Background Report

City of Fowler **General Plan Update**

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1. INTRODUCTION

California law requires that each county and city in the state develop and adopt a general plan. The general plan typically provides both an assessment of community needs and a statement of development policy, including diagrams and text setting forth community values, guiding principles, objectives, standards, and specific policy or program proposals. It is a comprehensive long-term plan for managing the physical development of the community. In this sense, it is a "blueprint" for the future.

PURPOSE

The Background Report (Report) provides a snapshot in time of the City of Fowler's existing conditions. Its purpose as a reporting document is to inform community members, City staff, and elected officials of the baseline conditions in the City of Fowler and the surrounding planning area. This Report provides useful information for future environmental analysis and informs the policies in the 2040 Fowler General Plan. The data and information in the Report are generally current as of 2019.

REPORT ORGANIZATION

This Report is organized by topic to generally align with the chapters of the General Plan. Some topics have been combined where common themes or issues exist. Analysis in each chapter is communicated through text, tables, diagrams, and maps. The chapters of this Report include:

Chapter 1: Introduction. Provides an overview of the Report's organization.

Chapter 2: The 2040 General Plan. Describes the General Plan update process and provides an overview of the Planning Area, Sphere of Influence, expansion areas, and City Limits. This information provides context for the extent of the data covered in subsequent chapters.

Chapter 3: Land Use. Discusses historic and projected population growth, existing land uses within the Planning Area as of 2019, and the presence of disadvantaged communities.

Chapter 4: Transportation and Mobility. Provides an overview of the City's roadway system, commute patterns and trends, and alternative modes of transportation.

Chapter 5: Open Space and Conservation. Describes Fowler's existing landscape, the use of existing parks and open space, air quality, and natural resources including biological and cultural resources.

Chapter 6: Public Facilities and Services. Addresses public facilities and services including education, library, law enforcement, fire protection and emergency response, landscape and lighting districts, water, wastewater, stormwater, and solid waste.

Chapter 7: Hazards and Safety. Discusses the potential for geologic and seismic issues, flooding, hazardous materials and contaminated sites, noise, and climate adaption.

Chapter 8: Economic Development. Provides a high-level overview of current conditions contributing to economic development within the Planning Area.

Appendices. The appendices of this Report are supplementary material that may be helpful in providing a more comprehensive understanding of the topics discussed above and include:

Appendix A: Special Status Species

Appendix B: California Air Resources Board (CARB) Air Quality Attainment Standards

Appendix C: Contaminated Sites Cleanup Status

Appendix D: Noise Regulations

2. THE 2040 FOWLER GENERAL PLAN

The City of Fowler incorporated in 1908 and adopted its first comprehensive General Plan in 1976. In 2004, the City updated the Land Use and Circulation elements and added an Economic Development chapter. These changes were the first updates to the General Plan document since its adoption in 1976.

The Housing Element of the Fowler General Plan was more recently adopted in April of 2016, as required by the Government Code. It was updated as part of a coordinated effort with Fresno County and 12 of the 15 cities in Fresno County. The Multi-Jurisdictional Housing Element created a regional plan for addressing the housing needs of Fresno County. The 2040 City of Fowler General Plan (Fowler General Plan) incorporates the adopted Multi-Jurisdictional Housing Element by reference.

While certain chapters have been revised or added, the City has not completed a comprehensive update of its General Plan since original adoption. Additionally, new laws affecting General Plans have been passed, new social and environmental issues have emerged, and new planning strategies and practices have been developed.

The Fowler General Plan looks ahead to the year 2040, making adjustments to policies and land uses based on current issues and emergent trends. The update also brings the General Plan into compliance with new laws related to environmental justice, complete streets, flood and fire protection, and climate adaptation. The Fowler General Plan comprehensively assesses current conditions and allows today's residents to express a vision for the future.

PLANNING BOUNDARIES

This section describes the major political and geographic boundaries that influence the long-term growth and development of Fowler.

The Planning Area

The General Plan addresses all lands located within the City limits and an area beyond the City that, in the City's judgment, bears relation to its planning efforts. This entire area is referred to as the General Plan Planning Area and encompasses approximately 5,690 acres, or roughly nine square miles, inclusive of public rights-of-way. The Planning Area includes the existing City limits, the Sphere of Influence (SOI), and approximately 1,195 acres beyond the SOI for a potential expansion area, as illustrated in Figure 2-1: Planning Boundaries. The Planning Area includes the area into which the SOI and, subsequently, the incorporated City boundaries may eventually expand, subject to approval by the Fresno Local Agency Formation Commission (Fresno LAFCo). Fowler has an interest in guiding land use and circulation decisions within the Planning Area because of the impacts that decisions made for these lands may have on quality of life in the City.

The boundary of the Planning Area is determined in accordance with State law requiring each city to include in its General Plan all territory within the boundaries of the incorporated area as well as "any land outside

its boundaries which in the planning agency's judgement bears relation to its planning" (California Government Code Section 65300).

The General Plan includes goals and policies for the area within the incorporated boundaries of the City of Fowler. In addition, the General Plan can set policy for the City's SOI and a broader Planning Area in case of future annexation and to help coordinate long-term development policy with adjacent jurisdictions.

Expansion Areas

The potential expansion area includes the approximately 1,195 acres located beyond the existing SOI for the City of Fowler. This area has been included in the Planning Area as it represents land outside the existing City limits and SOI boundaries which, in the City's judgement, bears relation to its planning efforts. The expansion area is comprised of three sections of land, as shown on **Figure 2-1: Planning Boundaries.**

The northwestern expansion area would extend the City's potential for expansion west to Minnewawa and Kenneth Avenues, respectively. This expansion area would capture the SR 99 and Clovis Avenue interchange in a more effective way than the current SOI boundary does.

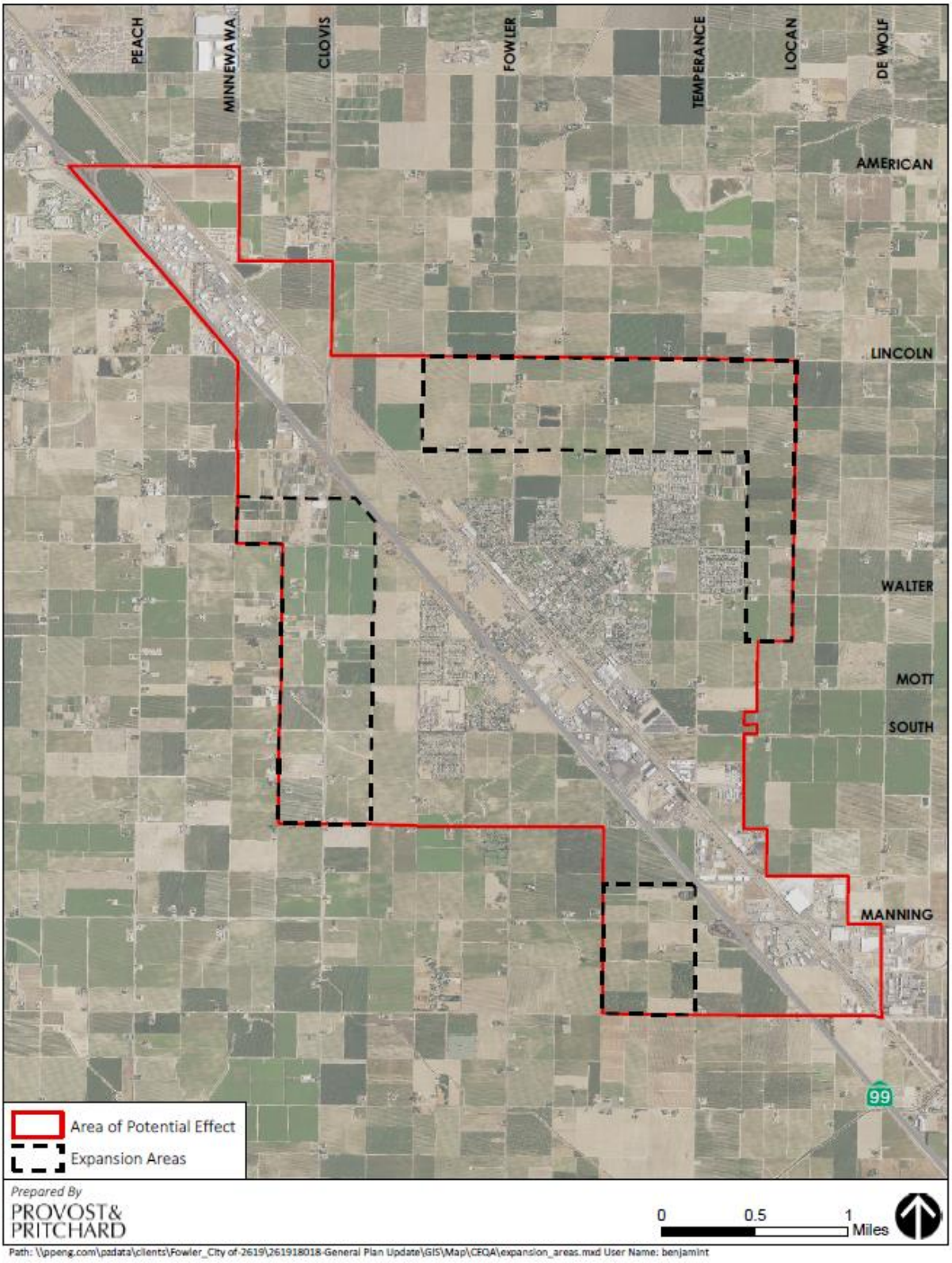
The southern expansion area proposes to expand the City's potential for expansion to Temperance and Manning Avenue south to Springfield Avenue and connecting back to SR 99 squaring off the southern boundary of the City and, again, taking advantage of the SR 99 and Manning Avenue interchange and entrance into the southern portion of the City.

The northeastern expansion area proposes to expand the City's potential for expansion to Lincoln on the north and Locan on the east.

Sphere of Influence

A Sphere of Influence (SOI) indicates an area of service provision and likely annexation by the city, although it is typically outside of the city limits and usually made up of unincorporated land administered by a county. The purpose of a SOI is to prevent overlapping jurisdictions and duplication of services, and thereby ensure the efficient provision of services while discouraging urban sprawl and the premature conversion of agricultural and open space lands. Local Agency Formation Commissions (LAFCos) determine SOIs for all local governmental agencies and are required to review the boundaries every five years. Fowler applies for SOI changes to the Fresno LAFCo

Figure 2-1: Planning Boundaries



3. LAND USE

The purpose of this chapter is to briefly describe the historical and existing development patterns in the City of Fowler, as well as basic trends in development. This chapter will also briefly describe the regulatory context, including the zoning ordinance that is in place today (as of 2019).

GROWTH TRENDS

Historical Growth

The origins of Fowler can be traced to 1872 with the opening of a railroad switch yard, known as the Fowler switch. At the time, the Central Pacific Railroad was in the process of expanding southeast of Fresno. Prominent State Senator, Thomas Fowler, used his influence to build a siding[1] to his and other ranches for the purpose of shipping cattle. A post office was soon built at the Fowler switch, marking the beginning of community growth and development.

The area around Fowler was used primarily for grazing until the introduction of irrigation in the 1880s. With a steady water supply, wheat farming was introduced. A short time later, grape vineyards and raisin processing were introduced. In 1889, the Fowler Fruit and Raisin Packing Company was built, establishing Fowler as a major raisin and dried fruit processing center.[2] The City was incorporated in 1908.

As of 2004, Fowler had approximately 1,445 homes and the population had increased from 2,245 in 1974,[3] to 4,100 in 2004,[4] nearly doubling in size over 30 years. Since 2004, Fowler has experienced continued growth in the form of new dwelling unit production at an average annual rate of 2.4 percent, according to building permits issued by the City. As of 2019, Fowler's City limits are mostly built out or have been approved for future development. As of January 1, 2019, the City contained 2,061 housing units and 6,605 residents.[5]

Projected Growth

The City has grown at a slower rate than surrounding cities over the past decade and is expected to maintain a 2-3% growth rate over the planning period. This would be consistent with overall Fresno County growth. At a 2% growth rate, the population of the City would increase from 4,100 in 2004 to approximately 6,214 and 8,364 in 2025 and 2040, respectively. At 3%, the population would increase to 7,707 and 11,883 in 2025 and 2040, respectively.[6]

[1] Rail siding is a railroad term used to describe a section of track off the main line where rail cars are sometimes dropped or exchanged.
[2] 1974 Fowler General Plan. Page 9.
[3] Ibid.
[4] (City of Fowler, 2004, p. 4)
[5] Department of Finance, E-5: City/County Population and Housing Estimates, 1/1/2019
[6] The 2-3% growth rate is based on City of Fowler growth data tracking dwelling units added annually. California Department of Finance estimates a 1.46% growth rate for the City of Fowler, which would increase to a population of 7,041 in 2025 and a population of 8,751 in 2040.

Growth Management

As part of the 2004 update to the 2025 General Plan, the City established growth management policies that established limits to urban growth. The intent of these policies was to maintain Fowler as a freestanding city surrounded by agricultural land and maintain quality of life within the community. Implementation of these Plan policies included the adoption of a Growth Management Ordinance in June 2004.

The Growth Management Ordinance set growth objectives for the City, limited growth rates to certain percentages per year, and set limits on growth rates averaged over five-year periods. This ordinance was implemented until the passing of SB 330, the Housing Crisis Act of 2019, which prohibits a city or county from enacting development policies, standards, or conditions that could result in building moratoriums or permit caps. The ordinance did not comply with the intent of SB 330, and enforcement was suspended in February 2020.

While the Ordinance was enforced, annual reports were prepared to help monitor growth rates. This was done through the tracking of building permits. At no time did Fowler's growth rate exceed the limits established by the Ordinance.

In order to meet the requirements of SB33, policies in the 2040 General Plan have been revised to guide development through the use of urban growth tier boundaries, which focus urban growth to certain areas of the City without the potential use of permit caps or building moratoriums.

EXISTING LAND USE

Existing land uses represent the uses that are currently occupying a property. These uses are distinguished from the zoning district or planned land use for a property, as often, the existing use on-site differs from what may be allowed for new development on a property. **Table 3-1** shows the breakdown of the existing land uses within the City limits, SOI, Expansion Area, and total Planning Area. Residential uses make up the largest category of uses in the City limits, with nearly 31 percent, followed by vacant lands at 22 percent. Agricultural uses make up a significant portion of both the SOI and Expansion Area, at 84.2 percent and 89.7 percent, respectively. The distribution of the existing land uses is shown in **Figure 3-1** through **Figure 3-4**.

Table 3-1: Existing Land Uses

Existing Land Use	City Limits Acres (%)	Sphere of Influence[a] Acres (%)	Expansion Area[b] Acres (%)	Planning Area[c] Acres (%)
Residential Uses	**378.1 (30.8%)**	**46.1 (1.8%)**	**17.7 (2.8%)**	**441.9 (9.9%)**
1 Unit	334.9	41.6	17.8	394.35
2-4 Units	14.2	4.0	5.0	23.2
5+ Units	24.0	0.5	-	24.5
Manufactured Home Park	5.0	-	-	5.0
Commercial and Office Uses	**69.1 (5.6%)**	**29.6 (1.1%)**	**23.9 (3.8%)**	**122.6 (2.7%)**
Commercial	3.5	-	-	3.5
Day Care	8.0	5.2	-	13.2
Food Store	0.3	-	-	0.3
Fraternal Lodge	18.8	-	-	18.8
Funeral Home	1.0	-	-	1.0
Garage	0.4	1.4	-	1.9
General Office	8.7	3.2	5.1	17.0
Medical-Dental Office	4.9	5.7	-	10.7
Motel	5.1	-	-	5.1
Parking Lot	5.3	-	-	5.3
Plant Nursery	1.6	1.1	-	2.7
Restaurant	-	13.0	18.8	31.8
Service Station	8.5	-	-	8.5
Used Car Lot	1.9	-	-	1.9
Industrial Uses	**223.7 (18.2%)**	**197.1 (7.6%)**	**0.0 (0%)**	**420.8 (9.4%)**
Cold Storage	8.5	-	-	8.5
Factory	12.2	-	-	12.2
Freight Truck Terminal	4.2	-	-	4.2
Light Industrial Facility	32.7	44.2	-	76.9
Packing House	45.3	9.5	-	54.8
Warehouse	120.8	143.4	-	264.2
Public/Quasi-Public and Institutional Uses	**191.3 (15.6%)**	**29.9 (1.2%)**	**0.0 (0%)**	**221.2 (5%)**
Church	18.4	-	-	18.4
Government	1.7	-	-	1.7
Health Facility	2.4	-	-	2.4
Library	0.7	-	-	0.7
Oil, Gas	4.6	-	-	4.6
Park	8.0	-	-	8.0
Ponding Basin	24.1	22.1	-	46.2
Railroad	27.8	7.8	-	35.6
School	85.7	-	-	85.7
Solar	15.8	-	-	15.8
Utility	2.2	-	-	2.2
Agriculture	**96.7 (7.9%)**	**2185.4 (84.2%)**	**567.2 (89.7%)**	**2849.4 (63.9%)**
Agricultural crops	96.7	2185.4	1,075.2	3,357.0
Vacant and Right-of-Way	**270.2 (22%)**	**108.1 (4.2%)**	**23.8 (3.8%)**	**402.1 (9%)**
Vacant	208.8	36.2	23.8	268.8
Vacant – Minor Improvements	42.6	49.0	-	91.6
Right-of-Way	18.7	22.9	-	41.6
TOTAL	1229.0	2596.3	632.6	4457.8

[a] *Includes acreage in the Sphere of Influence (SOI) boundary, exclusive of acreage in the City limits.*

[b] *Includes acreage in the Expansion Area, exclusive of acreage in the City limits and SOI.*

[c] *Includes acreage in City limits, SOI, and Expansion Area*

Figure 3-1: Existing Land Uses Index Code

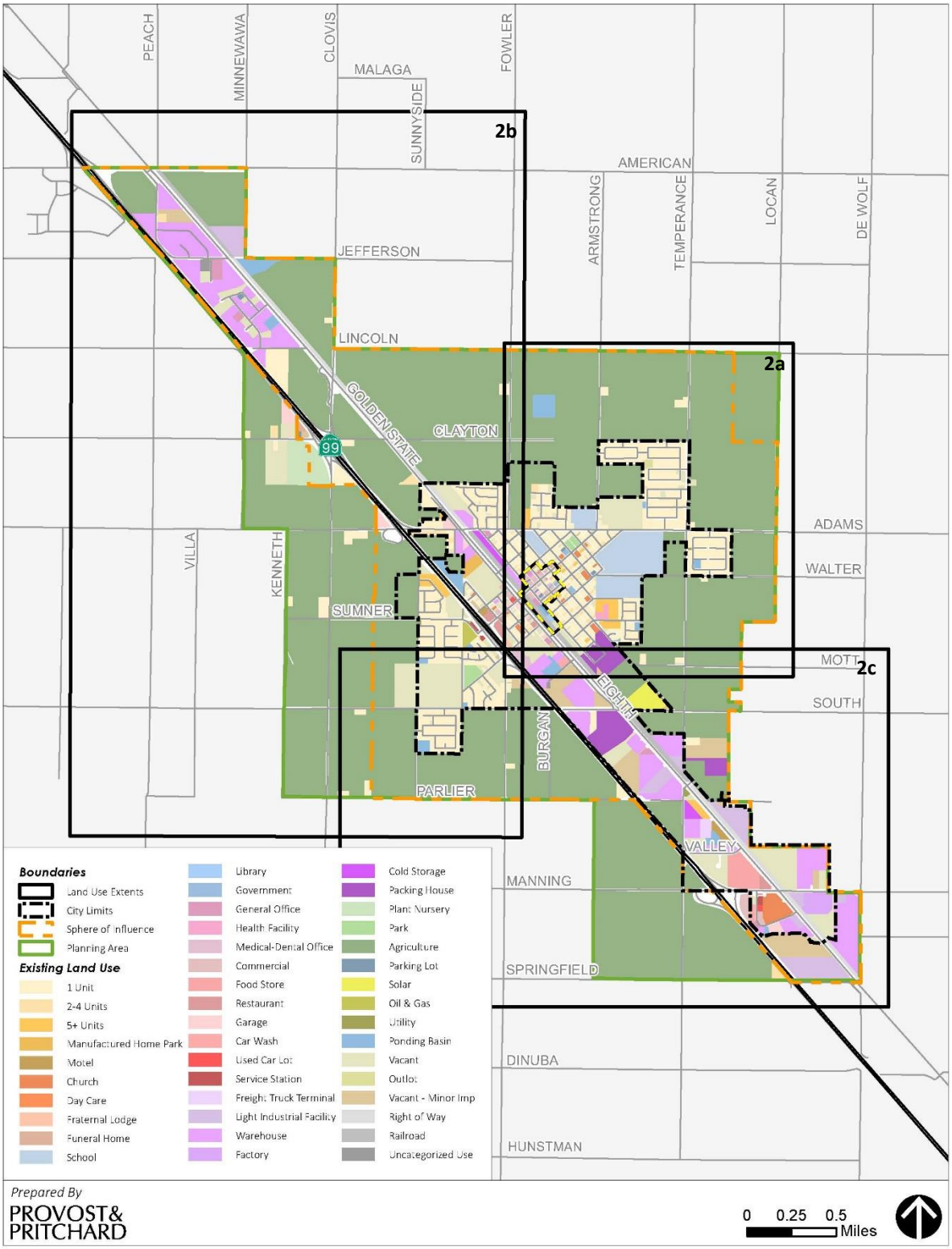


Figure 3-2: Existing Land Uses Northeast

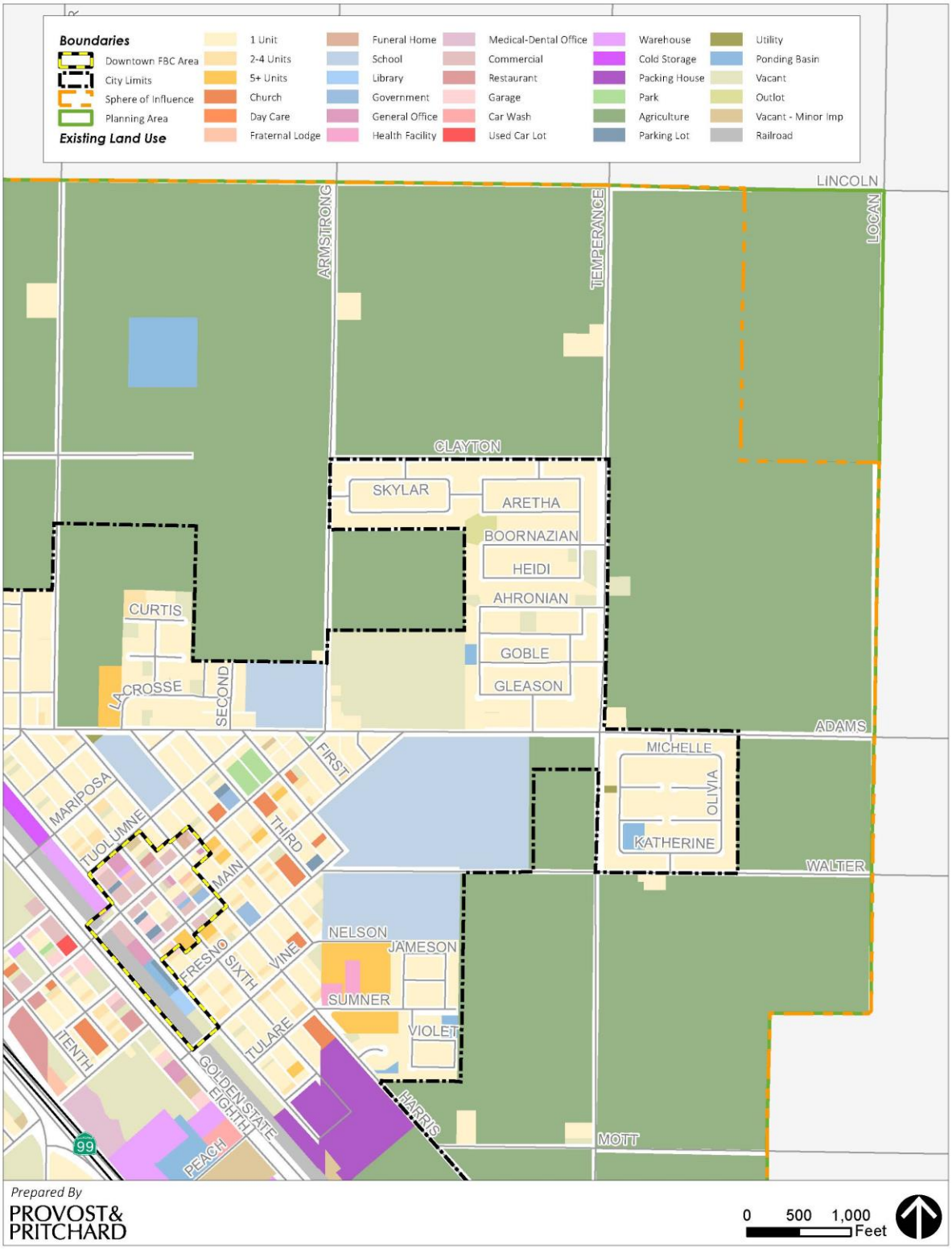


Figure 3-3: Existing Land Uses Northwest

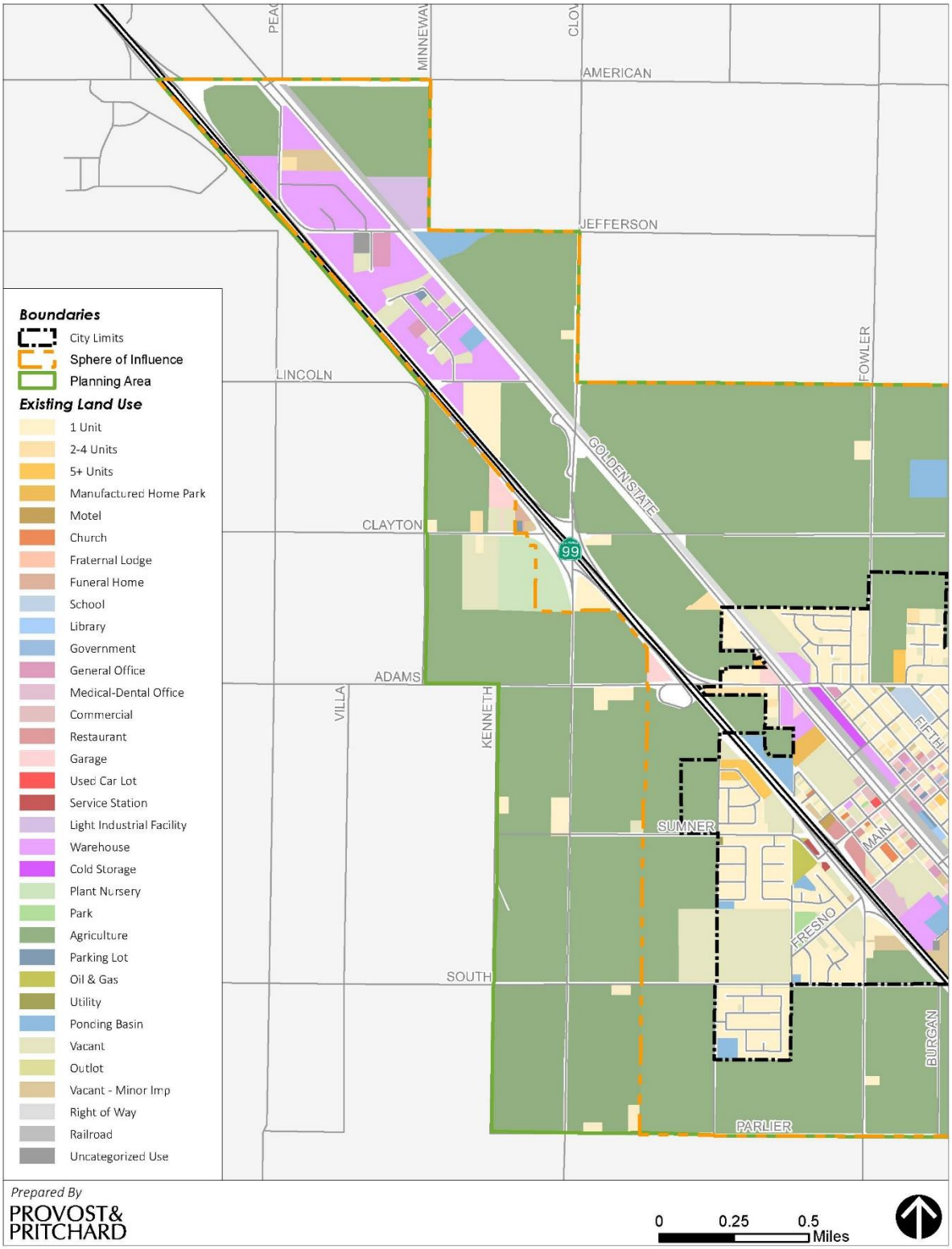
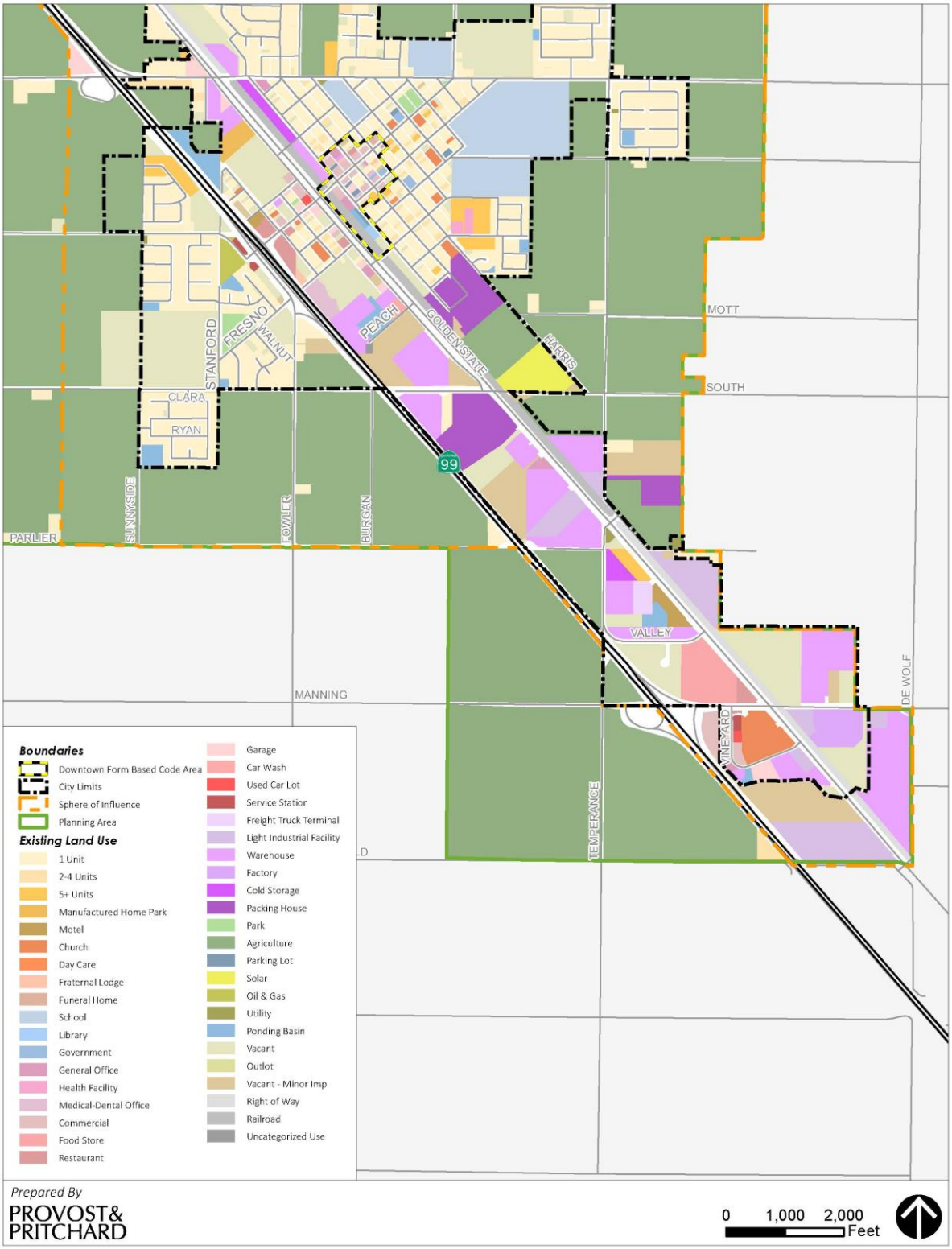


Figure 3-4: Existing Land Uses South



DISADVANTAGED COMMUNITIES

Environmental Justice (SB 1000)

Senate Bill (SB) 1000, also known as the *Planning for Healthy Communities Act*, was signed into law on September 24th, 2016. The purpose of this law is to create healthier cities and counties by protecting sensitive land uses and prioritizing the needs of disadvantaged communities (DACs). This law defines disadvantaged communities as "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."

As a result of this law, cities and counties must identify DACs within the planning area, and if present, must adopt an environmental justice element, or integrate environmental justice policies, into their general plans. These policies must work to reduce unique or compounded health risks in DACs by addressing the following:

- *Pollution exposure and air quality,*
- *Access to public facilities,*
- *Access to healthy food,*
- *Access to safe and sanitary homes,*
- *Access to spaces for physical activity,*
- *Community engagement, and*
- *Program improvements to identify and reverse systemic funding inequities for disadvantaged communities.*

The primary screening tool used to identify disadvantaged communities is CalEnviroScreen. CalEnviroScreen is a mapping tool maintained by CalEPA that identifies DACs by census tract. Scores are assigned to each census tract based on 20 different statewide indicators which are shown to significantly impact health or influence vulnerability to disease, including pollution exposures, environmental effects, sensitive populations, and socioeconomic factors.[7] Using the scores calculated through the CalEnviroScreen tool, all census tracts are ordered from highest to lowest and assigned a percentile rank. The percentile ranking for each census tract demonstrates the tract's degree of burdens relative to the rest of the state's census tracts. Areas with higher percentages experience a higher pollution burden than areas with lower percentages. A search of the CalEnviroScreen tool indicates that most of the City and Planning Area fall within the 91-100% category with the remaining area falling within the 81-90% category. Based on these results, environmental justice policies have been integrated into the Fowler General Plan. Additional research and data collection beyond the CalEnviroscreen search has been conducted to identify conditions unique to Fowler which could not be easily identified at the census tract level. For more detailed information, see the City of Fowler's *Environmental Justice Policy Paper.*

[7] (California Environmental Justice Alliance, 2018)

Disadvantaged Unincorporated Communities (SB 244)

Senate Bill (SB) 244 was passed in 2011, with the purpose of addressing the complex legal, financial, and political barriers that contribute to regional inequity and infrastructure deficits within disadvantaged unincorporated communities (DUCs). SB 244 requires cities and counties to identify and include DUCs in their long-range planning efforts. DUCs are defined by statute as meeting all the following criteria:

- Contains 10 or more dwelling units in close proximity to one another;
- Is either within city sphere of influence ("fringe community"), is an island within a city boundary ("island community"), or is geographically isolated and has existed for more than 50 years ("legacy community"); and
- Has a median household income that is 80 percent or less than the statewide median household income.

In 2020, the Fresno Local Agency Formation Commission (LAFCo) mapped DUCs in Fresno County using similar criteria.[8] At the time, a median household income of less than $48,706 was the threshold for identifying a DUC. As of the completion of this mapping effort, there were no DUCs identified within the City of Fowler or the Planning Area.

MILITARY COMPATIBILITY

California jurisdictions are required to consult with the United States Military if planned land uses could interfere with military operations. A search of the California Military Land Use Compatibility Analyst (CMLUCA), a mapping tool developed by OPR that local governments and developers can use to identify whether proposed planning projects are located in the vicinity of military bases, military training areas, or military airspace was conducted on November 19, 2021. This mapping tool confirmed that the Planning Area does not fall within military air space, training areas, or bases. There are also no military airports within the Planning Area.

[8] DUCs mapped by Fresno LAFCo included inhabited territory (meaning 12 or more registered voters) that constitutes all or a portion of a community with an annual median household income (MHI) that is less than 80 percent of the statewide annual MHI. In 2013, Fresno LAFCo updated this definition to refer to areas with at least 15 dwelling units at a density of not less than one unit per acre.

4. TRANSPORTATION AND MOBILITY

A city's circulation network provides for the movement of people, goods, energy, and other resources throughout its community. This network is heavily correlated with existing and planned land uses. The two planning efforts work together to create a system of places and linkages which form the identity and framework of the community overall, with each one informing and shaping the other.

When analyzing a city's transportation system, it is important to take inventory not just of physical infrastructure and its capacity, but also how the system serves the community in which it operates. This concept is often thought of as mobility. While the term transportation can be easily associated with infrastructure and physical accommodations for travel, mobility is often described as the ability to move freely and easily through the built environment. An abundance of physical connection points, bike lanes, sidewalks, public transportation routes, as well as transit availability and frequency are all aspects of a transportation system which enhances mobility. Together, features of transportation and mobility form a circulation network which affects a community's physical, social, and economic environment, as well as its health.

This chapter describes the current state of Fowler's local transportation and mobility network, including facilities, linkages to regional transit routes, and access to rail and air transportation services. An inventory of these elements will provide an important perspective when performing future analysis as part of the General Plan Update.

TRAVEL/COMMUTE PATTERNS AND TRENDS

In order to provide a relevant perspective on Fowler's circulation network, it is important to understand travel and commute patterns taking place in the community. The commuting characteristics summarized below have been provided by the United States Census Bureau's American Community Survey 2019 5-Year Estimates. Topics covered include journey to work statistics such as commute times and method of travel.

Journey to Work

Where people work, how they get there, and how long it takes are valuable statistics when planning for infrastructure improvements, transportation services, and mobility enhancements. Journey to work statistics inform the needs for services which serve disabled populations, bicycle commuters, carpools and rideshare participants, and other public transit users. This information is also useful in planning efforts which focus on improving public health. For example, long commute times have been linked to obesity rates as well as higher amounts of pollution and poor air quality. [9]

In Fowler, personal automobile use is by far the dominant mode of transportation to work, with almost 90 percent of workers traveling by either car, truck, or van. Approximately 81 percent of automobile users drove alone to work, while 9 percent participated in carpools. Approximately 2.1 percent of workers either walked or traveled by bicycle, while 4.5 percent of the workforce works from home. There was zero

[9] (Mammoser, 2019)

utilization of public transit as a means of travel to work. An overview of this information is provided in **Figure 4-1** below.

Most workers' commute times measure fewer than 30 minutes, accounting for approximately 77 percent of all work trips. Approximately six percent of all commutes lasted between 45 and 60 minutes. **Figure 4-2** provides a more in-depth overview of commute times for workers aged 16 years or over who did not work at home.

Figure 4-1: Means of Transportation to Work (Workers Age 16 or Older), 2019[10]

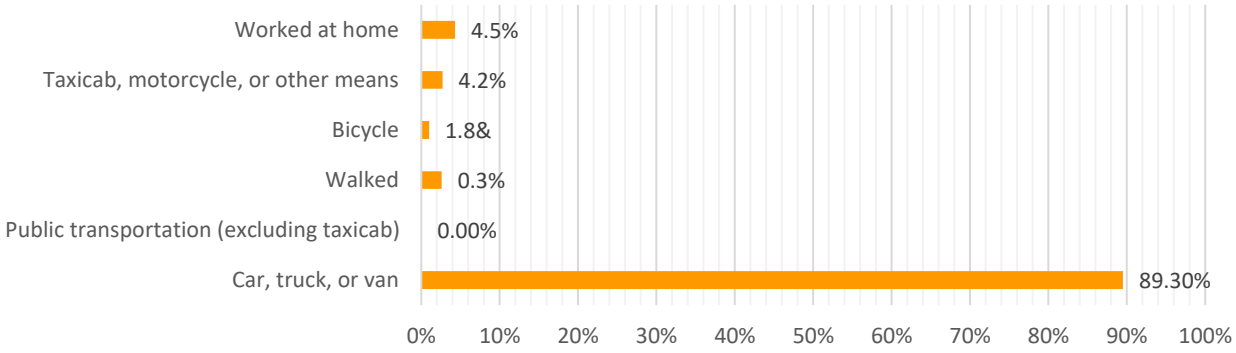
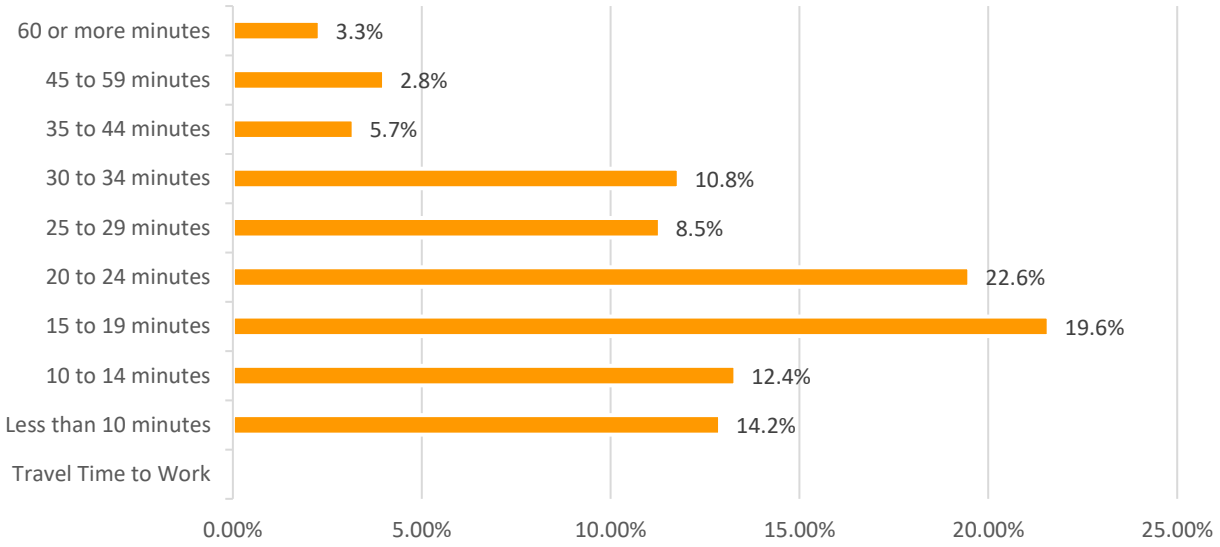


Figure 4-2: Travel Time to Work (Workers Age 16 or Older), 2019[11]



[10] (Bureau, 2019)
[11] (Bureau, 2019)

EXISTING MAJOR ROADWAYS

The roadway system within the Fowler planning area includes State Route (SR) 99 as well as numerous City and County route. The 2025 Fowler General Plan has established a hierarchy of roads, also known as a functional classification system, which groups streets into categories by service provided. There are five classifications established in the 2025 General Plan, as follows:

- ***Freeways***. Freeways carry regional traffic through the community with access only at major street interchanges.
- ***Expressways.*** Expressways connect regional destinations on the non-freeway system and generally pass through several jurisdictions. Traffic carrying capacity is maintained through access control at two-mile intervals.
- ***Arterials.*** Arterials serve as the principal network for cross-town traffic flow. They connect areas of major traffic generation within the urban area and link important county roads with state highways. They also provide for the distribution and collection of through traffic to and from collector and local streets.
- ***Collectors.*** Collectors provide for traffic movement between arterial and local streets, traffic movement within and between neighborhoods and major activity centers, and limited direct access to abutting properties.
- ***Local Streets.*** Local streets provide direct access to abutting properties and for localized traffic movements within residential, commercial, and industrial areas.

The Fowler General Plan designates Fowler's roadways according to this system and provides measurements for recommended rights of way. **Figure 4-3** shows the location of the major roadways in the City, while Table 4-1 provides a description and summary of those roadways.

Access

State Route 99 is the major regional transportation route into and out of the City. There are three exits from SR 99 that provide access directly into the City, including:

- Adams Avenue,
- Manning Avenue, and
- Merced Street.

Other notable entrances into Fowler include:

- North Fowler Avenue,
- South Fowler Avenue,
- South Temperance Avenue,
- Golden State Boulevard, and
- East South Avenue.

An overview of SR 99 and how it interacts with the City of Fowler can be seen in **Figure 4-4.**

Connectivity

While Fowler's position along SR 99 provides easy access to northern and southern California, it also acts as a dominant physical barrier, separating the east and west sides of the City. Most land area lies on the east side of SR 99; however, substantial residential land uses exist west of SR 99. Retail and industrial uses are generally clustered along SR 99 to the west of the highway. Only Merced Street, Adams Avenue, and Manning Avenue provide access across the highway, limiting the flow of both automobile and pedestrian traffic between the east and west sides of Fowler.

Table 4-1: Existing Roadway Classifications

Classification	Street Name	Recommended Right-of-Way[12]
Freeway		
	State Route 99	220'
Expressway		
	Temperance Avenue	100'
Arterial		
	American Avenue	84'
	Fowler Avenue	84'
	Golden State Boulevard	150'
	Manning Avenue	84'
Collector		
	5th	80'
	7th	80'
	8th	80'
	Adams	80'
	Armstrong	80'
	Clayton	80'
	Fowler	80'
	Fresno	80'
	Lincoln	80'
	Merced	80'
	Parlier	80'
	South	80'
	Springfield	80'
	Sumner	80'
	Sunnyside	80'
	Walter	80'

[12] (City of Fowler, 2004)

Figure 4-3: Circulation Network, 2040 Fowler General Plan

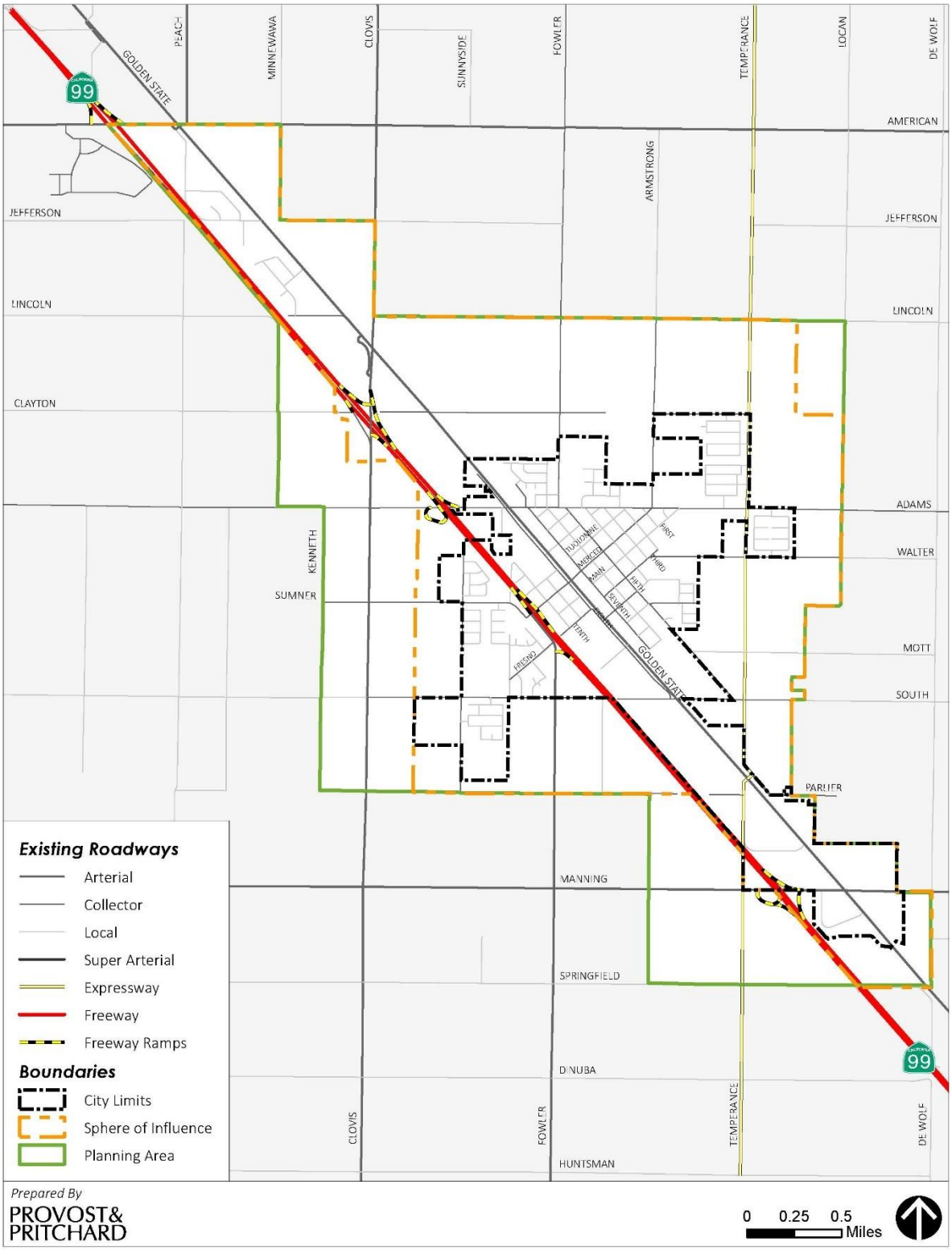
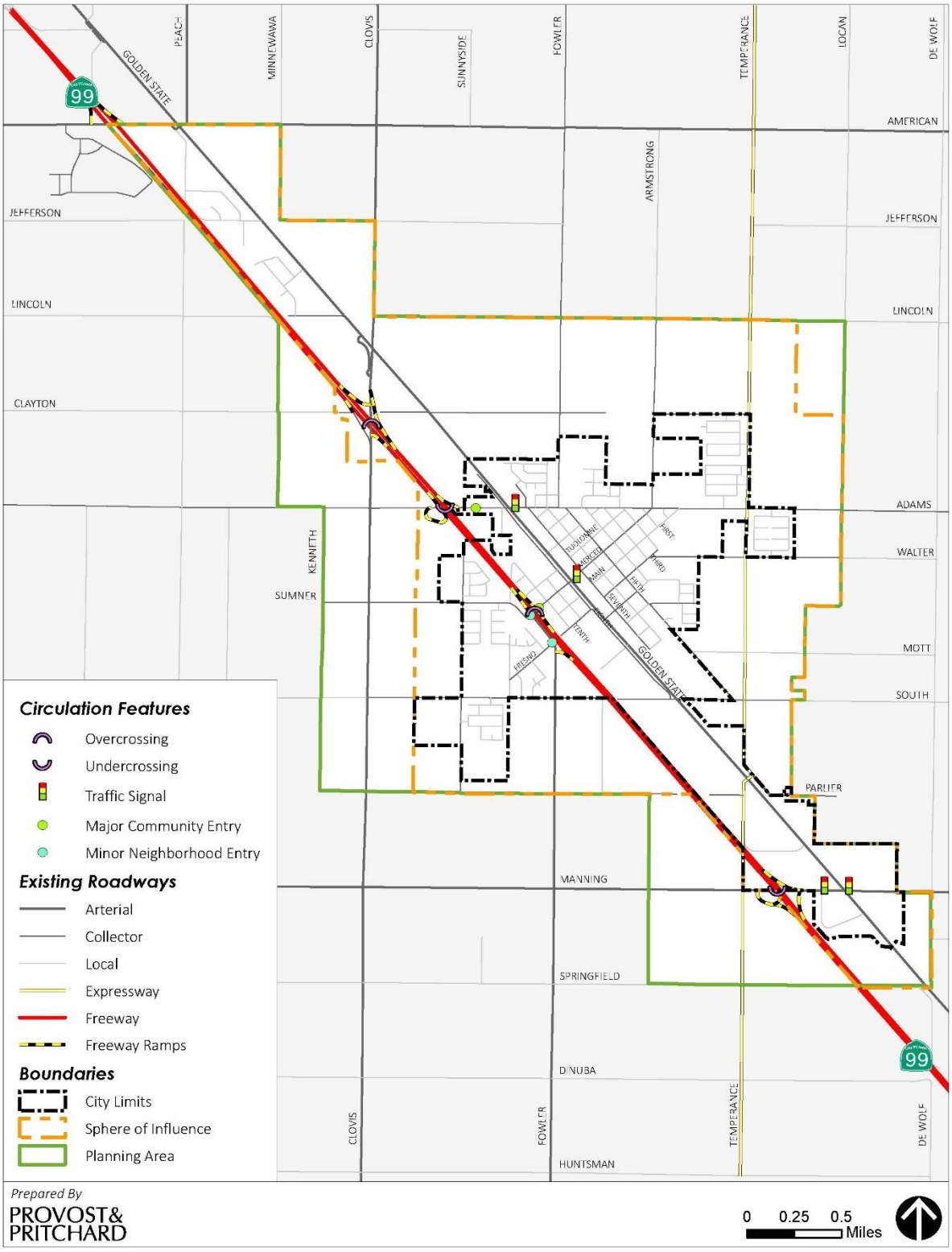


Figure 4-4: State Route 99



ALTERNATIVE MODES OF TRANSPORTATION

Pedestrian and Bicycle Facilities

While there have been some recent additions to bicycle and pedestrian facilities in Fowler, the City does not have an extensive system of bike lanes, bike paths, or walking trails. The ease of walking and driving in Fowler varies depending on the area. The downtown area is more walkable due to its short blocks, moderate density, occurrence of mature trees for shading, and close proximity of destinations. In addition, there is a class II bicycle lane along Adams Avenue from Vista to Temperance and Golden State Boulevard.

The Fresno Regional Active Transportation Plan (ATP) identifies current bicycling and sidewalk facilities in Fowler as of 2017. **Table 4-2** provides a summary of those facilities. **Figure 4-5** also provides an overview of bicycle facilities throughout the City.

Table 4-2: City of Fowler Existing Bicycle and Pedestrian Facilities

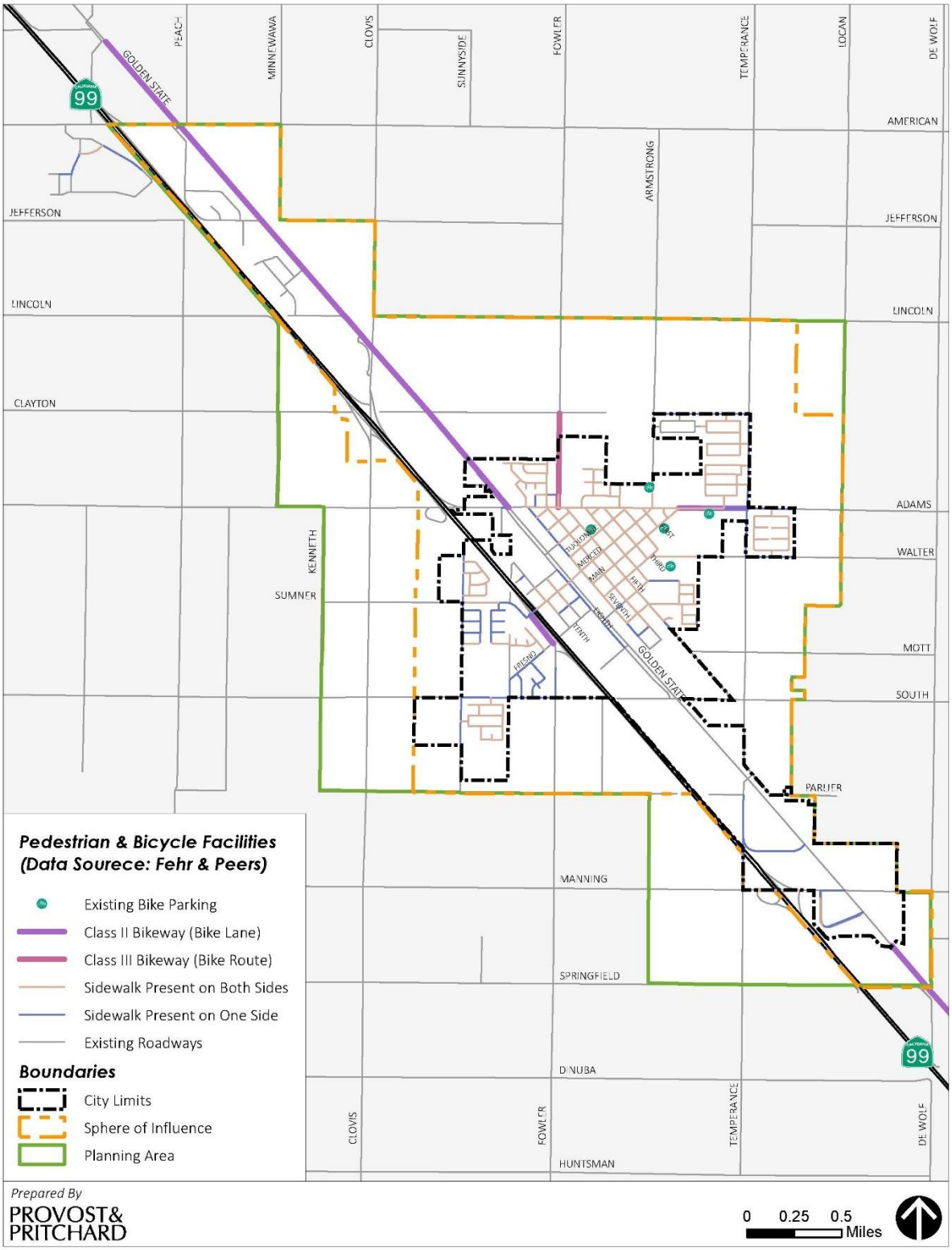
Type	Description/ Definition	Miles
Sidewalks	Paved areas immediately adjacent to the vehicular right-of-way for the exclusive use of pedestrians. Sidewalks may be used by cyclists unless prohibited.	42.9
Class I Bike Paths	Completely separated right of way, for exclusive use for bicycles and pedestrians.	0.0
Class II Bike Lanes	On-street striped lane for one-way bike travel.	7.0
Class III Bike Routes	Shared on street facility, commonly identified by pavement markings or signage.	1.0
Class IV Separated Bikeway	Physically separated bicycle facilities that are distinct from the sidewalk and designed for exclusive use by bicyclists. Also commonly known as cycle tracks.	0.0

The Fresno Regional ATP identifies the following challenges which impact the safety and comfort of biking and walking in Fowler:

- Irregular intersections where the railroad grid creates challenges for bicyclists and pedestrians;
- Sidewalk gaps, high curbs, lack of curb ramps, and angled intersections on Adams Avenue; and
- Challenges crossing Merced Street at 10th Street due to proximity to SR 99 interchange ramps.

The ATP also identifies key destinations for cyclists and pedestrians in Fowler, including local schools, businesses along Merced Street, and local parks.

Figure 4-5: Existing Bicycle Facilities



Public Transportation

Local Services

The Fresno County Rural Transit Agency (FCRTA)

The FCRTA was formed through a joint-powers agreement between Fresno County and the incorporated cities within its service area, including the City of Fowler, to provide fixed-route and on demand transit services through its service area. The FCRTA vehicles are wheelchair accessible, and all full-size buses include bike racks.

The FCRTA operates one fixed-route service, with minor route deviations, linking the City of Fowler with the cities of Fresno, Selma, and Kingsburg. Three round trips are provided each day. Services are provided Monday through Friday. The FCRTA also supports several specialized transportation programs, including shared-ride car and vanpool services, social service dial-a-ride, and specialized services for seniors and persons with disabilities.

Regional Services

AMTRAK

Fresno County's sole AMTRAK station is located in the City of Fresno downtown and provides AMTRAK services to San Francisco and Sacramento to the north, as well as Bakersfield and Los Angeles to the south. The AMTRAK San Joaquins line provides seven trains daily traveling along both north and southbound routes. The San Joaquins line joins with the Union Pacific Railroad line southeast of downtown Fresno, then separates and moves south, bypassing the City of Fowler.

There is not a train terminal in the City of Fowler. The closest station to the City of Fowler is in downtown Fresno, approximately 11 miles to the north. The next closest station is in Hanford, approximately 23 miles to the south.

High Speed Rail Authority (HSRA)

The California High-Speed Rail Authority (HRSA) is responsible for planning, designing, and building the California high speed rail. Once complete, the rail will connect major regions of the state. Phase 1 will run from San Francisco to Los Angeles. Subsequent phases will extend to Sacramento and San Diego.

The first phase of rail construction will connect Merced to Bakersfield, with stations planned in downtown Merced, downtown Fresno and downtown Bakersfield. As of July 2019, construction in Fresno County was underway, with work beginning on construction of the arches at the San Joaquin River Viaduct and the final pavings at Avenue 8 in Madera.

Airports

Public-use general aviation airports located near Fowler include Fresno Chandler Downtown Airport, Reedley Municipal Airport, and the Selma Aerodrome. The Reedley Municipal Airport occupies approximately 138 acres just north of the City of Reedley. It has one paved runway serving single and light twin-engine aircraft. Runway operations are expected to reach 36,538 by the year 2020, all of which will

be general aviation.[13] The Selma Aerodrome provides private services only. Fresno Yosemite International Airport (FAT) is Fresno County's primary passenger airport facility and the largest and busiest airport in the San Joaquin Valley. FAT supports seven commercial airlines and provides aviation facilities for both business and government agencies.

MOVEMENT OF GOODS

Freight generators in Fresno County consist of five distribution centers, two large agricultural businesses, an airport, and an import/export distribution facility.[14] The distribution centers identified specialize in transportation and warehousing, wholesale and retail trade, as well as grocery retail. Fowler's position along the SR 99 corridor makes it an efficient and cost-effective location for distributing and receiving products.

Truck Routes

There are several local businesses that rely on transporting goods via SR 99. Movement of goods from those businesses relies on prescribed trucking routes in order to navigate to the nearest SR 99 intersection. The estimated pass-through truck trips along SR 99 within the City of Fowler and Golden State Boulevard is currently unknown.

In 2016, Fresno Council of Governments published the San Joaquin Valley 1-5/SR99 Goods Movement Study. The study identified truck traffic generators, congested segments, collision hotspots, and truck service facilities along the SR 99 corridor. The study identified that while Fowler is impacted by traffic along these freeways, the City does not have a significant amount of congested or critical safety segments.[15]

The 2025 General Plan establishes preferred designated truck routes as part of the circulation element. The City's municipal code expands that list of designated truck routes and offers clarification as to the purpose and types of vehicles which must travel along such routes. Figure 4-6 provides a visual overview of designated truck routes as prescribed in the 2025 General Plan as well as the Fowler Municipal Code.

[13] (Wadell Engineering Corporation, 2003)
[14] (Cambridge Systematics, Inc., 2015)
[15] (Cambridge Systematics, Inc., 2015)

Figure 4-6: Bus Facilities

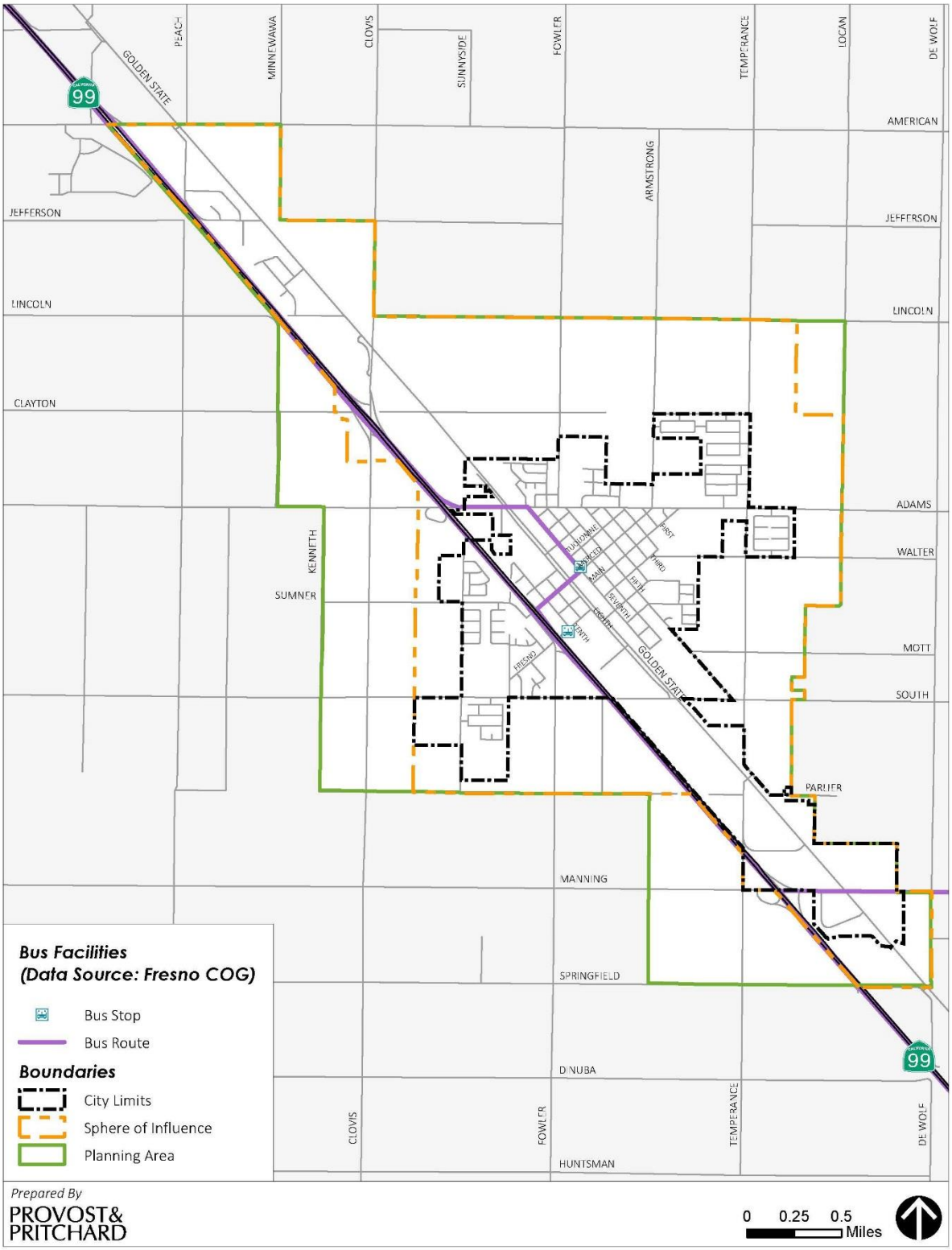
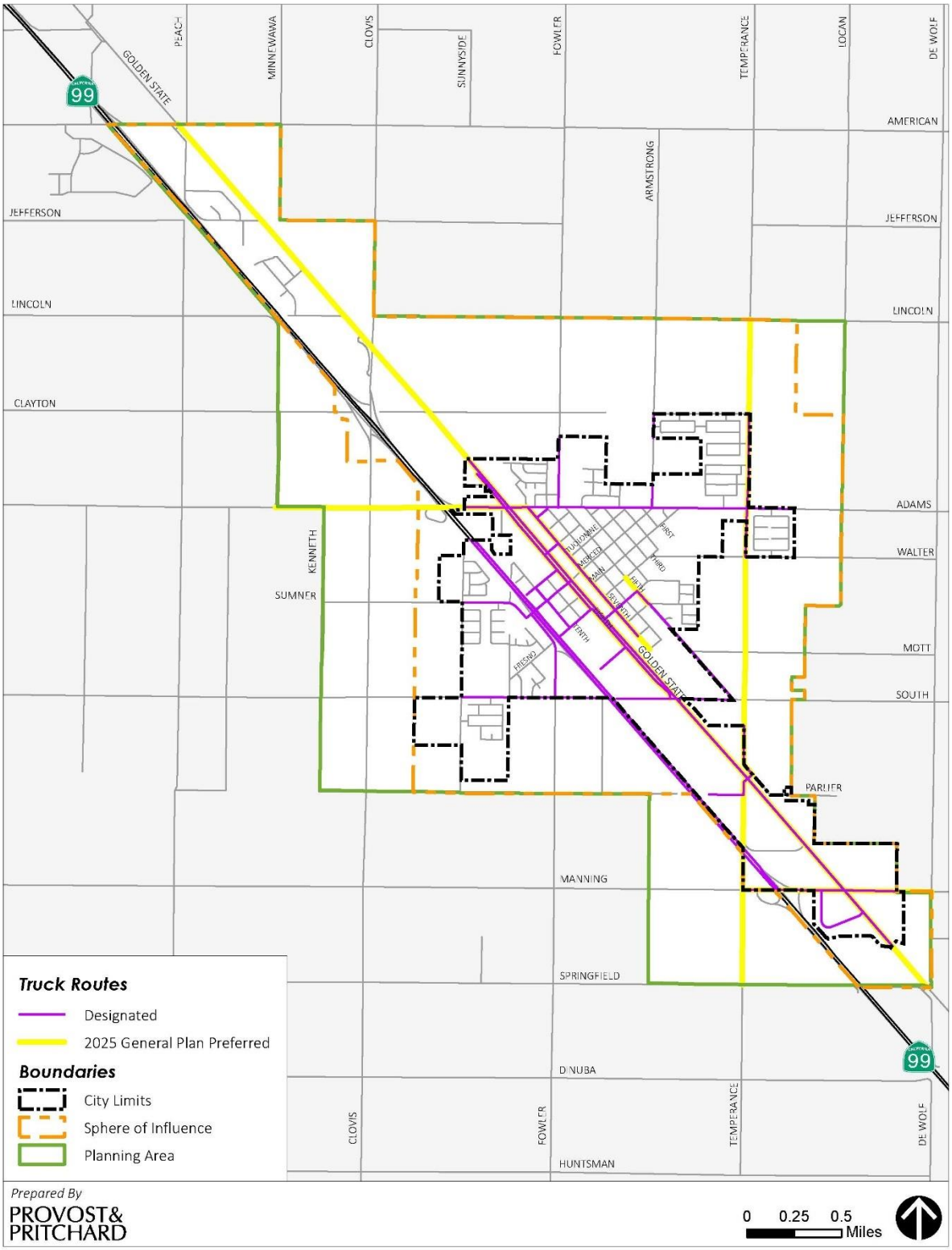


Figure 4-7: Designated Truck Routes



Air and Rail Cargo

The Union Pacific Railroad provides freight service in Fowler, connecting the City with major markets in northern and southern California. There is a rail siding[16] located in the southern portion of the City, next to major packing facility, National Raising Company.

Air cargo is a fast-growing method of transporting goods in and out of the area. The Fresno Yosemite International Airport is the major cargo-handling airport in the San Joaquin Valley.

While both rail and air provide freight services to the Valley and the City of Fowler, it is expected that trucks will continue to be the predominant method of goods movement for the foreseeable future.

RELATED PLANS AND POLICIES

Fresno County Regional Active Transportation Plan

In conjunction with the Fresno County Council of Governments (COG) the Active Transportation Plan assesses the status and future plans for biking and walking facilities in the City of Fowler. The preliminary report identifies approximately 42 miles of sidewalk, seven miles of Class II bike lanes, and one mile of Class III bike routes.

Expansion is planned for existing bicycle and pedestrian routes. Once complete, the total length of local sidewalks would increase to 50 miles, Class I bike lanes would increase to approximately 28 miles, and Class III bike routes would increase to an approximate total of four miles. The proposed expansions are designed to provide access to key destinations and to serve as recreational assets.

San Joaquin Valley Interregional Goods Movement Plan

The San Joaquin Valley Interregional Goods Movement Plan was developed in 2013 for the San Joaquin Valley Regional Transportation Planning Agencies. The study analyzed goods movement throughout the eight counties (Kern, Kings, Tulare, Fresno, Madera, Merced, Stanislaus, and San Joaquin) making up the San Joaquin Valley. The study focused on regionally significant commodity flows, transport operations, goods movement issues, and goods movement impacts. The study did not delve deeply into urban and localized goods movement issues that are particular to specific cities or rural areas within the study area.

Building on prior efforts, including the SJV Regional Goods Movement Action Plan (2007), corridor studies along SR 99 and other highways around the region, and new analysis, the purpose of this plan was to prioritize projects and develop strategic programs and policies that guide goods movement planning in the region.

San Joaquin Valley 1-5/SR99 Goods Movement Study

The San Joaquin Valley 1-5/SR99 Goods Movement Study was prepared in 2016 as a technical memorandum covering the eight county San Joaquin Valley region, including Kern, Kings, Tulare, Fresno, Madera, Merced, Stanislaus, and San Joaquin counties. The study identified strategic programs for goods

[16] Rail siding is a railroad term used to describe a section of track off the main line where rail cars are sometimes dropped or exchanged.

movement along with planned improvements and projects and assessed their feasibility. Some of the data gathered as part of this effort was to identify congested travel segment relative to truck operations and collision hotspots. The conclusions of this study will inform the selection of preferred strategies for addressing goods movement throughout the San Joaquin Valley region.

5. OPEN SPACE AND CONSERVATION

Key issues regarding natural resources in the City of Fowler include maintaining public parks and recreational facilities, preserving scenic, cultural, and biological resources, open space, as well as hydrology and water quality, and air quality. This chapter describes existing conditions relevant to these topics within the City of Fowler in order to provide direction for future analysis for the General Plan update.

EXISTING PARK AND RECREATION FACILITIES

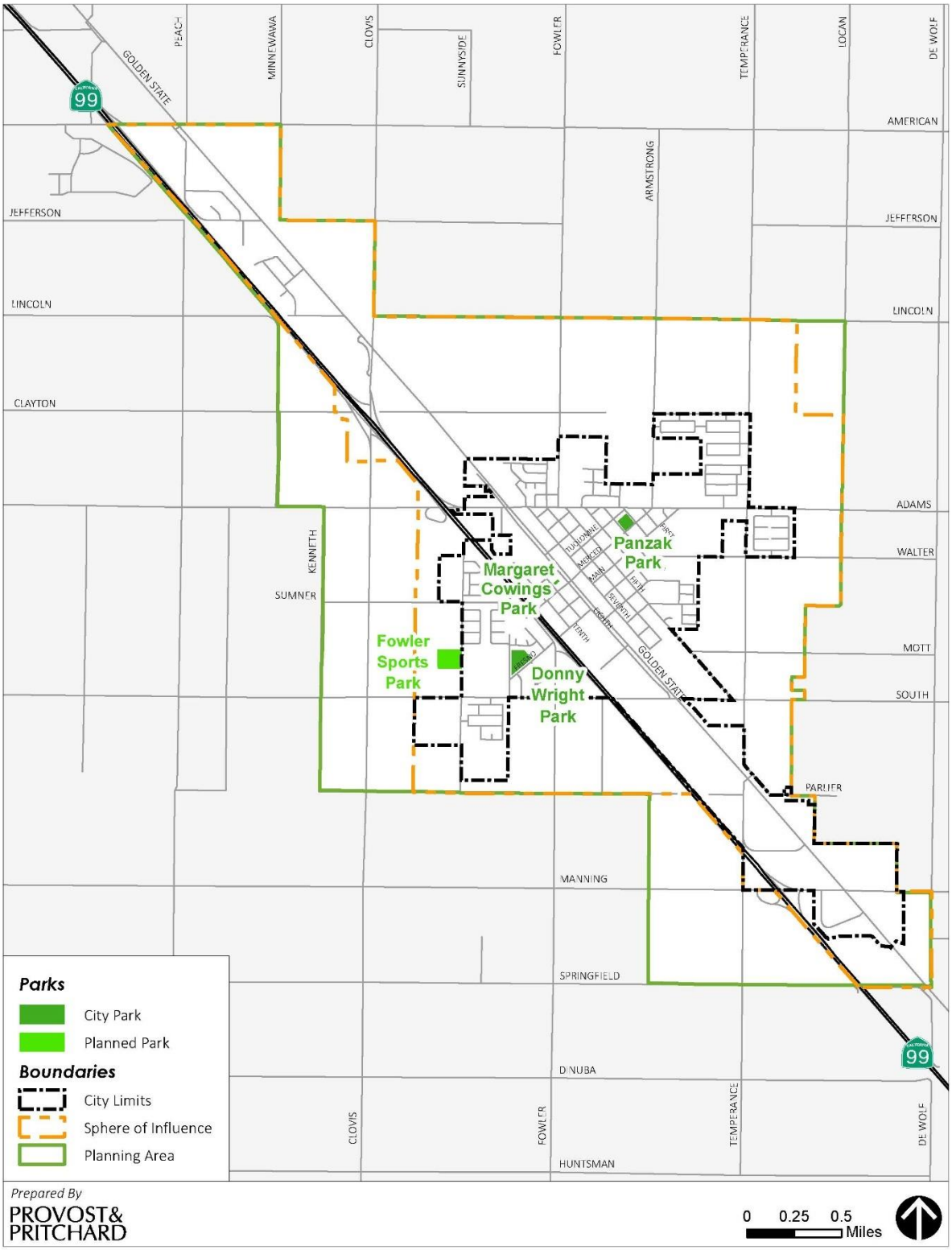
There are currently four City parks in Fowler, all of which are managed by the Department of Parks and Recreation. Panzak Park is approximately 2.5 acres and includes a covered picnic area, large shade trees, playground equipment, and tennis courts. The recently developed Donny Wright Park covers an area of approximately six acres and includes an expanse of irrigated lawn and trails for recreation. Margaret Cowings Park is an approximate 0.05-acre neighborhood park with an irrigated lawn and shade trees located on N. 9th Street between Merced and Tuolumne. Also considered a City park, the Fowler Veteran's Monument covers an area of approximately 0.1 acres and includes benches on paved surfaces, a fountain, several flag poles, ornamental hedges, and rose gardens. While not yet constructed, an eight-acre sports park west of SR 99 is in the planning and development stage. There are no State or regional parks located in the planning area.

The City of Fowler also operates the Edwin Blayney Senior Center, which offers a meeting place and specialized recreation opportunities for senior citizens. The center operates Monday through Friday from 10:00 am to 3:00 pm and is assisted by funding from the Fresno-Madera Area Agency on Aging. **Figure 5-1** shows the locations of the City's existing and proposed parks and recreational facilities.

Joint Use Facilities

The City has a memorandum of understanding in place with the Fowler Unified School District (FUSD) for the use of school facilities after hours for youth sports and community recreation. The City provides funds to the School District from its utility users account intended for supplementary maintenance to school facilities that will be required due to the added usage. The annual contribution is subject to budget availability and approval by City Council.

Figure 5-1: Parks and Recreation Facilities



SCENIC RESOURCES

Scenic resources contribute to a sense of community identity and can provide economic value from tourism. The definition and value of a scenic resource is subjective, but the term generally refers to the uniqueness, unity, and appeal of a view. In a city context, this can mean a variety of things, including views and viewpoints, scenic corridors, view streets, and visual focal points. It should be noted that scenic resources can be elements of either the natural or built environment valued for aesthetics. In Fowler there are two main sources for scenic resources: built structures which help define the identity and aesthetic quality of the City and views of the natural and human made landscape, including the Sierra Nevada mountains and agricultural land.

Built Structures

Downtown Fowler has a particular ambiance and charm due to a mixture of historic buildings and specialized architectural design standards for new development. Street level aesthetics and character are regulated on a city-wide level by Fowler's Zoning and Building Ordinances. The downtown area is more specifically regulated by a Form-Based Code Area, adopted as part of the Zoning Ordinance. The intent of the Form-Based Code Area is to preserve the character of downtown. As a result, all development in downtown Fowler is subject to a specific set of design standards regulating building form, streets, and open space to ensure that the area evolves cohesively, where new growth is compatible with historic buildings in the area. In addition to zoning regulation, expanded design guidelines and analysis for the downtown area are covered in the Central Fowler Revitalization Plan (2007).

The Golden State Corridor also has specific design guidelines, provided in the Golden State Corridor Economic Development Infrastructure Improvements Design Guidelines Manual (2011), developed by Fresno COG. The purpose of the Golden State Corridor Design Manual is to provide guidelines that promote quality design along the Golden State Corridor connecting the cities of Fowler, Selma, and Kingsburg in Fresno County.

Landscape

Other scenic resources in the area include views of the Sierra Nevada mountains or foothills to the east on a clear day, or the vast expanse of agricultural fields in the vicinity. As one of the cities along the Fresno County Blossom Trail, Fowler offers scenic views of blossoming orchard groves each spring and vibrant foliage in autumn.

CULTURAL RESOURCES

Cultural resources can refer to prehistoric and historic archaeological sites; architectural properties like buildings, bridges, and infrastructure; and locations significant to Native Americans.

Historical Context

The City of Fowler lies within an area once inhabited by the Northern Valley Yokuts. Yokuts villages were situated near major waterways, like the Kings River, and featured structures made with woven tule reeds.

As with other Native American Tribes in California, the Yokuts population was drastically reduced following the influx of Spanish explorers, missionaries, miners, ranchers, and other European immigrants to the San Joaquin Valley after 1700. During the gold rush, miners began to settle along major waterways such as the San Joaquin River and Kings River. The momentum of the gold rush could not be sustained, and miners began to pursue vocations in ranching and farming. The successful development of irrigation systems led to the agricultural boom as more tracts of land became suitable for crops.

Following the completion of the transcontinental railroad in 1869, the Central Pacific Railroad (now known as the Southern Pacific Railroad) began construction of a rail line through the Central Valley, and the segment through Fowler was laid around 1872. The valley branch of the historic Southern Pacific Railroad is presently owned and operated by the Union Pacific Railroad.

Golden State Boulevard runs north-south through the City of Fowler. Also known as "Old Highway 99" and initially named State Route 4, Golden State Boulevard was the Central Valley's first highway which connected Sacramento and Los Angeles. Groundbreaking began in 1912 and the highway opened approximately two years later. The roadway was laid over centuries of previously traveled corridors consisting initially of a series of Native American trails, later used for horse and stagecoach travel.

Known Historical Resources in the Planning Area

Fowler's Switch

In May 1973, Fowler's Switch was registered as a California Historical Resource.[17] The City is named for Thomas Fowler, State senator from 1869–72 and 1877–78, and a railroad switch was built on the Fowler ranch in 1872. The town developed around the railroad switch and became known as Fowler's Switch.[18] The City was incorporated in 1908 and its name was eventually shortened.[19]

BIOLOGICAL RESOURCES

California contains several rare species known to have low populations or limited distributions. As the human population grows and urban expansion occurs, habitat for these sensitive species is diminished which makes them increasingly more vulnerable to extirpation, or local extinction.

State and Federal regulations have authorized the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service to conserve and protect the diversity of plant and animal species native to California. Numerous native plants and animals have been formally designated as threatened or endangered under state and federal endangered species legislation. The California Native Plant Society (CNPS) maintains a list of native plants considered rare, threatened, or endangered. Collectively these plants and animals are referred to as "special status species" and are recorded within the California Natural Diversity Database (CNDDB).

[17] State of California Office of Historic Preservation. http://www.ohp.parks.ca.gov/ListedResources/Detail/P299 Accessed 5 September 2019.
[18] (The Encyclopedia of California, 1999)
[19] United States Geological Survey. https://geonames.usgs.gov/apex/f?p=gnispq:3:0::NO::P3_FID:1659724 Accessed 5 September 2019.

The sections below provide an overview of special habitats and endangered species known to exist within the Fowler planning area and provide additional context to land use decisions that will be considered during the General Plan Update process.

Habitat Types

The majority of the Fowler planning area consists of developed, ruderal, and agricultural habitats. Due to urbanization and agricultural practices, water features in the vicinity are limited to channelized irrigation canals and human made basins. Habitats within the planning area are disturbed or frequently maintained and therefore are of relatively low quality for most native wildlife species.

Developed Habitats

Developed habitats include residential communities and commercial and industrial business development. Concrete sidewalks, paved streets and lots, and landscaping are present throughout the planning area. Landscaping consists of manicured lawns, flower beds, and ornamental trees and shrubs. Developed lands in the planning area represent low-quality habitat for the majority of wildlife species. However, trees and shrubs in landscaped areas may provide nesting habitat for disturbance-tolerant species.

Ruderal Habitats

Ruderal habitats are characterized by a high level of human disturbance and dominated by non-native plant species or devoid of vegetation. Within the City of Fowler, there are vacant, ruderal parcels of land interspersed throughout developed areas and agricultural lands. Ruderal areas within the planning area have minimal value to wildlife due to frequent human disturbance, presence of domestic dogs and cats, and an absence of vegetative cover. However, some disturbance-tolerant species may make incidental use of these ruderal lands.

Agricultural Habitats

Vineyards and orchards — single species of grapes or trees planted in a row — dominate the agricultural landscape in Fowler and the surrounding land. Rows under the vines or trees are usually sprayed with herbicides to prevent the growth of weedy herbaceous plants. Intensive agricultural practices in vineyards and orchards likely limit their value to wildlife; however, some avian and mammalian species have adapted to vineyard habitats.

Natural Communities of Special Concern

Natural communities of special concern are those that are of limited distribution, distinguished by significant biological diversity, or home to special status species. California Department of Fish and Wildlife (CDFW) is responsible for classifying and mapping all natural communities in California. Just like the special status plant and animal species, these natural communities of special concern can be found within the CNDDB.

According to CNDDB, there are no recorded observations of natural communities of special concern within the planning area.

Designated Critical Habitat

The U.S. Fish and Wildlife Service (USFWS) often designates areas of "critical habitat" when listing species as threatened or endangered. Critical habitat is a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. These areas designated as critical habitat can be found within the CNDDB.

According to CNDDB, there are no areas of designated critical habitat within the planning area.

Wildlife Movement Corridors

Wildlife movement corridors are routes that wild animals regularly and predictably follow during seasonal migration, dispersal from native ranges, daily travel within home ranges, and inter-population movements. Movement corridors in California are typically associated with valleys, ridgelines, and rivers and creeks supporting riparian vegetation.

The planning area does not contain features that would be likely to function as wildlife movement corridors. Furthermore, the City of Fowler is located in a region often disturbed by intensive agricultural cultivation practices and human disturbance which would discourage dispersal and migration.

Special Status Plants and Animals

A search of the CNDDB for published accounts of special status plant and animal species was conducted for the *Malaga* and *Conejo* 7.5-minute quadrangles that contain the City of Fowler in its entirety, and for the 10 surrounding quadrangles: *Caruthers, Riverdale, Laton, Burris Park, Selma, Sanger, Round Mountain, Clovis, Fresno North,* and *Fresno South*.

According to CNDDB, there have been no recorded observations of special status species within the planning area; however, the special status plant and animal species list, found in **APPENDIX A,** have recorded observations in the surrounding vicinity. Due to past and ongoing disturbance and an absence of suitable habitat, many of the species listed in

APPENDIX A are unlikely to occur within the planning area. Furthermore, a number of the observations were recorded more than 50 years ago, and the associated populations may have been subsequently extirpated.

HYDROLOGY AND WATER QUALITY

The City of Fowler is located within the Kennedy Pond watershed.[20] The San Joaquin River and the Kings River are the two principal drainages within the San Joaquin Valley. Fowler is located approximately 18 miles south of the San Joaquin River and nine miles west of the Kings River.

The City of Fowler lies entirely within the Kings Groundwater Subbasin of the San Joaquin Valley Groundwater Basin.[21] Due to groundwater overdraft and contamination from agricultural chemicals,

[20] (U.S. Environmental Protection Agency, n.d.)
[21] DWR Bulletin 118 Groundwater Basin Boundary Assessment Tool. https://gis.water.ca.gov/app/bbat/ Accessed 3 September 2019.

provision of reliable sources of groundwater in both quantity and quality have been a challenge throughout the Central Valley.

Recent legislation has led to more proactive management plans related to groundwater. In 2014, the Sustainable Groundwater Management Act (SGMA) was enacted which requires government and water agencies of certain groundwater basins to halt overdraft and bring the basins into balanced levels of pumping and recharge. Under SGMA, local agencies form Groundwater Sustainability Agencies (GSAs) to manage basins and adopt Groundwater Sustainability Plans (GSPs) to outline how groundwater basins will reach long term sustainability. The City of Fowler is part of the South Kings GSA. The Groundwater Sustainability Plan for this GSA has recently been released for public review. Updates to the City of Fowler's General Plan will be coordinated with the adopted GSP.

For more detailed information on the City of Fowler's water supply and delivery system, please see **Chapter 6 Public Services and Facilities**, which provides an overview of City utilities and public services.

AIR QUALITY

Federal and state laws require emissions control measures in areas where air pollution exceeds standards. There are a variety of agencies implementing air pollution reduction programs at the federal, state, and local level.

The federal government, primarily through the Environmental Protection Agency (EPA), sets standards; oversees state and local actions; and implements programs for toxic air pollutants, heavy-duty trucks, locomotives, ships, aircraft, off-road diesel equipment, and some types of industrial equipment.[22] Areas classified under the Federal Clean Air Act are labeled as either "attainment", "nonattainment", or "extreme nonattainment" based on whether National Ambient Air Quality Standards (NAAQS) have been achieved.

State government, through the California Air Resources Board (CARB) and Bureau of Automotive Repair, sets more stringent state standards, oversees local actions, and implements programs for motor vehicle emissions, fuels, and smog checks.[23] State air quality standards are determined by CARB and are based on California Ambient Air Quality Standards (CAAQS).

At the local level, air pollution control districts develop plans and implement control measures in their areas. The City of Fowler lies within the San Joaquin Valley Air Basin (SJVAB), which is managed by the San Joaquin Valley Air Pollution Control District (SJVAPCD). There are eight counties managed by the SJVAPCD, including the County of Fresno and City of Fowler by extension.

Air quality in the SJVAB is influenced by a variety of factors, including topography, regional meteorology, pollutant transport, and increasing wildfires due to drought and forest mismanagement. The SJVAB is approximately 250 miles long and is shaped like a narrow bowl. The sides and southern boundary of the "bowl" are bordered by mountain ranges, including the Sierra Nevada to the east, the Tehachapi Mountains to the south, and the California coastal ranges to the west. The bowl-shaped Valley collects and holds

[22] (San Joaquin Valley Air Pollution Control District, 2012)
[23] (San Joaquin Valley Air Pollution Control District, 2012)

emissions caused by the activities of the Valley's residents and their vehicles, as well as vehicles from other areas traveling on SR 99 and Interstate 5.

The Valley's weather conditions include frequent temperature inversions, long, hot summers, and stagnant, foggy winters. The presence of surrounding mountains, in combination with stagnant weather patterns, prevent the dispersal of pollutants that accumulate within the Valley, while temperature inversions prohibit the vertical mixing of air mass, effectively acting as a lid, trapping pollution within the Valley basin.[24]

In addition, pollutants are also transported into the Valley from the Bay Area and the Sacramento Valley. Air pollution transported from the San Francisco Bay and Sacramento areas account for approximately seven percent of the total emissions in the South Valley (the Valley portion of Kern and Tulare Counties).[25]

In addition to topographical and meteorological factors, wildfires are becoming an increasingly problematic factor in reducing pollution and achieving attainment goals. For the last several years, tree mortality due to lack of water, drought-related bark beetle infestation, and the buildup of combustible materials through decades of forest mismanagement have made the forests in the region vulnerable to wildfire activity. Consequently, California and the Western United States have seen an increase in the frequency of large wildfires during the past 10 years. In 2018, more than 7,000 wildfires were recorded in California, 34 of which impacted the Valley's air quality and the health of Valley residents from July through November. Pollutant emissions from wildfires are enormous and greatly exceed all mobile and stationary source emissions in the Valley, easily overwhelming all control measures.[26]

Attainment Status

Local air districts use air quality plans, or attainment plans, to bring the applicable air basin into attainment with all State and Federal ambient air quality standards designed to protect the health and safety of residents within that air basin.

As illustrated in **Table 5-1** below, the San Joaquin Valley is designated as a State and Federal nonattainment area for ozone (O_3) and particulate matter at 2.5 microns ($PM_{2.5}$), and a State nonattainment area for particulate matter at 10 microns (PM_{10}). These criteria pollutants are discussed in more detail below. The SJVAB is in attainment for the remainder of the criteria pollutants. For more detailed air quality standards and current measurements for the San Joaquin Valley, please see **APPENDIX B.**

Despite being hard to detect through sight and smell, both ozone and particulate matter have harmful health impacts, including coughing, wheezing, chest pain, headaches, nausea, and fatigue. Recently, poor air quality has been linked to dementia in multiple studies.[27] Additionally, ozone and particulate matter can aggravate chronic respiratory diseases, such as asthma and bronchitis and when exposed to high levels people can experience shortness of breath and impaired lung function.[28]

[24] (San Joaquin Valley Air Pollution Control District, 2004)
[25] (San Joaquin Valley Air Pollution Contol District, 2016)
[26] (San Joaquin Valley Air Pollution Control District, 2018)
[27] (Reuben, 2019)
[28] (San Joaquin Valley Air Pollution Control District, 2012)

Ozone

Ground level ozone, not to be confused with atmospheric ozone, is unique in that it requires the presence of two separate pollutants to be created. Ozone, also more commonly referred to as smog, is a pollutant that forms when volatile organic compounds (VOCs) and nitrogen oxides (NO_x) combine in the presence of sunlight. Virtually invisible and odorless, smog can have harmful health impacts and is the most intense on hot summer days. Attainment plans carried out by SJVAPCD focus on reducing the sources of VOCs and NO_x. **Figure 5-2** and **Figure 5-3** provides an overview of where VOCs and NO_x typically form in the San Joaquin Valley.[29]

Table 5-1: Ambient Air Quality Attainment Designation

Ambient Air Quality Standards & Attainment Designation			
Pollutant	**Averaging Time**	**California Standards**	**National Standards**
Ozone (O3)	1-hour	Nonattainment/Severe	No Federal Standard
	8-hour	Nonattainment	Nonattainment (Extreme)
Particulate Matter (PM10)	AAM[30]	Nonattainment	Attainment
	24-hour		
Fine Particulate Matter (PM2.5)	AAM	Nonattainment	Nonattainment
	24-hour		
Carbon Monoxide (CO)	1-hour	Attainment/Unclassified	Attainment/Unclassified
	8-hour		
	8-hour (Lake Tahoe)		
Nitrogen Dioxide (NO2)	AAM	Attainment	Attainment/Unclassified
	1-hour		
Sulfur Dioxide (SO2)	AAM	Attainment	Attainment/Unclassified
	24-hour		
	3-hour		
	1-hour		
Lead (Pb)	30-day Average	Attainment	No Designation/Classification
	Calendar Quarter		
	Rolling 3-Month Average		
Sulfates (SO4)	24-hour	Attainment	No Federal Standards
Hydrogen Sulfide (H_2S)	1-hour	Unclassified	No Federal Standards
Vinyl Chloride (C2H3Cl)	24-hour	Attainment	No Federal Standards
Visibility-Reducing Particle Matter	8-hour	Unclassified	No Federal Standards

Source: California Air Resources Board (CARB)

[29] (San Joaquin Valley Air Pollution Control District, 2018)
[30] Annual Arithmetic Mean

Figure 5-2: Annual VOC Emissions

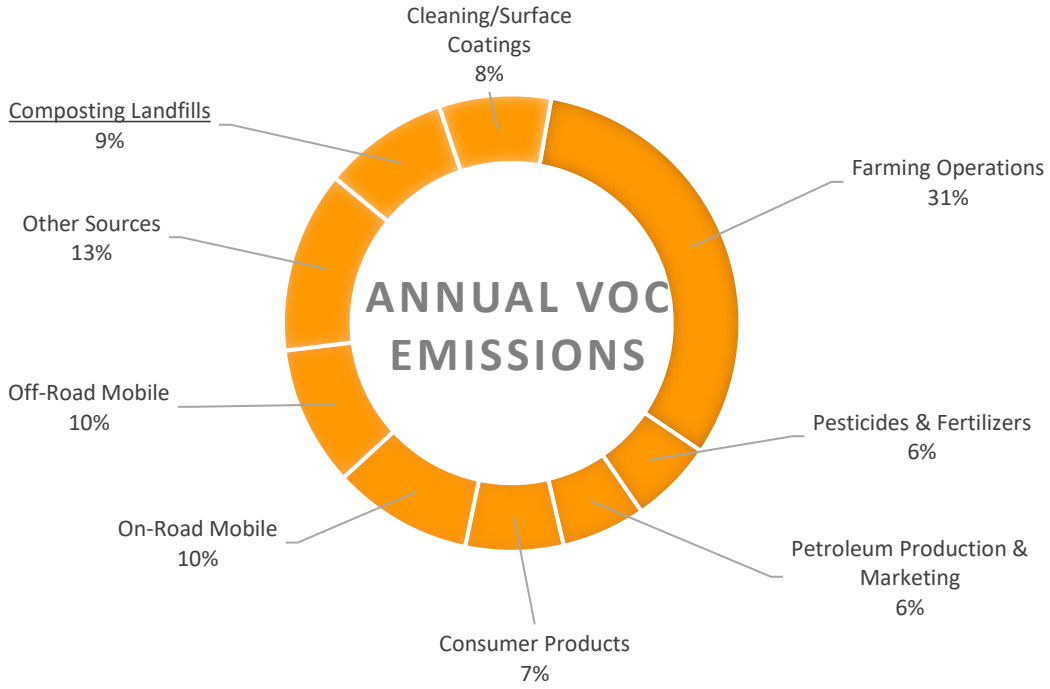
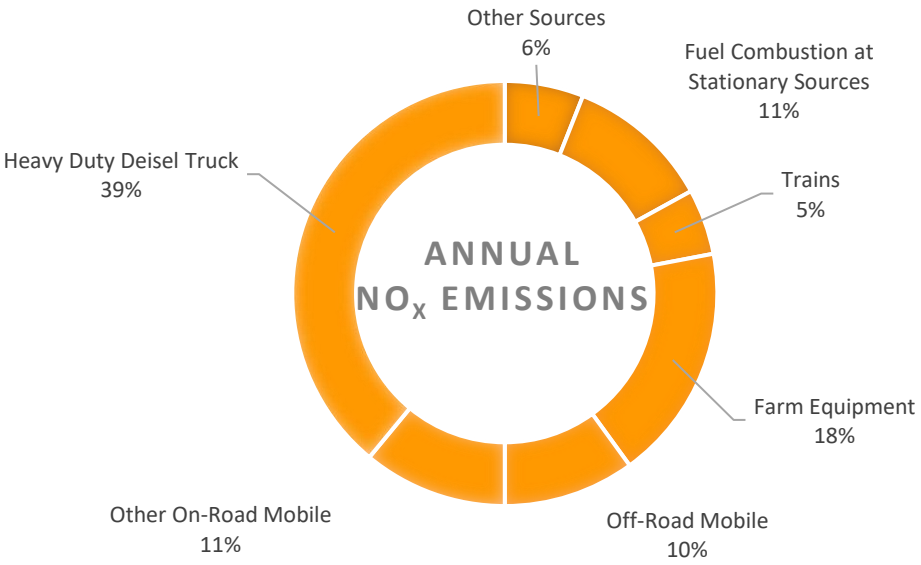


Figure 5-3: Annual NO_x Emissions



Particulate Matter

Particulate matter is made up of fine liquid or solid matter, such as dust, ash, soot, smoke, aerosols, and condensing vapors.[31] Once emitted, these particles can remain suspended in the air for long periods of time, negatively impacting health and aggravating chronic respiratory diseases. The EPA has set standards

[31] (San Joaquin Valley Air Pollution Control District, 2012)

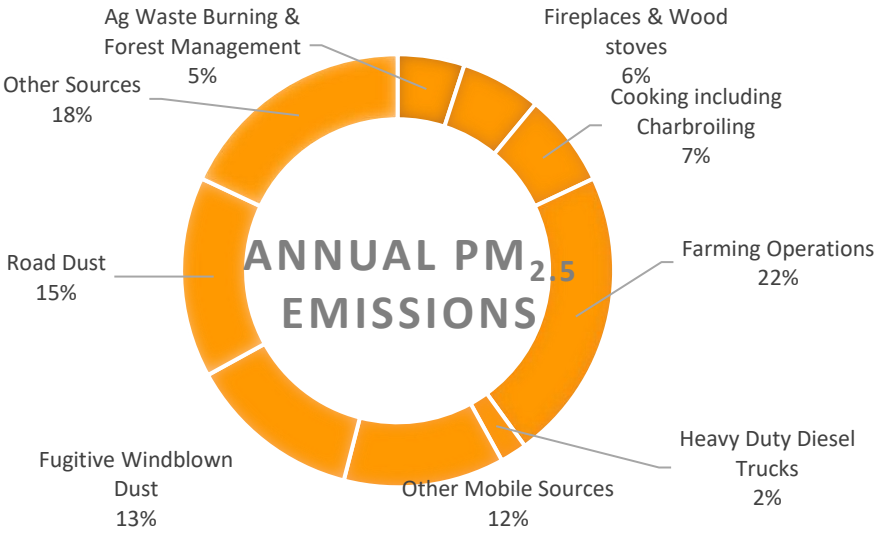
for particles smaller than 10 microns (PM_{10}) and smaller than 2.5 microns ($PM_{2.5}$). Particulate matter is either emitted directly from primary sources, in the form of dust or soot, or develops in the atmosphere through photochemical reactions or gaseous precursors, which are secondary sources. Much of the Valley's ambient particulate matter originates from atmospheric reactions of NO_x.[32]

Figure 5-4 provides an overview of PM 2.5 emissions sources throughout the Valley.[33]

In order to reduce particulate matter pollution in the San Joaquin Valley, the SJVAPCD has adopted the 2018 $PM_{2.5}$ Plan. This plan commits the district to pursue clean air strategies through:

- Restrictions on the use of wood burning fireplaces;
- New rules for industrial pollution sources, such as agriculture, boilers, steam generators, and combustion engines;
- Innovative strategies for commercial restaurants using underfired charbroilers;
- A suite of clean air grants for Valley residents focusing on clean air vehicles, carpools, and replacing gas mowers with electric mowers; and
- Incentive programs for Valley businesses focusing on replacing polluting trucks, off-road vehicles, and agricultural equipment.

Figure 5-4: Annual $PM_{2.5}$ Emissions



Greenhouse Gases

Commonly identified GHG emissions and sources include the following:

Carbon dioxide (CO_2) is an odorless, colorless natural greenhouse gas. CO_2 is emitted from natural and anthropogenic sources. Natural sources include the following: decomposition of dead organic matter;

[32] (San Joaquin Valley Air Pollution Control District, 2018)
[33] (San Joaquin Valley Air Pollution Control District, 2018)

respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic out gassing. Anthropogenic sources include the burning of coal, oil, natural gas, and wood.

Methane (CH_4) is a flammable greenhouse gas. A natural source of methane is the anaerobic decay of organic matter. Geological deposits, known as natural gas fields, also contain methane, which is extracted for fuel. Other sources are from landfills, fermentation of manure, and ruminants such as cattle.

Nitrous oxide (N_2O), also known as laughing gas, is a colorless greenhouse gas. Nitrous oxide is produced by microbial processes in soil and water, including those reactions that occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load.

Water vapor is the most abundant, and variable greenhouse gas. It is not considered a pollutant; in the atmosphere, it maintains a climate necessary for life.

Ozone (O_3) is known as a photochemical pollutant and is a greenhouse gas; however, unlike other greenhouse gases, ozone in the troposphere is relatively short-lived and, therefore, is not global in nature. Ozone is not emitted directly into the atmosphere but is formed by a complex series of chemical reactions between volatile organic compounds, nitrogen oxides, and sunlight.

Aerosols are suspensions of particulate matter in a gas emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light.

Chlorofluorocarbons (CFCs) are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. CFCs destroy stratospheric ozone; therefore, their production was stopped as required by the Montreal Protocol in 1987.

Hydrofluorocarbons (HFCs) are synthetic chemicals that are used as a substitute for CFCs. Of all the greenhouse gases, HFCs are one of three groups (the other two are perfluorocarbons and sulfur hexafluoride) with the highest global warming potential. HFCs are human made for applications such as air conditioners and refrigerants.

Perfluorocarbons (PFCs) have stable molecular structures and do not break down through the chemical processes in the lower atmosphere; therefore, PFCs have long atmospheric lifetimes, between 10,000 and 50,000 years. The two main sources of PFCs are primary aluminum production and semiconductor manufacture.

Sulfur hexafluoride (SF_6) is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It has the highest global warming potential of any gas evaluated. Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

6. PUBLIC SERVICES AND FACILITIES

The purpose of this chapter is to report on the current public facilities and services, including utilities, provided by the City of Fowler or quasi-public organizations. These services include education, library, law enforcement, fire protection and emergency response, landscape and lighting, water, wastewater, stormwater, and solid waste.

EDUCATION

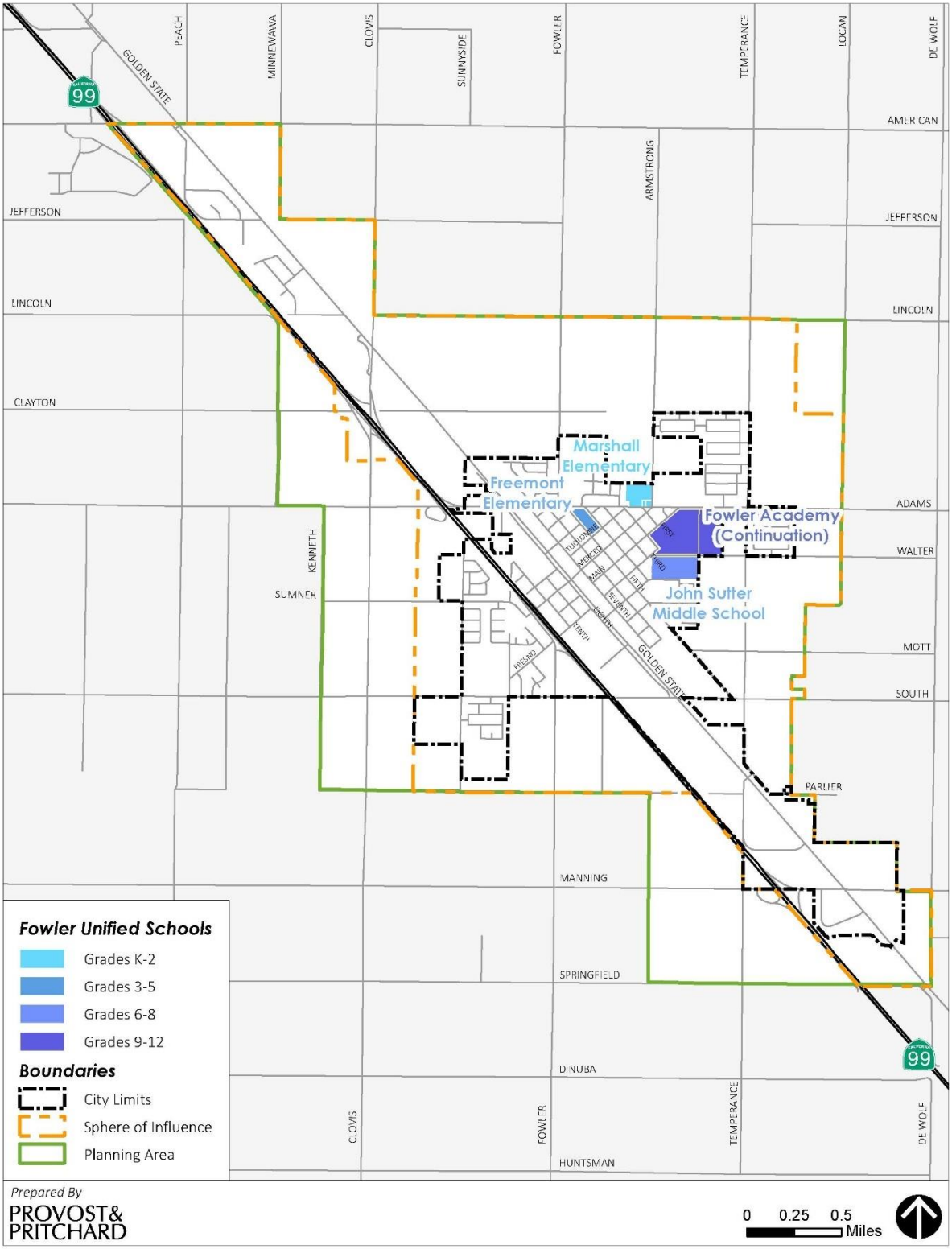
The City is served by the Fowler Unified School District (FUSD) which provides K-12 school education. Fowler is home to two elementary schools, one high school, and one continuation high school. Over the past five years, the FUSD has maintained a graduation rate of 98 percent, the highest in Fresno County.[34] In November 2016, Measure J passed with 78 percent voter approval. This school bond authorizes up to $42 million in funds to modernize and upgrade the District's facilities. As of publication, the FUSD has completed pool construction at Fowler High School, modernized playground equipment at the elementary schools, and widened Walter Avenue from the high school to Temperance Ave, among other improvements. The District and the City have established joint powers agreements for the provision of park and recreation facilities. See **Chapter 5 Open Space and Conservation** for details on the agreements. **Figure 6-1** shows the location of the FUSD schools operated by the District that lie within the Fowler planning area.

LIBRARY SERVICES

A reading room was established in Fowler in 1890, and Fresno County Public Library opened a branch in the City in 1910. In 1913, the two merged and the library remained in the same building for 94 years until 2008 when the Fowler branch was relocated to a new 8,660 square-foot building at 306 S. 7th Street. While not city run, the branch offers accessible and inclusive programs year-round for Fowler residents of all ages. In addition to lending materials, the branch also provides 20 internet stations for public use, printing and photocopying for a fee, and meeting room space.

[34] Fowler Unified School District. https://www.fowlerusd.org/ Accessed 4 September 2019.

Figure 6-1: Fowler Unified School District Facilities



POLICE SERVICES

The Fowler City Police Department provides law enforcement services within the City limits. The entire City is served from the headquarters office in downtown Fowler, at 128 S. 5th Street in City Hall. Fowler has no detention facilities and prisoners are taken to the Fresno County Jail in Fresno.

In August 2018, Fowler's City Council voted unanimously in favor of adding Measure N to the upcoming election ballot. The measure passed on November 6, 2018 with approximately 55% in favor. Measure N authorizes the City to enact a one percent sales tax with revenues earmarked to build a new police station and restore or replace out-of-date police equipment. Revenue may also be used to repair City streets and pay escalating pensions and other general fund obligations. At the time of the election, the one percent tax was estimated to generate approximately $953,000 annually toward these causes. As of the end of the 2018 fiscal year, Measure N has generated approximately $9,000 and continues to contribute additional funding in the current fiscal year.

Staffing

The Fowler Police Department currently has one Chief of Police, ten sworn officers, three sworn part-time officers, and two support staff members. The staffing ratio as of 2019[35] is approximately 1.5 full-time officers per 1,000 residents. Equipment includes 15 patrol cars. The police department operates two patrol units on a 24-hours basis in two 12-hour shifts, with a minimum of two officers per shift. Support staff includes one civilian evidence technician and one administrative employee. Unincorporated portions of the planning area are served by the area 3 substation of the Fresno County Sheriff's Department, which employs 29 deputy sheriffs, 11 detectives, and four service officers.

FIRE SERVICES/EMERGENCY RESPONSE

This document contains information that is accurate as of 2019. Since that time, the City has begun a process to change the way they provide fire services and emergency response in Fowler.

The City of Fowler Fire Department is a volunteer-based department and provides services within the City limits. The department has 12 firefighters and is approved for 14. There are no plans to transition to a full-time department. The City has a contract with the City of Selma for emergency medical services provided by American Ambulance. The department is also capable of emergency medical support. Emergency response times are six minutes during the day and eight to 10 at night while American Ambulance responds to emergencies within eight minutes on average.

Construction on a new fire station across from City Hall is expected to be completed in December 2019 and the station will be staffed in January 2020. Once operating, the department will have four fire engines at its disposal, all of which will meet the National Fire Protection Association's standards for fire apparatus.[36]

[35] as of August 20th, 2019.
[36] National Fire Protection Association. https://www.nfpa.org/Codes-and-Standards/All-Codes-and-Standards/List-of-Codes-and-Standards Accessed 4 September 2019.

Two type 1 engines will allow the department to address structural fires with a minimum of 1,000 gallons per minute of water transfer. Two wildland engines, a type 3 and a type 5, will equip the department to fight wildfires. Wildland engines are designed to pump-and-roll, where water is sprayed while the truck is on the move. Compared to type 3 engines, type 5 engines have a smaller tank capacity but increased maneuverability.

Unincorporated portions of the planning area are within the jurisdiction of the Fresno County Fire Protection District. Additionally, the District responds to some emergencies within the City limits, including vehicle accidents and structure fires. The City has entered into a transition agreement with the District to provide property tax revenue as areas annex to the City to reduce fiscal impacts on the District.

LANDSCAPE MAINTENANCE DISTRICT

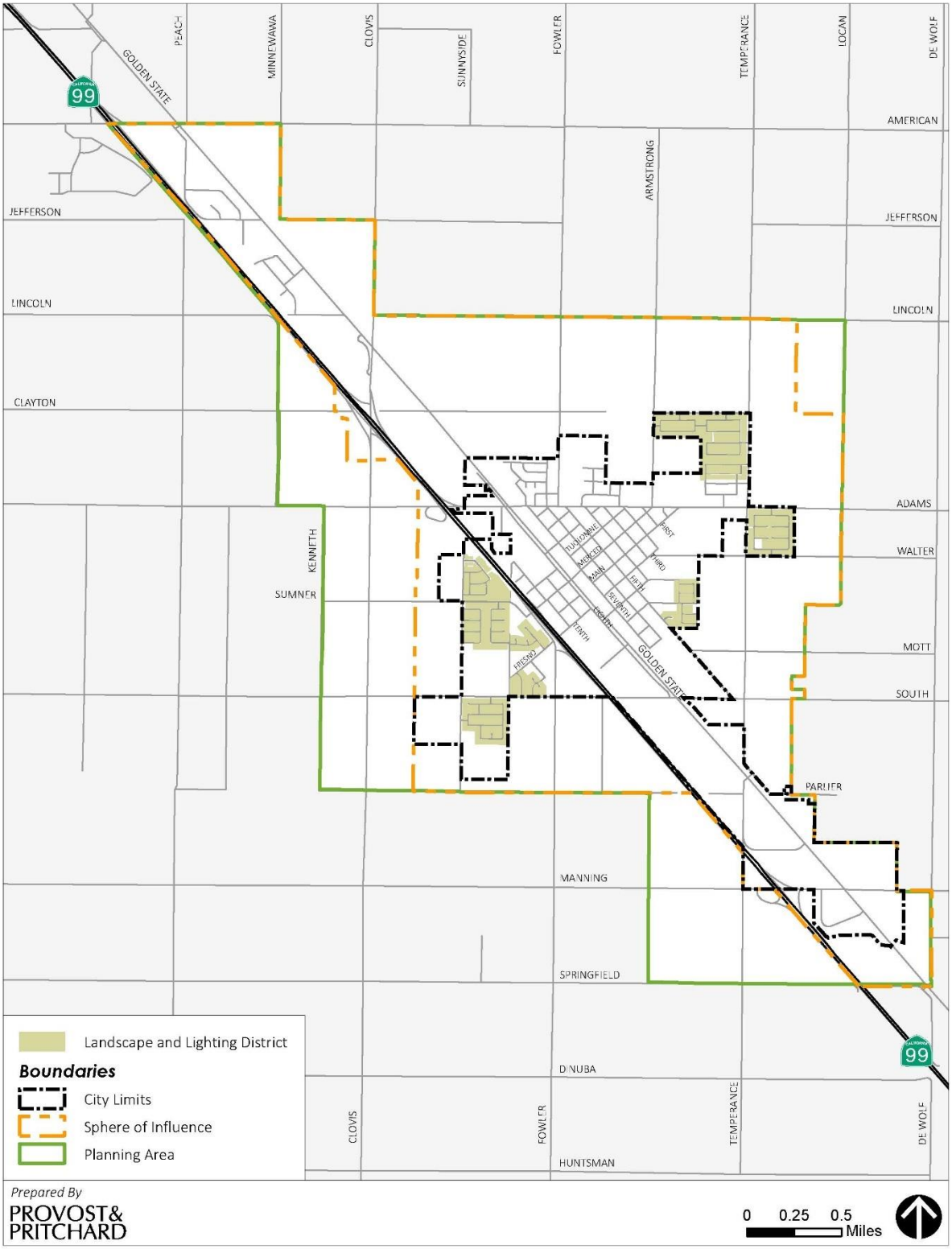
A Landscape Maintenance District (LMD) is a special district formed to provide property owners the opportunity to pay for enhanced landscaping and appurtenant improvements, maintenance, and services beyond those generally provided by City of Fowler. The LMD is funded through special property taxes assessed on the properties served by the district. There is one LMD within the City of Fowler, which serves several neighborhoods throughout the City. A map of parcels included in the LMD can be seen in **Figure 6-2**.

WATER SUPPLY AND WATER QUALITY

The City of Fowler relies on groundwater for its drinking water supply, sourced from six local wells. Distribution is provided by the Water Division of the City's Public Works Department through a system in which pumps deliver water to a network of mains, pipelines, and laterals to distribute water to residents and businesses. In accordance with state and federal standards, municipal water is tested monthly to ensure quality. The City's Public Works department is responsible for repairs and replacement of water lines, pumps, meters, and other equipment and maintains the integrity of the system.

In 2014, the City of Fowler entered into an agreement with Consolidated Irrigation District (CID) to fund groundwater recharge programs in order to sustain the aquifer the City is relies on. CID provides water from the Kings River for groundwater recharge and irrigation to more than 6,000 growers within its 144,000-acre service area, which includes land surrounding the City of Fowler.

Figure 6-2: Landscape Maintenance District



City of Fowler Water Rate Study

The City of Fowler Water Rate Study was completed in April 2015. The purpose of the report was to identify whether existing water rates would adequately provide for reliable water supply and delivery based on current needs and the state of City infrastructure. The study reported that previous rate increases (a base rate increase in 2003 and an overuse rate increase in 2009) are no longer keeping pace with operating costs. The study proposed rate increases to cover operating and maintenance costs and to begin adequately funding necessary capital improvements to the water system.

The report also estimated that annual costs for groundwater recharge with CID could total as much as $200,605 through 2022. The City has identified approximately $2,000,000 of capital improvement projects needed to upgrade the system over a ten-year period. The upgrades are necessary for the City to maintain current levels of service.[37]

South Kings Groundwater Sustainability Agency and Plan

In 2014, the Sustainable Groundwater Management Act (SGMA) was enacted which requires government and water agencies of certain groundwater basins to halt overdraft and bring the basins into balanced levels of pumping and recharge. Under SGMA, local agencies form Groundwater Sustainability Agencies (GSAs) to manage basins and adopt Groundwater Sustainability Plans (GSPs) to outline how groundwater basins will reach long term sustainability. The City of Fowler is part of the South Kings GSA. The Groundwater Sustainability Plan for this GSA has recently been released for public review. Updates to the City of Fowler's General Plan will be coordinated with the adopted GSP.

WASTEWATER SYSTEM

In 1971, Fresno LAFCo formed the Selma-Kingsburg-Fowler County Sanitation District (District) pursuant to the County Sanitation District Act, California Health and Safety Code section 4700 et seq. At that time, the District's objective was to address significant reoccurring sewage problems within the three member cities. The County of Fresno requested the formation of a sanitation district as a vehicle to pursue federal and state aid to construct a regional treatment facility. Construction of the District's regional wastewater treatment plant unified the three benefitting cities with the fiscal responsibility to fund the District's long-term operation and administration costs. The District provides sewer service and wastewater treatment to its member cities through a mutual agreement.[38]

The District owns, operates, and maintains a regional wastewater treatment plant that collects wastewater originating from the three cities and portions of unincorporated territory in Fresno County. Each city owns the section of the wastewater collection system within their respective city limits, and the District manages operations and performs maintenance, refurbishment, and replacement service on the entire system.[39]

[37] (Peters Engineering Group, 2015)
[38] (SKF Municipal Service Review and SOI Update Report, 2017)
[39] Ibid.

The District is a dependent special district. Its governing body consists of five board members: one city council member from each of the three cities and two Fresno County supervisors. When the members of the board of supervisors or city councils change, the composition of the District's board is updated accordingly.[40]

The capacity of the District's collection system was evaluated by the District's 2016 Collection System Master Plan, which included the Expansion Area. According to the Master Plan, the hydraulic design flows used for the capacity of the collection system consist of two key components: Peak Wet Weather Flows (PWWF) and Peak Dry Weather Flows (PDWF). The District anticipates the sewer system will continue to be built out consistent with the Master Plan. The District estimates its 2020 flow capacities as 7.87 million gallons per day (mgd) PDWF and 15.9 mgd PWWF.

STORMWATER SYSTEM

The City currently does not adhere to a storm drainage master plan. As such, the City reviews the capacity of its system and need for new storm drainage infrastructure as development projects are submitted, on a project-by-project basis. Each applicant is responsible for providing engineering details as part of their project submittal, which is then reviewed by the City Engineer. There are trunk lines that lead to various basins throughout the City, however some projects retain stormwater on-site through the incorporation of a new basin. A map of stormwater basin locations, as well as trunk lines, can be seen in **Figure 6-3.**

SOLID WASTE COLLECTION, RECYCLING, AND DISPOSAL

Solid waste collection in the City of Fowler is provided by Waste Management, Inc. The City's solid waste program includes waste disposal collection, a regular recyclables pickup program, and a green waste pickup program. After removing recyclable materials, Fowler's solid waste is transferred to the Kettleman Hills Nonhazardous Codisposal Site located at 35251 Old Skyline Road in Kettleman City, CA approximately 52 miles southeast of Fowler. The landfill is currently at approximately 44 percent capacity and has no scheduled closure date. In 2015, the City adopted Ordinance No. 2015-02, which mandates recycling and ensures compliance with Assembly Bill 341 which requires cities and counties to reduce, reuse, and recycle solid waste to the maximum extent feasible.

[40] Ibid.

Figure 6-3: Stormwater System Facilities

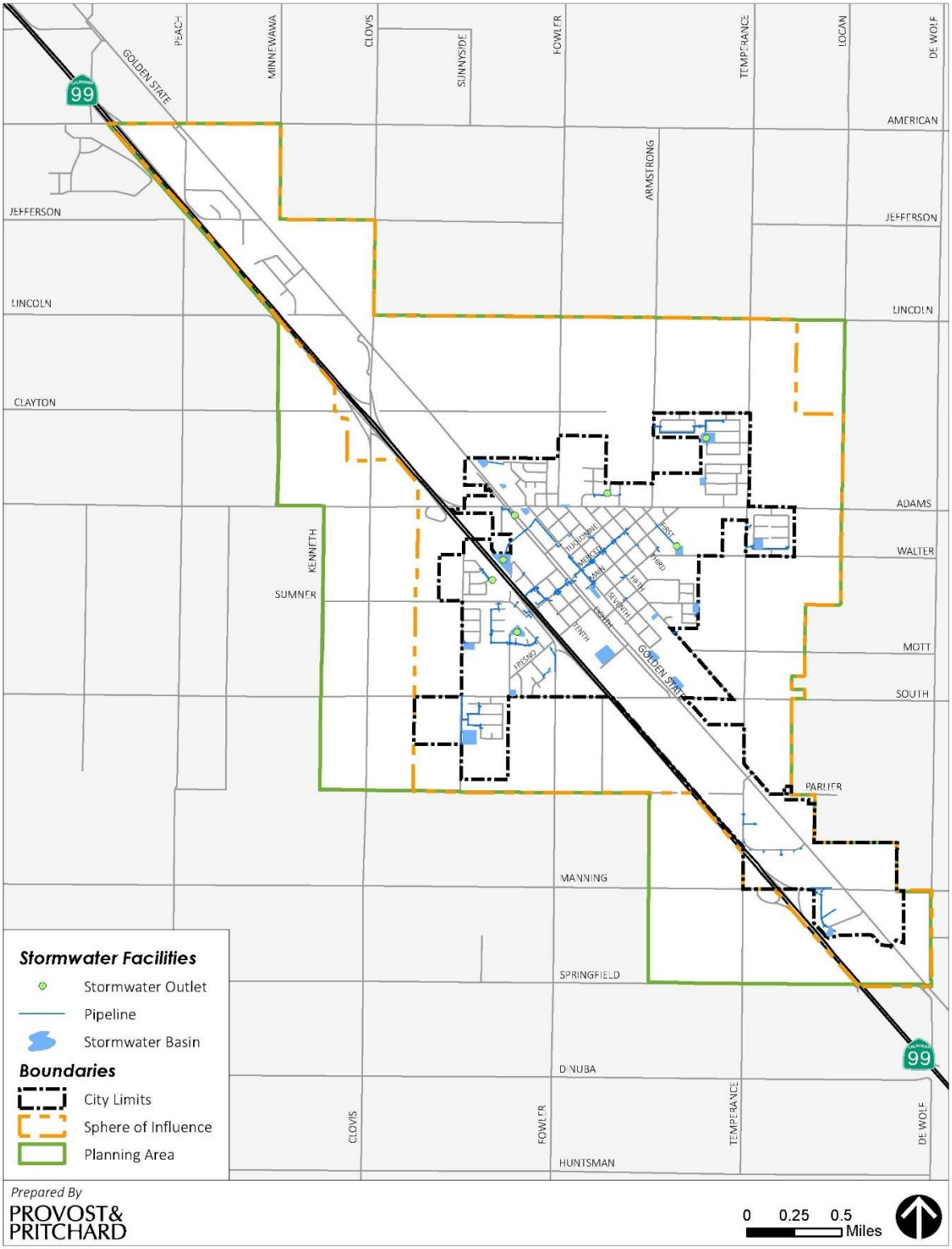
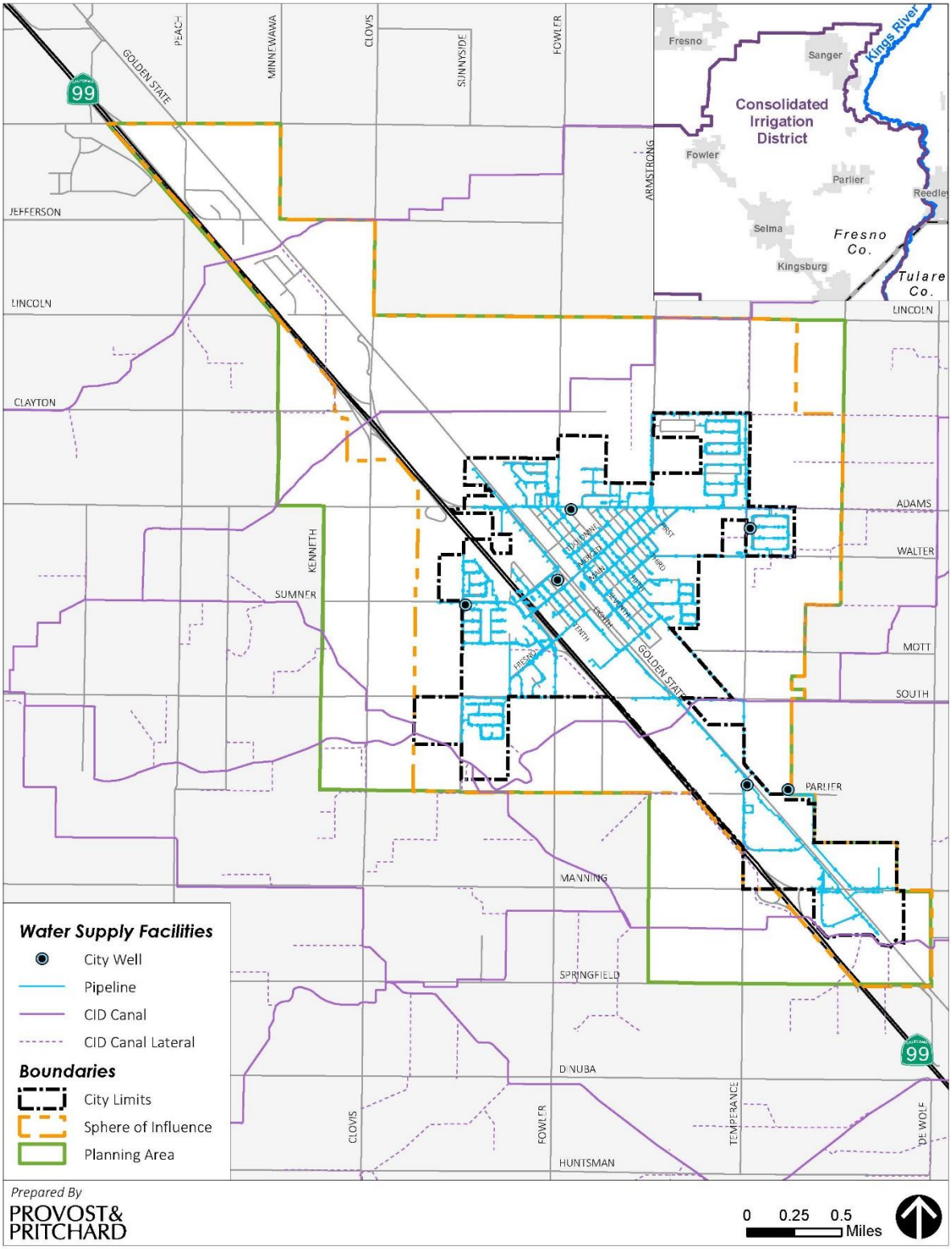


Figure 6-4: Water Supply Facilities



7. HAZARDS AND SAFETY

This chapter reviews the natural and humanmade hazards with potential to affect the City of Fowler. Hazards discussed include geologic and seismic issues, flooding, hazardous materials and contaminated sites, noise, and climate adaption.

GEOLOGIC AND SEISMIC HAZARDS

The City of Fowler is located in central Fresno County, in the southern section of California's Great Valley Geomorphic Province, or Central Valley. The Sacramento Valley makes up the northern third and the San Joaquin Valley makes up the southern two-thirds of the geomorphic province. Both valleys are watered by large rivers flowing west from the Sierra Nevada range, with smaller tributaries flowing east from the Coast Ranges. Most of the surface of the Great Valley is covered by Quaternary (present day to 1.6 million years ago) alluvium.[41] The Valley's geology makes for incredible fertility, but it also means the area is threatened by concerns like subsidence. The following sections assess Fowler's susceptibility to settling soil and other geologic hazards.

Faults and Shaking

The Alquist-Priolo Earthquake Fault Zoning Act (originally enacted in 1972 and renamed in 1994) is intended to reduce the risk to life and property from surface fault rupture during earthquakes. The statute prohibits the location of most types of structures intended for human occupancy across the traces of active faults and regulates construction in the corridors along active faults.

The City of Fowler is not located within an Alquist-Priolo Earthquake Fault Zone and there are no known active faults within the planning area. The nearest major fault is the San Andreas Fault, located approximately 65 miles southwest of the planning area. The San Andreas fault is the dominant active tectonic feature of the Coast Ranges and represents the boundary of the North American and Pacific plates. The Nunez Fault is approximately 51 miles southwest and the Poso Fault is approximately 51 miles south of the planning area.

Liquefaction

The potential for liquefaction, which is the loss of soil strength due to seismic forces, is dependent on soil types and density, the groundwater table, and the duration and intensity of ground shaking. Although no specific liquefaction hazard areas have been identified in Fresno County, this potential is recognized throughout the San Joaquin Valley where unconsolidated sediments and a high water table coincide. However, soil types along the Valley floor are not conducive to liquefaction because they are generally too coarse. Furthermore, the average depth to groundwater within the planning area is approximately 85 to 95 feet which also minimizes liquefaction potential.[42]

[41] (Harden, 1998, p. 479)
[42] (City of Fowler, 2019)

Landslides

Landslides usually occur in locations with steep slopes and unstable soils. The City of Fowler is located on the Valley floor where no major geologic landforms exist, and the topography is essentially flat and level. The nearest foothills are approximately 15 miles northeast of the City. Therefore, the City of Fowler has minimal-to-no landslide susceptibility.

Subsidence

Subsidence occurs when a large land area settles due to over-saturation or extensive withdrawal of groundwater, oil, or natural gas. These areas are typically composed of open-textured soils, high in silt or clay content, that become saturated. Although some areas in Fresno County have experienced subsidence due to groundwater overdraft, Fowler's elevation has remained relatively unchanged. The most current data from National Aeronautics and Space Administration (NASA) shows Fowler and surrounding lands have experienced minimal subsidence in recent years.[43]

Flooding

Federal Emergency Management Agency

The Federal Emergency Management Agency (FEMA) publishes Flood Insurance Rate Maps (FIRM) that show regulated flood hazard zones, which are then used to assign risk and insurance rates for homeowners and businesses. As illustrated in Figure 7-1, potential flood hazards in the Fowler planning area are set forth on three FIRMs, which divide the area into flood hazard zones. Each flood hazard zone depicts the severity of or the type of flooding expected to occur in an area. FIRMs show the areas susceptible to a 100-year flood, which is defined by FEMA as "a flood with a 1 percent chance of being equaled or exceeded in any given year." The maps also show areas susceptible to 500-year flood hazards, which consist of areas that have a 0.2 percent chance of flooding in any given year. If an area is not protected from the 100-year flood, mandatory flood insurance is required.

The FEMA flood hazard designations from the FIRMs for the City of Fowler are described as follows:

Zone A. This flood insurance rate hazard zone corresponds to areas with a 1 percent annual chance of flooding, known as the 100-year floodplain. No depths or base flood elevations are shown within this zone. Flood insurance is required to be purchased within this zone and development is subject to floodplain management standards.

Zone X (shaded). This flood insurance rate hazard zone represents an area of moderate flood hazard, outside of the 100-year floodplain. This area has a 0.2 percent annual chance of flooding, which is also referred to a the 500-year flood zone. Mandatory flood insurance and building standards do not apply to this zone.

[43] NASA InSAR (Interferometric Synthetic Aperture Radar) data provided by the California Department of Water Resources (DWR).

Zone X (unshaded). The majority of the planning area lies within this flood insurance rate hazard zone which represents an area of minimal flood hazard. These areas are outside of special flood hazard areas and at elevations above those susceptible to the 500-year flood.

Central Valley Flood Protection Plan

The Central Valley Flood Protection Plan (CVFPP), first adopted in 2012 and updated every five years, was developed to better manage flood risk in the Central Valley using the following strategies:

- *Prioritize the state's investment in flood management over the next three decades,*
- *Promote multi-benefit projects, and*
- *Integrate and improve ecosystem functions associated with flood risk reduction projects*.

Following adoption of the initial CVFPP in 2012, the California Department of Water Resources (DWR) funded development of six Regional Flood Management Plans (RFMPs) to address regional flood management goals and challenges. The planning area is not included in a RFMP because the risk of flood in the region is minimal. Fowler and the surrounding lands are not located within the 100-year, 200-year, or 500-year floodplains.[44]

Dam Inundation

Hundreds of dams and reservoirs have been built in California for water supply, flood control, hydroelectric power, and recreational use. The storage capacity of these dams varies across the State from large reservoirs with capacities exceeding millions of acre-feet to small reservoirs with capacities from hundreds to thousands of acre-feet. Depending on the season, water from these reservoirs is released into the river systems throughout the State and eventually reaches the Pacific Ocean. The Kings River, which flows approximately 9 miles east of the planning area, is the primary river in the vicinity of Fowler. The Kings River is impounded by a dam which forms the one-million-acre-foot Pine Flat reservoir, located approximately 23 miles northeast of the planning area. If Pine Flat dam were to fail, a large portion of Fresno County, including the City of Fowler, would be inundated with water. Figure 7-2 shows the dam inundation areas in the event that Pine Flat dam were to fail.

[44] (DWR Best Available Maps, n.d.)

Figure 7-1: Flood Zones

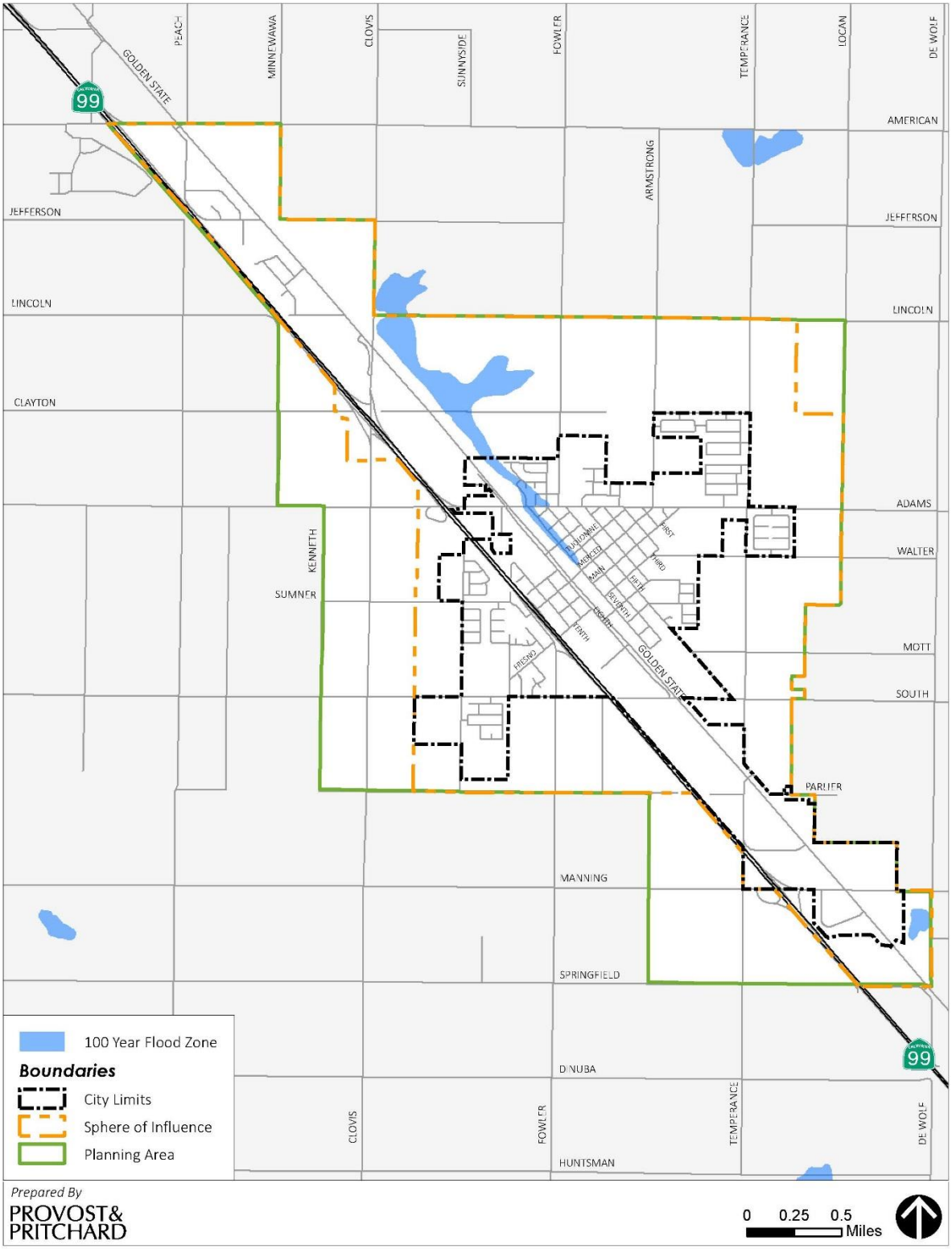
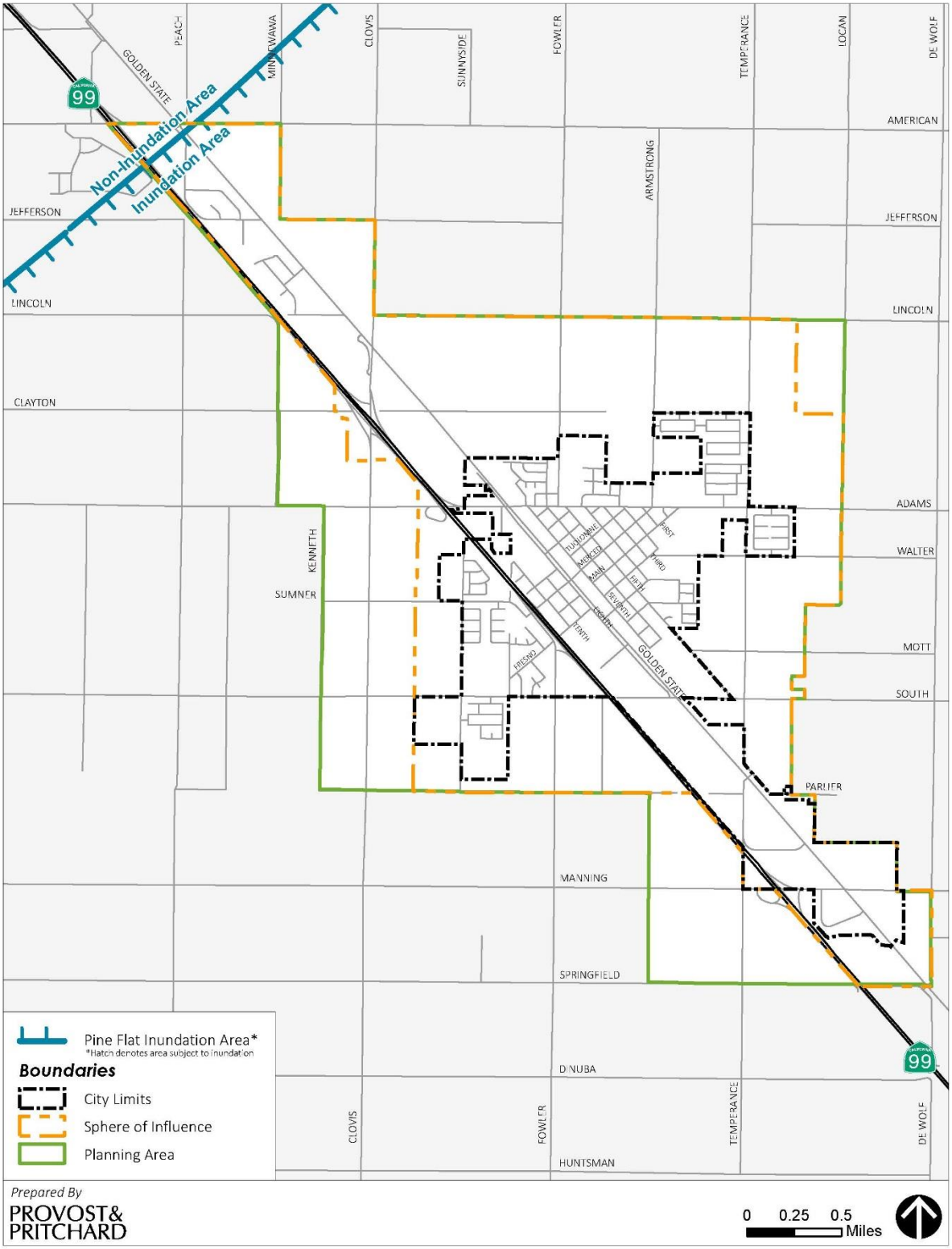


Figure 7-2: Dam Inundation Area



HAZARDOUS MATERIALS AND CONTAMINATED SITES

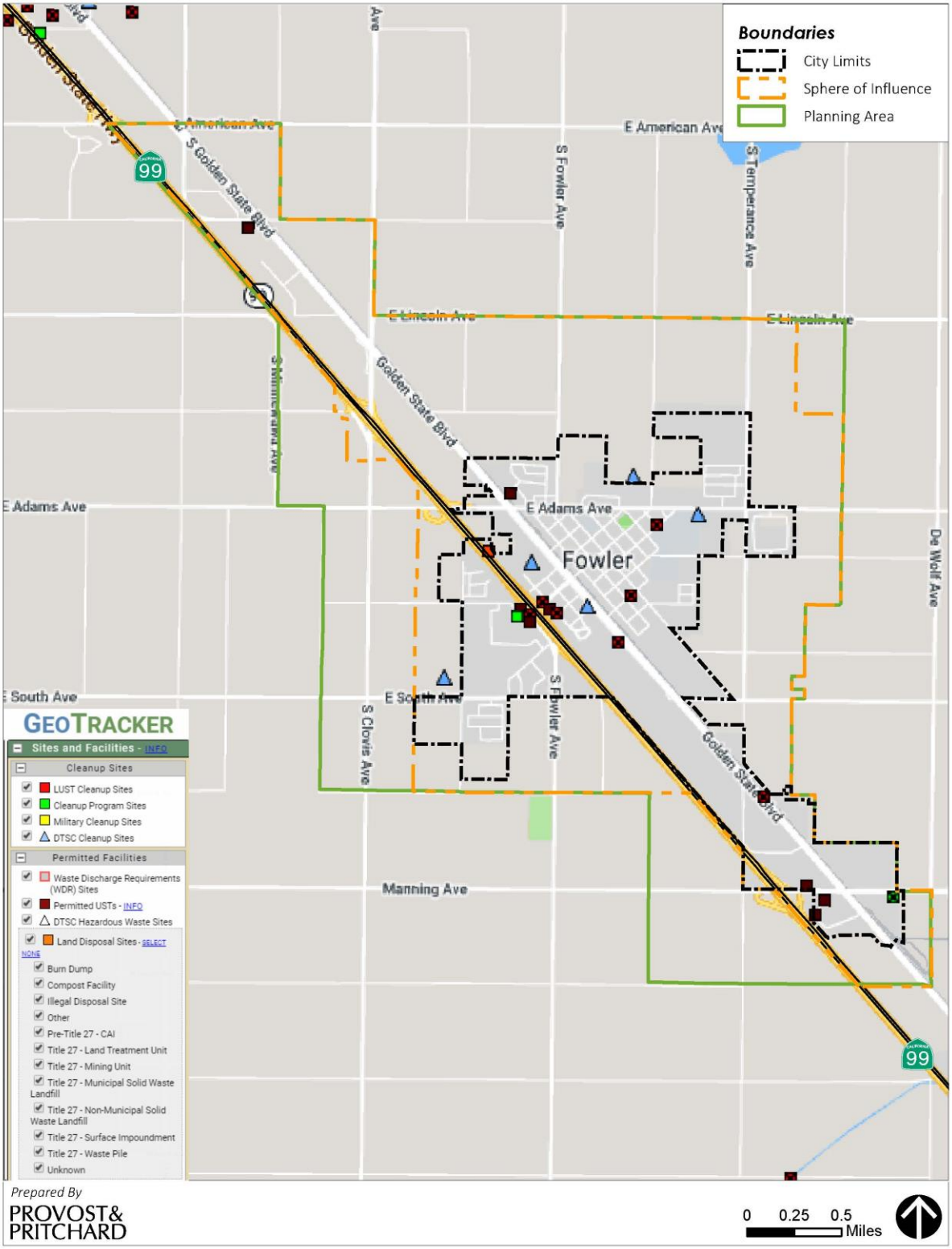
Sites where hazardous chemical compounds have been released into the environment can pose health threats. Historic or current activities, most often associated with industrial or commercial uses, such as car washes, gas stations, and dry cleaners, but also associated with some agricultural users, may result in the release of toxic substances which can contaminate soil and groundwater. Furthermore, ground disturbance through grading or excavation can result in public exposure to these chemicals. Improper handling of contaminated sites may result in further exposure via airborne dust, vapors, or surface water runoff.

The Hazardous Waste and Substances Sites (Cortese) List is a planning document that provides information about the location of hazardous materials release sites. Government Code (GC) Section 65962.5 requires the California Environmental Protection Agency (CalEPA) to develop at least annually an updated Cortese List. The Department of Toxic Substances Control (DTSC) is responsible for a portion of the information contained in the Cortese List. Other state and local government agencies are required to provide additional hazardous material release information for the Cortese List. DTSC's EnviroStor database provides DTSC's component of Cortese List data (DTSC, 2010). In addition to the EnviroStor database, the State Water Resources Control Board (SWRCB) Geotracker database provides information on regulated hazardous waste facilities in California, including underground storage tank (UST) cases and non-UST cleanup programs, including Spills-Leaks-Investigations-Cleanups (SLIC) sites, Department of Defense (DOD) sites, and Land Disposal program. As illustrated in Table 7-1 and Figure 5-4 below, a search of the DTSC EnviroStor database and the SWRCB Geotracker performed on January 2, 2019 determined that there are four known open contaminated sites within the planning area. See **APPENDIX C** for a more detailed summary of each site's cleanup status.

Table 7-1: Contaminated Sites

ID	Site Name	Address	Case Type	Cleanup Status
Active Cases Identified by the DTSC				
60002638	Marshall Elementary School	142 North Armstrong	School Investigation	Active
10490099	PG&E Manufactured Gas Plant SQ-FK-FOW	West Fresno Street near South Eighth Street	Evaluation	Inactive: Needs Evaluation
Active Cases Identified by the SWRCB				
T10000011242	Wright Oil	114 North Sumner Avenue	Cleanup Program Site	Open: Site Assessment
L10004199996	Fowler City Landfill	Highway 99 and West Adams Avenue	Land Disposal Site	Open

Figure 7-3: Contaminated Sites



NOISE

Sound is a process that consists of three components: the sound source, the sound path, and the sound receiver. All three components must be present for sound to exist. In most situations, there are many different sound sources, paths, and receivers. Noise is generally defined as loud, unpleasant, unexpected, or undesired sound.

The State of California and the City of Fowler both set guidelines for the compatibility of land uses with various noise levels. **APPENDIX B** contains a full review of state and local regulations pertaining to noise.

Noise Sensitive Land Uses

Noise sensitive land uses are generally defined as locations where people reside or where the presence of unwanted sound could adversely affect the primary intended use of the land. Places where people live, sleep, recreate, worship, and study are generally considered to be sensitive to noise because intrusive noise can be disruptive to these activities. Previous planning efforts have identified the following noise sensitive land uses within the City of Fowler:

- Residential uses,
- Schools,
- Parks,
- Hospitals, and
- Convalescent homes.

Major Noise Sources

Major sources of noise within the City include traffic on roadways, rail operations, and industrial facilities. Typical noise generators include:

- ***Roadways*** *including major high-speed arterials, such as SR 99, East Adams Avenue, and Golden State Boulevard.*
- ***Rail Operations*** *such as Union Pacific Railroad, which provides freight service in Fowler.*
- ***Stationary Sources*** *which may include water well pump stations, trucking operations, auto maintenance and restoration shops, shopping centers, drive-thrus, car washes, loading docks, recycling centers, special events such as concerts and fireworks, and sports activities at schools. Mechanical systems, including heating, ventilating, air conditioning equipment, and swimming pool pumps, are also a considered stationary noise source.*

CLIMATE ADAPTATION

The information contained in this chapter is discussed in further detail in the City of Fowler's *Climate Adaptation Policy Paper & Vulnerability Assessment* Report. The earth's climate has been warming for the past century. Scientific analysis of earth's historical climate shows that the climate system varies naturally over a wide range of timescales. In general, climate changes prior to the Industrial Revolution in the 1700s can be explained by natural causes. However, recent climate changes cannot be explained by natural causes

alone.[45] It is believed that this warming trend is related to anthropogenic[46] releases of certain gases, known as greenhouse gases (GHG), into the atmosphere. GHG absorb infrared energy that would otherwise escape from the Earth. As the infrared energy is absorbed, the air surrounding the Earth is heated. An overall warming trend has been recorded since the late 19th century, with the most rapid warming occurring over the past two decades.

Scientific and Legislative Context

Recent scientific analysis completed by the Intergovernmental Panel on Climate Change (IPCC) confirms that human influence on the climate system is clear, and recent anthropogenic emissions of greenhouse gases are the highest in history. This has led to atmospheric concentrations of carbon dioxide, methane, and nitrous oxide that are unprecedented in at least the last 800,000 years. Their effects, together with those of other anthropogenic drivers, have been detected throughout the climate system and are extremely likely to have been the dominant cause of the observed warming since the mid-20th century.

In recent decades, changes in climate have caused impacts on natural and human systems on all continents and across the oceans. Impacts are due to observed climate change, irrespective of its cause, indicating the sensitivity of natural and human systems to changing climate. Some of these impacts include changes in extreme weather, changes in precipitation or melting snow which affect water resources, negative impacts on crop yields, and changing wildlife geographic ranges and migratory patterns.[47]

In an effort to prepare for and mitigate climate change related impacts, new laws governing land use planning efforts have been enacted. In October 2015 the State of California passed Senate Bill 379, which ensures climate adaptation is integrated into local long-range planning documents such as Local Hazard Mitigation Plans and General Plan safety elements. These documents must be reviewed and updated to include climate adaptation and resiliency strategies, including:

1. ***A vulnerability assessment*** *that identifies the risks climate change poses to the local jurisdiction and the geographic areas at risk from climate change.*
2. ***A set of adaptation and resilience goals, policies, and objectives*** *based on the information specified in the vulnerability assessment.*
3. ***A set of feasible implementation measures*** *designed to carry out the goals, policies, and objectives identified in the adaptation objectives.*

[45] (Causes of Climate Change, 2017)
[46] Resulting from the influence of human beings.
[47] (Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Cliimate Change, 2014)

8. ECONOMIC DEVELOPMENT

Fowler's economic strength comes from its residents, businesses, schools, community organizations, and government. Economic development efforts within the City work to expand resources for those groups. General Plan policies that foster infrastructure improvements, downtown preservation, and business friendly practices guide City leaders to enhance the quality of life and economy in Fowler. This chapter serves as a high-level overview of current conditions contributing to economic development. The topics covered below provide a snapshot of economic development organizations operating in the City, population demographics, as well as previous planning efforts which will frame the economic development policy discussions that are part of this General Plan Update.

PREVIOUS PLANNING EFFORTS

City of Fowler 2025 General Plan (2004)

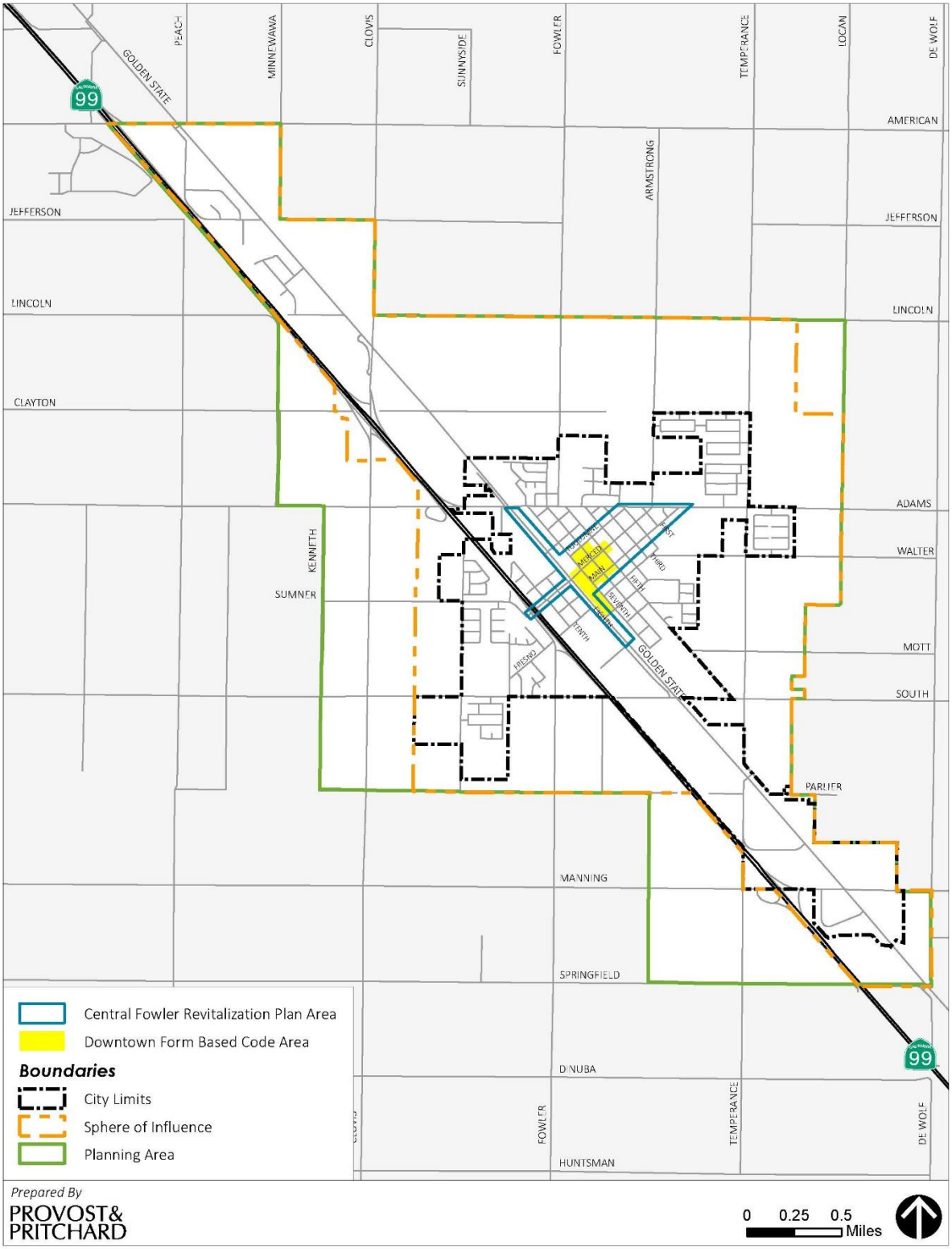
In 2004, the City of Fowler updated its original General Plan. The first update since adoption in 1976 focused on the elements of land use, economic development, and circulation. With a primary purpose of bolstering a stable, dynamic, and strong economy, the optional Economic Development Element outlined a series of goals with supporting policies and standards, including the following:

- Goal 3-1: Establish and implement an overall strategy for the economic development of Fowler.
- Goal 3-2: Invest in necessary infrastructure and beautification to ensure success of these strategies.
- Goal 3-3: Support programs and provide resources to strengthen and expand existing business enterprises and new business opportunities.
- Goal 3-4: Actively pursue the attraction of new commercial and industrial businesses by implementing a community marketing program.
- Goal 3-5: Establish a community-based organization for the planning and implementation of economic development.

Central Fowler Revitalization Plan (2007)

In April of 2007, the City conducted a series of public workshops to create a plan to rejuvenate and guide new development for Fowler's central commercial area and immediate surrounding neighborhoods. The geographic area subject to this plan can be seen in **Figure 8-1**. This effort was made possible through a Caltrans Environmental Justice: Context Sensitive Planning Grant received by the City of Fowler in partnership with the Local Government Commission (LGC).

Figure 8-1: Central Fowler Revitalization Plan and Form-Based Code Areas



Primary challenges identified in the resulting plan included wide roadways unsupportive of a central business core; the lack of pedestrian and urban design enhancements which create safety issues and unappealing, disconnected shopping environments; and the deterioration of historical buildings leading to unattractive storefronts and interior spaces that are ill-equipped for retail.

The Central Fowler Revitalization Plan identifies the following design principles meant to prioritize revitalization efforts with the maximum positive impact:

- Maintain a compact, walkable, accessible town center; and
- Provide a well-connected network for bicyclists and pedestrians.

Since plan adoption in 2007, the façades of several downtown storefronts have been restored using Community Development Block Grant (CDBG) funding. In addition, in 2008 a public library was constructed on 7th Street, the first new building since the original library opened in 1910.

Form Based Codes Implementation (2013)

Form based codes are a unique method of land use regulation which offers a more design forward approach than traditional zoning. Form based codes seek to provide a high-quality urban environment by using physical form as the organizing principle of regulation rather than separation of land use, as seen in traditional zoning practice.

In 2013, the City of Fowler amended its zoning ordinance with the addition of Article 17, establishing the City's first form-based code area. The form-based code area is located in the central portion of the City, bound by East Tuolumne Street on the north, South 5TH Street on the east, and South 8th Street on the west. See **Figure 8-1** for a complete overview of the Form Based Code district boundaries in comparison to the Central Fowler Revitalization Plan boundaries. The area was established to foster a vibrant and economically viable town center through a mix of uses with shop fronts and commercial uses at street level, overlooked by canopy shade trees, upper story residences, and offices. This greater emphasis on physical form is intended to produce attractive and enjoyable public spaces complemented with a healthy mix of land uses, including entertainment and retail. The ordinance also regulates components of the streetscape, including installation timelines, street lighting, and ample landscaping requirements.

Fresno County Comprehensive Economic Development Strategy (2016)

The 2016 Fresno County Comprehensive Economic Development Strategy (CEDS)[48] provides an overview of economic development opportunities within unincorporated Fresno County plus 14 medium and small sized cities within the County. The City of Fresno has completed its own individual CEDS and is not included in this report.

Many of the economic development opportunities presented in this report center around the Central Valley's agricultural base. Opportunity areas for the County at large include water conservation technology, alternative energy, high value specialty crops, ag manufacturing, and agricultural tourism. Additional

[48] Prepared by the Fresno Economic Development Corporation.

growth areas may include the health care industry, High Speed Rail, and the expansion of a Career Technical Education system.

While the report is regional in scope, it also identifies economic development goals and strategic priorities for each city discussed in the report. Priorities were developed through information collected from general plans, prior studies, stakeholder interviews, and exchanges with city staff. The CEDS reports that the City of Fowler's primary economic drivers include manufacturing establishments, wholesale trade, transportation and warehousing, and retail trade. The CEDS also identifies possible targets for business expansion and attraction including:

- Large employers that do not require high water consumption,
- Agricultural packing and packaging companies,
- Manufacturing and assembly,
- Metal fabricators, and
- Health care and services.

The CEDS report also summarized population growth trends in relation to job growth, reporting that between 2010 and 2014, the South County, which includes the Cities of Fowler, Selma, and Kingsburg, experienced five percent of the County's population growth. The report also states indicates that this growth may not be translating into more jobs for the region. Despite its five percent population growth, the South County captured only 1.8 percent of the increase in jobs overall, indicating that the area is becoming an attractive residential location for commuters who find work outside of the community.[49]

EXISTING RESOURCES

Organizations

Fowler Chamber of Commerce

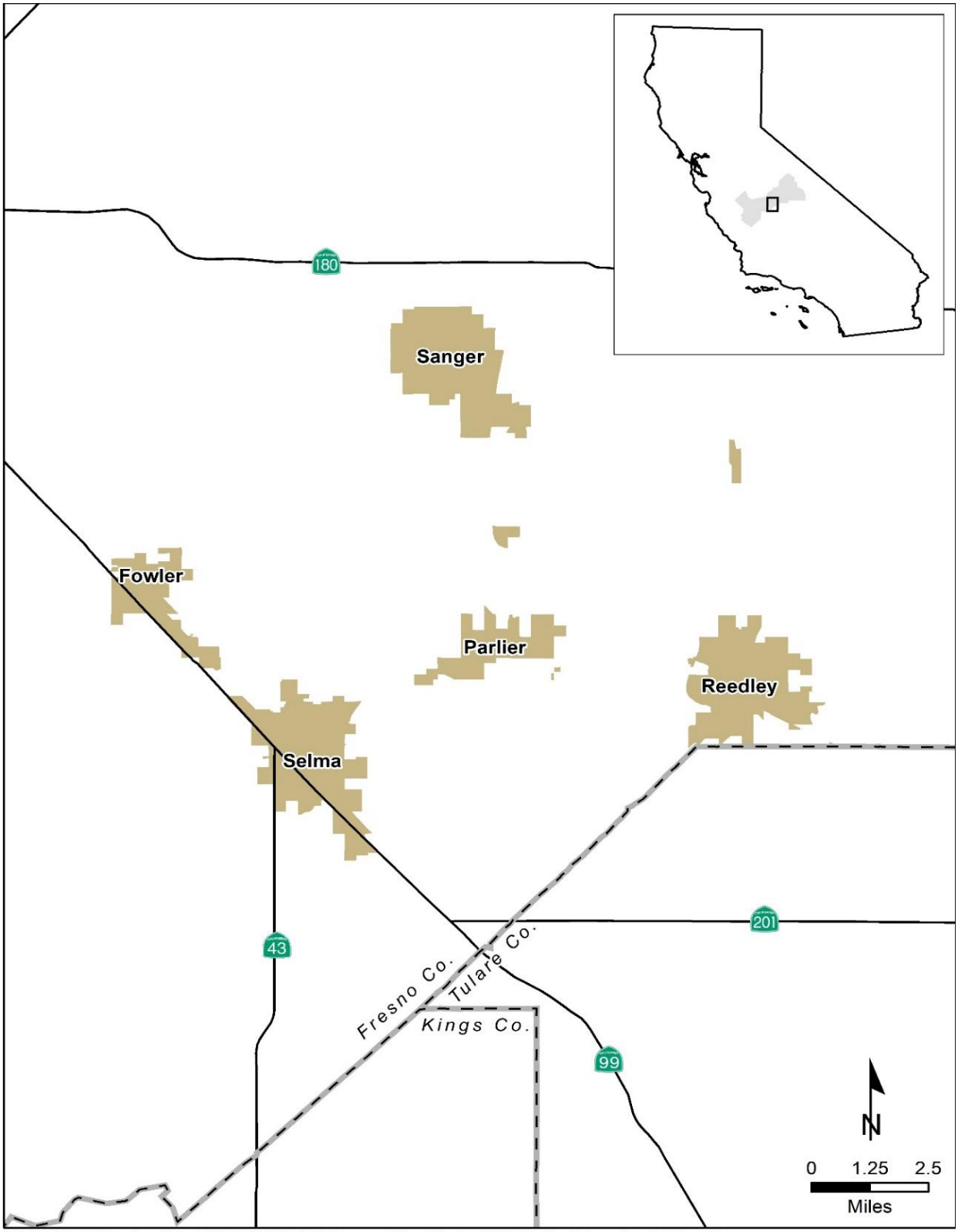
Fowler's Chamber of Commerce is in its infancy, having reformed in 2018 after disbanding several years ago. Since reestablishment, the Chamber has seen little growth and is currently rebuilding resources and services.

5-Cities Joint Powers Economic Development Authority

The 5-Cities Joint Powers Economic Development Authority (Authority) was originally formed through a Joint Powers Agreement involving the Cities of Fowler, Parlier, Reedley, Sanger, and Selma. In 2004, the County of Fresno was added as a member agency, followed by the City of Kingsburg in December 2006 and the City of Orange Cove in September 2010. The geographic area covered by member agencies can be seen in **Figure 8-2**.

[49] (Fresno County Comprehensive Economic Development Strategy 2016, 2016, p. 34)

Figure 8-2: 5-Cities Joint Powers Economic Development Authority



The purpose of the Authority is to provide staff resources, personnel, and expertise to assist member agencies to develop economic development resources, establish cooperative relationships to pursue legislation, seek funding, allocate resources, and implement regional programs for the benefit of the citizens and economies of the member agencies.

Fresno Economic Development Corporation

The Fresno Economic Development Corporation (EDC) was founded in 1981 as a public/private nonprofit organization with the primary purpose of marketing Fresno County to attract businesses to the region. The Fresno EDC also facilitates site selection for new business and assists in retention and expansion of existing businesses within the region.

Funding Sources

Community Development Block Grant Program

The Community Development Block Grant (CDBG) program provides annual federal funding to communities for a wide range of community development needs. CDBG has been in effect since 1974 and is currently one of the longest running Housing and Urban Development (HUD) programs, providing funding to more than 1,200 units of State and local governments.

In 2018, Fowler was awarded approximately $50,000 through a Fresno County CDBG program. This grant provided funding for downtown building façade revitalization. Façade restoration is one of the economic development policies outlined in the 2025 General Plan for commercial land uses within the City of Fowler, as well as one of the recommendations of the 2007 Central Fowler Revitalization Plan.

ECONOMIC DEMOGRAPHICS

The following demographic data was gathered primarily through the American Community Survey (ACS) provided by the United State Census Bureau. The ACS is published annually and estimates population and economic demographics in five-year intervals. The survey estimates economic conditions such as workforce, income, industry, and occupation characteristics. At the time of publication, the most current five-year estimate available detailed the period from 2013 to 2017. The ACS is considered a vital tool to assist local officials, community leaders, and businesses to understand changes taking place in their communities.

Workforce Composition

The economic health of an area largely depends on the composition of its labor force. In part, major employers decide where to locate based on the availability of the workers that can meet their needs. According to the ACS 2015-2019 data, Fowler has a total population of 6,527,[50] with a labor force of 2,730 people.[51] Between the years of 2015-2019, 56.1 percent of the population 16 and older were employed,

[50] For the purposes of this chapter, U.S. Census Bureau American Community Survey 5-year estimates were utilized in order to provide consistency with ACS employment statistics. Other chapters within this report may utilize other data sources for population statistics, including the Department of Finance.

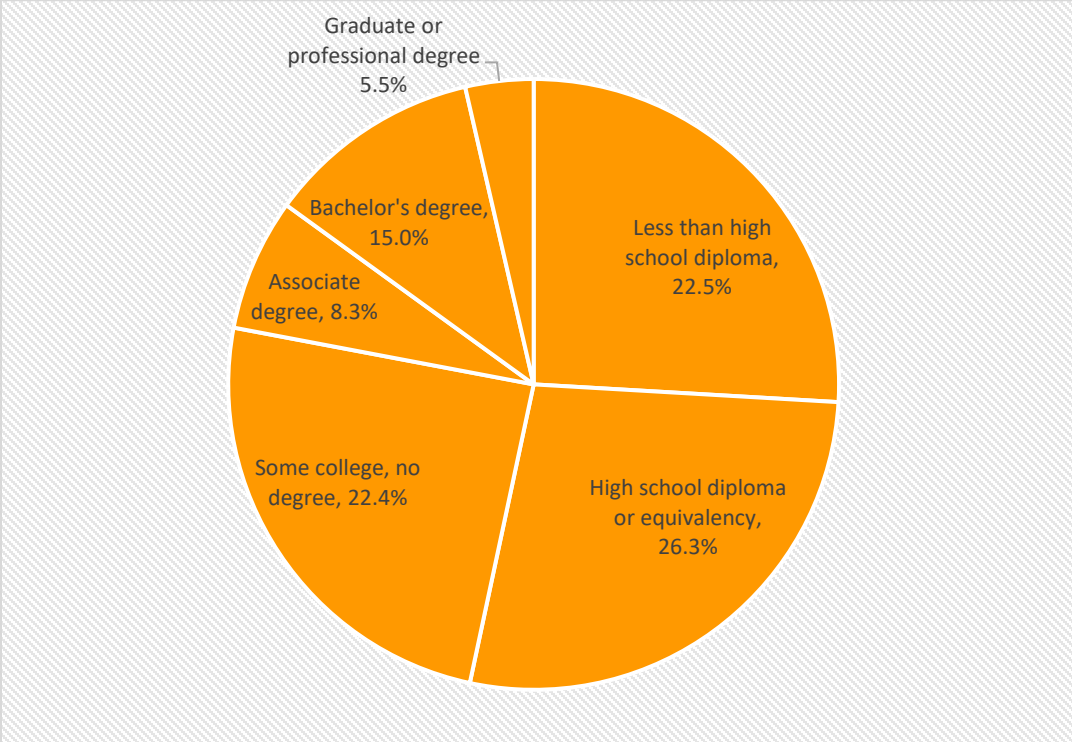
[51] Individuals contributing to the labor force include residents aged 16 years and older.

while 40.3 percent of that demographic were not part of the labor force. At the time of the survey, the unemployment rate was estimated at 3.6 percent.[52]

Educational Attainment

The employment opportunities and industries in a region are often a function of the educational attainment of its workforce, in combination with other economic factors. Fowler has a population whose primary educational attainment is that of a high school diploma or equivalency. This category accounts for 26.3 percent of the population aged 25 years and older. 22.5 percent of the population has less than a high school diploma and 15.0 and 5.5 percent of residents have obtained a bachelor's degree or graduate/professional degree, respectively. 22.4 percent of the population aged 25 or older had attended some college, but did not obtain a degree, while 8.3 percent had obtained an associate degree.

Figure 8-3: Educational Attainment for Residents 25 years and Older

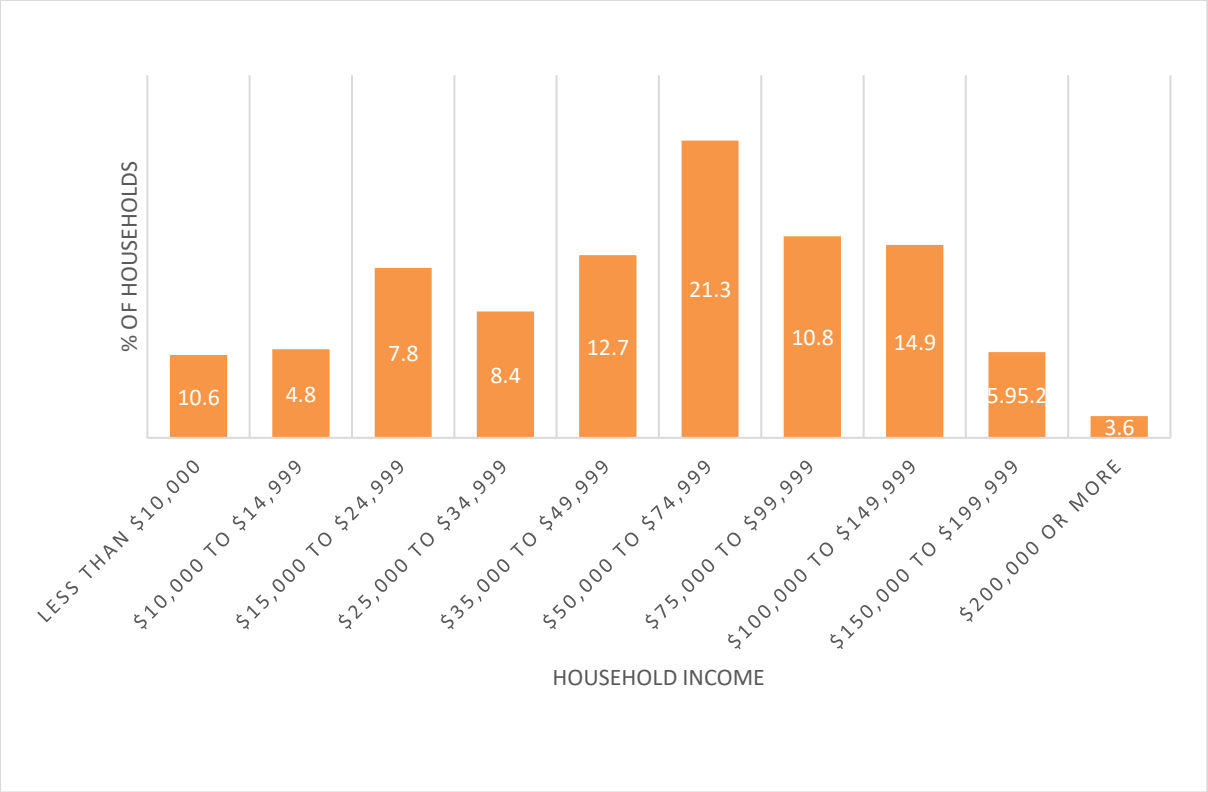


[52] (United States Census Bureau, 2019)

INCOME AND HOUSING CHARACTERISTICS

Fowler's estimated median household income as of 2019 was $57,676 which increased from $35,280 in the year 2000.[53] The City's median income is low compared to the State of California which was reported at $75,235,[54] and high compared to the County of Fresno reported at $53,969. In addition, Fowler's average home price is among the highest in Fresno County, at $253,300. Home prices in Fowler increased 4.71% from 2018 to 2019.[55]

Figure 8-4: Household Income (2015-2019 estimates)



Industry and Occupation Characteristics

Private wage and salary workers make up the bulk of employed residents within the City, estimated at roughly 74.6 percent of all employed residents, or approximately 2,036 workers. Self-employment accounted for only 4.4 percent, or 120 workers. Federal, state, or local government workers comprise 21.0 percent of the overall employed labor force, amounting to 574 workers. The top three industries providing employment to the workforce in Fowler include:

- Education, health care and social assistance services
- Retail trade

[53] (United States Census Bureau, 2019)
[54] (United States Census Bureau, 2019)
[55] (Data USA, 2019)

- Agricultural, forestry, fishing and hunting, and mining[56]

The top three occupations held by Fowler residents include:

- Management, business, sciences, and arts (28.4%)
- Sales and office occupations(24.1%)
- Production, transportation, and material moving occupations (18.4%)[57]

Table 8-1 through Table 8-3 below provide a breakdown of employment types, industries, and occupations in Fowler according to the U.S. Census Bureau's American Community Survey estimates.

Table 8-1: Employment Type

Employment by Type of Employer		
Class of Worker	**#**	**%**
Private wage and salary workers	2,036	74.6
Federal, state, or local government workers	574	21.0
Self-employed workers in own not incorporated business	120	4.4

Table 8-2: Employment by Industry

Employment Percentage by Industry	
Industry Type	**%**
Education, health care, and social assistance	26.2
Retail trade	17.3
Agriculture, forestry, fishing and hunting, mining	9.3
Professional, scientific, management, administrative, and waste management services	8.7
Public administration	6.9
Arts, entertainment, and recreation, accommodation, and food services	6.7
Manufacturing	6.4
Construction	6.2
Transportation and warehousing, utilities	4.3
Finance and insurance, real estate and rental and leasing	3.1
Other Services, except public administration	2.2
Wholesale trade	1.8
Information	0.9

Table 8-3: Employment by Occupation[58]

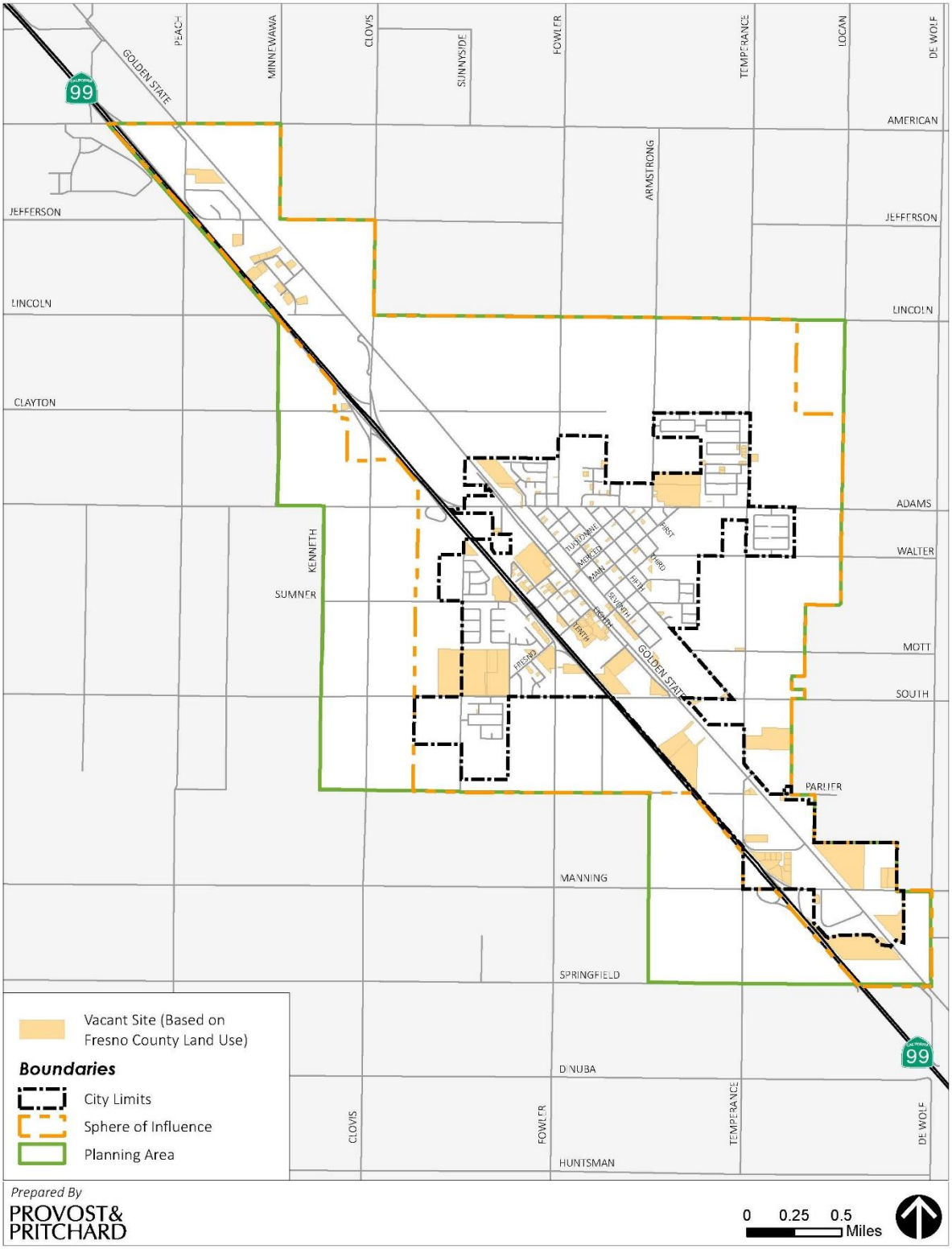
Occupation Types (Civilian employed population 16 and Older)		
Occupation	**#**	**%**
Management, business, sciences, and arts occupations	774	28.4
Sales and office occupations	658	24.1
Production, transportation, and material moving occupations	501	18.4
Service occupations	448	16.4
Natural resources, construction, and maintenance occupations	349	12.8

[56] (United States Census Bureau, 2019)
[57] (United States Census Bureau, 2019)
[58] Total may not add to 100% due to rounding.

OPPORTUNITY SITES MAPPING

Data utilized in the preparation of vacant and opportunity sites inventories is land use parcel data provided by Fresno County. See **Figure 8-5**.

Figure 8-5: Vacant Opportunity Sites



APPENDIX A SPECIAL STATUS SPECIES

INTRODUCTION

A search of the CNDDB for published accounts of special status plant and animal species was conducted for the Malaga and Conejo 7.5-minute quadrangles that contain the City of Fowler in its entirety, and for the 10 surrounding quadrangles: Caruthers, Riverdale, Laton, Burris Park, Selma, Sanger, Round Mountain, Clovis, Fresno North, and Fresno South.

According to CNDDB, there have been no recorded observations of special status species within the planning area; however, the special status plant and animal species list, found in **APPENDIX A** below have recorded observations in the surrounding vicinity.

Table A-1: Special Status Animal and Plant Species Observations in the Vicinity of Fowler

Species	Status
Special Status Animal Species	
tri-colored blackbird (*Agelaius tricolor*)	CCE, CSC
California tiger salamander (*Ambystoma californiense*)	FT, CT
northern California legless lizard (*Anniella pulchra*)	CSC
pallid bat (Antrozous pallidus)	CSC
California glossy snake (Arizona elegans occidentalis)	CSC
burrowing owl (Athene cunicularia)	CSC
vernal pool fairy shrimp (*Branchinecta lynchi*)	FT
Swainson's hawk (*Buteo swainsoni*)	CT
western yellow-billed cuckoo (Coccyzus americanus occidentalis)	FT, CE
valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)	FT
Fresno kangaroo rat (Dipodomys nitratoides exilis)	FE, CE
western pond turtle (*Emys marmorata*)	CSC
western mastiff bat (Eumops perotis californicus)	CSC
vernal pool tadpole shrimp (*Lepidurus packardi*)	FE
coast horned lizard (*Phrynosoma blainvillii*)	CSC
western spadefoot (*Spea hammondii*)	CSC
American badger (*Taxidea taxus*)	CSC
Least Bell's vireo (*Vireo bellii pusillus*)	FE, CE
San Joaquin kit fox (*Vulpes macrotis mutica*)	FE, CT
Special Status Plant Species	
brittlescale (Atriplex depressa)	CNPS 1B
lesser saltscale (*Atriplex minuscula*)	CNPS 1B
succulent owl's-clover (Castilleja campestris var. succulenta)	FT, CE, CNPS 1B
California jewelflower (*Caulanthus californicus*)	FE, CE, CNPS 1B
spiny-sepaled button-celery (*Eryngium spinosepalum*)	CNPS 1B
California satintail (*Imperata brevifolia*)	CNPS 2B
forked hare-leaf (Lagophylla dichotoma)	CNPS 1B
Panoche pepper-grass (Lepidium jaredii ssp. album)	CNPS 1B
Madera leptosiphon (Leptosiphon serrulatus)	CNPS 1B
San Joaquin Valley Orcutt grass (*Orcuttia inaequalis*)	FT, CE, CNPS 1B
San Joaquin adobe sunburst (*Pseudobahia peirsonii*)	FT, CE, CNPS 1B
California alkali grass (*Puccinellia simplex*)	CNPS 1B
Sanford's arrowhead (*Sagittaria sanfordii*)	CNPS 1B
caper-fruited tropidocarpum (*Tropidocarpum capparideum*)	CNPS 1B
Greene's tuctoria (*Tuctoria greenei*)	FE, CR, CNPS 1B

STATUS CODES

FE	*Federally Endangered*	*CE*	*California Endangered*
FT	*Federally Threatened*	*CT*	*California Threatened*
FPE	*Federally Endangered (Proposed)*	*CCT*	*California Threatened (Candidate)*
FPT	*Federally Threatened (Proposed)*	*CFP*	*California Fully Protected*
FC	*Federal Candidate*	*CSC*	*California Species of Special Concern*
CWL	*California Watch List*		
CCE	*California Endangered (Candidate)*		
CR	*California Rare*		

CNPS Listing

1A	*Plants Presumed Extinct in California*	*2*	*Plants Rare, Threatened, or Endangered in California, but more common elsewhere*
1B	*Plants Rare, Threatened, or Endangered in California and elsewhere*		

APPENDIX B CALIFORNIA AIR RESOURCES BOARD (CARB) AIR QUALITY ATTAINMENT STANDARDS

INTRODUCTION

Local air districts use air quality plans, or attainment plans, to bring the applicable air basin into attainment with all State and Federal ambient air quality standards, which are designed to protect the health and safety of residents within that air basin.

Table B-1 below provides detailed air quality standards and current measurements for the San Joaquin Valley.

Table B-1: Ambient Air Quality Standards and Attainment Designation

Ambient Air Quality Standards & Attainment Designation					
Pollutant	**Averaging Time**	**California Standards**		**National Standards**	
		Concentration	**Attainment Status**	**Primary**	**Attainment Status**
Ozone (O3)	1-hour	0.09 ppm	Nonattainment/ Severe	–	No Federal Standard
	8-hour	0.070 ppm	Nonattainment	0.075 ppm	Nonattainment (Extreme)**
Particulate Matter (PM10)	AAM[59]	20 µg/m3	Nonattainment	–	Attainment
	24-hour	50 µg/m3		150 µg/m3	
Fine Particulate Matter (PM2.5)	AAM	12 µg/m3	Nonattainment	12 µg/m3	Nonattainment
	24-hour	No Standard		35 µg/m3	
Carbon Monoxide (CO)	1-hour	20 ppm	Attainment/ Unclassified	35 ppm	Attainment/ Unclassified
	8-hour	9 ppm		9 ppm	
	8-hour (Lake Tahoe)	6 ppm		–	
Nitrogen Dioxide (NO2)	AAM	0.030 ppm	Attainment	53 ppb	Attainment/ Unclassified
	1-hour	0.18 ppm		100 ppb	
Sulfur Dioxide (SO2)	AAM	–	Attainment	--	Attainment/ Unclassified
	24-hour	0.04 ppm		--	
	3-hour	–		0.5 ppm	

[59] Annual Arithmetic Mean

Ambient Air Quality Standards & Attainment Designation					
Pollutant	**Averaging Time**	**California Standards**		**National Standards**	
		Concentration	**Attainment Status**	**Primary**	**Attainment Status**
	1-hour	0.25 ppm		75 ppb	
Lead (Pb)	30-day Average	1.5 µg/m3	Attainment	–	No Designation/ Classification
	Calendar Quarter	–		--	
	Rolling 3-Month Average	–		0.15 µg/m3	
Sulfates (SO4)	24-hour	25 µg/m3	Attainment	No Federal Standards	
Hydrogen Sulfide (H_2S)	1-hour	0.03 ppm (42 µg/m^3)	Unclassified		
Vinyl Chloride (C2H3Cl)	24-hour	0.01 ppm (26 µg/m^3)	Attainment		
Visibility-Reducing Particle Matter	8-hour	Extinction coefficient: 0.23/km-visibility of 10 miles or more due to particles when the relative humidity is less than 70%.	Unclassified		

Source: California Air Resources Board (CARB)

APPENDIX C CONTAMINATED SITES CLEANUP STATUS

INTRODUCTION

The Hazardous Waste and Substances Sites (Cortese) List is a planning document that provides information about the location of hazardous materials release sites. Government Code (GC) Section 65962.5 requires the California Environmental Protection Agency (CalEPA) to develop at least annually an updated Cortese List. DTSC's EnviroStor database provides DTSC's component of Cortese List data (DTSC, 2010). A search of the DTSC EnviroStor database and the SWRCB Geotracker performed on January 2, 2019 determined that there are four known open contaminated sites within the planning area. Below is a detailed summary of each site's cleanup status.

Marshall Elementary School (60002638)

Fowler Unified School District is interested in developing a three-acre site adjacent to existing Marshall Elementary School facilities to accommodate future growth. The site has historically been used for agriculture, and there are concerns regarding potential soil contamination by pesticides.

PG&E Manufactured Gas Plant SQ-FK-FOW (10490099)

This site was home to an operational PG&E gas plant from 1914 until 1930, at which time the plant was dismantled. Concerns at this site include high probability of contamination due to polynuclear aromatic hydrocarbons (PAHs).

Wright Oil (T10000011242)

During a site assessment related to a former leaky underground storage tank (UST), analytical results indicated that total petroleum hydrocarbons as diesel (TPHd) from additional leaking aboveground storage tanks (ASTs) was present from the surface of the ground to a depth of at least 40 feet. SWRCB has been requesting an investigation of the soil and groundwater beneath the affected property and subsequent cleanup since the contamination was discovered in 2014.

Fowler City Landfill (L10004199996)

This site was historically used for waste disposal prior to the regulations set forth in Title 27 of the CCR. The cleanup status of this site is listed as "Open as of January 1, 1965."

APPENDIX D NOISE REGULATIONS

INTRODUCTION

Noise is generally defined as loud, unpleasant, unexpected, or undesired sound.

The State of California and the City of Fowler both set guidelines for the compatibility of land uses with various noise levels. Below is a full review of state and local regulations pertaining to noise.

NOISE GUIDELINES

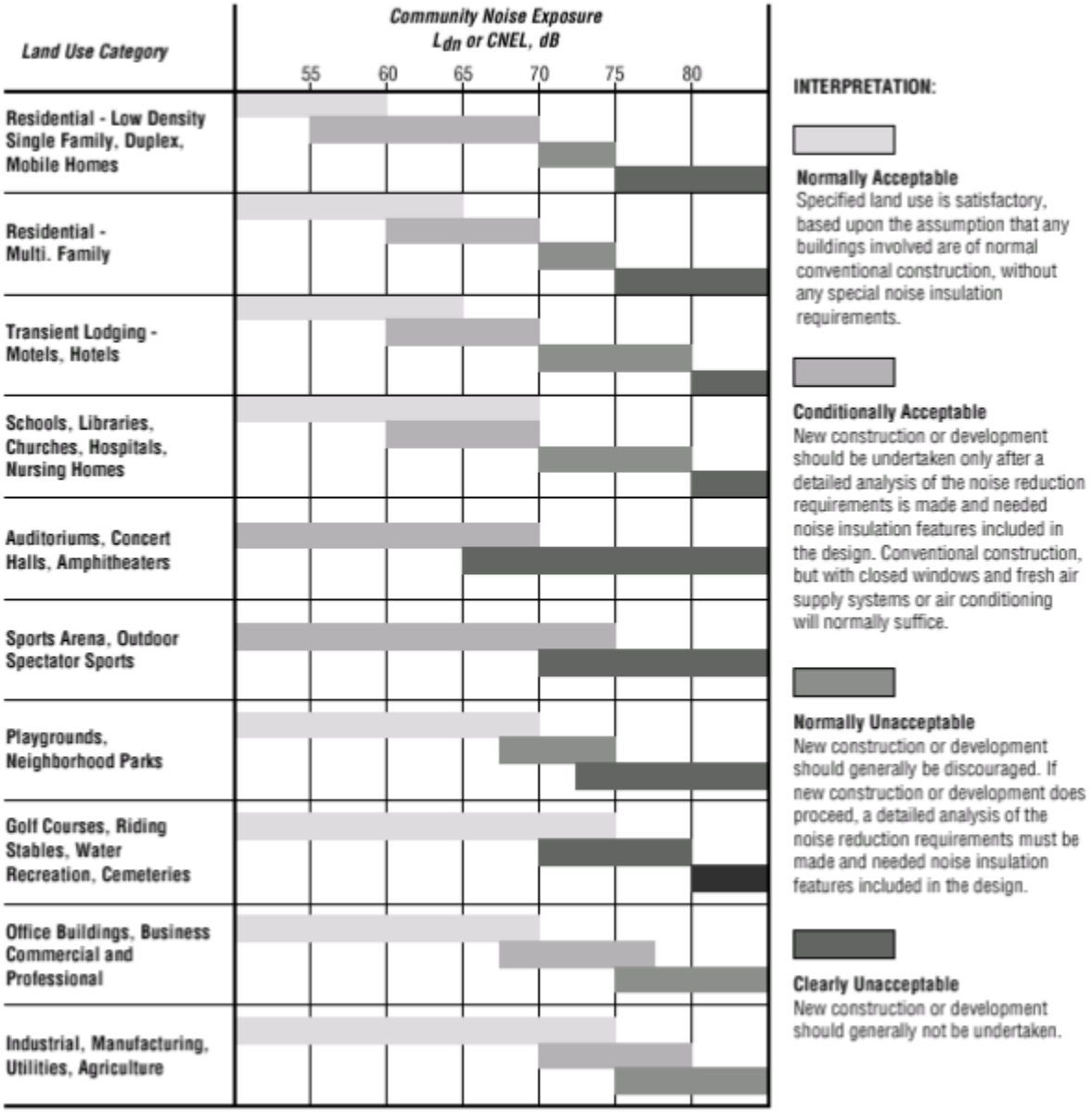
The State of California and the City of Fowler both set guidelines for the compatibility of land uses with various noise levels.

STATE GUIDELINES

The Governor's Office of Planning and Research provides guidelines to be used in the development of a Noise Element. These guidelines include a sound level/land use compatibility chart, shown in Table 11-2, that divides outdoor Ldn ranges into four compatibility categories (normally acceptable, conditionally acceptable, normally unacceptable and clearly unacceptable) based on land use. For many land uses, the chart shows overlapping Ldn ranges for two or more categories. These overlapping Ldn ranges are intended to indicate that local conditions (i.e., existing sound levels and community attitudes toward dominant sound sources) should be considered in evaluating land use compatibility at specific locations.

The compatibility chart in **Figure D-1** identifies the normally acceptable range for low-density residential uses as less than 60 dB and the conditionally acceptable range as 55–70 dB. The normally acceptable range for high-density residential uses is identified as Ldn values below 65 dB, and the conditionally acceptable range is identified as 60–70 dB. For educational and medical facilities, Ldn values below 70 dB are considered normally acceptable, and Ldn values of 60–70 dB are considered conditionally acceptable. For office and commercial land uses, Ldn values below 70 dB are considered normally acceptable, and Ldn values of 67.5–77.5 are categorized as conditionally acceptable.

Figure D-1: State Land Use Compatibility Standards for Community Noise



CITY OF FOWLER GUIDELINES

City of Fowler General Plan

The City's current General Plan has two policies of particular importance to the siting of new development in regard to noise levels:

Goal 5-3: Provide designated routes and loading standards that reduce the noise and safety concerns associated with truck traffic.

Policies and Standards:

1. Designate truck routes for use by heavy commercial and industrial traffic (reference Figure 5-2).

a) Designated truck routes shall be:

Golden State Boulevard

Manning Avenue

5th Street (south of Fresno)

7th Street

8th Street

South Temperance Avenue

Adams Avenue (west of 7th)

2. Design interior collector street systems for commercial and industrial subdivisions to accommodate the movement of heavy trucks.

3. Restrict heavy duty truck through-traffic in residential areas and plan land uses so that trucks do not need to traverse these areas.

4. Design off-street loading facilities so that they do not face surrounding roads or residential neighborhoods. Truck backing and maneuvering to access loading areas shall not be permitted on the public road system, except when specifically permitted.

Goal 5-6: Provide landscaping to improve the aesthetics of transportation system routes.

Policies and Standards:

1. Encourage Caltrans to install and maintain landscaping and other mitigation elements along SR 99 especially adjacent to residential or other noise sensitive uses.

Goal 5-7: Provide access (driveways, local streets, and private roads) to the City's street and highway system to reduce conflicts that can result from pedestrian traffic and motorized traffic.

Policies and Standards:

2. Require that the automobile and truck access of commercial and industrial land uses abutting residential parcels be located at the maximum practical distance from the nearest residential parcels to minimize noise impacts.

Goal 5-13: Design, construct, and operate the transportation system in a manner that maintains a high level of environmental quality.

Policies and Standards:

2. Protect City residents from transportation generated noise. Increased setbacks, walls, landscaped berms, other sound-absorbing barriers, or a combination thereof shall be provided along major roadways where appropriate in order to protect adjacent noise-sensitive land uses from traffic-generated noise impacts. Additionally, noise generators such as commercial or industrial activities shall use these techniques to mitigate exterior noise levels .

5. Include noise mitigation measures in the design of new roadway projects.

4.6 Industrial Land Use

3. Ensure that industrial development creates no significant off-site impacts concerning access and circulation, noise, dust, odors, visual features, and hazardous materials that cannot be adequately mitigated.

4.. Development standards between industrial properties and residential uses shall be as follows:

b) Roof-mounted and detached mechanical equipment shall be acoustically baffled to prevent equipment noise from exceeding 55 dBA measured at the nearest residential property line.

City of Fowler Noise Ordinance

5-21.601 - Unlawful Noise.

It is unlawful for any person to make, continue or cause to be made or continued any loud, unnecessary or unusual noise or any noise which either annoys, disturbs, injures or endangers the comfort, repose, health, peace or safety of others.

The following acts are declared to be loud, disturbing and unnecessary noises in violation of the provisions of this section, and shall be considered a nuisance, but the enumeration shall not be deemed to be exclusive:

(a) Horns, Signaling Devices. The sounding of any horn or warning device on any automobile, motorcycle or other vehicle except as a danger warning and for no longer than is reasonably necessary.

(b) Amplifiers, Stereos, and Musical Instruments. The using, operating, or permitting to be placed, used or operated amplifiers, televisions, stereos, musical instruments, or other machine or device for the producing or reproducing of sound in such manner as to disturb the peace, quiet and comfort of the neighboring inhabitants. The operation of any such device in the following manner shall be prima facie evidence of a violation of this section:

(1) On any Sunday through Thursday, except as provided for in subsection (b)(2) of this section, between the hours of 10:00 p.m. and 9:00 a.m. the following day, in such a manner as to be plainly audible beyond the property line, or at a distance of fifty (50) feet from the vehicle, in which it is located.

(2) On any Friday or Saturday, and on the day before and the day of an officially recognized City holiday, between the hours of 11:00 p.m. and 9:00 a.m. the following day, in such a manner as to be plainly audible beyond the property line, or at a distance of fifty (50) feet from the vehicle, in which it is located.

(c) Animals. The keeping of any animal, which by causing frequent or long continued noise, shall disturb the comfort or repose of any persons in the vicinity.

(d) Construction. The erection (including excavating), demolition, alteration or repair of any building other than between the hours of 7:00 a.m. and 8:00 p.m., except by special permit issued by the City Manager, Building Official, or City Engineer upon a determination that the public health and safety will not be impaired thereby. Nothing in this section shall be deemed to alter construction hours beyond those set forth in the conditions of approval for a development project.

(e) Machinery. Operation of any machinery or appliances between the hours of 8:00 p.m. and 7:00 a.m., which is attended by loud or unusual noise and in such a manner as to be plainly audible beyond the property line, or at a distance of fifty (50) feet from the vehicle, in which it is located.