

TABLE OF CONTENTS

2.0 LAND USE AND COVERED ACTIVITIES2-1

2.1 OVERVIEW2-1

2.2 BACKGROUND.....2-1

2.2.1 Land Uses.....2-1

2.2.1.1 Cities2-2

2.2.1.2 Agriculture2-2

2.2.1.3 Open Space and Conservation Lands.....2-2

2.2.1.4 Travis Air Force Base2-3

2.2.2 Population2-3

2.2.3 Economy2-4

2.3 PLAN PARTICIPANT EXISTING AND DESIGNATED LAND USES AND FACILITIES2-5

2.3.1 Urban Development2-5

2.3.1.1 City of Fairfield.....2-6

2.3.1.2 City of Suisun City.....2-7

2.3.1.3 City of Vacaville2-8

2.3.1.4 City of Vallejo.....2-8

2.3.1.5 City of Dixon.....2-9

2.3.1.6 City of Rio Vista2-9

2.3.2 SCWA and Participating Irrigation, Reclamation, and Special Districts2-10

2.3.2.1 Solano County Water Agency.....2-10

2.3.2.2 Solano Irrigation District.....2-11

2.3.2.3 Maine Prairie Water District2-12

2.3.2.4 Dixon Regional Watershed Joint Powers Authority2-12

2.3.2.5 Dixon Resource Conservation District.....2-12

2.3.2.6 Reclamation District No. 2068.....2-13

2.3.2.7 Vallejo Sanitation and Flood Control District.....2-13

2.3.2.8 Fairfield-Suisun Sewer District.....2-13

2.4 COVERED ACTIVITY ZONES2-13

2.4.1 Covered Activity Zone 1 – Urban Zone.....2-14

2.4.2 Covered Activity Zone 2 – SCWA, Irrigation, Reclamation, and Special District Zone.....2-15

2.4.3 Covered Activity Zone 3 – Remainder of the County2-15

2.5 COVERED ACTIVITIES2-16

2.5.1 Development2-16

2.5.1.1 Development within the Urban Zone (Zone 1 only).....2-16

2.5.1.2 City Activities Outside of Urban Growth Boundaries (Covered Activity Zone 2)2-17

2.5.2 Construction of New Irrigation and Flood Control Facilities to Support Inclusions, Expansions, and Annexations for the Irrigation, Reclamation, and Special District Service Areas (Covered Activity Zones 1 and 2).....2-18

2.5.3 Operation and Maintenance of Plan Participant Facilities (Covered Activity Zones 1 and 2).....2-20



2.5.4 Compatible Activities on Designated Reserves, Mitigation Sites/Banks, Open Space Lands, and Adjacent Lands (Covered Activity Zones 1, 2, and 3) 2-20

2.6 PROJECTS AND ACTIVITIES NOT COVERED BY THIS HCP..... 2-21

FIGURES

Figure 2-1: Urban Growth Trends 1950 to 2025 2-23

Figure 2-2: Solano County 2008 General Plan Land Use Diagram..... 2-25

Figure 2-3: City of Fairfield Habitat Types and General Plan Land Use Designations..... 2-27

Figure 2-4: City of Suisun City Habitat Types and General Plan Land Use Designations..... 2-29

Figure 2-5: City of Vacaville Habitat Types and General Plan Land Use Designations 2-31

Figure 2-6: City of Vallejo Habitat Types and General Plan Land Use Designations..... 2-33

Figure 2-7: City of Dixon Habitat Types and General Plan Land Use Designations 2-35

Figure 2-8: City of Rio Vista Habitat Types and General Plan Land Use Designations 2-37

Figure 2-9: Service Areas for SCWA, SID, MPWD, DRW JPA, Dixon RCD, RD 2068, VSFCD, and FSSD 2-39

TABLES

Table 2.1: Approximate Land Use in Solano County 2-1

Table 2.2: Agricultural Acreage in Solano County by Type..... 2-2

Table 2.3: Employment by Industry Type 2-4

Table 2.4: Solano Project Annual Entitlements 2-11

Table 2.5: Covered Activities by Covered Activity Zone..... 2-14

Table 2.6: Urban Development Land Conversions by City 2-17

Table 2.7: Land Conversion Impacts from Known Activities Outside Urban Zone by City 2-18

Table 2.8: New Irrigation and Flood Control Facilities for Special Districts 2-19



2.0 LAND USE AND COVERED ACTIVITIES

2.1 OVERVIEW

This chapter describes the historic and existing land uses within Solano County and the six cities participating in the Habitat Conservation Plan (HCP). To assess future land use and the potential impacts of urban growth, the current general plans and other relevant documents for the participating cities of Dixon, Fairfield, Rio Vista, Suisun City, Vacaville, and Vallejo were reviewed. This chapter also provides background on the Solano County Water Agency (SCWA) and the participating irrigation, reclamation, and special districts, their existing service areas and facilities, current operation and maintenance activities, and proposed annexation areas. Review of the existing and designated land uses for each Plan Participant provided the basis for delineating the Covered Activity Zones (Section 2.4) and identifying the activities proposed for coverage under the HCP (Section 2.5).

2.2 BACKGROUND

Established in 1850, Solano County is bordered by Yolo County to the north, Yolo and Sacramento Counties to the east, Suisun Bay and Suisun Marsh to the south, and Napa County to the west (Figures 1-1 and 1-2). Like neighboring counties, Solano County has historically been and continues to be primarily agricultural due to the vast extent of flat to rolling landscapes and rich soils. More recently, however, expansion of the San Francisco and Sacramento metropolitan areas has increased development pressure on Solano County communities. Much of this growing population now resides in the cities of Solano County and commutes to work in the San Francisco Bay Area (Bay Area) and Sacramento via three major highways: Interstate 80 (I-80), Interstate 680 (I-680), and Interstate 780 (I-780). Commercial and industrial business has also grown such that the economic importance of these businesses within the County nearly equals that of traditional agriculture. The following section provides an overview of the current status of Solano County in terms of its cities, land use, and population as well as economic considerations.

2.2.1 Land Uses

Solano County encompasses a total area of approximately 907 square miles (sq mi), making it the fifth largest county in the Northern Bay Area. It supports diverse land uses including urban, rural land, open space, and water. Table 2.1 lists these land uses and their corresponding areas within Solano County (Solano County 2005a).

Table 2.1: Approximate Land Use in Solano County

Land Type	Square Miles	Percent of County Land
Urban	157	17%
Rural Land	672	74%
Water	78	9%
Total	907	100%

Source: Solano County Department of Resource Management (County of Solano 2006)



In 1994, Solano County voters approved the Solano County Orderly Growth Initiative (Measure A). This initiative amended the Solano County General Plan to restrict the re-zoning of lands designated “Agriculture” or “Open Space” as shown on the Solano County Land Use and Circulation Map, through December 31, 2010 (Solano County 1994). It also placed limits on the density of residential and other development on agricultural lands. This initiative has been successful in keeping the growing population of Solano County within the seven incorporated cities (Figure 2-1). In 2008, Solano County updated its General Plan and voters passed Measure T, extending the provisions of the Measure A, with only minor changes to regional zoning, through to December 31, 2028. Figure 2-2 shows the Solano County 2008 General Plan Land Use Diagram passed under Measure T.

2.2.1.1 Cities

Seven incorporated cities house 95 percent of the population in Solano County (the City of Benicia has chosen not to participate in the HCP). The City of Vallejo covers the greatest area and supports the largest population. Despite recent population growth and the size of the cities, the vast majority of the County consists of unincorporated, rural land (see Table 2.1).

2.2.1.2 Agriculture

Like most of the surrounding counties, Solano County was historically based on an agricultural economy. Despite recent trends toward commercial and residential uses, agriculture remains the primary land use activity. County citizens and officials have focused considerable attention on preserving the agricultural heritage of the County. Agricultural practices vary widely from intensive irrigated farming to dryland farming and grazing, depending on soil type, topography, and water availability. In 2007, 470 full-time farms, averaging 403 acres (ac) in size, were in operation within the County (Solano County 2009). Over the last 20 years (1990 to 2009), an average of 360,580 ac of land was in active agricultural production, which is 63 percent of the total land area in the County. Table 2.2 provides a breakdown of the average acreage and percent of the major agricultural crops between 1990 and 2010 (Solano County Crop Reports 1990 to 2010).

Table 2.2: Agricultural Acreage in Solano County by Type

Crop Type	Area (acres)	Percent
Field Crops	126,501	35%
Fruit and Nut Crops	16,586	5%
Pasture and Range Lands	177,531	49%
Seed Crops	10,759	3%
Vegetable Crops	18,124	5%
Other/Fallow	9,129	3%
Nursery Stock	1,040	<1%

Source: Solano County Agriculture Department, 1990 to 2010, Agricultural Crop and Livestock Reports

2.2.1.3 Open Space and Conservation Lands

Open space land and water comprise approximately 18 percent and 9 percent of Solano County, respectively. Open space areas that have not been converted to agricultural use are largely marsh and freshwater wetland areas. The Suisun Marsh is the largest area of contiguous open space in



Solano County. These 85,000 ac of current and former brackish and salt marsh consist of State Wildlife Management Areas and private lands devoted primarily to waterfowl hunting. The State's McAteer-Petris Act, which created the San Francisco Bay Conservation and Development Commission (BCDC), separated the Suisun Marsh into Primary and Secondary Management Units. The Primary Management Unit is designated for conservation and use is restricted to resource management. The Secondary Management Unit consists of grassland and current agricultural land designated for intensive agricultural use. The Napa Marsh, another major wetland area, encompasses 6,300 ac of marsh, former salt production ponds, and agricultural lands bordering the Napa River and San Pablo Bay. The California Department of Fish and Game (CDFG) owns much of this land; the remaining land lies within the San Pablo Bay National Wildlife Refuge. Approximately 16,545 ac of the Napa Marsh lie within the County of Solano.

A number of other significant wetland and riparian areas exist along Putah Creek, Ulatis Creek, Miner Slough, Calhoun Cut, Prospect Slough, Lindsey-Haas-Barker Slough, and in the French Island Area along the western edge of the Sacramento River and Delta.

Remnants of native prairie and vernal pool habitats survive in the central portion of Solano County. Much of this land is privately owned and not currently protected. However, approximately 3,000 ac in the Greater Jepson Prairie Ecosystem are currently protected under conservation easement or held in fee title by a conservation organization. The United States Fish and Wildlife Service (USFWS) has designated the Greater Jepson Prairie Ecosystem as a high priority conservation region (USFWS 2004a).

A number of other open space areas are currently owned and managed by city, county, state, or Federal agencies for recreation and conservation purposes. Section 3.5 provides additional information on the characteristics and conservation values of these public lands.

2.2.1.4 Travis Air Force Base

Travis Air Force Base (AFB) encompasses approximately 5,100 ac. A large portion of this land has been developed for base housing, airfields, and aircraft storage/maintenance facilities; surrounding undeveloped open space lands lie within the Greater Jepson Prairie Ecosystem and are considered a high priority for conservation. Travis AFB is of particular importance due to the extent of its land holding in central Solano County and its impact on the County's economy, which was estimated at \$1.5 billion dollars in 2011.

2.2.2 Population

Over the past 50 years, the population of the State of California has increased dramatically, from 10 million people in 1950 to approximately 37 million people in the year 2010 according to the Association of Bay Area Governments (<http://www.bayareacensus.ca.gov>). The California Department of Finance predicts continued growth over the next 25 years with the population expected to reach 46,330,221 by the year 2035, a 25 percent increase from 2010. While the rate of growth will likely decline over the next 25 years, California's growth rate will still exceed growth rates throughout the country, and absolute growth in California will remain high.

The Bay Area's nine counties (Sonoma, Napa, Solano, Marin, San Francisco, San Mateo, Contra Costa, Alameda, and Santa Clara) have absorbed much of this population growth, accounting for



almost 20 percent of the State's total population. Over the next 25 years, the population in the Bay Area is expected to rise from 7,165,778 to 8,240,104 people, resulting in a 15 percent population increase.

The 2010 Census figures for Solano County reflect the rapid growth experienced throughout the Bay Area. Between 1940 and 2010, the population of Solano County grew from 50,000 people to 413,154 people, with 95 percent of the population living within the limits of the seven incorporated cities. According to census records, the population in Solano County has increased 4 percent per decade since 1960, an increase of 45 percent.

Affordability and availability of land contributed to the growth of Solano County between 1990 and 2000 (ABAG 2002). The California Department of Finance projects that Solano County's population will increase to 512,695 by 2035, with most growth occurring within the County's three largest cities: Vallejo, Fairfield, and Vacaville.

2.2.3 Economy

The economy of Solano County has traditionally been based on agriculture. Although fluctuations in agricultural prices and increasing commercial and industrial development have reduced its relative importance within the County, agriculture still remains a major part of the County's economy. For the year 2010, agriculture generated a total production value of \$259.4 million. Table 2.3 lists employment levels according to industry type through 2005. This table reflects the recent decline in agriculture and manufacturing, historically the two most important industries for jobs and income.

Table 2.3: Employment by Industry Type

Industry	No. of Jobs	Percentage of Total
Agriculture & Natural Resources	2,010	1%
Government	16,700	11%
Construction	11,560	8%
Retail	18,750	13%
Manufacturing & Wholesale	17,200	12%
Transportation & Utilities	5,530	4%
Financial & Leasing	10,130	7%
Professional & Managerial Services	11,380	8%
Health & Educational Services	33,190	23%
Arts, Recreation & Other Services	19,890	14%
Total	146,340	100%

Source: Association of Bay Area Governments (Projections 2005).

Travis AFB is also a significant component of the local economy. In light of recent base realignments and closures, Solano County and the cities in the County have enacted land use policies to protect Travis AFB from urban encroachment and other adverse actions that could affect the continued viability of the Base. Travis AFB employs 14,353 people, including military personnel, and civilian personnel. An analysis prepared by Travis AFB indicates that the Base contributes approximately \$1.5 billion dollars annually to the local economy. Due to its significant



economic contribution and the extent of land under its control, planners in Solano County have considered Travis AFB in their land use planning efforts.

2.3 PLAN PARTICIPANT EXISTING AND DESIGNATED LAND USES AND FACILITIES

This section summarizes the existing and proposed land uses, current service areas, projected annexation areas (irrigation, reclamation, and special districts only), existing facilities, proposed new facilities, and operation and maintenance activities for Plan Participants. Review of the existing and designated land uses for each Plan Participant provided the basis for delineating the Covered Activity Zones (Section 2.4) and identifying the activities proposed for coverage under the HCP (Section 2.5).

2.3.1 Urban Development

To assess the potential impacts of urban development on Covered Species, planned future land uses were identified by reviewing the current general plans and other relevant documents for the participating cities of Fairfield, Suisun City, Vacaville, Vallejo, Dixon, and Rio Vista. Each city adopts a General Plan to guide future growth within the community. The General Plan provides goals and policies that dictate how and where future development should occur and forms the basis for all land use decisions. In addition to the goals and policies, the General Plan contains a Land Use Diagram that designates areas for specific land uses. Typical land use designations include: residential (high, medium, and low density), commercial/office, industrial, public facilities, and open space.

Zoning Districts are established to implement the General Plan and to provide additional guidance for establishing compatible patterns of land use within the City's jurisdiction. Each parcel within the City is assigned to a Zoning District as illustrated by the Zoning Maps. The Zoning Ordinance specifies the types of land uses allowed and the site development regulations and performance standards appropriate to the purpose and use of each district.

For the purposes of the HCP incidental take assessment, lands zoned or designated as agriculture or open space are assumed to remain undeveloped. Lands zoned for residential, industrial, commercial, active recreation, or similar designations are presumed to be suitable for development. The HCP does not distinguish between the development zoning categories and assumes that some rezoning amongst development categories may occur over the life of the HCP. The primary impact considered in the HCP is the conversion of undeveloped land to residential, commercial, industrial, or active recreational use such that the baseline condition of the land is eliminated or substantially altered.

The term Urban Growth Boundary (UGB) is used as a general term throughout the HCP for referring to the growth boundaries for all of the cities collectively. UGBs were set using a combination of General Plan information for each city, urban limit lines where they have been established, and the Solano County General Plan Municipal Service Areas (MSAs) (see Section 2.4.1 for references).

Using current General Plan information, areas zoned or designated for development were compared with current land use and vegetation maps to identify areas where land conversion could occur,



resulting in impacts to Covered Species and their habitats. The City Plan Participants are seeking “take” coverage under the HCP for these areas. Future expansion beyond the boundaries assessed in the HCP will require an amendment to the HCP and implementation of additional conservation strategies. Planning horizons for the current General Plans extend to 2020/2025. Future General Plan updates will conform to the Solano HCP. In addition, a comprehensive revision of the Conservation Program will be conducted at Years 10 and 20, at which time changes necessitated by any General Plan updates will be incorporated into the HCP. If, however, significant changes occur to planned land uses prior to Year 10, the Plan Participants and Resource Agencies will review the conservation strategy to determine if alternative conservation actions should be implemented.

2.3.1.1 City of Fairfield

The City of Fairfield planning area occupies approximately 35,000 ac in the central portion of the County. Travis AFB lies within the eastern border of the City’s urban limits and encompasses approximately 5,000 ac (Figure 2-3).

The total population of Fairfield has grown significantly over the last 60 years, from 3,118 in 1950 to 58,099 in 1980, 98,800 in 2000, and 105,321 in 2010 (<http://www.bayareacensus.ca.gov>). Population growth has been accompanied by a substantial increase in urban land area from 311 ac circa 1950 to 3,852 ac in 1980, 12,030 ac in 2000, and 13,681 ac in 2005 (Figure 2-1). Fairfield issued an average of 604 housing permits per year during the 1970s and an average of 888 housing permits per year during the 1980s (Fairfield Observer 2001). During the 1990s, the number of housing permits issued fell to an average of 467 per year, a significant decline from the previous two decades.

In 2002, Fairfield modified its growth objectives to promote more compact and efficient growth, constrain the overall size of the City, and limit population growth. To do this, Fairfield adopted the Comprehensive Amendment to the City of Fairfield General Plan (General Plan Amendment; City of Fairfield 2002). The General Plan Amendment outlines strategies to encourage efficient land development, preservation of agricultural uses, transportation alternatives to the automobile, and compatible land uses adjacent to Travis AFB. To implement these modified growth objectives, the General Plan Amendment included a revised Land Use Diagram that designated a strict urban limit line for development. This designated urban limit line was used to designate the UGB for the HCP. The planning horizon for the General Plan Amendment is 2020, with build out expected sometime after 2020. The General Plan Amendment is designed to accommodate a total population of 135,000 (at build out), which is an increase of approximately 28 percent from the 2010 population.

In 2003, Fairfield voters adopted Measure L, which requires that any future General Plan amendment related to the Travis Reserve, the designated urban limit line, or airport noise standards in the vicinity of Travis AFB be submitted to the voters for approval through December 31, 2020 (City of Fairfield 2003). Except for certain minor modifications, such as updating the noise contours around Travis AFB, the City Council may not change these land use policies during this time period without voter approval. All other provisions of the General Plan may be amended by the City Council without voter approval.



Designated Land Uses. The City of Fairfield UGB (excluding Travis AFB¹) encompasses approximately 30,000 ac, of which approximately 14,000 ac are currently developed or have been approved for development by the City of Fairfield. Based on the General Plan, approximately 5,400 ac of undeveloped land are currently zoned for urban development. Figure 2-3 depicts the City of Fairfield UGB and the habitat types that may be affected by potential land conversion. The designated UGB also includes projected near-term and long-term annexation areas, such as the Rancho Solano North Master Plan Area (approximately 1,930 ac) and the Northeast Fairfield Specific Plan Area north of Travis AFB. Although 5,400 ac of land are currently designated for urban development, fewer acres will be converted based on known and suspected land use constraints and environmental considerations, including the establishment of project-specific mitigation lands and other conservation areas established as a result of the HCP Conservation Strategy.

Approximately 10,600 ac of land remaining within the City of Fairfield UGB are designated as open space, agriculture, and Travis Reserve (a special land use designation developed by Fairfield as part of the General Plan Amendment). Encompassing approximately 5,700 ac, the Travis Reserve designation allows only agricultural and open space uses, but contains provisions for expanding military, civilian, and joint use facilities at Travis AFB. Future development associated with the expansion of Travis AFB has not been included as a Covered Activity under the Solano HCP; however, Plan Participants have worked with Travis AFB personnel to coordinate conservation actions and ensure that implementation of the Solano HCP Conservation Program does not affect Travis AFB operations.

2.3.1.2 City of Suisun City

Suisun City is located between the City of Fairfield and Suisun Marsh. It is bounded by the City of Fairfield on the north and west, Suisun Marsh on the south, and Travis AFB on the east, thereby limiting the potential for Suisun City to grow. Despite these constraints, the population of Suisun City has grown rapidly over the last three decades, from 2,917 people in 1970 to 26,118 people in 2000, and 28,111 people in 2010 (<http://www.bayareacensus.ca.gov>). However, the population growth in Suisun City is expected to slow due to the constraints on physical expansion imposed by neighboring communities and the Suisun Marsh. The planning horizon for the current General Plan is 2010. The city is in the process of completing a General Plan update, which is scheduled to be adopted in the spring of 2012.

Designated Land Uses. The Suisun City UGB, which is based on the 1992 General Plan and adopted sphere of influence, encompasses approximately 5,145 ac, of which 2,270 ac are currently developed or have been approved for development by Suisun City (Figure 2-4). Approximately 1,000 ac of undeveloped land are currently zoned for urban development. Even though a new General Plan has not been adopted, the anticipated urban development will not change because the HCP adopted a UGB that represents the maximum sphere of influence for the City. In addition,

¹ Travis AFB is excluded from coverage under the HCP. As a Federal facility, the effects of development activities on threatened and endangered species at Travis AFB are addressed through the Section 7 consultation process.



fewer acres than the 1,000 ac currently zoned will likely be converted as a result of environmental constraints and other requirements, including the Solano HCP Conservation Strategy.

2.3.1.3 City of Vacaville

Since 1980, the City of Vacaville has grown faster than all the major cities in Solano County and throughout the Bay Area. In 1980, the total population of Vacaville was estimated at 43,367. By the year 2000, the City's population had grown to 88,000. In 2010, approximately 92,428 residents lived in Vacaville, representing a 5 percent population increase since 2000 (<http://www.bayareacensus.ca.gov>). Over the last 20 years, the City of Vacaville has built an average of 700 housing units annually. In January 2000, the City contained an estimated 28,952 dwelling units. Between 2000 and 2009, the City of Vacaville issued building permits for about 4,450 residential units, which is close to a 15 percent increase from the number of units existing in 2000 (City of Vacaville 2010). Currently, there are about 32,800 residential units in Vacaville. The General Plan anticipates a total of 37,000 to 44,500 dwelling units upon build out of designated residential land (City of Vacaville 1990). The City of Vacaville is currently updating its General Plan.

The rise in population has resulted in a substantial expansion of the Vacaville land area. Circa 1950, the urban area of Vacaville occupied approximately 309 ac. This area increased to 2,598 ac by the early 1980s, 12,536 ac by 2000, and 13,280 ac by 2005 (Figure 2-1). During the 1990s, the City acquired an additional 3,000 ac (5 sq mi) as a result of 15 separate annexations.

The Association of Bay Area Governments (ABAG 2002) predicts the population of Vacaville will reach 110,800 in 2015. At build out (2017), the Vacaville General Plan (updated in 1999 and under current revision) is designed to accommodate a total population between 108,500 and 128,500 people. The planning horizon for the Vacaville Comprehensive Annexation Plan (VCAP) is 2015. As identified in the VCAP, the growth in Vacaville will be sustained by: the availability of reasonably priced, developable land; the availability of financing for public services, industrial, business and commercial projects; and the demand for commuter housing.

Designated Land Uses. The City of Vacaville UGB, as defined by the County General Plan, VCAP, and 2012 General Plan Update, encompasses approximately 23,000 ac, of which 14,360 ac are currently developed or have been approved for development by the City of Vacaville (Figure 2-5). Approximately 5,270 ac of undeveloped land are currently zoned for urban development. The majority of planned development areas is located along the southern and eastern city limits and is composed primarily of agricultural lands with some vernal pool habitats and several creek corridors. Figure 2-5 depicts the existing and General Plan-designated land use categories and underlying vegetation types within Vacaville.

2.3.1.4 City of Vallejo

Vallejo is the largest city in Solano County in terms of population. As of the 2010 Census, the total population of Vallejo was 115,942 (<http://www.bayareacensus.ca.gov>). The population of Vallejo is expected to reach 158,800 by 2035; however, it is not expected to expand significantly in land area due to physical limitations on future growth.



Designated Land Uses. Vallejo County encompasses approximately 20,600 ac, of which 14,640 ac are currently developed or have been approved for development by the City of Vallejo (Figure 2-6). Approximately 1,840 ac of undeveloped land are currently zoned for urban development (Figure 2-6). Primary areas of undeveloped land include a few parcels in northern and eastern Vallejo along Columbus Parkway and in the Hunter Hill area west of I-80 (Figure 2-6).

Through 2025, most of the development in Vallejo will consist of infill development and redevelopment in existing urbanized areas, including the redevelopment of the former Mare Island Naval Shipyard, in western Vallejo. The Mare Island Final Reuse Plan (Reuse Plan) involves redevelopment of currently under-utilized parcels to promote civilian employment and to create a new neighborhood for the City of Vallejo. Mare Island is approximately 5,460 ac, of which 3,810 ac are comprised of marsh, tidal flats, and dredge sediment ponds. Under the Reuse Plan, approximately 3,800 ac of land would be set aside as open space, 2,845 ac of which are wetlands. Primary uses in the redevelopment areas include light industrial, warehouse, office, and commercial. Approximately 1,800 residential units would be created as part of the Reuse Plan.

2.3.1.5 City of Dixon

Dixon is located on the I-80 corridor, 19 miles (mi) west of Sacramento and approximately 67 mi northeast of San Francisco. The population of Dixon has increased by 76 percent, from 10,401 in 1990 to 16,103 in 2000 and 18,351 in 2010 (<http://www.bayareacensus.ca.gov>). Likewise, the number of households has increased from 3,386 in 1990 to 5,073 in 2000 and 5,856 in 2010. If this rate of residential development remains constant, ABAG projects a total population of 30,600 by 2035.

Designated Land Uses. Dixon's UGB encompasses approximately 5,100 ac, of which 2,740 ac are currently developed or have been approved for development by the City of Dixon (Figure 2-7). Approximately 2,250 ac of undeveloped land are currently zoned for urban development (Figure 2-7). According to the Dixon General Plan (City of Dixon 1993), areas designated for potential development are generally contiguous to existing residential areas (Figure 2-7). Future residential development (particularly infill development) would occur in areas of the City that are served by existing infrastructure or can be served by extending existing infrastructure. To better balance anticipated residential development, additional land has been designated for industrial and commercial development. As shown on Figure 2-6, future residential development would be concentrated primarily south and east of the existing city limits, and future industrial and commercial development would be located in a large area north of the existing city limits and in a smaller area in the southwest near I-80. For the duration of the HCP, development in Dixon is anticipated to extend out to the UGB boundary as mapped in the 1993 General Plan (Figure 2-6).

2.3.1.6 City of Rio Vista

The City of Rio Vista is located in the heart of the Sacramento River Delta, 48 mi southwest of Sacramento and 65 mi northeast of San Francisco. Rio Vista's total population has increased by 122 percent, from 3,316 in 1990 to 4,571 in 2000, and to 7,360 in 2010 (<http://www.bayareacensus.ca.gov>). In 1991, the Rio Vista City Council adopted a General Plan Amendment to annex 2,509 ac of open land, representing a 250 percent increase in land area and a six-fold increase in the capacity for residential development within the city limits. ABAG projects the population of Rio Vista will grow to approximately 24,500 by 2035. At build out (2020), the



annexed lands will accommodate over 7,500 new homes and multifamily residences under current zoning and development agreement requirements (City of Rio Vista 2001).

Designated Land Uses. Rio Vista's UGB encompasses approximately 3,870 ac, of which a total of approximately 2,800 ac are currently developed (1,670 ac) or have been approved for development (1,130 ac) by the City of Rio Vista (Figure 2-8). Approximately 1,070 ac of remaining undeveloped land are currently zoned for urban development. Following the build out of areas currently zoned for development (expected 2020), Rio Vista will double in size; therefore, no new annexations are planned during the timeframe of the current General Plan (1999–2020). Land is expected to convert fairly rapidly from vacant or agricultural to residential, commercial, and industrial uses. The majority of future growth and development will likely occur in the annexed areas, including the Esperson and River Walk properties, Marks Ranch, and Gibbs Ranch.

2.3.2 SCWA and Participating Irrigation, Reclamation, and Special Districts

This section provides information on the background, existing service area, and existing facilities of the SCWA, Solano Irrigation District (SID), Maine Prairie Water District (MPWD), Dixon Regional Watershed Joint Powers Authority (DRW JPA), Dixon Resource Conservation District (Dixon RCD), Reclamation District No. 2068 (RD 2068), Vallejo Sanitation and Flood Control District (VSFCD), and Fairfield-Suisun Sewer District (FSSD). The primary activities, undertaken by these Plan Participants are associated with the operation and maintenance of existing facilities (e.g., flood control, water supply and drainage channels, and other associated facilities) and the construction of new facilities. Additional information on the location of existing and proposed new facilities and routine operation and maintenance activities is provided in Appendix A.

2.3.2.1 Solano County Water Agency

In 1951, the State Legislature created the Solano County Flood Control and Water Conservation District (SCFC&WCD). As with other countywide flood control and water conservation districts established at that time, the SCFC&WCD was granted water supply and flood control authority over Solano County. The first major action of the SCFC&WCD was to contract with the United States Department of the Interior, Bureau of Reclamation (USBR) for water supply from the Solano Project. In 1988, the legislative act was amended to modify the governing board of the SCFC&WCD and to make other minor updates. In 1989, the name of SCFC&WCD was changed to the Solano County Water Agency (SCWA).

The SCWA Board of Directors includes the five members of the Solano County Board of Supervisors, the mayors from all seven cities in the County, and a board member from each of the three agricultural irrigation districts (SID, MPWD, and RD 2068). An Advisory Commission consisting of public works directors and irrigation district managers from each of the member agencies provides technical advice and recommendations to the SCWA Board of Directors. SCWA's jurisdiction includes all of Solano County and the property of the University of California, Davis in Yolo County.



SCWA is primarily responsible for providing wholesale, untreated water to cities, districts, and state agencies from the Solano Project. As shown in Table 2.4, the entire available water supply from the Solano Project has been contracted to the various Solano Project Member Agencies. The Solano Project Member Agencies are: the Cities of Fairfield, Suisun City, Vacaville, and Vallejo, SID, MPWD, University of California at Davis, and California State Prison – Solano. Exchanges and transfers of Solano Project entitlements have taken place. For example, MPWD has agreed to provide 10,000 acre-feet per year (afy) of its Solano Project entitlement to the SID in exchange for receiving a larger amount of SID’s agricultural return flows.

Table 2.4: Solano Project Annual Entitlements

Agency	Annual Entitlement (acre-feet)
City of Fairfield	9,200
City of Suisun City	1,600
City of Vacaville	5,750
City of Vallejo	14,600
Solano Irrigation District (SID)	141,000
Maine Prairie Water District (MPWD)	15,000
University of California at Davis	4,000
California State Prison – Solano	1,200
Project Operating Loss (average estimated)	15,000
Total Project	207,350

SCWA is responsible for the operation and maintenance of the Ulatis and Green Valley Flood Control Projects (Figure 2-9) and has the authority to manage all flood control matters within the boundaries of SCWA. The Ulatis Flood Control Project is located in the Vacaville-Elmira drainage basin and extends from the hills northwest of Vacaville to the Delta (Figure 2-9). Upon completion in 1972, the Federal Soil Conservation Service turned the project over to SCWA for operations and maintenance. The Green Valley Flood Control Project is located in the Cordelia area and extends from the hills between Vallejo and Fairfield to the Suisun Marsh. Upon completion in 1962, the United States Army Corps of Engineers (Corps) turned the project over to SCWA for operations and maintenance. The Green Valley Flood Control Project was designed to prevent flooding of unincorporated land around the City of Fairfield and areas within the City of Fairfield (see Appendix A for details).

2.3.2.2 Solano Irrigation District

SID was formed in 1948 under the provisions of California Irrigation District Law for the purpose of contracting for surface water entitlements from the Solano Project. SID delivers approximately 150,000 afy of water to 1,650 agricultural and rural residential customers in its 73,000 ac service area, including most of unincorporated Solano County and parts of Dixon and Suisun City (Figure 2-9). The majority of SID land lies to the east of the Vaca Mountains between Vacaville, Winters, and Davis. The SID distribution system consists of approximately 200 mi of underground irrigation supply pipeline and 182 mi of irrigation ditches (see Appendix A for more details).



2.3.2.3 Maine Prairie Water District

The MPWD was formed on December 12, 1958, under provisions of the California Water Code, Division 13 (California Water Districts) to bring irrigation water to lands that were primarily dry farmed or dry pasture land. Located in central Solano County, the MPWD encompasses approximately 15,000 ac and serves 88 landowners. The MPWD service area is bordered by SID on the north and west, RD 2068 to the east, and dry land farming and pasture land to the south. MPWD delivers water to 35 water users (some landowners and some water users that lease property) for agricultural use only; no domestic water service is provided. Through a contract with SCWA, MPWD receives 15,000 afy of Solano Project water from Lake Berryessa. Through a contract with SID, 10,000 afy of Solano Project water is exchanged for 20,000 afy of drain water. The remaining 5,000 afy of Solano Project water is used to supplement drain water during the irrigation season. Facilities within the MPWD service area are limited to approximately 11.4 mi of streams (mostly modified for flood control), 26.7 mi of irrigation ditches, and five seasonal dams (see Appendix A).

2.3.2.4 Dixon Regional Watershed Joint Powers Authority

The Dixon Resource Conservation District, City of Dixon, MPWD, and RD 2068 formed the DRW JPA on September 29, 2005 pursuant to Chapter 5 of Division 7 of Title 1 of the California Government Code (commencing with Section 6500) related to the joint exercise of powers.

The purpose of the DRW JPA is to provide for the planning, financing, acquisition, ownership, construction, improvement, operation, and maintenance of drainage facilities that serve the Dixon Regional Watershed and to increase economic development, flood protection, farmland preservation, and habitat preservation in the Dixon Regional Watershed. The boundary of the Dixon Regional Watershed over which the DRW JPA has jurisdiction is contiguous with the boundaries of its member agencies (Figure 2-9). The DRW JPA currently manages two drainage facilities comprising approximately 9.3 mi of ditches and channels: the Lateral 1 drain and the New South Channel (see Appendix A).

2.3.2.5 Dixon Resource Conservation District

The Dixon RCD was formed on September 2, 1952, as a political subdivision of the State of California, authorized under Division 9 of the Public Resources Code (PRC). Resource Conservation Districts (RCDs) have been given the authority to develop and carry out natural resource conservation programs affecting their districts. RCDs receive technical assistance from the Natural Resources Conservation Service and other government agencies. The Dixon RCD was originally formed to construct, operate, and maintain the Dixon Drain (Drain), a system of ditches designed to provide winter drainage, reduce duration of flooding, and diminish ponding of winter water on agricultural lands. The Drain is also used to collect irrigation tailwater in the spring and summer. The Drain is currently 74 mi long and is accessed by private properties via flashboard risers (see Appendix A).

The Dixon RCD boundary encompasses approximately 115,000 ac in the northeastern portion of Solano County and a portion of Yolo County referred to as the “Yolo Bypass”. However, the boundary for Drainage Service Area only encompasses 43,000 ac and includes only a small portion of Yolo County. Dixon RCD activities covered under the HCP are those limited to the Drainage Service Area and expansion area (Figure 2-9).



2.3.2.6 Reclamation District No. 2068

RD 2068 was organized in 1924 as a public agency pursuant to the State Reclamation District Act, currently Division 15 of the State Water Code. The formation of RD 2068 was the culmination of an effort to organize a much larger and more ambitious irrigation project under the name of the East Dixon Drainage Association. Planning and design studies began in 1917, and RD 2068 was formed on April 7, 1924. Immediately following formation, RD 2068 took possession of the assets of the East Dixon Drainage District, including a water right filing. Plans of reclamation were adopted, a bond issue in the amount of \$550,000 was authorized, and water deliveries began in 1926. The primary responsibility of RD 2068 is the delivery of irrigation water within its 9,000 ac boundary (Figure 2-9). RD 2068 also supplies supplemental water, as needed, to an additional 3,000 ac, beyond their service area boundary. The RD 2068 delivery system contains four primary pumping plants, approximately 45 mi of irrigation supply ditches, and approximately 59 mi of irrigation drainage ditches (see Appendix A for details).

2.3.2.7 Vallejo Sanitation and Flood Control District

The VSFCD was created by a special act of the California State Legislature in 1952. This act was put forward by the City of Vallejo and Solano County for a service area that encompassed approximately 23 sq mi, most of it unincorporated county land. Their current service area is approximately 26 sq mi, 90 percent of it incorporated into the City of Vallejo. Since its inception, the VSFCD has worked to improve the quality of wastewater discharges to the Carquinez and Mare Island Straits. VSFCD is responsible for collecting and cleaning wastewater and managing storm water runoff. The VSFCD covers approximately 17,000 ac and serves the City of Vallejo and unincorporated areas in the greater Vallejo area, including Mare Island, Glen Cove, Home Acres, and Sky Valley (Figure 2-9).

2.3.2.8 Fairfield-Suisun Sewer District

FSSD provides tertiary level treatment of wastewater from the City of Fairfield, City of Suisun City, and several properties in unincorporated Solano County. The FSSD service area encompasses a population of about 130,000 people (in 2003) over approximately 32,000 ac. From October 2003 to September 2006, the daily average dry weather flow into the wastewater treatment plant varied between 15.0 and 16.0 million gallons per day (mgd) and the estimated average dry weather flow into the plant at build out (2030) is projected to be between 19.5 and 21.0 mgd (FSSD 2006). Of the total flow treated, about 10 percent is reclaimed for agricultural irrigation; the remainder is discharged to Boynton Slough and Suisun Slough.

2.4 COVERED ACTIVITY ZONES

The proposed Solano HCP establishes a framework for complying with State and Federal endangered species regulations while accommodating future urban growth, development of infrastructure, and ongoing operation and maintenance activities associated with flood control, irrigation facilities, and other public infrastructure undertaken by or under the permitting authority/control of the Plan Participants within the Plan Area. Because of the varying interests and authorities of the Plan Participants and the presence of other non-participating agencies with land use authority over portions of the Plan Area (e.g., the County of Solano and City of Benicia have



chosen not to participate in the HCP), the Plan Area is divided into three Covered Activity Zones (Figure 1-4). Within each Covered Activity Zone, varying types of activities affecting Covered Species will be authorized. These zones include: (1) an urban zone (Zone 1); (2) the zone that encompasses the lands within the SCWA, irrigation, reclamation, and special district boundaries (including their annexation areas) (Zone 2); and (3) the remainder of the Plan Area (Zone 3). The extent of approved Covered Activities varies in each zone. Table 2.5 provides a summary of Covered Activities included in each Covered Activity Zone. Each Covered Activity Zone is described in more detail below.

Table 2.5: Covered Activities by Covered Activity Zone

Covered Activity	Plan Participants	Applicable Covered Activity Zones
Development	City of Vacaville City of Fairfield City of Suisun City City of Vallejo City of Dixon City of Rio Vista	1
City Activities Outside of Urban Boundaries	City of Vacaville City of Fairfield City of Suisun City City of Vallejo City of Dixon City of Rio Vista	2
Special District Service Area Inclusions, Expansions, Annexations, and New Facilities	SCWA SID MPWD RD 2068 Dixon RCD DRW JPA FSSD VSFCD	1 and 2
Operations and Maintenance Activities of Public Facilities	All Plan Participants	1 and 2
Compatible Activities on Designated Reserves, Mitigation Sites/Banks, Open Space Lands, and Adjacent Lands (Zones 1, 2, and 3) (Management, Enhancement, Habitat Restoration/ Construction, Monitoring, and Relocation of Covered Species)	All Plan Participants	1, 2, and 3

- Dixon RCD = Dixon Resource Conservation District
- DRW JPA = Dixon Regional Watershed Joint Powers Authority
- FSSD = Fairfield-Suisun Sewer District
- MPWD = Maine Prairie Water District
- RD 2068 = Reclamation District No. 2068
- SCWA = Solano County Water Agency
- SID = Solano Irrigation District
- VSFCD = Vallejo Sanitation and Flood Control District

2.4.1 Covered Activity Zone 1 – Urban Zone

Covered Activity Zone 1 encompasses all of the land within the MSAs of Dixon, Fairfield (excluding Travis AFB), Rio Vista, Suisun City, Vacaville, and Vallejo, approximately 87,000 ac. For the purposes of the HCP, the designated MSA for each city encompasses all of the designated land use area, including future annexation areas, as defined by their General Plans, the County



General Plan, and relevant supporting documents. Their boundaries are shown on Figures 2-3 through 2-8 and were derived from the following sources:

- **City of Dixon**..... 1993 General Plan
- **City of Fairfield** 2002 Comprehensive Amendment to the City of Fairfield General Plan
- **City of Rio Vista** .. 2001 General Plan
- **Suisun City** 1992 General Plan and adopted sphere of influence
- **City of Vacaville** .. 1990 General Plan, Amended in November 1999 and
- **City of Vallejo** 1999 Vallejo General Plan
- **Solano County** 2008 General Plan Update

In addition to the participating cities, two special districts participating in the HCP (FSSD and VSFC) are primarily located within Zone 1 (Figure 2-9). Facilities maintained by SCWA and SID are also located within Covered Activity Zone 1(Figure 2-9).

Within Covered Activity Zone 1, all Covered Activities (see Section 2.5) affecting Covered Species conducted in compliance with the goals and objectives described in Chapter 5.0 and the mitigation measures described in Chapter 6.0, and implemented under the authority/control of the Plan Participants (see Table 2.5) will be authorized.

2.4.2 Covered Activity Zone 2 – SCWA, Irrigation, Reclamation, and Special District Zone

Covered Activity Zone 2 (approximately 160,000 ac) consists of the lands outside of Covered Activity Zone 1 that are within the boundaries of SCWA, SID, MPWD, RD 2068, Dixon RCD, DRW JPA, FSSD, VSFC, any existing and future flood control channels/facilities maintained by the cities that extend beyond the cities’ UGBs, and up to a 0.5 mi outside of the cities’ UGBs (Figure 1-4). Covered Activity Zone 2 also encompasses future SID annexation areas (Figure 2-9). The boundaries and locations of the existing facilities of each district are mapped on Figure 2-9. Covered Activities within this zone are primarily related to: ongoing operation and maintenance of irrigation and flood control facilities; construction of new irrigation and flood control facilities for irrigation district service area inclusions (lands within the irrigation district service area that do not currently receive service); and annexations (lands currently outside of the irrigation district service area that may be included in the future). The portion of the Plan Area located in Yolo County falls within Covered Activity Zone 2.

2.4.3 Covered Activity Zone 3 – Remainder of the County

Covered Activity Zone 3 consists of the remainder of the County, approximately 338,000 ac (Figure 1-4). Covered Activities within this zone relate primarily to implementation of the HCP reserve system, including adaptive management and monitoring, habitat enhancement, habitat restoration and creation, and other associated compatible activities (Chapters 4.0, 5.0, 6.0, and 7.0 contain additional details on compatible activities) on designated reserves/preserves, mitigation sites/banks, open space lands, and adjacent lands. Agricultural lands within 0.5 mi of any property acquired as habitat mitigation for the HCP, including institutional and commercial mitigation banks established and certified by SCWA for conservation purposes, have the option of receiving permit coverage as part of the Solano HCP Good Neighbor Policy (see Section 10.5.4).



2.5 COVERED ACTIVITIES

The Solano HCP provides a comprehensive Conservation Program¹ for impacts to Covered Species and Natural Communities for designated activities undertaken by or under the permitting authority/control of the Plan Participants within the Planning Area and applicable Covered Activity Zones. Table 2.5 provides a summary of the Covered Activities authorized in each Covered Activity Zone. Plan Participants may also extend incidental take coverage for Covered Activities conducted by third parties who fall under their direct regulatory control. Third party applicants seeking authorization under the HCP for Covered Activities must complete a participating special entity process (see Section 10.4).

Covered Activities affecting Covered Species within the Plan Area have been divided into four broad categories. These four categories are described below. Information on which type of Covered Activity is authorized within each Covered Activity Zone is also provided.

2.5.1 Development

2.5.1.1 Development within the Urban Zone (Zone 1 only)

Development includes all ground- or habitat-disturbing projects and activities needed to accommodate urban growth, including the construction and maintenance of public and private facilities, consistent with local general plans and local, State, and Federal laws. This category includes, but is not limited to, the construction, maintenance, and operation of new commercial, residential, institutional, and industrial uses and associated infrastructure and facilities (i.e., roads, utilities, storm water control measures, parks, golf courses). Such actions could be either ministerial or discretionary as defined by the California Environmental Quality Act (CEQA) Guidelines, Sections 15369 and 15357. The development category also includes annexations and agricultural uses within Covered Activity Zone 1, requiring discretionary entitlements or permits by the applicable Plan Participant. Covered Activities associated with development will be confined to Covered Activity Zone 1, as shown on Figures 2-3 through 2-8.

Of the Covered Activities authorized under the HCP, urban development has the largest impact on Covered Species and associated habitats. After application of the Solano HCP Conservation Strategy, urban development will result in the conversion of 6,461 ac of Valley Floor Grassland and Vernal Pool Habitat, 3,505 ac of habitat within the Inner Coast Range, and 5,970 ac of Irrigated Agriculture. Table 2.6 identifies the extent of land conversion associated with urban development in each city. The impacts within the Inner Coast Range are delineated by Covered Species, primarily: California tiger salamander, California red-legged frog, callippe silverspot butterfly, Swainson's hawk, and burrowing owl.

¹ The Conservation Program consists of biological goals and objectives (Chapter 5.0), avoidance and minimization measures and mitigation measures (Chapter 6.0), and monitoring and adaptive management (Chapter 7.0).



Table 2.6: Urban Development Land Conversions by City

Natural Community/ Conservation Area	Land Conversion (acres ¹)						
	Dixon	Fairfield	Rio Vista	Suisun City	Vacaville	Vallejo	Total
Valley Floor and Vernal Pool Grassland – Uplands	1	2,360	1,380	460	2,010	250	6,461
Vernal Pool – Wetlands	13	70	13	13	38	12	159
California tiger salamander potential habitat within the Inner Coast Range	0	5	0	0	200	0	205
California red-legged frog and callippe silverspot butterfly habitat in the California Red- Legged Frog Conservation Area	0	420	0	0	0	530	950
Callippe silverspot butterfly habitat outside of the California Red-Legged Frog Conservation Area, but in the Callippe Silverspot Butterfly Conservation Area	0	110	0	0	0	0	110
Inner Coast Range: Swainson’s hawk and burrowing owl	0	1170	0	0	390	680	2,240
Irrigated Agriculture	1,930	430	50	0	3,550	10	5,970
Riparian, Stream and Freshwater Marsh	0	2	0.5	1.5	18	0.5	22.5
Other Habitat associated with the Riparian, Stream and Freshwater Marsh Natural Community	0.5	11	3	8	30	32	84.5
Coastal Marsh	0	2	3	5	0	15	25
Total Land Conversion	1,944.5	4,580	1,449.5	487.5	6,236	1529.5	16,227

¹ Numbers are rounded to the nearest 10 acres.

2.5.1.2 City Activities Outside of Urban Growth Boundaries (Covered Activity Zone 2)

This category includes non-agricultural activities carried out under the authority of, or participation by, the cities that are Participants to the Plan on lands outside of their UGB (Covered Activity Zone 1), but within Covered Activity Zone 2. Such activities may include, but are not limited to, communication service facilities, flood control facilities, roads, recreation facilities, and land-intensive activities that are typically located away from residential and commercial/industrial development because of the activities’ potentially incompatible impacts on the surrounding human environment. The total allowable development for all of the cities in this Covered Activity category is 1,279 ac (Table 2.7).

Some of the known activities in this category include:

- **Flood Control Facilities.** Covered Activities would include construction, operation, and maintenance of new flood control facilities that fall outside of the MSA (Covered Activity Zone 1), such as the City of Vacaville’s Ulatis Drainage System flood control project (West Yost Associates 2008) and the City of Dixon’s proposed new detention pond (see Appendix A).



Table 2.7: Land Conversion Impacts from Known Activities Outside Urban Zone by City

Natural Community/ Conservation Area	Land Conversion (acres ¹)						
	Dixon	Fairfield	Rio Vista	Suisun City	Vacaville	Vallejo	Total
Valley Floor and Vernal Pool Grassland – Uplands	0	150	100	25	50	20	345
Vernal Pool – Wetlands	1	10	2	5	3	1	22
Inner Coast Range: California tiger salamander	0	10	0	0	20	0	30
California red-legged frog and callippe silverspot butterfly	0	40	0	0	0	60	100
Callippe silverspot butterfly only	0	10	0	0	0	0	10
Inner Coast Range: Swainson’s hawk and burrowing owl	0	100	0	0	100	0	200
Irrigated Agriculture	200	45	5	0	300	2	552
Riparian, Stream and Freshwater Marsh	0	1	1	1	4	1	8
Other Habitat associated with the Riparian, Stream and Freshwater Marsh Natural Community	0.1	1	0.5	1	2	3	7.6
Coastal Marsh	0	0.2	1	1	0	2	4.2
Total Land Conversion	201.1	367.2	109.5	33	479	89	1,279

- **Roads.** There are a few roads that will be widened as part of urban development activities within the cities of Fairfield and Vacaville that extend outside of their UGBs. These roads are:
 - Peabody Road between the Fairfield and Vacaville UGBs.
 - Vanden Road between the Fairfield and Vacaville UGBs.
 - Cordelia Road between Fairfield and Cordelia.
 - California Drive extension in Vacaville, which will follow the current alignment of Cherry Glen Road.
 - A new north/south collector street in Vacaville east of Leisure Town Road. One potential alignment of such a roadway could curve into the unincorporated County to align with Horse Creek, north of Hawkins Road.
- **Recreation Facilities.** As part of the Northern Fairfield Specific Plan Area, the City of Fairfield is proposing to construct a walking trail/recreation facility connecting Fairfield to Vacaville.

2.5.2 Construction of New Irrigation and Flood Control Facilities to Support Inclusions, Expansions, and Annexations for the Irrigation, Reclamation, and Special District Service Areas (Covered Activity Zones 1 and 2)

This category includes construction of new irrigation and flood control facilities for irrigation, reclamation, and special district service area inclusions (lands within the irrigation or flood control district service area that do not currently receive service) and annexations (lands currently outside of the irrigation district service area that may be included in the future). This category also includes the construction of new facilities to update or improve aging infrastructure. These Covered



Activities would be authorized in Covered Activity Zones 1 and 2. Table 2.8 identifies the extent of linear feet or acres of new facilities allowed for each district under the HCP. Examples of Covered Activities that fall within this category include:

Table 2.8: New Irrigation and Flood Control Facilities for Special Districts

New Facilities	SCWA	SID	DRW JPA	Dixon RCD	MPWD	RD 2068	Total
Acres	75	300	150	N/A	40	30	595
Miles	5	65	20	N/A	4	5	99

Dixon RCD = Dixon Resource Conservation District
 DRW JPA = Dixon Regional Watershed Joint Powers Authority
 MPWD = Maine Prairie Water District
 N/A = not applicable
 RD 2068 = Reclamation District No. 2068
 SCWA = Solano County Water Agency
 SID = Solano Irrigation District

- **New DWJPA Facilities.** An additional 15 mi of new and enhanced drainage facilities are planned to be constructed and added to DRW JPA facilities. Future projects include enhancements to Tremont #3 and connections to the City of Dixon. These improvements will enhance existing facilities and result in the construction of 2 mi of additional channel to improve drainage in the area south and east of Dixon.
- **New Facilities within the Dixon RCD Drainage Service Expansion Area.** The potential Drainage Service Expansion Area consists of an approximately 8,930 ac area north of I-80 and northeast of the City of Dixon. During the life of the HCP, the Dixon RCD may expand its drainage services to include this area; however, no formal plans have been established at this time. Because there are currently no proposed expansion plans, the expansion of facilities within this area to be covered under the HCP would be limited to approximately 5 mi of new and enhanced drainage facilities. These facilities would be constructed under the authority of the DRW JPA (Table 2.8).
- **SID Annexation Area.** SID anticipates annexations to their Service Area over the next 30 years as lands are detached/removed¹ from the District and additional irrigation water becomes available. Future annexations will be limited to the following criteria:
 - A total annexation amount of no more than 3,000 ac (subject to additional limitations identified in Section 6.3.8)
 - Only currently or formerly irrigated lands (as of November 2010) within the Annexation Area shown on Figure 2-9 (within approximately 1 mi of the 2010 SID Service Area) may be annexed. No lands supporting native or naturalized vegetation may be annexed.

¹ Approximately 9,000 ac of lands currently within the SID are anticipated to be detached as a result of urban development. As detached lands are developed, mitigation for losses of covered species and habitats will be required based on the applicable Natural Community and Species criteria and site conditions as set forth in Chapter 6.0.



2.5.3 Operation and Maintenance of Plan Participant Facilities (Covered Activity Zones 1 and 2)

This category includes activities associated with the operation and maintenance of Plan Participant facilities. Detailed descriptions of existing facilities and operation and maintenance activities are provided in Appendix A. Facilities within this category include non-Federal transportation and flood control projects, irrigation ditches (both supply and drainage) and appurtenant facilities, and water treatment facilities.

Routine maintenance activities are required to protect the integrity of existing infrastructure such as roads, fences and gates, water control structures (pipes, conduits, culverts, etc.), pump stations, afterbays, ditches, and distribution systems, and to ensure that facilities operate efficiently and safely. Routine activities include: removal of sediment, vegetation, and debris; repair and replacement of utilities; backfilling of gullies and holes caused by soil erosion; trimming of overgrown or overhanging vegetation on maintenance roads or embankments; and mowing for fire control.

Routine operation and maintenance activities covered under the HCP include:

- General operation, routine maintenance, and minor construction activities (for existing ditches, pathways, roads, etc.);
- Erosion control activities;
- Vegetation management and weed control activities (excluding the use of herbicides and pesticides);
- Firebreak activities;
- Temporary dewatering and removal of sediment from water supply reservoirs and other water control structures; and
- Flood control channel and bank protection maintenance.

Detailed lists and descriptions of operation and maintenance activities (including linear miles of facilities maintained) conducted by each Plan Participant are provided in Appendix A. Covered Activities associated with the operation and maintenance of public facilities would be authorized in Covered Activity Zones 1 and 2.

2.5.4 Compatible Activities on Designated Reserves, Mitigation Sites/Banks, Open Space Lands, and Adjacent Lands (Covered Activity Zones 1, 2, and 3)

This category includes habitat management, habitat creation and restoration activities, approved agricultural and recreation uses, and other approved compatible uses on existing and future reserve lands designed to contribute to the conservation requirements of Covered Species and their habitats. Covered activities include reserve management, habitat enhancement, habitat restoration and construction, and monitoring. Additional actions related to salvage, transplant, or relocation of Covered Species are also included, subject to subsequent Resource Agency Approval which is described in more detail in Section 10.5. Covered Activities in this category also include take associated with routine activities on adjacent lands consistent with the Solano HCP Good Neighbor Policy. Covered Activities that fall within this category would be authorized in all three Covered Activity Zones.



2.6 PROJECTS AND ACTIVITIES NOT COVERED BY THIS HCP

Activities for which the Plan Participants are not seeking take authorization for and hence are not covered under the HCP include:

- Activities undertaken under the authority of non-Plan Participants;
- Aggregate mining;
- Dredging of intertidal habitats that are not associated with flood control channel maintenance;
- Instream flow releases from reservoirs;
- Federal projects;
- Expansion of Travis AFB facilities for nonmilitary uses;
- Maintenance and management of non-reserve lands in Suisun Marsh;
- Oil and gas drilling and production;
- Renewable energy facilities (wind and solar electrical power production) subject to California Fish and Game Code Section 2099.10¹;
- Normal agricultural activities undertaken by non-Plan Participants;
- Operation and maintenance activities associated with the North Bay Aqueduct;
- Operation and maintenance activities associated with the Putah South Canal;
- The application of pesticides and herbicides as part of operation and maintenance activities undertaken by Plan Participants;
- Commercial communication towers outside of Covered Activity Zone 1; and
- Vector control/mosquito abatement activities.

Coverage under this HCP will not be provided to activities or projects that:

- Could preclude the achievement of conservation goals and objectives of this HCP;
- Are not the type of impacts evaluated in Chapter 7.0 and in the Biological Opinion issued for this HCP;
- Substantially reduce the amount of take coverage available under the permit for expected future activities and projects; and/or
- Require a major or minor amendment to the HCP/are not specifically analyzed in the HCP.

¹ This category of excluded projects includes solar, wind, and other renewable energy resource projects as defined in the California Renewables Portfolio Standard Program (Article 16 [commencing with Section 399.11] of Chapter 2.3 of Part 1 of Division 1 of the Public Utilities Code) that could result in take of State-listed threatened or endangered species. Note that the CDFG considers most wind energy turbines to have the potential to take State-threatened Swainson's hawk within most of Solano County. Renewable energy projects not resulting in take of State-listed species would be covered activities under the HCP.



Although the activities listed above and other activities occurring outside of the Plan Area are not directly covered under the HCP, the conservation strategies in the HCP are designed to serve as a template upon which the Resource Agencies can base future mitigation requirements/actions so that non-covered activities do not conflict with the conservation goals and objectives of the Solano HCP. Compliance with applicable State and Federal regulations must also be obtained through individual Section 7 consultations, Section 10 permits, and/or Fish and Game Code requirements.



Figure 2-1: Urban Growth Trends 1950 to 2025



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2.0 LAND USE AND COVERED ACTIVITIES



Figure 2-2: Solano County 2008 General Plan Land Use Diagram



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2.0 LAND USE AND COVERED ACTIVITIES



Figure 2-3: City of Fairfield Habitat Types and General Plan Land Use Designations



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2.0 LAND USE AND COVERED ACTIVITIES



Figure 2-4: City of Suisun City Habitat Types and General Plan Land Use Designations



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2.0 LAND USE AND COVERED ACTIVITIES



Figure 2-5: City of Vacaville Habitat Types and General Plan Land Use Designations



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2.0 LAND USE AND COVERED ACTIVITIES



Figure 2-6: City of Vallejo Habitat Types and General Plan Land Use Designations



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2.0 LAND USE AND COVERED ACTIVITIES



Figure 2-7: City of Dixon Habitat Types and General Plan Land Use Designations



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2.0 LAND USE AND COVERED ACTIVITIES



Figure 2-8: City of Rio Vista Habitat Types and General Plan Land Use Designations



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2.0 LAND USE AND COVERED ACTIVITIES



Figure 2-9: Service Areas for SCWA, SID, MPWD, DRW JPA, Dixon RCD, RD 2068, VSFCD, and FSSD



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2.0 LAND USE AND COVERED ACTIVITIES

