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July 26, 2012

Ms. Jemellee Cruz, P.E. County of Los Angeles Department of Public Works Flood Maintenance Division 900 South Fremont Avenue, Annex Building, 2nd Floor Alhambra, California 91802-1460

VIA EMAIL jcruz@dpw.lacounty.gov

Results of Biological Inventory Surveys of Upper Ballona Creek, Los Angeles Subject:

County, California

Dear Ms. Cruz:

This Letter Report presents the findings of plant and wildlife inventory and vegetation mapping surveys conducted at Upper Ballona Creek in Marina Del Rey in Los Angeles County (Exhibit 1). "Upper" Ballona Creek extends from Centinela Avenue to about 500 feet downstream of the Marina Freeway (State Route [SR] 90) at the confluence of the Ballona and Centinela Creeks (Exhibit 2). This soft-bottom channel (SBC) reach of Ballona Creek is in the process of being added to the Los Angeles County Department of Public Work's (LACDPW's) existing California Department of Fish and Game (CDFG), U.S. Army Corps of Engineers (USACE), and Regional Water Quality Control Board (RWQCB) channel maintenance permits. The purpose of these surveys is to provide biological information in support of LACDPW's request for inclusion of the Upper Ballona Creek SBC with their existing regulatory permits.

The LACDPW maintains numerous SBC reaches and debris basins that primarily function to control flood waters. Maintained SBC reaches are located in association with concreted segments of rivers and creeks in order to prevent backup of debris and sediment that moves downstream during high rainfall events. High volumes of storm-water-carrying debris and sediment can cause considerable damage to downstream and upstream properties and result in the loss of human life. The dams, barriers, and debris basins also have spillways designed to allow removal of excess runoff water at safe velocities that will not damage the dam or downstream structures. Vegetation within the channels increases the collection of debris and requires periodic maintenance that involves removal of vegetation and debris from these SBC reaches. LACDPW maintenance activities in the SBC reaches and debris basins are conducted in conformance with permits issued by the CDFG, the USACE, and the RWQCB.

METHODS

BonTerra Consulting Biologists Robert Allen and Brian Daniels conducted the plant and wildlife inventory and vegetation mapping surveys on July 11, 2012. The surveys focused on the identification of all plant and wildlife species present within the channel. It should be noted that there are many bird species expected to use the channel habitats during the winter and migratory seasons that would not be detected during a survey conducted on this date. A survey on this date, however, in the middle of the summer season would be sufficient to identify those species that breed in the channel.

Previous survey reports of this SBC reach were reviewed, including the focused plant and biological reconnaissance surveys conducted in July 2009 at Ballona Creek (BonTerra Consulting 2009, 2010).

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All plant and wildlife species observed were recorded in field notes. Plant species were identified in the field or collected for subsequent identification using keys in Baldwin et al. (2012). Taxonomy follows Baldwin et al. (2012) and current scientific data (e.g., scientific journals) for scientific and common names. Nomenclature for vegetation types generally follows that of the *List of Vegetation Alliances and Associations*, *Vegetation Classification and Mapping Program* (CDFG 2010).

Active searches for reptiles and amphibians included lifting, overturning, and carefully replacing rocks and debris. Birds were identified by visual and auditory recognition. Surveys for mammals were conducted during the day and included searching for and identifying diagnostic signs including scat, footprints, scratch-outs, dust bowls, burrows, and trails. Taxonomy and nomenclature for wildlife generally follows Stebbins (2003) for amphibians and reptiles, American Ornithologists' Union (2012) for birds, and Baker et al. (2003) for mammals.

RESULTS

For a complete list of plant and wildlife species observed during the July 11, 2012 surveys, see Attachment A. The following discussion is primarily limited to those plant and wildlife species observed during the surveys.

Vegetation

The Upper Ballona Creek SBC reach supports two vegetation types as illustrated on Exhibits 3A, 3B, 3C, and 3D and summarized in Table 1 below. Site photographs are included as Exhibits 4A and 4B. Vegetation in this SBC reach is limited to thin bands and patches at the toe of the levee. At the downstream end of the reach, just upstream from the Marina Freeway (SR-90), the vegetation becomes sparser and bare areas begin to dominate (see Photo Exhibits 4A and 4B). Essentially no vegetation is present in this SBC reach slope downstream of the Marina Freeway (SR-90) to its terminus at the confluence with Centinela Creek. The tidal influence in the lower portion of this SBC reach is stronger and, as a result, the higher salt content of the water limits the downstream expansion of the upstream vegetation. The vegetation types include freshwater marsh which is dominated by southern cattail (Typha domingensis), southern bulrush (Schoenoplectus californicus [Scirpus californicus]), and cocklebur (Xanthium strumarium) and ruderal (weedy) vegetation, which is a mix of non-native species such as African fountain grass (Pennisetum setaceum), Mexican fan-palm (Washingtonia robusta), African umbrella-sedge (Cyperus involucratus), curly dock (Rumex crispus), common beggar ticks (Bidens pilosa), and volunteers of several species of ornamental trees, including Brazilian pepper (Schinus terebinthifolius), shamel ash (Fraxinus uhleri), rain tree (Koelreuteria paniculata), and Chinese elm (Ulmus parvifolia).

Table 1 Vegetation Types

Vegetation Type	Acres	Habitat Quality	
Freshwater Marsh	0.55	High (degraded)	
Ruderal	0.44	Low	

Freshwater marsh vegetation typically provides high habitat values. This is particularly evident in Southern California where it is relatively scarce. The freshwater marsh vegetation at this SBC reach, however, has been degraded by numerous non-native ruderal (weedy) and invasive species such as the Mexican fan palms (*Washingtonia robusta*) that intermix with the cattail and bulrush beds. The concreted levee also limits the distribution of these cattail and bulrush beds in

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the channel and diminishes their overall habitat value. The ruderal vegetation in this SBC reach is dominated by non-native ruderal species and ornamental species and provides low value habitat.

Wildlife

The open freshwater of the channel invert is the dominant habitat feature of this SBC reach. Vegetation is limited in size and primarily confined to the water's edge at the toe of the concrete levee. As a result, this SBC reach is expected to be used by a variety of water birds, but relatively few land birds. Water birds observed during the survey include gadwall (Anas strepera), mallard (Anas platyrhynchos), cinnamon teal (Anas cyanoptera), pied-billed grebe (Podilymbus podiceps), double-crested cormorant (Phalacrocorax auritus), brown pelican (Pelecanus occidentalis), great blue heron (Ardea herodias), snowy egret (Egretta thula), American coot (Fulica americana), killdeer (Charadrius vociferous), black-necked stilt (Himantopus mexicanus), least sandpiper (Calidris minutilla), Heermann's gull (Larus heermanni), western gull (Larus occidentalis), California gull (Larus californicus), Caspian tern (Hydroprogne caspia), and elegant tern (Thalasseus elegans). Broods of gadwall and mallard young were present, indicating they nest in the vegetation (either within the freshwater marsh or ruderal vegetation) at the water's edge in this SBC reach. The cinnamon teal, pied-billed grebe, American coot, killdeer, and black-necked stilt may also nest here, but the other observed species are just using the channel habitats for foraging and/or loafing. The diversity of water birds expected to use this SBC reach would be higher during the winter and migratory seasons.

Land bird use of the channel is expected to be limited, with most species occurring primarily for bathing and drinking opportunities. For example, the hooded oriole (*Icterus cucullatus*) was observed during the survey in the vegetation adjacent to the water's edge, but is expected to nest and primarily forage in the vegetation outside the channel. Some bird species observed during the survey such as the common yellowthroat (*Geothlypis trichas*) and song sparrow (*Melospiza melodia*) may nest in the vegetation at the water's edge in this SBC reach. The open water habitats of the channel are expected to support insect life that provides foraging opportunities for aerial foraging bird species. Birds observed foraging over the SBC reach during the survey include northern rough-winged swallow (*Stelgidopteryx serripennis*), cliff swallow (*Petrochelidon pyrrhonota*), and barn swallow (*Hirundo rustica*).

This SBC reach provides minimal habitat for amphibians or reptiles and none were observed during the survey. The western fence lizard (*Sceloporus occidentalis*) is the only reptile species expected to occur. Audubon's cottontail (*Sylvilagus audubonii*) was the only mammal species observed during the survey, but several other species are expected to occur such as the Virginia opossum (*Didelphis virginiana*) and black rat (*Rattus rattus*). Larger mammals including the common raccoon (*Procyon lotor*) and coyote (*Canis latrans*)are also expected to occur occasionally. Only one fish species was detected during the survey: carp (*Cyprinus carpio*) were heard foraging among the reedbeds. Few fish species are expected to regularly use the freshwater portion of this SBC reach, such as the mosquitofish (*Gambusia affinis*), but a variety of species are expected to use the more brackish waters downstream, especially downstream of the Marina Freeway (SR-90).

RECOMMENDATIONS

The 0.55 acre of freshwater marsh vegetation in this SBC reach is of high value not only due to its relative scarcity in the region, but also because it is the only native vegetation present in the channel. The habitat value, however, has been degraded by the abundance of invasive ornamental and non-native ruderal (weedy) vegetation and the concreted levees that limit the distribution of the cattail and bulrush beds to a narrow strip at the base of the levee.

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The results of the July 2009 biological reconnaissance surveys to determine the potential for special status plant and wildlife species at this SBC reach (BonTerra Consulting 2010) indicated that southern tarplant (*Centromadia parryi* ssp. *australis*) had potential to occur and, as a result, focused surveys were warranted. The southern tarplant survey was conducted in July 2009 and determined that this species was absent from this SBC reach (BonTerra Consulting 2009). The current biological inventory survey was conducted at the appropriate time for the southern tarplant, and reference populations were known to be blooming. No southern tarplants were observed, and the absence of southern tarplant in this biological inventory survey serves to confirm the July 2009 survey findings.

Although the results of the July 2009 biological reconnaissance surveys did not recommend any focused wildlife surveys, they indicated that the State- and federally listed Endangered California brown pelican (*Pelecanus occidentalis caifornicus*) and California least tern (*Sternula antillarum browni*) had potential to occur at this SBC reach for loafing and foraging activities, but not for nesting. Therefore, focused surveys were not recommended for either species since they would not nest at this SBC reach. The California brown pelican was present during this survey with five individuals in the Ballona Channel downstream of the Marina Freeway (SR-90) (see Wildlife List in Attachment A). These five birds were mostly loafing on the exposed mud flats at the mouth of the Centinela Creek Channel, but they were also foraging (diving) for fish. One dead California brown pelican was found on the concrete levee upstream of the Marina Freeway (SR-90) during the survey. The California brown pelican is present in the region year-round and may occur at any time at this SBC reach. The California least tern, however, is only present in the region from about April 1 to August 31 and was not present during this survey (see Wildlife List in Appendix A).

Once the Upper Ballona Creek SBC is permitted, BonTerra Consulting recommends that the LACDPW perform maintenance activities in an alternating pattern similar to other maintained SBC reaches. BonTerra Consulting proposes the following language for inclusion into the existing Maintenance Plan for the Annual Clearing of Earth-Bottom Flood Control Channels: "The channel clearing work will involve an alternating pattern of hand-clearing of vegetation. Only one-half of the channel will be cleared each year. The other one-half of the channel will be cleared the following year. A Biologist will be present during clearing activities to recommend appropriate avoidance measures of any biological resources that may warrant such measures. All invasive plant species will be removed in a manner approved by the Monitoring Biologist".

BonTerra Consulting has appreciated the opportunity to assist on this project. If you have any comments or questions, please call Marc Blain or Brian Daniels at (626) 351-2000.

Sincerely,

BONTERRA CONSULTING

Marc T. Blain

Associate, Biological Resources Manager

Brian E. Daniels

Senior Biologist/Ornithologist

Attachments: Exhibit 1 - Regional Location

Exhibits 2 - Local Vicinity

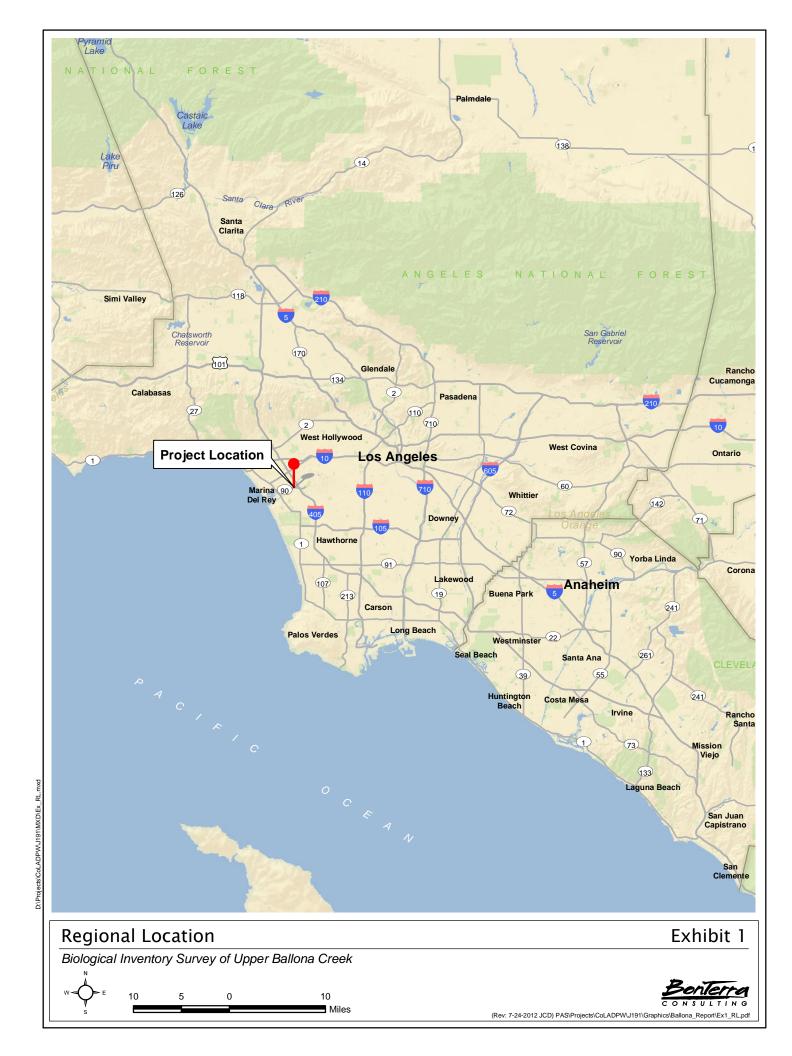
Exhibits 3A, 3B, 3C, and 3D - Vegetation Types

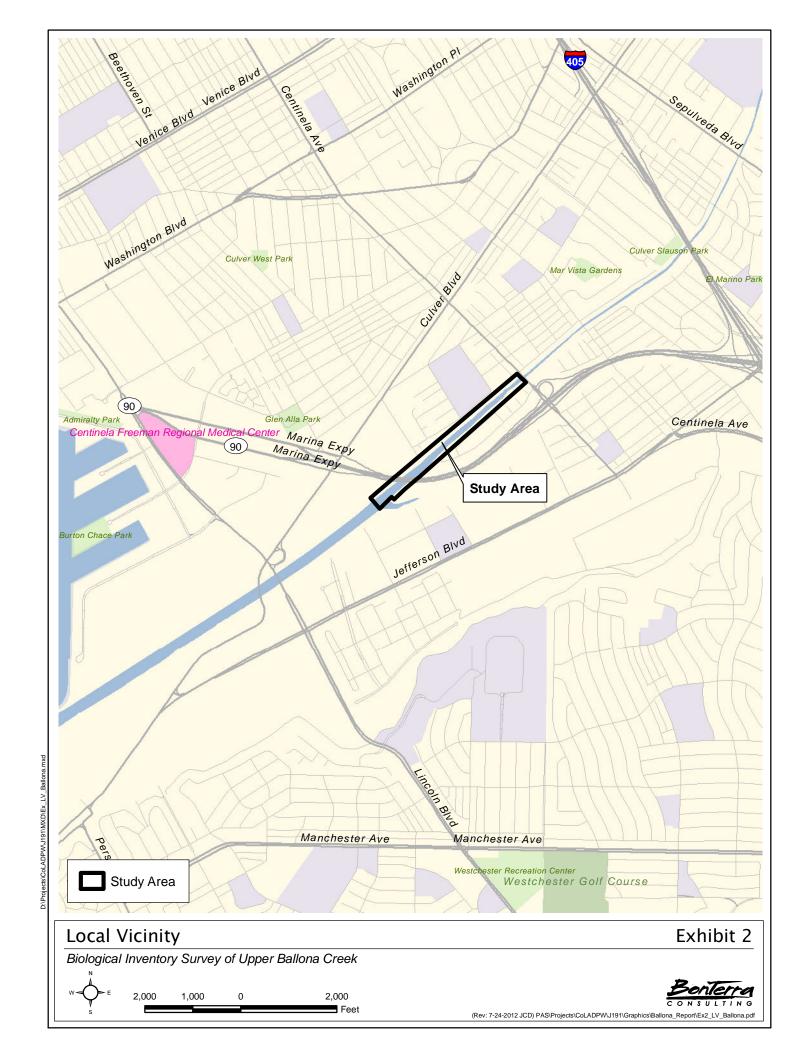
Exhibits 4A and 4B - Site Photographs

Attachment A - Plant and Wildlife Compendia

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- Stebbins, R.C. 2003. *A Field Guide to Western Reptiles and Amphibians* (3rd ed.). Boston, MA: Houghton-Mifflin Company.







Biological Inventory Survey of Upper Ballona Creek

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EXHIBIT 3A

Biological Inventory Survey of Upper Ballona Creek

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Feet

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View of Ballona Channel downstream of the Centinela Avenue Bridge.



View of the Ballona Channel Confluence with Centinela Creek.

Site Photographs - Upper Ballona Creek

Exhibit 4A

Biological Inventory Survey of Upper Ballona Creek





View downstream at the Marina Expressway Bridge over Ballona Channel.



View upstream of Ballona Channel at Centinela Avenue.

Site Photographs - Upper Ballona Creek

Exhibit 4B

Biological Inventory Survey of Upper Ballona Creek



ATTACHMENT A PLANT AND WILDLIFE COMPENDIA

UPPER BALLONA CREEK PLANT LIST July 11, 2012

ANGIOSPERMAE – FLOWERING PLANTS					
EUDICOTS AMARANTHACEAE – AMARANTH FAMILY					
ANACARDIACEAE – SUMAC FAMILY					
Malosma laurina	laurel sumac				
Schinus terebinthifolius*	Brazilian pepper tree				
APIACEAE – CARROT FAMILY					
Apium graveolens*	common celery				
Conium maculatum*	poison hemlock				
Foeniculum vulgare*	sweet fennel				
ASTERACEAE – SUNFLOWER FAMILY					
Ageratina adenophora*	crofton weed				
Ambrosia acanthicarpa	annual bur-sage				
Artemisia dracunculus	tarragon				
Bidens pilosa*	common beggar-ticks				
Cosmos suphureus*	yellow cosmos				
Cotula coronopifolia*	brass-buttons				
Erigeron canadensis [Conyza c.]	common horseweed				
Euthamia occidentalis	western goldenrod				
Glebionis coronaria [Chrysanthemum coronarium]*	garland daisy				
Helminthotheca echioides [Picris e.]*	bristly ox-tongue				
Lactuca serriola*	prickly lettuce				
Pseudognaphalium luteoalbum [Gnaphalium I.]*	weedy cudweed				
Sonchus oleraceus*	common sow thistle				
Symphyotrichum subulatum var. parviflorum [Aster s. var. ligulatum]	slender aster				
Xanthium strumarium	cocklebur				
BRASSICACEAE – MUSTARD FAMILY					
Brassica rapa*	field mustard				
Hirschfeldia incana*	shortpod mustard				
Lepidium sp.	peppergrass				
Lepidium didymum [Coronopus didymum]*	lesser swine cress				
Lepidium virginicum var. menziesii [L. v. var. pubescens]	wild peppergrass				
Raphanus sativus*	radish				
CHENOPODIACEAE – GOOSEFOOT FAMIL	.Y				
Atriplex prostrata [A. triangularis]	fat-hen				
Chenopodium album*	lamb's quarters				
Salicornia pacifica [S. virginica]	common woody pickleweed				
EUPHORBIACEAE – SPURGE FAMILY					
Ricinus communis*	castor bean				
FABACEAE – LEGUME FAMILY					
Acacia longifolia*	Sydney golden wattle				
Melilotus alba*	white sweetclover				

UPPER BALLONA CREEK PLANT LIST (Continued) July 11, 2012

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0
bull mallow
bui mailow
banyon tree
banyon nec
common chaffweed
common chanweed
bottlebrush
Dottiebrasii
shamel ash
Y
English plantain
common plantain
London plane tree
LY
willow weed
whorled dock
curly dock
Y
carrotwood
rain tree
LY
myoporum
<u>пуорогиш</u>
tomato
white nightshade
write riightshade
Chinese elm
Crimese cim
Canary Island palm
Mexican fan palm
_Y
Sprenger's asparagus
climbing asparagus
carriering doparague
alkali bulrush
African umbrella-sedge
southern bulrush
300
slender wild oat
perennial ryegrass
dallis grass
knot grass
seashore paspalum
Kikuyu grass
KIKIIVII arass

UPPER BALLONA CREEK PLANT LIST (Continued) July 11, 2012

ANGIOSPERMAE – FLOWERING PLANTS				
Polypogon viridis*	water beard grass			
Stipa miliacea [Piptatherum miliacea]*	smilo grass			
TYPHACEAE – CATTAIL FAMILY				
Typha angustifolia	narrow-leaved cattail			
* non-native to the region it was found				
cf. appears similar to				

UPPER BALLONA CREEK WILDLIFE LIST July 11, 2012

Common Name	Tally	Common Name	Tally		
BIRDS					
Gadwall Anas strepera	35	Elegant Tern Thalasseus elegans	4		
Mallard Anas platyrhynchos	35	Rock Pigeon Columba livia	6		
Cinnamon Teal Anas cyanoptera	3	Mourning Dove Zenaida macroura	3		
Pied-billed Grebe Podilymbus podiceps	2	Allen's/Rufous Hummingbird Selasphorus sp.	2		
Double-crested Cormorant Phalacrocorax auritus	1	Black Phoebe Sayornis nigricans	3		
Brown Pelican Pelecanus occidentalis	5	American Crow Corvus brachyrhynchos	5		
Great Blue Heron Ardea herodias	2	Northern Rough-winged Swallow Stelgidopteryx serripennis	4		
Snowy Egret Egretta thula	2	Cliff Swallow Petrochelidon pyrrhonota	2		
American Coot Fulica americana	6	Barn Swallow Hirundo rustica	12		
Killdeer Charadrius vociferous	2	Bushtit Psaltriparus minimus	20		
Black-necked Stilt Himantopus mexicanus	2	Common Yellowthroat Geothlypis trichas	5		
Least Sandpiper Calidris minutilla	4	Song Sparrow Melospiza melodia	2		
Heermann's Gull Larus heermanni	2	Hooded Oriole Icterus cucullatus	2		
Western Gull Larus livens	35	House Finch Carpodacus mexicanus	8		
California Gull Larus californicus	1	House Sparrow Passer domesticus	50		
Caspian Tern Hydroprogne caspia	6				
MAMMALS					
Desert Cottontail Sylvilagus audubonii	1				