June 14, 2011

Ms. Shirley Imsand
Los Angeles County Dept. of Regional Planning
Department of Regional Planning
320 West Temple Street
Los Angeles, California 90012

SUBJECT: Response to SEATAC's March 2011 Comments Pertaining to the Biological Constraints Analysis for Wildflower Green Energy Farm

Dear Ms. Imsand,

In March of 2011 NRC received written comments from the County of Los Angeles pertaining to SEATAC's review of the Wildflower Green Energy Farm (WGEF) Biological Constraints Analysis. The following letter lists the specific comments (in *italics*) and summarizes responses that have been incorporated into the revised BCA submitted on June 14, 2011.

- *p.1 - The executive summary should clarify that most of the report is on the original 2,357 acres, and that 46% of the site is still to be surveyed in more detail (total 4352 acres). The spring vegetation survey still must be done on the additional land. This will add habitats because of the topographic diversity of the added part of the project.*

  The final "site" includes approximately 4,191.7 acres. All 2011 biological surveys for vegetation communities, wetlands, sensitive plants, and sensitive wildlife covered all portions of the site. Data collected in 2010 on the original 2,357 acres were incorporated into these studies. All biological studies going forward will continue to cover the entire 4,191.7-acre site.

- *p.5 – The executive summary needs to discuss the regional open space along with other regional issues of the project. The location of the project is very sensitive: it includes part of the Fairmont Butte SEA—that is why it is reviewed by SEATAC; it is immediately adjacent to the well-known and treasured Poppy Preserve; it is immediately adjacent to the very important Portal Ridge-Liebre Mountain SEA and splits the connectivity with the existing Fairmont Butte SEA--the revision SEA would include the connection; and the project is very close in terms of vegetation and wildlife connectivity to the Ripley State Preserve, the County Desert Pines Sanctuary, and the Joshua Tree Woodland Habitat SEA. The location is a wildlife linkage (which needs a map and discussion—see below) area designated in the first Missing Linkages study.*

  The BCA addresses wildlife movement corridors and overall connectivity of the site to regional open space areas. All regional open spaces (California State poppy Preserve, Ripley State Preserve, the County Desert Pines Sanctuary, Joshua Tree Woodland Habitat SEA, etc.) have been incorporated into the wildlife movement analysis. This analysis examined topography, vegetation cover, existing obstructions, and primary, secondary, and tertiary movement patterns. Based on this evaluation it is NRC's and WEST's opinion that connectivity between the site and these areas is limited based on the proximity to the California Aqueduct, general lack of cover required for larger terrestrial wildlife, and the presence of major roadways (particularly, Rt. 138 and Lancaster Rd), fences, development, and other associated limitations. While the proposed SEA would overlap the Fairmont and Antelope Butte SEA and Portal Ridge-Liebre Mountain SEA, north-south wildlife movement is constrained by the California Aqueduct except for six crossings associated with existing roads.

- *Include the County Desert Pines Sanctuary on the open space map (exhibit 5).*

  The revised BCA includes County Desert Pines Sanctuary on Exhibits 4A and 4B (collectively, former Exhibit 5)

- *The former Fairmont Butte Motorsports Park may become a mitigation area and be an open space.*

  Fairmont Butte Motorsports Park is shown in Exhibits 4A and 4B of the BCA. A full discussion of mitigation possibilities will be included in the Biota Report

- *It would be helpful to have a table of vegetation and jurisdictional wetlands showing both percentage of the project area and actual acreage. A large project may have a substantial acreage of wetland that is not really evidenced by a percentage alone. Wetlands do not need great size to be significant.*

  Vegetation and jurisdictional wetlands acreage tables are included in Tables III and VII, respectively.

- *Many of the maps including the map of vegetation habitat need to have a larger scale, and may need to be broken into several parts or use fold-out 11 X 17" size. Maps could be added that separate off the gen-tie area along Avenue J West and allow a larger scale for the project parcels.*

  All maps are now displayed on 11x17 sheets with insets showing the gen-tie line when appropriate.

- *The vegetation map should use colors that are easily distinguishable or use hatching or text letters in addition to color. Primary colors might be easier to read.*

  Many of the graphics presented (e.g. CNDDB maps) have been split into several related maps for easier identification of features.

- *p.14 - The jurisdictional drainages (CDFG and Regional Board of Water Quality) of the project need more study, map in detail, and more discussion on downstream impacts. Put this with the Army Corps of Engineer discussion.*

  Public comment: *Erinn Wilson of CA Dept. of Fish & Game mentioned that wash scrub communities are jurisdictional and should be detailed. The downstream impacts need to be considered and discussed.*

  A full jurisdictional delineation was completed in April and May of 2011 by WEST, Inc. The methods of this study are included in Section 3.5. Results from these surveys are presented in Section 5.4 and Exhibits 13A and 13B. Riparian vegetation types under the jurisdictional of the CDFG are listed in Section 6.2.3.

- *p.17 – The Simpson 1996 reference needs to be added to the bibliography.*

  This reference was corrected to read Simpson and Hasenstab (2009).

- *p.17, p.18,¶1 – Acreage references are confusing, and should be more clearly explained. "2,500 areas" probably should be "2,500 acres." It would probably be best to not use rounded acreages—use the exact whole numbers.*

  Acreages presented are given to the nearest tenth of an acre. For wetlands, acreages were presented to the nearest hundredth of an acre.

- *The large extent of the project land should be recognized in the sense that it is difficult to sample all vegetation habitats in such an extensive area. There should be recognition of this in calling out sensitive habitat possibilities. Because of the potentially widespread ground disturbance needed for constructing tie-lines for wind projects, it is necessary to do careful vegetation ground-truthing in topographically diverse areas like the rolling hills and drainages of the project. Topographic diversity of flora and fauna are probable and should be looked for in the project studies.*

  NRC's botanists and plant ecologists visited all areas of the site while mapping vegetation in April 2011. Survey effort was greater in topographically diverse areas and the detail observed in these surveys is apparent in the final vegetation map. Additionally, the survey effort for meandering special status plant surveys and general botanical inventory were greater in these areas. WEST and NRC also focused more effort to topographically diverse areas by adding numerous survey stations within these areas.

- *Be careful in vegetation evaluations. Many areas evaluated as grassland (native or non-native) from aerial photos turn out to be forb fields when field checked. Some areas observed by SEATAC members in previous years on the project site are wildflower fields, but are categorized as non-native grassland in the project map. Joshua Tree Woodland should be rated as a possible habitat. Joshua Tree Woodland was the most probable former vegetation cover of most of the project area. CA Dept. of Fish and Game encourages the use of the 2nd edition of Sawyer, Keeler-Wolf, Evens, 2009. Manual of California Vegetation, 2nd edition.*

  All vegetation types were thoroughly mapped by NRC to the alliance levels described by Sawyer et al. (2009) as outlined in Appendix F. Survey methods followed CNPS/CDFG combined rapid assessment and relevé protocol within herb dominated areas. Data were collected describing each vegetation type and analyzed using cluster and discriminant analysis. These alliances are presented with reference to Holland (1986) as well as generalized vegetation types, which were included for acreage analysis.

  Less than a dozen Joshua trees were observed on site and all occur in close proximity to the northern entrance of the Castle Property. Based off of communication between land owners and NRC, these trees are known to be planted as ornamentals while the area was used for almond production. Succession back to Joshua tree woodland is unlikely due to the current land uses observed on site.

- *Wildflower fields are ephemeral, and recognition of this sensitive habitat depends on climate for the year and rainfall distribution for the year. It is important to discuss the possibility that the non-native grasslands could all or in large part be wildflower fields or forb fields.*

NRC's vegetation descriptions include a discussion of these vegetation types as a "shifting mosaic" and summarize major factors affecting spatio-temporal variation. All non-native plant dominated areas are referred to as "semi-natural stands" (*sensu* Sawyer et al. 2009) and native components within these areas are discussed.

- *Where known, the land-use map should give more detail on disturbed and undisturbed, level of disturbance or types of use, distinguishing grazing from field crops, possibly years since last use. This would give more clarity to where there may be herbaceous communities and what kind could be expected.*

  The alliance-level used for vegetation mapping addresses this concern. Several alliances (e.g. Rattail fescue fields, Mustard fields, Prickly lettuce patches) were prevalent on recently abandoned agricultural fields. Several areas of the site have undergone very recent changes. For example, in the southwest, NRC observed clearing of several acres of rabbitbrush scrub for oats crop, and two major agricultural circles cleared near the poppy preserve. The vegetation map provided shows the most recent vegetation on site as of April 2011.

- *The Spreading navarretia (Navarretia fossalis) is in a vernal pool, even though ponding has not been observed this year. This species is specific to non-alkaline vernal pools as is the hair grass (Deschampsia danthonioides) recorded at the periphery. A vernal pool in the vicinity is known for Fairy shrimp, but they do not appear every year, so the fairy shrimp should still be investigated as possible. The period needed for Fairy shrimp breeding is very brief. The watershed of the pool will need protection as a mitigation.*

  We have changed all references of "seasonal depressions" to "vernal pools". Two (2) additional vernal pools, based on the presence and dominance of two vernal pool indicator species (e.g annual hairgrass, finebranched popcornflower) were found on site by NRC biologists during 2011 vegetation mapping surveys. These features are included as biological constraints.

  Two non-protocol surveys for fairy shrimp were conducted by a qualified biologist in the spring 2011 within the largest vernal pool (prior to the discovery of the two smaller pools) on the site. No fairy shrimp were found in these informal surveys.

- *The faunal list seems slim in terms of observations of classes besides birds. One lizard and one snake observed on a 4352-acre site indicates inadequate survey. Use the 9-quad analysis of CNDDB and CNPS for all three topo quads of the project (Fairmont Butte, Lake Hughes, and Del Sur), and state that this has been done. This will be 16 quads total. State use of Los Angeles County Sensitive Bird List. Add any avifauna possible in habitats or migration from the lists:*
  http://losangelesaudubon.org/images/stories/pdf/vol.%2075%20no.%2003%20january%20february%202009,%20color%20web%20version.pdf

  -Add any observations from eBIRD to the observed/possible/unlikely column (with a superscript "e," if unobserved by the project studies).
  -Reconsider cases of "unlikely" using the criterion of any potential appropriate habitat for a species anywhere on the project area as a "possible" species. SEATAC prefers ratings of "observed," "possible," and "unlikely" in the sensitive species table, with discussion in the species paragraphs. Do not use normative language in the table. Some riparian species and others should become possible with addition of land including foothill areas with rocks,

drainages, and springs. This will involve re-evaluation for "possible" and rewrite of many of the paragraphs on impact potential for the sensitive species.

Based off of spring and ongoing surveys, WEST and NRC have significantly increased the number of observed plant and animal species. Revised CNDDB analyses included a total of sixteen USGS quads and several "unlikely" species are now considered "possible" based off of recent survey results.

- *The raptor list is good, but the bird survey should be supplemented with transects in addition to the point counts. This is important for finding small birds occurring on the project area, which will also be impacted by the wind turbines. Point counts are too limited in scope to adequately survey smaller birds. Nine points are too few for 2357 acres, and points chosen tend to be on periphery at roadsides. Project needs some interior surveys in the variety of habitats covered by the project. Change the description of the fixed-point survey to "raptor survey."*

  WEST's ornithologists have amended and updated all bird survey information. Several monitoring and survey points were added in 2011 with special attention in areas proximal to the California Aqueduct and topographically diverse areas. Please see Exhibit 8 for all bird sampling locations.

- *SEATAC recommends consulting the Point Reyes Observatory census methods for small birds.*

  Comment noted.

- *Much of the project habitat is grassland, which is considered valuable for raptor habitat. Value of raptor habitat in grassland should appear explicitly in the executive summary and other appropriate areas in the BC***A.**

  The use of the site by raptors was included in the revised executive summary as well as Sections 5.3, 5.5 and 6.0.

- *Wintering burrowing owls need to be surveyed in addition to the spring survey.*

  WEST has completed burrowing owl surveys of the entire site. The burrowing owl surveys are ongoing (See Section 3.1.7) and will be reported in the Biota Report.

- *The project's proximity to the California Aqueduct is a concern because of all the waterfowl that use the Aqueduct. This should be discussed. There should be some surveys of waterfowl which could be affected by the turbines.*

  WEST began migrating and breeding bird surveys adjacent to the aqueduct in April 2011 (See Section 3.6.4). Please also see Exhibit 8 for all bird sampling locations.

- *The area of the project is in use for bird migration. Among known migrants in the corridor are Turkey Vultures, Swainson's Hawk, Golden Eagles. A SEATAC member reported a large Turkey Vulture migration (LACo Sensitive) passing through the project region last week (approximately first week of March).*

WEST has conducted migratory bird surveys, riparian bird surveys, raptor nest surveys, and golden eagle and Swainson hawk surveys. The results of these surveys are reported in the BCA. Some surveys are ongoing and will be reported in The Biota Report.

- *p.30 – Round-leafed filaree (California macrophylla) should be rated as "possible." It occurs in habitats like those of the project on the nearby Centennial project. Another possible plant is the Alkali mariposa lily (Calochortus striatus), which is extensive in the area.*

  No examples of round-leaf filaree or alkali mariposa lily have yet to be found on the site from all surveys, including focused surveys for these species. Clayey slopes are generally lacking and common monolopia and Great Valley phacelia, two species often associated with round-leafed filaree in this area, were also not found onsite. Habitat for alkali mariposa lily is present and potential for occurrence of both species had been rated as "Moderate". Surveys for late blooming special status plants (e.g. *Aster greatae*) are planned for 2011.

- *One of the SEA criteria that may lead to SEA status is regional scarcity of habitat. It is important to consider regional plans in the BCA section on regional setting and in the executive summary. For this project the Town and Country Plan for the Antelope Valley has an outline map of the proposed San Andreas SEA, which will lap broadly onto the Wildflower Green Energy plan. This should be considered in the regional analysis with an estimate of how the impacted acreage may change. West Mohave Plan of the Bureau of Land Management (BLM) authored by Tom Egan of AMEC should be considered. The regional setting needs more discussion.*

  The change of SEA acreage affected by the proposed SEA is addressed in the executive summary and Section 2.1.

- *Another SEATAC design element of the revision was connectivity, so that Fairmont Butte, Antelope Buttes, and the Portal Ridge area are part of the proposed San Andreas SEA. The Wildflower Green Energy project could split these parts of the SEA, and this should be discussed.*

  See following response:
  .

- *Wildlife linkages should be mapped and discussed. This is a very important wildlife movement area near the junction of five (5) ecoregions. It is near the confluence of the Santa Clara River drainages with the San Andreas Fault corridor. It was detailed in the first Missing Linkages study as a cross point for Antelope Valley connecting the Tehachapis and western San Gabriels.*

  The BCA addresses wildlife movement corridors and overall connectivity of the site to regional open space areas. All regional open spaces (California State poppy Preserve, Ripley State Preserve, the County Desert Pines Sanctuary, Joshua Tree Woodland Habitat SEA, etc.) have been incorporated into the wildlife movement analysis. This analysis examined topography, vegetation cover, existing obstructions, and primary, secondary, and tertiary movement patterns. Based on this evaluation it is NRC's and WEST's opinion that connectivity between the site and these areas is limited based on the proximity to the California Aqueduct, general lack of cover required for larger terrestrial wildlife, and the presence of major roadways (particularly, Rt. 138 and Lancaster Rd), fences, development, and other associated limitations. While the proposed SEA would overlap the Fairmont Butte and Portal Ridge- Liebre Mountain SEAs, north-south wildlife movement is constrained by the California Aqueduct except for six crossings associated with existing roads.

The ridges and valleys associated with the Tehachapi Mountains to the west and northwest of the site provide a primary southwest-northeast wildlife movement corridor of regional significance that bridges the Sierra Nevada and San Gabriel Mountain Ranges. In addition, the broad-front linkage between the San Gabriel Mountains (including Portal Ridge) and the Mojave Desert provide a primary northwest-southeast wildlife corridor running south of the site. These two corridors may be used by large mammal species moving to and from wintering grounds in the high desert as well as for summer feeding, denning, and breeding. The site is not an integral part of either of these primary regional corridor or the secondary linkages associated with these topographic features. There is potential for localized wildlife movement on tertiary corridors between the WGEF site and SEA No. 57; however, movement away from these features is constrained by the California Aqueduct just south of the site, Highway 138 north of the site, and the general absence of tall vegetation throughout the Antelope Valley.

Wildlife movement to the north of the site is restricted by the lack of vegetative cover and approximately 16 miles of relatively open habitat including developed areas and roads (e.g., Rt. 138). This distance is greater than the roaming territory size of some species and food sources for many relevant species is limited in this area. There is potential for movement between the site and SEA No. 57; however, connectivity away from this area is limited.

- *Exhibit 10 should also show CNPS and eBIRD locations.*

These data were evaluated and added to the text and tables where appropriate. eBIRD and CNPS locations were not added to exhibits as spatial data for these sources are not peer reviewed for quality assurance.

- *Exhibit 10 needs more distinguishing symbology, such as characters supplementing the colors.*

This Exhibit was split into five (5) separate exhibits and symbology was updated for reader clarity.

- *The constraints map that is given is for the region. There should also be maps of the project area with observations of sensitive plants and animals shown and polygons of habitat shown for any "possible" species.*

Exhibit 15 summarizes all biological constraints observed.

- *The regional wildlife constraints map needs more discussion.*

Exhibit 12 is discussed in Section 5.3.

- *SEATAC initially stated that the BCA was incomplete since only 54% of the property was surveyed in the detail needed to delineate communities and constraints. Data for the additional 46% of the project site is needed to properly design the project with least impact to biological resources. Project design and mitigations are usually added to a complete BCA to make a Biota Report.*

All 2011 surveys for vegetation communities, wetlands, plants, and wildlife covered all portions of the 4,191.7-acre site and results are incorporated into the current version of the BCA.

.

- *For the next meeting with this project, SEATAC will accept a supplement to the BCA for the above additions and alterations that incorporate the spring studies data. This will include new BCA data for 1996 acres out of 4352 acres, or about 46% of the project area. Most important are revisiting characterization of vegetation; full map of habitat with more detail; discussion of all vegetation communities in text; reevaluation of species list observed/possible/unlikely; more detailed jurisdictional wetlands discussion and map; regional wildlife movement discussion and map; constraints map of most sensitive resources and least sensitive resources.*

  Comment noted.

If you have any questions or comments regarding this letter, please contact me directly at 949.497.0931.

Sincerely,

NATURAL RESOURCE CONSULTANTS

David A. Levine