White Paper on Required General Plan Updates for Climate Adaptation and Resiliency, Wildland Fire, and Environmental Justice

October 2022

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1. Introduction

Yolo County is currently preparing a focused update to its General Plan to address requirements of State law. This Background Report provides the County Board of Supervisors, Planning Commission, and members of the community with an assessment of requirements of State law related to circulation, safety, and environmental justice that have been enacted since adoption of the comprehensive update to the County's General Plan (the 2030 Yolo County General Plan) in 2009.

This Background Report identifies background information and data for key areas to be updated, including fire hazards, emergency response and preparedness, environmental justice, and climate change exposure, and vulnerability.

2. Safety – Climate Adaptation and Resilience

A. Background

Climate change contributes to ongoing, escalating impacts on people, the economy, and the environment on both the local and global level. Addressing and preparing for these impacts requires collaboration and transformative action among economic, governmental, social, environmental, and other elements. In recent years, California has been at the forefront of developing approaches to promote resiliency to the effects of climate change and reduce greenhouse gas (GHG) emissions while continuing to foster economic growth, social equity, and environmental protection. This White Paper addresses the federal, state, and regulatory framework related to climate change and greenhouse gas emissions, the status of local climate action efforts, conditions related to climate change, including primary GHG emissions sources, and potential impacts associated with climate change, including sea-level rise, extreme heat, changes in precipitation and drought, increased risk of wildfire and flooding, and other impacts.

This White Paper provides an overview of the existing and future impacts of climate change on people and the built environment. This includes descriptions of the regulatory framework relating to climate change. An overview of the regulatory framework is presented first, followed by an assessment climate change impacts on the community, and a discussion of how to address the community's priorities and concerns on climate change, including through mitigation and adaption.

Government Code Section 65302(g)(4) requires Yolo County's Health and Safety Element to address climate adaption and resiliency strategies and include a vulnerability assessment that identified climate change-related risks, a set of adaptation resilience goals, policies, and objectives, and a set of implementation measures to avoid or minimize climate change impacts, locate essential public facilities outside of at-risk areas, designate adequate and feasible infrastructure in an at-risk area, guidelines for working cooperatively with relevant agencies, and identification of natural infrastructure that may be used in adaptation projects.

Terms and Acronyms

- **ARB:** Air Resources Board
- **CALGreen.** The State of California mandatory green building code.
- **CAP:** Climate Action Plan
- **CCA:** Community Choice Aggregation
- **CEC:** California Energy Commission
- **CEQA:** California Environmental Quality Act
- **CO2e:** Carbon Dioxide Equivalent
- **CPUC:** California Public Utilities Commission
- **DOC:** Department of Conservation
- **DOE:** Department of Energy
- **EPA:** Environmental Protection Agency
- **FEMA:** Federal Emergency Management Agency

- **GHG:** Greenhouse Gas
- **ICLEI:** International Council for Local Environmental Initiatives
- **IPCC:** Intergovernmental Panel on Climate Change
- **LEED:** Leadership in Energy and Environmental Design
- **PPM:** Parts Per Million
- **USGBC:** United States Green Building Council
- **VMT:** Vehicle Miles Traveled
- **YSAQMD:** Yolo-Solano Air Quality Management District

Greenhouse Gases and Climate Change Linkages

Various gases in the Earth's atmosphere, classified as atmospheric GHGs, play a critical role in determining the Earth's surface temperature. Solar radiation enters Earth's atmosphere from space, and a portion of the radiation is absorbed by the Earth's surface. The Earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation.

Naturally occurring greenhouse gases include water vapor (H2O), carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), and ozone (O3). Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also greenhouse gases, but they are, for the most part, solely a product of industrial activities. Although the direct greenhouse gases occur naturally in the atmosphere, human activities have changed their atmospheric concentrations. The long-term cycle of ice ages, for example, reflects shifts of about 50 to 100 parts per million (ppm) in atmospheric carbon dioxide concentrations, compared to a current concentration (approximately 410 ppm) that is well over 150 ppm higher than the million-year average. (IPCC, 2021).

Greenhouse gases, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO2), methane (CH4), ozone (O3), water vapor, nitrous oxide (N2O), and chlorofluorocarbons (CFCs).

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. In California, the transportation sector is the largest emitter of GHGs, followed by the industrial and electricity generation sectors (California Energy Commission, 2020).

As the name implies, global climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern, respectively. California produced 425 million gross metric tons of carbon dioxide equivalents (MMTCO2e) in 2018 (California Air Resources Board, 2020a).).

Carbon dioxide equivalents are a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. This potential, known as the global warming potential of a GHG, is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Expressing GHG emissions in carbon dioxide

equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO2 were being emitted.

Consumption of fossil fuels in the transportation sector was the single largest source of California's GHG emissions in 2018, accounting for 41% of total GHG emissions in the state. This category was followed by the industrial sector (24%), the electricity generation sector (including both in-state and out of-state sources) (15%), the agriculture and forestry sector (8%), the residential energy consumption sector (7%), and the commercial energy consumption sector (5%) (California Air Resources Board, 2020c).

Greenhouse Gases and Climate Change - Regulatory Setting

California Executive Order S-3-05 and S-20-06: On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this Executive Order is to reduce California's GHG emissions to: 1) 2000 levels by 2010, 2) 1990 levels by the 2020 and 3) 80% below the 1990 levels by the year 2050. EO-S-20-06 establishes responsibilities and roles of the Secretary of Cal/EPA and state agencies in climate change, and establishes that the Secretary for Environmental Protection shall continue to be the statewide leader for California's greenhouse gas emission reduction programs.

Assembly Bill 32: In 2006,the goals established under Order S-3-05l were further reinforced with the passage of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals while further mandating that the CARB create a plan, which includes market mechanisms, and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Executive Order S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the state's Climate Action Team.

Senate Bill 32: SB 32 (Stats. 2016, ch. 249) added Section 38566 to the Health and Safety Code. It provides that "[i]n adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions authorized by [Division 25.5 of the Health and Safety Code], [CARB] shall ensure that statewide greenhouse gas emissions are reduced to at least 40 percent below the statewide greenhouse gas emissions limit no later than December 31, 2030." In other words, SB 32 requires California, by 2030, to reduce its statewide GHG emissions so that they are 40 percent below those that occurred in 1990.

Between AB 32 (2006) and SB 32 (2016), the Legislature has codified some of the ambitious GHG reduction targets included within certain high-profile Executive Orders issued by the last two Governors. The 2020 statewide GHG reduction target in AB 32 was consistent with the second of three statewide emissions reduction targets set forth in former Governor Arnold Schwarzenegger's 2005 Executive Order S-3-05, which is expressly mentioned in AB 32. (See Health & Safety Code Section 38501, subd. (i).) That Executive Branch document included the following GHG emission reduction targets: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to 80 percent below 1990 levels. To meet the targets, the Governor directed several State agencies to cooperate in the development of a climate action plan. The Secretary of Cal-EPA leads the Climate Action Team, whose goal is to implement global warming emission reduction programs identified in the Climate Action Plan and to report on the progress made toward meeting the emission reduction targets established in the executive order.

In 2015, Governor Brown issued Executive Order, B-30-15, which created a "new interim statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 is established

in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050." SB 32 codified this target.

In 2018, the Governor issued Executive Order B-55-18, which established a statewide goal to "achieve carbon neutrality as soon as possible, and no later than 2045, and maintain and achieve negative emissions thereafter." The order directs the CARB to work with other State agencies to identify and recommend measures to achieve those goals.

Notably, the Legislature has not yet set a 2045 or 2050 target in the manner done for 2020 and 2030 through AB 32 and SB 32, though references to a 2050 target can be found in statutes outside the Health and Safety Code. Senate Bill 350 (SB 350) (Stats. 2015, ch. 547) added to the Public Utilities Code language that essentially puts into statute the 2050 GHG reduction target already identified in Executive Order S-3-05, albeit in the limited context of new state policies (i) increasing the overall share of electricity that must be produced through renewable energy sources and (ii) directing certain State agencies to begin planning for the widespread electrification of the California vehicle fleet. Section 740.12(a)(1)(D) of the Public Utilities Code now states that "[t]he Legislature finds and declares [that] … [r]educing emissions of [GHGs] to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050 will require widespread transportation electrification." Furthermore, Section 740.12(b) now states that the California Public Utilities Commission (PUC), in consultation with CARB and the California Energy Commission (CEC), must "direct electrical corporations to file applications for programs and investments to accelerate widespread transportation electrification to reduce dependence on petroleum, meet air quality standards, … and reduce emissions of greenhouse gases to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050."

Senate Bill 375: Senate Bill (SB) 375 (Stats. 2008, ch. 728) (SB 375) was built on AB 32 (California's 2006 climate change law). SB 375's core provision is a requirement for regional transportation agencies to develop a Sustainable Communities Strategy (SCS) in order to reduce GHG emissions from passenger vehicles. The SCS is one component of the existing Regional Transportation Plan (RTP).

The SCS outlines the region's plan for combining transportation resources, such as roads and mass transit, with a realistic land use pattern, in order to meet a state target for reducing GHG emissions. The strategy must take into account the region's housing needs, transportation demands, and protection of resource and farmlands.

Additionally, SB 375 modified the state's Housing Element Law to achieve consistency between the land use pattern outlined in the SCS and the Regional Housing Needs Assessment allocation. The legislation also substantially improved cities' and counties' accountability for carrying out their housing element plans.

Finally, SB 375 amended the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq.) to ease the environmental review of developments that help reduce the growth of GHG emissions.

California Executive Order EO S-13-08: EO S-13-08 was issued on November 14, 2008. The EO is intended to hasten California's response to the impacts of global climate change, particularly sea level rise, and directs state agencies to take specified actions to assess and plan for such impacts, including requesting the National Academy of Sciences to prepare a Sea Level Rise Assessment Report, directing the Business, Transportation, and Housing Agency to assess the vulnerability of the State's transportation systems to sea level rise, and requiring the Office of Planning and Research and the Natural Resources Agency to provide land use planning guidance related to sea level rise and other climate change impacts.

The order also required State agencies to develop adaptation strategies to respond to the impacts of global climate change that are predicted to occur over the next 50 to 100 years. The adaption strategies report summarizes key climate change impacts to the State for the following areas: public health; ocean and coastal resources; water supply and flood protection; agriculture; forestry; biodiversity and habitat; and transportation and energy infrastructure. The report recommends strategies and specific responsibilities related to water supply, planning and land use, public health, fire protection, and energy conservation.

Climate Change Scoping Plan: On December 11, 2008, the CARB adopted its *Climate Change Scoping Plan* (Scoping Plan), which functions as a roadmap of the CARB's plans to achieve GHG reductions in California required by Assembly Bill (AB) 32 through subsequently enacted regulations. The Scoping Plan contains the main strategies California will implement to reduce carbon dioxide-equivalent (CO2e) emissions by 169 million metric tons (MMT), or approximately 30 percent, from the state's projected 2020 emissions level of 596 MMT of CO2e under a business-as-usual scenario. (This is a reduction of 42 MMT CO2e, or almost 10 percent, from 2002–2004 average emissions, but requires the reductions in the face of population and economic growth through 2020.) The Scoping Plan also breaks down the amount of GHG emissions reductions the CARB recommends for each emissions sector of the state's GHG inventory. The Scoping Plan calls for the largest reductions in GHG emissions to be achieved by implementing the following measures and standards:

- improved emissions standards for light-duty vehicles (estimated reductions of 31.7 MMT CO_2e);
- the Low-Carbon Fuel Standard (15.0 MMT CO_2e);
- energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 MMT CO_2e); and
- a renewable portfolio standard for electricity production (21.3 MMT CO_2e).

The CARB updated the Scoping Plan in 2013 (*First Update to the Scoping Plan*) and again in 2017 (the *Final Scoping Plan*). The 2013 Update built upon the initial Scoping Plan with new strategies and recommendations, and also set the groundwork to reach the long-term goals set forth by the state. Successful implementation of existing programs (as identified in previous iterations of the Scoping Plan) has put California on track to meet the 2020 target. The 2017 Update expands the scope of the plan further by focusing on the strategy for achieving the state's 2030 GHG target of 40 percent emissions reductions below 1990 levels (to achieve the target codified into law by SB 32), and substantially advances toward the state's 2050 climate goal to reduce GHG emissions by 80 percent below 1990 levels.

The 2017 Update relies on the preexisting programs paired with an extended, more stringent Cap-and-Trade Program, to delivery climate, air quality, and other benefits. The 2017 Update identifies new technologically feasible and cost-effective strategies to ensure that California meets its GHG reduction

targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health.

California Executive Order B-30-15: On April 29, 2015, Governor Jerry Brown issued Executive Order (EO) B-30-15, which establishes a State GHG reduction target of 40 percent below 1990 levels by 2030. The new emission reduction target provides for a mid-term goal that would help the State to continue on course from reducing GHG emissions to 1990 levels by 2020 (per AB 32) to the ultimate goal of reducing emissions 80 percent under 1990 levels by 2050 (per EO S-03-05). This is in line with the scientifically established levels needed in the U.S. to limit global warming below 2 degrees Celsius – the warming threshold at which scientists say there will likely be major climate disruptions. EO B-30-15 also addresses the need for climate adaptation and directs State government to:

- Incorporate climate change impacts into the State's Five-Year Infrastructure Plan;
- Update the Safeguarding California Plan, the State climate adaptation strategy, to identify how climate change will affect California infrastructure and industry and what actions the State can take to reduce the risks posed by climate change;
- Factor climate change into State agencies' planning and investment decisions; and
- Implement measures under existing agency and departmental authority to reduce GHG emissions.

Senate Bill 32: Senate Bill 32, which passed into law in 2016, sets the target of reducing greenhouse gas emissions to 40 percent below the 1990 level by the year 2030. SB 32 extends the original set of greenhouse gas targets provided by the passage of AB 32 (the Global Warmings Solutions Act of 2006). This new target sets an aggressive goalpost, helping the State along its pathway to achieve its longer-term goal of an 80 percent reduction in greenhouse gas emissions by the year 2050.

California Senate Bill 379: California SB 379 requires all cities and counties to include climate adaptation and resiliency strategies in the Safety Elements of their General Plans upon the next revision beginning January 1, 2017. The bill requires the climate adaptation update to include a set of goals, policies, and objectives for their communities based on the vulnerability assessment, as well as implementation measures, including the conservation and implementation of natural infrastructure that may be used in adaptation projects.

B. Yolo County Climate Adaptation Planning

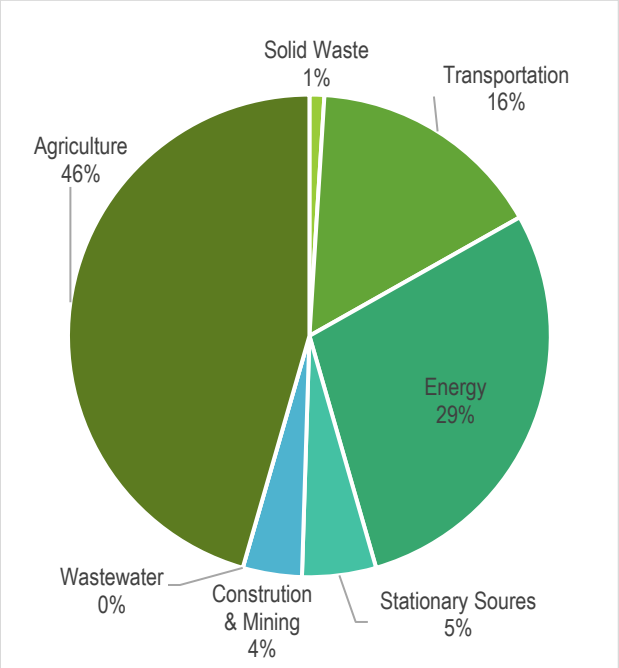
Yolo County Climate Action Plan

Yolo County has a strong commitment to the reduction of greenhouse gas (GHG) emissions, which is balanced with its strong commitment to agriculture and the role of agriculture in reducing GHG emissions. This is the result of the County's long-term advocacy of responsible growth, agricultural and open space preservation and energy conservation. With regard to climate change, this history goes back to 1982, when the County adopted a countywide Energy Plan, one of the first of its kind in the State. More recently, in 2007, the Board of Supervisors unanimously approved a resolution to participate in the Cool Counties Climate Stabilization Declaration and committed to reduce GHG emissions by 80% by 2050. The 2030 Yolo County General Plan expanded on this established tradition and contains more than 350 climate change focused policies and actions. General Plan Action CO-A117 calls for the development of a GHG Emissions Reduction Plan and/or Climate Action (CAP) for the County, to reduce GHG emissions, and to address economic and social adaptation to the effects of climate change.

The CAP, adopted in 2011, builds on the General Plan's vision and outlines detailed strategies and measures to achieve these goals and contribute to State and international climate protection efforts. Although agriculture contributes a small proportion of overall GHG emissions, it has an unrecognized yet essential value that greatly outweighs its minor impact on climate change. The inventories show that each acre of agriculture and open space conserved saves nearly 100 times the amount of GHG emissions that would result if the land were converted to urban use. Thus, the protection of farmland and open space limits the spread of urban development, thereby avoiding uses that create significantly higher levels of GHG emissions.

As a part of the County's continuing commitment to climate change, the CAP is intended to be an evolving document. Furthermore, the Board of Supervisors adopted a resolution declaring a climate crisis on September 19th, 2020, requiring an urgent and inclusive mobilization in Yolo County. The resolution created the Yolo County Climate Action Commission to develop and propose a new Climate Action Plan designed to reduce all greenhouse gas emissions in Yolo County and achieve a carbon negative footprint by 2030. The study of climate change is a relatively new field; one which is expanding and being refined at a rapid pace. The CAP is not being adopted as a part of the County General Plan, in order to provide the flexibility needed to allow it to be modified to reflect new research, changing technology, and economics. Progress on the CAP will be reviewed by the Board of Supervisors biennially, while the inventories will be updated every five years. Adoption of the CAP establishes an ongoing process by which the County will enhance its approach to reducing climate change and adapt to future challenges.

CHART 1: GHG EMISSIONS BY SECTOR



Source: Yolo County Climate Action Plan 2011

In 2008, the unincorporated portions of Yolo County generated approximately 651,740 MT CO2e. The breakdown of 2008 emissions by sector within the unincorporated area is shown in Chart 1. As shown on Chart 1, the largest emissions contributors were from Agriculture (46%), Energy (29%), and Transportation (16%).

Emission Projections: Emission projections estimate future emissions levels and provide insight regarding the scale of reductions necessary to achieve an emissions target.

The County prepared projections for 2020, 2030, and 2050 based on population and employment growth forecasts. Projected jurisdictional emissions for unincorporated Yolo County (assuming no implementation of the CAP) would be as follows:

- 2020 – 62% higher than 1990 levels (993,537 MT CO2e)
- 2030 – 127% higher than 1990 levels (1,394,957 MT CO2e)
- 2040 – 145% higher than 1990 levels (1,502,333 MT CO2e)
- 2050 – 162% higher than 1990 levels (1,607,798 MT CO2e)

Reduction Goals: The CAP establishes the following GHG emissions reduction goals for Yolo County:

- 1990 levels by 2020 (mandatory target)
- 27% below 1990 levels by 2030 (goal)
- 53% below 1990 levels by 2040 (goal)
- 80% below 1990 levels by 2050 (goal)

The CAP contains strategies and measures to address climate change in five key areas: agriculture, transportation and land use, energy, solid waste and wastewater, and adaptation. The GHG reduction strategies established by the CAP are projected to reduce GHG emissions 27% below 1990 levels by 2030.

The CAP establishes 15 primary measures that will help the unincorporated area achieve GHG reductions and successfully adapt to climate change. To ensure implementation of these measures, specific action steps, performance targets, responsible parties, timeframes, and estimates of emission reduction potential are provided. The CAP also contains 19 supporting measures, which provide additional important climate protection benefits.

The primary measures established for implementation by 2030 include:

Performance Indicator	MT CO2e/yr	% of Total
Community choice aggregation program results in 75% of county relying on 50% renewable, and 25% of county relying on 100% renewable	145,884	30%
100% of Dunnigan, 60% of Madison, 50% of Esparto, 33% of Elkhorn, and 25% of Knights Landing achieve 44 VMT	84,035	17%
Require 86% of new buildings (residential over 3,500 square feet [excluding affordable housing] and non-residential [after 2013]) to be 15% above Title 24 12% of new buildings (residential and non-residential) at 30% above Title 24 2% of new buildings (residential and non-residential) at zero-net energy consumption	67,200	14%
Restore 2,000 acres of riparian forest Establish 100 miles of new hedgerow	60,033	12%

Establish new orchards: 1,146 acres almonds, 891 acres walnuts, 2,860 acres olives		
Require 100% of new (excluding affordable housing) and 10% of existing homes to have photovoltaic systems Require 100% of new (after 2013) and 300,000 square feet of existing commercial to have photovoltaic systems Require 100% of new (excluding affordable housing) and 40% of existing residential units to install solar water heaters Require 100% of new (after 2013) and 10% of existing commercial to install solar water heaters	52,032	11%
Convert 90% of irrigation return pumps to solar electric energy and improve 10% of groundwater pumps to reduce energy 33%	18,949	4%
Landfill captures 90% of methane	13,649	3%
Retrofit 70% of residential units to reduce energy 15% Retrofit 30% of non-residential buildings to reduce energy 20%	12,322	3%
Reduce 90% of manure methane emissions from 100% of confined livestock	12,035	2%
Reduce nitrogen application rates by 15%	10,054	2%
Improve water fixture/fixture fitting efficiency by 20% in 100% of residential units built prior to 1994	4,100	1%
5% of farm equipment improves fuel efficiency by 6% through operation and maintenance 75% of farm equipment improves fuel efficiency by 5% through improvements to equipment	2,903	1%
Reduce landscape water consumption by 20% in 25% of residential units Reduce landscape water consumption by 20% in 50% of commercial buildings	862	<1%
Generate 2MW of renewable energy on farms in unincorporated County (excluding solar water pumps)	632	<1%
Eliminate methyl bromide application	36	<1%

Source: Yolo County CAP (2011); Table ES-2: County Actions by 2020 (Primary Measures)

The CAP defines a mandatory 2020 reduction target, and 2030, 2040, and 2050 GHG reduction goals for unincorporated Yolo County. Estimates of GHG reduction potential in 2020 were important to demonstrate the County's contribution toward implementation of Assembly Bill (AB) 32 addressing climate protection requirements. The goals for 2030, 2040, and 2050 achieve the thresholds set by the Governor's Executive Order S-3-05, as well as the County's own commitment as detailed in the Cool Counties initiative.

Yolo County Operational Area Multi-Jurisdictional Hazard Mitigation Plan (2018)

The Yolo County Operational Area Multi-Jurisdictional Hazard Mitigation Plan (Yolo County HMP) identifies the hazard risks and vulnerabilities for the Yolo County Operational Area and identifies mitigation projects and actions to help reduce those risks. Climate change is profiled in the 2018 Yolo County HMP as standalone hazard. The overall strategy of the Plan is to utilize a multi-jurisdictional effort to maintain and enhance the disaster resistance of the region, and to fulfill the requirements of the Disaster Mitigation Act of 2000.

In conjunction with the review of the General Plan to addresses specific requirements identified by State law, the General Plan has also been reviewed to ensure that significant risks or hazards identified in the 2018 HMP are also addressed in the General Plan.

As described in the 2018 Yolo County HMP, the anticipated climate change effects in Yolo County include temperature rise, change in precipitation patterns, impacted water resources, sea level rise, heat-related illness, air quality increased risk of wildfire, extreme weather events, and vector-borne diseases. There are

numerous effects of climate change, each play an interconnected role in the natural hazards that are faced throughout Yolo County. The Yolo County HMP identifies climate impacts associated with temperature, hazards, which are further described in Section C below.

The Yolo County HMP identifies 23 programs to address climate change through reducing greenhouse gas emissions, including agricultural programs to address energy use and emissions associated with farming and livestock activities, to reduce transportation-related fossil fuel and energy use, to encourage renewable energy sources, to prepare for the effects of climate change on agriculture, water resources, sea-level rise, and increased health risk, and to remain resilient to climate change. The programs are listed below:

- Farmer Outreach Program to Reduce Fossil Fuel Consumption
- Farmer Outreach Program to Reduce Greenhouse Gas Emissions
- Program to Reduce Energy Use in Agricultural Pumping
- Program to Reduce Livestock Manure Methane Emissions
- Program to Reduce Methyl Bromide Application
- Program to Sequester Carbon in Agricultural Landscapes
- Program to Reduce Vehicle Miles Traveled
- Community Choice Aggregation (CCA) Program
- Program to Reduce Energy Consumption in Existing Residential and Non- Residential Units
- Program to Reduce Energy Consumption in New Residential and Non- Residential Units
- Program to Increase On- Site Renewable Energy Generation to Reduce Demand for Grid Energy
- Program to Promote On- Farm Renewable Energy Facilities
- Program to Reduce Water Consumption in Existing Buildings through Increased Plumbing Fixture Efficiency
- Program to Promote Weather-Based Irrigation Systems and Water Efficient Turf Management
- Program to Expand Landfill Methane Capture Systems
- Program to Prepare for the Effects of Climate Change on Agriculture
- Program to Prepare for Climate Change Effects on Water Resources
- Program to Respond to the Potential Threat of Sea- Level Rise
- Program to Protect the Public from Increased Health Risks
- Program to Develop Governance Strategies to Ensure that Yolo County Remains Resilient to Climate Change

C. Climate Change Risks and Vulnerabilities

Local governments largely determine the shape of development through land-use plans, regulations, and implementing decisions. As such, local governments play an important role in developing climate change strategies including resiliency planning and adaptation. Inasmuch as local governments play an important role in adaptation strategies through local land use plans and policies, many climate adaptation strategies will need to be coordinated as part of a larger regional, or statewide strategy requiring cooperation by many local governments, and decision making and regulatory bodies.

Over the next century, increasing atmospheric GHG concentrations are expected to cause a variety of changes to global climate conditions, including sea level rise and storm surge in coastal areas, increased riverine flooding, and higher temperatures more frequently (leading to extreme heat events and wildfires), particularly in inland areas. Local impacts stemming from climate related conditions range from impacts to extreme temperatures, flooding, public health, wildfires, flood, and air quality.

The effects of increasing global temperature are far-reaching and extremely difficult to quantify. The scientific community continues to study the effects of global climate change. In general, increases in the ambient global temperature as a result of increased GHGs are anticipated to result in numerous effects, each play an interconnected role in the hazards that Yolo County faces. This section addresses future conditions anticipated to result from climate change as well as resiliency planning and adaptation strategies at the statewide, regional, and local levels, where applicable. Yolo County is anticipated to experience the following identified impacts, as described in Yolo County's Hazard Mitigation Plan and Climate Action Plan.

Temperature

Increased concentrations of GHGs in the atmosphere result in increased air, surface, and ocean temperatures. Increased temperatures, in turn, drive most other climate change effects. Most regional climate model projections predict that annual average temperatures will increase in California during the next 100 years. The California Climate Action Team projects that temperatures in California will rise between 1.8 degrees F and 5.4 degrees F by mid-century, and 3.6 degrees F and 9 degrees F by the end of the century. The exact level and timing of such a temperature increase in Yolo County is correspondingly uncertain.

Precipitation

Precipitation projections are more uncertain than those for temperature, because complex temporal variability is inherent in precipitation patterns. The International Panel on Climate Change (IPCC) predicts that increasing global surface temperatures are likely to result in changes in precipitation. Global climate models for a wide range of GHG emission scenarios also predict that average global precipitation will increase during the 21st century as a result of climate change. However, such models are y not well-suited for predicting regional and local precipitation changes given that factors affecting precipitation vary by regional geography and meteorology. Thus, significant regional differences in precipitation trends are expected.

The CAP indicates that recent regional modeling efforts conducted for the western United States anticipate that overall precipitation will increase, but considerable uncertainty remains. Projected precipitation increases are generally centered in Northern California in the winter months. However, various California climate models provide mixed results regarding changes in total annual precipitation in the State through the end of this century. One potential scenario of concern would be longer periods of drought punctuated by more intense storms during non-drought years. An IPCC review of multiple global models identifies much of California as an area where models generally did not agree on whether annual precipitation would increase or decrease; therefore, no firm conclusion on an increase or decrease can be provided, and the California climate could be either warmer-wetter or warmer-drier. Considerable uncertainties about the precise effects of climate change on California hydrology and water resources will remain until more precise and consistent information about how precipitation patterns, timing, and intensity will change is available. Given these uncertainties, regional conclusions regarding the potential effects of climate change on precipitation are speculative.

Extreme Weather Events

Climate change effects on weather patterns, storms, and extreme events in California are not well understood at this time. As previously discussed, some models suggest increased variations in weather cycles and an increase in intense storms while others point to increased potential for drought resulting from higher temperatures and evaporation with lower precipitation. Still others suggest that the west coast may have fewer extreme droughts than other areas while experiencing higher average annual rainfall. A separate study predicted higher risks of large storms and floods in California. These conflicting conclusions about climate variability and extreme weather events support the need for additional studies that provide region-scale predictions. Given these uncertainties and the speculative nature of predicting extreme weather events, effects of changing storm patterns and other extreme weather events remain unclear. Climate change may increase the number, duration, and intensity of atmospheric river events that can cause significant flooding in Yolo County. As temperatures warm, wetter storms will create more runoff. Increased precipitation and runoff in the mountainous areas of Yolo County can increase its susceptibility to landslides.

Snowpack and Runoff

By delaying runoff during the winter months when precipitation is greatest, snow accumulation in the Sierra Nevada and Cascade Range to the east and the Coast Ranges and Klamath Mountains to the west of the Sacramento River acts as a massive natural reservoir for California. Snowpack typically accumulates from November through the end of March and melts from April through July. The length and timing of each year's snowpack accumulation and melting periods vary based on both temperature and precipitation. Hydrologic models indicate that higher temperatures associated with global warming would affect the timing and magnitude of both snowmelt and runoff in California. Despite uncertainties surrounding climate change precipitation effects, there is very high confidence that higher temperatures will change both snowfall and snowmelt in many watersheds. This is particularly relevant to those areas in Yolo County that are dependent on the Sacramento River. These changes could diminish water supplies, increase flooding, and reduce summer soil moisture

Water Supply:

Yolo County's water supply systems are identified as being sensitive to climate change. However, experts are uncertain about what the overall effects will be on water supply. Some models indicate that drier conditions will cause decreased reservoir supplies and river flows while other models predict wetter conditions with increased reservoir inflows and storage, and increased river flows. Despite the uncertainties, it is still widely accepted that changes in water supply will occur and that water yields from reservoirs are expected to be unreliable. Furthermore, climate change is expected to result in more variable weather patterns, leading to longer and more severe droughts, which could lead to lower aquifer levels for those farmers dependent on groundwater. Additional groundwater pumping can increase the susceptibility of Yolo County to land subsidence. Competition for water resources between farming uses, water agencies, and the environment is projected to be greater than at the present time.

Heat-Related Illness:

The most notable risk with heat waves is increased levels of heat stress and risk of health effects caused by extreme temperatures. This is particularly important for the elderly and infirm, as well as those with heart or respiratory problems and mental health issues. The percentage of Yolo County residents over the age of 65 is expected to climb to 16.0% by 2030. With the prevalence of air-conditioner use during heat waves, demand for power could also increase putting more stress on power supply.

Air Quality:

While predicting the effect of climate change on air quality is difficult due to complex physical, chemical, social, and policy variables, studies indicate that climate change could further worsen air quality throughout the State, including Yolo County. Higher temperatures may lead to increased ozone formation. Emissions of methane and nitrous oxide are projected to increase global ozone concentrations by 4% to 25% by 2100. If ozone levels rise to the high end of this range, attainment of ozone air quality standards could be impaired, which would have local effects in Yolo County. Highly air quality could result in increased incidence of respiratory disease and asthma.

Wildfires:

Warmer temperatures cause early runoff, which leads to longer and drier summer conditions, thus resulting in wildfires of greater frequency and duration. Hotter weather increases the incidence of lightning, which is a primary cause of wildfires in the United States. In addition, the increased prevalence of dry conditions provides greater opportunities for arson, which is another source of wildfire. Much of the coast range hills of Yolo County are considered to have a moderate to high risk of wildfire. Wildfire is a potentially significant risk to public health and safety. In addition to direct safety risks, wildfires can lead to immediate and long- term adverse public health problems due to smoke exposure. During wildfires, large populations can be exposed to a complex mixture of pollutant gases and particles, which can have both acute and chronic health effects. Smoke can irritate the eyes, harm the respiratory system, and worsen chronic heart and lung diseases, including asthma. People with existing cardiopulmonary diseases are generally at the greatest risk from smoke inhalation, with age being a complicating risk factor for the exposed population.

Vector-Borne Diseases:

Temperature increases also could contribute to higher populations of mosquitoes and other disease spreading organisms, or vectors. In California, three vector-borne diseases are of particular concern: human Hantavirus cardiopulmonary syndrome, Lyme disease, and West Nile virus. Disease transmission, however, depends on additional factors such as the interaction of humidity and rainfall, the maturation cycles of both the vector and the pathogen, and human vector control activities. Yolo County's current low level of vector-borne disease is largely due to vector control measures. These measures would likely need to be enhanced and expanded, if vectors changed or risk of disease increased.

Sea Level Rise:

Worldwide average sea level appears to have risen about 0.4 to 0.7 feet over the past century. Various tidal gauge stations along California's coast show a similar trend. Rising average sea level over the past century has primarily been attributed to warming oceans and related thermal expansion, and the addition of water from melting land-based glaciers and polar ice. Yolo County's location (more than 50 miles inland from the mouth of the Golden Gate) precludes significant effects from coastal processes, such as wave action. However, low-lying communities in or near the Delta, such as Clarksburg and Elkhorn (with elevation as low as five feet above sea level), would be more susceptible to flooding as sea level rise continues. Rising sea levels affecting the San Francisco Bay along the Napa, Solano, and Contra Costa County boarders may also worsen flooding in Yolo County and expand the county's floodplains. It is also possible that sea level rise could reduce the effectiveness of Delta and river levees within the county (reducing the levee freeboard and increasing levee stresses as a result of the rise in the base level of the adjacent water).

3. Wildland Fire and Evacuation

Government Code Section 65302(g)(1) requires the Safety Element to address evacuation routes, including addressing residential developments in any hazard area identified in the safety element that does not have at least two emergency evacuation routes.

A substantial portion of Yolo County contains areas of flammable vegetation that would be considered at risk from wildland fires. Most of these areas are located in the Capay Hills, a low mountain range of the Inner Northern California Coast Ranges System, and in the northern segments of the county where grasslands are prevalent.

Most wildland fires in Yolo County are quickly contained due to rapid reporting and response, but if this first effort fails, a wildfire can grow large very fast. Such fires can require extensive firebreaks and/or a weather change for containment.

A. Background

Federal Wildfire Regulations

National Fire Plan (NFP). The NFP was created to address fire protection strategies for rural communities. Together, the U.S. Department of Agriculture Forest Service and the Department of the Interior are working to successfully implement key points outlined in the NFP, including firefighting, rehabilitation, hazardous fuels reduction, community assistance, and accountability.

FY 2001 Appropriations Act. Title IV of the Appropriations Act required the identification of "Urban Wildland Interface Communities in the Vicinity of Federal Lands that are at High Risk from Wildfire" by the U.S. Departments of the Interior and Agriculture.

Disaster Mitigation Act (2000). Section 104 of the Disaster Mitigation Act of 2000 (Public Law 106-390) enacted Section 322, Mitigation Planning of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, which created incentives for state and local entities to coordinate hazard mitigation planning and implementation efforts, and is an important source of funding for fuels mitigation efforts through hazard mitigation grants.

National Cohesive Wildland Fire Management Strategy. The Federal Wildland Fire Management Policy is intended to provide strategic consistency among federal agency fire management programs. The Guidance and Implementation of Federal Wildland Fire Management Policy (USFS et al., 2009) replaces the Interagency Strategy for the Implementation of Federal Wildland Fire Management Policy (National Association of State Foresters et al., 2003) and clarifies changes that have occurred since 2003, while providing revised direction for consistent implementation of the Review and Update of the 1995 Federal Wildland Fire Management Policy.

Healthy Forest Initiative 2002/Healthy Forest Restoration Act (HFRA). In August 2002, the Healthy Forest Initiative was launched with the intent to reduce the severe wildfires risks that threaten people, communities, and the environment. Congress then passed the HFRA on December 3, 2003 to provide the additional administrative tools needed to implement the Healthy Forest Initiative. The HFRA strengthened efforts to restore healthy forest conditions near communities by authorizing measures such as expedited environmental assessments for hazardous fuels projects on federal land. The HFRA emphasized the need for federal agencies to work collaboratively with communities in developing

hazardous fuel reduction projects and places priority on fuel treatments identified by communities themselves in their Community Wildfire Protection Plans.

Department of the Interior Department Manual Part 620. Wildland Fire Management. Part 620 of the Department of the Interior Departmental Manual pertains to wildland fire management policies, with the goal of providing an integrated approach to wildland fire management. The guiding principles of the plan emphasize the need for public health and safety considerations, risk management protocols, inter-agency collaboration, and economic feasibility of wildfire management practices, as well as the ecological role of wildfires

North American Electric Reliability Corporation Standards. To improve the reliability of regional electric transmission systems, the North American Electric Reliability Corporation developed a transmission vegetation management program for all transmission lines operated at 200 kilovolts (kV) and above, and to lower voltage lines designated by the Regional Reliability Organization as critical to the reliability of the regional electrical system. Developed in 2006, requirements of the program govern clearances between vegetation and any overhead, ungrounded supply conductors must be identified and documented, while considering transmission line voltage; effects of ambient temperature on conductor sag under maximum design loading; fire risk; line terrain and elevation; and effects of wind velocity on conductor sway. The clearances identified must be no less than those set forth in Institute of Electrical and Electronics Engineers Standard 516-2003.

State Wildfire Regulations

California Strategic Fire Plan. This statewide plan is a strategic document, which guides fire policy for much of California. The plan is aimed at reducing wildfire risk through pre-fire mitigation efforts tailored to local areas through assessments of fuels, hazards, and risks.

California State Multi-Hazard Mitigation Plan. The purpose of the State Multi-Hazard Mitigation Plan (SHMP) is to significantly reduce deaths, injuries, and other losses attributed to natural- and human-caused hazards in California. The SHMP provides guidance for hazard mitigation activities emphasizing partnerships among local, state, and federal agencies as well as the private sector.

California Public Utilities Commission General Orders. The California Public Utilities Commission (CPUC) regulates private investor-owned utilities in the state of California, including electric power companies like PG&E as well as natural gas, telecommunications, and water companies. Rules established by the CPUC are called "General Orders" or "GOs."

PG&E Fire Prevention Plan. PG&E prepared a Fire Prevention Plan in compliance with CPUC Decision 12-01-032 (Fire Safety Order), Standard 1.E of General Order 166, and Senate Bill 1028. The Fire Prevention Plan summarizes PG&E's fire prevention and safety procedures and programs which include, but are not limited to: fire threat and risk area mapping, fire prevention pre-planning, enhanced fire detection efforts, building resiliency (including a wood pole test and treat program), operational practices to reduce the risk of fires, overhead inspections and patrols, fire prevention outreach and training programs, as well as pro-active responses to fire incidents.

Government Code Section 51175. Government Code Section 51175 defines Very High Fire Hazard Severity Zones (VHFHSZ) and designates lands considered by the State to be a very high fire hazard.

Government Code Section 51189. Government Code Section 51189 directs the Office of the State Fire Marshal to create building standards for wildland fire resistance. The code includes measures that increase

the likelihood of a structure withstanding intrusion by fire (such as building design and construction requirements that use fire-resistant building materials) and provides protection of structure projections (such as porches, decks, balconies and eaves), and structure openings (such as attics, eave vents, and windows).

Government Code Section 65302.5. Government Code Section 65302.5 requires the State Board of Forestry and Fire Protection to provide recommendations for a local jurisdiction's General Plan fire safety element when the jurisdiction amends its general plan. While not a direct and binding fire prevention requirement for individuals, general plans that adopt the Board's recommendations will include goals and policies that provide for contemporary fire prevention standards for the jurisdiction.

Health and Safety Code Section 13000 et seq. State fire regulations are set forth in Section 13000 et seq. of the Health and Safety Code, which is divided into "Fires and Fire Protection" and "Buildings Used by the Public." The regulations provide for the enforcement of the UBC and mandate the abatement of fire hazards. The code establishes broadly applicable regulations, such as standards for buildings and fire protection devices, in addition to regulations for specific land uses, such as childcare facilities and high-rise structures.

Forest Practice Act and the Forest Practice Rules. The Z'Berg-Nejedly Forest Practice Act of 1973 (Public Resources Code Sections 4511–4360.2) and its implementing regulations, the Forest Practice Rules (14 CCR Section 895 et seq.), govern the management of privately owned forestlands in California, including with respect to wildfire. For example, Rule 938.4 governs smoking and matches (14 Cal. Code Regs. §938.4) and Rule 938.7 governs blasting and welding (14 Cal. Code Regs. §938.7)

Public Resources Code Section 4119 authorizes CalFire or its authorized agent to inspect properties to determine whether they comply with state forest and fire laws, regulations, or use permits. Section 4427 limits the use of any motor, engine, boiler, stationary equipment, welding equipment, cutting torches, tarpots, or grinding devices which may generate a spark or flame if the equipment is located on or near forested land or land covered in bush or grass. Section 4427 establishes requirements such as clearing flammable material within 10 feet of the area of operation, as well as carrying of fire response equipment such as a shovel, backpack pump water type fire extinguisher.

Public Resource Code Section 4290. The State's Fire Safe Regulations are set forth in Public Resources Code Section 4290, which include the establishment of State Responsibility Areas (SRAs). Public Resources Code Section 4291 sets forth defensible space requirements, which are applicable to anyone that owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining a mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or land that is covered with flammable material (Section 4291(a)). Public Resources Code Sections 4292-4296 and 14 California Code of Regulations (CCR) 1256: Fire Prevention for Electrical Utilities address the vegetation clearance standards for electrical utilities. They include the standards for clearing around energy lines and conductors such as power-line hardware and power poles. These regulations are critical to wildland fire safety because of the substantial number of power lines in wildlands, the historic source of fire ignitions associated with power lines, and the extensive damage that results from power line caused wildfires in severe wind conditions.

Public Resources Code Section 4428 limits industrial operations by requiring certain firefighting equipment to be used when operating internal combustion engines on or near land covered by forest bush or grass between April 1 and December 1 of any year, or other times when ground litter and

vegetation could sustain combustion and facilitate the spread of fire. Section 4428 requires that such work provide and maintain the following tools:

- A sealed box of tools containing a backpack pump-type fire extinguisher filled with water, two axes, two McLeod fire tools, and a shovel for each worker onsite must be in near the operating area in a manner that would be accessible in the event of a fire.
- At least one serviceable chainsaw or timber felling tools must be provided and maintained.
- Each passenger vehicle must be equipped with a shovel and an ax, and every other vehicle or tractor must have a shovel.

Public Resources Code Section 4431 requires users of gasoline-fueled internal combustion-powered equipment located within 25 feet of forest, brush, or grass to keep firefighting tools at the immediate location of use. The Director of Forestry and Fire Protection administers and specifies the type and size of fire extinguisher necessary to provide at least minimum assurance of controlling fire caused by use of portable power tools under various climatic and fuel conditions. In addition, Section 4442 restricts the use and operation of any internal combustion engine that uses hydrocarbon fuels on any forest, brush, or grass areas unless the engine is equipped with a spark arrestor, as defined in Pub. Res. Code Section 4442(c) and pursuant to Section 4443.

CCR Title 14 (Natural Resources). Division 1.5 (Department of Forestry and Fire Protection), Title 14 of the CCR establishes a variety of wildfire preparedness, prevention, and response regulations. Title 14 includes regulations implementing Fire Safe Regulations requirements, including requirements to be implemented in a SRA including road standards for fire equipment access (14 Cal. Code Regs. §1273 et seq.); standards for signs identifying streets, roads, and buildings (14 Cal. Code Regs. §1274 et seq.); requirements for minimum private water supply reserves for emergency fire use (14 Cal. Code Regs. §1275 et seq.); and requirements for fuel breaks such as defensible space and greenbelts (14 Cal. Code Regs. §§1272, 1276 et seq.).

CCR Title 19 (Public Safety). Title 19 of the CCR establishes a variety of emergency fire response, fire prevention, and construction and construction materials standards.

CCR Title 24 (CA Building Standards Code). The California Fire Code is set forth in Part 9 of the Building Standards Code. The CA Fire Code contains fire-safety building standards referenced in other parts of Title 24.

B. Yolo County Wildfire Evacuation Planning

Wildfire Conditions

Fire Hazard Severity Zones

CalFire has assigned a "Very High Fire Hazard Severity Zone" rating throughout portions of Yolo County. Figure -1 identifies the fire hazard severity zones for Yolo County. The majority of lands within very high fire hazard severity zones are not designated for residential use or for development and are located in the western foothill and mountainous areas within the county. Larger portions of the westernmost portions of Yolo County are included within State Responsible Areas (SRAs) and are designated as Moderate threat areas. Figure -1 also identifies planned land uses within and their associated fire hazards severity zones throughout Yolo County. As shown on Figure-1, the majority of lands within fire hazard areas are designated by the Yolo County General Plan Land Use Map for agricultural and open space uses.

CPUC Fire Threats

General Order (GO) 95 of the California Public Utilities Commission (CPUC) regulates all aspects of design, construction, and O&M of overhead electrical power lines and fire safety hazards for utilities subject to its jurisdiction. In addition to requirements the CPUC has created a High Fire-Threat District (HFTD) map identifying zones of high hazard, elevated risk and extreme risk for destructive utility-associated wildfires. As described in the CPUCs High Fire-Threat District (HFTD) maps the western portions of Yolo County are within Tier 2 – Elevated, for destructive utility-associated wildfires.

Wildfire Events

The unincorporated County includes the western, more foothill/mountains areas of the county where wildfires are more likely to occur. A wildfire in this area has the potential to significantly impact the Capay Valley, and could result in evacuations. Recently several large wildfires have burned in the Blue Ridge Mountains between Yolo, Napa, and Lake Counties. They have included the 2014 Monticello Fire, the 2015 Wragg Fire, the 2015 Rocky Fire, the 2015 Jerusalem Fire, the 2016 Cold Fire, and the 2017 Winter Fire. The majority of recent large fires which have been documented within Yolo County are shown on Figure-2a - Fire History Map. Additionally, Figure-2b shows historical fires by burn count.

Wildfire Impact

Large fires along State Route 16 can impact local resources and access to the communities along the highway. Grass fires are also of concern in the unincorporated areas of the county. A 10-acre grass fire in Dunnigan in 2016 destroyed a house, and the Hardwoods Subdivision is identified in the County Hazard Mitigation Plan as an area of particular concern for a grass fire.

Major fires, whether involving structures or wildland areas, may result in significant risk to life and property. Rapid moving fires in older structures, in grasslands or dense brush can quickly overwhelm firefighting efforts, resulting in possible danger to life safety. Farm animals and stock grazing in pastures are at risk unless they can be moved or protected. Power lines and other infrastructure may also be at risk and can be heavily damaged when exposed to major fire activity.

Yolo County Wildfire Mitigation & Response

The most effective means of mitigating the risk from fire is effective code enforcement, fire safety inspections, and people being careful with fire. Removal of flammable vegetation in wildland areas can help to protect structures and provide an area of safety for homeowners. The installation of fixed fire protection systems throughout structures within the county helps to provide a realistic suppression mechanism for rapid intervention.

Response to major fires will require mutual aid assistance from local and regional fire suppression assets and resources. The use of mobile fire apparatus, hand crews and specially equipped aircraft will be the primary response mechanism to fires occurring within the county.

Fire Districts

There are 15 fire protection districts within Yolo County that are staffed primarily with volunteers. Fire protection districts serve mostly rural communities and provide fire services, as well as emergency medical and hazardous material services. Figure 3 shows Fire Protection District and station locations/boundaries within Yolo County.

Yolo County Office of Emergency Services (OES)

The Yolo County Office of Emergency Services (OES) is the emergency management agency for Yolo County. OES coordinates the county government's response to disaster or other large scale emergencies. This website provides resources and instructions as to how you can protect yourself and your family before, during and after an emergency.

Hazard Mitigation Plan Updates

The hazard mitigation plan is formally updated by The Federal Emergency Management Agency (FEMA) every 5 years, and will be updated for 2023.

The plan addresses threats from potential hazards and identifies possible strategies to reduce impacts. The official 2023 plan update process will commence in 2022. As part of the 2023 plan update process, Yolo County Office of Emergency is currently encouraging public input by completing a survey to identify the community's concerns about hazards.

YOLO County Fire Safe Council

The main function of the Yolo County Fire Safe Council will be to provide support for wildfire prevention, wildfire response, and post-fire recovery efforts by implementing priority projects identified in the Yolo County Community Wildfire Protection Plan (CWPP). The RCD is leading the development of the CWPP as part of the CAL FIRE grant program. The planning process began in the fall of 2020 and will be completed over the course of the next two years. As the first step, a CWPP steering committee is meeting to develop a draft wildfire risk assessment that will be available for Fire Safe Council and community input in early fall. Once the wildfire risk assessment is finalized, the RCD will be holding a series of public meetings in the wildfire-prone communities in the greater Winters area, Esparto and Capay Valley.

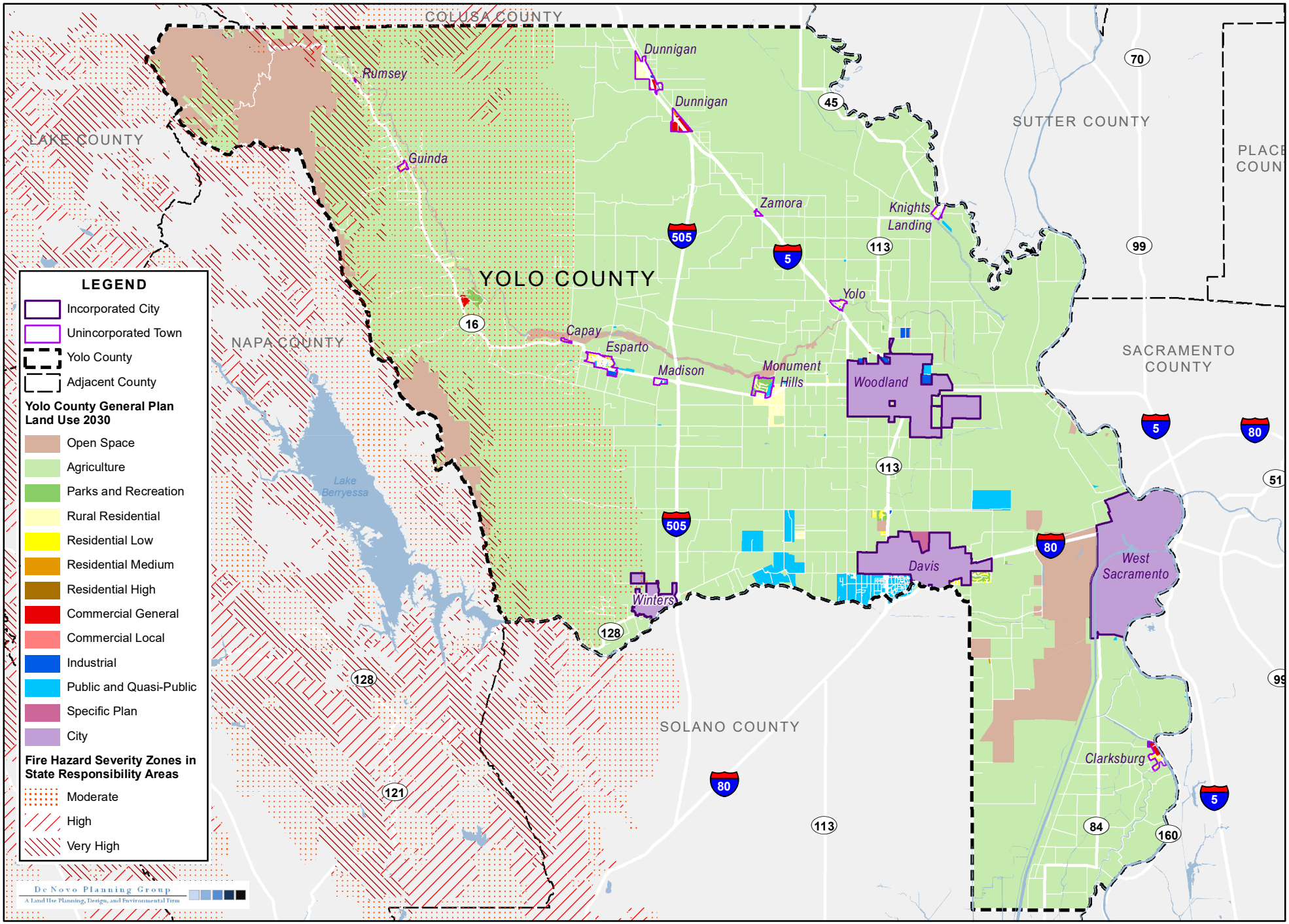
Know Your Zone

Yolo County and local cities participated in a joint planning effort, Know Your Zone, to identify evacuation zones that can be used during large-scale evacuation and shelter-in-place events. The Know Your Zone effort identified 91 individual zones throughout Yolo County effort. The Know Your Zone website identifies streets that can serve as evacuation routes and rally points for each zone. The Know Your Zone map can be accessed at:

https://yolo.maps.arcgis.com/apps/webappviewer/index.html?id=5458e2e8c8c54e19923da248ac3add0c/.

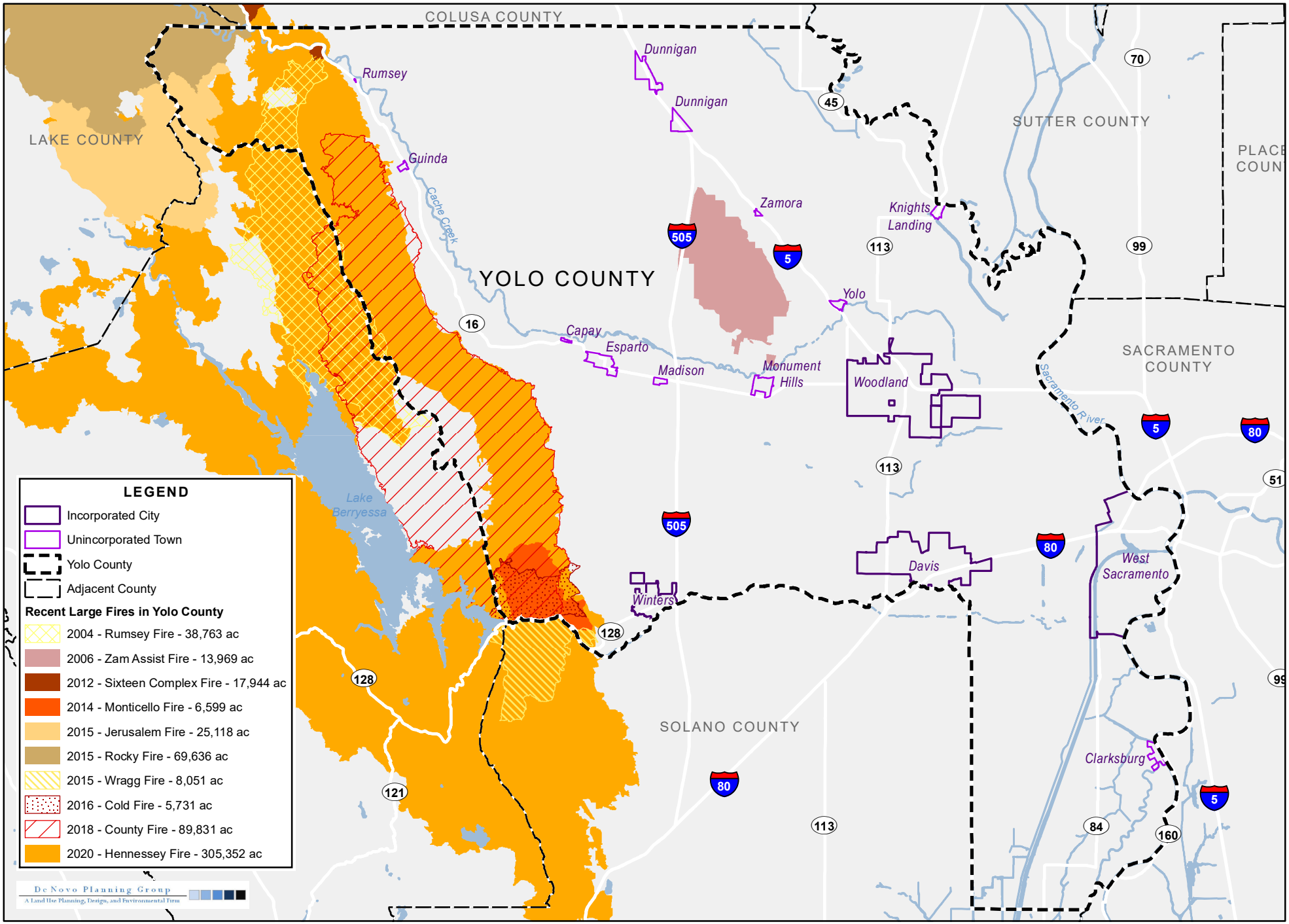
Residential Developments in Hazard Zones

Government Code Section 65302(g)(1) requires the County to address evacuation routes, including addressing residential developments in any hazard area identified in the Health and Safety Element that do not have at least two emergency evacuation routes. Figure 4 identifies residential areas, including areas planned for residential development, that are located in mapped high and very high fire hazard severity zones, are within a 100-year flood hazard area, or are susceptible to landslides.



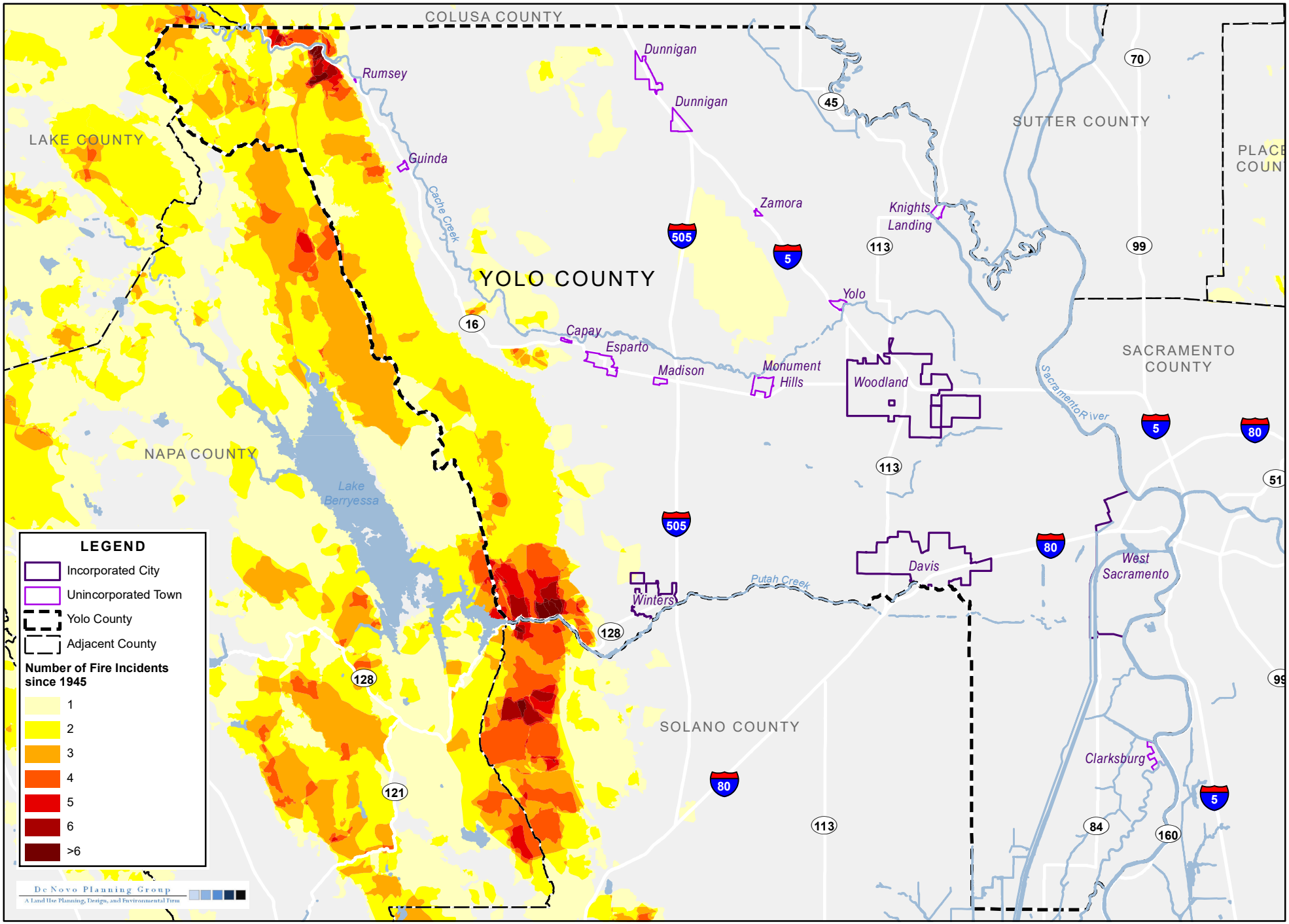
Sources: CalFire/Office of the State Fire Marshal; Yolo County GIS.
Map date: December 10, 2021.

Figure 1. Fire Hazard Severity Zones



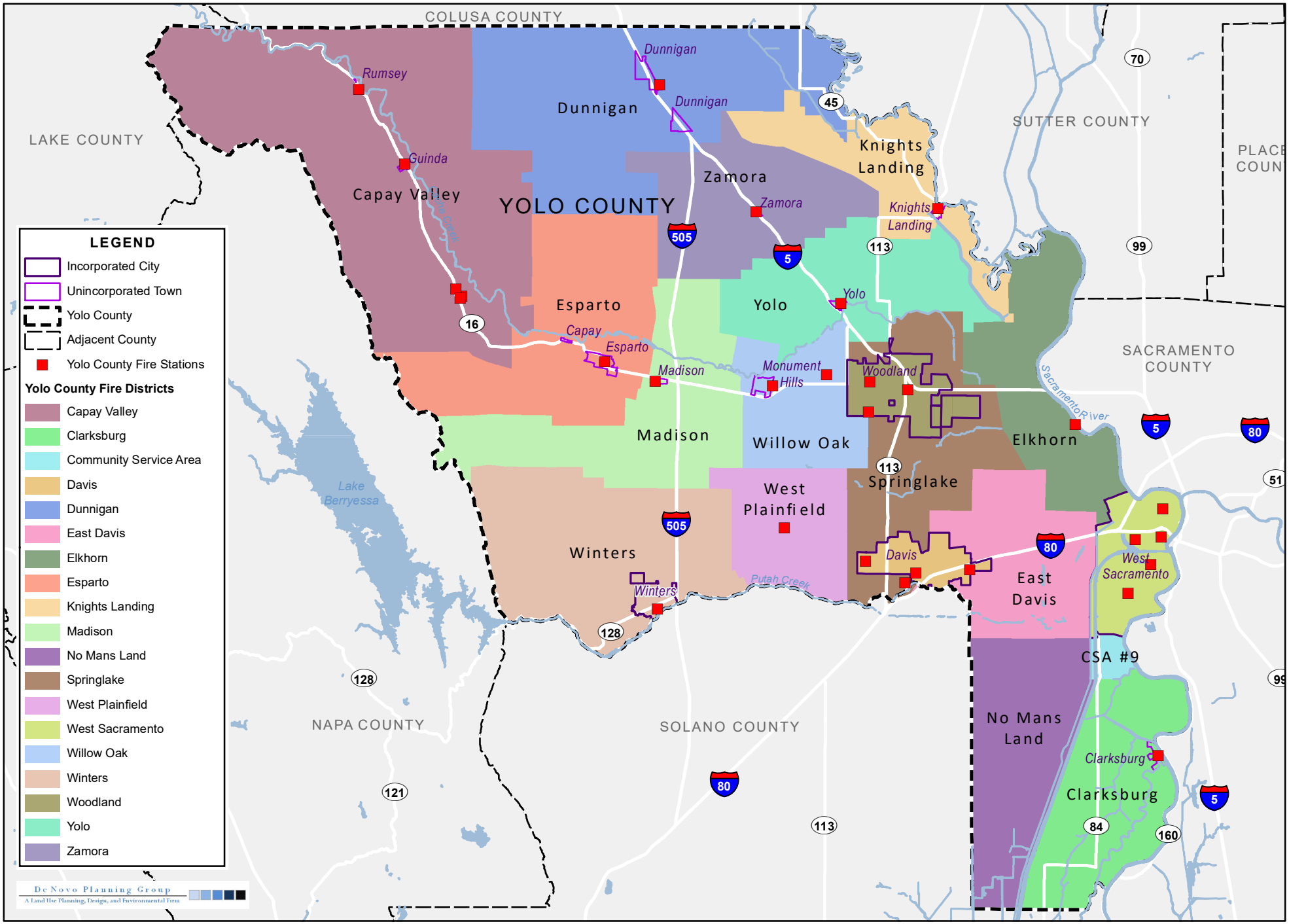
Sources: CalFire; Yolo County GIS.
Map date: December 10, 2021.

Figure 2a. Historical Fires Greater than 5,000 Acres Since 2000



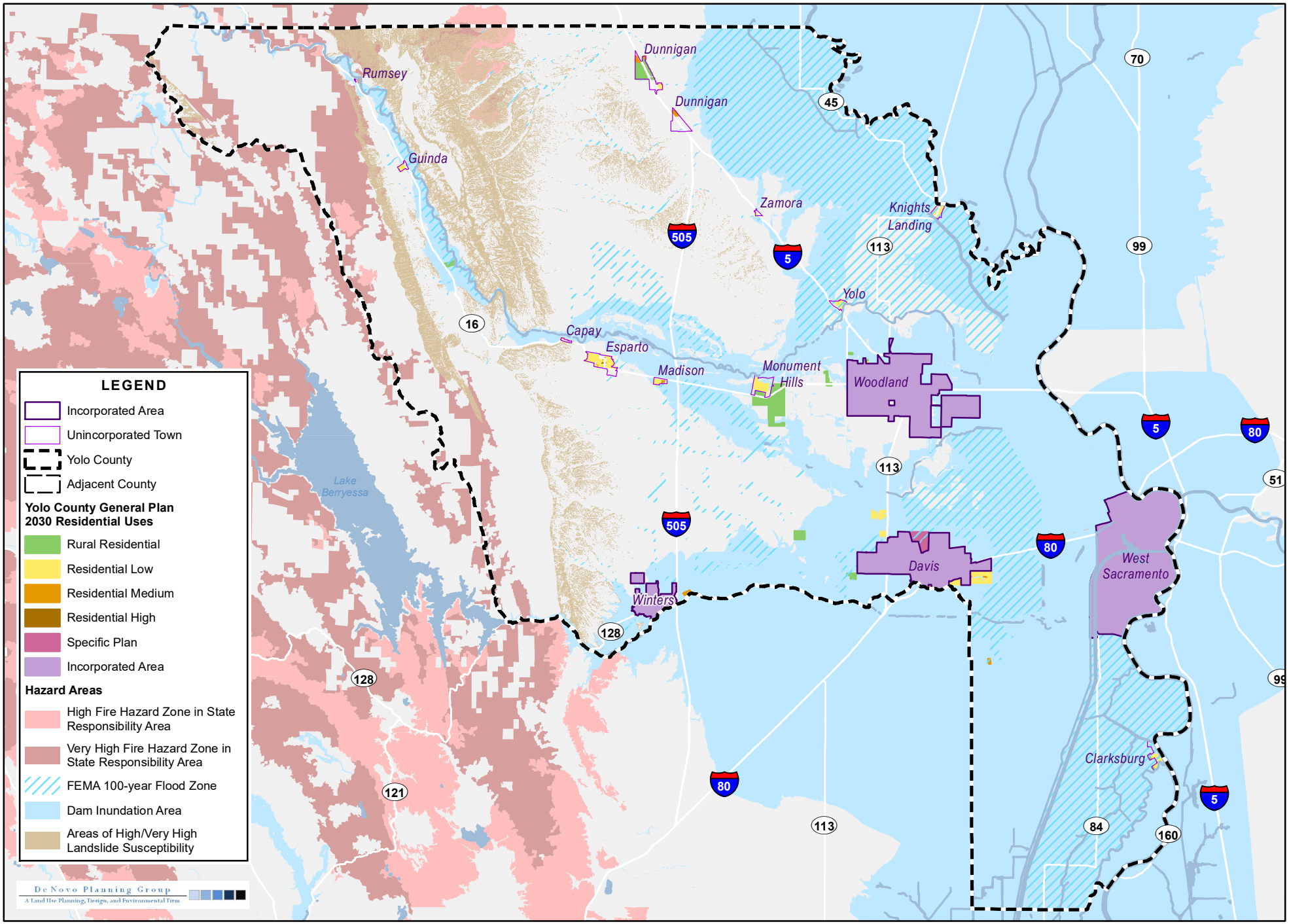
Sources: CalFire; Yolo County GIS.
Map date: December 10, 2021.

Figure 2b. Historical Fires by Burn Count



Sources: Yolo County GIS.
Map date: December 10, 2021.

Figure 3. Fire Districts and Stations



Sources: CalFire/Office of the State Fire Marshal; FEMA; DWR; CalOES; CGS Map Sheet 58; Yolo County GIS. Map date: February 28, 2021.

Figure 4. Residential Developments (Existing and Planned) in Hazard Areas

4. Environmental Justice

A. Background

The negative effects of environmental degradation and pollution are well-documented and include severe impacts to human health and longevity, depending on the level of exposure. Within the United States, certain communities have historically been disproportionately affected by environmental threats and the negative health impacts of environmental degradation. These communities include, but are not limited to, low-income communities, communities of color, communities comprising members of tribal nations, and immigrant communities. Increased exposure to environmental pollutants, unsafe drinking water, and contaminated facilities/structures have contributed to poorer health outcomes for these communities. Structural inequalities that disadvantage certain individuals and groups, local and regional policies, zoning, code enforcement deficiencies, and lack of community engagement and advocacy are related to disproportionate environmental and social effects. The field of environmental justice is focused on addressing these disproportionate impacts and improving the wellness of all communities by bolstering community planning efforts, considering exposure to adverse environmental effects, increasing access to amenities and services, and promoting the fair treatment of all people regardless of their race, ethnicity, national origin, or income.

Environmental Justice - Regulatory Setting

Senate Bill 1000:

Senate Bill 1000 (SB 1000), also known as The Planning for Healthy Communities Act, is a comprehensive state legislation that requires California counties and cities to include an Environmental Justice element or a set of environmental justice policies into their General Plans when updating two or more elements concurrently on or after January 1, 2018. The goal of SB 1000 is improving the health of California communities and addressing pertinent issues of environmental justice related to community wellness. SB 1000 outlines strategies to promote the protection of sensitive land uses within the state, and simultaneously mandates that jurisdictions address the needs of disadvantaged communities. Through this bill, environmental justice is a mandated consideration in all city's local land-use planning.

To aid local governments in meeting the requirements of SB 1000, the California Environmental Justice Alliance (CEJA) has created a strategic toolkit. The SB 1000 Implementation Toolkit serves as a guide for key stakeholders by clarifying legislation requirements and providing tools, best practices, and resources to support these stakeholders as they begin to incorporate the law into local practice. To effectively meet the mandates of the bill, jurisdictions must formally identify disadvantaged communities (DACs) and work to reduce health risks specific to these communities by outlining methods and programs within their plan that address the needs of DACs. Each General Plan must address the following topics in order to meet the requirements of SB 1000:

- Pollution Exposure and Air Quality
- Public Facilities
- Food Access
- Safe and Sanitary Homes
- Physical Activity
- "Civil" or Community Engagement
- Improvements and Programs (that address the needs of Disadvantaged Communities)

Senate Bill 535: In 2012, the Legislature passed SB 535, directing that 25 percent of the proceeds from the Greenhouse Gas Reduction Fund (established by the California Global Warming Solutions Act of 2006 AB 52's cap and trade program) go to projects that provide a benefit to disadvantaged communities.

Assembly Bill 1550: In 2016, the Legislature passed AB 1550, which amended SB 535 to require all GGRF investments that benefit DACs to also be located within those communities. The law also requires that an additional 10% of the fund be dedicated to low-income households and communities, of which 5% is reserved for low-income households and communities living within a half-mile of a designated DAC.

Senate Bill 673: In 2015, the Legislature passed SB 673 directing the Department of Toxic Substances Control (DTSC) to include criteria such as cumulative impact and neighborhood vulnerability when issuing or renewing facility permits. The law provides the DTSC with an opportunity to use tools such as CalEnviroScreen when making decisions on hazardous waste permitting.

Assembly Bill 523: Approved in 2017, AB 523, allocates at least 25% of the Electric Program Investment Charge funds administered by the California Energy Commission (CEC) to support technology demonstration and deployment projects located in and benefiting "disadvantaged communities," and dedicates at least 10% of the fund to activities located in and benefiting "low-income" communities as defined by AB 1550.

Senate Bill 43: Approved in 2013, SB 43, establishes the Green Tariff Shared Renewables program, administered by the California Public Utilities Commission (CPUC), which enables utility customers to meet their energy generation needs through offsite generation of renewable energy projects. The program requires 100 MW of renewable energy projects to be sited in the top 20% of CalEnviroScreen CES scores based on each investor-owned utility service territory.

Assembly Bill 693: Approved in 2015, AB 693 allocates $100 million per year for 10 years to fund solar installations on multifamily affordable housing. To qualify, a multifamily affordable housing property must be: (1) located in a DAC as defined by SB 535 using the most recent version of CalEnviroScreen CES; or (2) have at least 80% of tenants with incomes at or below 60% of area median income (AMI).

Assembly Bill 2722: Approved in 2016, AB 2722 requires the California Strategic Growth Council to award competitive grants to specified eligible entities for the development and implementation of neighborhood-level transformative climate community plans that include greenhouse gas emissions reduction projects that provide local economic, environmental, and health benefits to disadvantaged communities, as defined. AB 2722 created the Transformative Climate Communities (TCC) program administered through the California Strategic Growth Council. The TCC is a GGRF-funded program that supports innovative, comprehensive, and community-led plans that reduce pollution and achieve multiple co-benefits at the neighborhood level.

California Department of Transportation's Active Transportation Program: California Department of Transportation (CalTrans) the Active Transportation Program (ATP) aims to enhance public health and advance California's climate goals by increasing safety and mobility for non-motorized active transportation such as biking and walking. Twenty-five percent of program funds are set aside for ATP projects in "disadvantaged communities" (defined as census tracts within the top 25% of CalEnviroScreen (CES) scores along with several other options), while an additional 2% is set aside to fund active transportation planning in DACs.

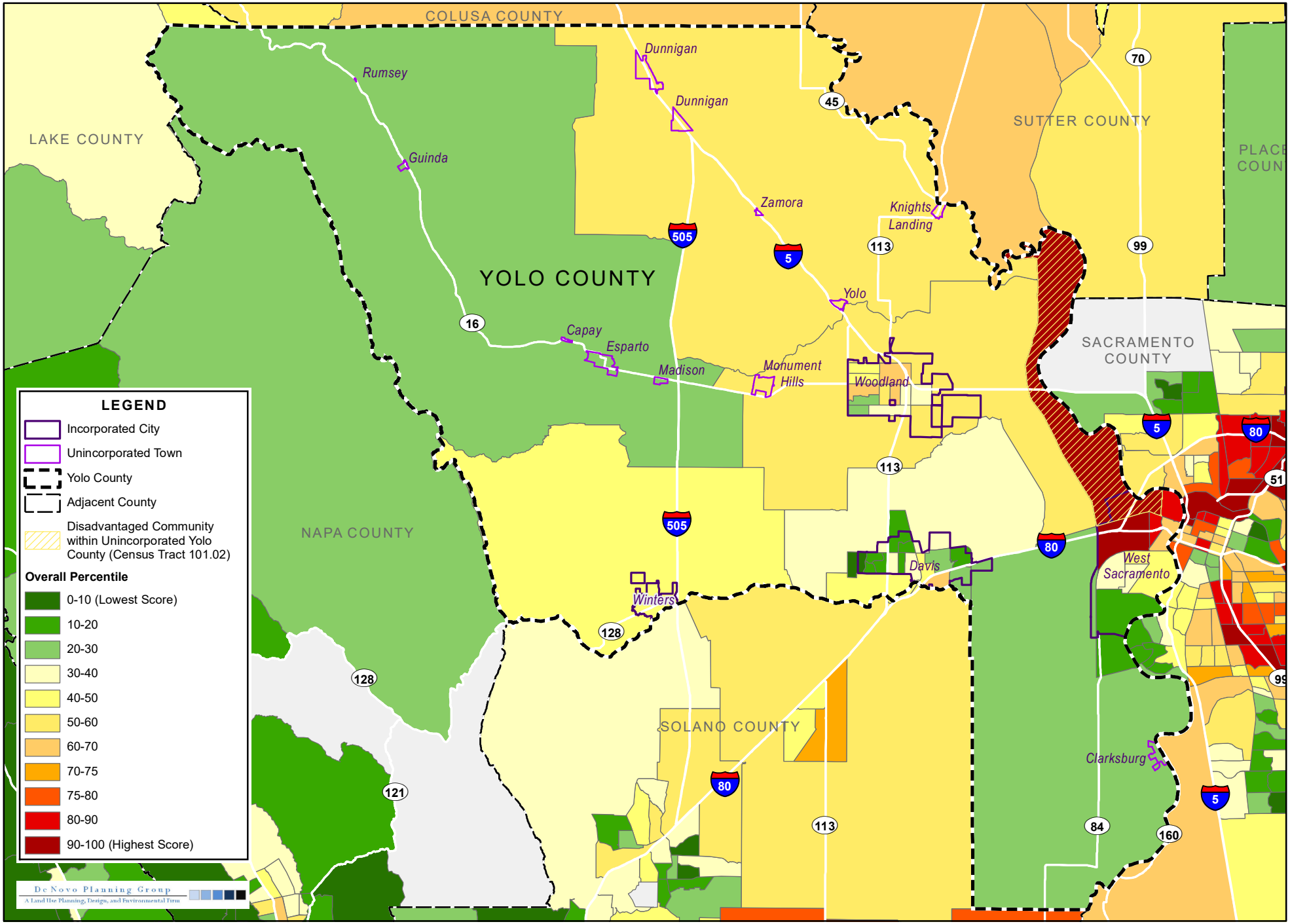
B. Disadvantaged Communities

The term 'disadvantaged community' is a broad designation that includes any community disproportionally affected by environmental, health, and other burdens or low income areas disproportionally affected by environmental pollution and other hazards. In relation to environmental justice, DACs are typically those communities that disproportionately face the burdens of environmental hazards. Government Code Section 65302, as amended by SB 1000, defines a DAC as follows:

> *"…an area identified by the California Environmental Protection Agency (CalEPA) pursuant to Section 39711 of the Health and Safety Code or an area that is a low-income area that is disproportionately affected by environmental pollution and other hazards that can lead to negative health effects, exposure, or environmental degradation."*

Jurisdictions that have a disadvantaged community are required to prepare an Environmental Justice Element to reduce unique or compounded health risks affecting the disadvantaged community, promote civic engagement in the decision-making process, and prioritize improvements and programs that address the needs of disadvantaged communities. (Government Code Section 65302 (h))

The CalEPA CalEnviroScreen 4.0 tool identifies communities that are disproportionately affected by environmental hazards. The CalEnviroScreen 4.0 map is a science-based tool developed by the Office of Environmental Health Hazards Assessment on behalf of CalEPA that uses existing environmental, health, and socioeconomic data to rank all census tracts in California with a CES score. CalEPA designates the tracts with a CES score in the top 25 percentile as DACs. Figure 5 identifies the CES score for each census tract in and around the Planning Area, and indicates that tracts 6113010203, 6113010102, 6113010101, and 6113010204 are identified as DACs based on CES score in the top 25 percentile. Of these, only DAC 6113010102 is located within a portion of the Unincorporated County, with the remainder being located within the City of West Sacramento. It should be noted that the majority of the developed areas within this DAC tract is located within the West Sacramento area, with the remaining portions within the unincorporated county north of West Sacramento. The majority of lands located within the unincorporated county are largely undeveloped and contain agricultural uses. Figure 5 below shows DACs designated by CalEnviroScreen 4.0 Percentiles within Yolo County and the surrounding areas.



Sources: OEHHA CalEnviroScreen 4.0; Yolo County GIS.
Map date: December 6, 2021.

Figure 5. CalEnviroScreen 4.0 Overall Percentile

C. Health & Socioeconomic Characteristics

To understand the existing health and socioeconomic conditions of each DAC in the County as a whole, Table 1 lists the percentiles for sensitive population and socioeconomic factor indicators in the Planning Area by census tract. The one DAC census tract within the unincorporated portions of Yolo County is highlighted with bold boxes; other census tracts located within the incorporated areas of Yolo County within West Sacramento are also included for reference as they are adjacent to the Yolo County DAC Tract 101.02. The sensitive population indicators reflect the communities' health and the socioeconomic factor indicators describe educational attainment, income level, employment, and housing conditions and burden. These indicators are presented below on Table 1. In combination with the environmental/pollution data included in Table 2: Pollution Burden by Pollution Indicator, the data forms the basis of the CES scores. For each indicator, scores of 75% or higher represent a high burden on the population.

As shown on Table 1 below, DAC Tract 101.02 has a high burden in five of the eight indicators including the Sensitive Population Indicators for asthma, and cardiovascular disease, and Socioeconomic Indicators including education, linguistic isolation, and unemployment.

TABLE 1: POPULATION CHARACTERISTICS BY SENSITIVE POPULATION AND SOCIOECONOMIC FACTOR INDICATORS

INDICATOR (%)	CENSUS TRACTS			
	101.02	102.03*	101.01*	102.04*
SENSITIVE POPULATION INDICATORS				
Asthma	**83**	76	88	70
Low Birth Weight	**67**	17	76	34
Cardiovascular Disease	**87**	77	93	69
SOCIOECONOMIC FACTOR INDICATORS				
Education	**81**	81	66	73
Linguistic Isolation	**81**	64	72	73
Poverty	**74**	96	77	83
Unemployment	**80**	95	92	90
Housing Burden	**47**	76	60	78
Total Population Characteristics Score Percentile	**88**	80	92	78

Legend

	High Burden: 75.0 – 100.0%		Medium Burden: 25.0 – 74.9%		Low Burden: 0.0 – 24.9%

*NOTE: * DACS INCLUDE CENSUS TRACT WITHIN INCORPORATED AREAS OF YOLO COUNTY.*
SOURCE: CALIFORNIA OFFICE OF ENVIRONMENTAL HEALTH HAZARD ASSESSMENT, CALENVIROSCREEN 4.0, 2021.

D. Environmental Justice Issues

Based Government Code Section 65302, as amended by SB 1000, the General Plan's Environmental Justice Element or integrated environmental justice policies must seek to reduce the unique or compounded health risks in the City's DAC by addressing the following topics, at a minimum: pollution exposure, including air quality, public facilities, food access, safe and sanitary homes, and physical activity, and by providing a policy framework to encourage civil engagement. The existing conditions for these topics within Yolo County are summarized below.

Pollution Exposure and Air Quality

The various forms and sources of air and water pollution and hazardous waste often disproportionately affect DACs. This is typically due to the existence and relative concentration of pollution-emitting sources within close proximity to the communities. Disproportionate exposure to pollutants is linked to variety of negative health impacts, including but not limited to, asthma, cardiovascular diseases, cancer, and other potentially fatal conditions. Based on CES data, Table 2 lists the percentile of pollution burden for the thirteen CES pollution indicators by census tract.

TABLE 2: POLLUTION BURDEN BY POLLUTION INDICATORS

INDICATOR (%)	CENSUS TRACTS			
	101.02	102.03 *	101.01 *	102.04 *
Air Quality: Ozone	55	43	47	43
Air Quality: PM2.5	24	37	38	36
Air Quality: Diesel PM	19	94	42	86
Pesticide Use	82	71	28	0
Toxic Releases from Facilities	33	32	34	34
Traffic Density	19	87	15	54
Drinking Water Contaminants	36	11	11	11
Lead Contaminants	78	89	76	90
Cleanup Sites	77	73	93	43
Groundwater Threats	84	89	85	92
Hazardous Waste	94	87	96	67
Impaired Water Bodies	99	98	98	98
Solid Waste Sites	92	91	0	43
Total Pollution Burden	**89**	**97**	**68**	**76**

	High Burden: 75.0 – 100.0%		Medium Burden: 25.0 – 74.9%		Low Burden: 0.0 – 24.9%

*NOTE: * DACS INCLUDE CENSUS TRACT WITHIN INCORPORATED AREAS OF YOLO COUNTY.*
SOURCE: CALIFORNIA OFFICE OF ENVIRONMENTAL HEALTH HAZARD ASSESSMENT, CALENVIROSCREEN 4.0, 2021.

Scores of 75% or higher represent a high pollution burden. The census tracts with total pollution burden scores over 75 within Yolo County are 101.02, 102.03, 101.01, and 102, 04. Of these, only DAC Tract 101.02

located within the unincorporated portion of the county and had a high burden score for seven indicators (Pesticide Use, Lead Contaminants, Cleanup Sites, Groundwater Threats, Hazardous Waste, Impaired Water Bodies, and Solid Waste Sites) and an overall score of 89.

Hazardous Materials and Toxics

Hazardous Materials and Toxics sites within 1-mile of DAC Tract 101.02 are shown on Table 3. The sites are generally clustered within the City of West Sacramento, Sacramento, and Sacramento County. DAC Tract 101.02 within the unincorporated area of Yolo County contains the following sites.

- Home Ranch Property. 13018 County Road 117 West Sacramento, CA 95691 - Lust Cleanup Site (Open - Site Assessment)
- Agriventure 1341 Property. County Road 124 West Sacramento, Ca - Cleanup Program Site Completed – (Case Closed)
- Old Bryte Landfill 50035 County Road 126 West Sacramento, CA 95691 - Voluntary Cleanup (Active)
- KMEP Yolo Bypass Petroleum Pipeline Release. UPRR Mile Post Marker 85.2 West Sacramento, Ca - Cleanup Program Site Completed – (Case Closed).

TABLE 3: HAZARDOUS MATERIALS AND TOXICS SITES WITHIN 1 MILE OF CENSUS TRACT 101.02

NAME	PROJECT TYPE/ACTIVITY	ADDRESS	AREA
ENVIROSTOR SITES[1]			
Payless Cleaners (2)	Historical	1351 Merkley Avenue	West Sacramento
Sunshine Laundry and Cleaners	Evaluation	820 Merkley Avenue	West Sacramento
Tomlin's Sunshine Cleaners	Historical	612 Michigan Blvd	West Sacramento
H And H Cleaners	Historical	1231 Merkley Avenue	West Sacramento
Finkey's Detroit & G.M. Diesel Engines	Historical	3050 West Capital Ave.	West Sacramento
Capitol City Truck & Bus Repair	Historical	4235 West Capitol Avenue	West Sacramento
River City High School	School Investigation	1100 Clarendon Street	West Sacramento
Riverpoint Business Park	Evaluation	Between I-80, Reed Ave, Harbor Blvd.	West Sacramento
Tower Court	Voluntary Cleanup	815 West Capitol Avenue	West Sacramento
Elkhorn Village Elementary School	School Investigation	750 Cummins Way	West Sacramento
Aron's Building & Wrecking	Historical	4245 & 4305 West Capitol Ave.	West Sacramento
Van Waters and Rogers, Inc	Evaluation	850 South River Road	West Sacramento
Two Rivers Elementary School	School Investigation	3201 West River Drive	Sacramento
Natomas Middle School	School Investigation	3710 Del Paso Boulevard	Sacramento
Sacramento Engineering Depot	Military Evaluation		Sacramento
Jibboom Building	Voluntary Cleanup	240 Jibboom Street	Sacramento
Sac Engr Area-Weir Area (J09ca0798)	State Response	State Old River/North Harbor Road	West Sacramento
The Rivers Phase II Proposed School	School Cleanup	Lighthouse And Fountain Drives	West Sacramento
Sacramento Stucco Co.	Evaluation	860 Riske Lane	West Sacramento
Electro-Coatings Inc	Historical	2904 Duluth Street	West Sacramento
Jar Building - Gerlinger Motor Parts	Historical	3020 & 3040 Duluth Street	West Sacramento

Name	Project Type/Activity	Address	Area
Petroleum Tank Lines	Evaluation	2600 Rice Avenue	West Sacramento
B O R Industries, Inc	Evaluation	2505 Rice Avenue	West Sacramento
Old Bryte Landfill	Voluntary Cleanup	50035 County Road 126	West Sacramento/Yolo County
Westco Technologies	Evaluation	801 South River Rd.	West Sacramento
Rice Growers Association	Historical	901 South River Road	West Sacramento
Northborough Elementary School	School Investigation	Banfield Drive/Minden Way	Sacramento
Jibboom Junkyard	Federal Superfund	240-260 Jibboom Street	Sacramento
The Rivers Phase II Proposed School	School Investigation	Lighthouse And Fountain Drives	West Sacramento
LABRIC/C & S Battery and Lead	Evaluation	860 Riske Lane	West Sacramento
Envirostor Hazardous Waste Sites[1]			
Karolton Envelope Co./American Pad & Pap	Corrective Action	2660 Port St	West Sacramento
Cortese List Site[2]			
Capitol Plating Corporation	State Response	319 3rd Street	West Sacramento
Geotracker Cleanup Program Site Sites[3]			
Agriventure 1341 Property	Cleanup Program Site	County Road 124	West Sacramento/ Yolo County
Capitol Plating Facility	Cleanup Program Site	319 3rd Street	West Sacramento
Discovery Plaza (Former Sage Cleaners)	Cleanup Program Site	1500-1590 West El Camino Avenue	Sacramento
El Rancho Fabric Care	Cleanup Program Site	1331 Merkley Avenue	West Sacramento
Former Johnson Ranch	Cleanup Program Site	3800 Garden Highway	Sacramento County
Former Loweyçös Dry Cleaners	Cleanup Program Site	3069 West Capitol Avenue	West Sacramento
Former Sacramento Generator	Cleanup Program Site	1721 West Capitol Avenue	West Sacramento
Former Sierra Chemical	Cleanup Program Site	640 Harbor Blvd.	West Sacramento
George Kristoff Water Treatment Plant	Cleanup Program Site	400 North Harbor Blvd.	West Sacramento
H&H Cleaners	Cleanup Program Site	1231 Merkley Ave	West Sacramento
Home Depot	Cleanup Program Site	700 Riverpoint Circle	West Sacramento
KMEP Yolo Bypass Petroleum Pipeline Release	Cleanup Program Site	UPRR Mile Post Marker 85.2	West Sacramento/Yolo County
PG&E - Power Plant Building	Cleanup Program Site	240 Jibboom Street	Sacramento
Raley's West Sacramento	Cleanup Program Site	1601 West Capitol Avenue	West Sacramento
Ranbo	Cleanup Program Site	710 Riverpoint Circle	West Sacramento
Shell Branded Service Station	Cleanup Program Site	3501 El Camino Avenue	Sacramento
The Ink Company	Cleanup Program Site	1115 Shore Street	West Sacramento

Name	Project Type/Activity	Address	Area
Univar USA Inc. (Formerly Van Waters & Rogers Inc)	Cleanup Program Site	400 Ballpark Dr (Formerly 850 S. River Rd)	West Sacramento
Wabash National Trailers	Cleanup Program Site	3600 West Capitol Avenue	West Sacramento
Wal-Mart	Cleanup Program Site	755 Riverpoint Circle	West Sacramento
Wal-Mart (Riverpoint Business Park)	Cleanup Program Site	755 Riverpoint Circle	West Sacramento
LUST Cleanup Sites[3]			
15th St Fire Station	LUST Cleanup Site	132 15th St	West Sacramento
49er Truck Stop	LUST Cleanup Site	2828 El Centro Rd	Sacramento
A-Best Auto Sales	LUST Cleanup Site	715 Galveston St	West Sacramento
Adco Lumber Co	LUST Cleanup Site	629 Houston St	West Sacramento
Arco #5786 Case #2	LUST Cleanup Site	847 Harbor Blvd, W	West Sacramento
Arco # 05786	LUST Cleanup Site	847 Harbor Blvd	West Sacramento
Arco #6168	LUST Cleanup Site	222 Jibboom St	Sacramento
Art Hayashida, Assignee	LUST Cleanup Site	618 Galveston St	West Sacramento
Benco Petroleum	LUST Cleanup Site	2505 Rice Ave	West Sacramento
Bp #02226 (Former)	LUST Cleanup Site	1705 West Capitol Ave	West Sacramento
Bryte Send Storage	LUST Cleanup Site	1645 Riverbank Rd	West Sacramento
Bumper Warehouse	LUST Cleanup Site	604 Galveston Street	West Sacramento
California Highway Patrol Academy #2	LUST Cleanup Site	3500 Reed Avenue	West Sacramento
Caltrans Park and Ride (Former Amerigas/Intercal Real Estate)	LUST Cleanup Site	4891 West Capitol Ave	West Sacramento
Capitol Cigar	LUST Cleanup Site	1105 Terminal Way	West Sacramento
Cen-Cal Wallboard	LUST Cleanup Site	880 South River Rd	West Sacramento
Central Transport	LUST Cleanup Site	900 F St	West Sacramento
Chevron #9-3824 (Former)	LUST Cleanup Site	1350 Jefferson Blvd	West Sacramento
Chevron #9-5878	LUST Cleanup Site	1381 West Capitol Ave	West Sacramento
Chevron #9-6726	LUST Cleanup Site	4800 West Capitol Ave	West Sacramento
CHP Academy	LUST Cleanup Site	3500 Reed Ave	West Sacramento
CHP Academy Diesel UST (Case #3)	LUST Cleanup Site	3500 Reed Avenue	West Sacramento
Christofer Oaks One	LUST Cleanup Site	2500 Venture Oaks Way	Sacramento
Circle-K #01340	LUST Cleanup Site	1506 Sacramento Ave	West Sacramento
Continental Heller (Former)	LUST Cleanup Site	4521 West Capitol Ave	West Sacramento
Conway Western Express, Inc.	LUST Cleanup Site	900 E St	West Sacramento
Cummins West	LUST Cleanup Site	2661 Evergreen Ave	West Sacramento
Dagget Property	LUST Cleanup Site	4153 Garden Hwy	Sacramento
Danmar Enterprises	LUST Cleanup Site	716 Houston St	West Sacramento
Darpetro	LUST Cleanup Site	2434 West Capitol Ave	West Sacramento
Epoch Truck Stop	LUST Cleanup Site	4790 West Capitol Ave	West Sacramento
Exxon # 70450	LUST Cleanup Site	2650 Gateway Oaks Dr	Sacramento
Exxon #7-3485 (Former)	LUST Cleanup Site	1150 Halyard Dr	West Sacramento
Exxon #70125	LUST Cleanup Site	2816 West Capitol Ave	West Sacramento
Exxon #73948	LUST Cleanup Site	900 Jefferson Boulevard (Aka 901 Park Ave)	West Sacramento
F.F. Smith Co	LUST Cleanup Site	3120 Coke St	West Sacramento
Food & Liquor #119 (Kayo)	LUST Cleanup Site	731 Poplar St (Aka: 1840 West Capitol)	West Sacramento

Name	Project Type/Activity	Address	Area
Former Experience Motel	LUST Cleanup Site	820-824 West Capitol Avenue	West Sacramento
Former Exxon Service Station # 7-0120	LUST Cleanup Site	1401 West Capitol Av	West Sacramento
Former Hudson	LUST Cleanup Site	500 C St	West Sacramento
Former Tesoro 67055/Former Beacon #3694	LUST Cleanup Site	1001 Sacramento Ave	West Sacramento
Fredericksen Tank Lines	LUST Cleanup Site	850 Delta Ln	West Sacramento
Gary's Mowhawk Service Case #2	LUST Cleanup Site	427 C Street	West Sacramento
Gary's Service Case #1	LUST Cleanup Site	427 C St	West Sacramento
Haring Property	LUST Cleanup Site	724 Harbor Blvd	West Sacramento
Hayshida/Buffalo Machinery	LUST Cleanup Site	4101 West Capitol Ave	West Sacramento
Holiday Inn	LUST Cleanup Site	200 Jibboom St	Sacramento
Home Ranch Property	LUST Cleanup Site	13018 County Road 117	West Sacramento/ Yolo County
Kings Truck Stop	LUST Cleanup Site	1056 Harbor Blvd	West Sacramento
Lend-Lease Truck	LUST Cleanup Site	3610 West Capitol Ave	West Sacramento
Lift All, Inc	LUST Cleanup Site	2399 Sellers Way	West Sacramento
Milne Trucking	LUST Cleanup Site	830 E St	West Sacramento
Mobil #12-188 (Former)	LUST Cleanup Site	950 Sacramento Ave	West Sacramento
Montgomery Wards	LUST Cleanup Site	3689 Industrial Blvd	West Sacramento
Motor Cargo	LUST Cleanup Site	917 Stillwater Road	West Sacramento
Natomas Middle School	LUST Cleanup Site	3700 Del Paso Blvd	Sacramento
North American Food Dist. Co.	LUST Cleanup Site	3969 Industrial Blvd	West Sacramento
Old PG&E Plant	LUST Cleanup Site	240 Jibboom St	Sacramento
Old Trailways Prop	LUST Cleanup Site	500 E St	West Sacramento
On The Ball Graphics	LUST Cleanup Site	500 5th St	West Sacramento
P.I.E. Nation Wide	LUST Cleanup Site	520 Houston St	West Sacramento
Pacific Bell (Ua-666)	LUST Cleanup Site	1250 Shore St	West Sacramento
Pelton And Sons	LUST Cleanup Site	2205 Rice Ave	West Sacramento
Penske Truck Leasing	LUST Cleanup Site	3009 Evergreen Ave	West Sacramento
Petroleum Tank Line	LUST Cleanup Site	2600 Rice Ave	West Sacramento
Pg&E Call Center	LUST Cleanup Site	2740 Gateway Oaks Drive	Sacramento
Post Property	LUST Cleanup Site	2300 Orchard Ln	Sacramento
Proposed Dialysis Clinic, Inc.	LUST Cleanup Site	2500 West Capitol Avenue	West Sacramento
Quik Stop Market #116	LUST Cleanup Site	1648 West Capitol Ave	West Sacramento
Raley's Landing/Parrish Arco	LUST Cleanup Site	490 West Capitol Ave	West Sacramento
Raley's West Sacramento	LUST Cleanup Site	1601 West Capitol Avenue	West Sacramento
Ramco Property (Former Ss)	LUST Cleanup Site	1101 West Capitol Ave	West Sacramento
Redwood Oil Ss (Former)	LUST Cleanup Site	1400 West Capitol Ave	West Sacramento
Reliable Truck Garage (Beneto)	LUST Cleanup Site	504 Harbor Blvd	West Sacramento
Relles Oil	LUST Cleanup Site	804 South River Road	West Sacramento
Ricky's Beacon	LUST Cleanup Site	45 15th St	West Sacramento
Ricky's Chevron	LUST Cleanup Site	1015 Jefferson Blvd	West Sacramento
Riverview Int	LUST Cleanup Site	2445 Evergreen Ave	West Sacramento
Roadway Express Inc	LUST Cleanup Site	800 Delta Ln	West Sacramento
Roadway Express, Inc.	LUST Cleanup Site	4200 West Capital Avenue	West Sacramento
Ryder Truck Rental	LUST Cleanup Site	2599 Evergreen Ave	West Sacramento
Sac Insulation Contractors	LUST Cleanup Site	411 Glide Ave	West Sacramento
Sacramento Auto Truck Company	LUST Cleanup Site	525 Galveston St	West Sacramento

Name	Project Type/Activity	Address	Area
Sacramento Generator	LUST Cleanup Site	1725 West Capitol Ave	West Sacramento
Sacramento Maintenance Yard	LUST Cleanup Site	1450 Riverbank Rd	West Sacramento
Sacramento Valley Ford	LUST Cleanup Site	825 Stillwater Rd	West Sacramento
Shell #204-6678-9003	LUST Cleanup Site	225 Jibboom St	Sacramento
Shell Service Station	LUST Cleanup Site	4900 West Capital Avenue	West Sacramento
Sierra Chemical	LUST Cleanup Site	640 Harbor Blvd	West Sacramento
Sterling Transit	LUST Cleanup Site	832 F St	West Sacramento
Taylor Bus Service	LUST Cleanup Site	3130 Duluth St	West Sacramento
Tenco Materials Handling Fac	LUST Cleanup Site	2801 Evergreen Ave	West Sacramento
Terminal Muffler	LUST Cleanup Site	2415 West Capitol Ave	West Sacramento
Terminal Truck Repair	LUST Cleanup Site	971 F St	West Sacramento
Texaco Service Station (Former)	LUST Cleanup Site	West Capitol & Third Street	West Sacramento
Texaco Ss (Former)	LUST Cleanup Site	831 Jefferson Blvd	West Sacramento
Texaco Ss (Former)	LUST Cleanup Site	226 Jibboom St	Sacramento
Tnt Reddaway Truck Lines	LUST Cleanup Site	620 Harbor Blvd	West Sacramento
Tony's Fine Foods	LUST Cleanup Site	3575 Reed Avenue	West Sacramento
Toyota Vlads Toys Inc.	LUST Cleanup Site	2630 West Capitol Avenue	West Sacramento
Truck & Trailer	LUST Cleanup Site	555 Galveston St	West Sacramento
Turner Land Company Property (Formerly 800 Sacramento Ave.)	LUST Cleanup Site	8th And Sacramento Avenue	West Sacramento
U C River Ranch	LUST Cleanup Site	5191 Garden Hwy	Sacramento
U-Haul Of Sacramento	LUST Cleanup Site	1750 West Capitol Ave	West Sacramento
Unocal #5695	LUST Cleanup Site	4825 West Capitol Ave	West Sacramento
Ups	LUST Cleanup Site	1380 Shore St	West Sacramento
Vecta Transportation Systems	LUST Cleanup Site	621 Houston St	West Sacramento
Verona Store	LUST Cleanup Site	6744 Garden Hwy	Sacramento
Washington Unified School District	LUST Cleanup Site	931 Westacre Road	West Sacramento
Wells Cargo Inc	LUST Cleanup Site	617 Houston St	West Sacramento
West Sacramento 76	LUST Cleanup Site	4010 Lake Road	West Sacramento
West Sacramento Cardlock	LUST Cleanup Site	3022 Evergreen Avenue	West Sacramento
Willig Freight Lines	LUST Cleanup Site	850 F St	West Sacramento
Wing Lee Meats	LUST Cleanup Site	3075 West Capitol Ave	West Sacramento
Yuki Pear Farm, Former Site Of	LUST Cleanup Site	7800 Garden Highway	Sacramento

1: Source: California Department of Toxic Substances Control, Envirostor Database, 2021.
2: Source: calepa.ca.gov/sitecleanup/corteselist/, 2021.
3: Source: California Water Resources Control Board Geotracker Database, 2021.

E. Public Facilities

Access and availability of public facilities is an aspect of the built-environment that may disproportionately limit the opportunities of DACs. If DACs have unequal access to public facilities, or if a jurisdiction does not provide adequate facilities for public use, DACs may be limited in their ability to access necessary key resources. Limited access to resources as a result of inadequate public facilities can lead to reduced lifespan, poorer health outcomes, and diminished mental well-being. The adequate planning of parks and transportation infrastructure can ensure that all communities within the County have equal access to resources.

This section summarizes the adequacy of public facilities as they pertain to the DACs.

Public Facility Locations Distribution and Access

Figures 6 and 7 show the locations of the public facilities within the Planning Area and with relationship to the DACs. The content portrayed on each map is as follows:

- Figure 6: Public Services Map – shows the location of transit stations and routes, hospitals, and public safety facilities (police and fire).
- Figure 7: Community Facilities Map – shows the location of city and county government buildings; parks; daycare centers; and libraries, museums, cultural facilities, and grocery stores.

Public Services

The DAC area within the unincorporated portion of the county includes one fire station (Elkhorn). Other nearby public serviced are located within the West Sacramento area and included addition police (Highway Patrol, and Sheriff Facilities) and the West Sacramento fire facilities, (Station 44). Several medical facilities are located approximately 2 miles southeast of the DAC in the City of Sacramento. Figure 6 shows public facilities in close proximity to the Yolo County DAC.

Community Facilities

Community facilities are generally located along the southern boundary of DAC tract and within the City of West Sacramento. Figure 7 shows the location of city and county government buildings; parks; daycare centers; and libraries, museums, cultural facilities, and grocery stores in close proximity to the Yolo County DAC. As shown on Figure 7, the majority of facilities are located within the City of West Sacramento, and the City of Sacramento. Within the unincorporated portions of the DAC area very limited resources and community facilities exist. One park is located within the unincorporated portion of the DAC (Elkhorn Regional Park). Additional information related to parks is included in Section H. (Physical Activity) below.

F. Food Access

Food access encompasses the following three interrelated topics:

- Nutritionally adequate, culturally appropriate, and affordable food;
- Income sufficient to purchase healthy food; and
- Proximity and ability to travel to a food source that offers affordable, nutritionally adequate, and culturally appropriate food.

Ensuring adequate food access is challenging in many communities. Many communities, and especially low-income areas, lack retailers with a sufficient selection of healthy foods. Consequently, many residents lack access to nutritional foods, known as "food insecurity", resulting in public health challenges and poor health outcomes. Affected populations cope with food insecurity by consuming nutrient-poor, but calorie-rich foods. This may result in malnutrition; obesity; cognitive, behavioral, and mental health problems in children; and physical and mental health problems and birth complications among pregnant women. Children and communities of color are often disproportionally affected by food insecurity.

Food Deserts/Access to Food Retailers

The USDA defines "food deserts" as both low-income areas and ones in which more than a third of the population (at the census tract level) lives over a mile from a grocery store/supermarket (10 miles for rural areas). DAC Tract 101.02 is not identified by the USDA as a food desert. The nearest designated food deserts are located immediately north and west of DAC Tract 101.02. Figure 8 shows USDAs designated Food Desert Census Tracts in proximity to the Yolo County DAC (Tract 101.02).

Figure 8 illustrates the Planning Area's supermarket and grocery store locations and census tracts that qualify as food deserts. The map categorizes supermarkets as larger food retailers that serve the community, grocery stores as the range of smaller food retailers that serve individual neighborhoods or cater to specific groups, and food deserts as low-income tracts where a substantial number or share of residents has low access to a supermarket that sells affordable and nutritious food. Community facilities are generally located along the southern boundary of DAC tract and within the City of West Sacramento.

No supermarkets or grocery stores are located in the unincorporated portions of DAC Tract 101.02

The lack of proximate grocery stores has the greatest affect in locations where residences do not own vehicles or have sufficient access to transit. Table 4 lists the number of and percent of households without vehicles within the DAC census tracts. As shown in Table 4 only 2.4% of households within DAC Tract 101.02 are without a vehicle. DAC tracts located within West Sacramento (tracts 102.03, and 101.02) have a much higher proportion of households without access to a vehicle at 12.1% and 8.9% respectively.

TABLE 4: CAR OWNERSHIP

DAC CENSUS TRACTS	% OF HOUSEHOLDS WITHOUT VEHICLES
101.02	**2.4%**
102.03 *	12.1%
101.01 *	8.9%
102.04 *	2.1%

** INCLUDE CENSUS TRACT WITHIN INCORPORATED AREAS OF YOLO COUNTY.*
SOURCE: UNITED STATES CENSUS BUREAU, AMERICAN FACT FINDER, 2019 5 YEAR ESTIMATES. TABLE S0802

USDA Low Income and Low Access Census Tracts

A census tract can be designated as low-income and low-access (LILA) based on various factors. For LILA census tracts, low income (LI) and low access (LA) are measured separately for each census tract.

Low-income (LI) Census Tracts: The USDA LILA criteria for identifying a census tract as low-income are from the U.S. Department of Treasury's New Markets Tax Credit (NMTC) program. This program defines a low-income census tract as any tract where:

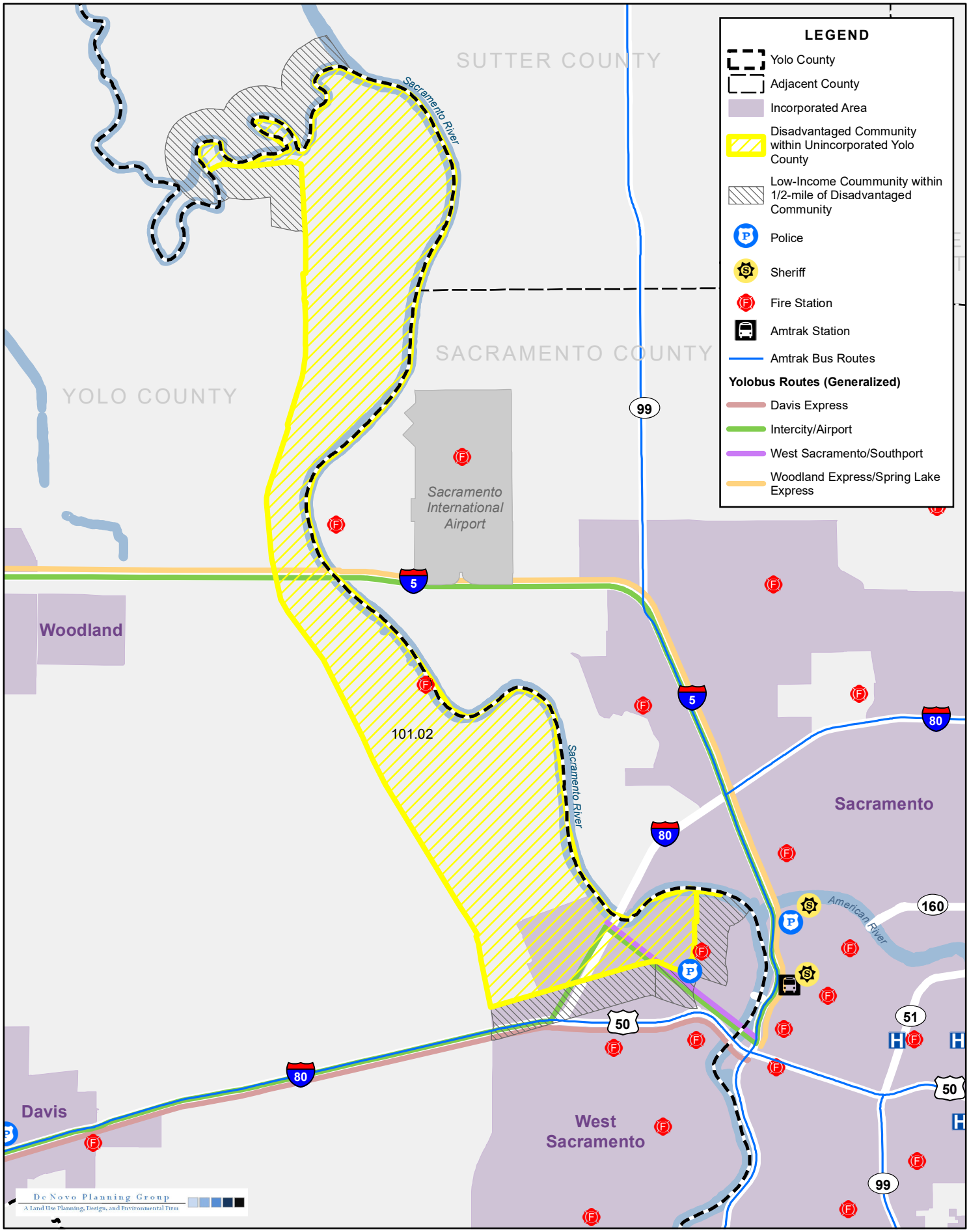
- The tract's poverty rate is 20 percent or greater; or
- The tract's median family income is less than or equal to 80 percent of the State-wide median family income; or
- The tract is in a metropolitan area and has a median family income less than or equal to 80 percent of the metropolitan area's median family income

Low-access (LA) Census Tracts: Low access to food stores is characterized by the number (at least 500) and share (at least 33 percent) of people at different distances from the nearest supermarket, supercenter, or large grocery store, as well as the number of housing units in the area without access to a vehicle and that are more than 0.5 mile from one of these stores. The FARA maps the following LA indicators:

- **LA at 1 mile and 10 miles**: A significant number or share of residents is more than 1 mile (urban) or 10 miles (rural) from the nearest food store; or
- **LA at 0.5 mile and 10 miles**: A significant number or share of residents is more than 0.5 mile (urban) or 10 miles (rural) from the nearest food store; or

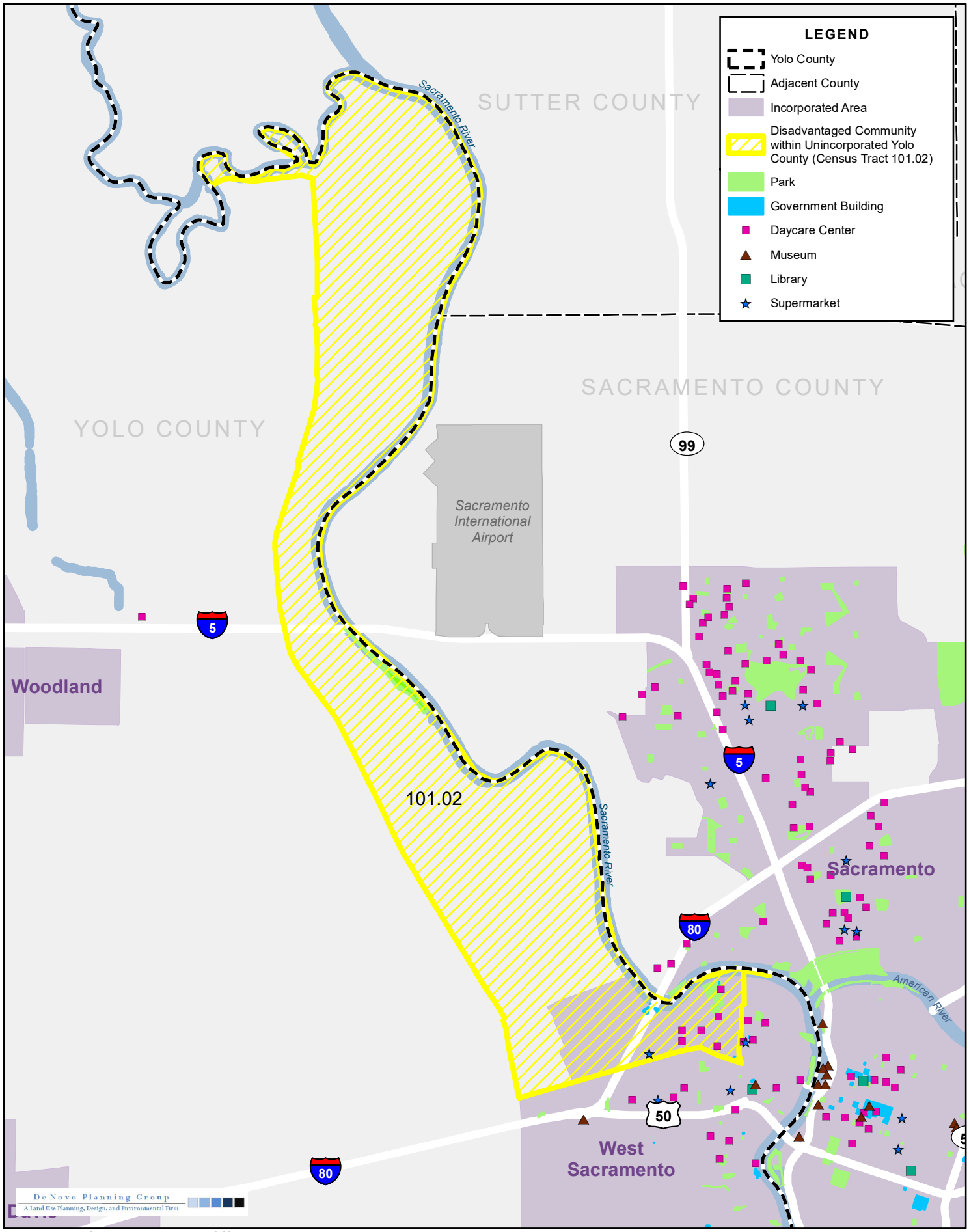
- LA at 1 mile and 20 miles: A significant number or share of residents is more than 1 mile (urban) or 20 miles (rural) from the nearest food store; or
- LA using vehicle access: More than 100 housing units do not have a vehicle and are more than 0.5 mile from the nearest food store, or a significant number or share of residents are more than 20 miles from the nearest food store.

DAC Tract 101.02 is mapped by the USDS Food Access Research Atlas as being within an LI and LA at 0.5 and 10 miles tract, meaning this tract has a significant share of lower income residents more than 10 miles (rural) from the nearest supermarket.



Sources: OEHHA CalEnviroScreen 4.0; Yolo County GIS; Sacramento County GIS; California State Geoportal.
Map date: December 6, 2021.

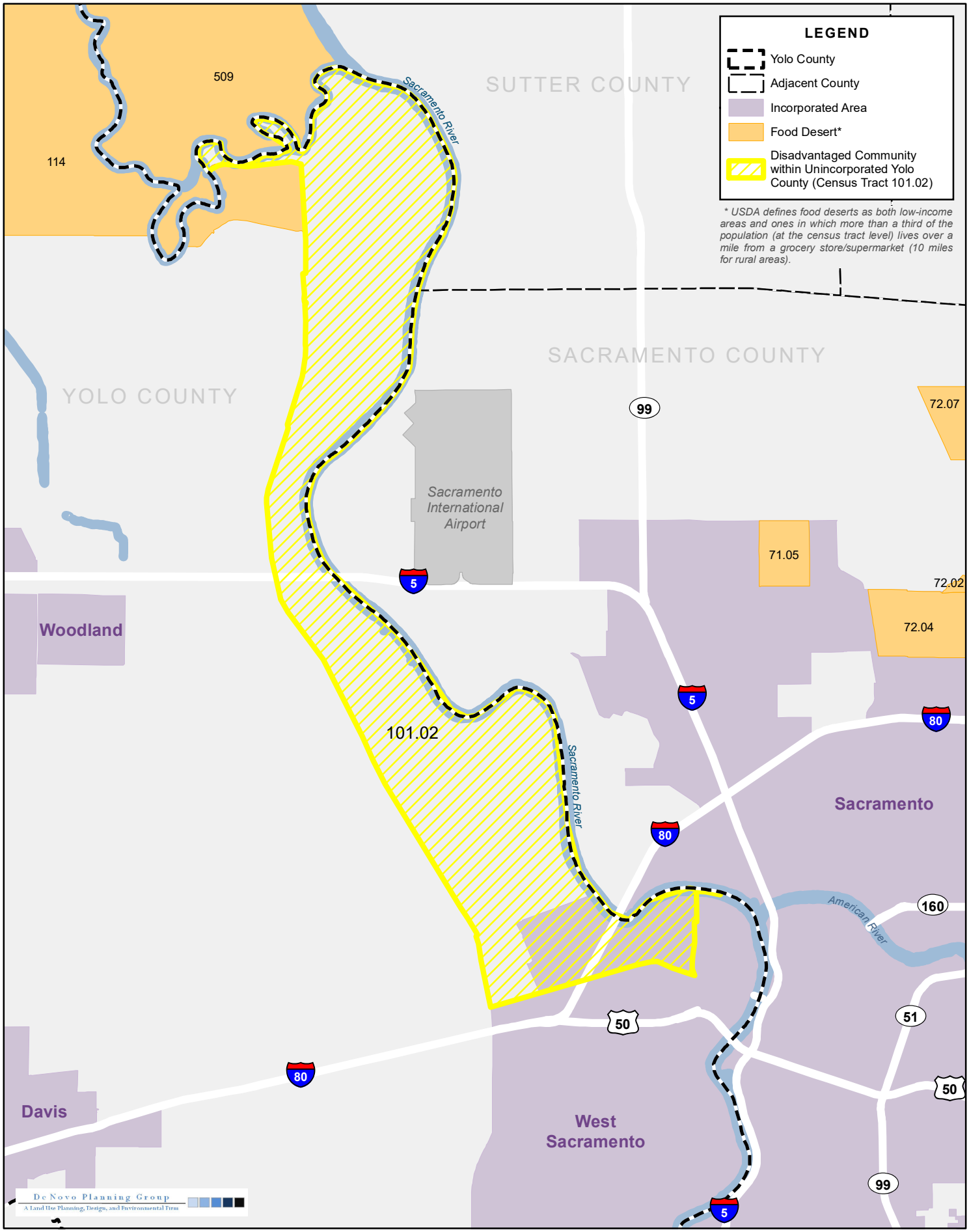
Figure 6: Public Services



Sources: OEHHA CalEnviroScreen 4.0; CDSS MyChildCare.ca.gov; Yolo County GIS; Sacramento County GIS; California State Geoportal. City of Sacramento GIS; City of West Sacramento GIS. Google Maps. Map date: December 9, 2021.

0 1 2
Miles

Figure 7. Community Facilities



Sources: USDA Food Access Research Atlas; OEHHA CalEnviroScreen 4.0; Yolo County GIS; Sacramento County GIS; California State Geoportal.
Map date: December 6, 2021.

Figure 8. Food Deserts

G. Housing Conditions

The condition of the housing stock in a DAC may have negative impacts on the well-being of its residents. These health impacts stem from issues such as poor indoor air quality, toxic building materials, exposure to climate variation such as excess heat or cold, improper ventilation, and structural insecurity. Unsafe housing conditions can be a result of the age of the dwelling structure, which increases the likelihood of incorporation of dangerous materials like lead and asbestos that have significant negative health impacts.[1] DACs often have a larger amount of older units within their housing stock and therefore, residents of these communities are more likely to be exposed to the harmful health impacts that are associated with older housing. Other factors that can contribute to unsafe housing conditions include; improper regulation and overcrowding. Ensuring the safety and sanitation of housing stock within a community ensures that there are proper living conditions for all residents, including those living in DACs.

This section summarizes the existing housing conditions and cost of housing throughout the city. While the conditions apply on a citywide level, they can reasonably be extrapolated to understand housing conditions in the DACs.

Housing Stock Conditions

Housing conditions are considered substandard when conditions are found to be below the minimum standard of living conditions defined in the California Health and Safety Code. Households living in substandard conditions are considered to be in need of housing assistance, even if they are not seeking alternative housing arrangements, due to the threat to health and safety.

In addition to structural deficiencies and standards, the lack of infrastructure and utilities often serves as an indicator for substandard conditions.

Limited data is available from the ACS that can be used to infer the condition of the unincorporated housing stock. The majority of development within DAC Tract 101.02 is within the City of West Sacramento. Minimal development existed within the unincorporated portions of DAC Tract 101.02. Therefore, unincorporated countywide data may provide a more accurate description of housing conditions.

The ACS data identifies whether housing units have complete plumbing and kitchen facilities and whether units lack a source of household heat. Since only a very small percentage of all housing units in unincorporated Yolo County lack complete plumbing facilities or kitchen facilities (see Table 5), these indicators do not reveal any significant needs associated with housing conditions. However, 7.3% of housing units rely on wood fuel or do not have a heating source, which may reveal needs associated with the housing conditions.

[1] SB 1000 Toolkit

TABLE 5: AGE OF UNINCORPORATED YOLO COUNTY HOUSING STOCK & CONDITIONS (2019)

Housing Stock Indicators	Number	Percent
Unincorporated Yolo County		
Occupied Housing Units	**9,027**	**100%**
Built 1970 or earlier	2,161	23.9%
Units Lacking Complete Plumbing Facilities	65	0.7%
Units Lacking Complete Kitchen Facilities	55	0.6%
No house heating fuel or wood fuel only	666	7.3%
No Phone Service Available	100	1.1%
DAC Tract 101.02		
Occupied Housing Units	2,357	100%
Units Lacking Complete Plumbing Facilities	12	0.5
Units Lacking Complete Kitchen Facilities	29	1.2%
No house heating fuel or wood fuel only	64	2,7%
No Phone Service Available	117	5.0%

Source: US Census ACS, 2015-2019

Since housing stock age and condition are generally correlated, an ACS variable that provides an indication of housing conditions is the age of a community's housing stock. Most of the housing units in unincorporated Yolo County (5,598 or 62.0%) were built before 1990 with 23.9% or 2,161 units built before 1970 and 38.1% or 3,437 built between 1970 to 1990. Over 26.5% of Yolo County's housing stock was built after 2000 and another 11.5% was built between 1990 and 1999. These statistics reflect tremendous growth in the area during the 1970s and 1980s. The age of housing stock often indicates the potential for a unit to need rehabilitation or significant maintenance. Most of the unincorporated Yolo County's housing stock is more than 30 years old (approximately 62.0%) and a 23.9% is over 50 years old, meaning these units may need moderate to significant rehabilitation, including replacement or refurbishing of roofs, siding, and windows as well as interior improvements including replacing or upgrading the plumbing and electric wires and outlets.

The housing needs and priorities survey conducted by the County in 2021 addressed housing conditions, desired housing improvements, and housing challenges in the unincorporated areas. Regarding housing conditions, 63% of unincorporated residents indicated their home is in sound condition, 15% indicated their home shows signs of minor deferred maintenance, 15% indicated that their home needs one or more modest rehabilitation improvements, and 7% indicated their home needs one or more major upgrades. When asked to identify desired improvements to their home, 52% of residents identified exterior improvements such as roofing, painting and general home repair, 44% identified heating/air conditioning, solar, and electrical upgrades, 41% identified landscaping, 26% identified a room addition or accessory dwelling unit development, and 15% identified a range of other improvements. When asked about housing challenges, 20% of residents identified that their home is in poor condition and needs repair.

Based on the ACS data regarding housing age and conditions, County staff's understanding of housing conditions, and the input provided during the community outreach component, it is estimated that approximately 20% (1,495 units) of the County's housing stock requires rehabilitation and approximately 3% (225 units) of the County's housing stock is in need of replacement.

Overcrowding

Overcrowding within a housing unit is a primary cause of unsafe housing conditions. The World Health Organization notes that overcrowding is a potential health risk as it contributes to the transmission of disease by creating unsanitary conditions.[2] A housing unit is considered overcrowded if there is more than one person per room and severely overcrowded if there are more than 1.5 persons per room.

According the 2015–2019 American Community Survey, overcrowding in unincorporated Yolo County was 7.0% (575) housing units), compared to 3.6% (898 housing units) in Davis, 5.6% (1,158 housing units) in Woodland, 6.1% (1,142 housing units) in West Sacramento, 9.1% (213 housing units) in Winters, and 5.3% (3,986 housing units) countywide. The State average during this same period was 8.2%. Among renters in unincorporated Yolo County, approximately 12.3% of these housing units (or 461 housing units) were in overcrowded conditions, and approximately 3.3% of these housing units (or 124 housing units) were in severely overcrowded conditions. Among homeowners, approximately 2.5% of these housing units (or 114 housing units) were in overcrowded conditions, and approximately 0.4% of these overcrowded housing units (or 34 housing units) were in severely overcrowded conditions. Table-6 provides information on overcrowded housing in unincorporated Yolo County.

TABLE 6. OVERCROWDED HOUSING IN UNINCORPORATED YOLO COUNTY (2019) – BY % OF UNITS OCCUPIED

	UNITS	PERCENT
Owner Occupied:	4,437	54.2%
0.5 or less occupants per room	3,193	72.0%
0.51 to 1 occupant per room	1,130	25.4%
1.01 to 1.5 occupants per room	80	1.8%
1.51 to 2.0 occupants per room	21	0.5%
2.01 or more occupants per room	13	0.3%
Owner Occupied Overcrowded (1.01+)	**114**	**2.5%**
Owner Occupied Severely Overcrowded (1.5+)	**34**	**0.8%**
Renter Occupied:	**3,749**	**45.8%**
0.5 or less occupants per room	1,345	35.9%
0.51 to 1 occupant per room	1,943	51.8%
1.01 to 1.5 occupants per room	337	9.0%
1.51 to 2.0 occupants per room	112	3.0%
2.01 or more occupants per room	12	0.3%
Renter Occupied Overcrowded	**461**	**12.3%**
Renter Occupied Severely Overcrowded	**124**	**3.3%**
Total Units	8,186	100.0%
Total Overcrowded	**575**	**7.0%**
Total Severely Overcrowded	**158**	**1.9%**
Source: ACS 2015-2019 (Table B25014)		

[2] World Health Organization (WHO). Accessed on September 5, 2018. Water Sanitation and Hygiene. What are the health risks related to overcrowding?". Available at: http://www.who.int/water_sanitation_health/emergencies/qa/emergencies_qa9/en/

Housing Affordability

As what is typically the most expensive component of a household's budget, housing cost (rent or mortgage, utilities, homeowner or renter insurance, and property taxes for homeowners only) is a preeminent factor in determining if the household is "cost burdened" or negatively impacted by its expenses. This consideration takes on even greater importance in California, a place where housing costs far exceed the national average.

A household is considered to be overpaying for housing (or cost burdened) if it spends more than 30% of its gross income on housing. Severe housing cost burden occurs when a household pays more than 50% of its income on housing. The prevalence of overpayment varies significantly by income, tenure, household type, and household size. Approximately, 30.3% of all households in unincorporated Yolo County overpaid for housing. Renters were slightly more likely to overpay than homeowners; 15.5% of renter households paid more than 30% of their income for housing compared to 14.8% of owner households. Of the 2,387 households overpaying for housing in unincorporated Yolo County, 1,221 were renter households, and 1,166 were owner households.

In general, overpayment disproportionately affects lower income households; 63.8% of lower income households (0-80% of AMI) and 83.3% of extremely low income households (0-30% of AMI) - paid more than 30% of their income for housing.

H. Physical Activity

Residents of DACs are often more likely to experience negative health outcomes. Increased physical activity levels are associated with a decreased risk for numerous health conditions and chronic illnesses. The built environment in DACs can often be limited by land use planning and lack of investment, leaving less opportunities for formal and informal physical activity. Increasing the opportunity for physical activity within a community can work to positively impact the physical health of residents living in DACs.

This section summarizes the use of active transportation modes and the state and distribution of pedestrian and bicycle facilities and facilities conducive to physical activity in DACs.

Active Transportation Use

Active transportation is any form of transportation that is non-motorized. The use of active transportation during a daily commute increases physical activity levels, yielding a number of positive health benefits, including mortality risk reduction, disease prevention, cardiorespiratory fitness, and metabolic health. DACs often have disproportionately poorer health outcomes. Increasing opportunities for active transportation within the County can improve the overall health outcomes of DACs.

Data from the 2019 American Community Survey (ACS) were utilized to illustrate journey to work (JTW) statistics for DAC Tract 101.02. Table 7 provides an overview of JTW mode split data. As shown in Table 7, the majority of workers within DAC Tract 101.02 utilize auto transportation with 63.52% driving alone, and 19.01% carpooling, while slightly over 6% utilize active transportation choices (walking and biking).

TABLE 7: COMMUTING TRANSPORTATION MODES

Population	DAC Tract 101.02	
Total Workers	3,257	
Mode Split	**Number**	**%**
Active Transportation Modes		
Walked	156	4.79%
Bicycled	52	1.60%
Powered Transportation Modes		
Drove Alone	2,069	63.52%
Carpooled	619	19.01%
Public Transit	0	0.00%
Taxicab, Motorcycle, or Other Means	50	1.54%
Worked at Home	311	9.55%

SOURCE: AMERICAN COMMUNITY SURVEY B08006 WORKERS BY MEANS OF TRANSPORTATION TO WORK 2019: ACS 5-YEAR ESTIMATES DETAILED TABLES. NOTE THAT THE MAJORITY OF DEVELOPMENT WITHIN CENSUS TRACT 101.02 IS LOCATED WITHIN THE CITY OF WEST SACRAMENTO.

The ACS reports that the majority of workers (64%) living in DAC Tract 101.02 drove to work alone, while approximately 6% used alternative active transportation (walking and biking). Utilizing active transportation is an effective way of engaging in physical exercise and can be a factor in improving community health outcomes in DACs. However, it should be noted that residents within the unincorporated portions of DAC Tract 101.02 would generally be assumed to be car dependent.

Facilities Conducive to Physical Activity

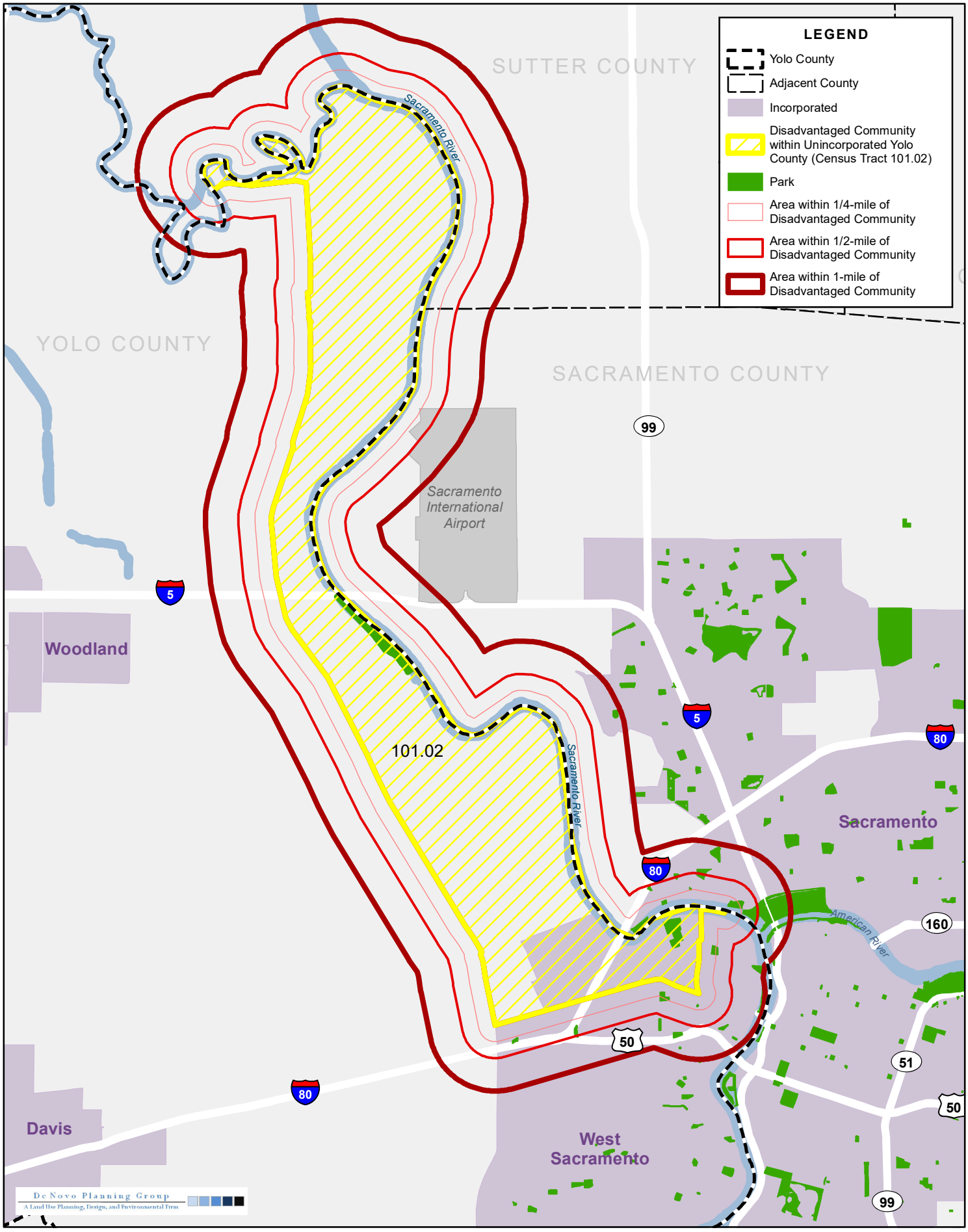
Table 8 lists the parks and their amenities, including facilities for physical activity, and indicates whether the parks are in the DAC (101.02) located within the unincorporated portion of Yolo County. Parks outside of the DAC include identification of a buffer distances of 0.25, 0.5, and 1.0 mile, illustrating the potential for reasonable walking distance to the facilities, as illustrated on Figure 9. Most park facilities are located within the City of Sacramento southeast of the DAC. Due to the geographic area of the DAC and the freeway and river barriers separating most of these facilities from the DAC, most of these facilities within the City of Sacramento would not be considered as walkable. The only park facility located within the DAC area is Elkhorn Regional Park that is located along the Sacramento River and does not generally provide safe access from alternative transportation.

TABLE 8: DAC AREA PARK FACILITIES

District/Area	Park Name	Park Address	Buffer Distance
Yolo County			
Yolo County Regional	Elkhorn Regional Park	18989 Old River Rd	Within DAC-101.02
City of Sacramento			
City of Sacramento	Shorebird Park	3200 Kittiwake Dr	Quarter-Mile
City of Sacramento	Sally Hudson Park	2400 Orchard Ln	Quarter-Mile
City of Sacramento	Natomas Oaks Park	2230 River Plaza Dr	Quarter-Mile
City of Sacramento	Sand Cove Park	2005 Garden Hwy	Quarter-Mile
City of Sacramento	Two Rivers Park	3166 Two Rivers Dr	Half-Mile
City of Sacramento	River Otter Park	2303 Barandas Dr	Half-Mile
City of Sacramento	Orchard Park	2936 W River Dr	Half-Mile
City of Sacramento	Swainson's Hawk Park	150 Lentini Way	One-Mile
City of Sacramento	Tiscornia Park	195 Jibboom Street	One-Mile

District/Area	Park Name	Park Address	Buffer Distance
Yolo County			
City of Sacramento	Barandas Park	2805 Grasslands Dr	One-Mile
City of Sacramento	Robert Matsui Waterfront Park	450 Jibboom St	One-Mile
Sacramento County			
Sacramento County	American River Parkway - Discovery Park	1600 Garden Hwy	Half-Mile
City of West Sacramento			
City of West Sac	River Walk Park	651 2nd Street	One-Mile
City of West Sac	Westifield School Playsite	504 Poplar Avenue	Quarter-Mile
City of West Sac	Elkhorn Park	820 Cummins Way	Quarter-Mile
City of West Sac	Westacre Park	1755 Evergreen Avenue	One-Mile
City of West Sac	Meadowdale Park	3625 West Capitol Avenue	Half-Mile
City of West Sac	Joey Lopes Park		One-Mile
City of West Sac	Jerome D. Barry Park	809 Ballpark Drive	One-Mile
City of West Sac	Roland Hensley Bike Park	4940 West Capitol Avenue	Half-Mile
City of West Sac	Garden Park	564 Garden Street	One-Mile
City of West Sac	Fernwood Pocket Park	725 Todhunter Avenue	One-Mile
City of West Sac	Rotary Centennial Minipark	580 Jefferson Boulevard	Quarter-Mile
City of West Sac	Bryte Park	425 Todhunter Avenue	Within DAC-101.02
City of West Sac	Alyce Norman-Bryte Playfields	725 Todhunter Avenue	Within DAC-101.02

SOURCES: OEHHA CALENVIROSCREEN 4.0; YOLO COUNTY GIS; SACRAMENTO COUNTY GIS; CALIFORNIA STATE GEOPORTAL. MAP DATE: DECEMBER 6, 2021.



Sources: OEHHA CalEnviroScreen 4.0; Yolo County GIS; Sacramento County GIS; California State Geoportal.
Map date: December 9, 2021.

Figure 9. Parks Map

I. Civic Engagement

An important aspect of planning for environmental justice is the development of effective policies and programs that enable all residents to participate in local decision making. DACs can often be excluded from decision-making when officials and policies do not focus on involving these communities in a strategic manner. SB 1000 emphasizes that community engagement must be promoted in a local jurisdiction through the development of objectives and policies that seek to specifically involve residents of DACs. By engaging DACs in decision-making processes, policy-makers can effectively meet the needs of these community members. DACs often have culturally-specific needs, distinct from those of the general population that must be made a priority within local policy to ensure community success. The US EPA Environmental Justice Policy requires the "… meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies." The establishment of appropriate opportunities for those who are low-income, minorities, and linguistically isolated to engage in local decision making will help ensure that environmental justice issues are identified and resolved. In addition, community programs that address the needs of DACs are critical to ensuring environmental justice is achieved for these communities.

This section summarizes the levels of civic engagement, based upon voter registration and turnout, and demographics that may influence civic engagement within DAC.s.

The primary means of measuring a community's level of civic engagement is the assessment of voter participation. This includes the percentage of voting age residents registered to vote and the percentage of registered voters who cast ballots. A summary of both metrics for Yolo County is as follows:

Voter Registration

Yolo County Assessor's office reported 115,340 registered voters as of Sept. 3, 2020. The county is reporting 58,900 registered Democrats, 22,969 registered Republicans, 3,296 registered American Independent and 565 people registered with the Green Party.

This signifies approximately a 5.7% increase in voter registration since the 2018 general election, where data from the Secretary of State shows that there were 109,103 Yolo County registered voters in September of that year.

Demographics That May Influence Civic Engagement

Certain demographic categories can help predict a community's likely level of civic engagement. This section assesses three demographic categories: resident age, language spoken at home, and educational attainment. The assessments are based upon tables that compare the demographic categories at the county, and DAC tract levels.

Resident Age

Age distribution can help predict the likelihood of a community participating in civic activities and identify constraints associated with engaging different members of the community. A disproportionately high percentage of residents under the age of 18 suggests the significant presence of families. Parents of minors are generally busy raising their children, making them less likely to participate in civic activities. Encouraging the use of virtual outreach tools, such as social media and online surveying, and outreach approaches at other community events, such as farmers markets, fairs, and sporting events, can help increase participation among this group. Conversely, a disproportionately high percentage of seniors, a

group that generally has fewer commitments and less time constraints, suggests that the community may participate in conventional civic activities, at a higher rate. Because seniors are less familiar with technology than their younger counterparts, the group is less likely to utilize virtual outreach tools.

As reflected by Table-9, residents living within DAC Tract 101.02 are generally similar when compared to the countywide age distributions. However, DAC Tract 101.02 has approximately 5% additional population under the age of 18 representing a slight increase in families.

TABLE-9: RESIDENT AGE

LOCATION	TOTAL POPULATION	AGE							
		MEDIAN AGE	UNDER 18 YEARS		OVER 18		60 YEARS AND OVER	
			NUMBER	%	NUMBER	%	NUMBER	%
Countywide	217,352	31.0	46,026	21.2%	171,326	78.8%	36,975	17.0%
DAC CENSUS TRACTS								
101.02	7,729	30.9	2,032	26.3%	5,697	73.7%	1,396	18.1%

NOTE: DACS INCLUDE CENSUS TRACT 101.02 A PORTION OF WHICH IS LOCATED WITHIN THE CITY OF WEST SACRAMENTO
SOURCE: UNITED STATES CENSUS BUREAU, AMERICAN FACT FINDER, 2019 ESTIMATES TABLE S0101

Language Access

Language is a critical signifier of a population's likely participation in civic activities. Non-native English speakers, and especially those individuals with limited English fluency, are less likely to participate in civic activities. Translation services are critical to reaching and actively communicating with these individuals. In addition, the metric of households who speak languages other than English can help identify the cultural diversity of a community. Civic activities, and the venues where they take place, can be tailored to accommodate the cultural preferences of individual racial, ethnic, and religious groups.

As identified by Table 10, the census tract DAC, is home to a more than 63 percent of households where the residents speak languages other than English. Of the other household languages spoken, Spanish and various other Indo-European languages are most common.

TABLE 10: LANGUAGES SPOKEN AT HOME

LOCATION	POPULATION 5 YEARS AND OVER	ENGLISH ONLY HOUSEHOLD	OTHER LANGUAGE SPOKEN AT HOME	LANGUAGES SPOKEN OTHER THAN ENGLISH			
				SPANISH	OTHER INDO-EUROPEAN	ASIAN AND PACIFIC ISLANDER	OTHER
		NUMBER	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER
		%	%	%	%	%	%
DAC CENSUS TRACT							
101.02	7224	2655	4569	2240	1897	432	0
		36.8	63.2	31.0	26.3	6.0	0.0%

NOTE: DACS INCLUDE LANDS WITHIN THE INCORPORATED PORTIONS OF WEST SACRAMENTO
SOURCE: UNITED STATES CENSUS BUREAU, AMERICAN FACT FINDER, 2019 ESTIMATES. Table *S1601 (LANGUAGE SPOKEN AT HOME)*

Educational Attainment

Educational attainment is a strong signifier of a population's likely participation in civic activities. Higher educational attainment generally correlates with increased civic participation. This is reflective of individuals with less educational attainment experiencing underemployment circumstances, such as working for less than a living wage and/or on a part-time basis. This may require individuals to seek out additional employment, reducing the time that they can commit to civic activities. In addition, individuals

with lower educational attainment generally make less money. Those individuals who cannot afford to own or otherwise have limited access to an automobile, may be unable to attend civic events. This may also be reflective of individuals with less educational attainment lacking the sufficient literacy level and/or a formal education in civics and government to feel comfortable participating in civic matters.

Based upon Table-11, residents within the DAC census tract (101.02) educational attainment levels are significantly lower than on the countywide level. On average, a significantly higher percentage of residents completed high school or graduated from high school or attained some post-secondary education countywide. Of the DAC residents, those that did not complete high school account for 15.3 percent of residents 25 and over. Only 12.4 % of DAC residents have a bachelor's degree, or higher, compared to 41.4% countywide.

TABLE-11: EDUCATIONAL ATTAINMENT

LOCATION	TOTAL POPULATION (25+ YEARS)	LESS THAN A HIGH SCHOOL GRADUATE		HIGH SCHOOL GRADUATE (OR EQUIVALENT)		SOME COLLEGE OR ASSOCIATE DEGREE		BACHELOR'S DEGREE OR HIGHER	
		NUMBER	#	NUMBER	#	NUMBER	#	NUMBER	#
Countywide	127,586	8,393	6.6%	23,086	18.1%	34,470	27.0 %	5,2851	41.4 %
DAC CENSUS TRACT									
101.02	4,824	740	15.3	1,190	24.7	1,553	32.2	596	12.4

NOTE: DACS INCLUDE A PORTION CENSUS TRACT 101.02.

SOURCE: UNITED STATES CENSUS BUREAU, AMERICAN FACT FINDER, 2019 ESTIMATES. Table *S1501 (EDUCATIONAL ATTAINMENT)*

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