Appendix E
Burrowing Owl Survey Report

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July 17, 2009

Ms. Sharon Wood
Assistant City Manager
City of Newport Beach
3300 Newport Boulevard
Newport Beach, California 92663

VIA EMAIL
swood@city.newport-beach.ca.us

Subject: Results of Focused Burrowing Owl Surveys for the Newport Banning Ranch Project Site, Orange County, California

Dear Ms. Wood:

This Letter Report presents the results of focused surveys for the western burrowing owl (*Athene cunicularia hypugaea*) on the Newport Banning Ranch project site (hereafter referred to as the "project site"). The purpose of the surveys is to determine the presence or absence of winter resident (non-breeding) as well as breeding western burrowing owl on the project site. The surveys were conducted in accordance with guidelines provided in the California Burrowing Owl Consortium survey protocol for this species (1993).

Project Location and Description

The project site is approximately 401 acres (Exhibit 1). Approximately 40 acres of the project site are located within the incorporated boundary of the City of Newport Beach; the remainder of the project site is within unincorporated Orange County, in the City of Newport Beach's adopted Sphere of Influence. The project site is located north of West Coast Highway, east of the Santa Ana River, south of 19th Street and Talbert Regional Park, and west of existing residential and commercial uses. The property has been used as an active oil field for over 50 years and ongoing oil operations along with remnant oil wells and pipelines occur throughout the project site. The proposed project is a phased development that includes single-family and multi-family residences, commercial development, and a coastal inn. The project will provide approximately 243 acres of open space that includes habitat preservation and restoration, and public trails. Of the 243 acres, approximately 19.3 acres would be used for interim oil operations at which point the acreage would be used for open space. Additionally, approximately 45 acres would be used for park and recreational activities.

The project site is located on the U.S. Geological Survey's (USGS's) Newport Beach 7.5-minute quadrangle, at Township 6S, Range 10W, Sections 20, 21, and 29 (Exhibit 2). Topography on the project site varies, with relatively flat areas, bluffs, and drainages. Elevations on the project site range from approximately sea level to 100 feet above mean sea level (msl). The project site is generally bound on the north by Talbert Nature Preserve/Regional Park in the City of Costa Mesa and residential development in the City of Newport Beach; on the south by West Coast Highway and residential development in Newport Beach; on the east by residential, light industrial, and office development in Costa Mesa and Newport Beach; and on the west by the U.S. Army Corps of Engineers (USACE) wetlands restoration area and the Santa Ana River. The City

of Huntington Beach is west of the Santa Ana River. At its nearest point, the project site is less than 0.25 mile inland from the Pacific Ocean. A variety of vegetation types occur on the project site including marsh, riparian forest, scrubland, grassland, ornamental, and ruderal vegetation in addition to disturbed and developed areas.

Background

The western burrowing owl is a grassland specialist distributed throughout western North America, where it occupies open areas with short vegetation and bare ground within shrub, desert, and grassland environments. Burrowing owls use a wide variety of arid and semi-arid environments, with well-drained, level to gently sloping areas characterized by sparse vegetation and bare ground (Haug et al. 1993; Dechant et al. 2003). Burrowing owls in Florida excavate their own burrows, but western burrowing owls are dependant upon the presence of burrowing mammals, whose burrows are used for roosting and nesting (Haug et al. 1993). The presence or absence of colonial mammal burrows (e.g., California ground squirrels [*Spermophilus beecheyi*]) is often a major factor that limits the presence or absence of burrowing owls. Where mammal burrows are scarce, burrowing owls have been found occupying man-made cavities, such as buried and non-functioning drain pipes, stand-pipes, and dry culverts. Burrowing mammals may burrow beneath rocks, debris, or large, heavy objects such as abandoned cars, concrete blocks, or concrete pads. Large, hard objects at burrow entrances stabilize the entrance from collapse, and may inhibit excavation by predators.

Burrowing owls often use "satellite", or non-nesting burrows, moving chicks into them from the nesting burrow presumably to reduce the risk of predation (Desmond and Savidge 1998) and possibly to avoid nest parasites (Dechant et al. 2003). One pair may use up to ten satellite burrows (James and Seabloom 1968). Individual burrowing owls have a moderate to high site fidelity to previously used burrow complexes and often use the same burrows for nesting year after year.

The western burrowing owl was once abundant and widely distributed within coastal Southern California, but it has declined precipitously in Los Angeles, Orange, San Diego, Riverside, and San Bernardino Counties. A recent petition was submitted to list the California population of the western burrowing owl as an Endangered or Threatened species (Center for Biological Diversity et al. 2003). The California Department of Fish and Game (CDFG) declined to list the burrowing owl as either Threatened or Endangered in consideration of its overall population throughout the state. The western burrowing owl is considered locally rare in Southern California and is considered a California Species of Special Concern.

A wintering burrowing owl was reported by the California Natural Diversity Database north of the project site in Fairview Park (CDFG 2008). Wintering burrowing owls are known to occur on the project site.

Survey Methodology

The Burrowing Owl Survey Protocol and Mitigation Guidelines prepared by the California Burrowing Owl Consortium (CBOC) (CBOC 1993), which the CDFG has adopted, details a sequence of surveys based on the findings of each previous level of survey. These surveys are done in three phases: (1) a habitat assessment; (2) burrow surveys; and (3) focused owl surveys.

Winter (non-breeding) Surveys

Surveys for burrowing owl were conducted during the winter season (December 1 – January 31). The first step of the survey protocol is a habitat assessment to determine whether or not suitable habitat for burrowing owl exists on the project site. BonTerra Consulting Ecologist Allison Rudalevige conducted the habitat assessment on January 22, 2009. In addition, a site overview was conducted with Ms. Rudalevige, BonTerra Consulting Senior Botanist Sandy Leatherman and Associate Principal Gary Medeiros, and biologists from Glenn Lukos Associates, Inc. Suitable habitat for burrowing owl was observed during the survey, and focused surveys were initiated.

A focused burrow survey was conducted on January 22, 2009 by Ms. Rudalevige and on January 23 and 26, 2009 by Ms. Rudalevige and BonTerra Consulting Ecologist Lindsay Messett. The burrow survey was conducted by walking transects at regularly spaced intervals to achieve 100 percent visual coverage of all potential habitat on the project site. The burrow survey was not conducted within five days of rain, which could have washed away potential sign. All natural or man-made cavities large enough to allow burrowing owl entry were inspected for evidence of occupation. Evidence of occupation may include prey remains, cast pellets, white-wash, feathers, and observations of owls adjacent to burrows. Photographs of potential burrow locations were taken during the survey (Exhibit 3). Survey times and weather conditions are summarized in Table 1 below.

TABLE 1
SURVEY DATA

Visit	Date	Time	Surveyor	Weather	Wind (mph)	Temp. (°F)	Results
Habitat Assessment	1/22/2009	0730-1100	Rudalevige	Cloudy	0-5	60	Burrowing owl observed
Burrow Survey	1/22/2009	1245-1500	Rudalevige	Partly Cloudy	0-5	60	No owls observed
Burrow Survey	1/23/2009	0830-1030	Rudalevige Messett	Cloudy, Light Showers	0-7	58	No owls observed
Burrow Survey	1/26/2009	0900-1200 1300-1715	Rudalevige Messett	Clear	0-3	67	No owls observed
Winter Crepuscular Survey 1	1/27/2009	0630-0900	Rudalevige Messett	Clear	0-2	47	Burrowing owl observed
Winter Crepuscular Survey 2	1/28/2009	0630-0905	Rudalevige Messett	Clear	0-1	48	Burrowing owl observed
Winter Crepuscular Survey 3	1/29/2009	1515-1745	Rudalevige Messett	Clear	0-13	77	No owls observed
Winter Crepuscular Survey 4	1/30/2009	1530-1810	Rudalevige Messett	Clear	0-9	68	No owls observed
Spring Crepuscular Survey 1	5/11/2009, 5/13/2009	0530-0645, 1820-1900	Rudalevige	Cloudy, Clear	2-5 0-5	60 66	No owls observed
Spring Crepuscular Survey 2	5/20/2009	0700-0910, 1800-1945	Messett Rudalevige	Cloudy, Clear	0-3 0-5	64 70	No owls observed
Spring Crepuscular Survey 3	5/21/2009	0515-0745	Messett Rudalevige	Cloudy	0-5	61	No owls observed
Spring Crepuscular Survey 4	5/26/2009	0515-0845	Messett	Partly Cloudy	0-3	62	No owls observed

A crepuscular (dawn or dusk) owl survey was conducted because potential burrows were observed during the burrow survey. Morning crepuscular surveys were conducted from one hour before sunrise to two hours after sunrise, and evening crepuscular surveys were conducted from two hours before sunset to one hour after sunset. Crepuscular surveys were conducted only when there was enough light to observe potential flights of burrowing owls. Four crepuscular surveys of each potential burrow were conducted as required by the protocol. Surveys were conducted on January 27, 28, 29, and 30, 2009, by Ms. Rudalevige and Ms. Messett. All potential habitat on the project site was surveyed to achieve 100 percent visual coverage of the area (Exhibit 4).

Spring (breeding) Surveys

Surveys for burrowing owl were also conducted during the spring (breeding) season (February 1 – August 31). Crepuscular surveys were conducted in all areas of suitable habitat on the project site. Surveys were conducted on May 11, 13, 20, 21, and 26, 2009, by Ms. Rudalevige and Ms. Messett. These surveys were conducted from either one hour before sunrise to two hours after, or from two hours before sunset to one hour after. All potential habitat on the project site was surveyed to achieve 100 percent visual coverage of the area.

Survey Results

Suitable habitat for burrowing owl is present in the non-native grassland, ruderal, and disturbed areas on the project site (Exhibit 4). Vegetation in these areas was low in stature at the time of the surveys. The majority of suitable habitat (i.e., flat, open areas) is located in the southern portion of the project site. California ground squirrel burrows were observed scattered throughout the project site, though primarily in the southern portion of the site (Exhibit 4). Burrows were scattered in open, flat areas and along bluffs and berms. Rock and debris piles were also located on the project site and surveyed.

Winter (non-breeding) Surveys

One burrowing owl was observed during the habitat assessment and winter crepuscular surveys of the project site (Exhibit 4). This owl was observed perched on a berm at the eastern edge of the project site. White-wash and cast pellets were also observed around a burrow on this berm.

Spring (breeding) Surveys

No burrowing owls or owl sign (i.e., cast pellets, white-wash, feathers, prey remains) were observed on the project site during the spring crepuscular surveys. A list of wildlife species observed during the owl surveys is provided in Attachment A of this Letter Report.

Recommendations

Although the burrowing owl was not observed during the spring surveys, it was observed during winter surveys and one could move into the survey area prior to future work. A qualified Biologist should conduct a pre-construction survey for this species within 30 days prior to any ground disturbance activity; pre-construction surveys can be conducted year-round.

If an active burrow is observed during the non-nesting season, a qualified Biologist will monitor the nest site; when the owl is away from the nest, the Biologist will exclude the owl from the burrow and then remove the burrow so the burrowing owl cannot return to the burrow.

If nesting activity is present at an active burrow, the active site will be protected until nesting activity has ended to ensure compliance with Section 3503.5 of the *California Fish and Game Code*. Peak nesting activity for the burrowing owl normally occurs between April and July. To protect the active burrow, the following restrictions to construction activities will be required until the burrow is no longer active (as determined by a qualified Biologist): (1) Clearing limits will be established within a 500-foot buffer around any active burrow, unless otherwise determined by a qualified Biologist and (2) Access and surveying will be restricted within 300 feet of any active burrow, unless otherwise determined by a qualified Biologist. Any encroachment into the buffer area around the active burrow will only be allowed if the Biologist determines that the proposed activity will not disturb the nest occupants. Construction can proceed when the qualified Biologist has determined that fledglings have left the nest.

BonTerra Consulting appreciates the opportunity to assist with this project. Please contact Stacie Tennant at (714) 444-9199 if you have questions or comments.

Sincerely,

BONTERRA CONSULTING

Ann M. Johnston
Principal, Biological Services

Stacie A. Tennant
Senior Project Manager/Biologist

Attachments: Exhibits 1, 2, 3, and 4
Attachment A – Wildlife Compendium

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References

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Regional Location

Exhibit 1

Newport Banning Ranch

N W E S

10 5 0 10 Miles

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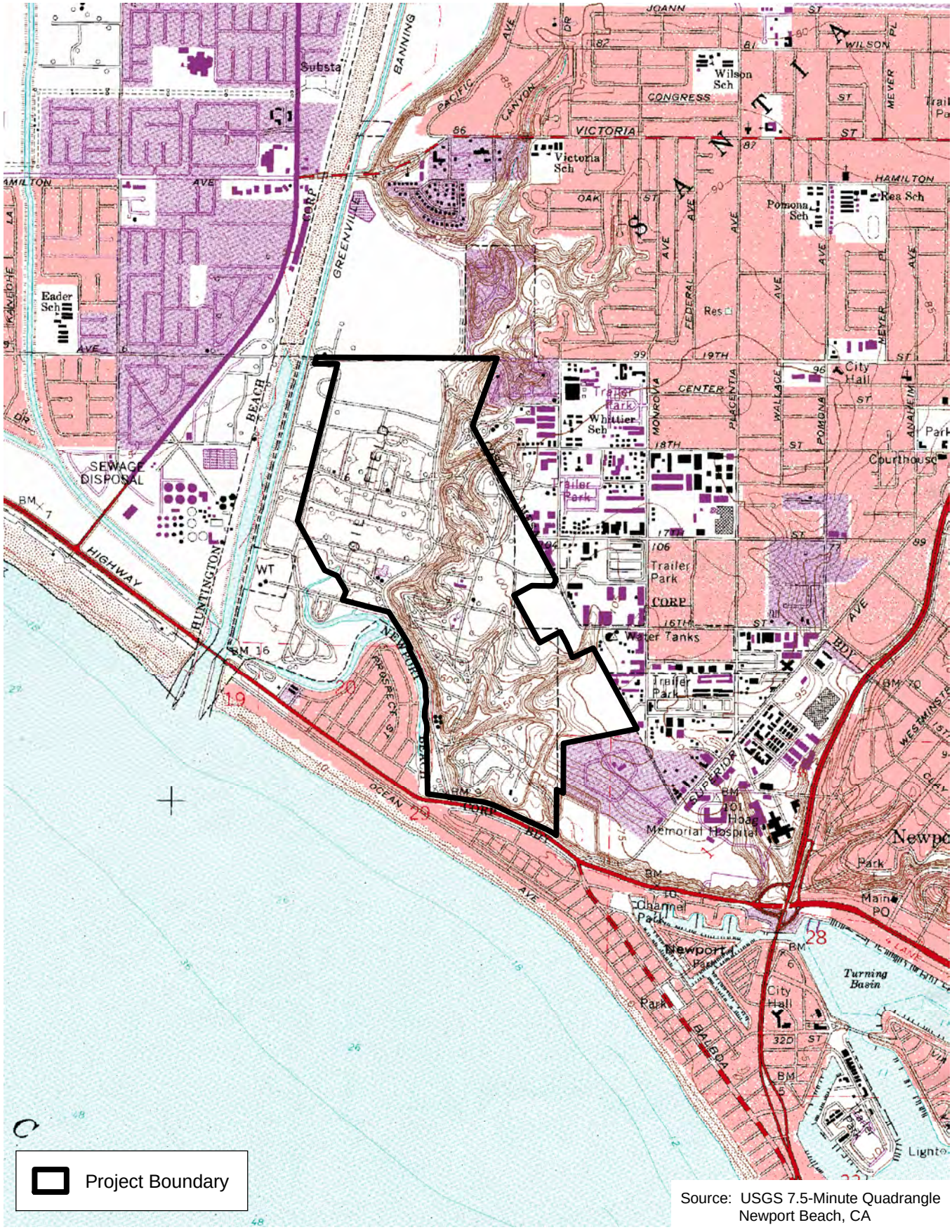

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Local Vicinity

Exhibit 2

Newport Banning Ranch

N
W E
S

2,000 1,000 0 2,000
Feet

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Suitable burrowing owl habitat in the northeastern corner of the project site.

Suitable burrowing owl habitat in the southeastern portion of the project site.

Suitable burrowing owl habitat at owl location on the eastern edge of the project site. The burrowing owl is observed on the right side of the berm.

Active burrowing owl burrow on the eastern edge of the project site.

Site Photographs

Exhibit 3

Newport Banning Ranch

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Potential Burrow Locations

Exhibit 4

Newport Banning Ranch

N
W E
S

600 300 0 600

Feet

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ATTACHMENT A

WILDLIFE COMPENDIUM

WILDLIFE COMPENDIUM

Species
Reptiles
PHRYNOSOMATIDAE - ZEBRA-TAILED, FRINGE-TOED, SPINY, TREE, SIDE-BLOTCHED, AND HORNED LIZARDS
Sceloporus occidentalis western fence lizard
Birds
ANATIDAE - WATERFOWL
Anas platyrhynchos mallard
ARDEIDAE - HERONS
Ardea herodias great blue heron
Ardea alba great egret
CATHARTIDAE - NEW WORLD VULTURES
Cathartes aura turkey vulture
ACCIPITRIDAE - HAWKS
Accipiter cooperii Cooper's hawk
Buteo jamaicensis red-tailed hawk
FALCONIDAE - FALCONS
Falco sparverius American kestrel
CHARADRIIDAE - PLOVERS
Charadrius vociferus killdeer
LARIDAE - GULLS & TERNS
Larus occidentalis western gull
COLUMBIDAE - PIGEONS & DOVES
Columba livia * rock pigeon
Zenaida macroura mourning dove
STRIGIDAE - TRUE OWLS
Athene cunicularia burrowing owl
TROCHILIDAE - HUMMINGBIRDS
Calypte anna Anna's hummingbird
Selasphorus sasin Allen's hummingbird
Sayornis nigricans black phoebe
Sayornis saya Say's phoebe
Tyrannus vociferans Cassin's kingbird

WILDLIFE COMPENDIUM (Continued)

Species
Birds (Continued)
Tyrannus verticalis western kingbird
CORVIDAE - JAYS & CROWS
Aphelocoma californica western scrub-jay
Corvus brachyrhynchos American crow
Corvus corax common raven
HIRUNDINIDAE - SWALLOWS
Tachycineta bicolor tree swallow
Tachycineta thalassina violet-green swallow
Stelgidopteryx serripennis northern rough-winged swallow
Petrochelidon pyrrhonota cliff swallow
Hirundo rustica barn swallow
AEGITHALIDAE - BUSHTITS
Psaltriparus minimus bushtit
SYLVIIDAE - GNATCATCHERS
Polioptila californica California gnatcatcher
MIMIDAE - THRASHERS
Mimus polyglottos northern mockingbird
STURNIDAE - STARLINGS
Sturnus vulgaris * European starling
MOTACILLIDAE - PIPITS
Anthus rubescens American pipit
PARULIDAE - WARBLERS
Geothlypis trichas common yellowthroat
EMBERIZIDAE - SPARROWS & JUNCOS
Pipilo maculatus spotted towhee
Pipilo crissalis California towhee
ICTERIDAE - BLACKBIRDS
Agelaius tricolor tricolored blackbird
Sturnella neglecta western meadowlark
Icterus cucullatus hooded oriole

WILDLIFE COMPENDIUM (Continued)

Species
Birds (Continued)
FRINGILLIDAE - FINCHES
Carpodacus mexicanus house finch
Carduelis psaltria lesser goldfinch
Mammals
LEPORIDAE - HARES & RABBITS
Sylvilagus audubonii desert cottontail
SCIURIDAE - SQUIRRELS
Spermophilus beecheyi California ground squirrel
GEOMYIDAE - POCKET GOPHERS
Thomomys bottae Botta's pocket gopher
CANIDAE - WOLVES & FOXES
Canis latrans coyote
* introduced species

Appendix F

Coastal California Gnatcatcher Survey Report

BonTerra CONSULTING

COSTA MESA PASADENA TEMECULA

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Pasadena, CA 91107

July 17, 2009

Ms. Sandy Marquez
U.S. Fish and Wildlife Service
6010 Hidden Valley Road
Carlsbad, California 92011

VIA EMAIL AND MAIL
sandy_marquez@fws.gov

Subject: Results of Coastal California Gnatcatcher Surveys for the Newport Banning Ranch Project Site, Orange County, California

Dear Ms. Marquez:

This Letter Report presents the results of focused surveys for the coastal California gnatcatcher (*Polioptila californica californica*) on the Newport Banning Ranch project site (hereafter referred to as the project site). The purpose of the surveys was to determine the presence or absence of the coastal California gnatcatcher on the project site. Surveys were conducted according to guidelines established by the U.S. Fish and Wildlife Service (USFWS) by a biologist holding the required federal Endangered Species Act (ESA) survey permit.

The site is approximately 401 acres (Exhibit 1). Approximately 40 acres of the project site are located within the incorporated boundary of the City of Newport Beach; the remainder of the project site is within unincorporated Orange County, in the City of Newport Beach's adopted Sphere of Influence. The project site is located north of Pacific Coast Highway, east of the Santa Ana River, south of 19th Street and Talbert Regional Park, and west of existing residential and commercial uses. The property has been utilized as an active oil field for over 50 years and ongoing oil operations along with remnant oil wells and pipelines occur throughout the project site. The proposed project is a phased development that includes single-family and multi-family residences, commercial development, and a coastal inn. The project will provide approximately 243 acres of open space that includes habitat preservation and restoration, and public trails of the 243 acres, approximately 19.3 acres would be used for interim oil operations. Upon termination of oil operations, this acreage would be retained in open space. Additionally approximately 45 acres would be used for parks and recreational uses. The project site is located within the Newport Beach U.S. Geological Survey (USGS) 7.5-minute quadrangle map (Exhibit 2).

Background

Recent taxonomic studies indicate the California gnatcatcher consists of four subspecies that extend from southwestern California to southern Baja California, Mexico (Atwood and Lerman 2006; Mellink and Rea 1994). The coastal California gnatcatcher, the northernmost gnatcatcher subspecies, is restricted to lowland areas from central Ventura County through Los Angeles, San Bernardino, Riverside, Orange, and San Diego counties to the Baja California, Mexico border (Atwood and Lerman 2006; Mellink and Rea 1994). Formerly, the coastal California gnatcatcher was common from the San Fernando Valley eastward along the base of the San Gabriel

Mountains to Claremont (Atwood 1990). The coastal California gnatcatcher is now rare in the northern part of its range with only a handful of sightings from Santa Clarita to Tujunga Wash, though a small population persists near the City of Moorpark in Ventura County.

Only a few isolated populations of the coastal California gnatcatcher persist in the Los Angeles Basin, such as on the Palos Verdes Peninsula where annual surveys found 51, 56, 26, 39, and 38 breeding pairs from 1993 to 1997 (Atwood et al. 1998a). Since the nearest populations are found approximately 45 kilometers (km) away near Montebello, Los Angeles County, and near Fullerton and Newport Beach, Orange County, through almost continuous urban habitats unsuitable for coastal California gnatcatchers, immigration to the Palos Verdes Peninsula was considered to be "impossible or extremely unlikely" (Atwood et al. 1998a). Although not currently supporting breeding populations, the coastal California gnatcatcher has been found in recent years at Huntington (Beach) Central Park (one pair bred in 2002 and 2003), Bolsa Chica (one pair bred in 2005 and 2006), and the Los Angeles River in Long Beach (no breeding documented but three recent observations: September 14, 2002; April 16, 2006; and February 7, 2009). These occurrences and the distance between the Palos Verdes Peninsula and the Los Angeles River in Long Beach (approximately 9 km) indicate that the Palos Verdes Peninsula may not be completely or "impossibly" isolated from other populations of the coastal California gnatcatcher.

The coastal California gnatcatcher has been recorded from sea level to approximately 3,000 feet above mean sea level (msl) (USFWS 2003); however, greater than 90 percent of gnatcatcher records are from elevations below 820 feet msl along the coast and below 1,800 feet above msl inland (Atwood and Bolsinger 1992). Recent estimates by the USFWS regarding the population size of the coastal California gnatcatcher in southern California have been about 3,000 pairs (Atwood and Bontrager 2001).

The coastal California gnatcatcher typically occurs within coastal and inland sage scrub vegetation types. Sage scrub often occurs in a patchy distribution pattern throughout the range of the gnatcatcher. Coastal California gnatcatchers also use chaparral, grassland, and riparian habitats that are in proximity to sage scrub. These non-sage scrub habitats are used for dispersal and foraging (Atwood et al. 1998b, Campbell et al. 1998, USFWS 2003). Availability of these non-sage scrub areas is essential during certain times of the year, particularly during drought conditions, or for dispersal, foraging, or nesting (USFWS 2003).

The coastal California gnatcatcher was designated a Threatened species by the USFWS on March 25, 1993. A Special Rule was issued that would allow incidental take of coastal California gnatcatcher under Section 9 of the federal ESA if the take results from activities conducted in accordance with the State's Natural Community Conservation Plan (NCCP) Act (USFWS 1993). For those not participating in the state's NCCP, any activity that may result in the take of coastal California gnatcatcher requires formal consultation with the USFWS under Sections 7 or 10 of the federal ESA. The County of Orange and the City of Newport Beach are participants in the NCCP program.

On December 19, 2007, the USFWS published a Final Rule that revised critical habitat and designated 197,303 acres of land in San Diego, Orange, Riverside, San Bernardino, Los Angeles, and Ventura counties as critical habitat for the coastal California gnatcatcher (USFWS 2007). The project site is located inside the designated critical habitat for the coastal California gnatcatcher.

Survey Methodology

The USFWS coastal California gnatcatcher survey protocol recommends six visits to all potentially occupied habitat areas for surveys conducted entirely within the breeding season, which extends from March 15 to June 30 (USFWS 1997a, 1997b). All visits must take place during the morning hours, and no more than 80 acres of suitable habitat may be surveyed per visit. Vegetation surveys of the project site identified less than 80 acres of coastal sage scrub habitats; therefore, a total of six visits were considered sufficient for this survey. Following the USFWS protocol for the species, BonTerra Consulting Senior Biologist Brian Daniels (USFWS Permit #TE-821401-3) conducted surveys for the coastal California gnatcatcher on March 25; and April 1, 9, 16, 23, and 30, 2009. The survey covered all potentially suitable habitats for the coastal California gnatcatcher on the project site.

Weather conditions met the USFWS survey protocol requirements for optimal gnatcatcher detection. Weather conditions that were too cold (below 55 degrees Fahrenheit), too hot (above 95 degrees Fahrenheit), or too windy (wind speed greater than 15 miles per hour) were avoided. Surveys were conducted by slowly walking through all appropriate habitats while listening and watching for gnatcatcher activity. A combination of taped recordings of gnatcatcher vocalizations and "pishing" sounds were used in an attempt to elicit responses from any gnatcatchers that might be present. The frequency of vocalization playback and "pishing" varied depending on conditions, such as habitat patch size and topography in each area. All bird species detected during the survey were recorded, including notable observations of special status birds or other wildlife species.

Survey Results

A total of 17 coastal California gnatcatcher territories consisting of 16 breeding pairs and 1 solitary male were present on the project site during the surveys (Exhibits 3a and 3b). As Exhibits 3a and 3b show, the coastal California gnatcatchers were distributed throughout the project site. All pairs, except for the one solitary male (#8 on Exhibits 3a and 3b), exhibited behavior consistent with breeding which was confirmed by locating either an active nest (Pairs 1 and 9) or by observing adults feeding fledglings (Pairs 5, 7, and 11). Coastal sage scrub vegetation on the project site is variable but the dominant species is California encelia (*Encelia californica*). California buckwheat (*Erigonum fasciculatum*) and bladderpod (*Isomeris arborea*) are fairly common on the project site, but California sagebrush (*Artemisia californica*) is decidedly uncommon. Other scrub species used by the coastal California gnatcatcher on the project site include coyote brush (*Baccharis pilularis*), mule fat (*Baccharis salicifolia*), California boxthorn (*Lycium californicum*), and coastal goldenbush (*Isocoma menziesii*). Two cacti species, the coast cholla (*Opuntia prolifera*) and prickly pear (*Opuntia littoralis*), are also present throughout the project site and are used by the coastal California gnatcatcher. California Natural Diversity Data Base (CNDDB) forms will be submitted to the California Department of Fish and Game (CDFG). Site photos are included as Exhibits 4 and 5.

Additional Sensitive Species

Two cactus wren (*Campylorhynchus brunneicapillus*) territories consisting of one breeding pair and one solitary male were present on the project site during the surveys (Exhibit 3b). The solitary male advertised persistently throughout the surveys from slopes in the northeast part of the project site but shifted between two locations about 1,000 feet apart (see Exhibit 3b). The breeding pair had an active nest in a large clump of prickly pear that failed, apparently, due to an infestation of Argentine ants (*Linepithema humile*).

Please contact Ann Johnston or Brian Daniels at (714) 444-9199 if you have questions or comments.

Sincerely,

BONTERRA CONSULTING

Ann M. Johnston
Principal, Biological Services

Brian E. Daniels
Senior Biologist/Ornithologist

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

Brian E. Daniels
Senior Biologist/Ornithologist
(TE-821401-3)

cc: Sharon Wood, City of Newport Beach

Attachments: Exhibits 1, 2, 3a, 3b, 4, and 5

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Regional Location

Exhibit 1

Newport Banning Ranch

N W E S

10 5 0 10 Miles

BonTerra CONSULTING

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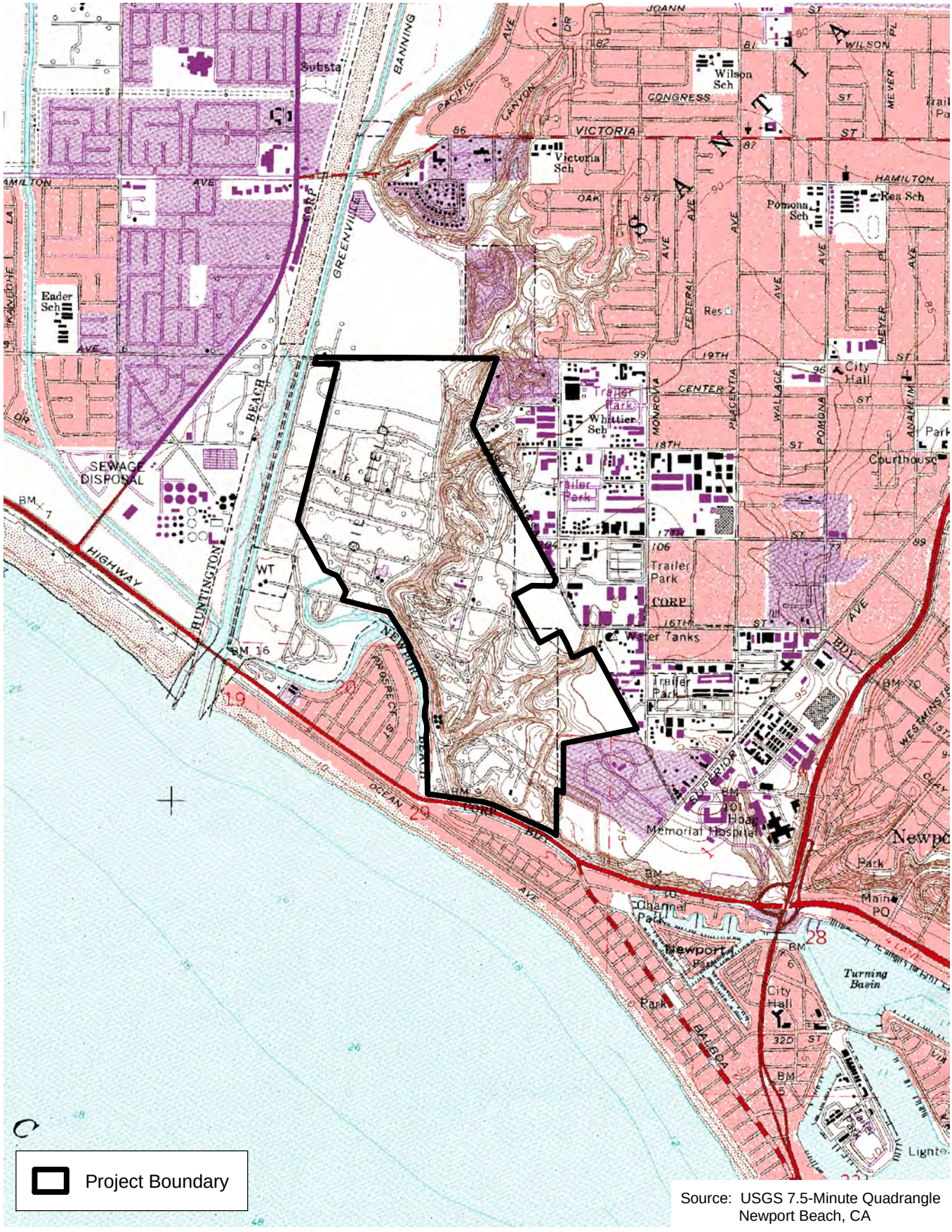

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Local Vicinity

Exhibit 2

Newport Banning Ranch

N
W E
S

2,000 1,000 0 2,000
Feet

BonTerra CONSULTING

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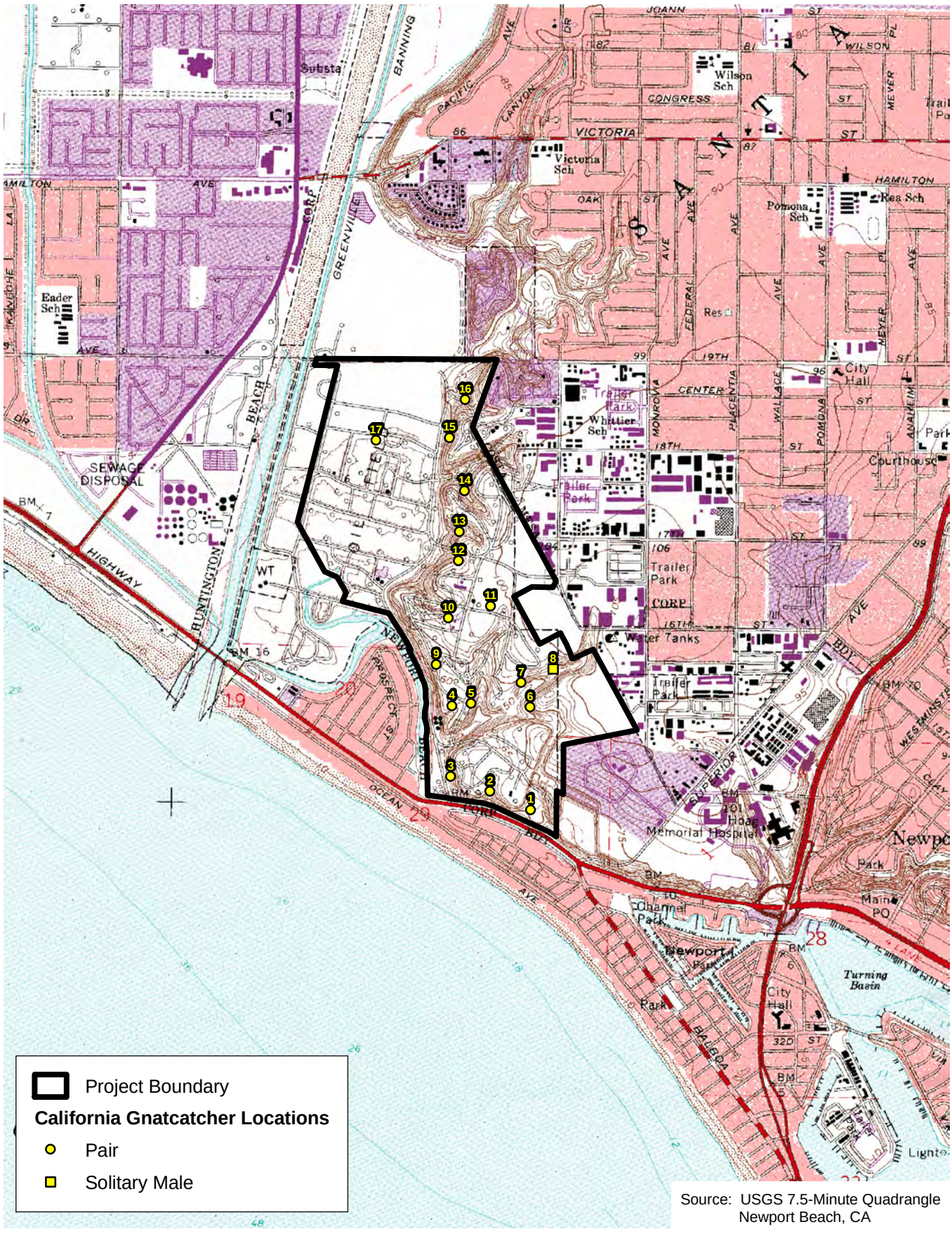

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Survey Results

Exhibit 3a

Newport Banning Ranch

N
W E
S

2,000 1,000 0 2,000

Feet

BonTerra CONSULTING

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Survey Results

Exhibit 3b

Newport Banning Ranch

N W E S

600 300 0 600 *Feet*

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View 1

View 2

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Photo Locations

Exhibit 4

Newport Banning Ranch

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View 3

View 4

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Photo Locations

Exhibit 5

Newport Banning Ranch

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Appendix G

Least Bell's Vireo/ Southwestern Willow Flycatcher Report

BonTerra CONSULTING

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Costa Mesa, CA 92626

September 21, 2009

Ms. Sandy Marquez
U.S. Fish and Wildlife Service
6010 Hidden Valley Road
Carlsbad, California 92011

VIA EMAIL AND MAIL
sandy_marquez@fws.gov

Subject: Results of Southwestern Willow Flycatcher and Least Bell's Vireo Surveys for the Newport Banning Ranch Project Site, Orange County, California

Dear Ms. Marquez:

This Letter Report presents the results of focused surveys conducted in 2009 for the southwestern willow flycatcher (*Empidonax traillii extimus*) and least Bell's vireo (*Vireo bellii pusillus*) at the Newport Banning Ranch project site (hereafter referred to as the "project site") in the City of Newport Beach and the City's Sphere of Influence in Orange County, California (Exhibit 1). The purpose of the surveys was to determine the presence or absence of these species on the project site. Surveys were conducted according to guidelines established by the U.S. Fish and Wildlife Service (USFWS) by a Biologist holding the required federal Endangered Species Act (ESA) Section 10(a) survey permit.

The project site is located north of Pacific Coast Highway (PCH), east of the Santa Ana River, south of 19th Street and Talbert Regional Park, and west of existing residential and commercial uses west of Whittier Avenue. The project site is located on the U.S. Geological Survey's (USGS's) Newport Beach 7.5-minute quadrangle at Township 6S, Range 10W, Sections 20, 21, and 29 (Exhibit 2). Topography on the project site varies with relatively flat areas, bluffs, and drainages; however, the northwestern and western portions of the project site are generally lower in elevation than the mesa on the eastern portion of the project site. Elevations on the project site range from approximately sea level to 100 feet above mean sea level (msl).

The project site has been used as an active oil field for over 50 years, and ongoing oil operations along with remnant oil wells and pipelines occur throughout the project site. A variety of vegetation types occur on the project site, including willow riparian forest/scrub, mule fat scrub, and alkali marsh in the western portion of the project site (i.e., the "lowlands") and in scattered drainages. Portions of the vegetation types are considered disturbed because they are heavily invaded by ruderal or invasive exotic species, especially pampas grass (*Cortaderia selloana*), and because of ongoing oil field activities. A network of roads in the lower portion of the project site divides habitat into patches; often ruderal, ornamental, and invasive exotic species are present along the roads. Ornamental vegetation occurs in patches throughout the project site, including patches interspersed with native riparian vegetation types.

BACKGROUND

The southwestern willow flycatcher and least Bell's vireo were formerly more common and widespread, but are now rare, local summer residents of Southern California's lowland

riparian woodlands (Grinnell and Miller 1944; Garrett and Dunn 1981). The substantial population declines of these two avian species over the latter half of the twentieth century is attributable to the loss and degradation of riparian habitats and brood parasitism by the brown-headed cowbird (*Molothrus ater*). As a result, the least Bell's vireo was listed by the California Department of Fish and Game (CDFG) as Endangered on October 2, 1980, and by the USFWS as Endangered on May 2, 1986. The CDFG listed all three subspecies of willow flycatcher that breed in California (*E. t. brewsteri*, *E. t. extimus*, and *E. t. adastus*) as Endangered on January 3, 1991. The USFWS listed the southwestern willow flycatcher as Endangered on February 7, 1995 (USFWS 1995).

Least Bell's Vireo

Bell's vireo is a Neotropical migrant that breeds in central and southwestern North America from northern Mexico to Southern California, Nevada, and Utah; east to Louisiana; and north to North Dakota, Wisconsin, and Indiana in the central United States (AOU 2006). Although not well known, the winter range of the Bell's vireo is believed to be the western coast of Central America from southern Sonora south to northwestern Nicaragua, including the cape region of Baja California, Mexico (Brown 1993). Of the four Bell's vireo subspecies, only two breed in California: the least Bell's vireo and the Arizona Bell's vireo (*V. b. arizonae*), which breeds in the Colorado River Valley (Garrett and Dunn 1981; Rosenberg et al. 1991). Though the least Bell's vireo was formerly considered a common breeder in riparian habitats throughout the Central Valley and other low-elevation riverine systems in California and Baja California, Mexico (Franzreb 1989), presently, the least Bell's vireo has been eliminated from much of its historical range (Franzreb 1989; Brown 1993).

The breeding habitat of the least Bell's vireo is primarily riparian dominated by willows with dense understory vegetation; shrubs such as mule fat and California rose (*Rosa californica*) are often a component of the understory (Goldwasser 1981). The least Bell's vireo is often found in areas that include trees such as willow (*Salix* sp.), western sycamore or cottonwood (*Populus* sp.), particularly where the canopy is within or immediately adjacent to an understory layer of vegetation (Salata 1983). The least Bell's vireo generally nests in early successional stages of riparian habitats, with nest sites frequently located in willows that are between four and ten feet high (RECON 1988; Franzreb 1989). The most critical factor in habitat structure is the presence of a dense understory shrub layer from approximately two to ten feet above ground (Goldwasser 1981; Salata 1983; Franzreb 1989).

On February 2, 1994, the USFWS issued their final determination of critical habitat for the least Bell's vireo (USFWS 1994), identifying approximately 37,560 acres as critical habitat in Santa Barbara, Ventura, Los Angeles, San Bernardino, Riverside, and San Diego counties. The survey area is not located in the designated critical habitat area for this species.

Southwestern Willow Flycatcher

The willow flycatcher is a Neotropical migrant that breeds in the west from northern Baja California, Mexico to central British Colombia, and generally east through the northern half of the United States to the Atlantic coast (AOU 2006). Depending on the authority, there are four or five recognized subspecies of willow flycatcher (Sedgwick 2000). The breeding range of southwestern willow flycatcher includes Southern California, Arizona, New Mexico, western Texas, and the extreme southern parts of Nevada and Utah (USFWS 1993). In California, the southwestern willow flycatcher breeds along the coast south of the San Fernando Valley and north in the interior to about Independence, Inyo County (Unitt 1987). The largest breeding populations of southwestern willow flycatcher in California are located at the South Fork of the

Kern River in Kern County and on the Santa Margarita River in Camp Pendleton in San Diego County (Unitt 1987). The range-wide population of southwestern willow flycatcher is estimated at between 300 and 500 pairs (USFWS 1997). The population of southwestern willow flycatcher in California is estimated to be about 70 pairs (USFWS 1993). More recent estimates for California include a total of 200 territories in 2004 (Durst et al. 2005), which indicates that the California population may slowly be recovering.

The southwestern willow flycatcher breeds in willow-dominated riparian habitats that are similar to least Bell's vireo nesting habitats. The southwestern willow flycatcher differs from least Bell's vireo in that it shows a stronger dependency on willow thickets for all its requirements (Grinnell and Miller 1944). In addition, the southwestern willow flycatcher appears to have a preference for sites with surface water in the vicinity, such as along streams, on the margins of a pond or lake, and at wet mountain meadows (Grinnell and Miller 1944; Flett and Sanders 1987; Harris et al. 1987). In Arizona, the southwestern willow flycatcher invariably nests near surface water (Phillips et al. 1964). Recently, the southwestern willow flycatcher has adapted to introduced vegetation present in riparian communities, such as tamarisk (*Tamarix* sp.) and Russian olive (*Elaeagnus angustifolia*) (USFWS 1993).

The willow flycatcher is a common migrant in the interior of California and a rare-to-uncommon migrant along the coastal slope, with most birds moving through Southern California between May 15 and June 20 (Garrett and Dunn 1981; Unitt 1987). The spring southwestern willow flycatcher migration is earlier than that of the northern subspecies (Unitt 1984; USFWS 1993). As a result, the presence of more abundant subspecies that migrate through the range of the southwestern willow flycatcher during its breeding season complicates surveys for nesting southwestern willow flycatchers.

On October 19, 2005, the USFWS published a final rule designating critical habitat for the southwestern willow flycatcher (USFWS 2005). This final rule designated 120,824 acres in Arizona, California, Nevada, New Mexico, and Utah as critical habitat. Of that, 17,212 acres were designated in Kern, Santa Barbara, San Bernardino, and San Diego counties, California. The survey area is not located in designated critical habitat for this species.

SURVEY METHODOLOGY

A total of ten surveys for the least Bell's vireo and southwestern willow flycatcher were conducted on April 13 and 24; May 4, 14, and 25; June 4, 15, and 25; and July 3 and 9, 2009. All surveys followed the recommended USFWS guidelines for both species. The survey protocol for the SWF was revised in July 2000 and now requires a total of five surveys instead of the three surveys recommended in the previous protocol. The first survey should be conducted between May 15 and May 31, with a subsequent survey conducted between June 1 and June 21, and three surveys between June 22 and July 17. Updated guidelines for least Bell's vireo surveys were issued on April 8, 1999, and require that at least eight surveys be conducted from April 10 to July 31 with a ten-day interval between each site visit. All surveys were conducted by BonTerra Consulting Senior Biologist Brian E. Daniels (USFWS permit number TE-821401-3).

The riparian habitats of the project site's "lowlands" (i.e., the "flat land" between the Santa Ana River and the mesa area on the eastern side of the project site) and the drainages on the mesa area were systematically surveyed by walking slowly and methodically along their margins. Taped vocalizations of southwestern willow flycatcher were used on May 25; June 15 and 25; and July 3 and 9, 2009 to elicit a response from any potentially territorial southwestern willow flycatcher. If no southwestern willow flycatchers were detected after the initial tape playing, the recording was replayed where appropriate. As the least Bell's vireo survey protocol does not

require the playback of least Bell's vireo vocalizations, no taped vocalizations of least Bell's vireo were used during these surveys. All surveys were conducted under optimal weather conditions and during early morning hours when bird activity is at a peak. Numbers were recorded for all bird species detected during the survey, including any notable observations of special status species or other birds, such as brown-headed cowbird.

SURVEY RESULTS

Two solitary male least Bell's vireos were present during these 2009 surveys in the riparian habitats of the lowlands of the project site (Exhibit 3). Solitary male # 1 was first detected on May 14, 2009, along the northern perimeter of the project site, and was last observed in the same area on June 25, 2009. This male sang persistently over the course of its stay on the project site from the same location, an approximate 100-foot stretch of willows with an understory of mule fat and blue elderberry (*Sambucus mexicana*) that paralleled the northern boundary fence of the project site. Solitary male # 1 was consistently observed in this localized stretch except for on June 25, 2009, when it was observed about 500 feet to the south within the northern part of the solitary male # 2 territory. While within the territory of solitary male # 2, solitary male # 1 was generally quiet but did sing its primary song at least a few times and eventually returned to its territory where it resumed singing at its more usual frequent rate. Solitary male # 2 was first detected on June 4, 2009, at the southern end of the willows on the project site's lowlands. Thereafter, it was observed more consistently about 300 feet to the north in about the middle of this willow woodland although it wandered more widely than solitary male # 1. Solitary male # 2 was last detected on July 4, 2009. These results are consistent with the results of previous surveys conducted by Glenn Lukos Associates (GLA) in 2006 and 2007 (GLA 2009). The two vireo locations observed in 2006 and 2007 by GLA were in the same location as observed during the current survey. Representative site photos are included in Appendix A.

No southwestern willow flycatchers were present and no migrant willow flycatchers (of any subspecies) were observed during these 2009 surveys of the project site. This is consistent with the results of previous surveys conducted by GLA in 2006 and 2007 (GLA 2009). Except for one leaking water pipe in the willow woodland of the project site lowlands, no standing or surface water was present during the current surveys. Many of the willows on the project site lowlands did not leaf-out until relatively late in the season.

A list of all bird species recorded during the 2009 avian surveys of the project site is included in Appendix B. The list includes several species listed by the CDFG as Species of Special Concern (Shuford and Gardali 2008). California Natural Diversity Database (CNDDB) forms will be submitted to the CDFG for those species that showed evidence of breeding on the project site. These species included northern harrier (*Circus cyaneus*), least Bell's vireo, coastal cactus wren (*Campylorhynchus brunneicapillus*), coastal California gnatcatcher (*Polioptila californica californica*), and yellow-breasted chat (*Icteria virens*). Appendix C provides copies of all CNDDB forms submitted for these surveys.

Brown-headed cowbirds were detected on all survey dates with a high count of ten birds on April 24, 2009, and an average of approximately six cowbirds per survey date in 2009.

Please contact Ann Johnston or Brian Daniels at (714) 444-9199 if you have questions or comments.

Sincerely,

BONTERRA CONSULTING

for Ann M. Johnston
Principal, Biological Services

Brian E. Daniels
Senior Biologist/Ornithologist

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

Brian E. Daniels
Senior Biologist/Ornithologist
(TE-821401-3)

cc: Sharon Wood, City of Newport Beach

Attachments: Exhibits 1, 2, and 3
Appendix A – Site Photos
Appendix B – Wildlife Compendium
Appendix C – CNDDB Forms

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Regional Location

Exhibit 1

Newport Banning Ranch

N W E S

10 5 0 10 Miles

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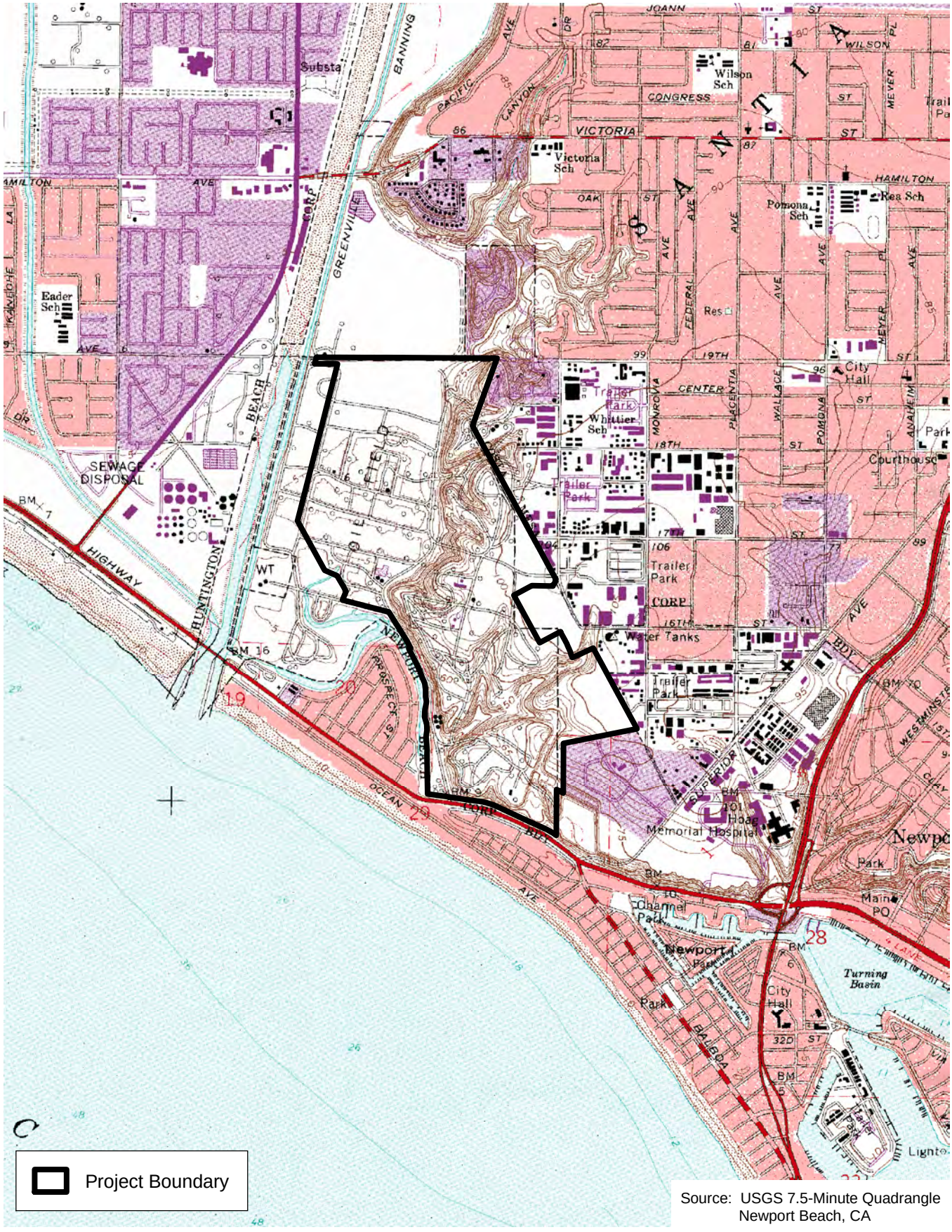

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Local Vicinity

Exhibit 2

Newport Banning Ranch

N
W E
S

2,000 1,000 0 2,000
Feet

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Survey Results

Exhibit 3

Newport Banning Ranch

N
W E
S

1,000 500 0 1,000

Feet

BonTerra CONSULTING

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APPENDIX A

SITE PHOTOS

View of willow riparian forest where solitary male # 1 least Bell's vireo was observed.

View of willow riparian forest where solitary male # 1 least Bell's vireo was observed.

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Site Photographs

Exhibit A-1

Newport Banning Ranch

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View of willow riparian forest where solitary male # 2 least Bell's vireo was observed.

View of willow riparian forest where solitary male # 2 least Bell's vireo was observed.

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Site Photographs

Exhibit A-2

Newport Banning Ranch

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APPENDIX B

WILDLIFE COMPENDIUM

BIRD SPECIES OBSERVED ON NEWPORT BANNING RANCH APRIL–JULY 2009

Species
ANATIDAE - WATERFOWL
Anas platyrhynchos mallard
ARDEIDAE - HERONS
Ardea herodias great blue heron
Ardea alba great egret
Nycticorax nycticorax black-crowned night-heron
CATHARTIDAE - NEW WORLD VULTURES
Cathartes aura turkey vulture
ACCIPITRIDAE - HAWKS
Pandion haliaetus osprey
Circus cyaneus northern harrier
Accipiter striatus sharp-shinned hawk
Accipiter cooperii Cooper's hawk
Buteo lineatus red-shouldered hawk
Buteo jamaicensis red-tailed hawk
FALCONIDAE - FALCONS
Falco sparverius American kestrel
CHARADRIIDAE - PLOVERS
Charadrius vociferus killdeer
SCOLOPACIDAE - SANDPIPERS & PHALAROPES
Numenius phaeopus whimbrel
LARIDAE - GULLS & TERNS
Larus californicus California gull
COLUMBIDAE - PIGEONS & DOVES
Columba livia rock pigeon*
Zenaida macroura mourning dove
STRIGIDAE - TRUE OWLS
Bubo virginianus great horned owl
APODIDAE - SWIFTS
Aeronautes saxatalis white-throated swift

BIRD SPECIES OBSERVED ON NEWPORT BANNING RANCH APRIL–JULY 2009 (Continued)

Species
TROCHILIDAE - HUMMINGBIRDS
Archilochus alexandri black-chinned hummingbird
Calypte anna Anna's hummingbird
Selasphorus rufus rufous hummingbird
Selasphorus sasin Allen's hummingbird
PICIDAE - WOODPECKERS
Picoides nuttallii Nuttall's woodpecker
Picoides pubescens downy woodpecker
TYRANNIDAE - TYRANT FLYCATCHERS
Contopus sordidulus western wood-pewee
Empidonax difficilis Pacific-slope flycatcher
Sayornis nigricans black phoebe
Sayornis saya Say's phoebe
Myiarchus cinerascens ash-throated flycatcher
Tyrannus vociferans Cassin's kingbird
Tyrannus verticalis western kingbird
VIREONIDAE - VIREOS
Vireo bellii pusillus least Bell's vireo
Vireo cassinii Cassin's vireo
Vireo huttoni Hutton's vireo
Vireo gilvus warbling vireo
CORVIDAE - JAYS & CROWS
Corvus brachyrhynchos American crow
Corvus corax common raven
HIRUNDINIDAE - SWALLOWS
Stelgidopteryx serripennis northern rough-winged swallow
Petrochelidon pyrrhonota cliff swallow
Hirundo rustica barn swallow

BIRD SPECIES OBSERVED ON NEWPORT BANNING RANCH APRIL–JULY 2009 (Continued)

Species
AEGITHALIDAE - BUSHTITS
Psaltriparus minimus bushtit
TROGLODYTIDAE - WRENS
Campylorhynchus brunneicapillus cactus wren
Troglodytes aedon house wren
REGULIDAE - KINGLETS
Regulus calendula ruby-crowned kinglet
SYLVIIDAE - GNATCATCHERS
Polioptila californica California gnatcatcher
TURDIDAE - THRUSHES & ROBINS
Catharus ustulatus Swainson's thrush
MIMIDAE - THRASHERS
Mimus polyglottos northern mockingbird
STURNIDAE - STARLINGS
Sturnus vulgaris European starling*
PARULIDAE - WARBLERS
Vermivora celata orange-crowned warbler
Vermivora ruficapilla Nashville warbler
Dendroica petechia yellow warbler
Dendroica coronata yellow-rumped warbler
Dendroica nigrescens black-throated gray warbler
Dendroica townsendi Townsend's warbler
Wilsonia citrinia hooded warbler
Wilsonia pusilla Wilson's warbler
Icteria virens yellow-breasted chat
THRAUPIDAE - TANAGERS
Piranga ludoviciana western tanager

BIRD SPECIES OBSERVED ON NEWPORT BANNING RANCH APRIL–JULY 2009 (Continued)

Species
EMBERIZIDAE - SPARROWS & JUNCOS
Pipilo maculatus spotted towhee
Pipilo crissalis California towhee
Passerculus sandwichensis savannah sparrow
Melospiza melodia song sparrow
Melospiza lincolnii Lincoln's sparrow
Zonotrichia leucophrys white-crowned sparrow
Zonotrichia atricapilla golden-crowned sparrow
CARDINALIDAE - GROSBEAKS & BUNTINGS
Pheuticus melanocephalus black-headed grosbeak
Passerina caerulea blue grosbeak
Passerina amoena lazuli bunting
Passerina cyanea indigo bunting
ICTERIDAE - BLACKBIRDS
Molothrus ater brown-headed cowbird
Icterus cucullatus hooded oriole
Icterus bullockii Bullock's oriole
FRINGILLIDAE - FINCHES
Carpodacus mexicanus house finch
Carduelis psaltria lesser goldfinch
Carduelis tristis American goldfinch
ESTRILDIDAE - MANNIKINS
Lonchura punctulata nutmeg mannikin**
** introduced species* *** exotic species*

APPENDIX C

CNDDB FORMS

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95814
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 06/04/2009

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Circus cyaneus*

Common Name: Northern Harrier

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals two Subsequent Visit? ☑ yes ☐ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Brian E. Daniels
Address: 3452 E. Foothill Blvd., Suite 420
Pasadena, California 91107
E-mail Address: bdaniels@bonterraconsulting.com
Phone: (626) 351-2000

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

2 # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☑ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

Adult male and female observed interacting in flight while vocalizing at northwestern corner of the project site near Santa Ana River, then disappeared north into fields of Talbert Regional Park. Adult male observed on previous surveys (April and May) foraging over mesa area of project site.

County: Orange County Landowner / Mgr.: Newport Banning Ranch property

Quad Name: Newport Beach Elevation: 2 meters

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GoogleEarth

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____

DATUM: NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy _____ meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ ***OR*** Geographic (Latitude & Longitude) ☑

Coordinates: 117°57'02.25" W 33°38'32.01" N

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

The scrub and ruderal (weedy) fields of the project site and adjacent Talbert Regional Park provide suitable nesting habitat for this species.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☐ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Santa Ana River mouth supports mix of open space, industrial, commercial, and residential land uses.

Visible disturbances:

Threats:

Comments:

Determination: *(check one or more, and fill in blanks)*

- ☐ Keyed (cite reference): _____
- ☐ Compared with specimen housed at: _____
- ☐ Compared with photo / drawing in: _____
- ☐ By another person (name): _____
- ☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☐
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☐ no ☐

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95814
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 07/04/2009

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Vireo bellii pusillus*

Common Name: Least Bell's Vireo

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 2 Subsequent Visit? ☑ yes ☐ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Brian Daniels
Address: 3452 E. Foothill Blvd.
Suite 420 Pasadena, CA 91107
E-mail Address: bdaniels@bonterraconsulting.com
Phone: (626) 351-2000

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

2 # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☑ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Orange County Landowner / Mgr.: Newport Banning Ranch property

Quad Name: Newport Beach Elevation: 2 meters

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GoogleEarth

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____

DATUM: NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy _____ meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ ***OR*** Geographic (Latitude & Longitude) ☑

Coordinates: 117°56'51.31" W 33°38'20.80" N

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Southern willow scrub vegetation type.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☐ Good ☑ Fair ☐ Poor

Immediate AND surrounding land use:

Visible disturbances:

Threats:

Comments: Two territories consisting of solitary males, both in "lowlands" on property; one male was present from May 14 to June 25 near northern boundary of property (next to Talbert Regional Park) and the other, where the above representative point is located, was present from June 4 to July 4.

Determination: *(check one or more, and fill in blanks)*

- ☐ Keyed (cite reference): _____
- ☐ Compared with specimen housed at: _____
- ☐ Compared with photo / drawing in: _____
- ☐ By another person (name): _____
- ☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☐
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☐ no ☐

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95814
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 07/09/2009

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Campylorhynchus brunneicapillus*

Common Name: Cactus Wren

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 3 Subsequent Visit? ☐ yes ☑ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☐ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Brian E. Daniels
Address: 3452 E. Foothill Blvd.
Suite 420 Pasadena, CA 91107
E-mail Address: bdaniels@bonterraconsulting.com
Phone: (626) 351-2000

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

# adults	# juveniles	# larvae	# egg masses	# unknown
2	1			

☑ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Orange County Landowner / Mgr.: Newport Banning Ranch property
Quad Name: Newport Beach Elevation: 24 meters
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GoogleEarth
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____
DATUM: NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy _____ meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ ***OR*** Geographic (Latitude & Longitude) ☑
Coordinates: 117°56'41.01" W 33°37'52.53" N

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Coastal sage scrub vegetation type.

Other rare taxa seen at THIS site on THIS date: (separate form preferred) Coastal California Gnatcatchers (Polioptila californica californica) also present nearby.

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☐ Good ☑ Fair ☐ Poor
Immediate AND surrounding land use: Santa Ana River mouth supports a mix of open space, industrial, commercial, and residential land uses.
Visible disturbances:
Threats:
Comments: This location had the only pair of cactus wrens on the project site this year (there was also one other solitary male present). Their first nesting attempt resulted in loss of two nestlings (documented on April 24, 2009) believed to be the result of an Argentine ant infestation of nest. This subsequent nesting attempt produced at least one fledgling.

Determination: *(check one or more, and fill in blanks)*
☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☐
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes☐ no☐

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95814
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 07/09/2009

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Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

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California Native Species Field Survey Form

Send Form

Scientific Name: *Campylorhynchus brunneicapillus*

Common Name: Cactus Wren

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 1 Subsequent Visit? ☐ yes ☑ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☐ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Brian E. Daniels
Address: 3452 E. Foothill Blvd.
Suite 420 Pasadena, CA 91107
E-mail Address: bdaniels@bonterraconsulting.com
Phone: (626) 351-2000

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

# adults	# juveniles	# larvae	# egg masses	# unknown
1				

☑ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Orange County Landowner / Mgr.: Newport Banning Ranch property
Quad Name: Newport Beach Elevation: 23 meters
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GoogleEarth
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____
DATUM: NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy _____ meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ ***OR*** Geographic (Latitude & Longitude) ☑
Coordinates: 117°56'43.19" W 33°38'21.32" N

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Coastal sage scrub vegetation type.

Other rare taxa seen at THIS site on THIS date: (separate form preferred) Coastal California Gnatcatchers (Polioptila californica californica) also present nearby.

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☐ Good ☑ Fair ☐ Poor
Immediate AND surrounding land use: Santa Ana River mouth supports a mix of open space, industrial, commercial, and residential land uses.
Visible disturbances:
Threats:
Comments: This solitary male was present from late March 2009 to this date at this location. To the south was the only Cactus Wren pair on site this year.

Determination: *(check one or more, and fill in blanks)*
☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☐
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes☐ no☐

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95814
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 07/09/2009

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Polioptila californica californica*

Common Name: Coastal California Gnatcatcher

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 33 Subsequent Visit? ☐ yes ☑ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Brian E. Daniels
Address: 3452 E. Foothill Blvd.
Suite 420 Pasadena, CA 91107
E-mail Address: bdaniels@bonterraconsulting.com
Phone: (626) 351-2000

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

33 # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☑ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

***Location Description* (please attach map AND/OR fill out your choice of coordinates, below)**

Representative point below for all 17 Coastal California Gnatcatcher territories on the property. The 17 territories consisted of 16 pairs and 1solitary male.

County: Orange County Landowner / Mgr.: Newport Banning Ranch property

Quad Name: Newport Beach Elevation: 27 meters

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GoogleEarth

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____

DATUM: NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy _____ meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ ***OR*** Geographic (Latitude & Longitude) ☑

Coordinates: 117°56'46.17" W 33°37'57.45" N

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Coastal sage scrub vegetation on slopes and mesa covering eastern part of property (16 of 17 territories here) and "lowlands" to the west (1territory here consisting of 1 pair) bordering the Santa Ana River.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☐ Good ☑ Fair ☐ Poor

Immediate AND surrounding land use:

Visible disturbances:

Threats:

Comments:

Determination: *(check one or more, and fill in blanks)*

- ☐ Keyed (cite reference): _____
- ☐ Compared with specimen housed at: _____
- ☐ Compared with photo / drawing in: _____
- ☐ By another person (name): _____
- ☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☐
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☐ no ☐

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95814
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 06/15/2009

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Icteria virens*

Common Name: Yellow-breasted Chat

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 16 Subsequent Visit? ☑ yes ☐ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Brian E. Daniels
Address: 3452 E. Foothill Blvd., Suite 420 Pasadena, CA 91107
E-mail Address: bdaniels@bonterraconsulting.com
Phone: (626) 351-2000

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☑ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Orange County Landowner / Mgr.: Newport Banning Ranch property

Quad Name: Newport Beach Elevation: 2 meters

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GoogleEarth

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____

DATUM: NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy _____ meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ ***OR*** Geographic (Latitude & Longitude) ☑

Coordinates: 117°56'50.29" W 33°38'25.84" N

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Southern willow scrub vegetation type.

Other rare taxa seen at THIS site on THIS date: Least Bell's Vireo - two solitary males in same area
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☐ Good ☑ Fair ☐ Poor

Immediate AND surrounding land use: Santa Ana River mouth supports mix of open space, industrial, commercial, and residential land uses.

Visible disturbances:

Threats:

Comments: The 16 individuals recorded on this date were represent in 10 to 12 territories in the lowlands of the project site. There was also one yellow-breasted chat on the mesa of the project site.

Determination: *(check one or more, and fill in blanks)*

- ☐ Keyed (cite reference): _____
- ☐ Compared with specimen housed at: _____
- ☐ Compared with photo / drawing in: _____
- ☐ By another person (name): _____
- ☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☐
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes☐ no☐

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95814
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 06/15/2009

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Icteria virens*

Common Name: Yellow-breasted Chat

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 1 Subsequent Visit? ☑ yes ☐ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Brian E. Daniels
Address: 3452 E. Foothill Blvd., Suite 420 Pasadena, CA 91107
E-mail Address: bdaniels@bonterraconsulting.com
Phone: (626) 351-2000

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☑ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Orange County Landowner / Mgr.: Newport Banning Ranch property

Quad Name: Newport Beach Elevation: 7 meters

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: HD MD SD Source of Coordinates (GPS, topo. map & type): GoogleEarth

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: HD MD SD GPS Make & Model _____

DATUM: NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy _____ meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ ***OR*** Geographic (Latitude & Longitude) ☑

Coordinates: 117°56'39.53" W 33°37'43.69" N

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Southern willow scrub vegetation type.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☐ Good ☑ Fair ☐ Poor

Immediate AND surrounding land use: Santa Ana River mouth supports mix of open space, industrial, commercial, and residential land uses.

Visible disturbances:

Threats:

Comments: This yellow-breasted chat territory is located in a drainage on the mesa. There were also 10 to 12 yellow-breasted chat territories in the lowlands below the mesa on the project site.

Determination: *(check one or more, and fill in blanks)*

- ☐ Keyed (cite reference): _____
- ☐ Compared with specimen housed at: _____
- ☐ Compared with photo / drawing in: _____
- ☐ By another person (name): _____
- ☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☐
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☐ no ☐

Appendix H
Jurisdictional Delineation

Draft Jurisdictional Delineation Report

Newport Banning Ranch, Newport Beach, California

Prepared for

City of Newport Beach
3300 Newport Boulevard
Newport Beach, CA 92663
Planning Manager: Patrick Alford

Prepared by

Gary A. Medeiros, Associate Principal, Regulatory Services
BonTerra Consulting
151 Kalmus Drive, Suite E-200
Costa Mesa, California 92626
T: (714) 444-9199 F: (714) 444-9599

August 2011

TABLE OF CONTENTS

TABLES

EXHIBITS

ATTACHMENTS

SECTION 1.0 INTRODUCTION

This Jurisdictional Delineation Report (report) was prepared for the City of Newport Beach to provide baseline data concerning the type and extent of resources under the jurisdiction of the U.S. Army Corps of Engineers (USACE), the California Department of Fish and Game (CDFG), California Coastal Commission (CCC), and the Regional Water Quality Control Board (RWQCB) for the Newport Banning Ranch Project, (hereafter referred to as the "proposed Project").

The extent of USACE, CDFG, and CCC jurisdictional resources on the Project site was determined through jurisdictional delineations conducted by BonTerra Consulting in 2009 and Glenn Lukos and Associates (GLA) in 2007 (GLA 2008). BonTerra Consulting performed a comparative analysis of the two jurisdictional delineations using Geographical Information System (GIS) technology and determined that: (1) the differences between the BonTerra Consulting and GLA assessments for CDFG and CCC jurisdictional areas were minimal and (2) although the differences between the BonTerra Consulting and GLA assessments for USACE were greater, the GLA assessment was based on a multi-year data collection including jurisdictional assessments immediately following storm events to more accurately identify the extent of hydrological resources for potential as "Waters of the U.S.". BonTerra Consulting and GLA reviewed the differences in the two delineation efforts in the field on September 30, 2009, using overlays of mapped jurisdictional resources of each effort and their respective data sheets and agreed to (1) revise portions of the two delineations based on re-evaluated data and (2) keep some discrepancies due to variations in number of survey site visits and timing between the two delineation efforts; in the latter case, GLA had more extensive mapped resources due to their more intensive multi-year sampling efforts. This coordinated jurisdictional assessment effort resulted in a refinement of both the BonTerra Consulting and GLA Jurisdictional Delineation Reports, which will serve as the baseline for the extent of jurisdictional resources on the Project site. Please note that the extent of CCC jurisdictional resources in the BonTerra Consulting assessment is based solely the presence of hydrophytic vegetation. GLA refined the CCC jurisdictional limits based on hydrology data that were not available during the BonTerra Consulting surveys.

1.1 PROJECT LOCATION AND DESCRIPTION

The Newport Banning Ranch Project site (Project site) encompasses approximately 401 acres. Approximately 40 acres of the Project site are located in the incorporated boundary of the City of Newport Beach, and approximately 361 acres are in unincorporated Orange County within the City's Sphere of Influence (Exhibit 1). The entire site is located within the boundary of the Coastal Zone, as established by the California Coastal Act. The Project site is located on the U.S. Geological Survey's (USGS's) Newport Beach 7.5-minute quadrangle (Exhibit 2) in the "Santiago De Santa Ana" land grant.

The Project site is generally bound on the north by the County of Orange Talbert Nature Preserve/Regional Park in the City of Costa Mesa and residential development in the City of Newport Beach; on the south by West Coast Highway and residential development in the City of Newport Beach; on the east by residential, light industrial, and office development in the Cities of Costa Mesa and Newport Beach; and on the west by the USACE wetlands restoration area and the Santa Ana River (Exhibit 3). The City of Huntington Beach is west of the Santa Ana River.

The proposed Project would involve the development of residential, commercial, hotel, and recreational uses (Attachment A). The 401-acre Project site is proposed for up to 1,375 dwelling units (du) on approximately 97 acres. Of the 1,375 du, up to 735 du and up to 75,000 square feet (sf) of commercial uses would be constructed on 21 acres of the Project site as a part of a

Regional Location

Exhibit 1

Newport Banning Ranch

N
W E
S

3 1.5 0 3 Miles

BonTerra CONSULTING

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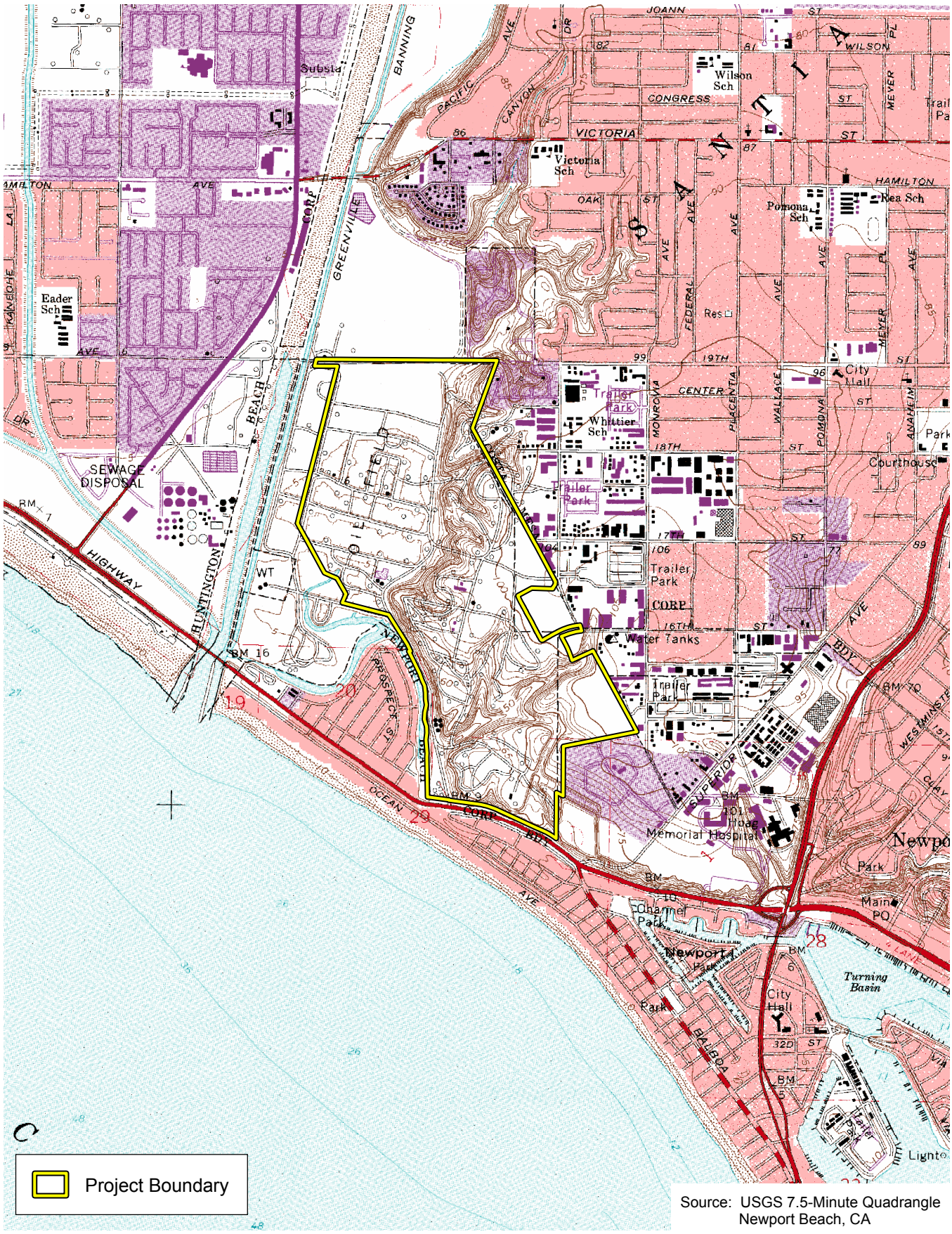
D:\Projects\Newport\J015\MXD\Ex_RL.mxd



Local Vicinity

Exhibit 2

Newport Banning Ranch

N
W E
S

2,000 1,000 0 2,000
Feet

BonTerra CONSULTING

(REV: WAD 04-20-10) R:\Projects\Newport\J015\Graphics\Bio\Ex2_LV_quad.pdf

D:\Projects\Newport\J015\MXD\Ex_lv_quad_new.mxd

D:\Projects\Newport\J015\Ex_PS.mxd

Project Site

Exhibit 3

Newport Banning Ranch

N
W E
S

600 300 0 600

Feet

BonTerra CONSULTING

(REV: JFG 10-01-09) R:\Projects\Newport\J015\Graphics\JD\ex4_PS.pdf

mixed-used component. Additionally, a 75-room resort hotel and 84 du are proposed on approximately 11 acres. Approximately 53 acres are proposed for active and passive park uses. Approximately 252 acres (approximately 61 percent) of the 401-acre site are proposed for natural resources protection in the form of open space and third-party habitat restoration. Of these 243 acres, 20 acres would be used for interim oil operations until this area converts to open space.

1.2 REGULATORY AUTHORITY

1.2.1 SUMMARY OF REGULATIONS

U.S. Army Corps of Engineers

The USACE Regulatory Branch regulates activities that discharge dredged or fill materials into "Waters of the U.S." under Section 404 of the federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. This permitting authority applies to all "Waters of the U.S." where the material (1) replaces any portion of a "Waters of the U.S." with dry land or (2) changes the bottom elevation of any portion of any "Waters of the U.S.". These fill materials would include sand, rock, clay, construction debris, wood chips, and materials used to create any structure or infrastructure in these Waters. The selection of disposal sites for dredged or fill material is done in accordance with the Section 404(b)(1) guidelines, which were developed by the U.S. Environmental Protection Agency (USEPA).

Waters of the United States

"Waters of the U.S." can be divided into three categories: territorial seas, tidal waters, or non-tidal waters. The term "Waters of the U.S." includes all waters that have, are, or may be used in interstate or foreign commerce (including sightseeing or hunting), including all waters subject to the ebb and flow of the tide, such as those listed below:

- Wetlands.
- All other waters such as interstate lakes, rivers, or streams (including intermittent streams); mudflats; sand flats; wetlands; sloughs; prairie potholes; wet meadows; playa lakes; or natural ponds the use, degradation, or destruction of which could affect interstate or foreign commerce.
- All impoundments of waters otherwise defined as "Waters of the U.S." under the definition.
- All tributaries to navigable waters, interstate waters, and impoundments of "Waters of the U.S.".
- Territorial seas.
- All wetlands adjacent to waters that are not themselves wetlands.

Ordinary High Water Mark

The landward limit of tidal "Waters of the U.S." is the high-tide line. In non-tidal waters where adjacent wetlands are absent, jurisdiction extends to the "ordinary high water mark" (OHWM). In the absence of wetlands in non-tidal waters, the extent of jurisdictional limits is determined by the OHWM. The OHWM is defined as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (33 *Code of Federal Regulations* [CFR] §328.3[e]).

Wetlands

A wetland is a subset of jurisdictional waters and is defined by the USACE and the USEPA as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR §328.3[b]). Wetlands generally include swamps, marshes, bogs, and areas containing similar features. The definition and methodology for identifying wetland resources was refined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008b), a supplement to the 1987 Corps Manual. The methodology contained in this supplement was used to identify the type and extent of wetland resources within the boundaries of the survey area.

Supreme Court Rulings/Regulatory Guidance

Guidance for determining the USACE jurisdiction over "Waters of the U.S." was provided following the consolidated cases of *Rapanos v. United States* and *Carabell v. United States* cases (referred to as the "Rapanos" cases). On June 19, 2006, a majority of the U.S. Supreme Court overturned two Sixth Circuit Court of Appeals decisions, finding that certain wetlands constituted "Waters of the U.S." under the CWA. Justice Scalia argued that "Waters of the U.S." should not include channels through which water flows intermittently or ephemerally or channels that periodically provide drainage for rainfall. He also stated that a wetland may not be considered "adjacent to" remote "Waters of the U.S." based on a mere hydrologic connection.

Although Justice Scalia's opinion would have greatly restricted the USACE's jurisdiction, only three other justices shared his point of view. Justice Kennedy, who provided the fifth vote needed to overturn the Court of Appeals' decisions, wrote a separate opinion that would narrow the USACE's jurisdiction but not as much as Justice Scalia desired. Without a clear majority opinion, the legal effect of this decision is uncertain. However, it does provide valuable information about the direction the USACE will consider in defining jurisdiction over certain bodies of water, such as man-made ditches, desert washes, and ephemeral streams.

As noted above, although Justice Kennedy sided with Justice Scalia in overturning the earlier court rulings, Justice Kennedy did so for a different reason. Justice Kennedy indicated that he relied on the Supreme Court's 2001 *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (SWANCC) decision on wetlands features, which states that wetlands are subject to jurisdiction only if there is a "significant nexus" between the wetland and some other navigable water such as a stream or lake. To prove such a "significant nexus", Justice Kennedy stated that the USACE must show that the wetlands in question, either alone or in combination with other similarly situated lands, significantly affect the chemical, physical, and biological integrity of other navigable waters. According to Justice Kennedy, that evidence has not been provided in either the *Rapanos v. United States* or the *Carabell v. United States* cases. Therefore, the case was remanded back to the lower court for reconsideration.

On June 5, 2007, the USACE published a memorandum that provides guidance to both the USEPA regions and the USACE districts that implement the Supreme Court's decision in the Rapanos cases (which address the jurisdiction over "Waters of the U.S." under the CWA). The memorandum includes a chart that summarizes its key points and is intended to be used as a reference tool along with a complete discussion of issues and guidance furnished throughout the memorandum.

In summary, the USACE and the USEPA will assert jurisdiction over the following waters: (1) traditional navigable waters (TNWs); (2) wetlands adjacent to TNWs; (3) non-navigable tributaries of TNWs that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months); and (4) wetlands that directly abut such tributaries.

The USACE and the USEPA will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a TNW: (1) non-navigable tributaries that are not relatively permanent; (2) wetlands adjacent to non-navigable tributaries that are not relatively permanent; and (3) wetlands adjacent to but that do not directly abut a relatively permanent, non-navigable tributary.

The USACE and the USEPA generally will not assert jurisdiction over the following features: (1) swales or erosional features (e.g., gullies or small washes characterized by low volume, infrequent, or short duration flow) and (2) ditches (including roadside ditches) excavated wholly within and draining only upland and that do not carry a relatively permanent flow of water.

The USACE and the USEPA will apply the significant nexus standard as follows:

1. A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of downstream TNWs.

2. A significant nexus includes consideration of hydrologic and ecological factors.

Regional Water Quality Control Board

The RWQCB is the primary agency responsible for protecting water quality within California through the regulation of discharges to surface waters under the CWA and the California Porter-Cologne Water Quality Control Act (Porter-Cologne Act). The RWQCB's jurisdiction extends to all "Waters of the State" and to all "Waters of the U.S.", including wetlands (isolated and non-isolated).

Section 401 of the CWA provides the RWQCB with the authority to regulate, through a Water Quality Certification, any proposed, federally permitted activity that may affect water quality. Among such activities are discharges of dredged or fill material permitted by the USACE pursuant to Section 404 of the CWA. Section 401 requires the RWQCB to provide "certification that there is reasonable assurance that an activity which may result in the discharge to 'Waters of the U.S.' will not violate water quality standards". Water Quality Certification must be based on a finding that the proposed discharge will comply with water quality standards, which contain numeric and narrative objectives that can be found in each of the nine RWQCBs' Basin Plans.

The Porter-Cologne Act provides the State with very broad authority to regulate "Waters of the State", which are defined as any surface water or groundwater, including saline waters. The Porter-Cologne Act has become an important tool in the post-SWANCC and Rapanos eras with respect to the State's authority over isolated waters. Generally, any person proposing to discharge waste into a water body that could affect its water quality must file a "Report of Waste Discharge" (WDR) when there is no federal nexus, such as under Section 404(b)(1) of the CWA. Although "waste" is partially defined as any waste substance associated with human habitation, the RWQCB interprets this to include fill discharge into water bodies.

California Department of Fish and Game

Activities of State and local agencies, public utilities and private projects are regulated under Section 1602 of the *California Fish and Game Code*. This section regulates any work that will (1) substantially divert or obstruct the natural flow of any river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

Because the CDFG includes streamside habitats under its jurisdiction that, under the federal definition, may not qualify as wetlands on a particular project site, its jurisdiction may be broader than that of the USACE. Riparian forests in California often lie outside the plain of ordinary high water regulated under Section 404 of the CWA, and often do not have all three parameters (wetlands hydrology, hydrophytic vegetation, and hydric soils) sufficiently present to be regulated as a wetland. However, riparian forests are frequently within CDFG regulatory jurisdiction under Section1602 of the *California Fish and Game Code*.

The CDFG enters into a Streambed Alteration Agreement (SAA) with a project proponent and can impose conditions on the agreement. The notification process is the completion of the applications, which will serve as the basis for the CDFG's issuance of a Section 1602 SAA. Section 1602 of the *California Fish and Game Code* applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the state.

The CDFG jurisdictional limits are not as clearly defined by regulation as those of the USACE. While they closely resemble the limits described by USACE regulations, they include riparian habitat supported by a river, stream, or lake regardless of the presence or absence of hydric and saturated soils conditions. In general, the CDFG takes jurisdiction from the top of a stream bank or from the outer limits of the adjacent riparian vegetation (outer drip line), whichever is greater. Notification is generally required for any project that will take place within, or in the vicinity of, a river, stream, lake, or their tributaries. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish, other aquatic plant and/or wildlife species, and watercourses that have a surface or subsurface flow that support or have supported riparian vegetation.

California Coastal Commission

The California Coastal Commission (CCC) defines wetlands under Section 30121 of the Coastal Act:

> *"Wetland" means lands within the coastal zone which may be covered periodically or permanently with shallow water and includes salt marshes, freshwater marshes, open and closed brackish water marshes, swamps, mudflats, and fens.*

The boundaries of a wetland are determined by the extent of one or more key wetland characteristics: hydrology, hydric soils, and hydrophytic vegetation. The size and extent of CCC wetland boundaries may also be determined by aerial photographs, national wetland inventory maps, and soil conservation maps. Also, the CCC generally turns to the CDFG for assistance in determining the presence and extent of wetlands subject to regulation in the coastal zone.

In addition, Section 30233 of the Coastal Act states that:

(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.

(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.

(3) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.

(4) Incidental public service purposes, including, but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.

(5) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.

(6) Restoration purposes.

(7) Nature study, aquaculture, or similar resource-dependent activities.

(b) Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for these purposes to appropriate beaches or into suitable longshore current systems.

(c) In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary. Any alteration of coastal wetlands identified by the CDFG, including, but not limited to, the 19 coastal wetlands identified in its report entitled, "Acquisition Priorities for the Coastal Wetlands of California", shall be limited to very minor incidental public facilities, restorative measures, nature study, commercial fishing facilities in Bodega Bay, and development in already developed parts of south San Diego Bay, if otherwise in accordance with this division. For the purposes of this section, "commercial fishing facilities in Bodega Bay" means that not less than 80 percent of all boating facilities proposed to be developed or improved, where the improvement would create additional berths in Bodega Bay, shall be designed and used for commercial fishing activities.

(d) Erosion control and flood control facilities constructed on watercourses can impede the movement of sediment and nutrients that would otherwise be carried by storm runoff into coastal waters. To facilitate the continued delivery of these sediments to the littoral zone, whenever feasible, the material removed from these facilities may be placed at appropriate points on the shoreline in accordance with other applicable provisions of this division, where feasible mitigation measures have been provided to minimize adverse environmental effects. Aspects that shall be considered before issuing a coastal development permit for these purposes are the method of placement, time of year of placement, and sensitivity of the placement area.