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Biological Evaluation Report

Chelsea Wetland Restoration Project

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Prepared for:

City of Hercules
111 Civic Drive
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Project No. 1136

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1 Introduction

The City of Hercules is proposing the restoration of tidal marsh habitat on the Chelsea Parcel. The property consists of a vacant 9-acre parcel adjacent to Pinole Creek in the City of Hercules, Contra Costa County, California (Figure 1). The tidal marsh restoration will be accomplished through the excavation of fill previously deposited on the site. In addition, an adjacent 2-acre marsh-upland transitional area owned by the Chelsea by the Bay Homeowners Association (HOA) will be incorporated into the design. Throughout this document the term "project site" will include both the Chelsea parcel and the HOA parcel. The project is intended to restore tidal marsh to reflect historic site conditions, provide flood storage benefits, minimize mosquito production potential, and provide habitat used by numerous wildlife species, including special-status species.

This Biological Evaluation Report describes the existing biological characteristics of the project site and its potential use by special-status wildlife species. The report identifies short-term adverse effects to sensitive biological resources that could occur during restoration activities, as well as long-term benefits to these resources that could be gained through wetland restoration activities. The report includes discussions of field survey methodologies, characterization and extent of onsite plant communities, special-status plant and wildlife species occurring or potentially occurring on the project site, project site opportunities for wildlife movement, and jurisdictional and sensitive habitats on the site.

The report is organized into the following sections:

1 Introduction
2 Project Description
3 Methodology
4 Results
5 Potential Impacts and Avoidance Measures

2 Project Description

The project is located in the City of Hercules, Contra Costa County, California on the northeast side of Pinole Creek near the shores of San Pablo Bay (Figure 1). The property consists of a vacant, 9-acre parcel that was historically part of a large tidal marsh complex that fringed San Pablo Bay. The property was filled sometime in the late 19th/early 20th century during the rapid development of this area. The proposed project would restore approximately 6 acres of tidal marsh to the Chelsea parcel through the excavation of fill material to appropriate elevations and the construction of a large tidal channel that will connect to Pinole Creek through an improved culvert array. The project will also integrate

the existing marsh-upland transitional area on the HOA parcel to enhance this important ecotone. The project includes an option to build a gentle berm from the adjacent Chelsea by the Bay housing development to the south down to the marsh plain to create a more natural wetland-upland transition and provide a buffer between the housing development and the marsh. The construction of this new berm would require the removal of several large trees along the existing berm, which would deprive the adjacent homeowners of shade and a visual screen in their back yards, but would open up their viewshed. The implementation of this alternative will depend completely upon homeowner preferences. Throughout this document, restoration Alternative A includes the construction of the transitional berm, while Alternative B leaves the existing berm in its current configuration.

In addition to creating important tidal marsh habitat, the project will provide additional flood storage along Pinole Creek, enhance recreational opportunities through improvements to the adjacent San Francisco Bay Trail, and reduce mosquito production on the property. The conceptual project design is displayed in Figure 2. This design was used as the basis for evaluating potential impacts of the project to current site biological resources.

3 Methodology

To perform this biological evaluation, we combined reviews of publicly available natural resource databases and conducted a number of field surveys.

3.1 Database Review

We reviewed the latest version of the California Natural Diversity Data Base (CNDDB) for the project USGS 7.5-minute quadrangle (*i.e.,* Richmond) and the surrounding San Quentin and Mare Island quadrangles. In addition, we reviewed the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants for the project quadrangle. The intent of the database review was to identify special-status plant and wildlife species that have been documented in the surrounding areas to assist in determining if these species might be present on or adjacent to the project site. The database review also served to create lists of locally occurring special-status plant and wildlife species, which were the focus of the field surveys discussed below.

3.2 Field Surveys

We conducted two independent field surveys for this biological evaluation – a reconnaissance level site visit and a jurisdictional delineation.

3.2.1 Reconnaissance Level Site Visit

On February 12, 2008, Josh Phillips of Pacific Biology and Dan Gillenwater of Wetlands & Water Resources (WWR) conducted a reconnaissance-level field survey of the project site.

Primary objectives of the field survey included (1) identifying, characterizing, and mapping onsite plant communities; (2) evaluating the potential of these plant communities/habitats to support special-status plant and wildlife species; and (3) determining the extent of other sensitive biological resources present. We walked the entire project site and investigated certain surrounding areas, including portions of Pinole Creek, the tidal marsh located to the northwest of the project site, the adjacent freshwater marsh to the southeast, and several nearby ponds. We identified and recorded all plant and wildlife species observed . Representative photographs of site features can be found in Appendix A.

3.2.2 Jurisdictional Delineation

WWR conducted a jurisdictional wetland delineation on March 5, 2008 following the Routine Wetland Determination Methodology described in the 1987 U.S. Army Corps of Engineers Wetland Delineation Manual (Environmental Laboratory 1987) and the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Regional Arid West Supplement) (Corps 2006). The wetland delineation was field verified by the Corps in March 2009. A copy of the final, Corps-verified jurisdictional delineation map and concurrence letter can be found in Appendix B.

4 Results

The results of the database queries and field investigations are presented below. The discussion begins with a brief summary of the general site conditions and surrounding land uses followed by a more detailed discussion of on-site plant communities, sensitive plant communities, special status plant and wildlife species, jurisdictional resources, and wildlife movement corridors.

4.1 Surrounding Land Uses and Habitats and Project Site Biological Characteristics

The surrounding land uses are discussed first to give the regional context of the project area, followed by a discussion of historic and current site characteristics.

4.1.1 Surrounding Land Uses and Habitats

Residential development occurs to the south and east of the project site, but habitats of high biological value also occur nearby (Figure 3). Pinole Creek runs southwest of the project site and is separated from the site by a paved and gravel walkway/access road. The portion of Pinole Creek bordering the project site is located approximately 800 feet upstream from San Pablo Bay, making it fully tidally influenced. Several beds of California cordgrass (*Spartina foliosa*) occur near the mouth of Pinole Creek, while other portions of the creek are dominated by Alkali bulrush (*Bolboschoenus maritimus*). Both vegetation types are classified as

coastal brackish marsh, following the California Department of Fish and Game (CDFG) classification system (CDFG 2003).

A large tidal marsh occurs approximately 175 feet to the northwest of the project site and is part of the East Bay Regional Parks District's San Pablo Bay Regional Shoreline Park. The tidal marsh is separated from the site by a constructed berm (containing a segment of the San Francisco Bay Trail), a row of planted eucalyptus trees, the now-defunct Railroad Avenue, and the Amtrak railroad right-of way (containing railroad tracks and areas of compacted dirt and gravel). The tidal marsh is dominated by pickleweed (*Sarcocornia pacifica*), but contains other tidal marsh species including fleshy jaumea (*Jaumea carnosa*) and marsh gumplant (*Grindelia stricta* var. *angustifolia*).

A freshwater marsh is located to the southeast of the project site. The marsh is generally choked with cattails (*Typha* spp.) with no large open water areas visible. Willows (*Salix* spp.) occur in locations throughout the marsh, as well as dense stands of Himalayan blackberry (*Rubus discolor*). A channel traversing the southern project site boundary continues into and terminates within the freshwater marsh. Upon entering the marsh, vegetation within the channel (primarily cattails) becomes dense and open water areas are limited.

A small drainage channel and two ponds occur east and upslope of the freshwater marsh and connect to the marsh via a culvert under Santa Fe Avenue. This channel is completely choked with cattails and willows. The ponds contain open aquatic habitat and are generally surrounded by cattails.

4.1.2 Onsite Biological Conditions

The project site was historically a tidal marsh. However, tidal marsh was largely eliminated by the construction of a railroad berm along the northwestern boundary, which separated the site from a large tidal marsh, and by the deposition of fill on a large area of the site. These actions significantly decreased the extent that the site is tidally influenced, which in turn has altered the vegetation composition of the site. Tidal action is now limited to the small channel located along the southern project boundary and connected to Pinole Creek via a 3-foot culvert. The Contra Costa County Mosquito and Vector Control District periodically cleans sediment and vegetation from this channel to maintain site drainage (Karl Malamud-Roam, Personal communication). The project site currently supports a matrix of upland, seasonal wetland, and salt marsh associated plant communities. The majority of the site contains upland-associated annual grasses and ruderal (*i.e.,* weedy) species, but pockets of seasonal wetland and salt marsh vegetation still occur throughout portions of the site. The pockets of salt marsh vegetation generally occur in low-lying areas where remnant soil salinities likely favor the establishment of salt-tolerant vegetation. Some of the lower-elevation areas that border the tidal channel may also receive occasional spillover of brackish

water during extreme high tides and storm events. The onsite plant communities are discussed in more detail below in Section 4.2, Onsite Plant Communities.

4.2 Onsite Plant Communities

Four plant communities occur on the project site, including annual grassland, pickleweed wetland, salt-alkali marsh, and brackish bulrush-cattail wetland. These plant communities are classified based on the CNDDB *Vegetation Classification and Mapping Program* (CDFG 2003). The biological characteristics of these plant communities are discussed below and their locations are shown on Figure 4**.**

4.2.1 Annual Grassland

Annual grasslands (9.078 ac) cover the majority of the project site. Non-native grasses, including wild oats (*Avena* sp.) and beardless wildrye (*Leymus triticoides*), are abundant on the site. Other dominant herbaceous vegetation includes spreading hedgeparseley (*Torilis arvensis*) garden vetch (*Vicia sativa*), ripgut brome (*Bromus diandrus*), and cutleaf geranium (*Geranium dissectum*). Large stands of field mustard (*Brassia rapa*) and scattered patches of curly dock (*Rumex crispus*), Harding grass (*Phalaris aquatica*), and salt grass(*Distichlis spicata*) occur within the grassland.

There are isolated pockets of freshwater seasonal wetlands (0.436 ac) scattered throughout the annual grassland where rainwater accumulates in topographic depressions. These areas are discussed in more detail below under Section 4.6, Jurisdictional Resources. We observed a small area of standing freshwater (approximately 4-5 inches in depth) within a freshwater wetland at the base of the Bay Trail berm along the northwestern site boundary. Based on the well developed invertebrate population (*e.g.,* daphnia, beetles) and the presence of pacific tree frog (*Hyla regilla*) egg masses, standing water likely occurs at this location for at least several consecutive weeks during the winter. However, when the wetland delineation was performed on March 5 (three weeks after the reconnaissance site visit), there was no visible sign of the pool.

A stand of coyote brush (*Baccharis pilularis*) occurs in the western corner of the project site. This native shrub quickly establishes in disturbed areas. A stand of coyote brush, intermixed with Himalayan blackberry (*Rubus discolor*), also occurs in the southeast corner of the site. Approximately ten non-native palm trees occur along the eastern site boundary. The southern site boundary contains a row of moderate-sized non-native pine (*Pinus* spp.) and eucalyptus trees, which were likely planted as a wind/visual barrier for the adjacent development.

4.2.2 Pickleweed Wetland

Pickleweed wetlands (0.855 ac) are dominated by pickleweed and occur in low-lying portions of the site. These areas pond water following rain events and likely have remnant soil salinities, which favor the establishment of salt-tolerant vegetation. Some of the lower-elevation areas on the HOA parcel also receive occasional spillover of brackish water from the channel during extreme high tides and storm events.

4.2.3 Salt-Alkali Marsh

Salt-alkali marsh (0.377 ac) habitat is found in the first 1,000 ft of the tidal channel traversing the southern project boundary (starting from the culvert on Pinole Creek). California cordgrass and alkali bullrush occur within lower portions of the channel, transitioning into a matrix of pickleweed, saltgrass, and marsh gumplant. Plant species bordering the channel include Harding grass, wild radish (*Raphanus raphanistrum*), and various non-native annual grasses.

4.2.4 Brackish Bulrush-Cattail Wetland

Brackish bulrush-cattail wetlands (0.084 ac) occur in the on-site channel, upstream of the first 1,000 ft. The vegetation in the channel is dominated by cattails and California bulrush *(Schoenoplectus californicus*) and transitions into a matrix of more salt-tolerant species at higher elevations (saltgrass, pickleweed, marsh gumplant). This transition to salt tolerant species is likely due to remnant soil salinity and intrusion of brackish water during storm events.

4.3 Sensitive Plant Communities

The California Department of Fish and Game (CDFG) Wildlife and Habitat Data Analysis Branch has developed a *List of California Terrestrial Natural Communities* (CDFG 2003). The most recent version of this list, dated September 2003, is derived from the CNDDB and is intended to supersede all other lists developed from the CNDDB. It is based on the detailed classification put forth in *A Manual of California Vegetation* (Sawyer and Keeler-Wolf 1995). It is also structured to be compatible with previous CNDDB lists.

The primary purpose of the CNDDB classification is to assist in the characterization of the rarity of various vegetation types. For the purposes of this analysis, plant communities denoted on the list as "high priority for inventory in CNDDB" in the September 2003 version are considered to be "sensitive." Based on this classification the only onsite plant communities considered to be a sensitive by the CDFG are the **pickleweed wetland** and **brackish bulrush-cattail wetland** .

Though stands of pickleweed occur on the project site, they are patchily distributed within an annual grassland matrix and do not provide a large extent of contiguous pickleweed habitat. As previously discussed, the project site was historically a tidal marsh altered by the

construction of a berm and deposition of fill material. As such, the biological value of these remnant pickleweed wetlands has been substantially diminished.

4.4 Special-Status Plant Species

For the purposes of this report, special-status plants include those species that are state or federally listed as Rare, Threatened or Endangered; federal candidates for listing; proposed for state or federal listing; or included on Lists 1, 2, 3, or 4 of the CNPS Inventory of Rare and Endangered Plants of California (CNPS Inventory).

Focused surveys for special-status plant species have not been conducted on the project site, however, we found no special-status plant species at the time of the reconnaissance survey or the wetland delineation. Vollmar Consulting conducted a focused survey for special-status plant species within the nearby tidal marsh (northwest of the project site) and the lower reach of Pinole Creek (adjacent to and near the project site) on June 11, 2007. Given the proximity to the project site to the survey area, and that the survey area contains similar (but less disturbed) habitat types to those on the project site, the survey findings provide information relevant to evaluating the potential occurrence of special-status plant species on the project site. Therefore, a summary of the survey findings is provided below.

Vollmar Consulting found no special-status plant species during their survey of nearby habitats. The large, nearby tidal marsh and the lower reach of the Pinole Creek provide potential habitat for soft bird's-beak (*Cordylanthus mollis* ssp. *mollis*) and Point Reyes bird's-beak (*Cordylanthus maritimus* ssp. *palustris*). However, both species are very rare and would have been observable at the time of the survey. Since neither species was observed, they were presumed not to occur. The brackish marsh habitat along the middle reach of Pinole Creek (southwest of the project site) provides low potential habitat for Suisun marsh aster (*Symphyotrichum lentum*) and Mason's lilaeopsis (*Lilaeopsis masonii*). These species occur more northward along the upper San Fransisco Bay and in Suisun Marsh. They would be unlikely to occur along a small section of stream reach with low potential habitat south of their known ranges. Both species would have been readily observable at the time of the field survey. Since neither species was observed, they are also presumed not to occur.

As previously discussed, fill material has been placed on a large portion of the project site. This disturbance has lowered the botanical value of the project site and greatly reduced the potential for special-status plant species to occur. With the exception of the remnant pickleweed wetlands and the drainage channel, the project site is dominated by vegetation characteristic of disturbed areas, including non-native grasses and ruderal species. Given the current botanical condition of the project site, and that no special-status species were found in similar, but less disturbed surrounding habitats, it is considered unlikely that any special-

status plant species occur on the project site. However, conducting focused surveys during the blooming period of the target species (*i.e.,* June-October) would be required to definitively establish the presence or absence of special-status plant species on the project site.

4.5 Special-Status Wildlife Species

For the purposes of this report, special-status wildlife species include those that are state or federally listed as Threatened or Endangered, proposed for listing as Threatened or Endangered, designated as state or federal candidates for listing, a federal Bird of Conservation Concern, a state Species of Special Concern, a state Fully Protected Animal, or that may otherwise be considered "rare" under Section 15380 of the CEQA Guidelines.

Review of the CNDDB and knowledge of the project region identified 29 special-status wildlife species (including mammal, amphibian, reptile, bird, and fish species) that are known to occur in the project area. These species are identified in Table 1 along with their regulatory status, habitat requirements, and an evaluation of their potential to occur on the site. Figure 5 displays the location of all CNDDB entries within 5 miles of the project site.

As illustrated in Table 1, 18 special-status wildlife species have some potential to occur on the project site or in areas that could be indirectly affected by the proposed project, including **San Pablo vole** (*Microtus californicus*), **saltmarsh harvest mouse** (*Reithrodontomys raviventhris*), **California red-legged frog** (*Rana draytonii*), **Cooper's hawk** (*Accipiter cooperi)*, **tricolored blackbird** (*Agelaius tricolor*), **great egret** (*Ardea alba*)(rookery), **great blue heron** (*Ardea herodia*) (rookery), **western burrowing owl** (*Athene cunicularia*) (wintering), **northern harrier** (*Circus cyaneus*), **white-tailed kite** (*Elanus leucurus)*, **saltmarsh common yellowthroat** (*Geothlypis trichas sinuosa)*, **California black rail** (*Laterallus jamaicensis coturniculus)*, **California clapper rail** (*Rallus longirostris obsoletus)*, **Alameda song sparrow** (*Melospiza melodia pusilluia)*, **osprey** (*Pandion haliaetu*), **steelhead trout** (*Oncorhyncus mykiss)*, **Chinook salmon** (*Oncorhynchus tshawytscha)*, and **tidewater goby** (*Eucyclogobius newberyi)*. Potential project-related impacts to these special-status wildlife species are discussed later in this report.

It is important to note that the above species are conservatively identified as having some potential to occur on the project site and include species for which available habitat is limited or non-existent and whose potential onsite occurrence is considered low. For example, the project site does not provide favorable habitat for the California red-legged frog and cannot sustain resident red-legged frogs; however, potential habitats occur nearby and the species could infrequently occur onsite. Similarly, in the project site's current condition California clapper rail and black rail are highly unlikely to be found onsite; however; suitable habitat occurs within the nearby tidal marsh, which could be subject to noise associated with the

proposed project. Additionally, Chinook salmon and tidewater goby are not known from Pinole Creek and the onsite drainage channel provides very marginal habitat for the species; however, if these species were to occur in Pinole Creek (including during migrations), they could enter the onsite drainage channel. By taking this conservative approach, appropriate avoidance measures can be implemented to ensure that no loss of special-status species occurs (see Section 5, Potential Impacts and Avoidance Measures).

4.6 Jurisdictional Resources

Wetlands, creeks, streams, and permanent and intermittent drainages are generally subject to the jurisdiction of the Corps under Section 404 of the Federal Clean Water Act. The Corps has jurisdiction up to the "ordinary high water mark" of rivers, creeks, and streams and to Mean High Water in tidal areas that are considered "Waters of the U.S." as defined by the Clean Water Act. If adjacent wetlands occur, the limits of jurisdiction extend beyond the ordinary high water mark to the outer edge of the wetlands. Wetlands are defined by the Corps as "those areas that are inundated or saturated by surface or groundwater at a frequency or duration to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." (Environmental Laboratory 1987). The presence and extent of wetland areas in this region of the country are normally determined by examination of the vegetation, soils, and hydrology of a site according to the methods outlined in the Corps' Wetland Delineation Manual of 1987 (Environmental Laboratory 1987) and the Regional Arid West Supplement (Corps 2006). The Corps' definition of wetlands requires that all three wetland identification parameters be met.

We conducted a jurisdictional wetland delineation of the project site on March 5, 2008. This delineation was field verified by the Corps in March 2009. Figure 6 shows the locations of all delineated wetlands. There are **1.752 acres** of wetlands on the project site, which fall into three general categories: brackish/salt marsh, brackish/salt marsh with tidal channel, and freshwater seasonal wetlands. The brackish/salt marshes (**0.855 ac**) consist of the pickleweed wetlands; the brackish marsh with tidal channel (**0.461 ac**) consists of the salt-alkali marsh and brackish bulrush cattail wetlands found in and along the tidal drainage channel. The freshwater seasonal wetlands (**0.436 ac**) mainly occur in isolated depressions that are fed primarily by rainwater.

Pinole Creek in the vicinity of the project site supports coastal brackish marsh vegetation along the channel margins. These areas fall under Section 404 Corps jurisdiction. The Pinole Creek channel may be subject to regulation by the CDFG under Section 1602 of the California Fish and Game Code. A stream is defined under these regulations as a body of water that flows at least periodically or intermittently through a bed or channel having banks,

and that supports fish or other aquatic life. CDFG jurisdiction extends to the edge of riparian vegetation associated with a creek. However, the fully tidal nature of Pinole Creek in the vicinity of the project site is expected to make the channel and adjacent banks not subject to CDFG jurisdiction.

4.7 Wildlife Movement Corridors

Wildlife movement corridors are described as pathways or habitat linkages that connect discrete areas of natural open space otherwise separated or fragmented by topography, changes in vegetation, and other natural or human induced factors such as urbanization. The project site is bordered by, or in proximity to, development to the east, south, and west. Therefore, the project site does not provide a habitat linkage between open spaces and is not considered to be part of a wildlife movement corridor. As the project site is not part of a wildlife movement corridor, this issue is not discussed further in this report.

4.8 Adopted Natural Resources Plans

The project site is not within an area covered by an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, the proposed project would not conflict with such a plan and this issue is not discussed further in this report.

5 Potential Impacts and Avoidance Measures

The goal of the proposed project is to restore tidal marsh habitat and to return the project site to a more natural condition. In the long-term the proposed project will result in increased habitat functions of the project site. However, in the short-term, construction-related impacts to sensitive biological resources could occur. This section provides a discussion of the potential project-related impacts to biological resources and recommends measures to address these potential short-term impacts.

5.1 Special Status Plant Species

As discussed previously, the potential for special-status plant species to occur on the project site is considered unlikely based on historic disturbances to the site and the results of surveys conducted in surrounding areas. However, appropriately timed surveys for special-status plant species would be required to establish with certainty that no special-status plant species are present.

Recommended Measure 1

Appropriately timed surveys for special-status plants shall be conducted. These surveys should be conducted during the blooming period of potentially occurring species, which occurs from late June to October.

5.2 Special Status Wildlife Species

Potential impacts to special-status wildlife species are broken out into the following groups: mammals, amphibians, birds, fish, and fairy shrimp. The proposed project would require the issuance of a Section 404 permit from the Corps. The issuance of the permit will likely require consultation, either formal or informal, with the USFWS and National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) under Section 7 of the federal Endangered Species Act (ESA) to address the potential project-related "take" of endangered species. The successful completion of consultation with these agencies will result in the issuance of a Biological Opinion (formal consultation) or letters of concurrence (informal consultation), which will specify measures to be implemented to prevent "take" from occurring. The measures recommended in this section are anticipated to be required in the project Biological Opinion or letters of concurrence.

No excavation/restoration activities shall occur on the project site prior to the completion of the Section 7 consultation and receipt of all appropriate permits. The applicant shall comply with all permit conditions.

5.2.1 Mammals

Salt marsh harvest mouse: ***Federal Endangered, State Endangered, State Fully Protected***. The salt marsh harvest mouse occurs only in the saline emergent wetlands of the San Francisco Bay and its tributaries. The primary habitat for this rodent is pickleweed-dominated, tidal salt marsh adjacent to higher elevation areas where it may escape during periods of high water. The nearby tidal marsh provides a large area of suitable pickleweed habitat for this species. The project site, which was filled long ago, currently provides only marginal habitat in the form of small, fragmented patched of pickleweed amongst upland, ruderal weeds. The site is also separated from nearby suitable habitat areas by dispersal barriers (railroad tracks, Railroad Ave., and the Bay Trail berm). Though it is unlikely that salt marsh harvest mice have colonized the pickleweed patches on the site, individuals may occasionally disperse into these areas from nearby suitable habitats, where they could potentially be injured or killed by restoration activities if present during the construction period.

San Pablo vole: ***California Species of Special Concern***. San Pablo vole is a burrowing rodent that is found primarily in the salt marshes of San Pablo Creek and on the south shore of San Pablo Bay. The species also uses grassland habitat in the vicinity of salt marshes. The

microhabitat for this species is described by the CNDDB as soft soils where the rodent may construct burrows. The nearby tidal marsh provides a large area of suitable pickleweed habitat for this species. The project site, which was filled long ago, currently provides only marginal habitat in the form of small, fragmented patched of pickleweed amongst upland, ruderal weeds. The site is also separated from nearby suitable habitat areas by dispersal barriers (railroad tracks, Railroad Ave., and the Bay Trail berm). Though it is unlikely that San Pablo vole have colonized the pickleweed patches on the site, individuals may occasionally disperse into these areas from nearby suitable habitats, where they could potentially be injured or killed by restoration activities if present during the construction period.

Recommended Measure 2

For informational purposes, the below types of avoidance measures are typically required by the USFWS and CDFG to prevent the "take" of salt marsh harvest mouse. However, as the Biological Opinion has not yet been issued and its content is unknown, the USFWS or CDFG could require other measures.

Prior to any excavation within salt marsh harvest mouse habitat, temporary fencing (designed to prevent entry of salt marsh harvest mice) shall be installed around the perimeter of the proposed excavation area to prevent entry of rodents from nearby habitat areas.

5.2.2 Amphibians

California red-legged frog: *Federally Threatened, California Species of Special Concern.* The project site does not provide favorable habitat for the species and could not sustain resident red-legged frogs. More specifically, suitable breeding habitat is not present on or adjacent to the project site for the following reasons: (1) the onsite drainage channel is not suitable breeding habitat given high salinity levels and the lack of open water habitats of suitable size; (2) the small freshwater seasonal pool within the grassland does not pond to adequate depth or duration to support breeding by the species; (3) the lower reach of Pinole Creek is tidally influenced and has high salinity levels; and (4) the nearby freshwater marsh is choked with cattails and lacks open water habitats. However, the species is known to occur in Pinole Creek, approximately 4 miles upstream of the project site (CNDDB) and there is some potential that non-breeding frogs could disperse to the lower reach of the creek. The species is also known to occur in nearby Refugio Creek and there is potential that red-legged frogs could occupy the nearby ponds and that non-breeding frogs could disperse to the adjacent freshwater marsh. Therefore, as there is potential that the species could occur in nearby habitats, there is a low potential that the species could temporarily and infrequently

occur on the project site. In the unlikely event that the species is present during the removal of fill and other restoration activities, individuals of this species could be injured or killed.

Recommended Measure 3

Given the presence of marginal aquatic habitat and the low potential of California red-legged frog to infrequently occur on the project site, it is expected that a preconstruction clearance survey, as described below, would be adequate to prevent any "take" of the species from occurring. However, additional measures to protect California red-legged frog could be required by the USFWS under Section 7 of the federal ESA.

Immediately preceding the commencement of restoration activities, a clearance survey for California red-legged frog shall be conducted by a qualified biologist. If California red-legged frogs are found, project-related activities will be postponed, and the USFWS would be consulted to determine the extent of potential impacts to individual frogs and to identify measures to avoid these impacts.

5.2.3 Birds

Cooper's hawk: ***California Species of Special Concern***. Suitable nesting habitat for this species is present on and adjacent to the project site. Alternative A will include the removal of some large trees along the adjacent housing development and both Alternatives A and B will involve prolonged construction activities adjacent to such trees. These activities could result in the direct loss or abandonment of an active nest of this special-status bird species.

Tricolored blackbird: ***Federal Bird of Conservation Concern, California Species of Special Concern***. Though the species has not been documented near the project site, suitable nesting habitat for this species is present within in the freshwater marsh adjacent to the project site. However, given the moderate to low noise levels associated with the proposed restoration project, the distance suitable nesting habitat occurs from the project site, and that the species has not been documented nesting near the site, it is not expected that noise associated with the proposed project would disrupt nesting by the species.

Great egret and great blue heron: ***Special Animal***. Rookeries of these bird species are considered sensitive by the CDFG. These bird species have been observed foraging within Pinole Creek and the trees on or near the project site could be used as a rookery. From a habitat perspective, the enhancement of pickleweed wetland and marsh habitat represents a net benefit to the species. However, Alternative A will include the removal of some large trees along the adjacent housing development and both Alternatives A and B will involve prolonged construction activities adjacent to such trees. These activities could result in the direct loss or abandonment of an active rookery.

Burrowing owl: ***Federal Bird of Conservation Concern, California Species of Special Concern***. No suitable ground squirrel or other small mammal burrows were observed on the project site. Additionally, based on the CNDDB, the species has not been documented nesting within 16 miles of the project site. However, the species has been observed wintering (non-breeding) near the project site by Pacific Biology. Therefore, though nesting on the site is considered unlikely, the species could temporarily occur on the site as a winter migrant and utilize structures such as culverts for shelter. Should a wintering owl occur, the proposed project could result in the disturbance or injury to the owl.

Northern harrier: ***California Species of Special Concern***. Based on the presence of suitable habitat, this ground nesting species could nest on the project site. From a habitat perspective, the enhancement of pickleweed wetland and marsh habitat represents a net benefit to the species. However, because the proposed project would involve restoration activities in areas potentially used for nesting by the species, an active nest of the species could be destroyed or disturbed if present during these activities.

White-tailed kite: ***California Fully Protected***. This species frequently forages in the project area and could nest on or near the project site. Alternative A will include the removal of some large trees along the adjacent housing development and both Alternatives A and B will involve prolonged construction activities adjacent to such trees. These activities could result in the direct loss or abandonment of an active nest of this special-status bird species.

Saltmarsh common yellowthroat: ***California Species of Special Concern***. Based on the presence of suitable habitat, this species could nest within the marsh habitat along the onsite drainage channel, as well nearby marsh habitats along Pinole Creek. From a habitat perspective, the enhancement of pickleweed wetland and marsh habitat represents a net benefit to the species. However, as the proposed project would involve restoration activities in and near areas potentially used for nesting by the species, an active nest of the species could be destroyed or disturbed if present during these activities.

California black rail: ***State Threatened***; **California clapper rail:** ***Federally Endangered, State Endangered***. In the site's current condition, it provides marginal habitat for these species due to the limited extent of tidal marsh vegetation and lack of tidal channels. However, the California black rail was documented in the nearby tidal marsh in 2001 (CNDDB) and the California clapper rail has potential to occur in the nearby tidal marsh based on the presence of suitable habitat. From a habitat perspective, the enhancement of pickleweed wetland habitat represents a net benefit to these species. Though these species could nest in the nearby tidal marsh, potential nesting habitat is separated from the site by a row of trees, the San Francisco Bay trail, an unused road, and an actively used railroad right-

of-way. Given these factors, and the moderate to low noise levels associated with the proposed restoration project, it is unlikely that an active nest of either species would be disturbed, should one occur within the nearby tidal marsh.

Alameda song sparrow: *California Species of Special Concern*. This species has been observed displaying nesting behavior near the project site, within the brackish marsh bordering the lower reach of Pinole Creek. Suitable nesting habitat is also present onsite for the species. From a habitat perspective, the enhancement of pickleweed wetland and marsh habitat represents a net benefit to the species. However, as the proposed project would involve restoration activities in and near areas potentially used for nesting by the species, an active nest of the species could be destroyed or disturbed if present during these activities.

Osprey: *California Species of Special Concern*. This species is regularly observed foraging near the project site and could nest on or near the site. Alternative A will include the removal of some large trees along the adjacent housing development and both Alternatives A and B will involve prolonged construction activities adjacent to such trees. These activities could result in the direct loss or abandonment of an active nest of this special-status bird species.

Recommended Measure 4

The preferred measure for avoiding impacts to special status bird species is to perform all construction activities outside of the nesting/breeding season. This would provide a construction window of approximately September through January. If construction activities must occur during the nesting/breeding season, the following measures will be implemented.

(A) Within two weeks prior to the commencement of restoration activities that would occur during the nesting/breeding season of native bird species potentially nesting/roosting on the site (typically February through August in the project region), the applicant shall have a survey conducted by a qualified biologist (*e.g.,* experienced with the nesting behavior of bird species of the region). The intent of the survey will be to determine if active nests or roosts of special-status bird species or other species protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code are present in the construction zone or within 200 feet (500 feet for raptors) of the construction zone. These surveys shall be timed such that the last survey is concluded no more than two weeks prior to initiation of construction or tree removal work. If ground disturbance activities are delayed, then an additional pre-construction survey will be conducted such that no more than two weeks

will have elapsed between the last survey and the commencement of ground disturbance activities.

If active nests are found in areas that could be directly affected or subject to prolonged restoration-related noise, a no-disturbance buffer zone will be created around active nests during the breeding season or until a qualified biologist determines that all young have fledged. The size of the buffer zones and types of construction activities restricted within them will be determined through consultation with the CDFG, taking into account factors such as the following:

a. Noise and human disturbance levels at the project site at the time of the survey and the noise and disturbance expected during the restoration activity;
b. Distance and amount of vegetation or other barriers (i.e. houses, Bay Trail, road, railroad tracks) between the project site and the nest; and
c. Sensitivity of individual nesting species and behaviors of the nesting birds.

Limits of construction to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers, and construction personnel will be instructed on the sensitivity of nest areas. The biologist shall serve as a construction monitor during those periods when restoration activities would occur near active nest areas to ensure that no inadvertent impacts on these nests occur.

(B) Prior to the commencement of restoration activities that would occur during the nesting/breeding season of clapper rail and black rail (typically February through August), surveys for these species will be performed in areas of the nearby tidal marsh within 600 ft of the project boundary using methods acceptable to USFWS and CDFG. If rails are detected during these surveys, appropriate disturbance buffers and avoidance measures will be established through consultation with CDFG and USFWS, taking into account site-specific conditions such as those listed in measure 4(A) above.

(C) Prior to restoration or site preparation activities occurring during the non-nesting season of burrowing owl (typically September through January), a qualified biologist shall conduct a clearance survey for wintering burrowing owls. The survey shall be conducted no more than 14 days prior to commencement of restoration activities. If non-breeding burrowing owls are

observed within the disturbance footprint, they would be excluded from all occupied burrows through the use of exclusion devices placed in occupied burrows in accordance with CDFG protocols (CDFG 1995). Specifically, exclusion devices, utilizing one-way doors, shall be installed in the entrance of all active burrows. The devices will be left in the burrows for at least 48 hours to ensure that all owls have been excluded from the burrows. Each of the burrows will then be excavated by hand and refilled to prevent reoccupation. Exclusion shall continue until the owls have been successfully excluded from the site, as determined by a qualified biologist.

5.2.4 Fish

Steelhead trout: ***Federally Threatened***. Individuals of this species potentially occurring in Pinole Creek would be part of the Central California Coast ESU (evolutionarily significant unit). Steelhead are the anadromous form of *O. mykiss*. *O. mykiss* have a highly flexible life history and may follow a variety of life-history patterns including freshwater residents (non-migratory) at one extreme and individuals that migrate to the open ocean (anadromous) at another extreme. Intermediate life-history patterns include fish that migrate within the stream (potamodromous), fish that migrate only as far as estuarine habitat, and fish that migrate to near-shore ocean areas. The species has been reported in Pinole Creek on numerous occasions between 1975 and 2002 (Leidy et al. 2005). These reports included an adult steelhead in Simas Creek (a tributary to Pinole Creek) in April 2002 (Leidy et al. 2005). A large number of *O. mykiss* were stocked in Pinole Creek in 1984 and possibly on earlier occasions as well though these introductions may not have been successful (Leidy et al. 2005). The onsite channel provides marginal habitat for this species given that it is relatively narrow (approximately 3 feet) and shallow (approximately 0-3 feet depending on the tide), and lacks open pools. Additionally, to enter the onsite channel, individual fish would need to move through the 3-ft culvert under the walkway/access road. However, given that steelhead are known to occur in Pinole Creek, individual fish (particularly juveniles) could enter the onsite drainage channel. Should the species be present within the disturbance zone, restoration-associated activities could result in the loss or harm of individual steelhead.

Chinook salmon: ***Federally Threatened/California Threatened***, ***California Species of Special Concern***. Individuals of this species potentially occurring in the project area would be part of the Central Valley spring run (Federally Threatened/California Threatened), Central Valley winter-run (Federally Endangered/California Endangered), or the Central Valley fall/late fall run (California Species of Special Concern). This anadromous fish species migrates up rivers/creeks to spawn and juveniles then return to the ocean. Chinook salmon have been observed in many of the tributaries to San Francisco Bay although many if not all of these sightings may be strays of hatchery origin (Hagar Environmental Science 2007). Chinook salmon have not been reported in lower Pinole Creek. The onsite channel provides

marginal habitat for this species given that it is relatively narrow (approximately 3 feet) and shallow (approximately 0-3 feet depending on the tide), and lacks open pools. Additionally, to enter the onsite channel, individual fish would need to move through the 3-ft culvert under the walkway/access road. However, there is a low potential that juveniles and smolts could occur within Pinole Creek briefly during rearing or migration periods and enter the onsite channel. In the unlikely event that the species be present within the disturbance zone, restoration-associated activities could result in the loss or harm of individual Chinook salmon.

Tidewater goby: ***Federally Endangered, California Species of Special Concern***. The tidewater goby is restricted to coastal, brackish-water habitats in California and is found primarily in discrete lagoons, estuaries or stream mouths. The species has not been documented in Pinole Creek. However, as available information indicates that the species is tolerant of a very wide range of salinity, temperature, and other water quality conditions, there is slight potential that the species could occur in lower Pinole Creek. The onsite channel provides marginal habitat for this species given that it is relatively narrow (approximately 3 feet) and shallow (approximately 0-3 feet depending on the tide), and lacks open pools. Additionally, to enter the onsite channel, individual fish would need to move through the 3-ft culvert under the walkway/access road. However, there is a low potential that the species could occur in Pinole Creek and enter the onsite drainage channel. In the unlikely event that the species be present within the disturbance zone, restoration-associated activities could result in the loss or harm of individual tidewater goby.

Recommended Measure 5

A qualified fisheries biologist shall be present at the outset of work occurring within the small tidal channel. The biologist will implement USFWS and NMFS approved procedures to ensure that no special status species are harmed during construction. The biologist will survey the channel at low tide to confirm that no fish are present, after which the culvert will be blocked using an approved fish exclusion device until excavation is complete. If fish are found in the channel during the survey, they will be netted, and released in Pinole Creek.

5.2.5 Fairy Shrimp

Based on a review of the CNDDB, the closest documented occurrence of a federally-listed fairy shrimp species is approximately 12 miles north of the project site, where vernal pool fairy shrimp have been documented. Therefore, no fairy shrimp species were included in Table 1. However, as surveys for federally-listed fairy shrimp species have been required by the USFWS for projects within the City of Hercules, a discussion of the potential onsite occurrence of federally-listed shrimp species is provided below.

Potential habitat for federally-listed fairy shrimp on the project site is limited to the single ephemeral pool located within the grassland at the base of the Bay Trail Berm along the northern site boundary. This area contains a small area of standing freshwater (approximately 4-5 inches in depth) for short periods and, based on a well-developed invertebrate population (*e.g.,* daphnia, beetles) and the presence of pacific tree frog egg masses, standing water persists for sufficient duration to support fairy shrimp. However, the occurrence of federally-listed shrimp species within the pool is considered unlikely for the following reasons:

- The project site was historically a tidal marsh and did not contain suitable fairy shrimp habitat. Fill has been deposited on the site and the single freshwater seasonal pool occurs on these fill soils. Therefore, the seasonal pool is not a natural feature and vernal pool fairly shrimp cysts would need to be introduced to the pool from a location greater than 12 miles from the site.

- Federally-listed fairy shrimp are not known from the project area. The closest documented occurrence of a federally-listed shrimp species is approximately 12 miles north of the project site. Additionally, no federally-listed fairy shrimp were identified in the project area during protocol wet season surveys in 2003-2004 by Condor Country Consulting and 2006-2007 by Vollmar Consulting, which were conducted approximately 0.7 mile north of the project site within the railroad right-of-way.

Given that federally-listed shrimp species are not expected to occur, no measures are required.

5.3 Sensitive Plant Communities and Jurisdictional Resources

The project is intended to expand and restore onsite tidal marsh habitat to reflect historic site conditions. To accomplish these goals, construction activities would occur in wetland habitat under the jurisdiction of the Corps. Impacts to these habitats are displayed in Figure 6. The construction of the project will result in the alteration of **0.315 acre** of freshwater wetland and **0.399 acre** of brackish/salt marsh. The brackish/salt marsh also qualifies as pickleweed wetland, which is considered a sensitive plant community by CDFG. In addition, **0.296 acre** of the on-site channel and associated adjacent salt marsh vegetation will be removed. The total area of habitats under Corps jurisdiction that are permanently impacted in this project is therefore **1.01 acres**.

The construction activities will not directly impact the wetland habitats on the existing marsh-upland transitional parcel (HOA parcel). However, there could be long term indirect impacts to these areas due to alterations in ground water levels and salinity on the property following restoration. The increased tidal prism on the property may lead to increased groundwater levels and groundwater salinities. These changes may cause an expansion in the area of salt marsh habitat and a conversion of freshwater seasonal wetlands to salt marsh. In addition, the increased volume of water transferred into the existing drainage channel from the new tidal channel may cause deepening and widening of the existing channel, leading to an expansion of this habitat type and associated adjacent tidal marsh habitats. These impacts are viewed to be beneficial to the habitat value of the site and will not require any mitigation.

There will be impacts to Corps jurisdictional habitats on Pinole Creek due to the construction of the flood overflow weir and culvert array on the District maintenance road. The new culvert array will include an outfall structure on the creek bank created from concrete and rip-rap materials, which will result in the loss of **0.009 acre** of coastal brackish marsh. Depending on the final engineering designs, it may be necessary to armor the creek bank along the weir with rip-rap to prevent erosion to the road and bank during flood-overflow events. This activity will result in the loss of **0.059 acre** of coastal brackish marsh. The total area of habitats on Pinole Creek under Corps jurisdiction that could be permanently impacted is therefore **0.068 acre**. These areas will also fall under CDFG jurisdiction if it is determined that the tidal reach of Pinole Creek qualifies as "stream" habitat under Section 1602 of the California Fish and Game Code.

The project will be self mitigating for losses of salt/brackish marsh and channel habitats as it will result in a net increase in these habitat types. There will be a net loss of freshwater wetland habitats due to project construction, however these habitats are fragmented and due to their small size are presumed to be of low habitat value. The restoration of the site to its original state (tidal marsh) should be adequate mitigation for any loss of freshwater wetlands.

5.4 Protected Trees

The City of Hercules defines a "mature tree" as any tree with a Diameter at Breast Height (DBH) larger than 12 inches. The removal of any mature trees in conjunction with a development project requires the creation of a Tree Replacement Plan that must be reviewed and accepted by the City.

The construction of the optional berm along the Chelsea by the Bay housing development will require the removal of several trees, some of which will qualify as mature trees.

Recommended Measure 6

Once the project plans have been finalized, a qualified botanist will determine the number of mature and non-mature trees to be removed and an appropriate Tree Replacement Plan will be developed. The Plan will incorporate the replacement of all mature trees into the restoration design at a minimum 1:1 ratio. The trees will be replaced with native varietals planted along the upland margins of the restoration area

6 Conclusions

Though in the long-term the proposed project would result in the increased habitat value of the project site, short-term restoration-related impacts to sensitive biological resources could occur. The measures recommended by this report would reduce any potential impacts to sensitive biological resources to below a level of significance.

The proposed project would require the issuance of a Section 404 permit from the Corps and compliance with all specified permit conditions. The issuance of the permit is expected to require consultation, either formal or informal, with the USFWS and NMFS under Section 7 of the federal Endangered Species Act for the potential take of salt marsh harvest mouse, California clapper rail, and federally-listed fish species. The consultation process with these agencies could result in additional avoidance and mitigation measures. In addition, a Section 401 Certification from the Regional Water Quality Control Board would be required. A CDFG Section 1600 permit is normally not required for projects in tidally influenced areas.

7 References

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Tables

Table 1
Special-Status Wildlife Species Documented in the Project Area

Common and Scientific Name	Status		Habitat Requirements	Historical and Potential Occurrence
	Federal	State		
Mammals				
Pallid bat *Antrozous pallidus*	--	CSC	Inhabits deserts, grasslands, shrublands, woodlands and forests. Most commonly found in open, dry habitats with rocky areas for roosting. Also known to roost within oak woodlands.	***Not Expected*:** marginal roosting habitat present and the species prefers dry habitats.
San Pablo vole *Microtus californicus*	--	CSC	Inhabits salt marshes on the south shore of San Pablo Bay. Feeds on a wide variety of grasses, sedges, and herbs.	***Potential:*** in its current condition the project site provides limited potential habitat for the species. However, given the presence of suitable habitat in the neighboring large tidal marsh, and the presence of some pickleweed habitat on the site, there is some potential that the species could occur within the project boundaries.
Big free-tail bat *Nyctinomops macrotis*	--	CSC	Requires cliffs or rocky outcrops for roosting sites.	***Not Expected:*** suitable roosting habitat not present.
Salt marsh harvest mouse *Reithrodontomys raviventhris*	FE	CE, CFP	Pickleweed and salt marsh stands in tidal and diked coastal salt marshes.	***Potential:*** in its current condition the project site provides limited pickleweed habitat, which is the preferred habitat of the species. However, the species is known to occur within diked tidal marshes with similar habitat composition to the project site. Further, given the presence of suitable habitat in the neighboring large tidal marsh, and that the species occupies habitats surrounding tidal marshes to escape high tides, the species could occur within the project boundaries.
Salt-marsh wandering shrew *Sorex vagrans halicoetes*	--	CSC	Salt marshes of the south arm of San Francisco Bay; dense, low-lying pickleweed areas.	***Not Expected:*** outside of expected range of the species.
Suisun shrew *Sorex ornatus sinuosus*	--	CSC	Tidal marshes of the northern shores of San Pablo and Suisun Bay.	***Not Expected:*** outside of expected range of the species.

Table 1
Special-Status Wildlife Species Documented in the Project Area

Common and Scientific Name	Status		Habitat Requirements	Historical and Potential Occurrence
	Federal	State		
Amphibians and Reptiles				
Western pond turtle *Clemmys marmorata*	--	CSC	Aquatic habitats including ponds, streams, and irrigation ditches. Requires basking sites such as partially submerged logs, vegetation mats, or open mud banks.	***Not Expected*:** Suitable habitat not present on the project site. While the species could occur in Pinole Creek, high salinity levels in the lower reach of the creek (near the project site) likely deters the species from occurring (including egg laying in adjacent habitats). The nearby freshwater marsh lacks open water habitats of suitable size to support the species.
Alameda whipsnake *Masticolphis lateralis euryxanthus*	FT	CT	Inhabits south facing slopes and ravines where shrubs form vegetation mosaic with oak trees and grasses.	***Not Expected:*** suitable habitat is not present and the project site is outside of expected distribution of the species.
California red-legged frog *Rana draytonii*	FT	CSC, CP	Permanent water sources such as ponds, lakes, reservoirs, streams and adjacent riparian woodlands.	***Potential*:** the project site does not provide favorable habitat for the species and cannot sustain resident frogs. However, the species is known to occur in Pinole Creek, approximately 4 miles upstream of the project site (CNDDB) and there is some potential that non-breeding frogs could disperse to the lower reach of the creek. The species is also known to occur in nearby Refugio Creek and there is some potential that frogs could occur in the nearby ponds and disperse to the adjacent freshwater marsh. As there is potential the species could occur in nearby habitats, there is low potential that the species could temporarily and infrequently occur on the project site.
Birds				
Cooper's hawk (nesting) *Accipiter cooperi*	--	CSC	Inhabits primarily open, interrupted or marginal woodlands. Nests mainly in riparian groves of deciduous trees in canyon bottoms on river flood-plains. Also nests in coast live oak.	***Potential:*** trees on and bordering the project site provide suitable nesting habitat.

Table 1
Special-Status Wildlife Species Documented in the Project Area

Common and Scientific Name	Status		Habitat Requirements	Historical and Potential Occurrence
	Federal	State		
Tricolored blackbird (nesting colony) *Agelaius tricolor*	BCC	CSC	Nests in freshwater marshes and riparian scrub.	***Potential (near project site):*** suitable nesting habitat is present in the adjacent freshwater marsh, but onsite habitats are marginal.
Great egret (rookery) *Ardea alba*	--	***	Nests colonially in large trees. Rookery sites are typically located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.	***Potential:*** trees on and bordering the project site provide suitable rookery habitat; no rookeries have been reported. Extent of local urbanization reduces rookery potential.
Great blue heron (rookery) *Ardea herodias*	--	***	Nests colonially in tall trees, cliff sides, and sequestered spots on marshes. Rookery sites are usually in close proximity to foraging areas such as marshes, lake margins, tide-flats, wet meadows, rivers, and streams.	***Potential:*** trees on and bordering the project site provide suitable rookery habitat; no rookeries have been reported. Extent of local urbanization reduces rookery potential.
Short-eared owl (nesting) *Asio flammeus*	--	CSC	Found in open areas with few trees such as grasslands, prairies, meadows, dunes, irrigated lands, and saline and fresh emergent marshes; builds nest on ground.	***Not Expected***: not known to nest in the project region; could occur as a winter migrant.
Western burrowing owl (occupied burrow sites) *Athene cunicularia*	BCC	CSC	Forages and nests in grasslands and open scrub with small mammal burrows.	***Potential:*** no ground squirrel burrows or other suitable small mammal burrows observed and nesting by the species has not been observed within 16 miles of the project site (CNDDB). Therefore, it is unlikely that the species nests on the site. However, the species could occur as a winter migrant and utilize structures such culverts as shelter.
Northern harrier (nesting) *Circus cyaneus*	--	CSC	Inhabits coastal salt and freshwater marshes. Nests and forages in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge. Nests are large mounds of sticks in wet areas.	***Potential*****:** suitable nesting habitat present. Extent of local urbanization reduces rookery potential.
Yellow warbler (nesting) *Dendroica petechia brewsteri*	--	CSC	Found in riparian areas.	***Not Expected:*** suitable riparian woodland/scrub habitats are not present on the project site.

Table 1
Special-Status Wildlife Species Documented in the Project Area

Common and Scientific Name	Status		Habitat Requirements	Historical and Potential Occurrence
	Federal	State		
White-tailed kite (nesting) *Elanus leucurus*	--	CFP	Usually nests in large bushes or trees, often in isolated stand, surrounded by open foraging habitat.	***Potential:*** species frequently occurs in the project area and suitable nesting habitat is present on and near the project site.
Saltmarsh common yellowthroat (nesting) *Geothlypis trichas sinuosa*	--	CSC	Fresh and salt water marshes; requires thick continuous cover down to water surface for foraging.	***Potential:*** suitable nesting habitat is present on and bordering the project site.
California black rail *Laterallus jamaicensis coturniculus*	--	CT	Salt marshes bordering larger bays; pickleweed typically present.	***Potential (near project site):*** in its current condition, the project site provides marginal habitat for the species. However, the species has been documented in the pickleweed tidal marsh near the project site.
Alameda song sparrow (nesting) *Melospiza melodia pusilluia*	--	CSC	Inhabits salt marshes bordering south arm of San Francisco Bay. Nests low in grinelia bushes and in salcornia.	***Potential:*** known to nest in the project area, including brackish marsh habitats along Pinole Creek. Some suitable nesting habitat present on the project site.
Osprey (nesting) *Pandion haliaetu*	--	CSC	Nests built in tree tops within 15-miles of a good fish producing body of water.	***Potential:*** observed in the project area; potential nesting habitat on and near the project site.
Double crested cormorant (rookery) *Phalacrocorax auritus*	--	CSC	Colonial nester on coastal cliffs, offshore islands, and along lake margins in the interior of the state.	***Not Expected:*** suitable nesting/roosting habitat not present.

Table 1
Special-Status Wildlife Species Documented in the Project Area

Common and Scientific Name	Status		Habitat Requirements	Historical and Potential Occurrence
	Federal	State		
California clapper rail *Rallus longirostris obsoletus*	FE	CE	Salt marshes bordering larger bays; pickleweed typically present.	***Potential (near project site):*** in its current condition, the project site provides marginal habitat for the species. However, the large tidal marsh near the project site provides suitable habitat.
Fish				
Green sturgeon *Acipenser medirostris*	FT	--	Spawn in deep pools or "holes" in large, turbulent, freshwater river mainstems including the Sacramento and Feather Rivers. Adults live in oceanic waters, bays, and estuaries when not spawning. Green sturgeons are believed to spend the majority of their lives in near-shore oceanic waters, bays, and estuaries.	***Not Expected:*** green sturgeon may potentially be found in the vicinity of lower Pinole Creek as foraging adults or juveniles. However, given the small size of the onsite drainage channel, shallow water depth, the density of emergent vegetation, and that the channel is separated from Pinole Creek by a culvert, the species is not expected to occur within the onsite drainage channel.
Delta smelt *Hypomesus transpacificus*	FT	CT	This fish is endemic to the upper Sacramento-San Joaquin estuary and occurs primarily in open, surface waters of Suisun Bay, in the Sacramento River upstream to Isleton, and in the San Joaquin River.	***Not Expected:*** the project site is outside of the expected distribution of the species. In the event that individual fish occur in Pinole Creek, it is very unlikely that the species would occur within the onsite drainage channel given its small size, shallow water depth, density of emergent vegetation, and that the channel is separated from Pinole Creek by a culvert.

Table 1
Special-Status Wildlife Species Documented in the Project Area

Common and Scientific Name	Status		Habitat Requirements	Historical and Potential Occurrence
	Federal	State		
Steelhead trout *Oncorhyncus mykiss*	FT	--	Highly flexible life history and may follow a variety of life-history patterns including freshwater residents (non-migratory) at one extreme and individuals that migrate to the open ocean (anadromous) at another extreme.	***Potential:*** the species has been reported in Pinole Creek on numerous occasions between 1975 and 2002 (Leidy et al. 2005). Juveniles and smolts could enter the onsite drainage channel, although it is considered to provide marginal habitat.
Chinook salmon *Oncorhynchus tshawytscha*	FT	CT	Migrates up rivers/creeks to spawn and juveniles then return to the ocean.	***Potential:*** the species has not been reported in Pinole Creek. However, there is some potential that juveniles and smolts could occur within Pinole Creek briefly during rearing or migration periods. If present in the creek, juveniles and smolts could enter the onsite drainage channel, although it is considered to provide marginal habitat.
Tidewater goby *Eucyclogobius newberyi*	FE	CSC	Restricted to coastal, brackish-water habitats in California and are found primarily in discrete lagoons, estuaries or stream mouths.	***Potential:*** the species has not been reported in Pinole Creek. However, as available information indicates that the species is tolerant of a very wide range of salinity, temperature, and other water quality conditions, there is some potential that the species could occur in lower Pinole Creek. If present in the creek, individuals could enter the onsite drainage channel, although it is considered to provide marginal habitat.

Status Key

Federal:

FE: Federal Endangered
FT: Federal Threatened
BCC: Federal Bird of Conservation Concern

State:

CE: California Endangered
CT: California Threatened
CSC: California Species of Special Concern
***: Special Animal

Figures

Appendix A:
Representative Site Photographs

Photo 1: Annual grasslands covering most of the project site

(photo by Dan Gillenwater, 3/5/2008)

Photo 2: Pickleweed wetland in a depressional area

(photo by Dan Gillenwater, 3/5/2008)

Photo 3: Tidal channel through site with associated marsh vegetation

(photo by Dan Gillenwater, 10/1/2007)

Photo 4: Small ephemeral freshwater pool

(photo by Dan Gillenwater, 2/12/2008)

Appendix B:
Verified Wetland Delineation Map

Tables

Table 1
Special-Status Wildlife Species Documented in the Project Area

Common and Scientific Name	Status		Habitat Requirements	Historical and Potential Occurrence
	Federal	State		
Mammals				
Pallid bat *Antrozous pallidus*	--	CSC	Inhabits deserts, grasslands, shrublands, woodlands and forests. Most commonly found in open, dry habitats with rocky areas for roosting. Also known to roost within oak woodlands.	***Not Expected*:** marginal roosting habitat present and the species prefers dry habitats.
San Pablo vole *Microtus californicus*	--	CSC	Inhabits salt marshes on the south shore of San Pablo Bay. Feeds on a wide variety of grasses, sedges, and herbs.	***Potential:*** in its current condition the project site provides limited potential habitat for the species. However, given the presence of suitable habitat in the neighboring large tidal marsh, and the presence of some pickleweed habitat on the site, there is some potential that the species could occur within the project boundaries.
Big free-tail bat *Nyctinomops macrotis*	--	CSC	Requires cliffs or rocky outcrops for roosting sites.	***Not Expected:*** suitable roosting habitat not present.
Salt marsh harvest mouse *Reithrodontomys raviventhris*	FE	CE, CFP	Pickleweed and salt marsh stands in tidal and diked coastal salt marshes.	***Potential:*** in its current condition the project site provides limited pickleweed habitat, which is the preferred habitat of the species. However, the species is known to occur within diked tidal marshes with similar habitat composition to the project site. Further, given the presence of suitable habitat in the neighboring large tidal marsh, and that the species occupies habitats surrounding tidal marshes to escape high tides, the species could occur within the project boundaries.
Salt-marsh wandering shrew *Sorex vagrans halicoetes*	--	CSC	Salt marshes of the south arm of San Francisco Bay; dense, low-lying pickleweed areas.	***Not Expected:*** outside of expected range of the species.
Suisun shrew *Sorex ornatus sinuosus*	--	CSC	Tidal marshes of the northern shores of San Pablo and Suisun Bay.	***Not Expected:*** outside of expected range of the species.

Table 1
Special-Status Wildlife Species Documented in the Project Area

Common and Scientific Name	Status		Habitat Requirements	Historical and Potential Occurrence
	Federal	State		
Amphibians and Reptiles				
Western pond turtle *Clemmys marmorata*	--	CSC	Aquatic habitats including ponds, streams, and irrigation ditches. Requires basking sites such as partially submerged logs, vegetation mats, or open mud banks.	***Not Expected*:** Suitable habitat not present on the project site. While the species could occur in Pinole Creek, high salinity levels in the lower reach of the creek (near the project site) likely deters the species from occurring (including egg laying in adjacent habitats). The nearby freshwater marsh lacks open water habitats of suitable size to support the species.
Alameda whipsnake *Masticolphis lateralis euryxanthus*	FT	CT	Inhabits south facing slopes and ravines where shrubs form vegetation mosaic with oak trees and grasses.	***Not Expected:*** suitable habitat is not present and the project site is outside of expected distribution of the species.
California red-legged frog *Rana draytonii*	FT	CSC, CP	Permanent water sources such as ponds, lakes, reservoirs, streams and adjacent riparian woodlands.	***Potential*:** the project site does not provide favorable habitat for the species and cannot sustain resident frogs. However, the species is known to occur in Pinole Creek, approximately 4 miles upstream of the project site (CNDDB) and there is some potential that non-breeding frogs could disperse to the lower reach of the creek. The species is also known to occur in nearby Refugio Creek and there is some potential that frogs could occur in the nearby ponds and disperse to the adjacent freshwater marsh. As there is potential the species could occur in nearby habitats, there is low potential that the species could temporarily and infrequently occur on the project site.
Birds				
Cooper's hawk (nesting) *Accipiter cooperi*	--	CSC	Inhabits primarily open, interrupted or marginal woodlands. Nests mainly in riparian groves of deciduous trees in canyon bottoms on river flood-plains. Also nests in coast live oak.	***Potential:*** trees on and bordering the project site provide suitable nesting habitat.

Table 1
Special-Status Wildlife Species Documented in the Project Area

Common and Scientific Name	Status		Habitat Requirements	Historical and Potential Occurrence
	Federal	State		
Tricolored blackbird (nesting colony) *Agelaius tricolor*	BCC	CSC	Nests in freshwater marshes and riparian scrub.	***Potential (near project site):*** suitable nesting habitat is present in the adjacent freshwater marsh, but onsite habitats are marginal.
Great egret (rookery) *Ardea alba*	--	***	Nests colonially in large trees. Rookery sites are typically located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.	***Potential:*** trees on and bordering the project site provide suitable rookery habitat; no rookeries have been reported. Extent of local urbanization reduces rookery potential.
Great blue heron (rookery) *Ardea herodias*	--	***	Nests colonially in tall trees, cliff sides, and sequestered spots on marshes. Rookery sites are usually in close proximity to foraging areas such as marshes, lake margins, tide-flats, wet meadows, rivers, and streams.	***Potential:*** trees on and bordering the project site provide suitable rookery habitat; no rookeries have been reported. Extent of local urbanization reduces rookery potential.
Short-eared owl (nesting) *Asio flammeus*	--	CSC	Found in open areas with few trees such as grasslands, prairies, meadows, dunes, irrigated lands, and saline and fresh emergent marshes; builds nest on ground.	***Not Expected***: not known to nest in the project region; could occur as a winter migrant.
Western burrowing owl (occupied burrow sites) *Athene cunicularia*	BCC	CSC	Forages and nests in grasslands and open scrub with small mammal burrows.	***Potential:*** no ground squirrel burrows or other suitable small mammal burrows observed and nesting by the species has not been observed within 16 miles of the project site (CNDDB). Therefore, it is unlikely that the species nests on the site. However, the species could occur as a winter migrant and utilize structures such culverts as shelter.
Northern harrier (nesting) *Circus cyaneus*	--	CSC	Inhabits coastal salt and freshwater marshes. Nests and forages in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge. Nests are large mounds of sticks in wet areas.	***Potential*:** suitable nesting habitat present. Extent of local urbanization reduces rookery potential.
Yellow warbler (nesting) *Dendroica petechia brewsteri*	--	CSC	Found in riparian areas.	***Not Expected:*** suitable riparian woodland/scrub habitats are not present on the project site.

Table 1
Special-Status Wildlife Species Documented in the Project Area

Common and Scientific Name	Status		Habitat Requirements	Historical and Potential Occurrence
	Federal	State		
White-tailed kite (nesting) *Elanus leucurus*	--	CFP	Usually nests in large bushes or trees, often in isolated stand, surrounded by open foraging habitat.	***Potential:*** species frequently occurs in the project area and suitable nesting habitat is present on and near the project site.
Saltmarsh common yellowthroat (nesting) *Geothlypis trichas sinuosa*	--	CSC	Fresh and salt water marshes; requires thick continuous cover down to water surface for foraging.	***Potential:*** suitable nesting habitat is present on and bordering the project site.
California black rail *Laterallus jamaicensis coturniculus*	--	CT	Salt marshes bordering larger bays; pickleweed typically present.	***Potential (near project site):*** in its current condition, the project site provides marginal habitat for the species. However, the species has been documented in the pickleweed tidal marsh near the project site.
Alameda song sparrow (nesting) *Melospiza melodia pusilluia*	--	CSC	Inhabits salt marshes bordering south arm of San Francisco Bay. Nests low in grinelia bushes and in salcornia.	***Potential:*** known to nest in the project area, including brackish marsh habitats along Pinole Creek. Some suitable nesting habitat present on the project site.
Osprey (nesting) *Pandion haliaetu*	--	CSC	Nests built in tree tops within 15-miles of a good fish producing body of water.	***Potential:*** observed in the project area; potential nesting habitat on and near the project site.
Double crested cormorant (rookery) *Phalacrocorax auritus*	--	CSC	Colonial nester on coastal cliffs, offshore islands, and along lake margins in the interior of the state.	***Not Expected:*** suitable nesting/roosting habitat not present.

Table 1
Special-Status Wildlife Species Documented in the Project Area

Common and Scientific Name	Status		Habitat Requirements	Historical and Potential Occurrence
	Federal	State		
California clapper rail *Rallus longirostris obsoletus*	FE	CE	Salt marshes bordering larger bays; pickleweed typically present.	***Potential (near project site):*** in its current condition, the project site provides marginal habitat for the species. However, the large tidal marsh near the project site provides suitable habitat.
Fish				
Green sturgeon *Acipenser medirostris*	FT	--	Spawn in deep pools or "holes" in large, turbulent, freshwater river mainstems including the Sacramento and Feather Rivers. Adults live in oceanic waters, bays, and estuaries when not spawning. Green sturgeons are believed to spend the majority of their lives in near-shore oceanic waters, bays, and estuaries.	***Not Expected:*** green sturgeon may potentially be found in the vicinity of lower Pinole Creek as foraging adults or juveniles. However, given the small size of the onsite drainage channel, shallow water depth, the density of emergent vegetation, and that the channel is separated from Pinole Creek by a culvert, the species is not expected to occur within the onsite drainage channel.
Delta smelt *Hypomesus transpacificus*	FT	CT	This fish is endemic to the upper Sacramento-San Joaquin estuary and occurs primarily in open, surface waters of Suisun Bay, in the Sacramento River upstream to Isleton, and in the San Joaquin River.	***Not Expected:*** the project site is outside of the expected distribution of the species. In the event that individual fish occur in Pinole Creek, it is very unlikely that the species would occur within the onsite drainage channel given its small size, shallow water depth, density of emergent vegetation, and that the channel is separated from Pinole Creek by a culvert.

Table 1
Special-Status Wildlife Species Documented in the Project Area

Common and Scientific Name	Status		Habitat Requirements	Historical and Potential Occurrence
	Federal	State		
Steelhead trout *Oncorhyncus mykiss*	FT	--	Highly flexible life history and may follow a variety of life-history patterns including freshwater residents (non-migratory) at one extreme and individuals that migrate to the open ocean (anadromous) at another extreme.	***Potential:*** the species has been reported in Pinole Creek on numerous occasions between 1975 and 2002 (Leidy et al. 2005). Juveniles and smolts could enter the onsite drainage channel, although it is considered to provide marginal habitat.
Chinook salmon *Oncorhynchus tshawytscha*	FT	CT	Migrates up rivers/creeks to spawn and juveniles then return to the ocean.	***Potential:*** the species has not been reported in Pinole Creek. However, there is some potential that juveniles and smolts could occur within Pinole Creek briefly during rearing or migration periods. If present in the creek, juveniles and smolts could enter the onsite drainage channel, although it is considered to provide marginal habitat.
Tidewater goby *Eucyclogobius newberyi*	FE	CSC	Restricted to coastal, brackish-water habitats in California and are found primarily in discrete lagoons, estuaries or stream mouths.	***Potential:*** the species has not been reported in Pinole Creek. However, as available information indicates that the species is tolerant of a very wide range of salinity, temperature, and other water quality conditions, there is some potential that the species could occur in lower Pinole Creek. If present in the creek, individuals could enter the onsite drainage channel, although it is considered to provide marginal habitat.

Status Key

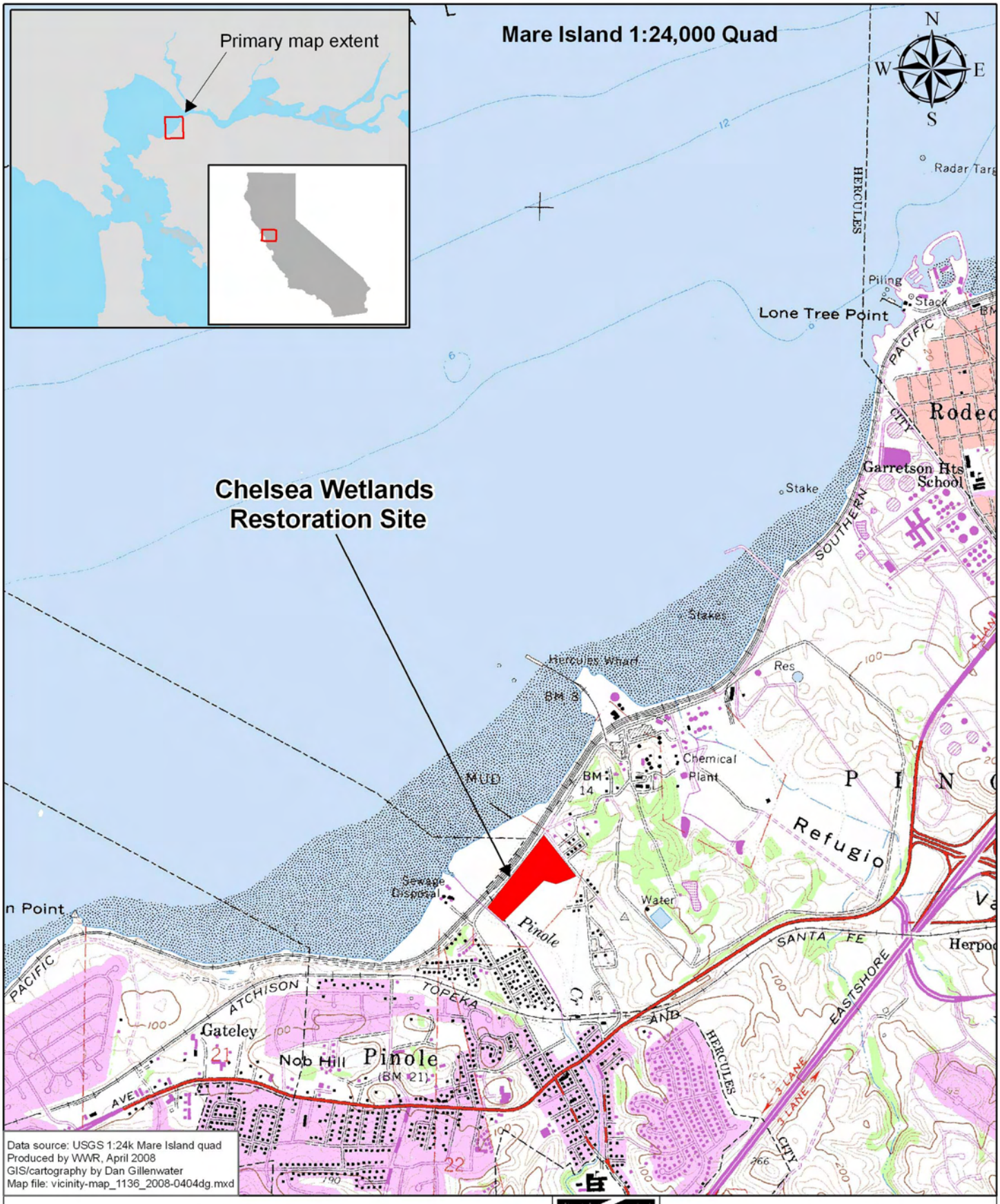
Federal:

FE: Federal Endangered
FT: Federal Threatened
BCC: Federal Bird of Conservation Concern

State:

CE: California Endangered
CT: California Threatened
CSC: California Species of Special Concern
***: Special Animal

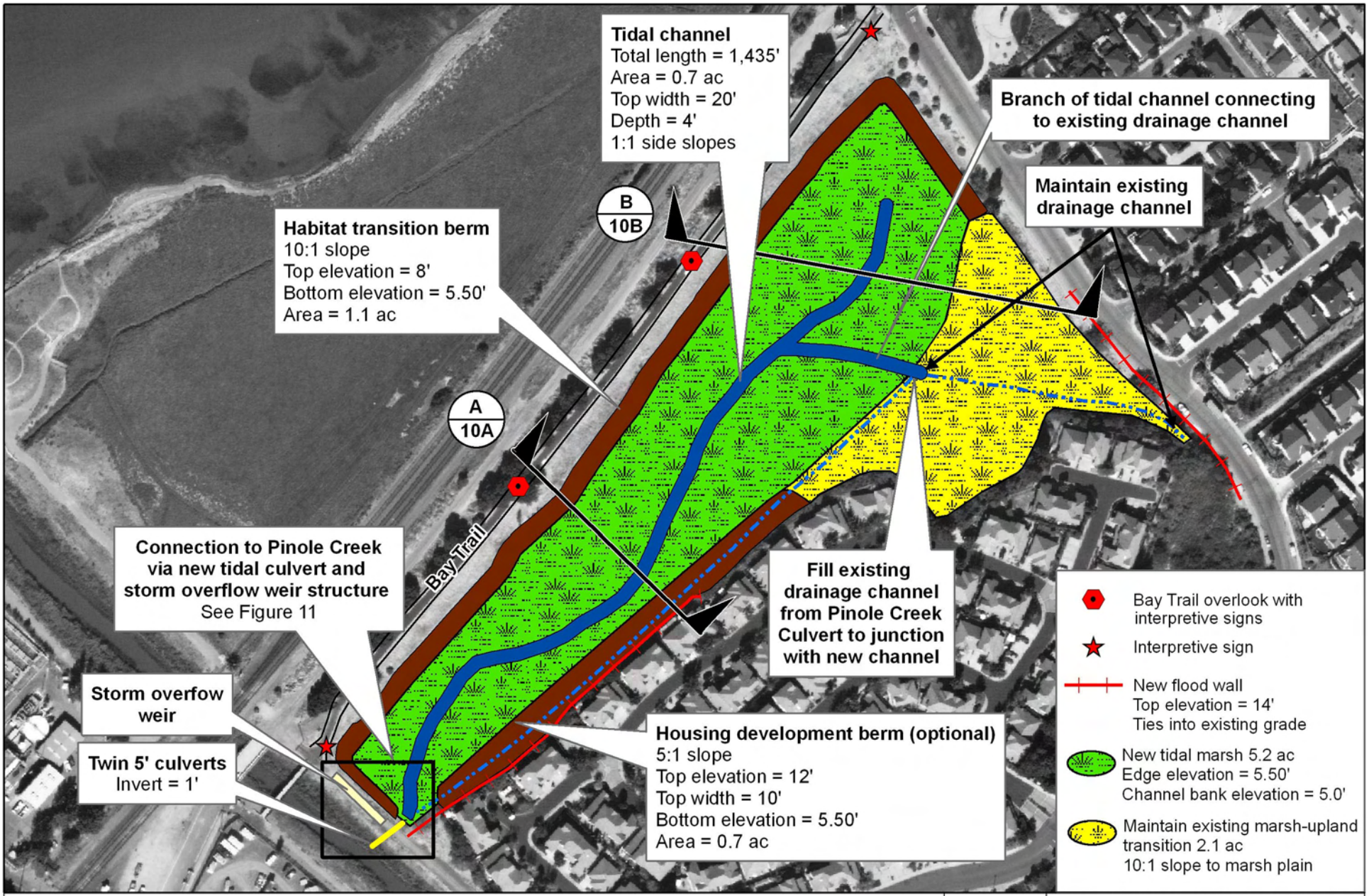
Figures



VICINITY MAP

Chelsea Wetlands Restoration Project
City of Hercules
Hercules, California

April 2008	Project No. 1136	Figure 1



All elevations in feet NAVD88

1:2,400 (1" = 200' at letter layout)

0 100 200 400 Feet

0 30 60 120 Meters

N W E S

Data Sources: Photo (USGS, 2004); Vector data (WWR, 2008)
Produced by WWR, Feb 2009
GIS/cartography by Dan Gillenwater
Map file: proposed-conditions_1136_2009-0211dg.mxd

CITY OF HERCULES CALIFORNIA

WETLANDS AND WATER RESOURCES, INC.

PROPOSED RESTORATION DESIGN

Chelsea Wetlands Restoration
City of Hercules
Hercules, California

February 2009 | Project No. 1136 | Figure 2

Data sources: photo (USGS, 2004); topo data (WWR, 2007)
Produced by WWR, March 2009
GIS/cartography by Dan Gillenwater
Map file: project-area_2009-0319dag.mxd

N
W E
S

1:3,600 (1" = 300' at letter layout)

0 150 300 600 Feet

0 45 90 180 Meters

CITY OF HERCULES · CALIFORNIA ·

WETLANDS AND WATER RESOURCES

SURROUNDING HABITATS AND LAND USE

Chelsea Wetlands Restoration Project
City of Hercules
Hercules, California

March 2009 | Project No. 1136 | Figure 3

N
W E
S

1:2,400 (1" = 200' at letter layout)

0 100 200 400 Feet

0 30 60 120 Meters

Data sources: photo (USGS, 2004); habitat data (WWR, 2008)
Produced by WWR, April 2009
GIS/cartography by Dan Gillenwater
Map file: biological-conditions_2009-0427dag.mxd

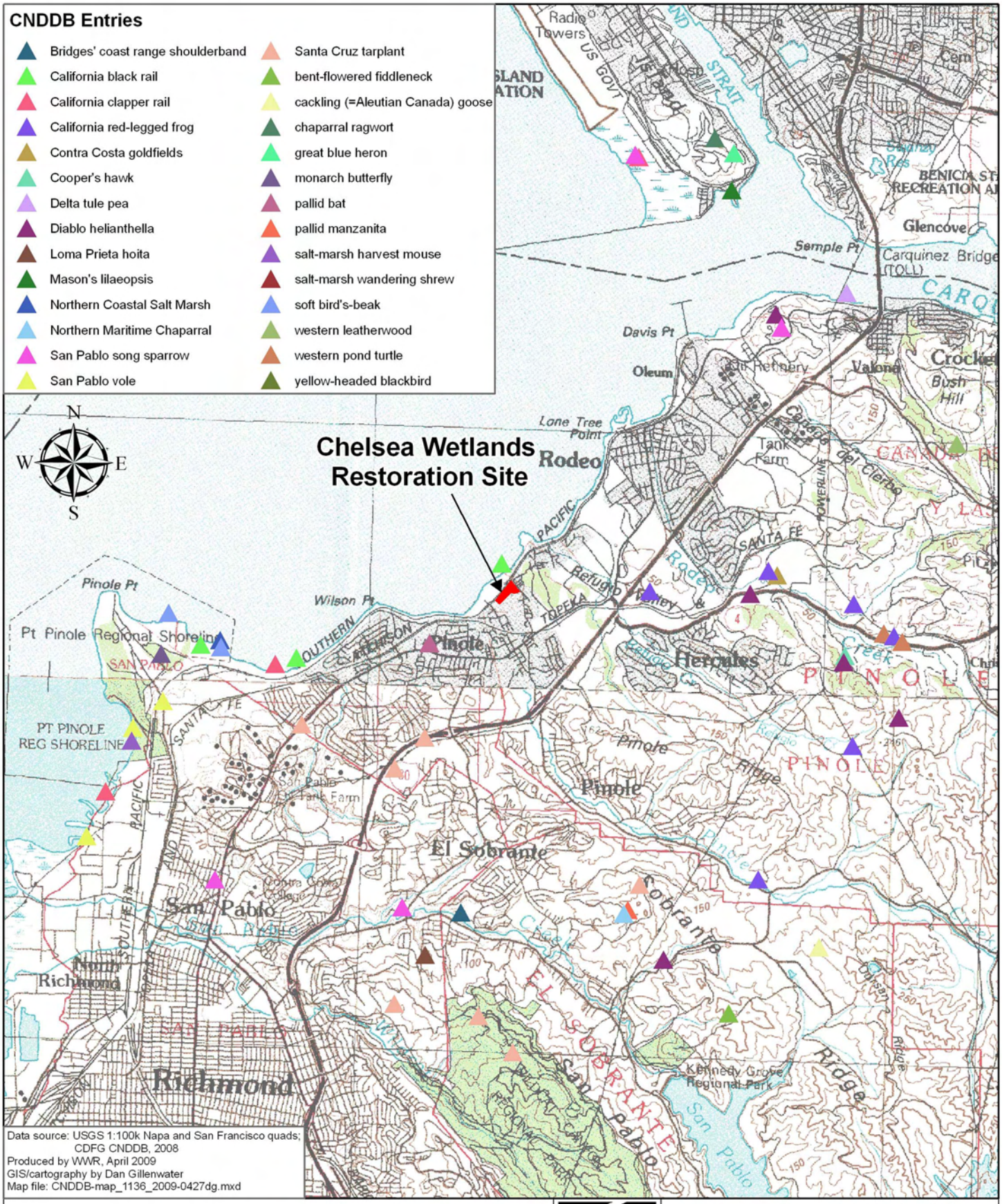
CITY OF HERCULES · CALIFORNIA ·

WETLANDS AND WATER RESOURCES

EXISTING BIOLOGICAL CONDITIONS

Chelsea Wetlands Restoration Project
City of Hercules
Hercules, California

April 2009 | Project No. 1136 | Figure 4



1:84,000(1" = 7,000' at letter layout)

0 7,000 14,000 Feet

0 1 2 Miles

WETLANDS AND WATER RESOURCES

CNDDB ENTRIES WITHIN 5 MI OF PROJECT SITE

Chelsea Wetlands Restoration Project
City of Hercules
Hercules, California

April 2009 | Project No. 1136 | Figure 5


Area (Acres) of Habitat Impacts on Project Site
Protected Habitat Type | On Site | Direct Loss | Indirect Impacts
Freshwater Wetland | 0.436 | 0.315 | 0.121
Pickleweed Wetland | 0.855 | 0.399 | 0.456
Salt-Alkali Marsh | 0.377 | 0.296 | 0.081
Brackish Bulrush-Cattail Wetland | 0.084 | 0 | 0.084
Total | 1.752 | 1.010 | 0.742
Impacts to Pinole Creek Habitats
(weir and culvert construction)
Coastal brackish marsh: 0.068 ac
Directly Impacted Areas: habitats altered by construction activities (all other habitats on site are indirectly impacted)
Santa Fe Ave
Railroad (Amtrak)
Pinole Creek
Chelsea by the Bay Housing Development
Weir bank stabilization
Culvert construction
Excavation footprint
1:2,400 (1" = 200' at letter layout)
0 100 200 400 Feet
0 30 60 120 Meters
N
W E
S
Data sources: photo (USGS, 2004); delineation data (WWR, 2008)
Produced by WWR, April 2009
GIS/cartography by Dan Gillenwater
Map file: Jurisdictional-impacts_2009-0427dag.mxd
CITY OF HERCULES CALIFORNIA
WETLANDS AND WATER RESOURCES
POTENTIAL IMPACTS TO JURISDICTIONAL RESOURCES
Chelsea Wetlands Restoration Project
City of Hercules
Hercules, California
April 2009
Project No. 1136
Figure 6

Appendix A:
Representative Site Photographs

Photo 1: Annual grasslands covering most of the project site

(photo by Dan Gillenwater, 3/5/2008)

Photo 2: Pickleweed wetland in a depressional area

(photo by Dan Gillenwater, 3/5/2008)

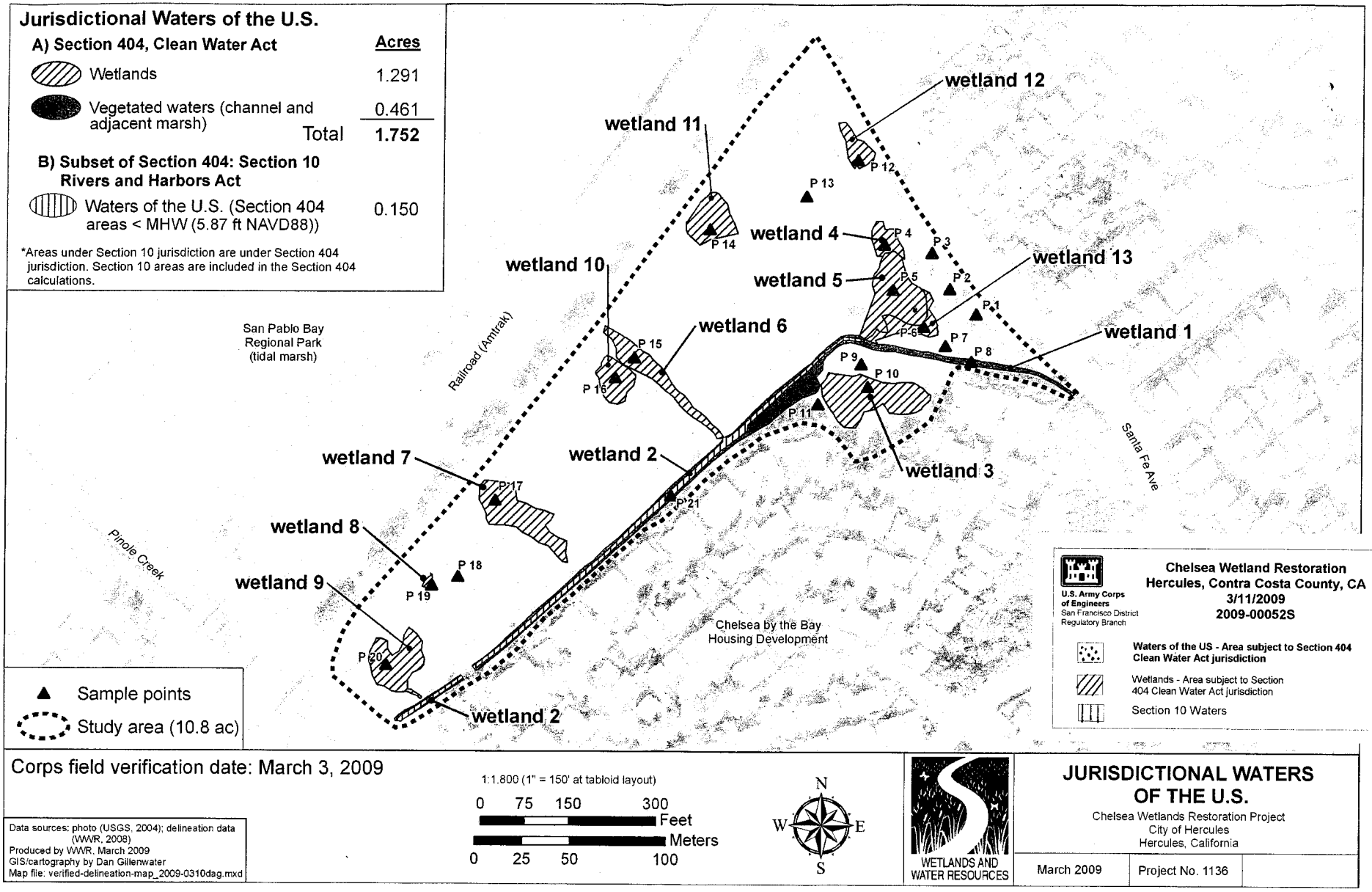
Photo 3: Tidal channel through site with associated marsh vegetation

(photo by Dan Gillenwater, 10/1/2007)

Photo 4: Small ephemeral freshwater pool

(photo by Dan Gillenwater, 2/12/2008)

Appendix B:
Verified Wetland Delineation Map


Jurisdictional Waters of the U.S.
A) Section 404, Clean Water Act
Acres
Wetlands 1.291
Vegetated waters (channel and adjacent marsh) 0.461
Total 1.752
B) Subset of Section 404: Section 10 Rivers and Harbors Act
Waters of the U.S. (Section 404 areas < MHW (5.87 ft NAVD88)) 0.150
*Areas under Section 10 jurisdiction are under Section 404 jurisdiction. Section 10 areas are included in the Section 404 calculations.
wetland 11
wetland 12
wetland 4
wetland 10
wetland 5
wetland 13
wetland 6
wetland 1
wetland 7
wetland 2
wetland 3
wetland 8
wetland 9
wetland 2
P 1
P 2
P 3
P 4
P 5
P 6
P 7
P 8
P 9
P 10
P 11
P 12
P 13
P 14
P 15
P 16
P17
P 18
P 19
P 20
P 21
San Pablo Bay Regional Park (tidal marsh)
Railroad (Amtrak)
Pinole Creek
Chelsea by the Bay Housing Development
Santa Fe Ave
Sample points
Study area (10.8 ac)
U.S. Army Corps of Engineers
San Francisco District
Regulatory Branch
Chelsea Wetland Restoration
Hercules, Contra Costa County, CA
3/11/2009
2009-00052S
Waters of the US - Area subject to Section 404 Clean Water Act jurisdiction
Wetlands - Area subject to Section 404 Clean Water Act jurisdiction
Section 10 Waters
Corps field verification date: March 3, 2009
1:1,800 (1" = 150' at tabloid layout)
0 75 150 300 Feet
0 25 50 100 Meters
N
W E
S
Data sources: photo (USGS, 2004); delineation data (WWR, 2008)
Produced by WWR, March 2009
GIS/cartography by Dan Gillenwater
Map file: verified-delineation-map_2009-0310dag.mxd
WETLANDS AND WATER RESOURCES
JURISDICTIONAL WATERS OF THE U.S.
Chelsea Wetlands Restoration Project
City of Hercules
Hercules, California
March 2009
Project No. 1136

DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, U.S. ARMY CORPS OF ENGINEERS
1455 MARKET STREET
SAN FRANCISCO, CALIFORNIA 94103-1398

MAR 30 2009

Regulatory Division

SUBJECT: File Number 2009-00054S

Mr. Dan Gillenwater
Wetlands and Water Resources, Inc.
818 5th Avenue, Suite 208
San Rafael, California 94901

Dear Mr.Gillenwater:

This letter is written in response to your submittal of January 11, 2009 requesting confirmation of the extent of Corps of Engineers jurisdiction at Chelsea Wetland Restoration Site, City of Hercules, Contra Costa County, California

The Corps concurs with the maps provided in the jurisdictional delineation map prepared by Wetland and Water Resources, Inc. dated March, 2009. We have based this jurisdictional delineation on the current conditions on the site as verified during a site visit performed by our staff on March 3, 2009. A change in those conditions may also change the extent of our jurisdiction. This jurisdictional delineation will expire in five years from the date of this letter. However, if there has been a change in circumstances that affects the extent of Corps jurisdiction, a revision may be completed before that date.

All proposed work and/or structures extending bayward or seaward of the line on shore reached by: (1) mean high water (MHW) in tidal waters, or (2) ordinary high water in non-tidal waters designated as navigable waters of the United States, must be authorized by the Corps of Engineers pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. Section 403). Additionally, all work and structures proposed in unfilled portions of the interior of diked areas below former MHW must also be authorized under Section 10 of the same statute.

All proposed discharges of dredged or fill material into waters of the United States must be authorized by the Corps of Engineers pursuant to Section 404 of the Clean Water Act (CWA) (33 U.S.C. Section 1344). Waters of the United States generally include tidal waters, lakes, ponds, rivers, streams (including intermittent streams), and wetlands.

Your proposed activity may be within our jurisdiction and a permit may be required for your project. Application for Corps authorization should be made to this office using the application form in the enclosed pamphlet. To avoid delays it is essential that you enter the file number at the top of this letter into Item No. 1 of the application. The application must include plans showing the location, extent and character of the proposed activity, prepared in accordance with the requirements contained in this pamphlet. You should note, in planning your project, that

upon receipt of a properly completed application and plans, it may be necessary to advertise the proposed work by issuing a Public Notice for a period of 30 days.

Our Nationwide Permits and Regional General Permits have already been issued to authorize certain activities provided specified conditions are met. Your completed application will enable us to confirm that your activity is already authorized. You are advised to refrain from starting your proposed activity until we make a determination that the project is covered by an existing permit. Commencement of work before you receive our notification will be interpreted as a violation of our regulations.

You are advised that the Corps has established an Administrative Appeal Process, as described in 33 C.F.R. Part 331 (65 Fed. Reg. 16,486; March 28, 2000), and outlined in the enclosed flowchart and "Notification of Administrative Appeal Options, Process, and Request for Appeal" form (NAO-RFA). If you do not intend to accept the approved jurisdictional determination, you may elect to provide new information to the District Engineer for reconsideration or submit a completed NAO-RFA form to the Division Engineer to initiate the appeal process. You will relinquish all rights to appeal, unless the Corps receives new information or a completed NAO-RFA form within sixty (60) days of the date of the NAO-RFA.

Should you have any questions regarding this matter, please call Kyle Dahl of our Regulatory Division at (415) 503-6783. Please address all correspondence to the Regulatory Division and refer to the File Number at the head of this letter. If you would like to provide comments on our permit review process, please complete the Customer Survey Form available online at http://per2.nwp.usace.army.mil/survey.html.

Sincerely,

Jane M. Hicks
Chief, Regulatory Division

Enclosures

Copy Furnished

CA RWQCB, Oakland, CA