

Wah Wah Valley Solar Energy Zone – Draft Summary Table: Impacts That May Warrant Regional Compensatory Mitigationⁱ

Wah Wah Valley Solar Energy Zone Resource/ Issue	Residual or Unavoidable Impact?	How certain is it that the residual impacts will occur?	How significant are the residual impacts onsite?	How significant are the residual impacts of developing the Wah Wah Valley SEZ in the region?	Role in the ecosystem?	Other Considerations	Are potential residual impacts likely to warrant regional mitigation?
Air Quality	Maybe (if site is graded).	Moderate. Depends on whether the entire developable area (i.e., ~5,873 acres, 80% of the SEZ area) is graded.	Low.	Very low.	Human element	PM levels will be monitored during all phases of development. An adaptive management approach will allow for increased mitigation if significant residual air quality degradation is detected	No. Impacts are not expected to result in noncompliance with National Air Quality Standards.
Acoustics	Maybe.	Moderate. Noise level depends on technology, and on construction and operational phase traffic.	Moderate. Low current ambient noise on site. Construction-phase noise of limited duration. Operation –phase traffic noise levels would be a long-term change. Residual operation-phase noise resulting from 80% buildout of ~5,873 acres may impact residents, recreation, wildlife, and/or livestock.	Low. Generally, impacts from solar development are expected to be temporary, localized, and readily mitigated onsite.	Human element that may also impact wildlife and livestock	Solar development may be limited to photovoltaic (no moving parts) within a certain distance of residences.	No.
Cultural	Yes. Impacts on non-renewable resources are both irretrievable and irreversible.	High.	Moderate. Unknown until surveys are completed.	Moderate. Unknown until surveys are completed.	Human element	Avoidance is preferred for significant resources. Adequate mitigation would be dependent on consultation and the resources and their relative significance in the region. Procedures to handle inadvertent discoveries will be addressed in a monitoring and discovery plan developed during the right-of-way process.	Maybe. Impacts warranting mitigation to be evaluated in consultation with the UT State Historic Preservation Office (SHPO) and tribes.

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Ecology: Vegetation	Yes. Development would result in direct removal or disturbance of native plant communities, special soil environments, and the ecosystem services they provide.	High.	Very high. Expect the loss of all vegetation in the developed areas, though mitigation may result in some remaining vegetation.	Very low.	Basic component		Yes.
Ecology: Invasive & Noxious Weeds	Maybe. Onsite mitigation will reduce, but not eliminate, the potential for invasive and noxious species. The degree of disturbance creates a significant opportunity for the establishment of invasive and noxious species.	High.	Moderate.	Very low.	Change agent - invasives	Impacts will be minimized through development of a Weed Management Plan and use of weed-free seed to support re-vegetation efforts, control invasive species, and prevent increase in fires.	No.

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Ecology: Terrestrial Wildlife & Aquatic Biota	Yes. Development of the Wah Wah Valley SEZ will likely impact up to 5,873 acres of wildlife habitat. Level of site grading and disturbance to native vegetation would be the primary driver of residual impacts on functional habitat for full build-out of SEZ.	Very high. Development of the Wah Wah Valley SEZ will likely impact up to 5,873 acres of wildlife habitat.	Very high. Expect the loss of habitat for most general wildlife species over the entire developable area	Expect the loss of habitat for most general wildlife species over the entire developable area. Decreasing trend in the ecoregion.	Basic component	Little can be done onsite to mitigate the loss of up to 5,873 acres of general wildlife habitat. Coordination needed with the UDWR.	Yes.
Ecology: Migratory Birds	Yes. Some level of bird injury/fatality has been observed for all types of solar facilities (through collisions with equipment or from burns). Research is ongoing to quantify impacts and identify effective mitigation measures.	Very high. Linked to vegetation and riparian habitat.	Very high.	Decreasing trends in the ecosystems.	Basic component (along with other wildlife).	Linked to Vegetation & Riparian Areas. Need to consider prohibitions on take in the Migratory Bird Treaty Act MBTA, also direction in Executive Order 13186. Coordination and consultation needed with the USFWS.	Yes.

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Ecology: Animal Special Status Species (SSS)	Yes. Level of site grading and disturbance to native vegetation would be the primary driver of residual impact on functional habitat for full build out of the SEZ. Loss of habitat (for golden eagle, kit fox, and Western burrowing owl)	Very high. Loss of habitat (for golden eagle, kit fox, and Western burrowing owl.).	Very high. Expect total loss of habitat for SSS animal species over entire developable area.	Decreasing trends in the ecosystem.	Basic component (along with other wildlife).	Mitigation of SSS is required by BLM policy, in coordination and consultation with USFWS and UDWR.	Yes.
Hydrology: Surface Water	Yes. Surface disturbance from solar development would have residual impacts on surface hydrology with potential impacts on other resources. Solar development may alter watershed processes that can impact runoff responses, groundwater recharge, and ecological habitats.	Very high.	Low. The gentle slopes and the avoidance of significant drainage features should prevent significant onsite impacts.	Very low.	Basic component	Mitigation measures to avoid ephemeral waters The SEZ and downslope areas will be monitored for signs of rapid runoff and excessive erosion. An adaptive management approach will require increased mitigation if problems with runoff and/or erosion are observed.	No.

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Hydrology: Groundwater	Maybe. It is possible for impacts on groundwater to be avoided with the UDWR's judicious evaluation of water rights change applications.	Low.	Low.	Low.	Basic component	The limited information on groundwater resources in Wah Wah Valley has prompted the U.S. Department of the Interior to initiate a groundwater investigation to assess potential impacts on groundwater resources in this region. Solar operators with substantial water needs should be prepared to contribute to this investigation to improve the forecasting of the impacts of groundwater pumping on the basin. An adaptive management approach will be taken, and the results of the investigation may indicate that mitigation measures are warranted to protect water resources and avoid legal disputes.	No.
Livestock Grazing	Maybe.	Possible, assuming 80% SEZ build-out and residual impacts on about 4% of the Wah Wah Dawson allotment.	Moderate to High.	Moderate.	Change agent – human development	IM No. 2013-142 states that regional mitigation for loss of AUMs is not required.	No. However, reimbursement for loss of range improvements will be addressed in project-specific NEPA.

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Soils/Erosion	Yes. Solar development on the SEZ is expected to result in a residual loss of sensitive soils and soil functions.	Very high.	High to very high. Impacts will be dependent on the degree of grading and vegetation removal required for the projects.	Low to moderate. Regional impacts will be proportional to the area of disturbance within the SEZ versus the undisturbed area of the region.	Basic component	Little can be done to mitigate the loss of up to 5,873 acres of soil. Avoidance (not developing some areas) will reduce the acreage and soil stabilization measures can reduce soil erosion post disturbance.	Yes.
Specially Designated Areas	Maybe. If power tower technology is developed within the SEZ, even with onsite mitigation measures, the development could be plainly visible from some parts the Wah Wah Mountains WSA. As a result, there could be residual impacts on naturalness and outstanding opportunities for solitude (direct and cumulative) to the Wah Wah Mountains WSA.	High for power tower technology.	High. Impacts to sites and sounds may be pervasive and omnipresent for parts of the Wah Wah Mountains WSA if power towers are located in the SEZ.	Low. The SEZ is in an area that does not have wilderness characteristics, though the surrounding mountain ranges to the west do include WSAs.	Human element	Outside sights and sounds should not have an impact on wilderness study areas unless they are pervasive and omnipresent (BLM Manual 6310).	No, impacts are not expected to be pervasive and omnipresent unless power tower development occurs within the SEZ. ¹
Tribal Concerns	Yes.	High.	Very high.	Very high. Decreasing trend in plant and animal resources. Visual impacts to Wah Wah Springs	Human element	Consultation on project applications will determine whether regional mitigation for Native American Concerns is warranted.	Maybe.

¹ Power tower technology very unlikely to be developed in the Wah Wah Valley SEZ given the proximity to the Utah Testing and Training Range (6 miles to northwest of the SEZ).

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Visual Resources	Yes.	High.	Visual contrast for parts of the Wah Wah Mountains WSA and surrounding areas could be very high if power towers are located in the SEZ; otherwise high. Low for King Top WSA.	Low. The SEZ is in an area of low scenic quality and low use, and would have residual impacts on only a few visually sensitive areas.	Human element		No, the affected areas within visually-sensitive areas are remote with too few viewers to warrant mitigation.

¹ Only resources for which residual impacts may occur (“yes” or “maybe”) are included in this table. Resources/Issues with no residual impacts include Climate Change, Riparian Vegetation, Special Status Species-Plants, Environmental Justice, Lands & Realty, Paleontology, Recreation, Socioeconomics, and Wild Horses and Burros.