

Appendix R2.10

Paleontological Resources

Appendix R2.10 Paleontological Resources

This appendix presents data supporting the analysis in Volume IV, Chapter IV.10. This appendix is organized as follows.

- Section R2.10.1 – No Action Alternative: Tables R2.10-1 through R2.10-2
- Section R2.10.2 – Preferred Alternative: Tables R2.10-3 through R2.10-4
- Section R2.10.3 – Alternative 1: Tables R2.10-6 through R2.10-7
- Section R2.10.4 – Alternative 2: Tables R2.10-8 through R2.10-9
- Section R2.10.5 – Alternative 3: Tables R2.10-10 through R2.10-11
- Section R2.10.6 – Alternative 4: Tables R2.10-12 through R2.10-13

Note on Rounding of Data. The following general rounding rules were applied to calculated values: values greater than 1,000 were rounded to nearest 1,000; values less than 1,000 and greater than 100 were rounded to the nearest 100; values of 100 or less were rounded to the nearest 10, and therefore totals may not sum due to rounding. In cases where subtotals are provided, the subtotals and the totals are individually rounded. The totals are not a sum of the rounded subtotals; therefore the subtotals may not sum to the total within the table.

R2.10.1 No Action Alternative

**Table R2.10-1
Potential Plan-wide Paleontological Resource Impacts by Ecoregion Subarea – No Action Alternative**

Ecoregion Subareas	Low/Very Low (PFYC Class 1 or 2)		Moderate/Unknown (PFYC Class 3)		High/Very High (PFYC Class 4 or 5)		Grand Total (Acres) ^{1,2}
	Acres	Percent	Acres	Percent	Acres	Percent	
Cadiz Valley and Chocolate Mountains	5,000	11.3%	24,000	60.0%	11,000	28.0%	40,000
Imperial Borrego Valley	400	2.2%	14,000	68.6%	4,000	19.3%	20,000
Kingston and Funeral Mountains	4,000	22.8%	11,000	65.0%	2,000	12.2%	17,000
Mojave and Silurian Valley	10	25.6%	10	56.1%	0	18.3%	20
Owens River Valley	—	—	—	—	—	—	—
Panamint Death Valley	—	—	—	—	—	—	—
Pinto Lucerne Valley and Eastern Slopes	400	39.6%	400	41.0%	200	19.4%	1,000
Piute Valley and Sacramento Mountains	—	—	—	—	—	—	—
Providence and Bullion Mountains	3,000	24.1%	8,000	60.6%	2,000	15.3%	13,000
West Mojave and Eastern Slopes	5,000	26.5%	10,000	54.3%	4,000	19.1%	18,000
Estimated Footprint Impacts (acres)	17,000	15.7%	67,000	61.3%	23,000	20.9%	109,000

¹ Grand totals may not match the sum of PFYC classes because it includes areas mapped as water features which could not be assigned a PFYC class.

² Grand total may be less than the area of permanent disturbance shown in Table IV.1-1, because transmission scenarios were not included in the analysis.

Table R2.10-2
Potential BLM LUPA Paleontological Resource Impacts by Ecoregion Subarea – No Action Alternative

Ecoregion Subareas	Low/Very Low (PFYC Class 1 or 2)		Moderate/Unknown (PFYC Class 3)		High/Very High (PFYC Class 4 or 5)		Grand Total (Acres) ^{1,2}
	Acres	Percent	Acres	Percent	Acres	Percent	
Cadiz Valley and Chocolate Mountains	4,000	12.0%	17,000	58.9%	9,000	29.1%	29,000
Imperial Borrego Valley	400	4.8%	4,000	56.2%	3,000	39.0%	8,000
Kingston and Funeral Mountains	3,000	22.6%	9,000	64.6%	2,000	12.7%	13,000
Mojave and Silurian Valley	0	29.2%	10	51.1%	0	19.8%	20
Owens River Valley	—	—	—	—	—	—	—
Panamint Death Valley	—	—	—	—	—	—	—
Pinto Lucerne Valley and Eastern Slopes	300	53.1%	200	31.3%	90	15.6%	600
Piute Valley and Sacramento Mountains	—	—	—	—	—	—	—
Providence and Bullion Mountains	2,000	24.1%	6,000	59.6%	2,000	16.3%	10,000
West Mojave and Eastern Slopes	2,000	32.4%	2,000	41.3%	1,000	26.3%	5,000
Estimated Footprint Impacts (acres)	14,000	23.2%	32,000	52.0%	15,000	24.7%	61,000

¹ Grand totals may not match the sum of PFYC classes because it includes areas mapped as water features which could not be assigned a PFYC class.

² Grand total may be less than the area of permanent disturbance shown in Table IV.1-1, because transmission scenarios were not included in the analysis.

R2.10.2 Preferred Alternative

**Table R2.10-3
Potential Plan-wide Paleontological Resource Impacts by Ecoregion Subarea – Preferred Alternative**

Ecoregion Subareas	Low/Very Low (PFYC Class 1 or 2)		Moderate/Unknown (PFYC Class 3)		High/Very High (PFYC Class 4 or 5)		Grand Total (Acres) ^{1,2}
	Acres	Percent	Acres	Percent	Acres	Percent	
Cadiz Valley and Chocolate Mountains	200	1%	23,000	78%	6,000	21%	29,000
Imperial Borrego Valley	0	0%	52,000	91%	2,000	3%	57,000
Kingston and Funeral Mountains	0	0%	3,000	98%	50	2%	3,000
Mojave and Silurian Valley	100	4%	3,000	90%	200	7%	3,000
Owens River Valley	60	4%	1,000	96%	0	0%	1,000
Pinto Lucerne Valley and Eastern Slopes	600	6%	8,000	83%	1,000	11%	10,000
Providence and Buillion Mountains	100	11%	900	89%	0	0%	1,000
West Mojave and Eastern Slopes	3,000	8%	31,000	78%	6,000	14%	40,000
Estimated Footprint Impacts (acres)	4,000	3%	122,000	85%	14,000	10%	145,000

¹ Grand totals may not match the sum of PFYC classes because it includes areas mapped as water features which could not be assigned a PFYC class.

² Grand total may be less than the area of permanent disturbance shown in Table IV.1-1, because transmission scenarios were not included in the analysis.

Table R2.10-4
Potential BLM LUPA Paleontological Resource Impacts by Ecoregion Subarea – Preferred Alternative

Ecoregion Subareas	Low/Very Low (PFYC Class 1 or 2)		Moderate/Unknown (PFYC Class 3)		High/Very High (PFYC Class 4 or 5)		Grand Total (Acres) ^{1,2}
	Acres	Percent	Acres	Percent	Acres	Percent	
Cadiz Valley and Chocolate Mountains	200	1%	15,000	73%	5,000	26%	21,000
Imperial Borrego Valley	0	0%	12,000	91%	1,000	9%	13,000
Kingston and Funeral Mountains	0	0%	2,000	98%	50	2%	2,000
Mojave and Silurian Valley	90	8%	900	76%	200	16%	1,000
Owens River Valley	60	4%	1,000	96%	0	0%	1,000
Pinto Lucerne Valley and Eastern Slopes	300	13%	2,000	74%	300	13%	2,000
Providence and Buillion Mountains	90	17%	400	83%	0	0%	500
West Mojave and Eastern Slopes	1,000	18%	3,000	58%	1,000	23%	5,000
Estimated Footprint Impacts (acres)	2,000	4%	37,000	78%	8,000	18%	47,000

¹ Grand totals may not match the sum of PFYC classes because it includes areas mapped as water features which could not be assigned a PFYC class.

² Grand total may be less than the area of permanent disturbance shown in Table IV.1-1, because transmission scenarios were not included in the analysis.

**Table R2.10-5
Comparison of Potential Paleontological Resource Impacts by Alternative**

Ecoregion Subareas	Low/Very Low (PFYC Class 1 or 2)		Moderate/Unknown (PFYC Class 3)		High/Very High (PFYC Class 4 or 5)		Grand Total (Acres) ^{1,2}
	Acres	Percent	Acres	Percent	Acres	Percent	
<i>Plan-wide</i>							
No Action	17,000	15.7%	67,000	61.3%	23,000	20.9%	109,000
Preferred Alternative	4,000	3.1%	122,000	84.6%	14,000	10.0%	145,000
Alternative 1	3,000	2.3%	130,000	87.6%	8,000	5.4%	148,000
Alternative 2	8,000	6.0%	103,000	76.4%	21,000	15.5%	135,000
Alternative 3	4,000	2.5%	132,000	87.4%	10,000	6.7%	151,000
Alternative 4	4,000	2.7%	122,000	83.1%	16,000	10.9%	147,000
<i>BLM LUPA (Subset)</i>							
No Action	14,000	23.2%	32,000	52.0%	15,000	24.7%	61,000
Preferred Alternative	2,000	3.8%	37,000	78.3%	8,000	17.9%	47,000
Alternative 1	1,000	7.9%	14,000	78.4%	3,000	13.7%	18,000
Alternative 2	5,000	9.4%	33,000	61.3%	16,000	29.3%	54,000
Alternative 3	1,000	3.4%	30,000	81.6%	6,000	14.9%	37,000
Alternative 4	1,000	2.7%	31,000	75.5%	9,000	21.8%	41,000

¹ Grand totals may not match the sum of PFYC classes because it includes areas mapped as water features which could not be assigned a PFYC class.

² Grand total may be less than the area of permanent disturbance shown in Table IV.1-1, because transmission scenarios were not included in the analysis.

R2.10.3 Alternative 1

**Table R2.10-6
Potential Plan-wide Paleontological Resource Impacts by Ecoregion Subarea – Alternative 1**

Ecoregion Subareas	Low/Very Low (PFYC Class 1 or 2)		Moderate/Unknown (PFYC Class 3)		High/Very High (PFYC Class 4 or 5)		Grand Total (Acres) ^{1,2}
	Acres	Percent	Acres	Percent	Acres	Percent	
Cadiz Valley and Chocolate Mountains	0	0.0%	19,000	91.0%	2,000	9.0%	21,000
Imperial Borrego Valley	10	0.0%	55,000	86.5%	2,000	2.8%	64,000
Mojave and Silurian Valley	20	0.4%	5,000	98.9%	30	0.7%	5,000
Owens River Valley	200	2.7%	6,000	97.3%	0	0.0%	6,000
Pinto Lucerne Valley and Eastern Slopes	1,000	10.1%	9,000	71.7%	2,000	18.3%	13,000
Providence and Buillion Mountains	300	15.7%	2,000	84.3%	0	0.0%	2,000
West Mojave and Eastern Slopes	2,000	4.6%	34,000	90.2%	2,000	5.2%	37,000
Estimated Footprint Impacts (acres)	3,000	2.3%	130,000	87.6%	8,000	5.4%	148,000

¹ Grand totals may not match the sum of PFYC classes because it includes areas mapped as water features which could not be assigned a PFYC class.

² Grand total may be less than the area of permanent disturbance shown in Table IV.1-1, because transmission scenarios were not included in the analysis.

**Table R2.10-7
Potential BLM LUPA Paleontological Resource Impacts by Ecoregion Subarea – Alternative 1**

Ecoregion Subareas	Low/Very Low (PFYC Class 1 or 2)		Moderate/Unknown (PFYC Class 3)		High/Very High (PFYC Class 4 or 5)		Grand Total (Acres) ^{1,2}
	Acres	Percent	Acres	Percent	Acres	Percent	
Cadiz Valley and Chocolate Mountains	0	0.0%	3,000	82.7%	700	17.3%	4,000
Imperial Borrego Valley	0	0.0%	6,000	85.6%	1,000	14.4%	7,000
Owens River Valley	100	3.8%	4,000	96.2%	0	0.0%	4,000
Pinto Lucerne Valley and Eastern Slopes	800	33.3%	900	37.9%	700	28.8%	2,000
Providence and Buillion Mountains	200	73.6%	80	26.4%	0	0.0%	300
West Mojave and Eastern Slopes	300	30.5%	500	53.0%	200	16.5%	1,000
Estimated Footprint Impacts (acres)	1,000	7.9%	14,000	78.4%	3,000	13.7%	18,000

¹ Grand totals may not match the sum of PFYC classes because it includes areas mapped as water features which could not be assigned a PFYC class.

² Grand total may be less than the area of permanent disturbance shown in Table IV.1-1, because transmission scenarios were not included in the analysis.

R2.10.4 Alternative 2

**Table R2.10-8
Potential Plan-wide Paleontological Resource Impacts by Ecoregion Subarea – Alternative 2**

Ecoregion Subareas	Low/Very Low (PFYC Class 1 or 2)		Moderate/Unknown (PFYC Class 3)		High/Very High (PFYC Class 4 or 5)		Grand Total (Acres) ^{1,2}
	Acres	Percent	Acres	Percent	Acres	Percent	
Cadiz Valley and Chocolate Mountains	200	1.2%	16,000	78.2%	4,000	20.7%	20,000
Imperial Borrego Valley	900	1.7%	42,000	80.7%	6,000	12.2%	53,000
Kingston and Funeral Mountains	100	5.5%	2,000	93.6%	20	0.9%	2,000
Mojave and Silurian Valley	50	1.3%	4,000	96.9%	70	1.8%	4,000
Owens River Valley	50	2.1%	2,000	97.9%	0	0.0%	2,000
Panamint Death Valley	10	0.8%	900	98.1%	0	0.0%	900
Pinto Lucerne Valley and Eastern Slopes	2,000	17.8%	8,000	70.6%	1,000	11.6%	12,000
Providence and Bullion Mountains	600	27.0%	1,000	58.7%	300	14.3%	2,000
West Mojave and Eastern Slopes	4,000	10.2%	27,000	68.1%	9,000	21.7%	39,000
Estimated Footprint Impacts (acres)	8,000	6.0%	103,000	76.4%	21,000	15.5%	135,000

¹ Grand totals may not match the sum of PFYC classes because it includes areas mapped as water features which could not be assigned a PFYC class.

² Grand total may be less than the area of permanent disturbance shown in Table IV.1-1, because transmission scenarios were not included in the analysis.

**Table R2.10-9
Potential BLM LUPA Paleontological Resource Impacts by Ecoregion Subarea – Alternative 2**

Ecoregion Subareas	Low/Very Low (PFYC Class 1 or 2)		Moderate/Unknown (PFYC Class 3)		High/Very High (PFYC Class 4 or 5)		Grand Total (Acres) ^{1,2}
	Acres	Percent	Acres	Percent	Acres	Percent	
Cadiz Valley and Chocolate Mountains	200	1.7%	10,000	72.1%	4,000	26.3%	14,000
Imperial Borrego Valley	900	5.4%	9,000	58.6%	6,000	36.0%	16,000
Kingston and Funeral Mountains	100	7.6%	1,000	91.2%	20	1.2%	1,000
Mojave and Silurian Valley	40	1.6%	2,000	96.6%	40	1.8%	2,000
Owens River Valley	40	3.3%	1,000	96.7%	0	0.0%	1,000
Panamint Death Valley	0	0.0%	700	99.1%	0	0.0%	700
Pinto Lucerne Valley and Eastern Slopes	1,000	26.6%	2,000	63.2%	400	10.1%	4,000
Providence and Bullion Mountains	500	29.4%	800	52.3%	300	18.3%	2,000
West Mojave and Eastern Slopes	2,000	18.2%	5,000	38.4%	6,000	43.4%	13,000
Estimated Footprint Impacts (acres)	5,000	9.4%	33,000	61.3%	16,000	29.3%	54,000

¹ Grand totals may not match the sum of PFYC classes because it includes areas mapped as water features which could not be assigned a PFYC class.

² Grand total may be less than the area of permanent disturbance shown in Table IV.1-1, because transmission scenarios were not included in the analysis.

R2.10.5 Alternative 3

**Table R2.10-10
Potential Plan-wide Paleontological Resource Impacts by Ecoregion Subarea – Alternative 3**

Ecoregion Subareas	Low/Very Low (PFYC Class 1 or 2)		Moderate/Unknown (PFYC Class 3)		High/Very High (PFYC Class 4 or 5)		Grand Total (Acres) ^{1,2}
	Acres	Percent	Acres	Percent	Acres	Percent	
Cadiz Valley and Chocolate Mountains	60	0.3%	17,000	82.7%	4,000	17.1%	21,000
Imperial Borrego Valley	0	0.0%	54,000	87.3%	3,000	4.4%	62,000
Mojave and Silurian Valley	80	1.9%	4,000	94.3%	100	3.8%	4,000
Owens River Valley	80	2.6%	3,000	97.4%	0	0.0%	3,000
Panamint Death Valley	20	0.9%	2,000	97.9%	0	0.0%	2,000
Pinto Lucerne Valley and Eastern Slopes	800	6.0%	11,000	82.4%	2,000	11.6%	14,000
Providence and Bullion Mountains	200	10.9%	2,000	89.1%	0	0.0%	2,000
West Mojave and Eastern Slopes	2,000	5.7%	39,000	89.5%	2,000	4.8%	43,000
Estimated Footprint Impacts (acres)	4,000	2.5%	132,000	87.4%	10,000	6.7%	151,000

¹ Grand totals may not match the sum of PFYC classes because it includes areas mapped as water features which could not be assigned a PFYC class.

² Grand total may be less than the area of permanent disturbance shown in Table IV.1-1, because transmission scenarios were not included in the analysis.

**Table R2.10-11
Potential BLM LUPA Paleontological Resource Impacts by Ecoregion Subarea – Alternative 3**

Ecoregion Subareas	Low/Very Low (PFYC Class 1 or 2)		Moderate/Unknown (PFYC Class 3)		High/Very High (PFYC Class 4 or 5)		Grand Total (Acres) ^{1,2}
	Acres	Percent	Acres	Percent	Acres	Percent	
Cadiz Valley and Chocolate Mountains	60	0.7%	6,000	68.2%	3,000	31.1%	8,000
Imperial Borrego Valley	0	0.0%	14,000	87.4%	2,000	12.6%	17,000
Mojave and Silurian Valley	50	8.1%	400	76.3%	90	15.6%	600
Owens River Valley	80	3.8%	2,000	96.2%	0	0.0%	2,000
Panamint Death Valley	0	0.0%	1,000	99.0%	0	0.0%	1,000
Pinto Lucerne Valley and Eastern Slopes	400	15.0%	2,000	69.6%	500	15.4%	3,000
Providence and Bullion Mountains	200	17.4%	800	82.6%	0	0.0%	1,000
West Mojave and Eastern Slopes	500	11.9%	3,000	82.2%	200	5.9%	4,000
Estimated Footprint Impacts (acres)	1,000	3.4%	30,000	81.6%	6,000	14.9%	37,000

¹ Grand totals may not match the sum of PFYC classes because it includes areas mapped as water features which could not be assigned a PFYC class.

² Grand total may be less than the area of permanent disturbance shown in Table IV.1-1, because transmission scenarios were not included in the analysis.

R2.10.6 Alternative 4

**Table R2.10-12
Potential Plan-wide Paleontological Resource Impacts by Ecoregion Subarea – Alternative 4**

Ecoregion Subareas	Low/Very Low (PFYC Class 1 or 2)		Moderate/Unknown (PFYC Class 3)		High/Very High (PFYC Class 4 or 5)		Grand Total (Acres) ^{1,2}
	Acres	Percent	Acres	Percent	Acres	Percent	
Cadiz Valley and Chocolate Mountains	300	0.8%	32,000	78.6%	8,000	20.6%	41,000
Imperial Borrego Valley	0	0.0%	41,000	86.8%	1,000	2.8%	47,000
Kingston and Funeral Mountains	0	0.0%	600	100.0%	0	0.0%	600
Mojave and Silurian Valley	20	0.9%	3,000	97.4%	50	1.7%	3,000
Owens River Valley	80	2.6%	3,000	97.4%	0	0.0%	3,000
Panamint Death Valley	0	0.0%	800	100.0%	0	0.0%	800
Pinto Lucerne Valley and Eastern Slopes	500	5.9%	6,000	81.3%	1,000	12.8%	8,000
Providence and Bullion Mountains	200	14.7%	900	85.3%	0	0.0%	1,000
West Mojave and Eastern Slopes	3,000	6.8%	35,000	81.0%	5,000	12.2%	43,000
Estimated Footprint Impacts (acres)	4,000	2.7%	122,000	83.1%	16,000	10.9%	147,000

¹ Grand totals may not match the sum of PFYC classes because it includes areas mapped as water features which could not be assigned a PFYC class.

² Grand total may be less than the area of permanent disturbance shown in Table IV.1-1, because transmission scenarios were not included in the analysis.

**Table R2.10-13
Potential BLM LUPA Paleontological Resource Impacts by Ecoregion Subarea – Alternative 4**

Ecoregion Subareas	Low/Very Low (PFYC Class 1 or 2)		Moderate/Unknown (PFYC Class 3)		High/Very High (PFYC Class 4 or 5)		Grand Total (Acres) ^{1,2}
	Acres	Percent	Acres	Percent	Acres	Percent	
Cadiz Valley and Chocolate Mountains	300	1.2%	22,000	73.4%	8,000	25.4%	30,000
Imperial Borrego Valley	0	0.0%	5,000	87.5%	700	12.5%	6,000
Owens River Valley	70	3.8%	2,000	96.2%	0	0.0%	2,000
Panamint Death Valley	0	0.0%	700	100.0%	0	0.0%	700
Pinto Lucerne Valley and Eastern Slopes	100	31.9%	200	42.9%	100	25.3%	400
Providence and Bullion Mountains	100	73.6%	40	26.4%	0	0.0%	200
West Mojave and Eastern Slopes	500	17.1%	2,000	58.2%	700	24.7%	3,000
Estimated Footprint Impacts (acres)	1,000	2.7%	31,000	75.5%	9,000	21.8%	41,000

¹ Grand totals may not match the sum of PFYC classes because it includes areas mapped as water features which could not be assigned a PFYC class.

² Grand total may be less than the area of permanent disturbance shown in Table IV.1-1, because transmission scenarios were not included in the analysis.