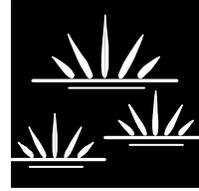


# GLENN LUKOS ASSOCIATES

Regulatory Services



September 19, 2011

Erin McCarthy  
U.S. Fish & Wildlife Service  
6010 Hidden Valley Road  
Carlsbad, California 92009

**SUBJECT:** Results of Dry-Season Survey for Listed Fairy Shrimp for a Single Feature at the 412.5-acre Newport Banning Ranch Property, City of Newport Beach and Unincorporated Orange County, Orange County, California

Dear Ms. McCarthy:

Please accept this letter and attachments as the final report regarding the results of a dry-season survey for listed fairy shrimp within a single feature (BRC 39) at the above referenced property. The survey of the subject feature was conducted in coordination with Chris Medak of USFWS, who suggested that a dry-season survey for this feature be conducted.

The Newport Banning Ranch property is approximately 412 acres and is located within both the City Newport Beach as well as an unincorporated portion of Orange County. The property is located north of Pacific Coast Highway (PCH), east of the Santa Ana River, south of 19<sup>th</sup> Street, and west of existing residential and commercial areas. The Project is situated within Unsectioned areas of Township 6 South, and Range 10 West of the USGS Newport Beach 7.5' Topographic quadrangle maps [Exhibit 1 – Vicinity Map]. The Study Area occurs at Universal Transverse Mercator (UTM) coordinates 412214 mE and 3722187 mN.

As noted in our September 14, 2011 notification, David Moskovitz (TE-084606-1) is the point of contact for GLA and Frank Wegscheider (TE-038716-2) conducted the dry-season sampling in accordance with the U.S. Fish and Wildlife Service Vernal Pool Branchiopods Survey Guidelines (USFWS 1996). The survey was limited to one disturbed feature located near the southeast corner of the site consisting of a low area in a drainage swale that currently supports a predominance of upland grasses and forbs but which ponded water in late December 2010 following extreme rainfall events. A photograph of BRC 39 is included as Exhibit 2.

29 Orchard  
Telephone: (949) 837-0404

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## **METHODS**

### **Soil Collection**

Soil sample collection was conducted by Frank Wegscheider and followed the USFWS Interim Survey Guidelines to Permittees for Recovery Permits Under Section 10(a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods (April 1996). The subject feature was sampled at 10 equidistant points starting at the edge of the feature continuing lengthwise and widthwise, including at least two samples from the lowest portions. Soil samples of approximately 100-milliliter (ml) aliquots were removed at each sub-sample site (for a total of 1 liter/ponded area) and transferred to labeled plastic bags for future analysis. The feature had been previously mapped by Tony Bomkamp of GLA using sub-meter global positioning system (GPS) technology and photographed.

### **Soil Analysis**

USFWS-approved branchiopod biologist Frank Wegscheider conducted soil analyses. Soil samples were placed into a one-gallon plastic container and allowed to pre-soak in water. The resulting slurry was slowly poured into a graded set of stacked U.S. standard eight-inch soil sieves (710, 300, and 150 micron), while concurrently being gently washed with flowing water. Water was directed through the samples for a time period sufficient to wash all of the resting eggs (cysts) into the 150-micron sieve. Soil remaining in the 150-micron and 300-micron sieves was used for analysis. The Project site lies outside of the currently documented range of the federally endangered vernal pool tadpole shrimp (*Lepidurus packardi*), which is endemic to California's Central Valley; therefore, it was unnecessary to examine the 300-micron sample. Nonetheless, the 300-micron sample was examined for the presence of cladoceran ephippia. To facilitate the analyses, the 150-micron samples were transferred to a saturated sodium chloride (NaCl) solution whereupon the organic components were twice decanted. The remaining organic contents were then examined under a Bausch & Lomb dissecting microscope at 10-30X for the presence of anostracan cysts.

## **RESULTS OF THE 2011 DRY-SEASON STUDY**

Anostracan (fairy shrimp) cysts were not detected within the feature and it is concluded that listed fairy shrimp, specifically the San Diego fairy shrimp does not occur within this feature. Notably, cysts of widespread and common seed shrimp (Ostracoda) were also not detected within the feature. A number of hexapod (insect) parts were found in the soil samples taken from this feature but were not identified to species.

Table 1: Feature BCR 39					
Subsample number	Cyst quantity	Genus/species	Ostracod cysts	Hexapod exoskeleton	Cladocera ephippia
1	0	N/A	0	+	0
2	0	N/A	0	+	0
3	0	N/A	0	+	0
4	0	N/A	0	+	0
5	0	N/A	0	+	0
6	0	N/A	0	+	0
7	0	N/A	0	+	+
8	0	N/A	0	+	+
9	0	N/A	0	+	+
10	0	N/A	0	+	0

## **DISCUSSION**

In our notification, we noted that based on separate site assessments conducted by BonTerra Consulting permitted Biologists Allison Rudalevige (TE177979-0) and Jeff Crain (TE-047998-1)<sup>1</sup> as well as by Tony Bomkamp of GLA (TE-825679-1 - permit currently inactive), BRC-39 is not a vernal pool, lacking not only vernal pool indicator species but also lacking a predominance of wetland indicator plants along with a complete absence of indicators for hydric soils, showing that it rarely ponds and then for only short duration. The dry-season survey results confirm this, and the lack of not only Anostracan cysts but also cysts of Ostracoda demonstrates that the feature as noted ponds at best rarely, and when it does (i.e., following extreme rainfall in late December 2010), the ponding lasts for only brief periods. In our notification, GLA proposed a modified protocol consisting of one dry-season sampling as a “complete” survey in the event that fairy shrimp cysts are absent, including the listed San Diego fairy shrimp and common versatile fairy shrimp (both of which are absent). Given the complete absence of Anostracan cysts, GLA believes that the dry-season survey has definitively demonstrated that listed species do not occur within feature BRC-39 due to the lack of suitable habitat and that a “Complete” survey has been accomplished for this feature. No additional wet- or dry-surveys are necessary.

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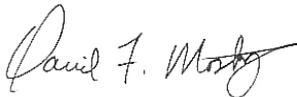
<sup>1</sup> The results of the BonTerra’s review of the site relative to potential areas of seasonal ponding are included in a report dated September 9, 2011 referencing: *Supplemental Biological Resource Information for the Sunset Ridge Park Project*. This report was submitted to Chris Medak of your office.

Erin McCarthy  
U.S. Fish and Wildlife Service  
September 19, 2011  
Page 4

If you have any questions regarding this request, please call me at (949) 837-0404, ext. 42, or Tony Bomkamp at ext. 41.

I certify that the information in this survey report and attached exhibits fully and accurately represents my work.

GLENN LUKOS ASSOCIATES, INC.



TE-084606-1

9/19/2011

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David F. Moskowitz  
Biologist

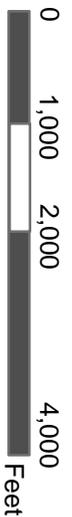
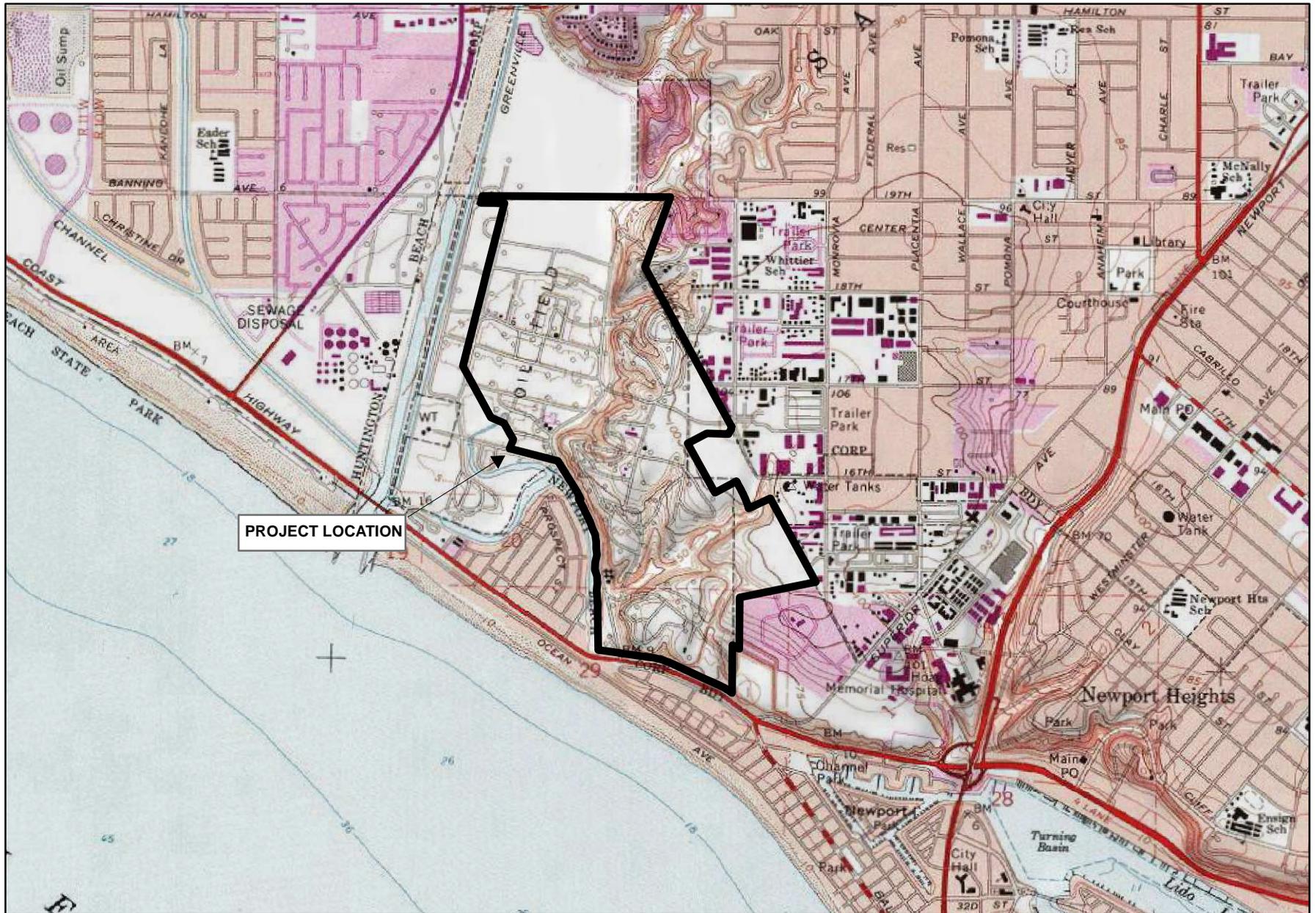
Permit #

Date

s:0472-8a.2011\_dry survey\_90 day.doc

CC: Christine Medak (U.S. Fish and Wildlife Service)  
Jonna Engel (California Coastal Commission)

Adapted from USGS Newport Beach, CA quadrangle



# NEWPORT BANNING RANCH

Vicinity Map

GLENN LUKOS ASSOCIATES

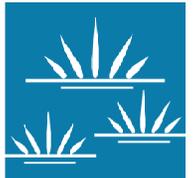


Exhibit 1

Feature BRC-39 exhibiting predominance of upland vegetation. No fairy shrimp cysts were detected.



## NEWPORT BANNING RANCH

Fairy Shrimp Surveys: Site Photograph

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EXHIBIT 2

