

3.1 Introduction

This chapter describes existing land use conditions and land use plans in the Plan Area and projects and activities the incidental take permits (permits) will cover. Section 3.2, *Land Use and Jurisdiction*, the land use component of this chapter, provides the necessary context for the covered activities upon which the effects analysis (Chapter 5, *Effects on Covered Species and Natural Communities*) is based. Section 3.3, *Methods for Identifying Covered Activities*, describes the methods used for identifying covered activities; Section 3.4, *Screening Criteria and Criteria for Coverage*, describes the criteria for determining whether activities are covered under the *Yolo Habitat Conservation Plan/Natural Communities Conservation Plan* (Yolo HCP/NCCP); and Section 3.5, *Covered Activities Description*, describes the covered activities.

The covered activities described in this chapter include both projects and activities. *Projects* are well-defined actions that occur once in a discrete location, unless otherwise noted. *Activities* are actions that occur repeatedly in one location or throughout the permit area. Together, these activities and projects are the *covered activities* for which the Permittees will obtain incidental take authorization from the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) and for which this HCP/NCCP will provide avoidance, minimization, and compensation for adverse effects on covered species and natural communities. All covered activities described in this chapter have been analyzed in Chapter 5, *Effects on Covered Species and Natural Communities*.

The projects and activities described in this chapter may be implemented by Permittees, applicants under the jurisdiction of one of the Permittees, or by Special Participating Entities covered through a Certificate of Inclusion. All parties seeking coverage for projects or activities under this HCP/NCCP must obtain approval from the Permittee with jurisdiction over the activity or project. All covered activities must incorporate the relevant conditions on covered activities described in Chapter 4, *Application Process and Conditions on Covered Activities*, to avoid and minimize adverse effects on covered species and natural communities. Part of the approval process for parties seeking coverage is demonstration that the conditions have been incorporated or will be incorporated properly into proposed activities and projects. The descriptions of covered activities in this chapter have been written to be as consistent as possible with the conditions in Chapter 4. If any inconsistencies exist, the conditions described in Chapter 4 take precedence over the description in this chapter to ensure adequate avoidance and minimization measures.

3.2 Land Use and Jurisdiction

The Plan Area, 653,549 acres (1,021 square miles) in size¹, includes the incorporated areas of Davis, West Sacramento, Winters, and Woodland and unincorporated areas of Yolo County. Yolo County has a rural character, consisting almost entirely of undeveloped land, with both existing and planned development clustered primarily in the incorporated cities. Additionally, the 1,130-acre expanded Plan Area for Putah Creek conservation includes riparian vegetation along the south end of Putah Creek in Solano County.

This section includes information on the land use conditions and plans for each city and unincorporated areas of Yolo County. Its population, housing, and employment conditions and projections provide an overview of existing and planned development for each city and unincorporated Yolo County. This section also describes the conservation and open space policies in the general plans for each city and unincorporated Yolo County to provide context for the effects analysis (Chapter 5, *Effects on Covered Species and Natural Communities*).

3.2.1 City of Davis

Davis is located 11 miles west of Sacramento, along Interstate 80 and the Union Pacific railroad line. Putah Creek runs along the southern boundary of Davis, while Yolo Bypass is to the east and Willow Slough is to the northeast of Davis. The Davis Planning Unit (#20) includes the incorporated boundary of Davis (6,357 acres) and the city's Local Agency Formation Commission (LAFCO) Sphere of Influence (SOI; 4,719 acres), a total of 11,076 acres. This includes the following unincorporated areas: North Davis Meadows golf course, Davis wastewater treatment plant, northwest quadrant (including Binning Farms), Covell/Pole Line Road, Mace curve, El Macero, Royal Oak Mobile Home Park, Willow Bank, UC Davis, Nishi, and Patwin Road.

The City of Davis adopted its most recent general plan in January 2007, with amendments in December 2013 for the Transportation Element and February 2014 for the Housing Element. The horizon year for the *City of Davis General Plan* is 2021 for the Housing Element and 2015 for the other elements of the general plan. This document reflects community values and policies, which serve as the basis for land use decision-making. The general plan emphasizes development that maintains Davis's small-town character and a healthy community, surrounded by farmland, a greenbelt, and natural habitat areas, and preserves.

3.2.1.1 Population, Housing, and Employment

The population of Davis was 65,622 in 2010. It is projected to reach 76,665 in 2035, an increase of 17 percent compared with 2010 levels (Sacramento Area Council of Governments 2005a). Assuming a consistent growth rate beyond 2035 (the last year from which Sacramento Area Council of Governments [SACOG] projections are available), the population of Davis will reach 98,327 in 2065, an increase of 50 percent compared with 2010 levels.

The number of housing units in Davis totaled 26,440 in 2012. The number of housing units is projected to reach 28,351 in 2036, an increase of seven percent (Sacramento Area Council of Governments 2014). Assuming a consistent growth rate beyond 2036 (the last year from which

¹ This acreage does not include the 1,174-acre expanded Plan Area for conservation of riparian located in Solano County, along the southern bank of Putah Creek.

SACOG projections are available), the number of housing units in Davis will reach 30,845 in 2065, an increase of 17 percent compared with 2012 levels.

The number of jobs in Davis totaled 15,430, or 16.6 percent of the total number of jobs county-wide, in 2012. The number of jobs is projected to reach 21,298 in 2036, or 14.6 percent of the projected number of jobs county-wide (Sacramento Area Council of Governments 2005b). Assuming a consistent growth rate beyond 2036 (the last year from which SACOG projections are available), the number of jobs in Davis will reach 25,700 in 2065, or 10.8 percent of the projected number of jobs.

3.2.1.2 Conservation and Open Space Policies

The *City of Davis General Plan* contains many goals, policies, and actions that support habitat conservation and open space preservation. A selection of these goals, policies, and actions from the *Habitat and Natural Areas* and the *Parks and Open Space* chapters of the 2007 *City of Davis General Plan*, as amended, are listed below.

Goal HAB 1. Identify, protect, restore, enhance, and create natural habitats. Protect and improve biodiversity consistent with the natural biodiversity of the region.

- **Policy HAB 1.1** Protect existing natural habitat areas, including designated Natural Habitat Areas.
- **Policy HAB 1.2** Enhance and restore natural areas and create new wildlife habitat areas.
- **Policy HAB 1.3** Commit adequate City resources and staff time so as to protect habitat and other natural resources.
- **Policy HAB 1.4** Preserve and protect scenic resources.

Goal HAB 2. Increase public awareness of habitat, wildlife, and sensitive species.

- **Policy HAB 2.1** Develop environmental educational programs and public access areas and programs to allow viewing of wildlife and habitat through controlled interactions of people with natural areas.

Goal POS 1. Provide ample, diverse, safe, affordable, and accessible parks, open spaces, and recreation facilities and programs to meet the current and future needs of Davis' various age and interest groups and to promote a sense of community, pride, family, and cross-age interaction.

- **Policy POS 1.2** Provide informal areas for people of all ages to interact with natural landscapes, and preserve open space between urban and agricultural uses to provide a physical and visual edge to the City.
- **Policy POS 1.8** Support regional and state-wide efforts that encourage open space preservation.
 - Seek coordination of open space goals in the *Davis General Plan* with UC Davis; neighboring cities, including Woodland, Winters, Dixon and West Sacramento; and Yolo, Sacramento, and Solano Counties and the Yolo County Habitat Conservation Program.

3.2.2 City of West Sacramento

West Sacramento is located across the Sacramento River from the state capitol, in the eastern part of Yolo County, in California's Sacramento Valley. The city is bounded by the Sacramento River on its northern and eastern borders and the Sacramento Deep Water Ship Channel and Yolo Bypass to the west. The West Sacramento Planning Unit (#21) includes the incorporated boundary of the city (14,723 acres), which is coterminous with the city's LAFCO SOI.

West Sacramento adopted a comprehensive update to the *City of West Sacramento General Plan 2035* in November 2016. The plan envisions that West Sacramento will become a premier city in the Sacramento Valley and a vital urban core along the Sacramento River, with a population of more than 130,000 people by 2050. Population growth will be accommodated through greenfield development, which will include new developments in conjunction with parks and open space areas (City of West Sacramento 2016).

3.2.2.1 Population, Housing, and Employment

The population of West Sacramento was 48,744 in 2010. It is projected to reach 87,402 in 2035, an increase of 79 percent compared with 2010 levels (Sacramento Area Council of Governments 2005a). Assuming a consistent growth rate beyond 2035 (the last year from which SACOG projections are available), the population of West Sacramento will reach 222,475 in 2065, an increase of 356 percent compared with 2010 levels.

The number of housing units in West Sacramento totaled 18,879 in 2012. The number of housing units is projected to reach 32,039 in 2036, an increase of 70 percent (Sacramento Area Council of Governments 2014). Assuming a consistent growth rate beyond 2036 (the last year from which SACOG projections are available), the number of housing units in West Sacramento will reach 60,706 in 2065, an increase of 222 percent compared with 2012 levels.

The number of jobs in West Sacramento totaled 25,860, or 27.8 percent of the total number of jobs county-wide, in 2012. The number of jobs is projected to reach 50,599 in 2036 (Sacramento Area Council of Governments 2005b). Assuming a consistent growth rate beyond 2036 (the last year from which SACOG projections are available), the number of jobs in West Sacramento will reach 113,864 in 2065, or 48.1 percent of the projected number of jobs.

3.2.2.2 Conservation and Open Space Policies

The *City of West Sacramento General Plan 2035* (City of West Sacramento 2016) contains several policies that support habitat conservation and preservation. A selection of these policies from the *Natural and Cultural Resources Element* is provided below.

Goal NRC-2: To protect sensitive native vegetation and wildlife communities and habitat in West Sacramento.

- **NRC-2.1 Public Awareness.** The City shall encourage and support development project and programs that enhance public appreciation and awareness of the natural environment.
- **NCR-2.2 Yolo Habitat Conservancy Program.** The City shall continue to work cooperatively with other jurisdictions in the county, and with the State and Federal governments to incorporating, as deemed appropriate, the findings and recommendations of the California

Department of Fish and Wildlife and the U.S. Fish and Wildlife Service into site-specific development proposals.

- **NCR-2.3 Habitat Connectivity.** The City shall preserve, enhance, and create interconnected open space and natural areas to provide for wildlife movement and protect biodiversity.
- **NCR-2.4 Habitat Surveys.** The City shall require site-specific surveys for discretionary development proposals that could potentially impact biological resources to determine if any significant wildlife habitat and vegetation resources will be adversely affected and, if so, to identify appropriate measures to avoid or mitigate such impacts.
- **NCR-2.5 Habitat Buffers.** The City shall require the provision and maintenance of an adequate setback between significant habitats and adjacent development. The buffer shall be landscaped with native vegetation and may be used for passive recreation purposes.
- **NCR-2.7 Rare, Threatened, & Endangered Species Protection.** The City shall preserve rare, threatened, and endangered species by ensuring that development does not adversely affect such species or by fully mitigating adverse effects. For developments where adverse impacts cannot be mitigated, the City shall not approve the project.
- **NCR-2.8 Habitat Preservation.** The City shall support State and Federal policies for preservation and enhancement of riparian and wetland habitats by incorporating, as deemed appropriate, the findings and recommendations of the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service into site-specific development proposals.
- **NCR-2.9 No Net Loss.** The City shall require new development to ensure no net loss of State and Federally regulated wetlands, other waters of the United States (including creeks, rivers, ponds, marshes, vernal pools, and other seasonal wetlands), and associated functions and values by regulating development in and near these habitats and promoting projects that avoid sensitive areas. Where habitat loss is unavoidable, the City shall require replacement consistent with State and Federal regulations protecting wetland resources.
- **NCR-2.10 Wetland and Riparian Habitat Protection.** The City shall seek to minimize the loss or degradation of wetland and riparian habitats at the following sites: Lake Washington and associated wetlands, Bee's Lake and associated riparian woodlands, riparian woodlands along the Sacramento River north of the I Street Bridge and south of the barge canal, and riparian woodlands along the Deep Water Ship Channel and the Yolo Bypass.
- **NCR-2.11 Riparian Vegetation Maintenance.** The City shall encourage the maintenance of marsh and riparian vegetation along irrigation/ drainage canals and along the Deep Water Ship Channel through routine maintenance and clearing and by disturbing only one bank per year.
- **NCR-2.12 Floodway Design.** The City shall encourage floodway design and flood control facilities to foster riparian habitat enhancement, improved water quality, and groundwater recharge.
- **NCR-2.13 Fisheries.** The City shall implement measures to ensure that development in the city does not adversely affect fishery resources in the Sacramento River, Deep Water Ship Channel, and Lake Washington.
- **NCR-2.14 Public Areas.** The City shall ensure that public access and recreation facilities do not eliminate or degrade riparian habitat values. Trails, picnic areas, and other improvements shall be sited to minimize impacts on sensitive wildlife habitat or riparian vegetation.

- **NCR-2.15 Landscaping and Native Plants.** The City shall promote the use of native plants, especially valley oaks, for landscaping roadsides, medians, parks, and private properties. In particular, native plants should be used along the Sacramento River, in areas adjacent to riparian and wetland habitats, and in other open space and natural areas.
- **NCR-2.16 Golf Courses.** The City shall encourage any future golf courses to incorporate and maintain, to the maximum extent possible, areas of native vegetation and wildlife habitat.

3.2.3 City of Winters

Winters is located in the southwestern corner of Yolo County, approximately 14 miles west of Davis and just east of the Vaca Mountains. The city is bordered by Dry Creek and Putah Creek on the south and southwest. Interstate 505 and State Route 128 are located in and near the city, serving as key links to Interstate 80, approximately 10 miles to the south, and Interstate 5, 23 miles to the north. State Route 128 intersects the city and serves as a major access route to Lake Berryessa. The Winters Planning Unit (#22) includes the incorporated boundary of Winters (1,627 acres) and a portion of the city's LAFCO SOI (352 acres of 496 total acres in the SOI), for a total of 1,994 acres.

The City of Winters adopted its most recent general plan in 1992. There have been minor amendments since that time; the Housing Element was revised in October 2013. The horizon year for the *City of Winters General Plan* is 2021 for the Housing Element and 2018 for the other elements of the general plan. The *General Plan Policy Document* includes a land use diagram that outlines the standards of population density and building density for land designations within the Urban Limit Line. The plan seeks to maintain the traditional small-town qualities and agricultural heritage of Winters while focusing on contained development (City of Winters 1992).

3.2.3.1 Population, Housing, and Employment

The population of Winters was 6,624 in 2010. It is projected to reach 12,360 in 2035, an increase of 87 percent compared with 2010 levels (Sacramento Area Council of Governments 2005a). Assuming a consistent growth rate beyond 2035 (the last year from which SACOG projections are available), the population of Winters will reach 33,532 in 2065, an increase of 406 percent compared with 2010 levels.

The number of housing units in Winters totaled 2,372 in 2012. The number of housing units is projected to reach 3,126 in 2036, an increase of 32 percent (Sacramento Area Council of Governments 2014). Assuming a consistent growth rate beyond 2036 (the last year from which SACOG projections are available), the number of housing units in Winters will reach 4,364 in 2065, an increase of 84 percent compared with 2012 levels.

The number of jobs in Winters totaled 1,921, or 2.1 percent of the total number of jobs county-wide, in 2012. The number of jobs is projected to reach 2,824 in 2036 (Sacramento Area Council of Governments 2005b). Assuming a consistent growth rate beyond 2036 (the last year from which SACOG projections are available), the number of jobs in Winters will reach 4,498 in 2065, or 1.9 percent of the projected number of jobs.

3.2.3.2 Conservation and Open Space Policies

The *City of Winters General Plan* (City of Winters 1992) contains several policies that support habitat conservation and open space preservation. A selection of these policies is provided below.

Goal VI.C: To protect sensitive native vegetation and wildlife communities and habitat.

- Prior to approving private or public development projects, the City shall require the project area to be field surveyed for the presence of special-status species. If encountered, appropriate measures will be taken to minimize disturbance and protect identified populations where feasible.
- The City shall ensure that there is no net loss of riparian or wetland habitat acreage. Where habitat loss is unavoidable, the City shall require replacement on at least a 1:1 basis.
- The City shall work with surrounding jurisdictions and state and federal agencies to develop a regional *Habitat Management Plan*.
- The City shall undertake a feasibility study for the establishment of an Open Space Preserve between the Urban Limit Line and Grant Avenue west of I-505. The preserve will be designed for a combination of uses including agriculture, habitat protection, groundwater recharge, and educational and recreational activities. It would also function as a flood control system.

Goal VI.D: To promote the protection and enhancement of wetlands and the riparian and aquatic ecosystems of Putah Creek and Dry Creek.

- The City shall require that all new development along Putah Creek and Dry Creek be set back at least 50 or 100 feet from the top of the creek bank.
- Putah Creek and Dry Creek in the downtown area should be preserved as much as possible in their natural state. Public access and recreational facilities shall not eliminate or degrade riparian habitat values.

3.2.4 City of Woodland

Woodland, nicknamed “City of Trees,” is the county seat of Yolo County, located 20 miles northwest of Sacramento at the intersection of Interstate 5 and State Route 113. The Yolo Bypass lies approximately three miles east of the city, Willow Slough is one mile southeast, and Cache Creek is two miles north. The Woodland Planning Unit (#19) includes the incorporated boundary of Woodland (9,624 acres), its LAFCO SOI (2,639 acres), and an additional 503 acres outside of the SOI and the city limits that corresponds to a voter-approved Urban Limit Line adopted in 2006. The total amount of acreage for the Woodland Planning Unit is 12,766 acres.

The City of Woodland completed a comprehensive update of its general plan in May 2017. The general plan update envisions Woodland maintaining its small-town atmosphere, rich historical buildings, and commitment to the protection of agricultural soils. The new plan has a horizon year of 2035 (City of Woodland 2016).

3.2.4.1 Population, Housing, and Employment

The population of Woodland was 55,468 in 2010. It is projected to reach 76,132 in 2035, an increase of 37 percent compared with 2010 levels (Sacramento Area Council of Governments 2005a). Assuming a consistent growth rate beyond 2035 (the last year from which SACOG projections are

available), the population of Woodland will reach 126,359 in 2065, an increase of 128 percent compared with 2010 levels.

The number of housing units in Woodland totaled 20,036 in 2012. The number of housing units is projected to reach 23,571 in 2036, an increase of 18 percent (Sacramento Area Council of Governments 2014). Assuming a consistent growth rate beyond 2036 (the last year from which SACOG projections are available), the number of housing units in Woodland will reach 28,684 in 2065, an increase of 43 percent.

The number of jobs in Woodland totaled 21,302, or 22.9 percent of the total number of jobs county-wide, in 2012. The number of jobs is projected to reach 32,004 in 2036 (Sacramento Area Council of Governments 2005b). Assuming a consistent growth rate beyond 2036 (the last year from which SACOG projections are available), the number of jobs in Woodland will reach 52,338 in 2065, or 22.1 percent of the projected number of jobs.

3.2.4.2 Conservation and Open Space Policies

The *City of Woodland General Plan 2035* explicitly states that the city shall participate in the county-wide HCP/NCCP and incorporate the goals of the habitat plan, as outlined below (City of Woodland 2017).

Policy 7.B.1 Habitat Conservation Plan/Natural Community Conservation Plan. Continue to participate in the planning process for the countywide Habitat Conservation Plan/Natural Community Conservation Plan. Once adopted, fully implement the Plan to mitigate the impacts of growth projected under the General Plan on plant and wildlife habitats in the Woodland area. Evaluate the opportunity for adoption and implementation of a Local Conservation Plan to provide additional clearance under the California Environmental Quality Act (CEQA) for general biological resource impacts. The general plan (City of Woodland 2017) also contains policies that support habitat conservation and open space preservation. A selection of these policies from the Sustainability, Conservation, and Open Space Element (Chapter 7) is provided below.

Policy 7.B.2 Sensitive Habitat Types. Support and cooperate with efforts of other local, State, and Federal agencies and private entities engaged in the preservation and protection of sensitive habitat types from incompatible land uses and development. Sensitive habitat types include alkali sink, freshwater wetlands, freshwater marsh, riparian forest, drainages, riverine habitat, and lakes.

Policy 7.B.3 Special-Status Species. Support preservation of the habitats of Federally- or State-listed rare, threatened, endangered, and/or other special status species. Encourage Federal and State agencies, as well as other resource conservation organizations, to acquire and manage endangered species' habitats.

Policy 7.B.4 Fish and Wildlife. Support the management efforts of the California Department of Fish and Wildlife to maintain and enhance the productivity of important wildlife species by protecting identified critical habitat for these species from incompatible suburban, rural residential, or recreational development.

Policy 7.B.5 Open Space for Conservation. Where appropriate, permanently protect as open space areas of natural resource value, including sensitive habitat types (e.g. alkali sink and prairie, freshwater wetlands, freshwater marsh, riparian forest, drainages). Maintain connectivity between open space areas designated for habitat conservation values within the Planning Area as well as

linkages to adjacent habitats outside the Planning Area, such as Willow Slough, Cache Creek, and habitat preserves to the east. (EIR Mitigation Measure 4.4-1b)

Policy 7.B.6 Open Space Buffer. Continue to work with Yolo County and the City of Davis to maintain the permanent open space buffer between County Roads 27 and 29 and its existing wildlife habitat values. (EIR Mitigation Measure 4.4-2a).

Policy 7.B.7 Woodland Regional Park. Protect and maintain Woodland Regional Park as an important wildlife preserve and habitat for special-status plants and allow for public access that is compatible with and promotes public education of the site's habitat value. (EIR Mitigation Measure 4.4-1b)

Policy 7.B.8 Native and Compatible Non-Native Plant Species. Require developers to use native and compatible non-native species, especially drought-resistant species, to the extent possible in order to preserve the visual integrity of the landscape, provide benefits for native wildlife, and ensure that a variety of plants suited to the region are maintained. (EIR Mitigation Measure 4.4-2a).

3.2.5 County of Yolo

Yolo County is located in the agricultural region of the Central Valley and the Sacramento River Delta. The county line is directly west of Sacramento, northeast of the Bay Area counties of Solano and Napa, south of Colusa County, and west of Sutter County. The unincorporated area of Yolo County encompasses 95 percent of the land area, or 621,218 acres. Approximately half of Yolo County's unincorporated population and housing units are located within existing unincorporated communities. The University of California, Davis; the Yocha Dehe Wintun Nation; and several special districts are located within Yolo County's unincorporated area but have land use and related authority that are distinct from the *Yolo County General Plan*.

The *Yolo County General Plan* was adopted in November 2009. There have been minor amendments since that time; the Housing Element was revised in 2013. The horizon year for the general plan is 2021 for the Housing Element and 2030 for the other elements.

Yolo County has led the state in agriculture preservation practices and is committed to sustainability, community identity, and rural service standards. The general plan seeks to continue to preserve agriculture by focusing development on existing communities. It aims to discourage sprawl and encourage density, infill, and compact community design.

Existing urban development makes up approximately 20,000 acres, or approximately three percent, of the 621,224 acres in the unincorporated area. Buildout of the 2030 *Yolo County General Plan* would result in the conversion of approximately 4,807 acres to urban development (including roadways), bringing the urbanized total to 24,860 acres, or approximately four percent.² The unincorporated county is divided into the 18 non-urban planning units (1 through 18) of this HCP/NCCP.

² Yolo County Board of Supervisors Staff Report, Certification of the General Plan EIR, Final Adoption of the *Yolo County 2030 Countywide General Plan*, and Associated Actions, November 10, 2009.

3.2.5.1 Population, Housing, and Employment

The total population of the unincorporated areas of Yolo County was 29,293 (out of 209,035 total in Yolo County) in 2010. The total countywide population is projected to reach 290,558 in 2035, an increase of 39 percent (Sacramento Area Council of Governments 2005a). Assuming a consistent growth rate beyond 2035 (the last year from which SACOG projections are available), the population of Yolo County as a whole will reach 471,100 in 2065, an increase of 135% compared with 2010 levels.

The *Yolo County General Plan* indicates that growth in the unincorporated county through 2035 will be concentrated within the adopted community growth boundaries of Clarksburg, Knights Landing, and Dunnigan.

The number of housing units in unincorporated Yolo County totaled 7,825 (approximately 70,000 total in Yolo County) in 2012. The number of housing units is projected to reach 10,258 in 2036, an increase of 31 percent (Sacramento Area Council of Governments 2014). Assuming a consistent growth rate beyond 2036 (the last year from which SACOG projections are available), the number of housing units in Yolo County will reach 14,228 in 2065, an increase of 82 percent.

The number of jobs in total Yolo County (incorporated and unincorporated) totaled 25,429, or 30.6 percent of the total number of jobs county-wide, in 2012. The number of jobs is projected to reach 33,366 in 2036 (Sacramento Area Council of Governments 2005b). Assuming a consistent growth rate beyond 2036 (the last year from which SACOG projections are available), the number of jobs in Yolo County will reach 40,489 in 2065, or 17.1 percent of the projected number of jobs.

3.2.5.2 Conservation and Open Space Policies

The *Yolo County 2030 Countywide General Plan* (Yolo County 2009) contains numerous policies that support habitat conservation and open space preservation. They are found in all elements of the general plan and work together as a framework for extraordinary landscape protections.

Yolo County puts great stock in the preservation of its long-term vision. Since its creation as an original county of the state in 1850, Yolo County has updated its general plan only three times. This is a testament to the fact that Yolo County has stayed focused on the same basic goals and values since its inception more than 100 years ago.

Yolo County has an adopted overarching Vision Statement, which is composed of nine principles that guide the general plan and all land use actions. The number one principle within Yolo County's adopted Vision Statement is "The success of Yolo County depends upon the success of agriculture." The number two principle is "The benefits of open space and natural areas are essential to our quality of life."

The Land Use and Community Character Element of the *Yolo County General Plan* states the following with regard to Yolo County's purposefully limited and focused approach to urban development:

This element seeks to preserve and foster the rural character of the County. The County has challenged itself to determine how small its communities can remain and yet still be sustainable in terms of infrastructure, balanced in terms of housing and jobs, and healthy in terms of quality of life and community services. Each existing rural town was examined in this manner and a modest amount of growth has been proposed for some areas. This element also establishes goals for

regional collaboration and equity, green building standards, sustainable community design and net community benefits from new growth. Growth boundaries have been established for every community and each of the four cities.

The following policies are among the more innovative and/or relevant for an understanding of the significance of Yolo County's commitment to agriculture and natural resource preservation:

Policy LU-1.1 This policy identifies and defines the County's land use designations. There are two key aspects of the County's land use designations relevant to the HCP/NCCP: 1) the only residential uses allowed in the Agricultural (AG) designation are farm dwellings and farmworker housing. Rural residential is not an allowed use; and 2) the Residential High (RH) designation allows densities of 20 dwelling units per acre and above with no upper maximum. This is as high or higher than any other jurisdiction (city or county) in the SACOG region.

Policy LU-2.1 Urban development shall bear the primary burden of this policy. Ensure that development will not have a significant adverse effect on the economic viability or constrain the lawful practices of adjoining or nearby agricultural operations, except for land within the Sphere (SOI) around a city or within the growth boundary of an unincorporated community. New urban (non-agricultural) development should be setback a minimum of 300 feet from adjoining agricultural land where possible, but special circumstances can be considered by the decision-making body. Except as noted below where no buffer is required, in no case shall the buffer be reduced to less than 100 feet.

Policy LU-2.3 Prohibit the division of land in an agricultural area if the division is for non-agricultural purposes and/or if the result of the division will be parcels that are infeasible for farming. Projects related to clustering and/or transfers of development rights are considered to be compatible with agriculture.

Policy LU-3.1 Direct all of the County's residential growth to designated areas within the cities and within the growth boundaries of existing unincorporated communities, as depicted on the Land Use Diagram in Figure LU-1, with the exception of individual farm dwellings (houses allowed on agricultural land), other allowed units (e.g., second units, ancillary dwellings, houses allowed in mixed-use commercial areas, etc.) and housing allowed on existing residentially designated land.

Policy LU-3.8 The intent of allowing residences in the agricultural areas is to provide dwellings for those directly involved in on-site farming activity, including farm employees, the landowners and their immediate families. All such dwellings shall be encouraged to locate on lands least suited for agricultural use and/or in "clustered" configurations to minimize the conversion of agricultural lands to any other uses.

Policy LU-3.9 Prohibit the creation of a ring of rural residential development around existing growth boundaries.

Policy LU-3.10 Conservation easements located within community growth boundaries will not be accepted for mitigation purposes.

Policy LU-7.1 Seek recognition, reimbursement and reward for foregone revenues and opportunities associated with the active preservation of agriculture, open space and important natural resources.

Policy LU-7.5 Support efforts to adopt a regional tax measure that would fund agricultural and open space acquisition, protection and maintenance.

Policy CC-1.7 Reinforce the growth boundaries for each community through appropriate mechanisms including greenbelts, buffers, conservation easements and other community separators.

Policy CC-2.1 Require planned growth to pay the full cost of new development, as well as, to the greatest feasible extent, benefit residents in each existing community through efforts that, among other things, result in basic urban services and community sustainability.

Policy CC-2.10 Strive to achieve a minimum jobs/housing balance of 1.2 jobs for every dwelling unit on average within each unincorporated community, to the greatest extent feasible.

Policy CC-2.11 Strive to achieve a match between the prices of dwelling units and the salaries of the jobs provided within each unincorporated community, to the greatest extent feasible.

Policy CC-2.12 Strive to create an average yield community-wide of 16 jobs per acre for industrial, commercial and other job-generating land uses.

Policy CC-2.15 Develop all services, parks, buffers and infrastructure within identified community growth boundaries. Mitigation lands for the loss of agricultural land and wildlife habitat are the only component of community development that are allowed to be located outside of the growth boundaries.

Policy CC-4.31 Encourage clustering of allowed residential units to protect resources and/or improve efficiency of services.

The Circulation Element contains similarly innovative policies (some the first of their kind in the state) that support the land use vision. Two in particular that are relevant are:

Policy CI-3 This policy establishes transportation levels of service of LOS C as a limit on rural roads to maintain farm-to-market capacity and generally LOS E within other specified growth areas to maximum development efficiency. Improvements to rural roads to regain LOS C are not allowed – the threshold is a planning limit.

The goals and policies of the Agriculture and Economic Development Element emphasize wildlife-friendly farming, local food preference, community revitalization, creation of jobs and economic health, among other values. As stated in this element, the defining characteristic of Yolo County is its agriculture and open spaces. Though agriculture is a business, the fields, orchards, and rangeland that comprise most of the agricultural land base are generally open and pastoral and create valued views and vistas. The term “working landscape” is sometimes used to refer to the de facto open space provided by the vast land mass of designated Agricultural (AG) land in Yolo County, even though this land is not designated Open Space (OS).

Ninety-two percent of the land surface of Yolo County is off-limits to residential, commercial, and industrial development uses that are not consistent with the agricultural or open space designations. Instead, these lands are set aside for farming, grazing, and open space. Over 85 percent of county land is used for agriculture. Sixty-seven percent of the unincorporated area of Yolo County is protected under Williamson Act contracts to provide further long-term protection of these lands.

Yolo County’s historic commitment to honor its “roots” by preserving agriculture—dating back several decades and reaffirmed in the prior comprehensive update of the general plan in 1983 and the most recent update —has produced an enviable quality of life, significant open space preservation, and long-standing development agreements between Yolo County and its four

incorporated cities that largely concentrate housing and commercial development within the SOI of existing urbanized areas, which correlate to the four urban planning units (19–22) identified for this plan.

Yolo County has long maintained a growth strategy that focuses urban development within the four cities and the unincorporated communities. The general plan establishes growth boundaries for each unincorporated community in Yolo County and relies upon the city SOI as the growth boundaries for the cities, clearly defining the agricultural-community interface. In addition, Yolo County has agreed with Davis and Woodland to maintain a permanent agricultural and open space buffer between the two cities. The Agriculture and Economic Development Element contains a policy to maintain this 11,000-acre buffer and an action to work with the cities to make it more specific and binding.

Redevelopment pass-through agreements and annexation revenue-sharing agreements are key components of the County's farmland preservation framework, providing revenues to the County that allow it to forego revenue-generating urban development on unincorporated agricultural land. Through the general plan, the County has committed to continued collaboration with the cities to strengthen such agreements, ensure sufficient revenues, cover county revenue losses and service costs and enable the continued preservation of agricultural land that would otherwise be subject to intense development pressure.

The following policies from the Agricultural Element are particularly relevant:

Policy AG-1.2 Maintain parcel sizes outside of the community growth boundaries large enough to sustain viable agriculture and discourage conversion to non-agricultural home sites.

Policy AG-1.3 Prohibit the division of agricultural land for non-agricultural uses.

Policy AG-1.4 Prohibit land use activities that are not compatible within agriculturally designated areas.

Policy AG-1.5 Strongly discourage the conversion of agricultural land for other uses. No lands shall be considered for redesignation from Agricultural or Open Space to another land use designation unless all of the following findings can be made:

- A. There is a public need or net community benefit derived from the conversion of the land that outweighs the need to protect the land for long-term agricultural use.
- B. There are no feasible alternative locations for the proposed project that are either designated for non-agricultural land uses or are less productive agricultural lands.
- C. The use would not have a significant adverse effect on existing or potential agricultural activities on surrounding lands designated Agriculture.

Policy AG-1.6 Continue to mitigate at a ratio of no less than 1:1 the conversion of farm land and/or the conversion of land designated or zoned for agriculture, to other uses.

Policy AG-1.7 Locate farm dwellings in a manner that protects both on-site and off-site agricultural practices. All dwellings in agriculturally zoned areas shall be encouraged to be located on portions of the parcel less suitable for agricultural use and in "clustered" configurations.

Policy AG-1.9 Regulate and encourage removal of incompatible land uses and facilities from agriculturally designated lands.

Policy AG-1.13 Prohibit new residential or suburban subdivisions in areas designated for agricultural use.

Policy AG-1.17 Encourage the coordinated acquisition of agricultural conservation easements by local, State and federal agencies and private conservation organizations with established records of responsible stewardship to protect agriculture, from willing sellers or donors.

Policy AG-1.18 Encourage the coordinated placement of agricultural conservation easements on land most threatened by development, particularly those lands located close to cities and unincorporated communities.

Policy AG-1.22 Within conservation easements, preclude the practice of fallowing fields for the purpose of water export. Fallowing as a part of normal crop rotation is not subject to this policy.

Policy AG-1.24 Oppose the creation of any conservation easements within growth boundaries. Conservation easements within growth boundaries shall not be accepted for mitigation purposes.

Policy AG-2.2 Preserve water resources for agriculture, both in quantity and quality, from competition with development, mitigation banks and/or interests from outside of the County.

Policy AG-2.8 Facilitate partnerships between agricultural operations and habitat conservation efforts to create mutually beneficial outcomes.

Policy AG-2.9 Support the use of effective mechanisms to protect farmers potentially impacted by adjoining habitat enhancement programs, such as “safe harbor” programs and providing buffers within the habitat area.

Policy AG-2.10 Encourage habitat protection and management that does not preclude or unreasonably restrict on-site agricultural production.

Policy AG-2.13 Promote wildlife-friendly farm practices, such as tailwater ponds, native species/grasslands restoration in field margins, hedgerows, ditch management for riparian habitat, restoration of riparian areas in a manner consistent with ongoing water delivery systems, reduction of pesticides, incorporating winter stubble and summer fallow, etc.

Policy AG-2.15 Encourage the establishment of agricultural mitigation banks in appropriate locations that provide strategic protection of high value farmland.

Policy AG-3.11 Adopt land use regulations for small farms that recognize the potential role such farms play in education and agricultural tourism and provide for the inclusion of such activities, while discouraging the use of small farms as non-agricultural home sites.

The Conservation and Open Space Element focuses on balanced management of Yolo County’s multiple natural and cultural resources. The goals and policies speak to a connected and accessible open space system, with communities separated by agriculture and natural spaces, which are linked by a network of trails, where open spaces complement other land areas in a way that benefits both natural resources and the community. Among other important items, this element anticipates full integration of the Yolo HCP/NCCP as a tool for multi-species protection.

Further in the element, under the discussion of biological resources, there is a discussion of how each of the communities and habitats in Yolo County provide important biological value, support numerous plant and wildlife species, and are all part of an interrelated ecological landscape. The element states that an effective conservation approach considers the interrelatedness of this system

as a whole and strives to preserve and restore the functioning of ecologic processes by maintaining the necessary connectivity across the landscape.

The element contains descriptions of cultivated and natural lands throughout Yolo County and relevant programs, including this HCP/NCCP, the *Yolo County Oak Woodland Conservation and Enhancement Plan*, and the *Programmatic Safe Harbor Agreement for the Restoration of Riparian and Wetland Habitat*, as administered by the Audubon California Landowner Stewardship Program.

Key goals, policies, and actions in this element include the following:

GOAL CO-1 Natural Open Space. Provide a diverse, connected and accessible network of open space, to enhance natural resources and their appropriate use.

- Expand and enhance an integrated network of open space to support recreation, natural resources, historic and tribal resources, habitat, water management, aesthetics, and other beneficial uses.
- Develop a connected system of recreational trails to link communities and parks throughout the county.
- Create opportunities for ecotourism.
- Encourage responsible stewardship of private lands. Promote increased opportunities for public access to waterways and other natural areas.

Action CO-A2 Establish permanent areas of agriculture and open space between cities and unincorporated towns to ensure the continued distinctiveness of each community.

Action CO-A3 Seek to acquire voluntary easements to ensure connectivity with the conservation areas established through the Blue Ridge Berryessa Natural Area Conservation Partnership.

Action CO-A6 Connect the future Bay Delta Trail system, the future trail system in the lower Yolo Bypass, and the future Cache Creek Parkway system, and link those trails to the American River Bikeway system in Sacramento County.

Policy CO-1.14 Support the preservation of open space consistent with this general plan, via acquisition of fee title or easement interest by land trusts, government agencies, and conservancies from willing landowners.

Policy CO-1.15 Support efforts to acquire either fee title or easements on additional open space areas adjoining existing protected natural resource areas to increase the size, connectivity, and buffering of existing habitat.

Policy CO-1.16 Coordinate open space acquisition with habitat acquisition that occurs pursuant to the Yolo Natural Heritage Program.

Policy CO-1.25 Allow for specified areas of resource parks to be preserved, enhanced and/or restored as mitigation sites for public agencies only, consistent with the requirements of appropriate regulatory and funding agencies, provided that adequate compensation, including funding for operations and maintenance of the mitigation, is provided.

GOAL CO-2 Biological Resources. Protect and enhance biological resources through the conservation, maintenance, and restoration of key habitat areas and corresponding connections that

represent the diverse geography, topography, biological communities, and ecological integrity of the landscape.

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

Policy CO-2.2 Focus conservation efforts on high priority conservation areas (core reserves) that consider and promote the protection and enhancement of species diversity and habitat values, and that contribute to sustainable landscapes connected to each other and to regional resources.

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-2.4 Coordinate with other regional efforts (e.g., Yolo County HCP/NCCP) to sustain or recover special-status species populations by preserving and enhancing habitats for special-status species.

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-2.12 Support the use of controlled fire management where feasible and appropriate as a natural ecosystem process, to reduce the threat of catastrophic wildfire, to encourage oak recruitment, and to meet other resources management objectives in higher elevation woodland and chaparral communities.

Policy CO-2.13 Promote the use of oak woodlands conservation banks to mitigate for losses due to development impacts and to provide carbon sequestration for greenhouse gas emissions under applicable State programs.

Policy CO-2.14 Ensure no net loss of oak woodlands, alkali sinks, rare soils, vernal pools or geological substrates that support rare endemic species, with the following exception. The limited loss of blue oak woodland and grasslands may be acceptable, where the fragmentation of large forests exceeding 10 acres is avoided, and where losses are mitigated.

Policy CO-2.15 Encourage the use of mosquito abatement methods that are compatible with protecting fish and wildlife, including native insect pollinators.

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

Policy CO-2.17 Emphasize and encourage the use of wildlife-friendly farming practices within the County's Agricultural Districts and with private landowners, including:

- Establishing native shrub hedgerows and/or tree rows along field borders.
- Protecting remnant valley oak trees.
- Planting tree rows along roadsides, field borders, and rural driveways.

- Creating and/or maintaining berms.
- Winter flooding of fields.
- Restoring field margins (filter strips), ponds, and woodlands in non-farmed areas.
- Using native species and grassland restoration in marginal areas.
- Managing and maintaining irrigation and drainage canals to provide habitat, support native species, and serve as wildlife movement corridors.
- Managing winter stubble to provide foraging habitat.
- Discouraging the conversion of open ditches to underground pipes, which could adversely affect giant garter snakes and other wildlife that rely on open waters.
- Widening watercourses, including the use of setback levees.

Policy CO-2.18 Coordinate with the Yolo County Resource Conservation District, Natural Resource Conservation Service, UC Cooperative Extension, and other farm organizations to encourage farming practices and the management of private agricultural land that is supportive of wildlife habitat values.

Policy CO-2.19 Support the use of sustainable farming methods that minimize the use of products such as pesticides, fuels and petroleum-based fertilizers.

Policy CO-2.20 Encourage the use of wildlife-friendly Best Management Practices to minimize unintentional killing of wildlife, such as restricting mowing during nesting season for ground-nesting birds or draining of flooded fields before fledging of wetland species.

Policy CO-2.21 Promote wildlife-friendly farming through mechanisms such as farmland trusts, conservation easements and safe harbor-type agreements.

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. A larger setback is preferred.

Policy CO-2.23 Support efforts to coordinate the removal of non-native, invasive vegetation within watersheds and replacement with native plants.

Policy CO-2.24 Promote floodplain management techniques that increase the area of naturally inundated floodplains and the frequency of inundated floodplain habitat, restore some natural flooding processes, river meanders, and widen riparian vegetation, where feasible.

Policy CO-2.26 Coordinate with local watershed stewardship groups to identify opportunities for restoring or enhancing watershed, instream, and riparian biodiversity.

Policy CO-2.27 Evaluate the need for additional water to support future riparian enhancement efforts, including the benefits of conjunctive management of groundwater and surface water resources.

Policy CO-2.28 Balance the needs of aquatic and riparian ecosystem enhancement efforts with flood management objectives.

Policy CO-2.29 Promote native perennial grass habitat restoration and controlled fire management in grazing lands to reduce invasive species cover and enhance rangeland forage.

Policy CO-2.30 Protect and enhance streams, channels, seasonal and permanent marshland, wetlands, sloughs, riparian habitat and vernal pools in land planning and community design.

Policy CO-2.31 Protect wetland ecosystems by minimizing erosion and pollution from grading, especially during grading and construction projects.

Policy CO-2.33 Create partnerships with landowners, non-government organizations, and other public agencies to implement the *Yolo County Oak Woodland Conservation and Enhancement Plan*.

Policy CO-2.34 Recognize, protect and enhance the habitat value and role of wildlife migration corridors for the Sacramento River, Putah Creek, Willow Slough, the Blue Ridge, the Capay Hills, the Dunnigan Hills and Cache Creek.

Policy CO-2.35 Consider potential effects of climate change on the locations and connections between wildlife migration routes.

Policy CO-2.36 Habitat preserved as a part of any mitigation requirements shall be preserved in perpetuity through deed restrictions, conservation easement restrictions, or other method to ensure that the habitat remains protected. All habitat mitigation must have a secure, ongoing funding source for operation and maintenance.

Policy CO-2.37 Where applicable in riparian areas, ensure that required state and federal permits/approvals are secured prior to development of approved projects.

Policy CO-2.38 Avoid adverse impacts to wildlife movement corridors and nursery sites (e.g., nest sites, dens, spawning areas, breeding ponds). Preserve the functional value of movement corridors to ensure that essential habitat areas do not become isolated from one another due to the placement of either temporary or permanent barriers within the corridors. Encourage avoidance of nursery sites (e.g., nest sites, dens, spawning areas, breeding ponds) during periods when the sites are actively used and that nursery sites which are used repeatedly over time are preserved to the greatest feasible extent or fully mitigated if they cannot be avoided.

Policy CO-2.39 Require new or retrofitted bridges, and new or expanded roads to incorporate design and construction measures to maintain the functional value of wildlife movement corridors.

Policy CO-2.40 Preserve grassland habitat within 2,100 feet of documented California tiger salamander breeding ponds or implement required mitigation (equivalent or more stringent) as imposed by appropriate agencies or through the County HCP/NCCP, to fully mitigate impacts consistent with local, State, and federal requirements. Implementation and funding of mitigation measures for projects that will be developed in phases over time may also be phased, with the applicable mitigation being implemented and funded prior to the final approval of each phase or sub-phase.

Policy CO-2.41 Require that impacts to species listed under the State or federal Endangered Species Acts, or species identified as special-status by the resource agencies, be avoided to the greatest feasible extent. If avoidance is not possible, fully mitigate impacts consistent with applicable local, State, and Federal requirements.

Policy CO-2.42 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-2.43 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 to impact California tiger salamander upland or breeding habitat (if such assessment has not already been done as part of an approved HCP/NCCP). Such an assessment will be required for all projects located within 1.3 miles of a known or potential breeding site. Development activities that would result in isolation of the breeding or upland habitat will be required to mitigate for such impacts. Mitigation shall consist of two components: 1) habitat preservation and enhancement of suitable upland habitat, and 2) preservation and construction of new breeding habitat. CTS upland habitat must be mitigated at a ratio of 3:1 (preserved:impacted), located within 2,100 feet of an occupied habitat, and include at least one suitable breeding pond. Equivalent or more stringent mitigation may be implemented as determined by trustee and responsible agencies. Mitigation must be coordinated with the HCP/NCCP program if adopted.

Action CO-A2 Establish permanent areas of agriculture and open space between cities and unincorporated towns to ensure the continued distinctiveness of each community.

Action CO-A3 Seek to acquire voluntary easements to ensure connectivity with the conservation areas established through the Blue Ridge Berryessa Natural Area Conservation Partnership.

Action CO-A6 Connect the future Bay Delta Trail system, the future trail system in the lower Yolo Bypass, and the future Cache Creek Parkway system, and link those trails to the American River Bikeway system in Sacramento County.

Action CO-A25 Develop a conservation strategy that considers the preservation and protection of intact functioning landscapes, watersheds, and landscape corridors. The approach should be based on the initial identification of high value habitat areas (core areas) and how these areas could be physically linked across the landscape. Coordinate to ensure that the basic landscape-level conservation concepts are incorporated into the HCP/NCCP. (Policy CO-2.1 through 2.4, Policy CO-2.14, Policy CO-2.19 through CO-2.24, Policy CO-2.27, Policy CO-2.29, Policy CO-2.29, Policy CO-2.30, Policy CO-2.32, Policy CO-2.33)

Action CO-A26 Adopt and implement the *Habitat Conservation Plan/Natural Communities Conservation Plan* developed through the Yolo Natural Heritage Program. Integrate the HCP/NCCP (Natural Heritage Program) into the general plan as appropriate. Direct habitat mitigation to strategic areas that implement the Yolo Natural Heritage Program and are consistent with the County's conservation strategy. Avoid the conversion of agricultural areas and focus on lands where wildlife values and farming practices are complementary. (Policy CO-2.1 through CO-2.4, Policy CO-2.14)

Action CO-A27 Protect the habitat value and biological function of oak woodlands, grasslands, riparian areas, and wetland habitats. Avoid activities that remove or degrade these habitats and establish buffers to avoid encroachment into sensitive areas. (Policy CO-2.4, Policy CO-2.14, Policy CO-2.15, Policy CO-2.18, Policy CO-2.19, Policy CO-2.20 through CO-2.24)

Action CO-A28 Create a program to encourage the planting of new oak seedlings in appropriate locations and the protection of plantings from damage by animals, insects, and people until seedlings are of sufficient size. (Policy CO-2.13, Policy CO-2.16, Policy CO-2.17)

Action CO-A29 Adopt a heritage tree preservation ordinance. (Policy CO-2.17, Policy CO-2.36)

Action CO-A30 Encourage landowners to participate in programs that restore degraded creek resources by:

- Removing exotic species and establishing native riparian vegetation.
- Managing the upland areas of watersheds to control erosion and overgrazing.
- Adding exclusionary fencing to keep livestock out of streams and stream bank areas.

(Policy CO-2.12, Policy CO-2.20 through CO-2.24, Policy CO-2.25)

Action CO-A31 Establish criteria for the preservation of vernal pools that include the following:

- Unusual features;
- Habitat quality;
- Watershed integrity;
- Defensibility and buffering;
- Size;
- Plant and animal species variety; and
- Presence of special status species.

(Policy CO-2.20 through CO-2.24)

Action CO-A32 Prepare a complete inventory of identified streams, channels, seasonal and permanent marshland, wetlands, sloughs, riparian habitat and vernal pools for use in community plans, area plans and specific plans. (Policy CO-2.25, Policy CO-2.33, Policy CO-2.34)

Action CO-A34 Identify stream sections with important fish and riparian habitat restoration needs. Seek funding and participate in programs to address needs. (Policy CO-2.5 through Policy CO-2.11, Policy CO-2.25, Policy CO-2.26, Policy CO-2.28)

Action CO-A35 Integrate biological and habitat conditions and constraints into the County Geographical Information System. (Policy CO-2.1 through CO-2.4)

Action CO-A36 Acquire fee title or easements from willing landowners to promote wildlife migration routes focusing on Cache Creek, Putah Creek, Dunnigan Hills, Willow Slough, the Sacramento River, and the Capay Hills. (Policy CO-2.37, Policy CO-2.38)

3.3 Methods for Identifying Covered Activities

To begin the process of determining covered activities, the Yolo Habitat Conservancy (Conservancy) developed comprehensive lists of activities and projects under the direct control or jurisdiction of the Permittees that might have a need for take coverage for one of more of the covered species. The Conservancy based these lists primarily on the activities and projects described in each Permittee's general plan or other planning document. The Conservancy reviewed general plans, specific plans, master plans, parkway plans, bicycle plans, area plans, infrastructure plans, and similar adopted plans that were consistent with the permittees' general plans. The Conservancy worked with the Permittees to include activities described in these plans in the comprehensive list as appropriate. The relevant plans used to develop the list are referenced in this chapter. Figure 3-1 depicts

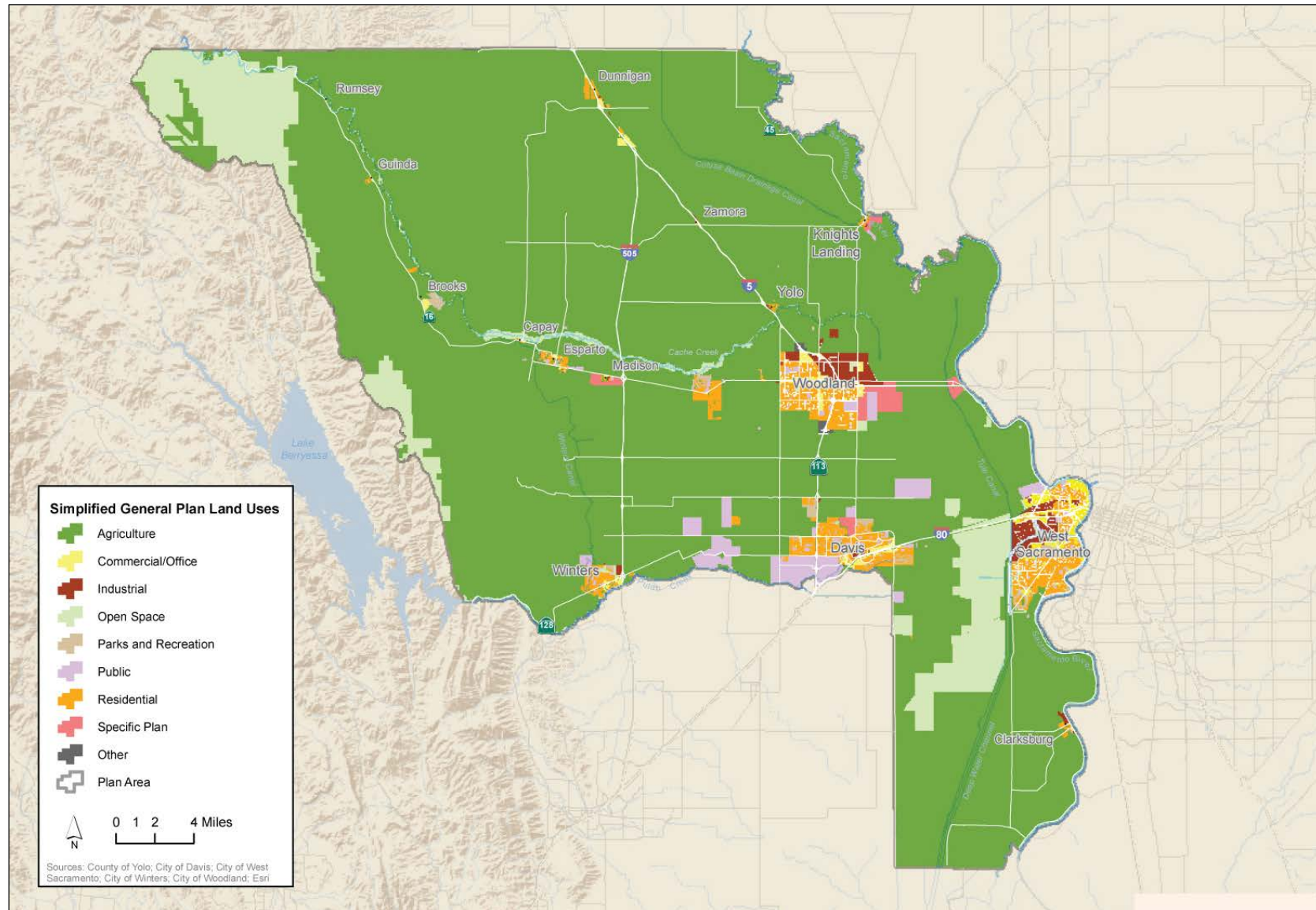
simplified general plan land use designations for Yolo County and the cities of Woodland, Winters, Davis, and West Sacramento in the Plan Area as they relate to trends in future growth and development. After this initial work to identify covered activities the Conservancy worked iteratively with the Permittees to verify, refine, and constrain this layer to be more reflective of actual likely future conditions and also to ensure plan affordability. Finally, Conservancy staff members reviewed the data layer of covered activities with the planning staff of each Permittee multiple times to solidify the covered activity descriptions. The resulting covered activities layer is summarized in Table 3-1.

3.4 Screening Criteria and Criteria for Coverage

3.4.1 Screening Criteria

The Conservancy used the following five criteria to screen the lists of activities and projects identified from the general plans for inclusion in this chapter. Candidate covered activities needed to meet all five criteria to be considered covered activities under this HCP/NCCP.

- **Location:** The activity or project will occur within the Plan Area boundaries.
- **Timing:** Except for ongoing operations and maintenance activities, implementation of activities or construction of the project is scheduled to begin after this HCP/NCCP is approved and the project is completed within the expected term of the permit.
- **Effect:** The activity or project has a reasonable potential or likelihood to affect a covered species adversely. Highly unlikely or speculative effects did not meet this criterion.
- **Definition:** The location, size, and other relevant aspects of the activity or project could be defined well enough such that direct and indirect effects on covered species could be evaluated and conservation measures developed to mitigate those effects.
- **Feasibility:** Inclusion of the activity or project as a covered activity would not result in undue delays or substantial additional cost to HCP/NCCP development and the permitting process relative to the benefit of including the activity/project as a covered activity. In other words, it would not be more cost-effective to permit the activity/project separately. Examples of impractical covered activities are ones that, on their own, would add additional covered species, generate substantial controversy, or significantly complicate the effects analysis.

Figure 3-1. General Plan Land Use in the Plan Area

3.4.2 Criteria for Coverage

The HCP/NCCP permits will cover an activity or project if all of the following criteria are met:

- The activity or project does not preclude achieving the biological goals and objectives of this HCP/NCCP (Chapter 6, *Conservation Strategy*), as determined by the Conservancy at the time the covered activity is proposed. The Conservancy will make this determination upon agreement with the wildlife agencies for projects for which there is some question whether the biological goals and objectives of this HCP/NCCP may be precluded.
- The activity will be directly implemented by a Permittee, requires a discretionary permit from a Permittee, or may result in take of covered species and the applicant desires to obtain take coverage under this HCP/NCCP as a Special Participating Entity (see Section 4.2.1.3, *Projects Proposed by Special Participating Entities*).
- The activity or project causes a type of effect (adverse or beneficial) evaluated in Chapter 5, *Effects on Covered Species and Natural Communities*.
- Adequate take coverage³ under the permits remains available for other covered activities.

The Conservancy based identification of the covered activities in this chapter on the types of projects and activities allowed by the Permittees' respective general plans and other planning documents described above. The Permittees will develop additional activities and projects over the course of the permit term (e.g., through the update of existing planning documents or development of new planning documents). To the extent these additional activities and projects are generally and qualitatively described below, meet the screening criteria, and are not expressly limited by this chapter, these future activities and projects may also be covered by this HCP/NCCP.

To maintain flexibility in implementation, this chapter broadly defines all of the different types of activities and projects covered by this HCP/NCCP. Therefore, some interpretation is expected during implementation as to whether this HCP/NCCP covers some activities or projects. The Permittee with jurisdiction will evaluate activities or projects that do not fall clearly within the descriptions provided in this chapter on a case-by-case basis. If the Permittee with jurisdiction over a proposed activity or project determines that a specific type of activity or project is not included within the descriptions in this chapter, then it will not receive coverage under this HCP/NCCP. The Conservancy will resolve any uncertainties regarding whether an activity or project can receive coverage under this HCP/NCCP. The Conservancy has the authority to determine that an activity cannot receive take coverage under this HCP/NCCP.

Project-specific identification as a covered activity, either in this chapter or through a future Conservancy determination, does not imply or grant entitlement for implementation. Project applicants are required to gain other project approvals from local jurisdictions and other local, state, and federal regulatory agencies as necessary.

³ Take coverage is defined in this HCP/NCCP in terms of natural community and covered species habitat loss and sometimes in terms of covered species occurrences. Take limits are summarized in Table 5-2(a) and 5-2(b).

3.5 Covered Activities Description

For the purpose of this HCP/NCCP, covered activities are organized into the following categories and subcategories.

- Urban projects and activities.
 - General urban development.
 - Urban public services, infrastructure, and utilities.
 - Urban projects in rural areas.
- Rural projects and activities.
 - General rural development.
 - Rural public services, infrastructure, and utilities.
 - Agricultural economic development.
 - Open space.
 - Aggregate mining.
- Public and private operations and maintenance.
- Conservation strategy implementation and covered activities on reserve lands.
- Neighboring landowner protection program.

The Conservancy defined these categories to be consistent with local planning processes and group similar types of activities together, which facilitates description and minimizes redundancy. The covered activities described below are those projects and activities that will have direct or indirect effects on the covered species and natural communities and for which the Permittees will request incidental take authorization. As such, covered activity descriptions focus on those projects and activities that will have ground-disturbing effects, require vegetation management, or may have indirect effects on listed species (e.g., erosion associated with a culvert that degrades water quality at the site and downstream). Descriptions of covered activities in this chapter are mostly qualitative. Additional quantitative assumptions of covered activity footprints are described in Chapter 5, *Effects on Covered Species and Natural Communities*.

The Yolo HCP/NCCP may cover projects or activities that do not require a discretionary permit from the Permittees under a Certificate of Inclusion if the project proponent qualifies as a Special Participating Entity (Section 4.2.1.3, *Projects Proposed by Special Participating Entities*).

Table 3-1, *Spatially Defined Urban and Rural Development, Methods and Assumptions*, provides the methods and assumptions for developing the spatially defined covered activities footprint, and includes the acreage of each type of covered activity assumed. Table 3-2, *Spatially Undefined Activities, Methods and Assumptions*, describes the methods and assumptions for determining the general location, acreage, and affected land cover types for the spatially undefined covered activities.

Table 3-1. Spatially Defined Urban and Rural Development, Methods and Assumptions

Covered Activity Category	Covered Activity Type	GIS Detail	Covered Activity Amount Assumed (acres)^g
Urban Projects and Activities			
	General Urban Development and Urban Public Services, Infrastructure, and Utilities	Planning Unit 19 (Woodland)	3,397 ^a
		Planning Unit 20 (Davis)	1,251
		Planning Unit 21 (West Sacramento)	3,559 ^b
		Planning Unit 22 (Winters)	718
		Summary	8,925
	Urban Projects in Rural Areas	Davis Mace Ranch Innovation Center	223 ^c
		West Sacramento Levee Improvement Program	496
		Summary	719
Rural Projects and Activities			
	General Rural Development	Capay	7
		Clarksburg	99
		Dunnigan	2,720 ^d
		Elkhorn	383
		Esparto	215
		Guinda	7
		I 505/ CR 14	10
		Knights Landing	249
		Madison	429
		Monument Hills	170
		North Davis Meadows	7
		Rumsey	0 ^e
		Willow Oak	13
		Yolo	53
		Yolo Fruit Stand/I 80	3
		Zamora	22
		General Rural Development Summary	4,387
	Rural Public Service, Infrastructure and Utilities		
		Woodland-Davis Alternative Transportation Corridor	19
		Bike paths/trails in unincorporated area	113
	Bridges	Repair, replace, rehab construct bridges (permanent impacts)	3
		Temporary impacts	18
	Roads	SR 16	34
		CR 102	18
		CR 99W	7
		CR 89	19
		CR 85B	3
		CR 21A	5

Covered Activity Category	Covered Activity Type	GIS Detail	Covered Activity Amount Assumed (acres)^g
		CR 6	0 ^f
	Bike lanes and multi-use trails	Additional planned intra-county bike lanes	377
	Airport	County airport	256
		Public Services, Infrastructure, and Utilities Summary	872
	Agricultural Economic Development		
	Ag Industrial and Ag Commercial	SE corner I-505/SR-128	65
		Zamora	16
		Clarksburg	54
		Other possible	197
		Agric. Economic Dev. Summary	332
	Open Space		
	Parks/Open Space	Six 10-acre nodes to represent developed areas within 4,103 acres of planned county open space park. These nodes are randomly spaced and do not represent defined locations.	60
		Additional trails	5
		Open Space Summary	65
	Aggregate Mining		
	Aggregate mining	Planned aggregate mining	1,282
		Additional future mining	968
		Aggregate Mining Summary	2,250
Grand Total			17,550

Notes

- a. Includes Woodland Regional Park.
- b. Includes planned future development in legally incorporated City boundary and LAFCO approved sphere of influence, as refined by city planning staff. Also includes the portion of West Sacramento Levee Improvement Program within planning unit 21.
- c. 229-acre site excluding six acres already developed (Ikedas, City water tank, City park and ride lot, abandoned CR 32A ROW)
- d. The Public Draft HCP/NCCP included the projected impacts of the Dunnigan Specific Plan within Planning Units 5 and 13. Since then, Yolo County has removed the Dunnigan Specific Plan from the County General Plan to allow for more incremental development of the Plan area. While the Dunnigan Specific Plan is no longer a covered activity, the area remains a possible location for future development in Yolo County within the 50-year permit term because of its proximity to I-5 and the existing Dunnigan community, and its location outside of the floodplain, among other reasons. The Final HCP/NCCP maintains the location and amount of impact in the analysis in the event similar development is approved in the future.
- e. Less than one acre included.
- f. Dunnigan area acreage per footnote d above.
- g. Acreage assumptions are for the purposes of analysis only. These amounts do not represent take limits for each planning unit or project. Take limits apply to the Yolo HCP/NCCP as a whole and are defined in Chapter 5, Effects Analysis.

Table 3-2. Spatially Undefined Activities, Methods and Assumptions

Covered Activity Type	Amount Assumed (acres)^a	Methods, Assumptions
Road maintenance	246	4,880 acres of road rights-of-way are spatially defined in GIS. Assumed 5% (246 acres) will be permanently removed as a result of ongoing operations and maintenance activities. These 246 acres were distributed proportionately among the land use types occurring within the road rights-of-way.
Reclamation Districts and County Service Areas	100	Assumed up to 100 acres will be permanently removed as a result of ongoing operations and maintenance activities. These 100 acres were distributed proportionately among the land use types occurring within the reclamation districts.
Yolo County Flood Control and Water Conservation District and County Service Areas	50	1,000 acres of levees within the district are spatially defined in GIS. Assumed 5% (50 acres) will be permanently removed as a result of ongoing operations and maintenance activities. These 50 acres were distributed proportionately among the land use types occurring within the 1,000 acres of spatially defined area along the levees.
Cache Creek Resources Management Plan	110	The Cache Creek Resources Management Plan is spatially defined in GIS from CCAP and County General Plan Cache Creek Open Space area and consists of 2,235 acres. Assumed 110 acres will be removed through operations and maintenance activities, including 17 acres grasslands, 37 acres barren, 16 acres riverine, and 41 acres of valley foothill riparian. Most removal will be temporary. The removal of 41 acres of valley foothill riparian is treated as permanent because this natural community will take more than one year to recover from disturbance.
Cultivated lands, temporary effects	200	Covered activities will temporarily affect up to 200 acres of non-rice cultivated lands. Each disturbance will last no more than one year. Temporary activities will include activities such as temporary trenching and construction staging areas. These activities will avoid take of individuals through the avoidance and minimization measures described in Chapter 4. The Conservancy expects individual disturbance areas to typically be less than ten acres in size.
TOTAL	706	

Note:

^a Acreage assumptions are for the purposes of the analysis only; these amounts do not represent take limits for each project or category of activity. Take limits apply to the Yolo HCP/NCCP as a whole and are defined in Chapter 5, *Effects Analysis*.

3.5.1 Urban Projects and Activities

Urban projects and activities will be implemented by Permittees or by private and public non-Permittee applicants who seek take coverage through one of the Permittees. Urban development will occur within the city planning units listed below, summarized in Table 3-1, and depicted in Figure 3-2.

- Planning Unit 19 (which includes the City of Woodland), including 3,397 acres of urban projects and activities.
- Planning Unit 20 (which includes the City of Davis), including 1,251 acres of urban projects and activities.
- Planning Unit 21 (which includes the City of West Sacramento), including 3,559 acres of urban projects and activities.
- Planning Unit 22 (which includes the City of Winters), including 718 acres of urban projects and activities.

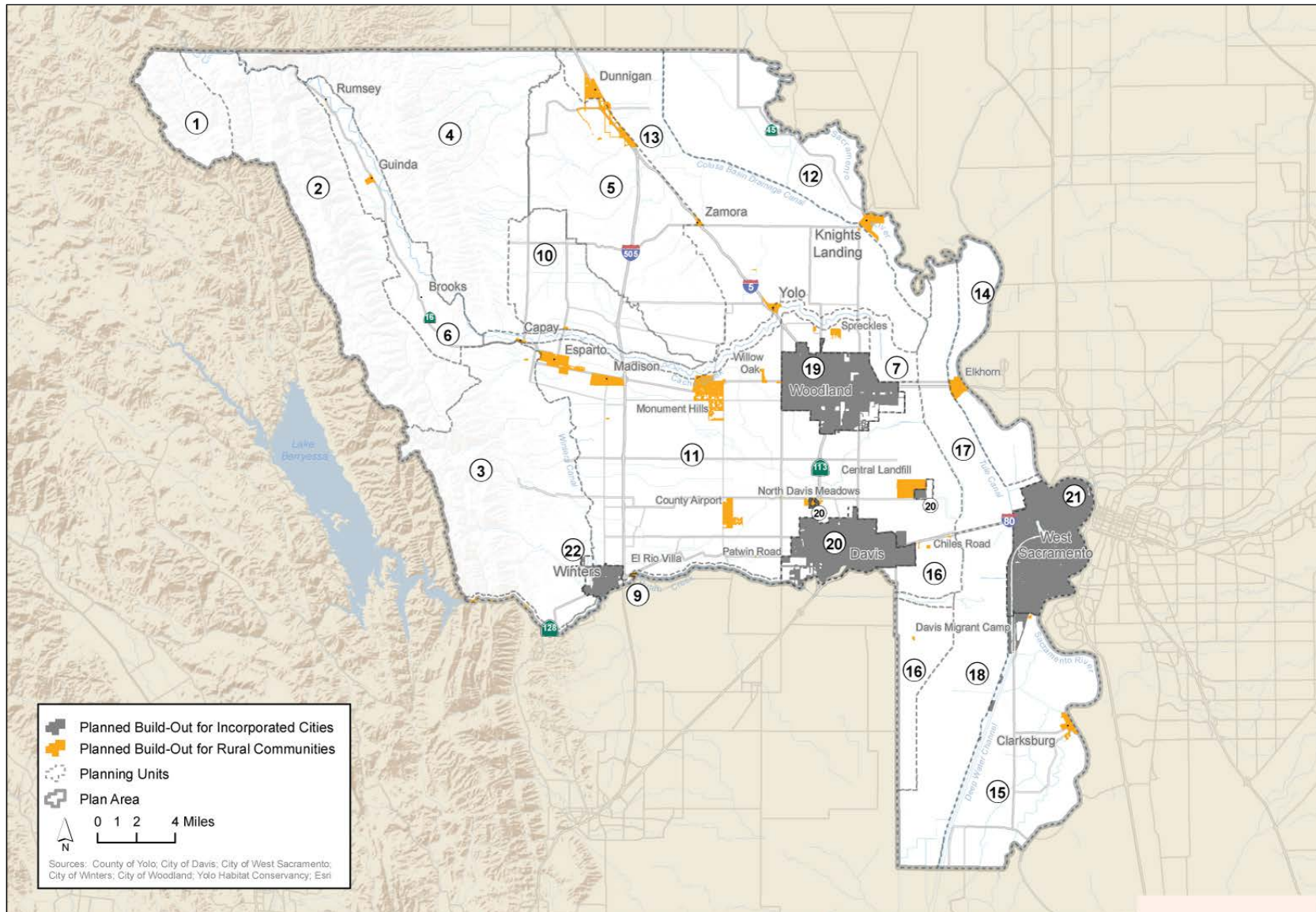
Urban projects and activities include planned land uses within the four urban planning units that are consistent with Permittee general plans, including specific plans, master plans, parkway plans, bicycle plans, area plans, infrastructure plans, and similar adopted plans that are consistent with and implement local general plans. With the exception of avoided riparian and wetland areas, covered activities in the urban planning units are assumed to result in the removal of all remaining natural and agricultural land cover types.

The urban projects and activities category is divided into three secondary categories: general urban development; urban public service, infrastructure, and utilities; and urban projects in rural areas. The covered activities included under each of these sub-categories are described below under the applicable heading. These urban projects and activities may be implemented by Permittees, private applicants under the jurisdiction of one of the Permittees, or by Special Participating Entities covered through a Certificate of Inclusion.

3.5.1.1 General Urban Development

This HCP/NCCP provides coverage to support the implementation of planned residential, industrial, commercial, mixed-use, recreational and open space, and public/quasi-public land uses, including associated infrastructure, consistent with local general plans, including the following:

- Residential uses (single-family homes, multi-family homes [e.g., duplexes, triplexes, apartment buildings, condominiums]).
- Commercial uses (retail centers, grocery stores, restaurants, stores and shops, offices).
- Industrial uses (warehouse and distribution centers).
- Public and quasi-public buildings and facilities, including governmental offices, schools, and places of worship.
- Recreational and open space facilities such as neighborhood parks, dog parks, soccer fields, golf courses, indoor and outdoor sports centers, and trails.

Figure 3-2. General Plan Build Out within Plan Area

3.5.1.2 Urban Public Services, Infrastructure, and Utilities

Associated urban services, infrastructure, and utilities, including landscaping, sewer connections, streets, driveways, lighting, parking areas, roadways, and bridges; bikeways and pathways; water supply, treatment, storage, and distribution facilities; wastewater collection, treatment, and disposal facilities; energy generation (excluding wind power) and distribution facilities; municipal services and facilities; landfills, collection facilities, and transfer stations; stormwater and drainage collection, treatment, and retention/detention facilities; flood control facilities; levees; airport; and other services, infrastructure, and utilities that serve planned land uses consistent with local general plans. This includes the West Sacramento Levee Improvement Program and Woodland Water Pollution Control Facility expansion.

- Development and operation of new stormwater and drainage collection, treatment, and retention/detention facilities.⁴
- Expansion and improvements to, and maintenance of, existing stormwater and drainage collection, treatment, and retention/detention facilities.
- Development and operation of new flood control facilities, including levees.
- Expansion and improvements to existing flood control facilities, including levees.
- Development and operation of new wastewater, water collection, storage treatment, and conveyance structures and facilities.
- Development and operation of new water supply treatment, storage, and distribution facilities (e.g., pipelines and pump stations).
- Expansion and improvements to existing water supply treatment, storage, and distribution facilities (e.g., pipelines and pump stations).
- Development and operation of solid waste management facilities, including landfills, collection facilities, recycling plants, and composting facilities.
- Expansion and improvements to existing solid waste management facilities, including landfills, collection facilities, recycling plants, and composting facilities.
- Development, expansion, and improvements to transportation facilities, including sidewalks, bike paths, paved and unpaved roads, public bridges, culverts, and transit facilities.
- Development, expansion, and improvements to public service facilities, including new fire stations, police stations, communications facilities, public administration centers, theatres, museums, community centers, community gardens, and concession buildings.
- Development, expansion, improvements, and operation of public and private utilities such as energy generation and distribution facilities (excluding wind farms and solar), including underground and aerial electric transmission and distribution lines, telecommunications lines, and gas pipelines and wells. The HCP/NCCP does not cover wind farms.
- Development, expansion, and operation of parks, open space, and trails.
- Construction and replacement of underground and aerial utility infrastructure, including telecommunication lines, cell phone and wireless communication facilities, lighting, cable

⁴ This includes, but is not limited to, the Woodland drainage channel south of CR25.

television lines, electric power transmission lines (bulk transfer of electrical energy, from generating power plants to electrical substations), electric power distribution lines (local electric power distribution lines), natural gas pipelines, aviation and other fuel lines, water supply pipelines, and wastewater pipelines.

For urban development, the HCP/NCCP assumes that these lines will fall within the urban planning units; therefore, the acreage of urban utility development is subsumed within the acreage of covered activities in these planning units

3.5.1.2.1 Woodland Water Pollution Control Facility Expansion

This HCP/NCCP also provides coverage to the Woodland Water Pollution Control Facility Expansion project. The Water Pollution Control Facility (WPCF) is a 10.4-million-gallon-per-day wastewater treatment plant that serves the city of Woodland. The City of Woodland owns and operates the WPCF, which treats wastewater from the City's residential, commercial, and industrial users. The facility uses a tertiary (advanced) treatment system, with the treated effluent discharged into the Tule Canal within the Yolo Bypass. The treatment system consists of activated sludge oxidation ditches, secondary clarifiers, and a chlorination/dechlorination process. Approximately 315 acres of ponds are used for the treatment of sludge and storage of excess wastewater during periods of peak flow. The WPCF is designated as a class V facility, the highest treatment rating in California, and holds all required federal and state permits (National Pollutant Discharge Elimination System [NPDES] Permit No. CA0077950, WDR Order No. R5-209-0010).

The WPCF includes the following physical improvements:

- Modification of the four existing oxidation ditches into anoxic and aerated zones.
- Installation of submersible mixers and fine bubble diffusers to replace the older and less-efficient surface brush aerators.
- Construction of a blower building on a 0.26-acre pad south of the oxidation ditches, outside of the existing fence line.
- Additional improvements at two of the 12 existing approximate 4,800-square-foot settling ponds (the two central ponds on the east side) to improve sludge removal. These improvements would entail adding lime and Portland cement to the existing soil.
- Construction of approximately 2,700 linear feet of new pipe between the existing ponds.
- Installation of eight new manholes.

These improvements are expected to reduce secondary power usage by 30 percent and reduce indirect air emissions, including greenhouse gases related to energy usage. Additional benefits include improved sludge settleability and process stability. The process would also remove additional nitrogen from the water, which would improve the quality of the effluent.

3.5.1.3 Urban Projects in Rural Areas

3.5.1.3.1 Davis Mace Ranch Innovation Center

The Yolo HCP/NCCP provides coverage for adverse terrestrial effects associated with development of the Davis Mace Ranch Innovation Center, a business park covering 223 acres, by the City of Davis in Planning Unit 11.

3.5.1.3.2 West Sacramento Levee Improvement Program

This HCP/NCCP provides coverage to the West Sacramento Area Flood Control Agency for the West Sacramento Levee Improvement Program to improve the levees in Yolo County that protect the city of West Sacramento. The HCP/NCCP covered activities footprint includes 496 acres outside the West Sacramento planning unit, and additional acres within the West Sacramento planning unit, for this project. The West Sacramento Area Flood Control Agency is teaming with the U.S. Army Corps of Engineers and the California Department of Water Resources to implement the program. The purpose of the West Sacramento Levee Improvement Program is to achieve a minimum of 200-year flood protection⁵ for the entire city by improving the approximately 50 miles of levees that protect West Sacramento. The West Sacramento Flood Control Agency expects to implement these levee improvements within the first 10 to 20 years of HCP/NCCP implementation.

The goals of the West Sacramento Levee Improvement Program are as follows:

- Construct levee improvements as soon as possible to reduce flood risk as quickly as possible.
- Construct improvements that are politically, socially, economically, and environmentally acceptable.
- Provide recreation and open space elements for the city that are compatible with flood improvement actions.
- Ensure continuing federal assistance for levee repairs and maintenance.

Levee improvement and stabilization activities may include repair or rehabilitation of levees as well as full reconstruction of levees.

Flood control design components that may be utilized include those listed below.

- Regrading of bank slopes.
- Installation of hardscape.
- Temporary stream diversion during construction.
- Planting. This includes vegetative slope and soil stabilization. All planting will be implemented to allow proper flood conveyance and may include hydroseeding on all earthen surfaces above the channel bed.
- Reconstruction or improvement of floodwalls and/or levees. Work may result in a raised or expanded levee.
- Maintenance road construction.
- Installation or repair of culverts or outfall structures.
- Structural improvements, including expanding the levee footprint, increasing the height of the levee, or adding new material to support the levee.

West Sacramento levees will generally be reconstructed with in-kind materials and within the footprint of existing levees. This may include adding new hardscape to the channel banks. The West Sacramento Area Flood Control Agency has identified specific geographic locations where levees will

⁵ A 200-year flood is a flood that has a 0.5 percent chance of occurring in any given year or annual exceedance probability.

be modified and borrow sites will be located, and the Conservancy has spatially defined these locations in the geographic information system (GIS) data. These are south of urban Planning Unit 21 and in Planning Unit 15. The Yolo HCP/NCCP covers components of the West Sacramento Levee Improvement Program that are included in the covered activities layer, which was developed based on information provided by the City of West Sacramento.⁶

3.5.2 Rural Projects and Activities

This category of covered activities includes planned land uses within the 18 rural planning units (1 through 18), including specific plans, master plans, parkway plans, bicycle plans, area plans, infrastructure plans, and similar adopted plans that are consistent with and implement the *Yolo County General Plan* and other local general plans if applicable. This category also includes roads and bridges, bike lanes and multi-use trails, airports, agricultural economic development and open space, habitat conservation projects, parks and recreation, and aggregate mining. These rural projects and activities may be implemented by Permittees, private applicants under the jurisdiction of one of the Permittees, or by Special Participating Entities covered through a Certificate of Inclusion.

3.5.2.1 General Rural Development

This category includes 4,391 acres of planned residential, industrial, commercial, mixed-use, park and open space, and public/quasi-public land uses that are consistent with the *Yolo County General Plan* and other local general plans if applicable. It includes planned growth within the adopted growth boundaries for unincorporated communities/places identified in the *Yolo County General Plan*.

The *Yolo County General Plan* identifies unincorporated (rural) towns and places with land uses other than agriculture. These towns/places are geographically discrete and individually and collectively small in scale. For the purposes of discussing these towns/places in this HCP/NCCP, these areas are called *unincorporated communities/places*. General rural development covered activities could occur within the boundaries of the following unincorporated communities/places (Figure 3-2):

- Capay (seven acres)
- Clarksburg (99 acres)
- Dunnigan (2,720 acres)
- Elkhorn (383 acres)
- El Rio Villa (five acres)
- Esparto (215 acres)
- Guinda (seven acres)
- Interstate 505/County Road 14 (10 acres)
- Knights Landing (249 acres)

⁶ Personal communication, email from Paul Dirksen, City of West Sacramento, September 25, 2014. The actual locations and total acreage are subject to modification by the Conservancy within the terms of the Permits.

- Madison (429 acres)
- Monument Hills (170 acres)
- North Davis Meadows (seven acres)
- Rumsey (less than 0.5 acre)
- Willow Oak (13 acres)
- Yolo (53 acres)
- Yolo Fruit Stand/Interstate 80 (three acres)
- Zamora (22 acres)

The types of future development that could occur in these areas are the same as those described under Section 3.5.1, *Urban Projects and Activities*, because the land uses in these areas are non-agricultural. In general, the unincorporated communities are not expected to experience significant growth beyond existing conditions. Most of the unincorporated community development that is planned to occur will be focused in the following six unincorporated communities: Elkhorn, Madison, Clarksburg, Dunnigan, Esparto, and Knights Landing.

Similar to urban projects and activities, this category of covered activities includes, but is not limited to, construction occurring within the unincorporated community boundaries defined above. With the exception of some riparian and wetland avoidance, covered activities in the unincorporated communities are assumed to result in the removal of all remaining natural and agricultural land cover types. As such, coverage for operation and maintenance of covered activities in the unincorporated communities is included in this subcategory and is not described in Section 3.5.3, *Public and Private Operations and Maintenance*.

This category also includes the following, to the extent that each activity is under the discretionary authority of a Permittee:

- Vegetation management, including fuel reduction (e.g., hand and mechanized removal and controlled burns), tree removal and pruning, grazing activities, invasive vegetation control/removal, hazardous tree removal, weed abatement, algae control in ponds, and revegetation to prevent re-invasion of invasive plants.
- Implementation of integrated pest management programs. (See below for limitations on this activity as a covered activity by the USFWS permit.)

This HCP/NCCP provides coverage for construction and replacement of underground and aerial utility infrastructure, including telecommunications lines, cell phone and wireless communication facilities, lighting, cable television lines, electric power transmission lines (bulk transfer of electrical energy, from generating power plants to electrical substations), electric power distribution lines (local electric power distribution lines), natural gas pipelines, aviation and other fuel lines, water supply pipelines, and wastewater pipelines. The HCP/NCCP assumes that these lines will fall within the urban planning units described in Section 3.5.1, *Urban Projects and Activities*, and general development areas described in Section 3.5.2, *Rural Projects and Activities*; therefore, the acreage of utility development is subsumed within the acreage of the covered activities footprints for urban and rural projects.

3.5.2.2 Rural Public Services, Infrastructure, and Utilities

This category includes both public and private roadways and bridges; bikeways and pathways; water supply, treatment, storage, and distribution facilities; wastewater collection, treatment, and disposal facilities; energy generation and distribution facilities; municipal services and facilities; landfills, collection facilities, and transfer stations; stormwater and drainage collection, treatment, and retention/detention facilities; flood control facilities; levees; airport; and other services, infrastructure, and utilities that serve planned land uses that are consistent with local general plans.

3.5.2.2.1 Roads and Bridges

The *Yolo County General Plan* identifies several road and bridge projects. This HCP/NCCP provides coverage for the following future roadway network improvements (Figure 3-4):

- CR 21A: Upgrade to a major two-lane county road standard between CR 85B and State Route (SR) 16. (5 acres)
- CR 85B: Upgrade to a major two-lane county road standard between SR 16 and CR 21A. (3 acres)
- CR 99W: Widen to a four-lane arterial between CR 2 and CR 8. (7 acres)
- SR 16: Widen to a four-lane arterial between CR 21A and Interstate 505. (34 acres)
- CR 6: This road improvement acreage is included within the 2,720 acres of covered activities within the Dunnigan area described in Section 3.5.2.1, *General Rural Development*.

The HCP/NCCP provides coverage for the following roadway improvements, which include, but are not limited to, intersection control and lane configuration improvements, passing lanes, and/or wider travel lanes and shoulders:

- CR 89 between SR 16 and CR 29A. (19 acres)
- CR 102 between CR 13 and Woodland city limits and between Woodland city limits and Davis city limits. (18 acres)

This HCP/NCCP will cover the replacement/rehabilitation of up to 26 bridges and construction of three new bridges (total of 3 acres permanent, 18 acres temporary):

- Bridge 22C-0095 on CR 49 over Hamilton Creek.
- Bridge 22C-0126 on CR 96 over Union School Slough.
- Bridge 22C-0127 on CR 96 over Dry Slough.
- Bridge 22C-0085 on CR 32D over a branch of Putah Creek.
- Bridge 22C-0102 on CR 25 over Cottonwood Slough.
- Bridge 22C-131 on CR 12 over Willow Spring Creek.
- Bridge 22C-0144 on CR 19 over Slough S3.
- Bridge 22C-0112 on CR 29 over Winters Canal.
- Bridge 22C-0082 on CR 85 over Goodnow Slough.
- Bridge 22C-0110 on CR 88 over Winters Canal.
- Bridge 22C-109 on CR 88 over Union School Slough.
- Bridge 22C-0108 on CR 27 over Union School Slough.

- Bridge 22C-0133 on CR 12A over Oat Creek.
- Bridge 22C-0138 on CR 97 over Slough S7.
- Bridge 22C-0105 on CR 20 over Chickahominy Slough.
- Bridge 22C-0055 on CR 26 over Winters Canal.
- Bridge 22C-0004 on CR 94B over Cache Creek.
- Bridge 22C-0045 on CR 31 over Chickahominy Slough.
- Bridge 22C-0075 on CR 25 over Cottonwood Slough.
- Bridge 22C-0116 on CR 25 over the north fork of Willow Slough.
- Bridge 22C-0111 on CR 28 over Union School Slough.
- Bridge 22C-0136 on CR 91B over Oat Creek.
- Bridge 22C-0094 on CR 40A over Pine Creek.
- Bridge 22C-0096 on CR 82 over Salt Creek.
- Bridge 22C-0121 on CR 91A over Dry Slough.
- Bridge 22C-0059 on CR 23 over a tributary of Lamb Valley Slough.

3.5.2.2.2 Bike Lanes and Multi-Use Trails

Several bike lanes and multi-use trails are identified in the general plans for Yolo County and the city of Woodland and are proposed for coverage under this HCP/NCCP. Projects may be constructed along existing roads, levees, or railways or may require new alignments independent of existing or proposed infrastructure. The addition of bike lanes along existing roads would include expansion of existing roadways to accommodate four- to six-foot-wide bike lanes on either side of the road. Multi-use trails along levees or railways are expected to be between 10 and 40 feet. Bike lanes and multi-use trails identified in the *Yolo County General Plan* will cover an estimated 113 acres, while bike lanes and multi-use trails identified in the Circulation Element for the *City of Woodland General Plan* cover an estimated eight acres in four locations. Trails will also be constructed on the Woodland Regional Park site (Figure 3-3) and within the CCRMP boundaries. The location of trails on the Woodland Regional Park site will be subject to wildlife agency approval. Total acreage for bike lanes and trails is identified in Table 3-1.

The Woodland-Davis Alternative Transportation Corridor project (Figure 3-4) includes 19 acres on the covered activities layer (Table 3-1) and will provide an off-road path between the cities of Davis and Woodland. The path will be paved and 10 feet wide. It is expected to be used mainly by bicycles, but low-speed electric vehicles and pedestrians could also use the path. The project will tie into the regional bikeway system along the Interstate 80 corridor through connections in Davis, providing bicycle access to Capital Corridor rail service; the cities of Sacramento, West Sacramento, and Winters; and the Bay Area to Lake Tahoe Cross-State Bicycle Route.

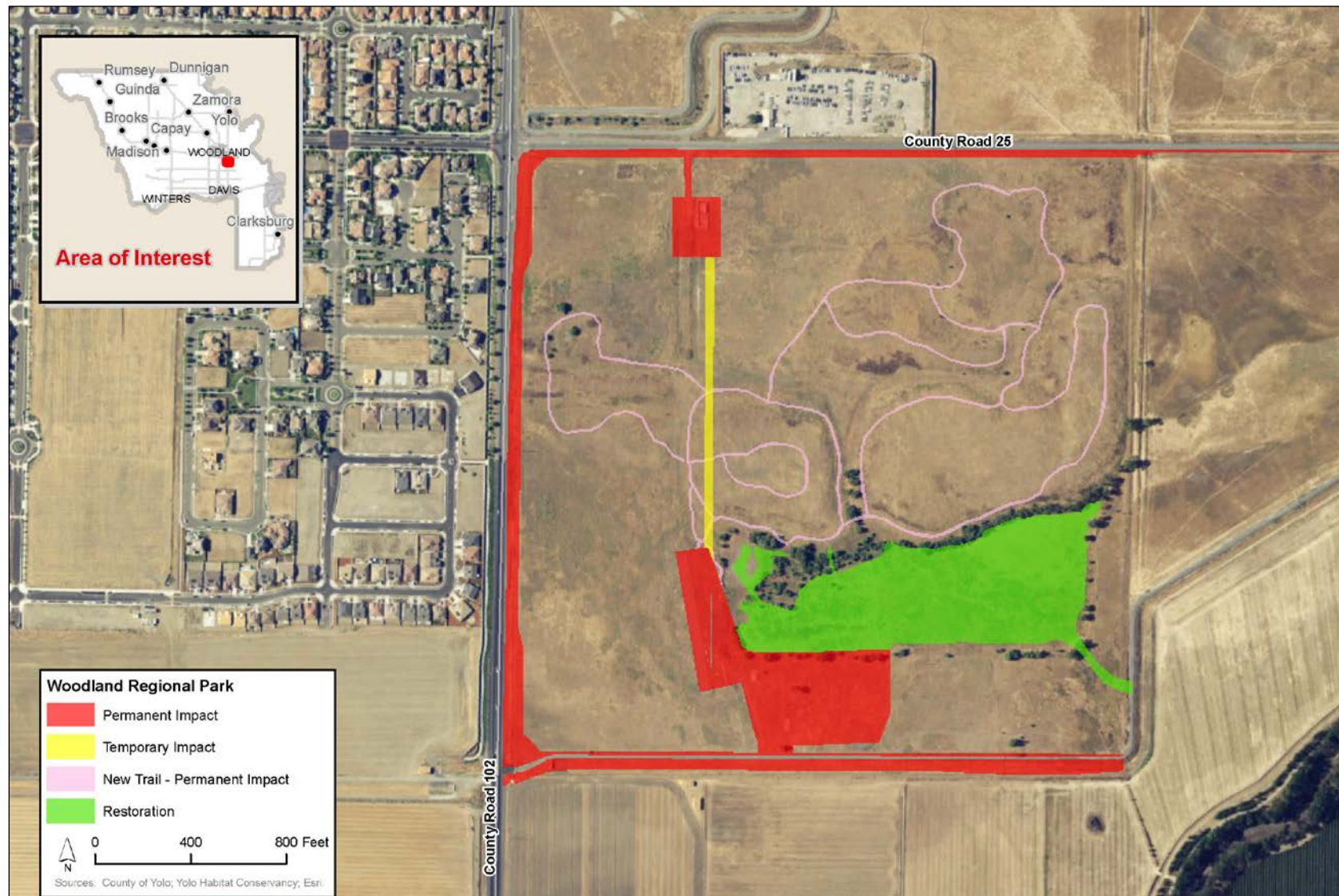
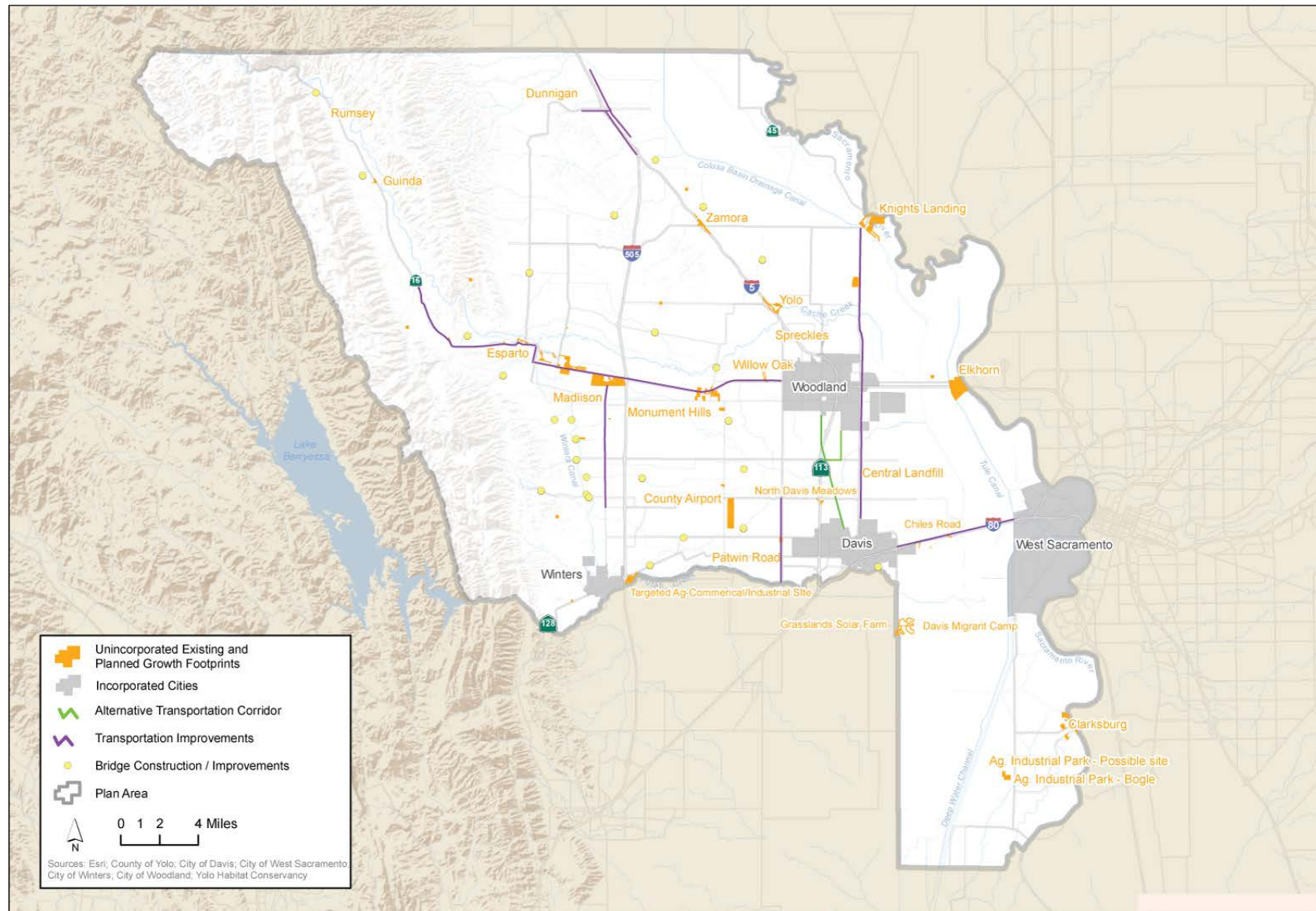
Figure 3-3. Woodland Regional Park

Figure 3-4. Planned Public Services, Infrastructure, and Utilities in the Plan Area

3.5.2.2.3 Airports

This HCP/NCCP will provide coverage for future development at the Yolo County Airport. This will include construction of new hangars and other airport-related uses, and runway improvements, over the next twenty years. The expansion will occur on agricultural lands owned by the County and is adjacent to the existing airport runway and hangars. This future development is assumed to affect up to 256 acres of land for the development of detention basins and drainage improvements, new hanger facilities, other aviation facilities, non-aviation facilities, airfield areas that will be graded and reseeded, new airfield pavement, and pavement to be removed (Yolo County Planning, Public Works and Environmental Services Department 2015).

3.5.2.3 Agricultural Economic Development

This category includes agricultural economic development activities that occur outside of approved growth boundaries for unincorporated communities/places in the rural planning units (1 through 18). This category is limited to agricultural industrial and agricultural commercial land uses that are consistent with the *Yolo County General Plan*. It does not include general agricultural land uses and activities. General agricultural land uses and activities may be covered under a Certificate of Inclusion if the project proponent qualifies as a Special Participating Entity (Section 4.2.1.3, *Projects Proposed by Special Participating Entities*).

This HCP/NCCP provides coverage for 332 acres of activities associated with agricultural commercial and agricultural industrial development pursuant to the *Yolo County General Plan* that are under the discretionary authority of Yolo County. The acres for each of these activities are provided in Table 3-1. Agricultural industrial uses include agricultural research, processing, and storage; supply; service; crop dusting; agricultural chemical and equipment sales; and surface mining. Agricultural commercial uses include roadside stands, wineries, farm-based tourism (e.g., u-pick, dude ranches, lodging), horseshows, rodeos, crop-based seasonal events, and ancillary restaurants and/or stores.

3.5.2.4 Open Space

This HCP/NCCP provides coverage for the expansion of existing and development of new planned park and open space uses and activities that are consistent with the *Yolo County General Plan* and the *Yolo County Parks and Open Space Master Plan* (Figure 3-6), and recreational activities within the CCRMP boundaries and consistent with the Yolo County Cache Creek Area Plan. This includes 4,103 acres of parks, as described in the *Yolo County General Plan*, and includes recreational activities associated within the Cache Creek Area Plan. Such facilities include areas for campsites, picnic areas, swimming, water skiing, fishing, rafting, archery, model airplane use, dog park, horseshoes, beach access, inner-tubing, nature study, general natural enjoyment, habitat preservation and educational tours, multi-use trails (horse, bicycle, pedestrian, dog walking with leash, running/jogging), barbeque areas, mooring docks, fishing piers, off-highway vehicle park, nature centers, signs, overlooks/view platforms, restrooms, shade structures, hunting, fishing, birdwatching and other wildlife viewing, photography, gold panning, swimming, historic or archaeological exploration (provided no ground disturbance), camp host facilities, ATVs or other off-road vehicles for management purposes only, drones, model airplanes, and general open space and passive recreational uses. Coverage also includes infrastructure and amenities associated with these facilities, such as access roads, utilities, signage, landscaping, parking lots, launch ramps, trash receptacles, lighting, and drinking fountains. Park facilities and active recreational areas will include

60 acres of parks as described in the *Yolo County General Plan*, and five acres of additional trails (not including Woodland Regional Park trails, which are accounted for in the covered activities footprint for the Woodland planning unit).

3.5.2.5 Aggregate Mining

This HCP/NCCP covers aggregate mining within the *Cache Creek Area Plan* (CCAP) boundary (Figure 3-5), consistent with the *Off-Channel Mining Plan* (OCMP) (Yolo County 1996). The OCMP and relevant implementing ordinances (i.e., the Off-Channel Surface Mining Ordinance and the Surface Mining Reclamation Ordinance) currently authorize seven off-channel mining operations (Teichert-Schwarzgruber, Syar, CEMEX, Teichert-Woodland, Teichert-Esparto, Granite-Capay, and Granite-Esparto) along Cache Creek. This includes 968 acres of planned aggregate mining and 1,282 acres of additional future mining.

Development of a mining site typically follows a phased plan, which entails clearing of surface vegetation, removal and stockpiling of topsoil for future use in reclamation activities, mining of sand and gravel (i.e., construction aggregate), processing of mined aggregate at rock processing plants in the mine area, and reclamation of the mined lands to such uses as agricultural, lake, habitat, and open space uses. Facilities that will be constructed in the mine area to support aggregate mining activities include sand and gravel processing plants, asphalt-concrete hot mix plants, concrete batch plants, material stockpiles, settling ponds, water wells, stationary and mobile equipment, and haul roads. Other activities include prospecting and exploration within the OCMP planning area, use of conveyor systems, dust control, equipment maintenance, site maintenance, and paved and unpaved road maintenance.

Site reclamation and restoration activities within approved mine sites are also covered. These activities may include reclamation to agriculture, habitat and open space, and open water lakes with habitat and/or recreational uses. Activities necessary for reclamation may include backfilled excavation improvements (the construction of habitat, trails, roadways, agricultural fields, or recreational/open space facilities proposed for construction in reclaimed mining areas); bank stabilization maintenance (grading, revegetation, and biotechnical/bioengineered stabilization); fencing; grading for field drainage and releveling; resoiling; revegetation; soil compaction; seeding, planting, irrigation, and maintenance of revegetated areas until the desired reclaimed condition is established; and erosion control.

Mining of off-channel aggregate deposits along lower Cache Creek within the OCMP boundary is expected to continue for the life of this HCP/NCCP and beyond. This HCP/NCCP assumes 2,250 acres of new mining beyond those approved for the seven authorized operations listed above. In-channel maintenance, stabilization and restoration are addressed in Section 3.5.2.4, *Open Space*.

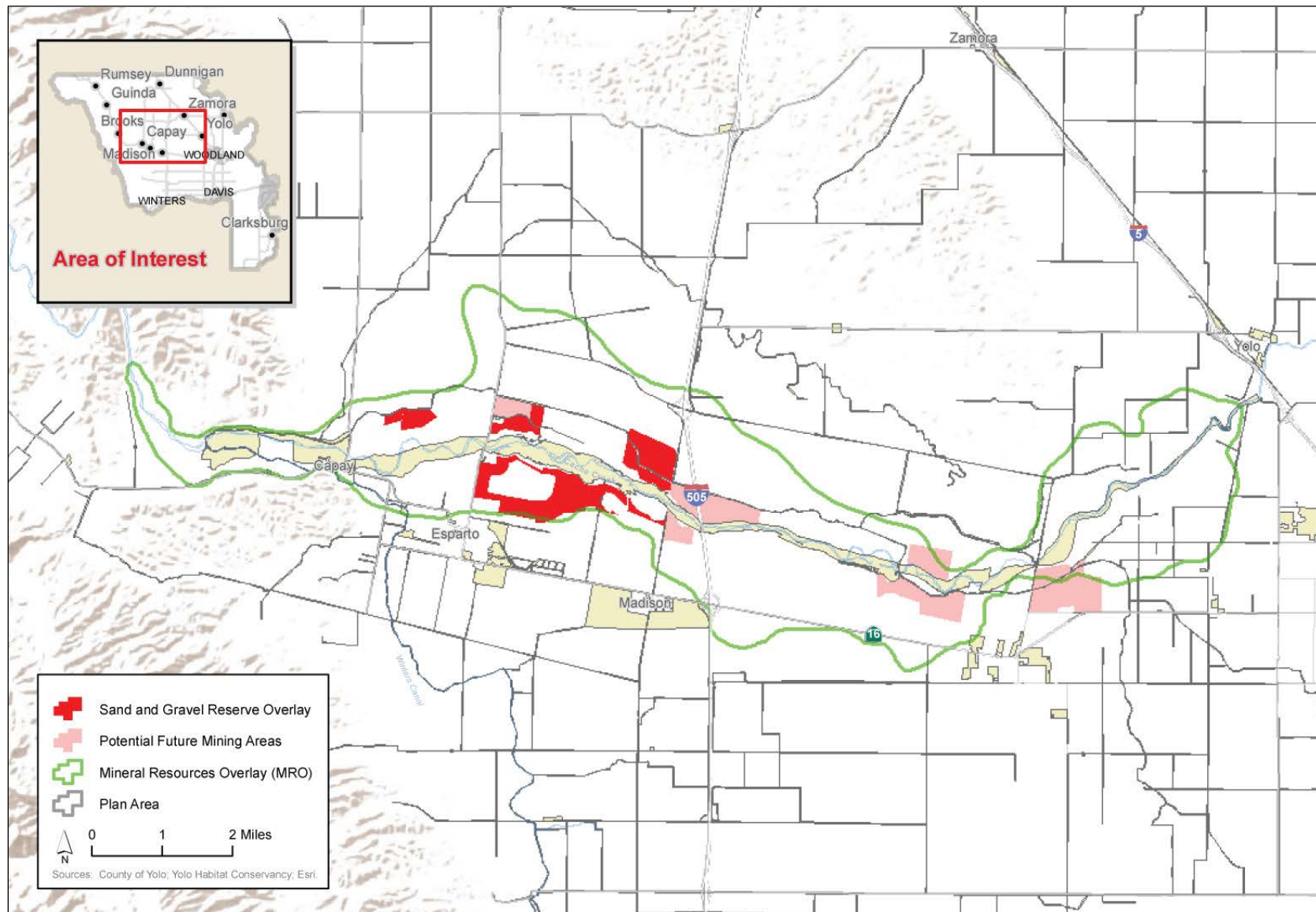
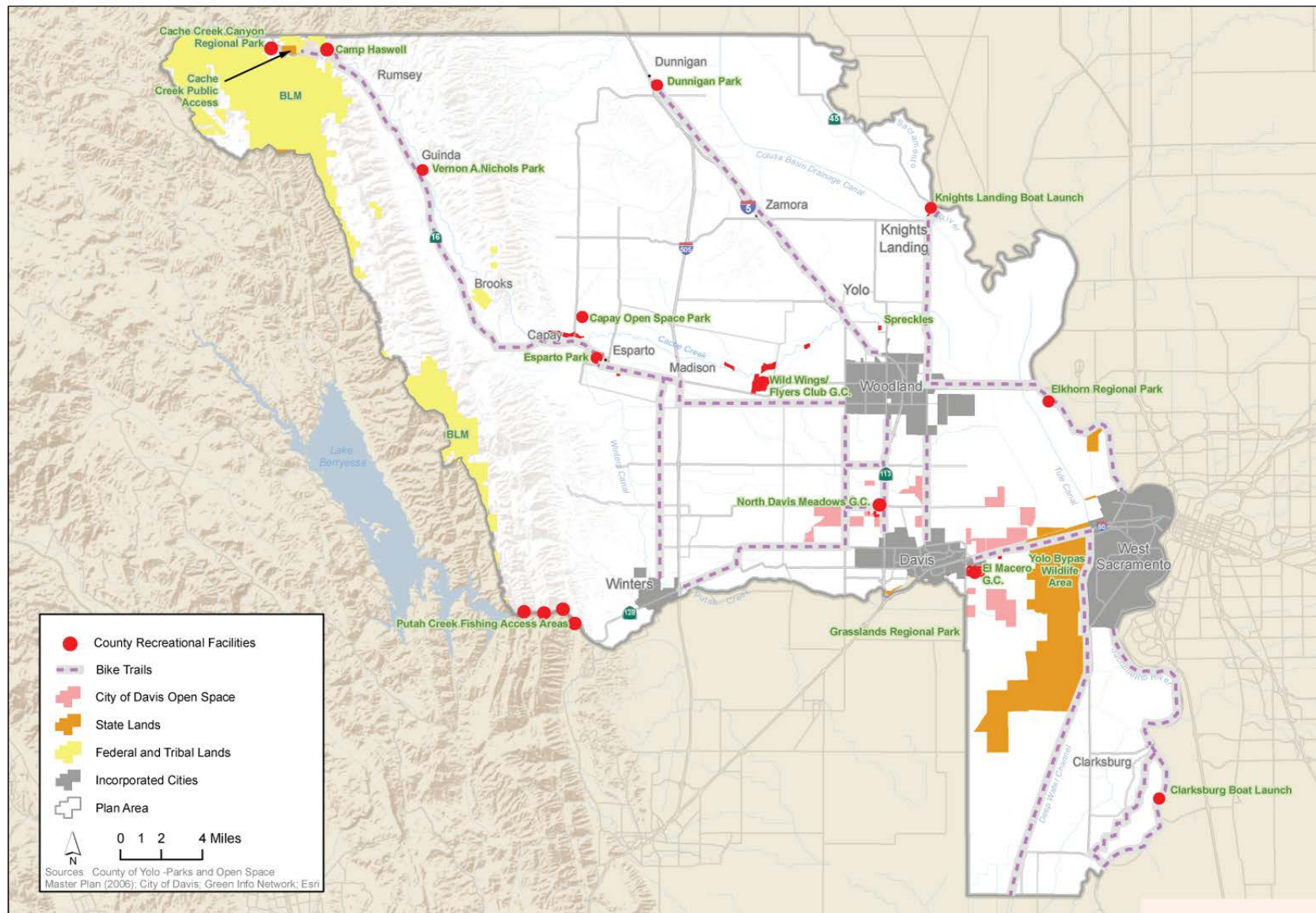
Figure 3-5. Planned Aggregate Mining within the HCP/NCCP

Figure 3-6. Publicly Owned Land

3.5.3 Public and Private Operations and Maintenance

This section describes activities that are necessary for the ongoing operation and maintenance of existing and planned land uses, facilities, and services in both urban and rural planning units throughout the Plan Area. The HCP/NCCP covers 506 acres of operations and maintenance activities as listed in Table 3-2, *Spatially Undefined Activities, Methods and Assumptions*.

Many common activities do not typically require take coverage because the activities occur on existing developed sites and do not have the potential to affect covered species. Nonetheless, situations may arise when operations and maintenance activities do need take coverage. Such coverage will be provided through this HCP/NCCP to the extent that such activities require a discretionary permit from a local jurisdiction or a project proponent requests coverage through a Certificate of Inclusion. Operations and maintenance covered activities are described in the sections below. These public and private operations and maintenance activities may be implemented by Permittees, private applicants under the jurisdiction of one of the Permittees, or by Special Participating Entities covered through a Certificate of Inclusion.

3.5.3.1 General Urban and Rural Development Operations and Maintenance

This HCP/NCCP provides coverage for operations and maintenance activities related to park and open space facilities, including the management, operations, rehabilitation, replacement, repair, and maintenance of park and open space facilities described in Section 3.5.2.4, *Open Space*. The following activities are included in this category:

- Repair, maintenance, and replacement of signage.
- Landscaping.
- Mechanical and manual vegetation management.
- Seeding or planting of disturbed areas.
- Dust management.
- Maintenance of fencing
- Maintenance of lighting.
- Fuel management activities, including the maintenance of fire management zones along existing infrastructure (e.g., roads))
- Placement of trash receptacles, lighting, drinking fountains, and associated infrastructure necessary to support these facilities.
- Removal of infrastructure (e.g., building structures, roads, trails, stock ponds) for public safety, resource protection, and park management.
- Vegetation management, as described in Section 3.5.3.2, *Public Services, Infrastructure, and Utilities Operations and Maintenance*.
- Erosion control.

- Management of natural resources, such as enhancement of freshwater resources, sensitive species management and monitoring outside of the reserve system (restoration and enhancement within the reserve system is described in Section 3.5.4, *Conservation Strategy Implementation and Covered Activities on Reserve Lands*, below), prescribed burns, invasive vegetation management, bullfrog management, feral pig removal, management of other exotic nuisance species, and managed grazing.
- Trail maintenance, including grading, clearing, brushing, erosion control, paving, re-paving, abandonment, and restoration.
- Pest abatement to manage rodents, insects, and disease and weed abatement to manage fire hazards outside the reserve system, including the removal of dead and dying wood, trees, and vegetation in agricultural areas. May include mowing or disking for weed abatement and insect and disease management. Use of pesticides is not covered by this plan; therefore, the plan does not authorize any pesticide use that would result in take of covered species. Any pesticide use must comply with all existing applicable judicial orders related to use of pesticides.
- Surveys and monitoring to support management decisions outside of the reserve system (monitoring within the reserve system is described in Section 3.5.4, *Conservation Strategy Implementation and Covered Activities on Reserve Lands*, below).
- Enhancement and restoration projects outside of the reserve system.
- Maintenance of water delivery systems. This includes maintenance of in-stream structures that have a screened pipe that pulls water from a local stream or channel into the property.
- Activities associated with the maintenance of large facilities, including golf courses, large-event facilities, and sports complexes.
- Equestrian facilities and uses, including equestrian stables, equestrian centers, trails, manure management, equestrian group camping and horse grazing activities.
- Minor remediation projects (less than 1.0 acre) for spills, illegal dumping, fuel/chemical storage, and firing ranges.

Covered activities in the urban planning units (described in Section 3.5.1, *Urban Projects and Activities*) as well as those activities occurring in unincorporated communities (described in Section 3.5.2.3, *Agricultural Economic Development*) are generally assumed to result in the removal of all natural and agricultural land cover types. As such, coverage for operations and maintenance activities in the urban planning units is included in the urban projects and activities category and not described in this category. Similarly, operations and maintenance covered activities occurring in the growth boundaries of unincorporated communities/places are included in the general rural development subcategory and not described in this category.

3.5.3.2 Public Services, Infrastructure, and Utilities Operations and Maintenance

As described in Section 3.5.2.2, *Rural Public Services, Infrastructure and Utilities*, there is a variety of different infrastructure that will be constructed or expanded over the permit term. This is in addition to existing infrastructure. Although this infrastructure may be diverse in nature, it may share common operations and maintenance needs. This HCP/NCCP covers the operations and maintenance activities below. Subsections to this section are included to specify any operations and

maintenance activities that may be required for various infrastructure beyond the list of common operations and maintenance activities.

- General maintenance of existing or future facilities, including repair, replacement, and general upkeep.
- Mechanical and manual vegetation management, including mowing, disking, and manual pruning. Equipment used includes, but is not limited to, tractor mowers, tractors and disc trailers, and boom mowers. Manual removal includes using power trimmers, weed eaters, and tools such as pruning loppers, saws, and clippers.
- Vegetation and wetland management for mosquito control purposes.
- Seeding or planting of disturbed areas.
- Dust management.
- Installation or maintenance of fencing.
- Installation and maintenance of lighting.
- Fuel management activities, including the maintenance of fire management zones along existing infrastructure (e.g., roads).
- Site inspections of facilities. Site inspections are made both by vehicular access and on foot. Access, particularly in areas that are frequently maintained, is generally available from paved and dirt maintenance roads. Small-scale repairs (e.g., fence and gate repairs, graffiti removal, trash and small debris removal) may be made as part of regular site inspections.

This HCP/NCCP does not cover pesticide (including herbicide) use. That is, the Permittees are not allowed to cause take of a state or federally listed species as a result of pesticide use. Permittees will use pesticides in accordance with labeling instructions to avoid take of listed species. Any pesticide use must comply with all existing applicable judicial order related to the use of pesticides.

These operations and maintenance activities apply to the following facilities.

- Yolo County Airport and Port of West Sacramento.
- Landfills, collection facilities, and transfer stations.
- Energy generation and distribution facilities.
- Wastewater collection, treatment, and disposal facilities.
- Stormwater and drainage collection, treatment, and retention/detention facilities.⁷

These operations and maintenance activities also apply to the following types of activities that have special operations and maintenance requirements, which are described in more detail below.

- Roadways and bridges, bikeways, and pathways.
- Water supply, treatment, storage, and distribution facilities.
- Municipal services and facilities.
- Flood control facilities and levees.

⁷ This includes, but is not limited to, maintenance of the Davis El Macero drainage channel.

3.5.3.2.1 Roads, Bridges, Bike Lanes, and Multi-Use Pathways

This HCP/NCCP provides coverage for 246 acres of operations and maintenance activities at transportation facilities or infrastructure, including rehabilitation of and improvements to existing and future bridges; transit facilities, highways, freeways, interstates, public and private roadways, bicycle lanes, roadside parking and viewing facilities; and ancillary drainage systems. These activities will occur within the rights-of-way of new and existing roadways and facilities.

Covered operations and maintenance activities include curbing, grading, and resurfacing of roadways; repair, replacement and maintenance of guardrails, lighting fixtures, fences, and signage; installation of safety devices/safety barriers; road sweeping; drainage measures associated with roads; and other maintenance, repair, and rehabilitation activities, including necessary modification of ditches/conveyance facilities, back-slopes, and shoulders.

This HCP/NCCP provides coverage for bridge and culvert repair. Operation and maintenance of bridges and associated drainage structures includes in-channel operation of equipment to repair and prevent scour of the streambed beneath and adjacent to bridge structures, dewatering activities to support in-channel work, natural debris and trash removal from bridge piers and pilings or from streambeds, vegetation management beneath and adjacent to bridge structures, and erosion/sediment control for bridges and drainage infrastructure beneath and adjacent to bridge structures. Additional activities include patching bike paths and roadways; grading and mowing paths, roadways, and shoulders; and erosion and dust control.

3.5.3.2.2 Flood Control Facilities

This HCP/NCCP provides coverage for maintenance of up to 150 acres of flood control structures and associated water conveyance infrastructure, including sediment removal, bank stabilization, vegetation management, and natural and trash debris removal. Figure 3-7 shows the jurisdictions of local flood control and water districts, and Figure 3-8 shows a number of reclamation districts. These agencies will be the primary project proponents for implementing flood control facility maintenance.

Covered activities include the following:

- Repairing previous erosion control work, including failed rock, gunite, sacked concrete, gabions, or bioengineered vegetated sections.
- Bank and levee stabilization and repair projects. May include use of rock riprap or grouting of holes.
- Installation of water measurement devices, scientific measuring devices, and water quality monitoring stations.
- Sloping, planting vegetation, placing earthen fill, installing rocks and gabions or using other bank stabilization methods, and taking other necessary measures to control erosion on previously unrevetted areas.
- Cleaning, washing, painting, or conducting minor repairs on structures.

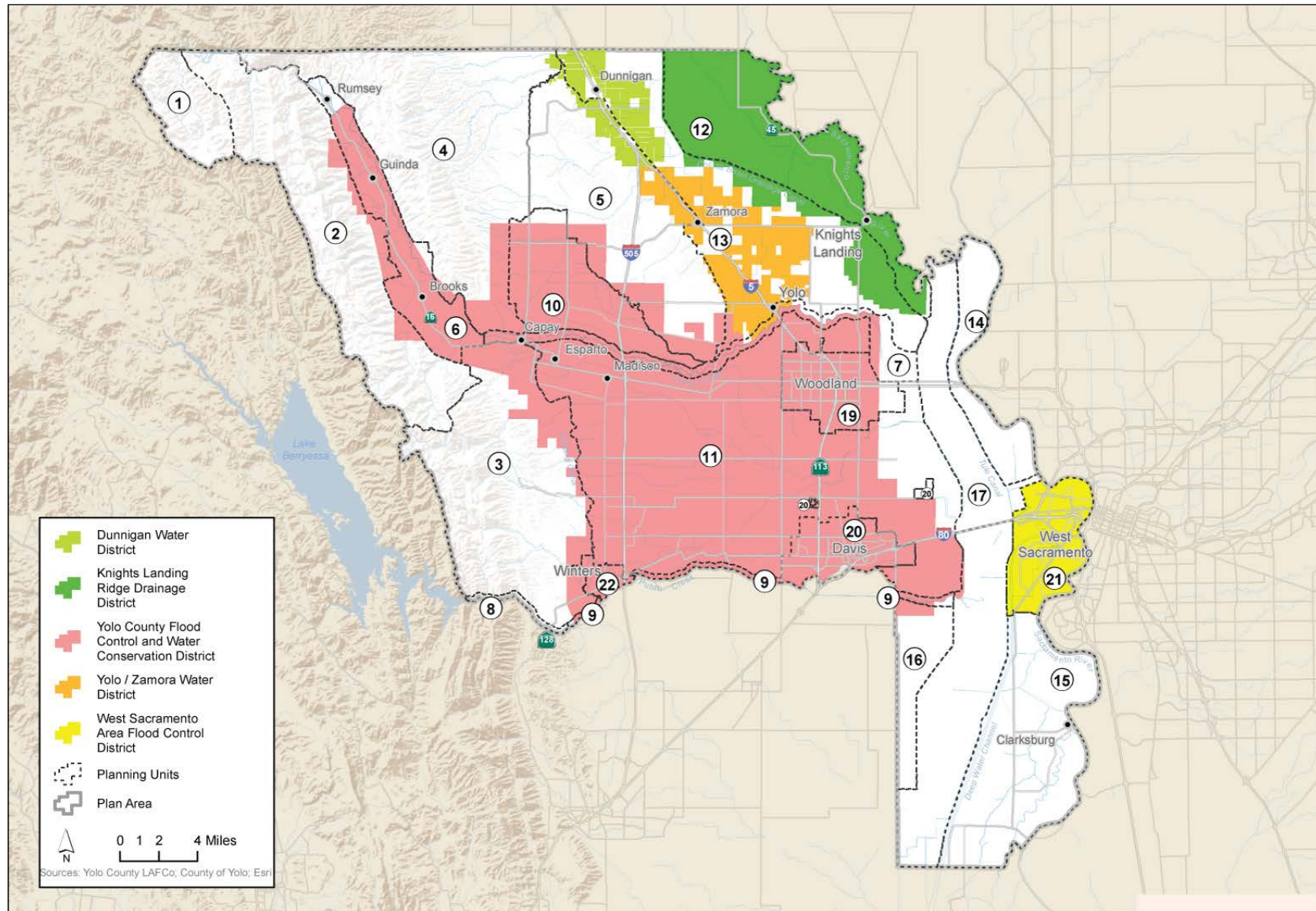
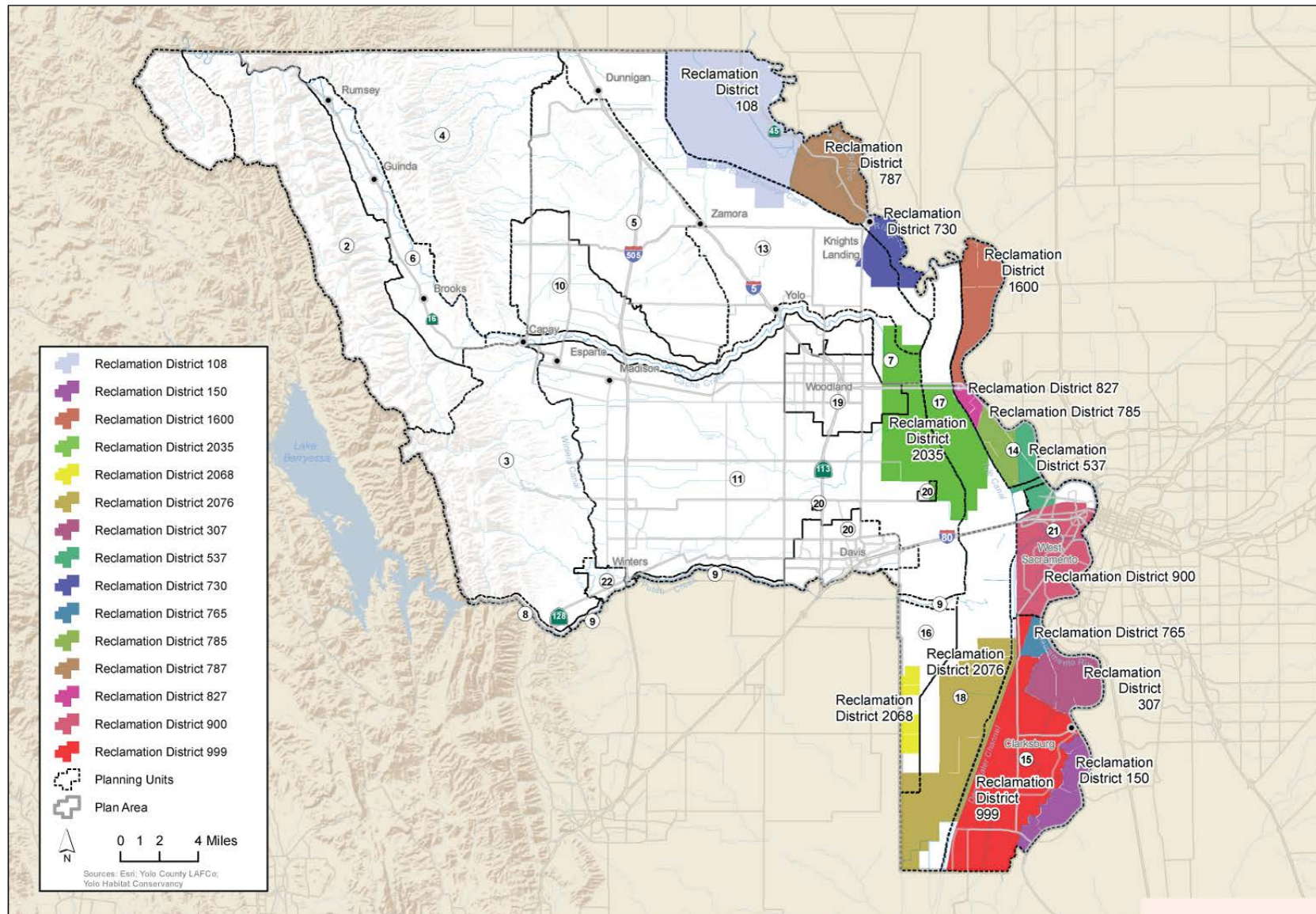
Figure 3-7. Flood Control and Water Districts in the Plan Area

Figure 3-8. Reclamation Districts in the Plan Area

- Vegetation management, including:
 - Cutting, mowing, disking, tilling, ripping, and burning.
 - Grazing (e.g., cattle, goats, or sheep).
 - Cutting, trimming, and removing the lower branches of large trees to facilitate site inspections, maintain channel capacity, and maintain native plant communities.
 - Removing downed trees and dead or live trees that are in clear danger of falling in or across a channel and that would significantly reduce channel capacity, accelerate erosion, or otherwise cause an emergency.
 - Removing dead trees, dying trees, and new trees less than four inches in diameter at breast height to maintain channel capacity, preventing erosion, and maintaining native plant communities.
 - Scraping, scouring, and dredging channels to remove vegetation and/or maintain conveyance capacity and stockpiling removed material on channel banks or access roads.
 - Killing or removing nonnative invasive vegetation by nonchemical means.
 - Activities to restore native habitats, including adjusting land contours, shaping channel banks, tilling, plowing, disking, or otherwise preparing soils of channel banks and adjacent land for planting of native plants; seeding and planting native plants; and placing habitat features such as nest boxes, resting structures (e.g., bat boxes), or breeding structures.
- Planting of channel vegetation using mechanized planters and hand-planting.
- Installation of irrigation systems during periods of plant establishment and application of irrigation water.

3.5.3.2.3 General Utilities

This HCP/NCCP provides coverage for operations and maintenance activities related to up to 150 acres of public and private utility facilities, including natural gas, electric, water, sewer, communications, and other utility infrastructure. The 150 acres are subsumed within the total acreage of development within the covered activities layer. These activities include surveying, excavation, trenching, replacement of above- or below-ground infrastructure, transmission line reconductoring, overburden material storage, and restoration of disturbed ground at maintenance sites. Maintenance of underground utilities often requires trenching around existing pipelines and conducting repairs or replacing segments of pipeline.

Water Supply, Treatment, Storage, and Distribution Facilities

Areas that may be affected by water supply operations and maintenance activities include those around water conveyance systems, such as pipelines, pump stations, blow-offs, turnouts, and vaults. The following activities may be conducted as part of routine pipeline maintenance:

- Leak repair. May require blow-off (i.e., dewatering of pipes; typically includes a point source of high-velocity flow) to local uplands or streams and/or excavation to access pipelines.
- Internal inspection. May require blow-off to local uplands or streams.
- Unscheduled releases of water due to a pressure surge in a pipeline that could damage the pipeline. Under such conditions, an automatic turnout valve will open and release the water to prevent the pipe from bursting. Flows from the pipeline may be reduced following such an

event. This is a relatively self-contained process, with the valves opening for less than one minute and shutting as soon as system pressure drops.

- Rehabilitation and/or replacement of pipeline components, including, but not limited to, air release valves, piping sections or connections, joints, and appurtenances. Activities may include excavation to access pipelines.
- Bank stabilization and erosion control within a creek related to pipeline maintenance. Discharges either come out of pipes within a streambank and flow down the bank into the channel or are pumped down or across a streambank. Bank protection work would occur prior to a planned discharge in areas where banks within 50 feet of the discharge point show signs of erosion or instability. May require excavation.
- Replacement/repair of buried service valves (including valves within creek embankments that may require excavation and minor bank stabilization activities).
- Maintenance of pipeline turnouts, including access to pipelines.
- Replacement/repair of appurtenances, fittings, manholes, and meters.
- Vault maintenance. Vaults occur along segments of pipeline. Pipeline components are located within vaults. There are different types of vaults, and all are considered confined spaces. Structures other than the pipeline contained within the vaults include valves, electrical stations, turnout piping, etc. Telemetry pull boxes, corrosion monitoring stations, and some air release valves are not located within vaults. Vaults are typically made of concrete and may be located immediately below grade (i.e., below ground level) or partially or fully above grade.
- Telemetry cable/system inspections and repairs. Telemetry systems allow communication of data from the pipeline to the pipeline operator so that the operator can track the operations of the pipeline. Telemetry cables are often sited in the center of roads. May require excavation to access system components.
- Meter inspections and repairs. Flow meters measure the rate of flow through a pipeline. Some meters are located in vaults, while others are not.
- Maintenance of pump stations, operation yards, utility yards, and corporation yards.

3.5.3.2.4 Cache Creek Resources Management Plan

The *Cache Creek Resources Management Plan* (CCRMP) addresses management of 2,324 acres of in-channel activities along a 14.5-mile reach of lower Cache Creek (Figure 3-5). The Cache Creek Improvement Program (CCIP) was developed to implement the goals, objectives, actions, and performance standards of the CCRMP as it relates to the maintenance, stabilization, and restoration of lower Cache Creek.

The actions described in the CCRMP/CCIP are undertaken for the sole and/or primary purpose of the five activities listed below. With the exception of pesticide application, the Yolo HCP/NCCP covers 110 acres of activities associated with the CCRMP/CCIP. Some activities described in the CCRMP/CCIP will be integrated with the conservation strategy of this HCP/NCCP and are described in Chapter 6, *Conservation Strategy*. However, other activities may occur independent of the conservation strategy of this HCP/NCCP.

As part of the CCRMP/CCIP, a technical advisory committee guides stream monitoring and maintenance activities and identifies initial high-priority projects for stream stabilization. The technical advisory committee recommends specific maintenance activities based on annual monitoring information. This includes erosion control, flood control, bank protection, riparian

restoration, and other in-channel activities and/or in-channel modifications consistent with the CCRMP and CCIP to protect structures, infrastructure, and land uses along the creek and downstream from damage from natural creek forces (e.g., flooding, erosion, deposition, and washout) and restore the creek. The general types of in-channel activities include the following:

- Habitat preservation, enhancement, and restoration
- Aquifer recharge and conjunctive water use.
- Channel stabilization.
- Erosion control and channel maintenance.
- Public open space and recreation, including trail construction.

3.5.4 Conservation Strategy Implementation and Covered Activities on Reserve Lands

In addition to the activities and projects described above, this HCP/NCCP provides take authorization for the actions described in Chapter 6, *Conservation Strategy* (acres quantified in Table 6-1(b)). Habitat management is an integral component of this HCP/NCCP. All habitat modification, management, and monitoring activities undertaken for the purpose of implementing this HCP/NCCP are covered. Covered activities include habitat assessments and population surveys; habitat management activities to maintain suitable habitat conditions, including cultivation of specified crop types; establishing and maintaining fuel management zones at the wildland/urban interface; restoration, enhancement, and creation of habitats; construction and maintenance of facilities necessary for the management, maintenance, and access control of HCP/NCCP conservation lands (e.g., fences, access roads, and outbuildings); control of invasive nonnative species by mechanical means or other means; scientific investigation into species' biological characteristics; and all other management and monitoring activities prescribed in this HCP/NCCP.

3.5.4.1 Management Activities

This category includes all management actions required by this HCP/NCCP or other actions that might be necessary to achieve the specified biological goals and objectives. This category includes construction, maintenance, and use of facilities needed to manage the reserve system, including, but not limited to, maintenance sheds, shade structures, roads, culverts, fences, gates, wells, stock tanks, and stock ponds. All reserve system management structures will be constructed to minimize adverse effects on covered species and natural communities in compliance with the conditions on covered activities described in Chapter 4. Facilities existing at the time of land acquisition will be used whenever feasible.

Management actions that will occur within the reserve system are described in detail in Chapter 6, *Conservation Strategy*. Actions not already described earlier in this chapter may include, but are not limited to, the activities listed below. Many of these activities overlap.

- Vegetation management using livestock grazing, manual labor, prescribed burning, and/or herbicides. Herbicides will be used in accordance with label instructions and in compliance with state and local laws. Any pesticide use must comply with all existing injunctions related to the use of pesticides. For example, a May 2010 injunction disallows the use of certain pesticides within habitat and buffer zones established for California tiger salamander. Pesticide use is not a

covered activity under this HCP/NCCP; therefore, all pesticide use must avoid take of state or federally listed species.

- Seed collection from palmate-bracted bird's beak for depositing in a seed bank on a case-by-case basis, contingent on approval by the wildlife agencies.
- Development of field facilities for workshop space and tool and machinery storage.
- Construction, rehabilitation, and maintenance of facilities (e.g., corrals, fencing, gates, feed storage, water delivery) to support livestock grazing as a covered species management tool.
- Maintenance of existing roads and new roads constructed for the reserve system to protect or enhance the conservation values of the reserve, including grading and relocation of roads to protect sensitive resources.
- Demolition or removal of structures, roads, or human-made livestock ponds to restore habitat.
- Use of motorized vehicles for patrolling, maintenance, and resource management activities in the reserve system.
- Use of mechanized equipment for construction, maintenance, and resource management projects in the reserve system.
- Control of nonnative species (e.g., feral cats and dogs, nonnative pigs, nonnative red fox, nonnative fish, bullfrogs, barred tiger salamanders, and hybrids).
- Stream maintenance for natural community and covered species habitat purposes.
- Installation of wells, the water from which will be used to fill stock ponds or provide water sources for cattle consistent with management plans for California tiger salamander management plans, where this species potentially occurs. Wells will be installed only as necessary for natural resource management purposes and when no alternative surface water supplies are available. Wells will be sited so that they do not degrade surrounding habitat.
- Surveys and monitoring for mitigation and restoration/habitat enhancement projects.
- Fire management, including prescribed burning, mowing, and fuel-break establishment and maintenance.
- Hazardous materials remediation, such as appropriate closure of underground storage tanks, soil remediation, cleanup of illegal dumping.
- Repair or replacement of existing facilities damaged by flood, fire, or earthquake to pre-damage condition.
- Operations related to water delivery for ponds and other aquatic habitat.
- Water delivery for use in operations facilities (e.g., field facilities and the native plant nursery).

3.5.4.2 Public Access and Recreation in the Reserve System

Limited public access and recreational use of reserves is permitted under this HCP/NCCP (see Chapter 6, *Conservation Strategy*, for details). To the extent possible, recreational facilities will use existing infrastructure such as existing trails and fire or ranch roads. The Permits do not cover off-trail recreational activities or any type of activity prohibited by this HCP/NCCP or by state or federal law.

3.5.4.3 Habitat Enhancement, Restoration, and Creation

The conservation strategy (Chapter 6) sets forth requirements for habitat enhancement, restoration, and creation. Enhancement activities generally fall under the reserve management category. Habitat restoration and creation will generally be disruptive only in the short term because these activities may involve soil disturbance, removal of undesirable plants, and limited grading. All habitat restoration and creation is expected to result in a net long-term benefit for covered species and natural communities. However, these activities may have temporary or short-term adverse effects and may result in limited take of covered species (Chapter 5, *Effects on Covered Species and Natural Communities*). The permits cover all habitat enhancement, restoration, and creation activities conducted in reserves that are consistent with HCP/NCCP requirements. Examples of habitat enhancement, restoration, and creation activities include, but are not limited to, the following:

- Creating hedgerows on farm field edges.
- Pond creation.
- Restoration projects in streams, riparian areas, wetlands, and uplands.
- Native vegetation planting.
- Removal of invasive species.

3.5.4.4 Species Surveys, Monitoring, and Research

Biologists will need to conduct surveys for covered species, natural communities, and other resources within the reserves on a regular basis for monitoring, research, and adaptive management purposes. These surveys may require physical capture and inspection of specimens to determine identity, mark individuals, or measure physical features, all of which may be considered take under the FESA or CESA. Surveys for covered species will also be conducted on private land that the Conservancy is considering for acquisition. Although these surveys are not expected to require as much handling of specimens, limited take may still occur. Qualified biologists will conduct surveys for all covered species, as defined in Chapter 6, *Conservation Strategy*. The Permits cover such survey activity that is consistent with this HCP/NCCP.

The permits cover research conducted by biologists on reserves in support of this HCP/NCCP as long as the research projects have negligible effects on populations of covered species and are a component of reserve system monitoring and management. These researchers must be under contract with the Permittee(s) and/or have a Section 10(a)(1)(A) recovery permit to cover incidental take that may occur as a result of research conducted on reserve lands (see Chapter 4 for a more detailed description of a “qualified biologist”). The Conservancy will evaluate research on reserves unrelated to this HCP/NCCP on a case-by-case basis because the nature and effects of future research projects cannot be predicted at this time. If the Conservancy determines such research is consistent with the terms of this HCP/NCCP, coverage may be granted through a Certificate of Inclusion.

3.5.4.5 Agricultural Practices within the Reserve System

Lawful and routine agricultural practices on reserve lands are covered agricultural activities under this HCP/NCCP, provided they are consistent with the conservation easement. Appendix M, *Yolo County Agricultural Practices*, Section M-1, *Agricultural Practices Associated with the Yolo HCP/NCCP Reserve System*, lists routine agricultural practices that qualify as covered agricultural activities. The

seasonal descriptions in Appendix M are provided only as a guide. Some farms conduct these activities outside the typical time periods listed, but the HCP/NCCP still covers their actions provided they are consistent with the conservation easement. If any lawful and routine agricultural practice does not appear in Appendix M, the Conservancy may allow the practice (as a covered agricultural activity) provided it does not result in impacts not analyzed in the HCP/NCCP and the conservation easement (subject to wildlife agency approval) also allows the activity. All such agricultural practices on reserve lands must avoid and minimize effects on covered species as described in Section 4.3.6, *Avoidance and Minimization Measures within the Reserve System*.

3.5.5 Western Burrowing Owl Relocation

As described in Chapter 4, Section 4.3.4, *Covered Species*, AMM17 provides for passive relocation of western burrowing owls from project sites to avoid and minimize adverse effects on this species. It also allows for active relocation upon wildlife agency approval. This relocation is a covered activity under the Yolo HCP/NCCP.

3.5.6 Neighboring Landowner Protection Program

The implementation of conservation measures described in Chapter 6, *Conservation Strategy*, may increase populations of covered species in the reserve system. As a result, some individuals may disperse to neighboring private lands where the presence of listed species could interfere with routine agricultural activities, other activities, or allowed use of the land. Protections for neighboring landowners are described in Chapter 7, *Plan Implementation*; the methods for establishing and estimating take associated with this program are described in Chapter 5, *Effects on Covered Species and Natural Communities*. With certain provisions and restrictions described in these chapters, farmlands in the vicinity of the reserve system boundary are eligible for take coverage during the course of routine agricultural activities, during the permit term, only for take beyond the baseline condition that existed prior to the establishment of the neighboring reserves. Appendix M, *Yolo County Agricultural Practices*, lists the routine agricultural activities that may occur on lands enrolled in the Neighboring Landowner Protection Program.

Take coverage for this program is limited to four covered species: California tiger salamander, valley elderberry longhorn beetle, giant garter snake, and western pond turtle. Take coverage is only available for lands within a certain distance of the reserve system, and this distance varies by the four eligible covered species. Take coverage is voluntary and must be sought by the landowner (i.e., landowners must opt-in) and enacted through a Certificate of Inclusion. Therefore, take coverage for neighboring lands is not automatic and the Conservancy expects to extend it to only a subset of qualifying landowners. The Conservancy estimates that landowners will enroll up to 2,347 acres of land in this program. Details of eligibility and estimated acreage are described in Chapter 5, Section 5.4.4, *Neighboring Landowner Protection Program*. Details of the application process for coverage are described in Chapter 7, Section 7.7.7.1, *Neighboring Landowner Protection Program*.