CHAPTER EIGHT: ENVIRONMENTAL RESOURCES

8.1 OVERVIEW

This chapter identifies the environmental conditions and sensitive resources found in the Plan Area. Goals and policies contained in the Dunnigan Specific Plan (DSP) shall guide the conservation, protection or mitigation of existing environmental conditions and sensitive resources. The DSP will implement sustainable practices through compliance with established policies, actions, design requirements and implementation strategies as presented in various chapters in the Specific Plan. This chapter addresses seven keys areas: wetland resources, special status species, cultural resources, vegetation and wildlife, soils, biotic conservation and agricultural mitigation.

The existing environmental conditions in the Plan Area were taken into account during the development of the land use plan. The land use plan is designed not only to protect significant sensitive resources and to minimize the impacts of development on the existing and natural communities in the Plan Area, but also to utilize these features in the overall sustainability program.

8.2 GOALS AND POLICIES

The sustainability of the Plan Area's ecological and natural resources plays a large part in the fundamental guiding principles of the DSP, which are outlined in Chapter 2.5. This section outlines the overall goals and policies applicable to the environmentally sensitive resources found within the Plan Area. These goals and policies guide the conservation, protection and mitigation of these resources. Sustainability measures and preservation are prevalent in this chapter and certain goals and policies may be cross referenced from other chapters due to applicability in several areas.

The following are the relevant General Plan policies that help to guide the Environmental Resources program for the Plan Area:

Policy CO-2.1: Consider and maintain the ecological function of landscapes, connecting features, watersheds, and wildlife movement corridors.

Policy CO-2.3: Preserve and enhance those biological communities that contribute to the county's rich biodiversity including blue oak and mixed oak woodlands, native grassland prairies, wetlands, riparian areas, aquatic habitat, agricultural lands, heritage valley oak trees, remnant valley oak groves, and roadside tree rows.

Policy CO-2.9: Protect riparian areas to maintain and balance wildlife values.

Policy CO-2.10: Encourage the restoration of native habitat.

Policy CO-2.11: Ensure that open space buffers are provided between sensitive habitat and planned development.

Policy CO-2.16: Existing native vegetation shall be conserved where possible and integrated into new development if appropriate.

Policy CO-2.22: Prohibit development within a minimum of 100 feet from the top of banks for all lakes, perennial ponds, rivers, creeks, sloughs, and perennial streams. (et seq.)

Policy CO-2.31: Protect and enhance streams, channels, seasonal and permanent marshland, wetlands, sloughs, riparian habitat and vernal pools in land planning and community design.

Policy CO-2.32: Protect wetland ecosystems by minimizing erosion and pollution from grading, especially during grading and construction projects.

Policy CO-2.42: Require that impacts to species listed under the State or federal Endangered Species Acts, or species identified as special-status species by the resource agencies, be avoided to the greatest feasible extent. If avoidance is not possible, fully mitigate impacts consistent with local, State, and Federal requirements.

Policy CO-2.43: Projects that would impact Swainson's hawk foraging habitat shall participate in the Agreement Regarding Mitigation for Impacts to Swainson's Hawk Foraging Habitat in Yolo County entered into by the CDFG and the Yolo County HCP/NCCP Joint Powers Agency, or satisfy other subsequent adopted mitigation requirements consistent with applicable local, State, and Federal requirements.

Policy CO-2.44: Projects that have the potential to impact California tiger salamander breeding or terrestrial habitat in the Dunnigan Hills area shall conduct a project-level biological assessment to determine the potential impact to California tiger salamander upland or breeding habitat (et. seq.)

8.3 SUMMARY OF EXISTING RESOURCES

The following is an overview of the key existing resources of the Plan Area: wetland resources, special status species, cultural resources, vegetation and wildlife and soils. Detailed studies of many of these resources are included in Appendices G and H.

8.3.1 Wetlands

Approximately 15.424 acres of potentially jurisdictional waters of the United States (U.S.) were mapped within the 2,850 acre study area of the entire 3,110 acre DSP area. The developed portion of Dunnigan in the northern portion of the Specific Plan area (referred to as the Hardwoods Subdivision) was not delineated during this effort, but is the subject of a separate assessment-level investigation (ECORP, 2009e) The delineated portion of the Plan Area includes approximately 0.550 acre of "wetlands" and approximately 14.874 acres of "other waters", for a total of approximately 15.424 acres (ECORP, 2009d). Any impacts to these features would likely require permitting pursuant to Section 404 and 401 of the federal Clean Water Act; Section 1600-1616 of the California Fish and Game Code (Lake and Streambed Alteration Agreement); and/or the Porter-Cologne Water Quality Control Act regulating waters of the State.

A wetland delineation was conducted for the Plan Area to determine the relative distribution and extent of areas potentially subject to jurisdiction of the U.S. Army Corps of Engineers (Corps) under Section 404 of the Clean Water Act. The site was delineated by ECORP Consulting, Inc. (ECORP) in 2009 and will be submitted to the Corps for verification. The wetland delineation was conducted in accordance with the Corps'

Wetland Delineation Manual (Environmental Laboratory, 1987) and the Interim Regional Supplement to the Corps Wetland Delineation Manual: Arid West Region (Arid West Region Supplement) (U.S. Army Corps of Engineers, 2006). The boundaries of potential waters of the U.S. were delineated through aerial photograph interpretation and standard field methodologies (e.g., paired data set analyses). The potential waters of the U.S. types, including Seasonal Wetlands, Seasonal Wetland Swales, Marsh, Ponds, Ephemeral Drainages, Irrigation Ditches, Drainage Ditches, Roadside Ditches, and Intermittent Creeks, detailed below were identified in the 2009 wetland delineation performed by ECORP for the DSP Area, shown on Exhibit 8-1.

8.3.2 Seasonal Wetlands

Seasonal wetlands are ephemerally wet due to accumulation of surface runoff and rainwater within low-lying areas. Inundation periods tend to be short and these wetlands are commonly dominated by non-native annual or perennial hydrophytic species. Fourteen seasonal wetlands totaling approximately 0.256 acre are scattered throughout the site. Dominant plants identified within the seasonal wetlands included Bermuda grass (*Cynodon dactylon*), hyssop (*Lythrum hyssopifolium*), barley (*Hordeum murinum*), and curly dock (*Rumex crispus*).

8.3.3 Seasonal Wetland Swales

Seasonal wetland swales are linear wetland features that convey water during rainfall events, but do not have an ordinary high water mark. Three seasonal wetland swales totaling approximately 0.068 acre were mapped on-site. These features are located within on the sloped dry-farmed western portion of the site. Common plants observed in these features included Bermuda grass, barley, and curly dock. To be identified as a wetland, three criteria need to be satisfied: (a) a majority of dominant vegetation species are wetland associated species; (b) hydrologic conditions exist that result in periods of flooding, ponding, or saturation during the growing season; and (c) hydric soils are present. Wetland hydrology indicators observed within seasonal wetland swales in the study area predominantly included primary hydrology indicators such as drift lines, evidenced by deposition of debris in a line on the wetland surface.

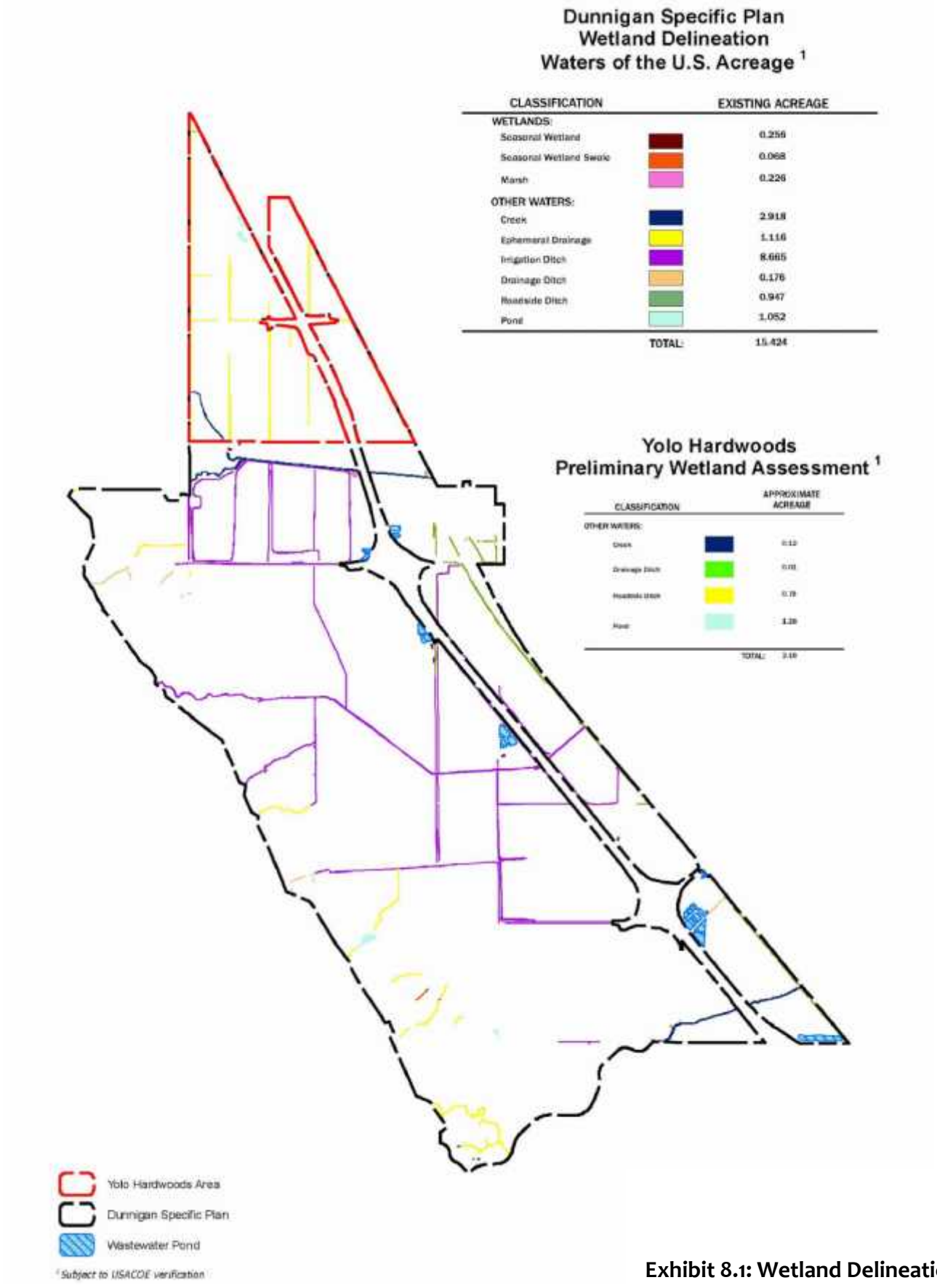

Exhibit 8.1: Wetland Delineation Exhibit

8.3.4 Marsh

Marshes are seasonally or permanently inundated features characterized by an abundance of emergent herbaceous vegetation such as cattails (*Typha* sp.), bulrush (*Scirpus* sp.), and spikerush (*Eleocharis* sp.). Two marshes totaling approximately 0.226 acre were mapped in the planning area.

8.3.5 Ponds

Ponds are perennial impoundments and absent of flow. Two ponds totaling approximately 1.052 acres were mapped on-site. The limits of the ponds were delineated in the field according to the presence of ordinary high water marks (e.g., distinct vegetation breaks). Vegetation was dominated by cattail, with a trace of curly dock.

8.3.6 Ephemeral Drainage

Ephemeral drainages are linear features that exhibit an ordinary high water mark. They are seasonal features that typically convey runoff for short periods of time, usually during and immediately following rain events, and they are not influenced by groundwater. The channel tends to be unvegetated due to the scouring effects of flowing water. A total of approximately 1.116 acres of ephemeral drainages were mapped. Plants are limited in distribution to the upper limits of the drainage and included wheat (*Triticum aestivum*), hairy hawkbit (*Leontodon taraxacoides*), and lupine (*Lupinus* sp.).

8.3.6.1 Irrigation Ditch

Irrigation ditches are (usually) linear, manmade water conveyance features that transport water within an agricultural setting. They are usually adjacent to unpaved roads and may or may not be maintained to control the growth of vegetation. A total of approximately 8.665 acres of irrigation ditches were mapped on-site. Azevedo Drain is a major irrigation ditch that runs west to east through the middle of the planning area.

8.3.6.2 Drainage Ditch

Drainage ditches are linear manmade features constructed to convey storm-water runoff. They are usually adjacent to paved or unpaved roads and in low-laying areas. A total of approximately 0.176 acre of drainage ditches were mapped in the planning area.

8.3.6.3 Roadside Ditch

Roadside ditches are linear manmade features constructed to drain stormwater runoff from paved roadways. They were a common feature in the planning area, and occurred along many roadways east of Highway 5. A total of approximately 0.947 acre of roadside ditches were mapped in the planning area.

8.3.6.4 Intermittent Creek

Two creeks totaling approximately 2.918 acres have been mapped within the DSP boundaries. In the field, these features were delineated at the ordinary high water mark, which was identified based on water marks, scour, and shifts in vegetation. Dunnigan Creek flows from west to east in the northern one-third of the planning area. It appears

to have been channelized or maintained to drain adjacent farm lands. Bird Creek is located along the southern boundary of the planning area. Dunnigan Creek and Bird Creek are mapped on USGS topographic maps as intermittent streams. During the field surveys, both creeks were dry.

8.3.7 Special Status Species

The vegetation communities and current conditions observed on-site represent suitable habitat for several regionally occurring special-status species.

8.3.7.1 Plants

Special-status plants with the potential to occur on-site include Ferris's milk-vetch, brittlescale, San Joaquin spearscale, round-leaved filaree, palmate-bracted bird's-beak, Colusa layia, Heckard's pepper-grass, woolly-headed lessingia, Baker's navarretia, and Wright's trichocoronis. No special-status plant species were identified during focused surveys conducted in 2008 (ECORP, 2009a) (refer to *Special-Status Plant Survey for Dunnigan Specific Plan* in Appendix G). Determinate special-status plant surveys have not been conducted within the Hardwoods portion of the Plan Area which has been the subject of an assessment-level investigation to date (ECORP 2009)

8.3.7.2 Invertebrates

Based on the project's Biological Resource Assessment (ECORP, 2009), the site supports suitable habitat for a variety of regionally occurring special-status invertebrates. Special-status invertebrates with the potential to occur on-site include the Valley elderberry longhorn beetle (VELB, *Desmocerus californicus dimorphus*) and several vernal pool branchiopods (e.g. vernal pool fairy shrimp (*Branchinecta lynchi*)). A focused investigation mapping and cataloguing elderberry shrubs on-site has been conducted (ECORP 2009c) (Appendix G). To date, no field surveys for special-status vernal pool invertebrates have been conducted on-site, however the developed nature (e.g. agricultural history) of the potential habitat for these invertebrates reduces the likelihood of their occurrence.

8.3.7.3 Fish

There are no apparent special-status fish habitat issues within the site, as the agricultural ditches, ephemeral drainages, and intermittent creeks do not support suitable habitat. The USFWS special-status species list for the region indicates that green sturgeon, delta smelt, Central Valley steelhead, Central Valley spring-run Chinook salmon, and winter-run Chinook salmon have the potential to occur in the general region. The Sacramento River, which is located approximately seven miles east of the site, represents critical habitat for those special-status fish.

8.3.7.4 Amphibians

Special-status amphibians with the potential to occur on-site include the California tiger salamander (CTS, *Ambystoma californiense*), Western spadefoot (*Spea hammondii*, California species of concern), California red-legged frog (*Rana aurora draytonii*), and foothill yellow-legged frog (*Rana boylii*). While they are known to occur in the region,

they are not expected to occur on-site. A CTS larval survey and habitat assessment have been completed (ECORP, 2008, and 2010, respectively, Appendix G). According to the CNDDB, there is one historical occurrence of California tiger salamander in the western portion of the site, which is now considered extirpated, and several relative recent occurrences adjacent to the site.

8.3.7.5 Reptiles

Special-status reptiles that may occur in the vicinity are those species that are typically associated with intermittent creeks, ephemeral drainages, ponds, and ditches. These species include Western pond turtle and giant garter snake.

8.3.7.6 Birds

Vegetation communities and environmental conditions observed within the site provide suitable nesting habitat for a variety of special-status bird species, including common raptors. Suitable habitat also occurs on-site for non-nesting special-status bird species that could be present, but do not nest in the region (i.e., migrants or winter visitors). Potential nesting and/or wintering habitat is present for numerous special-status birds including colonial nesting water birds, white-tailed kite, bald eagle, northern harrier, Cooper's hawk, Swainson's hawk, ferruginous hawk, golden eagle, merlin, American peregrine falcon, prairie falcon, California black rail, mountain plover, long-billed curlew, burrowing owl, short-eared owl, loggerhead shrike, grasshopper sparrow, "Modesto" song sparrow, tricolored blackbird, yellow-headed blackbird, and yellow-billed magpie. In addition, potential nesting habitat for common raptor species is present throughout the site.

8.3.7.7 Mammals

The trees, barns, almond orchard, and abandoned buildings in the Plan Area provide suitable roosting habitat for the following special-status bat species: Yuma myotis, hoary bat, Western red bat, Townsend's big-eared bat, and pallid bat. In addition, the annual grassland and aquatic features (e.g., intermittent creeks and ponds) represent potential foraging habitat for these species. Undeveloped and uncultivated lands may support suitable habitat for American badger. None of these species are listed and protected pursuant to either the California or federal ESA; however, they are considered to be CDFG species of special concern. Project specific field surveys will be conducted for these species in Spring 2013.

8.3.8 Cultural Resources

In 2009, ECORP Consulting, Inc. (ECORP) conducted a cultural resources records and literature search for the Specific Plan Area. This information was gathered from the California Historical Resources Information System's Northwest Information Center, located at Sonoma State University. This records search level of analysis included: a review of cultural resource records and literature; an examination of cultural resource maps for the Plan Area; and a sacred land file search by the California Native American Heritage Commission.

The records and literature search completed in 2009, served to identify any historic properties in the Specific Plan area. In particular, the Specific Plan Area plus a one-quarter mile buffer zone was examined for the existence of any known recorded cultural resources. Among the regulatory databases reviewed were the National Register of Historic Places, California Register, California Historical Landmarks, the California Places of Historical Interest, and the California Historical Resources Information System (HRI: file dated May 27, 2009).

In addition, Michael Brandman Associates (MBA) completed further cultural resources assessment in 2011 which included a review of Yolo County Assessor data using ParcelQuest, which included a structures evaluation, in conjunction with a pedestrian field survey. The ParcelQuest structures evaluation searched all parcels in the Specific Plan Area to gain insight on the amount of acreage in each parcel; this search also identified whether or not structures existed on any of the properties in the Specific Plan Area and provided the age of the structures. The ParcelQuest data was taken into the field with the previously completed records search completed in 2009 in order to assist the inventory team during the pedestrian survey.

Following a supplemental records search with the Northwest Information Center, MBA surveyed for Specific Plan Area for the existence of cultural resources by professionally qualified MBA archaeologists between October 7 and October 17, 2011. Of the 3,110 acres in the Plan Area, staff had direct access to roughly 1,220 acres that could be directly examined following standard archaeological survey protocols. The remaining acreage was either composed of crops or active orchards, were fallow fields covered in grass, or inaccessible. The summary findings of the comprehensive cultural resources evaluation identified one isolated prehistoric artifact and 49 buildings constructed on or before 1966, of which the majority are existing in the "Old Town" portion of the Plan Area on the east side of I-5.

Potential cultural and historic resources identified during both the 2009 and 2011 evaluation will need to be evaluated for eligibility for the CRHR and the NRHP related to the project's phasing plan as part of the DSP Environmental Impact Report. If determined eligible and thereby requiring mitigation the DSP will evaluate either avoidance by preserving them in open space or by carrying out data recovery efforts prior to project implementation, or construction.

8.3.9 Vegetation and Wildlife

8.3.9.1 Plant Communities and Habitat Types

Seven dominant vegetation communities were identified on-site including wheat (approximately 22 acres), alfalfa (approximately 187 acres), unknown crop (approximately 1,293 acres), almond orchard (approximately 329 acres), vineyard (approximately 125 acres), annual grassland (approximately 263 acres), and developed (approximately 58 acres) (ECORP 2009b) (refer to the *Biological Resource Assessment for Dunnigan Specific Plan* in Appendix H).

Multiple land uses occur in the planning area including wheat and alfalfa fields, almond orchards, vineyards, farm/rural residences, and annual grassland. Wheat fields are

located throughout the site, and alfalfa fields are limited to the eastern portion. Other weedy plant species interspersed within the fields and at the edges, fence lines, and boundaries included filaree, ripgut brome, morning glory, ryegrass, chickweed, barley, pineapple weed, wild oats, and arroyo lupine. At the time of the surveys, many of the fields were harvested and/or disked and not planted with any row crop. Wildlife species associated with agricultural fields include a variety of common species including house mouse, brown rat, western kingbird, and Brewer's blackbird. The state-threatened Swainson's hawk, and other raptors, commonly forage within harvested agricultural, particularly alfalfa fields.

The almond orchards had a weedy understory with scattered filaree, geranium, ryegrass, chickweed, fiddle-neck, pineapple weed, common mallow, and wild oats. Vineyards were dominated by cultivated wine grape, with understory plants including strawberry clover, morning glory, ryegrass, soft brome, pineapple weed, pepper grass, morning glory, vetch, barley, and filaree. Approximately 58 acres of farms and rural residences were scattered among agricultural fields and included farm facilities, residences, roads, staging and disturbed areas. Wildlife species typically observed in orchards, vineyards, and rural residential settings include common species such as raccoon, mourning dove, American crow, house finch, and house sparrow.

Annual grassland community occurs in scattered areas throughout portions of the planning area, but are most common in the western and southwestern portion of the site, east of the canal and north of Bird Creek. Trees are largely absent from these areas, with the exception of scattered individual trees such as Valley oak, cultivated walnut, gum, and tree of heaven. Plants occurring in the annual grasslands included slender wild oats, soft brome, bur clover, wild radish, black mustard, bicolored lupine, winter vetch, common vetch, cut-leaved geranium, medusahead grass, Mediterranean barley, yellow star-thistle, brodiaea, filaree, Rancher's fireweed, and dock. Other non-native weedy plants have become well-established in disturbed areas, including wild oat, ryegrass, ripgut brome, prickly lettuce, bindweed, filaree, curly dock, and chicory. Wildlife species commonly found in grassland communities include western fence lizard, deer mouse, California ground squirrel, mourning dove, savannah sparrow.

8.3.10 Soils

According to the Soil Survey of Yolo County, California (U.S. Department of Agriculture, Soil Conservation Service 1990), 14 soil units, or types, have been mapped within the site (refer to the *Biological Resource Assessment for Dunnigan Specific Plan* in Appendix H). These are: (AaA) Arbuckle gravelly loam, 0-2% slopes; (Ca) Capay silty clay; (CtD2) Corning gravelly loam, 2-15% slopes; (HcA) Hillgate loam, 0-2% slopes; (HdA) Hillgate loam, moderately deep, 0-2% slopes; (Ms) Myers clay; (Rg) Rincon silty clay loam; (SkF2) Sehorn clay, 30-50% slopes, eroded; (SmD) Sehorn-Balcom complex, 2-15% slopes; (SmE2) Sehorn-Balcom complex, 15-30% slopes, eroded; (Sv) Sycamore complex, drained; (TaA) Tehama loam, 0-2% slopes; (TaB) Tehama loam, 2-5% slopes; and (Ya) Yolo silt loam. Soil types (Ca) and (Sv) contain hydric inclusions. Soil type (Sv) also contains hydric components (U.S. Department of Agriculture, Soil Conservation Service 1990). Average annual rainfall is approximately 16.5 inches per year (NCDC data).

8.4 BIOTIC CONSERVATION STRATEGY

8.4.1 Wetlands Avoidance, Preservation, and Mitigation

As noted above, the delineated portion of the Plan Area includes approximately 0.550 acre of wetlands and approximately 14.874 acres of "other waters", for a total of approximately 15.424 acres. Any impacts to these features would likely require permitting pursuant to Section 404 and 401 of the federal Clean Water Act; Section 1600-1616 of the California Fish and Game Code (Lake and Streambed Alteration Agreement); and/or the Porter-Cologne Water Quality Control Act regulating waters of the State.

The Plan will avoid approximately 2.010 acres of potential waters of the U.S. and create drainages and ponds totaling approximately 30.676 acres. The avoided and created features will occur within natural open space and greenways located throughout the Plan Area. In addition, approximately 2.750 acres of potential waters of the U.S. will be preserved within the Plan Area. Per the Corps' guidelines, this will likely require the placement of a conservation easement and the development of an Operations and Management Plan.

Impacts to potential "waters of the U.S." within the Plan Area are estimated to be approximately 10.664 acres. This will include impacts to 0.213 acre of seasonal wetland, 0.063 acre of seasonal wetland swale, 0.219 acre of marsh, 0.518 acre of creek, 0.258 acre of ephemeral drainage, 7.236 acres of irrigation ditch, 0.158 acre of drainage ditch, 0.947 acre of roadside ditch, and 1.052 acres of pond. It is expected that impacts to the waters of the U.S. will be mitigated through the creation of the features noted above and/or purchase of mitigation credits through an agency-approved mitigation bank. A summary of the proposed avoidance, preservation, impact and mitigation strategy is shown in Table 8.1

Table 8.1 Wetlands/Water of U.S. Avoidance and Preservation Summary

Existing Features	**Acres**
Wetlands	0.055
Other Waters of the US	14.874
Total Existing Acres	**15.424 acres**
Proposed Avoidance	2.010
Proposed Preservation	2.750
Approximate Impact	10.664
Total	**15.424 acres**

8.4.2 Special-Status Species Habitat Avoidance and Mitigation

The Yolo County Natural Heritage Program Plan is planned to provide a take permit for most, if not all, of the anticipated development impacts associated with the Yolo County General Plan as well as the growth plans for the cities of West Sacramento, Winters, Woodland and Davis. A take permit for the DSP is expected, but not required, to be in

place prior to any individual land division or project development. In the event that the Natural Heritage Program Plan is not finalized prior to development, implementation of the Mitigation Monitoring or Reporting Plan (MMRP) will ensure that development occur without causing the take of any protected species. The following sections summarize the mitigation measures detailed in the MMRP. In the event of any conflict between this Chapter and the MMRP, the provisions of the MMRP shall control.

8.4.2.1 Plants

To date, no special-status plants have been identified on-site. Should any special-status plants be found during subsequent field surveys, mitigation for impacts would follow the Yolo County Natural Heritage Program Plan, once enacted, to be consistent with Yolo County General Plan Policy CO-2.4. The Yolo County Natural Heritage Program Plan is planned to provide a take permit for most (if not all) the anticipated development impacts associated with the Yolo County General Plan (which includes the DSP) as well as the growth plans for the cities of West Sacramento, Winters, Woodland and Davis.

In the event that the Yolo County Natural Heritage Program Plan is not complete, in order to prevent take of special-status plant species, standard pre-construction surveys shall be performed in portions of the Plan Area which not have been previously surveyed but contain appropriate habitat for these species to adequately document existing conditions and determine any necessary mitigation, as provided in the MMRP. If these species are found in the Plan Area, the population and supporting habitat will be preserved if feasible. If preservation is not feasible, populations will be transplanted to suitable habitat in the natural open space portions of the Plan Area and monitored. Transplantation of populations may be accomplished by relocating individual plants or through seed collection and dispersal, or a combination of both, to be determined based on species habitat requirements and best known science.

8.4.2.2 Invertebrates

Protocol surveys for aquatic vernal pool invertebrates (e.g. vernal pool fairy shrimp) have not been conducted to date. In the event that following the project-specific biological assessment, the U.S. Fish and Wildlife Service (USFWS) considers any ephemeral wetlands on-site to represent potentially occupied habitat, determinate protocol surveys using the 1996 USFWS Interim Vernal Pool Branchiopods Survey Guidelines may be warranted. To be consistent with Yolo County General Plan Policy CO-2.4 and CO-2.42, if found to occur, mitigation for impacts to these features would follow the Yolo County Natural Heritage Program Plan and/or as stipulated in the USFWS' biological opinion resulting from consultation pursuant to Section 7 of the Federal Endangered Species Act.

Elderberry shrubs were identified on-site during the biological surveys. All elderberry shrubs on-site represent suitable habitat for the Valley Elderberry Longhorn Beetle (VELB). An elderberry survey was conducted by ECORP during the summer of 2009. To be consistent with the Yolo County General Plan Policy CO-2.42, until federal delisting of the VELB is finalized, elderberry shrubs will be avoided, to the extent possible, and any impacts to elderberry shrubs will be mitigated according to the Yolo County Natural Heritage Program Plan and/or as stipulated in the USFWS' biological opinion resulting from consultation pursuant to Section 7 of the federal Endangered Species Act.

8.4.2.3 Riparian Areas

To be consistent with the Yolo County General Plan Policy CO-2.22, and avoid impact to special-status amphibians and reptiles, development would be prohibited within a minimum of 100 feet from the top of banks for all pre-existing lakes, perennial ponds, rivers, creeks, sloughs, and perennial streams. As stated in the Policy, "*The setback will allow for fire and flood protection, a natural riparian corridor (or wetland vegetation), a planned recreational trail where applicable, and vegetated landscape for storm water to pass through before it enters the water body. Recreational trails and other features established in the setback should be unpaved and located along the outside of the riparian corridors whenever possible to minimize intrusions and maintain the integrity of the riparian habitat. Exceptions to this action include irrigation pumps, roads and bridges, levees, docks, public boat ramps, and similar uses. In all cases where intrusions into the riparian buffer are made, only the minimum amount of riparian vegetation necessary to construct the feature shall be removed.*"

8.4.2.4 California Tiger Salamander

The DSP will avoid impacts to potential California tiger salamander (CTS) breeding or terrestrial habitat in the project area based on a CTS Habitat Assessment and negative larval sampling results. If the USFWS determines, prior to the development of a particular project (i.e., subdivision or site development) that the species will be directly or indirectly impacted, mitigation will be provided in accordance with the NCCP/HCP or MMRP, and may consist of two components: 1) habitat preservation and enhancement of suitable upland habitat, and 2) preservation and construction of new breeding habitat.

8.4.2.5 Raptors (including Swainson's hawk) Nesting and Foraging Habitat

In the Spring of 2013, approximately 1,451 acres of Swainson's Hawk Foraging Habitat was identified within the Plan Area by reviewing Yolo Natural Heritage Program Vegetation Series mapped for the Yolo County NCCP/HCP. Appendix R, Master Habitat Conservation Strategy, provides an overview of the habitat types found within the Plan Area and surrounding area. For the purposes of the review, suitable foraging habitat was assessed on the basis of broad agricultural land use categories identified by the Yolo Natural Heritage Program, rather than specific cover types, recognizing that the agricultural crop pattern mosaic is dynamic in the DSP area and is subject to change annually and seasonally (with the general exception of more static deciduous fruit and nut crops or vineyards). In agricultural landscapes, Swainson's hawks respond with fluctuating home range size and configuration throughout the breeding season as the foraging landscape changes as vegetation grows and is harvested. Together, alfalfa hay, field crops, irrigated pasture, and grasslands provide a relatively constant source of suitable foraging habitat throughout the season. Impacts to Swainson's hawk foraging habitat, i.e., the development of foraging habitat, shall follow the Agreement Regarding Mitigation for Impacts to Swainson's Hawk Foraging Habitat in Yolo County entered into by the CDFG and the Yolo County HCP/NCCP Joint Powers Agency, using lands identified as sufficient for foraging.

Preconstruction surveys will be conducted by a qualified biologist during the nesting season (February through August) to identify nest sites on or adjacent to the project site where ground disturbing activities or vegetation removal will occur. If active nests are identified, exclusion zones of a size sufficient to avoid disturbing the nest occupant will be established and maintained until the young have left the nest and are foraging independently or construction has been completed.

8.4.2.6 Other Special-Status Birds and Mammals

Special-status bird field or mammal surveys will be completed in Spring 2013. Should any special-status bird nests or mammals be found during subsequent field surveys, mitigation for impacts would follow the impending Yolo County Natural Heritage Program Plan to be consistent with Yolo County General Plan Policy CO-2.4.

8.5 AGRICULTURAL LAND MITIGATION PROGRAM

A primary defining characteristic of Yolo County is its agriculture and open spaces. As stated in the Agricultural Element of the 2030 General Plan; *"The County's long-standing emphasis on farming and compact communities, as well as its abundant natural resources, has positioned it well to take advantage of the opportunities created by an era of rising food and energy costs."*

The 2030 General Plan continues the County's commitment to agriculture, open space and smart growth by designating the Dunnigan Specific Plan Area to accommodate urban growth on a compact footprint, while minimizing impact on surrounding farmlands. Approximately 75% of the DSP Plan Area was either zoned for agriculture or was in agricultural production prior to the Specific Plan, therefore mitigation is required to offset the farmland that will be taken out of production as development occurs.

Through its Agricultural Land Conservation Ordinance, Title 8, Chapter 2, Sec. 8-2.2416 of the Yolo County Code, the County requires mitigation when farmland is converted to non-agricultural uses for development purposes. The ordinance requires dedication of one acre of proximate (within two or four miles) and equivalent agricultural soils for each acre of agricultural land converted. However, some land uses are exempt from this requirement, including affordable housing projects, public uses such as parks, schools, and cultural institutions. The ordinance outlines the soil, irrigation and other requirements of land that can qualify as agricultural mitigation. The ordinance also prohibits "stacked mitigation," which would allow credit for agricultural mitigation and habitat or other mitigation on the same property.

The high cost of acquiring mitigation land may warrant a departure from the strict application of the Agricultural Land Conservation Ordinance to the DSP. By strictly limiting urban growth within the County, the Board of Supervisors has prevented the widespread urbanization that has occurred elsewhere in the Sacramento Valley. Moreover, while the DSP contains approximately 1,535 acres of prime farmland, there are significant areas within the Plan Area that are of more marginal quality (including areas of Class III and IV soils). To compensate for the conversion of agricultural land, developers will comply with the Agricultural Land Conservation Ordinance, or secure alternative mitigation as specified in the Development Agreement.

8.6 HABITAT MITIGATION PROGRAM/HCP COORDINATION

The environmental resources identified will be regulated pursuant to the Yolo County 2030 Countywide General Plan (2009). In addition, environmental resources will be regulated in conjunction with the Yolo Natural Heritage Program, Natural Communities Conservation Plan/Habitat Conservation Plan (NCCP/HCP), upon its adoption. The NCCP/HCP, will provide guidelines governing open space designation, impacts to and mitigation for special-status species and unique natural communities, including farmland. As stated earlier in this Chapter, the NCCP/HCP is intended to provide an incidental take permit for development of the urban uses of the DSP as contemplated by planned for in the County General Plan. In the event the NCCP/HCP has not been adopted prior to the issuance of building/construction/ground disturbance permits, mitigation shall be implemented in accordance with the MMRP.