CALIFORNIA
NATIVE PLANT SOCIETY

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Sent via electronic mail to docket@energy.ca.gov

Subject: DRECP NEPA/CEQA (comments on the Draft Desert Renewable Energy Conservation Plan and Environmental Impact Statement/Environmental Impact Report)

To Whom It May Concern:
Please find enclosed and fully consider these comments from the California Native Plant Society (CNPS) regarding the draft Desert Renewable Energy Conservation Plan (DRECP) and associated draft NEPA/CEQA documentation. We appreciate the opportunity to provide the DRECP agencies with our comments, and the attention given to our comments by reviewers.

CNPS is a California 501c(3) non-profit organization with nearly 10,000 members representing 34 Chapters across California and Baja California, MX, all working to protect California's native plant heritage and preserve it for future generations.

We appreciate the opportunity to provide the DRECP agencies with these native plant-focused comments regarding the draft DRECP and associated NEPA/CEQA reports. The comments in this letter supplement comments submitted in two other letters sent to the DRECP agencies by a desert NGO coalition of which CNPS is a partner. Those letters address our shared concerns with what we feel are fundamental problems with the draft, and with the draft agreement between the California Department of Fish and Wildlife (CDFW) and the U.S. Bureau of Land Management (BLM) and the draft Agreement's ability to ensure lasting protections on BLM-managed lands and meet the conservation and recovery requirements of the NCCP Act. We incorporate the comments of the group letters herein by reference, and have attached copies for your reference.

CNPS has remained committed to the DRECP process since it formally began in 2009, and has been a member of the Stakeholder Group since 2010. We continue to devote considerable organizational resources to ensuring the DRECP (or Plan) will ultimately achieve its highest potential to conserve desert species and develop renewable energy in appropriately sited places.

While we afirm our continued commitment to the Plan's development, we can not support this version of a draft DRECP because of serious flaws that we believe prevent the draft Plan from providing sufficient conservation for desert native plant species and communities given the scope of development proposed. We articulate our concerns herein, and feel the Plan will need to undergo significant revision in order to address the breadth of concerns that we and others have

collectively raised. Where we can, we have included recommendations for actions that can address our concerns. In this way we strive to work with the DRECP agencies, the energy industry, fellow Stakeholders, and local community members to find the path that leads to a successful Plan.

1. Draft DRECP Natural Communities

The draft Plan fails to establish clear, quantifiable, and measurable NCCP BGOs and BLM LUPA Conservation and Management Actions (CMAs) for DRECP natural communities. As a result, it is not possible to evaluate whether the conservation strategy for DRECP natural communities is achievable.

The draft DRECP also fails to use available information to identify areas where important natural communities occur across the Plan Area. This is of critical concern for key areas of natural community ranges where models and empirical field data indicate there is potential for future range expansion under changing climate conditions.

Lacking this information, the draft Plan proposes land designations that conflict with and potentially eliminate the conservation value of lands critical to the future of DRECP natural communities including Joshua tree woodland, microphyll woodland, dune, and other rare (S1-S3 ranked) natural communities. We provide examples of these concerns below. While not an exhaustive list of examples, they are representative of the type of problems that need to be addressed through revision of the current draft DRECP.

Joshua tree woodland

Joshua tree woodland is an iconic natural community of the Mojave Desert that supports a high biological diversity including nesting habitat for native birds and a food source for Mohave ground squirrels. Joshua tree woodland vegetation alliance has a rank of S3, and is threatened by development. Joshua tree woodland continues to decline throughout the state as the result of direct removal, fragmentation, exposure to increased wildfire from the result of continuing urbanization and agricultural expansion, and climate change. The continual loss of Joshua tree woodland is a conservation concern that can be effectively addressed through DRECP natural community BGOs and BLM LUPA CMAs.

The draft DRECP fails to use available information to clearly identify areas where Joshua tree woodland is known to occur across the Plan Area. The draft Plan also fails to establish clear, quantifiable, and measurable NCCP BGOs and BLM LUPA Conservation and Management Actions (CMAs) for this natural community, especially for key areas of its range where models and empirical field data indicate potential for future range expansion under changing climate conditions.

Lacking this information, the draft Plan proposes land designations that conflict with or otherwise eliminate the conservation potential of lands critical to the future of DRECP covered natural communities including Joshua tree woodland, microphyll woodland, dune, and other rare (S1-S3 ranked) natural communities.

The Plan must be revised to establish clear, quantitative, and measurable conservation targets for natural communities, and to remove ambiguity from, and thereby strengthen, avoidance and minimization CMAs for natural communities. A revised Plan must also include additional analyses to identify priority conservation areas for natural communities that are consistent with revised BGOs and CMAs. We provide more detail regarding these recommendations below.

i. Establish clear, quantitative, and measurable Plan-wide BGOs for Joshua tree
The draft DRECP BGO Goal L1 and Objective L1.4 prioritize the types of areas to be conserved for Joshua tree within the Plan Area, specifically;

> "Create a Plan-wide reserve design consisting of a mosaic of natural communities with habitat linkages that is adaptive to changing conditions and includes temperature and precipitation gradients, elevation gradients, and a diversity of geological facets that provide for movement and gene flow and accommodate range shifts and expansions in response to climate change." (Landscape Features and Habitat Connectivity Plan-Wide BGO Goal L1),

and

> "Conserve unique landscape features, important landforms, and rare or unique vegetation types identified within the Plan Area, including: ...areas of dense Joshua tree woodland" and "rare natural community alliances." (Goal L1, Objective L1.4) Both at DRECP Appendix C, p. C-9.

In principle, these are admirable goals and objectives. However, by not specifying the quantity of a natural community's baseline distribution to be conserved and where, the draft DRECP provides no means by which to analyze whether these goals and objectives are achievable under the proposed conservation strategy.

In earlier drafts, DRECP BGOs had clearly defined conservation targets for natural communities. [1] These earlier quantitative-based BGO proposals have been removed from the current draft DRECP with no explanation or rationale provided for their removal. For example, earlier BGOs developed for microphyll woodland and dune natural communities included,

> "Conserve the areal extent of at least 90% of all existing microphyll woodlands relative to existing levels in each Conservation Area." (April 10, 2013)

> "Within existing microphyll woodlands, conserve the areal extent of at least 95% of smoke tree woodland, honey mesquite riparian form and desert willow microphyll woodland rare alliances relative to existing levels in each Conservation Area." (April 10, 2013 memo)

[1] Draft DRECP 4-BGO Driver memo of April 10, 2013, and Draft DRECP 3-BGO Driver memo of May 20, 2013.

> "Conserve the entirety of the eight rare alliances in the Reserve System, and ensure that Covered Activities in the DFAs do not diminish or obstruct eolian transport into the Reserve System." (May 20, 2013 memo)

Here was a conservation strategy being driven by clear, quantitative BGOs that state the target quantity of natural community to be conserved and where. In the current draft, the heart of the conservation strategy for covered natural communities is summarized by a generic statement repeated for each natural community listed in the Appendix C BGO tables,

> "conserve (insert natural community name) in the (insert name) subarea(s)" where it occurs. (Appendix C, Table C-1 pp. C12-C20)

This direction is too generic to be meaningful as a conservation strategy for natural communities, and is a gross oversimplification of the more detailed BGOs for natural communities that appeared in previous draft DRECP documents. We attach the previous documents for your reference and as examples of the type of quantitative BGO targets we had expected would be developed for the DRECP, and that we feel are essential to its ultimate success as a conservation plan.

The acreage for Joshua tree woodland (*Yucca brevifolia* alliance) provided in DRECP's Natural Community tables does not include all available mapped acreage for this community (see section ii below), and there are no quantitative Plan-wide or subarea-specific BGO conservation targets. Without an accurate baseline or an acreage target for Joshua tree, the draft DRECP has provided no means to determine whether cumulative impacts from covered activities and/or other activities over the term of the Plan will have exceeded the threshold of viability for the natural community in the Plan Area.

The insufficiency of the BGOs are exacerbated by weak conservation language used to develop avoidance and minimization Conservation and Management Actions (CMAs) for natural communities under the DRECP's BLM LUPA component. CMAs call for avoidance and minimization of natural communities, "to the maximum extent practicable." While requiring maximum avoidance and minimization of impacts is commendable, the ambiguous and subjective nature of the CMA requirement provides no certainty that the community will maintain viable in the face of cumulative impacts. The amount of impacts to DRECP natural communities becomes even less constrained through the "unavoidable impacts to resources" allowance associated with natural community CMAs (e.g., CMA AM-DFA-RIPWET-1 p. II.3-49, and elsewhere).

The draft BGO L1.4 for Joshua tree woodlands, "*Conserve…[a]reas of dense Joshua tree woodland*," is unclear. Within the context of BGO L1.4, what is the definition of "dense"? What is the baseline distribution of "dense" Joshua tree woodland? How much of this baseline must be conserved to meet the goals of the DRECP, and where? The draft DRECP fails to provide clarity to these fundamental questions. We recommend removing the word "dense" as a qualification threshold for Joshua tree woodland conservation. If retained, then "dense" must be defined, and a quantitative conservation target for "dense" stands established.

The National Vegetation Classification System's (NVCS) membership rules for Joshua tree woodland (*Yucca brevifolia* Woodland Alliance) is for Joshua trees to be "evenly distributed at ≥1% cover."[2] The 2013 DRECP, the 2013 revised JTNP, and the 2004 MDEP vegetation maps all used a ≥1% canopy cover threshold for mapping Joshua tree woodland. Therefore, if defining "dense" Joshua tree woodland is based on available vegetation map data, then the most applicable definition is the ≥1% canopy cover standard.

The 2013 DRECP vegetation map, covering approximately 7 million acres of the DRECP Plan Area, used three density classes to map Joshua tree woodland; <1%, 1-5%, and >5% canopy cover. It delineates approximately 16,400 acres of Joshua tree woodland at >5% canopy cover, and these usually are only found at higher or wetter sites where clonal stands occur. Woodland stands at >5% cover represents less than 2% of the combined acreage of woodland stands (≥1% cover) mapped in California to date. See Figure JT-4. While these higher-density stands are definitely a conservation priority for Joshua tree woodland, they must not be the type and density that defines a DRECP conservation requirement. We recommend removing the term "dense" from Joshua tree woodland natural community BGOs. If the term is not removed, the NVCS membership rule of ≥1% canopy cover should define "dense Joshua tree woodland."

For a subsequent draft revision, we recommend establishing a range of conservation targets for Joshua tree woodland, whereby a 100% aerial extent BGO target is set for the uncommon, >5% canopy cover stands of Joshua tree, and for Joshua tree woodlands in transitional habitat areas. In other areas, a lower aerial extent target could be appropriate. We offer the following model from which to build quantitative BGOs for Joshua tree woodland, and other rare natural communities within the DRECP Plan Area.

a. *Conserve 100% of the aerial extent of Joshua tree woodland alliance with >5% canopy cover within the subareas where they occur.* See Joshua tree conflicts in Bird Spring Canyon related to the proposed Tehachapi Wind project and SRMA that highlight the need for this conservation target.
b. *Conserve 100% of the aerial extent of Joshua tree woodland alliance with ≥1% canopy cover in priority transitional habitat areas where the community has the potential to expand its range across elevation and temperature gradients in response to climate change.* We identify Some of these are within Preferred Alternative DFAs. Because of their location in potential transitional habitat and their uncommon density, their conservation should be a high priority.
c. *Conserve 95% of the aerial extent of Joshua tree woodland alliance with ≥1% canopy cover within the subareas where they occur.*
d. *Conserve Joshua tree woodland alliance with <1% canopy cover to the maximum extent practicable as per the avoidance and minimization CMA for Joshua tree woodland.* See below for recommendations for Joshua tree CMA language.

[2] Sawyer, J., T. Keeler-Wolf, J. Evens. 2009. A manual of California vegetation, 2nd Edition. California Native Plant Society. Sacramento, CA. p. 301.

ii. Revise DRECP Joshua tree distribution map (see Figures JT1-JT6)
Three vegetation maps that identify Joshua tree woodland at the alliance level are publicly available; the 2013 DRECP vegetation map, the 2013-revised Joshua Tree National Park (JTNP) vegetation map, and the 2004 Mojave Desert Ecosystem Project (MDEP) vegetation map.

The draft DRECP Joshua tree map (Appendix C, Figure C-17) displays a combination of Joshua tree woodland distribution from the 2013 DRECP and 2013 JTNP vegetation maps, but not the 2004 MDEP map. Rather, the DRECP combines the MDEP Joshua tree information into its related vegetation Macrogroup, the Mojave and Great Basin upper bajada and toe slope (MGUT) community. Furthermore, Joshua tree woodland alliance mapped by the MDEP within the CDCA but outside the DRECP boundary has been clipped from the draft DRECP map since it is not a resource within the Plan Area. As a result, important Joshua tree woodland areas originally in the MDEP map that occur in important CDCA LUPA conservation areas are indistinguishable from the aggregated MGUT layer and become, in practice, invisible to planning and conservation considerations. A revised DRECP must include a complete Joshua tree woodland distribution map.

CNPS recommends revising the DRECP distribution map for Joshua tree alliance to show all available mapped distribution information for California. This can improve conservation planning decisions by helping to prioritize conservation actions for Joshua tree, especially at the periphery of its range and/or where populations have the opportunity to expand into new, transitional habitats without direct management intervention (i.e., assisted migration). A more complete map will also better illustrate where this community occurs within proposed BLM LUPA designations, and add to the importance and relevance of administering proposed ACECs and/or NCLs for Joshua tree conservation.

iii. Revise BLM LUPA ACEC / NCL worksheet language to state that Joshua tree woodland natural community conservation is a management priority.
For proposed ACEC / NCL designations on lands with Joshua tree woodland natural community occurrences, CNPS recommends adding language to the BLM LUPA worksheets that will highlight the importance and relevance of conserving Joshua tree through the administration of these designations. We propose the following language to be added to NLCS designation worksheets listed below:

Joshua tree woodland is an iconic natural community of the Mojave Desert that supports a high biological diversity including nesting habitat for native birds and a food source for Mohave ground squirrels. Joshua tree woodland vegetation alliance has a rank of S3, and is threatened by many factors including; development, grazing, vandalism, direct removal, habitat fragmentation, exposure to increased wildfire from the result of continuing urbanization and agricultural expansion, and climate change. Management of the (name) ACEC / NCL will address the conservation of Joshua tree woodlands by monitoring population trends, removing and /or preventing threats to this natural community, and taking remedial actions when impacts to Joshua tree woodland occurs.

List of LUPA designations to which Joshua tree language should be added:
- Cerro Gordo - Congolomerate Mesa ACEC designation

• Castle Mountain NLCS designation
• Shadow Valley and Halloran Wash ACEC / NLCS designations
• Old Woman Springs Wildlife Linkage NLCS designation
• Granite Mountain corridor ACEC designation
• Jawbone / Butterbredt ACEC (add language via expansion NLCS designation)
• Kelso Creek Monkeyflower ACEC (add language to existing ACEC, CNPS does not support removal of ACEC and incorporation into Jawbone / Butterbredt)
• Middle Knob NLCS designation

iv. Prioritize Joshua tree conservation in potential transitional habitat areas

Below we identify five areas within the DRECP Plan Area, and one outside the DRECP boundary but within the CDCA LUPA boundary, where elevation and climate gradients occur that could provide favorable conditions for future Joshua tree recruitment and/or range expansion under changing climate conditions. Many of these areas occur across BLM-managed lands that are proposed or capable of being proposed for conservation designation through the DRECP LUPA process.

Although each of these areas is consistent with draft BGO Goal L1 and Objective L1.4, and the information presented in the following Figures JT 7-13 is available - though not easily accessible - within the DRECP, none of the six areas shown are noted in the Plan for Joshua tree woodland conservation. Along with the lack of quantitative BGO conservation targets for natural communities, we highlight these areas as examples of additional analysis and revisions needed in the draft DRECP.

Western Antelope Valley / Tehachapi Mountains transitional habitat

Western Antelope Valley into the Tehachapi Mountains. Some of the densest woodlands occur on private lands in Kern County, within a developing wind resource area. Other stands occur across BLM checkerboard lands. These are priority for long-term conservation and management through LUPA conservation designations. Add conservation and management of Joshua tree to proposed LUPA NLCS / ACEC designations in this area, including Middle Knob, Jawbone / Butterbredt, and Kelso Creek Monkeyflower, and Tehachapi Linkage units.

Southern Sierra Nevada Mountains transitional habitat

Ensemble climate model projections for Joshua tree woodland in the Tehachapi and Southern Sierra Nevada (SSN) mountains developed by The Nature Conservancy (TNC) categorize lands along the SSN boundary from low to high habitat stress for Joshua tree woodland. Model results point to areas of lower habitat stress for Joshua tree under several future climate scenarios occurring on lands west of HW 395, north of the Kern / Inyo County line and into the SSN range. See Figure JT10 .[3] Much of this area occurs on BLM-managed lands west of Rose Valley along the Inyo / Tulare County line and bordering the eastern boundaries of the Inyo and Sequoia National Forests.

[3] see DataBasin Joshua tree distribution model maps for the Southern Sierra Nevada at: http://databasin.org/search/#query=joshua%20tree&scope=all

We recommend managing lands across this area to conserve Joshua tree woodland and transitional habitat from Rose Valley into the Southern Sierra Nevada mountains. Joshua tree stands occur across BLM-managed lands in this area, however new vegetation mapping for Joshua tree is needed to map their distribution with accuracy. A composite range map of available vegetation maps, literature search results, and expert opinion was compiled by Kenneth Cole and others in 2003. This range map, together with TNC forecast model results provide a guide to transitional Joshua tree range in this area.

Centennial Flats / Conglomerate Mesa transitional habitat
This is another important area and one where the Joshua tree population is exhibiting vigorous regeneration. Joshua tree individuals 40cm or less in height, which generally correspond to 10-15 years growth,[4] are scattered throughout this transitional margin between the Mojave and Great Basin Desert ecoregions. Additional Joshua tree habitat occurs in Lower Centennial Flat and the extensive Joshua tree habitat in Santa Rita Flat to the north of the Talc City Hills near the Death Valley National Park boundary. Both these areas will be increasingly important for Joshua tree recruitment and survival as climate change further effects desert landscapes. These and other ecologically significant lands harboring Joshua tree woodlands should also be designated for conservation through the DRECP BLM LUPA process. We recommend designating Upper and Lower Centennial Flats as NLCS lands as proposed in Alternative 2. Joshua tree woodland conservation must be a priority management goal for this designation.

Shadow Valley / Mesquite Mountains / Kingston Range transitional habitat
Shadow Valley rising north into the Mesquite and Kingston mountain ranges. Include the conservation and management of Joshua tree woodland community as a resource management priority for the NLCS designation proposed for Shadow Valley in the DRECP Preferred Alternative.

Lucerne Valley transitional habitat Lucerne Valley into the San Gabriel mountains and San Bernardino NF. Include conservation and management of Joshua tree woodland, microphyll woodlands, and other rare (S1-S3 ranked) natural communities as resource conservation priorities within proposed ACEC and NLCS designations in the DRECP Preferred Alternative. Refine Johnson Valley DFA boundaries to avoid the densest stands of Joshua tree and of creosote clones natural communities. Refine Lucerne DFA to avoid >1% cover Joshua tree woodland stands, microphyll woodlands, and other rare natural communities.

Pinon Hills / Countyline transitional habitat ACEC
Conserve Joshua tree habitat on BLM-managed lands near Pinon Hills, CA by pulling the DFA boundary to the north of CA HW-18, and make conservation of Joshua tree woodland a management priority on BLM parcels south of HW-18.

*v. Establish an avoidance and minimization CMA for Joshua tree woodlands in DFAs*At the project level, draft DRECP CMAs for JT (and all other natural communities) will default to

[4] Barrows, C. and M. Murphy-Merescal. 2012. Modeling impacts of climate change on Joshua trees at their southern boundary: How scale impacts predictions. *Biological Conservation*. 152: 29-36.

doing a habitat assessment based on available map information and surveys as described in CMA# AM-PW-1 and Appendix H.

The loss of Joshua tree woodland as the result of projects within proposed DFAs should be recognized by the DRECP agencies as a significant impact from covered activities unless mitigated below a significant level. The draft DRECP needs to include a more stringent CMA for natural communities that occur within DFAs, including Joshua tree woodland. We off the following mitigation concepts related to Joshua tree for inclusion in a revised CMA.

Joshua tree woodland on project sites should be avoided and preserved in perpetuity from further development. If avoidance is not feasible, off site Joshua tree woodland of equal or superior quality should be acquired at no less than a 1:1 mitigation ratio, where a minimum of 1:1 mitigation ratio should be employed only for degraded Joshua tree woodland habitat. Greater than 1:1 mitigation is required for impacts to higher quality habitat. The 2013 DRECP vegetation map includes 5 specific attributes that quantify disturbance within Joshua tree habitat occurring within the DFAs of the Western Mojave and Eastern Slopes ecoregion subarea. These habitat quality map attributes, along with project-level habitat assessment can be used to determine woodland habitat quality and appropriate mitigation ratios.

Mitigation for remaining Joshua tree woodland must occur within the same subarea to avoid local extirpation and promote population resiliency to climate change. Acquired habitat should be adjacent to large tracts of existing Joshua tree woodland that have been identified by resource agencies as having a high priority for acquisition for conservation. All mitigation lands preserved on site or acquired off site should be deeded to a local land conservancy and protected in perpetuity under a conservation easement to prohibit incompatible uses on the site.

Salvage and transplantation of Joshua trees should not be considered the default mitigation action for loss of Joshua tree woodland vegetative communities as these methods are experimental and there are no assurances of their success. If used as mitigation and/or restoration action of last resort, CNPS recommends following Joshua tree salvage, transplantation, and management protocols practiced by BLM Nevada Las Vegas District, and by the California Wildlands Conservancy. Both entities have transplanted Joshua tree individuals while monitoring and measuring their success and failure, and tracking resources required to maintain transplanted individuals over several years.

Summary of recommendations for Joshua tree woodlands

i. Establish clear, quantitative, and measurable Plan-wide BGOs for Joshua tree
ii. Revise the draft DRECP to include a more complete map of areas where Joshua tree woodland alliance has been mapped to date.
iii. Revise LUPA ACEC and/or NCL worksheet language to identify Joshua tree woodland as a natural resource conservation priority within ACECs and NCLs where Joshua tree woodlands occur.
iv. Prioritize conservation designations and management actions for Joshua tree woodlands in areas of potential range expansion under changing climate conditions, including establishing new ACECs where priority habitats occur on currently undesignated BLM-managed lands.
v. Establish an avoidance and minimization CMA for Joshua tree woodlands in DFAs

Microphyll Woodlands

Microphyll woodlands are desert woodlands comprised of specific vegetation alliances typically associated with the desert wash systems that provide high quality habitat values for desert birds, mammals, and reptiles. The general term microphyll woodlands includes four vegetation alliances that occur across the Plan Area; Chilopsis linearis alliance (Desert willow), Prosopis glandulosa alliance (Mesquite), Psorothamnus spinosus alliance (Smoke tree), and Parkinsonia florida - Olneya tesota alliance (Blue palo verde - Ironwood). Desert willow, Mesquite, and Smoke tree are rare vegetation alliances. A significant portion of all Blue palo verde - Ironwood alliance distribution in California occurs within and adjacent to the Riverside East DFA / SEZ. All four microphyll woodland vegetation alliances are classified within the broader NVCS vegetation Group, Sonoran-Coloradan semi-desert wash woodland scrub (SCOWS). In the DRECP, all microphyll woodlands alliances are treated under the SCOWS natural community heading. Therefore all BGOs and CMAs that apply to SCOWS cover microphyll woodlands.

In terms of vegetation classification hierarchy, the microphyll woodland-containing natural community SCOWS, along with the Mojavean semi-desert wash scrub (MOWS) natural community both belong within the vegetation MacroGroup, Madrean Warm Semi-Desert Wash Woodland/Scrub, or (MAWW) natural community. This has relevance to microphyll woodlands since all microphyll woodlands belong within both the SCOWS (Group) natural community, and the MAWW (MacroGroup) natural community, BGO and CMA references. Therefore all Plan references to SCOWS and/or MAWW natural communities can apply to microphyll woodlands, including map references, BGOs, and CMAs.

Our comments regarding the insufficient conservation value of draft BGOs and CMAs for the Joshua tree woodland natural community extend to the microphyll woodland natural community. DRECP natural community map information for microphyll woodland distribution are incomplete and need revision. The draft Plan lacks quantitative conservation targets for microphyll woodlands, and CMAs for microphyll woodland communities must be strengthened.

i. The draft DRECP microphyll woodland map, and BGO subarea list are incomplete and need to be revised

Figures MW-1 displays the DRECP microphyll woodland map available on the DRECP DataBasin Gateway.[5] Figure MW-2 displays the distribution of all microphyll woodland alliance polygons extracted from publicly available map datasets containing microphyll woodland alliance layers.[6] And Figure MW-3 displays the distribution by alliance.

There are microphyll woodland (mesquite) stands in Preferred Alternative DFAs within the West Mojave and Eastern Slopes subarea that do not appear on the DRECP microphyll woodland map, or the DRECP SCOWS natural community map (Appendix C, Figure C-25). See Figure MW4.

[5] http://databasin.org/datasets/632bd81f0a1b4fd9b1182d6fdb8793ec

[6] 2013 DRECP Vegetation Map, Joshua Tree National Park Vegetation Map, Anza Borrego State Park Vegetation Map, and the MDEP Vegetation Map. The NECO vegetation map data included in the DRECP microphyll woodland map is based on Holland classification, not NVCS alliances, and is not included in Figure MW3.

The West Mojave and Eastern Slopes subarea needs to be added to the BGO for the SCOWS natural community (Appendix C, p. C-19) as one of the Plan subareas where microphyll woodlands occur.

There are additional microphyll communities that do not appear on DRECP maps that intersect or are adjacent to the Charleston View DFA and Variance lands in Mesquite Valley, both within the Kingston and Funeral Mountains subarea. The Mesquite Valley mesquite bosque UPA occurs here yet this microphyll vegetation does not appear on DRECP maps. The area encircling the mesquite bosque is designated Variance land that should be removed to protect this example of a vanishing groundwater-dependent microphyll community type. (Figure MW-4)

More microphyll woodland occurs within the Daggett Triangle DFA in the Mojave and Silurian Valley subarea. Including these woodland areas on DRECP maps will help identify potential development conflicts with these resources. The draft DRECP appears to have overlooked these rare natural community occurrences. (Figure MW-4)

It is not clear how the DRECP baseline acreage totals for microphyll woodlands were calculated. There is no explanation within draft Plan documents, and acreages listed within the attribute table of the DRECP microphyll woodland map are confusing. For example all records sourced from the NECO vegetation map are duplicated within the attribute table. If baseline acreage was calculated using this data table, then the veracity of the values that appear in the Baseline Biology Natural Communities table (Appendix Q, Table 4-1).

More importantly, as with Joshua tree woodland natural community, the baseline mapping and acreage calculations for microphyll woodland needs to be revised and reanalyzed, and the methods used clarified.

ii. establish quantitative, measurable BGO conservation targets for microphyll woodland natural communities

The Plan lacks quantitative conservation targets for natural communities (e.g., % aerial extent of community to be conserved). The DRECP December Document (2012) and Spring 2013 BGO Driver memos (cited above) all indicated that target conservation percentages would be used to drive the DRECP conservation strategy. The draft Plan provides no explanation or rationale for abandoning this strategy. Our concern with the lack of quantitative conservation targets extends to dune communities and all other rare (S1-S3 ranked) natural communities.

We recommend the draft DRECP be revised to, among other things, reestablish quantitative BGOs for microphyll woodlands and other natural communities. With them, the process for determining allowable impacts becomes more transparent. Without them,
it is unclear how one can assess the efficacy of the DRECP conservation strategy, or by what measure the DRECP Coordinating Group would evaluate cumulative impacts from “previously permitted impacts and conservation" when determining whether or not to allow “unavoidable impacts to resources."

iii. clarify what activities, if any, are allowed within riparian and wetland buffers
The purpose of riparian and wetland avoidance and setback buffers (CMA# AM-DFA-RIPWET-1, p. II.3-48) are to avoid and minimize impacts to riparian wash species and natural communities. The draft DRECP is not clear regarding what activities, if any, would be allowable within buffers and setbacks. The draft is not clear whether there is avoidance from all covered activities within buffers, and whether all proposed incursions into buffers will be reviewed and decided by DRECP Coordination Committee. Additionally, if incursions into buffers and setbacks fall into the "unavoidable impacts to resources" category, then the plan needs to clarify what criteria will be considered when making determinations about what activities are allowable within buffers.

Summary of recommendations for microphyll woodlands
i. Revise the draft DRECP microphyll woodland map, and BGO subarea list
ii. Establish quantitative, measurable BGO conservation targets for microphyll woodland natural communities
iii. Clarify what activities, if any, are allowed within riparian and wetland buffers

Other DRECP Natural Communities
Crucifixion thorn
Crucifixion thorn (*Castela emoryi*) is not listed as a component of the SCOWS natural community, and should be added to this list as a rare, S1.1 special stand. Since the original CDCA Plan, Crucifixion thorn stands have been recognized for enhanced conservation by BLM through the Unusual Plan Assemblage (UPA) designation.

The draft DRECP recognizes rare special stands of vegetation (technically not an alliance) and provides conservation measures for them as exemplified by *Wislizenia refracta*, a special stand of dune vegetation listed in the North American warm desert dunes and sand flats community. The same treatment must be applied to Crucifixion thorn special stands.

Additionally, botanists have recently documented perhaps the largest Crucifixion thorn stand in California north of the Rice Valley wilderness area. This occurrence falls within the proposed Chuckwalla-Chemehuevi desert tortoise linkage ACEC. We recommend the following language be added to the Vegetation section of the BLM worksheet for this proposed designation (Appendix L1_Part5-2):
Management Action: Protect special status vegetation including rare plants and rare natural communities, including Crucifixion thorn (*Castela emoryi*) special stands. The largest documented Crucifixion thorn population in California occurs in Rice Valley within this ACEC as described in Bell and Herskovits (2013). [7] We have included the Bell and Herskovits article as an attachment for your reference.

[7] Bell, D. and T. Herskovitz. 2013. A newly discovered large and significant population of *Castela emoryi* (Emory's Crucifixion thorn, Simaroubaceae) in California. Aliso, 31(1): 43-47.

Wetland CMA requirements

It is not clear whether the ALSH and SOMA natural communities are included under Other Riparian and Wetland Related Features in Table II.3-6, and thereby require a 200 foot RIPWET avoidance setback. This needs to be clarified in subsequent Plan revision.

Additional LRO natural community

A Locally Rare Occurrence (LRO) designation should be applied to the *Sarcobatus vermiculatus* alliance within the Wetland Communities natural community. It meets the same description of a natural community LRO as those currently labeled as LRO.

Elements of the draft that should be retained in future revisions

Some elements of the draft DRECP's conservation framework for natural communities represent parts of a strong foundation for a desert-wide conservation strategy. We strongly recommend that they be retained in subsequent Plan revisions. These include:

• Identification of Locally Rare Occurrences (LROs) of natural communities within the Baseline Biology Report's Natural Communities table, and an excellent description of the ecological and evolutionary importance of these peripheral populations and rationale for their conservation in the Plan Area (see Chapter III.7.4, Section *Ecological Context of Plan Area*, pp. III.7-31,32).

• Identification of natural communities using national vegetation classification standards, including identification of vegetation Alliances and Special Stands (e.g., *Wislizenia refracta* Special Stands in the (SAND) community), especially Alliances and Special Stands with state rarity ranks of S1, S2, or S3, and more common Alliances that have uncommon desert representation (i.e., Locally Rare Occurrences, or LRO). This can facilitate planning by allowing agencies and stakenholders to "speak the same language" when discussing natural community conservation.

• The acreage of Variance lands has been reduced in the Preferred Alternative, though additional acreage still needs to be removed (e.g., see Mesquite Flats notes above). The process of "refiltering" Variance land areas demonstrates that through the DRECP, there can be a process of considering new information and revising Plan Area designations based on that information in a manner that can both improve conservation through avoidance, and improve project siting by elimination high-conflict areas from development potential.

• The 2013 DRECP Vegetation Map provides alliance-scale mapping of approximately 7 million acres of Plan Area. Of equal importance to planning is the attribute information available in the map's geodatabase. This information can facilitate the prioritization of conservation decisions, e.g., 5 terrestrial disturbance-related attributes associated with every mapped polygon that can be used to quantify which areas of mapped natural communities are higher-quality, less impacted than others.[8] We recommend facilitating the accessibility of this information via the DRECP DataBasin Gateway.

[8] 2013 DRECP Vegetation Map attributes; *Exotics, Roadedness, Development, Antrhopogenic Alteration, Hydromodification*. Located within the map geodatabase's Attribute Table. The 2013 DRECP Vegetation Map geodatabase and GIS files are publicly available at: http://www.dfg.ca.gov/biogeodata/vegcamp.

2. Refining Preferred Alternative DFAs

There are areas of DFAs proposed in the Preferred Alternative that should be refined in order to avoid sensitive biological resources, important ecological processes, and project siting conflicts. We recommend making the following DFA refinements.

Riverside East DFA

The draft DRECP specifies a 200' setback for microphyll woodlands (MW) and several other covered natural communities (CMA# AM-DFA-RIPWET-1). Circled areas on the map in Figure LUPA-1 highlight areas of dense microphyll woodland and other rare MOWS / SCOWS riparian natural communities, where siting of PV modules would be challenging without extensive removal of microphyll woodland. These areas should redesignated from DFA and Solar PEIS SEZ to ACECs as described below.

1. McCoy Wash area (Figures LUPA-2 through LUPA-5)

Microphyll woodland washes cover areas on both sides of upper McCoy Wash. Desert lavender (rare) and Blue palo verde - Ironwood vegetation alliances require a 200' setback. Because of budget and timing constraints, the 2013 DRECP vegetation mapping effort adopted a ≥ 90' minimum mapping width for microphyll woodlands. Project level vegetation mapping (as per CMA# AM-PW-1 and Appendix H) will delineate additional stands that meet the NVCS membership rules for microphyll woodlands[9] and are < 90 feet wide further complicating the siting of PV arrays due to the density of microphyll woodland channels and associated setback buffers (see Figure LUPA-3 and LUPA-5 for examples).

To conserve microphyll woodlands and avoid complications with project siting, we recommend refining both the Preferred Alternative DFA and the Solar PIES SEZ boundaries to the southeast, in alignment with the proposed Alternative 3 DFA boundary for this area (Figure LUPA-14). The Alternative 3 DFA boundary conforms to the microphyll woodland wash avoidance approach we have described. We further recommend that lands be redesignated from DFA / SEZ to ACEC and thereby expand the McCoy Wash ACEC designation proposed in the Preferred Alternative.

2. Blythe Variance lands (Figure LUPA-6)

We apply the same rationale and approach for refining the DFA / SEZ boundary around upper McCoy Wash to the Blythe Variance lands, where the draft DRECP has already modified this Solar PEIS Variance area to remove delineated microphyll woodlands (>90 feet wide) from Variance designation. Setback buffers would still need to be established. Those buffers, along with additional woodlands < 90' wide will further complicate solar siting. Therefore we recommend this area should be redesignated from Variance to McCoy Valley ACEC to protect microphyll woodland habitat.

3. Southwest of McCoy Peak (Figures LUPA 7-8).

Lands to the southwest of the McCoy Mountains and north of I-10 are another example of where densely braided microphyll washes present likely insurmountable challenges to designing a viable solar project footprint. As for other like-areas nearby, we recommend refining the DFA

[9] Membership rules for microphyll woodland alliances are trees >2% or >3% canopy cover, depending on the type.

boundary to the Alternative 3 boundary at this area, and redesignating lands to into the McCoy Valley ACEC. This will also increase connectivity within the DRECP NCCP Reserve lands across this area.

5. Palen Dunes area (Figures LUPA 9-11)
Microphyll woodlands bordering the Palen Mountain wilderness, rare Dune natural communities, a rare Wetland community, and an aeolian sand transport corridor make this area biologically rich and important to conserve, and logistically challenging to develop.

Figure LUPA-11 shows where an aeolian sand transport corridor mixes with alluvial fans flowing downslope from the Palen Mountains wilderness. These mixed soils support dense microphyll woodlands (Blue palo verde - Ironwood). Dense microphyll woodland communities, unstable soils, and a sand transport corridor make this place a logistical challenge for project siting. We recommend modifying the DFA boundary to avoid microphyll and rare dune natural communities, and the Aeolian transport corridor as per Alternative 3's DFA alignment. Previously designated DFA lands should be redesignated as Palen/Ford ACEC lands.

5. Desert Center area (Figures 12-13)
d. Revise DFA and SEZ by removing from both DFA and SEZ designation all BLM-managed lands south of Desert Center airport and north of I-10, and BLM-managed lands immediately north of Desert Center to private land boundary. These are lands that are logistically impracticable for PV due to density of MW channels and buffers. Expand ACEC designation into MW areas removed from DFA.

Silurian Valley DFA
Silurian Valley should be redesignated as NLCS lands and removed from SAA designation. CNPS, along with a coalition of conservation groups and local community stakeholders, have submitted comments previously and often regarding the value and importance of an undeveloped Silurian Valley.

West Mojave DFAs
As discussed in Section II, project siting in DFAs along the north and south margins of the Antelope Valley will need to avoid significant populations of Joshua tree woodland and several rare natural community types that are living and evolving across the margins of their ranges. Some of the rare natural communities living along these marginal lands occur more commonly elsewhere but represent Locally Rare Occurrences (LROs) in this part of the desert characterized by climate, soil, and elevational gradients. California juniper (*Juniperus californica* alliance), Nevada joint fir scrub (*Ephedra nevadensis* alliance), and California poppy fields (*Eschscholzia californica* alliance) are examples of LRO communities living at the boundary of their ranges, and in places, within DFAs.

Figure LUPA-15 maps areas along the margins of Antelope Valley where rare natural communities living on the edges of their range are in conflict with DFA designations. Lands south of HW-18 in the El Mirage Valley DFA are rich in higher-density Joshua tree woodlands and a suite of rare natural communities. Moving the DFA boundary north of HW-18 would avoid almost all these important communities.

The same issues occur on DFA-designated lands near Palmdale, in Fremont Valley, and at the western-most reaches of Antelope Valley. We recommend selectively removing some Antelope Valley DFA lands to conserve components of these rare communities, as per the intent of the Plan-Wide BGO L1, and associated Objective L1.4.

Johnson Valley DFA
The proposed Johnson Valley DFA includes some of the oldest creosote plants discovered in the Mojave Desert to date. The Soggy Dry Lake Creosote Rings ACEC was designated to protect creosote rings that have been estimated to reach over 10,000 years of age. Even the average age of individual creosote bushes in this unique plant assemblage is likely well over 600 years old, well beyond the projected life of this plan. The contribution of these ancient creosote bushes to our global carbon sequestration equation is just now becoming more fully appreciated. Deep-rooted, long-lived desert plants have been documented to sequester CO2 along the hyphae of their connected mycorrhizal root partners, and the longer lived the plants, the more they contribute to the long-term sequestration of CO2 from the atmosphere. Besides risking damage or destruction of clonal creosote rings that have garnered focused international scientific attention, earned special designation by BLM, and won approval by Congress for inclusion in an ACEC, the loss of millennia-old plants that began growing right after our last ice age in order to install a short-term technology would be a tragic loss of heritage, ecological stability, and long-term environmental benefit. The Johnson Valley DFA must be modified to avoid large, contiguous, and representative areas of dense creosote clone ring occurrences.

3. NLCS and ACEC LUPA Designations

CNPS does not support modifying the designations of any existing ACECs or DWMAs through the DRECP LUPA process, including but not limited to the Barstow wooly sunflower, Kelso Creek monkeyflower, Mojave monkeyflower, Parish's Phacelia, and Soggy Dry Lake creosote clone ring ACECs. We do support the following designations proposed in the Preferred Alternative.

Chuckwalla to Chemehuevi Tortoise Linkage ACEC / NLCS
We support the Preferred Alternative's proposed designation of the Chuckwalla to Chemehuevi Tortoise Linkage to ACEC / NLCS lands. This would provide the opportunity to protect a significant and newly documented population of Crucifixion thorn in Rice Valley.

As noted above in Section II, botanists from the Rancho Santa Ana Botanic Garden have recently documented perhaps the largest Crucifixion thorn stand in California north of the Rice Valley wilderness area. This occurrence falls within the proposed Chuckwalla-Chemehuevi desert tortoise linkage ACEC. We recommend the following language be added to the Vegetation section of the BLM worksheet for this proposed designation (Appendix L1_Part5-2) in order to incorporate the protection and management of this rare natural community into the ACEC / NLCS as a Vegetation management priority:

Vegetation Management Action: Protect special status vegetation including rare plants and rare natural communities, including Crucifixion thorn (*Castela emoryi*) special stands. The largest documented Crucifixion thorn population in California occurs in Rice Valley within this ACEC

as described in Bell and Herskovits (2013). [10] We have included the Bell and Herskovits article as an attachment for your reference.

McCoy Valley ACEC
As described above, we recommend refining the Riverside East DFA and SEZ boundaries to avoid dense, braided channels of microphyll woodlands, and incorporate the undevelopable lands into the McCoy Valley ACEC.

A DFA alignment as proposed for this area in Alternative 3 would avoid removal of hundreds to thousands of acres of microphyll woodlands that would be necessary to site utility-scale projects here. (see Figures LUPA2-5, and LUPA 14)

Cadiz Valley
The Cadiz Valley-Iron Mountains region, consisting of approximately 188,540 total acres, is located in both San Bernardino and Riverside Counties, south of the town of Cadiz. The region is undoubtedly one of the most scenic and undeveloped areas remaining in the California desert. In fact, the region includes the largest remaining unprotected roadless area in southeastern California.

Only the northern portion of the Cadiz Valley-Iron Mountain region is included in the National Conservation Lands in the Preferred Alternative. It is critically important that, with the exception of salt mines, the Colorado River Aqueduct and other developments, the remainder of this highly scenic, ecologically important and still largely wild region be included as well.

Both north and south portions of Cadiz Valley should be added to BLM's NLCS for its wildlife values, intactness, and remoteness. Creating further anthropogenic disturbance and habitat fragmentation in these areas would contradict the basic conservation principle of maintaining habitat resiliency, particularly in light of climate change, and contradict the conservation goals of the DRECP.

Castle Mountains
CNPS supports the designation of the Castle Mountains ACEC. The Castle Mountains are a fantastic example of the great diversity of relatively small mountain ranges in the California deserts. Though only about 30 square miles, the Castle Mountains are are home to over 30 rare plant species and hundreds of common species. Walk any ridgeline or wash and you will find unique and interesting plant species, some of which are found only in this rugged corner of the Mojave, such as canyon bird's foot (*Lotus argyraeus* var. *multicaulis*) and the showy pinto beardtongue (*Penstemon bicolor*).

The center of the Castle Mountains is rugged and rocky, with hidden canyons containing a diversity of rare desert annuals, including nine-awned pappus grass (*Enneapogon desvauxii*) and Clark Mountain spurge (*Euphorbia exstipulata*). Steep canyons spill out into wide valleys that surround the range. They are home to dense and extraordinarily healthy stands of Joshua trees

[10] Bell, D. and T. Herskovitz. 2013. A newly discovered large and significant population of *Castela emoryi* (Emory's Crucifixion thorn, Simaroubaceae) in California. Aliso, 31(1): 43-47.

that are part of a desert savannah containing a diversity of native annual and perennial grasses. Around two dozen grass species are found here, of which half a dozen are rare grasses. Some species, such as burro grass (*Scleropogon brevifolius*) and false buffalo grass (*Munroa squarrosa*), are part of unique desert grasslands found nowhere else in California. Closer inspection also reveals a plethora of other rare plant populations such as matted cholla (*Grusonia parishii*), Abert's sanvitalia aster (*Sanvitalia abertii*), and red four o'clock (*Mirabilis coccinea*).

The Castle Mountains are a botanical frontier where botanical collections hold important discoveries that will allow us to further understand our rare plant populations and their distribution in the California desert. We attach with this letter a vouchered checklist of plant species of Castle Mountains being developed by Duncan Bell and Jim André. This list helps demonstrate the diverse, rare, and special botanical qualities of the Castle Mountain.

Conglomerate Mesa / Centennial Flats NLCS designations: Alternative 2
We strongly support the designation of Conglomerate Mesa and Upper and Lower Centennial Flats to NLCS lands as proposed in Alternative 2. This area is important transitional habitat for Joshua tree, and a nursery for this species whose fecundity in lower elevations of its range is in decline.

Brisbane Valley Monkey Flower
CNPS supports the proposed expansion of the Brisbane Valley Monkey Flower ACEC to include known populations. Researches at UC-Davis have been intensively surveying and monitoring Mojave monkeyflower populations for the past 5 years. One of only four documented occurrences of Mojave monkeyflower that has bloomed during the last 5 years lies just at the southwest border of this ACEC. Dr. Kara Moore-O'Leary is preparing a report on this research that should be in press by summer 2015.

4. Rare plant species

Eight of ten Plant Covered Species have quantitative conservation acreage targets associated with them in their Step Down BGOs. This is a good first step to ensuring as robust a conservation strategy as possible is designed in the DRECP for these plants.

Unfortunately, little else about their conservation reserve design is clear. What criteria were used to calculate the acreage targets? Where in the Plan Area, or in the DRECP NCCP Reserve area are these acres to be acquired? Once lands of suitable habitat for a plant Covered Species is acquired and added to the reserve, CMA# AM-RES-RL-PLANT-1 states:

> Impacts to suitable habitat for all plant Covered Species within lands added to the reserve will be limited to 1% of their suitable habitat *in the Plan Area*. (italics added for emphasis). P. II.3-79.

According to this CMA, the disturbance cap for lands added to the Reserve for plant Covered Species can disturb most or all of the lands added. For example, the BGO for Mojave monkeyflower says there is 9,000 acres of suitable habitat in the Plan Area for this plant (it is unclear how this number was derived). If 100 acres of land is acquired and added to the Reserve for Mojave monkeyflower conservation, the disturbance cap is 1% of suitable

habitat within the Plan Area, not within the parcel just added to the Reserve. 1% of suitable habitat in this case is 90 acres. So in accordance with this CMA for lands added to the Reserve, a 90-acre disturbance on a 100 acre conservation acquisition parcel is part of the DRECP conservation strategy for plant Covered Species. This CMA clearly needs revision.

Several plants still need to be considered for Covered Species list

The benefit of being a plant on an NCCP plant Covered Species list is that, theoretically, an NCCP will design a conservation reserve that favors preservation of larger, intact core reserve areas for the species and avoids piecemeal fragmentation and degradation of habitat over time, thereby avoiding the need to list the species or witness it's extirpation / extinction. In return for core intact reserve space, the permitting agency permits the destruction of a portion of the population over time, and that portion is a very well-defined percentage of a baseline.

A rare plant not on the covered species list in the footprint of an energy project might avoid immediate harm if the project pushes its footprint to the side, or builds around rather than on top of a population. Over time however, indirect impacts of living so closely to an industrial site could be fatal to the individual. Continued fragmentation and encroachment to the population could be fatal to the species.

Of the 347 rare plants documented to occur within the Plan Area, 159 (CRPR 1B and 2 species) have ≥ 75% of their documented California distribution entirely within the Plan Area. Of those 159 plant species, 15 have ≥ 75% of their documented California population entirely within the Plan Area and outside of LLPA lands. Of those 15 species, 2 are currently on the plant Covered Species list. They are, alkali mariposa lily and desert cymopterus.

CNPS is concerned that the conservation of the plant species have been critically under-addressed in the draft DRECP. Foremost among the list of overlooked species is Nye milkvetch (*Astragalus nyensis).* Nye milkvetch is a CRPR 1B.1, S1, G3 plant which means it is rare and vulnerable to extremely threatened throughout its ecological range (CA, NV, AZ, UT). All, 100%, of this plant's documented occurrences in California (CA) fall within the Charleston View DFA boundary. Reputable desert botanists surveyed specifically for this plant intensively between 2010-2012 throughout areas they felt represented appropriate habitat in the eastern Mojave, both in California and Nevada (NV) (and 2011 was a wet year). They found 1 occurrence in Stewart's Valley in NV, and no other CA populations outside the DFA.

DRECP Covered Activities within the Charleston View DFA could potentially extirpate the species from CA and push its Global population closer to listing or even extinction. Our knowledge of Nye milkvetch ecophysiology and management needs are equivalent to how much we know about other plants currenlty on the Covered Species list. Given the generic nature of Planwide and Step-down BGOs for the 10 plant CS currently on the list, the BGO management prescriptions for the current 10 covered plants can basically be cut and pasted for Nye milk vetch to the same management result. What's more, the restricted distribution of Nye milk vetch in CA makes it is possible to develop a confident target conservation acreage for the species within the DFA.

Therefore if the Charleston View area remains on the DRECP map as a DFA, putting Nye milkvetch on the Covered Species list would increase its long-term chances of surviving impacts from covered activities through the development of a reserve strategy for the species, even at the expense of a portion of its population (take permits). Absent a place on the Covered Species list, project avoidance for rare plants like Nye milkvetch on solar projects to date has been either significant footprint re-design to preserve larger intact rare plant areas, which is preferred, or avoidance of individual occurrences of plants within "halos" of polyester roping in between panels in fields of solar arrays. Absent a core reserve strategy, Nye milkvetch within the Charleston View DFA will likely face gradual fragmentation and decline from life between panels.

Other plants that need to be considered during draft DRECP revision are:
Allium shevockii - Spanish needle onion
Eriogonum kennedyii var. pinicola - Kern buckwheat
Phacelia nashiana - Charlotte's phacelia
Streptanthus cordatus var. paiutensis - Paiute Mts. Jewelflower
These are all threatened by wind development in the Tehachapi / southern Sierra Nevada mountains.

Other rare plant concerns

• Plant-specific CMAs and Appendix H need to be revised to ensure project-level plant surveys, and avoidance, minimization, mitigation measures are required for all rare plants, at least to the degree they have been required in current CEC Conditions of Certification for special status plants, for special status plants not on the covered species list. We recommend adding another CMA much like AM-DFA-ONC-1 (for "other natural communities" p. II.3-55) as an umbrella action for "other special status plants" e.g., create an AM-DFA-OSSP-1 CMA, and include the list of 54 plants not addressed from CNPS's originally recommended list of 64 plants for the Covered Species list.

• New botanical discoveries will occur during the term of the Plan. New botanical discoveries that could occur on lands affected by Covered Activities must be considered and addressed in the DRECP's Monitoring and Adaptive Management plan. How would a newly discovered species be addressed if it were discovered on a proposed project site within a DFA?

5. Revise DG Alternative

The DRECP's planning goal of 20,000MW of renewable energy generation from the desert is more than what will be required for California to meets renewable energy goals for 2040 (the term of the Plan). By factoring in re-powering of existing desert wind projects, improved energy conservation measures, additional large-scale solar projects outside the desert, and increased deployment of distributed generation across the state, we believe the DRECP can greatly reduce the current 20 GW desert target. Reducing the energy target will reduce the need to identify millions of acres of developable lands at the expense of conservation of desert habitat.

Recommendation: the DRECP must reanalyze the Distributed Generation alternative which is deficient and was considered but rejected in the current draft. This analysis must consider factors included in the a letter prepared by Basin and Range Watch, signed by a list of concerned

individuals and organizations, including CNPS, and submitted to the DRECP regarding, among other things, the California Energy Efficiency Strategic Plan and its relationship to DRECP purpose and need. Such an analysis will provide guidance for achieving a greater percentage of renewable energy goals from rooftops, parking lots, and smaller-scale (<20MW) ground-mounted facilities sited on disturbed lands closer to end users.

Summary

In summary, the draft DRECP must be revised to establish clear, quantitative, and measurable conservation targets for natural communities, and to remove ambiguity from, and thereby strengthen, avoidance and minimization CMAs for natural communities. A revised Plan must also include additional analyses to identify priority conservation areas for natural communities that are consistent with revised BGOs and CMAs, and provide a clearer explanation of how the conservation strategy for special status plants will account for the conservation needs of all rare plants impacted by covered activities. Without these key fixes, together with lingering uncertainty of lasting protections on BLM-managed lands, we believe the current draft DRECP fails to meet the legal standards of the NCCP Act (see especially California Fish & Game Code Section 2820).

While much work will be required to revise and develop a supportable draft DRECP, CNPS believes it is possible to do so. We have dedicated significant resources to engage in the DRECP process, and remain committed to working with the DRECP agencies, stakeholders, and local communities to build a supportable DRECP.

Sincerely,

Greg Suba
Conservation Program Director

Julie Anne Hopkins
Conservation Chair, CNPS Bristlecone Chapter

Attachments:

1. NGO letter of February 12, 2015 to BLM CA Director Jim Kenna and CDFW Deputy Director Kevin Hunting re: draft Agreements between BLM and CDFW
2. NGO letter of February 23, 2015 to DRECP Directors re: fundamental problems with draft DRECP
3. DRECP 4-Driver BGO memo - April 10, 2013
4. DRECP 3-Driver BGO memo - May 20, 2013
5. Bell and Herskovitz (2013) *Aliso* article on new Crucifixion thorn population
6. Annotated plant list of Castle Mountains: Bell & André

CNPS comments re: draft DRECP NEPA/CEQA
Figures JT 1-13
Figures LUPA 1-15

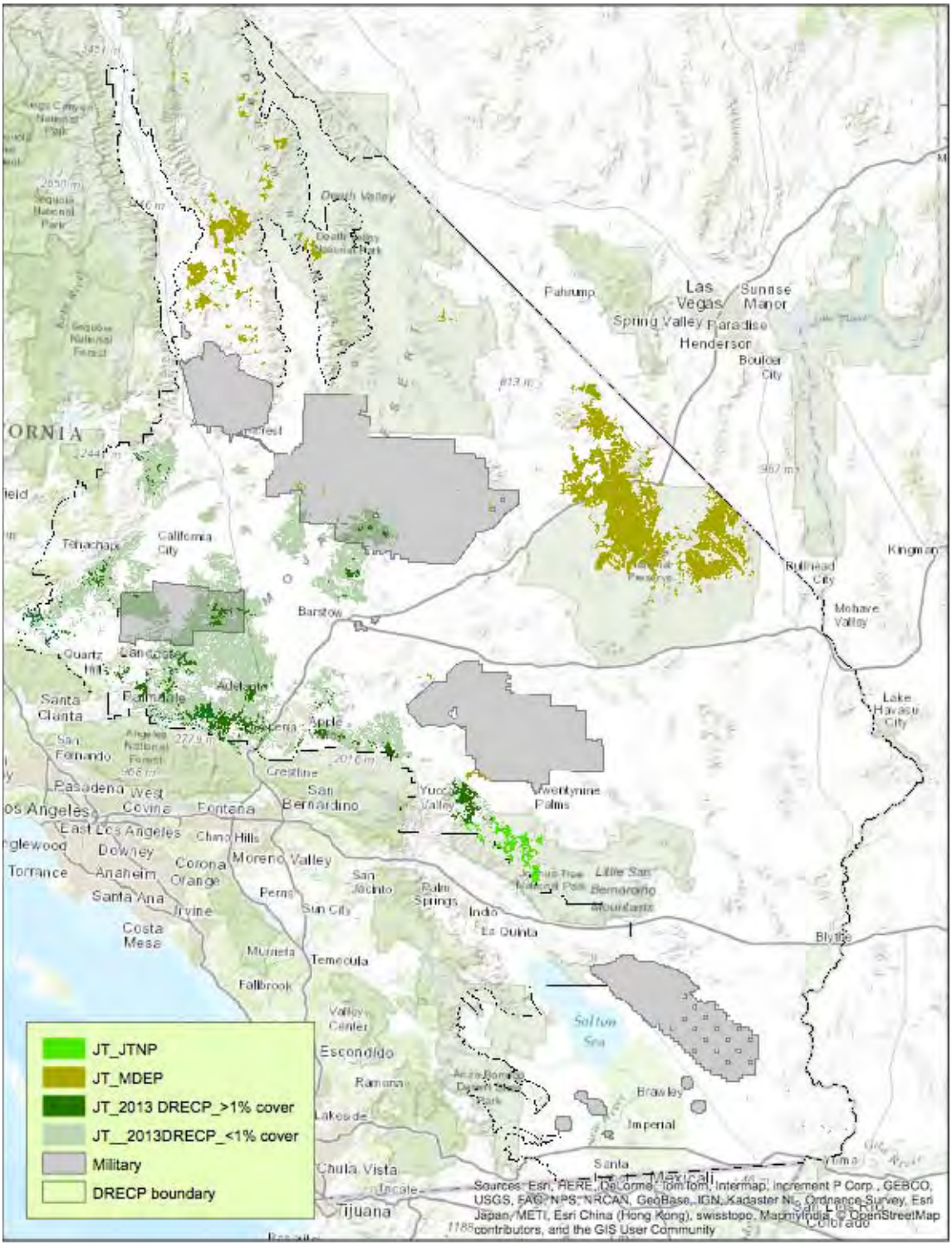


Figure JT-1. Three alliance-level vegetation maps for Joshua tree woodlands (JT) are publicly available.

1. the 2013 DRECP vegetation map (forest green in map),
2. the 2004 MDEP vegetation map (mustard tan),
3. the Joshua Tree National Park (JTNP) vegetation map which was created in late 1990's, revised and accuracy assessed 2007-2009, and published in 2013 (lime green).

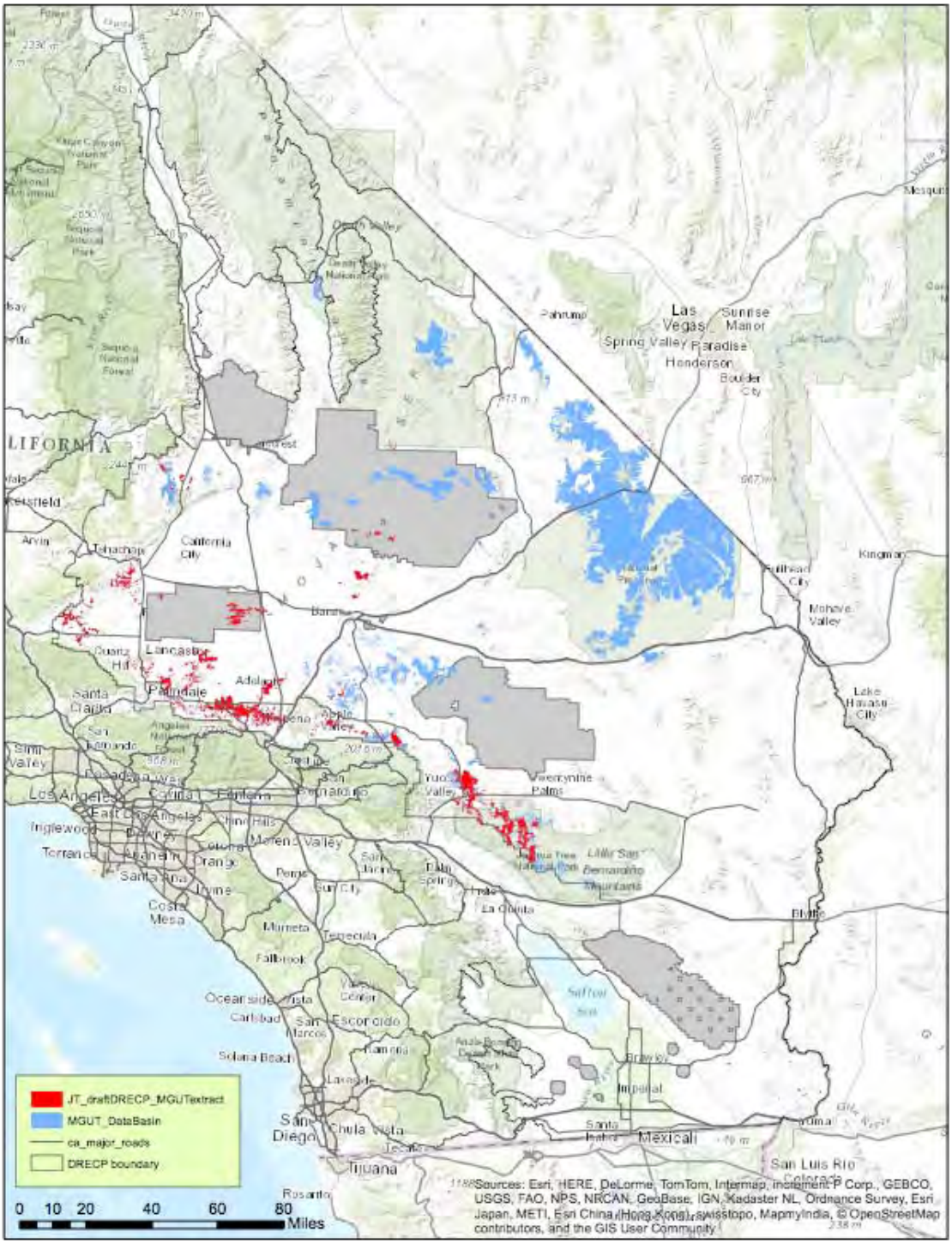


Figure JT-2. The draft DRECP aggregates Joshua tree woodlands within the Mojave and Great Basin upper bajada and toe slope (MGUT) natural community (light blue in map). Joshua tree (Yucca brevifolia alliance) is mapped along with 4 other MGUT alliances and the aggregated MGUT layer at Appendix C, Figure C-17.

Using DRECP' s DataBasin Gateway files, we have extracted and re-displayed the draft DRECP Joshua tree component of MGUT here (in red), along with the rest of the DRECP MGUT layer (light blue).

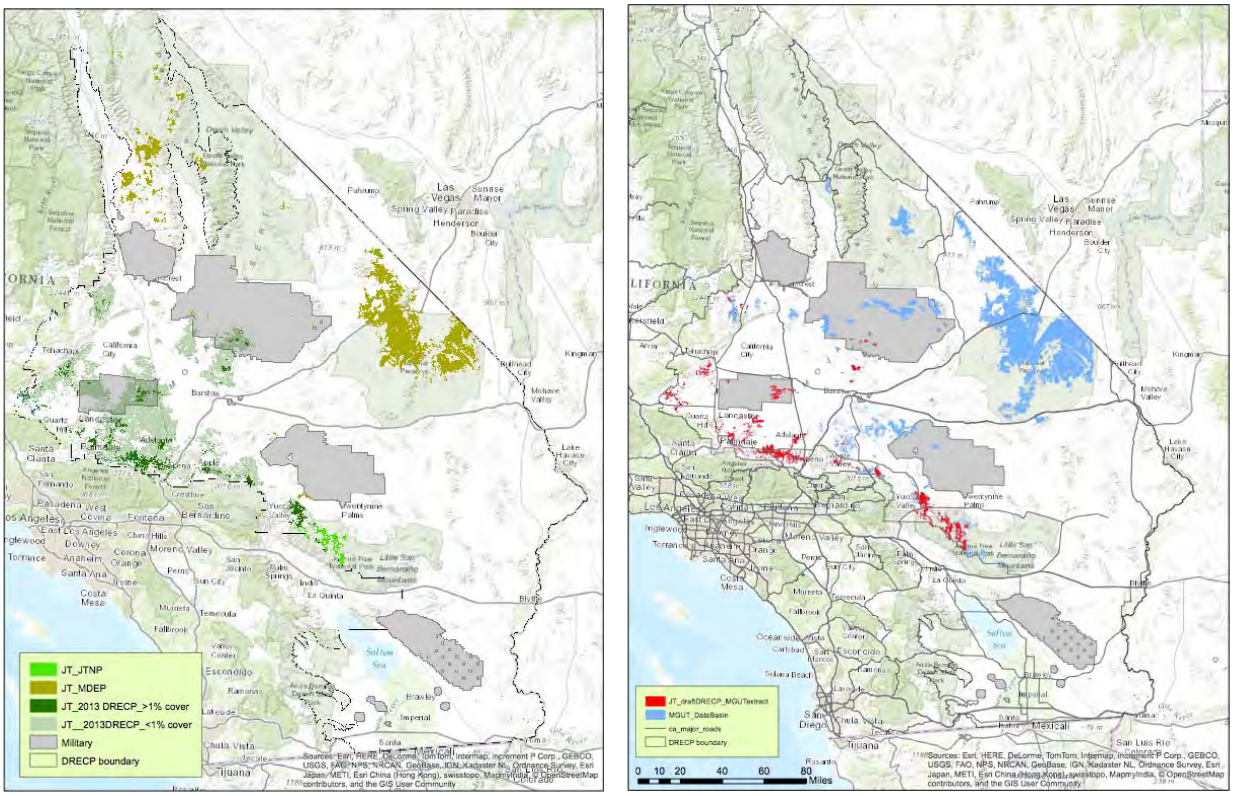


Figure JT-3. The draft DRECP JT map (red) combines and displays JT distribution from the 2013 DRECP and 2013 JTNP vegetation maps, but not the MDEP map. Rather, the MDEP Joshua tree information (mustard color on left) is folded into the more general MGUT layer (light blue on right). Additional JT mapped by the MDEP within the CDCA (mustard polygons in Inyo County on left) but outside the DRECP boundary has been clipped from the draft DRECP map since it is not a resource within the Plan Area. As a result, Joshua tree woodlands in some priority CDCA LUPA conservation areas are buried from view.

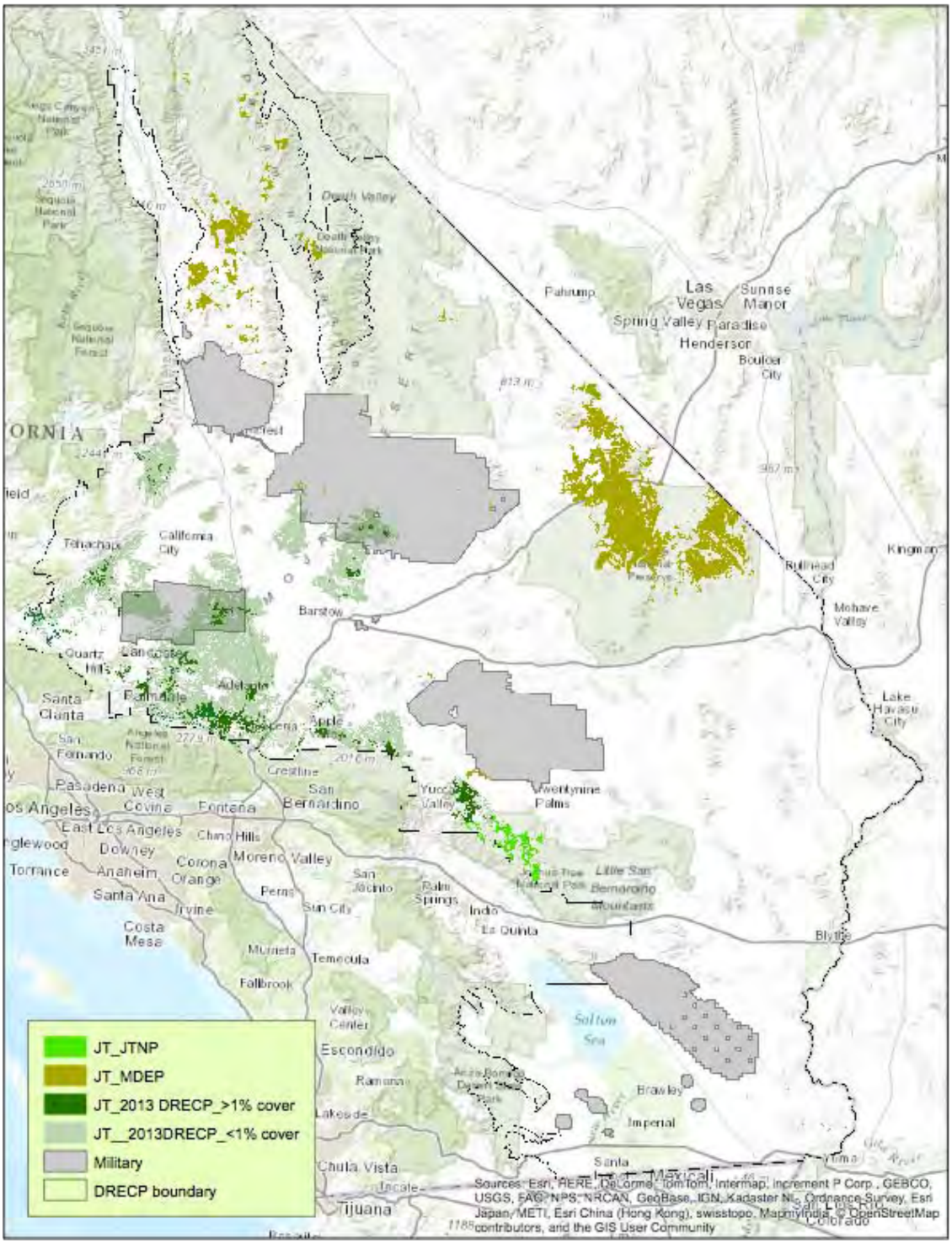


Figure JT-4. CNPS recommends revising the DRECP distribution map for Yucca brevifolia alliance to show all available CA distribution information. This will facilitate:
1. identifying priority JT conservation areas, especially at the periphery of its range, and/or where populations have the opportunity to expand into new, transitional habitats without direct intervention (assisted migration).
2. illustrating the importance and relevance of Joshua tree woodlands where they occur within proposed BLM ACEC / NLCS LUPA designations.

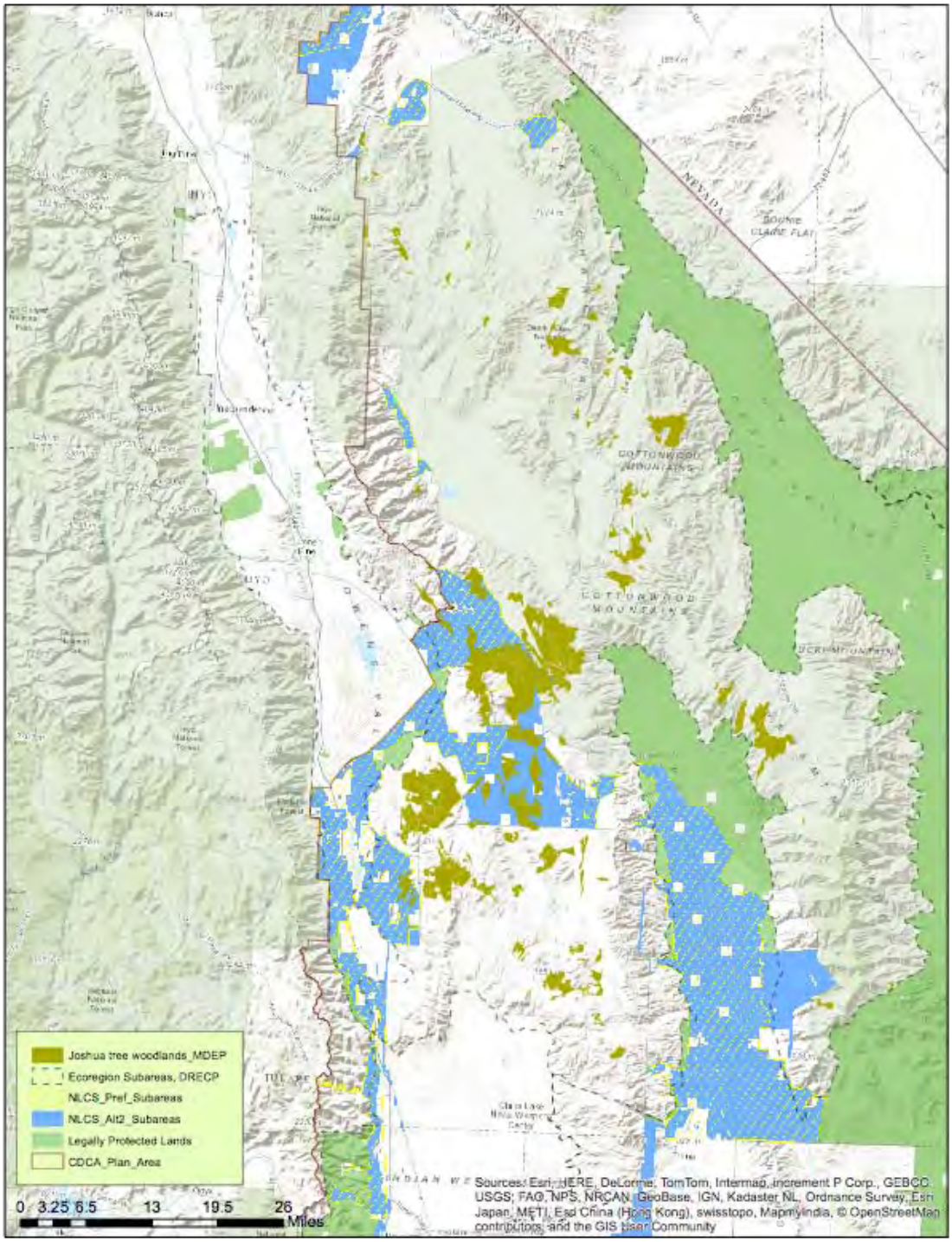


Figure JT-5. Including the older MDEP data to newer Joshua tree map data (just as the older NECO microphyll woodlands map has been included with newer microphyll map data in the draft DRECP) will provide a more complete view of where Joshua tree occurs in relation to proposed LUPA conservation designation lands, and underscore the importance of conserving Joshua tree woodlands in NLCS lands at the northwest periphery of its range.

Eventually, the MDEP vegetation map area should be remapped using newer tools and include more accuracy assessment as part of an effort to complete a vegetation map for the entire CDCA. For now, the current version contains finer-scale information that can and should be utilized.

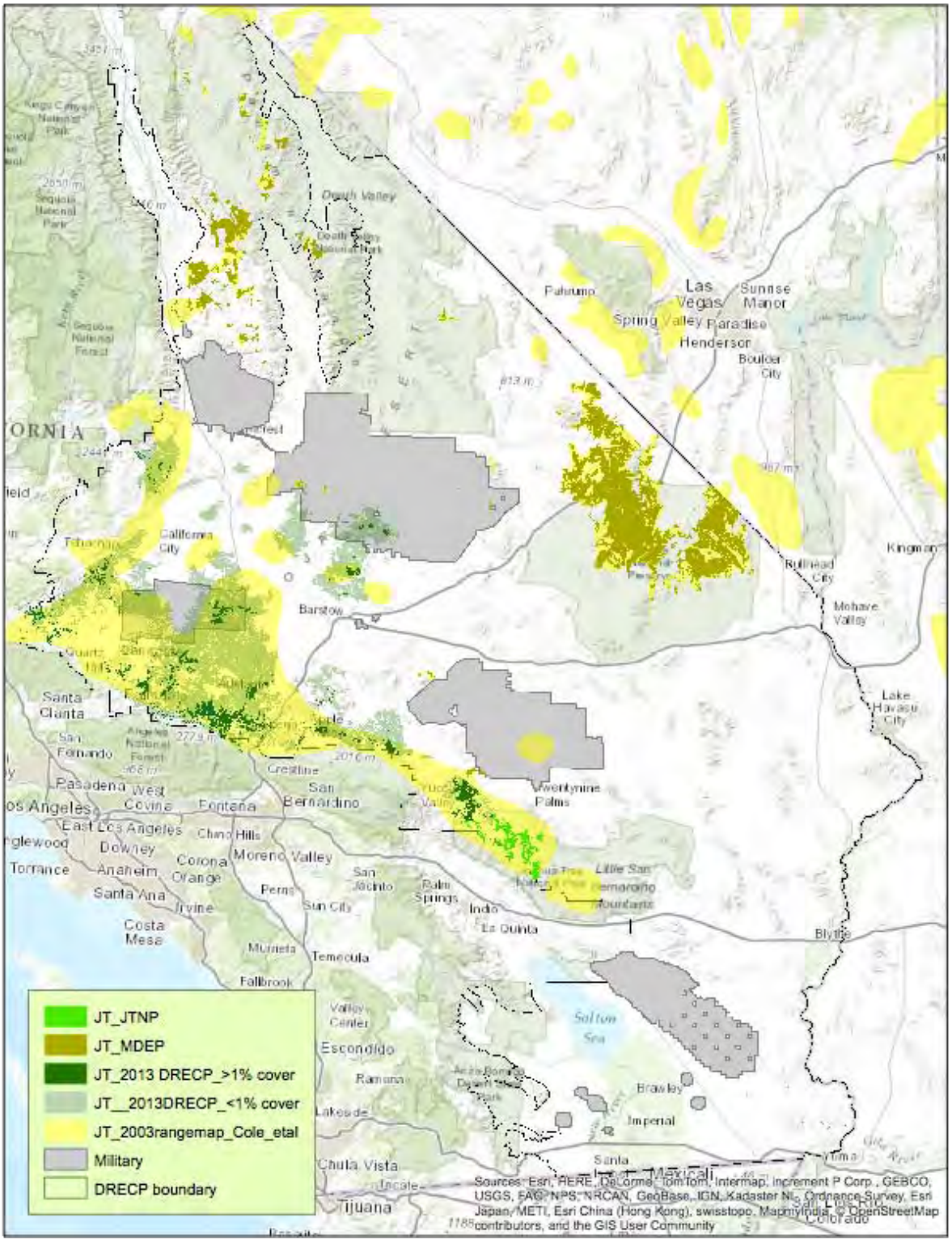


Figure JT-6. The DRECP DataBasin Gateway provides a Joshua tree range map that was aggregated from existing map data (including MDEP), literature search, and expert opinion in 2003. DataBasin' s "Range Map of Joshua tree" corresponds with older and newer JT map data for California, especially along the edges of its range.

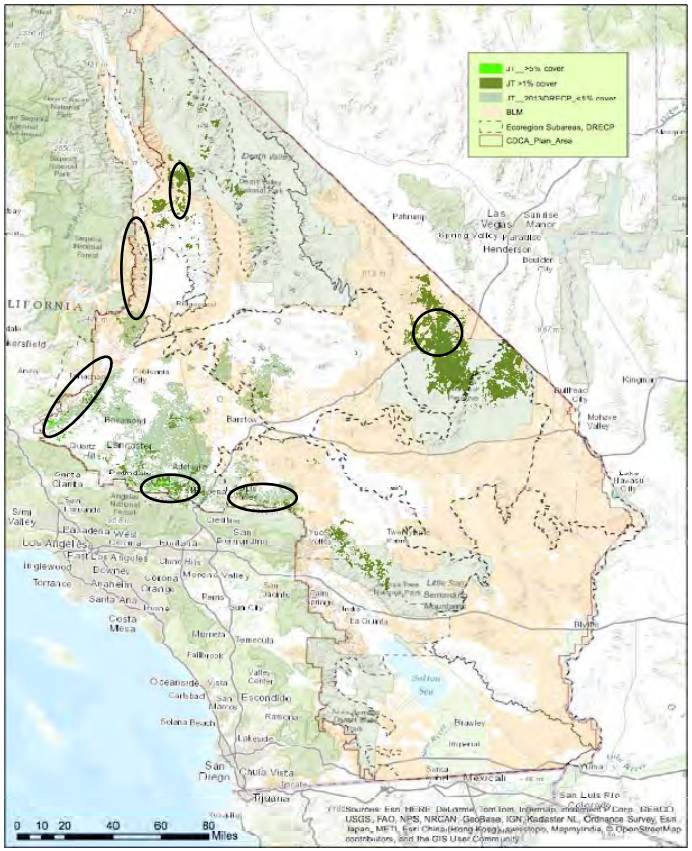
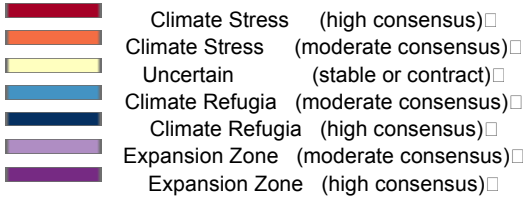
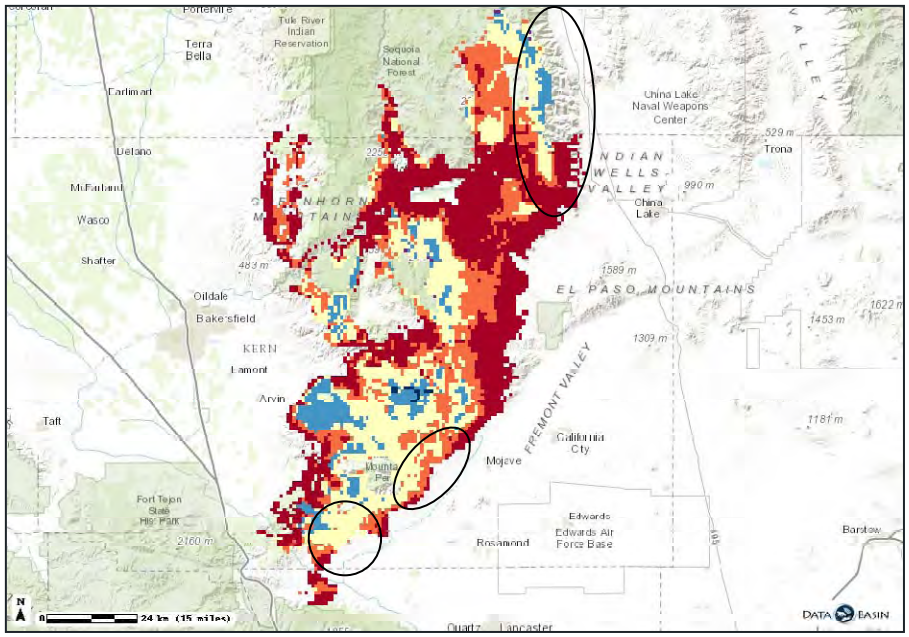


Figure JT-7. Transitional habitat opportunities for Joshua tree woodland upslope habitat expansion. BLM LUPA ACEC and/or NLCS designations in these areas must include Joshua tree woodland conservation as a management goal .





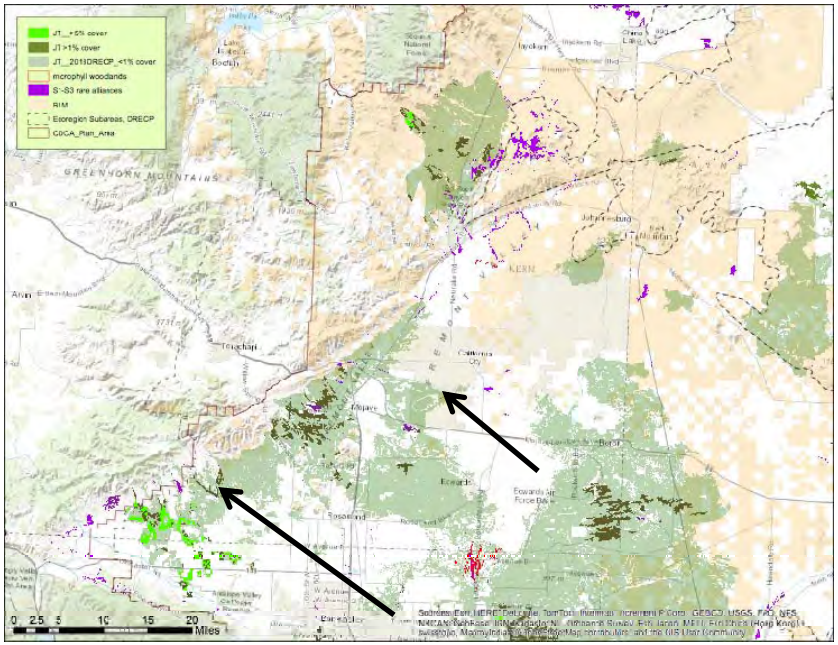


Figure JT-8. Western Antelope Valley into the Tehachapi Mountains. Some of the densest woodlands occur on private lands in Kern County, within a developing wind resource area. Other stands occur across BLM checkerboard lands. These are priority areas for long-term conservation and management of Joshua tree transitional habitat through LUPA conservation designations. Proposed LUPA designations in the Preferred Alternative must be revised to include Joshua tree woodland conservation as a management goal.

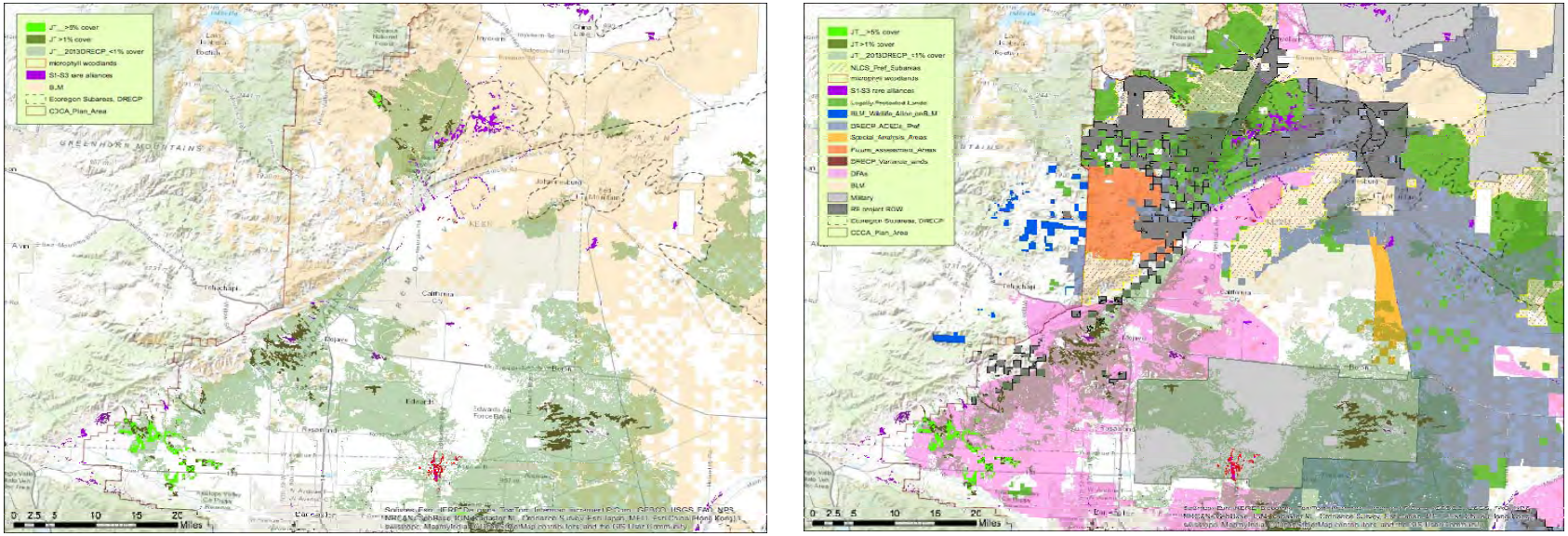


Figure JT-9. Western Antelope Valley into the Tehachapi Mountains. Some of the densest woodlands occur on private lands in Kern County, within a developing wind resource area. Other stands occur across BLM checkerboard lands. These are priority areas for long-term conservation and management of Joshua tree transitional habitat through LUPA conservation designations. Proposed LUPA designations in the Preferred Alternative must be revised to include Joshua tree woodland conservation as a management goal.

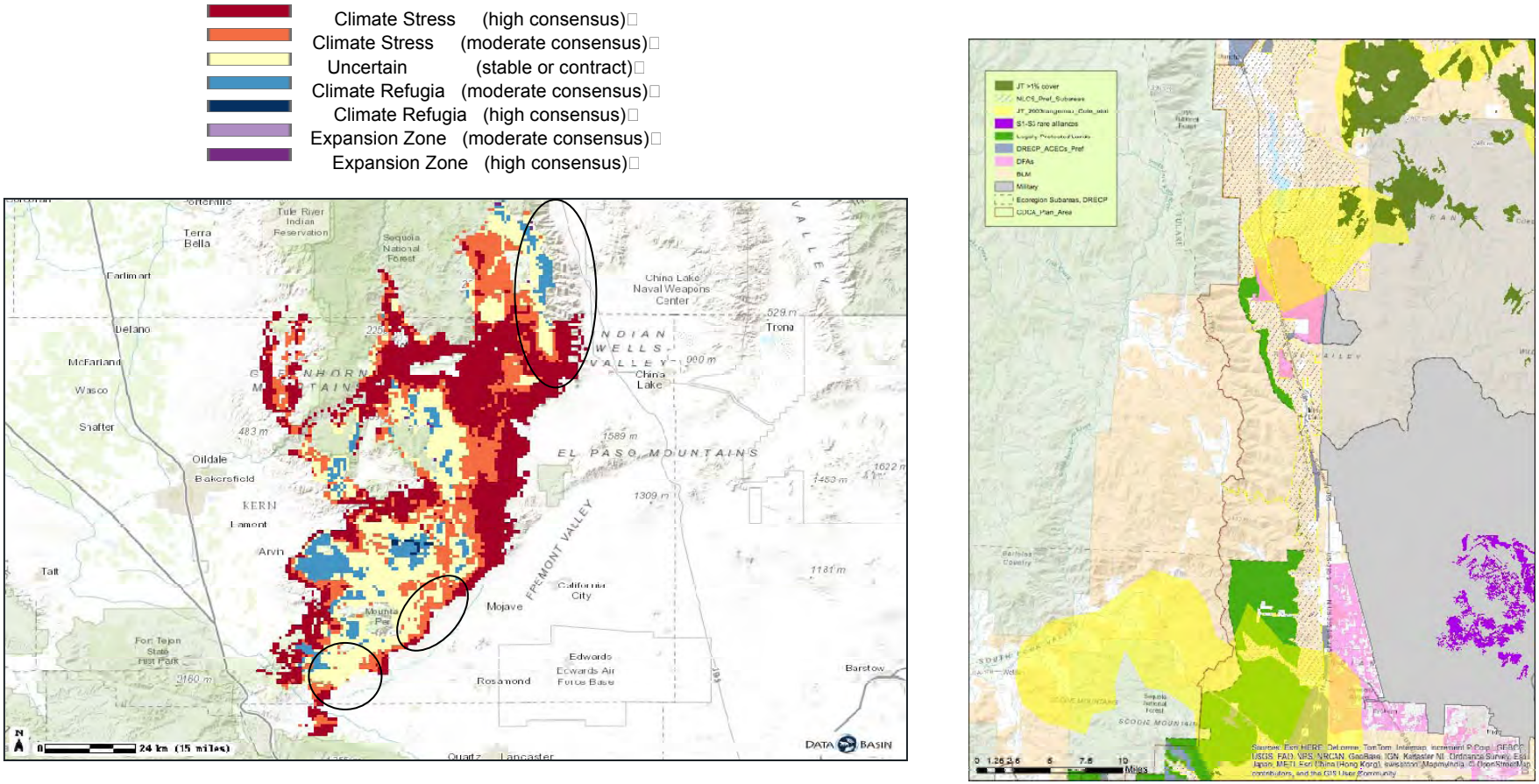


Figure JT-10. Rose Valley to Southern Sierra Nevada. Joshua tree stands occur across BLM-managed lands in the area, however new vegetation mapping for Joshua tree is needed. A composite range map of (then) current maps, literature search results, and expert opinion was compiled by Kenneth Cole and others in 2003. Together with TNC ensemble forecast model results, this range map provides a guide to transitional Joshua tree range in this area.

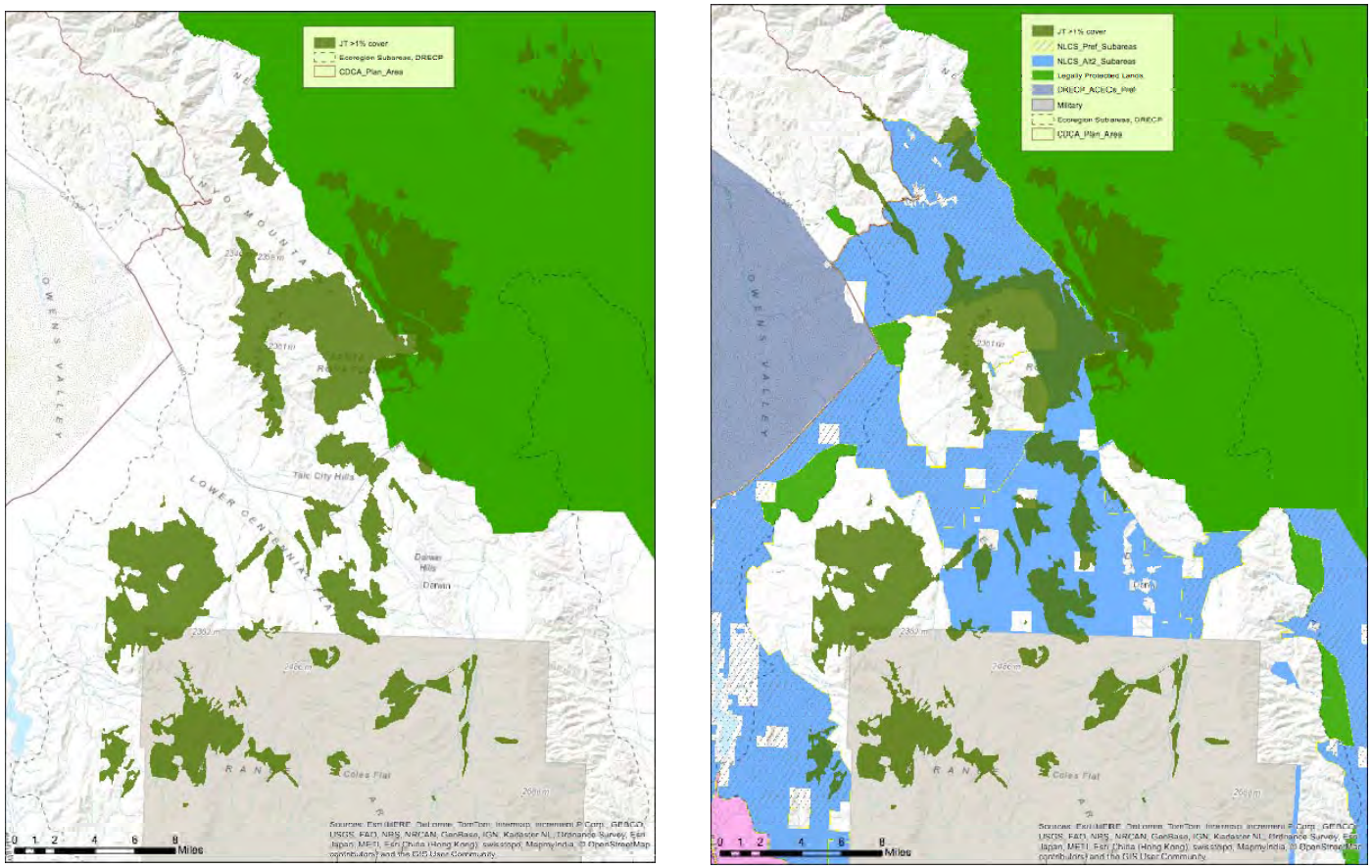


Figure JT-11. Upper and Lower Centennial Flats. Designate NCL lands outside the DRECP but within the CDCA as proposed in Alternative 2, and ensure conservation and management of Joshua tree woodland community is a priority resource management goal.

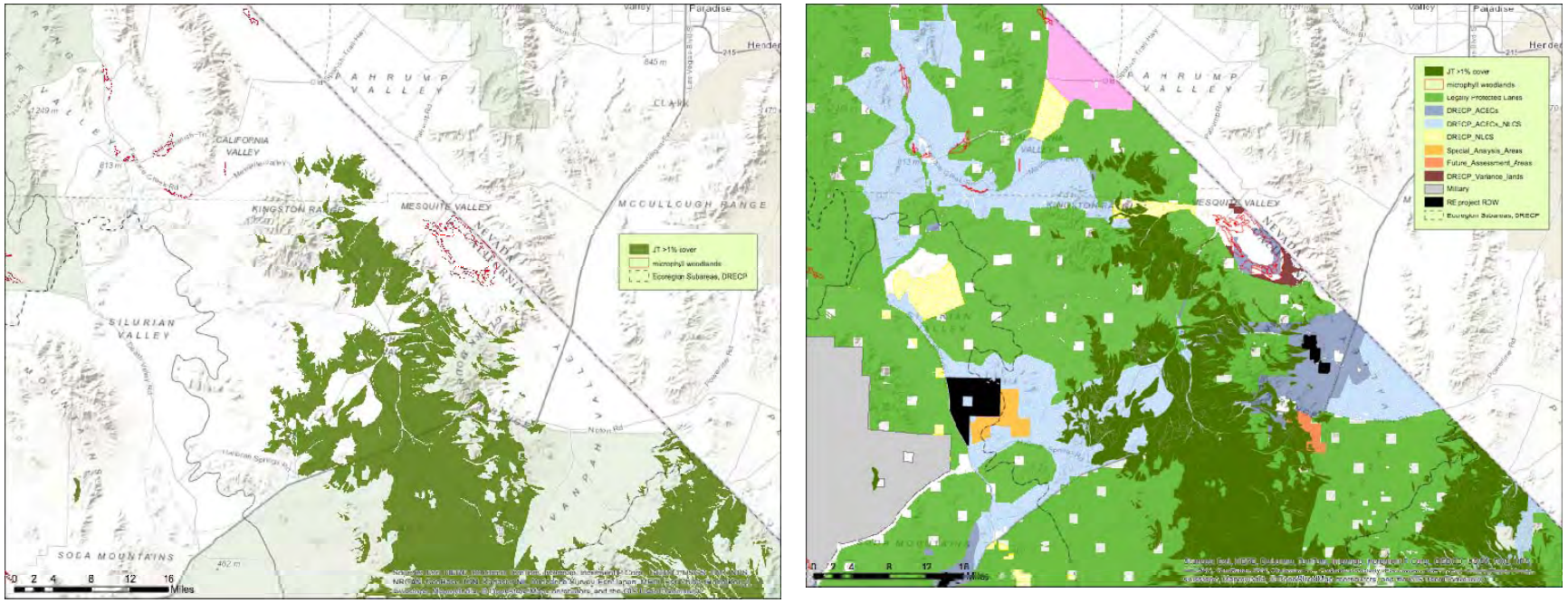


Figure JT-12. Joshua tree woodlands in Shadow Valley connecting north into the Mesquite and Kingston mountain ranges. Include the conservation and management of Joshua tree woodland community as a resource management priority for the NCL designation proposed for Shadow Valley in the DRECP Preferred Alternative.

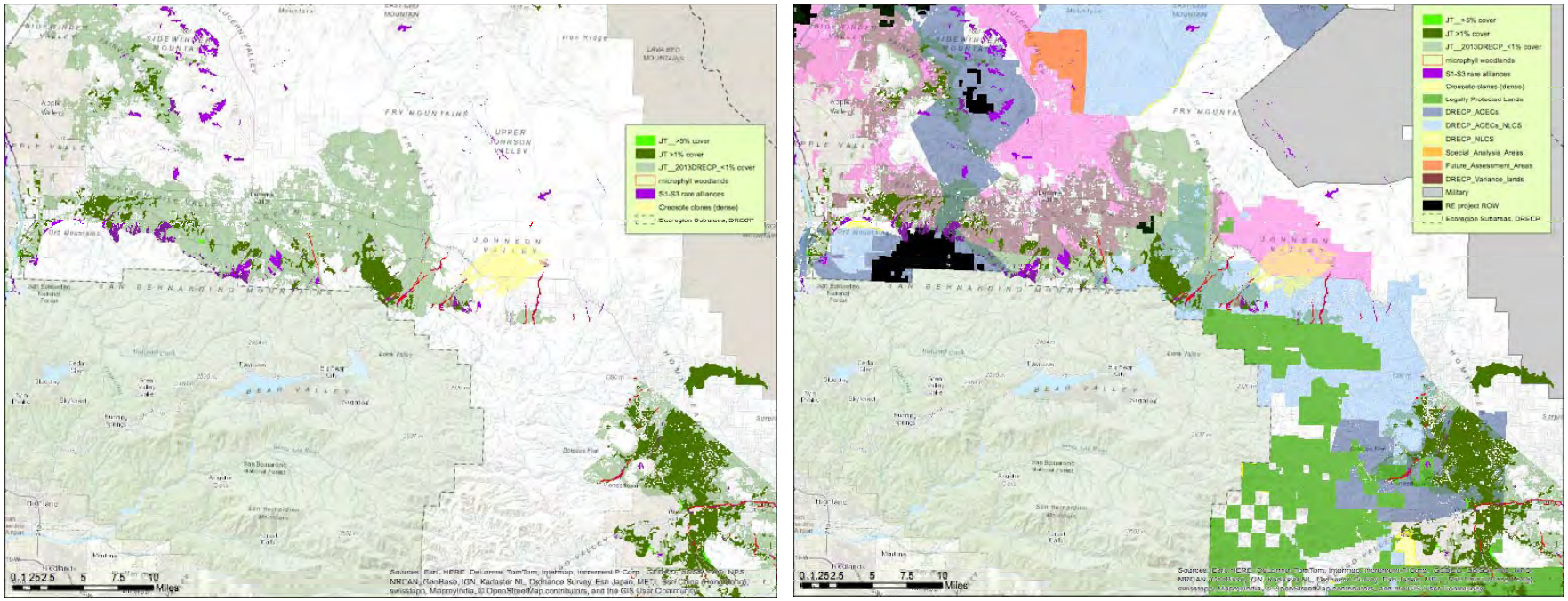


Figure JT-13. Lucerne Valley rising up into the San Gabriel mountains in the San Bernardino NF. Include conservation and management of Joshua tree woodland, microphyll woodlands, and other rare (S1-S3 ranked) natural communities as resource conservation priorities within proposed ACEC and NCL designations in the DRECP Preferred Alternative. Refine Johnson Valley DFA boundaries to avoid the densest stands of Joshua tree and of creosote clones natural communities. Refine Lucerne DFA to avoid >1% cover Joshua tree woodland stands, microphyll woodlands, and other rare S1-S3 ranked) natural communities.

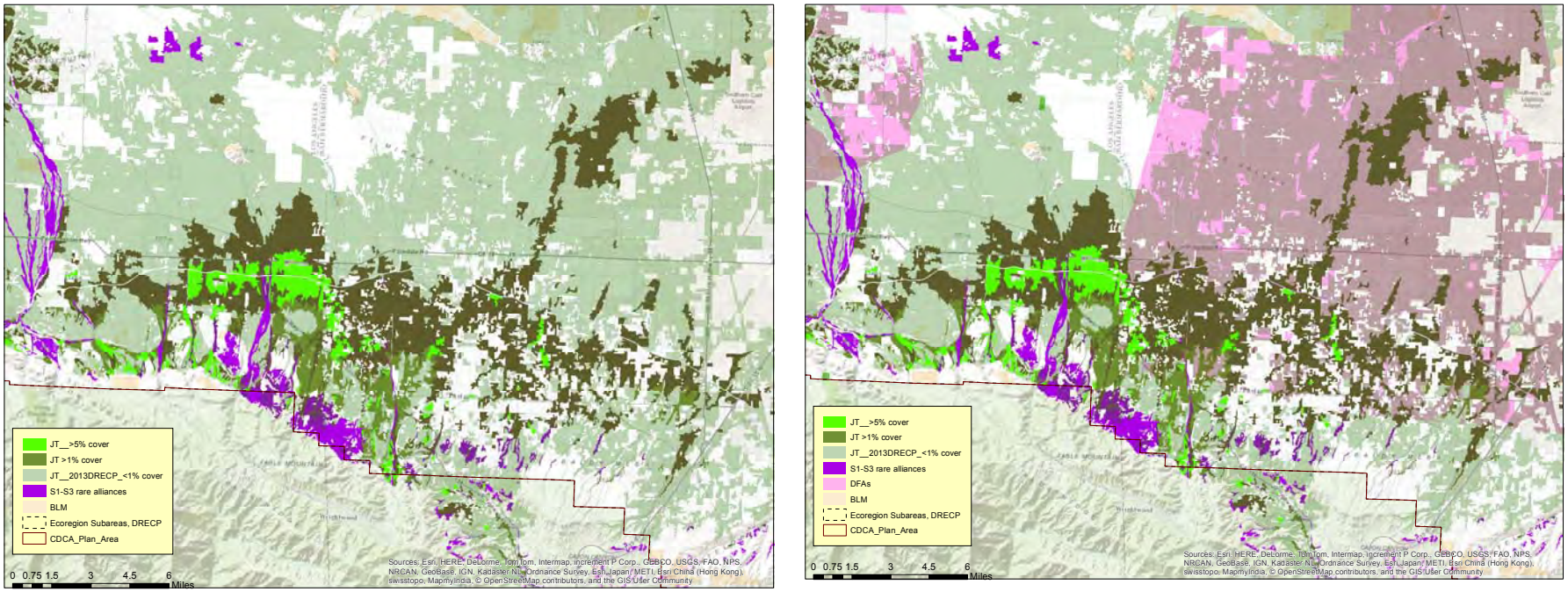


Figure JT-14. Pinon Hills. Conserve Joshua tree habitat on BLM-managed lands near Pinon Hills, CA by pulling the DFA boundary north of CA HW-18 and make conservation of Joshua tree woodland a management priority on BLM parcels south of HW-18.

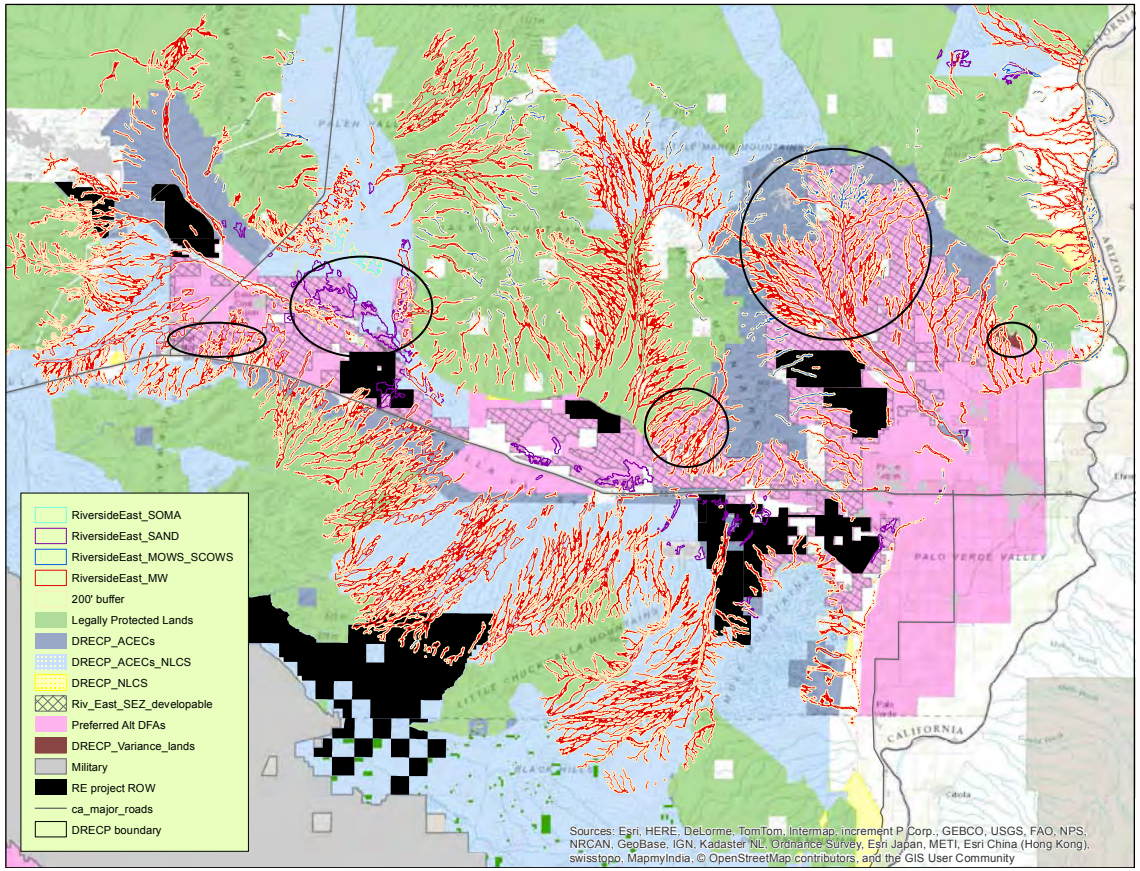


Figure LUPA-1. The draft DRECP specifies a 200 foot setback for microphyll woodlands (MW) and several other covered natural communities at (CMA# AM-DFA-RIPWET-1). Areas of dense MW (red) and other rare MOWS / SCOWS communities (blue), where siting of PV modules would be challenging without extensive removal of microphyll woodland, are highlighted in circles above. These areas should redesignated from DFA and Solar PEIS SEZ to ACECs as described below.

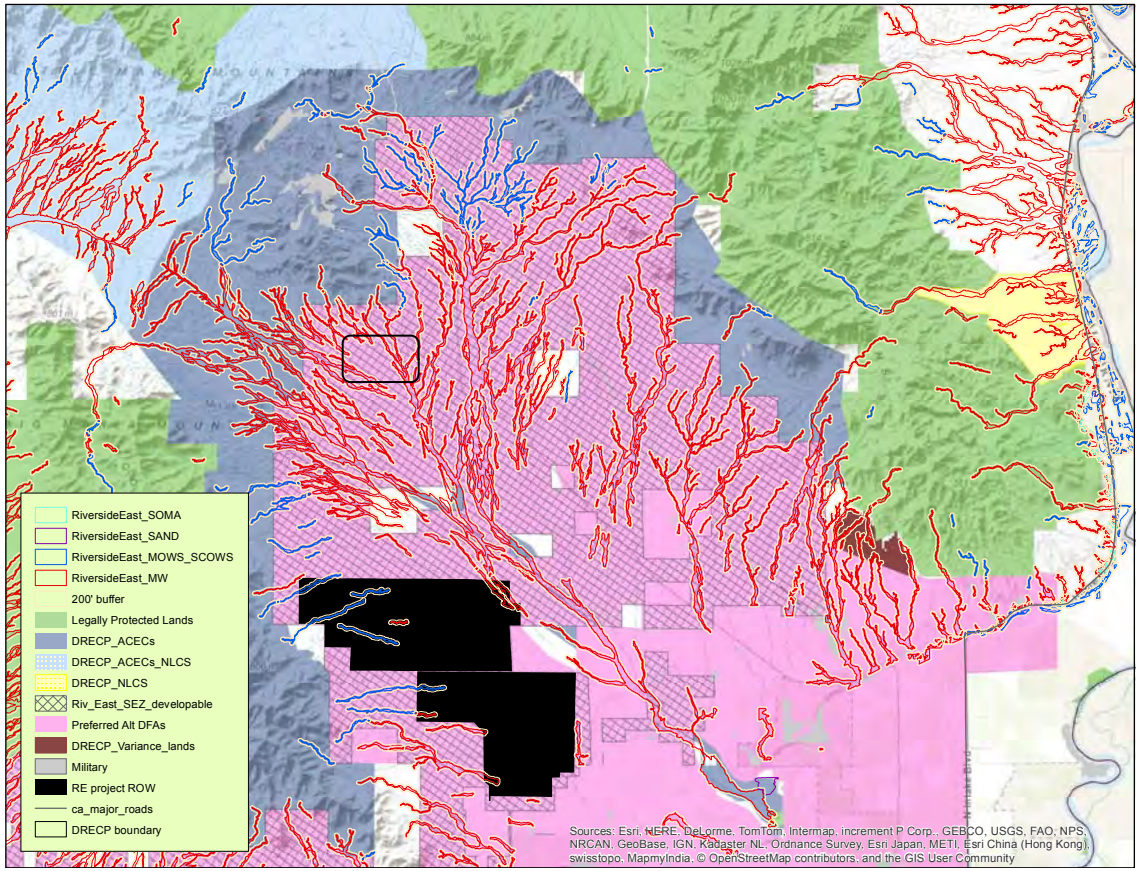


Figure LUPA-2. McCoy Wash area: Budget and timing constrained the 2013 DRECP vegetation mapping effort to a 90 foot minimum mapping width for microphyll woodlands. Project-level vegetation mapping (as per CMA# AM-PW-1 and Appendix H) will delineate additional stands less than 90 feet wide, which meet the NVCS membership rules for microphyll woodlands. A look at aerial imagery of the lands inside empty black box, above left, illustrates this point (see Figure LUPA-3).

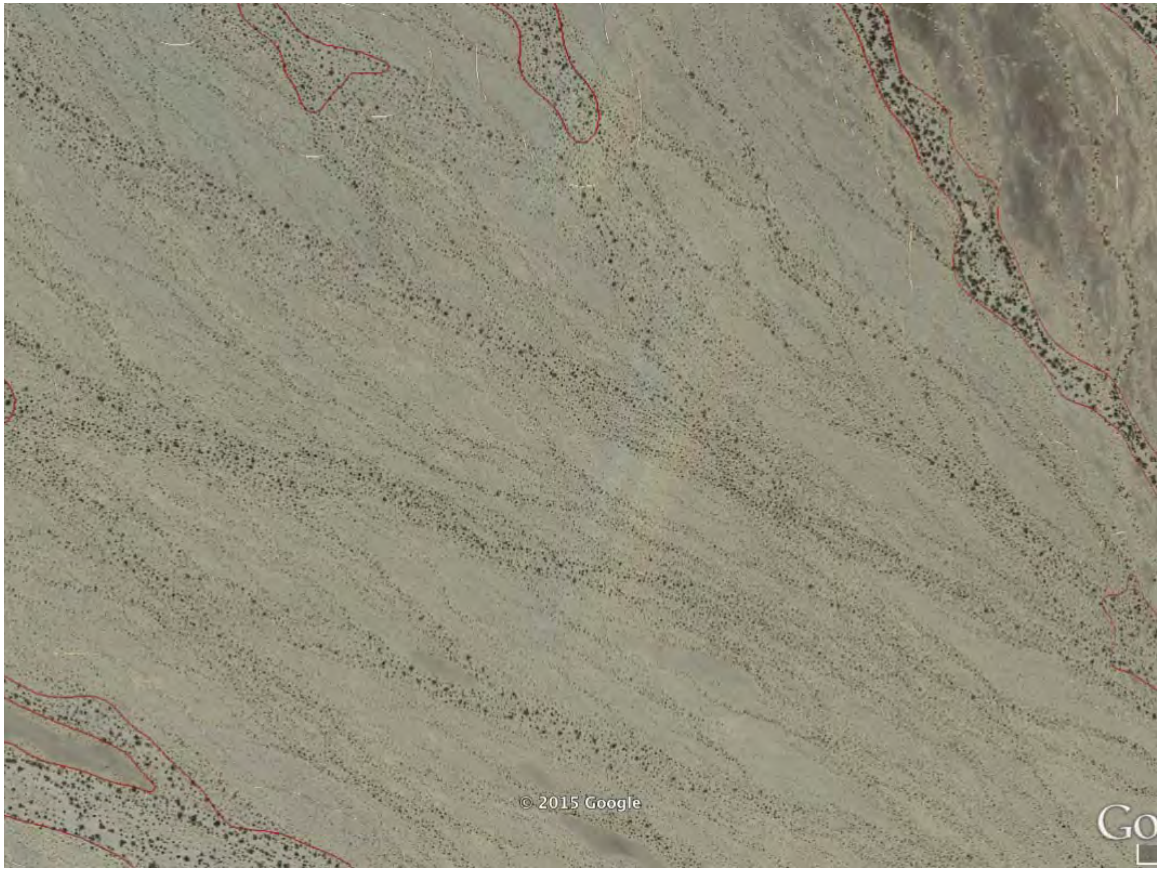


Figure LUPA-3. Closer view of inset boxed area: Additional microphyll woodland washes occur throughout the Riverside East DFA / SEZ that fall below the 2013 vegetation map's 90' minimum mapping width. These are additional riparian natural communities that will require 200' setback buffers and further complicate siting of solar arrays in areas of already densely mapped MW.

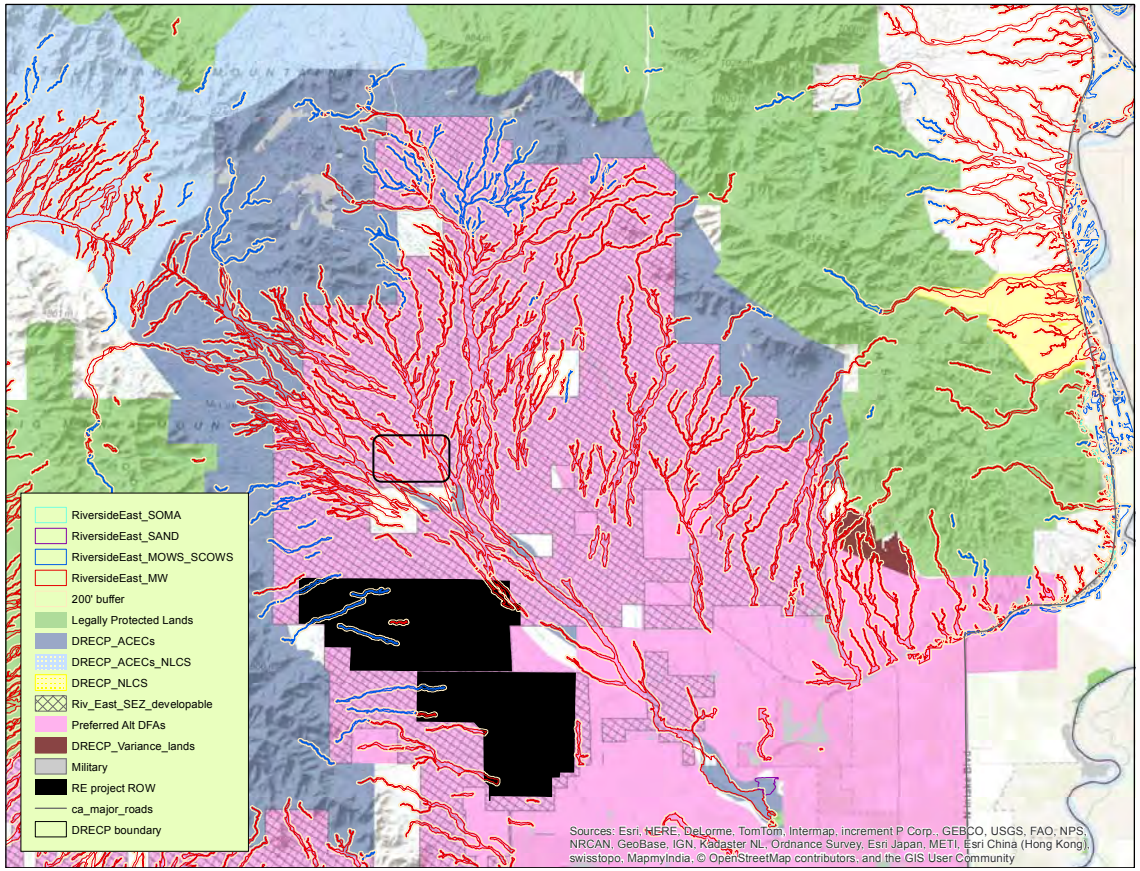


Figure LUPA-4. McCoy Wash area: Inset box upper left illustrates another example of where Project-level vegetation mapping will delineate additional stands less than 90 feet wide. Aerial imagery of the lands inside empty black box illustrates this (see Figure LUPA-5).

Figure LUPA-5. Closer view of inset boxed area: Another example of microphyll woodland washes “hidden” below the 90’ mapping width. These are additional riparian natural communities that will require 200’ setback buffers and further complicate siting of solar arrays in areas of already densely mapped MW. Redesignate microphyll woodlands in this area from DFA / SEZ to McCoy Valley ACEC.

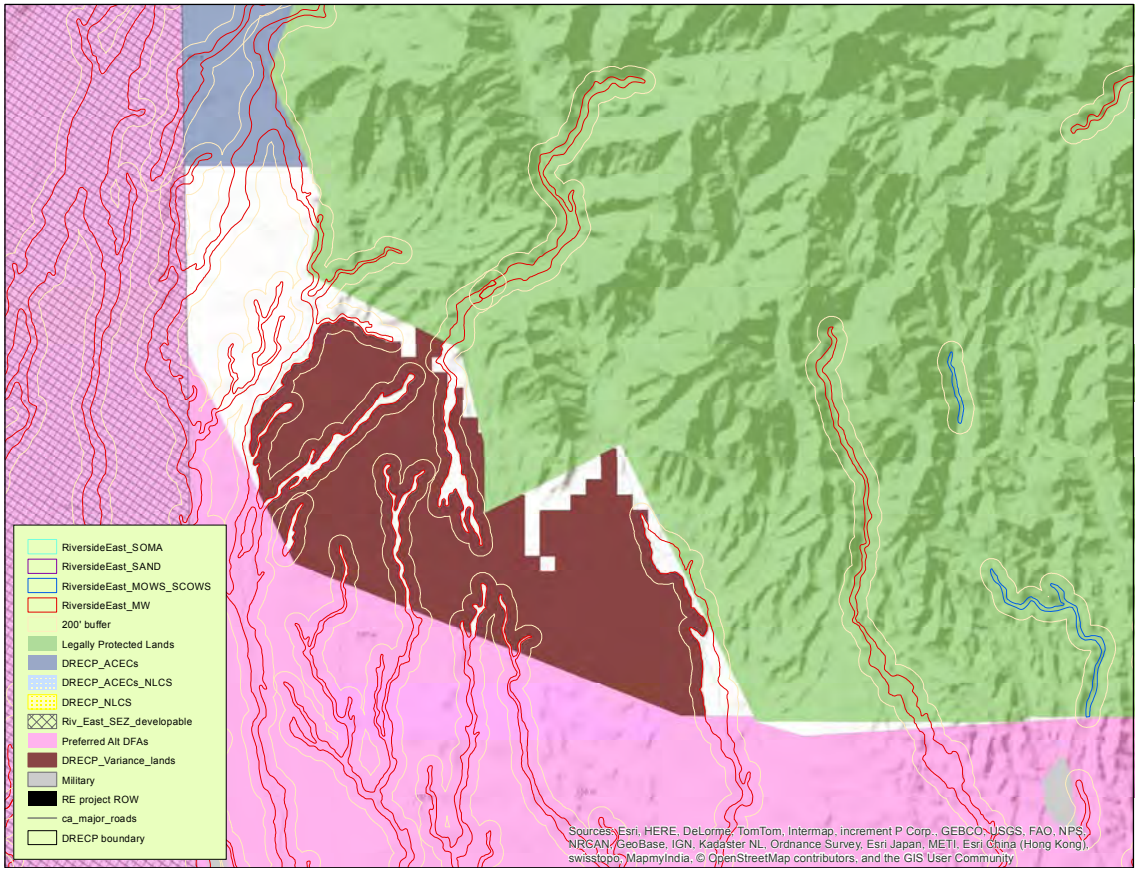


Figure LUPA-6. Blythe Variance lands: draft DRECP revised this Solar PEIS Variance area to remove delineated microphyll woodlands (>90 feet wide) from Variance designation (but note the CMA-specified 200' buffers have not also been removed from (brown) Variance area. Project-level vegetation mapping will delineate additional woodlands less 90 feet wide and further complicate solar siting. This area should be redesignated from Variance to McCoy Valley ACEC to protect microphyll woodland habitat.

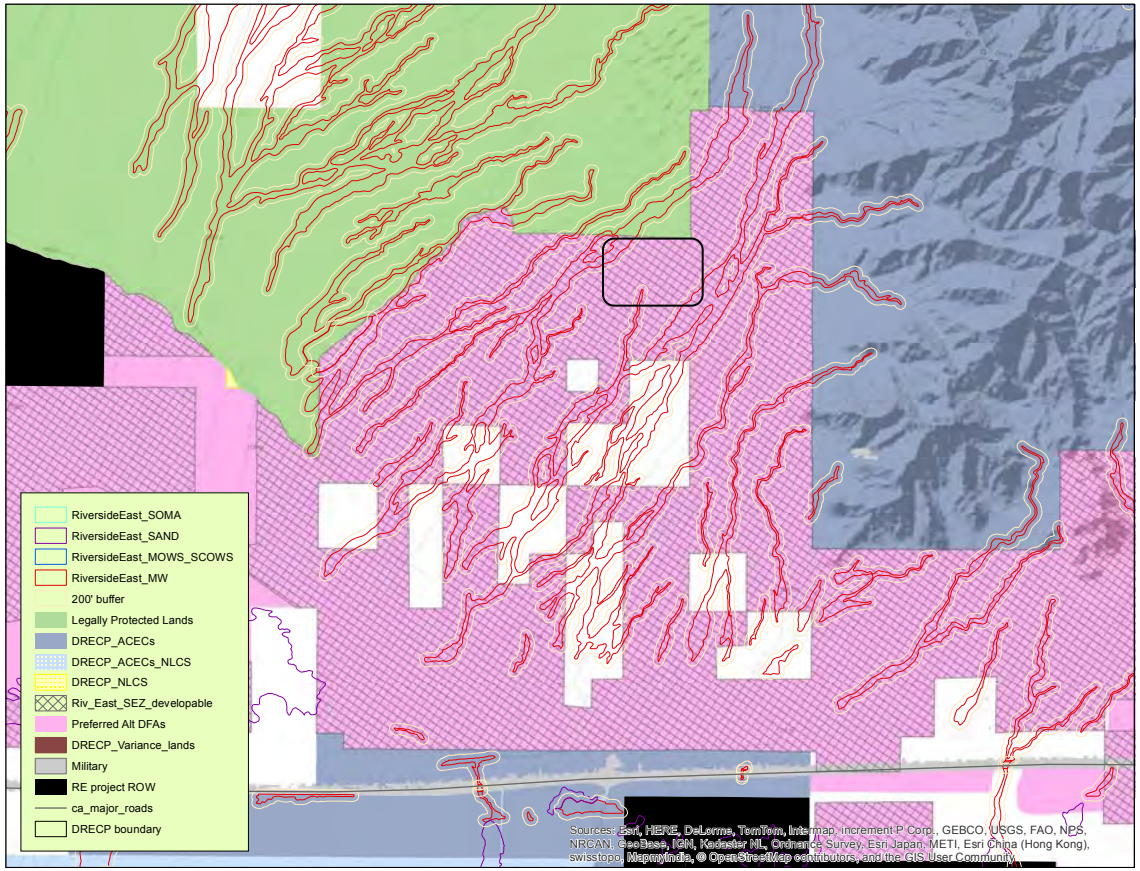


Figure LUPA-7. SW of McCoy Peak, north of I-10: Another area of dense microphyll woodlands, where project-level vegetation mapping (as per CMA# AM-PW-1 and Appendix H) will delineate additional woodlands less than 90 feet wide. Aerial imagery of the lands inside empty black box (center middle above) illustrates this point. See Figure LUPA-8. Redesignate and incorporate area to McCoy Valley ACEC. This will also increase connectivity within the DRECP NCCP Reserve lands across this area.

Figure LUPA-8. Additional microphyll woodland washes occur throughout the Riverside East DFA / SEZ that fall below the 90’ minimum mapping width, and which will require 200’ setback buffers. Darker areas = desert pavements between microphyll washes.

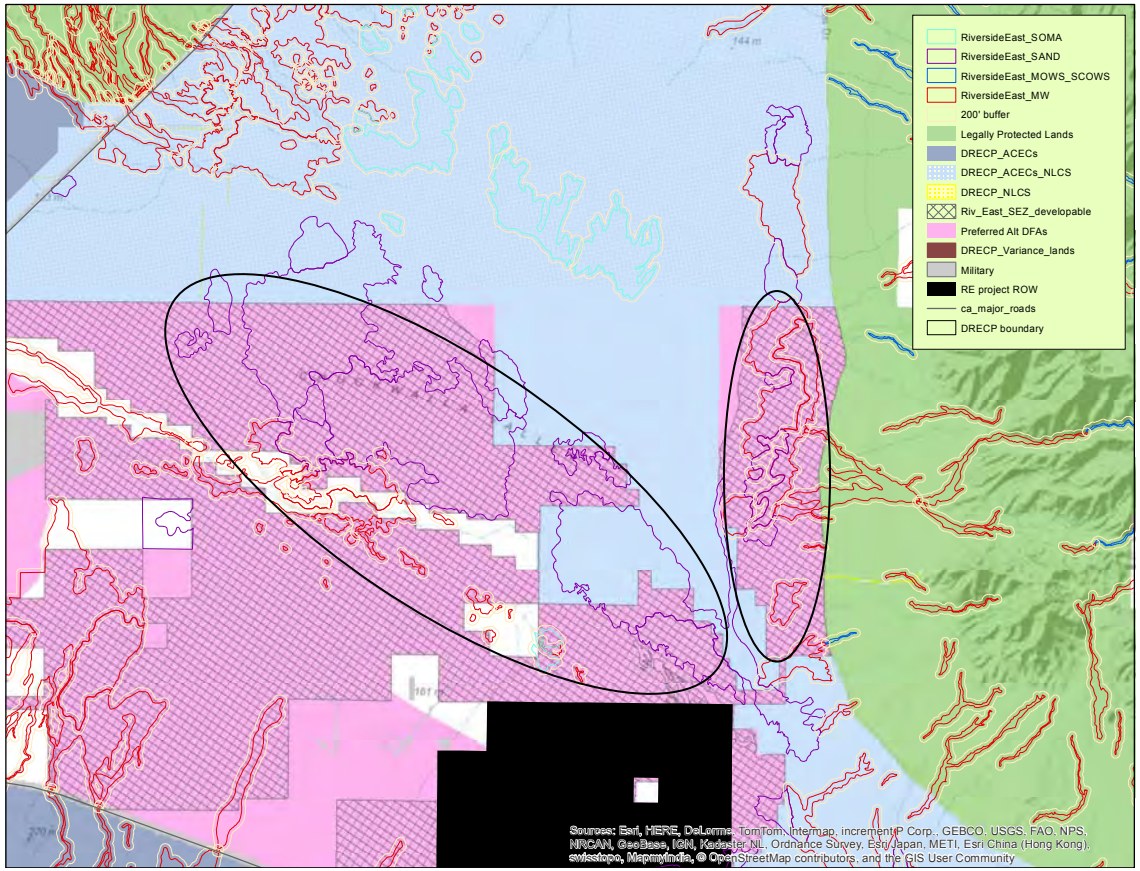


Figure LUPA-9. Palen Dunes area: Here, microphyll woodlands (red) bordering the Palen Mt. wilderness (green), rare Dune natural communities purple), a rare Wetland community (aqua blue), and an aeolian sand transport corridor make this area biologically important to conserve and logistically challenging to develop. Much of this area should be redesignated from DFA and SEZ incorporated into the Palen/Ford ACEC.

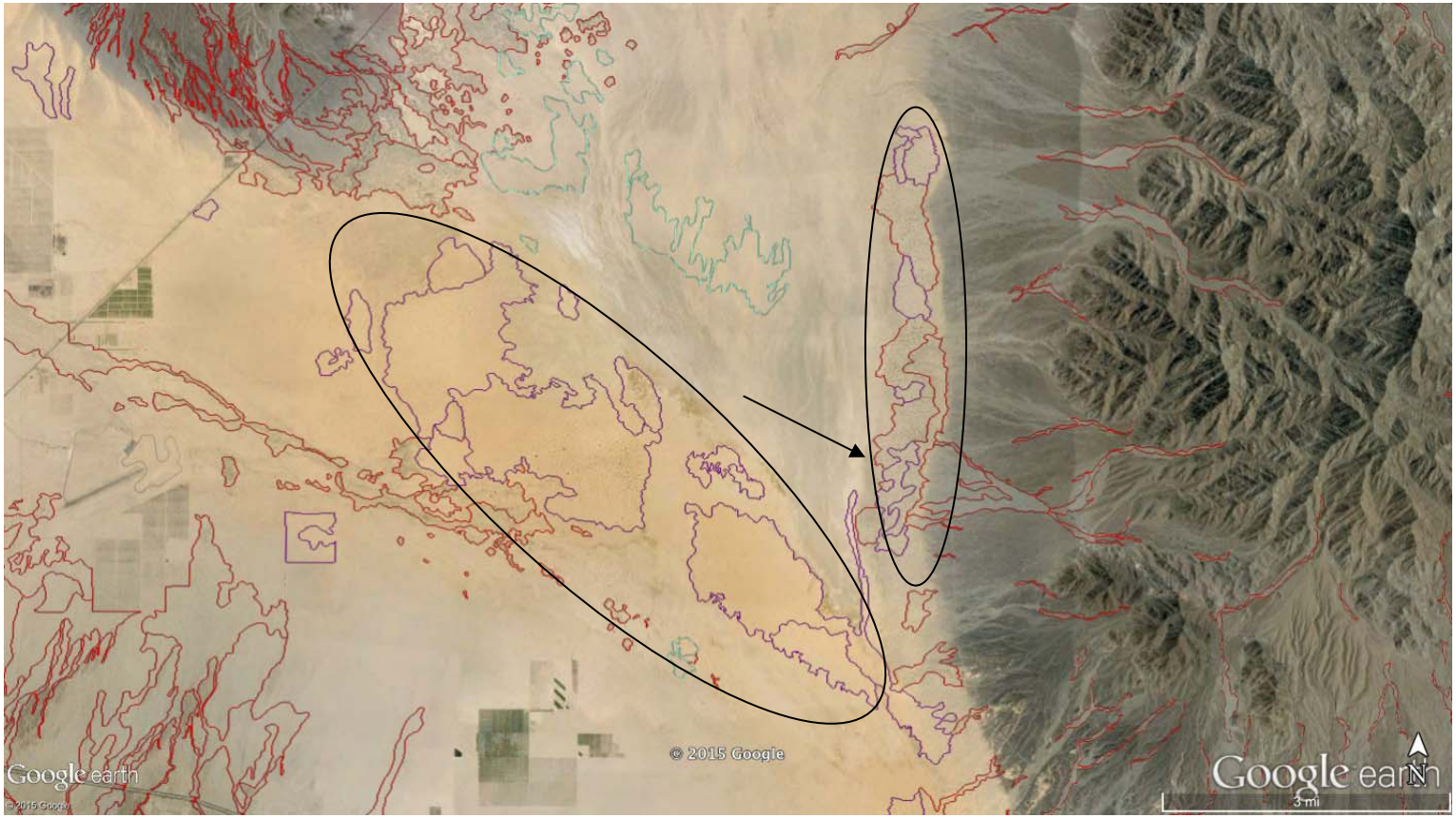


Figure LUPA-10. Palen Dunes area: Here, microphyll woodlands (red) bordering designated wilderness (green), rare Dune natural communities purple), a rare Wetland community (aqua blue), and an aeolian sand transport corridor make this area biologically important to conserve and logistically challenging to develop. Much of this area should be redesignated from DFA and SEZ to Palen/Ford ACEC. Arrow indicates POV of next slide.

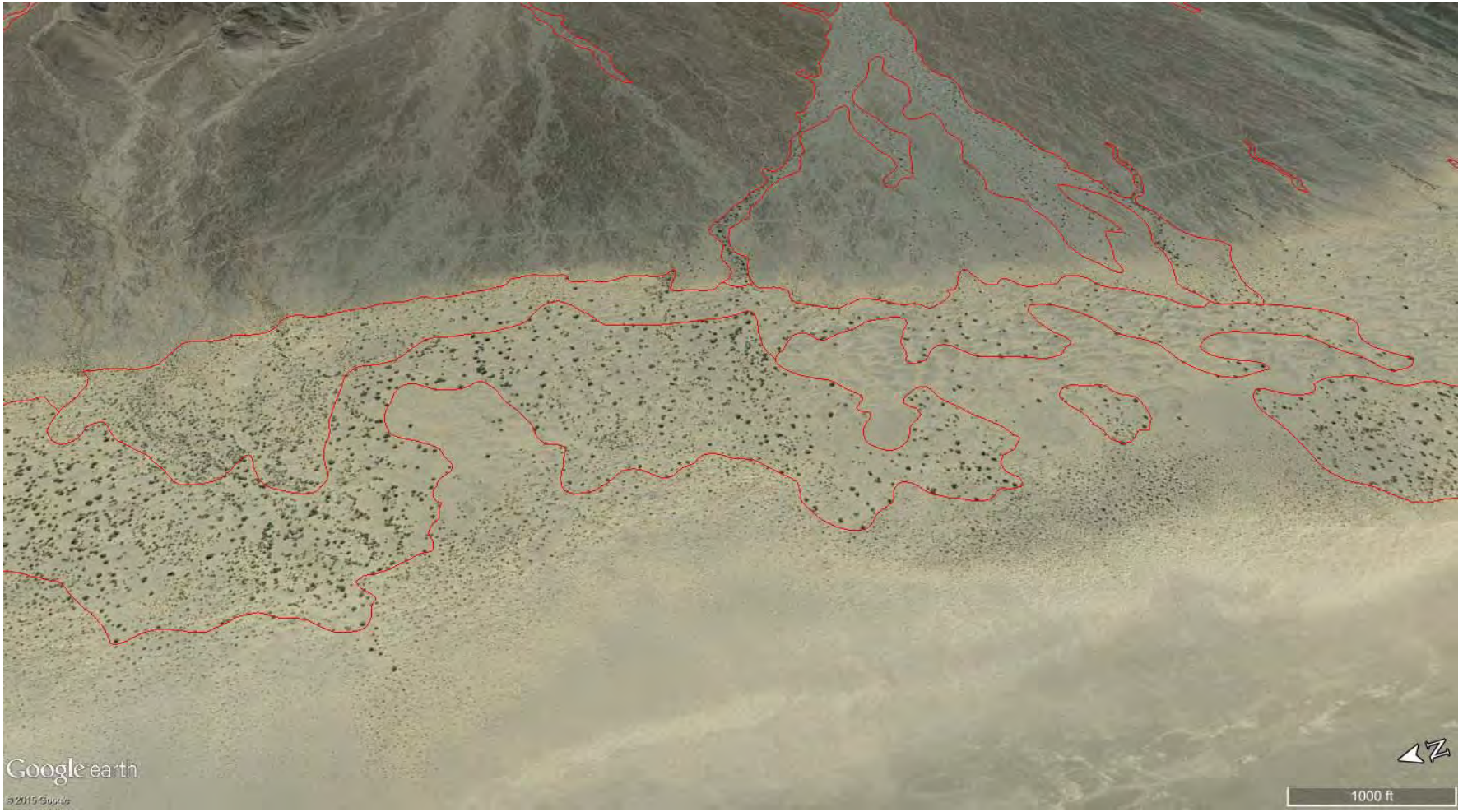


Figure LUPA-11. Aeolian sand transport corridor mixes with alluvial fans flowing from western slopes of Palen Mts. wilderness. These soils support dense microphyll woodlands (blue palo verde / ironwood) outlined in red. This area should be redesignated from DFA /SEZ to Palen/Ford ACEC.

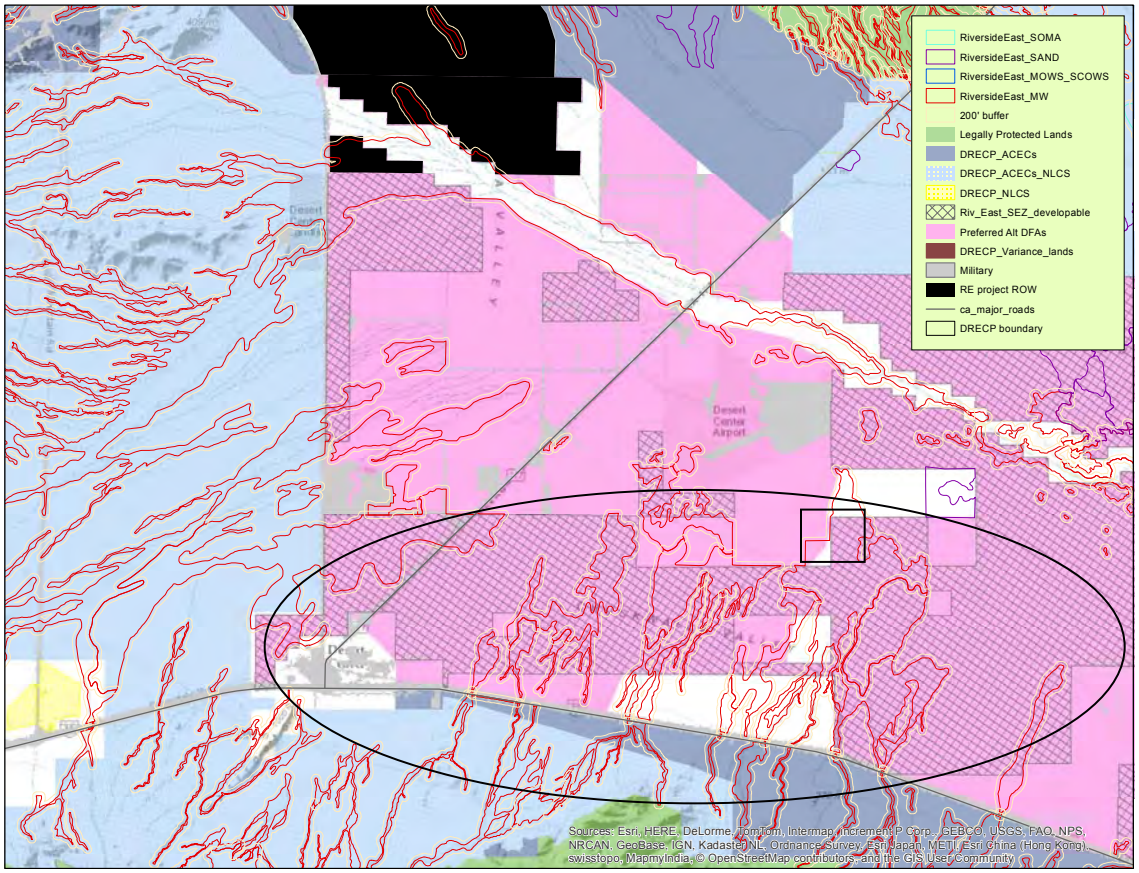


Figure LUPA-12. South of Desert Center: Though near already developed areas, extensive stands of microphyll woodlands will need to be destroyed in order to develop projects here. Some MW removal has already occurred. See aerial of inset box (Figure LUPA-13). Redesignate from DFA / SEZ to ACEC to conserve microphyll woodland habitat.

Figure LUPA-13. South of Desert Center: removal of much blue-palo verde / ironwood (one of four microphyll woodland types) has already occurred here. Lacking quantitative, measurable conservation targets for natural communities like microphyll woodlands, the draft Plan fails to provide a means to determine how much development impact is allowable, and how much impact is too much.

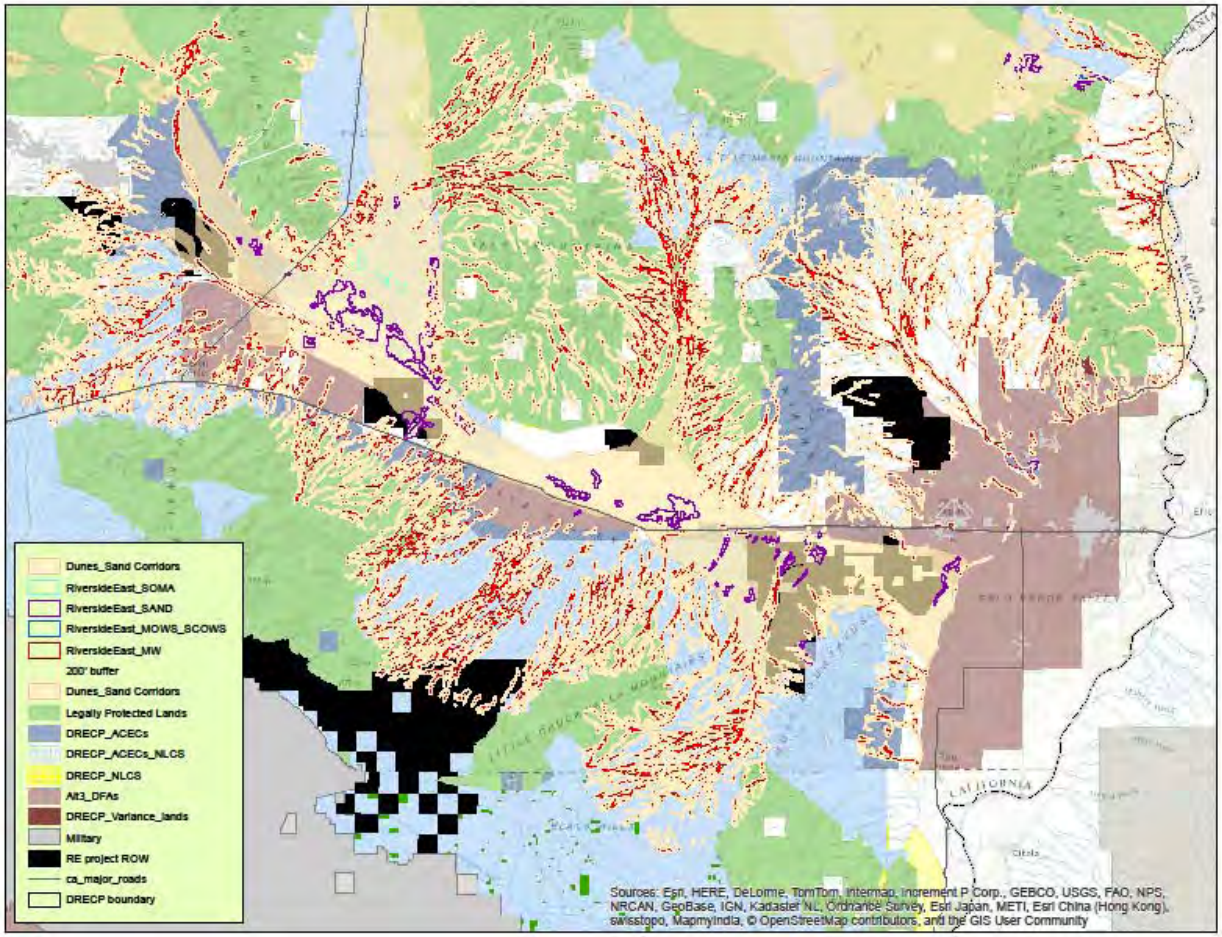


Figure LUPA-14. From a natural communities conservation and aeolian corridor avoidance perspective, a DFA / SEZ alignment much like the Riverside East DFA of Alternative 3 would avoid most of the botanically rich areas noted above, except for the Blythe Variance and south of Desert Center areas. Since we have not done a comprehensive review of Alternative 3, CNPS can support only the reduced aerial extent of Riverside East DFA component of Alternative 3's proposals, with additional redesignations for Blythe Variance and DFA/SEZ lands south of Desert Center.

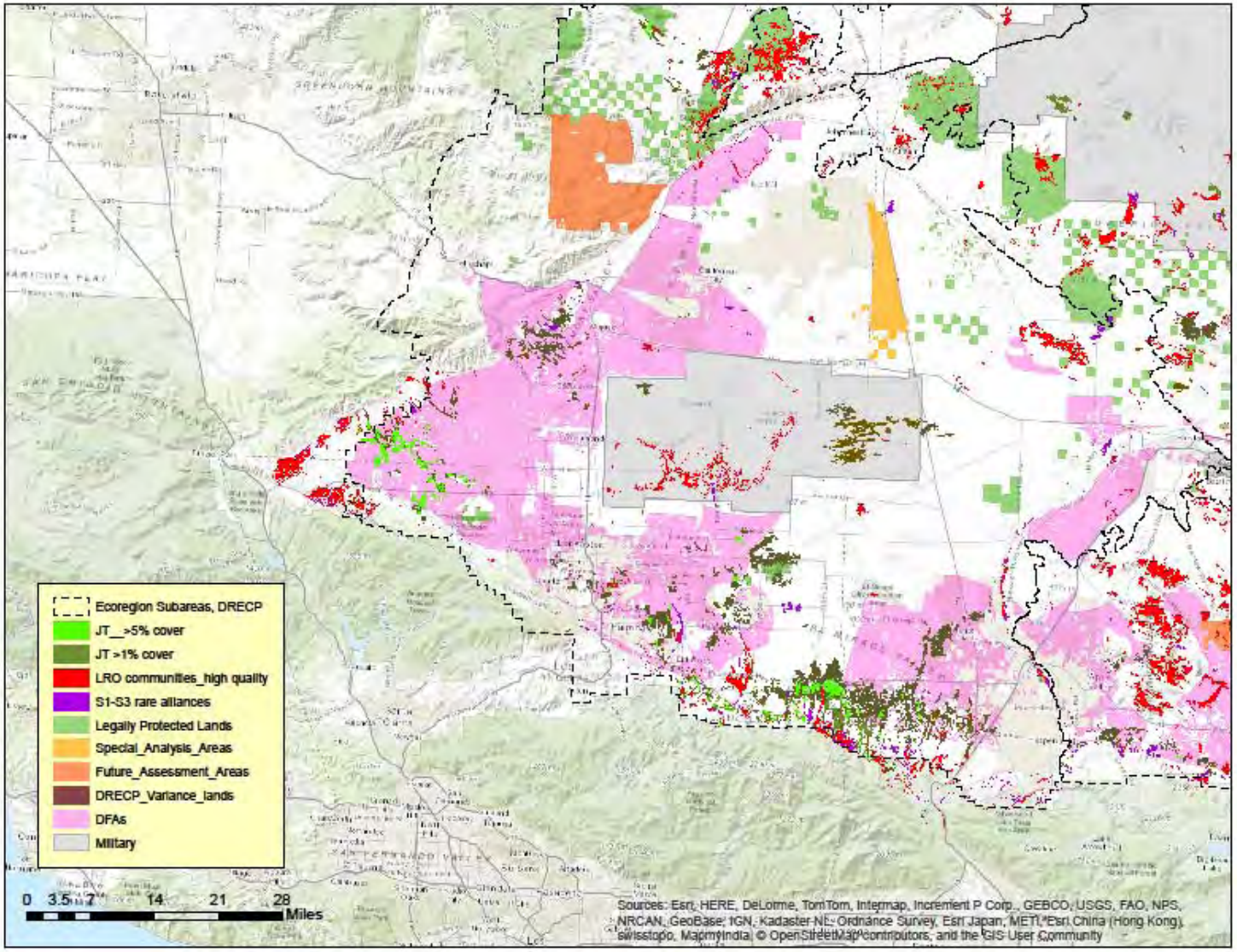


Figure LUPA-15. Rare and unusual natural communities in transition. DFAs must be refined in places to avoid extirpating these communities from the edges of their range.