APPENDIX E

Biological Constraints Analysis: Madera Site

H.T. HARVEY & ASSOCIATES
ECOLOGICAL CONSULTANTS

July 27, 2004

Analytical Environmental Services
Attn: Chad Broussard
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916-447-3479

SUBJECT: Brown Property Biological Constraints Analysis, Project 2410-01

Dear Mr. Broussard:

The developmental potential of the Brown Property in Madera County is under review by Analytical Environmental Services (AES). The purpose of H. T. Harvey & Associates' analysis was to provide an overview of existing biological and regulated resources that may pose a potential constraint to site development to assist with this review in compliance with the National Environmental Policy Act (NEPA). H. T. Harvey & Associates conducted a reconnaissance-level survey of the Brown Property located north of Madera, California on June 16 and 24, 2004 (Figure 1). The property was surveyed for potentially regulated habitats and the habitats' potential to support special-status species. A map of biotic and regulated habitats was prepared using the rectified aerial photo provided by AES (Figure 2). The following report describes the habitats on the 305-acre site, identifies potential effects to biotic resources resulting from developing the site, describes recommended focused surveys, and discusses whether agency consultation is likely to be required.

SITE OVERVIEW

The Brown property is located approximately seven miles north of Madera, California, between Avenue 17 and Avenue 18, west of Highway 99 (Figure 1). The project vicinity is dominated by agriculture that includes dryland crops, vineyards, and orchards. The property is mostly flat and is underlain primarily by San Joaquin sandy loam and areas of Atwater loamy sand, Hanford sandy loam, and Tujunga sandy loam. The San Joaquin, Atwater, and Hanford soils are all underlain by hardpans, while the Tujunga soil is associated with former and current stream courses. A historic alignment of Schmidt Creek transects the property from the southeast corner of the site diagonally to the northwest along a narrow band of Tujunga and Hanford soils. The creek has been realigned as a ditch that extends to the western boundary of the parcel and beyond (Figure 2). The limited areas of existing development and Schmidt Creek ditch are dominated by ruderal habitat. The remainder of the parcel is planted with dryland wheat.

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Brown Property: Site / Vicinity Map

File No. 2410-01	Date 7/12/04	Figure 1

Dryland Wheat Fields

Vegetation. Dryland wheat (*Triticum aestivum*) dominates the majority of the 305-acre site except those areas where it has not been planted, including within the Schmidt Creek ditch and disturbed and developed areas of the property. The density of the wheat precludes the establishment of herbaceous grassland species, though various invasive annual forbs form large patches within the fields. These forbs include black mustard (*Brassica nigra*), charlock (*Sinapsis arvensis*), wild radish (*Raphanus sativus*), and rancher's fireweed (*Amsinckia menziesii*). These species occur along historic drainages and broad depressions where more water may be available.

Two isolated depressions underlain by the Atwater and Hanford soils were found in the southern half of the property (Figure 2). These depressions are dominated by seasonal hydrophytic (water-loving) plants including toad rush (*Juncus bufonius*), slender popcorn-flower (*Plagiobothrys stipitatus*), rabbitsfoot grass (*Polypogon monspeliensis*), and Italian rye (*Lolium multiflorum*), as well as wheat and other annual grasses and forbs.

A hardpan layer associated with the underlying soils may be responsible for winter ponding in these areas but the vegetation in these depressions is not representative of vernal pool or seasonal wetland habitat. Much of the underlying hardpan has been broken by repeated tillage over many decades, further increasing the drainage afforded by the sandy soils on site. While most of the southern half of the project site has a hardpan underlying the sandy soils, no other depressions or vernal pool topography was observed on site.

Wildlife. Cultivated fields are frequently disturbed and provide limited habitat for wildlife. Frequent plowing for cultivation and weed control disrupts burrows and groundcover. Species that occur in cultivated habitats are generally widespread and accustomed to disturbances, such as American Kestrels (*Falco sparverius*), American Crows (*Corvus brachyrhynchos*), Killdeer (*Charadrius vociferous*), Mourning Doves (*Zenaida macroura*), Western Meadowlarks (*Sturnella neglecta*), Brewer's Blackbirds (*Euphagus cyanocephalus*), and House Finches (*Carpodacus mexicanus*).

Developed Areas

Vegetation. For the purpose of this assessment, Schmidt Creek ditch was considered a developed feature on site because of its purpose and origin as a ditch excavated in uplands. Schmidt Creek formerly began as swale topography on the Brown property and flowed to the southeast according to the USGS Kismet quadrangle map. Realignment of the creek likely occurred decades ago. The creek currently extends beyond the property boundary and is contiguous with Dry Creek, approximately 0.5 miles to the west. The ditch has a sandy bottom that lies approximately three feet below the surrounding grade and is bordered by sandy spoils dredged from the creek.

Schmidt Creek ditch is dominated by ruderal (disturbance-loving) vegetation. Dominant species within the ditch include rattail fescue (*Vulpia myuros*), ripgut brome (*Bromus diandrus*), soft chess brome (*Bromus hordeaceus*), Bermuda grass (*Cynodon dactylon*), heliotrope

(*Heliotropium curassavicum*), Meditteranean barley (*Hordeum marinum*), curly dock (*Rumex crispus*), and rancher's fireweed. While some of these species are hydrophytic, they do not form distinct seasonal wetland habitat anywhere within the ditch. A small thicket of willows (*Salix* spp.) and Fremont cottonwood trees (*Populus fremontii*) exists within the eastern half of the ditch, but many of the trees are dead or in poor health due to the limited hydrology.

A ranch house with adjacent pastures and outbuildings occurs in the southeast corner of the site. Trees, including willows, blue gum (*Eucalyptus globulus*), and walnut (*Juglans* spp.) exist around the ranch house in addition to the non-native grasses and forbs described above. A dumping ground west of the ranch is infested with rancher's fireweed. Finally, an irrigation canal is located parallel to Road 23, just inside the western property boundary. Water, up to two-feet deep, was flowing in the canal. The water in this canal is diverted underneath Schmidt Creek ditch through a vault structure and is not hydrologically connected to the ditch.

Wildlife. Homesteads typically provide habitat for common species accustomed to human disturbance. Common backyard birds such as Western Scrub-jays (*Aphelocoma californica*), American Robin (*Turdus migratorius*), Northern Mockingbirds (*Mimus polyglottos*), House Finches, and House Sparrows (*Passer domesticus*) are likely to be present at these sites. Where there are wood or brush piles, species such as western fence lizards (*Sceloporus occidentalis*) and desert cottontails (*Sylvilagus audobonii*) may be present. The homesteads and agricultural habitats of the project site are too disturbed to provide important habitat for migrating birds, though some common migrating birds in the region such as Wilson's Warblers (*Wilsonia pusilla*), Western Tanagers (*Piranga ludoviciana*), and Bullock's Orioles (*Icterus bullockii*) may be present during spring and fall migrations.

SPECIAL-STATUS PLANT SPECIES ASSESSMENT

Reconnaissance-level surveys were conducted on June 16, 2004 for special-status plant species (state and/or federally threatened or endangered, federal candidate species, and California Native Plant Society List 1B species) blooming at the time of the survey and for habitats capable of supporting them. A query of the California Natural Diversity Database (CNDDB 2004) was performed to identify special-status plant species potentially occurring in the project vicinity in the USGS Kismet quadrangle and the surrounding quadrangles. The only habitat specified in the query was valley and foothill grassland. This habitat was chosen for the similarity of its constituent species to those on the site. In addition, the California Native Plant Society Inventory (CNPS 2001) was used to identify and assess additional species occurring in similar habitats in Madera County.

Eighteen special-status plant species were identified in these queries, nine of which were dismissed due to the absence of vernal pool, clayey, and/or alkaline habitats on site. The remaining nine species considered potentially occurring within the project area include heartscale (*Atriplex cordulata*), lesser saltscale (*Atriplex minuscula),* subtle orache (*Atriplex subtilis*), Hoover's calycadenia (*Calycadenia hooveri*), Hoover's cryptantha (*Cryptantha hooveri*), gypsum-loving larkspur (*Delphinium gypsophilum* ssp. *gypsophilum*), Ewan's larkspur (*Delphinium hansenii* ssp. *ewanianum*), spiny-sepaled button-celery (*Eryngium spinosepalum*), and large-flowered linanthus (*Linanthus grandiflorus*). None of these species are listed as state or federal endangered or threatened, nor have they been documented as occurring within five

miles of the Brown property (CNDDB 2004). Due to the intensive farming and disturbed nature of the Brown property and surrounding areas, none of these species occur on site and protocol-level surveys are not recommended.

Finally, two sensitive habitats identified in the CNDDB query included northern hardpan vernal pools and valley sacaton grassland, neither of which were observed on site. While most of the site is underlain by acidic iron and silica cemented hardpan according to the soil series descriptions, which is characteristic of northern hardpan vernal pools geology, no vernal pool topography or associated vegetation was observed on site. Fragments of hardpan were found along the southwest boundary of the site and in the adjacent vineyard, but these were likely surfaced as the adjacent parcel was ripped to install the vineyard. Hardpan was encountered within 12 inches of the surface during soil sampling in the isolated depression in the southwest corner of the site, but the depth to the hardpan is expected to be deeper across most of the site. No evidence of a hardpan was observed within Schmidt Creek ditch, which lies at least three-feet below the surrounding grade throughout much of its alignment within the site.

SPECIAL-STATUS WILDLIFE SPECIES

Reconnaissance surveys were conducted on June 16, 2004 for habitats capable of supporting special-status wildlife species. A query of the CNDDB (2004) was performed to assist with identify special-status animal species potentially occurring in the project vicinity in the USGS Kismet quadrangle and the surrounding quadrangles. Ten special-status wildlife species were identified by the CNDDB as potentially occurring in the project vicinity (Table 1) and six more species were added to this list based on our experience with projects in the vicinity.

There are records of four special-status vernal pool crustaceans, conservancy fairy shrimp (*Branchinecta conservatio*), vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardi*), and California linderiella (*Linderiella occidentalis*) from near the proposed project site (CNDDB 2004). However, vernal-pool habitat is absent from the proposed project site and thus, none of these species occur on the site.

The Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), a federally threatened species, has been recorded on the San Joaquin River north of Herndon. This beetle requires mature elderberry plants (*Sambucus mexicana*) that are absent from the current project site. Therefore, the Valley elderberry longhorn beetle does not occur on the project site.

Table 1. Special-status Wildlife Species Reviewed for Potential Occurrence within the Footprint of the Proposed Effluent Storage Pond.

Scientific Name	Common Name	Listing Status
Crustaceans		
Branchinecta conservatio	Conservancy fairy shrimp	FE
Branchinecta lynchi	Vernal pool fairy shrimp	FT
Lepidurus packardi	Vernal pool tadpole shrimp	FE
Linderiella occidentalis	California linderiella	SSC
Insects		
Desmocerus californicus dimorphus	Valley elderberry longhorn beetle	FT
Amphibians		
Ambystoma californiense	California tiger salamander	FC, SSC
Scaphiopus hammondii	Western spadefoot	SSC
Reptiles		
Gambelia sila	Blunt-nosed leopard lizard	FE, SE, SFP
Birds		
Agelaius tricolor	Tricolored Blackbird	SSC
Athene cunicularia	Burrowing Owl	SSC
Buteo swainsoni	Swainson's Hawk	ST
Circus cyaneus	Northern Harrier	SSC
Eremophila alpestris actia	California Horned Lark	SSC
Lanius ludovicianus	Loggerhead Shrike	SSC
Mammals		
Perognathus inornatus inornatus	San Joaquin pocket mouse	SSC
Vulpes macrotis mutica	San Joaquin kit fox	FE, ST

Listing Status

FE = Federally Listed as Endangered
FT = Federally Listed as Threatened
FC = Federal Candidate
SE = State Listed as Endangered
ST = State Listed as Threatened
SSC= State Species of Special Concern
SFP= State Fully Protected

The California tiger salamander (*Ambystoma californiense*) occurs in the vicinity of the project site. The California tiger salamander is a Candidate Species for listing by the U.S. Fish and Wildlife Service. For purposes of environmental review, the California Department of Fish and Game (CDFG) considers the California tiger salamander at the same level as species actually listed as threatened.

California tiger salamanders require pond environments such as vernal pools or stock ponds for breeding. A pool must be present for a minimum of three months during the winter or early spring to provide adequate habitat for egg laying and maturation of larval salamanders. Streams, ditches, and canals do not provide breeding habitat. Additionally, California tiger salamanders require nearby burrows excavated by small mammals such as California ground squirrels (*Spermophilus beecheyi*) and Botta's pocket gophers (*Thomomys bottae*) for aestivation. Appropriate breeding and aestivation habitat are absent from the site and its immediate vicinity. The California tiger salamander, therefore, is absent from the project site.

The western spadefoot is a toad considered by the State to be a Species of Special Concern. As with the California tiger salamander, the western spadefoot requires temporary pools for breeding. The western spadefoot is absent because the site lacks suitable breeding habitat.

The endangered blunt-nosed leopard lizard (*Gambelia sila*) inhabits open, sparsely vegetated areas within non-native grassland, valley sink scrub, valley needlegrass grassland, and alkali playa communities on the floor of the San Joaquin Valley. The lizards also inhabit the Saltbush Scrub communities within the foothills of the southern San Joaquin Valley and the adjacent Carrizo Plain. Blunt-nose leopard lizards are typically absent where habitat conditions include steep slopes, dense vegetation, or areas subject to seasonal flooding. The density of vegetation on the project site, repeated disturbance associated with cultivation, and the paucity of small burrows preclude Blunt-nose leopard lizards from occurring on the site.

Tricolored Blackbirds (*Agelaius tricolor*) typically nests in tall, dense, stands of cattails or tules, but also nests in blackberry, wild rose bushes, and tall herbs. Nesting colonies are typically located near standing or flowing freshwater. Vegetation that would provide suitable nesting habitat for Tricolored Blackbirds is absent from the site, though the wheat field does provide potential foraging habitat.

The Burrowing Owl (*Athene cunicularia*) is a small, terrestrial owl of open country. Burrowing Owls favor flat, open grassland or gentle slopes and sparse-shrubland ecosystems. These owls prefer annual and perennial grasslands, typically with sparse or nonexistent tree or shrub canopies. In California, Burrowing Owls are found in close association with California ground squirrels. Owls use the abandoned burrows of ground squirrels for shelter and nesting. Burrows suitable for Burrowing Owls were absent from the project site. Burrowing Owls do not occur on the project site.

The Swainson's Hawk (*Buteo swainsoni*) is listed as threatened by the state of California and occurs in the greater project area. Nest sites in the Central Valley are generally associated with riparian habitat (Bloom 1980) that is in proximity to foraging habitat. Swainson's Hawks require large amounts of foraging habitat, preferably grassland or pasture habitats, and may occasionally range up to 18 miles from the nest in search of prey (Estep 1989, Babcock 1993). Their preferred prey items are voles (*Microtus* sp), gophers, birds, and insects such as grasshoppers (Estep 1989). They have also adapted to some croplands, particularly alfalfa, hay, and pasture. Crops such as grains, tomatoes, beets, and other row crops can be used extensively for short periods at, or after, harvest when prey is made accessible, but are generally not used before harvest (Estep 1989). Crops such as cotton, corn, orchards, and vineyards are not suitable

foraging habitat because they either lack suitable prey or the prey is unavailable to Swainson's Hawks due to the crop structure. Generally, crops greater than two feet tall create an impenetrable barrier for foraging Swainson's Hawks (Estep 1989).

Swainson's Hawks are unlikely to forage on the site. The nearest modern CNDDB record describes a nest on the Fresno County side of the San Joaquin River, approximately 15 miles from the project site. During the reconnaissance-level survey, an assessment of potential Swainson's Hawk foraging habitat within a five-mile radius of the project site was made by driving the major roads in an area bordered approximately by Avenue 26 on the north, Road 28 ½ on the east, Avenue 12 on the South, and Road 16 on the west. The area within a five-mile radius is comprised primarily of orchards, vineyards and isolated cultivated fields (both planted and fallow) and pastures, and developed lands (residential and light industrial). Crops providing quality foraging habitat, such as alfalfa and pasture, were rare within a five-mile radius of the project site and in small (up to 20 acres) isolated plots.

A Northern Harrier was observed foraging over the site, but breeding habitat was not found on the site. Northern Harriers (*Circus cyaneus*) are commonly found in open grasslands, agricultural areas and marshes. This Species of Special Concern nests on the ground in areas where long grasses or marsh plants provide cover and protection. Harriers hunt for a variety of prey, including rodents, birds, frogs, reptiles, and insects by flying low and slow in a traversing manner utilizing both sight and sound to detect prey items.

California Horned Larks (*Eremophila alpestris actia*) are a Species of Special Concern in California. Horned larks occur over nearly all of North America in bare ground habitats with sometimes contain several subspecies. This subspecies is a widespread breeder along the coast and in the Central Valley of California. California Horned Larks are not likely to use the project site when it is planted with wheat, but could be present when the site is fallow.

Shrikes may forage on the site. Loggerhead Shrikes (*Lanius ludovicianus*), a Species of Special Concern, are a predatory songbird inhabiting much of lower 48 states of the United States of America. They prefer open habitats interspersed with shrubs, trees, poles, fences, or other perches from which they can hunt. Some populations of the Loggerhead Shrike, primarily those in eastern North America, have declined significantly over the last 20 years. Other populations, including those in western North America, appear to be decreasing as well. Even with this trend, Loggerhead Shrikes are still considered a fairly common species in California. A Loggerhead Shrike was observed within a quarter of a mile of the project site.

San Joaquin pocket mice are absent from the project site. San Joaquin pocket mice (*Perognathus inornatus inornatus*) occur in grasslands and blue oak savannas that have friable soils. Pocket mice live in shallow burrows, often in small colonies. The frequent ground disturbance associated with cultivation has removed suitable habitat from the project site and its vicinity.

The federally endangered San Joaquin kit fox (*Vulpes macrotis mutica*) occurs in grasslands or grassy open stages with scattered shrubs. San Joaquin kit fox do not occur on the project site. Cultivation has precluded the formation of burrows for denning and a suitable prey base comprised of small mammals such as California ground squirrels and kangaroo rats is absent

from the project site and its vicinity. The site and vicinity are comprised of croplands dominated by orchards and vineyards interspersed with smaller parcels of row crops and developed areas. The nearest reported occurrence is from grassland habitats approximately eleven miles southwest of the site.

REGULATED HABITATS

Army Corps of Engineers Jurisdiction

The project site was surveyed for areas that may meet the regulatory definition of "Waters of the United States" (*i.e.*, jurisdictional waters) subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE). These waters may include all waters used, or potentially used, for interstate commerce, including all waters subject to the ebb and flow of the tide, all interstate waters, all other waters (intrastate lakes, rivers, streams, mudflats, sandflats, playa lakes, natural ponds, etc.), all impoundments of waters otherwise defined as "Waters of the U.S.," tributaries of waters otherwise defined as "Waters of the U. S.," the territorial seas, and wetlands adjacent to "Waters of the U.S." (33 CFR, Part 328, Section 328.3).

Areas typically not considered to be jurisdictional waters include non-tidal drainage and irrigation ditches excavated on dry land, artificially-irrigated areas, artificial lakes or ponds used for irrigation or stock watering, small artificial water bodies such as swimming pools, and water-filled depressions (33 CFR, Part 328).

RESULTS

Schmidt Creek ditch is a realignment of the historic Schmidt Creek watercourse that was formerly a natural tributary of Dry Creek with the confluence situated approximately one-half mile to the west. The 1985 USGS Kismet quadrangle depicts Schmidt Creek as a blue-line stream course terminating on the Brown property, but the older (1946) Madera County soil survey aerial photo depicts the watercourse as being contiguous with Dry Creek. Currently, the portion of Schmidt Creek ditch on the site connects the natural watercourse of Schmidt Creek upstream with Dry Creek downstream. Schmidt Creek is currently dry upstream of the property, except within the long box culvert under Highway 99 which has standing water. Dry Creek has running water at least two feet deep and abundant wetland vegetation. Schmidt Creek ditch is expected to receive stormwater runoff during the winter and may occasionally be used to deliver irrigation water as evidenced by two pump stations along its alignment. Since the realigned course of Schmidt Creek connects two well-defined watercourses, the ditch on site is considered a potential Waters of the U.S.

Hydrophytic plants were observed throughout the Schmidt Creek ditch alignment, including Bermuda grass, heliotrope, Meditteranean barley, and curly dock. These species are only scattered in their occurrence throughout the ditch and do not form distinct wetland habitat. In addition, none of the soils underlying the ditch are known to be hydric according to the state list of hydric soils (SCS, 1995); only the Tujunga soil series is known to have a hydric phase, which does not occur on site. Therefore, since the ditch is otherwise dominated by ruderal

(disturbance-loving) vegetation, and does not have any physical evidence of hydric soil development, no potential Section 404 wetlands exist within the Schmidt Creek ditch.

Finally, an irrigation canal is located parallel to Road 23, just inside the western property boundary. The reach of this canal on site is excavated in uplands and is only expected to have artificial hydrology. Water was being pumped into the canal at the time of the survey. Furthermore, the water in this canal is diverted underneath Schmidt Creek ditch through a vault structure and is not hydrologically connected to the ditch. For these reasons, the canal is not considered potentially jurisdictional.

California Department of Fish and Game Jurisdiction

The site was also examined for areas containing a definable bed, bank, or channel that are under the regulatory jurisdiction of CDFG (1994a). CDFG potentially extends the definition of stream to include "intermittent and ephemeral streams, rivers, creeks, dry washes, sloughs, blue-line streams mapped on USGS quadrangles, and watercourses with subsurface flows. Canals, aqueducts, irrigation ditches, and other means of water conveyance can also be considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife" (CDFG 1994).

Because Schmidt Creek ditch was formerly mapped as a USGS blue-line stream course, and currently supports limited riparian vegetation, the ditch alignment is considered to be within the jurisdiction of the CDFG.

CONCLUSION

The purpose of H. T. Harvey & Associates' analysis was to provide an overview of existing biological and regulated resources that may pose a potential constraint to site development to assist with this review and aid site planning efforts. A summary of potential constraints by resource is provided below.

Special-Status Plants

Special-status plants do not pose a constraint to development. Special-status plant species are not expected to occur on site due to the intensive farming and disturbed nature of the Brown property and surrounding areas. Species considered, but rejected, include heartscale, lesser saltscale, subtle orache, Hoover's calycadenia, Hoover's cryptantha, gypsum-loving larkspur, Ewan's larkspur, spiny-sepaled button-celery, and large-flowered linanthus. No further surveys are warranted for these species.

Special-Status Wildlife

Vernal pool crustaceans, Valley elderberry longhorn beetles, California Tiger Salamander, western spadefoot, blunt-nosed leopard lizard, Burrowing Owl, San Joaquin pocket mouse, and San Joaquin kit fox do not occur on the project site due to lack of suitable habitat. Development

of the project site would not adversely affect these species, nor would these species constrain development.

Breeding habitat for Tricolored Blackbirds, Northern Harriers, California Horned Larks, and Loggerhead Shrike is absent from the site. Suitable foraging habitat for these birds is present. Minor reductions in forging habitat for Tricolored Blackbirds, Northern Harriers, California Horned Larks, and Loggerhead Shrikes would not constitute a significant adverse effect under NEPA and would not constrain the project.

Development of the proposed site will not significantly affect the Swainson's Hawk and potential use of the site for foraging by Swainson's Hawks should not constrain site development. Swainson's Hawks are unlikely to forage within the proposed project site and the density of orchards and development within a five-mile radius of the site decreases its value as foraging habitat, especially given the availability of much larger acreages of suitable foraging habitat 10 to 15 miles from the site. New nesting activity within 10 miles of the site prior to construction could cause constraints. If a breeding pair of Swainson's Hawks is observed within 10 miles of the site prior to construction, the project proponent may be required to preserve off-site foraging habitat. The amount of land to be preserved would depend on the distance between the nest and the project site, but would not exceed one and a half acres of land preserved for each acre developed (CDFG 1994b).

Regulated Habitats

Regulated habitats would constrain development. Based on the clear hydrologic connection between Schmidt Creek and Dry Creek, and recent conversations with representatives of the Sacramento District of the USACE, Schmidt Creek ditch meets the regulatory definition of waters of the U.S.; as such, any activities conducted within this drainage feature may be under the regulatory jurisdiction of the USACE under Section 404 of the Clean Water Act. Schmidt Creek ditch may also be within the jurisdiction of the Regional Water Quality Control Board (RWQCB) under Section 401 of the Clean Water Act and within the jurisdiction of the CDFG under Section 1600 of the California Fish and Game code. Activities occurring within the bed and banks of Schmidt Creek ditch would require either a Nationwide Permit or an Individual Permit from the USACE, depending on the nature of proposed impacts. Such activities may also require a Section 401 Water Quality Certification permit, and a Streambed Alteration Agreement with CDFG. Furthermore, activities within the creek may require compliance with USACE Nationwide Permit Conditions regarding endangered species.

Avoiding the regulated habitat, while constraining, would prevent the project proponent from having to obtain state and federal permits. Preparing the permit applications and obtaining approval from federal and/or state agencies is a time consuming process and could delay construction by several months.

Laws and Regulations Protecting Avian Species

Several avian species that are not considered special-status species are likely to nest on the site. These species would include Killdeer, Mourning Doves, Western Kingbirds, and House Finches.

Laws and regulations protecting avian species pose a minor constraint to development. The federal Migratory Bird Treaty Act (MBTA; 16 U.S.C., §703, Supp. I, 1989) prohibits killing, possessing or trading in migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs. Migratory birds are also protected in and by the state of California. The State Fish and Game Code §3503 (and other sections and subsections) emulates the MBTA and protects birds' nests and eggs from all forms of take.

Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment, a violation of the MBTA. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "take" by the CDFG. The compliance measure described below should be implemented to comply with laws and regulations protecting raptors or other birds nesting on or immediately adjacent to the sites.

Measure 1. Avoid Construction During Nesting Season. Construction should be scheduled to avoid the nesting season to the extent feasible. The nesting season for most birds, including raptors, extends from January through August.

Measure 2. Pre-construction/Pre-disturbance Surveys. If demolition and construction cannot be scheduled between August and January, pre-construction surveys for nesting birds should be conducted by a qualified ornithologist to ensure that no nests will be disturbed during project implementation. This survey should be conducted no more than 14 days prior to the initiation of demolition/construction activities during the early part of the breeding season (January through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August). During this survey, the ornithologist should inspect all trees and other potential habitats (e.g., grasslands, buildings) in, and immediately adjacent to, the impact areas for nests. If an active nest is found sufficiently close to work areas to be disturbed by these activities, the ornithologist, in consultation with CDFG, should determine the extent of a construction-free buffer zone to be established around the nest to ensure that no nests of species protected by the MBTA or CDFG Code will be disturbed during project implementation.

Measure 3. Inhibiting Nesting. If vegetation is to be removed by the project and all necessary approvals have been obtained, potential nesting substrate (e.g., bushes, trees, grass, burrows) that will be removed by the project should be removed outside of the nesting season to help preclude nesting. Pre-removal surveys are required for some species.

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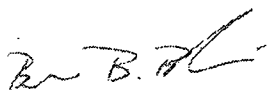
Feel welcome to contact me with any questions that you might have.

Sincerely,



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