MBCA

morongo basin conservation association

September 22, 2022

County of San Bernardino, Land Use Services Department
Attn: Jim Morrissey, Planner
385 North Arrowhead Avenue, First Floor
San Bernardino, CA 92415
Email: Jim.Morrissey@lus.sbcounty.gov

RE: Scoping Comments for Sienna Solar and Storage Project in Lucerne Valley

Dear Mr. Morrissey:

MBCA takes this opportunity to comment on the proposed Sienna Solar and Storage Project consisting of the installation of a photovoltaic (PV) solar facility, a battery storage system (BESS), Project substation, operations and maintenance building(s), and the underground collection system on approximately 1,932-acres/500MW. The Project would interconnect with the SCE Calcite Substation (currently pending final permits and construction) via a proposed overhead and/or underground 230-kV gen-tie line in addition to other ancillary facilities utilizing private and potentially public right-a-way.

RECE Policy 4.10, 4.10.2, Co Resolution No. 2019-17, Section 3, and Sienna 2

- The Renewable Energy and Conservation Element (RECE) Policy 4.10: Prohibits utility-oriented renewable energy (RE) project development on sites that would create adverse impacts on the quality of life or economic development opportunities in existing unincorporated communities.
- Re 4.10.2 prohibits development of utility-oriented RE projects within the boundaries of existing community plans, which at the time of the RECE adoption included Lucerne Valley. This would seem to protect Lucerne Valley from the larger Sienna 2. However,
- County Resolution No. 2019-17 Section 3 states: *Any application for development of a renewable energy generation project that has been accepted as complete in compliance with CA Gov. Code Sec. 65943 before the effective date of this Resolution shall be processed in compliance with the policies and regulations in effect at the time the application was accepted as complete. These applications may be located to other sites under the same policies and regulations.*

The RECE and the Resolution were adopted in February 2019. The Resolution was not incorporated into the RECE. The original Sienna Application for a CUP was accepted in 2014.

However, eight years earlier the RECE incorporated the Countywide Vision Core Values as fundamental to development of the siting criteria for utility-scale RE projects. The Core Values sited on page 4 of the RECE were adopted on June 30, 2011 as part of the Countywide Vision Statement. The RECE Guiding Principles, based largely on the Core Values, are subject to the General Plan (2007). When complying with the policies and regulations, which comes first? In this case the chickens: General Plan (2007) and Core Values[1] (2011) precede the 2014 Sienna 1 Application. The County Resolution NO. 2019-17, Section 3, and the 2022 Sienna 2 NOP, the eggs, follow.

The proposed Sienna 2 project and its footprint is significantly different than the project described in the original application even though the 645 ac/300 MW (2014) grew over time to 1630 ac/450 MW (2018). The applicant, 99MT 8ME, LLC, remains the same.

The relocated Sienna 2 is larger than the final design of Sienna 1 by 302 acres. It now also includes a towering 45 foot high battery storage structure and a whopping 39 miles of collector and gen-tie lines to connect areas in within its irregular footprint with the substation. A reasonable person could assume these are not the same projects. See Sienna 2 NOP Figure 2-Local Vicinity Map.

CEQA Environmental Factor IX. LAND USE AND PLANNING: a) The large footprint Sienna 2 physically divides the established community as clearly visualized in Appendix A Figure 10.

Comment: Approval of Sienna 2 is questionable under Section 3. However, If Sienna 2 is approved under Section 3 it will bring regionally permanent adverse changes to the character, quality-of-life, and economy of the severely disadvantaged community (SDAC) of Lucerne Valley (https://gis.water.ca.gov/app/dacs/ Figure 9 Appendix A). These changes must be itemized under potentially significant cumulative impacts at all levels off-site and on-site.

Project Objectives

Is the SDAC community of Lucerne Valley included in the proposed Sienna 2 Project Objectives? No. But, it should be. See the RECE Community-Oriented Guiding Principles (page 5).

- Keep large-scale utility projects separate from or sufficiently buffered from existing communities, to avoid adverse impacts on community development and quality of life.

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[1] CORE VALUES Renewable Energy and Conservation Element Page 4.
The Countywide Vision Statement adopted by the Board of Supervisors on June 30, 2011, fosters strategic countywide coordination in a manner that reflects the priorities of local residents, businesses, and stakeholders. The citizens of San Bernardino County share the following core values, as articulated in the Countywide Vision:
 Quality of Life: A high quality of life for residents of the county that provides a broad range of choices to support the county's diverse people, geography, and economy to live, work, and play.
 Vibrant Economy: Ample economic opportunities for current residents and businesses that support countywide prosperity, as well as new investment in economic growth.
 Conservation of Natural and Cultural Resources: Stewardship that conserves and responsibly uses environmental, scenic, recreational, and cultural assets, ensures healthy habitats for sensitive plants and wildlife, enhances air quality and makes the county a great place for residents and visitors alike. Renewable energy, when developed responsibly, is a valuable natural resource.
 Sustainable Systems: High quality built, natural, and social systems that complement, rather than degrade, the county's natural resources, environment, and existing communities.
 Self-Reliance: Communities or individuals meeting their own energy needs.
 Open Governance: Governance guided by open, transparent, and ethical decision-making that values the county's environment, people, heritage, location, economy, and community spirit.

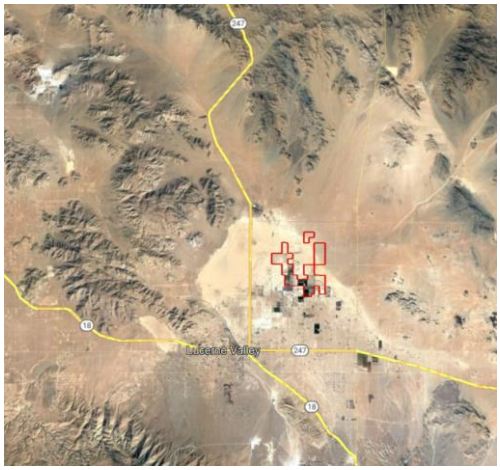
- Provide residents more affordable, reliable, diverse, and safe access to energy, especially renewable energy.

Comment: Should the proposed Sienna 2 be approved, the SDAC of Lucerne Valley will be required to absorb impacts to its development and quality of life. How much of that 500 MW of solar power will be diverted directly to community residents or community buildings? How will 8ME bring affordable, reliable, and safe access to renewable energy to Lucerne Valley residents?

CEQA Environmental Factor

I. AESTHETICS

The project would: a) have a substantial adverse effect on a scenic vista; b) substantially damage scenic resources; c) substantially degrade the existing visual character or quality of public views of the site and its surroundings; d) create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?



The Impacts of this project on scenic vistas and the visual character of the community are significant. The quality-of life for all residents will be changed. No longer will the view out the window or from the front porch be one's neighbor (wave to say hi) and the surrounding mountains.

The Project footprint would industrialize an area of ~5 square miles of land east of SR 247. It will be visible for 322 sq. /mi, and within the viewshed of 2,761 homes,

See Figure 2: Visibility of Proposed Sienna Solar and SCE Substation Projects (page 4) and Figure 10 Appendix A

Figure 1: Landscape view of Proposed Project showing its basin location in relation to the surrounding mountainous viewshed.

The NOP does not provide information on lighting but one assumes for security purposes lighting will be required. In addition, the lighting glow at night could be substantial and affect wildlife as well as the residents. Please consult the SB Co Outdoor Lighting Ordinance https://lus.sbcounty.gov/planning-home/outdoor-lighting-regulations/

The County has designated SR 247 as scenic. Currently, its views are largely unobstructed. SR 247 could be one of the least despoiled series of desert views in California.

As proposed, Sienna 2 will impact SR 247's designation by Caltrans as "eligible" for Scenic Highway status. The State has established it as eligible for scenic designation; therefore it has scenic protection under Chapter 27 of the California Department of Transportation Standard Environmental Reference: *The intent of the State Scenic Highway Program is to protect and enhance California's natural scenic beauty. If a highway is listed as eligible for official designation, it is also part of the Scenic Highway System and care must be taken to preserve its eligible status*. Department of Transportation website:
http://www.dot.ca.gov/ser/vol1/sec3/community/ch27via/chap27via.htm#scenic

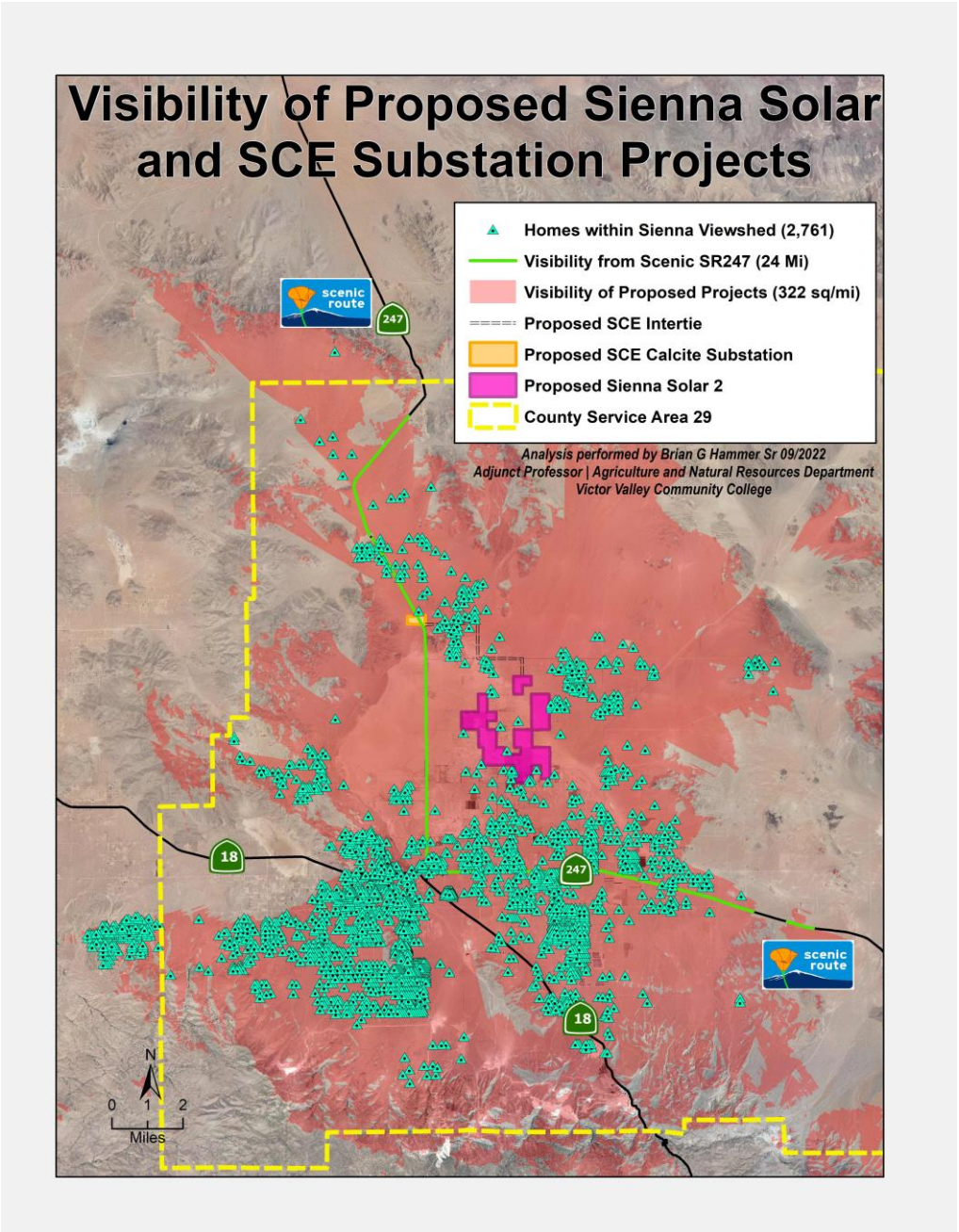


Figure 2: Visibility of proposed Sienna Solar and SCE Substation Projects

Because of the scale the homes look close together but in reality, and factoring in the history of homesteading back to the 1870s and the later Small Tract Act (5 acre Jackrabbit Homesteads 1938-1976) most homes are on 1 to 5 acres and larger. See Figure 10 Appendix A

Comment: The Impact of the proposed Project is potentially significant and all mitigation measures must take into consideration the whole action involved, including off- and on-site.

THIS IS NOT AN ACT OF GOD

Taken 03/17/2014 at 2:04 PM at the top of Camp Rock Road, Lucerne Valley

THIS IS INDUSTRIAL SOLAR IN THE DESERT

CEQA Environmental Factor
III AIR QUALITY:
As we will see (Figure 3, page 6), when disturbed the Sienna 2 project area soils will release considerable PM 10 and PM 2.5 exposing a large number of sensitive receptors (Figure 2) to substantial dust pollution resulting in significant health impacts. See the Newberry Springs blog referenced below.

Unfortunately, the local Mojave Desert Air Quality Management District (MDAQMD) is not able to make accurate PM determinations because it lacks ambient air quality monitors in the affected area. Their monitors are in Hesperia and Victorville approximately 22 miles west, upwind of the proposed project and blocked by the Granite Mountain ridges. The Lucerne Valley ambient air monitor is located at a school on Aliento Road off Route 18 going toward Big Bear. It monitors descending air from the higher up Mitsubishi Cement Mine and would not record PM rising from disturbance 5 miles to the north although the dust clouds will be visible.

As a Best Management Practice 8ME would have baseline monitoring data for at least one year, but 2 is better. Without baseline data you would be advised to rely on local experience including consultation with Chuck Bell and members of LVEDA. When the wind blows, beginning at 15 mph. the dust will rise during the 12 to 24 months of continuous construction and during operation. See photo at the top of this page. The MDAQMD Dust Control Plan which 8ME will have to sign relies on water and chemicals. To see how well this has worked for the folks in Newberry Springs during the current construction of the Daggett Solar Project visit
http://newberryspringsinfo.com/Alliance/Compilation3.html

Figure 3: Soils with potential for dust issues illustrates how wise 8ME was to move Sienna 1 east off the dry lake proper. The beige color in Figure 3 is the shrinking clays found at the upper edges of Pleistocene lakes. Following storms, as the slimy clays dry out, huge fissures form which swell and heave making it difficult to travel across. A thick gravel surface will be required for vehicles traveling across the project area. The agricultural parcels will lose their cover crops along with the moisture and roots which hold the clay surface in place.

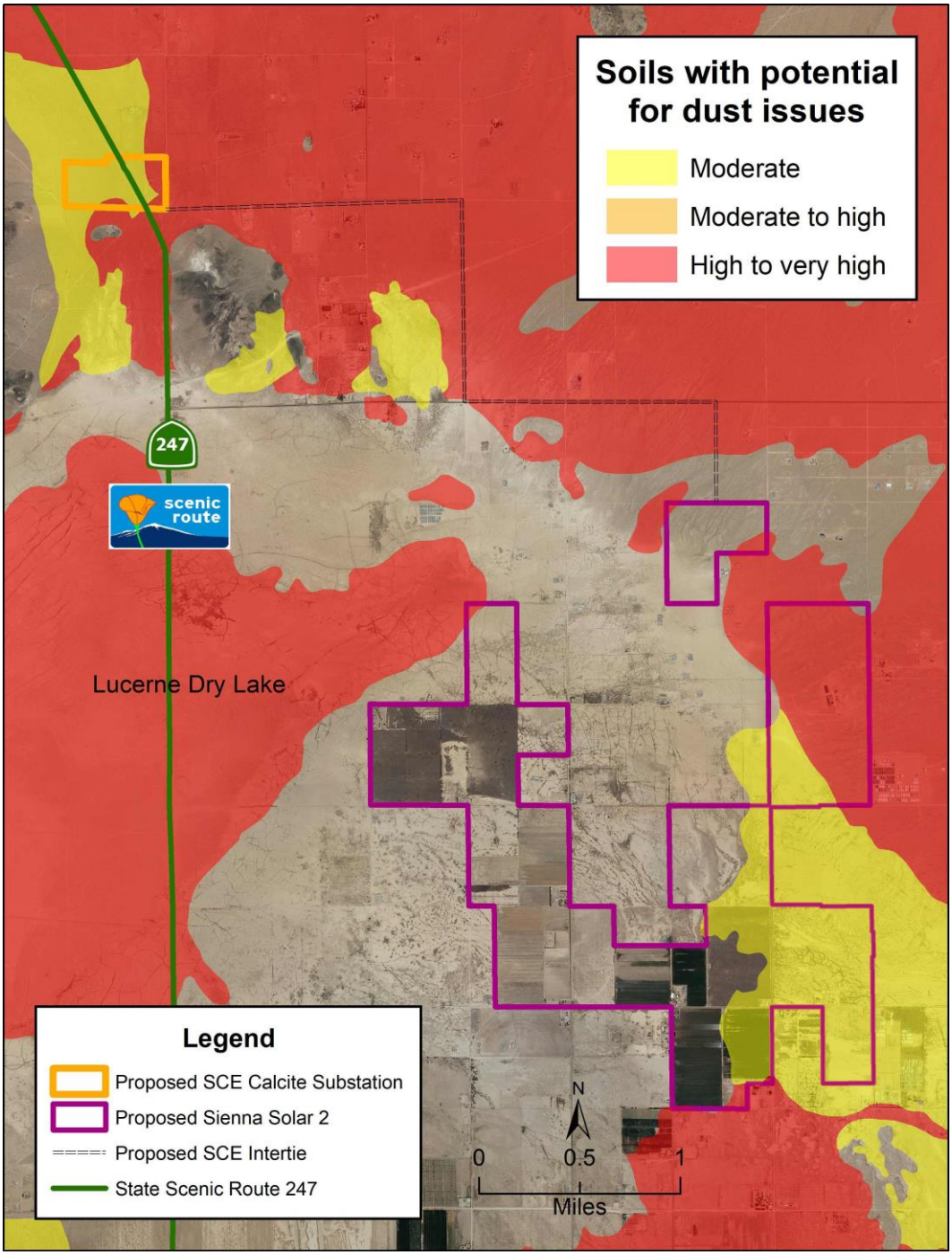


Figure 3: Soils with potential for dust issues

Although CEQA lists the factors to be addressed alphabetically nature doesn't work that way. All discussion of air quality includes the geology and soils and water availability for the life of the project and beyond.

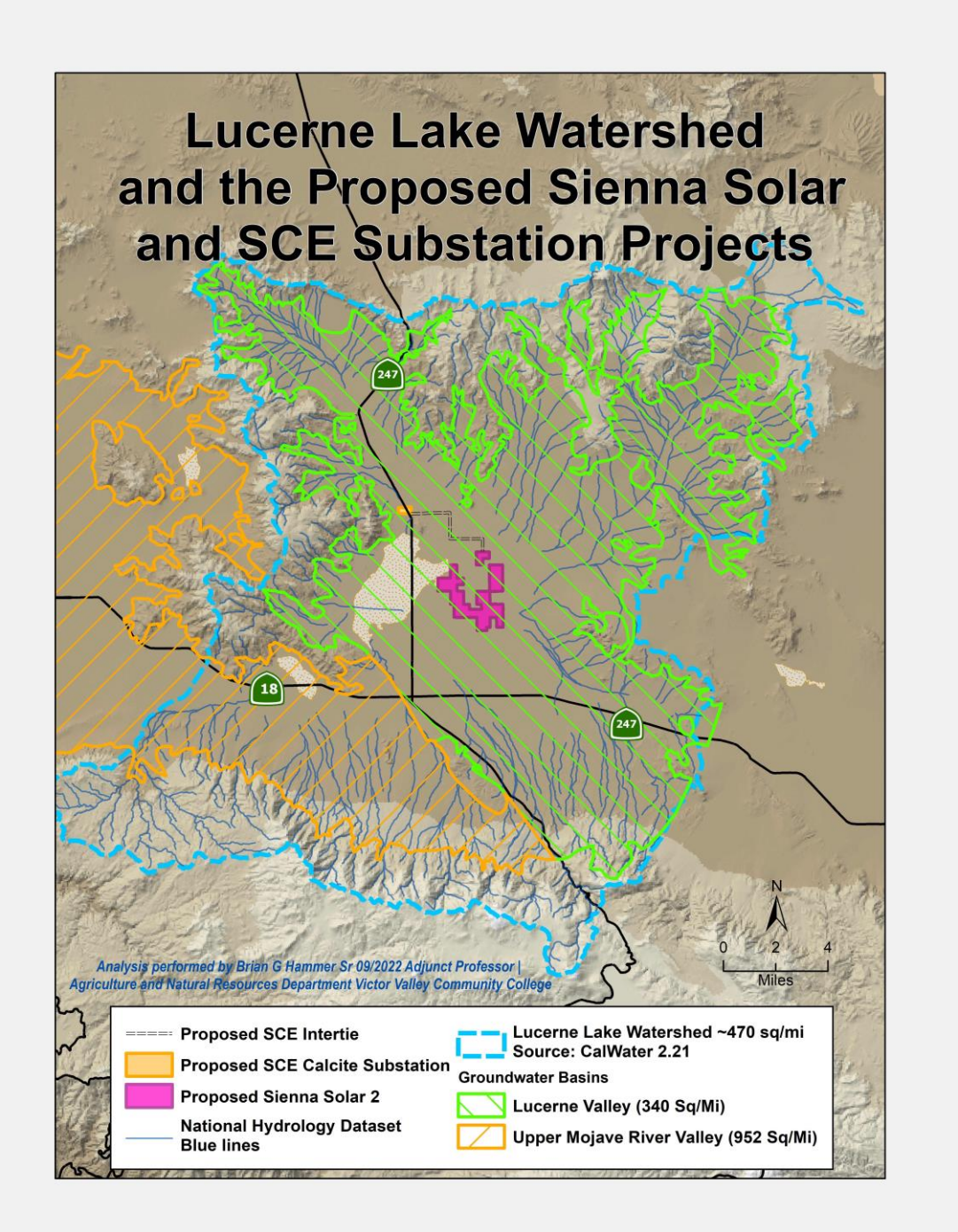


Figure 4: Lucerne Lake Watershed and Groundwater Basins

Comment: Local residents relying on wells must be protected. Water for construction, operation, and decommissioning (unless the project is continued) must be accounted for. Chuck Bell, President of LVEDA, has pointed out that estimates for previous projects primarily for soil stabilization have been a fraction of what was actually used or needed. The EIR needs to be realistic about water and dust control. Locals have the experience to know when soil stabilization and water calculations are based on the best available information.

Dust control and water availability, including recharge have potentially significant impacts from the proposed Sienna 2 project. Before any approval of the CUP 8ME must show they have the water rights and/or will serve letters to provide all the water required for the duration of the project without drying up neighboring wells. This information must be publically disclosed.

For these comments the USGS 2022 study done with the Mojave Water Agency was consulted.
https://www.usgs.gov/publications/hydrogeology-and-simulation-groundwater-flow-lucerne-valley-groundwater-basin

> *Groundwater withdrawal from pumping has exceeded the amount of water recharged to the basin, causing groundwater declines of more than 100 feet between 1917 and 2016 in the center of the basin. The continued withdrawal has resulted in an increase in pumping costs, reduced well efficiency, and land subsidence near Lucerne Lake. Although the volume of pumping has declined in recent years, there is concern that new agricultural growth and limits on imported water will continue to strain the sustainability of the groundwater system*.

Dust Control: Those of us living in areas subject to dust storms during construction and operation of utility-scale solar projects speak from experience. It must be dealt with up front to prevent both the health and property impacts. We suggest again that the Newberry Springs blog visualizing their ongoing experience with the construction of Daggett Solar be viewed.
http://newberryspringsinfo.com/Alliance/Compilation3.html
The Great Basin Unified Air Pollution Control District provides useful guidance on the technology for controlling dust in our basins.
https://gbuapcd.org/OwensLake/DustControls/

CEQA Environmental Factor
IV BIOLOGICAL RESOURCES
d) The project would interfere substantially with the movement of established native resident or migratory wildlife species and their migratory corridors.

The EIR biological report must account for the golden eagles known to fly the area. The 39 miles of connector and gen-tie pole lines will provide a number of perches for eagles and other birds especially ravens. Raven numbers are out of control in the region – poor desert tortoise,
https://www.29palms.marines.mil/Portals/56/Docs/Environmental%20Affairs/RavenManagementFinalPEA_signedFONSI.pdf

Apple Valley is preparing a Multispecies Habitat Conservation Plan And Natural Community Conservation Plan (Apple Valley MSHCP/NCCP).
https://www.applevalley.org/home/showpublisheddocument/31135/637575478074670000

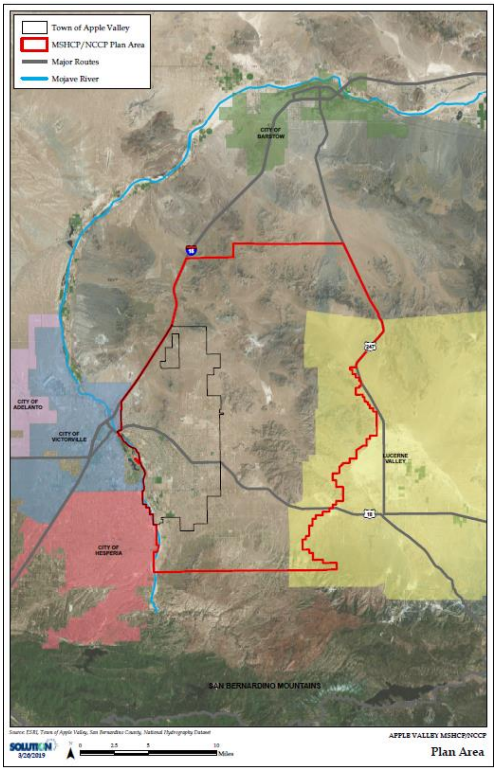


Figure 5: Plan Area for the Apple Valley HCCP

The Plan Area does not overlap with the proposed Sienna 2 site but the covered species are not impressed with artificial boundaries and should be studied for overlap with the Sienna 2 site in the EIR. See Table 1 below for the list of covered species especially those that are threatened, endangered, or candidate species under federal and state laws.

Figure 6: Terrestrial Connectivity (page 10) places the proposed Sienna 2 within both Connectivity Rank 3 and 4 as developed by California Department of Fish and Wildlife. It is also within the DRECP Desert Linkage Network.

The terrestrial connectivity bridges the area between the San Bernardino Mountains and the Newberry and Rodman Mountain Wilderness Areas.

Covered Species

The species proposed for coverage under the MSHCP/NCCP include four State and/or Federally listed species and five special status species and/or state fully protected species in the Plan Area (see Table 1, below). The list of species proposed to be covered in the MSHCP/NCCP may be modified to include additional threatened or endangered species, and species that may become listed as endangered or threatened during the life of the permit that occur within the project area and may be affected by the covered activities.

TABLE 1 – SPECIES PROPOSED FOR INCLUSION IN THE APPLE VALLEY MSHCP/NCCP

Common name	Scientific name	Federal status	State status
Birds			
Burrowing owl	*Athene cunicularia*	None	State Species of Concern (SSC)
Golden eagle	*Aquila chrysaetos*	Protected under BGEPA and MBTA	Fully Protected Watch List
Least Bell's vireo	*Vireo belli pusillus*	Endangered	Endangered
Southwestern willow flycatcher	*Epidonax traillii extimus*	Endangered	Endangered
Western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	Candidate	Endangered
Mammals			
Desert bighorn sheep	*Ovis canadensis*	None	Fully Protected
Desert kit fox	*Vulpes marotis arsipus*		Fully Protected Furbearing Mammal
Reptiles			
Desert tortoise	*Gopherus agassizii*	Threatened	Threatened
Plants			
Joshua tree	*Yucca brevifolia*		Candidate Threatened

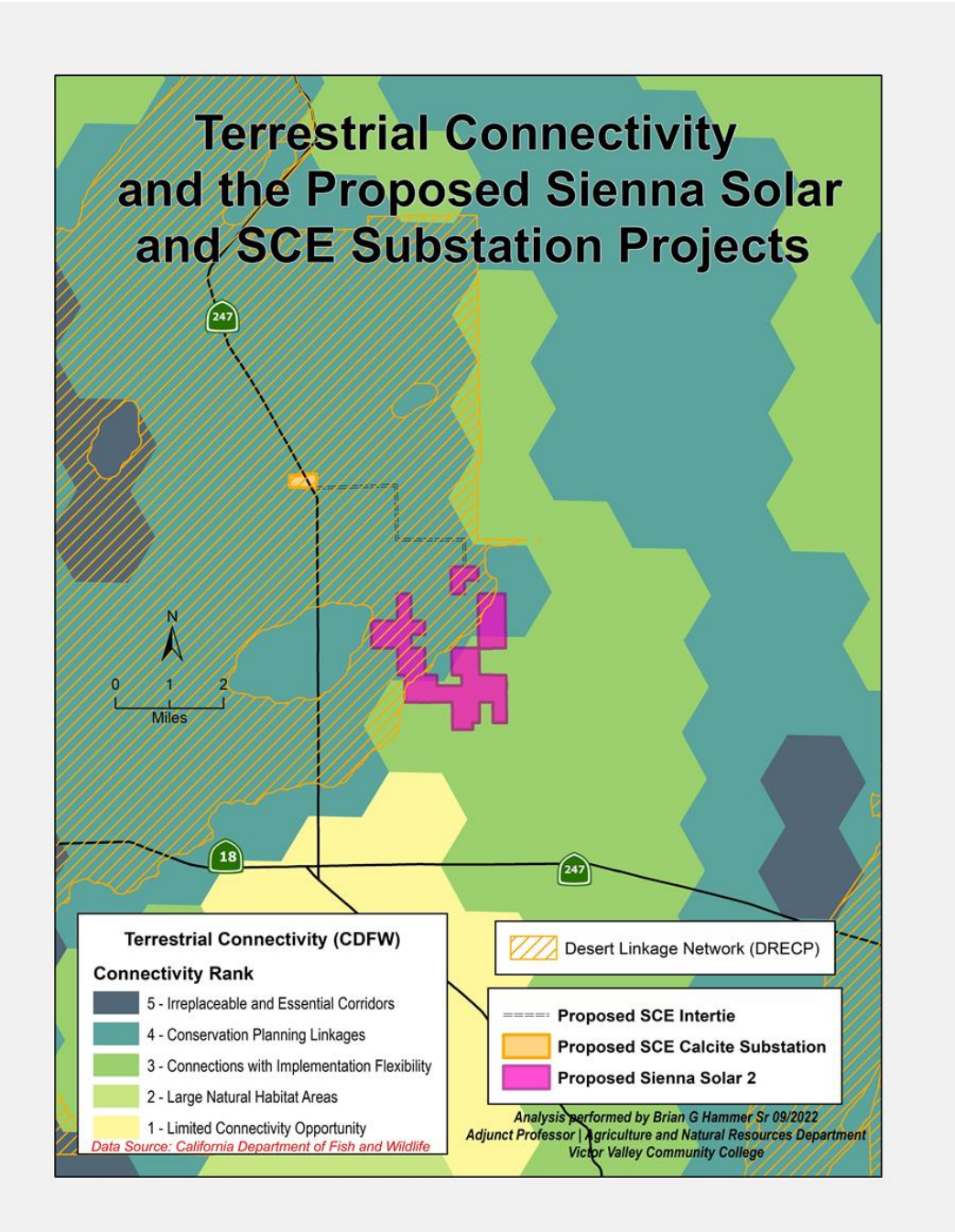


Figure 6: Terrestrial Connectivity

Comment: The EIR must analyze the biological richness of the area and the mitigation measures proposed for Sienna 2 on- and off-site including the larger surrounding area to maintain the integrity of the connectivity between the San Bernardino Mountains and the Newberry and Rodman Mountains Wilderness Areas.

CEQA Environmental Factor
XIII PUBLIC SERVICES
The proposed Project's battery storage system will include up to 525 MW of energy storage capacity. Lithium batteries are known to be highly explosive and flammable under certain conditions. A fire in the battery storage system would have a significant impact on the surrounding community and Fire fighting service..

Comment: The EIR must account for the flammabality of the 45' high storage facility and show if the local San Bernardino Fire Station 8 has the equipment and the trained fighters to extinguish a lithim blaze while protecting the surrounding community members. Mitigation could require 8ME to support expanded equipment, personnel, and training.

CEQA Environmental Factor
XVII. MANDATORY FINDINGS OF SIGNIFICANCE
a) Does the project have the potential to substantilally degrade the quality of the environment?
b) Does the project have impacts that are individually limited but cumulatively considerable?

The answer to both a. and b. is yes. Following we show the degradation of the environment as it relates to migratory bird species. And we will demonstrate the triggering affect of this project and its dependence on additional projects.

Cumulative effects
Please see Figure 7: Cumulative Solar Projects (page 12)
Figure 7 shows the existing and planned solar projects and the SCE Calcite Substation.

Southern Lucerne Valley
- Agincourt (80 acres) and
- Marathon (152 acres) off Camp rock road in

Northern Lucerne Valley
- Sienna 2 (proposed – 1932 acres)
- Ord Mountain (proposed - 483 acres)
- Calcite Solar (proposed - 664 acres)
- Stagecoach Solar (proposed – 1950 acres)

Daggett Solar (in construction – 3500 acres) in Newberry Springs

The four Projects in northern Lucerne Valley depend on the approval and construction of the Calcite Substation for energy distribution. The EIR for Calcite is connected to Stagecoach Solar with approval by the CPUC before construction. Stagecoach is on State Lands and California State Lands is the Lead Agency.

Comment: Figure 7: Cumulative Solar Projects (page 12) is included to assist with the cumulative analysis on the environment and on the SDAC communities of Lucerne Valley and Newberry Springs. From the personal investment of homeowners, health effects from diminished air quality, loss of community tourist revenue, the personal loss of viewshed and dark night skies, and the change in day-today living that the muliple effects will change many lives. Watch again the Newberry Springs blog documenting Daggett Solar construction.

Lake Effect and degradation of the environment

If all the listed projects are built the millions of solar panels when stowed at night under moonlight or just starlight will resemble a series of ponds of varying sizes. Migrating birds, many species flying at night, will see the ponds as places to stop and rest, and feed, before continuing on to the Salton Sea and other points south. Unfortunately, they tend to crashland on the hard panel surface with fatal results. Panel glow will also attract birds during daylight hours.

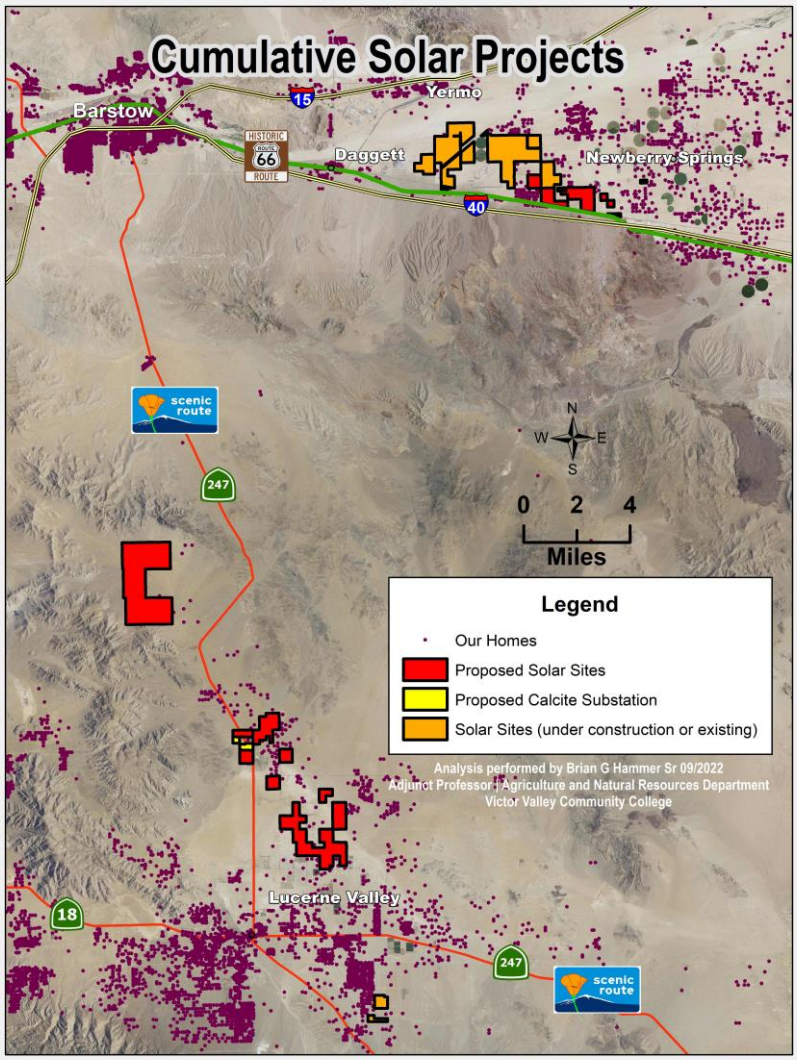


Figure 7: Cumulative Solar Projects

Birds have been migrating the inland route of the Pacific Flyway for millions of years. During the Pleistocene (Ice Ages) they would have been used to seeing the landscape below them dotted with lakes in the basins between the hundreds of mountain ranges. At the end of the Ice Ages the climate warmed and the lakes became ephemiral and then disappeared. Now, human created ponds attract the birds to rest and eat. It can be hard to distinguish the difference between a solar field and a pond at night and certain times during the day. The Lake Effect is a deadly illusion.

The Lake Effect as a bird killer has been known since 1982 with the installation of the experimental Solar One in Daggett. During migration hundreds of migrating birds a day would be observed in the Daggett Evaporation Ponds. Occasionally, disoriented birds flew into a heliostat. This reviewer reports from experience as the biologist on site to observe and record the birds.

In order to understand the magnitude of the bird problem it is necessary to look beyond bird surveys of the solar sites themselves for a regional picture. Fortunately this is easy to do because the Cornell Lab of Ornithology has given us the tool: eBird is a citizen science, peer reviewed site where people record birds at locations around the world. To access this project go to https://ebird.org/hotspots. When the world map comes up type “Daggett Evaporation Ponds” into the Hotspot search window. Shortly you will see the hotpot on a larger map. For a better look at

the area activate the satellite map. Pulling back you will get a view of other hotspots in the area. I am interested in the ones marked by yellow or red balloons. Figure 8 shows the mapped area in Figure 7. Daggett/Newberry Springs is on the east side. Lucerne Valley is at the base of the arc of mountains. The Mojave River defines the mountain arc and includes the red balloon Mojave Narrows Regional Park.

The yellow balloons:
Piute Rd. Dairy, Daggett Evaporation Ponds and Tees & Trees surround the Daggett Solar Project. The rest of the yellow balloons trace ponds along the Mojave River.

Figure 8: eBird Hotspots captured 9/19/2022

eBird Hotspot from east to west	# species	# counts
Camp Cady	109	38
Piute Rd. Dairy	125	135
Daggett Evaporation Ponds	150	291
Tees & Trees – Barstow Ponds	256	218
Barstow WTP	165	186
Barstow Community College	121	310
Helendale WTP	126	141
Silver Lakes (SBE Co.)	187	235
Mojave Narrows Regional Park (red balloon)	267	1222

Table 2: eBird Hotspot data from east to west. The #counts is the number of times that a person has uploaded observations to the site.

The area is rich is species diversity. Most of the species are migratory, heading south to the Salton Sea and beyond.

The proliferation of utility solar sites in this area of the flyway is deadly. Without scientific study and transparent reporting there is no way to know if any mitigation measures work.

Comment: In addition to the CEQA Mandatory Findings the County Development Code Findings must be completely evaluated in the project EIR.

The San Bernardino County Development Code § 85.06.040 Findings Required

(1) The site for the proposed use is adequate in terms of shape and size to accommodate the proposed use and all landscaping, loading areas, open spaces, parking areas, setbacks, walls and fences, yards, and other required features pertaining to the application.

(2) The site for the proposed use has adequate access, which means that the site design incorporates appropriate street and highway characteristics to serve the proposed use.

(3) The proposed use will not have a substantial adverse effect on abutting property or the allowed use of the abutting property, which means that the use will not generate excessive noise, traffic, vibration, or other disturbance. In addition, the use will not substantially interfere with the present or future ability to use solar energy systems.

(4) The proposed use and manner of development are consistent with the goals, maps, policies, and standards of the General Plan and any applicable community or specific plan.

(5) There is supporting infrastructure, existing or available, consistent with the intensity of development, to accommodate the proposed development without significantly lowering service levels.

(6) The lawful conditions stated in the approval are deemed reasonable and necessary to protect the public health, safety, and general welfare.

Thank you for your consideration of these Scoping Comments.

Special thanks to Board Member Brian Hammer for the informative and visually compelling maps without which this analysis could not have been done.

Sincerely,

Pat Flanagan, MBCA Board Member and Project Reviewer

Steve Bardwell, MBCA Board President

Cc:

Supervisor Col. Paul Cook	Supervisor.Cook@bos.sbcounty.gov
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APPENDIX A

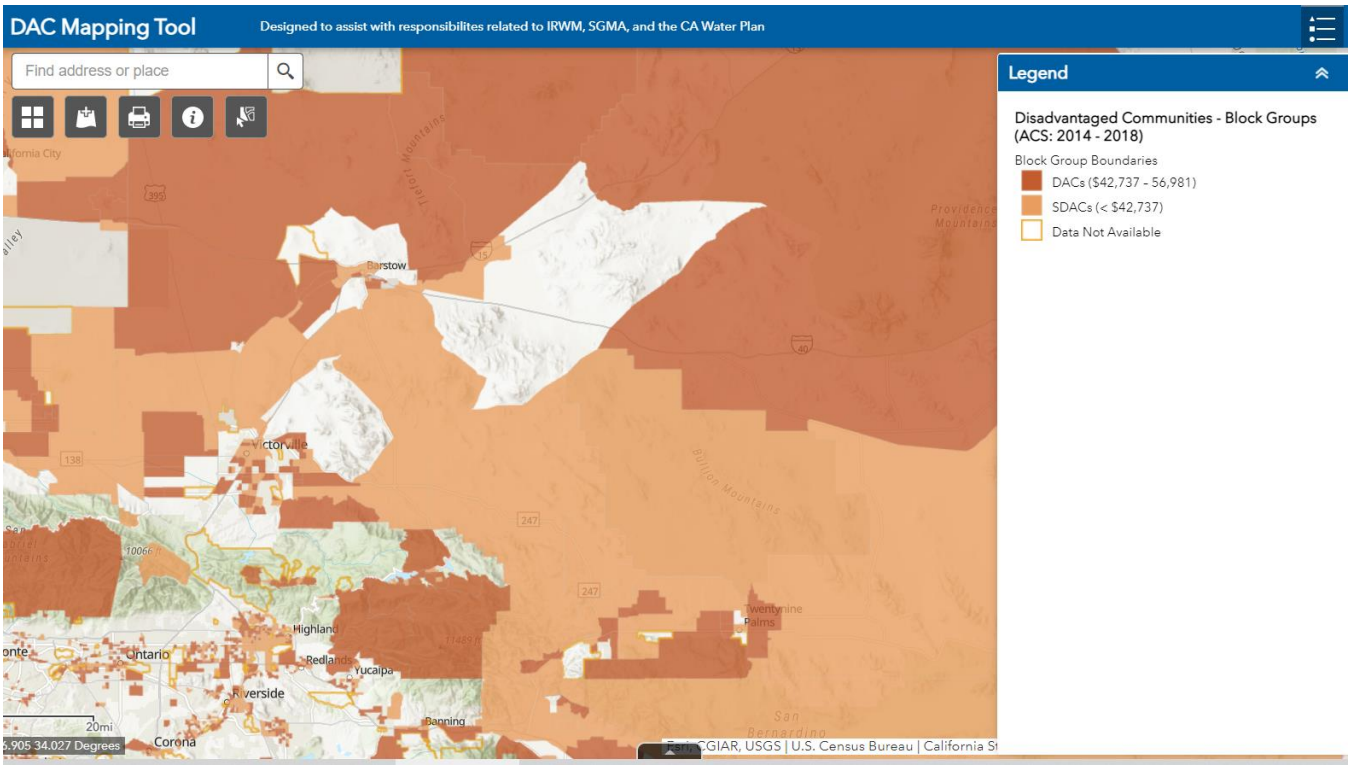

Figure 9: Map showing the Severely Disadvantaged Communities (SDAC) of Lucerne Valley and Newberry Springs.

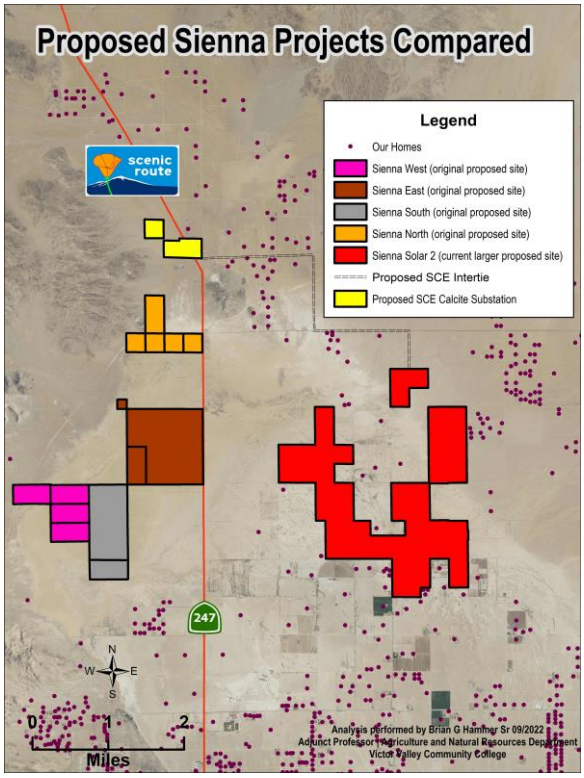

Figure 10: Proposed Sienna Projects Compared

The map demonstrates the degree to which the original Sienna 1 Project, even after the additional acres were added, did not physically divide the community of Lucerne Valley as the proposed Sienna 2 does.