the value of these lands. Additionally, there is a very specialized real estate market that can place surprisingly high values on inholdings, as the threat of their development takes value away from surrounding lands. If these parcels are Category 1 parcels under the land tenure adjustment section of the RMP [the DEIS does not discuss this], these parcels could be sold to parties other than BVR; this possibility of being available to competing parties could affect the value of these smaller acreages; thus, the appraisals should also account for the land tenure status of these parcels.*

The commenter is correct that not all parcels are one-to-one habitat trades or replacements, as that is not a requirement of the valuation process, which focuses rather on the sum total of the land exchange resources and values. The commenter is referred to response to Comment 8.2 and Appendix C of this Final EIS for additional details on the USDI Appraisal and Valuation Services Office appraisal process.

8.5 *BLM-K would be donated to the Blue Valley Acres #2 homeowners association. Skylark Ranch and Sheephorn Ranch would incorporate the acquired land into their ranching operations and the Homeowners Association would likely use BLM-K as open space and for recreation. DEIS at 3-139. In addition to the above proposed transactions, the Proponent intends to buy BVR-9 from Summit County and transfer it to the USFS via the BLM. “BVR-9, which is subject to an existing purchase option between BVR and Summit County ... “ DEIS at 3-3 There needs to be disclosure of the agreements or MOU’s relating to ensuing private to private land exchanges and clarity on the future uses of the parcels. Currently, this information is either missing or unclear in the DEIS. For example, a comment addressed at the open house meeting at Silverthorne library June 4, 2018 suggested that Blue Valley home owners could potentially put in a fire hall and sell parcels to adjacent landowners to pay for that community asset, as*

long as it was a community need. This is different than the open space/ recreation uses anticipated in the DEIS and would also affect property values.

Following the release of the Draft EIS, additional information has become available related to post-exchange agreements and additional transfers of ownership. As it relates to BLM-K and its proposed transfer to Blue Valley Metropolitan District subsequent to completion of the proposed land exchange, this Final EIS has been updated to state that, "...BLM-K would be transferred to Blue Valley Metropolitan District with a condition of closing that the parcel is to be used for community purposes. Specifically, this binding agreement states that there would be no development for the purpose of housing or commercial uses allowed on this parcel" (Final EIS p. 15).

As it relates to BLM-C and its proposed transfer to Sheephorn Ranch subsequent to completion of the proposed land exchange, this Final EIS has been updated to state that, "The sales agreement for BLM-C from BVR to Sheephorn Ranch, restricts development (as a deed restriction) and a condition of closing is that this sales agreement restricting development needs to be in escrow" (Final EIS p. 119). This deed restriction on BLM-C thus protects wetlands from potential impacts associated with development. The commenter is incorrect in their understanding of the transfer of BVR-9. As stated in the Chapter 1 of this Final EIS, "BVR-9 is owned by Summit County as part of its open space program. The parcel is bounded by BVR-2 on the north, west and south and other BLM managed land on the east. BVR has an option from Summit County to purchase this parcel concurrent with the closing of the land exchange and convey the parcel to the BLM. Inclusion of this parcel in the exchange would allow for consistent land management by BLM after the exchange is completed" (Final EIS p. 4). As highlighted in this text, BVR-9 would not be conveyed to the Forest Service. BVR-2 would be conveyed to the Forest Service. As stated in Chapter 1 of this Final EIS, "Approximately 300 acres in the southern half of BVR-2 would automatically become National Forest System (NFS) lands under the Federal Land Management and Policy Act because they are within the WRNF's administrative boundary. These lands would then be managed by the WRNF" (Final EIS p. 5).

8.6 *Information on additional beneficiaries and related agreements -There are no details regarding the arrangements between the proponent and the three thirdparty beneficiaries of the land exchange. The public has a right to know whether or not there is any profit associated with these outside transactions on public lands. The proposed transactions are as follows: Parcel K to Blue Valley Acres HOA, part of Parcel C to Sheephorn Ranch, and Parcel J to Skylark Ranch. BVR 2 is owned now by Summit county with an option for BVR to purchase and convey to USFS via BLM. There should be multiple agreements for these conveyances, and drafts should be in a DEIS appendix.*

The commenter is referred to the response to the previous Comment 8.5, as well as the response to Comment 7.1, which details the post exchange agreements related to BLM-J and Skylark Ranch.

8.7 *The DEIS does not state the land-tenure categories of the federal parcels.*

The commenter is referred to Appendix F of this Final EIS, which describes the Proposed Action's conformance with the 2015 RMP. The 2015 RMP provides direction related to land tenure adjustments, found under the "Lands and Realty" Decision in Chapter 2 – Plan Decisions (RMP pp. 52–55). Parcels are described in this appendix as it relates to the land-tenure categories of retention, acquisition, and disposal.

8.8 *These three parcels [BLM G, H, and I] are the heart of the exchange; they are by far the most valuable of the public parcels as far as the proponent is concerned as their acquisition will give him total control of almost 20 linear miles of a Gold Medal fishing resource. Ironically, this value is exactly the same for the public. BLM G and H are key parcels for those who wish to float this section of the river; while it is still possible to do so without the BLM parcels; it is improbable that people will, as the land exchange will eliminate any stopping points, causing one to spend 8 hours in a boat. Parcel I is downstream of the proponent's fish habitat improvements, and the current public access to that parcel is also access to the proponent's trophy sized trout. CWPL has been reaching out to anglers asking whether they use this now public amenity and, despite BLMs assertion that this is stretch is little used, we are finding that people come from all over the state to float and fish this river stretch. Other people have told us that they have not floated this stretch, but they are aware of it and would like to. This Blue River run has a following, and BLM should not minimize that following. The recreational value of G, H and I are precisely what makes*

them attractive targets for assemblage with BVR. As such, the appraisals should not undervalue the recreational amenities of G, H and I.

The commenter is incorrect in their understanding of how the transfer of BLM-G and BLM-H would impact the existing recreation experience for those floating the Blue River. Additionally, as described in Chapter 2, Section B – Alternative Considered in Detail, the Pump Station Rest Stop was added to the Proposed Action Alternative. As described in Chapter 3, Section C – Recreation, “The impacts of the loss of public use of BLM-G and BLM-H would be diminished by the proposed Recreation Design Features at Spring Creek Bridge and Pump Station Rest Stop. An analysis of float times shows that under various flow regimes the proposed Spring Creek Bridge Take-Out and Rest Stop and BLM-G and BLM-H are approximately 15 to 20 minutes away from one another (Kossler 2016). The enhanced site at Spring Creek Bridge would include a permanent rest stop with the right to re-enter the river and take-out for floaters with picnic tables, a seasonal toilet, and improvements related to parking and access on existing BVR property at the Spring Creek Bridge. The Pump Station Rest Stop would provide an additional permanent rest stop with the right to re-enter the river, seasonal toilet, and informational signage.

In summary, users that previously used the Federal parcels as a stopping point (BLM-G and BLM-H), would no longer be able to stop in this area and would have to stop earlier at the proposed Spring Creek Bridge Take-Out and Rest Stop or at the proposed Pump Station Rest Stop that is approximately 3.1 miles downstream. As the Pump Station Recreation Design Feature is located approximately 3.1 miles downstream of the Spring Creek Bridge Take-Out and Rest Stop and 6.8 miles upstream of the Lower Blue River Take-Out the Proposed Action Alternative would provide similar distances between rest stops as BLM-H and BLM-I that are currently utilized by the public. Overall, the Pump Station Rest Stop and Spring Creek Take-Out and Rest Stop would help mitigate loss of public access to BLM-G, BLM-H, and BLM-I, which recreationalists can currently use as rest-stops during floats.

Additionally, the proposed permanent rest stops and take-out are expected to provide a better stopping point than currently available on BLM-G and BLM-H, as their location severely limits the BLM’s ability to manage and provide necessary services on these parcels” (Final EIS p. 45). Further, while the analysis in this Final EIS describes minimal use on the exchange parcels, it is undisputed that the stretch of Blue River from below Green Mountain Reservoir to the confluence with the Colorado River is widely used and recognized as a world class opportunity for a number of user groups when flows support lawful floating. As described in Chapter 3, Section C the exchange of BLM-G and BLM-H would change certain aspects of this experience, but would not have a measurable impact on the experience as a whole. As it relates to alternate exchange options of riverfront parcels, the commenter is referred to Appendix E of this Final EIS, which describes alternatives and design components considered but eliminated from detailed analysis. A discussion of parcel valuation is provided in response to Comment 8.2.

In addition, an alternative has been added to address resource concerns associated with BLM-I. Under Alternative 3, a 76-acre portion of BLM-I would be excluded from the exchange to continue to provide public access to the Blue River. However, this alternative would continue to include BLM-G and BLM-H, and would result in the loss of public access of these parcels, and would not include any Recreation Design Features. Chapter 3, Section C – Recreation further details Alternative 3’s impacts to the recreation resource.

9.0 SOCIAL AND ECONOMIC RESOURCES

9.1 *Losing this access will greatly reduce the value of my property to me and eliminate my favorite place to fish and go for a walk.*

The commenter is referred to the response to Comment 8.1, which discusses the loss of individual property values resulting from the transfer of public lands. Specifically, this response states that the “BLM acknowledges that access to this parcel and the Blue River via this parcel may be the reason that individuals purchased property in Blue Valley Metropolitan District. While there may have been a perception that this land would exist in BLM ownership in perpetuity, this parcel is described as being appropriate for disposal in the 2015 RMP” (Final EIS p. 56). The Lands and Realty discussion in Appendix F provides additional details around the RMP direction. As described in the RMP and disclosed in Appendix F, “Some of the Federal parcels, particularly BLM-G, BLM-H, BLM-I, and BLM-K, are located within 0.5 mile of either side of the Blue River. Additionally, BLM-J is located within 0.5 mile of either side

of the Colorado River. As stated under Allocations and Management Actions of the 2015 RMP, these parcels would classify as “retention” areas because they are in, “[m]ajor river corridors [0.5 mile on either side of the following rivers: Colorado, Blue, Fraser (Grand County), and North Platte (Jackson County)] (19,900 acres).’ However, as stated under Exception Criteria for Retention Areas of the 2015 RMP, ‘Lands on the list of Retention Areas included in a proposed land exchange for which an agreement to initiate an exchange was approved before the date of the Notice of Intent to prepare the DRMP/DEIS.’ Thus, BLM-G, BLM-H, BLM-I, BLM-J, and BLM-K are not classified as retention areas because the currently proposed exchange was initiated in 2005 and the Notice of Intent to prepare the [Kremmling] DRMP/DEIS was published in the Federal Register in 2006” (Final EIS App. F p. F-3). Therefore, it is evident that this parcel has been clearly designated as being appropriate for disposal.

County property valuation information can be found at <https://co.grand.co.us/133/Assessor>.

9.2 *As a new resident, I was not informed about this possibility. This was not mentioned by the realtor, the BLM, or Blue Valley. I bought the land and built a house due to the private access to the Blue River. I don’t think a land exchange benefits me individually in any way. I am concerned with that the increased amount of people would also disrupt the peace and natural surroundings that I now have.*

The commenter is referred to response to Comment 8.1 and Comment 10.1.

9.3 *My house backs up to BLM G. One of the main reasons we purchased the home we own is because of that parcel. We wanted the ability to walk out of our back door and have public land there. With that being BLM we knew that that land wouldn’t be developed. Also, between the homeowners in Spring Creek and Blue Valley Acres, there are nearly 200 homes that have access to that area. Despite what your study says, that parcel sees use. We walk our dogs down there. I hunt coyotes back there. The public uses the area at the river as a stop prior to continuing through BVR. I feel if this becomes just another property for Paul Tudor Jones, it is going to hurt my property values as well as the values of my neighbors. So they want to “gift” BVMD a patch of sagebrush adjacent to highway 9. Some gift. That piece of ground is worth as much to us as it is to them. NOTHING!*

The commenter is referred to the response to Comment 9.10, Comment 10.1, and Comment 10.2.

10.0 PALEONTOLOGICAL RESOURCES

10.1 *Portions of BLM parcels G, H, K, and I are in Potential Fossil Yield Classification (PFYC) 5 (DEIS at 3-67), under which the probability for impacting significant paleontological resources is high. The area should be assessed prior to land tenure adjustments. Pre-work surveys are usually needed and on-site monitoring may be necessary during land use activities. Avoidance or resource preservation through controlled access, designation of areas of avoidance, or special management designations should be considered. Id. at 3-65. Parcel K would be conveyed to Blue Valley Acres subdivision #2, where ground disturbance could occur for a “community purpose” such as a meeting hall or ball fields. DEIS at 3-68. This could expose and damage fossils. For resources on federal land, the Paleontological Resources Preservation Act applies.*

As described in Chapter 3, Section F – Paleontological Resources, parcels BLM-G, BLM-H, BLM-I, and BLM-K contain a range of geologic formations ranging in rank from Class 1 to Class 5 using the Potential Fossil Yield Classification (ranging from low to high probability of impacting significant paleontological resources). The areas of BLM-G, BLM-H, BLM-I, and BLM-K that might contain Class 5 areas overlap the Niobrara Formation. BLM knowledge and museum record searches do not support the likelihood of subsurface paleontological resources being present, and KFO specialists has determined it not necessary to pursue further surveying/excavation. With the exception of BLM-K, transfer of these parcels to private ownership is not anticipated to result in paleontological resource degradation, as no surface disturbance is anticipated. There is no paleontological resource degradation anticipated on BLM-K; however, since some level of development could occur on this parcel there is potential for fossils to be impacted. Additionally, in the instances of parcels BLM-G, BLM-H, and BLM-I transfer of these parcels may reduce the likelihood of resource degradation, if fossils are present, since public access would be restricted. Under Alternative 3, slightly less acreage of federal land would be transferred to private ownership, in the form of the

altered boundary of BLM-I, and could slightly reduce the likelihood of paleontological resources being transferred to private ownership.

11.0 CUMULATIVE EFFECTS

11.1 *Under the land exchange, there will be several cumulative effects that the DEIS does not discuss, as they limited this section of the analysis to the immediate area of the land exchange. Since its inception, Colorado Wild Public Lands has participated in the NEPA processes for 3 different land exchanges, including this Blue Valley Ranch exchange. As such, we are already beginning to see patterns of incremental losses of public resources which result in cumulative effects. The environmental analyses (EIS included) are restricted to the vicinity of the proposed action; this narrows the scope of consideration in analyzing the cumulative impacts of these land exchanges and does not present the whole picture of some of these impacts. The analysis of the loss of Harrington Penstemon habitat is a good example of this. The proposed action in this analysis, exchanging lands with the Blue Valley Ranch, results in a net loss of 7 acres of habitat; this does not seem like much. However, if the scope of analysis were expanded, a different picture might emerge. For example, with the Sutey Ranch Land Exchange 100 miles away in Pitkin County, the BLM traded a minimum of 52.4 acres of *P. harringtonii* habitat in exchange for 1.5 acres on the non-federal exchange lands (Sutey DEA pp. 3-115, 117, and 118). If the agency were tracking these incremental changes on a larger scale, they may find the impacts of these individual actions are having real impacts on the larger landscape. There is a similar pattern in the treatment of wetlands and riparian habitats in other land exchanges we have analyzed. In the Sutey Ranch land exchange, the public lost 15.6 of 16.6 acres of wetland and riparian habitat (DEA 3-143, 147, 153, 156, 158, 158) and the proposed Buffalo Horn Land Exchange in Rio Blanco and Moffat counties would trade 4 acres for none, a 100% loss to the public (Buffalo Horn EA 65). Again, absent the wider geographic range for the cumulative scope of analysis, the agency has no way to gage the true cumulative impacts of individual actions such as this proposed Blue Valley Ranch Land Exchange.*

It is undeniable that if the cumulative effects analysis were to consider a broader cumulative effects Analysis Area a different picture would emerge, as suggested by the commenter; However, that picture would not necessarily provide an accurate representation of resource impacts, as a cumulative effect must overlap in space and time with the direct and indirect effects of the action. Accordingly, the Analysis Area is defined for each resource considered in the cumulative effects analysis contained in Chapter 3, Section M.

The definition of the Analysis Area directs the analysis and determines the scope of analysis; therefore, all information provided in this Final EIS is correctly limited to the Analysis Area for any given resource. For vegetation and wetlands resources, as described by the commenter, BLM has considered the entire KFO planning area and adjacent NFS lands with potential to be impacted by the proposed Recreation Design Feature proposed in the Green Mountain Area. The Sutey Ranch Land Exchange in Pitkin County mentioned by the commenter is outside of the spatial bounds that define the cumulative effects analysis of these resources, as effects in this area are not managed by the KFO and thus do not overlap with potential effects from the current land exchange.

As discussed under the Lands and Realty sub-heading of the cumulative effects analysis in Chapter 3, Section M, the direct and indirect effects of the Proposed Action in the context of four other land exchanges identified in the cumulative effects Analysis Area is considered. National direction regarding land exchanges (i.e., FLPMA), requirements and resource protections placed on lands entering federal ownership in the four identified exchanges, the effects of an exchange on lands leaving federal ownership in the four identified exchanges and the overall effect of the four identified exchanges on public land ownership/management is considered. Specific details of the cumulative effects to each resource analyzed in this Final EIS are also discussed.

Section 206 of the Federal Land Policy and Management Act (FLPMA) allows for the exchange of public lands (BLM and Forest Service), provided “the Secretary concerned determines that the public interest will be well served by making that exchange.” As such, the agencies require demonstration of net positive public benefit to conclude a land exchange. Dating back to 1984, all lands acquired by the United States Government through land exchanges in the cumulative effects Analysis Area have been incorporated into either BLM or Forest Service management plans, as

appropriate. These management plans provide direction to the agency on a resource-by-resource basis, commensurate with law, regulation and policy. Sustainable use requirements and resource protections are placed on lands entering federal ownership, as defined in laws such as the FLPMA and the National Forest Management Act. The effects of an exchange on lands leaving federal ownership are also considered as part of the exchange analysis. The four land exchanges considered throughout the cumulative effects Analysis Area has resulted in a net loss of approximately 5,094.45 acres of public lands under BLM management. The net gain or loss of land terms of acreage is important in considering land exchange patterns within the Analysis Area; however, it is also important to understand that land exchanges are completed on an equal value basis, not an equal acre basis (per the BLM Land Exchange Handbook H-2200-1). Thus, regardless of a net gain or loss of public lands by acreage, environmental review and the appraisal process has determined that the lands exchanged were of approximately equal value. The public benefit requirement for each of the four land exchanges, in conjunction with the management requirements and protections afforded acquired federal in the Analysis Area indicate an overall benefit to the public estate.

12.0 ACCESS AND TRAFFIC

12.1 Also we really do not want the enhanced spring creek bridge take out as it will increase the already high amount of traffic through our neighborhood.

The BLM acknowledges that there may be a slight increase in vehicular traffic on Spring Creek Road due to the proposed Recreation Design Feature at Spring Creek Bridge under the Proposed Action (refer to the *Traffic Volumes* discussion in Chapter 3, Section B – Access and Traffic). However, additional traffic volumes are not anticipated to be discernable or increase above the current design capacity of the road as there are only 10 parking spaces proposed in this area that is already used by recreationists as a take-out. In addition, a third alternative has been included in the Final EIS that does not include Recreation Design Features. The Spring Creek Bridge Take-Out and Rest Area is not included under this alternative.

12.2 Assurance of continued public use of the Blue River - The DEIS suggests that the public will have the right to continue to use the Blue River for floating and fishing, and that they will be permitted to stop and rest in the Spring Creek Bridge area. Users that previously used the Federal parcels as a stopping point, would no longer be able to stop in this area and would have to stop earlier at the proposed Spring Creek Bridge area. DEIS 3-28 The DEIS should include an appendix disclosing a binding agreement between the proponent and appropriate entities that would ensure the public's right to float the river without encumbrances, and also address the proposed agreements for the Spring Creek Bridge area.

Following the proposed land exchange under the Proposed Action, the public access to the river would be consistent with State of Colorado law and BLM resource management policies and guidelines. There would not be a binding agreement between the Proponent and appropriate entities to ensure the public's right to float the river without encumbrances as the proposed land exchange would not affect the public's right to do so. BVR currently owns both sides of the river in large extents of the Blue River Valley; the transfer of riverfront exchange parcels into BVR ownership under the Proposed Action would not enable BVR to restrict the public's ability to float any more than is already possible. Furthermore, Alternative 3 would not include the riverfront portion of parcel BLM-I, which would continue to promote public use of the Blue River through walk-in access.

12.3 Public access and use of Blue River -The majority of scoping comments that were against the land exchange addressed the concern around loss of public access and use of the Blue River, yet this is minimally addressed in the DEIS. Similar concerns were identified in the 2005 scoping period and identified by the BLM KFO to be addressed in the EA anticipated at that time. (DEIS at2&3)

The direct and indirect effects of the Proposed Action on public access are thoroughly analyzed in the *Environmental Effects* discussion in Chapter 3, Section C – Recreation. As noted, “under the Proposed Action the public would actually gain additional access on previously inaccessible public lands suitable for recreation that would be made accessible through the consolidation of land ownership boundaries. The Proposed Action would also create additional recreation opportunities through the proposed Recreation Design Features. The proposed land exchange would be expected to enhance access to, and recreational opportunities associated with, public lands under the Proposed Action.

Beneficial effects for trail connections would occur, particularly as it relates to public lands in the Green Mountain area that would benefit from the construction of a short hiking/access trail on NFS lands providing access to the bank of the Blue River and fishing and pedestrian access easements across BVR property providing continuous fishing access from the existing BLM lands to the north to the National Forest System lands to the south. Additionally, recreational opportunities and trail access in the Confluence Recreation Area would increase due to additional land and Recreation Design Features to be constructed adjacent to the Upper Colorado SRMA. Recreation Design Features along the Blue River, such as the Spring Creek Bridge Take-Out and Rest Stop and the Pump Station Rest Stop would maintain a similar floating experience to what is currently available, by providing the floating public with designated stopping points along the Blue River. The two new rest stops would offer improved accessibility for entities managing the rest stops. In addition, funding for long-term maintenance of these areas would be provided. Overall, the Spring Creek Take-Out and Rest Stop and Pump Station Rest Stop would help mitigate loss of public access to BLM-G, BLM-H, and BLM-I, which recreationalists can currently use as rest-stops during floats. The Proposed Action would also improve BLM's ability to manage recreation resources by consolidating land ownership boundaries and reducing conflict" (Final EIS p. 45).

In regard to Alternative 3, the Final EIS states "Alternative 3 is expected to produce beneficial effects for recreational resources as compared to the existing conditions by acquiring additional public access on the non-Federal parcels while retaining the riverfront on BLM-I, which is highly valued by the public for its walk-in fishing access. As compared to the Proposed Action Alternative, there are not Recreation Design Features included in this alternative; however, it is acknowledged that some recreationists in the project area may prefer the land ownership configuration and opportunities that would be provided under Alternative 3 due to affinities for certain parcels and their resources" (Final EIS p. 51). Overall, Alternative 3 would continue to provide public access to the riverfront section of BLM-I but would not include the benefits provided by the Recreation Design Features.

12.4 *The proposed land exchange calls for an "easement or similar instrument" to ensure take-out access at the Spring Creek Bridge Road. Elsewhere in the summary of the proposed land exchange the summary refers to the granting of easements to ensure permanent access to other property impacted by the land exchange. CW strongly believes that BLM should insist on an easement at the Spring Creek Bridge road for take-out access. This is the best way to ensure undisputed permanent access. CW is concerned that the term "similar instrument" is vague and that anything other than an recorded easement will fail to ensure take-out access on an undisputed permanent basis for boaters who paddle the canyon below Green Mountain Reservoir. A "similar instrument," such as a license or access agreement, provides little assurance that take-out access will be permanent. Conversely, an easement would run with the land and would be permanent and binding on subsequent landowners. The BLM should make the granting of such an easement a condition of the land exchange.*

The commenter is referred to the response to Comment 2.2, which provides additional context regarding take-out access at the proposed Spring Creek Bridge Recreation Design Feature.

13.0 WATER RIGHTS AND USE

13.1 *Generally speaking, there would be a net public gain of water rights. The exchange would convey more cfs to the public than the BVR will receive, and the public will benefit from the relinquishment of the BLM I water rights to the Blue River. There is however a lost opportunity under the exchange to work with the Colorado Water Trust to use the water rights on now public parcel J for in-stream flow. (DEIS 3-144) Moreover, Since BLM acquired Parcel J through a previous land exchange, we have requested information from the administrative record for that exchange in order to ascertain what the BLM's motivations were for seeking to obtain this parcel for public ownership. It is possible, that the agency's intent was to utilize these water rights for a specific purpose. Without knowing what motivated the agency to acquire the property in the first place, it is difficult to know whether conveyance to a private party serves the public interest.*

The opportunity for the BLM to convert water rights to an instream flow was considered under the No Action Alternative; however, it would not meet the Purpose and Need for the project and was not carried forward for

additional analysis under the Proposed Action. Over the short term, BVR would continue to use the Sophronia Day Ditch water rights on parcel BLM-J to irrigate wet meadows for hay production and livestock grazing. BVR intends to convey the parcel and the water rights to Skylark Ranch, who is expected to continue the land and water uses. Whether future private landowners or water rights holders choose to work with the Colorado Water Trust is beyond the scope of this analysis. As it relates specifically to the BLM's intent at the time of acquiring BLM-J, the commenter is referred to response to Comment 2.6.

14.0 GEOLOGY AND MINERALS

14.1 *Mineral Resources on Private Lands to be Exchanged -The Feasibility Analysis from 2004 states that the State of Colorado “reserved all rights to any and all minerals, ore ... oil and gas and other like substances in or under said land, the rights of ingress and egress for the purpose of mining ... “ for a portion of BVR parcel 1. (FA at 17). There are also some reserved mineral interests on BVR parcel 3 (FA, 18). The DEIS contains no discussion of mineral potential on non-federal parcels, as the mineral reports on non-federal parcels have not yet been done. (DEIS 3-139, 3-169). Given that non-federal parcels have mineral interests held by third parties, BLM should inform the public about potential disruptive uses of the lands they receive in the exchange before it occurs, so that they can weigh in on whether the benefits of acquiring the property outweigh the potential for future disruption of the public enjoyment of the lands. This potential disruption could impact the value of these lands to the public.*

The mineral estates on the non-Federal parcels would be transferred to the BLM and managed in accordance with the RMP. Minerals reports on the acquired parcels would be completed during a future management planning process. Since there are little to no salable minerals on the Federal parcels, valuation of minerals on non-Federal properties is not required for valuation of the Proposed Action. More information on the valuation process and extant minerals can be found in Appendix G, Section G – Geology and Minerals.

14.2 *The proposed land exchange would convey leasable minerals (oil and gas) and salable minerals (sand and gravel) on BLM parcels G, H, I, J and K out of public ownership. See DEIS at 3- 133 through -136. While it is unlikely that the current owner would develop these mineral resources, there is nothing to prevent future owners from doing so, as the mineral resources are potentially significant, and will be made more economically viable through assemblage with private property that can provide and enhance vehicular access to the resources. Though heavily regulated, development of these resources, or failure to undertake reclamation from their development could have adverse impacts on water quality in the both the Blue and Colorado River watersheds. According to DEIS p. 3-139, Because BLM-K has a potential hydrocarbon trapping structure and some potential for oil and gas production, the Mineral Potential Report recommends that the leasable mineral estate be retained until the potential for oil and gas production is evaluated. It is not in the public interest to trade away parcels with potential mineral value without receiving lands with comparable value in return.*

Valuation of the parcels was approved by the USDI Appraisal and Valuation Services Office. The USDI Appraisal and Valuation Services Office-Geologic Evaluation and Mineral Valuation Report concluded there was relatively little, if any, value associated with the salable minerals on any of the Federal parcels. Approval of salable mineral developments on BLM-managed lands is discretionary, meaning the BLM has the flexibility to approve or deny development based on site-specific circumstances. Any future mineral development on the parcels would undergo additional NEPA analysis with associated public involvement. More information on the valuation process and extant minerals can be found in Appendix G, Section G – Geology and Minerals.

15.0 RECREATION

15.1 *As we reviewed the DEIS we looked for areas where the manner in which the DEIS addressed the issues could be clarified for easier consumption by the public and decision maker. The one area we identified is the discussion of Recreational Access in the context of environmental effects/impacts. We concluded that the document could have better highlighted the fact that access for recreation would be improved as to public lands as a result of the exchange. Since the DEIS does discuss access as an issue, there is not an*

inadequacy in the document. The broad public support we witnessed at the BLM's open houses illustrates that most were able to discern this overall benefit. However, more explicitly discussing the impacts of the exchange with respect to access to recreational opportunities is warranted and will help to clarify the impact of the exchange. Given the recreational issues framed by the river-front exchange parcels, improving the discussion and highlighting the improved access the LEX provides for recreational resources should be considered. On DEIS pages 3-7 to 3-8 it discusses the affected environment and impact of access generally, but does not provide a focus on improved access the LEX will provide for recreation purposes. The Recreation analysis found on pages 3-19 to 3-35 does not emphasize, as a benefit, increased access to recreational opportunities. The reader can discern these benefits, but, more focus (such as in a discrete sub-section) would facilitate the understanding.

The benefits of improved access to recreational opportunities, and discussion of the differences between alternatives, are detailed under the *Alternative 2* and *Alternative 3* discussions in Chapter 3, Section C – Recreation. This section provides detailed information on impacts to recreation on both the Federal and non-Federal parcels. Additional information related to recreational access is provided in the *Direct and Indirect Effects* discussion in Chapter 3, Section B – Access and Traffic.

15.2 *The net loss of over 1 mile of stream frontage and 3.2 acres of aquatic habitat means a loss of water-based recreation opportunities under the proposed land exchange. Not only would there be less area to access water to play in, but the remaining opportunities would mostly be concentrated in one area, BVR-8. An easement would be provided at the Spring Creek Bridge where use is currently allowed, Mitigation for loss of Blue River access on BLM parcels G, H, and especially I, depends on construction of the proposed Recreation Design Features and the proposed trail on national forest land. DEIS at 3-28, 3-29. However, the implementation of these features is not assured, as a memorandum of understanding, yet to be signed, would be needed to assure funding, construction, and management of these features. DEIS at 2-7, 3-35. Approval of the proposed trail would require a separate analysis (NEPA) and decision by the White River National Forest. DEIS at 3-35. Approval of the MOU and trail construction can thus not be assured at this time. And even if these approvals occur, it could be some time after the land exchange is consummated before the design features and trail are constructed. In the meantime, users would be deprived of use of the Blue River, or at least their already limited access would be reduced. Overall, the land exchange could degrade the user experience on the Blue River unless further assurance are put in place, including a means of guaranteeing the public will be able to continue to use the river for recreational, floating and fishing purposes without encumbrances such as fences or habitat improvements.*

The commenter is referred to the response to Comment 2.8, which describes that Chapter 2, Section B – Alternative Considered in Detail has been updated to state that, “Funding for the construction and future management of these features would be provided by BVR.

Since the publication of the Draft EIS, the Recreation Design Features located in the Green Mountain Recreation Area have been augmented in two ways. First, additional public access for fishing in the lower Green Mountain Canyon west of BVR-10 would be granted. BVR would grant a fishing easement in perpetuity for public use of the 0.18-mile segment of river on BVR property that lies between NFS lands to the south and BLM lands to the north. This fishing easement would result in a total of 1.65 miles of contiguous bank and wade fishing access on the Blue River. Secondly, to allow anglers to more easily reach the fishing easement, BVR would also grant a perpetual pedestrian-only access easement following the route of the existing BVR ranch road, which extends westerly from the boundary of BVR-10, and then following a trail, which would be created starting from a point where the road ends, to extend the pedestrian-only access easement to the edge of the fishing easement.

The fishing easement and the pedestrian-only access easement may be subject to the occasional temporary interruption of use for public safety, natural resource protection, and ranch management activities—such as river improvements, irrigation structure repair, and road maintenance. Because the easements would run through active ranch land, cattle grazing and irrigation activities would be proximate; therefore, the easements would not allow camping, fires, firearms or animals, and would only be used for pedestrian access. Motorized vehicles and wheeled

devices would not be permitted; and the public would not be permitted to use the easements for putting in to float the Blue River.

An additional Recreation Design Feature has been added to the Proposed Action to provide an additional rest stop along the Blue River. This Recreation Design Feature, the Pump Station Rest Stop, would provide an additional rest stop with right to re-entry as well as a seasonal restroom for floaters along the Blue River.

Future management of these features, once implemented, would be the responsibility of BLM in the case of the Confluence Recreation Area, and the BLM in cooperation with the WRNF in the case of the Green Mountain Recreation Area, and either an existing governmental entity or a not-for-profit entity in the case of the proposed Spring Creek Bridge Recreation Design Feature (a perpetual easement located on private lands). Management of activities on NFS lands would be the responsibility of the Forest Service.

To ensure that the Recreation Design Features would be implemented, the closing of the land exchange would be conditioned on certain measures specific to each Recreation Design Feature being in place. In general, the provision for construction and operation of the Recreation Design Features would be part of a binding exchange agreement, with the assured construction of the proposed improvements covered by a bond that BVR would provide, and funding for future management of the proposed improvements set aside in the nature of an endowment funded by BVR” (Final EIS p. 17).

As it relates to the proposed construction of a hiking trail on NFS lands adjacent to BVR-10, the commenter is referred to the response to Comment 3.2, which states that, “the BLM anticipates the Forest Service would proceed with analysis for the proposed trail departing from BVR-10 and on to Forest Service managed lands in a timely manner. This Recreation Design Feature has been developed through close collaboration with all parties involved in the land exchange and aligns with the goals and objectives of both the BLM and the Forest Service.”

With regard to the lag time from the construction of proposed Recreation Design Features and the loss recreation opportunities that currently exist, Chapter 3, Section C – Recreation has been updated to state, “Although losses of recreation opportunities would be diminished by the proposed exchange and the associated Recreation Design Features, certain opportunities would no longer exist in their current state. Additionally, there would be a period following the close of the proposed land exchange where the proposed Recreation Design Features would not be constructed yet. During this window of time, certain users may perceive a greater loss in recreation opportunities; however, it is important to note that following completion of the exchange, public access for casual use on parcels with proposed Recreation Design Features is allowed. This interim loss of opportunity is expected to have a minor net impact because public use appears to be limited due to either inaccessibility or the limited opportunities provided by these parcels” (Final EIS p. 46).

An additional alternative retaining public access to the riverfront section of BLM-I has also been added to the Final EIS. Alternative 3 would exclude a 76-acre portion of BLM-I that currently provides public access to the Blue River. However, this alternative would not include the Recreation Design Features described under the Proposed Action.

15.3 *The transfer of Parcel 10 to public ownership provides walk-in public access to over one mile of the Blue River; this benefit is added to the benefits of the Recreation Design Features near Parcel 8. The quantification of recreational access impacts associated with exchange of Parcel I and the relative reduction of such impacts due to benefits from the transfer of Parcel 10 to public ownership and construction of the Recreation Design Features is not as robust as the same discussions of this issue for Parcels G and H. The DEIS text on pages 3-28 through 3-32 would benefit from an improved and more direct analyses detailing the mitigation of impacts to fishing access from the exchange of Parcel I due to the Recreation Design Features associated with Parcel 8 and the new access provided by Parcel 10. In discussions with the KFO as the parcels for exchange were being identified, KFO specifically indicated*

that the addition of Parcel 10 to facilitate recreational access to lower Green Mountain Canyon was intended to help off-set the loss of recreational access to Parcel I.

Additional clarification has been added to this Final EIS, in the text referenced by the commenter, describing the role of BVR-8, its Proposed Recreation Design Features, and the access provided by BVR-10 would have in offsetting the loss of walk-in fishing opportunities on BLM-I.

Since the close of the Draft EIS comment period, a third alternative has been added to the Final EIS. Under Alternative 3, the public would retain access to the riverfront portion of BLM-I due to a modified parcel boundary of BLM-I. Conversely, this alternative would not include any Recreation Design Features. A complete description of this alternative is contained in Chapter 2, Section B – Alternative Considered in Detail.

15.4 The EIS also notes that Summit County and BVR will assist with design and construction of a safer, more user friendly put-in near the dam. We have engaged an engineer to create a conceptual design for a stairway structure. This effort has indicated that design options for the put-in may be constrained by uncertainty in the property boundary between Bureau of Reclamation and USFS property in this location. While we understand that this necessary work concerning the put-in is not within the scope of the NEPA process on the land exchange, Summit County wants to take this opportunity to stress the importance of a continued cooperative effort among Summit County, BLM, USFS and BVR on Blue River issues and to request that this boundary uncertainty be resolved by the agencies in the near future. We also request that the USFS endeavor to promptly commence its environmental review of any impacts on USFS lands associated with the proposed improvements at the put-in.

As acknowledged by the commenter, the put-in near the Green Mountain dam is beyond the scope of this analysis. The BLM recognizes the importance of a continued cooperative effort among Summit County, BLM, Forest Service and BVR on Blue River issues and is committed to resolving the boundary issue brought up by the commenter.

15.5 CW [Colorado Whitewater] also believes the put-in should be improved below Green Mountain Reservoir. While the land exchange does not directly impact the put-in, in conjunction with efforts to improve the take-out access and facilities, improving the put-in access point will promote conservation of the Blue River canyon resources. The put-in access would be greatly improved by using the road below the dam that crosses from the South side of the Blue River to the North side. But even if the put-in location remains the same, it needs to be improved.

The commenter is referred to response to Comment 9.4.

15.6 The EIS does not place a value on the quality of water frontage being traded from BLM to BVR. Sections G and H are located on a gold medal river and provide unique recreation opportunities in a wild land setting for float-in recreation... There is no replacement for these recreational opportunities in the EIS. There will never be a camping option at spring creek road.

The proposed land exchange does not include exact one-for-one trades for recreational opportunities and access. As previously described in Response to Comment 8.2, process for and the valuation of the parcels was approved by the USDI Appraisal and Valuation Services Office. The commenter is correct that not all parcels are one-to-one habitat trades or direct trades of linear river frontage, as that is not a requirement of the valuation process, which focuses rather on the sum total of the proposed exchange resources and values. As it specifically relates to float-in camping opportunities, this opportunity would be removed from the Blue River, but would persist elsewhere on KFO managed lands. Existing float-in recreation opportunities, including camping along the Colorado River (Pumphouse and Radium both have recreation sites, in addition to many dispersed camping opportunities) are within the KFO's managed Upper Colorado Special Recreation Management Area (SRMA); whereas the current situation of camping on BLM-G and BLM-H has posed management challenges for the KFO and is not located within a SRMA.

Although in the vicinity of BLM-G and BLM-H, camping is not allowed on the Spring Creek Bridge Take-Out Rest Stop or the Pump Station Rest Stop Recreation Design Features that are included in the Proposed Action. For a discussion on how these features are intended to off-set the loss of BLM-G and BLM-H the reader is referred to the response to Comment 2.5.

15.7 *The proposed exchange of public river frontage/access/use for hunting areas is not an equitable exchange. - Existing river users lose their current rights to a different user group (hunters) who gain additional benefits. There is no equitable compensation to the public river users who have lost their use.*

The commenter is referred to response to Comment 9.6. The proposed land exchange is not intended to benefit one user group over another. Proposed Recreation Design Features under the Proposed Action are intended to mitigate the loss of existing recreational resources rather than replace existing recreation opportunities in a one-for-one sense. While Alternative 3 would continue to provide public access to the Blue River with BLM-I, there would be no Recreation Design Features included in this alternative.

15.8 *During the May-June 2016 scoping period, at minimum 14 people/groups submitted public comments on the need to keep parcels, G, H and I, for reasons including the importance of public use of that stretch of Blue River, concern for a too-long float without stopping, and potential diminution of public use and experience of the Blue River. Current activities include fishing and floating and the question was asked why not make improvements to the current situation, instead of giving away public lands? Almost all the comments against the exchange focused on the issue of loss of public lands on the river that are currently used by floaters and fishermen. One main point was that by removing these lands from public ownership, the experience of the float along the river would be significantly changed. Currently, travelling downstream there are opportunities to stop on BLM parcels after putting-in below Green River Dam. Without BLM parcels G and H, there would be a longer continuous float distance to the take-out. The public would forego opportunities to enjoy 6,406 feet of river frontage of public lands, dispersed along three or more stops, plus the adjoining land that provides further exploring opportunities. In addition: This stretch of the Blue River on BLM-1 is designated as “Gold Medal” trout fishing and is overlapped by the Upper Colorado SRMA. DEIS at 3-21.*

The commenter is correct that the float experience would change with the proposed land exchange. However, the Proposed Action includes improved amenities at the Spring Creek Bridge Take-Out and Rest Stop, as well as the Pump Station Rest Stop that was added to the Proposed Action Alternative following the close of the Draft EIS comment period. Users that previously used the Federal parcels as a stopping point (BLM-G and BLM-H), would no longer be able to stop in this area and would have to stop earlier at the proposed Spring Creek Bridge Take-Out and Rest Stop or at the proposed Pump Station Rest Stop that is approximately 3.1 miles downstream. As the Pump Station Recreation Design Feature is located approximately 3.1 miles downstream of the Spring Creek Bridge Take-Out and Rest Stop and 6.8 miles upstream of the Lower Blue River Take-Out the Proposed Action Alternative would provide similar distances between rest stops as BLM-H and BLM-I that are currently utilized by the public. Overall, the Pump Station Rest Stop and Spring Creek Take-Out and Rest Stop would help mitigate loss of public access to BLM-G, BLM-H, and BLM-I. Additionally, the proposed permanent rest stops and take-out are expected to provide a better stopping point than currently available on BLM-G and BLM-H, as their location severely limits the BLM’s ability to manage and provide necessary services on these parcels,. Furthermore, Alternative 3 has been added to the analysis in the Final EIS to assess the impact of continuing to provide public access to the Blue River through BLM-I. Under this alternative, the public could continue to use BLM-I for access to the Blue River; however, no Recreation Design Features would be included in this alternative.

The impacts of these components of the project are thoroughly detailed in the *Alternative 2, Environmental Effects* discussion in Chapter 3, Section C – Recreation. Further, the commenter is referred to Chapter 1, Section C – Purpose and Need for the Proposed Action, which describes a multi-faceted purpose of the proposed land exchange that would not be met by solely making improvements to the current situation as suggested by the commenter. Public involvement in the scoping process is well documented in Chapter 1, Section H – Scoping and Public Involvement, as well as scoping reports available in the project file.

15.9 *Also, between the homeowners in Spring Creek and Blue Valley Acres, there are nearly 200 homes that have access to that area. Despite what your study says, that parcel sees use. We walk our dogs down there. I hunt coyotes back there. The public uses the area at the river as a stop prior to continuing through BVR.*

The commenter is correct that private use of parcels BLM-G and BLM-H occurs now; however, because they are not accessible to the general public, the analysis describes the public benefit in the overall land exchange to provide other lands for public access in lieu of these parcels with limited public access.

15.10 *Parcels BLM-G, BLM-H, BLM-I and BLM-J offer exceptional public recreation values and should not be included in the exchange. The riverfront parcels offer important recreation and wildlife values; BLM should be looking to manage more land of this nature rather than less. It is therefore not in the public interest to divest of BLM-G, BLM-H, BLM-I and BLM-J with this exchange proposal. The use studies on the G and H parcels were not comprehensive enough to properly conclude the parcels see only minimal use; the studies therefore cannot serve as justification for trading them out of public ownership. Parcel BLM-I abuts a portion of the Blue River that is designated as having “Gold Medal” trout fishing. Parcel BLM-J was acquired less than twenty years ago, presumably for its river recreation values. If the proponent is not interested in completing an exchange without these parcels the BLM should decide not to pursue the exchange.*

The studies of public use patterns on the BLM parcels were not intended to justify the land exchange. Rather, they were conducted to better understand the current use. The commenter is referred to Chapter 1, Section C – Purpose and Need for the Proposed Action, which explains the justification and purpose for pursuing a land exchange. Additionally, the commenter is referred to the *Recreation Opportunities* discussion in Chapter 3, Section C – Recreation for more information about current public use on the Federal parcels.

15.11 *Proposed access (a new trail) to national forest land adjacent to the Blue River is described in the DEIS as being provided by the proponent as mitigation for loss of public riverfront lands. However no information is provided about the existing national forest land that is being accessed, the existing conditions, natural resources, suitability for future development and proposed Forest Service management. Information is needed on the proposed trail design, whether it is an existing trail or a new trail, and proposed grades and widths to determine usability and impacts. What is the terrain like at the bottom of the trail and how much access is available considering topography?*

If the proposed exchange as described under the Proposed Action occurs, the White River National Forest (WRNF) would begin environmental review of the proposed trail. Analysis of the proposed trail is included in this Final EIS and the WRNF would review this information to make an informed decision and/or require additional analysis as necessary prior to implementation of this proposed Recreation Design Feature. The commenter is referred to the *WRNF Environmental Review of the Proposed Hiking Trail* discussion in Chapter 3, Section C – Recreation for more information.

Alternative 3 does not include any Recreation Design Features, including the new trail on WRNF land, and therefore, would not require any additional analysis.

15.12 *The national forest land near Green Mountain is managed by the Forest Service for deer and elk winter range. Opening the land to increased public use would create additional impacts to natural resources. Potential impacts to, and management of, the national forest land have not been addressed in the DEIS. If additional access were to be provided, further detail of the design, costs and management need to be provided along with a specific commitment from the proponent. The trail appears to traverse steep slopes to reach the Blue River, located in a tight canyon. The DEIS describes additional public access to river frontage. How much more accessible will this area be, given that it is in a steep canyon? Additionally, this land has always been in public ownership and is accessible from below Green Reservoir where an area is used as a put-in. The DEIS at 3-35 states that the WRNF still needs to do an environmental review on the potential impacts of the proposed trail, so again there is no certainty as to the viability and benefits of this proposed access. Among known wildlife values of Green Mountain, is the herd of bighorn sheep that lives in the area, per local resident, Dan Campbell. It seems there may be a misunderstanding among members*

of the public who supported the exchange based on information that: “... the current^{1/2} or^{3/4} mile of river frontage/access is being exchanged to gain 2.5 miles of frontage/access”. Given the above analysis, this information appears to be incorrect.

For information regarding the analysis of the proposed Recreation Design Feature overlapping NFS lands the commenter is referred to response to Comment 15.11. As described in response to Comment 6.1, an analysis of bighorn sheep has been added to this Final EIS. Lastly, as it relates to the commenter’s assertion that there is a misunderstanding regarding the proposed land exchange’s impact to recreational access, the commenter is referred to Chapter 3, Section B – Access and Traffic. The environmental effects discussion of this chapter highlights that due to surrounding land ownership patterns, exchange of the proposed BVR and BLM parcels would result in increased access to recreation opportunities under the Proposed Action. Although not to the specific values cited by the commenter, the Proposed Action would transfer existing public access into private ownership but would unlock greater access to public lands overall. In addition, the fishing and pedestrian access easements across BVR property west BVR-10 would provide continuous fishing access from the existing BLM lands to the north to the National Forest System lands to the south.

Under Alternative 3, the public would retain access to the riverfront section of BLM-I but would not gain the Recreation Design Features described in the Proposed Action.

15.13 *The proponent is proposing to provide developed recreation facilities in exchange for the land they would receive. This does not appear to be an equal exchange as it creates a different set of uses and management issues. There are impacts associated with construction, costs of construction, costs of maintenance and the overall a loss of natural undeveloped open space. Due to the difference in types of facilities and experiences, the users being served will likely be different than the users being displaced. Furthermore, descriptions of the proposed recreation improvements and the related future ownership, easements, funding and management plan are unclear and therefore difficult to evaluate potential impacts, use and benefits. These need to be more specific, including types and amounts of facilities, costs, locations and especially future funding and management, in order to be evaluated and provide the public assurance of the commitments.*

The proposed Recreation Design Features included in the Proposed Action are intended to facilitate realization of certain opportunities for enhanced public recreation; they are not being exchanged for the federal lands themselves. The commenter is correct that the proposed land exchange and associated construction of Recreation Design Features would not result in one-to-one replacements of recreational opportunities, as that is not a requirement of the exchange process, which focuses rather on the sum total of the proposed exchange resources and values. Additional details related to Memorandum of Understanding (MOUs) and post exchange agreements have been added to this Final EIS, and are described further in the responses to Comment 2.2 and Comment 2.8. In addition, while the Proposed Action is associated with a different series of costs—including construction and maintenance—these are costs that would be covered by BVR and are management activities that the BLM, along with the not-for-profit entity (specific to the Spring Creek Bridge Recreation Design Feature) that would be created for management of these features, is capable of addressing. For more detail on the costs and management of the proposed Recreation Design Features, the commenter is referred to Chapter 2, Section B – Alternative 2.

Under Alternative 3, there are no Recreation Design Features proposed. Refer to Chapter 3, Section C – Recreation for a discussion of the recreational impacts associated with this alternative.

15.14 *The proposed exchange of public river frontage/access/use for hunting areas is not an equitable exchange. Existing river users lose their current rights to a different user group (hunters) who gain additional benefits. There is no equitable compensation to the public river users who have lost their use.*

The commenter is correct that not all parcels are one-to-one replacements of recreational opportunities, as that is not a requirement of the exchange process, which focuses rather on the sum total of the proposed exchange resources and values. The purpose of the overall land exchange is to consolidate boundaries of public lands to minimize and reduce conflict while improving access and enhancing recreational opportunities, as well as meeting objectives from the 2015

RMP for wildlife, recreation, public access, and scenic values. Meeting this purpose is intended to benefit the public as a whole, rather than preferentially provide recreationalists opportunities for one type of use over another.

In addition, Alternative 3 has been added to analysis in the Final EIS to assess the impacts of a land exchange that would continue to provide public access to the Blue River through BLM-I.

15.15 These parcels are proposed to become private property in the exchange. Parcels A, C, and F are projections of public land into private property. Hunting trespass is a consistent issue in these spots. Parcel B is land locked by private [parcels] and inaccessible to the public without permission. The trade of these parcels into private holding would reduce trespass, fencing maintenance, and make the public-private boundary easier for hunters to understand.

The above comment supports analysis found in Chapter 3, Section C – Recreation.

15.16 CPW supports this exchange to improve public fishing access to the Blue River from Hwy 9. CPW recommends maintaining/improving existing foot trail to the river, but do not support development of new trails, and recommends limiting the trail to foot access only (no bikes or motorized use). CPW personnel have discussed this parcel with the United States Forest Service and learned that this management is in line with their vision for the acreage the USFS would acquire in the exchange.

The above comment supports analysis found in Chapter 3, Section B – Access and Traffic and Section C – Recreation.

15.17 This 396.9-acre parcel is currently held by BLM. It provides hunting access south of Trough Road and fishing access to a short section of the Blue River. This section of river is popular legal access to the Blue River for anglers. This parcel is problematic with anglers who do not understand the public/private land boundary before fishing the parcel. Local District Wildlife Managers respond to and write multiple fishing trespass tickets each year to anglers who fish on the adjacent private land without permission. The exchange of this parcel into private ownership will be a loss to hunters and anglers who utilize this parcel. CPW believes this loss is outweighed by an overall gain to sportsmen. Anglers will experience a net gain of fishing access on the Blue River post-exchange. Post-exchange, CPW recommends that the public road into Parcel BLM-I be gated and locked. Signage should be posted that the property is in private ownership to deter trespass on the parcel

The above comment supports analysis found in Chapter 3, Section B – Access and Traffic and Section C – Recreation. CPW's suggestion to improve signage has been conveyed to KFO and WRNF staff for consideration.

15.18 The creation of a larger, more easily accessible recreation area at the confluence of the Blue and Colorado Rivers will greatly benefit sportsmen. Improved foot access via the proposed trails will increase access for a variety of anglers and waterfowl hunters. There are currently only a few locations at which handicapped anglers can access the Colorado River. Creation of handicapped accessible access to the Blue River at the Confluence Recreation Area would be a benefit to all of Colorado's anglers. In addition, the proposed in-stream developments will increase the availability of desirable habitat for trout species in this area. Currently, the river is wide and shallow with little habitat variation excepting naturally forming sand bars. Creation of deeper pools, riffles, and cover for trout increases trout use of the area and as a result may improve the sport fishery. Creation of these in-stream developments also improves watershed and river health.

The above comment supports analysis found in Chapter 3, Section C – Recreation and Section G – Wildlife.

15.19 Creation of a rest stop at Spring Creek road will offset the loss of BLM Parcel H which is currently used as a rest stop for sportsmen floating the Blue River and fishing. The addition of a rest stop may help relieve trespass issues further downstream by giving boaters a legal place to anchor or beach and use the facilities.

The above comment supports analysis found in Chapter 3, Section B – Access and Traffic and Section C – Recreation.

15.20 *The creation of a small parking lot and trail to access lower Green Mountain Canyon will be a great benefit to sportsmen. This area is currently not accessible by foot, so legal and developed access will allow opportunity for anglers who do not float the river to fish this stretch of the Blue River. There is currently minimal use of this area outside of fall big game seasons, but the projected increase in vehicle and foot traffic by anglers into the canyon is not expected to adversely impact the wildlife in the area.*

The above comment supports analysis found in Chapter 3, Section B – Access and Traffic, Section C – Recreation, and Section G – Wildlife.

15.21 *CPW supports this exchange. This parcel is currently posted and has a public road (Williams Peak Road) running through it, which receives heavy public use during summer and fall months. Converting this parcel to BLM will reduce trespass issues and improve hunting opportunity for the public. CPW encourages BVR and BLM to post the new boundary to reduce trespass issues.*

The above comment supports analysis found in Chapter 3, Section B – Access and Traffic and Section C – Recreation. CPW's suggestion to improve signage has been conveyed to KFO and WRNF staff for consideration.

15.22 *Next, the proposed trail down to the river to access below Green Mountain Canyon. I fish the BVMD section of river and upstream into the public section at least 3 days a week. I have NEVER seen anyone use the existing public access to the river. What good does it do to provide additional access to the river when the public doesn't use the access that they already have? It doesn't make any sense.*

Though access to the location mentioned in the comment is legal, there is no formal route or access point. The new Recreation Design Features at Green Mountain Recreation Area proposed under the Proposed Action—including the proposed hiking trail and fishing and pedestrian access easements to the river west of BVR-10 (1.65 mile of contiguous walk-in and wade fishing access)—would provide a more formal and improved access point and route in the area, including lower Green Mountain Canyon. As described in Chapter 3, Section C – Recreation, the proposed hiking trail and exchange of BVR-2, BVR-9, and BVR-10 would generate use in this area. This section estimates that, “approximately 20 to 26 users would be expected to use this area on days with the highest use, when the proposed parking area is at capacity. Projected increases in demand for recreation opportunities along the Blue River would be better met by the Recreation Design Features providing access to approximately a 1.2-mile stretch of river in lower Green Mountain Canyon” (Final EIS p. 48). It is important to note Alternative 3 would not include any Recreation Design Features and, therefore, trail discussed by the commenter would not be built under Alternative 3. Refer to Chapter 3, Section C – Recreation for a discussion of the recreational associated with this alternative.

15.23 *This brings me to my next point, the kayak take out at Spring Creek bridge. I will agree, the take out does see some light use, and I mean light. The people accessing the river are mainly there to access the fishing through BVR. I attended all of the open houses over the years and can't get a straight answer as to who will be responsible for that area. BVMD doesn't want it. Is CPW going to take care of it? They can't take care of what they have already. That area will become trashed, guaranteed. I see it already. Nobody wants to take care of it. The outhouse will be full and trash scattered to the wind because it won't get emptied. And where is it going to blow? Right to our section of river.*

Additional details related to MOUs and post exchange agreements for the management of the Spring Creek Bridge Recreation Design Feature have been added to this Final EIS (p. 17), “To ensure that the Spring Creek Bridge Recreation Design Feature would be implemented, the closing of the land exchange would be conditioned on a perpetual easement being in place. Under this Recreation Design Feature, BVR's land at Spring Creek Bridge would not be conveyed to BLM. Like the other proposed Recreation Design Features, the construction of improvements at Spring Creek Bridge would be part of a binding exchange agreement, with funding for the construction of the proposed improvements covered by a bond and funding for future management of the proposed improvements set aside by BVR for use by the holder of the easement. Following construction, the management of the Spring Creek Bridge Recreation Design Feature would be the responsibility of either an existing governmental entity or a not-for-profit entity created to hold and manage the easement.” As discussed previously, Alternative 3 would not include any Recreation Design Features and therefore this discussion would not apply to Alternative 3. Refer to Chapter 3, Section C – Recreation for a discussion of the recreational impacts associated with this alternative.

16.0 OTHER

16.1 The attached Detailed Comments are provided for the BLM's consideration in developing the FEIS. We hope they are useful.

All suggestions for editorial changes and typographic errors were considered, and many were included in this Final EIS.

APPENDIX M. FEDERAL, STATE, AND LOCAL AGENCY COMMENT LETTERS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

Comment letters on the Draft EIS were submitted by the following agencies:

- United States Environmental Protection Agency Region 8
- Colorado Parks and Wildlife
- Grand County Board of Commissioners
- Summit County Board of Commissioners

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
Denver, CO 80202-1129
Phone (800) 227-8917
www.epa.gov/region08

JUN 25 2018

Ref: 8EPR-N

Stephanie Odell, Field Manager
Bureau of Land Management
Kremmling Field Office
2103 E. Park Avenue
P.O. Box 68
Kremmling, Colorado 80459

Dear Field Manager Odell:

In accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, the U.S. Environmental Protection Agency Region 8 has reviewed the Bureau of Land Management's Draft Environmental Impact Statement for the Blue Valley Ranch Land Exchange (CEQ No. 20180091).

The BLM is proposing to transfer approximately 1,489 acres of federal lands in Grand County, Colorado to Blue Valley Ranch (BVR) in exchange for approximately 1,830 acres of non-federal lands in Summit County and Grand County, Colorado. Once exchanged, the non-federal lands would be owned and managed by the BLM Kremmling Field Office (~1,530 acres) and the U.S. Forest Service White River National Forest (~300 acres). The exchange would consolidate public and private land ownership patterns to improve management and reduce conflicts, while also improving access to public lands. The BVR has proposed a number of "Recreation Design Features" for enhanced public recreation made possible by the proposed land exchange.

Based on our review of the Draft EIS, the EPA has rated this document as EC-2, Environmental Concerns – Insufficient Information. A description of the EPA's rating system can be found at: <http://www2.epa.gov/nepa/environmental-impact-statement-rating-system-criteria>. This rating is based on wetland and floodplain impacts and mitigation, and opportunities for further clarification. Our detailed recommendations are provided for your consideration in the enclosure.

If further explanation of our comments is desired, please contact me at (303) 312-6704, or Melissa McCoy, lead reviewer for this project, at (303) 312-6155 or mccoy.melissa@epa.gov.

Sincerely,

Philip S. Strobel
Director, NEPA Compliance and Review Program
Office of Ecosystems Protection and Remediation

Enclosure

EPA's Detailed Comments on the Blue Valley Ranch Land Exchange EIS

1. Wetlands and Riparian Habitats

In the Draft EIS (page 1-25), one of the analytical indicators for potential impacts to wetlands is a discussion of the consistency of the proposed land exchange with Executive Order (EO) 11990, *Protection of Wetlands*. The Draft EIS states that the proposed land exchange would result in a net loss by BLM of 61.8 acres of wetlands, 71% of which are natural (i.e., not irrigated). The Draft EIS does not, however, include a discussion of the consistency of the proposed land exchange with EO 11990. When federally owned wetlands or portions of wetlands are proposed for disposal to non-federal public or private parties, EO 11990 directs federal agencies to (a) reference in the conveyance those uses that are restricted under identified federal, state or local wetlands regulations; and (b) attach other appropriate restrictions to the uses of properties by the grantee or purchaser and any successor, except where prohibited by law; or (c) withhold such properties from disposal. In addition, page 1-13 of the Draft EIS states the BLM's policy is that mitigation in the form of deed restrictions can be used when required by executive order, clearly supported by the environmental documentation and closely coordinated with the Field or Regional Solicitor. The BLM's policy also states that environmental mitigation in the form of reserved federal rights or interests should be evaluated for appropriateness as part of analysis of alternatives in the environmental documentation.

Based on EO 11990 and BLM's policy, we recommend that the Final EIS evaluate, as part of the alternatives analysis, whether there are restrictions that are appropriate to place on the uses of the parcels acquired by BVR to protect those wetlands and their beneficial functions, such as restricting livestock grazing and prohibiting destruction of non-jurisdictional wetlands. Also consistent with EO 11990 and the BLM's policy, we recommend that the EIS consider factors (including those listed in the EO and on page 3-156 of the Draft EIS) relevant to this proposal's effect on the survival and quality of the wetlands. Finally, we recommend that the Final EIS describe the grazing impacts to wetlands that could occur as a result of the proposed land exchange, especially in BLM-J, which is not currently grazed but could be in the future by Skylark Ranch, and in the western half of BLM-C, where a use of "open space" (Table 3Q-2) would likely be changed to an intended use by Sheephorn Ranch of livestock grazing. We note, however, that other sections of the Draft EIS indicate that BLM-C is already grazed; therefore, we recommend that the Final EIS clarify if the eastern and western halves of BLM-C are currently grazed.

2. Floodplains

The proposed land exchange would result in a net loss of streams and rivers by the BLM and would be exempt from the requirement in the Kremmling Field Office's Resource Management Plan that lands within 0.5 mile of either side of the Blue River or Colorado River be retained by the BLM. In addition to the information provided in Table 3S-1, it may be helpful to estimate the acres of floodplain that would be exchanged under the proposal, in order to make it clear which party would gain more or less of this resource.

Similar to EO 11990, EO 11988 requires that when federal property in floodplains is proposed for disposal to non-federal public or private parties, the federal agency shall (1) reference in the conveyance those uses that are restricted under identified federal, state or local floodplain regulations; and (2) attach other appropriate restrictions to the uses of properties by the grantee or purchaser and any successors,

except where prohibited by law; or (3) withhold such properties from conveyance. Therefore, we recommend that the Final EIS evaluate, as part of the analysis of alternatives, whether there are restrictions that are appropriate to place on the uses of the parcels acquired by BVR to protect those floodplains and their beneficial functions, including flood water storage and conveyance, water quality protection, groundwater recharge, biological productivity and diversity, and wildlife habitat.

To facilitate ease of understanding, in the section on Environmental Effects, we recommend separating the subsections into federal and non-federal parcels, as was done for other resources in the EIS. It is also not clear whether development may occur in the floodplain of the Blue River on non-federal parcels that would be acquired by the BLM. Page 3-178 of the Draft EIS states that there are no reasonably foreseeable development plans to build structures within the floodplains on the non-federal parcels to be acquired by the BLM, but on page 3-179 and in Figures 2 and 3, the EIS indicates that features of the Confluence Recreation Area, such as parking lots, may be located in the floodplain of the Blue River. We suggest clarifying in the Final EIS whether development may occur in the floodplain of the Blue River, and if it may, explain how such development would be consistent with EO 11988, which requires federal agencies to avoid direct or indirect support of floodplain development wherever there is a practicable alternative.

3. *Water Quality*

Page 3-150 of the Draft EIS states that the section of the Blue River that passes through the Analysis Area is impaired for temperature. The Draft EIS also states that USGS data from 1984-2007 for that section of the Blue River documented that almost all water temperature measurements and dissolved oxygen concentrations met the CDPHE standard for aquatic life protection. It is not clear what these data indicate about the impairment since the description of the data appears inconsistent with a temperature impairment. We recommend that the Final EIS reconcile this information.



COLORADO

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June 25, 2018

Annie Sperandio, Realty Specialist
Bureau of Land Management
2103 East Park Avenue
PO Box 68
Kremmling, Colorado 80459

RE: Blue Valley Land Exchange (1793(CO-N02))

Dear Annie,

Thank you for the opportunity to comment on the proposed Blue Valley Land Exchange. Colorado Parks and Wildlife (CPW) has had an opportunity to review the "Draft Environmental Impact Statement for the Blue Valley Ranch Land Exchange" and associated documents.

Area Wildlife Manager Lyle Sidener, District Wildlife Managers Rachel Sralla and Elissa Knox, and Conservation Biologist Michelle Cowardin have attended the open house information sessions the BLM has hosted in Silverthorne and Kremmling in 2016 and 2018. The aforementioned CPW staff members have spoken with BLM personnel, Blue Valley Ranch staff, and wildlife stakeholders regarding the exchange.

The Blue Valley Ranch Land Exchange, as proposed would put 1,489 acres of current federal land into private ownership and 1,830 acres of current private and county-owned lands into the public trust as federal lands. There will be a net gain of federal lands of 341 acres. The majority of the proposed parcels sit in the Blue River Valley, which is home to a diverse array of big and small game animals as well as many non-game species and provides critical habitat to those species throughout the year.

CPW supports the Blue Valley Ranch Land Exchange. CPW feels that sportsmen and wildlife will benefit from the access and protections created by the land exchange. CPW is in favor of consolidating public and private land boundaries when possible.

Based on CPW's working relationship with BVR as partners in wildlife and aquatic conservation, land stewardship, and education, we believe that the Federal parcels proposed for transfer into private ownership will be well-managed based on the Ranch's conservation ethics. The consolidation of private and publicly owned parcels will allow for greater continuity of landscape-scale habitat conservation and improvement for Colorado's wildlife species.

CPW personnel have considered all documents provided by BLM regarding the exchange and would like to make the following comments and recommendations regarding specific parcels proposed for exchange:



Parcel BVR-1:

This parcel is currently private property. As part of the proposed land exchange, this 656.58 acre parcel would become BLM land. In addition, this would provide legal public access to a currently land-locked 480 acre parcel of BLM on San Toy Mountain.

Increased legal access to San Toy post-exchange would especially benefit hunters. This area provides important habitat for mule deer and elk throughout the year. In addition, Rocky Mountain bighorn sheep, pronghorn, black bear, and mountain lion utilize the resources on the mountain during all or part of the year. The entrance of this parcel into the public trust would protect greater sage-grouse habitat including mapped breeding, production, and brood-rearing habitat.

CPW encourages continued good grazing practices on Parcel BVR-1 for the benefit of rangeland health and wildlife habitat. The eastern portion of San Toy is in the Engle grazing allotment and the allotment is well managed.

Currently a minimal number of roads exist on these parcels. CPW stresses the importance of this habitat for wildlife, and acknowledges that where road access is decreased, hunter success increases. CPW strongly recommends that no additional roads be created in these parcels post-exchange, CPW also recommends that existing roads be assessed to determine if closure to motorized use would be appropriate, especially to protect breeding sage grouse in spring and wintering deer and elk.

Parcels BVR-2, 10:

CPW supports this exchange to improve public fishing access to the Blue River from Hwy 9. CPW recommends maintaining/improving existing foot trail to the river, but do not support development of new trails, and recommends limiting the trail to foot access only (no bikes or motorized use). CPW personnel have discussed this parcel with the United States Forest Service and learned that this management is in line with their vision for the acreage the USFS would acquire in the exchange.

Parcels BVR-2, 3, 9:

CPW supports these exchanges to improve public hunting access on Green Mountain. Hunting is very popular in this area, and the current mixed land ownership is not well marked and very confusing to the public. CPW believes this exchange will improve access and opportunity for hunters. CPW recommends that if the new boundaries are to be marked, that they are posted with signs or markers but not with fences, which can impede wildlife movement.

CPW also encourages the removal of old grazing fences on/between any of the parcels on Green Mountain. Green Mountain provides year-round wildlife habitat, including summer and winter range for elk, and summer range, winter range and winter concentration area for mule deer. Bighorn sheep also move through the area. Unmaintained fences are a hazard to animals, as they can become entangled in loose wire. CPW would be happy to assist in future fence removal efforts.

CPW recommend that post-exchange, no additional roads or trails are to be created in the Green Mountain area. A few existing dirt roads and trails exist, some of which are open to motorized use and others that are not. CPW recommends restricting motorized use to roads that are currently open.

Additional roads and trails and subsequent recreational use will negatively impact animals on summer and winter ranges.

Parcel BVR-4:

CPW supports this exchange. This parcel is currently posted and has a public road (Williams Peak Road) running through it, which receives heavy public use during summer and fall months. Converting this parcel to BLM will reduce trespass issues and improve hunting opportunity for the public. CPW encourages BVR and BLM to post the new boundary to reduce trespass issues.

Parcel BVR-8:

This parcel is a 67.3 acre hay meadow currently owned by Blue Valley Ranch and leased to a neighboring ranch. The ranch cuts and puts up hay from this meadow every year. CPW strongly encourages BLM to keep this meadow in agricultural production through grazing or haying. If this is not feasible, CPW would like to recommend a partnership with BLM to perform a habitat project. When hay meadows are no longer used for hay production, the potential for the parcel to be overtaken by weeds is very high. This puts neighboring properties at risk for noxious weed infestation and reduces the quality of vegetation available for wildlife species. In addition, the parcel has a valuable water right that could be put to use for waterfowl nesting habitat or wetland conservation if it is not used for irrigation.

The neighboring landowner has placed the adjacent land into a conservation easement held by Colorado Cattleman's Agricultural Land Trust. This land will be conserved for historical use in perpetuity. The acquisition of BLM-8 by the BLM will conserve this land and its important historic and wildlife values.

Post-exchange public access to this stretch of the Blue River would make walk-in bank or wade fishing possible. Public access for such opportunities is currently limited south of Spring Creek Road. The Blue River from Green Mountain dam to the Confluence with the Colorado River holds the Gold Medal Water designation and is popular with anglers who float the River.

The confluence of the Blue River, Colorado River and Muddy Creek is a popular spot for duck hunters. Waterfowl hunting access would also be increased in this river stretch and on the hay meadows post-exchange.

Blue Valley Ranch has proposed the funding of in-stream river work to improve the trout fishery in this stretch of the Blue River. If J-Hook vanes, "bankfull" benches, and toewood structures are put into this stretch, the angling experience would be greatly enhanced. This section of the Blue River is wide and shallow with little cover available for trout. The creation of trout habitat would disperse fish through the channel and allow for increased and a wider variety of fishing access than the current float access.

Parcels BLM-A, B, C, F:

These parcels are proposed to become private property in the exchange. Parcels A, C, and F are projections of public land into private property. Hunting trespass is a consistent issue in these spots. Parcel B is land locked by private and inaccessible to the public without permission. The trade of these

parcels into private holding would reduce trespass, fencing maintenance, and make the public-private boundary easier for hunters to understand.

BLM-G, H:

These BLM parcels are proposed to become private property in the exchange. These parcels are currently only legally accessible to neighboring private property owners or by floating the Blue River. These parcels provide an opportunity for floating fishermen to beach their rafts and wade fish or get out of their rafts. The Blue River would become all private property from the Grand County/Summit County line south to the lower Blue River takeout post-exchange. This would reduce trespass onto the private land, but wouldn't change the current float access to the Blue. Parcel H is not accessible from Spring Creek Road, and gets very little hunting use. Parcel G does provide opportunity for deer harvest during the hunting seasons. The conversion of these parcels to private land would be considered a loss for the public, but CPW feels this loss is outweighed by benefits to sportsmen and wildlife when the whole exchange is considered.

Parcel BLM-I:

This 396.9 acre parcel is currently held by BLM. It provides hunting access south of Trough Road and fishing access to a short section of the Blue River. This section of river is popular legal access to the Blue River for anglers. This parcel is problematic with anglers who do not understand the public/private land boundary before fishing the parcel. Local District Wildlife Managers respond to and write multiple fishing trespass tickets each year to anglers who fish on the adjacent private land without permission. The exchange of this parcel into private ownership will be a loss to hunters and anglers who utilize this parcel. CPW believes this loss is outweighed by an overall gain to sportsmen. Anglers will experience a net gain of fishing access on the Blue River post-exchange.

Post-exchange, CPW recommends that the public road into Parcel BLM-I be gated and locked. Signage should be posted that the property is in private ownership to deter trespass on the parcel.

Parcel BLM-J:

This 89.7 acre parcel was acquired by BLM in a past land exchange. CPW supports the trade of this property back into private ownership. This parcel was a hay meadow pre-exchange, and CPW recommends grazing, haying, or both be conducted on the parcel post-exchange.

Parcel BLM-K:

This 40 acre parcel is currently BLM and is proposed to become property of the Blue Valley Metropolitan District. This parcel is currently accessible to the public and the ridge holds a large number of wintering mule deer during the winter months. During the summer months it is a popular dog-walking and motorized recreation area for the residents from the subdivision. The proposed removal of this 40 acres from the 200 acres it is parceled with will block up the private/public land boundary between BLM and the subdivision.

CPW would like to make the following comments regarding the proposed Recreation Area Concepts:

Proposed Confluence Recreation Area:

The creation of a larger, more easily accessible recreation area at the confluence of the Blue and Colorado Rivers will greatly benefit sportsmen. Improved foot access via the proposed trails will increase access for a variety of anglers and waterfowl hunters. There are currently only a few locations at which handicapped anglers can access the Colorado River. Creation of handicapped accessible access to the Blue River at the Confluence Recreation Area would be a benefit to all of Colorado's anglers. In addition, the proposed in-stream developments will increase the availability of desirable habitat for trout species in this area. Currently, the river is wide and shallow with little habitat variation excepting naturally forming sand bars. Creation of deeper pools, riffles, and cover for trout increases trout use of the area and as a result may improve the sport fishery. Creation of these in-stream developments also improves watershed and river health.

Proposed Spring Creek Road Take-Out and Rest Stop:

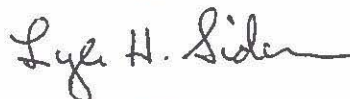
Creation of a rest stop at Spring Creek road will offset the loss of BLM Parcel H which is currently used as a rest stop for sportsmen floating the Blue River and fishing. The addition of a rest stop may help relieve trespass issues further downstream by giving boaters a legal place to anchor or beach and use the facilities.

Proposed Green Mountain Trailhead Parking:

The creation of a small parking lot and trail to access lower Green Mountain Canyon will be a great benefit to sportsmen. This area is currently not accessible by foot, so legal and developed access will allow opportunity for anglers who do not float the river to fish this stretch of the Blue River. There is currently minimal use of this area outside of fall big game seasons, but the projected increase in vehicle and foot traffic by anglers into the canyon is not expected to adversely impact the wildlife in the area.

The Blue Valley Land Exchange will be an overall benefit to sportsmen in Colorado and to wildlife. CPW and I look forward to a continued strong working relationship and dialogue about the proposed Blue Valley Land Exchange. If you have any further questions, please contact me at (970) 725-6200 or lyle.sidener@state.co.us, or District Wildlife Manager Rachel Sralla at (970) 531-2445 or rachel.sralla@state.co.us.

Sincerely,



Lyle H. Sidener
Area Wildlife Manager

Cc. JT Romatzke, Northwest Region Manager
Rachel Sralla, District Wildlife Manager
Elissa Knox, District Wildlife Manager
Tom Davies, District Wildlife Manager
Michelle Cowardin, Biologist
Taylor Elm, Land Use Specialist



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ROBERT FRANEK
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June 19, 2018

Bureau of Land Management - Kremmling Field Office
Attn: Ms. Annie Sperandio – Realty Specialist
PO Box 68
Kremmling, CO 80459

Sent via regular mail and email blm_co_kr_webmail@blm.gov and asperandio@blm.gov

Re: Grand County comments on Blue Valley Land Exchange

Dear Ms. Sperandio,

The Grand County Board of County Commissioners appreciates the opportunity to reaffirm our comments and support of the Draft Environmental Impact Statement for the Blue Valley Ranch Land Exchange – May 2018.

We applaud Blue Valley Ranch's diligence in listening to public comments provided during the previously proposed land exchange, especially with regard to BLM Parcel I, and coming back to the table with a proposed land exchange that we believe is a win-win and provides benefit to the public interests of both our citizens and visitors. In the end, the public gains approximately 341 acres of public land. However, Blue Valley Ranch specifically addressed previous public comment by now providing public access to nearly 1 mile of Blue River near its confluence. BVR Parcel 8a is the property provided to BLM in lieu of the BLM giving up .3 miles of Blue River accessed off County Road 1 - Trough Road within BLM Parcel I. In addition, Blue Valley Ranch is providing walk-in access to approximately 1.6 miles of Blue River in the canyon below Green Mountain Reservoir and other public property described below.

The proposed public improvements (in-stream fishery improvements, accessible fishing platforms, boating put-in/take-out, trails, parking areas and day use areas) within BVR Parcel 8a will provide a tremendous benefit to the public and will likely result in a direct economic benefit to the Town of Kremmling. We have been provided a copy of the current BLM Access

Easement to the existing public land near the confluence and understand it allows for permanent access to BVR Parcel 8a, as well. Perfecting a public high water mark easement now or in the future on the west bank of the Blue River along the common boundary between BVR Parcel 8a and Sand Toy Land Company would eliminate any future trespass issues from wade fisherman in this section, as the property line is depicted to be the middle of the river.

BVR Parcel 1 provides nearly 657 acres of walk-in hunting and recreational property on the north east side of San Toy Mountain, which is contiguous to and provides access to another 480 acres of public property on its west boundary. In total, the public would have access to over 1,130 contiguous acres access off of County Road 1 – Trough Road.

BVR Parcel 10 (including the adjacent access trail into the canyon) and BVR Parcel 2 provide both approximately 1.6 miles of angler walk-in access to the Blue River canyon below Green Mountain Reservoir previously accessible via boat, and nearly 622 acres of additional walk-in hunting and recreational property and access to Green Mountain (not the reservoir).

Downriver from BVR Parcel 10 at the County Road 10 - Spring Creek Bridge, Blue Valley Ranch is also providing a boating rest stop, take-out, seasonal toilet and parking area. We commend Blue Valley Ranch for addressing our previous concern, as we understand they are now providing an easement to make this a "permanent" public amenity.

Likewise, we appreciate BLM retaining the public section of Colorado River adjacent to BLM Parcel J currently accessed via Reeder Creek.

To summarize, the Grand County Board of County Commissioners reaffirms its full support of the Blue Valley Land Exchange. If you have any questions or need additional information, please contact Edward Moyer at (970)725-3100 or emoyer@co.grand.co.us.

Sincerely,



Merrit Linke
Commissioner Chair



Kristen Manguso
Commissioner



Richard Cimino
Commissioner

BOCC:em

Cc: Blue Valley Ranch



BOARD OF COUNTY COMMISSIONERS

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June 25, 2018

Bureau of Land Management
Kremmling District
Attn: Annie Sperandio
2103 E Park Avenue, P.O. Box 68
Kremmling, CO 80459

Via U.S. Mail and blm_co_kr_webmail@blm.gov and kfo_webmail@blm.gov

Re: Blue Valley Ranch Land Exchange Draft Environmental Impact Statement

Dear Ms. Sperandio,

Through this letter, the Summit County Board of County Commissioners is providing comments on the Draft Environmental Impact Statement (EIS) for the Blue Valley Ranch Land Exchange (BVR). As you know, the proponents have included a 120-acre property owned by Summit County Government in this exchange proposal. We have also been cooperating partners with the U.S. Forest Service (USFS) and BLM on managing recreational and natural resources, and have undertaken numerous efforts to support USFS management of the lower Blue River valley in recent years. Our comments relating to this proposal reflect our goals of working in the public interest, providing and maintaining public access, and facilitating efficient management of our public lands.

The Summit County Board of County Commissioners would like to thank the Kremmling BLM and other parties to the Blue Valley Ranch Land Exchange for all your efforts to address the comments we provided in our June 6, 2016 scoping letter and to preserve the Blue River below Green Mountain Reservoir as a sustainable public amenity. The perpetual access agreements associated with the Recreational Design Features set forth in the EIS appear to address our concerns and we want to state our appreciation for the extra effort it took to address these critical issues as part of the scope of this transaction.

As we indicated in our previous letter and discussions, our project partnership and support is predicated upon establishment of safe public access to both ends of Green Mountain Canyon and the Blue River below Green Mountain Reservoir. The EIS indicates that construction of the trail entering the lower canyon below Parcel 10 is contingent upon the USFS undertaking an environmental analysis of this trail. Given this contingency, we request that the USFS endeavor to undertake this analysis promptly after closing as consideration for the land that the USFS will be receiving in the land exchange.

The EIS also notes that Summit County and BVR will assist with design and construction of a safer, more user friendly put-in near the dam. We have engaged an engineer to create a conceptual design for a stairway structure. This effort has indicated that design options for the put-in may be constrained by

uncertainty in the property boundary between Bureau of Reclamation and USFS property in this location. While we understand that this necessary work concerning the put-in is not within the scope of the NEPA process on the land exchange, Summit County wants to take this opportunity to stress the importance of a continued cooperative effort among Summit County, BLM, USFS and BVR on Blue River issues and to request that this boundary uncertainty be resolved by the agencies in the near future. We also request that the USFS endeavor to promptly commence its environmental review of any impacts on USFS lands associated with the proposed improvements at the put-in.

Thank you for the opportunity to comment on the EIS. We want to reiterate our support the goals set forth for this exchange. If you have questions regarding the comments provided in this letter, please contact Brian Lorch, Summit County Open Space and Trails Department at (970) 668-4067 or Brian.Lorch@summitcountyco.gov.

Respectfully,



Thomas Davidson
Chairman



Dan Gibbs
Commissioner



Kam Stiegelmeier
Commissioner

cc.: Stephanie Odell, Field Manager, BLM
Tom Glass, Western Land Group
Scott Vargo, Summit County Manager
Jim Curnutte, Summit County Community Development Director
Brian Lorch, Summit County Open Space and Trails Director

APPENDIX N. SUPPLEMENTARY INFORMATION ON STREAM RESTORATION

OVERVIEW

The approach for this restoration is based on the Natural Channel Design (NCD) methodology as developed by D. Rosgen, described in the NRCS National Engineering Handbook, Part 654, Chapter 11, the “Rosgen Geomorphic Channel Design,” August 2007. Also described in Rosgen, 2011 and 2018.

The NCD applications have been successfully implemented on over 6 miles of the Blue River upstream of the proposed confluence restoration project over a 20-year period.

The lower reach of the Blue River near the confluence with the Colorado River is an entrenched (F5/4 stream type) with a very high width/depth ratio with accelerated streambank erosion, excess fine sediment deposition and poor fish habitat quality (lack of high and low flow refugia).

As summarized as part of the Wildland Hydrology conceptual design entitled “Fish Habitat Enhancement and Recreational Development of the Confluence Recreation Area, Blue River, Colorado,” D. and B. Rosgen, 2016, the following restoration implementation was recommended:

1. Decrease the width/depth ratio by narrowing the riffle cross-section of the bankfull channel from a width of 150 feet to 90 feet and defining a 4-stage shaped channel including a defined inner berm (deep low flow channel feature).
2. Construct a floodplain and bankfull bench against the high terrace banks within the present condition entrenched channel.
3. Develop a riparian corridor on the bankfull bench and constructed floodplain against the existing eroding streambanks.
4. Install toe wood, J-Hook rock vanes, cross-vanes and other structures to provide fish habitat, grade control and streambank stabilization.
5. Provide a functional lift of the channel by creating floodplain connectivity and creating new wetlands and riparian function.
6. Create a safe boating take out/put in.
7. Provide a surface for a trail system on both banks for fishing access, including opportunity for handicap trails.

PRELIMINARY ESTIMATED EARTHWORK VOLUMES

For constructed cross-sections, the estimated earthwork excavation volumes (cut) to create a low flow (inner berm) channel and narrow the bankfull width as reflected for a typical riffle was determined as shown in Figure 1, and for a pool, Figure 2. There is 4,043 feet of stream channel length with pools making up 1,200 feet. The amount of fill was estimated at 35,939 cubic yards and for excavation (cut) is approximately 36,471 cubic yards. The fill would provide the surface for the bankfull bench, trail system and create floodplain and riparian function. The volume of material from rock structures are estimated for nine J-Hook Vanes at 180 3-foot rocks/structure or 1,620 cubic yards. Two rock Cross-Vanes are proposed at 360 3-foot rocks/structure or 720 cubic yards. Examples of the character, design details and location of the rock structures are depicted in the Fish Habitat Enhancement and Recreational Development Report, 2016. Approximately 650 feet of Toe Wood structure for fish habitat and streambank protection are planned to involve an estimate of 1,440 cubic yards.

ESTIMATED WETLAND IMPACTS

As determined from the proposed plan view overlay of the mapped wetlands, there would be less than 1 acre of wetlands disturbed due to construction. This small impact would be adjacent to the take-out/put-in boat feature and near the proposed oxbow ponds in the narrow stringer floodplain surface at the lower end of the project. Wetlands would be created on the new floodplain surface by a 3:1 margin to make up for the small area impacted. Most of the

wetlands would be created within the constructed floodplains and associated raised water table with the oxbow ponds on adjacent floodplain surfaces.

REQUIRED WORK REMAINING

A detailed field survey of the existing dimension, pattern, profile, channel materials, channel stability examination including the Bank Assessment for Non-point source Consequences of Sediment model for streambank erosion and sediment transport capacity is required for the assessment phase. To obtain the Nationwide 27 404 permit from the U.S. Army Corps of Engineers (USACE) regulatory branch detailed end area calculations (cut/fill balances), and mapped area of wetland impacts due to construction, plan and obtained from detailed section and profile views of detailed design including structure locations and design details. Assessment of potential endangered species and cultural resource evaluations are also required if applicable. The field survey work would involve three to four days with subsequent analysis and report writing involving up to four to six weeks preparation and approximately sixty days for the USACE permit review. We have a cadre of available contractors that we have trained to do this type of restoration work including those who were previously involved in the design implementation of the BVR restoration projects.

BENEFITS COMPARED TO EXISTING CONDITIONS

The existing entrenched and high width/depth ratio channel presently has poor instream cover for both adult and juvenile fish. This morphology is associated with accelerated streambank erosion, fine sediment deposition and aggradation of fine sediments over gravel. This fine sediment adversely affects the food chain and spawning substrate. Even with high flows, in the presence of the over-wide channel, sediment deposition continues to create adverse habitat features. The proposed multi-stage channel includes a well-defined low flow (inner berm) channel and narrowed bankfull channel width that would increase the sediment transport capacity and provide better low flow and winter refugia for trout.

It is anticipated that there would be an 80 percent reduction in streambank erosion rates and land loss involving approximately 450 tons/year of sediment from the current actively eroding streambanks with the proposed restoration. An increase in sediment transport capacity and reduced sediment supply with the proposed design would help “clean” significant fine sediment deposition from the streambed and prevent further aggradation.

IMPLEMENTATION

Approximately 2.5 months may be required to implement the river restoration portion of the design. Construction would be completed during periods of low flows (March, April, and May) due to controlled releases from Green Mountain dam). During construction, the river would not be shut down for boating or fishing activities.

Figure 1. (upper), Typical riffle cross-section showing cut and fill requirements with narrowing of the bankfull width and development of a low flow channel and new floodplain/bankfull bench

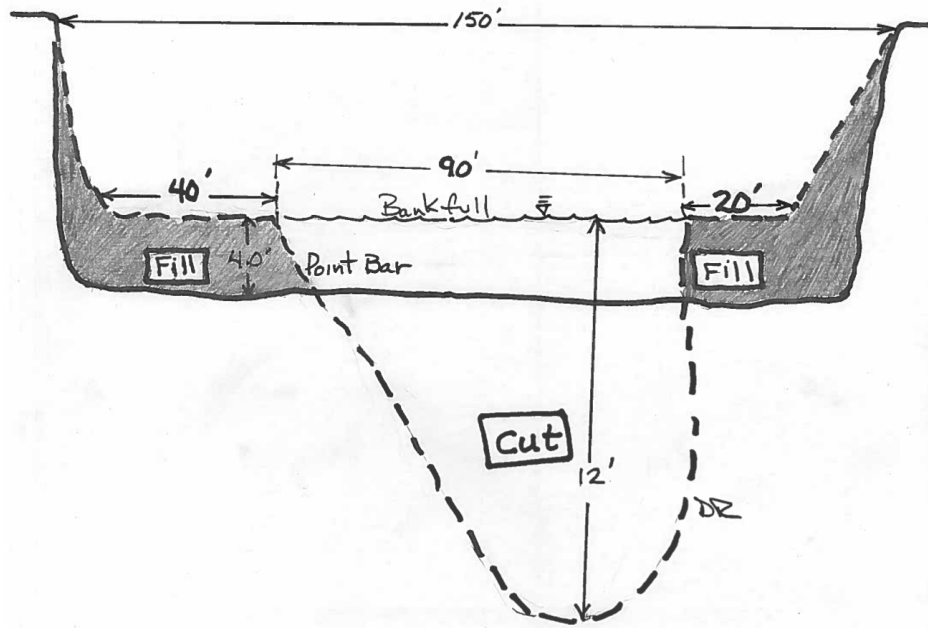
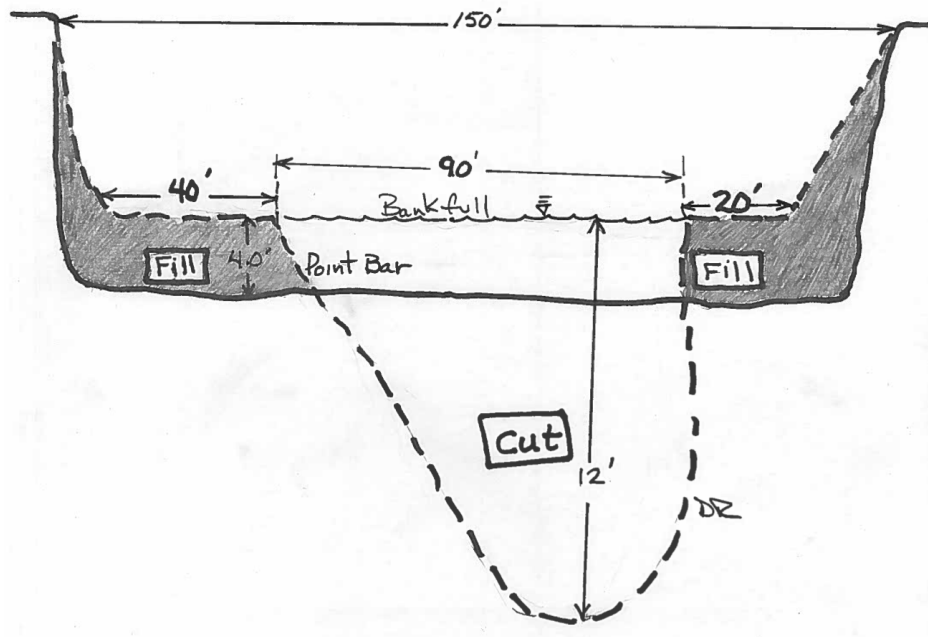


Figure 2. (lower) A typical pool cross-section showing point bar and maximum bankfull depth, floodplain construction and bankfull bench.



LITERATURE CITED

- Rosgen, D.L. 2007. NRCS National Engineering Handbook, Part 654, Chapter 11, the “Rosgen Geomorphic Channel Design”
- Rosgen, D. L. 2011. Natural Channel Design: Fundamental Concepts, Assumptions, and Methods. In A. Simon, S.J. Bennett, & J.M. Castro (Eds.), Stream Restoration in Dynamic Fluvial Systems: Scientific Approaches, Analyses, and Tools, Geophysical Monograph Series 194, pp. 69–93. Washington, D.C.: American Geophysical Union. An edited version of this paper was published by AGU. Copyright 2011 American Geophysical Union.
- Rosgen, D.L. 2018. Natural Channel Design for River Restoration. Encyclopedia Water: Science, Technology and Society, edited by Patricia A. Maurice. Copyright © 2020 John Wiley & Sons, Inc.