

US EPA ARCHIVE DOCUMENT



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105
January 27, 2012

Department of the Interior
Bureau of Land Management
Attn: Ms. Linda Resseguie
BLM Solar PEIS Project Manager
1849 C Street, N.W., Room 2134LM
Washington DC, 20240

Subject: Supplement to the Draft Programmatic Environmental Impact Statement for Solar Energy Development in Six Southwestern States [CEQ# 20110361]

Dear Ms. Resseguie:

The U.S. Environmental Protection Agency (EPA) has reviewed the Supplement to the Draft Programmatic Environmental Impact Statement for Solar Energy Development in Six Southwestern States, including Arizona, California, Colorado, Nevada, New Mexico, and Utah. Our review was conducted pursuant to Section 309 of the Clean Air Act, the National Environmental Policy Act, and the Council on Environmental Quality NEPA implementing regulations (40 CFR Parts 1500-1508).

EPA recognizes the challenges associated with the development of the new Solar Energy Program and we strongly support the Bureau of Land Management (BLM) and Department of Energy (DOE) in this endeavor. In light of this undertaking and the large number of solar and other renewable energy projects that have been proposed in the Pacific Southwest, we were very pleased to enter into a Memorandum of Understanding with BLM last month to coordinate and cooperate on the NEPA process for renewable energy projects on federal lands administered by BLM in California, Arizona, and Nevada. Accelerating the pace of solar energy development on public lands in America will help meet the nation's energy demand, while reducing the amount of greenhouse gas emissions necessary to do so. To minimize adverse consequences and streamline project deployment, such projects should be directed away from areas of high conflict and sensitive resources, and towards areas of low conflict, including previously disturbed, degraded, or contaminated lands, sites adjacent to such lands, and locations that minimize the need for construction of new roads and transmission lines. This is consistent with the goals of recent Presidential directives designed to expedite the processing of renewable energy and infrastructure development projects through more efficient and effective permitting and environmental reviews. BLM's programmatic approach provides an excellent venue for thoughtful planning to avoid and minimize unnecessary environmental trade-offs at the project level.

We are pleased to see that the Supplement addresses several of the issues raised in our previous comments. Most importantly, BLM has made substantial progress in characterizing critical components of the new Solar Energy Program and in better identifying those areas within the Solar Energy Zones (SEZs) that are best suited for utility-scale solar energy development. Of significance, BLM has modified its preferred alternative to ensure that SEZs are not located in high conflict areas, reducing the number of zones from 24 to 17 and the corresponding acreage from 677,384 to 285,417 acres. The Supplement also establishes a protocol for identifying new SEZs in the future and discusses incentives designed to make development inside SEZs more attractive to industry.

However, we do have some concerns, and look forward to working with you on these issues. These concerns are addressed further in the enclosed detailed comments. For example, EPA recommends that BLM focus on identifying and incorporating disturbed, degraded or contaminated lands into the new Solar Energy Program. According to the Supplement, the identification of disturbed or previously disturbed sites is listed as a factor that will be considered in both the proposed identification protocol for new SEZs, as well as the proposed variance application process (pg. 2-29; 2-35). We recommend that more emphasis be placed on identifying and on siting future projects on disturbed, degraded, and contaminated lands, and that BLM and DOE offer additional incentives for development on such sites. We also recommend that BLM and DOE work with the Bureau of Indian Affairs to engage tribal governments to determine if there is interest in developing future SEZs on tribal land in light of recent proposed regulations for surface leases of trust land for energy and other uses.

Based on our review, we have rated the document as *Environmental Concerns - Insufficient Information* (EC-2). We appreciate the opportunity to provide comments on the Supplement to the Draft PEIS, and look forward to working closely with BLM and DOE to address the issues that we have identified. If you have any questions, please contact me at 415-972-3843, or contact Ann McPherson, the lead reviewer for this project. Ann can be reached at 415-972-3545 or mcpherson.ann@epa.gov.

Sincerely,

/S/

Enrique Manzanilla, Director
Communities and Ecosystem Division

Enclosures: Summary of EPA Rating Definitions
Detailed Comments

Cc: Jim Kenna, State Director, Bureau of Land Management, California State Office
Amy Lueders, State Director, Bureau of Land Management, Nevada State Office
Ray Suazo, State Director, Bureau of Land Management, Arizona State Office
Jesse Juen, State Director, Bureau of Land Management, New Mexico State Office
Juan Palma, State Director, Bureau of Land Management, Utah State Office
Helen Hankins, State Director, Bureau of Land Management, Colorado State Office
Tracey A. LeBeau, Director, U.S. Department of Energy, Office of Indian Energy Policy and Programs
Steve Black, Counselor to Secretary of the Interior, U.S. Department of the Interior
Janea Scott, Special Assistant to the Counselor, U.S. Department of the Interior
Michael Picker, Senior Advisor on Renewable Energy Facilities, State of California Governor's Office
Karen J. Atkinson, Director, Indian Affairs, U.S. Department of the Interior

U.S. EPA DETAILED COMMENTS ON THE SUPPLEMENT TO THE DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT FOR SOLAR ENERGY DEVELOPMENT IN SIX SOUTHWESTERN STATES, JANUARY 27, 2012

Variance Process

EPA supports BLM's proposal to reevaluate the need for additional SEZs in the variance areas at least every five years. Focusing solar development within SEZs offers many benefits, including reducing environmental impacts and streamlining the environmental review and permitting process. The establishment of new SEZs should better enable BLM's field offices to guide projects to more suitable locations. According to the Supplement, the variance process for projects proposed to be sited outside of SEZs includes two pre-application meetings, submission of a ROW application, submission of a Plan of Development, and various BLM coordination activities (pgs. 2-33 to 34). We are unclear, however, how the variance process specifically differs from BLM's current procedures for processing ROW applications.

Recommendations:

Clarify in the Final PEIS how the variance process will differ from the methods that BLM currently uses to process ROW applications. For example, the Final PEIS should describe whether future applications for projects located in SEZs would receive priority attention over applications in variance lands. If a proposed project does not utilize disturbed, degraded or contaminated variance land, BLM should consider requiring the developer to evaluate project alternatives within an SEZ in the applicant's Plan of Development and, if appropriate, in the project level NEPA analysis.

Greater Focus on Disturbed, Degraded, and Contaminated Lands

In our previous comments on the Draft PEIS, EPA committed to provide a list of contaminated sites tracked in our databases that are located in or near BLM-administered lands considered in the Solar PEIS. We have identified 25 sites, including two sites within the boundaries of the Solar Energy Development Alternative, using the boundaries presented in the Draft PEIS. Ten of the 25 sites are located within two miles of the Solar Energy Development Alternative area and one site is located within one mile of the Dry Lake SEZ. These sites are included in a table at the end of these Detailed Comments. Other federal, state, tribal, and local agencies, as well as the public, may be able to identify additional sites that should be considered for solar development.

Recommendations:

Expand the search for disturbed, degraded, and contaminated lands to include public, private, and tribal lands.

Work with the Nevada Department of Environmental Protection and other state agencies to examine recently active, but currently closed, mine sites on BLM land suitable for solar energy development and publish these sites in the Final PEIS.

Consider creating an Internet-based portal to allow for continuous input from other federal, state, tribal, and local agencies and the public, aimed at identifying lands that are disturbed, degraded or contaminated. Use this portal to begin to create a comprehensive inventory of such sites so that developers can be directed to these sites in the future.

Extend the same incentives designed to steer development to SEZs to disturbed, degraded or contaminated sites.

Include the list of contaminated sites identified by EPA in the Final PEIS, along with additional information about the sites and a preliminary determination as to their suitability for solar development.

Consider whether the boundaries of the Dry Lake SEZ should be adjusted to incorporate the site on EPA's list of contaminated sites that is located 0.65 miles from that SEZ.

Add the following sentence as a footnote to the RE-Powering America's Land Initiative on page 2-35: "EPA and other parties have or will continue to characterize and cleanup these sites to ensure they are protective for people."

Processing of Existing Solar ROW Applications

As of August 15, 2011, there were 79 pending solar applications. According to the Supplement, BLM intends to continue to process all pending applications that meet due diligence and siting requirements under BLM's current policies, and that pending applications on lands proposed as exclusion areas are likely candidates for denial.

We believe that future efforts should be focused on the designation of new SEZs and the identification of disturbed, degraded, and contaminated lands. Not allowing projects in exclusion areas will allow state and federal agencies to be more selective about lands to be utilized for development and should provide BLM with a better opportunity to evaluate the effectiveness of the Solar Energy Program.

Recommendations:

Disclose in the Final PEIS the numbers of pending applications that are located within the SEZs, variance lands, and exclusion areas, and include maps to illustrate the locations of the active ROW applications.

Provide clear and strong preference to project applications in SEZs with few resource constraints and on disturbed, degraded, and contaminated lands.

Competitive Bidding

The Supplement states that BLM may, through rulemaking, establish a competitive process that results in the immediate issuance of a ROW lease authorization to the successful bidder (pg. 2-23).

Recommendation:

Describe the competitive process in the Final PEIS more fully and clarify when the appropriate environmental analysis would be completed.

SEZ-Specific Action Plans – Appendices C.1 to C.6

EPA appreciates the inclusion of action plans for each of the SEZs, describing the changes that have been made to the SEZs, as well as outlining the additional information that will be collected (Appendix C.1 to C.6). According to the Supplement, some of the items identified in the action plans will be completed by BLM and presented in the Final PEIS. Data collection efforts not completed by BLM, however, would likely be required of developers as part of site-specific tiered analysis for future projects.

Recommendation:

Clarify in the Final PEIS when data will be collected in conjunction with the SEZ-specific action plans and how that data will be integrated into the decision-making process and/or presented if it is collected subsequent to the publication of the Final PEIS. For example, explain how stakeholders will be informed of newly designated „non-development’ areas in the SEZs.

The first section of each SEZ-specific action plan includes a summary of potential impacts identified in the Draft PEIS, followed by recommendations for additional data collection. Some recommendations on additional data collection are applicable to most, if not all, of the SEZs. EPA recommends one addition to the Water Resources section of each SEZ-specific action plan, as noted below.

Recommendation:

Include a functional assessment of waters of the U.S. to evaluate and disclose the existing condition of such waters and any potential adverse effects from solar development.

We are pleased to see that „non-development’ areas have been specified in many SEZs to avoid surface water features. Due to the scale of the maps, however, it is difficult to tell the size of these areas relative to the water resources they are protecting, or whether a buffer has been included in the area specified as „non-development.’

Recommendations:

Provide more detailed information in the Final PEIS on the avoidance of surface water features, particularly as it relates to „non-development’ areas within SEZs, including whether or not a buffer has been included in such areas.

Establish 100-foot buffer zones¹ to avoid adverse impacts to water quality or hydrology of streams, wetlands and riparian areas. Larger buffers may be necessary depending on resources, landscape position, and surrounding land use.

¹ A 100-foot buffer for waters was proposed in the West Chocolate Mountains Renewable Energy Evaluation Area DEIS (June 2011).

Revised Transmission Analysis – Appendix C.7.1

We are pleased to see that BLM proposes to complete additional analyses of transmission needs for the SEZs being carried forward in the Final PEIS. According to the Supplement, this analysis will address transmission access issues associated with the SEZs and the extent of new transmission development that might be needed to support solar energy generation within the SEZs (pg. C-321). While the Supplement contains a commitment that the Final PEIS will include a more detailed evaluation of the transmission needs and impacts for anticipated solar development within the SEZs (pg. 2-25), it does not commit to addressing impacts associated with anticipated transmission line development (Section C.7.1).

Recommendation:

Include in the Final PEIS a general description of the types of impacts associated with upgrading transmission infrastructure or building new lines, along with a commitment that future project-specific NEPA analyses will address such impacts during the review of the proposed solar energy facilities.

Water Resources Action Plan – Appendix C.7.2

We appreciate the inclusion of the Water Resources Action Plan (Appendix C.7.2), which outlines seven main action plan items relating to water resources that apply to all SEZs going forward. We are pleased to see that the WRAP states that a planning-level inventory of water resources will be presented in the Final PEIS, as we recommended previously. The WRAP lists products that will be developed and sources of information that will be utilized for this inventory, such as Google Earth links to specific datasets.

Recommendations:

EPA recommends that BLM also utilize Google Earth to assist in mapping waters by including aerial photo interpretation at an appropriate scale.

Specify in the Final PEIS when the Floodplain Determinations, Jurisdictional Waters Determinations, and Significant Ephemeral Waters Determinations will be completed and how this information will be integrated into the decision-making process for the SEZs, particularly if these items are completed after the publication of the Final PEIS.

The WRAP states that the following seven SEZs will benefit from a more quantitative analysis of groundwater impacts including: Afton, Amargosa Valley, Brenda, Dry Lake, Dry Lake Valley North, Imperial East, and Riverside East. We support BLM's commitment to perform quantitative analyses of the potential drawdown impacts in certain SEZs; however, it is not clear how the seven SEZs listed in Section C.7.2 were selected for analysis. Our Draft PEIS comments expressed concern regarding groundwater impacts in the Escalante Valley and Milford Flats South SEZs, where subsidence has already been observed in association with excessive groundwater withdrawal. Development of a numerical groundwater model is listed in the SEZ-specific WRAP for Escalante Valley and Milford

Flats South, and we suggest clarification as to whether this is a different level of modeling than that described in Section C.7.2, or whether the two SEZs were inadvertently left off the list.

Recommendations:

Clarify in the Final PEIS whether additional groundwater modeling will be conducted in the Escalante Valley and Milford Flats South SEZs and if this is part of the general WRAP, or SEZ-specific action plans.

Perform additional quantitative analyses for the Escalante Valley and Milford Flats South SEZs.

Identify in the Final PEIS the criteria used to determine when a quantitative analysis is appropriate for an SEZ, and consider including situations where water availability is already limited to the point that wet-cooling options would not be feasible as one criterion.

Groundwater Impacts

EPA believes that there is the potential for adverse impacts to the long-term availability of groundwater in many SEZs, considering the quantities needed for maximum build-out and the potential impacts associated with pumping groundwater in these basins.

Recommendations:

Clearly identify in the Final PEIS the quantity of groundwater withdrawal allowable in each SEZ, and describe impacts associated with lowering of the water table.

Consider further restrictions on solar technology within SEZs in exceptionally arid regions, such as Afton, by limiting development to low water-use technologies such as photovoltaic systems.

EPA is particularly interested in the groundwater withdrawal in the Amargosa Valley SEZ. Groundwater withdrawals for construction and operation at full build-out capacity far exceed the available groundwater supply in this SEZ. Moreover, the basin is currently over-allocated and groundwater withdrawals have been curtailed due to restrictions protecting water rights at Devils Hole. In addition, it is currently not possible to model the extent that continued groundwater pumping will impact water levels at Devils Hole and Ash Meadows National Wildlife Refuge.² Regional groundwater models indicate that groundwater levels at Devils Hole are steadily declining and may reach critical levels in the near future. Small declines in spring discharge or changes in water temperature or water chemistry resulting from groundwater withdrawals in the basin may affect threatened and endangered species at Ash Meadows NWR. Consequently, it is likely that full build-out would have significant impacts to groundwater resources and groundwater-dependent species.

² Draft Environmental Impact Statement for the Amargosa Farm Road Solar Energy Project. See internet address: http://www.blm.gov/pgdata/etc/medialib/blm/nv/field_offices/las_vegas_field_office/energy/amargosa_farm_road3.Par.28872.File.dat/Chapter%204%20-%20Environmental%20Effects.pdf

Recommendation:

Given the over-appropriation of groundwater resources and the presence of special-status species, particularly in Ash Meadows NWR, EPA recommends that BLM eliminate the Amaragosa Valley SEZ and exclude this land from further development.

Air Quality

Our comments on the Draft PEIS recommended that additional information on Dust Abatement Plans and soil stabilization techniques be included in the Final PEIS to address potential adverse air quality impacts predicted by air quality modeling. The action plans presented in Appendix C, however, do not address the data gaps that we have referenced. In fact, the Supplement states that no additional air quality information is needed for any of the SEZs. EPA is concerned about cumulative impacts of fugitive dust, and we reiterate our recommendation to document the potential for cumulative air quality impacts of solar energy development, particularly on Class I areas. Fugitive dust mitigation techniques may fall within the scope of the design features, which will be updated in the Final PEIS. If this is the case, we look forward to seeing this additional information at that time.

Recommendations:

Present further information in the Final PEIS on Dust Abatement plans and soil stabilization techniques.

Document in the Final PEIS the potential for cumulative air quality impacts related to solar energy development, particularly on Class I areas.

Wind erosion is a major issue in the planning area. Construction of large solar energy projects could result in an increase in wind-borne particulate matter, which can lead to dust storms. Dust particles in the air can lead to a number of respiratory problems, asthma especially. Children, in particular, have greater sensitivities to various environmental contaminants, including air pollutants. Construction emissions could exacerbate existing conditions, such as asthma, for children, the elderly, and those with existing respiratory or cardiac disease. EPA suggests that BLM consult with the U.S. Department of Agriculture to identify soils that may be vulnerable to wind erosion. Any areas or regions that are determined to be particularly susceptible to wind erosion should be excluded from development, and this exclusion criterion should be added to Table 2.2-1. We suggest utilizing the New Mexico Wind Erosion Prediction Guide³ to gain an understanding of the wind erosion process and how to identify areas that are susceptible to wind erosion.

Recommendations:

Consult with the USDA to identify soils that may be vulnerable to wind erosion and exclude from development areas that are determined to be particularly susceptible from development.

Consider including ‘lands with vulnerability to wind erosion’ as an exclusion criterion in Table 2.2-1.

³ See Internet address: <http://www.nm.nrcs.usda.gov/technical/fotg/section-1/references/weq-prediction-guide.html>

Environmental Justice

In our comments on the Draft PEIS, EPA raised concerns over the methodology used to identify potential low-income and minority communities located near proposed SEZs, and we made several recommendations to improve the analysis. We recommended that BLM remove the state-wide analysis and utilize a lower threshold for the SEZ-specific analysis to define low-income and minority populations that are meaningfully greater than the state average. The SEZ-specific action plans, however, state that no additional information is needed regarding environmental justice issues.

Recommendations:

Revise and update the EJ analysis to provide more accurate analysis of impacted areas and comparisons with state demographics, both for minority percentages and low-income rates.

Include additional design features that address EJ concerns in the Final PEIS.

Cumulative Impacts

The Supplement discusses cumulative impacts briefly in Section 2.3.5, incorporating by reference the cumulative impact analysis presented in the Draft PEIS. The Supplement states that the cumulative impacts analyses for individual SEZs will be updated in the Final PEIS. Overall, BLM expects direct and indirect impacts, and therefore cumulative impacts, to be of lesser magnitude than was contemplated in the Draft PEIS. The Supplement also states that cumulative impacts may be more concentrated and/or severe within individual SEZs than was described in the Draft PEIS. In most cases, little or no information was presented in the Draft PEIS in support of these conclusions, nor were thresholds identified to determine significance.

Recommendations:

Address EPA's comments on the Draft PEIS concerning the cumulative impacts analysis, as presented in our comments on the Draft PEIS.

Describe the condition of the resource(s) and the time required for the resource(s) to recover from the impact of the proposed action, in conjunction with other past, present, and reasonably foreseeable future actions, in the Final PEIS.

Provide data to support the Supplement's assumption that direct, indirect, and cumulative impacts would be small to minor based on mitigation, as well as the Supplement's conclusion that cumulative impacts are likely to be of lesser magnitude than was contemplated in the Draft PEIS.

DOE's Proposed Programmatic Environmental Guidance

DOE's Proposed Programmatic Environmental Guidance is also presented in the Supplement. Using the guidance, DOE will select where to make technology and resource investments to minimize the environmental impacts of solar technologies. A second element of the guidance allows DOE to establish

environmental mitigation recommendations for project proponents who are seeking financial assistance from DOE. EPA is pleased to have the opportunity to review DOE's Proposed Programmatic Environmental Guidance and offers the following recommendations regarding Section 3.2.4, Water Resources and Erosion Control, as detailed below. We suggest replacing the word „consider' and revising the language as follows:

- Bullet #1: **Give precedence to** technologies that minimize water use.
- Bullet #2: **Promote** sustainable use of water resources through appropriate technology selection **and implementation of** conservation practices that **protect and preserve the function, acreage, and quality** of the existing natural water bodies (including streams, wetlands, ephemeral washes, **microphyll woodlands**, and floodplains, as well as groundwater aquifers).
- Bullet #4: Avoid locations that would involve impacts on surface water bodies, ephemeral washes, playas, **microphyll woodlands**, and natural drainage areas (including groundwater recharge areas).
- Bullet #11: **Contact the U.S. Army Corps of Engineers to discuss the reach and extent of waters of the U.S. on the proposed project site. Present a reasonable range of onsite and offsite alternatives and an analysis that evaluates alternatives to avoid impacts to waters in compliance with Section 404 of the Clean Water Act.**
- Bullet #12 (new): **Avoid impacts to waters of the U.S., including indirect impacts to waters of the U.S. located off the project site.**

EPA Tracked Sites located in the No-Action Alternative, as defined by the Draft PEIS.

| Program | EPA_ID/ BF ACRES Property ID | Site ID/ BF Grant IDs | Site Name | Latitude | Longitude |
|---------------------|------------------------------|-----------------------|--|-----------|-------------|
| Federal Superfund | NMD980750020 | 600911 | LEE ACRES LANDFILL (USDOJ) | 36.711100 | -108.092100 |
| Abandoned Mine Land | NMD986684231 | 604718 | STEPHENSON - BENNETT MINE | 32.403000 | -105.402000 |
| Abandoned Mine Land | NM0001408608 | 605033 | HORIZON POTASH MINE | 32.425000 | -103.760000 |
| Abandoned Mine Land | UTN000802138 | 802138 | OPERATION MINE SHAFT | 37.772000 | -113.171000 |
| Abandoned Mine Land | CO0008969974 | 801727 | CORKSCREW AND GRAY COPPER GULCHES | 37.921000 | -106.343000 |
| Abandoned Mine Land | UTN010161078 | 801847 | PIONEER 3-STAMP MILL | 37.134000 | -113.222000 |
| Landfill | 1554 | 0 | Garfield County/John's Valley LF | 37.821390 | -112.383612 |
| Abandoned Mine Land | UTD980667208 | 800679 | MONTICELLO RADIOACTIVELY CONTAMINATED PROPERTIES | 37.863880 | -109.333610 |
| Abandoned Mine Land | COD983801069 | 801336 | GREAT WEST GOLD AND SILVER | 38.382000 | -107.043000 |
| Abandoned Mine Land | UT0012605880 | 801913 | BULLION CANYON MILLS | 38.427000 | -112.286000 |
| Abandoned Mine Land | CO0000286203 | 801536 | LONDON MINE | 39.273000 | -105.862000 |
| Landfill | 1534 | 0 | Millard County LF | 39.308334 | -112.472779 |
| Abandoned Mine Land | CO0001411347 | 801566 | UPPER ANIMAS MINING DISTRICT | 37.844000 | -107.571000 |
| Abandoned Mine Land | UT0001910793 | 801607 | TINTIC STANDARD REDUCTION MILL | 39.958000 | -110.146000 |
| Abandoned Mine Land | UT0010221516 | 801869 | OPHIR MILLS AND SMELTER | 40.221000 | -112.153000 |
| Landfill | 930 | 0 | Apex Regional LF | 36.401670 | -114.865180 |
| Abandoned Mine Land | CA4141190567 | 903786 | BLACKROCK MINE | 37.362000 | -117.605000 |
| Landfill | 192 | 0 | Landers Disposal Site | 34.240480 | -116.381520 |
| Abandoned Mine Land | AZ0000307959 | 905040 | AMERICAN LEGION MINE | 35.192000 | -113.938000 |

| | | | | | |
|---------------------|--------------|--------|--------------------------------|-----------|-------------|
| Landfill | 187 | 0 | Kern Valley LF | 35.750000 | -118.433334 |
| Abandoned Mine Land | NVD981989627 | 903042 | UNITED MINING CORP. | 39.313000 | -118.353000 |
| Landfill | 1794 | 0 | Sunrise Landfill | 36.141201 | -114.999080 |
| Abandoned Mine Land | NVD000626531 | 903992 | BARRICK GOLD STRIKE MINE - BLM | 39.513000 | -114.038000 |
| Abandoned Mine Land | CAD980496863 | 901736 | ATLAS ASBESTOS MINE | 36.321660 | -120.586700 |
| Abandoned Mine Land | CA0000878058 | 905138 | SISKON MINE | 41.581000 | -122.359000 |

EPA Tracked Sites located in the Solar Energy Development Program Alternative, as defined by the Draft PEIS.

| Program | EPA_ID/ BF ACRES Property ID | Site ID/ BF Grant IDs | Site Name | Latitude | Longitude |
|----------|--|-----------------------------|-----------------------|-----------|-------------|
| Landfill | 930 | 0 | Apex Regional LF | 36.401670 | -114.865180 |
| Landfill | 192 | 0 | Landers Disposal Site | 34.240480 | -116.381520 |

EPA Tracked Sites located near (2 miles or less) Solar Energy Zones, as defined by the Draft PEIS.

| Program | EPA_ID/ BF ACRES Property ID | Site ID/ BF Grant IDs | Site Name | Latitude | Longitude |
|----------|--|-----------------------------|------------------|-----------|-------------|
| Landfill | 930 | 0 | Apex Regional LF | 36.401670 | -114.865180 |

EPA Tracked Sites located near (15 miles or less) the Solar Energy Development Program Alternative, as defined by the Draft PEIS

| Program | EPA_ID/ BF ACRES Property ID | Site ID/ BF Grant IDs | Site Name | Latitude | Longitude |
|---------------------|------------------------------|-----------------------|--|-----------|-------------|
| Federal Superfund | NMD980750020 | 600911 | LEE ACRES LANDFILL (USDOJ) | 36.711100 | -108.092100 |
| Abandoned Mine Land | NMD986684231 | 604718 | STEPHENSON - BENNETT MINE | 32.403000 | -105.402000 |
| Abandoned Mine Land | NM0001408608 | 605033 | HORIZON POTASH MINE | 32.425000 | -103.760000 |
| Abandoned Mine Land | UTN000802138 | 802138 | OPERATION MINE SHAFT | 37.772000 | -113.171000 |
| Abandoned Mine Land | CO0008969974 | 801727 | CORKSCREW AND GRAY COPPER GULCHES | 37.921000 | -106.343000 |
| Abandoned Mine Land | UTN010161078 | 801847 | PIONEER 3-STAMP MILL | 37.134000 | -113.222000 |
| Landfill | 1554 | 0 | Garfield County/John's Valley LF | 37.821390 | -112.383612 |
| Abandoned Mine Land | UTD980667208 | 800679 | MONTICELLO RADIOACTIVELY CONTAMINATED PROPERTIES | 37.863880 | -109.333610 |
| Abandoned Mine Land | COD983801069 | 801336 | GREAT WEST GOLD AND SILVER | 38.382000 | -107.043000 |
| Abandoned Mine Land | UT0012605880 | 801913 | BULLION CANYON MILLS | 38.427000 | -112.286000 |
| Abandoned Mine Land | CO0000286203 | 801536 | LONDON MINE | 39.273000 | -105.862000 |
| Abandoned Mine Land | CA4141190567 | 903786 | BLACKROCK MINE | 37.362000 | -117.605000 |
| Abandoned Mine Land | AZ0000307959 | 905040 | AMERICAN LEGION MINE | 35.192000 | -113.938000 |
| Landfill | 187 | 0 | Kern Valley LF | 35.750000 | -118.433334 |
| Abandoned Mine Land | NVD981989627 | 903042 | UNITED MINING CORP. | 39.313000 | -118.353000 |
| Abandoned Mine Land | NVD000626531 | 903992 | BARRICK GOLD STRIKE MINE - BLM | 39.513 | -114.038 |
| Landfill | 1794 | 0 | Sunrise Landfill | 36.141201 | -114.999080 |