IV.15 MINERAL RESOURCES

This chapter analyzes how implementation of the Desert Renewable Energy Conservation Plan (DRECP or Plan) alternatives could potentially impact mineral resources. Existing mineral resource conditions appear in Volume III, Chapter III.15. The extent to which mineral resources would be affected by both Development Focus Areas (DFAs) and existing and proposed Conservation Planning Areas, for each alternative, are primary concerns in considering and quantifying those impacts.

IV.15.1 Approach to Impact Analysis

IV.15.1.1 General Methods

This impact analysis to mineral resources is based on both the potential effects of Covered Activities and the overall Plan Area conservation strategy. Covered Activities are associated with permitted renewable energy development within the DFAs. Transmission development outside the DFAs may still be subject to permitting and management conditions set by the Plan.

Assumptions used in the analysis of mineral resource impacts include the following:

- DFA approval would not affect existing mining operations authorized under plans of operation authorized under the Code of Federal Regulations (CFR) (43 CFR 3809), authorized solid minerals leases (43 CFR 3600), and all other active surface and underground mineral extraction operations.
- DFA approval would not affect existing reclamation plans and "vested rights" pursuant to the Surface Mining and Reclamation Act (California Public Resources Code [PRC] Section 2710 et seq. and California Code of Regulations [CCR] Section 3500 et seq.).
- Active mining claims, including placer claims, lode claims, and mill sites would not be affected by DFAs and Conservation Planning Areas.
- Areas of current mineral exploration authorized with plans of operation or notice-level operations would not be affected by DFAs and Conservation Planning Areas (43 CFR 3809).
- Existing leases and claims would not be affected by lands either identified as DFAs or within proposed Conservation Planning Areas.

General thresholds for determining impact significance to mineral resources address the following questions:

- Would Plan implementation result in a loss in availability of minerals of national critical significance?
- Would Plan implementation result in the loss of lands where state-classified Mineral Resource Zones (MRZs) show areas of mineral resource significance?
- Would Plan implementation result in a loss in availability of Bureau of Land Management (BLM)-identified areas with mineral resources?

Appendix R2.15 contains tables that support information in this chapter. Data in those tables quantify potential acreage for development and describe Conservation Designation impacts on each of the mineral resources analyzed.

This Environmental Impact Report/Environmental Impact Statement (EIR/EIS) is a programmatic document; its analysis primarily concerns typical impacts and does not evaluate the site-specific impacts of specific projects. Project-specific impacts are assessed during the permitting process and in additional California Environmental Quality Act/National Environmental Policy Act (CEQA/NEPA) documents. Because project sites are yet to be determined, it is possible that impacts to mineral resources may be avoided altogether within the DFAs. This impact analysis is based on tables showing Known Geothermal Resource Areas (KGRAs), high-potential mineral areas, existing high-priority mineral or energy locations, rare earth element areas (including radioactive deposits found at the Mountain Pass Mine), or locatable, leasable, and mineral material resource areas within each of the Plan's 10 ecoregion subareas and within DFAs or Conservation Planning Areas.

IV.15.1.2 CEQA Standards of Significance

CEQA Appendix G establishes significance standards for assessing impacts to mineral resources. Impacts are deemed significant if a project would:

- Result in the loss of availability of a known mineral resource that would be valuable to the region or the state, or cause the loss of availability of a locally important mineral resource recovery site on a local General Plan, a specific plan, or some other land use plan.

IV.15.2 Typical Impacts Common to All Action Alternatives

IV.15.2.1 Impacts of Renewable Energy and Transmission Development

The typical effects of renewable energy development (solar, wind, and geothermal) and its associated transmission requirements on mineral resources were evaluated by reviewing the Solar Programmatic EIS (PEIS), the Wind PEIS, and the Geothermal PEIS.

If the Plan is approved, renewable energy and transmission facilities would be built within identified DFAs. Each project would be subject to analysis by NEPA and/or CEQA. Project impacts would vary depending upon the proposed technology, location of the project, the timing and degree of disturbance from development, and the size and complexity of the facilities. Existing authorized mineral and energy operations would be allowable uses in the Plan Area, and unpatented mining claims would be subject to valid existing rights. Existing high-priority mineral and energy operations and their identified expansion areas would be excluded from proposed renewable energy applications. Established access routes to existing authorized operations and areas would also be allowed within proposed DFAs and Conservation Designations.

IV.15.2.1.1 Impacts of Site Characterization

The site characterization phase of renewable energy and transmission facility development may impact mineral resources. These impacts would be:

- Generally short-term, localized access restrictions to ongoing mineral resource lease activities, associated with geotechnical investigations and meteorological tower and access road installations, if required.

IV.15.2.1.2 Impacts of Construction and Decommissioning

The construction and decommissioning of renewable energy and transmission facilities would likely impact mineral resources. Impacts could include the following:

- Solar and geothermal development would be incompatible with and therefore preclude most mineral development activities within developed areas once facilities are built; access may be limited, fragmented, or blocked. An exception to this could be if geothermal resources located below solar facilities could be accessed using directional drilling technologies.
- Designation of new Reserve Design Lands may limit, fragment, or block access to future exploration and mineral resource removal.
- Construction of new access roads for renewable energy and transmission sites would increase access to mineral resource areas.

IV.15.2.1.3 Impacts of Operations and Maintenance

The operation and maintenance of renewable energy facilities would prevent access to mineral resources for as long as 30 years, the typical operational life of generation projects. This impact on access would begin during the construction phase (see Section IV.15.2.1.2), but continue through decommissioning.

IV.15.2.2 Impacts of the Reserve Design

Impacts on mineral resources from conservation actions would likely be adverse; conservation areas would restrict mineral resource access and exploration. However, within BLM-administered lands, existing authorized mineral and energy operations would be allowable within conservation areas, and unpatented mining claims would retain valid existing rights. Existing high priority mineral and energy operations and their identified expansion areas would be excluded from proposed conservation applications. Additionally, established access routes to existing high priority mineral/energy operations would be allowable in conservation areas. Any restrictions to future mining activities or access to sites would affect mineral resource development.

IV.15.2.3 Impacts of BLM Land Use Plan Decisions

IV.15.2.3.1 Impacts of Renewable Energy Development and Transmission on BLM Lands

The typical impacts from the various renewable energy and transmission technologies on BLM lands would be the same as those described above in Section IV.15.2.1. However, the specific locations in which energy and transmission development would be allowed would be driven by Land Use Plan Amendment (LUPA) decisions, which may encourage or restrict development in some areas.

Impacts on mineral resources within designated Areas of Critical Environmental Concern (ACECs), National Landscape Conservation System (NLCS) lands, and wildlife allocations would likely be adverse because of the access restrictions and disturbance caps that are designed to conserve and protect resources. Conservation Designations would adversely impact mineral resources by limiting or restricting access to mineral areas and removing lands from mineral entry or exploration. Existing mineral rights and mining activities could be moderately to severely restricted by disturbance caps and other restrictions imposed within conservation lands.

To the extent that Special Recreation Management Areas (SRMAs) are designated, there would be increased accessibility to mineral locations and existing mining areas, potentially affecting both access and mining activities. If SRMAs exclude Non Surface Occupancy renewable energy development (applicable only to geothermal) and maintain or enhance recreational setting characteristics, mineral resource mining may also be limited to No Surface Occupancy or have access restrictions due to recreational designations and activities.

IV.15.2.3.2 Impacts of BLM Land Designations and Management Actions

Because the BLM LUPA land designations would be managed to protect ecological, historic, cultural, scenic scientific, and recreation resources and values, the use of or access to mineral resources would likely be restricted/limited. While other land uses may be allowed within these areas, they must be compatible with the resources and values that the land designation is intended to protect.

Details on allowable uses and management within NLCS lands are presented in the proposed LUPA description in Volume II. Details on the goals, objectives, allowable uses, and management actions for each ACEC and SRMA unit appear in the LUPA worksheets in Appendix H.

IV.15.2.4 Impacts of Natural Community Conservation Plan and General Conservation Plan

The Natural Community Conservation Plan (NCCP) would be administered by the California Department of Fish and Wildlife (CDFW), and would be applicable to the entire Plan Area. The General Conservation Plan (GCP) would be administered by the United States Fish and Wildlife Service (USFWS) and would be applicable to nonfederal lands, a subset of the entire Plan Area.

IV.15.2.4.1 Natural Community Conservation Plan

The impacts of renewable energy development permitted under the NCCP would be the same as those defined for the Plan-wide impacts, including the typical impacts described in Section IV.15.2 above, and for each alternative described below.

IV.15.2.4.2 General Conservation Plan

The types of impacts resulting from renewable energy development permitted under the GCP would be the same as those defined for the Plan-wide impacts, including the typical impacts described in Section IV.15.2. above. However, the locations where these impacts would occur would vary by alternative.

IV.15.3 Impact Analysis by Alternative

The following sections present the impact analyses for the No Action Alternative, the Preferred Alternative, and Alternatives 1 through 4.

IV.15.3.1 No Action Alternative

The No Action Alternative assumes the state's renewable energy goals would be achieved absent the DRECP, and that renewable energy, transmission development, and mitigation for those projects in the Plan Area would occur on a project-by-project basis in a pattern consistent with past and ongoing renewable energy and transmission projects.

IV.15.3.1.1 Impacts Within the Entire Plan Area in No Action Alternative

IV.15.3.1.1.1 Impacts and Mitigation for Renewable Energy and Transmission Development in No Action Alternative

Impact Assessment

Impact MR-1: Plan components would reduce or improve access to and development of known and future mineral resources.

Potential impacts to mineral resources resulting from renewable energy and transmission facility development under the No Action Alternative are summarized in Table IV.15-1 and presented in more detail in Table R2.15-1 (Appendix R2).

Table IV.15-1
Potential Acres of Mineral Resource Impacts by Technology Type – No Action Alternative

Mineral Resource	Mineral Resources (acres)	Potential Mineral Resource Impacts by Technology Type (acres)			
		Solar	*Wind*	*GT*	*Transmission*
Geothermal resources	347,000	4,000	400	300	4,000
High potential mineral areas	1,519,000	6,000	300	40	1,000
High priority mineral & energy locations	101,000	400	0	0	40
Rare earth element areas	59,000	800	0	0	0
Locatable mineral areas	348,000	4,000	30	0	400
Leasable mineral areas	84,000	0	0	0	0
Mineral material areas	101,000	1,000	40	30	500

Note: 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.

Potential impacts to mineral resources under the No Action Alternative are listed below and described in more detail in Section IV.15.2 (Typical Impacts).

Geothermal: There would be potential access restrictions to approximately 8,700 acres of geothermal resources from development of solar, wind, and transmission facilities, all of which would be within the Imperial Borrego Valley ecoregion subarea. This is approximately 3% of the defined geothermal resources within the Plan Area. The potential access restrictions would be very small relative to the geothermal resources within the Plan Area, even without mitigation requiring avoidance of mineral resources. In addition, 300 acres within the Plan Area would be available for geothermal resource development.

High Potential Mineral Areas: There would be potential access restrictions to approximately 7,300 acres of high potential mineral areas from development of solar, wind, geothermal, and transmission facilities, primarily within the Cadiz Valley and Chocolate Mountains and Imperial Borrego Valley ecoregion subareas. This is approximately 0.5% of the defined high potential mineral areas within the Plan Area. The potential access restrictions would be very small relative to the high potential mineral area acres within the Plan Area, even without mitigation requiring avoidance of these mineral resources.

High Priority Mineral and Energy Locations: There would be potential access restrictions to approximately 400 acres of high priority mineral and energy locations from development of solar and transmission facilities, primarily within the Kingston and Funeral Mountains ecoregion subarea. This is approximately 0.5% of the defined high priority mineral and energy locations within the Plan Area. The potential access restrictions would be very small relative to the high priority mineral and energy locations within the Plan Area, even without mitigation requiring avoidance of these mineral resources.

Rare Earth Element Areas: There would be potential access restrictions to approximately 800 acres of rare earth element areas from development of solar facilities, primarily within the Kingston and Funeral Mountains ecoregion subarea, potentially overlapping the Molycorp Mountain Pass rare earth mine area (which also contains radioactive deposits). This is approximately 1.4% of the defined rare earth element areas within the Plan Area. The potential access restrictions would be small relative to the rare earth element areas within the Plan Area, even without mitigation requiring avoidance of these mineral resources.

Locatable Mineral Areas: There would be potential access restrictions to approximately 4,500 acres of locatable mineral areas from development of solar, wind, and transmission facilities, the majority within the Kingston and Funeral Mountains ecoregion subarea (approximately 2,000 acres). This is approximately 1.3% of the defined locatable mineral areas within the Plan Area. The potential access restrictions would be very small relative to the locatable mineral areas within the Plan Area.

Leasable Mineral Areas: There would be no potential access restrictions to leasable mineral areas from development of solar, wind, geothermal, or transmission facilities.

Mineral Material Areas: There would be potential access restrictions to 1,600 acres of mineral material areas from development of solar, wind, geothermal, and transmission facilities. This is approximately 1.6% of the defined mineral material areas within the Plan Area. The potential access restrictions would be very small relative to the mineral material areas within the Plan Area.

Laws and Regulations

Relevant regulations are presented in the Regulatory Setting in Volume III. Because this EIR/EIS addresses amendments to BLM's land use plans, these plans are addressed separately and are not included in this section. The requirements of relevant regulations would reduce impacts through the following mechanisms:

- General Mining Law of 1872, as amended – This law provides that all valuable mineral deposits (except as otherwise provided) and the lands in which they are found in the United States, shall be free and open to exploration and purchase by citizens of the United States.
- Federal Land Policy and Management Act of 1976 (FLPMA), as amended – This act allows for access to existing mining claims in areas designated as wilderness, and reaffirms valid existing mining claims and rights.

In addition, the following design features were defined in the Solar PEIS, and would reduce potential impacts to mineral resources. Solar PEIS design features apply only to solar generation and only to BLM Solar Energy Zones (SEZs) and Solar PEIS variance lands on BLM lands:

MR-1 Project developers shall consult with BLM in the early phases of project planning to identify potential impacts on mineral development activities and ways to minimize any potential adverse impacts.

(a) Impact assessments on mineral resources shall include, but are not limited to, the following actions:

- Identify active mining claims or mineral development activities and potential for mineral development in proximity to a proposed project. In coordination with BLM, developers shall consult existing land use plans and updated inventories.

- Evaluate impacts on mineral development as part of the environmental impact analysis for the project, and consider options to avoid, minimize, and mitigate adverse impacts, in coordination with BLM.

MR1-2 All solar energy development rights-of-way (ROWs) shall contain the stipulation that BLM retains the right to issue geothermal leases with a No Surface Occupancy stipulation within the ROW. Upon designation, Solar Energy Zones (SEZs) will be classified as No Surface Occupancy areas for geothermal leasing.

Mitigation Measures

Mitigation measures adopted for approved renewable energy and transmission development projects would likely be the same as those applied under the No Action Alternative. Examples of these measures for mineral resources follow:

- Where valid mining claims or leases already exist, early coordination with claim or lease holders should be initiated to determine the possibility of locating new facilities in or near these areas to avoid adverse effects on mineral development.
- For future mining resource exploration and development, determine the siting most likely to avoid both adverse effects on natural and cultural values and conflicts with renewable energy facility development.

IV.15.3.1.1.2 Impacts from Reserve Design in the No Action Alternative

The No Action Alternative has no reserve design, but without approval of an action alternative, there would be continued protection of existing Legislatively and Legally Protected Areas (LLPAs), which include wilderness areas. In addition, under the No Action Alternative, renewable energy projects would continue to be evaluated and approved with project-specific mitigation requirements.

Potential impacts to mineral resources resulting from existing BLM conservation land designations (including ACECs) under the No Action Alternative are summarized in Table IV.15-2 and presented in detail in Table R2.15-5 (Appendix R2).

Table IV.15-2
Estimated Acres of Mineral Resources in Conservation and Protected Areas – No Action Alternative

Mineral Resource Type	Mineral Resources in Subarea (acres)	Existing Protected Areas (acres)	BLM Conservation Designations (acres)	Percent in Conservation
Geothermal resources	347,000	20,000	12,000	9.0
High potential mineral areas	1,519,000	649,000	135,000	51.6
High priority mineral & energy locations	101,000	100	0	0.1
Rare earth element areas	59,000	24,000	9,000	56.8
Locatable mineral areas	348,000	11,000	95,000	30.4
Leasable mineral areas	84,000	0	0	0.0
Mineral material areas	101,000	700	23,000	23.4

Note: 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.

Geothermal: There are approximately 32,000 acres of geothermal resources within existing protected and BLM Conservation Designations, with the majority in the Imperial Borrego Valley ecoregion subarea. This is approximately 9% of the defined geothermal resources within the Plan Area. There are existing stipulations and restrictions to access within existing protected and conservation areas. The potential access restrictions would be small relative to the geothermal resources within the Plan Area, even without measures requiring avoidance or minimization of impacts to mineral resources.

High Potential Mineral Areas: There are approximately 784,000 acres of high potential mineral areas within existing protected and BLM Conservation Designations, with nearly 250,000 acres within the Panamint Death Valley ecoregion subarea. This is approximately 52% of the defined high potential mineral areas within the Plan Area. There are existing stipulations and restrictions to access within existing protected and conservation areas. The potential access restrictions would continue to be significant, relative to the high potential mineral areas within the Plan Area. Measures requiring avoidance or minimization of impacts to mineral resources would reduce impacts.

High Priority Mineral and Energy Locations: There are approximately 100 acres of high priority mineral and energy locations within existing protected and BLM Conservation Designations. This is approximately 0.1% of the defined high priority mineral and energy locations within the Plan Area. There are existing stipulations and restrictions to access within

existing protected and conservation areas. The potential access restrictions would be very small relative to the high priority mineral and energy locations within the Plan Area, even without measures requiring avoidance or minimization of impacts to mineral resources that would reduce impacts.

Rare Earth Element Areas: There are approximately 33,000 acres of rare earth element areas within existing protected and BLM Conservation Designations, primarily within the Kingston and Funeral Mountains ecoregion subarea (nearly 20,000 acres), potentially overlapping the Molycorp Mountain Pass rare earth mine area (which also contains radioactive deposits). This is approximately 57% of the defined rare earth element areas within the Plan Area. There are existing stipulations and restrictions to access within existing protected and conservation areas. The potential access restrictions would be significant, relative to the rare earth element areas within the Plan Area. Measures requiring avoidance or minimization of impacts to mineral resources would reduce impacts; however, overall impacts to access of rare earth element areas would remain significant.

Locatable Mineral Areas: There are approximately 106,000 acres of locatable mineral areas within existing protected and BLM Conservation Designations throughout the majority of ecoregion subareas. This is approximately 30.4% of the defined locatable mineral areas within the Plan Area. There are existing stipulations and restrictions to access within existing protected and conservation areas. The potential access restrictions would be moderate, relative to the locatable mineral areas within the Plan Area and the location of the resources in relation to population centers and areas where renewable energy could be developed.

Leasable Mineral Areas: There are virtually no acres of leasable mineral areas within existing protected and BLM Conservation Designations. There would be no access restrictions to the leasable mineral areas within the Plan Area.

Mineral Material Areas: There are approximately 24,000 acres of mineral material areas within existing protected and BLM Conservation Designations, mostly within the Piute Valley and Sacramento Mountains ecoregion subarea. This is approximately 23.4% of the defined mineral material areas within the Plan Area. There are existing stipulations and restrictions to access within existing protected and conservation areas. The potential access restrictions would be small to moderate relative to the mineral material areas within the Plan Area.

Summary: Establishing new conservation areas would create access restrictions to currently undeveloped mineral resource areas and prevent future exploration. Access restrictions would reduce availability of known mineral resources valuable to the region, the state, and to locally important mineral resource recovery sites.

However, within conservation lands on BLM-administered lands, exploration and access could continue following the area-specific management plans, including disturbance caps. Also, unpatented mining claims are subject to valid existing rights. Typical mitigation measures would reduce or avoid some impacts from mineral resources, and therefore, to mineral resources.

IV.15.3.1.2 Impacts on BLM Lands of Existing BLM Land Use Plans in No Action Alternative

Under the No Action Alternative, existing BLM land use plans within the Plan Area would continue to be implemented within BLM-administered lands. These land use plans would continue to allow for renewable energy and transmission development within certain land designations, including Solar PEIS SEZs and solar Variance Lands. These projects would continue to require land use plan amendments for approval if they are proposed outside those areas.

Potential overlap of renewable energy and transmission development within mineral resource areas in the land use plan boundaries (California Desert Conservation Area [CDCA], Caliente Resource Management Plan [RMP] area, and Bishop RMP area) are presented in Table IV.15-3.

Table IV.15-3
Potential Acres of Mineral Resource Impacts by Technology Type on BLM Lands – No Action Alternative

Mineral Resources	Potential Mineral Resource Impacts by Technology Type (acres)			
	Solar	*Wind*	*GT*	*Transmission*
Geothermal resources	100	0	0	700
High potential mineral areas	5,000	100	30	700
High priority mineral & energy locations	300	0	0	20
Rare earth element areas	700	0	0	0
Locatable mineral areas	4,000	20	0	300
Leasable mineral areas	0	0	0	0
Mineral materials areas	1,000	40	20	400

Note: 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.

Within BLM LUPA lands, the impacts of solar, wind, geothermal, and transmission development on access to mineral resources would be small when compared with the overall availability of mineral resources within the Plan Area. Rare earth element areas and leasable min-

eral areas would not be impacted within BLM lands, and there would be minimal impact (approximately 300 acres) to high priority mineral and energy locations (Table IV.15-3).

Potential overlap of existing ACECs and SRMAs with mineral resource areas in the land use plan boundaries (California Desert Conservation Area [CDCA], Caliente Resource Management Plan [RMP] area, and Bishop RMP area) are summarized below and presented in Table IV.15-4.

Table IV.15-4
Estimated Acres of Mineral Resources on BLM Land Designations – No Action Alternative

Mineral Resources	Existing SRMAs (acres)	Existing ACECs (acres)	Areas Managed for Recreation Emphasis
Geothermal resources	13,000	18,000	12,000
High potential mineral areas	2,000	190,000	62,000
High priority mineral & energy locations	0	0	0
Rare earth element areas	0	16,000	0
Locatable mineral areas	1,000	101,000	7,000
Leasable mineral areas	0	0	0
Mineral materials areas	0	24,000	23,000

Note: 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.

Impacts of existing SRMAs (approximately 16,000 acres) and ACECs (approximately 349,000 acres) would be moderate when compared with the overall availability of mineral resources within the Plan Area. There are no leasable mineral areas or high priority mineral and energy locations within existing SRMAs and ACECs; therefore, these resources would not be affected.

Impacts to mineral resources on BLM-administered lands under existing land use plans would be the same as discussed above under Section IV.15.3.1.1.1.

IV.15.3.1.1.3 Impacts of Natural Community Conservation Plan in No Action Alternative

The NCCP would apply to all lands within the Plan Area. In the absence of Plan implementation, the NCCP would not be approved and no incidental take permits would be issued. under the NCCP. Projects would continue to be considered by the appropriate lead agency

on an individual basis. The impacts that would occur in the absence of the NCCP would be the same as those described in Section IV.15.3.1.1.1 (Plan-wide analysis).

IV.15.3.1.4 Impacts of General Conservation Plan in No Action Alternative

As described in Appendix M, the GCP would apply to nonfederal lands in the Plan Area. In the absence of Plan implementation, the GCP would not be approved and no incidental take permits would be issued under the GCP. Projects would continue to be considered by the appropriate lead agency on an individual basis. The impacts that would occur in the absence of the GCP would be the same as those described in Section IV.15.3.1.1.1 (Plan-wide analysis), but would be specific to nonfederal lands.

IV.15.3.1.5 Impacts Outside the Plan Area in No Action Alternative

Additional transmission lines would be needed to deliver electricity from renewable energy projects to load centers (areas of high demand) outside of the Plan Area. It is assumed that new transmission lines outside the Plan Area would use existing transmission corridors between the Plan Area and existing substations in the more heavily populated areas of the state. The areas outside the Plan Area where new transmission lines might be constructed include the San Diego, Los Angeles, North Palm Springs–Riverside, and Central Valley areas. Mineral resources in these areas are described in Chapter III.15 (Mineral Resources), Section III.15.5.

IV.15.3.1.5.1 Impacts of Transmission Outside the Plan Area

Impact MR-1: Plan components would reduce or improve access to and development of known and future mineral resources.

A transmission tower has a relatively small footprint and towers are widely spaced, so very little surface area is occupied at any one location. Even if towers are located in an area with mineral resources, therefore, there would be minimal impact. Subsurface mining would not be affected by the presence of a tower on the land surface. Surface mining could be affected to the extent that mining around a tower base could leave a pillar of the mineral resource undisturbed beneath the tower itself, but this would not cause substantial access restrictions to resources. Depending on the value of the mineral, the transmission line could be rerouted around the area.

IV.15.3.1.5.2 Impacts of Existing BLM Land Use Plans Outside the Plan Area

Under the No Action Alternative, the existing BLM CDCA land use plan would continue to be implemented on CDCA lands. Under the No Action Alternative, renewable energy projects would still be developed through BLM's existing policies. Impacts on mineral resources

would be of the types described above in Section IV.15.2.1, with similar mitigation measures being included on a case-by-case basis.

The existing land designations, such as existing protected areas, ACECs, and National Scenic and Historic Trails, would continue to be managed to protect their associated values and resources.

Potential overlap of existing ACECs and SRMAs with mineral resource areas outside the Plan Area (within the CDCA plan) are presented in Table IV.15-5.

Table IV.15-5
Estimated Acres of Mineral Resources Outside Plan Area – No Action Alternative

Mineral Resources	Existing SRMAs (acres)	Existing ACECs (acres)
Geothermal resources	300	1,00
High potential mineral areas	59,000	8,000
High priority mineral & energy locations	0	0
Rare earth element areas	12,000	0
Locatable mineral areas	100	0
Leasable mineral areas	0	0
Mineral materials areas	4, 000	600

Note: 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.

Impacts of existing SRMAs and ACECs outside the Plan Area would be small when compared with the overall availability of mineral resources. There are no leasable mineral areas or high priority mineral and energy locations within existing SRMAs and ACECs; therefore, these resources would not be affected.

IV.15.3.1.6 CEQA Significance Determination: No Action Alternative

MR-1: Plan components would reduce or improve access to and development of known and future mineral resources. Impacts from development within available development areas under the No Action Alternative would be less than significant with implementation of typical mitigation measures. These measures would ensure early coordination with mine operators and access to mineral resource areas. Access to minerals from might be restricted if newly created conservation and protected areas are created as a result of project-specific mitigation. Those impacts would be less than significant for

geothermal, high priority mineral and energy locations, and locatable, leasable, and mineral material areas.

Overall, impacts to mineral resources would be less than significant from potential available development areas and restriction to access to these resources due to conservation lands under the No Action Alterative. Exploration and access could continue following existing area-specific management plans. Unpatented mining claims would continue to be subject to valid existing rights. Typical mitigation measures would continue to reduce or avoid some impacts to mineral resources.

Typical mitigation measures, as defined in Section IV.15.3.1.1.1, would be implemented to reduce impacts. Solar PEIS design features and existing laws and regulations described above, if fully implemented and carefully monitored, would also help reduce potential restrictions to access to mineral resources by avoiding important mineral resource areas when possible and maintaining access to existing and future mineral development. Overall, impacts from the No Action Alternative would likely be less than significant with mitigation.

IV.15.3.2 Preferred Alternative

IV.15.3.2.1 Plan-wide Impacts of Implementing the DRECP: Preferred Alternative

IV.15.3.2.1.1 Plan-wide Impacts and Mitigation Measures from Renewable Energy and Transmission Development

Impact Assessment

Impact MR-1: Plan components would reduce or improve access to and development of known and future mineral resources.

Potential impacts to mineral resources resulting from renewable energy and transmission facility development within DFAs under the Preferred Alternative are summarized in Table IV.15-6 and presented in more detail in Table R2.15-6 (Appendix R2).

Table IV.15-6
Potential Acres of Mineral Resource Impacts by Technology Type – Preferred Alternative

Mineral Resource	Mineral Resources (acres)	Potential Mineral Resource Impacts by Technology Type (acres)			
		Solar	*Wind*	*GT*	*Transmission*
Geothermal resources	331,000	14,000	100	6,000	3,000

Table IV.15-6
Potential Acres of Mineral Resource Impacts by Technology Type – Preferred Alternative

Mineral Resource	Mineral Resources (acres)	Potential Mineral Resource Impacts by Technology Type (acres)			
		Solar	*Wind*	*GT*	*Transmission*
High potential mineral areas	1,209,000	2,000	100	200	1,000
High priority mineral & energy locations	99,000	0	0	0	0
Rare earth element areas	59,000	0	0	0	0
Locatable mineral areas	278,000	600	100	0	100
Leasable mineral areas	50,000	0	0	0	0
Mineral material areas	89,000	700	100	200	400

Note: 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.

Potential impacts to mineral resources under the Preferred Alternative are listed below and described in more detail in Section IV.15.2.

Geothermal: There would be potential access restrictions to approximately 23,000 acres, primarily within the Imperial Borrego Valley ecoregion subarea, of geothermal resources from development of solar, wind, and transmission facilities. There would be approximately 6,000 acres within the Plan Area available for geothermal resource development, reducing impacts to about 3% of the defined geothermal resources within the Plan Area. The potential access restrictions would be minimal relative to the geothermal resources within the Plan Area, even without mitigation requiring avoidance of mineral resources.

High Potential Mineral Areas: There would be potential access restrictions to approximately 3,000 acres, mostly within the West Mojave and Eastern Slopes ecoregion subarea, of high potential mineral areas from development of solar, wind, geothermal, and transmission facilities. This is approximately 0.2% of the defined high potential mineral areas within the Plan Area. The potential access restrictions would be minimal relative to high potential mineral areas within the Plan Area, even without mitigation requiring avoidance of these mineral resources.

High Priority Mineral and Energy Locations: There would be no potential access restrictions from development of solar, wind, geothermal, or transmission facilities. Conservation and Management Actions (CMAs) for minerals state that existing operations would be designated as allowable uses.

Rare Earth Element Areas: There would be no potential access restrictions to rare earth element areas from development of solar, wind, geothermal, or transmission facilities.

Locatable Mineral Areas: There would be potential access restrictions to approximately 800 acres, primarily within the West Mojave and Eastern Slopes ecoregion subarea, of locatable mineral areas from development of solar, wind, and transmission facilities. This is approximately 0.3% of the defined locatable mineral areas within the Plan Area. The potential access restrictions would be minimal relative to the locatable mineral areas within the Plan Area.

Leasable Mineral Areas: There would be no potential access restrictions to leasable mineral areas from development of solar, wind, geothermal, or transmission facilities.

Mineral Material Areas: There would be potential access restrictions to approximately 1,400 acres, primarily within the Cadiz Valley and Chocolate Mountains ecoregion subarea, of mineral material areas from development of solar, wind, geothermal, and transmission facilities. This is approximately 0.7% of the defined mineral material areas within the Plan Area. The potential access restrictions would be minimal relative to the mineral material areas within the Plan Area.

Impacts in Study Area Lands

"Study Area Lands" refers to three categories of lands shown on alternative maps: Future Assessment Areas (FAAs), Special Analysis Areas (SAAs) and DRECP Variance Lands.

Future Assessment Areas (FAAs). Lands within FAAs are neither reserve lands nor DFAs; they are simply areas that are deferred for future assessment. The future assessment will determine their suitability for either renewable energy development or ecological conservation. If there is renewable energy development on FAA lands, a BLM Land Use Plan Amendment (LUPA) would not be required. FAAs for each alternative are described in Volume II in Table IV.1-2 and Figure II.3-1. FAAs represent areas where renewable energy development or inclusion to the reserve design could be implemented through an amendment to the DRECP, but additional assessment would be needed.

Because most of the FAAs are presented as "undesignated areas" in the action alternatives. There would be no difference between the FAAs in the Preferred Alternative except that renewable development in an FAA would not require a BLM LUPA, so the environmental review process would be somewhat simpler than if the location remained undesignated. Development or Conservation Designation of the FAAs would potentially impact the following mineral resources:

- High Potential Mineral Areas: Approximately 11,000 acres, primarily within the Providence and Bullion Mountains ecoregion subarea.

- High Priority Mineral and Energy Locations: Approximately 10,000 acres, primarily within the Kingston and Funeral Mountains ecoregion subarea.
- Rare Earth Element Areas: Approximately 7,000 acres, all within the Kingston and Funeral Mountains ecoregion subarea. Potential impacts to the Molycorp Mountain Pass rare earth mine may occur.
- Locatable Minerals: Approximately 7,000 acres, primarily within the Kingston and Funeral Mountains ecoregion subarea.
- Leasable Minerals: Approximately 8,000 acres, all within the Providence and Bullion Mountains ecoregion subarea.
- Mineral Materials: Approximately 700 acres, primarily within the Piute Valley and Sacramento Mountains ecoregion subarea.

FAAs may result in access restrictions to mineral resources from either renewable energy development or ecological conservation.

Special Analysis Areas (SAAs). There are two areas defined as SAAs, each subject to ongoing analysis. These areas (located in the Silurian Valley and just west of Highway 395 in Kern County) have high value for renewable energy development and also high value for ecological and cultural conservation, and recreation. SAA lands are expected to be designated in the EIR/EIS as either DFAs or included in the Reserve Design/ Conservation Designation.

DRECP Variance Lands. DRECP Variance Lands represent the BLM Solar PEIS Variance Lands screened for the EIR/EIS are based on BLM screening criteria. Covered Activities could be permitted (for NCCP purposes) only through an NCCP plan amendment. However, development of renewable energy on variance lands would not require a BLM LUPA, so the environmental review process would be somewhat simpler than if the location remained undesignated. Development or Conservation Designation of the DRECP Variance Lands could result in access restrictions to approximately 600 acres of mineral material resources within the Piute Valley and Sacramento Mountains ecoregion subarea.

Impact Reduction Strategies and Mitigation

Implementation of the Plan would result in the conservation of some desert lands and the development of renewable energy generation and transmission facilities on other lands. There are several ways that the impacts of renewable energy development could be reduced. First, the Plan incorporates CMAs for each alternative, including specific biological reserve design and LUPA components. Implementation of existing laws, orders, regulations and standards would also reduce the impacts of project development. If there are still sig-

nificant impacts after implementing CMAs and complying with applicable laws and regulations, then specific mitigation measures are recommended.

Conservation and Management Actions

The conservation strategy for the Preferred Alternative (presented in Volume II, Section II.3.1.1) defines specific actions that would reduce the impacts of this alternative. The conservation strategy includes definition of the reserve design and specific CMAs for the Preferred Alternative. While the CMAs were developed for BLM lands only, this analysis assumes that all CMAs would also be applied to nonfederal lands. The following CMAs apply to all action alternatives, including the Preferred Alternative.

Minerals CMAs for BLM Land for the Entire Plan Area. For identified minerals lands and existing mining and energy development (locatable, salable, solid leasable and geothermal minerals) with currently approved Plans of Operations, Notices, Mine and Reclamation Plans or Plans of Development (43 CFR 3200; 3500; 3600; and 3802/09), mineral resources have been identified as follows in proposed DFAs and conservation areas:

<u>High Potential Mineral Areas (Identified in CA GEM Data)</u>

- These areas are mineral lands with existing or historic mining activity and a reasonable probability of future mineral resource development. These identified areas are designated as mineral land polygons on DRECP maps, and recognized as probable future development areas for planning purposes and allowable use areas.
- If a renewable energy project is proposed in a high potential mineral area, that area's mineral resource value should be considered in the renewable energy project analysis.

<u>Existing Mineral and Energy Operations</u>

- Existing authorized mineral/energy operations, including amendments and requests for expansion on existing operations, shall be designated as an allowable use within all BLM lands in the Plan Area; unpatented mining claims are subject to valid existing rights.

<u>Existing High Priority Mineral/Energy Operations Exclusion Areas</u>

- Existing high priority operation footprints and their identified expansion areas shall be excluded from proposed renewable energy and conservation applications.

- Existing authorized mineral/energy operations, including amendments and requests for expansion on existing operations, shall be designated as an allowable use within both proposed DFAs and conservation areas.
- High priority operation exclusions are referenced by name with their respective footprint (acreage) below:
  - Molycorp REE (General Legal Description: 35° 26'N; 115° 29'W) – 10,490.9 surface acres. Also contains radioactive deposits.
  - Briggs Au, Etna (General Legal Description: 35° 56'N; 117° 11'W) – 3,216.9 surface acres.
  - Cadiz Evaporites (General Legal Description: 34° 17'N; 115° 23'W) – 2,591.5 surface acres.
  - Searles Dry Lake (Evaporate) Operation (General Legal Description: 35° 43'N; 117° 19'W) – 72,000 surface acres.
  - Bristol Dry Lake (Evaporate) Operation (General Legal Description: 34° 29'N; 115° 43'W) – 3,500 surface acres.
  - Mesquite Gold Mine (General Legal Description: 33° 04'N; 114° 59'W) – 4,500 surface acres.
  - Hector Mine (Hectorite Clay) (General Legal Description: 34° 45'N; 116° 25'W) – 1,500 surface acres.

Access to Existing Operations

- Established access routes to the above-authorized operations and areas shall be designated as allowable uses within the proposed DFAs and conservation areas.

Areas Located Outside of Identified Mineral Areas ("White Areas")

- Areas which could not be characterized because of insufficient data and mineral potential may fluctuate, depending upon market economy, extraction technology, and other geologic information. Requires periodic updating.

High Potential Mineral Areas

- In National Conservation Lands and ACECs, determine if reasonable alternatives exist outside of the National Conservation Lands/ACEC areas before proposing mineral resource development within these areas.
- In National Conservation Lands, subject to valid existing rights, if mineral resource development is proposed on a parcel of public land administered by BLM for conser-

vation purposes and designated as part of the NLCS within the CDCA, pursuant to OPLMA Section 2002(b)(2)(D):

  - Identify, analyze, and consider the resources and values for that parcel of public land administered for conservation purposes.
  - Determine whether development of mineral resources is compatible with BLM administration of that parcel of public land for conservation purposes. If development is incompatible, the mineral resource would not be developed, subject to valid existing rights.

- In National Conservation Lands, protect the values for which a National Conservation Land unit was designated; avoid, minimize, and mitigate impacts to those values. All Plans of Operation will meet the performance standards in 43 CFR 3809.420, specifically 43 CFR 3809.420(a)(3) - Land-Use Plans; and 43 CFR 3809.420(b)(7) - Fisheries, Wildlife and Plant Habitat.

The following CMAs apply to the Preferred Alternative for NLCS lands:

- **Leasable Minerals:**
  - National Conservation Lands would be available for leasing with a No Surface Occupancy stipulation.
  - Geothermal and other leasing must protect groundwater quality and quantity.
- **Locatable Minerals:** National Conservation Lands would be treated as "controlled" or "limited" use areas in the CDCA, and would require a plan of operations for greater than casual use (43 CFR 3809.11).
- **Saleable Minerals:** National Conservation Lands would be available for saleable mineral development, and would require mitigation/compensation that would result in a net benefit for National Conservation Lands values.

The following CMAs apply to the Preferred Alternative for National Scenic and Historic Trails:

- **Locatable Minerals:** National Trail corridors would be treated as "controlled" or "limited" use areas in the CDCA and would require a plan of operations for greater than casual use (43 CFR 3809.11).
- **Leasable Minerals:** NSHT Management Corridors would be available for leasing with a No Surface Occupancy stipulation. Surface coal mining would not be allowed within the NSHT Management Corridors.

- **Mineral Material Areas:** NSHT Management Corridors would be available for saleable mineral development if they do not substantially interfere with the nature and purpose of NSHT and require mitigation/compensation that would result in a net benefit to NSHT values.

Laws and Regulations

Similar to the No Action Alternative, existing laws and regulations will reduce certain impacts of Plan implementation. Relevant regulations are presented in the Regulatory Setting in Volume III. The requirements of relevant laws and regulations are summarized above for the No Action Alternative in Section IV.15.3.1.1.1.

Mitigation Measures

After implementation of the CMAs and existing laws and regulations, the following mitigation measure is recommended to further reduce adverse impacts:

MR-1a **Coordinate to Ensure Access to Mineral Resources.** Where valid mining claims or leases exist, initiate early coordination with claim or lease holders to identify avoidance measures so that renewable energy and transmission facilities would not restrict access to mineral resource facilities.

IV.15.3.2.1.2 Impacts of the Reserve Design

Potential impacts to mineral resources resulting from Reserve Design Lands under the Preferred Alternative are summarized in Table IV.15-6 and presented in detail in Table R2.15-7 (Appendix R2).

Table IV.15-7
Estimated Acres of Mineral Resources within Reserve Design Lands – Preferred Alternative

Mineral Resource	Mineral Resources (acres)	Existing Conservation Areas (acres)	BLM LUPA Conservation Designations (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Geothermal resources	331,000	15,000	9,000	100	7.4
High potential mineral areas	1,209,000	469,000	312,000	12,000	65.5
High priority mineral & energy locations	99,000	100	10,000	2,000	12.4
Rare earth element areas	59,000	24,000	20,000	200	75.7
Locatable mineral areas	278,000	11,000	175,000	3,000	67.1

Table IV.15-7
Estimated Acres of Mineral Resources within Reserve Design Lands – Preferred Alternative

Mineral Resource	Mineral Resources (acres)	Existing Conservation Areas (acres)	BLM LUPA Conservation Designations (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Leasable mineral areas	50,000	0	6,000	1,000	13.9
Mineral material areas	89,000	700	32,000	400	37.2

Note: 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.

Geothermal: There would be potential access restrictions to approximately 24,000 acres of geothermal resources from existing conservation and proposed Reserve Design Lands, mostly within the Imperial Borrego Valley ecoregion subarea. This is approximately 7% of the defined geothermal resources within the Plan Area. The potential access restrictions would be minimal relative to the geothermal resources within the Plan Area, even without stipulations related to existing claims and allowable uses, and some of these resources may still be accessible through directional drilling.

High Potential Mineral Areas: There would be potential access restrictions to approximately 793,000 acres of high potential mineral areas from existing conservation and proposed Reserve Design Lands throughout the majority of ecoregion subareas. This is approximately 66% of the defined high potential mineral areas within the Plan Area. The potential access restrictions would be significant relative to the high potential mineral areas within the Plan Area. CMAs for high potential mineral areas would reduce impacts.

High Priority Mineral and Energy Locations: There would be approximately 13,000 acres, primarily within the Panamint Death Valley ecoregion subarea, of high priority mineral and energy locations within existing conservation and proposed Reserve Design Lands; however, these existing operations would be designated as an allowable use. There would therefore be no potential access restrictions to the high priority mineral and energy locations within the Plan Area.

Rare Earth Element Areas: There would be potential access restrictions to approximately 44,000 acres of rare earth element areas from existing conservation and proposed Reserve Design Lands. This is approximately 76% of the defined rare earth element areas within the Plan Area. Potential rare earth mines affected would be the Cadiz Evaporate mine in the

Cadiz Valley and Chocolate Mountains ecoregion subarea, the Molycorp Mountain Pass rare earth mine, and the rare earth mines in the Panamint Death Valley ecoregion subarea (Briggs Gold mine, Trona Borax mine, and Searles Dry Lake operation). The potential access restrictions would be significant relative to the rare earth element areas within the Plan Area. CMAs for existing operations would reduce impacts; however, impacts would still remain significant overall.

Locatable Mineral Areas: There would be potential access restrictions to approximately 189,000 acres of locatable mineral areas from existing conservation and proposed Reserve Design Lands throughout the majority of ecoregion subareas. This is approximately 67% of the defined locatable mineral areas within the Plan Area. There would be approximately 2,000 acres of ACECs closed to locatable mineral extraction; remaining acres of ACECs would be open with stipulations and restrictions. The potential access restrictions would be significant relative to the locatable mineral areas within the Plan Area. CMAs for locatable mineral areas would reduce impacts; however, impacts would remain significant overall.

Leasable Mineral Areas: There would be potential access restrictions to approximately 7,000 acres, primarily within the Cadiz Valley and Chocolate Mountains ecoregion subarea, of leasable mineral areas from existing conservation and proposed Reserve Design Lands. This is approximately 14% of the defined leasable mineral areas within the Plan Area. The potential access restrictions would be moderate relative to the leasable mineral areas within the Plan Area. CMAs would further reduce impacts.

Mineral Material Areas: There would be potential access restrictions to approximately 33,000 acres, mostly within the Piute Valley and Sacramento Mountains ecoregion subarea, of mineral material areas from existing conservation and proposed Reserve Design Lands. This is approximately 37% of the defined mineral material areas within the Plan Area. There would be approximately 100 acres of ACECs closed to mineral material extraction; the remaining acres of ACECs would be open with stipulations and restrictions. The potential access restrictions would be moderate relative to the mineral material areas within the Plan Area. CMAs would further reduce impacts.

Summary: Establishing new conservation areas would create access restrictions to currently undeveloped mineral resource areas and prevent future exploration within acquired lands in Conservation Planning Areas. Access restrictions would reduce availability of known mineral resources valuable to the region, the state, and to locally important mineral resource recovery sites. A large percentage of mineral resources are located within Reserve Design Lands under the Preferred Alternative. Management actions under the Preferred Alternative fall into three categories: available for leasable minerals with a No Surface Occupancy stipulation, “controlled” or “limited” use areas for locatable minerals, and available for mineral material development with mitigation and compensation. Availability and access to mineral resources within NLCS lands would reduce impacts.

Within conservation lands on BLM-administered lands, exploration and access could continue following the area-specific management plans, including disturbance caps. Also, unpatented mining claims would continue to be subject to valid existing rights. Impacts to mineral resources from restrictions to access due to acquisition of Conservation Planning Area lands would be significant for high potential mineral areas, rare earth element areas, and locatable mineral areas. CMAs would reduce impacts; however, impacts to these mineral resources would remain significant and unmitigable under the Preferred Alternative.

IV.15.3.2.2 Impacts of DRECP Land Use Plan Amendment on BLM Land: Preferred Alternative

This section addresses two components of effects of the BLM LUPA: the streamlined development of renewable energy and transmission on BLM land under the LUPA, and the impacts of the amended land use plans themselves.

IV.15.3.2.2.1 Impacts from Renewable Energy and Transmission Development on BLM Land

Potential impacts to mineral resources from renewable energy and transmission facility development within DFAs under the Preferred Alternative for BLM lands are summarized below and presented in Table IV.15-8.

Table IV.15-8
Potential Acres of Mineral Resource Impacts by Technology Type on BLM LUPA Lands – Preferred Alternative

Mineral Resources	Mineral Resources in BLM LUPA (acres)	Potential Mineral Resources Impacts by Technology Type (acres)			
		Solar	*Wind*	*GT*	*Transmission*
Geothermal resources	76,000	2,000	0	2,000	400
High potential mineral areas	652,000	1,000	100	200	2,000
High priority mineral & energy locations	76,000	0	0	0	0
Rare earth element areas	39,000	0	0	0	0
Locatable mineral areas	241,000	500	100	0	100
Leasable mineral areas	38,000	0	0	0	0
Mineral material areas	80,000	1,000	100	200	300

Note: 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.

In areas where DFAs overlap with mineral resource areas, potential renewable energy and transmission development within DFAs would have the following impacts:

Geothermal: There would be potential access restrictions to approximately 4,000 acres, primarily within the Imperial Borrego Valley ecoregion subarea, of geothermal resources from development of solar and transmission facilities on BLM LUPA lands. There would be approximately 2,000 acres within BLM LUPA lands available for geothermal resource development, reducing impacts to 0.3% of the defined geothermal resources within BLM LUPA lands. The potential access restrictions would be minimal relative to the geothermal resources with BLM LUPA lands.

High Potential Mineral Areas: There would be potential access restrictions to approximately 3,000 acres of high potential mineral areas from development of solar, wind, geothermal, and transmission facilities within BLM LUPA lands. This is approximately 0.1% of the defined high potential mineral areas within BLM LUPA lands. The potential access restrictions would be minimal relative to the high potential mineral areas within BLM LUPA lands.

High Priority Mineral and Energy Locations: There would be no potential access restrictions to high priority mineral and energy locations from development of solar, wind, geothermal, or transmission facilities within BLM LUPA lands. CMAs for minerals state that existing operations would be designated as an allowable use.

Rare Earth Element Areas: There would be no potential access restrictions to rare earth element areas from development of solar, wind, geothermal, or transmission facilities within BLM LUPA lands.

Locatable Mineral Areas: There would be potential access restrictions to approximately 1,000 acres of locatable mineral areas from development of solar, wind, and transmission facilities within BLM LUPA lands. This is approximately 0.02% of the defined locatable mineral areas within BLM LUPA lands. The potential access restrictions would be minimal relative to the locatable mineral areas within BLM LUPA lands.

Leasable Mineral Areas: There would be no potential access restrictions access restrictions to leasable mineral areas from development of solar, wind, geothermal, or transmission facilities within BLM LUPA lands.

Mineral Material Areas: There would be potential access restrictions to approximately 1,500 acres, primarily within the Cadiz Valley and Chocolate Mountains ecoregion subarea, of mineral material areas from development of solar, geothermal, and transmission facilities within BLM LUPA lands. This is approximately 0.4% of the defined mineral material

areas within BLM LUPA lands. The potential access restrictions would be minimal relative to the mineral material areas within BLM LUPA lands.

IV.15.3.2.2.2 Impacts of Changes to BLM Land Designations

Potential impacts to mineral resources resulting from Reserve Design Lands under the Preferred Alternative on BLM lands are summarized in Table IV.15-9 and presented in Table R2.15-9 (Appendix R2).

Table IV.15-9
Estimated Acres of Mineral Resources in BLM LUPA Land Designation – Preferred Alternative

Mineral Resources	Mineral Resources in BLM LUPA Lands (acres)	Mineral Resources in BLM Land Designations						
		SRMAs (acres)	*NLCS (acres)*	*ACEC (acres)*	*Wildlife Allocation (acres)*	*Managed LWC (acres)*	*Trail Management Corridors (acres/miles)*	
Geothermal resources	76,000	26,000	7,000	11,000	0	0	0	0
High potential mineral areas	652,000	37,000	221,000	112,000	0	18,000	54,000	5
High priority mineral & energy locations	76,000	6,000	0	11,000	0	4,000	0	0
Rare earth element areas	39,000	0	8,000	20,000	0	0	0	0
Locatable mineral areas	241,000	16,000	152,000	35,000	0	2,000	7,000	0.5
Leasable mineral areas	38,000	0	5,000	1,000	0	0	0	0
Mineral material areas	80,000	20,000	29,000	6,000	0	1,000	3,000	0.25

Note: There is overlap between some, but not all, BLM land designations, such as overlap of ACECs and National Scenic and Historic Trail (NSHT) management corridors or managed lands with wilderness characteristics. This overlap may result in the appearance of greater acres of overlap between mineral resources and conservation lands than actually exists.
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.

Geothermal: There would be potential access restrictions to approximately 44,000 acres, primarily within the Imperial Borrego Valley ecoregion subarea, of geothermal resources from existing conservation and proposed BLM designations. This is approximately 58% of the defined geothermal resources within BLM LUPA lands. The potential access restrictions would be significant relative to the geothermal resources within BLM LUPA lands. CMAs for high potential mineral areas could reduce impacts, but likely not to a significant degree.

High Potential Mineral Areas: There would be potential access restrictions to approximately 442,000 acres of high potential mineral areas from existing conservation and proposed Reserve Design Lands. This is approximately 68% of the defined high potential mineral areas within BLM LUPA lands. The potential access restrictions would be significant relative to the high potential mineral areas within BLM LUPA lands. CMAs for high potential mineral areas could reduce impacts, but likely not to a significant degree.

High Priority Mineral and Energy Locations: There would be approximately 21,000 acres of high priority mineral and energy locations within existing and proposed Reserve Design Lands; however, per the CMAs for minerals, these existing operations would be designated as an allowable use. Therefore, there would be no potential access restrictions to the high priority mineral and energy locations within BLM LUPA lands; however, the access to any expansion of these high priority mineral and energy locations could be severely restricted.

Rare Earth Element Areas: There would be potential access restrictions to approximately 28,000 acres of rare earth element areas from existing conservation and proposed Reserve Design Lands. This is approximately 72% of the defined rare earth element areas within the BLM LUPA lands. The potential access restrictions would be significant relative to the rare earth element areas within BLM LUPA lands. CMAs for existing operations could reduce impacts, but likely not to a significant degree.

Locatable Mineral Areas: There would be potential access restrictions to approximately 212,000 acres of locatable mineral areas from existing conservation and proposed Reserve Design Lands. This is approximately 88% of the defined locatable mineral areas within BLM LUPA lands. There are approximately 2,000 acres of ACECs closed to locatable mineral extraction, the remaining acres of ACECs would be open with stipulations and restrictions. The potential access restrictions would be significant relative to the locatable mineral areas within BLM LUPA lands. CMAs for locatable mineral areas may reduce these impacts somewhat, but it is still likely that the impacts to the availability of locatable minerals would be moderate to significant.

Leasable Mineral Areas: There would be potential access restrictions to approximately 6,000 acres of leasable mineral areas from existing conservation and proposed Reserve

Design Lands. This is approximately 16% of the defined leasable mineral areas within BLM LUPA lands. The potential access restrictions would be minor relative to the leasable mineral areas within BLM LUPA lands, CMAs would reduce impacts.

Mineral Material Areas: There would be potential access restrictions to approximately 59,000 acres of mineral material areas from existing conservation and proposed Reserve Design Lands. This is approximately 74% of the defined mineral material areas within BLM LUPA lands. There are approximately 100 acres of ACECs closed to mineral material extraction; the remaining acres of ACECs would be open with stipulations and restrictions. The potential access restrictions would be significant relative to the mineral material areas within BLM LUPA lands. CMAs for mineral material resources would reduce impacts.

CMAs and mitigation measures outlined for Plan-wide impacts to mineral resources from conservation and Reserve Design Lands would apply to BLM lands. Within some ACECs, mineral resource uses would be closed (no access would be allowed). Restrictions and stipulations within other Reserve Design Lands would allow limited access. CMAs allowing mineral resource use with restrictions and stipulations would reduce adverse impacts to mineral resources from Plan implementation under the Preferred Alternative. Existing mining claims and mineral resource related access would still be allowed, further reducing impacts.

IV.15.3.2.3 Impacts of Natural Community Conservation Plan: Preferred Alternative

The analysis of Covered Activities under the NCCP is equivalent to the Plan-wide analysis of the interagency alternatives. Reserve design features and other conservation actions under the NCCP alternatives represent more detailed categories of the reserve design under the interagency Plan-wide alternatives. These NCCP differences in reserve design features do not affect nonbiological resources analyzed in this document, and the analysis of reserve design and conservation and management actions under the NCCP is therefore equivalent to the Plan-wide analysis of the interagency alternatives, as described in Section IV.15.3.2.1.

IV.15.3.2.4 Impacts of General Conservation Plan

The impacts of the GCP for the Preferred Alternative would be similar to those defined in Section IV.15.3.2.1 for the Plan-wide analysis, but they would occur on nonfederal lands only. Potential impacts to mineral resources from DFAs under the Preferred Alternative on GCP (nonfederal lands only) are summarized below and presented in Table IV.15-10.

Table IV.15-10
Potential Acres of Mineral Resources Impacts on GCP Lands by Technology Type – Preferred Alternative

Mineral Resources	Mineral Resources Within GCP Lands (acres)	Potential Mineral Resource Impacts by Technology Type (acres)			
		Solar	*Wind*	*GT*	*Transmission*
Geothermal resources	225,000	11,000	100	3,000	3,000
High potential mineral areas	179,000	1,000	100	100	200
High priority mineral & energy locations	23,000	0	0	0	0
Rare earth element areas	4,000	0	0	0	0
Locatable mineral areas	34,000	100	0	0	100
Leasable mineral areas	12,000	0	0	0	0
Mineral material areas	8,000	100	0	0	100

Note: 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.

Potential impacts to mineral resources under the Preferred Alternative for the GCP are listed below and described in more detail in Section IV.15.2.

Geothermal: There would be potential access restrictions to approximately 16,000 acres of geothermal resources from development of solar, wind, and transmission facilities. There would be approximately 3,000 acres within the GCP available for geothermal resource development, reducing impacts to 6% of the defined geothermal resources within the GCP. The potential access restrictions would be minimal relative to the geothermal resources within the GCP.

High Potential Mineral Areas: There would be potential access restrictions to approximately 2,000 acres of high potential mineral areas from development of solar, wind, geothermal, and transmission facilities. This is approximately 1% of the defined high potential mineral areas within the GCP. The potential access restrictions would be minimal relative to the high potential mineral areas within the GCP.

High Priority Mineral and Energy Locations: There would be no potential access restrictions to high priority mineral and energy locations from the development of solar, wind, geothermal, or transmission facilities within the GCP. CMAs for minerals state that existing operations would be designated as an allowable use.

Rare Earth Element Areas: There would be no potential access restrictions to rare earth element areas from the development of solar, wind, geothermal, or transmission facilities within the GCP.

Locatable Mineral Areas: There would be potential access restrictions to approximately 200 acres of locatable mineral areas from development of solar, wind, and transmission facilities. This is approximately 0.4% of the defined locatable mineral areas within the GCP. The potential access restrictions would be minimal relative to the locatable mineral areas within the GCP.

Leasable Mineral Areas: There would be no potential access restrictions to leasable mineral areas from development of solar, wind, geothermal, or transmission facilities within the GCP.

Mineral Material Areas: There would be potential access restrictions to approximately 200 acres of mineral material areas from development of solar, wind, and transmission facilities. This is approximately 1% of the defined mineral material areas within the GCP. The potential access restrictions would be minimal relative to the mineral material areas within the GCP.

Under the Preferred Alternative, mineral resources found within Reserve Design Lands (existing conservation and Conservation Planning Areas) on GCP lands are summarized below and presented in Table IV.15-11.

Table IV.15-11
Estimated Acres of Mineral Resources Within Reserve Design Lands on GCP Lands – Preferred Alternative

Mineral Resources	Mineral Resources within GCP Lands (acres)	Existing Conservation Areas (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Geothermal resources	225,000	5,000	100	2.4
High potential mineral areas	179,000	12,000	11,000	13.2
High priority mineral & energy locations	23,000	0	2,000	9.2
Rare earth element areas	4,000	40	100	4.3
Locatable mineral areas	34,000	20	3,000	8.2
Leasable mineral areas	12,000	0	1,000	6.9
Mineral material areas	8,000	100	400	6.4

Note: 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.

Geothermal: There would be potential access restrictions to approximately 5,000 acres of geothermal resources from existing conservation and proposed Reserve Design Lands within the GCP. This is approximately 2.4% of the defined geothermal resources within the GCP. The potential access restrictions would be minimal relative to the geothermal resources within the Plan Area.

High Potential Mineral Areas: There would be potential access restrictions to approximately 23,000 acres of high potential mineral areas from existing conservation and proposed Reserve Design Lands within the GCP. This is approximately 13% of the defined high potential mineral areas within the GCP. The potential access restrictions would be minor relative to the high potential mineral areas within the GCP. CMAs for high potential mineral areas would effectively reduce impacts.

High Priority Mineral and Energy Locations: There would be potential access restrictions to approximately 2,000 acres of high priority mineral and energy locations from existing conservation and proposed Reserve Design Lands within the GCP. This is approximately 9% of the defined high priority mineral and energy locations within the GCP. The potential access restrictions would be minimal relative to the high priority mineral and energy locations within the GCP, even without stipulations to existing claims and allowable uses.

Rare Earth Element Areas: There would be approximately 140 acres of high priority mineral and energy locations within existing and proposed Reserve Design Lands; however, these existing operations would be designated as an allowable use. Therefore, there would be no potential access restrictions to the high priority mineral and energy locations within the GCP.

Locatable Mineral Areas: There would be potential access restrictions to approximately 3,000 acres of locatable mineral areas from existing conservation and proposed Reserve Design Lands within the GCP. This is approximately 7% of the defined locatable mineral areas within the GCP. The potential access restrictions would be minimal relative to the locatable mineral areas within the GCP.

Leasable Mineral Areas: There would be potential access restrictions to approximately 1,000 acres of leasable mineral areas from existing conservation and proposed Reserve Design Lands within the GCP. This is approximately 6% of the defined leasable mineral areas within the Plan Area. The potential access restrictions would be minimal relative to the leasable mineral areas within the GCP.

Mineral Material Areas: There would be potential access restrictions to approximately 500 acres of mineral material areas from existing conservation and proposed Reserve Design Lands within the GCP. This is approximately 5.5% of the defined mineral material areas within the GCP. The potential access restrictions would be minimal relative to the mineral material areas within the GCP.

IV.15.3.2.5 Impacts Outside the Plan Area

IV.15.3.2.5.1 Impacts of Transmission Outside the Plan Area

The impacts of transmission outside the Plan Area on mineral resources would be the same under all alternatives. These impacts are as described for the No Action Alternative in Section IV.15.3.1.5.

IV.15.3.2.5.2 Impacts of BLM LUPA Decisions Outside the Plan Area

Potential impacts to mineral resources from BLM LUPA decisions under the Preferred Alternative for the CDCA outside the Plan Area are summarized below and presented in Table IV.15-12.

Table IV.15-12
Estimated Acres of Mineral Resources in BLM LUPA Lands Outside the Plan Area – Preferred Alternative

Mineral Resources	Mineral Resources within BLM LUPA Lands Outside the Plan Area	Proposed NLCS (acres)*	Existing & Proposed ACECs (acres)*	Trail Management Corridors (acres/miles)	
Geothermal resources	23,000	19,000	22,000	0	0
High potential mineral areas	175,000	37,000	48,000	300	0
High priority mineral & energy locations	2,000	0	0	0	0
Rare earth element areas	19,000	2,000	5,000	0	0
Locatable mineral areas	7,000	1,000	5,000	0	0
Leasable mineral areas	0	0	0	0	0
Mineral material areas	6,000	800	5,000	200	0

Note: 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.

* Designations overlap

Geothermal: There would be potential access restrictions to the majority (100%) of geothermal resources from existing conservation and proposed Reserve Design Lands outside the Plan Area. The potential access restrictions would be significant relative to the geothermal resources outside the Plan Area. Stipulations and restrictions for mineral resource allowable uses included in CMAs for geothermal resources would reduce impacts; however, impacts would remain significant overall.

High Potential Mineral Areas: There would be potential access restrictions to approximately 85,000 acres of high potential mineral areas from existing conservation and proposed Reserve Design Lands outside the Plan Area. This is approximately 49% of the defined high potential mineral areas outside the Plan Area. The potential access restrictions would be moderate relative to the high potential mineral areas outside the Plan Area. CMAs for high potential mineral areas would reduce impacts.

High Priority Mineral and Energy Locations: There would be no potential access restrictions of high priority mineral and energy locations from existing conservation and proposed Reserve Design Lands outside the Plan Area.

Rare Earth Element Areas: There would be potential access restrictions to approximately 7,000 acres of rare earth element areas from existing conservation and proposed Reserve Design Lands outside the Plan Area. This is approximately 37% of the defined rare earth element areas outside the Plan Area. The potential access restrictions would be moderate relative to the rare earth element areas outside the Plan Area. CMAs for rare earth element areas would reduce impacts.

Locatable Mineral Areas: There would be potential access restrictions to approximately 6,000 acres of locatable mineral areas from existing conservation and proposed Reserve Design Lands outside the Plan Area. This is approximately 86% of the defined locatable mineral areas outside the Plan Area. The potential access restrictions would be significant relative to the locatable mineral areas outside the Plan Area. CMAs for locatable mineral areas would reduce impacts; however, impacts would remain significant overall.

Leasable Mineral Areas: There would be no potential access restrictions to leasable mineral areas from existing conservation and proposed Reserve Design Lands outside the Plan Area.

Mineral Material Areas: There would be potential access restrictions to approximately 6,000 acres of mineral material areas from existing conservation and proposed Reserve Design Lands outside the Plan Area. This is basically 100% of the defined mineral material areas outside the Plan Area. There are 80 acres of ACECs closed to mineral material extraction; remaining acres of ACECs would be open with stipulations and restrictions. The potential

access restrictions would be significant relative to the mineral material areas outside the Plan Area. CMAs for mineral material areas would reduce impacts.

IV.15.3.2.6 CEQA Significance Determination for the Preferred Alternative

MR-1: Plan components would reduce or improve access to and development of known and future mineral resources. The availability of lands for renewable energy and transmission development may result in restrictions of access to future mineral resource areas. Impacts from the potential access restrictions from renewable energy and transmission development would be minimal overall and would be reduced with implementation of Mitigation Measure MR-1a, which requires early coordination between developers and mineral leaseholders. Impacts would be further reduced with implementation of CMAs that require avoidance of impacts to mineral resource areas. Overall, impacts of the proposed development of renewable energy and transmission on mineral resources would be less than significant with implementation of CMAs.

Future Assessment Areas may result in impacts to mineral resources, particularly high potential mineral areas, high priority mineral areas, rare earth element areas (specifically Molycorp Mountain Pass rare earth mine), and leasable mineral areas.

Areas designated for reserve design, conservation, and protection would likely reduce access to future mineral resource areas. For high potential mineral areas, rare earth element areas, and locatable mineral areas, impacts from restricted access would be significant. Specifically, there would be approximately 793,000 acres of high potential mineral areas throughout the majority of ecoregion subareas where restricted access could also restrict future development of rare earth elements:

- The Cadiz Evaporate mine in the Cadiz Valley and Chocolate Mountains ecoregion subarea;
- The Molycorp Mountain Pass rare earth mine; and
- The rare earth mines in the Panamint Death Valley ecoregion subarea (Briggs Gold mine, Trona Borax mine, and Searles Dry Lake operation).

In these areas, there may be restrictions on future expansion. For locatable minerals, approximately 189,000 acres within the majority of ecoregion subareas may experience restricted access to future development. For these mineral resources (high potential mineral areas, rare earth element areas, and locatable minerals), impacts would be significant. CMAs would reduce impacts; however, impacts created by the reserve design and conservation components of the Preferred Alternative would remain significant and unmitigable because they would restrict access to large areas of mineral resources.

IV.15.3.2.7 Comparison of the Preferred Alternative With No Action Alternative

Chapter IV.27 presents a comparison of all action alternatives and the No Action Alternative across all disciplines. This section summarizes the comparison of the Preferred Alternative with the No Action Alternative.

IV.15.3.2.7.1 Preferred Alternative Compared with No Action Alternative for Plan-wide DRECP

A comparison between the Preferred Alternative and the No Action Alternative within DFAs for the Plan-wide DRECP is summarized in Table IV.15-13.

Table IV.15-13
Preferred Alternative (DFAs) Compared with No Action Alternative (Available Development Areas) for Plan-wide DRECP

Mineral Resource	No Action Alternative (acres)	Preferred Alternative (acres)	Comparison
Geothermal	8,700 300 geothermal	23,100 6,000 geothermal	The No Action Alternative would result in 14,100 fewer acres of renewable development within geothermal resource areas than the Preferred Alternative. The Preferred Alternative would have 5,700 more acres available for geothermal development.
High potential mineral areas	7,340	3,300	The No Action Alternative would result in 4,040 more acres of potential renewable development within high mineral areas than the Preferred Alternative.
High priority mineral & energy locations	440	0	Areas designated for renewable energy development would be an allowable use under both the No Action and Preferred Alternative. The No Action Alternative would have 440 more acres available within existing high priority mineral and energy locations.
Rare earth element areas	800	0	The No Action Alternative would result in 800 more acres of renewable development within rare earth element areas than the Preferred Alternative.
Locatable mineral areas	4,430	800	The No Action Alternative would result in 3,630 more acres of renewable development within locatable mineral areas than the Preferred Alternative.

Table IV.15-13
Preferred Alternative (DFAs) Compared with No Action Alternative (Available Development Areas) for Plan-wide DRECP

Mineral Resource	No Action Alternative (acres)	Preferred Alternative (acres)	Comparison
Leasable mineral areas	0	0	The No Action Alternative and Preferred Alternative would be the same.
Mineral material areas	1,570	1,400	The No Action Alternative would result in 170 more acres of renewable development within mineral material acres than the Preferred Alternative.

Note: 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.

A comparison between the Preferred Alternative and the No Action Alternative within existing and proposed conservation lands or Reserve Design Lands for the Plan-wide DRECP is summarized in Table IV.15-14.

Table IV.15-14
Preferred Alternative (Reserve Design) Compared with No Action Alternative (Existing Conservation) for Plan-wide DRECP

Mineral Resource	No Action Alternative (acres)	Preferred Alternative (acres)	Comparison
Geothermal	22,000	24,100	The No Action Alternative would result in 2,100 fewer acres of conservation lands within geothermal resource areas than the Preferred Alternative.
High potential mineral areas	784,000	793,000	The No Action Alternative would result in 9,000 fewer acres of conservation lands within high potential mineral areas than the Preferred Alternative.
High priority mineral & energy locations	100	12,100	The No Action Alternative would result in 12,000 fewer acres of conservation lands within high priority mineral and energy locations than the Preferred Alternative. Existing high priority mineral and energy locations would be an allowable use for both alternatives.

Table IV.15-14
Preferred Alternative (Reserve Design) Compared with No Action Alternative (Existing Conservation) for Plan-wide DRECP

Mineral Resource	No Action Alternative (acres)	Preferred Alternative (acres)	Comparison
Rare earth element areas	33,000	44,200	The No Action Alternative would result in 11,200 fewer acres of conservation lands within rare earth element areas than the Preferred Alternative.
Locatable mineral areas *ACEC acres closed to extraction*	106,000	189,000 *2,000*	The No Action Alternative would result in 83,000 fewer acres of conservation lands within locatable mineral areas than the Preferred Alternative.
Leasable mineral areas	0	7,000	The No Action Alternative would result in 7,000 fewer acres of conservation lands within leasable mineral areas than the Preferred Alternative.
Mineral material areas *ACEC acres closed to extraction*	23,700	33,100 *100*	The No Action Alternative would result in 9,400 fewer acres of conservation lands within mineral material areas than the Preferred Alternative.

Note: 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.

IV.15.3.2.7.2 Preferred Alternative Compared with No Action Alternative for the BLM Land Use Plan Amendment

A comparison between the Preferred Alternative and the No Action Alternative within DFAs for BLM-administered lands is summarized in Table IV.15-15.

Table IV.15-15
Preferred Alternative (DFAs) Compared with No Action Alternative (Available Development Areas) for BLM Lands

Mineral Resource	No Action Alternative (acres)	Preferred Alternative (acres)	Comparison
Geothermal	800 0 geothermal	4,400 2,000 geothermal	The No Action Alternative would result in 3,600 fewer acres of renewable development within geothermal resource areas than the Preferred Alternative. The Preferred would have 2,000 more acres available for geothermal development.
High potential mineral areas	5,830	3,300	The No Action Alternative would result in 2,530 more acres of renewable development within high potential mineral areas than the Preferred Alternative.
High priority mineral & energy locations	320	0	While areas designated for renewable energy development overlap, the existing high priority mineral and energy locations would be an allowable use under the No Action Alternative.
Rare earth element areas	700	0	The No Action Alternative would result in 700 more acres of renewable development within rare earth element areas than the Preferred Alternative.
Locatable mineral areas	4,320	700	The No Action Alternative would result in 3,620 more acres of renewable development within locatable mineral areas than the Preferred Alternative.
Leasable mineral areas	0	0	The No Action Alternative and Preferred Alternative would be the same.
Mineral material areas	1,460	1,600	The No Action Alternative would result in 140 fewer acres of renewable development within mineral material areas than the Preferred Alternative.

Note: 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.

A comparison between the Preferred Alternative and the No Action Alternative within existing ACECs and SRMAs, and reserve design (existing and proposed ACECs and SRMAs) for BLM-administered lands is summarized in Table IV.15-16.

Table IV.15-16
Preferred Alternative (BLM Land Designations) Compared with No Action Alternative (Existing ACECs and SRMAs) for BLM Lands

Mineral Resource	No Action Alternative (acres)	Preferred Alternative (acres)	Comparison
Geothermal	43,000	44,000	The No Action Alternative would have 1,000 fewer acres of BLM designations within geothermal areas than the Preferred Alternative.
High potential mineral areas	254,000	442,000	The No Action Alternative would have 188,000 fewer acres of BLM designations within high potential mineral areas than the Preferred Alternative.
High priority mineral & energy locations	0	21,000	While conservation lands overlap them, the existing high priority mineral and energy locations would be an allowable use under both the No Action and Preferred Alternative.
Rare earth element areas	16,000	28,000	The No Action Alternative would have 12,000 fewer acres of BLM designations within rare earth element areas than the Preferred Alternative.
Locatable mineral areas *ACEC acres closed to extraction*	109,000	212,000 *2,000*	The No Action Alternative would have 103,000 fewer acres of BLM designations within locatable mineral areas than the Preferred Alternative.
Leasable mineral areas	0	6,000	The No Action Alternative would have 6,000 fewer acres of BLM designations within leasable mineral areas than the Preferred Alternative.
Mineral material areas *ACEC acres closed to extraction*	47,000	59,000 *100*	The No Action Alternative would have 12,000 fewer acres of BLM designations within mineral material areas than the Preferred Alternative.

Note: 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.

The Preferred Alternative includes proposed NLCS designations as well as designations of NSHT management corridors and lands with wilderness characteristics, increasing the number of acres under conservation and protection as compared with the No Action Alternative.

IV.15.3.2.7.3 Preferred Alternative Compared With No Action Alternative for NCCP

The impacts of the NCCP for the Preferred Alternative are the same as those defined in Section IV.15.3.2.1 for the Plan-wide analysis. As a result, the comparison of the Preferred Alternative with the No Action Alternative for the NCCP is the same as described above for the Plan-wide DRECP.

IV.15.3.2.7.4 Preferred Alternative Compared with No Action Alternative for the GCP

There are approximately 485,000 acres of mineral resources (all types) within nonfederal lands for the GCP under the Preferred Alternative (see Table IV.15-10). Under the No Action Alternative, proposed renewable energy and transmission projects on these nonfederal lands would still be considered by the appropriate lead agency on an individual basis. Under the Preferred Alternative, DFAs (approximately 19,000 acres) and Conservation Planning Areas (approximately 35,000 acres) would be designated. The comparison between the No Action Alternative and Preferred Alternative would be similar to the Plan-wide analysis above.

IV.15.3.3 Alternative 1

IV.15.3.3.1 Plan-wide Impacts of Implementing the DRECP: Alternative 1

IV.15.3.3.1.1 Plan-wide Impacts and Mitigation Measures from Renewable Energy and Transmission Development

Impact Assessment

Impact MR-1: Plan components would reduce or improve access to and development of known and future mineral resources.

Potential impacts to mineral resources resulting from renewable energy and transmission facility development within DFAs under Alternative 1 are summarized in Table IV.15-17 and presented in Table R2.15-13 (Appendix R2).

Table IV.15-17
Potential Acres of Mineral Resource Impacts by Technology Type – Alternative 1

Mineral Resource	Mineral Resources (acres)	Potential Mineral Resource Impacts by Technology Type (acres)			
		Solar	*Wind*	*GT*	*Transmission*
Geothermal resources	347,000	30,000	0	10,000	5,000
High potential mineral areas	1,519,000	3,000	30	100	1,000
High priority mineral & energy locations	101,000	0	0	0	50

Table IV.15-17
Potential Acres of Mineral Resource Impacts by Technology Type – Alternative 1

Mineral Resource	Mineral Resources (acres)	Potential Mineral Resource Impacts by Technology Type (acres)			
		Solar	*Wind*	*GT*	*Transmission*
Rare earth element areas	59,000	0	0	0	0
Locatable mineral areas	348,000	500	0	0	100
Leasable mineral areas	84,000	0	0	0	0
Mineral material areas	101,000	200	0	0	400

Note: 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.

Potential impacts to mineral resources under Alternative 1 are listed below and described in more detail in Section IV.15.2.

Geothermal: There would be potential access restrictions to approximately 45,000 acres, primarily within the Imperial Borrego Valley ecoregion subarea, of geothermal resources from development of solar and transmission facilities. There would be approximately 10,000 acres within the Plan Area available for geothermal resource development, reducing impacts to about 10% of the defined geothermal resources within the Plan Area. The potential access restrictions would be minimal relative to the geothermal resources within the Plan Area, even without mitigation requiring avoidance of mineral resources.

High Potential Mineral Areas: There would be potential access restrictions to approximately 4,000 acres of high potential mineral areas from development of solar, wind, geothermal, and transmission facilities. This is approximately 0.2% of the defined high potential mineral areas within the Plan Area. The potential access restrictions would be minimal relative to the high potential mineral areas within the Plan Area, even without mitigation requiring avoidance of these mineral resources.

High Priority Mineral and Energy Locations: There would be approximately 50 acres of high priority mineral and energy locations within DFAs; however, these existing operations would be designated as an allowable use. Therefore, there would be no potential access restrictions to the high priority mineral and energy locations within the Plan Area.

Rare Earth Element Areas: There would be no potential access restrictions to rare earth element areas from the development of solar, wind, geothermal, or transmission facilities.

Locatable Mineral Areas: There would be potential access restrictions to approximately 600 acres, primarily within the West Mojave and Eastern Slopes ecoregion subarea, of locatable mineral areas from development of solar, wind, and transmission facilities. This is approximately 0.3% of the defined locatable mineral areas within the Plan Area. The potential access restrictions would be minimal relative to the locatable mineral areas within the Plan Area.

Leasable Mineral Areas: There would be no potential access restrictions to leasable mineral areas from development of solar, wind, geothermal, or transmission facilities.

Mineral Material Areas: There would be potential access restrictions to approximately 600 acres of mineral material areas from development of solar, geothermal, and transmission facilities. This is approximately 0.6% of the defined mineral material areas within the Plan Area. The potential access restrictions would be minimal relative to the mineral material areas within the Plan Area.

Impacts in Study Area Lands

Future Assessment Areas. There are no FAAs under Alternative 1.

Special Analysis Areas. Designating the SAAs as conservation may impact mineral resources. Impacts would be the same as those explained for the Plan-wide reserve design in the section "Impacts of the Reserve Design," below.

DRECP Variance Lands. DRECP Variance Lands represent the BLM Solar PEIS Variance Lands for the DRECP and EIS/EIR, based on BLM screening criteria. Covered Activities could be permitted for NCCP purposes only through an NCCP plan amendment. However, development of renewable energy on variance lands would not require a BLM LUPA so the environmental review process would be somewhat simpler than if the location were left undesignated. Development designation of the DRECP Variance Lands could result in access restrictions to mineral resources as follows:

- Geothermal Resources: Approximately 2,000 acres within the Cadiz Valley and Chocolate Mountains ecoregion subarea.
- High Potential Mineral Areas: Approximately 4,000 acres, primarily within the Imperial Borrego Valley ecoregion subarea.
- High Priority Mineral and Energy Locations: Approximately 300 acres, within the Providence and Bullion Mountains ecoregion subarea.
- Leasable Minerals: Approximately 500 acres within the Providence and Bullion Mountains ecoregion subarea.

- Mineral Materials: Approximately 3,000 acres, primarily within the Imperial Borrego Valley ecoregion subarea.

Impact Reduction Strategies and Mitigation

The implementation of the Plan would result in conservation of some desert lands as well as the development of renewable energy generation and transmission facilities on other lands. There are several ways in which the impacts of the renewable energy development covered by the Plan would be lessened. First, the Plan incorporates CMAs for each alternative, including specific biological reserve design components and LUPA components. Also, the implementation of existing laws, orders, regulations and standards would reduce the impacts of project development. If significant impacts would still result after implementation of CMAs and compliance with applicable laws and regulations, then specific mitigation measures are recommended in this section.

Conservation and Management Actions

The conservation strategy for Alternative 1 (presented in Volume II, Section II.3.1.1) defines specific actions that would reduce the impacts of this alternative. The conservation strategy includes definitions of the reserve design and specific CMAs for the Preferred Alternative. While the CMAs were developed for BLM lands only, this analysis assumes that all CMAs would also apply to nonfederal lands.

<u>Minerals CMAs for BLM Land for the Entire Plan Area</u>

For identified minerals lands and existing mining and energy development (locatable, salable, solid leasable and geothermal minerals) with currently approved plans of operations, notices, mine and reclamation plans or plans of development (43 CFR 3200; 350; 3600; and 3802/09), mineral resources are identified and described as under the Preferred Alternative (Section IV.15.3.2.1.1).

CMAs under Alternative 1 for NLCS lands would be the same as the Preferred Alternative for mineral resources, except for the following:

- **Leasable Minerals:**
  - National Conservation Lands would be available for geothermal leasing with a No Surface Occupancy stipulation.
  - National Conservation Lands would be unsuitable for all other leasing.

CMAs under Alternative 1 for NSHTs would be the same as for the Preferred Alternative for mineral resources, except for the following:

- **Saleable Minerals:** NSHT Management Corridors would be unavailable for saleable mineral development.

Laws and Regulations

Similar to the No Action Alternative, existing laws and regulations will reduce certain impacts of Plan implementation. Relevant regulations are presented in the Regulatory Setting in Volume III. The requirements of relevant laws and regulations are summarized above for the No Action Alternative in Section IV.15.3.1.1.1.

Mitigation Measures

After implementation of the CMAs and existing laws and regulations, mitigation measures are recommended to further reduce adverse impacts.

MR-1a **Coordinate to Ensure Access to Mineral Resources.** Where valid mining claims or leases exist, initiate early coordination with claim or lease holders to avoid development measures that would restrict their access to mineral resource facilities.

IV.15.3.3.1.2 Impacts from Reserve Design

Potential impacts to mineral resources resulting from Reserve Design Lands under Alternative 1 are summarized in Table IV.15-18 and presented in Table R2.15-14 (Appendix R2).

Table IV.15-18
Estimated Acres of Mineral Resources within Reserve Design Lands – Alternative 1

Subarea	Mineral Resources in Subarea (acres)	Existing Conservation Areas (acres)	BLM LUPA Conservation Designations (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Geothermal resources	347,000	20,000	8,000	300	8.0
High potential mineral areas	1,519,000	653,000	388,000	13,000	69.2
High priority mineral & energy locations	101,000	100	11,000	2,000	13.6
Rare earth element areas	59,000	24,000	20,000	200	76.0
Locatable mineral areas	347,000	11,000	222,000	3,000	68.0

Table IV.15-18
Estimated Acres of Mineral Resources within Reserve Design Lands – Alternative 1

Subarea	Mineral Resources in Subarea (acres)	Existing Conservation Areas (acres)	BLM LUPA Conservation Designations (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Leasable mineral areas	84,000	0	48,000	700	57.2
Mineral material areas	101,000	700	37,000	600	37.4

Note: 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.

Geothermal: There would be potential access restrictions to approximately 28,000 acres, primarily within the Imperial Borrego Valley ecoregion subarea, of geothermal resources from existing conservation and proposed Reserve Design Lands. This is approximately 8% of the defined geothermal resources within the Plan Area. The potential restriction of access would be minor relative to the geothermal resources within the Plan Area, even without stipulations to existing claims and allowable uses.

High Potential Mineral Areas: There would be potential access restrictions to approximately 1,054,000 acres of high potential mineral areas from existing conservation and proposed Reserve Design Lands throughout all ecoregion subareas, except in the Owens River Valley. This is approximately 69% of the defined high potential mineral areas within the Plan Area. The potential restriction of access would be significant relative to the high potential mineral areas within the Plan Area. CMAs for high potential mineral areas would reduce impacts; impacts would, however, remain significant overall.

High Priority Mineral and Energy Locations: There would be approximately 13,000 acres, primarily within the Panamint Death Valley ecoregion subarea, of high priority mineral and energy locations within existing conservation and proposed Reserve Design Lands; however, these existing operations would be designated as an allowable use. Therefore, there would be no potential restriction of access to the high priority mineral and energy locations within the Plan Area.

Rare Earth Element Areas: There would be potential access restrictions to approximately 44,000 acres, primarily within the Kingston and Funeral Mountains and Pinto Lucerne Valley and Eastern Slopes ecoregion subareas, of rare earth element areas from existing conservation and proposed Reserve Design Lands. This is approximately 76% of the defined rare earth element areas within the Plan Area. Potential rare earth mines affected

would be the Molycorp Mountain Pass rare earth mine. The potential restriction of access would be significant relative to the rare earth element areas within the Plan Area. CMAs for existing operations would reduce impacts; however, impacts would remain significant overall.

Locatable Mineral Areas: There would be potential restriction of access to approximately 236,000 acres, throughout all ecoregion subareas except Owens River Valley, of locatable mineral areas from existing conservation and proposed Reserve Design Lands. This is approximately 68% of the defined locatable mineral areas within the Plan Area. There would be 8,000 acres of ACECs closed to locatable mineral extraction; the remaining acres of ACECs would be open with stipulations and restrictions. The potential restriction of access would be significant relative to the locatable mineral areas within the Plan Area. CMAs for locatable mineral areas would reduce impacts; however, impacts would remain significant overall.

Leasable Mineral Areas: There would be potential restriction of access to approximately 49,000 acres, primarily within the Cadiz Valley and Chocolate Mountains ecoregion subarea, of leasable mineral areas from existing conservation and proposed Reserve Design Lands. This is approximately 57% of the defined leasable mineral areas within the Plan Area. The potential restriction of access would be significant relative to the leasable mineral areas within the Plan Area. CMAs for leasable mineral areas would further reduce impacts.

Mineral Material Areas: There would be potential restriction of access to approximately 38,000 acres of mineral material areas from existing conservation and proposed Reserve Design Lands. This is approximately 37% of the defined mineral material areas within the Plan Area. There would be 1,000 acres of ACECs closed to mineral material extraction; the remaining acres of ACECs would be open with stipulations and restrictions. The potential restriction of access would be moderate relative to the mineral material areas within the Plan Area. CMAs would reduce impacts.

Summary: Establishing new conservation areas would create access restrictions to currently undeveloped mineral resource areas and prevent future exploration within acquired lands in Conservation Planning Areas. Access restrictions would reduce availability of known mineral resources valuable to the region, the state, and to locally important mineral resource recovery sites. A large percentage of mineral resources are located within Reserve Design Lands under Alternative 1. Management actions for Alternative 1 would make NLCS lands available for locatable and saleable minerals and leasable with No Surface Occupancy. Availability and access to mineral resources within NLCS lands, as described above, would reduce impacts.

Within conservation lands on BLM-administered lands, exploration and access could continue following the area-specific management plans, including disturbance caps. Also,

unpatented mining claims would continue to be subject to valid existing rights. Impacts to mineral resources from restrictions to access due to acquisition of Conservation Planning Area lands would remain significant for high potential mineral areas, rare earth element areas, and locatable and leasable mineral areas. CMAs would reduce impacts; however, impacts would remain significant and unmitigable for these mineral resources under Alternative 1.

IV.15.3.3.2 Impacts of DRECP Land Use Plan Amendment on BLM Land: Alternative 1

This section addresses two components of effects of the BLM LUPA: the streamlined development of renewable energy and transmission on BLM land under the LUPA, and the impacts of the amended land use plans themselves.

IV.15.3.3.2.1 Impacts from Renewable Energy and Transmission Development on BLM Land

Potential impacts to mineral resources from renewable energy and transmission facility development within DFAs under Alternative 1 for BLM lands are summarized below and presented in Table IV.15-19.

Table IV.15-19
Estimated Acres of Mineral Resources within DFAs by Technology Type on BLM LUPA Lands – Alternative 1

Mineral Resources	Mineral Resources in BLM LUPA (acres)	Potential Mineral Resource Impacts by Technology Type (acres)			
		Solar	*Wind*	*GT*	*Transmission*
Geothermal resources	92,000	5,000	0	3,000	900
High potential mineral areas	835,000	1,000	0	0	800
High priority mineral & energy locations	77,000	0	0	0	20
Rare earth element areas	40,000	0	0	0	0
Locatable mineral areas	302,000	200	0	0	100
Leasable mineral areas	71,000	0	0	0	0
Mineral material areas	92,000	200	0	40	400

Note: 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.

In areas where DFAs overlap with mineral resource areas, potential renewable energy and transmission development within DFAs would have the following impacts:

Geothermal: There would be potential access restrictions to approximately 9,000 acres, primarily within the Imperial Borrego Valley ecoregion subarea, of geothermal resources from development of solar and transmission facilities on BLM LUPA lands. There would be approximately 3,000 acres within BLM LUPA lands available for geothermal resource development. The potential access restrictions would be minimal relative to the geothermal resources within BLM LUPA lands.

High Potential Mineral Areas: There would be potential access restrictions to approximately 2,000 acres of high potential mineral areas from development of solar, wind, geothermal, and transmission facilities within BLM LUPA lands. This is approximately 0.2% of the defined high potential mineral areas within BLM LUPA lands. The potential access restrictions would be very small relative to the high potential mineral areas within BLM LUPA lands.

High Priority Mineral and Energy Locations: There would be approximately 20 acres of high priority mineral and energy locations within DFAs, all within potential transmission corridors; however, these existing operations would be designated as an allowable use. Therefore, there would be no potential access restrictions to the high priority mineral and energy locations within BLM LUPA lands.

Rare Earth Element Areas: There would be no potential access restrictions to rare earth element areas from development of solar, wind, geothermal, or transmission facilities within BLM LUPA lands.

Locatable Mineral Areas: There would be potential access restrictions to approximately 300 acres of locatable mineral areas from development of solar, wind, and transmission facilities within BLM LUPA lands. This is approximately 0.2% of the defined locatable mineral areas within BLM LUPA lands. The potential access restrictions would be minimal relative to the locatable mineral areas within BLM LUPA lands.

Leasable Mineral Areas: There would be no potential access restrictions to leasable mineral areas from development of solar, wind, geothermal, or transmission facilities within BLM LUPA lands.

Mineral Material Areas: There would be potential access restrictions to approximately 600 acres of mineral material areas from development of solar, geothermal, and transmission facilities within BLM LUPA lands. This is approximately 0.4% of the defined mineral material areas within BLM LUPA lands. The potential access restrictions would be very small relative to the mineral material areas within BLM LUPA lands.

Summary: Impacts to mineral resources on BLM-administered lands under existing land use plans would be the same as discussed above under Section IV.15.3.2.1.1. Mitigation measures also outlined in Section IV.15.3.2.1.1 would be implemented for any adverse impacts to mineral resources from Plan implementation under Alternative 1.

IV.15.3.3.2.2 Impacts of Changes to BLM Land Designations

Potential impacts to mineral resources resulting from Reserve Design Lands under Alternative 1 on BLM lands are summarized below and presented in Table IV.15-20.

Table IV.15-20
Estimated Acres of Mineral Resources in BLM LUPA Land Designation – Alternative 1

Mineral Resources	Mineral Resources in BLM LUPA Lands (acres)	Mineral Resources in BLM Land Designations						
		SRMAs (acres)	*NLCS (acres)*	*ACEC (acres)*	*Wildlife Allocation (acres)*	*Managed LWCs (acres)*	*Trail Management Corridors (acres/miles)*	
Geothermal resources	92,000	24,000	20	22,000	0	0	0	0
High potential mineral areas	835,000	41,000	98,000	233,000	112,000	0	3,000	5.9
High priority mineral & energy locations	77,000	8,000	80	11,000	1,000	0	0	0
Rare earth element areas	40,000	20	1,000	26,000	1,000	0	0	0
Locatable mineral areas	302,000	17,000	102,000	92,000	38,000	0	0	0
Leasable mineral areas	71,000	700	0	0	48,000	0	0	0
Mineral material areas	92,000	20,000	14,000	25,000	1,000	0	60	0

Note: There is overlap between some, but not all, BLM land designations, such as overlap of ACECs and National Scenic and Historic Trail (NSHT) management corridors or lands with wilderness characteristics. This overlap may result in the appearance of greater acres of overlap between mineral resources and conservation lands than actually exists.
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.

Geothermal: There would be potential access restrictions to approximately 46,000 acres of geothermal resources from existing conservation and proposed BLM designations, pri-

marily within the Imperial Borrego Valley ecoregion subarea. This is approximately 50% of the defined geothermal resources within BLM LUPA lands. The potential access restrictions would be moderate to significant relative to the geothermal resources within the BLM LUPA lands. CMAs for geothermal mineral areas could reduce impacts, but likely not to a significant degree.

High Potential Mineral Areas: There would be potential access restrictions to approximately 487,000 acres of high potential mineral areas from existing conservation and proposed Reserve Design Lands throughout most of the ecoregion subareas. This is approximately 58% of the defined high potential mineral areas within BLM LUPA lands. The potential access restrictions would be significant relative to the high potential mineral areas within BLM LUPA lands. CMAs for high potential mineral areas could reduce impacts, but likely not to a significant degree.

High Priority Mineral and Energy Locations: There would be approximately 20,000 acres of high priority mineral and energy locations within existing conservation and proposed Reserve Design Lands; however, per the CMAs for minerals, these existing operations would be designated as an allowable use. Therefore, there would be no potential access restrictions to the high priority mineral and energy locations within BLM LUPA lands; however, the access to any expansion of these high priority mineral and energy could be severely restricted and result in significant impacts, primarily within the Panamint Death Valley ecoregion subarea.

Rare Earth Element Areas: There would be potential access restrictions to approximately 28,000 acres of rare earth element areas from existing conservation and proposed Reserve Design Lands, mostly within the Kingston and Funeral Mountains and Pinto Lucerne Valley and Eastern Slopes ecoregion subareas. This is approximately 71% of the defined rare earth element areas within the BLM LUPA lands. The potential access restrictions would be significant relative to the rare earth element areas within BLM LUPA lands. CMAs for existing operations could reduce impacts, but likely not to a significant degree.

Locatable Mineral Areas: There would be potential access restrictions to approximately 249,000 acres of locatable mineral areas from existing conservation and proposed Reserve Design Lands throughout most of the ecoregion subareas. This is approximately 82% of the defined locatable mineral areas within BLM LUPA lands. There would be 8,000 acres of ACECs closed to locatable mineral extraction; the remaining acres of ACECs would be open with stipulations and restrictions. The potential access restrictions would be significant relative to the locatable mineral areas within BLM LUPA lands. CMAs for locatable mineral areas may reduce these impacts somewhat, but it is still likely that the impacts to the availability of locatable minerals would be moderate to significant.

Leasable Mineral Areas: There would be potential access restrictions to approximately 49,000 acres of leasable mineral areas from existing conservation and proposed Reserve Design Lands, primarily within the Cadiz Valley and Chocolate Mountains and Providence and Bullion Mountains ecoregion subareas. This is approximately 69% of the defined leasable mineral areas within BLM LUPA lands. The potential access restrictions would be significant relative to the leasable mineral areas within BLM LUPA lands. CMAs for leasable mineral areas would reduce impacts, but likely not to a significant degree.

Mineral Material Areas: There would be potential access restrictions to approximately 60,000 acres of mineral material areas from existing conservation and proposed Reserve Design Lands throughout most of the ecoregion subareas. This is approximately 65% of the defined mineral material areas within BLM LUPA lands. There would be approximately 1,000 acres of ACECs closed to mineral material extraction; the remaining acres of ACECs would be open with stipulations and restrictions. The potential access restrictions would be significant relative to the mineral material areas within BLM LUPA lands. CMAs for mineral material resources would reduce impacts.

Summary: CMAs and mitigation measures outlined for Plan-wide impacts to mineral resources from conservation and Reserve Design Lands would apply to BLM lands. Within some ACECs, mineral resource uses would be closed (no access would be allowed). Restrictions and stipulations within other Reserve Design Lands would allow limited access. CMAs allowing mineral resource use with restrictions and stipulations would reduce adverse impacts to mineral resources from Plan implementation under Alternative 1. Existing mining claims and mineral resource related access would continue to be allowed, further reducing impacts.

IV.15.3.3.3 Impacts of Natural Community Conservation Plan: Alternative 1

The analysis of Covered Activities under the NCCP is equivalent to the Plan-wide analysis of the interagency alternatives. Reserve design features and other conservation actions under the NCCP alternatives represent more detailed categories of the reserve design under the interagency Plan-wide alternatives. These NCCP differences in reserve design features do not affect nonbiological resources analyzed in this document, and the analysis of reserve design and conservation and management actions under the NCCP is therefore equivalent to the Plan-wide analysis of the interagency alternatives, as described in Section IV.15.3.3.1.

IV.15.3.3.4 Impacts of General Conservation Plan

The impacts of the GCP for Alternative 1 would be similar to those defined in Section IV.15.3.2.1 for the Plan-wide analysis, but they would occur on nonfederal lands only.

Potential impacts to grazing allotments resulting from DFAs under Alternative 1 on GCP (nonfederal lands only) are summarized below and presented in Table IV.15-21.

Table IV.15-21
Potential Acres of Mineral Resources Impacts on GCP Lands by Technology Type –Alternative 1

Mineral Resources	Mineral Resources within GCP Lands (acres)	Potential Mineral Resources Impacts by Technology Type (acres)			
		Solar	*Wind*	*GT*	*Transmission*
Geothermal resources	225,000	24,000	0	6,000	3,000
High potential mineral areas	191,000	2,000	20	100	300
High priority mineral & energy locations	24,000	0	0	0	30
Rare earth element areas	4,000	0	0	0	0
Locatable mineral areas	41,000	200	0	0	40
Leasable mineral areas	13,000	0	0	0	0
Mineral material areas	9,000	30	0	0	40

Note: 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.

Potential impacts to mineral resources under the Preferred Alternative for the GCP are listed below and described in more detail in Section IV.15.2.

Geothermal: There would be potential access restrictions to approximately 33,000 acres, primarily within the Imperial Borrego Valley ecoregion subarea, of geothermal resources from development of solar, wind, and transmission facilities. There would be approximately 6,000 acres within the GCP available for geothermal resource development, reducing impacts to about 8% of the defined geothermal resources within the GCP. The potential access restrictions would be minimal relative to the geothermal resources within the GCP, even without mitigation requiring avoidance of mineral resources.

High Potential Mineral Areas: There would be potential access restrictions to approximately 2,000 acres, primarily within the West Mojave and Eastern Slopes ecoregion subarea, of high potential mineral areas from development of solar, wind, geothermal, and transmission facilities. This is approximately 1% of the defined high potential mineral areas within the GCP. The potential access restrictions would be minimal relative to the

high potential mineral areas within the GCP, even without mitigation requiring avoidance of these mineral resources.

High Priority Mineral and Energy Locations: There would be approximately 30 acres of high priority mineral and energy locations within DFAs (potential transmission corridors); however, in accordance with the CMAs that protect minerals, these existing operations would be designated as an allowable use. Therefore, there would be no potential access restrictions to the high priority mineral and energy locations within the GCP.

Rare Earth Element Areas: There would be no potential access restrictions to rare earth element areas from development of solar, wind, geothermal, or transmission facilities within the GCP.

Locatable Mineral Areas: There would be potential access restrictions to approximately 240 acres of locatable mineral areas from development of solar, wind, and transmission facilities. This is approximately 0.5% of the defined locatable mineral areas within the GCP. The potential access restrictions would be minimal relative to the locatable mineral areas within the GCP, even without mitigation requiring avoidance of these mineral resources.

Leasable Mineral Areas: There would be no potential access restrictions to leasable mineral areas from development of solar, wind, geothermal, or transmission facilities within the GCP.

Mineral Material Areas: There would be potential access restrictions to approximately 100 acres of mineral material areas from development of solar, wind, and transmission facilities. This is approximately 1% of the defined mineral material areas within the GCP. The potential access restrictions would be minimal relative to the mineral material areas within the GCP, even without mitigation requiring avoidance of these mineral resources.

Under Alternative 1, mineral resources found within Reserve Design Lands (existing conservation and Conservation Planning Areas) on GCP lands are summarized below and presented in Table IV.15-22.

Table IV.15-22
Estimated Acres of Mineral Resources Within Reserve Design Lands on GCP Lands – Alternative 1

Mineral Resources	Mineral Resources within GCP Lands (acres)	Existing Conservation Areas (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Geothermal resources	225,000	5,000	200	2.4
High potential mineral areas	191,000	15,000	13,000	14.7
High priority mineral & energy locations	24,000	0	2,000	9.6
Rare earth element areas	4,000	40	100	4.3
Locatable mineral areas	41,000	20	3,000	7.5
Leasable mineral areas	13,000	0	700	5.1
Mineral material areas	9,000	100	600	7.0

Note: 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.

Geothermal: There would be potential access restrictions to approximately 5,000 acres, all within the Imperial Borrego Valley ecoregion subarea, of geothermal resources from existing conservation and proposed Reserve Design Lands within the GCP. This is approximately 2% of the defined geothermal resources within the GCP. The potential access restrictions would be minimal relative to the geothermal resources within the Plan Area.

High Potential Mineral Areas: There would be potential access restrictions to approximately 28,000 acres of high potential mineral areas from existing conservation and proposed Reserve Design Lands within the GCP. This is approximately 14% of the defined high potential mineral areas within the GCP. The potential access restrictions would be minor relative to the high potential mineral areas within the GCP. CMAs for high potential mineral areas would effectively reduce impacts.

High Priority Mineral and Energy Locations: There would be approximately 2,000 acres, mostly within the Imperial Borrego Valley ecoregion subarea, of high priority mineral and energy locations within existing conservation and proposed Reserve Design Lands; however, per the CMAs for minerals, these existing operations would be designated as an allowable use. Therefore, there would be no potential access restrictions to the high priority mineral and energy locations within the GCP.

Rare Earth Element Areas: There would be potential access restrictions to approximately 140 acres, primarily within the Kingston and Funeral Mountains ecoregion subarea, of rare earth element areas from existing conservation and proposed Reserve Design Lands within the GCP. This is approximately 4% of the defined rare earth element areas within the GCP. The potential access restrictions would be minimal relative to the rare earth element areas within the GCP.

Locatable Mineral Areas: There would be potential access restrictions to approximately 3,000 acres of locatable mineral areas from existing conservation and proposed Reserve Design Lands within the GCP. This is approximately 7% of the defined locatable mineral areas within the GCP. The potential access restrictions would be minimal relative to the locatable mineral areas within the GCP.

Leasable Mineral Areas: There would be potential access restrictions to approximately 700 acres of leasable mineral areas from existing conservation and proposed Reserve Design Lands within the GCP. This is approximately 5% of the defined leasable mineral areas within the Plan Area. The potential access restrictions would be minimal relative to the leasable mineral areas within the GCP.

Mineral Material Areas: There would be potential access restrictions to approximately 1,000 acres of mineral material areas from existing conservation and proposed Reserve Design Lands within the GCP. This is approximately 7% of the defined mineral material areas within the GCP. The potential access restrictions would be minimal relative to the mineral material areas within the GCP.

IV.15.3.3.5 Impacts Outside the Plan Area

IV.15.3.3.5.1 Impacts of Transmission Outside the Plan Area

The impacts of transmission outside the Plan Area on mineral resources would be the same under all alternatives. These impacts are as described for the No Action Alternative in Section IV.15.3.1.5 (Impacts of Transmission Outside the Plan Area).

IV.15.3.3.5.2 Impacts of BLM LUPA Decisions Outside the Plan Area

Potential impacts to mineral resources resulting from BLM LUPA decisions under the Preferred Alternative for the CDCA outside the Plan Area are summarized below and presented in Table IV.15-23.

Table IV.15-23
Estimated Acres of Mineral Resources in BLM LUPA Lands Outside the Plan Area – Alternative 1

Mineral Resources	Mineral Resources within BLM LUPA Lands Outside the Plan Area	Proposed NLCS (acres)*	Existing & Proposed ACECs (acres)*	Trail Management Corridors (acres/miles)	
Geothermal resources	23,000	14,000	22,000	0	0
High potential mineral areas	175,000	23,000	28,000	0	0
High priority mineral & energy locations	2,000	0	0	0	0
Rare earth element areas	19,000	2,000	4,000	0	0
Locatable mineral areas	7,000	0	1,000	0	0
Leasable mineral areas	0	0	0	0	0
Mineral material areas	6,000	20	2,000	0	0

Note: 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.
* These designations may overlap

Geothermal: There would be potential access restrictions to approximately 36,000 acres of geothermal resources from existing conservation and proposed Reserve Design Lands outside the Plan Area. This is nearly all of the defined geothermal resources outside the Plan Area. The potential access restrictions would be significant relative to the geothermal resources outside the Plan Area. Stipulations and restrictions for mineral resource allowable uses in CMAs for geothermal resources would reduce impacts, but likely not to a significant degree.

High Potential Mineral Areas: There would be potential access restrictions to approximately 51,000 acres of high potential mineral areas from existing conservation and proposed Reserve Design Lands outside the Plan Area. This is approximately 29% of the defined high potential mineral areas outside the Plan Area. The potential access restrictions would be moderate relative to the high potential mineral areas outside the Plan Area. CMAs for high potential mineral areas would reduce impacts.

High Priority Mineral and Energy Locations: There would be no potential access restrictions of high priority mineral and energy locations from existing conservation and proposed Reserve Design Lands outside the Plan Area.

Rare Earth Element Areas: There would be potential access restrictions to approximately 6,000 acres of rare earth element areas from existing conservation and proposed Reserve Design Lands outside the Plan Area. This is approximately 32% of the defined rare earth element areas outside the Plan Area. The potential access restrictions would be moderate relative to the rare earth element areas outside the Plan Area. CMAs for rare earth element areas would reduce impacts.

Locatable Mineral Areas: There would be potential access restrictions to approximately 1,000 acres of locatable mineral areas from existing conservation and proposed Reserve Design Lands outside the Plan Area. This is approximately 13% of the defined locatable mineral areas outside the Plan Area. The potential access restrictions would be minimal relative to the locatable mineral areas outside the Plan Area.

Leasable Mineral Areas: There would be no potential access restrictions to leasable mineral areas from existing conservation and proposed Reserve Design Lands outside the Plan Area.

Mineral Material Areas: There would be potential access restrictions to approximately 2,000 acres of mineral material areas from existing conservation and proposed Reserve Design Lands outside the Plan Area. This is approximately 34% of the defined mineral material areas outside the Plan Area. There would be approximately 100 acres of ACECs closed to mineral material extraction, the remaining acres of ACECs would be open with stipulations and restrictions. The potential access restrictions would be moderate relative to the mineral material areas outside the Plan Area.

IV.15.3.3.6 CEQA Significance Determination for Alternative 1

MR-1: Plan components would reduce or improve access to and development of known and future mineral resources. The availability of lands for renewable energy and transmission development may result in restrictions of access to future mineral resource areas. Impacts from potential access restrictions from renewable energy and transmission development would be reduced with implementation of MR-1a, which requires early coordination between developers and mineral leaseholders. Impacts would be further reduced with implementation of CMAs that require avoidance of impacts to mineral resource areas. Overall, impacts of the proposed development of renewable energy and transmission on mineral resources would be less than significant with implementation of CMAs.

DRECP Variance Lands may result in access restrictions to mineral resources. These lands would create especially severe impacts, particularly to:

- Geothermal resources in the Cadiz Valley and Chocolate Mountains ecoregion subarea;

- High potential mineral areas within the Imperial Borrego Valley ecoregion subarea;
- High priority mineral areas within the Providence and Bullion Mountains ecoregion subarea;
- Leasable mineral areas within the Providence and Bullion Mountains ecoregion subarea; and
- Mineral material areas within the Imperial Borrego Valley ecoregion subarea.

Areas designated for reserve design, conservation, and protection would likely result in reduced access to future mineral resource areas. For high potential mineral areas, rare earth element areas, locatable mineral and leasable mineral areas, the impacts would be significant from the potential restriction of access. Specifically, there would be approximately 1,054,000 acres of high potential mineral areas throughout the majority of ecoregion subareas that may experience reduced access or restrictions on future development. For rare earth element areas, the Molycorp Mountain Pass rare earth mine may experience restrictions on future expansion. For locatable minerals, approximately 236,000 acres within the majority of ecoregion subareas may experience restricted access on future development. For leasable minerals, approximately 49,000 acres, primarily within the Cadiz Valley and Chocolate Mountains ecoregion subarea, may experience restricted access on future development. CMAs would reduce impacts; however, impacts created by the reserve design and conservation components of Alternative 1 would remain significant and unmitigable because the alternative's reserve design would restrict access to large areas of mineral resources.

IV.15.3.3.7 Comparison of Alternative 1 with Preferred Alternative

Chapter IV.27 presents a comparison of all action alternatives and the No Action Alternative across all disciplines. This section summarizes the comparison of Alternative 1 with the Preferred Alternative.

IV.15.3.3.7.1 Alternative 1 Compared with Preferred Alternative for Plan-wide DRECP

A comparison between Alternative 1 and the Preferred Alternative within DFAs for the Plan-wide DRECP is summarized in Table IV.15-24.

Table IV.15-24
Alternative 1 Compared with the Preferred Alternative on DFAs for the Plan-wide DRECP

Mineral Resource	Alternative 1	Preferred Alternative	Comparison
Geothermal	45,000 10,000 geothermal	23,100 6,000 geothermal	Alternative 1 would result in 21,900 more acres of DFAs within geothermal resource areas than the Preferred Alternative. Alternative 1 would have 4,000 more acres available for geothermal development.
High potential mineral areas	4,130	3,300	Alternative 1 would result in 830 more acres of DFAs within high potential mineral areas than the Preferred Alternative.
High priority mineral & energy locations	50	0	While proposed DFAs would overlap them, the existing high priority mineral and energy locations would be an allowable use under both alternatives.
Rare earth element areas	0	0	Alternative 1 would be the same as the Preferred Alternative.
Locatable mineral areas	600	800	Alternative 1 would result in 200 fewer acres of DFAs within locatable mineral areas than the Preferred Alternative.
Leasable mineral areas	0	0	Alternative 1 and Preferred Alternative would be the same.
Mineral material areas	600	1,400	Alternative 1 would result in 800 fewer acres of DFAs within mineral material areas than the Preferred Alternative.

Note: 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.

A comparison between Alternative 1 and the Preferred Alternative Reserve Design Lands for the Plan-wide DRECP is summarized in Table IV.15-25.

Table IV.15-25
Alternative 1 Compared with the Preferred Alternative on Reserve Design Lands for the Plan-wide DRECP

Mineral Resource	Alternative 1 (acres)	Preferred Alternative (acres)	Comparison
Geothermal	28,300	24,100	Alternative 1 would result in 4,200 more acres of Reserve Design Lands within geothermal resource areas than the Preferred Alternative.
High potential mineral areas	1,054,000	793,000	Alternative 1 would result in 261,000 more acres of Reserve Design Lands within high potential mineral areas than the Preferred Alternative.
High priority mineral & energy locations	13,100	12,100	While Reserve Design lands overlap them, the existing high priority mineral and energy locations would be an allowable use under both alternatives.
Rare earth element areas	44,200	44,200	Alternative 1 and Preferred Alternative would be the same.
Locatable mineral areas *ACEC acres closed to extraction*	236,000 *8,000*	189,000 *2,000*	Alternative 1 would result in 47,000 more acres of Reserve Design Lands within locatable mineral areas than the Preferred Alternative.
Leasable mineral areas	48,700	7,000	Alternative 1 would result in 41,700 more acres of Reserve Design Lands within leasable mineral areas than the Preferred Alternative.
Mineral material areas *ACEC acres closed to extraction*	38,300 *1,000*	33,100 *100*	Alternative 1 would result in 5,200 more acres of Reserve Design Lands within mineral material areas than the Preferred Alternative.

Note: 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.

IV.15.3.3.7.2 Alternative 1 Compared with Preferred Alternative for the BLM Land Use Plan Amendment

A comparison between Alternative 1 and the Preferred Alternative within DFAs for BLM-administered lands is summarized in Table IV.15-26.

Table IV.15-26
Alternative 1 Compared with the Preferred Alternative on DFAs for BLM Lands

Mineral Resource	Alternative 1 (acres)	Preferred Alternative (acres)	Comparison
Geothermal	8,900 3,000 geothermal	4,400 2,000 geothermal	Alternative 1 would result in 4,500 more acres of DFAs within geothermal resource areas than the Preferred Alternative. The Preferred Alternative would have 1,000 fewer acres available for geothermal development.
High potential mineral areas	1,800	3,300	Alternative 1 would result in 1,500 fewer acres of DFAs within high potential mineral areas than the Preferred Alternative.
High priority mineral & energy locations	20	0	While proposed DFAs would overlap them, the existing high priority mineral and energy locations would be an allowable use under both alternatives.
Rare earth element areas	0	0	Alternative 1 would be the same as the Preferred Alternative.
Locatable mineral areas	300	700	Alternative 1 would result in 400 fewer acres of DFAs within locatable mineral areas than the Preferred Alternative.
Leasable mineral areas	0	0	Alternative 1 and Preferred Alternative would be the same.
Mineral material areas	640	1,600	Alternative 1 would result in 960 fewer acres of DFAs within mineral material areas than the Preferred Alternative.

Note: 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.

A comparison between Alternative 1 and the Preferred Alternative within Reserve Design Lands for the BLM-administered lands is summarized in Table IV.15-27.

Table IV.15-27
Alternative 1 Compared with Preferred Alternative on Reserve Design Lands for BLM Lands

Mineral Resource	Alternative 1 (acres)	Preferred Alternative (acres)	Comparison
Geothermal	46,020	44,000	Alternative 1 would have 2,020 more acres of Reserve Design Lands within geothermal areas than the Preferred Alternative.
High potential mineral areas	487,000	442,000	Alternative 1 would have 45,000 more acres of Reserve Design Lands within high potential mineral areas than the Preferred Alternative.
High priority mineral & energy locations	20,080	21,000	While Reserve Design lands overlap them, the existing high priority mineral and energy locations would be an allowable use under both alternatives.
Rare earth element areas	28,000	28,000	Alternative 1 and Preferred Alternative would be the same.
Locatable mineral areas *ACEC acres closed to extraction*	249,000 *8,000*	212,000 *2,000*	Alternative 1 would have 37,000 more acres of Reserve Design Lands within locatable mineral areas than the Preferred Alternative.
Leasable mineral areas	48,700	6,000	Alternative 1 would have 42,700 more acres of Reserve Design Lands within leasable mineral areas than the Preferred Alternative.
Mineral material areas *ACEC acres closed to extraction*	60,000 *1,000*	59,000 *100*	Alternative 1 would have 1,000 more acres of Reserve Design Lands within mineral material areas than the Preferred Alternative.

Note: 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.

IV.15.3.3.7.3 Alternative 1 Compared with Preferred Alternative for NCCP

The impacts of the NCCP for Alternative 1 are the same as those defined in Section IV.15.3.2.1 for the Plan-wide analysis. As a result, the comparison of Alternative 1 with the Preferred Alternative for the NCCP is the same as described above for the Plan-wide DRECP.

IV.15.3.3.7.4 Alternative 1 Compared with Preferred Alternative for the GCP

A comparison between Alternative 1 and the Preferred Alternative within DFAs for GCP (nonfederal) lands is summarized in Table IV.15-28.

Table IV.15-28
Alternative 1 Compared with the Preferred Alternative on DFAs for GCP Lands

Mineral Resource	Alternative 1 (acres)	Preferred Alternative (acres)	Comparison
Geothermal	33,000 6,000 geothermal	17,000 3,000 geothermal	Alternative 1 would result in 16,000 more acres of DFAs within geothermal resource areas than the Preferred Alternative. The Preferred Alternative would have 3,000 fewer acres available for geothermal development.
High potential mineral areas	2,420	1,300	Alternative 1 would result in 1,120 more acres of DFAs within high potential mineral areas than the Preferred Alternative.
High priority mineral & energy locations	30	20	While proposed DFAs would overlap them, the existing high priority mineral and energy locations would be an allowable use under both alternatives.
Rare earth element areas	0	0	Alternative 1 would be the same as the Preferred Alternative.
Locatable mineral areas	240	200	Alternative 1 would result in 40 more acres of DFAs within locatable mineral areas than the Preferred Alternative.
Leasable mineral areas	0	0	Alternative 1 and Preferred Alternative would be the same.
Mineral material areas	70	100	Alternative 1 would result in 30 fewer acres of DFAs within mineral material areas than the Preferred Alternative.

Note: 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.

A comparison between Alternative 1 and the Preferred Alternative within existing and proposed conservation lands or Reserve Design Lands for the GCP lands is summarized in Table IV.15-29.

Table IV.15-29
Alternative 1 Compared with Preferred Alternative on Reserve Design Lands for GCP Lands

Mineral Resource	Alternative 1 (acres)	Preferred Alternative (acres)	Comparison
Geothermal	5,200	5,000	Alternative 1 would have 200 more acres of Reserve Design Lands within geothermal areas than the Preferred Alternative.
High potential mineral areas	28,000	23,000	Alternative 1 would have 5,000 more acres of Reserve Design Lands within high potential mineral areas than the Preferred Alternative.
High priority mineral & energy locations	2,000	2,000	While proposed DFAs would overlap them, the existing high priority mineral and energy locations would be an allowable use under both alternatives.
Rare earth element areas	200	200	Alternative 1 would be the same as the Preferred Alternative.
Locatable mineral areas	3,000	3,000	Alternative 1 would be the same as the Preferred Alternative.
Leasable mineral areas	700	800	Alternative 1 would have 100 fewer acres of Reserve Design Lands within leasable mineral areas than the Preferred Alternative.
Mineral material areas	700	500	Alternative 1 would have 200 more acres of Reserve Design Lands within mineral material areas than the Preferred Alternative.

Note: 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.

IV.15.3.4 Alternative 2

IV.15.3.4.1 Plan-wide Impacts of Implementing the DRECP: Alternative 2

IV.15.3.4.1.1 Plan-wide Impacts and Mitigation Measures from Renewable Energy and Transmission Development

Impact Assessment

Impact MR-1: Plan components would reduce or improve access to and development of known and future mineral resources.

Potential impacts to mineral resources resulting from renewable energy and transmission facility development within DFAS under Alternative 2 are summarized in Table IV.15-30 and presented in Table R2.15-20 (Appendix R2).

Table IV.15-30
Potential Acres of Mineral Resource Impacts by Technology Type – Alternative 2

Mineral Resource	Mineral Resources (acres)	Potential Mineral Resource Impacts by Technology Type (acres)			
		Solar	*Wind*	*GT*	*Transmission*
Geothermal resources	347,000	11,000	200	7,000	4,000
High potential mineral areas	1,519,000	4,000	1,000	200	1,000
High priority mineral & energy locations	101,000	1,000	100	0	100
Rare earth element areas	59,000	0	0	0	100
Locatable mineral areas	348,000	3,000	1,000	0	1,000
Leasable mineral areas	84,000	0	0	0	0
Mineral material areas	102,000	500	100	200	400

Note: 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.

Potential impacts to mineral resources under Alternative 2 are listed below and described in more detail in Section IV.15.2.

Geothermal: There would be potential access restrictions to approximately 22,000 acres, primarily within the Imperial Borrego Valley ecoregion subarea, of geothermal resources from development of solar, wind, and transmission facilities. There would be approximately 7,000 acres within the Plan Area available for geothermal resource development, reducing impacts to about 2% of the defined geothermal resources within the Plan Area.

The potential access restrictions would be minimal relative to the geothermal resources within the Plan Area, even without mitigation requiring avoidance of mineral resources.

High Potential Mineral Areas: There would be potential access restrictions to approximately 7,000 acres of high potential mineral areas from development of solar, wind, geothermal, and transmission facilities. This is approximately 0.3% of the defined high potential mineral areas within the Plan Area. The potential access restrictions would be minimal relative to the high potential mineral areas within the Plan Area, even without mitigation requiring avoidance of these mineral resources.

High Priority Mineral and Energy Locations: There would be approximately 1,000 acres of high priority mineral and energy locations within DFAs; however, per the CMAs for minerals, these existing operations would be designated as an allowable use. Therefore, there would be no potential access restrictions to the high priority mineral and energy locations within the Plan Area.

Rare Earth Element Areas: There would be potential access restrictions to approximately 100 acres within proposed transmission corridors of rare earth element areas from development of transmission facilities, all within the Kingston and Funeral Mountains ecoregion subarea. This is approximately 0.2% of the defined high potential mineral areas within the Plan Area. The potential access restrictions would be minimal relative to the rare earth element areas within the Plan Area, even without mitigation requiring avoidance of these mineral resources.

Locatable Mineral Areas: There would be potential access restrictions to approximately 5,000 acres of locatable mineral areas from development of solar, wind, and transmission facilities. This is approximately 1% of the defined locatable mineral areas within the Plan Area. The potential access restrictions would be minimal relative to the locatable mineral areas within the Plan Area.

Leasable Mineral Areas: There would be no potential access restrictions to leasable mineral areas from development of solar, wind, geothermal, or transmission facilities.

Mineral Material Areas: There would be potential access restrictions to approximately 1,200 acres of mineral material areas from development of solar, geothermal, and transmission facilities. This is approximately 1% of the defined mineral material areas within the Plan Area. The potential access restrictions would be minimal relative to the mineral material areas within the Plan Area.

Impacts in Study Area Lands

Future Assessment Areas (FAAs). Lands within FAAs are neither reserve lands nor DFAs; they are simply areas that are deferred for future assessment. The future assessment will determine their suitability for either renewable energy development or ecological conservation. If there is renewable energy development on FAA lands, a BLM LUPA would not be required. FAAs for each alternative are described and shown in Table IV.1-2 and Figure II.5-1 in Volume II. The FAAs represent areas where renewable energy development or inclusion in the reserve design could be implemented through an amendment to the DRECP, but additional assessment would be needed.

Because most of the FAAs are presented as "undesignated areas" in the action alternatives, there would be no difference between FAAs in Alternative 2 except that renewable development in an FAA would not require a BLM LUPA; the environmental review process would therefore be somewhat simpler than if the location were left undesignated. Development or Conservation Designation of the FAAs would potentially impact the following mineral resources:

- High Potential Mineral Areas: Approximately 4,000 acres, primarily within the Providence and Bullion Mountains ecoregion subarea.

FAAs may result in access restrictions to mineral resources from either renewable energy development or ecological conservation.

Special Analysis Areas. Designating the SAAs for development would result in impacts similar to those identified for DFAs with Plan-wide impacts. SAAs may result in access restrictions to mineral resources from renewable energy development. No rare earth element areas would be affected by the designation of SAAs for development.

DRECP Variance Lands. DRECP Variance Lands represent the BLM Solar PEIS Variance Lands for the EIS/EIR, based on BLM screening criteria. Covered Activities could be permitted for NCCP purposes only through an NCCP plan amendment. However, development of renewable energy on variance lands would not require a BLM LUPA so the environmental review process would be somewhat simpler than if the location were left undesignated. Development or Conservation Designation of the DRECP Variance Lands could result in access restrictions to mineral resources.

Impact Reduction Strategies and Mitigation

The implementation of the Plan would result in conservation of some desert lands as well as the development of renewable energy generation and transmission facilities on other lands. There are several ways in which the impacts of the renewable energy development

covered by the Plan would be lessened. First, the Plan incorporates CMAs for each alternative, including specific biological reserve design components and LUPA components. Also, the implementation of existing laws, orders, regulations and standards would reduce the impacts of project development. If significant impacts would still result after implementation of CMAs and compliance with applicable laws and regulations, then specific mitigation measures are recommended in this section.

Conservation and Management Actions

The conservation strategy for Alternative 2 (see Section II.3.1.1) defines specific actions that would reduce the impacts of this alternative. The conservation strategy includes the definition of the reserve design and specific CMAs for the Preferred Alternative. While the CMAs were developed for BLM lands only, this analysis assumes that all CMAs would also apply to nonfederal lands.

The following CMAs apply to all action alternatives, including Alternative 2.

<u>Minerals CMAs for BLM Land for the Entire Plan Area</u>

For identified minerals lands and existing mining and energy development (locatable, salable, solid leasable and geothermal minerals) with currently approved Plans of Operations, Notices, Mine and Reclamation Plans or Plans of Development (43 CFR 3200; 3500; 3600; and 3802/09), the mineral resources are characterized as under the Preferred Alternative (Section IV.15.3.2.1.1).CMAs under Alternative 2 for NLCS lands would be the same as the Preferred Alternative for mineral resources, except for the following:

- **Leasable Minerals:**
  - National Conservation Lands would be unsuitable for all leasing.
  - BLM would review National Conservation Land values and undertake additional planning to determine if No Surface Occupancy (NSO) leasing can be permitted.
- **Locatable Minerals:**
  - For purposes of locatable minerals, National Conservation Lands would be treated as “controlled” or “limited” use areas in the CDCA, and require a plan of operations for greater than casual use (43 CFR 3809.11).
  - BLM would develop a priority list of subareas for potential withdrawal.
  - Initiate segregation of one subregion annually and complete mineral withdrawal review process (within 2-year time frame for each subregion).

- **Saleable Minerals:** Saleable mineral development would be limited to BLM parcels smaller than 2,000 acres. Mitigation and compensation must result in a net benefit to National Conservation Lands.

The following CMAs apply to Alternative 2 for National Scenic and Historic Trails:

- **Locatable Minerals:** BLM would propose that NSHT Management Corridors be withdrawn from mineral entry. Withdrawals would be subject to valid existing rights.
- **Leasable Minerals:** NSHT Management Corridors would be unavailable for mineral leasing.
- **Saleable Minerals:** NSHT Management Corridors would be unavailable for saleable mineral development.

Laws and Regulations

Similar to the No Action Alternative, existing laws and regulations will reduce certain impacts of Plan implementation. Relevant regulations are presented in the Regulatory Setting in Volume III. The requirements of relevant laws and regulations are summarized above for the No Action Alternative in Section IV.15.3.1.1.1.

Mitigation Measures

After implementation of the CMAs and existing laws and regulations, the following mitigation measure is recommended to further reduce adverse impacts.

MR-1 **Coordinate to Ensure Access to Mineral Resources.** Where valid mining claims or leases exist, initiate early coordination with claim or lease holders to define avoidance measures so that access to mineral resource facilities would not be restricted

IV.15.3.4.1.2 Impacts from Reserve Design

Potential impacts to mineral resources resulting from Reserve Design Lands under Alternative 2 are summarized in Table IV.15-31 and presented in Table R2.15-21 (Appendix R2).

Table IV.15-31
Estimated Acres of Mineral Resources within Reserve Design Lands – Alternative 2

Resource Type	Mineral Resources in Subarea (acres)	Existing Conservation Areas (acres)	BLM LUPA Conservation Designations (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Geothermal resources	347,000	20,000	10,000	100	8.5
High potential mineral areas	1,519,000	653,000	429,000	16,000	72.3
High priority mineral & energy locations	101,000	100	32,000	2,000	33.4
Rare earth element areas	59,000	24,000	28,000	400	89.0
Locatable mineral areas	348,000	11,000	218,000	4,000	67.1
Leasable mineral areas	84,000	0	66,000	1,000	79.6
Mineral material areas	101,000	700	70,000	400	70.0

Note: 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.

Geothermal: There would be potential access restrictions to approximately 30,000 acres, primarily within the Imperial Borrego Valley ecoregion subarea, of geothermal resources from existing conservation and proposed Reserve Design Lands. This is approximately 9% of the defined geothermal resources within the Plan Area. The potential access restrictions would be minimal relative to the geothermal resources within the Plan Area, even without stipulations related to existing claims and allowable uses.

High Potential Mineral Areas: There would be potential access restrictions to approximately 1,098,000 acres throughout all ecoregion subareas except the Owens River Valley, of high potential mineral areas from existing conservation and proposed Reserve Design Lands. This is approximately 72% of the defined high potential mineral areas within the Plan Area. The potential access restrictions would be significant relative to the high potential mineral areas within the Plan Area. CMAs for high potential mineral areas would reduce impacts; however, impacts would remain significant overall.

High Priority Mineral and Energy Locations: There would be approximately 34,000 acres of high priority mineral and energy locations within existing conservation and proposed Reserve Design Lands; however, per the CMAs for minerals, these existing operations

would be designated as an allowable use. Therefore, there would be no potential access restrictions to the high priority mineral and energy locations within the Plan Area.

Rare Earth Element Areas: There would be potential access restrictions to approximately 52,000 acres, primarily within the Kingston and Funeral Mountains and Pinto Lucerne Valley and Eastern Slopes ecoregion subareas, of rare earth element areas from existing conservation and proposed Reserve Design Lands. This is approximately 89% of the defined rare earth element areas within the Plan Area. Potential rare earth mines affected would be the Molycorp Mountain Pass rare earth mine. The potential access restrictions would be significant relative to the rare earth element areas within the Plan Area. CMAs for existing operations would reduce impacts; however, impacts would remain significant overall.

Locatable Mineral Areas: There would be potential access restrictions to approximately 233,000 acres of locatable mineral areas from existing conservation and proposed Reserve Design Lands. This is approximately 67% of the defined locatable mineral areas within the Plan Area. The potential access restrictions would be significant relative to the locatable mineral areas within the Plan Area. CMAs for locatable mineral areas would reduce impacts; however, impacts would remain significant overall.

Leasable Mineral Areas: There would be potential access restrictions to approximately 67,000 acres, mostly within the Cadiz Valley and Chocolate Mountains ecoregion subarea, of leasable mineral areas from existing conservation and proposed Reserve Design Lands. This is approximately 80% of the defined leasable mineral areas within the Plan Area. There would be 2,356 acres of ACECs closed to locatable mineral extraction; the remaining acres of ACECs would be open with stipulations and restrictions. The potential access restrictions would be significant relative to the leasable mineral areas within the Plan Area. CMAs for leasable mineral areas would further reduce impacts.

Mineral Material Areas: There would be potential access restrictions to approximately 71,000 acres of mineral material areas from existing conservation and proposed Reserve Design Lands. This is approximately 70% of the defined mineral material areas within the Plan Area. There would be approximately 400 acres of ACECs closed to mineral material extraction; the remaining acres of ACECs would be open with stipulations and restrictions. The potential access restrictions would be significant relative to the mineral material areas within the Plan Area. CMAs would reduce impacts.

Summary: Establishing new conservation areas would create access restrictions to currently undeveloped mineral resource areas and prevent future exploration within acquired lands in Conservation Planning Areas. Access restrictions would reduce availability of known mineral resources valuable to the region, the state, and to locally important mineral resource recovery sites. A large percentage of mineral resources are located within Reserve Design

Lands under Alternative 2. Management actions for Alternative 2 would require withdrawal of locatable minerals over time and make NLCS lands unsuitable for extracting leasable minerals. Because Alternative 2 would have the largest percentage of NLCS lands and the NLCS management of minerals would be very restrictive for locatable and leasable minerals, the impact would be significant. Availability and access to mineral resources within NLCS lands, as described above, would reduce impacts.

Within conservation lands on BLM-administered lands, exploration and access could continue following the area-specific management plans, including disturbance caps. Also, unpatented mining claims would continue to be subject to valid existing rights. Impacts to mineral resources from restrictions to access due to Reserve Design Lands would be remain significant for high potential mineral areas, rare earth element areas, and locatable and leasable mineral areas. CMAs would reduce impacts; however, impacts would remain significant and unmitigable for these mineral resources under Alternative 2.

IV.15.3.4.2 Impacts of DRECP Land Use Plan Amendment on BLM Land: Alternative 2

This section addresses two components of effects of the BLM LUPA: the streamlined development of renewable energy and transmission on BLM land under LUPA, and the impacts of the amended land use plans themselves.

IV.15.3.4.2.1 Impacts from Renewable Energy and Transmission Development on BLM Land

Potential impacts to mineral resources resulting from renewable energy and transmission facility development within DFAs under Alternative 2 for BLM lands are summarized below and presented in Table IV.15-32.

Table IV.15-32
Estimated Acres of Mineral Resources within DFAs by Technology Type on BLM LUPA Lands – Alternative 2

Mineral Resources	Mineral Resources in BLM LUPA (acres)	Potential Mineral Resources Impacts by Technology Type (acres)			
		Solar	*Wind*	*GT*	*Transmission*
Geothermal resources	92,000	2,000	0	3,000	700
High potential mineral areas	844,000	3,000	1,000	100	900
High priority mineral & energy locations	77,000	500	100	0	30
Rare earth element areas	40,000	0	0	0	70
Locatable mineral areas	315,000	2,000	1,000	0	500

Table IV.15-32
Estimated Acres of Mineral Resources within DFAs by Technology Type on BLM LUPA Lands – Alternative 2

Mineral Resources	Mineral Resources in BLM LUPA (acres)	Potential Mineral Resources Impacts by Technology Type (acres)			
		Solar	*Wind*	*GT*	*Transmission*
Leasable mineral areas	71,000	0	0	0	0
Mineral material areas	92,000	500	100	200	400

Note: 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.

In areas where DFAs overlap with mineral resource areas, potential renewable energy and transmission development within DFAs would have the following impacts:

Geothermal: There would be potential access restrictions to approximately 6,000 acres, primarily within the Imperial Borrego Valley ecoregion subarea, of geothermal resources from development of solar, wind, and transmission facilities on BLM LUPA lands. There would be approximately 3,000 acres within BLM LUPA lands available for geothermal resource development, reducing impacts of the defined geothermal resources within those lands. The potential access restrictions would be minimal relative to the geothermal resources within BLM LUPA lands.

High Potential Mineral Areas: There would be potential access restrictions to approximately 5,000 acres of high potential mineral areas from development of solar, wind, geothermal, and transmission facilities within BLM LUPA lands. This is approximately 0.5% of the defined high potential mineral areas within those lands. The potential access restrictions would be minimal relative to the high potential mineral areas within BLM LUPA lands.

High Priority Mineral and Energy Locations: There would be approximately 600 acres of high priority mineral and energy locations within DFAs; however, per the CMAs for minerals, these existing operations would be designated as an allowable use. Therefore, there would be no potential access restrictions to the high priority mineral and energy locations within BLM LUPA lands.

Rare Earth Element Areas: There would be potential access restrictions to approximately 100 acres of rare earth element areas from development of transmission facilities. This is essentially an undetectable amount relative to the overall availability of high priority mineral and energy locations within the Plan Area.

Locatable Mineral Areas: There would be potential access restrictions to approximately 4,000 acres, primarily within the Imperial Borrego Valley ecoregion subarea, of locatable mineral areas from development of solar, wind, and transmission facilities within BLM LUPA lands. This is approximately 0.8% of the defined locatable mineral areas within those lands. The potential access restrictions would be minimal relative to the locatable mineral areas within BLM LUPA lands.

Leasable Mineral Areas: There would be no potential access restrictions to leasable mineral areas from development of solar, wind, geothermal, or transmission facilities within BLM LUPA lands.

Mineral Material Areas: There would be potential access restrictions to approximately 1,200 acres of mineral material areas from development of solar, geothermal, and transmission facilities within BLM LUPA lands. This is approximately 1% of the defined mineral material areas within those lands. The potential access restrictions would be minimal relative to the mineral material areas within BLM LUPA lands.

Summary: CMAs and mitigation measures outlined for Plan-wide impacts to mineral resources from conservation and Reserve Design Lands would apply to BLM lands. Within some ACECs, mineral resource uses would be closed (no access would be allowed). Restrictions and stipulations within other Reserve Design Lands, such as some ACECs and SRMAs, would allow limited access. CMAs allowing mineral resource use with restrictions and stipulations would reduce adverse impacts to mineral resources from Plan implementation under Alternative 2. Existing mining claims and mineral resource-related access would still be allowed, further reducing impacts.

IV.15.3.4.2.2 Impacts of Changes to BLM Land Designations

Potential impacts to mineral resources resulting from Reserve Design Lands under Alternative 2 on BLM lands are summarized below and presented in Table IV.15-33.

Table IV.15-33
Estimated Acres of Mineral Resources in
BLM LUPA Land Designations – Alternative 2

Mineral Resources	Mineral Resources in BLM LUPA Lands (acres)	Mineral Resources in BLM Land Designations						
		SRMAs (acres)	NLCS (acres)	ACEC (acres)	Wildlife Allocation (acres)	Managed LWCs (acres)	Trail Management Corridors (acres/miles)	
Geothermal resources	92,000	24,000	13,000	15,000	0	0	400	0

Table IV.15-33
Estimated Acres of Mineral Resources in
BLM LUPA Land Designations – Alternative 2

Mineral Resources	Mineral Resources in BLM LUPA Lands (acres)	Mineral Resources in BLM Land Designations						
		SRMAs (acres)	NLCS (acres)	ACEC (acres)	Wildlife Allocation (acres)	Managed LWCs (acres)	Trail Management Corridors (acres/miles)	
High potential mineral areas	835,000	28,000	447,000	58,000	200	14,000	127,000	6
High priority mineral & energy locations	77,000	8,000	26,000	9,000	0	4,000	0	0
Rare earth element areas	40,000	20	29,000	7,000	0	0	100	0
Locatable mineral areas	302,000	5,000	225,000	6,000	0	4,000	20,000	0
Leasable mineral areas	71,000	0	70,000	100	50	0	0	0
Mineral material areas	92,000	2,000	74,000	2,000	0	1,000	9,000	0

Note: There is overlap between some, but not all, BLM land designations, such as overlap of ACECs and National Scenic and Historic Trail (NSHT) management corridors or lands with wilderness characteristics. This overlap may result in the appearance of greater acres of overlap between mineral resources and conservation lands than actually exists.
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.

Geothermal: There would be potential access restrictions to approximately 52,000 acres of geothermal resources from existing conservation and proposed BLM designations. This is approximately 57% of the defined geothermal resources within BLM LUPA lands. The potential access restrictions would be significant relative to the geothermal resources within those lands. CMAs for geothermal mineral areas could reduce impacts, but likely not to a significant degree.

High Potential Mineral Areas: There would be potential access restrictions to approximately 674,000 acres of high potential mineral areas from existing conservation and proposed Reserve Design Lands. This is approximately 81% of the defined high potential mineral areas within BLM LUPA lands. The potential access restrictions would be significant

relative to the high potential mineral areas within those lands. CMAs for high potential mineral areas could reduce impacts, but likely not to a significant degree.

High Priority Mineral and Energy Locations: There would be approximately 47,000 acres of high priority mineral and energy locations within existing conservation and proposed Reserve Design Lands; however, per the CMAs for minerals, these existing operations would be designated as an allowable use. Therefore, there would be no potential access restrictions to the high priority mineral and energy locations within BLM LUPA lands; however, the access to any expansion of these high priority mineral and energy locations could be severely restricted and result in significant impacts.

Rare Earth Element Areas: There would be potential access restrictions to approximately 36,000 acres of rare earth element areas from existing conservation and proposed Reserve Design Lands. This is approximately 90% of the defined rare earth element areas within the BLM LUPA lands. The potential access restrictions would be significant relative to the rare earth element areas within those lands. CMAs for existing operations could reduce impacts, but likely not to a significant degree.

Locatable Mineral Areas: There would be potential access restrictions to approximately 260,000 acres of locatable mineral areas from existing conservation and proposed Reserve Design Lands. This is approximately 86% of the defined locatable mineral areas within BLM LUPA lands. There would be approximately 2,000 acres of ACECs closed to locatable mineral extraction; the remaining acres of ACECs would be open with stipulations and restrictions. The potential access restrictions would be significant relative to the locatable mineral areas within BLM LUPA lands. CMAs for locatable mineral areas may reduce these impacts somewhat, but it is still likely that the impacts to the availability of locatable minerals would be significant.

Leasable Mineral Areas: There would be potential access restrictions to approximately 70,000 acres of leasable mineral areas from existing conservation and proposed Reserve Design Lands. This is approximately 99% of the defined leasable mineral areas within BLM LUPA lands. The potential access restrictions would be significant relative to the leasable mineral areas within BLM LUPA lands. CMAs for leasable mineral areas may reduce these impacts somewhat, but it is still likely that the impacts to the availability of leasable minerals would be significant.

Mineral Material Areas: There would be potential access restrictions to approximately 88,000 acres of mineral material areas from existing conservation and proposed Reserve Design Lands. This is approximately 96% of the defined mineral material areas within BLM LUPA lands. There would be approximately 400 acres of ACECs closed to mineral material extraction; the remaining acres of ACECs would be open with stipulations and restrictions.

The potential access restrictions would be significant relative to the mineral material areas within BLM LUPA lands. CMAs for mineral material resources would reduce impacts.

Summary: Impacts to mineral resources on BLM-administered lands under existing land use plans would be the same as discussed above in Section IV.15.3.2.1.1. CMAs and mitigation measures outlined for Plan-wide impacts to mineral resources from conservation and Reserve Design Lands would also apply to BLM lands. These measures would reduce adverse impacts to mineral resources from Plan implementation under Alternative 2.

IV.15.3.4.3 Impacts of Natural Community Conservation Plan: Alternative 2

The analysis of Covered Activities under the NCCP is equivalent to the Plan-wide analysis of interagency alternatives. Reserve design features and other conservation actions under the NCCP alternatives represent more detailed categories of the reserve design under the interagency Plan-wide alternatives. These NCCP differences in reserve design features do not affect nonbiological resources analyzed in this document, and the analysis of reserve design and conservation and management actions under the NCCP is therefore equivalent to the Plan-wide analysis of the interagency alternatives, as described in Section IV.15.3.4.1.

IV.15.3.4.4 Impacts of General Conservation Plan

The impacts of the GCP for Alternative 2 would be similar to those defined in Section IV.15.3.2.1 for the Plan-wide analysis, but they would apply to nonfederal lands only. Potential impacts to mineral resources resulting from DFAs under Alternative 2 on GCP (nonfederal lands only) are summarized below and presented in Table IV.15-34.

Table IV.15-34
Potential Acres of Mineral Resources Impacts on GCP Lands by Technology Type – Alternative 2

Mineral Resources	Mineral Resources within GCP Lands (acres)	Potential Mineral Resources Impacts by Technology Type (acres)			
		Solar	*Wind*	*GT*	*Transmission*
Geothermal resources	225,000	8,000	200	3,000	15,000
High potential mineral areas	191,000	1,000	100	300	1,000
High priority mineral & energy locations	24,000	100	0	40	200
Rare earth element areas	4,000	0	0	0	0
Locatable mineral areas	41,000	200	100	0	100
Leasable mineral areas	13,000	0	0	0	0

Table IV.15-34
Potential Acres of Mineral Resources Impacts on GCP Lands by Technology Type – Alternative 2

Mineral Resources	Mineral Resources within GCP Lands (acres)	Potential Mineral Resources Impacts by Technology Type (acres)			
		Solar	*Wind*	*GT*	*Transmission*
Mineral material areas	9,000	50	0	0	100

Note: 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.

Potential impacts to mineral resources under the Preferred Alternative for the GCP are listed below and described in more detail in Section IV.15.2.

Geothermal: There would be potential access restrictions approximately 26,000 acres of geothermal resources from development of solar, wind, and transmission facilities. There would be 3,609 acres within the GCP available for geothermal resource development, reducing impacts to 2.6% of the defined geothermal resources within the GCP. The potential access restrictions would be minimal relative to the geothermal resources within the GCP.

High Potential Mineral Areas: There would be potential access restrictions to approximately 2,000 acres of high potential mineral areas from development of solar, wind, geothermal, and transmission facilities. This is approximately 1% of the defined high potential mineral areas within the GCP. The potential access restrictions would be minimal relative to the high potential mineral areas within the GCP.

High Priority Mineral and Energy Locations: There would be approximately 300 acres of high priority mineral and energy locations within DFAs; however, per the CMAs for minerals, these existing operations would be designated as an allowable use. Therefore, there would be no potential access restrictions to the high priority mineral and energy locations within the GCP.

Rare Earth Element Areas: There would essentially be no potential access restrictions to rare earth element areas from development of solar, wind, geothermal, or transmission facilities within the GCP.

Locatable Mineral Areas: There would be potential access restrictions to approximately 400 acres of locatable mineral areas from development of solar, wind, and transmission facilities. This is approximately 1% of the defined locatable mineral areas within the GCP. The potential access restrictions would be minimal relative to the locatable mineral areas within the GCP.

Leasable Mineral Areas: There would be no potential access restrictions to leasable mineral areas from development of solar, wind, geothermal, or transmission facilities within the GCP.

Mineral Material Areas: There would be potential access restrictions to approximately 200 acres of mineral material areas from the development of solar, wind, and transmission facilities. This is approximately 2% of the defined mineral material areas within the GCP. The potential access restrictions would be minimal relative to the mineral material areas within the GCP.

Under Alternative 2, mineral resources found within Reserve Design Lands (existing conservation and Conservation Planning Areas) on GCP lands are summarized below and presented in Table IV.15-35.

Table IV.15-35
Estimated Acres of Mineral Resources Within Reserve Design Lands on GCP Lands – Alternative 2

Mineral Resources	Mineral Resources within GCP Lands (acres)	Existing Conservation Areas (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Geothermal resources	225,000	5,000	1,000	2.5
High potential mineral areas	191,000	15,000	33,000	17.2
High priority mineral & energy locations	24,000	0	2,000	8.3
Rare earth element areas	4,000	40	1,000	17.2
Locatable mineral areas	41,000	20	8,000	11.4
Leasable mineral areas	13,000	0	2,000	12.2
Mineral material areas	9,000	100	300	4.4

Note: 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.

Geothermal: There would be potential access restrictions to approximately 6,000 acres of geothermal resources from existing conservation and proposed Reserve Design Lands within the GCP. This is approximately 3% of the defined geothermal resources within the GCP. The potential access restrictions would be minimal relative to the geothermal resources within the Plan Area.

High Potential Mineral Areas: There would be potential access restrictions to approximately 48,000 acres of high potential mineral areas from existing conservation and proposed Reserve Design Lands within the GCP. This is approximately 17% of the defined high potential mineral areas within the GCP. The potential access restrictions would be moderate relative to the high potential mineral areas within the GCP. CMAs for high potential mineral areas would effectively reduce impacts.

High Priority Mineral and Energy Locations: There would be approximately 2,000 acres of high priority mineral and energy locations within existing conservation and proposed Reserve Design Lands; however, per the CMAs for minerals, these existing operations would be designated as an allowable use. Therefore, there would be no potential access restrictions to the high priority mineral and energy locations within the GCP.

Rare Earth Element Areas: There would be potential access restrictions to approximately 1,000 acres of rare earth element areas from existing conservation and proposed Reserve Design Lands within the GCP. This is approximately 8% of the defined rare earth element areas within the GCP. The potential access restrictions would be minimal relative to the rare earth element areas within the GCP.

Locatable Mineral Areas: There would be potential access restrictions to approximately 8,000 acres of locatable mineral areas from existing conservation and proposed Reserve Design Lands within the GCP. This is approximately 11% of the defined locatable mineral areas within the GCP. The potential access restrictions would be minimal relative to the locatable mineral areas within the GCP.

Leasable Mineral Areas: There would be potential access restrictions to approximately 2,000 acres of leasable mineral areas from existing conservation and proposed Reserve Design Lands within the GCP. This is approximately 12% of the defined leasable mineral areas within the Plan Area. The potential access restrictions would be minimal relative to the leasable mineral areas within the GCP.

Mineral Material Areas: There would be potential access restrictions to approximately 400 acres of mineral material areas from existing conservation and proposed Reserve Design Lands within the GCP. This is approximately 4% of the defined mineral material

areas within the GCP. The potential access restrictions would be minimal relative to the mineral material areas within the GCP.

IV.15.3.4.5 Impacts Outside the Plan Area

IV.15.3.4.5.1 Impacts of Transmission Outside the Plan Area

The impacts of transmission outside the Plan Area on mineral resources would be the same under all alternatives. These impacts are as described for the No Action Alternative in Section IV.15.3.1.5.

IV.15.3.4.5.2 Impacts of BLM LUPA Decisions Outside the Plan Area

Potential impacts mineral resources resulting from BLM LUPA decisions under Alternative 2 for the CDCA outside the Plan Area are summarized below and presented in Table IV.15-36.

Table IV.15-36
Estimated Acres of Mineral Resources in BLM LUPA Lands Outside the Plan Area –Alternative 2

Mineral Resources	Mineral Resources within BLM LUPA Lands Outside the Plan Area	Proposed NLCS (acres)*	Existing & Proposed ACECs (acres)*	Trail Management Corridors (acres/miles)	
Geothermal resources	23,000	21,000	22,000	0	0
High potential mineral areas	175,000	64,000	48,000	21,000	0
High priority mineral & energy locations	2,000	0	0	0	0
Rare earth element areas	19,000	2,000	5,000	0	0
Locatable mineral areas	7,000	5,000	5,000	0	0
Leasable mineral areas	0	0	0	0	0
Mineral material areas	6,000	2,000	3,000	1,000	0

Note: 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.
* Designations overlap

Geothermal: There would be potential access restrictions to the majority of geothermal resources from existing conservation and proposed Reserve Design Lands outside the Plan Area. This is nearly 100% of the defined geothermal resources outside the Plan Area. The potential access restrictions would be significant relative to the geothermal resources

outside the Plan Area. Stipulations and restrictions for mineral resource allowable uses included in CMAs for geothermal resources would reduce impacts; however, impacts would remain significant overall.

High Potential Mineral Areas: There would be potential access restrictions to approximately133,000 acres of high potential mineral areas from existing conservation and proposed Reserve Design Lands outside the Plan Area. This is approximately 76% of the defined high potential mineral areas outside the Plan Area. The potential access restrictions would be moderate relative to the high potential mineral areas outside the Plan Area. CMAs for high potential mineral areas would reduce impacts.

High Priority Mineral and Energy Locations: There would be no potential access restrictions of high priority mineral and energy locations from existing conservation and proposed Reserve Design Lands outside the Plan Area.

Rare Earth Element Areas: There would be potential access restrictions to approximately 7,000 acres of rare earth element areas from existing conservation and proposed Reserve Design Lands outside the Plan Area. This is approximately 37% of the defined rare earth element areas outside the Plan Area. The potential access restrictions would be moderate relative to the rare earth element areas outside the Plan Area. CMAs for rare earth element areas would reduce impacts.

Locatable Mineral Areas: There would be potential access restrictions to the majority of locatable mineral areas from existing conservation and proposed Reserve Design Lands outside the Plan Area. This is nearly 100% of the defined locatable mineral areas outside the Plan Area. The potential access restrictions would be significant relative to the locatable mineral areas outside the Plan Area.

Leasable Mineral Areas: There would be no potential access restrictions to leasable mineral areas from existing conservation and proposed Reserve Design Lands outside the Plan Area.

Mineral Material Areas: There would be potential access restrictions of the majority of mineral material areas from existing conservation and proposed Reserve Design Lands outside the Plan Area. This is nearly 100% of the defined mineral material areas outside the Plan Area. There would be 80 acres of ACECs closed to mineral material extraction; the remaining acres of ACECs would be open with stipulations and restrictions. The potential access restrictions would be significant relative to the mineral material areas outside the Plan Area.

IV.15.3.4.6 CEQA Significance Determination for Alternative 2

MR-1: Plan components would reduce or improve access to and development of known and future mineral resources. The availability of lands for renewable energy and transmission development may restrict access to future mineral resource areas. Impacts from potential access restrictions from renewable energy and transmission development would be reduced with implementation of MR-1a, which requires early coordination between developers and mineral leaseholders. Impacts would be further reduced with implementation of CMAs that require avoiding impacts to mineral resource areas. Overall, impacts of the proposed development of renewable energy and transmission on mineral resources would be less than significant with implementation of CMAs.

Future Assessment Areas may result in access restrictions to mineral resources, particularly high potential mineral areas within the Imperial Borrego Valley ecoregion subarea and the Providence and Bullion Mountains ecoregion subarea (4,000 acres).

Areas designated for reserve design, conservation, and protection would likely reduce access to future mineral resource areas. For high potential mineral areas, rare earth element areas, locatable mineral, leasable mineral areas, and mineral material areas, the impacts would be significant from the potential restriction of access. Specifically, there would be approximately 1,098,000 acres of high potential mineral areas throughout the majority of ecoregion subareas that may experience reduced access and restrict future development. For rare earth element areas, the Molycorp Mountain Pass rare earth mine may experience restrictions on future expansion, and approximately 52,000 acres may be impacted primarily within the Kingston and Funeral Mountains and Pinto Lucerne Valley and Eastern Slopes ecoregion subareas. For locatable minerals, approximately 233,000 acres within the majority of ecoregion subareas may experience restricted access on future development. For leasable minerals, approximately 67,000 acres may experience restricted access on future development. For mineral materials, approximately 71,000 acres may experience restricted access to future development. For these mineral resources, impacts would be significant. CMAs would reduce impacts; however, impacts created by the reserve design and conservation components of Alternative 2 would remain significant and unmitigable because the alternative's reserve design would restrict access to large areas of mineral resources.

IV.15.3.4.7 Comparison of Alternative 2 With Preferred Alternative

Chapter IV.27 presents a comparison of all action alternatives and the No Action Alternative across all disciplines. This section summarizes the comparison of Alternative 2 with the Preferred Alternative.

IV.15.3.4.7.1 Alternative 2 Compared With Preferred Alternative for Plan-wide DRECP

A comparison between Alternative 2 and the Preferred Alternative within DFAs for the Plan-wide DRECP is summarized in Table IV.15-37.

Table IV.15-37
Alternative 2 Compared with the Preferred Alternative on DFAs for the Plan-wide DRECP

Mineral Resource	Alternative 2	Preferred Alternative	Comparison
Geothermal	22,200 7,000 geothermal	23,100 6,000 geothermal	Alternative 2 would result in 900 fewer acres of DFAs within geothermal resource areas than the Preferred Alternative. Alternative 2 would have 1,000 more acres available for geothermal development.
High potential mineral areas	6,200	3,300	Alternative 2 would result in 2,900 more acres of DFAs within high potential mineral areas than the Preferred Alternative.
High priority mineral & energy locations	1,200	0	While proposed DFAs would overlap them, the existing high priority mineral and energy locations would be an allowable use under both alternatives.
Rare earth element areas	100	0	Alternative 2 would result in 100 more acres of DFAs within rare earth element areas than the Preferred Alternative.
Locatable mineral areas	5,000	800	Alternative 2 would result in 4,200 more acres of DFAs within locatable mineral areas than the Preferred Alternative.
Leasable mineral areas	0	0	Alternative 2 and Preferred Alternative would be the same.
Mineral material areas	1,200	1,400	Alternative 2 would result in 200 fewer acres of DFAs within mineral material areas than the Preferred Alternative.

Note: 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.

A comparison between Alternative 2 and the Preferred Alternative Reserve Design Lands for the Plan-wide DRECP is summarized in Table IV.15-38.

Table IV.15-38
Alternative 2 Compared with the Preferred Alternative on Reserve Design Lands for the Plan-wide DRECP

Mineral Resource	Alternative 2 (acres)	Preferred Alternative (acres)	Comparison
Geothermal	30,100	24,100	Alternative 2 would result in 4,000 more acres of Reserve Design Lands within geothermal resource areas than the Preferred Alternative.
High potential mineral areas	1,098,000	793,000	Alternative 2 would result in 305,000 more acres of Reserve Design Lands within high potential mineral areas than the Preferred Alternative.
High priority mineral & energy locations	34,100	12,100	While proposed DFAs would overlap them, the existing high priority mineral and energy locations would be an allowable use under both alternatives.
Rare earth element areas	52,400	44,200	Alternative 2 would result in 8,200 more acres of Reserve Design Lands within rare earth element areas than the Preferred Alternative.
Locatable mineral areas *ACEC acres closed to extraction*	233,000 *2,000*	189,000 *2,000*	Alternative 2 would result in 44,000 more acres of Reserve Design Lands within locatable mineral areas than the Preferred Alternative.
Leasable mineral areas	67,000	7,000	Alternative 2 would result in 60,000 more acres of Reserve Design Lands within leasable mineral areas than the Preferred Alternative.
Mineral material areas *ACEC acres closed to extraction*	71,100 *425*	33,100 *100*	Alternative 2 would result in 38,000 more acres of Reserve Design Lands within mineral material areas than the Preferred Alternative.

Note: 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.

IV.15.3.4.7.2 Alternative 2 Compared With Preferred Alternative for the BLM Land Use Plan Amendment

A comparison between Alternative 2 and the Preferred Alternative within DFAs for BLM-administered lands is summarized in Table IV.15-39.

Table IV.15-39
Alternative 2 Compared With the Preferred Alternative on DFAs for BLM Lands

Mineral Resource	Alternative 2 (acres)	Preferred Alternative (acres)	Comparison
Geothermal	5,700 3,000 geothermal	4,400 2,000 geothermal	Alternative 2 would result in 1,300 more acres of DFAs within geothermal resource areas than the Preferred Alternative. The Preferred Alternative would have 1,000 fewer acres available for geothermal development.
High potential mineral areas	5,000	3,300	Alternative 2 would result in 1,700 more acres of DFAs within high potential mineral areas than the Preferred Alternative.
High priority mineral & energy locations	630	0	While proposed DFAs would overlap them, the existing high priority mineral and energy locations would be an allowable use under both alternatives.
Rare earth element areas	70	0	Alternative 2 would result in 70 more acres of DFAs rare earth element areas than the Preferred Alternative.
Locatable mineral areas	3,500	700	Alternative 2 would result in 2,800 more acres of DFAs within locatable mineral areas than the Preferred Alternative.
Leasable mineral areas	0	0	Alternative 2 and Preferred Alternative would be the same.
Mineral material areas	1,200	1,600	Alternative 2 would result in 400 fewer acres of DFAs within mineral material areas than the Preferred Alternative.

Note: 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.

A comparison between Alternative 2 and the Preferred Alternative within Reserve Design Lands for the BLM-administered lands is summarized in Table IV.15-40.

Table IV.15-40
Alternative 2 Compared with Preferred Alternative on Reserve Design Lands for BLM Lands

Mineral Resource	Alternative 2 (acres)	Preferred Alternative (acres)	Comparison
Geothermal	52,400	44,000	Alternative 2 would have 8,400 more acres of Reserve Design Lands within geothermal areas than the Preferred Alternative.
High potential mineral areas	674,200	442,000	Alternative 2 would have 232,200 more acres of Reserve Design Lands within high potential mineral areas than the Preferred Alternative.
High priority mineral & energy locations	47,000	21,000	While proposed DFAs would overlap them, the existing high priority mineral and energy locations would be an allowable use under both alternatives.
Rare earth element areas	36,120	28,000	Alternative 2 would have 8,120 more acres of Reserve Design Lands within rare earth element areas than the Preferred Alternative.
Locatable mineral areas *ACEC acres closed to extraction*	260,000 *2,000*	212,000 *2,000*	Alternative 2 would have 48,000 more acres of Reserve Design Lands within locatable mineral areas than the Preferred Alternative.
Leasable mineral areas	70,150	6,000	Alternative 2 would have 64,150 more acres of Reserve Design Lands within leasable mineral areas than the Preferred Alternative.
Mineral material areas *ACEC acres closed to extraction*	88,000 *400*	59,000 *100*	Alternative 2 would have 29,000 more acres of Reserve Design Lands within mineral material areas than the Preferred Alternative.

Note: 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.

IV.15.3.4.7.3 Alternative 2 Compared With Preferred Alternative for NCCP

The impacts of the NCCP for Alternative 2 are the same as those defined in Section IV.15.3.2.1 for the Plan-wide analysis. As a result, the comparison of Alternative 2 with the Preferred Alternative for the NCCP is the same as described above for the Plan-wide DRECP.

IV.15.3.4.7.4 Alternative 2 Compared With Preferred Alternative for the GCP

A comparison between Alternative 2 and the Preferred Alternative within DFAs for GCP (nonfederal) lands is summarized in Table IV.15-41.

Table IV.15-41
Alternative 2 Compared With the Preferred Alternative on DFAs for GCP Lands

Mineral Resource	Alternative 2 (acres)	Preferred Alternative (acres)	Comparison
Geothermal	26,200 3,000 geothermal	17,000 3,000 geothermal	Alternative 2 would result in 9,200 more acres of DFAs within geothermal resource areas than the Preferred Alternative. The Preferred Alternative would have the same acres available for geothermal development.
High potential mineral areas	2,400	1,300	Alternative 2 would result in 1,100 more acres of DFAs within high potential mineral areas than the Preferred Alternative.
High priority mineral & energy locations	340	20	While proposed DFAs would overlap them, the existing high priority mineral and energy locations would be an allowable use under both alternatives.
Rare earth element areas	0	0	Alternative 2 and Preferred Alternative would be the same.
Locatable mineral areas	400	200	Alternative 2 would result in 200 more acres of DFAs within locatable mineral areas than the Preferred Alternative.
Leasable mineral areas	0	0	Alternative 2 and Preferred Alternative would be the same.
Mineral material areas	150	100	Alternative 2 would result in 50 more acres of DFAs within mineral material areas than the Preferred Alternative.

Note: 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.

A comparison between Alternative 2 and the Preferred Alternative within existing and proposed conservation lands or Reserve Design Lands for the GCP lands is summarized in Table IV.15-42.

Table IV.15-42
Alternative 2 Compared With Preferred Alternative on Reserve Design Lands for GCP Lands

Mineral Resource	Alternative 2 (acres)	Preferred Alternative (acres)	Comparison
Geothermal	6,000	5,000	Alternative 2 would have 1,000 more acres of Reserve Design Lands within geothermal areas than the Preferred Alternative.
High potential mineral areas	48,000	23,000	Alternative 2 would have 25,000 more acres of Reserve Design Lands within high potential mineral areas than the Preferred Alternative.
High priority mineral & energy locations	2,000	2,000	While proposed DFAs would overlap them, the existing high priority mineral and energy locations would be an allowable use under both alternatives.
Rare earth element areas	1,040	200	Alternative 2 would have 960 more acres of Reserve Design Lands within rare earth element areas than the Preferred Alternative.
Locatable mineral areas	8,020	3,000	Alternative 2 would have 5,020 more acres of Reserve Design Lands within locatable mineral areas than the Preferred Alternative.
Leasable mineral areas	2,000	800	Alternative 2 would have 1,200 more acres of Reserve Design Lands within leasable mineral areas than the Preferred Alternative.
Mineral material areas	400	500	Alternative 2 would have 100 fewer acres of Reserve Design Lands within mineral material areas than the Preferred Alternative.

Note: 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.

IV.15.3.5 Alternative 3

IV.15.3.5.1 Plan-wide Impacts of Implementing the DRECP: Alternative 3

IV.15.3.5.1.1 Plan-wide Impacts and Mitigation Measures from Renewable Energy and Transmission Development

Impact Assessment

Impact MR-1: Plan components would reduce or improve access to and development of known and future mineral resources.

Potential impacts to mineral resources resulting from renewable energy and transmission facility development within DFAs under Alternative 3 are summarized in Table IV.15-43 and presented in Table R2.15-27 (Appendix R2).

Table IV.15-43
Potential Acres of Mineral Resource Impacts by Technology Type – Alternative 3

Mineral Resource	Mineral Resources (acres)	Potential Mineral Resource Impacts by Technology Type (acres)			
		Solar	*Wind*	*GT*	*Transmission*
Geothermal resources	347,000	26,000	100	10,000	4,000
High potential mineral areas	1,519,000	4,000	100	300	1,000
High priority mineral & energy locations	101,000	2,000	0	0	100
Rare earth element areas	59,000	0	0	0	0
Locatable mineral areas	348,000	1,000	30	0	100
Leasable mineral areas	84,000	0	0	0	0
Mineral material areas	101,000	1,000	20	300	400

Note: 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.

Potential impacts to mineral resources under Alternative 3 are listed below and described in more detail in Section IV.15.2.

Geothermal: There would be potential access restrictions to approximately 40,000 acres of geothermal resources from development of solar, wind, and transmission facilities, primarily within the Imperial Borrego Valley ecoregion subarea. There would be approximately 10,000 acres within the Plan Area available for geothermal resource development, reducing impacts to 12% of the defined geothermal resources within the Plan Area. The

potential access restrictions would be minimal relative to the geothermal resources within the Plan Area, even without mitigation requiring avoidance of mineral resources.

High Potential Mineral Areas: There would be potential access restrictions to approximately 5,400 acres of high potential mineral areas from development of solar, wind, geothermal, and transmission facilities. This is approximately 0.4% of the defined high potential mineral areas within the Plan Area. The potential access restrictions would be minimal relative to the high potential mineral areas within the Plan Area, even without mitigation requiring avoidance of these mineral resources.

High Priority Mineral and Energy Locations: There would be approximately 2,000 acres of high priority mineral and energy locations within DFAs; however, per the CMAs for minerals, these existing operations would be designated as an allowable use. Therefore, there would be no potential access restrictions to the high priority mineral and energy locations within the Plan Area.

Rare Earth Element Areas: There would be no potential access restrictions to rare earth element areas from development of solar, wind, geothermal, or transmission facilities within the Plan Area.

Locatable Mineral Areas: There would be potential access restrictions to approximately 1,000 acres of locatable mineral areas from development of solar, wind, and transmission facilities. This is approximately 0.3% of the defined locatable mineral areas within the Plan Area. The potential access restrictions would be minimal relative to the locatable mineral areas within the Plan Area.

Leasable Mineral Areas: There would be no potential access restrictions to leasable mineral areas from development of solar, wind, geothermal, or transmission facilities.

Mineral Material Areas: There would be potential access restrictions to approximately 2,000 acres of mineral material areas from development of solar, geothermal, and transmission facilities. This is approximately 2% of the defined mineral material areas within the Plan Area. The potential access restrictions would be minimal relative to the mineral material areas within the Plan Area.

Impacts in Study Area Lands

Future Assessment Areas (FAAs). Lands within FAAs are neither reserve lands nor DFAs; they are simply areas that are deferred for future assessment. The future assessment will determine their suitability for either renewable energy development or ecological conservation. If there is renewable energy development on FAA lands, a BLM LUPA would not be required. FAAs for each alternative are described in Table IV.1-2 and Figure II.6-1 in

Volume II. The FAAs represent areas where renewable energy development or inclusion in the reserve design could be implemented through an amendment to the DRECP, but additional assessment would be needed.

Because most FAAs are presented as "undesignated areas" in the action alternatives, there would be no difference between the FAAs in Alternative 2 except that renewable development in an FAA would not require a BLM LUPA; so the environmental review process would be somewhat simpler than if the location were left undesignated. Development or Conservation Designation of the FAAs would potentially impact approximately 100 acres of high potential mineral areas within the Pinto Lucerne Valley and Eastern Slopes ecoregion subarea.

Special Analysis Areas. Designating the SAAs as conservation may impact mineral resources. Impacts would be the same as those explained for the Plan-wide reserve design in the section "Impacts of the Reserve Design."

DRECP Variance Lands. DRECP Variance Lands represent the BLM Solar PEIS Variance Lands for the EIR/EIS based on BLM screening criteria. Covered Activities could be permitted for NCCP purposes only through an NCCP plan amendment. However, development of renewable energy on variance lands would not require a BLM LUPA, so the environmental review process would be somewhat simpler than if the location were left undesignated. Development or Conservation Designation of DRECP Variance Lands could result in access restrictions to mineral resources.

Impact Reduction Strategies and Mitigation

The implementation of the Plan would result in conservation of some desert lands as well as the development of renewable energy generation and transmission facilities on other lands. There are several ways in which the impacts of the renewable energy development covered by the Plan would be lessened. First, the Plan incorporates CMAs for each alternative, including specific biological reserve design components and LUPA components. Also, the implementation of existing laws, orders, regulations and standards would reduce the impacts of project development. If significant impacts would still result after implementation of CMAs and compliance with applicable laws and regulations, then specific mitigation measures are recommended in this section.

Conservation and Management Actions

The conservation strategy for Alternative 3 (see Section II.3.1.1) defines specific actions that would reduce the impacts of this alternative. The conservation strategy includes the definition of the reserve design and specific CMAs for the Preferred Alternative. While the

CMAs were developed for BLM lands only, this analysis assumes that all CMAs would also apply to nonfederal lands.

The following CMAs apply to all action alternatives, including Alternative 3:

Minerals CMAs for BLM Land for the Entire Plan Area

For identified minerals lands and existing mining and energy development (locatable, salable, and solid leasable and geothermal minerals) with currently approved Plans of Operations, Notices, Mine and Reclamation Plans or Plans of Development (43 CFR 3200; 3500; 3600; and 3802/09), the mineral resources have been described as under the Preferred Alternative (Section IV.15.3.2.1.1).

CMAs under Alternative 2 for NLCS lands would be the same as the Preferred Alternative for mineral resources except for the following:

- **Leasable Minerals:**
  - National Conservation Lands would be unsuitable for all leasing.
  - BLM would review National Conservation Land values and undertake additional planning to determine if NSO leasing can be permitted.
- **Locatable Minerals:**
  - BLM would develop a priority list of subareas for potential withdrawal.
  - Initiate segregation of one subregion annually and complete mineral withdrawal review process (within 2-year timeframe for each subregion).
- **Saleable Minerals:** Development would be limited to BLM parcels less than 2,000 acres. Mitigation and compensation "must" result in net benefit to National Conservation Lands.

The following CMAs apply to Alternative 3 for National Scenic and Historic Trails:

- **Locatable Minerals:** BLM would propose NSHT Management Corridors for withdrawal from mineral entry. Withdrawals would be subject to valid existing rights.
- **Leasable Minerals:** NSHT Management Corridors would be unsuitable for all leasing.
- **Saleable Minerals:** Development in NSHT Management Corridors would be limited to local public works projects. Mitigation and compensation must result in a net benefit to NSHT.

Laws and Regulations

Similar to the No Action Alternative, existing laws and regulations will reduce certain impacts of Plan implementation. Relevant regulations are presented in the Regulatory Setting in Volume III. The requirements of relevant laws and regulations are summarized above for the No Action Alternative in Section IV.15.3.1.1.1.

Mitigation Measures

After implementation of the CMAs and existing laws and regulations, the following mitigation measure is recommended to further reduce adverse impacts.

MR-1 **Coordinate to Ensure Access to Mineral Resources.** Where valid mining claims or leases exist, initiate early coordination with claim or lease holders to define avoidance measures that would not restrict access to mineral resource facilities.

IV.15.3.5.1.2 Impacts from Reserve Design

Potential impacts to mineral resources resulting from Reserve Design Lands under Alternative 3 are summarized in Table IV.15-44 and presented in Table R2.15-28 (Appendix R2).

Table IV.15-44
Estimated Acres of Mineral Resources Within Reserve Design Lands – Alternative 3

Resource Type	Mineral Resources in Subarea (acres)	Existing Conservation Areas (acres)	BLM LUPA Conservation Designations (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Geothermal resources	347,000	20,000	10,000	100	8.6
High potential mineral areas	1,519,000	653,000	424,000	12,000	71.7
High priority mineral & energy locations	101,000	100	12,000	2,000	14.2
Rare earth element areas	59,000	24,000	20,000	200	75.9
Locatable mineral areas	348,000	11,000	225,000	3,000	68.9
Leasable mineral areas	84,000	0	48,000	1,000	57.6
Mineral material areas	101,000	1,000	38,000	400	38.7

Note: 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.

Geothermal: There would be potential access restrictions to approximately 30,000 acres of geothermal resources from existing conservation and proposed Reserve Design Lands. This is approximately 9% of the defined geothermal resources within the Plan Area. The potential access restrictions would be minimal relative to the geothermal resources within the Plan Area, even without stipulations related to existing claims and allowable uses.

High Potential Mineral Areas: There would be potential access restrictions to approximately 1,089,000 acres of high potential mineral areas from existing conservation and proposed Reserve Design Lands throughout the majority of ecoregion subareas. This is approximately 72% of the defined high potential mineral areas within the Plan Area. The potential access restrictions would be significant relative to the high potential mineral areas within the Plan Area. CMAs for high potential mineral areas would reduce impacts; however, impacts would remain significant overall.

High Priority Mineral and Energy Locations: There would be approximately 14,000 acres of high priority mineral and energy locations within existing conservation and proposed Reserve Design Lands; however, per the CMAs for minerals, these existing operations would be designated as an allowable use. Therefore, there would be no potential access restrictions to the high priority mineral and energy locations within the Plan Area.

Rare Earth Element Areas: There would be potential access restrictions to approximately 44,000 acres of rare earth element areas from existing conservation and proposed Reserve Design Lands, primarily within the Kingston and Funeral Mountains and Pinto Lucerne Valley ecoregion subareas. This is approximately 76% of the defined rare earth element areas within the Plan Area. The potential access restrictions would be significant relative to the rare earth element areas within the Plan Area. CMAs for existing operations would reduce impacts; however, impacts would remain significant overall.

Locatable Mineral Areas: There would be potential access restrictions to approximately 239,000 acres of locatable mineral areas from existing conservation and proposed Reserve Design Lands throughout the majority of ecoregion subareas. This is approximately 70% of the defined locatable mineral areas within the Plan Area. There would be 9,000 acres of ACECs closed to locatable mineral extraction; the remaining acres of ACECs would be open with stipulations and restrictions. The potential access restrictions would be significant relative to the locatable mineral areas within the Plan Area.

Leasable Mineral Areas: There would be potential access restrictions to approximately 49,000 acres of leasable mineral areas from existing conservation and proposed Reserve Design Lands, primarily within the Cadiz Valley and Chocolate Mountains and Providence and Bullion Mountains ecoregion subareas. This is approximately 58% of the defined leasable mineral areas within the Plan Area. The potential access restrictions would be sig-

nificant relative to the leasable mineral areas within the Plan Area. CMAs for leasable mineral areas would reduce impacts.

Mineral Material Areas: There would be potential access restrictions to approximately 39,000 acres of mineral material areas from existing conservation and proposed Reserve Design Lands. This is approximately 39% of the defined mineral material areas within the Plan Area. There would be approximately 700 acres of ACECs closed to mineral material extraction; the remaining acres of ACECs would be open with stipulations and restrictions. The potential access restrictions would be moderate relative to the mineral material areas within the Plan Area.

Summary: Establishing new conservation areas would create access restrictions to currently undeveloped mineral resource areas and prevent future exploration within acquired lands in Conservation Planning Areas. Access restrictions would reduce availability of known mineral resources valuable to the region, the state, and to locally important mineral resource recovery sites. Management actions for Alternative 3 would require withdrawal of locatable minerals over time and make NLCS unsuitable for extracting leasable minerals. Because Alternative 3 would have the largest percentage of NLCS lands, NLCS management would be very restrictive for locatable and leasable minerals.

However, within conservation lands on BLM-administered lands, exploration and access could continue following the area-specific management plans, including disturbance caps. Also, unpatented mining claims would continue to be subject to valid existing rights. Impacts to mineral resources from restrictions to access due to acquisition of Conservation Planning Area lands would be significant. CMAs would reduce impacts; however, impacts would remain significant and unmitigable under Alternative 3.

IV.15.3.5.2 Impacts of DRECP Land Use Plan Amendment on BLM Land: Alternative 3

This section addresses two components of effects of the BLM LUPA: the streamlined development of renewable energy and transmission on BLM land under the LUPA, and the impacts of the amended land use plans themselves.

IV.15.3.5.2.1 Impacts from Renewable Energy and Transmission Development on BLM Land

Potential impacts to mineral resources resulting from renewable energy and transmission facility development within DFAs under Alternative 3 for BLM lands are summarized below and presented in Table IV.15-45.

Table IV.15-45
Estimated Acres of Mineral Resources
within DFAs by Technology Type on BLM LUPA Lands – Alternative 3

Mineral Resources	Mineral Resources in BLM LUPA (acres)	Potential Mineral Resource Impacts by Technology Type (acres)			
		Solar	*Wind*	*GT*	*Transmission*
Geothermal resources	92,000	6,000	0	4,000	1,000
High potential mineral areas	835,000	2,000	20	200	1,000
High priority mineral & energy locations	77,000	1,000	0	0	20
Rare earth element areas	40,000	0	0	0	0
Locatable mineral areas	302,000	500	20	0	100
Leasable mineral areas	71,000	0	0	0	0
Mineral material areas	92,000	1,000	20	300	300

Note: 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.

In areas where DFAs overlap with mineral resource areas, potential renewable energy and transmission development within DFAs would have the following impacts:

Geothermal: There would be potential access restrictions to approximately 11,000 acres of geothermal resources from development of solar and transmission facilities on BLM LUPA lands. There would be approximately 4,000 acres within BLM LUPA lands available for geothermal resource development, reducing impacts to 8% of the defined geothermal resources within BLM LUPA lands. The potential access restrictions would be minimal relative to the geothermal resources within BLM LUPA lands.

High Potential Mineral Areas: There would be potential access restrictions to approximately 3,000 acres of high potential mineral areas from development of solar, wind, geothermal, and transmission facilities within BLM LUPA lands. This is approximately 0.4% of the defined high potential mineral areas within BLM LUPA lands. The potential access restrictions would be minimal relative to the high potential mineral areas within BLM LUPA lands.

High Priority Mineral and Energy Locations: There would be approximately 1,000 acres of high priority mineral and energy locations within DFAs; however, per the CMAs for minerals, these existing operations would be designated as an allowable use. Therefore, there

would be no potential access restrictions to the high priority mineral and energy locations within BLM LUPA lands.

Rare Earth Element Areas: There would be no potential access restrictions to rare earth element areas from development of solar, wind, geothermal, or transmission facilities within BLM LUPA lands.

Locatable Mineral Areas: There would be potential access restrictions to approximately 600 acres of locatable mineral areas from development of solar, wind, and transmission facilities within BLM LUPA lands. This is approximately 0.2% of the defined locatable mineral areas within BLM LUPA lands. The potential access restrictions would be minimal relative to the locatable mineral areas within BLM LUPA lands.

Leasable Mineral Areas: There would be no potential access restrictions to leasable mineral areas from development of solar, wind, geothermal, or transmission facilities within BLM LUPA lands.

Mineral Material Areas: There would be potential access restrictions to approximately 2,000 acres of mineral material areas from development of solar, geothermal, and transmission facilities within BLM LUPA lands. This is approximately 2% of the defined mineral material areas within those lands. The potential access restrictions would be minimal relative to the mineral material areas within BLM LUPA lands.

Summary: Impacts to mineral resources on BLM-administered lands under existing land use plans would be the same as discussed above in Section IV.15.3.2.1.1. Mitigation measures also outlined in Section IV.15.3.2.1.1 would be implemented for any adverse impacts to mineral resources from Plan implementation under Alternative 3.

CMAs and mitigation measures outlined for Plan-wide impacts to mineral resources from conservation and Reserve Design Lands would apply to BLM lands. Within some ACECs, mineral resource uses would be closed (no access would be allowed). Restrictions and stipulations within other Reserve Design Lands, such as some ACECs and SRMAs, would allow limited access. CMAs allowing mineral resource use with restrictions and stipulations would reduce adverse impacts to mineral resources from Plan implementation under Alternative 3. Existing mining claims and mineral resource-related access would continue to be allowed, further reducing impacts.

IV.15.3.5.2.2 Impacts of Changes to BLM Land Designations

Potential impacts to mineral resources resulting from Reserve Design Lands under Alternative 3 on BLM lands are summarized below and in Table IV.15-46.

Table IV.15-46
Estimated Acres of Mineral Resources in BLM LUPA Land Designation – Alternative 3

Mineral Resources	Mineral Resources in BLM LUPA Lands (acres)	Mineral Resources in BLM Land Designations						
		SRMAs (acres)	*NLCS (acres)*	*ACEC (acres)*	*Wildlife Allocation (acres)*	*Managed LWCs (acres)*	*Trail Management Corridors (acres/miles)*	
Geothermal resources	92,000	24,000	26,000	13,000	0	0	400	0
High potential mineral areas	835,000	38,000	258,000	221,000	0	16,000	127,000	5.9
High priority mineral & energy locations	77,000	7,000	1,000	12,000	0	4,000	0	0
Rare earth element areas	40,000	20	8,000	20,000	0	0	100	0
Locatable mineral areas	302,000	16,000	191,000	45,000	0	4,000	20,000	0
Leasable mineral areas	71,000	0	5,000	44,000	0	0	0	0
Mineral material areas	92,000	20,000	30,000	12,000	0	1,000	9,000	0

Note: There is overlap between some, but not all, BLM land designations, such as overlap of ACECs and National Scenic and Historic Trail (NSHT) management corridors or lands with wilderness characteristics. This overlap may result in the appearance of greater acres of overlap between mineral resources and conservation lands than actually exists.
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.

Geothermal: There would be potential access restrictions to approximately 59,000 acres of geothermal resources from existing conservation and proposed BLM designations. This is approximately 64% of the defined geothermal resources within BLM LUPA lands. The potential access restrictions would be significant relative to the geothermal resources within those lands. CMAs for geothermal mineral areas could reduce impacts, but likely not to a significant degree.

High Potential Mineral Areas: There would be potential access restrictions to approximately 660,000 acres of high potential mineral areas from existing conservation and proposed Reserve Design Lands. This is approximately 79% of the defined high potential mineral areas within BLM LUPA lands. The potential access restrictions would be significant

relative to the high potential mineral areas within those lands. CMAs for high potential mineral areas could reduce impacts, but likely not to a significant degree.

High Priority Mineral and Energy Locations: There would be approximately 24,000 acres of high priority mineral and energy locations within existing conservation and proposed Reserve Design Lands; however, per the CMAs for minerals, these existing operations would be designated as an allowable use. Therefore, there would be no potential access restrictions to the high priority mineral and energy locations within BLM LUPA lands; however, the access to any expansion of these high priority mineral and energy locations could be severely restricted and result in moderate impacts overall.

Rare Earth Element Areas: There would be potential access restrictions to approximately 28,000 acres of rare earth element areas from existing conservation and proposed Reserve Design Lands. This is approximately 70% of the defined rare earth element areas within the BLM LUPA lands. The potential access restrictions would be significant relative to the rare earth element areas within those lands. CMAs for existing operations could reduce impacts, but likely not to a significant degree.

Locatable Mineral Areas: There would be potential access restrictions to approximately 276,000 acres of locatable mineral areas from existing conservation and proposed Reserve Design Lands. This is approximately 91% of the defined locatable mineral areas within BLM LUPA lands. There would be approximately 9,000 acres of ACECs closed to locatable mineral extraction; the remaining acres of ACECs would be open with stipulations and restrictions. The potential access restrictions would be significant relative to the locatable mineral areas within BLM LUPA lands. CMAs for locatable mineral areas may reduce these impacts somewhat, but it is still likely that the impacts to the availability of locatable minerals would be moderate to significant.

Leasable Mineral Areas: There would be potential access restrictions to approximately 49,000 acres of leasable mineral areas from existing conservation and proposed Reserve Design Lands. This is approximately 69% of the defined leasable mineral areas within BLM LUPA lands. The potential access restrictions would be significant relative to the leasable mineral areas within those lands. CMAs for leasable mineral areas may reduce these impacts somewhat, but it is still likely that the impacts to the availability of leasable minerals would be significant.

Mineral Material Areas: There would be potential access restrictions to approximately 72,000 acres of mineral material areas from existing conservation and proposed Reserve Design Lands. This is approximately 78% of the defined mineral material areas within BLM LUPA lands. There would be approximately 1,000 acres of ACECs closed to mineral material extraction; the remaining acres of ACECs would be open with stipulations and restric-

tions. The potential access restrictions would be significant relative to the mineral material areas within BLM LUPA lands. CMAs for mineral material resources would reduce impacts, but it is still likely that the impacts to the availability of mineral material areas would be significant.

Summary: CMAs and mitigation measures outlined for Plan-wide impacts to mineral resources from conservation and Reserve Design Lands would apply to BLM lands. Within some ACECs, mineral resource uses would be closed (no access would be allowed). Restrictions and stipulations within other Reserve Design Lands, such as some ACECs and SRMAs, would allow limited access. CMAs allowing mineral resource use with restrictions and stipulations would reduce adverse impacts to mineral resources from Plan implementation under Alternative 3. Existing mining claims and mineral resource related access would still be allowed, further reducing impacts.

IV.15.3.5.3 Impacts of Natural Community Conservation Plan: Alternative 3

The analysis of Covered Activities under the NCCP is equivalent to the Plan-wide analysis of interagency alternatives. Reserve design features and other conservation actions under the NCCP alternatives represent more detailed categories of the reserve design under the interagency Plan-wide alternatives. These NCCP differences in reserve design features do not affect nonbiological resources analyzed in this document, and the analysis of reserve design and conservation and management actions under the NCCP is therefore equivalent to the Plan-wide analysis of the interagency alternatives, as described in Section IV.15.3.5.1.

IV.15.3.5.4 Impacts of General Conservation Plan: Alternative 3

The impacts of the GCP for Alternative 3 would be similar to those defined in Section IV.15.3.2.1 for the Plan-wide analysis, but they would occur only on nonfederal lands. Potential impacts to grazing allotments resulting from DFAs under Alternative 3 on the GCP (nonfederal lands only) are summarized below and presented in Table IV.15-47.

Table IV.15-47
Potential Acres of Mineral Resources Impacts on GCP Lands by Technology Type – Alternative 3

Mineral Resources	Mineral Resources within GCP Lands (acres)	Potential Mineral Resources Impacts by Technology Type (acres)			
		Solar	*Wind*	*GT*	*Transmission*
Geothermal resources	225,000	18,000	100	5,000	3,000
High potential mineral areas	191,000	2,000	100	100	300
High priority mineral & energy locations	24,000	400	0	0	30

Table IV.15-47
Potential Acres of Mineral Resources Impacts on GCP Lands by Technology Type – Alternative 3

Mineral Resources	Mineral Resources within GCP Lands (acres)	Potential Mineral Resources Impacts by Technology Type (acres)			
		Solar	*Wind*	*GT*	*Transmission*
Rare earth element areas	4,000	0	0	0	0
Locatable mineral areas	41,000	200	0	0	50
Leasable mineral areas	13,000	0	0	0	0
Mineral material areas	9,000	100	0	0	40

Note: 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.

Potential impacts to mineral resources under the Preferred Alternative for the GCP are listed below and described in more detail in Section IV.15.2.

Geothermal: There would be potential access restrictions to approximately 26,000 acres of geothermal resources from development of solar, wind, and transmission facilities. There would be approximately 5,000 acres within the GCP available for geothermal resource development, reducing impacts to approximately 9% of the defined geothermal resources within the GCP. The potential access restrictions would be minimal relative to the geothermal resources within the GCP.

High Potential Mineral Areas: There would be potential access restrictions to approximately 3,000 acres of high potential mineral areas from development of solar, wind, geothermal, and transmission facilities. This is approximately 2% of the defined high potential mineral areas within the GCP. The potential access restrictions would be minimal relative to the high potential mineral areas within the GCP.

High Priority Mineral and Energy Locations: There would be approximately 430 acres of high priority mineral and energy locations within DFAs; however, per the CMAs for minerals, these existing operations would be designated as an allowable use. Therefore, there would be no potential access restrictions to the high priority mineral and energy locations within the GCP.

Rare Earth Element Areas: There would be no potential access restrictions to rare earth element areas from development of solar, wind, geothermal, or transmission facilities within the GCP.

Locatable Mineral Areas: There would be potential access restrictions to approximately 300 acres of locatable mineral areas from development of solar, wind, and transmission facilities. This is approximately 0.9% of the defined locatable mineral areas within the GCP. The potential access restrictions would be minimal relative to the locatable mineral areas within the GCP.

Leasable Mineral Areas: There would be no potential access restrictions to leasable mineral areas from development of solar, wind, geothermal, or transmission facilities within the GCP.

Mineral Material Areas: There would be potential access restrictions to approximately 140 acres of mineral material areas from development of solar, wind, and transmission facilities. This is approximately 1.5% of the defined mineral material areas within the GCP. The potential access restrictions would be minimal relative to the mineral material areas within the GCP.

Under Alternative 3, mineral resources found within Reserve Design Lands (existing conservation and Conservation Planning Areas) on GCP lands are summarized below and presented in Table IV.15-48.

Table IV.15-48
Estimated Acres of Mineral Resources
within Reserve Design Lands on GCP Lands – Alternative 3

Mineral Resources	Mineral Resources within GCP Lands (acres)	Existing Conservation Areas (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Geothermal resources	225,000	5,000	100	2.3
High potential mineral areas	191,000	15,000	12,000	14.5
High priority mineral & energy locations	24,000	0	2,000	8.7
Rare earth element areas	4,000	40	100	4.3
Locatable mineral areas	41,000	20	3,000	7.2
Leasable mineral areas	13,000	0	1,000	5.1
Mineral material areas	9,000	100	400	7.8

Note: 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.

Geothermal: There would be potential access restrictions to approximately 5,000 acres of geothermal resources from existing conservation and proposed Reserve Design Lands

within the GCP, all within the Imperial Borrego Valley ecoregion subarea. This is approximately 2% of the defined geothermal resources within the GCP. The potential access restrictions would be minimal relative to the geothermal resources within the Plan Area.

High Potential Mineral Areas: There would be potential access restrictions to approximately 27,000 acres of high potential mineral areas from existing conservation and proposed Reserve Design Lands within the GCP throughout the majority of ecoregion subareas. This is approximately 15% of the defined high potential mineral areas within the GCP. The potential access restrictions would be moderate relative to the high potential mineral areas within the GCP. CMAs for high potential mineral areas would effectively reduce impacts.

High Priority Mineral and Energy Locations: There would be approximately 2,000 acres of high priority mineral and energy locations within existing conservation and proposed Reserve Design Lands; however, per the CMAs for minerals, these existing operations would be designated as an allowable use. Therefore, there would be no potential access restrictions to the high priority mineral and energy locations within the GCP.

Rare Earth Element Areas: There would be potential access restrictions to approximately 140 acres of rare earth element areas from existing conservation and proposed Reserve Design Lands within the GCP, primarily within the Kingston and Funeral Mountains ecoregion subarea. This is approximately 9% of the defined rare earth element areas within the GCP. The potential access restrictions would be minimal relative to the rare earth element areas within the GCP.

Locatable Mineral Areas: There would be potential access restrictions to approximately 3,000 acres of locatable mineral areas from existing conservation and proposed Reserve Design Lands within the GCP throughout the majority of ecoregion subareas. This is approximately 7% of the defined locatable mineral areas within the GCP. The potential access restrictions would be minimal relative to the locatable mineral areas within the GCP.

Leasable Mineral Areas: There would be potential access restrictions to approximately 1,000 acres of leasable mineral areas from existing conservation and proposed Reserve Design Lands within the GCP, primarily within the Providence and Bullion Mountains ecoregion subarea. This is approximately 5% of the defined leasable mineral areas within the Plan Area. The potential access restrictions would be minimal relative to the leasable mineral areas within the GCP.

Mineral Material Areas: There would be potential access restrictions to approximately 500 acres of mineral material areas from existing conservation and proposed Reserve Design Lands within the GCP. This is approximately 8% of the defined mineral material

areas within the GCP. The potential access restrictions would be minimal relative to the mineral material areas within the GCP.

IV.15.3.5.5 Impacts Outside the Plan Area

IV.15.3.5.5.1 Impacts of Transmission Outside the Plan Area

The impacts of transmission outside the Plan Area on mineral resources would be the same under all alternatives. These impacts are as described for the No Action Alternative in Section IV.15.3.1.5.

IV.15.3.5.5.2 Impacts of BLM LUPA Decisions Outside the Plan Area

Potential impacts mineral resources resulting from BLM LUPA decisions under Alternative 3 for the CDCA outside the Plan Area are summarized below and presented in Table IV.15-49.

Table IV.15-49
Estimated Acres of Mineral Resources
in BLM LUPA Lands Outside the Plan Area – Alternative 3

Mineral Resources	Mineral Resources within BLM LUPA Lands Outside the Plan Area	Proposed NLCS (acres)*	Existing & Proposed ACECs (acres)*	Trail Management Corridors (acres/miles	
Geothermal resources	23,000	15,000	22,000	0	0
High potential mineral areas	175,000	32,000	48,000	500	0
High priority mineral & energy locations	2,000	0	0	0	0
Rare earth element areas	19,000	2,000	5,000	0	0
Locatable mineral areas	7,000	100	5,000	0	0
Leasable mineral areas	0	0	0	0	0
Mineral material areas	6,000	200	3,000	100	0

Note: 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.
* These designations may overlap

Geothermal: There would be potential access restrictions to the majority of geothermal resources from existing conservation and proposed Reserve Design Lands outside the Plan Area. This is nearly all of the defined geothermal resources outside the Plan Area. The

potential access restrictions would be significant relative to the geothermal resources outside the Plan Area. Stipulations and restrictions for mineral resource allowable uses in CMAs for geothermal resources would reduce impacts, but likely not to a significant degree.

High Potential Mineral Areas: There would be potential access restrictions to approximately 118,000 acres of high potential mineral areas from existing conservation and proposed Reserve Design Lands outside the Plan Area. This is approximately 67% of the defined high potential mineral areas outside the Plan Area. The potential access restrictions would be significant relative to the high potential mineral areas outside the Plan Area. CMAs for high potential mineral areas would reduce impacts, but likely not to a significant degree.

High Priority Mineral and Energy Locations: There would be no potential access restrictions of high priority mineral and energy locations from existing conservation and proposed Reserve Design Lands outside the Plan Area.

Rare Earth Element Areas: There would be potential access restrictions to approximately 7,000 acres of rare earth element areas from existing conservation and proposed Reserve Design Lands outside the Plan Area. This is approximately 37% of the defined rare earth element areas outside the Plan Area. The potential access restrictions would be moderate relative to the rare earth element areas outside the Plan Area. CMAs for rare earth element areas would reduce impacts.

Locatable Mineral Areas: There would be potential access restrictions to approximately 5,000 acres of locatable mineral areas from existing conservation and proposed Reserve Design Lands outside the Plan Area. This is approximately 69% of the defined locatable mineral areas outside the Plan Area. The potential access restrictions would be significant relative to the locatable mineral areas outside the Plan Area.

Leasable Mineral Areas: There would be no potential access restrictions to leasable mineral areas from existing conservation and proposed Reserve Design Lands outside the Plan Area.

Mineral Material Areas: There would be potential access restrictions to approximately 3,000 acres of mineral material areas from existing conservation and proposed Reserve Design Lands outside the Plan Area. This is approximately 55% of the defined mineral material areas outside the Plan Area. There would be approximately 100 acres of ACECs closed to mineral material extraction; the remaining acres of ACECs would be open with stipulations and restrictions. The potential access restrictions would be significant relative to the mineral material areas outside the Plan Area.

IV.15.3.5.6 CEQA Significance Determination for Alternative 3

MR-1: Plan components would reduce or improve access to and development of known and future mineral resources. The availability of lands for renewable energy and transmission development may restrict access to future mineral resource areas. Impacts from potential access restrictions from renewable energy and transmission development would be reduced with implementation of MR-1a, which requires early coordination between developers and mineral leaseholders. Impacts would be further reduced with implementation of CMAs that require avoiding impacts to mineral resource areas. Overall, impacts of the proposed development of renewable energy and transmission on mineral resources would be less than significant with implementation of CMAs.

Areas designated for reserve design, conservation, and protection would likely result in reduced access to future mineral resource areas. For high potential mineral areas, rare earth element areas, locatable mineral and leasable mineral areas, the impacts would be significant from the potential restriction of access. Specifically, there would be approximately 1,089,000 acres of high potential mineral areas throughout the majority of ecoregion subareas that may experience reduced access or restrictions. For rare earth element areas, the Molycorp Mountain Pass rare earth mine may experience restrictions on future expansion, and approximately 44,000 acres may be impacted primarily within the Kingston and Funeral Mountains and Pinto Lucerne Valley and Eastern Slopes ecoregion subareas. For locatable minerals, approximately 239,000 acres within the majority of ecoregion subareas may experience restricted access on future development. For leasable minerals, approximately 49,000 acres may experience restricted access on future development. For these mineral resources, impacts would be significant. CMAs would reduce impacts; however, impacts created by the reserve design and conservation components of Alternative 3 would remain significant and would remain significant and unmitigable.

IV.15.3.5.7 Comparison of Alternative 3 With Preferred Alternative

Chapter IV.27 presents a comparison of all action alternatives and the No Action Alternative across all disciplines. This section summarizes the comparison of Alternative 3 with the Preferred Alternative.

IV.15.3.5.7.1 Alternative 3 Compared With Preferred Alternative for Plan-wide DRECP

A comparison between Alternative 3 and the Preferred Alternative within DFAs for the Plan-wide DRECP is summarized in Table IV.15-50.

Table IV.15-50
Alternative 3 Compared with the Preferred Alternative on DFAs for the Plan-wide DRECP

Mineral Resource	Alternative 3	Preferred Alternative	Comparison
Geothermal	31,100 10,000 geothermal	23,100 6,000 geothermal	Alternative 3 would result in 8,000 more acres of DFAs within geothermal resource areas than the Preferred Alternative. Alternative 3 would have 4,000 more acres available for geothermal development.
High potential mineral areas	5,400	3,300	Alternative 3 would result in 2,100 more acres of DFAs within high potential mineral areas than the Preferred Alternative.
High priority mineral & energy locations	2,100	0	While proposed DFAs would overlap them, the existing high priority mineral and energy locations would be an allowable use under both alternatives.
Rare earth element areas	0	0	Alternative 3 and Preferred Alternative would be the same.
Locatable mineral areas	1,130	800	Alternative 3 would result in 330 more acres of DFAs within locatable mineral areas than the Preferred Alternative.
Leasable mineral areas	0	0	Alternative 3 and Preferred Alternative would be the same.
Mineral material areas	1,720	1,400	Alternative 3 would result in 320 more acres of DFAs within mineral material areas than the Preferred Alternative.

Note: 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.

A comparison between Alternative 3 and the Preferred Alternative Reserve Design Lands for the Plan-wide DRECP is summarized in Table IV.15-51.

Table IV.15-51
Alternative 3 Compared With the Preferred Alternative on Reserve Design Lands for the Plan-wide DRECP

Mineral Resource	Alternative 3 (acres)	Preferred Alternative (acres)	Comparison
Geothermal	30,100	24,100	Alternative 3 would result in 6,000 more acres of Reserve Design Lands within geothermal resource areas than the Preferred Alternative.
High potential mineral areas	1,089,000	793,000	Alternative 3 would result in 296,000 more acres of Reserve Design Lands within high potential mineral areas than the Preferred Alternative.
High priority mineral & energy locations	14,100	12,100	While proposed DFAs would overlap them, the existing high priority mineral and energy locations would be an allowable use under both alternatives.
Rare earth element areas	44,200	44,200	Alternative 3 and Preferred Alternative would be the same.
Locatable mineral areas *ACEC acres closed to extraction*	239,000 *9,000*	189,000 *2,000*	Alternative 3 would result in 50,000 more acres of Reserve Design Lands within locatable mineral areas than the Preferred Alternative.
Leasable mineral areas	49,000	7,000	Alternative 3 would result 42,000 more acres of Reserve Design Lands within leasable mineral areas than the Preferred Alternative.
Mineral material areas *ACEC acres closed to extraction*	39,400 *700*	33,100 *100*	Alternative 3 would result in 6,300 more acres of Reserve Design Lands within mineral material areas than the Preferred Alternative.

Note: 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.

IV.15.3.5.7.2 Alternative 3 Compared With Preferred Alternative for the BLM Land Use Plan Amendment

A comparison between Alternative 3 and the Preferred Alternative within DFAs for BLM-administered lands is summarized in Table IV.15-52.

Table IV.15-52
Alternative 3 Compared With the Preferred Alternative on DFAs for BLM Lands

Mineral Resource	Alternative 3 (acres)	Preferred Alternative (acres)	Comparison
Geothermal	11,000 4,000 geothermal	4,400 2,000 geothermal	Alternative 3 would result in 6,600 more acres of DFAs within geothermal resource areas than the Preferred Alternative. The Preferred Alternative would have 1,004 more acres available for geothermal development.
High potential mineral areas	2,220	3,300	Alternative 3 would result in 1,080 fewer acres of DFAs within high potential mineral areas than the Preferred Alternative.
High priority mineral & energy locations	20	0	While proposed DFAs would overlap them, the existing high priority mineral and energy locations would be an allowable use under both alternatives.
Rare earth element areas	0	0	Alternative 3 and Preferred Alternative would be the same.
Locatable mineral areas	620	700	Alternative 3 would result in 80 fewer acres of DFAs within locatable mineral areas than the Preferred Alternative.
Leasable mineral areas	0	0	Alternative 3 and Preferred Alternative would be the same.
Mineral material areas	1,620	1,600	Alternative 3 would result in 20 more acres of DFAs within mineral material areas than the Preferred Alternative.

Note: 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.

A comparison between Alternative 3 and the Preferred Alternative within Reserve Design Lands for the BLM-administered lands is summarized in Table IV.15-53.

Table IV.15-53
Alternative 3 Compared With Preferred Alternative on Reserve Design Lands for BLM Lands

Mineral Resource	Alternative 3 (acres)	Preferred Alternative (acres)	Comparison
Geothermal	63,400	44,000	Alternative 3 would have 19,400 more acres of Reserve Design Lands within geothermal areas than the Preferred Alternative.
High potential mineral areas	660,000	442,000	Alternative 3 would have 218,000 more acres of Reserve Design Lands within high potential mineral areas than the Preferred Alternative.
High priority mineral & energy locations	24,000	21,000	While proposed DFAs would overlap them, the existing high priority mineral and energy locations would be an allowable use under both alternatives.
Rare earth element areas	28,120	28,000	Alternative 3 would have 120 more acres of Reserve Design Lands within rare earth element areas than the Preferred Alternative.
Locatable mineral areas *ACEC acres closed to extraction*	276,000 *9,000*	212,000 *2,000*	Alternative 3 would have 64,000 more acres of Reserve Design Lands within locatable mineral areas than the Preferred Alternative.
Leasable mineral areas	49,000	6,000	Alternative 3 would have 43,000 more acres of Reserve Design Lands within leasable mineral areas than the Preferred Alternative.
Mineral material areas *ACEC acres closed to extraction*	72,000 *700*	59,000 *100*	Alternative 3 would have 13,000 more acres of Reserve Design Lands within mineral material areas than the Preferred Alternative.

Note: 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.

IV.15.3.5.7.3 Alternative 3 Compared with Preferred Alternative for NCCP

The impacts of the NCCP for Alternative 3 are the same as those defined in Section IV.15.3.2.1 for the Plan-wide analysis. As a result, the comparison of Alternative 3 with the Preferred Alternative for the NCCP is the same as described above for the Plan-wide DRECP.

IV.15.3.5.7.4 Alternative 3 Compared with Preferred Alternative for the GCP

A comparison between Alternative 3 and the Preferred Alternative within DFAs for GCP (nonfederal) lands is summarized in Table IV.15-54.

Table IV.15-54
Alternative 3 Compared With the Preferred Alternative on DFAs for GCP Lands

Mineral Resource	Alternative 3 (acres)	Preferred Alternative (acres)	Comparison
Geothermal	26,100 5,000 geothermal	17,000 3,000 geothermal	Alternative 3 would result in 9,100 more acres of DFAs within geothermal resource areas than the Preferred Alternative. The Preferred Alternative would have 2,000 fewer acres available for geothermal development.
High potential mineral areas	2,500	1,300	Alternative 3 would result in 1,200 more acres of DFAs within high potential mineral areas than the Preferred Alternative.
High priority mineral & energy locations	430	20	While proposed DFAs would overlap them, the existing high priority mineral and energy locations would be an allowable use under both alternatives.
Rare earth element areas	0	0	Alternative 3 and the Preferred Alternative would be the same.
Locatable mineral areas	250	200	Alternative 3 would result in 50 more acres of DFAs within locatable mineral areas than the Preferred Alternative.
Leasable mineral areas	0	0	Alternative 3 and the Preferred Alternative would be the same.
Mineral material areas	140	100	Alternative 3 would result in 40 more acres of DFAs within mineral material areas than the Preferred Alternative.

Note: 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.

A comparison between Alternative 3 and the Preferred Alternative within existing and proposed conservation lands or Reserve Design Lands for the GCP lands is summarized in Table IV.15-55.

Table IV.15-55
Alternative 3 Compared With Preferred Alternative on Reserve Design Lands for GCP Lands

Mineral Resource	Alternative 3 (acres)	Preferred Alternative (acres)	Comparison
Geothermal	5,100	5,000	Alternative 3 would have 100 more acres of Reserve Design Lands within geothermal areas than the Preferred Alternative.
High potential mineral areas	27,000	23,000	Alternative 3 would have 4,000 more acres of Reserve Design Lands within high potential mineral areas than the Preferred Alternative.
High priority mineral & energy locations	2,000	2,000	While proposed DFAs would overlap them, the existing high priority mineral and energy locations would be an allowable use under both alternatives.
Rare earth element areas	140	200	Alternative 3 would have 60 fewer acres of Reserve Design Lands within rare earth element areas than the Preferred Alternative.
Locatable mineral areas	3,020	3,000	Alternative 3 would have 20 more acres of Reserve Design Lands within locatable mineral areas than the Preferred Alternative.
Leasable mineral areas	1,000	800	Alternative 3 would have 200 more acres of Reserve Design Lands within leasable mineral areas than the Preferred Alternative.
Mineral material areas	500	500	Alternative 3 would be the same as the Preferred Alternative.

Note: 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.

IV.15.3.6 Alternative 4

IV.15.3.6.1 Plan-wide Impacts of Implementing the DRECP: Alternative 4

IV.15.3.6.1.1 Plan-wide Impacts and Mitigation Measures from Renewable Energy and Transmission Development

Impact Assessment

Impact MR-1: Plan components would reduce or improve access to and development of known and future mineral resources.

Potential impacts to mineral resources resulting from renewable energy and transmission facility development within DFAs under Alternative 4 are summarized in Table IV.15-56 and presented in Table R2.15-34 (Appendix R2).

Table IV.15-56
Potential Acres of Mineral Resource Impacts by Technology Type – Alternative 4

Resource Type	Mineral Resources (acres)	Potential Mineral Resource Impacts by Technology Type (acres)			
		Solar	*Wind*	*GT*	*Transmission*
Geothermal resources	347,000	19,000	100	10,000	2,000
High potential mineral areas	1,519,000	2,000	100	200	600
High priority mineral & energy locations	101,000	300	0	0	30
Rare earth element areas	59,000	0	0	0	0
Locatable mineral areas	348,000	800	100	0	200
Leasable mineral areas	84,000	0	0	0	0
Mineral material areas	101,000	700	50	100	300

Note: 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.

Potential impacts to mineral resources under Alternative 4 are listed below and described in more detail in Section IV.15.2.

Geothermal: There would be potential access restrictions to approximately 31,000 acres of geothermal resources from development of solar, wind, and transmission facilities, primarily within the Imperial Borrego Valley ecoregion subarea. There would be 10,000 acres within the Plan Area available for geothermal resource development, reducing impacts to 6% of the defined geothermal resources within the Plan Area. The potential access restric-

tions would be minimal relative to the geothermal resources within the Plan Area, even without mitigation requiring avoidance of mineral resources.

High Potential Mineral Areas: There would be potential access restrictions to approximately 3,000 acres of high potential mineral areas from development of solar, wind, geothermal, and transmission facilities throughout the majority of ecoregion subareas. This is approximately 0.2% of the defined high potential mineral areas within the Plan Area. The potential access restrictions would be minimal relative to the high potential mineral areas within the Plan Area, even without mitigation requiring avoidance of these mineral resources.

High Priority Mineral and Energy Locations: There would be approximately 330 acres of high priority mineral and energy locations within DFAs; however, per the CMAs for minerals, these existing operations would be designated as an allowable use. Therefore, there would be no potential access restrictions to the high priority mineral and energy locations within the Plan Area.

Rare Earth Element Areas: There would be no potential access restrictions to rare earth element areas from development of solar, wind, geothermal, or transmission facilities within the Plan Area.

Locatable Mineral Areas: There would be potential access restrictions to approximately 800 acres of locatable mineral areas from development of solar, wind, and transmission facilities, primarily within the Cadiz Valley and Chocolate Mountains ecoregion subarea. This is approximately 0.3% of the defined locatable mineral areas within the Plan Area. The potential access restrictions would be minimal relative to the locatable mineral areas within the Plan Area.

Leasable Mineral Areas: There would be no potential access restrictions to leasable mineral areas from development of solar, wind, geothermal, or transmission facilities.

Mineral Material Areas: There would be potential access restrictions to approximately 1,000 acres of mineral material areas from development of solar, geothermal, and transmission facilities, primarily within the Cadiz Valley and Chocolate Mountains ecoregion subarea. This is approximately 0.8% of the defined mineral material areas within the Plan Area. The potential access restrictions would be minimal relative to the mineral material areas within the Plan Area.

Impacts in Study Area Lands

Future Assessment Areas. There are no FAAs under Alternative 4.

Special Analysis Areas. Designating the SAAs as conservation may impact mineral resources. Impacts would be the same as those explained for the Plan-wide reserve design in the section "Impacts of the Reserve Design."

DRECP Variance Lands. DRECP Variance Lands represent the BLM Solar PEIS Variance Lands for the EIR/EIS, based on BLM screening criteria. Covered Activities could be permitted for NCCP purposes only through an NCCP plan amendment. However, development of renewable energy on variance lands would not require a BLM LUPA, so the environmental review process would be somewhat simpler than if the location were left undesignated. Development designation of the DRECP Variance Lands could result in access restrictions to mineral resources as follows:

- Geothermal Resources: Approximately 17,000 acres within the Imperial Borrego Valley ecoregion subarea.
- High Potential Mineral Areas: Approximately 87,000 acres, primarily within the Cadiz Valley and Chocolate Mountains and Imperial Borrego Valley ecoregion subarea.
- High Priority Mineral and Energy Locations: Approximately 15,000 acres, within the Imperial Borrego Valley ecoregion subarea.
- Rare Earth Element Areas: Approximately 100 acres within the Kingston and Funeral Mountains ecoregion subarea, potentially impacting the Molycorp Mountain Pass rare earth mine.
- Locatable Minerals: Approximately 47,000 acres throughout the majority ecoregion subareas, with the majority within the Imperial Borrego Valley ecoregion subarea.
- Leasable Minerals: Approximately 18,000 acres all within the Providence and Bullion Mountains ecoregion subarea.
- Mineral Materials: Approximately 17,000 acres throughout the majority of ecoregion subareas, but primarily within the Imperial Borrego Valley ecoregion subarea.

Impact Reduction Strategies and Mitigation

Implementation of the Plan would result in conservation of some desert lands and development of renewable energy generation and transmission facilities on other lands. There are several ways that the impacts of the renewable energy development in the Plan would be reduced. First, the Plan incorporates CMAs for each alternative, including specific biological reserve design components and LUPA components. Also, the implementation of existing laws, orders, regulations and standards would reduce the impacts of project development. If significant impacts would still result after both implementation of CMAs and compliance

with applicable laws and regulations, then specific mitigation measures are recommended in this section.

Conservation and Management Actions

The conservation strategy for Alternative 4 (see Section II.3.1.1) defines specific actions that would reduce the impacts of this alternative. The conservation strategy includes the definition of the reserve design and specific CMAs for the Preferred Alternative. While the CMAs were developed for BLM lands only, this analysis assumes that all CMAs would also apply to nonfederal lands.

The following CMAs apply to all action alternatives, including Alternative 4:

Minerals CMAs for BLM Land for the Entire Plan Area

For identified minerals lands and existing mining and energy development (locatable, salable, solid leasable and geothermal minerals) with currently approved Plans of Operations, Notices, Mine and Reclamation Plans or Plans of Development (43 CFR 3200; 3500; 3600; and 3802/09), the mineral resources have been described as the same as the Preferred Alternative (Section IV.15.3.2.1.1).

CMAs under Alternative 4 for NLCS lands would be the same as the Preferred Alternative for mineral resources except for the following:

- **Leasable Minerals:** May be allowed. Nonsurface Occupancy is required outside of nondesignated lands, Variance Lands, and DFAs.
- **Locatable Minerals:** Subject to deed restrictions, location of mining claims is nondiscretionary. Plans of operation will include actions to reduce potential impacts on sensitive receptors. Mitigation, subject to technical and economic feasibility, will be required.
- **Saleable Minerals:** Continuous use of existing areas of sand and gravel extractions is allowed, subject to BLM permits. New operations may also be allowed, subject to deed restrictions.

The following CMAs apply to Alternative 4 for proposed NLCS lands:

- **Locatable Minerals:** Locatable minerals would be treated the same as limited or controlled use areas and a plan of operations will be required for greater than casual use (CFR 3809.11). Proposed for withdrawal, subject to valid existing rights (VERs) and grandfathered uses. Develop priority list of ecoregion subareas for

potential withdrawal. Initiate segregation of one subregion annually and complete mineral withdrawal review process (within 2-year timeframe for each subregion).

- **Leasable Minerals:** Leasing permitted if values of conservation lands are protected or enhanced through mitigation or compensation.
- **Saleable Minerals:** Available for mineral materials development. Mitigation and compensation must result in a net benefit to NLCS.

Laws and Regulations

Similar to the No Action Alternative, existing laws and regulations will reduce certain impacts of Plan implementation. Relevant regulations are presented in the Regulatory Setting in Volume III. The requirements of relevant laws and regulations are summarized above for the No Action Alternative in Section IV.15.3.1.1.1.

Mitigation Measures

After implementation of the CMAs and existing laws and regulations, the following mitigation measure is recommended to further reduce adverse impacts.

MR-1 **Coordinate to Ensure Access to Mineral Resources.** Where valid mining claims or leases exist, initiate early coordination with claim or lease holders to define avoidance measures that would not restrict access to mineral resource facilities.

IV.15.3.6.1.2 Impacts from Reserve Design

Potential impacts to mineral resources resulting from Reserve Design Lands under Alternative 4 are summarized in Table IV.15-57 and presented in Table R2.15-35 (Appendix R2).

Table IV.15-57
Estimated Acres of Mineral Resources Within Reserve Design Lands – Alternative 4

Resource Type	Mineral Resources in Subarea (acres)	Existing Conservation Areas (acres)	BLM LUPA Conservation Designations (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Geothermal resources	347,000	20,000	7,000	200	7.7
High potential mineral areas	1,519,000	653,000	346,000	14,000	66.7
High priority mineral & energy locations	101,000	100	11,000	2,000	13.6

Table IV.15-57
Estimated Acres of Mineral Resources Within Reserve Design Lands – Alternative 4

Resource Type	Mineral Resources in Subarea (acres)	Existing Conservation Areas (acres)	BLM LUPA Conservation Designations (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Rare earth element areas	59,000	24,000	20,000	200	75.9
Locatable mineral areas	348,000	11,000	153,000	4,000	48.5
Leasable mineral areas	84,000	0	48,000	1,000	57.2
Mineral material areas	101,000	1,000	32,000	400	32.8

Note: 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.

Geothermal: There would be potential access restrictions to approximately 27,000 acres of geothermal resources from existing conservation and proposed Reserve Design Lands. This is approximately 8% of the defined geothermal resources within the Plan Area. The potential access restrictions would be small relative to the geothermal resources within the Plan Area, even without stipulations related to existing claims and allowable uses.

High Potential Mineral Areas: There would be potential access restrictions to approximately 1,013,000 acres of high potential mineral areas from existing conservation and proposed Reserve Design Lands throughout the majority of ecoregion subareas. This is approximately 67% of the defined high potential mineral areas within the Plan Area. The potential access restrictions would be significant relative to the high potential mineral areas within the Plan Area. CMAs for high potential mineral areas would reduce impacts; however, impacts would remain significant overall.

High Priority Mineral and Energy Locations: There would be approximately 13,000 acres of high priority mineral and energy locations within existing conservation and proposed Reserve Design Lands; however, per the CMAs for minerals, these existing operations would be designated as an allowable use. Therefore, there would be no potential access restrictions to the high priority mineral and energy locations within the Plan Area.

Rare Earth Element Areas: There would be potential access restrictions to approximately 44,000 acres of rare earth element areas from existing conservation and proposed Reserve Design Lands, primarily within the Kingston and Funeral Mountains and Pinto Lucerne Valley and Eastern Slopes ecoregion subareas. This is approximately 76% of the defined

rare earth element areas within the Plan Area. The potential access restrictions would be significant relative to the rare earth element areas within the Plan Area. CMAs for existing operations would reduce impacts; however, impacts would remain significant overall.

Locatable Mineral Areas: There would be potential access restrictions to approximately 168,000 acres of locatable mineral areas from existing conservation and proposed Reserve Design Lands. This is approximately 49% of the defined locatable mineral areas within the Plan Area. There are approximately 2,000 acres of ACECs closed to locatable mineral extraction, the remaining acres of ACECs would be open with stipulations and restrictions. The potential access restrictions would be moderate relative to the locatable mineral areas within the Plan Area.

Leasable Mineral Areas: There would be potential access restrictions to approximately 49,000 acres of leasable mineral areas from existing conservation and proposed Reserve Design Lands. This is approximately 57% of the defined leasable mineral areas within the Plan Area. The potential access restrictions would be significant relative to the leasable mineral areas within the Plan Area. CMAs for leasable mineral areas would reduce impacts; however, impacts would remain significant overall.

Mineral Material Areas: There would be potential access restrictions to approximately 33,000 acres of mineral material areas from existing conservation and proposed Reserve Design Lands. This is approximately 33% of the defined mineral material areas within the Plan Area. There are approximately 400 acres of ACECs closed to mineral material extraction; the remaining acres of ACECs would be open with stipulations and restrictions. The potential access restrictions would be moderate relative to the mineral material areas within the Plan Area.

Summary: Establishing new conservation areas would create access restrictions to currently undeveloped mineral resource areas and prevent future exploration within acquired lands in Conservation Planning Areas. Access restrictions would reduce availability of known mineral resources valuable to the region, the state, and to locally important mineral resource recovery sites. Management actions for Alternative 4 would require withdrawal of locatable mineral development over time. It would be available for mineral materials and would be available for geothermal development with stipulations. Because Alternative 4 would have management actions that would allow mining in the NLCS lands, overall impacts would be reduced.

Within conservation lands on BLM-administered lands, exploration and access could continue following the area-specific management plans, including disturbance caps. Also, unpatented mining claims would continue to be subject to valid existing rights. Impacts to mineral resources from restrictions to access due to acquisition of Conservation Planning

Area lands would be significant for high potential mineral areas, rare earth element areas, and leasable mineral areas. CMAs would reduce impacts; however, impacts would remain significant and unmitigable under Alternative 4.

IV.15.3.6.2 Impacts of DRECP Land Use Plan Amendment on BLM Land: Alternative 4

This section addresses two components of effects of the BLM LUPA: the streamlined development of renewable energy and transmission on BLM land under the LUPA, and the impacts of the amended land use plans themselves.

IV.15.3.6.2.1 Impacts from Renewable Energy and Transmission Development on BLM Land

Potential impacts to mineral resources resulting from renewable energy and transmission facility development within DFAs under Alternative 4 for BLM lands are summarized below and presented in Table IV.15-58.

Table IV.15-58
Estimated Acres of Mineral Resources Within DFAs by Technology Type on BLM LUPA Lands – Alternative 4

Mineral Resources	Mineral Resources in BLM LUPA (acres)	Potential Mineral Resource Impacts by Technology (acres)			
		Solar	*Wind*	*GT*	*Transmission*
Geothermal resources	92,000	2,000	0	4,000	300
High potential mineral areas	835,000	700	100	100	400
High priority mineral & energy locations	77,000	300	0	0	0
Rare earth element areas	40,000	0	0	0	0
Locatable mineral areas	302,000	600	50	0	100
Leasable mineral areas	71,000	0	0	0	0
Mineral material areas	92,000	700	50	100	200

Note: 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.

In areas where DFAs overlap with mineral resource areas, potential renewable energy and transmission development within DFAs would have the following impacts:

Geothermal: There would be potential access restrictions to approximately 6,000 acres of geothermal resources from development of solar and transmission facilities on BLM LUPA lands. There would be approximately 4,000 acres within BLM LUPA lands available for geothermal resource development, reducing impacts of the defined geothermal resources within BLM LUPA lands. The potential access restrictions would be minimal relative to the geothermal resources with BLM LUPA lands, even without mitigation requiring avoidance of mineral resources.

High Potential Mineral Areas: There would be potential access restrictions to approximately 1,000 acres of high potential mineral areas from development of solar, wind, geothermal, and transmission facilities within BLM LUPA lands. This is approximately 0.2% of the defined high potential mineral areas within those lands. The potential access restrictions would be minimal relative to the high potential mineral areas within BLM LUPA lands, even without mitigation requiring avoidance of these mineral resources.

High Priority Mineral and Energy Locations: There would be approximately 300 acres of high priority mineral and energy locations within DFAs; however, per the CMAs for minerals, these existing operations would be designated as an allowable use. Therefore, there would be no potential access restrictions to the high priority mineral and energy locations within BLM LUPA lands.

Rare Earth Element Areas: There would be no potential access restrictions to rare earth element areas from development of solar, wind, geothermal, or transmission facilities within BLM LUPA lands.

Locatable Mineral Areas: There would be potential access restrictions to approximately 1,000 acres of locatable mineral areas from development of solar, wind, and transmission facilities within BLM LUPA lands. This is approximately 0.2% of the defined locatable mineral areas within BLM LUPA lands. The potential access restrictions would be minimal relative to the locatable mineral areas within BLM LUPA lands.

Leasable Mineral Areas: There would be no potential access restrictions to leasable mineral areas from development of solar, wind, geothermal, or transmission facilities within BLM LUPA lands.

Mineral Material Areas: There would be potential access restrictions to approximately 1,000 acres of mineral material areas from development of solar, geothermal, and transmission facilities within BLM LUPA lands. This is approximately 0.8% of the defined mineral material areas within BLM LUPA lands. The potential access restrictions would be minimal relative to the mineral material areas within BLM LUPA lands.

IV.15.3.6.2.2 Impacts of Changes to BLM Land Designations

Potential impacts to mineral resources resulting from Reserve Design Lands under Alternative 4 on BLM lands are summarized below and in Table IV.15-59.

Table IV.15-59
Estimated Acres of Mineral Resources in BLM LUPA Land Designation – Alternative 4

Mineral Resources	Mineral Resources in BLM LUPA Lands (acres)	Mineral Resources in BLM Land Designations						
		SRMAs (acres)	*NLCS (acres)*	*ACEC (acres)*	*Wildlife Allocation (acres)*	*Manage d LWCs (acres)*	*Trail Management Corridors (acres/miles)*	
Geothermal resources	92,000	24,000	4,000	17,000	0	0	0	0
High potential mineral areas	835,000	39,000	183,000	143,000	71,000	17,000	11,000	5
High priority mineral & energy locations	77,000	7,000	100	11,000	1,000	4,000	0	0
Rare earth element areas	40,000	0	8,000	20,000	0	0	0	0
Locatable mineral areas	302,000	13,000	119,000	42,000	0	2,000	100	0
Leasable mineral areas	71,000	0	5,000	0	44,000	0	0	0
Mineral material areas	92,000	16,000	21,000	14,000	0	1,000	1,000	0

Note: There is overlap between some, but not all, BLM land designations, such as overlap of ACECs and National Scenic and Historic Trail (NSHT) management corridors or lands with wilderness characteristics. This overlap may result in the appearance of greater acres of overlap between mineral resources and conservation lands than actually exists.
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.

Geothermal: There would be potential access restrictions to approximately 45,000 acres of geothermal resources from existing conservation and proposed BLM designations. This is approximately 49% of the defined geothermal resources within BLM LUPA lands. The potential access restrictions would be moderate relative to the geothermal resources within the BLM LUPA lands. CMAs for high potential mineral areas would reduce impacts.

High Potential Mineral Areas: There would be potential access restrictions to approximately 464,000 acres of high potential mineral areas from existing conservation and proposed Reserve Design Lands. This is approximately 56% of the defined high potential mineral areas within BLM LUPA lands. The potential access restrictions would be significant relative to the high potential mineral areas within BLM LUPA lands. CMAs for high potential mineral areas would reduce impacts; however, impacts would remain significant overall.

High Priority Mineral and Energy Locations: There would be approximately 23,000 acres within existing conservation and proposed Reserve Design Lands; however, per the CMAs for minerals, these existing operations would be designated as an allowable use. Therefore, there would be no potential access restrictions to the existing high priority mineral and energy locations within BLM LUPA lands. However, any future expansion areas may be limited or restricted by Reserve Design Lands.

Rare Earth Element Areas: There would be potential access restrictions to approximately 28,000 acres of rare earth element areas from existing conservation and proposed Reserve Design Lands, primarily within the Kingston and Funeral Mountains and Pinto Lucerne Valley and Eastern Slopes ecoregion subareas. This is approximately 70% of the defined rare earth element areas within the BLM LUPA lands. The potential access restrictions would be significant relative to the rare earth element areas within BLM LUPA lands. CMAs for existing operations would reduce impacts; however, impacts would remain significant overall.

Locatable Mineral Areas: There would be potential access restrictions to approximately 176,000 acres of locatable mineral areas from existing conservation and proposed Reserve Design Lands. This is approximately 58% of the defined locatable mineral areas within BLM LUPA lands. There are approximately 2,000 acres of ACECs closed to locatable mineral extraction; the remaining acres of ACECs would be open with stipulations and restrictions. The potential access restrictions would be significant relative to the locatable mineral areas within BLM LUPA lands.

Leasable Mineral Areas: There would be potential access restrictions to approximately 49,000 acres of leasable mineral areas from existing conservation and proposed Reserve Design Lands. This is approximately 69% of the defined leasable mineral areas within BLM LUPA lands. The potential access restrictions would be significant relative to the leasable mineral areas within BLM LUPA lands. CMAs for leasable mineral areas would reduce impacts; however, impacts would remain significant overall.

Mineral Material Areas: There would be potential access restrictions to approximately 53,000 acres of mineral material areas from existing conservation and proposed Reserve Design Lands. This is approximately 58% of the defined mineral material areas within BLM

LUPA lands. There are approximately 400 acres of ACECs closed to mineral material extraction, the remaining acres of ACECs would be open with stipulations and restrictions. The potential access restrictions would be significant relative to the mineral material areas within BLM LUPA lands.

Summary: CMAs and mitigation measures outlined for Plan-wide impacts to mineral resources from conservation and Reserve Design Lands would apply to BLM lands. Within some ACECs, mineral resource uses would be closed (no access would be allowed). Restrictions and stipulations within other Reserve Design Lands, such as some ACECs and SRMAs, would allow limited access. CMAs allowing mineral resource use with restrictions and stipulations would reduce adverse impacts to mineral resources from Plan implementation under Alternative 4. Existing mining claims and mineral resource-related access would continue to be allowed, further reducing impacts.

IV.15.3.6.3 Impacts of Natural Community Conservation Plan: Alternative 4

The analysis of Covered Activities under the NCCP is equivalent to the Plan-wide analysis of the interagency alternatives. Reserve design features and other conservation actions under the NCCP alternatives represent more detailed categories of the reserve design under interagency Plan-wide alternatives. These NCCP differences in reserve design features do not affect nonbiological resources analyzed in this document, and the analysis of reserve design and conservation and management actions under the NCCP is therefore equivalent to the Plan-wide analysis of the interagency alternatives, as described in Section IV.15.3.6.1.

IV.15.3.6.4 Impacts of General Conservation Plan: Alternative 4

The impacts of the GCP for Alternative 4 would be similar to those defined in Section IV.15.3.2.1 for the Plan-wide analysis, but they would occur only on nonfederal lands. Potential impacts to grazing allotments resulting from DFAs under Alternative 4 on GCP (nonfederal lands only) are summarized below and presented in Table IV.15-60.

Table IV.15-60
Potential Acres of Mineral Resources Impacts on GCP Lands by Technology Type – Alternative 4

Mineral Resources	Mineral Resources within GCP Lands (acres)	Potential Mineral Resources Impacts by Technology (acres)			
		Solar	*Wind*	*GT*	*Transmission*
Geothermal resources	225,000	16,000	100	6,000	1,000
High potential mineral areas	191,000	1,000	100	100	100

Table IV.15-60
Potential Acres of Mineral Resources Impacts on GCP Lands by Technology Type – Alternative 4

Mineral Resources	Mineral Resources within GCP Lands (acres)	Potential Mineral Resources Impacts by Technology (acres)			
		Solar	*Wind*	*GT*	*Transmission*
High priority mineral & energy locations	24,000	20	0	0	20
Rare earth element areas	4,000	0	0	0	0
Locatable mineral areas	41,000	200	20	0	100
Leasable mineral areas	13,000	0	0	0	0
Mineral material areas	9,000	100	0	0	100

Note: 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.

Potential impacts to mineral resources under the Preferred Alternative for the GCP are listed below and described in more detail in Section IV.15.2.

Geothermal: There would be potential access restrictions to approximately 23,000 acres of geothermal resources from development of solar, wind, and transmission facilities. There would be approximately 6,000 acres within the GCP available for geothermal resource development, reducing impacts to about 5% of the defined geothermal resources within the GCP. The potential access restrictions would be minimal relative to the geothermal resources within the GCP, even without mitigation requiring avoidance of mineral resources.

High Potential Mineral Areas: There would be potential access restrictions to approximately 1,200 acres of high potential mineral areas from development of solar, wind, geothermal, and transmission facilities. This is approximately 0.8% of the defined high potential mineral areas within the GCP. The potential access restrictions would be minimal relative to the high potential mineral areas within the GCP, even without mitigation requiring avoidance of these mineral resources.

High Priority Mineral and Energy Locations: There would be potential access restrictions to approximately 40 acres of high priority mineral and energy locations from development of solar and transmission facilities. This is approximately 0.2% of the defined high potential mineral areas within the GCP. The potential access restrictions would be minimal

relative to the high potential mineral areas within the GCP, even without mitigation requiring avoidance of these mineral resources.

Rare Earth Element Areas: There would be no potential access restrictions to rare earth element areas from development of solar, wind, geothermal, or transmission facilities within the GCP.

Locatable Mineral Areas: There would be potential access restrictions to approximately 300 acres of locatable mineral areas from development of solar, wind, and transmission facilities. This is approximately 0.7% of the defined locatable mineral areas within the GCP. The potential access restrictions would be minimal relative to the locatable mineral areas within the GCP.

Leasable Mineral Areas: There would be no potential access restrictions to leasable mineral areas from development of solar, wind, geothermal, or transmission facilities within the GCP.

Mineral Material Areas: There would be potential access restrictions to approximately 200 acres of mineral material areas from development of solar, wind, and transmission facilities. This is approximately 0.2% of the defined mineral material areas within the GCP. The potential access restrictions would be very small relative to the mineral material areas within the GCP.

Under Alternative 4, mineral resources found within Reserve Design Lands (existing conservation and Conservation Planning Areas) on GCP lands are summarized below and presented in Table IV.15-61.

Table IV.15-61
Estimated Acres of Mineral Resources
Within Reserve Design Lands on GCP Lands – Alternative 4

Mineral Resources	Mineral Resources within GCP Lands (acres)	Existing Conservation Areas (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Geothermal resources	225,000	5,000	200	2.4
High potential mineral areas	191,000	15,000	14,000	15.2
High priority mineral & energy locations	24,000	0	2,000	9.3
Rare earth element areas	4,000	40	100	4.3
Locatable mineral areas	41,000	20	4,000	10.7

Table IV.15-61
Estimated Acres of Mineral Resources
Within Reserve Design Lands on GCP Lands – Alternative 4

Mineral Resources	Mineral Resources within GCP Lands (acres)	Existing Conservation Areas (acres)	Conservation Planning Areas (acres)	Percent in Conservation
Leasable mineral areas	13,000	0	700	5.1
Mineral material areas	9,000	100	400	8.4

Note: 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.

Geothermal: There would be potential access restrictions to approximately 5,000 acres of geothermal resources from existing conservation and proposed Reserve Design Lands within the GCP. This is approximately 2% of the defined geothermal resources within the GCP. The potential access restrictions would be minimal relative to the geothermal resources within the Plan Area, even without stipulations related to existing claims and allowable uses.

High Potential Mineral Areas: There would be potential access restrictions to approximately 29,000 acres of high potential mineral areas from existing conservation and proposed Reserve Design Lands within the GCP. This is approximately 15% of the defined high potential mineral areas within the GCP. The potential access restrictions would be minimal relative to the high potential mineral areas within the GCP. CMAs for high potential mineral areas would effectively reduce impacts.

High Priority Mineral and Energy Locations: There would be approximately 2,000 acres of high priority mineral and energy locations within existing conservation and proposed Reserve Design Lands; however, per the CMAs for minerals, these existing operations would be designated as allowable uses. Therefore, there would be no potential access restrictions to the high priority mineral and energy locations within the GCP.

Rare Earth Element Areas: There would be potential access restrictions to approximately 140 acres of rare earth element areas from existing conservation and proposed Reserve Design Lands within the GCP. This is approximately 4% of the defined rare earth element areas within the GCP. The potential access restrictions would be minimal relative to the rare earth element areas within the GCP, even without stipulations related to existing claims and allowable uses.

Locatable Mineral Areas: There would be potential access restrictions to approximately 4,000 acres of locatable mineral areas from existing conservation and proposed Reserve Design Lands within the GCP. This is approximately 11% of the defined locatable mineral areas within the GCP. The potential access restrictions would be minimal relative to the locatable mineral areas within the GCP, even without stipulations related to existing claims and allowable uses.

Leasable Mineral Areas: There would be potential access restrictions to approximately 700 acres of leasable mineral areas from existing conservation and proposed Reserve Design Lands within the GCP. This is approximately 5% of the defined leasable mineral areas within the Plan Area. The potential access restrictions would be minimal relative to the leasable mineral areas within the GCP, even without stipulations related to existing claims and allowable uses.

Mineral Material Areas: There would be potential access restrictions to approximately 500 acres of mineral material areas from existing conservation and proposed Reserve Design Lands within the GCP. This is approximately 8% of the defined mineral material areas within the GCP. The potential access restrictions would be minimal relative to the mineral material areas within the GCP, even without stipulations related to existing claims and allowable uses.

IV.15.3.6.5 Impacts Outside the Plan Area

IV.15.3.6.5.1 Impacts of Transmission Outside the Plan Area

The impacts of transmission outside the Plan Area on mineral resources would be the same under all alternatives. These impacts are as described for the No Action Alternative in Section IV.15.3.1.5.

IV.15.3.6.5.2 Impacts of BLM LUPA Decisions Outside the Plan Area

Potential impacts mineral resources resulting from BLM LUPA decisions under Alternative 4 for the CDCA outside the Plan Area are summarized below and presented in Table IV.15-62.

Table IV.15-62
Estimated Acres of Mineral Resources
in BLM LUPA Lands Outside the Plan Area – Alternative 4

Mineral Resources	Mineral Resources within BLM LUPA Lands Outside the Plan Area	Proposed NLCS (acres)*	Existing & Proposed ACECs (acres)*	Trail Management Corridors (acres/miles)	
Geothermal resources	23,000	16,000	22,000	0	0
High potential mineral areas	175,000	33,000	48,000	0	0
High priority mineral & energy locations	2,000	0	0	0	0
Rare earth element areas	19,000	2,000	5,000	0	0
Locatable mineral areas	7,000	200	5,000	0	0
Leasable mineral areas	0	0	0	0	0
Mineral material areas	6,000	200	3,000	0	0

Note: 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.
* Designations may overlap

Geothermal: There would be potential access restrictions to the majority of geothermal resources from existing conservation and proposed Reserve Design Lands outside the Plan Area. This is most of the defined geothermal resources outside the Plan Area. The potential access restrictions would be significant relative to the geothermal resources outside the Plan Area. Stipulations and restrictions for mineral resource allowable uses included in CMAs for geothermal resources would reduce impacts, but likely not to a significant degree.

High Potential Mineral Areas: There would be potential access restrictions to approximately 81,000 acres of high potential mineral areas from existing conservation and proposed Reserve Design Lands outside the Plan Area. This is approximately 46% of the defined high potential mineral areas outside the Plan Area. The potential access restrictions would be moderate relative to the high potential mineral areas outside the Plan Area. CMAs for high potential mineral areas would reduce impacts.

High Priority Mineral and Energy Locations: There would be no potential access restrictions of high priority mineral and energy locations from existing conservation and proposed Reserve Design Lands outside the Plan Area.

Rare Earth Element Areas: There would be potential access restrictions to approximately 7,000 acres of rare earth element areas from existing conservation and proposed Reserve Design Lands outside the Plan Area. This is approximately 37% of the defined rare earth element areas outside the Plan Area. The potential access restrictions would be moderate relative to the rare earth element areas outside the Plan Area. CMAs for rare earth element areas would reduce impacts.

Locatable Mineral Areas: There would be potential access restrictions to approximately 5,000 acres of locatable mineral areas from existing conservation and proposed Reserve Design Lands outside the Plan Area. This is approximately 68% of the defined locatable mineral areas outside the Plan Area. The potential access restrictions would be major relative to the locatable mineral areas outside the Plan Area.

Leasable Mineral Areas: There would be no potential access restrictions to leasable mineral areas from existing conservation and proposed Reserve Design Lands outside the Plan Area.

Mineral Material Areas: There would be potential access restrictions to approximately 3,000 acres of mineral material areas from existing conservation and proposed Reserve Design Lands outside the Plan Area. This is approximately 55% of the defined mineral material areas outside the Plan Area. There are approximately 200 acres of ACECs closed to mineral material extraction, the remaining acres of ACECs would be open with stipulations and restrictions. The potential access restrictions would be significant relative to the mineral material areas outside the Plan Area. CMAs for mineral material areas would reduce impacts.

IV.15.3.6.6 CEQA Significance Determination for Alternative 4

MR-1: Plan components would reduce or improve access to and development of known and future mineral resources. The availability of lands for renewable energy and transmission development may result in restrictions of access to future mineral resource areas. Impacts from potential access restrictions from renewable energy and transmission development would be reduced with implementation of MR-1a, which requires early coordination between developers and mineral leaseholders. Impacts would be further reduced with implementation of CMAs that require avoiding impacts to mineral resource areas. Overall, impacts of the proposed development of renewable energy and transmission development on mineral resources would be less than significant with implementation of CMAs.

DRECP Variance Lands may result in access restrictions to mineral resources, particularly for the following resources and areas:

- Geothermal resources (17,000 acres) in the Cadiz Valley and Chocolate Mountains ecoregion subarea;

- High potential mineral areas (90,000 acres) throughout the majority of ecoregion subareas;
- High priority mineral areas (15,000 acres) primarily within the Imperial Borrego Valley and Providence and Bullion Mountains ecoregion subareas;
- Locatable mineral areas (47,000 acres) throughout the majority of ecoregion subareas;
- Leasable mineral areas (18,000 acres) within the Providence and Bullion Mountains ecoregion subarea; and
- Mineral material areas (17,000 acres) throughout the majority of ecoregion subareas.

Areas designated for reserve design, conservation, and protection would likely result in reduced access to future mineral resource areas. For high potential mineral areas, rare earth element areas, and leasable mineral areas, the impacts would be significant from the potential restriction of access. Specifically, there would be approximately 1,013,000 acres of high potential mineral areas throughout the majority of ecoregion subareas that may experience reduced access or restrictions on future development. For rare earth element areas, the Molycorp Mountain Pass rare earth mine may experience restrictions on future expansion and approximately 44,000 acres may be impacted primarily within the Kingston and Funeral Mountains and Pinto Lucerne Valley and Eastern Slopes ecoregion subareas. For leasable minerals, approximately 49,000 acres may experience restricted access on future development. For these mineral resources, impacts would be significant. CMAs would reduce impacts; however, impacts created by the reserve design and conservation components of Alternative 4 would remain significant and unmitigable because the alternative's reserve design would restrict access to large areas of mineral resources..

IV.15.3.6.7 Comparison of Alternative 4 With Preferred Alternative

Chapter IV.27 presents a comparison of all action alternatives and the No Action Alternative across all disciplines. This section summarizes the comparison of Alternative 4 with the Preferred Alternative.

IV.15.3.6.7.1 Alternative 4 Compared With Preferred Alternative for Plan-wide DRECP

A comparison between Alternative 4 and the Preferred Alternative within DFAs for the Plan-wide DRECP is summarized in Table IV.15-63.

Table IV.15-63
Alternative 4 Compared With the Preferred Alternative on DFAs for the Plan-wide DRECP

Mineral Resource	Alternative 4	Preferred Alternative	Comparison
Geothermal	31,100 10,000 geothermal	23,100 6,000 geothermal	Alternative 4 would result in 8,000 more acres of DFAs within geothermal resource areas than the Preferred Alternative. Alternative 4 would have 4,000 more acres available for geothermal development.
High potential mineral areas	2,900	3,300	Alternative 4 would result in 400 more acres of DFAs within high potential mineral areas than the Preferred Alternative.
High priority mineral & energy locations	330	0	While proposed DFAs would overlap them, the existing high priority mineral and energy locations would be an allowable use under both alternatives.
Rare earth element areas	0	0	Alternative 4 and Preferred Alternative would be the same.
Locatable mineral areas	1,100	800	Alternative 4 would result in 300 more acres of DFAs within locatable mineral areas than the Preferred Alternative.
Leasable mineral areas	0	0	Alternative 4 and Preferred Alternative would be the same.
Mineral material areas	1,150	1,400	Alternative 4 would result in 250 fewer acres of DFAs within mineral material areas than the Preferred Alternative.

Note: 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.

A comparison between Alternative 4 and the Preferred Alternative Reserve Design Lands for the Plan-wide DRECP is summarized in Table IV.15-64.

Table IV.15-64
Alternative 4 Compared With the Preferred Alternative on Reserve Design Lands for the Plan-wide DRECP

Mineral Resource	Alternative 4 (acres)	Preferred Alternative (acres)	Comparison
Geothermal	27,200	24,100	Alternative 4 would result in 3,100 more acres of Reserve Design Lands within geothermal resource areas than the Preferred Alternative.
High potential mineral areas	1,013,000	793,000	Alternative 4 would result in 220,000 more acres of Reserve Design Lands within high potential mineral areas than the Preferred Alternative.
High priority mineral & energy locations	13,100	12,100	While proposed DFAs would overlap them, the existing high priority mineral and energy locations would be an allowable use under both alternatives.
Rare earth element areas	44,200	44,200	Alternative 4 and Preferred Alternative would be the same.
Locatable mineral areas *ACEC acres closed to extraction*	168,000 *2,000*	189,000 *2,000*	Alternative 4 would result in 21,000 fewer acres of Reserve Design Lands within locatable mineral areas than the Preferred Alternative.
Leasable mineral areas	48,700	7,000	Alternative 4 would result 41,700 more acres of Reserve Design Lands within leasable mineral areas than the Preferred Alternative.
Mineral material areas *ACEC acres closed to extraction*	33,100 *400*	33,100 *100*	Alternative 4 and Preferred Alternative would be the same.

Note: 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.

IV.15.3.6.7.2 Alternative 4 Compared With Preferred Alternative for the BLM Land Use Plan Amendment

A comparison between Alternative 4 and the Preferred Alternative within DFAs for BLM-administered lands is summarized in Table IV.15-65.

Table IV.15-65
Alternative 4 Compared with the Preferred Alternative on DFAs for BLM Lands

Mineral Resource	Alternative 4 (acres)	Preferred Alternative (acres)	Comparison
Geothermal	6,300 4,000 geothermal	4,400 2,000 geothermal	Alternative 4 would result in 1,900 more acres of DFAs within geothermal resource areas than the Preferred Alternative. The Preferred Alternative would have 2,000 fewer acres available for geothermal development.
High potential mineral areas	1,300	3,300	Alternative 4 would result in 2,000 fewer acres of DFAs within high potential mineral areas than the Preferred Alternative.
High priority mineral & energy locations	300	0	While proposed DFAs would overlap them, the existing high priority mineral and energy locations would be an allowable use under both alternatives.
Rare earth element areas	0	0	Alternative 4 and Preferred Alternative would be the same.
Locatable mineral areas	750	700	Alternative 4 would result in 50 more acres of DFAs within locatable mineral areas than the Preferred Alternative.
Leasable mineral areas	0	0	Alternative 4 and Preferred Alternative would be the same.
Mineral material areas	1,050	1,600	Alternative 4 would result in 550 fewer acres of DFAs within mineral material areas than the Preferred Alternative.

Note: 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.

A comparison between Alternative 4 and the Preferred Alternative within Reserve Design Lands for the BLM-administered lands is summarized in Table IV.15-66.

Table IV.15-66
Alternative 4 Compared With Preferred Alternative on Reserve Design Lands for BLM Lands

Mineral Resource	Alternative 4 (acres)	Preferred Alternative (acres)	Comparison
Geothermal	45,000	44,000	Alternative 4 would have 1,000 more acres of Reserve Design Lands within geothermal areas than the Preferred Alternative.
High potential mineral areas	465,000	442,000	Alternative 4 would have 22,000 more acres of Reserve Design Lands within high potential mineral areas than the Preferred Alternative.
High priority mineral & energy locations	23,100	21,000	While proposed DFAs would overlap them, the existing high priority mineral and energy locations would be an allow-able use under both alternatives.
Rare earth element areas	28,000	28,000	Alternative 4 and Preferred Alternative would be the same.
Locatable mineral areas *ACEC acres closed to extraction*	176,100 *2,000*	212,000 *2,000*	Alternative 4 would have 35,900 fewer acres of Reserve Design Lands within locatable mineral areas than the Preferred Alternative.
Leasable mineral areas	49,000	6,000	Alternative 4 would have 43,000 more acres of Reserve Design Lands within leasable mineral areas than the Preferred Alternative.
Mineral material areas *ACEC acres closed to extraction*	53,000 *400*	59,000 *100*	Alternative 4 would have 6,000 fewer acres of Reserve Design Lands within mineral material areas than the Preferred Alternative.

Note: 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.

IV.15.3.6.7.3 Alternative 4 Compared With Preferred Alternative for NCCP

The impacts of the NCCP for Alternative 4 are the same as those defined in Section IV.15.3.2.1 for the Plan-wide analysis. As a result, the comparison of Alternative 4 with the Preferred Alternative for the NCCP is the same as described above for Plan-wide DRECP.

IV.15.3.6.7.4 Alternative 4 Compared With Preferred Alternative for the GCP

A comparison between Alternative 4 and the Preferred Alternative within DFAs for GCP (nonfederal) lands is summarized in Table IV.15-67.

Table IV.15-67
Alternative 4 Compared with the Preferred Alternative on DFAs for GCP Lands

Mineral Resource	Alternative 4 (acres)	Preferred Alternative (acres)	Comparison
Geothermal	23,100 6,000 geothermal	17,000 3,000 geothermal	Alternative 4 would result in 6,000 more acres of DFAs within geothermal resource areas than the Preferred Alternative. The Preferred Alternative would have 3,000 fewer acres available for geothermal development.
High potential mineral areas	1,300	1,300	Alternative 4 and Preferred Alternative would be the same.
High priority mineral & energy locations	40	20	While proposed DFAs would overlap them, the existing high priority mineral and energy locations would be an allowable use under both alternatives.
Rare earth element areas	0	0	Alternative 4 and the Preferred Alternative would be the same.
Locatable mineral areas	320	200	Alternative 4 would result in 120 more acres of DFAs within locatable mineral areas than the Preferred Alternative.
Leasable mineral areas	0	0	Alternative 4 and the Preferred Alternative would be the same.
Mineral material areas	200	100	Alternative 4 would result in 100 more acres of DFAs within mineral material areas than the Preferred Alternative.

Note: 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.

A comparison between Alternative 4 and the Preferred Alternative within existing and proposed conservation lands or Reserve Design Lands for the GCP lands is summarized in Table IV.15-68.

Table IV.15-68
Alternative 4 Compared With Preferred Alternative on Reserve Design Lands for GCP Lands

Mineral Resource	Alternative 4 (acres)	Preferred Alternative (acres)	Comparison
Geothermal	5,200	5,000	Alternative 4 would have 200 more acres of Reserve Design Lands within geothermal areas than the Preferred Alternative.
High potential mineral areas	29,000	23,000	Alternative 4 would have 6,000 more acres of Reserve Design Lands within high potential mineral areas than the Preferred Alternative.
High priority mineral & energy locations	2,000	2,000	While proposed DFAs would overlap them, the existing high priority mineral and energy locations would be an allowable use under both alternatives.
Rare earth element areas	140	200	Alternative 4 would have 60 fewer acres of Reserve Design Lands within rare earth element areas than the Preferred Alternative.
Locatable mineral areas	4,020	3,000	Alternative 4 would have 31,020 more acres of Reserve Design Lands within locatable mineral areas than the Preferred Alternative.
Leasable mineral areas	700	800	Alternative 4 would have 100 fewer acres of Reserve Design Lands within leasable mineral areas than the Preferred Alternative.
Mineral material areas	500	500	Alternative 4 would be the same as the Preferred Alternative.

Note: 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.

IV.15.3.7 Summary of Alternatives

Table IV.15-69 provides a summary of potential acres impacted for the Plan-wide analysis area for technology, conservation lands, and study area lands.

Table IV.15-69
Summary Alternative Comparison of Potential Mineral Resource Impacts by Technology, Conservation Lands, and Study Area Lands for the Plan-wide DRECP

Mineral Resource	No Action Alternative	Preferred Alternative	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Technology Impacts (acres)						
Geothermal resources	8,700	23,100	45,000	22,200	40,100	31,100
High potential mineral areas	7,340	3,300	4,130	6,200	5,400	2,900
High priority mineral & energy locations	440	0	50	1,200	2,100	330
Rare earth element areas	800	0	0	100	0	0
Locatable mineral areas	4,430	800	600	5,000	1,130	1,100
Leasable mineral areas	0	0	0	0	0	0
Mineral material areas	1,570	1,400	600	1,200	1,720	1,150
TOTAL	**23,280**	**28,600**	**50,380**	**35,900**	**50,450**	**36,580**
Existing Conservation Areas / Reserve Design Lands (acres)						
Geothermal resources	32,000	24,100	28,300	30,100	30,100	27,200
High potential mineral areas	784,000	793,000	1,054,000	1,098,000	1,089,000	1,013,000
High priority mineral & energy locations	100	12,100	13,100	34,100	14,100	13,100
Rare earth element areas	33,000	44,200	44,200	52,400	44,200	44,100
Locatable mineral areas	106,000	189,000	236,000	233,000	239,000	168,000
Leasable mineral areas	0	7,000	48,700	67,000	49,000	49,000
Mineral material areas	23,700	33,100	38,300	71,100	39,400	33,400
TOTAL	**978,800**	**1,102,500**	**1,462,600**	**1,585,700**	**1,504,800**	**1,347,800**
Study Area Lands (acres)						
Future Assessment Areas						
Geothermal resources	0	0	0	0	0	0
High potential mineral areas	0	11,000	0	4,000	100	0
High priority mineral & energy locations	0	10,000	0	0	0	0
Rare earth element areas	0	7,000	0	0	0	0

Table IV.15-69
Summary Alternative Comparison of Potential Mineral Resource Impacts by Technology, Conservation Lands, and Study Area Lands for the Plan-wide DRECP

Mineral Resource	No Action Alternative	Preferred Alternative	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Locatable mineral areas	0	0	0	0	0	0
Leasable mineral areas	0	8,000	0	0	0	0
Mineral material areas	0	700	0	0	0	0
Special Analysis Areas						
Geothermal resources	0	*	0	0	0	0
High potential mineral areas	0	*	0	0	0	0
High priority mineral & energy locations	0	*	0	0	0	0
Rare earth element areas	0	*	0	0	0	0
Locatable mineral areas	0	*	0	0	0	0
Leasable mineral areas	0	*	0	0	0	0
Mineral material areas	0	*	0	0	0	0
DRECP Variance Lands						
Geothermal resources	0	0	2,000	0	0	17,000
High potential mineral areas	0	0	4,000	0	0	87,000
High priority mineral & energy locations	0	0	300	0	0	0
Rare earth element areas	0	0	0	0	0	100
Locatable mineral areas	0	0	0	0	0	47,000
Leasable mineral areas	0	0	500	0	0	18,000
Mineral material areas	0	600	3,000	0	0	17,000
TOTAL	**0**	**373,000***	**9,800**	**4,000**	**100**	**186,100**

* There are two areas defined as SAAs. These areas are in the Silurian Valley and just west of Highway 395 in Kern County.

Note: 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.