

Appendix R2.6

Groundwater, Water Supply, and Water Quality

Appendix R2.6 Groundwater, Water Supply, and Water Quality

This appendix presents data supporting the analysis in Volume IV, Chapter IV.6. This appendix is organized as follows.

- Section R2.6.1 – No Action Alternative: Tables R2.6-1 through R2.6-5
- Section R2.6.2 – Preferred Alternative: Tables R2.6-6 through R2.6-13
- Section R2.6.3 – Alternative 1: Tables R2.6-14 through R2.6-20
- Section R2.6.4 – Alternative 2: Tables R2.6-21 through R2.6-27
- Section R2.6.5 – Alternative 3: Tables R2.6-28 through R2.6-34
- Section R2.6.6 – Alternative 4: Tables R2.6-35 through R2.6-41

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.

R2.6.1 No Action Alternative

**Table R2.6-1
Potential Acres of Groundwater Basin Impacts by Technology Type and Subarea – No Action Alternative**

Groundwater Basin in Subarea (acres)	Potential Groundwater Basin Impacts by Technology Type (acres)				
	Solar [†]	Wind [‡]	GT*	Transmission	
<i>Cadiz Valley and Chocolate Mountains</i>					
Arroyo Seco Valley	256,000	400	0	0	0
Cadiz Valley	240,000	400	0	0	0
Calzona Valley	78,000	80	0	0	0
Chocolate Valley	72,000	1,000	0	0	0
Chuckwalla Valley	593,000	16,000	0	0	8,000
Orocopia Valley	17,000	700	0	0	900
Palo Verde Mesa	225,000	9,000	0	0	4,000
Palo Verde Valley	73,000	2,000	0	0	700
Quien Sabe Point Valley	25,000	900	0	0	0
Rice Valley	187,000	4,000	0	0	0
Vidal Valley	128,000	400	0	0	0
Ward Valley	353,000	1,000	0	0	0
<i>Imperial Borrego Valley</i>					
Amos Valley	127,000	20	0	0	0
Borrego Valley	140,000	2,000	5,000	200	0
Coachella Valley - Indio	1,000	10	20	0	0
Coyote Wells Valley	135,000	2,000	4,000	200	500
East Salton Sea	172,000	400	400	20	2,000
Imperial Valley	957,000	10,000	17,000	700	8,000
Ocotillo-Clark Valley	211,000	3,000	6,000	200	600
Vallecito-Carrizo Valley	97,000	30	50	0	0
West Salton Sea	87,000	1,000	3,000	100	700
<i>Kingston and Funeral Mountains</i>					

**Table R2.6-1
Potential Acres of Groundwater Basin Impacts by Technology Type and Subarea – No Action Alternative**

Groundwater Basin in Subarea (acres)		Potential Groundwater Basin Impacts by Technology Type (acres)			
		Solar [†]	Wind [‡]	GT*	Transmission
California Valley	58,000	800	0	0	0
Death Valley	43,000	10	0	0	0
Greenwater Valley	60,000	20	0	0	0
Ivanpah Valley	196,000	1,000	0	0	0
Kelso Valley	115,000	50	0	0	0
Lower Kingston Valley	142,000	400	0	0	0
Mesquite Valley	88,000	1,000	0	0	0
Middle Amargosa Valley	389,000	5,000	0	0	0
Pahrump Valley	93,000	1,000	0	0	0
Riggs Valley	10,000	300	0	0	0
Silver Lake Valley	3,000	40	0	0	0
Soda Lake Valley	100,000	200	0	0	0
Upper Kingston Valley	177,000	1,000	0	0	0
<i>Mojave and Silurian Valley</i>					
Caves Canyon Valley	55,000	0	0	0	400
Coyote Lake Valley	88,000	0	0	0	200
Cronise Valley	126,000	0	0	0	0
Lower Mojave River Valley	200,000	10	0	0	1,000
Superior Valley	120,000	0	0	0	10
<i>Owens River Valley (No Groundwater Basins Affected)</i>					
<i>Panamint Death Valley (No Groundwater Basins Affected)</i>					
<i>Pinto Lucerne Valley and Eastern Slopes</i>					
Ames Valley	108,000	100	10	0	10
Bessemer Valley	39,000	0	60	0	0
Chuckwalla Valley	8,000	0	0	0	0
Copper Mountain Valley	30,000	70	0	0	0

**Table R2.6-1
Potential Acres of Groundwater Basin Impacts by Technology Type and Subarea – No Action Alternative**

Groundwater Basin in Subarea (acres)		Potential Groundwater Basin Impacts by Technology Type (acres)			
		Solar [†]	Wind [‡]	GT*	Transmission
Dale Valley	123,000	200	0	0	0
Deadman Valley - Surprise Spring	29,000	10	0	0	0
Iron Ridge Area	5,000	0	20	0	10
Johnson Valley - Soggy Lake	77,000	10	500	0	40
Joshua Tree	27,000	30	0	0	0
Kane Wash Area	6,000	0	50	0	0
Lower Mojave River Valley	15,000	0	70	0	0
Lucerne Valley	147,000	0	1,000	0	200
Means Valley	15,000	0	40	0	0
Middle Mojave River Valley	57,000	0	400	0	20
Morongo Valley	7,000	10	0	0	0
Orocopia Valley	800	0	0	0	0
Pinto Valley	170,000	10	0	0	0
Pipes Canyon Fault Valley	3,000	10	0	0	0
Twentynine Palms Valley	62,000	100	0	0	0
Upper Mojave River Valley	129,000	0	800	0	200
Warren Valley	23,000	40	0	0	0
<i>Piute Valley And Sacramento Mountains (No Groundwater Basins Affected)</i>					
<i>Providence And Bullion Mountains</i>					
Bristol Valley	481,000	2,000	0	0	60
Broadwell Valley	92,000	3,000	0	0	300
Cady Fault Area	7,000	100	0	0	0
Caves Canyon Valley	18,000	600	0	0	0
Kelso Valley	10,000	10	0	0	0
Lavic Valley	90,000	2,000	0	0	400
Lower Mojave River Valley	33,000	1,000	0	0	200

**Table R2.6-1
Potential Acres of Groundwater Basin Impacts by Technology Type and Subarea – No Action Alternative**

Groundwater Basin in Subarea (acres)		Potential Groundwater Basin Impacts by Technology Type (acres)			
		Solar [†]	Wind [‡]	GT*	Transmission
Soda Lake Valley	14,000	50	0	0	0
<i>West Mojave And Eastern Slopes</i>					
Antelope Valley	953,000	6,000	40,000	0	2,000
Brite Valley	2,000	10	300	0	0
Cuddeback Valley	76,000	300	600	0	0
El Mirage Valley	73,000	200	0	0	100
Fremont Valley	317,000	2,000	51,000	0	1,000
Harper Valley	401,000	3,000	7,000	0	200
Indian Wells Valley	361,000	40	900	0	20
Kelso Lander Valley	11,000	40	1,000	0	0
Kern River Valley	4,000	0	100	0	0
Lower Mojave River Valley	37,000	300	0	0	100
Middle Mojave River Valley	154,000	1,000	0	0	30
Tehachapi Valley East	24,000	200	4,000	0	0
Tehachapi Valley West	15,000	60	2,000	0	0
Upper Mojave River Valley	275,000	400	0	0	1,000
Upper Santa Ana Valley - Cajon	200	0	0	0	0
Total	15,755,000**	89,000	145,000	1,000	33,000

† Includes ground-mounted distributed generation

‡ Project Area

* Project Area

** Total acreage includes all groundwater basins in all subareas, however only those basins impacted by renewable energy projects are listed in Table R2.6-1.

Table R2.6-2
Estimated Acres of Groundwater Basin in Conservation by Subarea- No Action Alternative

Subarea/Groundwater Basin	Groundwater Basin in Subarea (acres)	Existing Protected Areas (acres)	BLM Conservation Designations (acres)	Percent in Conservation
<i>Cadiz Valley and Chocolate Mountains</i>				
Amos Valley	3,000	200	400	20%
Arroyo Seco Valley	256,000	10,000	83,000	36%
Bristol Valley	100	100	0	95%
Cadiz Valley	240,000	84,000	0	35%
Calzona Valley	78,000	900	2,000	3%
Chocolate Valley	72,000	3,000	24,000	38%
Chuckwalla Valley	593,000	167,000	132,000	50%
Ogilby Valley	500	10	0	2%
Orocopia Valley	17,000	800	9,000	58%
Palo Verde Mesa	225,000	2,000	1,000	1%
Palo Verde Valley	73,000	600	0	1%
Pinto Valley	2,000	2,000	0	95%
Quien Sabe Point Valley	25,000	2,000	0	9%
Rice Valley	187,000	72,000	0	39%
Vidal Valley	128,000	18,000	38,000	44%
Ward Valley	353,000	117,000	47,000	47%
Yuma Valley	22,000	7,000	0	33%
<i>Imperial Borrego Valley</i>				
Amos Valley	127,000	13,000	2,000	12%
Borrego Valley	140,000	40,000	6,000	33%
Coyote Wells Valley	135,000	20,000	34,000	40%

Table R2.6-2
Estimated Acres of Groundwater Basin in Conservation by Subarea- No Action Alternative

Subarea/Groundwater Basin	Groundwater Basin in Subarea (acres)	Existing Protected Areas (acres)	BLM Conservation Designations (acres)	Percent in Conservation
East Salton Sea	172,000	1,000	0	1%
Imperial Valley	957,000	23,000	80,000	11%
Ocotillo-Clark Valley	211,000	83,000	10,000	44%
Ogilby Valley	133,000	2,000	600	2%
Vallecito-Carrizo Valley	97,000	90,000	200	93%
West Salton Sea	87,000	28,000	0	32%
Yuma Valley	102,000	2,000	30	2%
<i>Kingston and Funeral Mountains</i>				
California Valley	58,000	22,000	2,000	43%
Death Valley	43,000	36,000	0	83%
Gold Valley	3,000	3,000	0	95%
Greenwater Valley	60,000	56,000	0	94%
Ivanpah Valley	196,000	103,000	32,000	69%
Kelso Valley	115,000	107,000	0	93%
Lower Kingston Valley	142,000	117,000	2,000	84%
Mesquite Valley	88,000	37,000	7,000	50%
Middle Amargosa Valley	389,000	183,000	16,000	51%
Pahrump Valley	93,000	55,000	0	60%
Rhodes Hill Area	14,000	12,000	0	92%
Riggs Valley	10,000	0	0	0%
Silver Lake Valley	3,000	1,000	0	42%
Soda Lake Valley	100,000	87,000	4,000	91%

Table R2.6-2
Estimated Acres of Groundwater Basin in Conservation by Subarea- No Action Alternative

Subarea/Groundwater Basin	Groundwater Basin in Subarea (acres)	Existing Protected Areas (acres)	BLM Conservation Designations (acres)	Percent in Conservation
Upper Kingston Valley	177,000	110,000	40,000	85%
<i>Mojave and Silurian Valley</i>				
Broadwell Valley	0	0	0	95%
Cady Fault Area	600	300	0	57%
Caves Canyon Valley	55,000	8,000	19,000	49%
Coyote Lake Valley	88,000	16,000	42,000	66%
Cronise Valley	126,000	15,000	22,000	29%
Cuddeback Valley	19,000	7,000	6,000	68%
Death Valley	42,000	27,000	200	64%
Denning Spring Valley	7,000	3,000	10	37%
Fremont Valley	18,000	500	10,000	61%
Grass Valley	10,000	1,000	5,000	63%
Harper Valley	8,000	1,000	5,000	80%
Kelso Valley	129,000	119,000	0	92%
Langford Valley - Langford Well Lake	19,000	300	1,000	8%
Leach Valley	61,000	10,000	0	16%
Lower Kingston Valley	98,000	57,000	2,000	60%
Lower Mojave River Valley	200,000	20,000	62,000	41%
Owl Lake Valley	600	500	0	95%
Pilot Knob Valley	136,000	80	800	1%
Red Pass Valley	96,000	3,000	0	3%
Riggs Valley	78,000	26,000	0	33%

Table R2.6-2
Estimated Acres of Groundwater Basin in Conservation by Subarea- No Action Alternative

Subarea/Groundwater Basin	Groundwater Basin in Subarea (acres)	Existing Protected Areas (acres)	BLM Conservation Designations (acres)	Percent in Conservation
Searles Valley	15,000	5,000	1,000	41%
Silver Lake Valley	32,000	16,000	0	50%
Soda Lake Valley	266,000	166,000	6,000	65%
Superior Valley	120,000	10,000	21,000	26%
<i>Owens River Valley</i>				
Owens Valley	347,000	10,000	0	3%
Rose Valley	34,000	2,000	300	8%
<i>Panamint Death Valley</i>				
Butte Valley	8,000	7,000	0	95%
Death Valley	791,000	738,000	0	93%
Harrisburg Flats	600	600	0	95%
Indian Wells Valley	19,000	5,000	900	30%
Leach Valley	200	200	0	90%
Lost Lake Valley	23,000	21,000	0	89%
Owl Lake Valley	22,000	20,000	0	92%
Panamint Valley	240,000	97,000	300	41%
Rhodes Hill Area	2,000	2,000	0	94%
Searles Valley	178,000	700	5,000	3%
Spring Canyon Valley	5,000	5,000	0	95%
Wingate Valley	0	0	0	95%
<i>Pinto Lucerne Valley and Eastern Slopes</i>				
Ames Valley	108,000	2,000	0	2%

**Table R2.6-2
Estimated Acres of Groundwater Basin in Conservation by Subarea- No Action Alternative**

Subarea/Groundwater Basin	Groundwater Basin in Subarea (acres)	Existing Protected Areas (acres)	BLM Conservation Designations (acres)	Percent in Conservation
Bessemer Valley	39,000	0	1,000	4%
Cadiz Valley	100	100	0	95%
Chuckwalla Valley	8,000	7,000	60	82%
Coachella Valley - Mission Creek	800	700	0	88%
Copper Mountain Valley	30,000	300	0	1%
Dale Valley	123,000	13,000	33,000	37%
Hexie Mountain Area	11,000	11,000	0	95%
Iron Ridge Area	5,000	200	900	20%
Johnson Valley - Soggy Lake	77,000	2,000	600	3%
Joshua Tree	27,000	9,000	40	33%
Kane Wash Area	6,000	400	4,000	69%
Lost Horse Valley	17,000	16,000	0	95%
Lower Mojave River Valley	15,000	7,000	6,000	88%
Lucerne Valley	147,000	0	29,000	20%
Middle Mojave River Valley	57,000	0	19,000	34%
Morongo Valley	7,000	300	10	4%
Orocopia Valley	800	300	60	49%
Pinto Valley	170,000	158,000	600	93%
Pipes Canyon Fault Valley	3,000	20	0	1%
Pleasant Valley	10,000	9,000	0	95%
Upper Mojave River Valley	129,000	0	2,000	2%
Warren Valley	23,000	3,000	0	14%

Table R2.6-2
Estimated Acres of Groundwater Basin in Conservation by Subarea- No Action Alternative

Subarea/Groundwater Basin	Groundwater Basin in Subarea (acres)	Existing Protected Areas (acres)	BLM Conservation Designations (acres)	Percent in Conservation
<i>Piute Valley and Sacramento Mountains</i>				
Calzona Valley	2,000	500	400	35%
Chemehuevi Valley	272,000	55,000	145,000	73%
Needles Valley	86,000	19,000	300	22%
Piute Valley	111,000	24,000	62,000	77%
Rice Valley	1,000	1,000	0	92%
Vidal Valley	10,000	5,000	4,000	93%
Ward Valley	106,000	24,000	70,000	89%
<i>Providence and Bullion Mountains</i>				
Bristol Valley	481,000	106,000	200	22%
Broadwell Valley	92,000	33,000	4,000	40%
Cadiz Valley	30,000	18,000	0	60%
Cady Fault Area	7,000	5,000	0	67%
Caves Canyon Valley	18,000	4,000	900	30%
Dale Valley	89,000	28,000	11,000	43%
Fenner Valley	452,000	272,000	78,000	77%
Ivanpah Valley	2,000	2,000	0	95%
Kelso Valley	10,000	10,000	0	92%
Lanfair Valley	157,000	100,000	0	64%
Lavic Valley	90,000	2,000	9,000	12%
Lower Mojave River Valley	33,000	3,000	800	12%
Pinto Valley	6,000	6,000	0	91%

Table R2.6-2
Estimated Acres of Groundwater Basin in Conservation by Subarea- No Action Alternative

Subarea/Groundwater Basin	Groundwater Basin in Subarea (acres)	Existing Protected Areas (acres)	BLM Conservation Designations (acres)	Percent in Conservation
Piute Valley	64,000	28,000	27,000	84%
Soda Lake Valley	14,000	11,000	0	84%
Ward Valley	98,000	26,000	61,000	88%
<i>West Mojave and Eastern Slopes</i>				
Antelope Valley	953,000	3,000	200	0.3%
Cuddeback Valley	76,000	12,000	34,000	60%
Fremont Valley	317,000	7,000	44,000	16%
Harper Valley	401,000	22,000	157,000	45%
Indian Wells Valley	361,000	25,000	51,000	21%
Kelso Lander Valley	11,000	5,000	2,000	62%
Kern River Valley	4,000	500	2,000	59%
Lower Mojave River Valley	37,000	200	5,000	15%
Middle Mojave River Valley	154,000	3,000	33,000	23%
Tehachapi Valley East	24,000	0	4,000	16%
Upper Mojave River Valley	275,000	700	12,000	4%
Total	15,755,000	4,274,000	1,697,000	38%

*Project-by-project mitigation generated from renewable energy and transmission development is not reflected in this tabular summary.

**Table R2.6-3
Potential Acres of Groundwater Basin Impacts on BLM Lands by Technology Type – No Action Alternative**

Subarea	Potential Groundwater Basin Impacts by Technology Type (acres)			
	Solar [†]	Wind [‡]	GT [*]	Transmission
Cadiz Valley and Chocolate Mountains	25,000	0	0	8,000
Imperial Borrego Valley	5,000	10,000	400	3,000
Kingston and Funeral Mountains	9,000	0	0	0
Mojave and Silurian Valley	10	0	0	800
Owens River Valley	0	0	0	0
Panamint Death Valley	0	0	0	0
Pinto Lucerne Valley and Eastern Slopes	200	1,000	0	70
Piute Valley and Sacramento Mountains	0	0	0	0
Providence and Bullion Mountains	7,000	0	0	700
West Mojave and Eastern Slopes	3,000	18,000	0	300
Total	50,000	29,000	400	13,000

† Includes ground-mounted distributed generation

‡ Project Area

* Project Area

**Table R2.6-4
Estimated Acres of Groundwater Basin on BLM Land Designations Outside of Plan Area – No Action Alternative**

Groundwater Basin	Areas Managed for Recreation (acres)	Existing ACECs (acres)
Black Springs Valley	8,000	0
Borrego Valley	3,000	0
Buck Ridge Fault Valley	3,000	0
Chocolate Valley	12,000	15,000
Coachella Valley - Desert Hot Springs	13,000	9,000
Coachella Valley - Indio	14,000	1,000
Coachella Valley - Mission Creek	0	6,000
Coachella Valley - San Geronio Pass	50	0
Coyote Wells Valley	7,000	300
Davies Valley	4,000	0
Death Valley	200	0
Deep Springs Valley	23,000	500
Eureka Valley	30,000	0
Fish Lake Valley	42,000	0
Indian Wells Valley	500	80
Kern River Valley	10	70
Lee Flat	5,000	400
Orocopia Valley	24,000	23,000
Owens Valley	1,000	0
Panamint Valley	0	0
Rose Valley	300	200
Saline Valley	9,000	700
Santa Rosa Flat	12,000	0
Searles Valley	0	30
Vallecito-Carrizo Valley	2,000	2,000
TOTAL	213,000	59,000

R2.6.2 Preferred Alternative

**Table R2.6-5
 Potential Acres of Groundwater Basin Impacts by Technology Type by Subarea - Preferred Alternative**

Subarea/Groundwater Basin	Groundwater Basins in Subarea (acres)	Groundwater Basins in DFA Footprint by Technology Type (acres)			
		Solar [†]	Wind [‡]	GT*	Transmission
<i>Cadiz Valley and Chocolate Mountains</i>					
Chuckwalla Valley	593,000	9,000	24,000	0	7,000
Orocopia Valley	17,000	0	0	0	600
Palo Verde Mesa	225,000	14,000	31,000	0	4,000
Palo Verde Valley	73,000	2,000	2,000	0	100
<i>Imperial Borrego Valley</i>					
Coyote Wells Valley	135,000	0	0	0	900
East Salton Sea	172,000	3,000	500	1,000	1,000
Imperial Valley	957,000	33,000	6,000	13,000	8,000
Ocotillo-Clark Valley	211,000	1,000	40	600	600
West Salton Sea	87,000	1,000	40	900	1,000
<i>Kingston and Funeral Mountains</i>					
Pahrump Valley	93,000	3,000	0	0	0
<i>Mojave and Silurian Valley</i>					
Caves Canyon Valley	55,000	100	0	0	20
Coyote Lake Valley	88,000	0	0	0	200
Cronise Valley	126,000	0	0	0	60
Lower Mojave River Valley	200,000	3,000	0	0	700
<i>Owens River Valley</i>					
Owens Valley	347,000	0	0	0	300
Rose Valley	34,000	500	0	900	100
<i>Panamint Death Valley (no groundwater basins in DFA footprint)</i>					
<i>Pinto Lucerne Valley and Eastern Slopes</i>					
Bessemer Valley	39,000	0	0	0	60
Chuckwalla Valley	8,000	0	0	0	0
Iron Ridge Area	5,000	0	0	0	90
Johnson Valley - Soggy Lake	77,000	2,000	10,000	0	200
Johnson Valley - Upper Johnson Valley	35,000	0	0	0	50

**Table R2.6-5
Potential Acres of Groundwater Basin Impacts by Technology Type by Subarea – Preferred Alternative**

Subarea/Groundwater Basin	Groundwater Basins in Subarea (acres)	Groundwater Basins in DFA Footprint by Technology Type (acres)			
		Solar [†]	Wind [‡]	GT*	Transmission
Lower Mojave River Valley	15,000	0	0	0	0
Lucerne Valley	147,000	2,000	12,000	0	900
Means Valley	15,000	10	50	0	0
Middle Mojave River Valley	57,000	30	200	0	0
Orocopia Valley	800	0	0	0	0
Upper Mojave River Valley	129,000	3,000	14,000	0	1,000
<i>Piute Valley and Sacramento Mountains (no groundwater basins in DFA footprint)</i>					
<i>Providence and Bullion Mountains</i>					
Lavic Valley	90,000	0	0	0	200
Lower Mojave River Valley	33,000	1,000	0	0	200
<i>West Mojave and Eastern Slopes</i>					
Antelope Valley	953,000	15,000	16,000	0	500
Brite Valley	2,000	0	0	0	0
El Mirage Valley	73,000	1,000	5,000	0	40
Fremont Valley	317,000	8,000	20,000	0	200
Harper Valley	401,000	1,000	0	0	100
Indian Wells Valley	361,000	1,000	0	0	200
Lower Mojave River Valley	37,000	300	0	0	40
Middle Mojave River Valley	154,000	2,000	0	0	0
Tehachapi Valley East	24,000	100	300	0	0
Tehachapi Valley West	15,000	20	50	0	0
Upper Mojave River Valley	275,000	4,000	13,000	0	500
Upper Santa Ana Valley - Cajon	200	0	0	0	0
Total	15,755,000**	111,000	152,000	17,000	29,000

[†] Includes ground-mounted distributed generation

[‡] Project Area

* Project Area

** Total acreage includes all groundwater basins in all subareas, however only those basins impacted by renewable energy projects are listed in Table R2.6-5.

**Table R2.6-6
 Estimated Acres of Groundwater Basins in Study Area Lands by Subarea – Preferred Alternative**

Subarea	Special Analysis Areas (acres)
Cadiz Valley and Chocolate Mountains	0
Imperial Borrego Valley	0
Kingston and Funeral Mountains	6,000
Mojave and Silurian Valley	8,000
Owens River Valley	0
Panamint Death Valley	0
Pinto Lucerne Valley and Eastern Slopes	0
Piute Valley and Sacramento Mountains	0
Providence and Bullion Mountains	0
West Mojave and Eastern Slopes	17,000
Total	31,000

**Table R2.6-7
Estimated Acres of Groundwater Basins in Reserve Design Lands by Subarea – Preferred Alternative**

Subarea	Groundwater Basins in Subarea (acres)	Existing Conservation Areas (acres)	BLM LUPA Conservation Designations (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Cadiz Valley and Chocolate Mountains	2,293,000	487,000	976,000	16,000	65%
Imperial Borrego Valley	2,161,000	303,000	401,000	6,000	33%
Kingston and Funeral Mountains	1,490,000	931,000	338,000	9,000	86%
Mojave and Silurian Valley	1,784,000	541,000	300,000	10,000	48%
Owens River Valley	381,000	28,000	79,000	26,000	35%
Panamint Death Valley	1,391,000	934,000	189,000	3,000	81%
Pinto Lucerne Valley and Eastern Slopes	1,268,000	239,000	178,000	12,000	34%
Piute Valley and Sacramento Mountains	589,000	128,000	296,000	2,000	72%
Providence and Bullion Mountains	1,646,000	656,000	487,000	16,000	70%
West Mojave and Eastern Slopes	2,754,000	79,000	523,000	134,000	27%
Total	15,756,000	4,327,000	3,768,000	234,000	53%

**Table R2.6-8
Potential Acres of Groundwater Basin Impacts on BLM Lands by Technology Type – Preferred Alternative**

Groundwater Basin	Groundwater Basins in BLM LUPA (acres)	Potential Groundwater Basin Impacts by Technology Type (acres)			
		Solar [†]	Wind [‡]	GT*	Transmission
Antelope Valley	11,000	700	800	0	0
Bessemer Valley	28,000	0	0	0	60
Caves Canyon Valley	42,000	90	0	0	10
Chuckwalla Valley	488,000	8,000	23,000	0	6,000
Coyote Lake Valley	45,000	0	0	0	200
Coyote Wells Valley	97,000	0	0	0	700
Cronise Valley	47,000	0	0	0	30
East Salton Sea	31,000	700	0	600	200
Fremont Valley	93,000	3,000	3,000	0	20
Harper Valley	199,000	300	0	0	30
Imperial Valley	320,000	5,000	0	4,000	1,000
Indian Wells Valley	151,000	400	0	0	100
Iron Ridge Area	5,000	0	0	0	90
Johnson Valley - Soggy Lake	48,000	800	4,000	0	100
Johnson Valley - Upper Johnson Valley	32,000	0	0	0	50
Lavic Valley	37,000	0	0	0	100
Lower Mojave River Valley	119,000	1,000	0	0	300
Lucerne Valley	68,000	200	1,000	0	100
Means Valley	14,000	10	50	0	0
Middle Mojave River Valley	92,000	200	90	0	0
Ocotillo-Clark Valley	70,000	500	0	400	200
Orocopia Valley	10,000	0	0	0	200
Owens Valley	133,000	0	0	0	100
Pahrump Valley	74,000	2,000	0	0	0
Palo Verde Mesa	136,000	10,000	26,000	0	1,000
Rose Valley	27,000	500	0	900	80
Upper Mojave River Valley	38,000	500	3,000	0	90
West Salton Sea	13,000	700	0	500	200
Total	6,727,000**	35,000	61,000	7,000	12,000

† Includes ground-mounted distributed generation

‡ Project Area

* Project Area

** Total acreage includes all groundwater basins in the BLM LUPA, however only those basins impacted by renewable energy projects are listed in Table R2.6-8.

**Table R2.6-9
Potential Acres of Groundwater Basin Impacts on GCP Lands by Technology Type – Preferred Alternative**

Groundwater Basin	Groundwater Basin in GCP (acres)	Potential Groundwater Basin Impacts by Technology Type (acres)			
		Solar [†]	Wind [‡]	GT*	Transmission
Antelope Valley	746,000	14,000	15,000	0	500
Brite Valley	2,000	0	0	0	0
Caves Canyon Valley	25,000	40	0	0	10
Chuckwalla Valley	86,000	800	800	0	1,000
Coyote Lake Valley	17,000	0	0	0	40
Coyote Wells Valley	27,000	0	0	0	100
Cronise Valley	6,000	0	0	0	10
East Salton Sea	57,000	2,000	500	700	800
El Mirage Valley	68,000	1,000	5,000	0	40
Fremont Valley	231,000	6,000	17,000	0	200
Harper Valley	192,000	900	0	0	70
Imperial Valley	578,000	27,000	6,000	9,000	6,000
Indian Wells Valley	68,000	800	0	0	80
Johnson Valley - Soggy Lake	29,000	1,000	6,000	0	10
Lavic Valley	9,000	0	0	0	40
Lower Mojave River Valley	139,000	3,000	0	0	600
Lucerne Valley	78,000	2,000	11,000	0	800
Middle Mojave River Valley	99,000	2,000	80	0	0
Ocotillo-Clark Valley	138,000	700	40	200	500
Orocopia Valley	7,000	0	0	0	400
Owens Valley	213,000	0	0	0	200
Pahrump Valley	19,000	700	0	0	0
Palo Verde Mesa	86,000	5,000	4,000	0	3,000
Palo Verde Valley	61,000	2,000	2,000	0	100
Rose Valley	4,000	0	0	0	20
Tehachapi Valley East	20,000	100	300	0	0
Tehachapi Valley West	15,000	20	50	0	0
Upper Mojave River Valley	366,000	6,000	24,000	0	2,000
West Salton Sea	74,000	800	40	400	800
Total	4,576,000**	76,000	92,000	10,000	17,000

† Includes ground-mounted distributed generation

‡ Project Area

* Project Area

** Total acreage includes all groundwater basins in the GCP area, however only those basins impacted by renewable energy projects are listed in Table R2.6-9.

Table R2.6-10
Estimated Acres of Groundwater Basins in GCP Reserve Design Lands – Preferred Alternative

Groundwater Basin	Groundwater Basin in GCP (acres)	Existing Conservation Areas (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Ames Valley	44,000	2,000	300	5%
Amos Valley	9,000	0	1,000	16%
Antelope Valley	746,000	3,000	78,000	11%
Arroyo Seco Valley	45,000	200	900	2%
Bessemer Valley	3,000	0	400	13%
Borrego Valley	105,000	36,000	1,000	35%
Bristol Valley	56,000	2,000	2,000	6%
Broadwell Valley	6,000	20	300	7%
Cadiz Valley	26,000	700	1,000	8%
Cady Fault Area	2,000	0	500	20%
California Valley	3,000	10	70	3%
Calzona Valley	37,000	0	1,000	3%
Caves Canyon Valley	25,000	300	4,000	16%
Chemehuevi Valley	41,000	500	400	2%
Chocolate Valley	2,000	0	20	1%
Chuckwalla Valley	86,000	200	7,000	8%
Coachella Valley - Indio	1,000	0	0	31%
Coachella Valley - Mission Creek	500	500	100	1%
Copper Mountain Valley	28,000	300	1,000	8%
Coyote Lake Valley	17,000	0	80	0%
Coyote Wells Valley	27,000	12,000	30	45%
Cronise Valley	6,000	0	300	4%
Cuddeback Valley	26,000	500	4,000	18%
Dale Valley	42,000	700	2,000	7%
Death Valley	15,000	4,000	1,000	37%
East Salton Sea	57,000	1,000	300	3%
El Mirage Valley	68,000	0	3,000	4%
Fenner Valley	33,000	6,000	2,000	22%
Fremont Valley	231,000	7,000	11,000	8%

Table R2.6-10
Estimated Acres of Groundwater Basins in GCP Reserve Design Lands – Preferred Alternative

Groundwater Basin	Groundwater Basin in GCP (acres)	Existing Conservation Areas (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Greenwater Valley	600	50	70	20%
Harper Valley	192,000	10,000	19,000	15%
Imperial Valley	578,000	7,000	500	1%
Indian Wells Valley	68,000	13,000	5,000	26%
Ivanpah Valley	14,000	40	2,000	14%
Johnson Valley - Soggy Lake	29,000	500	2,000	8%
Joshua Tree	17,000	0	800	5%
Kelso Lander Valley	9,000	5,000	0	58%
Kelso Valley	6,000	900	1,000	32%
Kern River Valley	1,000	60	0	4%
Lanfair Valley	41,000	2,000	8,000	25%
Lavic Valley	9,000	0	500	6%
Leach Valley	200	200	0	90%
Lost Lake Valley	2,000	300	300	34%
Lower Kingston Valley	14,000	2,000	1,000	25%
Lower Mojave River Valley	139,000	2,000	6,000	5%
Lucerne Valley	78,000	0	3,000	4%
Mesquite Valley	16,000	40	1,000	8%
Middle Amargosa Valley	25,000	2,000	2,000	13%
Middle Mojave River Valley	99,000	60	3,000	3%
Morongo Valley	7,000	0	1,000	16%
Needles Valley	27,000	10	2,000	6%
Ocotillo-Clark Valley	138,000	83,000	2,000	61%
Ogilby Valley	14,000	0	200	1%
Orocopia Valley	7,000	0	40	1%
Owens Valley	213,000	200	26,000	12%
Owl Lake Valley	2,000	1,000	100	67%
Pahrump Valley	19,000	10	400	2%
Palo Verde Mesa	86,000	40	2,000	2%

Table R2.6-10
Estimated Acres of Groundwater Basins in GCP Reserve Design Lands – Preferred Alternative

Groundwater Basin	Groundwater Basin in GCP (acres)	Existing Conservation Areas (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Palo Verde Valley	61,000	400	1,000	3%
Panamint Valley	11,000	2,000	300	20%
Pinto Valley	2,000	0	300	20%
Pipes Canyon Fault Valley	900	0	200	19%
Piute Valley	21,000	600	400	4%
Quien Sabe Point Valley	6,000	0	1,000	24%
Red Pass Valley	200	0	40	20%
Rhodes Hill Area	400	10	70	18%
Rice Valley	22,000	10	700	3%
Riggs Valley	4,000	60	300	10%
Rose Valley	4,000	0	900	26%
Salt Wells Valley	700	0	100	19%
Searles Valley	17,000	20	800	5%
Silver Lake Valley	2,000	0	200	8%
Soda Lake Valley	25,000	1,000	3,000	16%
Superior Valley	8,000	3,000	0	41%
Twentynine Palms Valley	41,000	0	900	2%
Upper Kingston Valley	10,000	700	1,000	17%
Upper Mojave River Valley	366,000	700	9,000	3%
Vallecito-Carrizo Valley	92,000	86,000	0	93%
Vidal Valley	15,000	600	0	4%
Ward Valley	35,000	1,000	500	5%
Warren Valley	20,000	0	1,000	6%
West Salton Sea	74,000	28,000	200	38%
Wingate Valley	200	0	0	1%
Yuma Valley	55,000	10	300	1%
Total	4,576,000	329,000	232,000	12%

** Total acreage includes all groundwater basins in the GCP area, however only those basins having conservation are listed in Table R2.6-10.

Table R2.6-11
Estimated Acres of Groundwater Basins in BLM LUPA Outside of Plan Area – Preferred Alternative

Groundwater Basin	Groundwater Basins within BLM LUPA Lands Outside Plan Area (acres)	BLM LUPA Designation [†]		
		Proposed NLCS (acres)	Existing and Proposed ACECs (acres)	Trail Management Corridors (acres/miles)
Antelope Valley	0	0	0	0/0
Black Springs Valley	27,000	9,000	16,000	0/0
Borrego Valley	3,000	300	300	100/0
Buck Ridge Fault Valley	3,000	0	0	0/0
Butte Valley	20	0	0	0/0
Cactus Flat	7,000	4,000	4,000	0/0
Chocolate Valley	30,000	14,000	15,000	0/0
Coachella Valley	71,000	15,000	17,000	11,000/0
Coyote Wells Valley	7,000	1,000	2,000	300/0
Darwin Valley	12,000	2,000	11,000	0/0
Davies Valley	4,000	0	0	0/0
Death Valley	300	200	0	0/0
Deep Springs Valley	23,000	7,000	500	0/0
East Salton Sea	1,000	0	0	0/0
Eureka Valley	30,000	4,000	0	0/0
Fish Lake Valley	43,000	1,000	0	0/0
Imperial Valley	200	50	100	100/0
Indian Wells Valley	500	300	400	200/0
Jacumba Valley	40	0	0	0/0
Kern River Valley	80	0	80	0/0
Lee Flat	5,000	4,000	800	0/0
Orocopia Valley	37,000	17,000	23,000	0/0
Owens Valley	14,000	3,000	3,000	0/0
Panamint Valley	5,000	900	2,000	0/0
Rose Valley	2,000	1,000	2,000	0/0
Saline Valley	9,000	3,000	700	0/0
Santa Rosa Flat	15,000	5,000	2,000	0/0
Searles Valley	300	200	200	0/0
Vallecito-Carrizo Valley	2,000	0	2,000	0/0
Total	353,000	94,000	101,000	11,000/0

[†]These designations overlap.

R2.6.3 Alternative 1

**Table R2.6-12
 Potential Acres of Groundwater Basin Impacts by Technology Type by Subarea – Alternative 1**

Subarea/Groundwater Basin	Groundwater Basins in Subarea (acres)	Groundwater Basins in DFA Footprint by Technology Type (acres)			
		Solar [†]	Wind [‡]	GT*	Transmission
<i>Cadiz Valley and Chocolate Mountains</i>					
Chuckwalla Valley	593,000	4,000	900	0	4,000
Orocopia Valley	17,000	0	0	0	400
Palo Verde Mesa	225,000	13,000	3,000	0	2,000
Palo Verde Valley	73,000	5,000	1,000	0	60
<i>Imperial Borrego Valley</i>					
Coyote Wells Valley	135,000	0	0	0	1,000
East Salton Sea	172,000	4,000	0	1,000	1,000
Imperial Valley	957,000	35,000	0	12,000	10,000
Ocotillo-Clark Valley	211,000	1,000	0	1,000	800
West Salton Sea	87,000	2,000	0	2,000	1,000
<i>Kingston and Funeral Mountains (no groundwater basins in DFA footprint)</i>					
<i>Mojave and Silurian Valley</i>					
Caves Canyon Valley	55,000	100	0	0	30
Coyote Lake Valley	88,000	10	0	0	400
Cronise Valley	126,000	0	0	0	100
Lower Mojave River Valley	200,000	5,000	0	0	900
<i>Owens River Valley</i>					
Owens Valley	347,000	2,000	0	0	2,000
Rose Valley	34,000	4,000	0	0	500
<i>Panamint Death Valley (no groundwater basins in DFA footprint)</i>					
<i>Pinto Lucerne Valley and Eastern Slopes</i>					

Table R2.6-12
Potential Acres of Groundwater Basin Impacts by Technology Type by Subarea – Alternative 1

Subarea/Groundwater Basin	Groundwater Basins in Subarea (acres)	Groundwater Basins in DFA Footprint by Technology Type (acres)			
		Solar [†]	Wind [‡]	GT*	Transmission
Bessemer Valley	39,000	0	0	0	70
Chuckwalla Valley	8,000	0	0	0	0
Iron Ridge Area	5,000	0	0	0	100
Johnson Valley - Soggy Lake	77,000	0	0	0	100
Johnson Valley - Upper Johnson Valley	35,000	0	0	0	60
Lower Mojave River Valley	15,000	0	0	0	0
Lucerne Valley	147,000	4,000	4,000	0	1,000
Orocopia Valley	800	0	0	0	0
Upper Mojave River Valley	129,000	7,000	7,000	0	2,000
<i>Piute Valley and Sacramento Mountains (no groundwater basins in DFA footprint)</i>					
<i>Providence and Bullion Mountains</i>					
Lavic Valley	90,000	0	0	0	300
Lower Mojave River Valley	33,000	2,000	0	0	300
<i>West Mojave and Eastern Slopes</i>					
Antelope Valley	953,000	13,000	2,000	0	400
Brite Valley	2,000	0	0	0	0
El Mirage Valley	73,000	3,000	4,000	0	50
Fremont Valley	317,000	10,000	5,000	0	200
Indian Wells Valley	361,000	500	0	0	300
Tehachapi Valley East	24,000	60	40	0	0
Tehachapi Valley West	15,000	50	30	0	0
Upper Mojave River Valley	275,000	8,000	9,000	0	600
Total	15,755,000**	120,000	36,000	15,000	30,000

† Includes ground-mounted distributed generation

‡ Project Area

* Project Area

** Total acreage includes all groundwater basins in all subareas, however only those basins impacted by renewable energy projects are listed in Table R2.6-12.

Table R2.6-13
Estimated Acres of Groundwater Basins in Reserve Design Lands by Subarea –Alternative 1

Subarea	Groundwater Basins in Subarea (acres)	Existing Conservation Areas (acres)	BLM LUPA Conservation Designations (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Cadiz Valley and Chocolate Mountains	2,293,000	487,000	1,066,000	14,000	68%
Imperial Borrego Valley	2,161,000	303,000	368,000	7,000	31%
Kingston and Funeral Mountains	1,490,000	931,000	340,000	11,000	86%
Mojave and Silurian Valley	1,784,000	541,000	259,000	12,000	46%
Owens River Valley	381,000	28,000	76,000	27,000	35%
Panamint Death Valley	1,391,000	934,000	124,000	3,000	76%
Pinto Lucerne Valley and Eastern Slopes	1,268,000	239,000	181,000	11,000	34%
Piute Valley and Sacramento Mountains	589,000	128,000	295,000	2,000	72%
Providence and Bullion Mountains	1,646,000	656,000	499,000	19,000	71%
West Mojave and Eastern Slopes	2,754,000	79,000	524,000	154,000	27%
Total	15,756,000	4,327,000	3,733,000	260,000	53%

Table R2.6-14
Potential Acres of Groundwater Basin Impacts on BLM Lands by Technology Type –Alternative 1

Groundwater Basin	Groundwater Basins in BLM LUPA (acres)	Potential Groundwater Basin Impacts by Technology Type (acres)			
		Solar [†]	Wind [‡]	GT*	Transmission
Antelope Valley	11,000	50	0	0	0
Bessemer Valley	28,000	0	0	0	70
Caves Canyon Valley	42,000	0	0	0	10
Chuckwalla Valley	488,000	2,000	500	0	3,000
Coyote Lake Valley	45,000	0	0	0	300
Coyote Wells Valley	97,000	0	0	0	900
Cronise Valley	47,000	0	0	0	50
East Salton Sea	31,000	40	0	60	300
Fremont Valley	93,000	400	0	0	30
Imperial Valley	320,000	2,000	0	3,000	2,000
Indian Wells Valley	151,000	200	0	0	200
Iron Ridge Area	5,000	0	0	0	100
Johnson Valley - Soggy Lake	48,000	0	0	0	100
Johnson Valley - Upper Johnson Valley	32,000	0	0	0	60
Lavic Valley	37,000	0	0	0	200
Lower Mojave River Valley	119,000	100	0	0	300
Lucerne Valley	68,000	200	100	0	100
Ocotillo-Clark Valley	70,000	70	0	600	200
Orocopia Valley	10,000	0	0	0	100
Owens Valley	133,000	0	0	0	700
Palo Verde Mesa	136,000	2,000	500	0	700
Rose Valley	27,000	4,000	0	0	400
Upper Mojave River Valley	38,000	1,000	800	0	100
West Salton Sea	13,000	100	0	900	200
Total	6,726,000**	12,000	2,000	4,000	11,000

† Includes ground-mounted distributed generation

‡ Project Area

* Project Area

** Total acreage includes all groundwater basins in the BLM LUPA, however only those basins impacted by renewable energy projects are listed in Table R2.6-14.

Table R2.6-15
Potential Acres of Groundwater Basin Impacts on GCP Lands by Technology Type – Alternative 1

Groundwater Basin	Groundwater Basin in GCP (acres)	Potential Groundwater Basin Impacts by Technology Type (acres)			
		Solar [†]	Wind [‡]	GT [*]	Transmission
Antelope Valley	746,000	12,000	2,000	0	400
Brite Valley	2,000	0	0	0	0
Caves Canyon Valley	25,000	100	0	0	0
Chuckwalla Valley	86,000	1,000	300	0	900
Coyote Lake Valley	17,000	10	0	0	70
Coyote Wells Valley	27,000	0	0	0	100
Cronise Valley	6,000	0	0	0	20
East Salton Sea	57,000	4,000	0	1,000	1,000
El Mirage Valley	68,000	3,000	4,000	0	50
Fremont Valley	231,000	9,000	5,000	0	100
Imperial Valley	578,000	33,000	0	9,000	8,000
Indian Wells Valley	68,000	400	0	0	90
Johnson Valley - Soggy Lake	29,000	0	0	0	10
Lavic Valley	9,000	0	0	0	80
Lower Mojave River Valley	139,000	6,000	0	0	700
Lucerne Valley	78,000	4,000	4,000	0	1,000
Ocotillo-Clark Valley	138,000	1,000	0	500	600
Orocopia Valley	7,000	0	0	0	200
Owens Valley	213,000	2,000	0	0	800
Palo Verde Mesa	86,000	11,000	2,000	0	1,000
Palo Verde Valley	61,000	5,000	1,000	0	60
Rose Valley	4,000	300	0	0	80
Tehachapi Valley East	20,000	60	40	0	0
Tehachapi Valley West	15,000	50	30	0	0
Upper Mojave River Valley	366,000	14,000	16,000	0	2,000
West Salton Sea	74,000	2,000	0	700	1,000
Total	4,576,000**	108,000	35,000	11,000	19,000

† Includes ground-mounted distributed generation

‡ Project Area

* Project Area

** Total acreage includes all groundwater basins in the GCP area, however only those basins impacted by renewable energy projects are listed in Table R2.6-15.

Table R2.6-16
Estimated Acres of Groundwater Basins in GCP Reserve Design Lands – Alternative 1

Groundwater Basin	Groundwater Basin in GCP (acres)	Existing Conservation Areas (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Ames Valley	44,000	2,000	300	5%
Amos Valley	9,000	0	2,000	18%
Antelope Valley	746,000	3,000	88,000	12%
Arroyo Seco Valley	45,000	200	900	2%
Bessemer Valley	3,000	0	400	13%
Borrego Valley	105,000	36,000	1,000	35%
Bristol Valley	56,000	2,000	5,000	13%
Broadwell Valley	6,000	20	300	7%
Cadiz Valley	26,000	700	1,000	8%
Cady Fault Area	2,000	0	500	20%
California Valley	3,000	10	70	3%
Calzona Valley	37,000	0	1,000	3%
Caves Canyon Valley	25,000	300	4,000	18%
Chemehuevi Valley	41,000	500	400	2%
Chocolate Valley	2,000	0	20	1%
Chuckwalla Valley	86,000	200	4,000	5%
Coachella Valley - Mission Creek	500	500	0	31%
Copper Mountain Valley	28,000	300	100	1%
Coyote Lake Valley	17,000	0	50	0%
Coyote Wells Valley	27,000	12,000	30	45%
Cronise Valley	6,000	0	500	8%
Cuddeback Valley	26,000	500	2,000	8%
Dale Valley	42,000	700	2,000	7%
Death Valley	15,000	4,000	1,000	37%
East Salton Sea	57,000	1,000	500	3%
El Mirage Valley	68,000	0	3,000	4%
Fenner Valley	33,000	6,000	2,000	22%
Fremont Valley	231,000	7,000	12,000	8%

Table R2.6-16
Estimated Acres of Groundwater Basins in GCP Reserve Design Lands – Alternative 1

Groundwater Basin	Groundwater Basin in GCP (acres)	Existing Conservation Areas (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Greenwater Valley	600	50	70	20%
Harper Valley	192,000	10,000	21,000	16%
Imperial Valley	578,000	7,000	600	1%
Indian Wells Valley	68,000	13,000	14,000	39%
Iron Ridge Area	200	0	200	70%
Ivanpah Valley	14,000	40	2,000	14%
Johnson Valley - Soggy Lake	29,000	500	3,000	10%
Kelso Valley	6,000	900	1,000	32%
Kern River Valley	1,000	60	0	4%
Lanfair Valley	41,000	2,000	8,000	25%
Lavic Valley	9,000	0	500	6%
Leach Valley	200	200	0	90%
Lost Lake Valley	2,000	300	300	34%
Lower Kingston Valley	14,000	2,000	1,000	25%
Lower Mojave River Valley	139,000	2,000	6,000	5%
Lucerne Valley	78,000	0	500	1%
Mesquite Valley	16,000	40	1,000	8%
Middle Amargosa Valley	25,000	2,000	2,000	13%
Middle Mojave River Valley	99,000	60	3,000	3%
Morongo Valley	7,000	0	1,000	16%
Needles Valley	27,000	10	2,000	6%
Ocotillo-Clark Valley	138,000	83,000	2,000	61%
Ogilby Valley	14,000	0	700	5%
Orocopia Valley	7,000	0	40	1%
Owens Valley	213,000	200	26,000	12%
Owl Lake Valley	2,000	1,000	100	67%
Pahrump Valley	19,000	10	3,000	14%
Palo Verde Mesa	86,000	40	1,000	2%

Table R2.6-16
Estimated Acres of Groundwater Basins in GCP Reserve Design Lands – Alternative 1

Groundwater Basin	Groundwater Basin in GCP (acres)	Existing Conservation Areas (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Palo Verde Valley	61,000	400	1,000	3%
Panamint Valley	11,000	2,000	1,000	27%
Pinto Valley	2,000	0	300	20%
Pipes Canyon Fault Valley	900	0	200	19%
Piute Valley	21,000	600	400	5%
Quien Sabe Point Valley	6,000	0	1,000	24%
Red Pass Valley	200	0	40	20%
Rhodes Hill Area	400	10	70	18%
Rice Valley	22,000	10	700	3%
Riggs Valley	4,000	60	400	13%
Rose Valley	4,000	0	900	26%
Salt Wells Valley	700	0	100	19%
Searles Valley	17,000	20	800	5%
Silver Lake Valley	2,000	0	300	11%
Soda Lake Valley	25,000	1,000	4,000	20%
Superior Valley	8,000	3,000	0	41%
Twentynine Palms Valley	41,000	0	900	2%
Upper Kingston Valley	10,000	700	1,000	17%
Upper Mojave River Valley	366,000	700	9,000	3%
Vallecito-Carrizo Valley	92,000	86,000	0	93%
Vidal Valley	15,000	600	0	4%
Ward Valley	35,000	1,000	500	5%
Warren Valley	20,000	0	1,000	6%
West Salton Sea	74,000	28,000	200	38%
Wingate Valley	200	0	0	3%
Yuma Valley	55,000	10	300	1%
Total	4,576,000**	329,000	258,000	13%

** Total acreage includes all groundwater basins in the GCP area, however only those basins having conservation are listed in Table R2.6-16.

Table R2.6-17
Estimated Acres of Groundwater Basins in BLM LUPA Outside of Plan Area Alternative 1

Groundwater Basin	Groundwater Basins within BLM LUPA Lands Outside Plan Area (acres)	BLM LUPA Designation [†]		
		Proposed NLCS (acres)	Existing & Proposed ACECs (acres)	Trail Management Corridors (acres/miles)
Antelope Valley	0	0	0	0/0
Black Springs Valley	27,000	3,000	0	0/0
Borrego Valley	3,000	0	300	0/0
Buck Ridge Fault Valley	3,000	0	0	0/0
Butte Valley	20	0	0	0/0
Cactus Flat	7,000	4,000	4,000	0/0
Canebrake Valley	0	0	0	0/0
Chocolate Valley	30,000	6,000	15,000	0/0
Coachella Valley - Desert Hot Springs	35,000	7,000	9,000	0/0
Coachella Valley - Indio	25,000	200	1,000	500/1.3
Coachella Valley - Mission Creek	11,000	3,000	6,000	1,000/3.9
Coachella Valley - San Gorgonio Pass	400	10	0	10/0
Coyote Wells Valley	7,000	40	2,000	0/0
Darwin Valley	12,000	600	0	0/0
Davies Valley	4,000	0	0	0/0
Death Valley	300	0	0	0/0
Deep Springs Valley	23,000	0	500	0/0
East Salton Sea	1,000	0	0	0/0
Eureka Valley	30,000	4,000	0	0/0
Fish Lake Valley	42,000	0	0	0/0
Indian Wells Valley	500	100	400	0/0
Jacumba Valley	40	0	0	0/0
Kern River Valley	70	0	70	0/0
Lee Flat	5,000	4,000	800	0/0

Table R2.6-17
Estimated Acres of Groundwater Basins in BLM LUPA Outside of Plan Area Alternative 1

Groundwater Basin	Groundwater Basins within BLM LUPA Lands Outside Plan Area (acres)	BLM LUPA Designation [†]		
		Proposed NLCS (acres)	Existing & Proposed ACECs (acres)	Trail Management Corridors (acres/miles)
Mason Valley	10	0	10	0/0
Middle Park Canyon	50	0	0	0/0
Orocopia Valley	37,000	900	23,000	0/0
Owens Valley	14,000	2,000	2,000	0/0
Panamint Valley	5,000	700	0	0/0
Rose Valley	2,000	200	2,000	0/0
Saline Valley	9,000	0	700	0/0
Santa Rosa Flat	15,000	5,000	0	0/0
Searles Valley	300	100	40	0/0
Vallecito-Carrizo Valley	2,000	0	2,000	0/0
Total	353,000	41,000	69,000	1,000/5.2

[†]These Designations Overlap.

R2.6.4 Alternative 2

**Table R2.6-18
Potential Acres of Groundwater Basin Impacts by Technology Type by Subarea – Alternative 2**

Subarea/Groundwater Basin	Groundwater Basins in Subarea (acres)	Groundwater Basins in DFA Footprint by Technology Type (acres)			
		Solar [†]	Wind [‡]	GT*	Transmission
<i>Cadiz Valley and Chocolate Mountains</i>					
Chuckwalla Valley	593,000	6,000	25,000	0	4,000
Orocopia Valley	17,000	0	0	0	400
Palo Verde Mesa	225,000	9,000	33,000	0	3,000
Palo Verde Valley	73,000	1,000	2,000	0	500
Yuma Valley	22,000	0	1,000	0	0
<i>Imperial Borrego Valley</i>					
Amos Valley	127,000	400	3,000	0	0
Coyote Wells Valley	135,000	0	0	0	1,000
East Salton Sea	172,000	2,000	500	1,000	1,000
Imperial Valley	957,000	24,000	6,000	13,000	9,000
Ocotillo-Clark Valley	211,000	900	40	600	500
Ogilby Valley	133,000	3,000	24,000	0	200
West Salton Sea	87,000	900	40	900	1,000
Yuma Valley	102,000	600	5,000	0	10
<i>Kingston and Funeral Mountains</i>					
Ivanpah Valley	196,000	0	0	0	200
Lower Kingston Valley	142,000	0	10	0	0
Pahrump Valley	93,000	1,000	3,000	0	0
Riggs Valley	10,000	300	1,000	0	0
Silver Lake Valley	3,000	0	0	0	20
Soda Lake Valley	100,000	0	0	0	50
Upper Kingston Valley	177,000	0	0	0	200
<i>Mojave and Silurian Valley</i>					
Caves Canyon Valley	55,000	50	0	0	200

Table R2.6-18
Potential Acres of Groundwater Basin Impacts by Technology Type by Subarea – Alternative 2

Subarea/Groundwater Basin	Groundwater Basins in Subarea (acres)	Groundwater Basins in DFA Footprint by Technology Type (acres)			
		Solar [†]	Wind [‡]	GT*	Transmission
Coyote Lake Valley	88,000	0	0	0	200
Cronise Valley	126,000	0	0	0	70
Fremont Valley	18,000	10	80	0	0
Lower Kingston Valley	98,000	300	2,000	0	0
Lower Mojave River Valley	200,000	2,000	0	0	600
Riggs Valley	78,000	1,000	8,000	0	20
Silver Lake Valley	32,000	90	600	0	80
Soda Lake Valley	266,000	0	0	0	100
Superior Valley	120,000	0	0	0	20
<i>Owens River Valley</i>					
Owens Valley	347,000	600	3,000	100	500
Rose Valley	34,000	400	400	800	200
<i>Panamint Death Valley</i>					
Searles Valley	178,000	800	1,000	0	0
<i>Pinto Lucerne Valley and Eastern Slopes</i>					
Ames Valley	108,000	100	2,000	0	80
Bessemer Valley	39,000	0	0	0	70
Copper Mountain Valley	30,000	20	300	0	40
Iron Ridge Area	5,000	0	0	0	100
Johnson Valley - Soggy Lake	77,000	2,000	14,000	0	400
Johnson Valley - Upper Johnson Valley	35,000	3,000	18,000	0	1,000
Lower Mojave River Valley	15,000	0	0	0	400
Lucerne Valley	147,000	0	0	0	20
Middle Mojave River Valley	57,000	0	0	0	0
Morongo Valley	7,000	40	1,000	0	0
Orocopia Valley	800	2,000	13,000	0	2,000
Pipes Canyon Fault Valley	3,000	50	800	0	10

Table R2.6-18
Potential Acres of Groundwater Basin Impacts by Technology Type by Subarea – Alternative 2

Subarea/Groundwater Basin	Groundwater Basins in Subarea (acres)	Groundwater Basins in DFA Footprint by Technology Type (acres)			
		Solar [†]	Wind [‡]	GT*	Transmission
Upper Mojave River Valley	129,000	100	2,000	0	80
Warren Valley	23,000	0	0	0	70
<i>Piute Valley and Sacramento Mountains (No Groundwater Basins in DFA Footprint)</i>					
<i>Providence and Bullion Mountains</i>					
Bristol Valley	481,000	500	5,000	0	60
Broadwell Valley	92,000	100	1,000	0	300
Lavic Valley	90,000	60	500	0	400
Lower Mojave River Valley	33,000	400	3,000	0	200
<i>West Mojave and Eastern Slopes</i>					
Antelope Valley	953,000	12,000	20,000	0	400
Brite Valley	2,000	0	0	0	0
Cuddeback Valley	76,000	300	100	0	0
El Mirage Valley	73,000	1,000	5,000	0	20
Fremont Valley	317,000	7,000	21,000	0	200
Harper Valley	401,000	3,000	70	0	60
Indian Wells Valley	361,000	6,000	0	0	100
Lower Mojave River Valley	37,000	100	0	0	20
Middle Mojave River Valley	154,000	30	0	0	0
Tehachapi Valley East	24,000	70	300	0	0
Tehachapi Valley West	15,000	10	50	0	0
Upper Mojave River Valley	275,000	3,000	14,000	0	200
Total	15,755,000**	94,000	238,000	17,000	30,000

† Includes ground-mounted distributed generation

‡ Project Area

* Project Area

** Total acreage includes all groundwater basins in all subareas, however only those basins impacted by renewable energy projects are listed in Table R2.6-18.

Table R2.6-19
Estimated Acres of Groundwater Basins in Reserve Design Lands by Subarea –Alternative 2

Subarea	Groundwater Basins in Subarea (acres)	Existing Conservation Areas (acres)	BLM LUPA Conservation Designations (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Cadiz Valley and Chocolate Mountains	2,293,000	487,000	1,019,000	19,000	66%
Imperial Borrego Valley	2,161,000	303,000	388,000	6,000	32%
Kingston and Funeral Mountains	1,490,000	931,000	375,000	18,000	89%
Mojave and Silurian Valley	1,784,000	541,000	308,000	14,000	48%
Owens River Valley	381,000	28,000	72,000	30,000	34%
Panamint Death Valley	1,391,000	934,000	185,000	4,000	81%
Pinto Lucerne Valley and Eastern Slopes	1,268,000	239,000	185,000	25,000	35%
Piute Valley and Sacramento Mountains	589,000	128,000	342,000	3,000	80%
Providence and Bullion Mountains	1,646,000	656,000	559,000	20,000	75%
West Mojave and Eastern Slopes	2,754,000	79,000	483,000	138,000	25%
Total	15,756,000	4,327,000	3,916,000	276,000	54%

Table R2.6-20
Potential Acres of Groundwater Basin Impacts on BLM Lands by Technology Type – Alternative 2

Groundwater Basin	Groundwater Basins in BLM LUPA (acres)	Potential Groundwater Basin Impacts by Technology Type (acres)			
		Solar [†]	Wind [‡]	GT*	Transmission
Ames Valley	28,000	10	400	0	0
Amos Valley	82,000	300	3,000	0	0
Antelope Valley	11,000	600	500	0	0
Bessemer Valley	28,000	0	0	0	70
Bristol Valley	317,000	400	5,000	0	50
Broadwell Valley	86,000	100	1,000	0	200
Caves Canyon Valley	42,000	20	0	0	80
Chuckwalla Valley	488,000	5,000	24,000	0	3,000
Copper Mountain Valley	2,000	0	0	0	100
Coyote Lake Valley	45,000	0	0	0	800
Coyote Wells Valley	97,000	0	0	0	50
Cronise Valley	47,000	200	70	0	0
Cuddeback Valley	66,000	500	0	600	200
East Salton Sea	31,000	3,000	3,000	0	20
El Mirage Valley	5,000	2,000	20	0	20
Fremont Valley	93,000	3,000	0	4,000	1,000
Harper Valley	199,000	5,000	0	0	90
Imperial Valley	320,000	0	0	0	100
Indian Wells Valley	151,000	10	400	0	0
Iron Ridge Area	5,000	300	3,000	0	0
Ivanpah Valley	74,000	0	0	0	200
Johnson Valley - Soggy Lake	48,000	800	6,000	0	200
Lavic Valley	37,000	30	300	0	300
Lower Kingston Valley	225,000	300	2,000	0	0
Lower Mojave River Valley	119,000	300	2,000	0	200

Table R2.6-20
Potential Acres of Groundwater Basin Impacts on BLM Lands by Technology Type – Alternative 2

Groundwater Basin	Groundwater Basins in BLM LUPA (acres)	Potential Groundwater Basin Impacts by Technology Type (acres)			
		Solar [†]	Wind [‡]	GT*	Transmission
Lucerne Valley	68,000	800	6,000	0	200
Middle Mojave River Valley	92,000	0	0	0	300
Ocotillo-Clark Valley	70,000	400	0	400	200
Ogilby Valley	119,000	3,000	23,000	0	200
Orocopia Valley	10,000	0	0	0	200
Owens Valley	133,000	50	0	100	200
Pahrump Valley	74,000	600	3,000	0	0
Palo Verde Mesa	136,000	6,000	28,000	0	800
Pipes Canyon Fault Valley	2,000	20	800	0	0
Riggs Valley	60,000	1,000	10,000	0	20
Rose Valley	27,000	300	0	800	100
Searles Valley	147,000	600	1,000	0	0
Silver Lake Valley	33,000	90	600	0	90
Soda Lake Valley	137,000	0	0	0	100
Superior Valley	24,000	0	0	0	10
Upper Kingston Valley	87,000	0	0	0	100
Upper Mojave River Valley	38,000	300	2,000	0	100
West Salton Sea	80	500	0	500	200
Yuma Valley	200	600	6,000	0	0
Total	6,726,000**	35,000	127,000	7,000	10,000

† Includes ground-mounted distributed generation

‡ Project Area

* Project Area

** Total acreage includes all groundwater basins in the BLM LUPA, however only those basins impacted by renewable energy projects are listed in Table R2.6-20.

Table R2.6-21
Potential Acres of Groundwater Basin Impacts on GCP Lands by Technology Type – Alternative 2

Groundwater Basin	Groundwater Basin in GCP (acres)	Potential Groundwater Basin Impacts by Technology Type (acres)			
		Solar [†]	Wind [‡]	GT*	Transmission
Ames Valley	44,000	100	2,000	0	80
Amos Valley	9,000	10	60	0	0
Antelope Valley	746,000	11,000	19,000	0	400
Bristol Valley	56,000	100	400	0	10
Brite Valley	2,000	0	0	0	0
Broadwell Valley	6,000	20	100	0	20
Caves Canyon Valley	25,000	40	0	0	80
Chuckwalla Valley	86,000	600	800	0	900
Copper Mountain Valley	28,000	20	300	0	40
Coyote Lake Valley	17,000	0	0	0	30
Coyote Wells Valley	27,000	0	0	0	100
Cronise Valley	6,000	0	0	0	20
Cuddeback Valley	26,000	50	40	0	0
East Salton Sea	57,000	1,000	500	700	900
El Mirage Valley	68,000	1,000	5,000	0	20
Fremont Valley	231,000	5,000	18,000	0	200
Harper Valley	192,000	800	50	0	40
Imperial Valley	578,000	21,000	6,000	8,000	8,000
Indian Wells Valley	68,000	800	0	0	40
Ivanpah Valley	14,000	0	0	0	10
Johnson Valley - Soggy Lake	29,000	1,000	8,000	0	200
Lavic Valley	9,000	30	100	0	80
Lower Mojave River Valley	139,000	2,000	1,000	0	500
Lucerne Valley	78,000	2,000	12,000	0	1,000
Middle Mojave River Valley	99,000	30	0	0	200
Morongo Valley	7,000	0	0	0	10
Ocotillo-Clark Valley	138,000	500	40	200	400

Table R2.6-21
Potential Acres of Groundwater Basin Impacts on GCP Lands by Technology Type – Alternative 2

Groundwater Basin	Groundwater Basin in GCP (acres)	Potential Groundwater Basin Impacts by Technology Type (acres)			
		Solar [†]	Wind [‡]	GT*	Transmission
Ogilby Valley	14,000	200	1,000	0	10
Orocopia Valley	7,000	0	0	0	300
Owens Valley	213,000	600	3,000	0	300
Pahrump Valley	19,000	500	0	0	0
Palo Verde Mesa	86,000	4,000	4,000	0	2,000
Palo Verde Valley	61,000	1,000	2,000	0	400
Pipes Canyon Fault Valley	900	20	300	0	0
Riggs Valley	4,000	0	0	0	0
Rose Valley	4,000	80	400	0	30
Searles Valley	17,000	0	0	0	10
Silver Lake Valley	2,000	0	0	0	10
Soda Lake Valley	25,000	70	300	0	0
Tehachapi Valley East	20,000	10	50	0	0
Tehachapi Valley West	15,000	0	0	0	20
Upper Kingston Valley	10,000	4,000	24,000	0	2,000
Upper Mojave River Valley	366,000	50	800	0	10
Warren Valley	20,000	500	40	400	900
West Salton Sea	74,000	0	0	0	10
Yuma Valley	55,000	30	0	0	200
Total	4,576,000**	59,000	111,000	10,000	19,000

† Includes ground-mounted distributed generation

‡ Project Area

* Project Area

** Total acreage includes all groundwater basins in the GCP area, however only those basins impacted by renewable energy projects are listed in Table R2.6-21.

Table R2.6-22
Estimated Acres of Groundwater Basins in GCP Reserve Design Lands – Alternative 2

Groundwater Basin	Groundwater Basin in GCP (acres)	Existing Conservation Areas (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Ames Valley	44,000	2,000	1,000	7%
Amos Valley	9,000	0	1,000	16%
Antelope Valley	746,000	3,000	86,000	12%
Arroyo Seco Valley	45,000	200	900	2%
Bessemer Valley	3,000	0	400	13%
Borrego Valley	105,000	36,000	1,000	35%
Bristol Valley	56,000	2,000	6,000	13%
Broadwell Valley	6,000	20	400	7%
Cadiz Valley	26,000	700	1,000	8%
Cady Fault Area	2,000	0	500	20%
California Valley	3,000	10	90	4%
Calzona Valley	37,000	0	1,000	3%
Caves Canyon Valley	25,000	300	4,000	18%
Chemehuevi Valley	41,000	500	400	2%
Chocolate Valley	2,000	0	10	1%
Chuckwalla Valley	86,000	200	9,000	11%
Coachella Valley - Mission Creek	500	500	0	31%
Copper Mountain Valley	28,000	300	100	1%
Coyote Lake Valley	17,000	0	80	0%
Coyote Wells Valley	27,000	12,000	30	45%
Cronise Valley	6,000	0	500	8%
Cuddeback Valley	26,000	500	200	3%
Dale Valley	42,000	700	2,000	7%
Death Valley	15,000	4,000	1,000	37%
East Salton Sea	57,000	1,000	300	3%
El Mirage Valley	68,000	0	2,000	4%
Fenner Valley	33,000	6,000	2,000	22%
Fremont Valley	231,000	7,000	8,000	6%
Greenwater Valley	600	50	70	20%

Table R2.6-22
Estimated Acres of Groundwater Basins in GCP Reserve Design Lands – Alternative 2

Groundwater Basin	Groundwater Basin in GCP (acres)	Existing Conservation Areas (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Harper Valley	192,000	10,000	21,000	16%
Imperial Valley	578,000	7,000	500	1%
Indian Wells Valley	68,000	13,000	1,000	21%
Iron Ridge Area	200	0	200	70%
Ivanpah Valley	14,000	40	2,000	14%
Johnson Valley - Soggy Lake	29,000	500	1,000	6%
Joshua Tree	17,000	0	800	5%
Kelso Lander Valley	9,000	5,000	1,000	72%
Kelso Valley	6,000	900	1,000	32%
Kern River Valley	1,000	60	0	4%
Lanfair Valley	41,000	2,000	8,000	25%
Lavic Valley	9,000	0	500	5%
Leach Valley	200	200	0	90%
Lost Lake Valley	2,000	300	300	34%
Lower Kingston Valley	14,000	2,000	4,000	46%
Lower Mojave River Valley	139,000	2,000	6,000	6%
Lucerne Valley	78,000	0	3,000	3%
Mesquite Valley	16,000	40	4,000	27%
Middle Amargosa Valley	25,000	2,000	3,000	18%
Middle Mojave River Valley	99,000	60	9,000	9%
Morongo Valley	7,000	0	4,000	58%
Needles Valley	27,000	10	2,000	6%
Ocotillo-Clark Valley	138,000	83,000	2,000	61%
Ogilby Valley	14,000	0	200	1%
Orocopia Valley	7,000	0	100	2%
Owens Valley	213,000	200	29,000	14%
Owl Lake Valley	2,000	1,000	100	67%
Pahrump Valley	19,000	10	400	2%
Palo Verde Mesa	86,000	40	2,000	2%

Table R2.6-22
Estimated Acres of Groundwater Basins in GCP Reserve Design Lands – Alternative 2

Groundwater Basin	Groundwater Basin in GCP (acres)	Existing Conservation Areas (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Palo Verde Valley	61,000	400	1,000	3%
Panamint Valley	11,000	2,000	1,000	29%
Pinto Valley	2,000	0	300	20%
Piute Valley	21,000	600	800	7%
Quien Sabe Point Valley	6,000	0	1,000	24%
Red Pass Valley	200	0	40	20%
Rhodes Hill Area	400	10	70	18%
Rice Valley	22,000	10	700	3%
Riggs Valley	4,000	60	400	13%
Rose Valley	4,000	0	900	25%
Salt Wells Valley	700	0	400	67%
Searles Valley	17,000	20	1,000	6%
Silver Lake Valley	2,000	0	200	8%
Soda Lake Valley	25,000	1,000	4,000	23%
Superior Valley	8,000	3,000	0	41%
Twentynine Palms Valley	41,000	0	900	2%
Upper Kingston Valley	10,000	700	2,000	29%
Upper Mojave River Valley	366,000	700	16,000	5%
Vallecito-Carrizo Valley	92,000	86,000	0	93%
Vidal Valley	15,000	600	0	4%
Ward Valley	35,000	1,000	500	5%
Warren Valley	20,000	0	3,000	14%
West Salton Sea	74,000	28,000	200	38%
Wingate Valley	200	0	0	1%
Yuma Valley	55,000	10	300	1%
Total	4,576,000**	329,000	273,000	13%

** Total acreage includes all groundwater basins in the GCP area, however only those basins having conservation are listed in Table R2.6-22.

Table R2.6-23
Estimated Acres of Groundwater Basins in BLM LUPA Outside of Plan Area –Alternative 2

Groundwater Basin	Groundwater Basins within BLM LUPA Lands Outside Plan Area (acres)	BLM LUPA Designation [†]		
		Proposed NLCS (acres)	Existing & Proposed ACECs (acres)	Trail Management Corridors (acres/miles)
Antelope Valley	0	0	0	0/0
Black Springs Valley	27,000	20,000	16,000	0/0
Borrego Valley	3,000	2,000	300	3,000/0
Buck Ridge Fault Valley	3,000	0	0	3,000/0
Butte Valley	20	0	0	0/0
Cactus Flat	7,000	4,000	4,000	0/0
Canebrake Valley	0	0	0	0/0
Chocolate Valley	30,000	21,000	15,000	0/0
Coachella Valley - Desert Hot Springs	35,000	22,000	9,000	400/0
Coachella Valley - Indio	25,000	13,000	1,000	6,000/1.3
Coachella Valley - Mission Creek	11,000	8,000	6,000	6,000/3.9
Coachella Valley - San Gorgonio Pass	400	400	0	400/0
Coyote Wells Valley	7,000	3,000	2,000	6,000/0
Darwin Valley	12,000	11,000	11,000	0/0
Davies Valley	4,000	10	0	4,000/0
Death Valley	300	200	0	0/0
Deep Springs Valley	23,000	22,000	500	0/0
East Salton Sea	1,000	1,000	0	0/0
Eureka Valley	30,000	4,000	0	0/0
Fish Lake Valley	42,000	18,000	0	0/0
Indian Wells Valley	500	300	400	500/0

Table R2.6-23
Estimated Acres of Groundwater Basins in BLM LUPA Outside of Plan Area –Alternative 2

Groundwater Basin	Groundwater Basins within BLM LUPA Lands Outside Plan Area (acres)	BLM LUPA Designation [†]		
		Proposed NLCS (acres)	Existing & Proposed ACECs (acres)	Trail Management Corridors (acres/miles)
Jacumba Valley	40	40	0	0/0
Kern River Valley	70	70	70	100/0
Lee Flat	5,000	4,000	800	0/0
Mason Valley	10	0	10	10/0
Middle Park Canyon	50	50	50	0/0
Orocopia Valley	37,000	21,000	23,000	0/0
Owens Valley	14,000	3,000	3,000	600/0
Panamint Valley	5,000	2,000	2,000	0/0
Rose Valley	2,000	2,000	2,000	300/0
Saline Valley	9,000	4,000	700	0/0
Santa Rosa Flat	15,000	11,000	2,000	0/0
Searles Valley	300	200	200	0/0
Vallecito-Carrizo Valley	2,000	20	2,000	400/0
Total	353,000	196,000	100,000	30,000/5.2

†These designations overlap.

R2.6.5 Alternative 3

**Table R2.6-24
Potential Acres of Groundwater Basin Impacts by Technology Type by Subarea –Alternative 3**

Subarea/Groundwater Basin	Groundwater Basins in Subarea (acres)	Groundwater Basins in DFA Footprint by Technology Type (acres)			
		Solar [†]	Wind [‡]	GT*	Transmission
<i>Cadiz Valley and Chocolate Mountains</i>					
Chuckwalla Valley	593,000	5,000	3,000	0	4,000
Orocopia Valley	17,000	0	0	0	400
Palo Verde Mesa	225,000	12,000	6,000	0	2,000
Palo Verde Valley	73,000	3,000	1,000	0	60
<i>Imperial Borrego Valley</i>					
Coyote Wells Valley	135,000	0	0	0	900
East Salton Sea	172,000	5,000	100	2,000	1,000
Imperial Valley	957,000	32,000	800	11,000	9,000
Ocotillo-Clark Valley	211,000	2,000	0	800	700
Ogilby Valley	133,000	1,000	2,000	0	0
West Salton Sea	87,000	2,000	0	1,000	1,000
<i>Kingston and Funeral Mountains (no groundwater basins affected)</i>					
<i>Mojave and Silurian Valley</i>					
Caves Canyon Valley	55,000	100	0	0	20
Coyote Lake Valley	88,000	10	0	0	200
Cronise Valley	126,000	0	0	0	60
Lower Mojave River Valley	200,000	4,000	0	0	500
Superior Valley	120,000	0	0	0	40
<i>Owens River Valley</i>					
Owens Valley	347,000	900	0	0	600
Rose Valley	34,000	1,000	0	1,000	200
<i>Panamint Death Valley</i>					
Indian Wells Valley	19,000	0	0	0	100
Searles Valley	178,000	2,000	0	0	0
<i>Pinto Lucerne Valley and Eastern Slopes</i>					

Table R2.6-24
Potential Acres of Groundwater Basin Impacts by Technology Type by Subarea –Alternative 3

Subarea/Groundwater Basin	Groundwater Basins in Subarea (acres)	Groundwater Basins in DFA Footprint by Technology Type (acres)			
		Solar [†]	Wind [‡]	GT*	Transmission
Bessemer Valley	39,000	0	0	0	80
Chuckwalla Valley	8,000	0	0	0	0
Iron Ridge Area	5,000	0	0	0	100
Johnson Valley - Soggy Lake	77,000	3,000	4,000	0	200
Lower Mojave River Valley	15,000	0	0	0	0
Lucerne Valley	147,000	4,000	10,000	0	1,000
Orocopia Valley	800	0	0	0	0
Upper Mojave River Valley	129,000	5,000	10,000	0	2,000
<i>Piute Valley and Sacramento Mountains (no groundwater basins in DFA footprint)</i>					
<i>Providence and Bullion Mountains</i>					
Lavic Valley	90,000	0	0	0	300
Lower Mojave River Valley	33,000	2,000	0	0	300
<i>West Mojave and Eastern Slopes</i>					
Antelope Valley	953,000	15,000	14,000	0	600
Brite Valley	2,000	0	0	0	0
El Mirage Valley	73,000	2,000	4,000	0	80
Fremont Valley	317,000	12,000	9,000	0	300
Harper Valley	401,000	2,000	0	0	0
Indian Wells Valley	361,000	300	0	0	500
Lower Mojave River Valley	37,000	300	0	0	0
Middle Mojave River Valley	154,000	70	0	0	0
Tehachapi Valley East	24,000	50	40	0	0
Tehachapi Valley West	15,000	40	30	0	0
Upper Mojave River Valley	275,000	6,000	11,000	0	900
Total	15,755,000**	121,000	76,000	16,000	28,000

† Includes ground-mounted distributed generation

‡ Project Area

* Project Area

** Total acreage includes all groundwater basins in all subareas, however only those basins impacted by renewable energy projects are listed in Table R2.6-24.

Table R2.6-25
Estimated Acres of Groundwater Basins in Reserve Design Lands by Subarea –Alternative 3

Subarea	Groundwater Basins in Subarea (acres)	Existing Conservation Areas (acres)	BLM LUPA Conservation Designations (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Cadiz Valley and Chocolate Mountains	2,293,000	487,000	1,037,000	12,000	67%
Imperial Borrego Valley	2,161,000	303,000	412,000	7,000	33%
Kingston and Funeral Mountains	1,490,000	931,000	340,000	11,000	86%
Mojave and Silurian Valley	1,784,000	541,000	273,000	11,000	46%
Owens River Valley	381,000	28,000	74,000	24,000	33%
Panamint Death Valley	1,391,000	934,000	187,000	3,000	81%
Pinto Lucerne Valley and Eastern Slopes	1,268,000	239,000	190,000	11,000	35%
Piute Valley and Sacramento Mountains	589,000	128,000	295,000	2,000	72%
Providence and Bullion Mountains	1,646,000	656,000	524,000	16,000	73%
West Mojave and Eastern Slopes	2,754,000	79,000	535,000	151,000	28%
Total	15,756,000	4,327,000	3,865,000	248,000	54%

Table R2.6-26
Potential Acres of Groundwater Basin Impacts on BLM Lands by Technology Type –Alternative 3

Groundwater Basin	Groundwater Basins in BLM LUPA (acres)	Potential Groundwater Basin Impacts by Technology Type (acres)			
		Solar [†]	Wind [‡]	GT*	Transmission
Antelope Valley	11,000	100	40	0	0
Bessemer Valley	28,000	0	0	0	80
Caves Canyon Valley	42,000	50	0	0	10
Chuckwalla Valley	488,000	4,000	3,000	0	3,000
Coyote Lake Valley	45,000	0	0	0	200
Coyote Wells Valley	97,000	0	0	0	800
Cronise Valley	47,000	0	0	0	30
East Salton Sea	31,000	1,000	0	800	200
El Mirage Valley	5,000	20	0	0	0
Fremont Valley	93,000	3,000	900	0	40
Harper Valley	199,000	300	0	0	0
Imperial Valley	320,000	6,000	0	4,000	2,000
Indian Wells Valley	151,000	0	0	0	400
Iron Ridge Area	5,000	0	0	0	100
Johnson Valley - Soggy Lake	48,000	500	1,000	0	200
Lavic Valley	37,000	0	0	0	200
Lower Mojave River Valley	119,000	1,000	0	0	300
Lucerne Valley	68,000	900	2,000	0	100
Ocotillo-Clark Valley	70,000	800	0	400	200
Ogilby Valley	119,000	1,000	2,000	0	0
Orocopia Valley	10,000	0	0	0	100
Owens Valley	133,000	0	0	0	300
Palo Verde Mesa	136,000	4,000	3,000	0	700
Rose Valley	27,000	1,000	0	1,000	200
Searles Valley	147,000	1,000	0	0	0
Superior Valley	24,000	0	0	0	20
Upper Mojave River Valley	38,000	900	2,000	0	100
West Salton Sea	13,000	1,000	0	500	200
Total	6,727,000**	28,000	13,000	7,000	10,000

† Includes ground-mounted distributed generation

‡ Project Area

* Project Area

** Total acreage includes all groundwater basins in the BLM LUPA, however only those basins impacted by renewable energy projects are listed in Table R2.6-26.

Table R2.6-27
Potential Acres of Groundwater Basin Impacts on GCP Lands by Technology Type – Alternative 3

Groundwater Basin	Groundwater Basin in GCP (acres)	Potential Groundwater Basin Impacts by Technology Type (acres)			
		Solar [†]	Wind [‡]	GT*	Transmission
Antelope Valley	746,000	15,000	14,000	0	600
Brite Valley	2,000	0	0	0	0
Caves Canyon Valley	25,000	80	0	0	0
Chuckwalla Valley	86,000	1,000	600	0	900
Coyote Lake Valley	17,000	10	0	0	40
Coyote Wells Valley	27,000	0	0	0	100
Cronise Valley	6,000	0	0	0	10
East Salton Sea	57,000	3,000	100	900	900
El Mirage Valley	68,000	2,000	4,000	0	80
Fremont Valley	231,000	9,000	8,000	0	200
Harper Valley	192,000	25,000	800	7,000	7,000
Imperial Valley	578,000	300	0	0	100
Indian Wells Valley	68,000	2,000	3,000	0	10
Johnson Valley - Soggy Lake	29,000	0	0	0	90
Lavic Valley	9,000	5,000	0	0	500
Lower Mojave River Valley	139,000	3,000	8,000	0	1,000
Lucerne Valley	78,000	70	0	0	0
Middle Mojave River Valley	99,000	1,000	0	400	500
Ocotillo-Clark Valley	138,000	0	0	0	200
Ogilby Valley	14,000	900	0	0	300
Orocopia Valley	7,000	15,000	14,000	0	600
Owens Valley	213,000	0	0	0	0
Palo Verde Mesa	86,000	8,000	3,000	0	2,000
Palo Verde Valley	61,000	3,000	1,000	0	60
Rose Valley	4,000	200	0	0	30
Searles Valley	17,000	400	0	0	0
Tehachapi Valley East	20,000	50	40	0	0
Tehachapi Valley West	15,000	40	30	0	0
Upper Mojave River Valley	366,000	10,000	19,000	0	3,000
West Salton Sea	74,000	1,000	0	500	1,000
Total	4,576,000**	93,000	63,000	9,000	18,000

[†] Includes ground-mounted distributed generation

[‡] Project Area

* Project Area

** Total acreage includes all groundwater basins in the GCP area, however only those basins impacted by renewable energy projects are listed in Table R2.6-27.

Table R2.6-28
Estimated Acres of Groundwater Basins in GCP Reserve Design Lands – Alternative 3

Groundwater Basin	Groundwater Basin in GCP (acres)	Existing Conservation Areas (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Ames Valley	44,000	2,000	300	5%
Amos Valley	9,000	0	1,000	16%
Antelope Valley	746,000	3,000	92,000	13%
Arroyo Seco Valley	45,000	200	300	1%
Bessemer Valley	3,000	0	400	13%
Borrego Valley	105,000	36,000	1,000	35%
Bristol Valley	56,000	2,000	2,000	7%
Broadwell Valley	6,000	20	300	7%
Cadiz Valley	26,000	700	1,000	8%
Cady Fault Area	2,000	0	500	20%
California Valley	3,000	10	70	3%
Calzona Valley	37,000	0	1,000	3%
Caves Canyon Valley	25,000	300	4,000	16%
Chemehuevi Valley	41,000	500	400	2%
Chocolate Valley	2,000	0	10	0%
Chuckwalla Valley	86,000	200	4,000	5%
Coachella Valley - Mission Creek	500	500	0	31%
Copper Mountain Valley	28,000	300	100	1%
Coyote Lake Valley	17,000	0	80	0%
Coyote Wells Valley	27,000	12,000	30	45%
Cronise Valley	6,000	0	300	4%
Cuddeback Valley	26,000	500	4,000	19%
Dale Valley	42,000	700	2,000	7%
Death Valley	15,000	4,000	1,000	37%
East Salton Sea	57,000	1,000	300	3%
El Mirage Valley	68,000	0	3,000	4%
Fenner Valley	33,000	6,000	2,000	22%
Fremont Valley	231,000	7,000	11,000	8%
Greenwater Valley	600	50	70	20%

Table R2.6-28
Estimated Acres of Groundwater Basins in GCP Reserve Design Lands – Alternative 3

Groundwater Basin	Groundwater Basin in GCP (acres)	Existing Conservation Areas (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Harper Valley	192,000	10,000	20,000	16%
Imperial Valley	578,000	7,000	600	1%
Indian Wells Valley	68,000	13,000	5,000	26%
Iron Ridge Area	200	0	200	70%
Ivanpah Valley	14,000	40	2,000	14%
Johnson Valley - Soggy Lake	29,000	500	3,000	10%
Joshua Tree	17,000	0	800	5%
Kelso Lander Valley	9,000	5,000	300	62%
Kelso Valley	6,000	900	1,000	32%
Kern River Valley	1,000	60	0	4%
Lanfair Valley	41,000	2,000	8,000	25%
Lavic Valley	9,000	0	500	6%
Leach Valley	200	200	0	90%
Lost Lake Valley	2,000	300	300	34%
Lower Kingston Valley	14,000	2,000	1,000	25%
Lower Mojave River Valley	139,000	2,000	6,000	5%
Lucerne Valley	78,000	0	900	1%
Mesquite Valley	16,000	40	1,000	8%
Middle Amargosa Valley	25,000	2,000	2,000	13%
Middle Mojave River Valley	99,000	60	3,000	3%
Morongo Valley	7,000	0	1,000	16%
Needles Valley	27,000	10	2,000	6%
Ocotillo-Clark Valley	138,000	83,000	2,000	61%
Ogilby Valley	14,000	0	500	4%
Orocopia Valley	7,000	0	40	1%
Owens Valley	213,000	200	24,000	11%
Owl Lake Valley	2,000	1,000	100	67%
Pahrump Valley	19,000	10	3,000	14%
Palo Verde Mesa	86,000	40	2,000	2%

Table R2.6-28
Estimated Acres of Groundwater Basins in GCP Reserve Design Lands – Alternative 3

Groundwater Basin	Groundwater Basin in GCP (acres)	Existing Conservation Areas (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Palo Verde Valley	61,000	400	1,000	3%
Panamint Valley	11,000	2,000	300	20%
Pinto Valley	2,000	0	300	20%
Pipes Canyon Fault Valley	900	0	200	19%
Piute Valley	21,000	600	400	5%
Quien Sabe Point Valley	6,000	0	1,000	24%
Red Pass Valley	200	0	40	20%
Rhodes Hill Area	400	10	70	18%
Rice Valley	22,000	10	700	3%
Riggs Valley	4,000	60	400	13%
Rose Valley	4,000	0	300	8%
Salt Wells Valley	700	0	400	67%
Searles Valley	17,000	20	1,000	6%
Silver Lake Valley	2,000	0	200	8%
Soda Lake Valley	25,000	1,000	3,000	18%
Superior Valley	8,000	3,000	0	41%
Twentynine Palms Valley	41,000	0	900	2%
Upper Kingston Valley	10,000	700	1,000	17%
Upper Mojave River Valley	366,000	700	9,000	3%
Vallecito-Carrizo Valley	92,000	86,000	0	93%
Vidal Valley	15,000	600	0	4%
Ward Valley	35,000	1,000	500	5%
Warren Valley	20,000	0	1,000	6%
West Salton Sea	74,000	28,000	200	38%
Wingate Valley	200	0	0	1%
Yuma Valley	55,000	10	500	1%
Total	4,576,000**	329,000	246,000	13%

** Total acreage includes all groundwater basins in the GCP area, however only those basins having conservation are listed in Table R2.6-28.

Table R2.6-29
Estimated Acres of Groundwater Basins in BLM LUPA Outside of Plan Area –Alternative 3

Groundwater Basin	Groundwater Basins within BLM LUPA Lands Outside Plan Area (acres)	BLM LUPA Designation [†]		
		Proposed NLCS (acres)	Existing & Proposed ACECs (acres)	Trail Management Corridors (acres/miles)
Antelope Valley	0	0	0	0/0
Black Springs Valley	27,000	9,000	16,000	0/0
Borrego Valley	3,000	0	300	100/0
Buck Ridge Fault Valley	3,000	0	0	0/0
Butte Valley	20	0	0	0/0
Cactus Flat	7,000	4,000	4,000	0/0
Canebrake Valley	0	0	0	0/0
Chocolate Valley	30,000	6,000	15,000	0/0
Coachella Valley - Desert Hot Springs	35,000	10,000	9,000	0/0
Coachella Valley - Indio	25,000	1,000	1,000	4,000/1.3
Coachella Valley - Mission Creek	11,000	5,000	6,000	6,000/3.9
Coachella Valley - San Gorgonio Pass	400	40	0	400/0
Coyote Wells Valley	7,000	100	2,000	2,000/0
Darwin Valley	12,000	2,000	11,000	0/0
Davies Valley	4,000	0	0	0/0
Death Valley	300	0	0	0/0
Deep Springs Valley	23,000	0	500	0/0
East Salton Sea	1,000	0	0	0/0
Eureka Valley	30,000	0	0	0/0
Fish Lake Valley	42,000	0	0	0/0
Indian Wells Valley	500	300	400	200/0
Jacumba Valley	40	0	0	0/0
Kern River Valley	70	0	80	0/0
Lee Flat	5,000	4,000	800	0/0
Mason Valley	10	0	10	10/0

Table R2.6-29
Estimated Acres of Groundwater Basins in BLM LUPA Outside of Plan Area –Alternative 3

Groundwater Basin	Groundwater Basins within BLM LUPA Lands Outside Plan Area (acres)	BLM LUPA Designation [†]		
		Proposed NLCS (acres)	Existing & Proposed ACECs (acres)	Trail Management Corridors (acres/miles)
Middle Park Canyon	50	0	0	0/0
Orocopia Valley	37,000	17,000	23,000	0/0
Owens Valley	14,000	3,000	3,000	0/0
Panamint Valley	5,000	900	2,000	0/0
Rose Valley	2,000	300	2,000	0/0
Saline Valley	9,000	3,000	700	0/0
Santa Rosa Flat	15,000	5,000	2,000	0/0
Searles Valley	300	100	200	0/0
Vallecito-Carrizo Valley	2,000	0	2,000	0/0
Total	353,000	73,000	101,000	13,000/5.2

†These designations overlap.

R2.6.6 Alternative 4

Table R2.6-30
Potential Acres of Groundwater Basin Impacts by Technology Type by Subarea –Alternative 4

Subarea/Groundwater Basin	Groundwater Basins in Subarea (acres)	Groundwater Basins in DFA Footprint by Technology Type (acres)			
		Solar [†]	Wind [‡]	GT*	Transmission
<i>Cadiz Valley and Chocolate Mountains</i>					
Chuckwalla Valley	593,000	14,000	19,000	0	10,000
Orocopia Valley	17,000	0	0	0	900
Palo Verde Mesa	225,000	22,000	26,000	0	5,000
Palo Verde Valley	73,000	3,000	2,000	0	100
<i>Imperial Borrego Valley</i>					
Coyote Wells Valley	135,000	0	0	0	400
East Salton Sea	172,000	3,000	100	1,000	600
Imperial Valley	957,000	23,000	900	11,000	4,000
Ocotillo-Clark Valley	211,000	900	0	900	300
West Salton Sea	87,000	1,000	0	1,000	500
<i>Kingston and Funeral Mountains</i>					
Pahrump Valley	93,000	600	0	0	0
<i>Mojave and Silurian Valley</i>					
Caves Canyon Valley	55,000	70	0	0	10
Coyote Lake Valley	88,000	10	0	0	100
Cronise Valley	126,000	0	0	0	30
Lower Mojave River Valley	200,000	3,000	0	0	300
<i>Owens River Valley</i>					
Owens Valley	347,000	800	0	80	700
Rose Valley	34,000	1,000	0	1,000	200
<i>Panamint Death Valley</i>					
Searles Valley	178,000	800	0	0	0
<i>Pinto Lucerne Valley and Eastern Slopes</i>					
Bessemer Valley	39,000	0	0	0	30
Iron Ridge Area	5,000	0	0	0	50

Table R2.6-30
Potential Acres of Groundwater Basin Impacts by Technology Type by Subarea –Alternative 4

Subarea/Groundwater Basin	Groundwater Basins in Subarea (acres)	Groundwater Basins in DFA Footprint by Technology Type (acres)			
		Solar [†]	Wind [‡]	GT*	Transmission
Johnson Valley - Soggy Lake	77,000	0	0	0	200
Lower Mojave River Valley	15,000	0	0	0	0
Lucerne Valley	147,000	3,000	9,000	0	500
Middle Mojave River Valley	57,000	10	70	0	0
Orocopia Valley	800	0	0	0	0
Upper Mojave River Valley	129,000	3,000	11,000	0	600
<i>Piute Valley and Sacramento Mountains (no groundwater basins in DFA footprint)</i>					
<i>Providence and Bullion Mountains</i>					
Lavic Valley	90,000	0	0	0	200
Lower Mojave River Valley	33,000	1,000	0	0	100
<i>West Mojave and Eastern Slopes</i>					
Antelope Valley	953,000	19,000	14,000	0	300
Brite Valley	2,000	0	0	0	0
El Mirage Valley	73,000	2,000	5,000	0	40
Fremont Valley	317,000	9,000	18,000	0	200
Harper Valley	401,000	1,000	0	0	90
Indian Wells Valley	361,000	200	0	0	200
Lower Mojave River Valley	37,000	300	0	0	30
Middle Mojave River Valley	154,000	1,000	0	0	0
Tehachapi Valley East	24,000	100	300	0	0
Tehachapi Valley West	15,000	20	50	0	0
Upper Mojave River Valley	275,000	5,000	12,000	0	400
Total	15,778,000**	116,000	117,000	16,000	27,000

† Includes ground-mounted distributed generation

‡ Project Area

* Project Area

** Total acreage includes all groundwater basins in all subareas, however only those basins impacted by renewable energy projects are listed in Table R2.6-30.

Table R2.6-31
Estimated Acres of Groundwater Basins in Reserve Design Lands by Subarea –Alternative 4

Subarea	Groundwater Basins in Subarea (acres)	Existing Conservation Areas (acres)	BLM LUPA Conservation Designations (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Cadiz Valley and Chocolate Mountains	2,293,000	487,000	842,000	21,000	59%
Imperial Borrego Valley	2,161,000	303,000	299,000	8,000	28%
Kingston and Funeral Mountains	1,490,000	931,000	323,000	10,000	85%
Mojave and Silurian Valley	1,784,000	541,000	226,000	12,000	44%
Owens River Valley	381,000	28,000	64,000	25,000	31%
Panamint Death Valley	1,391,000	934,000	186,000	3,000	81%
Pinto Lucerne Valley and Eastern Slopes	1,268,000	239,000	162,000	11,000	33%
Piute Valley and Sacramento Mountains	589,000	128,000	294,000	2,000	72%
Providence and Bullion Mountains	1,646,000	656,000	478,000	19,000	70%
West Mojave and Eastern Slopes	2,754,000	79,000	537,000	133,000	27%
Total	15,756,000	4,327,000	3,410,000	245,000	51%

Table R2.6-32
Potential Acres of Groundwater Basin Impacts on BLM Lands by Technology Type –Alternative 4

Groundwater Basin	Groundwater Basins in BLM LUPA (acres)	Potential Groundwater Basin Impacts by Technology Type (acres)			
		Solar [†]	Wind [‡]	GT*	Transmission
Antelope Valley	11,000	400	600	0	0
Bessemer Valley	28,000	0	0	0	30
Caves Canyon Valley	42,000	0	0	0	0
Chuckwalla Valley	488,000	12,000	18,000	0	8,000
Coyote Lake Valley	45,000	0	0	0	80
Coyote Wells Valley	97,000	0	0	0	300
Cronise Valley	47,000	0	0	0	20
East Salton Sea	31,000	30	0	60	100
Fremont Valley	93,000	2,000	2,000	0	10
Harper Valley	199,000	30	0	0	30
Imperial Valley	320,000	2,000	0	3,000	700
Indian Wells Valley	151,000	0	0	0	200
Iron Ridge Area	5,000	0	0	0	50
Johnson Valley - Soggy Lake	48,000	0	0	0	0
Lavic Valley	37,000	0	0	0	100
Lower Mojave River Valley	119,000	0	0	0	100
Lucerne Valley	68,000	100	0	0	200
Middle Mojave River Valley	92,000	20	200	0	70
Ocotillo-Clark Valley	70,000	10	70	0	0
Orocopia Valley	10,000	0	0	500	80
Owens Valley	133,000	0	0	0	300
Palo Verde Mesa	136,000	0	0	0	300
Rose Valley	27,000	800	0	1,000	200
Searles Valley	147,000	700	0	0	0
Upper Mojave River Valley	38,000	100	1,000	0	50
West Salton Sea	13,000	0	0	700	90
Total	6,726,000**	32,000	44,000	5,000	13,000

† Includes ground-mounted distributed generation

‡ Project Area

* Project Area

** Total acreage includes all groundwater basins in the BLM LUPA, however only those basins impacted by renewable energy projects are listed in Table R2.6-32.

Table R2.6-33
Potential Acres of Groundwater Basin Impacts on GCP Lands by Technology Type – Alternative 4

Groundwater Basin	Groundwater Basin in GCP (acres)	Potential Groundwater Basin Impacts by Technology Type (acres)			
		Solar [†]	Wind [‡]	GT*	Transmission
Antelope Valley	746,000	18,000	14,000	0	300
Caves Canyon Valley	25,000	70	0	0	0
Chuckwalla Valley	86,000	1,000	700	0	2,000
Coyote Lake Valley	17,000	10	0	0	20
Coyote Wells Valley	27,000	0	0	0	40
East Salton Sea	57,000	3,000	100	1,000	500
El Mirage Valley	68,000	2,000	5,000	0	40
Fremont Valley	231,000	8,000	16,000	0	100
Harper Valley	192,000	1,000	0	0	60
Imperial Valley	578,000	22,000	900	8,000	3,000
Indian Wells Valley	68,000	200	0	0	60
Johnson Valley - Soggy Lake	29,000	0	0	0	100
Lavic Valley	9,000	0	0	0	40
Lower Mojave River Valley	139,000	4,000	0	0	300
Lucerne Valley	78,000	3,000	9,000	0	500
Middle Mojave River Valley	99,000	1,000	0	0	0
Ocotillo-Clark Valley	138,000	900	0	400	200
Orocochia Valley	7,000	0	0	0	600
Owens Valley	213,000	800	0	80	300
Pahrump Valley	19,000	600	0	0	0
Palo Verde Mesa	86,000	7,000	4,000	0	4,000
Palo Verde Valley	61,000	3,000	2,000	0	100
Rose Valley	4,000	200	0	20	40
Searles Valley	17,000	200	0	0	0
Tehachapi Valley East	20,000	100	300	0	0
Tehachapi Valley West	15,000	20	50	0	0
Upper Mojave River Valley	366,000	8,000	22,000	0	1,000
West Salton Sea	74,000	1,000	0	600	400
Total	4,576,000**	84,000	73,000	10,000	14,000

† Includes ground-mounted distributed generation

‡ Project Area

* Project Area

** Total acreage includes all groundwater basins in the GCP area, however only those basins impacted by renewable energy projects are listed in Table R2.6-33.

Table R2.6-34
Estimated Acres of Groundwater Basins in GCP Reserve Design Lands – Alternative 4

Groundwater Basin	Groundwater Basin in GCP (acres)	Existing Conservation Areas (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Ames Valley	44,000	2,000	300	5%
Amos Valley	9,000	0	2,000	18%
Antelope Valley	746,000	3,000	79,000	11%
Arroyo Seco Valley	45,000	200	900	2%
Bessemer Valley	3,000	0	400	13%
Borrego Valley	105,000	36,000	1,000	35%
Bristol Valley	56,000	2,000	4,000	11%
Broadwell Valley	6,000	20	400	8%
Cadiz Valley	26,000	700	1,000	8%
Cady Fault Area	2,000	0	500	20%
California Valley	3,000	10	70	3%
Calzona Valley	37,000	0	1,000	3%
Caves Canyon Valley	25,000	300	4,000	18%
Chemehuevi Valley	41,000	500	400	2%
Chocolate Valley	2,000	0	10	1%
Chuckwalla Valley	86,000	200	7,000	8%
Coachella Valley - Mission Creek	500	500	0	31%
Copper Mountain Valley	28,000	300	100	1%
Coyote Lake Valley	17,000	0	50	0%
Coyote Wells Valley	27,000	12,000	30	45%
Cronise Valley	6,000	0	500	8%
Cuddeback Valley	26,000	500	200	3%
Dale Valley	42,000	700	2,000	7%
Death Valley	15,000	4,000	1,000	37%
East Salton Sea	57,000	1,000	400	3%
El Mirage Valley	68,000	0	3,000	4%
Fenner Valley	33,000	6,000	2,000	22%
Fremont Valley	231,000	7,000	11,000	8%
Greenwater Valley	600	50	70	20%

Table R2.6-34
Estimated Acres of Groundwater Basins in GCP Reserve Design Lands – Alternative 4

Groundwater Basin	Groundwater Basin in GCP (acres)	Existing Conservation Areas (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Harper Valley	192,000	10,000	20,000	16%
Imperial Valley	578,000	7,000	600	1%
Indian Wells Valley	68,000	13,000	5,000	26%
Iron Ridge Area	200	0	200	70%
Ivanpah Valley	14,000	40	2,000	14%
Johnson Valley - Soggy Lake	29,000	500	3,000	10%
Joshua Tree	17,000	0	800	5%
Kelso Lander Valley	9,000	5,000	300	62%
Kelso Valley	6,000	900	1,000	32%
Kern River Valley	1,000	60	0	4%
Lanfair Valley	41,000	2,000	8,000	25%
Lavic Valley	9,000	0	500	6%
Leach Valley	200	200	0	90%
Lost Lake Valley	2,000	300	300	34%
Lower Kingston Valley	14,000	2,000	1,000	26%
Lower Mojave River Valley	139,000	2,000	6,000	6%
Lucerne Valley	78,000	0	1,000	2%
Mesquite Valley	16,000	40	1,000	8%
Middle Amargosa Valley	25,000	2,000	2,000	13%
Middle Mojave River Valley	99,000	60	3,000	3%
Morongo Valley	7,000	0	1,000	16%
Needles Valley	27,000	10	2,000	6%
Ocotillo-Clark Valley	138,000	83,000	2,000	61%
Ogilby Valley	14,000	0	2,000	12%
Orocopia Valley	7,000	0	100	2%
Owens Valley	213,000	200	25,000	12%
Owl Lake Valley	2,000	1,000	100	67%
Pahrump Valley	19,000	10	2,000	9%
Palo Verde Mesa	86,000	40	6,000	7%

Table R2.6-34
Estimated Acres of Groundwater Basins in GCP Reserve Design Lands – Alternative 4

Groundwater Basin	Groundwater Basin in GCP (acres)	Existing Conservation Areas (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Palo Verde Valley	61,000	400	1,000	3%
Panamint Valley	11,000	2,000	300	20%
Pinto Valley	2,000	0	300	20%
Pipes Canyon Fault Valley	900	0	200	19%
Piute Valley	21,000	600	400	5%
Quien Sabe Point Valley	6,000	0	1,000	24%
Red Pass Valley	200	0	40	20%
Rhodes Hill Area	400	10	70	18%
Rice Valley	22,000	10	1,000	5%
Riggs Valley	4,000	60	500	16%
Rose Valley	4,000	0	300	8%
Salt Wells Valley	700	0	100	19%
Searles Valley	17,000	20	800	5%
Silver Lake Valley	2,000	0	500	20%
Soda Lake Valley	25,000	1,000	3,000	19%
Superior Valley	8,000	3,000	0	41%
Tehachapi Valley East	41,000	0	30	0%
Twentynine Palms Valley	10,000	700	900	2%
Upper Kingston Valley	366,000	700	1,000	17%
Upper Mojave River Valley	92,000	86,000	9,000	3%
Vallecito-Carrizo Valley	15,000	600	0	93%
Vidal Valley	35,000	1,000	400	6%
Ward Valley	20,000	0	500	5%
Warren Valley	74,000	28,000	1,000	6%
West Salton Sea	200	0	200	38%
Yuma Valley	55,000	10	500	1%
Total	4,576,000**	329,000	243,000	13%

** Total acreage includes all groundwater basins in the GCP area, however only those basins having conservation are listed in Table R2.6-34.

Table R2.6-35
Estimated Acres of Groundwater Basins in BLM LUPA Outside of Plan Area –Alternative 4

Groundwater Basin	Groundwater Basins within BLM LUPA Lands Outside Plan Area (acres)	BLM LUPA Designation [†]		
		Proposed NLCS (acres)	Existing & Proposed ACECs (acres)	Trail Management Corridors (acres/miles)
Antelope Valley	0	0	0	0/0
Black Springs Valley	27,000	9,000	16,000	0/0
Borrego Valley	3,000	0	300	0/0
Buck Ridge Fault Valley	3,000	0	0	0/0
Butte Valley	20	0	0	0/0
Cactus Flat	7,000	4,000	4,000	0/0
Canebrake Valley	0	0	0	0/0
Chocolate Valley	30,000	6,000	15,000	0/0
Coachella Valley - Desert Hot Springs	35,000	9,000	9,000	0/0
Coachella Valley - Indio	25,000	200	1,000	2,000/1.3
Coachella Valley - Mission Creek	11,000	4,000	6,000	3,000/3.9
Coachella Valley - San Geronio Pass	400	10	0	200/0
Coyote Wells Valley	7,000	200	2,000	0/0
Darwin Valley	12,000	2,000	11,000	0/0
Davies Valley	4,000	0	0	0/0
Death Valley	300	0	0	0/0
Deep Springs Valley	23,000	0	500	0/0
East Salton Sea	1,000	0	0	0/0
Eureka Valley	30,000	4,000	0	0/0
Fish Lake Valley	42,000	0	0	0/0
Indian Wells Valley	500	100	400	100/0
Jacumba Valley	40	0	0	0/0
Kern River Valley	70	0	70	0/0
Lee Flat	5,000	4,000	800	0/0
Mason Valley	10	0	10	0/0
Middle Park Canyon	50	0	50	0/0

Table R2.6-35
Estimated Acres of Groundwater Basins in BLM LUPA Outside of Plan Area –Alternative 4

Groundwater Basin	Groundwater Basins within BLM LUPA Lands Outside Plan Area (acres)	BLM LUPA Designation [†]		
		Proposed NLCS (acres)	Existing & Proposed ACECs (acres)	Trail Management Corridors (acres/miles)
Orocopia Valley	37,000	9,000	23,000	0/0
Owens Valley	14,000	3,000	3,000	0/0
Panamint Valley	5,000	900	2,000	0/0
Rose Valley	2,000	400	2,000	0/0
Saline Valley	9,000	3,000	700	0/0
Santa Rosa Flat	15,000	5,000	2,000	0/0
Searles Valley	300	100	200	0/0
Vallecito-Carrizo Valley	2,000	0	2,000	0/0
Total	353,000	64,000	100,000	5,000/5.2

†These designations overlap.