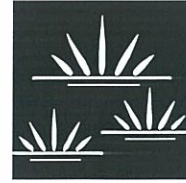


**Appendix J**  
**Wetlands Determination**

# GLENN LUKOS ASSOCIATES

Regulatory Services



December 12, 2008

Tim Paone  
Manatt, Phelps & Phillips LLP  
695 Town Center Drive  
Floor 14  
Costa Mesa, California 92626

**SUBJECT:** Jurisdictional Determination for Area of African Umbrella Sedge adjacent to Aerie Project Site Located in Newport Beach, Orange County, California.

Dear Mr. Paone:

This letter report summarizes our preliminary findings regarding whether wetlands are present on the above-referenced property. The subject site contains no blue-line drainages (as depicted on the U.S. Geological Survey (USGS) topographic map Newport Beach, California [dated 1965 and (photorevised in 1981)] [Exhibit 1]. On December 10, 2008, regulatory specialists of Glenn Lukos Associates, Inc. (GLA) examined the project site to determine the presence of areas potentially subject to the jurisdiction of 1) the U.S. Army Corps of Engineers pursuant to Section 404 of the Clean Water Act, 2) the California Department of Fish and Game pursuant to Section 1602 of the California Fish and Game Code, and 3) as well as wetlands defined in accordance with the California Coastal Act. Enclosed is a 40-scale aerial photograph [Exhibit 2] that depicts the area evaluated for wetlands with data point location. Photographs to document the characteristics of the site are provided as Exhibit 3. Wetland data sheets are attached as Appendix A.

## SUMMARY OF RESULTS

A limited area of African Umbrella sedge (*Cyperus involucratus*, FACW), covering approximately 10 feet by 19 feet (0.004 acre), occurs on the slope adjacent to the proposed building site. The African umbrella sedge begins approximately two feet below the point where a 30-inch drainage pipe discharges on the slope. Summaries of the findings relative to the jurisdictional status of the subject area relative to the requirements of the Corps, CDFG and CCC are as follows with more detailed information provided below in the body of this report.

29 Orchard  
Telephone: (949) 837-0404

▪ Lake Forest

▪ California 92630-8300  
Facsimile: (949) 837-5834

### **Corps Jurisdiction**

While the area of African umbrella sedge exhibits a predominance of wetland indicator species, the area does not exhibit hydric soils nor does it exhibit wetland hydrology. Therefore, the area occupied by the African umbrella sedge is not a wetland pursuant to Section 404 of the Clean Water Act and the area is not subject to Corps jurisdiction.

### **CDFG Jurisdiction**

The area of African umbrella sedge is not associated with a stream or lake and is therefore not subject to jurisdiction under Section 1600 of the California Fish and Game Code.

### **CCC Jurisdiction**

While the area of African umbrella sedge exhibits a predominance of wetland indicator plants (consisting only of the African umbrella sedge), the area is not covered periodically or permanently with shallow water. Therefore, the area is not a wetland under the Coastal Act, as the plants are not growing as hydrophytes. As detailed below in Sections III and IV, the subject plants are supported by artificial irrigation on the slope immediately above the African umbrella sedge as well as local runoff (i.e., nuisance water) that is discharged from the 30-inch pipe. This conclusion is further confirmed by the strong upland characteristics of the well-drained soils that support the subject sedge.

## **I. METHODOLOGY**

Prior to beginning the field delineation, a site reconnaissance visit was conducted to determine whether portions of the site support plant species that are potentially indicators of wetland conditions. Based on the initial reconnaissance, a 10 foot by 19 foot area supporting African umbrella sedge was detected and was field checked for the presence of a predominance of vegetation with a wetland indicator status of facultative (FAC) or wetter, hydric soils, and wetland hydrology. The potential wetland area was evaluated using the methodology set forth in the U.S. Army Corps of Engineers 1987 Wetland Delineation Manual<sup>1</sup> (Wetland Manual) and the 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West

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<sup>1</sup> Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experimental Station, Vicksburg, Mississippi.

Region (Version 2.0) (Arid West Supplement).<sup>2</sup> While in the field the location where data was collected was recorded using a Trimble GeoXT GPS Unit, with sub-meter accuracy. Field data were recorded onto wetland data sheets. As noted, the area evaluated for wetlands extends approximately 19 feet, beginning about two feet below the pipe. The area averages about ten feet in width as depicted on Exhibit 2.

#### A. Vegetation

During the December 10, 2008, site visit, GLA biologists documented vegetation, soils and hydrology within the area occupied by the African Umbrella Sedge. Vegetation predominance data was analyzed using the methodology described in the Corps' Arid West Regional Supplement (see attached wetland data sheet included as Appendix A). Because the area is small, (i.e., 10 by 19 feet), the entire area was characterized relative to the vegetation.

The presence of hydrophytic wetland indicator plant species was determined based on *The National List of Plant Species that Occur in Wetlands*<sup>3</sup> and as needed *The National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary (1996 National List)*.<sup>4</sup>

#### B. Soils

The Soil Conservation Service (SCS)<sup>5</sup> has mapped the following soil types as occurring in the general vicinity of the project site:

##### ***Beaches and Myford Sandy Loam, 2 to 9 percent slope***

Neither of these soil types is entirely consistent with the soils observed on the site, which consisted of a dark brown 10YR 2/1 loamy sand. While in the field, the soils were checked for

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<sup>2</sup> U.S. Army Corps of Engineers. September 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Supplement Version 2.0. Ed. J.S. Wakeley, R.W. Lichevar, and C.V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

<sup>3</sup> Reed, P.B., Jr. 1988. *National List of Plant Species that Occur in Wetlands*. U.S. Fish and Wildlife Service Biological Report 88(26.10).

<sup>4</sup> U.S. Fish and Wildlife Service. 1997. *The National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary (1996 National List)*. Published by the U.S. Fish and Wildlife Service, National Wetlands Inventory, St. Petersburg, Florida. This list was used where particular species, (e.g., *Penisetum clandestinum*) was not included in the 1988 list but was updated with an indicator status of FACU the 1997 list.

<sup>5</sup> SCS is now known as the National Resource Conservation Service or NRCS.

color using a Munsell Color Chart. The soils were also checked for reducing conditions using alpha alpha dipyridyl.

**C. Hydrology**

During the December 10, 2008 site visits observations of hydrology were recorded and are included on the data sheet attached as Appendix A.

**II. JURISDICTION**

**A. Army Corps of Engineers**

Pursuant to Section 404 of the Clean Water Act, the Corps regulates the discharge of dredged and/or fill material into waters of the United States. The term "waters of the United States" is defined in Corps regulations at 33 CFR Part 328.3(a) as:

- (1) *All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;*
- (2) *All interstate waters including interstate wetlands;*
- (3) *All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect foreign commerce including any such waters:*
  - (i) *Which are or could be used by interstate or foreign travelers for recreational or other purposes; or*
  - (ii) *From which fish or shell fish are or could be taken and sold in interstate or foreign commerce; or*
  - (iii) *Which are used or could be used for industrial purpose by industries in interstate commerce...*
- (4) *All impoundments of waters otherwise defined as waters of the United States under the definition;*
- (5) *Tributaries of waters identified in paragraphs (a) (1)-(4) of this section;*
- (6) *The territorial seas;*
- (7) *Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1)-(6) of this section.*

The term "wetlands" (a subset of "waters of the United States") is defined at 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support...a prevalence of vegetation typically adapted for life in saturated soil conditions." In 1987 the Corps published a manual to guide its field personnel in determining jurisdictional wetland boundaries. The methodology set forth in the 1987 Wetland Delineation Manual and the Arid West Supplement Version 2.0 generally require that, in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibit at least minimal hydric characteristics. While the manual and Supplement provide great detail in methodology and allow for varying special conditions, a wetland should normally meet each of the following three criteria:

- more than 50 percent of the dominant plant species at the site must be typical of wetlands (i.e., rated as facultative or wetter in the National List of Plant Species that Occur in Wetlands<sup>6</sup>);
- soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., a gleyed color, or mottles with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions); and
- Whereas the 1987 Manual requires that hydrologic characteristics indicate that the ground is saturated to within 12 inches of the surface for at least five percent of the growing season during a normal rainfall year, the Arid West Supplement does not include a quantitative criteria with the exception for areas with "problematic hydrophytic vegetation", which require a minimum of 14 days of ponding to be considered a wetland.

#### **B. California Department of Fish and Game**

Pursuant to Division 2, Chapter 6, Sections 1600-1603 of the California Fish and Game Code, the CDFG regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake, which supports fish or wildlife.

CDFG defines a "stream" (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has

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<sup>6</sup> Reed, P.B., Jr. 1988. National List of Plant Species that Occur in Wetlands. U.S. Fish and Wildlife Service Biological Report 88(26.10).

supported riparian vegetation." CDFG's definition of "lake" includes "natural lakes or man-made reservoirs."

CDFG jurisdiction within altered or artificial waterways is based upon the value of those waterways to fish and wildlife. CDFG Legal Advisor has prepared the following opinion:

- Natural waterways that have been subsequently modified and which have the potential to contain fish, aquatic insects and riparian vegetation will be treated like natural waterways....
- Artificial waterways that have acquired the physical attributes of natural stream courses and which have been viewed by the community as natural stream courses, should be treated by [CDFG] as natural waterways....
- Artificial waterways without the attributes of natural waterways should generally not be subject to Fish and Game Code provisions....

Thus, CDFG jurisdictional limits closely mirror those of the Corps. Exceptions are CDFG's exclusion of isolated wetlands (those not associated with a river, stream, or lake), the addition of artificial stock ponds and irrigation ditches constructed on uplands, and the addition of riparian habitat supported by a river, stream, or lake regardless of the riparian area's federal wetland status.

### C. CCC Jurisdiction

Pursuant to the California Coastal Act (California Public Resources Code Section 30233), the CCC regulates the diking, filling, or dredging of wetlands within the coastal zone. The Coastal Act Section 30121 defines "wetlands" as land "*which may be covered periodically or permanently with shallow water.*" The 1981 CCC Statewide Interpretive Guidelines state that hydric soils and hydrophytic vegetation, "*are useful indicators of wetland conditions, but the presence or absence of hydric soils and/or hydrophytes alone are not necessarily determinative when the Commission identifies wetlands under the Coastal Act. In the past, the Commission has considered all relevant information in making such determinations and relied upon the advice and judgment of experts before reaching its own independent conclusion as to whether a particular area will be considered wetland under the Coastal Act.*"

See Section IV below for a detailed discussion regarding application of these definitions to wetland delineation within the Coastal Zone.

### III. RESULTS

#### A. Description of Feature

The area that supports the subject African umbrella sedge [see Exhibit 3, Photograph 1] occurs on a steep (approximately 1:1) slope directly above a small cove. As noted, a 30-inch drain pipe that collects water from a storm drain inlet at the corner of Carnation Avenue and Ocean Boulevard discharges storm water and nuisance flow onto the slope.

#### B. Vegetation

The area that supports African umbrella sedge (*Cyperus involucratus*, FACW) covers 10 by 19 feet and is completely surrounded by ornamental vegetation including Victorian box (*Pittosporum undulatum*), tobira (*Pittosporum tobira*), two species of privet (*Ligustrum* spp.), Japanese honeysuckle (*Lonicera japonica*), which also dominates the irrigated slope immediately above the umbrella sedge.

Within the area occupied by the umbrella sedge, it was estimated to account for 80 percent of the total cover with Victorian box and Privet accounting for about 10-percent each. Using the 50/20 rule, only the African umbrella sedge is considered dominant.<sup>7</sup> However, as discussed below, in this instance, the presence of a species with an indicator status of FACW is not sufficient to make a positive determination for the presence of wetlands and discussed in more detail in the soils and hydrology discussion immediately below.

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<sup>7</sup> The 50/20 Rule is a method set forth in the Arid West Supplement for determining which plant species should be considered dominant and is implemented as follows: 1. Estimate the absolute percent cover of each species in the first stratum. Since the same data may be used later to calculate the prevalence index, the data should be recorded as absolute cover and not converted to relative cover. 2. Rank all species in the stratum from most to least abundant. 3. Calculate the total coverage of all species in the stratum (i.e., sum their individual percent cover values). Absolute cover estimates do not necessarily sum to 100 percent. 4. Select plant species from the ranked list, in decreasing order of coverage, until the cumulative coverage of selected species exceeds 50 percent of the total coverage for the stratum. If two or more species are equal in coverage (i.e., they are tied in rank), they should all be selected. The selected plant species are all considered to be dominants. All dominants must be identified to species. 5. In addition, select any other species that, by itself, is at least 20 percent of the total percent cover in the stratum. Any such species is also considered to be a dominant and must be accurately identified. 6. Repeat steps 1-5 for any other stratum present. Combine the lists of dominant species across all strata. Note that a species may be dominant in more than one stratum (e.g., a woody species may be dominant in both the tree and sapling/shrub strata).



**C. Soils**

Soils on the slope are thin, overlaying bedrock. Soil in the area that supports the African umbrella sedge are upland soils, dark brown loamy sand, 10YR 2/1 and very uniform to 15 inches (in some areas the bedrock is very close to the surface). Because of the 1:1 slope and the sandy character of the soils, the soils drain quickly and do not have the ability to become saturated. No evidence of hydric soil development was detected and it is not expected due to the steepness of the slope and ability of the sandy soils to drain quickly.

**D. Hydrology**

In addressing the presence of wetland hydrology, two factors were considered. First, the hydrological indicators set forth in the Arid West Supplement and second, the definition in the Coastal Act which includes areas “*which may be covered periodically or permanently with shallow water.*” It is important to note that the steep slope and well-drained character of the sandy soils indicate that there is no potential for this area to be “covered” periodically or permanently with shallow water. Storm flows would drain quickly through the sandy soils precluding saturation for sufficient duration to be consistent with the presence of “wetland hydrology” (i.e., saturation for periods sufficient to promote anaerobic conditions in the upper 12 inches).

**1. Precipitation**

Annual precipitation for this area averages approximately 11 inches per year. Because of the steep slope and porous character of the soils, precipitation would not be sufficient to promote saturation for periods sufficient to promote anaerobic conditions in the upper 12 inches.

**2. Runoff**

Storm water discharge from the 30-inch pipe would be substantial during storm events; however, because of the steep slope and porous soils, the area would not be covered with shallow water for sufficient duration to promote anaerobic conditions in the upper 12 inches.

**3. Irrigation**

Given the lack of wetland hydrology, as confirmed by the strong upland characteristics of the soils, it appears that the African umbrella sedge is supported by regular irrigation water. During the December 10, 2008, site visit, we observed the neighbor washing off her deck and steps, with the water running into the adjacent honeysuckle. She was also directly watering the honeysuckle

with some over spray directly reaching the umbrella sedge. Also, approximately halfway into our field visit, we observed a very small “trickle” of water discharging from the 30-inch pipe that lasted for just a few minutes. Upon investigating the source of water, we found a different neighbor, washing an automobile with the runoff eventually reaching the area. Such runoff would not be sufficient to make a positive finding for the presence of wetland hydrology; however, combined with the irrigation of the adjacent landscaped slope it explains the presence of the umbrella sedge, especially given the strong upland character of the soils. It is also important to note in this regard that the African umbrella sedge is designated as FACW, meaning that up to one-third of occurrences of this species is in upland areas. Confirmation that African umbrella sedge is a common landscape plant that is highly adaptable is provided in the *Sunset Western Garden Book*:

*Grows in or out of water. Effective near pools, in pots or planters, or **in dry stream beds or rock gardens**. Self sows. Can become weedy....<sup>8</sup> [Emphasis added.]*

Given this adaptability, in the absence of other wetland indicators such as the confirmed presence of wetland hydrology or hydric soils, the presence of this plant is not a reliable indicator of wetland conditions and the nearby irrigation would explain the presence of this highly adaptable species.

#### IV. DISCUSSION

As noted, the 10 by 19-foot area that supports African umbrella sedge is able to support the umbrella sedge due to a combination of landscape irrigation and nuisance water that reaches the site through the 30-inch pipe. None of the hydrological inputs are sufficient to make a positive finding for the presence of wetland Hydrology.

##### A. Corps Jurisdiction

The African umbrella sedge area lacks indicators for the presence of hydric soils and wetland hydrology and as such would not be considered a wetland under Section 404 of the Clean Water Act.

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<sup>8</sup> Sunset Western Garden Book, by the Editors of Sunset Magazine. 1990. p 312.

**B. CDFG Jurisdiction**

The African umbrella sedge area is not associated with a stream of lake and is therefore not subject to jurisdiction under Section 1600 of the California Fish and Game Code.

**C. CCC Jurisdiction**

Although the African umbrella sedge area exhibits a predominance of wetland indicator species (the African umbrella sedge being the sole such species), it lacks evidence for the presence of hydric soils or wetland hydrology and would not be considered a wetland under the Coastal Act because the 10 by 19-foot patch of African umbrella sedge is not covered permanently or periodically with shallow water. The area is supported primarily by intermittent artificial water sources, including landscape irrigation from the adjacent slope. While that fact alone does not preclude the area from being a wetland, this specific area is not a wetland under the Coastal Act because it does not meet the Coastal Act definition of a wetland for the following reasons:

First, the Coastal Act Definition of Wetlands as set forth in the Public Resources Code Section 30121 is as follows:

*Wetlands' means lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens.*

Thus, irrespective of any "parameter" test, the area under consideration as a wetland must be "covered periodically or permanently with shallow water." As noted, the subject area occurs on a steep slope that precludes the area from being covered by shallow water except during very brief periods of intense rainfall. The clear lack of hydric soils as confirmed in the field, indicates that water does not cover or saturate the soil for sufficient duration necessary to promote development of hydric soils nor the growth of hydrophytes, which are present due to the artificial irrigation that is applied to the adjacent vegetation.

Second, in accordance with the Commission Regulations, specifically Section 13577 (California Code of Regulations, Title 14, Division 5.5), the Commission has interpreted the regulation consistent with what is often referred to as the "One-Parameter Definition" based on the following definition:

*(b) Wetlands.*

*(1) .... Wetland shall be defined as land where the water table is at, near, or above land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes....[T]he upland limit of a wetland shall be defined as:*

*(A) the boundary between land with predominantly hydrophytic cover and land with predominantly mesophytic or xerophytic cover....*

Although Commission staff and even Commissioners themselves often refer to the Commission's standard for identifying wetlands as a "One-Parameter Test," this is a misleading description of how the Commission's delineation process described in Reg. §13577 actually works. In reality, the Commission's "one parameter" test only establishes a rebuttable presumption that the other indicator(s) also are present. While the Commission takes the position that the presence of a single wetland indicator establishes a presumption that a wetland is present, that presumption can be "rebutted by strong, independent evidence of upland condition." (This is a quote from Staff Ecologist Dr. John Dixon at a Coastal Commission hearing on November 5, 2003.) Dr. Dixon also wrote in an opinion referenced in a staff report prior to that 2003 hearing that "In recognition of the fact that a proportion of wetland indicator plants occur in uplands, the wetland presumption may be falsified where there is strong, positive evidence of upland conditions." Therefore, once the Commission establishes the presumption, the burden shifts to the applicant who must then prove that one or both of the other indicators does not exist. This is a critical distinction because it allows, as in this case, for an in-depth biological analysis to determine if the area, in fact, is NOT a wetland, despite the presence of a single wetland indicator.

Given clear and demonstrable lack of wetland hydrology and hydric soils, combined with the characteristics of the African umbrella sedge, a highly adaptable common landscape plant that occurs in upland areas for one-third of occurrences, the subject 10 by 19 foot area is not a wetland under the Coastal Act.

#### **D. Newport Beach Coastal Land Use Plan Policies**

While the area of African umbrella sedge is not a wetland as defined under the Coastal Act, it is appropriate to address the area under the Newport Beach Coastal Land Use Plan Policies (CLUP) for purposes of completeness.

Policy 4.2.2-3 of the City's CLUP specifies that all wetland ESHA shall have "a minimum buffer width of 100 feet wherever possible"; however, it is important to consider the entire policy set forth in 4.2.2-3:

*Require buffer areas around wetlands of a sufficient size to ensure the biological integrity and preservation of the wetland that they are designed to protect. Wetlands shall have a minimum buff width of 100 feet wherever possible. **Smaller buffer widths may be allowed only where it can be demonstrated that 1) a 100 foot buffer is not possible due to site constraints, and 2) the proposed narrower buffer would be amply protective of the biological integrity of the wetland given the site-specific characteristics of the resource, and of the type and intensity of disturbance.** [Emphasis not in Original]*

Should a finding be made that the area of African umbrella sedge is a wetland, it is important to note that this area is exactly the sort of resource that does not require a 100-foot buffer for the following reasons:

- First, the area already lacks a 100-foot buffer along the eastern and southern edges due to the presence of existing residential structures, including the neighboring structure, which is within approximately 17 feet of the umbrella sedge as depicted on Exhibit 3 (this distance was measured with a tape measured using GIS).
- Second, as depicted on Exhibit 3, the area of sedge is almost entirely surrounded by or occurs as understory to non-native species and the African umbrella sedge is a non-native species that is considered to be highly invasive and would be subject to eradication from local wetland restoration sites or managed wetlands.
- Third, when considered in accordance with the ESHA definition in the Coastal Act, the area does not meet any of the criteria typically associated with ESHA. Specifically, the African umbrella sedge cannot in any way be considered rare as it is a widespread invasive species. The approximately 0.004 acre area does not support or exhibit potential to support any rare or otherwise special status species and does not exhibit importance in the ecosystem given its position on the landscape and composition. Finally, the area is already highly degraded due to the presence of the invasive and/or non-native species noted above.

Given these factors, including the proximity of established neighboring development no change in buffer requirements compared with the current conditions are warranted.

If you have any questions regarding this letter report, please contact Tony Bomkamp at (949) 837-0404, extension 41.

Tim Paone  
Manatt, Phelps & Phillips LLP  
December 12, 2008  
Page 13

Sincerely,

GLENN LUKOS ASSOCIATES, INC.

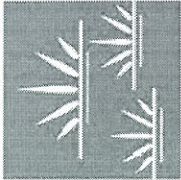
A handwritten signature in black ink that reads "Tony Bomkamp". The signature is written in a cursive, flowing style.

Tony Bomkamp  
Regulatory Specialist

0731-7\_JD\_Aerie.doc



Adapted from USGS Newport Beach OES, CA quadrangle



GLENN LUKOS ASSOCIATES

Exhibit 1

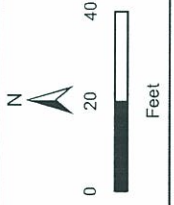
**AERIE PROPERTY**  
 Vicinity Map



**Legend**

- Data Point for African Umbrella Sedge
- Approximate location of African Umbrella Sedge

\*GPS Data subject to Potential Multipath Error



**AERIE PROPERTY**  
Aerial Map

GLENN LUKOS ASSOCIATES

Exhibit 2



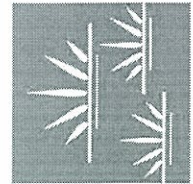




Photograph 1. View of discharge pipe with African umbrella sedge mixed with other ornamentals. Photograph taken on 12-10-2008.



Photograph 2. This photograph depicts irrigation lines visible immediately above the area vegetated with African umbrella sedge. Photograph taken on 12-10-2008.



GLENN LUKOS ASSOCIATES

EXHIBIT 3

AERIE PROPERTY

Site Photographs

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: Aerie Project site City/County: Orange Sampling Date: 12/10/08  
 Applicant/Owner: Manatt, Phelps + Phillips State: CA Sampling Point: 1  
 Investigator(s): D Bonkump / P Schwartz Section, Township, Range: T 7 S, R 10 W, sec 1  
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): Slope / None Slope (%): 40-50  
 Subregion (LRR): Med Lat: 33° 35' 54.0 N Long: 117° 52' 45.6 W Datum: WGS 84  
 Soil Map Unit Name: Myford NWI classification: NONE

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? NO Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? NO (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Remarks:			

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Pinus ponderosa</u>	<u>10</u>	<u>N</u>	<u>UNK</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. <u>Ligustrum sp.</u>	<u>10</u>	<u>N</u>	<u>UNK</u>	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Total Cover: _____				
<b>Sapling/Shrub Stratum</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Total Cover: _____				
<b>Herb Stratum</b>				
1. <u>Cyperus involucreatus</u>	<u>80%</u>	<u>Y</u>	<u>FACW</u>	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: _____				
<b>Woody Vine Stratum</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____		% Cover of Biotic Crust _____		
Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				

Remarks: \* Appears to be supported by irrigation for adjacent landscaping + nuisance water

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-14	10YR 2/1	100	NONE				Loamy Sand	Smells very fresh i.e. good garden soil - no hydric indicators of any kind

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No

Remarks:

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (any one indicator is sufficient)</p> <p><input type="checkbox"/> Surface Water (A1)</p> <p><input type="checkbox"/> High Water Table (A2)</p> <p><input type="checkbox"/> Saturation (A3)</p> <p><input type="checkbox"/> Water Marks (B1) (Nonriverine)</p> <p><input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)</p> <p><input type="checkbox"/> Drift Deposits (B3) (Nonriverine)</p> <p><input type="checkbox"/> Surface Soil Cracks (B6)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Water-Stained Leaves (B9)</p>	<p>Secondary Indicators (2 or more required)</p> <p><input type="checkbox"/> Salt Crust (B11)</p> <p><input type="checkbox"/> Biotic Crust (B12)</p> <p><input type="checkbox"/> Aquatic Invertebrates (B13)</p> <p><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</p> <p><input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>	<p><input type="checkbox"/> Water Marks (B1) (Riverine)</p> <p><input type="checkbox"/> Sediment Deposits (B2) (Riverine)</p> <p><input type="checkbox"/> Drift Deposits (B3) (Riverine)</p> <p><input type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Thin Muck Surface (C7)</p> <p><input type="checkbox"/> Crayfish Burrows (C8)</p> <p><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</p> <p><input type="checkbox"/> Shallow Aquitard (D3)</p> <p><input type="checkbox"/> FAC-Neutral Test (D5)</p>
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Field Observations:

Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_

Saturation Present? (includes capillary fringe) Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes \_\_\_\_\_ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: