

# Existing Conditions Overview

Summary Presentation

October 13, 2021

# Purpose of this Existing Conditions Overview



A single, integrative report that provides a common level of understanding for the community and the planning team



Summarize key considerations to understand the context of the General Plan Update, including past trends, current and future issues, and opportunities for positive change

# Purpose of this Existing Conditions Overview



Technical detail is in the topic-specific “deep dive” reports available at [www.planpetaluma.org](http://www.planpetaluma.org):

- Demographic and Socioeconomic profile
- Land use and community character
- Transportation
- Housing
- Market, economics and retail
- Hazards & Climate Change
- Greenhouse gas emissions
- Health and environmental justice
- Parks and public facilities
- Environment
- Historic resources
- Arts and culture
- Utilities

# Organization of the Overview



Key insights about Petaluma are summarized in the slides immediately below.



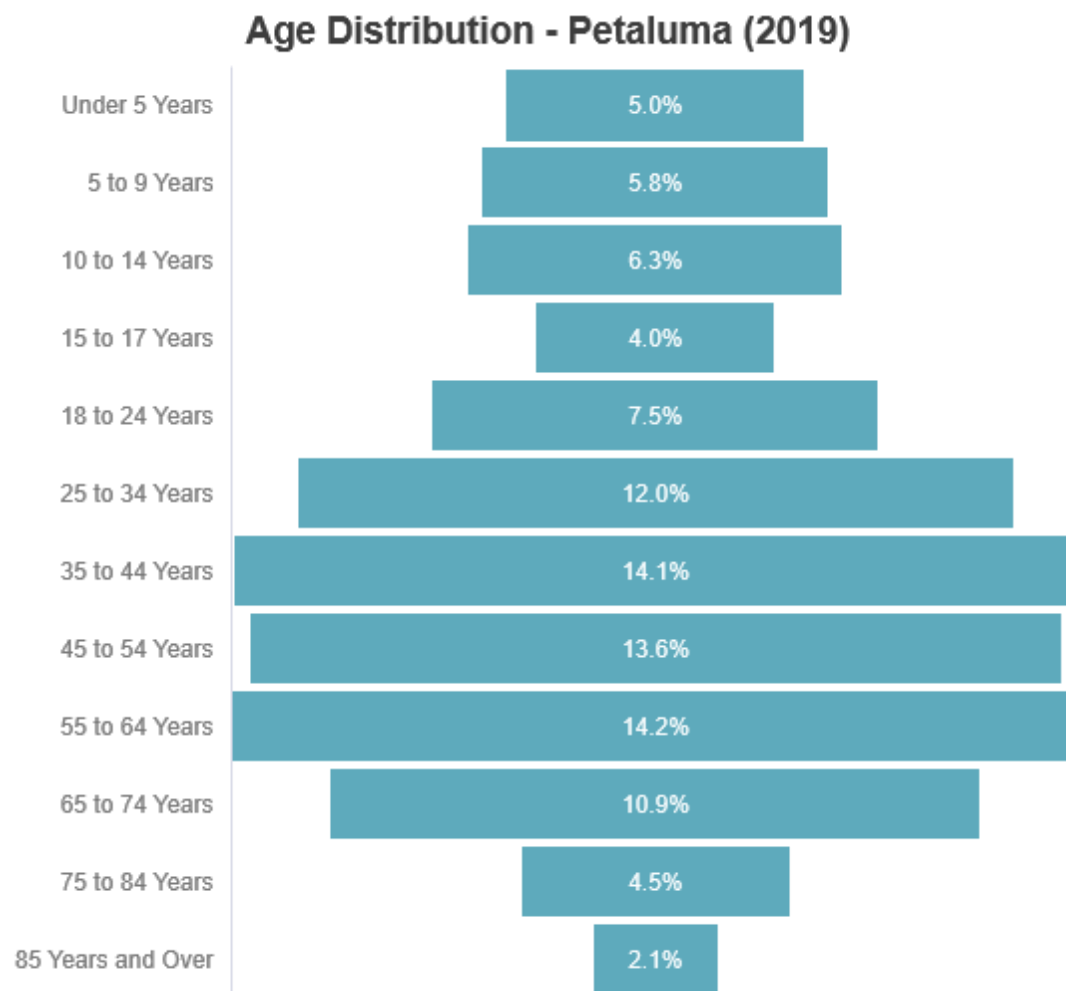
These insights are followed by **topic-specific summaries of conditions, issues, and opportunities.**

# Key Insights

# Socioeconomics

Petaluma's population is aging, diversifying, and affluent.

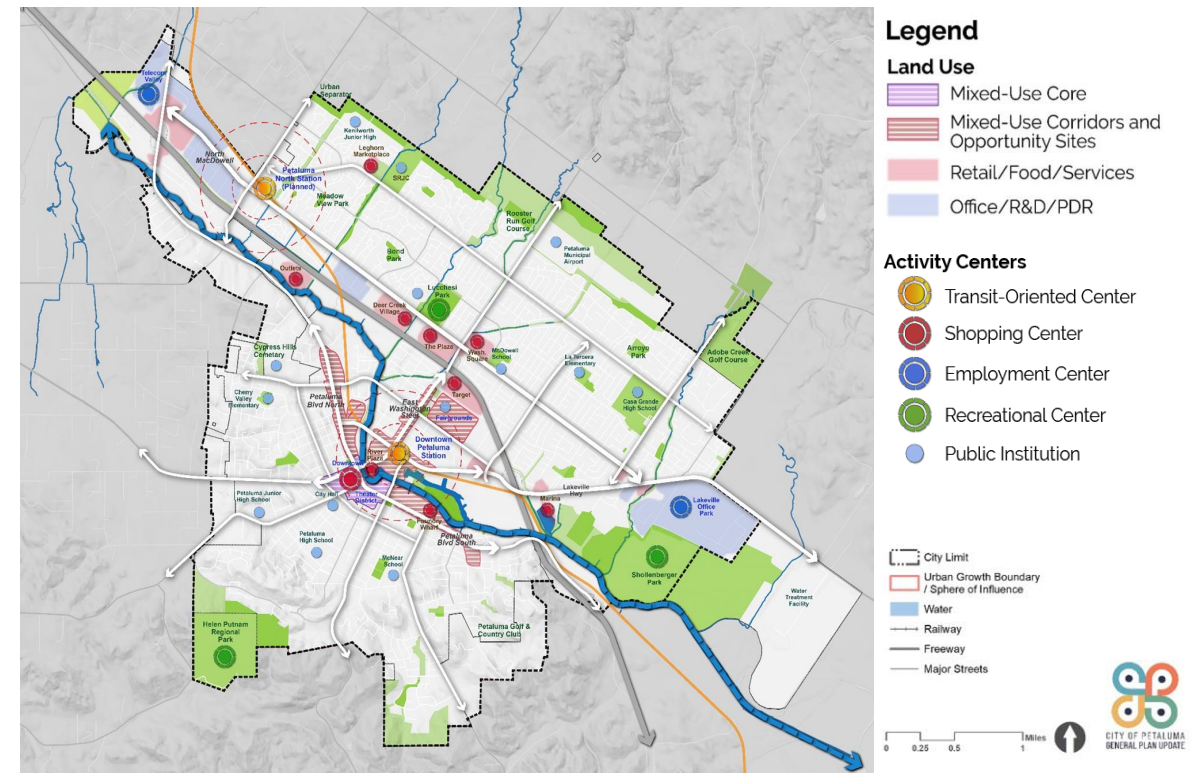
- Population between 55 and 74 is increasing
- 32% of residents are 55 and older
- City is predominantly White/Caucasian
- Hispanic population increased by 7.3% since 2010
- Relatively high median income



# Land Use

Petaluma is a built-out city with a potential for infill.

- Land use pattern evolved around Downtown and the Petaluma River
- Diverse mix of residential and non-residential uses
- Urban Growth Boundary limits outward expansion
- Opportunities for infill development along commercial corridors, in shopping centers and at SMART stations
- Infill strategies help the community achieve climate change, resilience and transportation goals

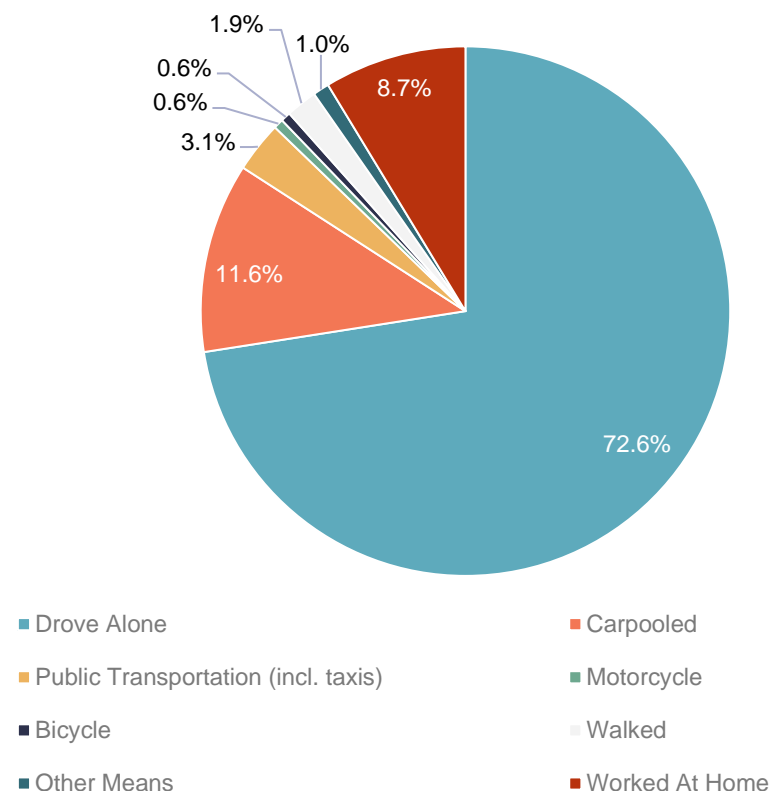


# Transportation

Petaluma is auto-oriented and must expand biking, walking and transit use.

- 73% of residents drive alone to work
- Opportunity to shift trips from driving to other modes (1/3 of trips less than 2 miles)
- Reducing vehicle travel in Petaluma is critical for addressing climate emergency
- Barriers and gaps inhibit crosstown travel, especially for people walking and bicycling
- Shifting priorities from automobile throughput to accessibility and roadway safety

Means of Transportation to Work – Petaluma (2019)



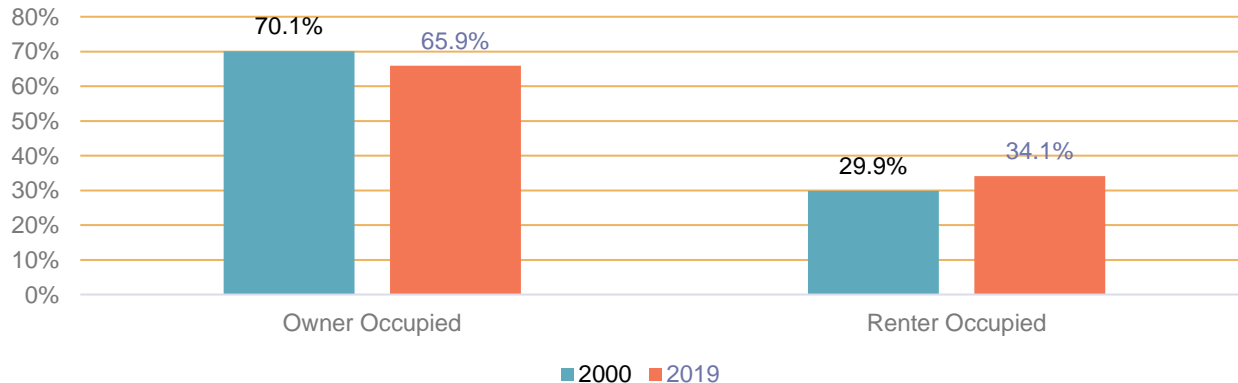


# Housing

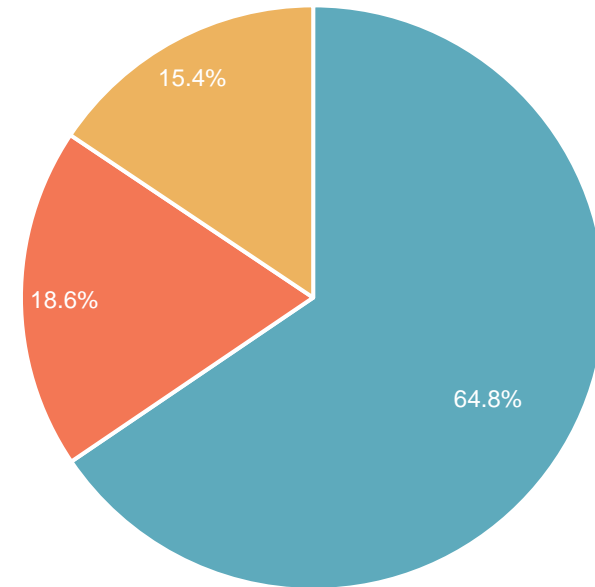
Despite relatively high-income levels, housing is unaffordable.

- 2/3 of homes are owner-occupied
- 1/3 of households are spending more than 30% of their income on housing
- Median housing cost is 20% higher than the State

Housing Tenure - Petaluma (2000 and 2019)



Housing Cost Burden, Petaluma (2017)



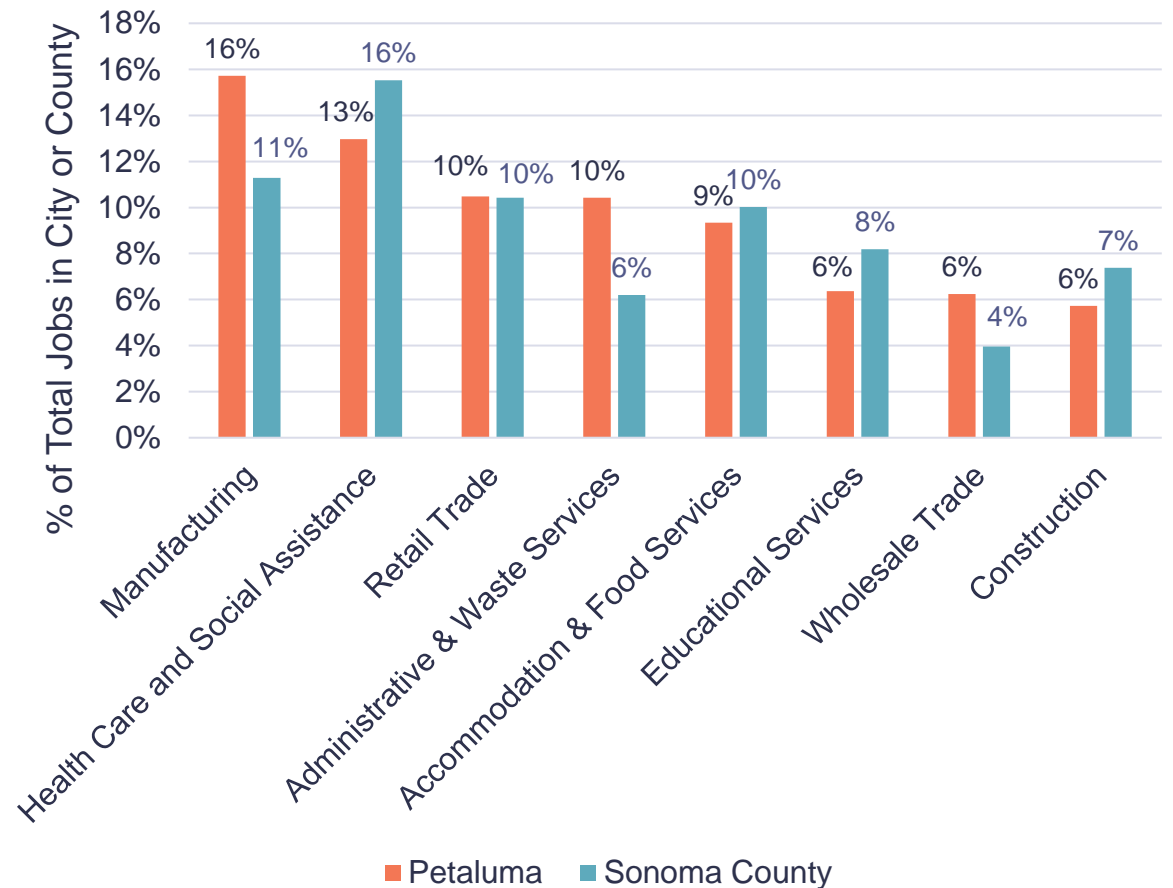
- No Cost Burden <=30%
- Cost Burdened (>30% to <=50% of income spent on housing)
- Severely Cost Burdened (>50% of income spent on housing)

# Economic and Market Conditions

Petaluma has a healthy economy.

- Mix of export-oriented and resident-serving industries
- Strengths in food/beverage, tourism, medical services, and tech businesses
- Economy poised for growth from expanding population, high quality of life and access to regional transit

Largest Industries, Petaluma and Sonoma County, 2018

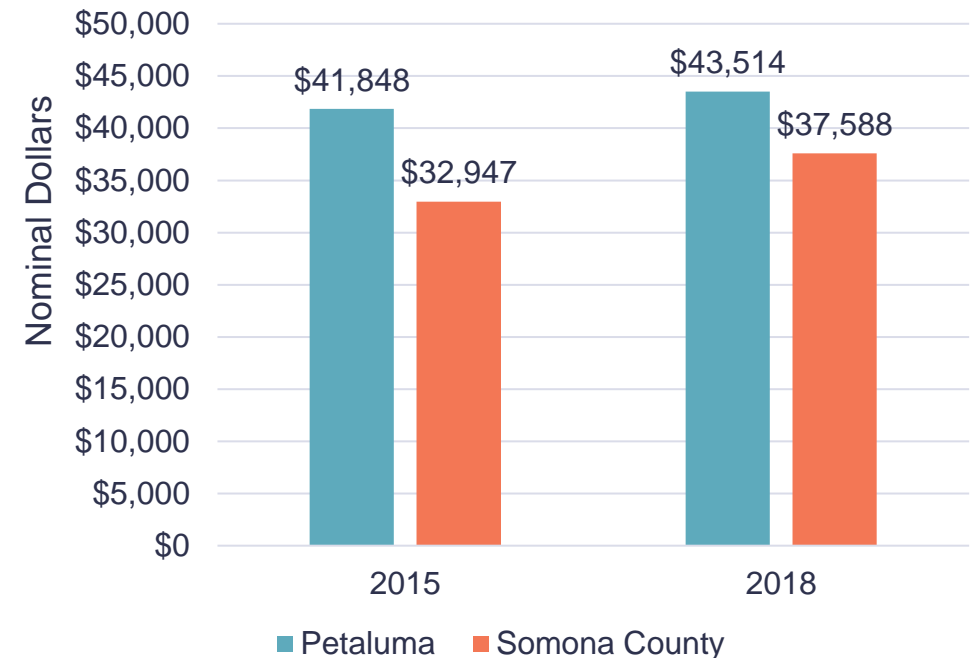


# Retail

## Retail is changing and should be reimagined.

- Retailing changing due to greater online presence
- Strong demand from a large, affluent market
- Opportunity for more specialty retail
- Excess of retail spaces along corridors
- Opportunity to redevelop underperforming retail with a diverse mix of uses (residential, services, community spaces, etc.)

Taxable Sales per Household in Petaluma and Sonoma County Overall, 2015 and 2018

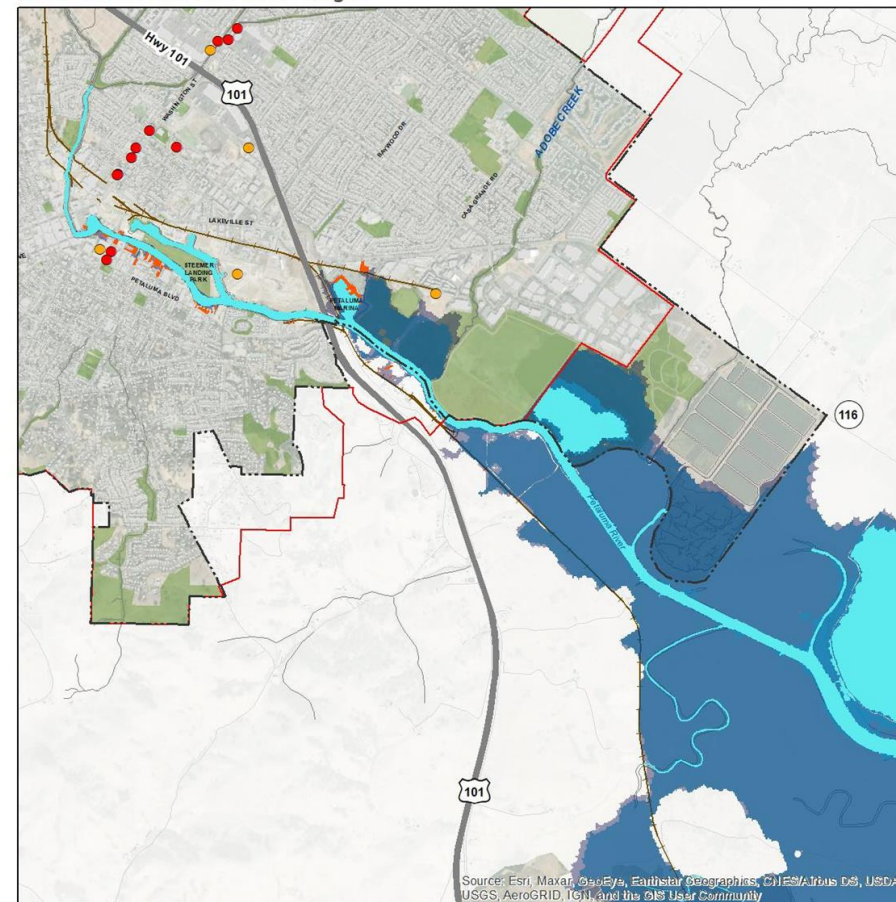


# Climate Adaptation

Adaptation strategies are needed now to prepare for climate change

- Sea level rise will occur along the Petaluma River
- Additional drought, wildfires and extreme heat events expected
- Preserving green spaces create critical areas of adaptability and flood management for a changing future
- Sensitive populations – elderly, low-income and BIPOC – are most impacted
- Adaptation strategies needed now to prepare for changes

Buildings Affected by Sea Level Rise - 2018 State Guidance "Likely" Scenarios (66% Probability) w/ 20-Year and 100-Year Storm Surges



## Legend

- City Boundary
- Urban Growth Boundary
- Cleanup Program Site\*
- Leaking Underground Storage Tanks (LUST) Cleanup Site\*
- Buildings affected by the flooded area

- 2050 Likely SLR w/ Mean Higher High Water (MHHW) (0.8') w/ 100-Year Storm Surge
- 2050 Likely SLR w/ Mean Higher High Water (MHHW) (0.8') w/ 20-Year Storm Surge
- 2100 Likely SLR w/ Mean Higher High Water (MHHW) (3.3') w/ 100-Year Storm Surge
- 2100 Likely SLR w/ Mean Higher High Water (MHHW) (3.3') w/ 20-Year Storm Surge

Data Sources: City of Petaluma (2021), County of Sonoma (2021), ESRI (2021)  
\* Per LHM 2020  
NOTE: 20-Year Storm may induce greater flooding than 100-Year.



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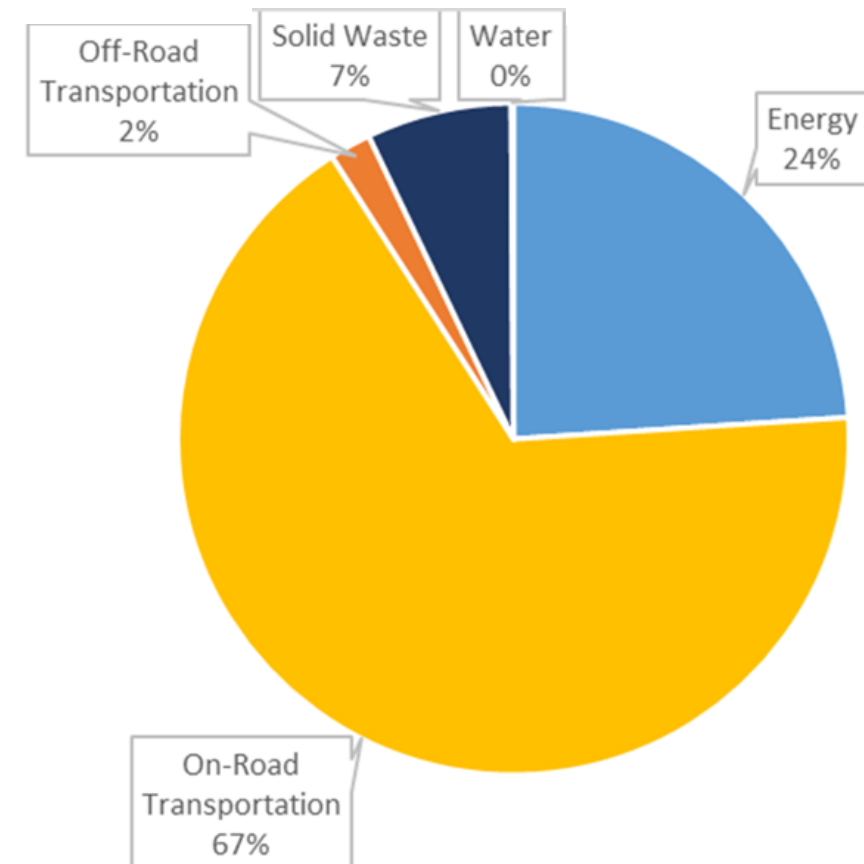
# GHG Emissions

Aggressive strategies are needed to meet the city's climate goals.

- 2/3 of GHG emissions from transportation and 1/4 from buildings
- Total emissions are increasing; per capita emissions decreasing
- Innovative strategies needed to meet city's climate neutrality goal by 2030
  - Implement building electrification ordinance
  - Reduce natural gas use in existing buildings
  - Implement the resolution for zero waste by 2030
  - Reduce VMT through demand management, parking, and land use

## 2018 Emissions

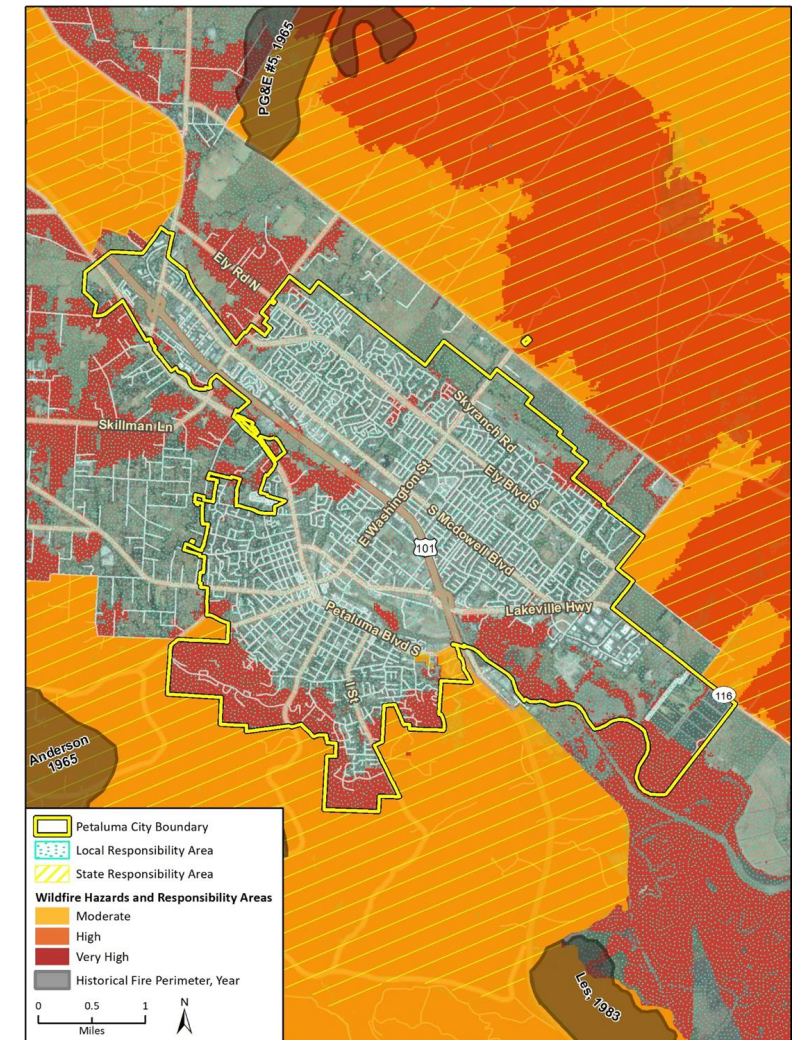
(472,422 MTCO<sub>2</sub>e, 5.2 MTCO<sub>2</sub>e per service population)



# Hazards

Petaluma is vulnerable to natural and man-made hazards.

- Susceptible to wildfire due to proximity to open spaces
- Flooding impacts many areas along the Petaluma River and creeks
- Seismic risk is high due to fault lines in and around the city

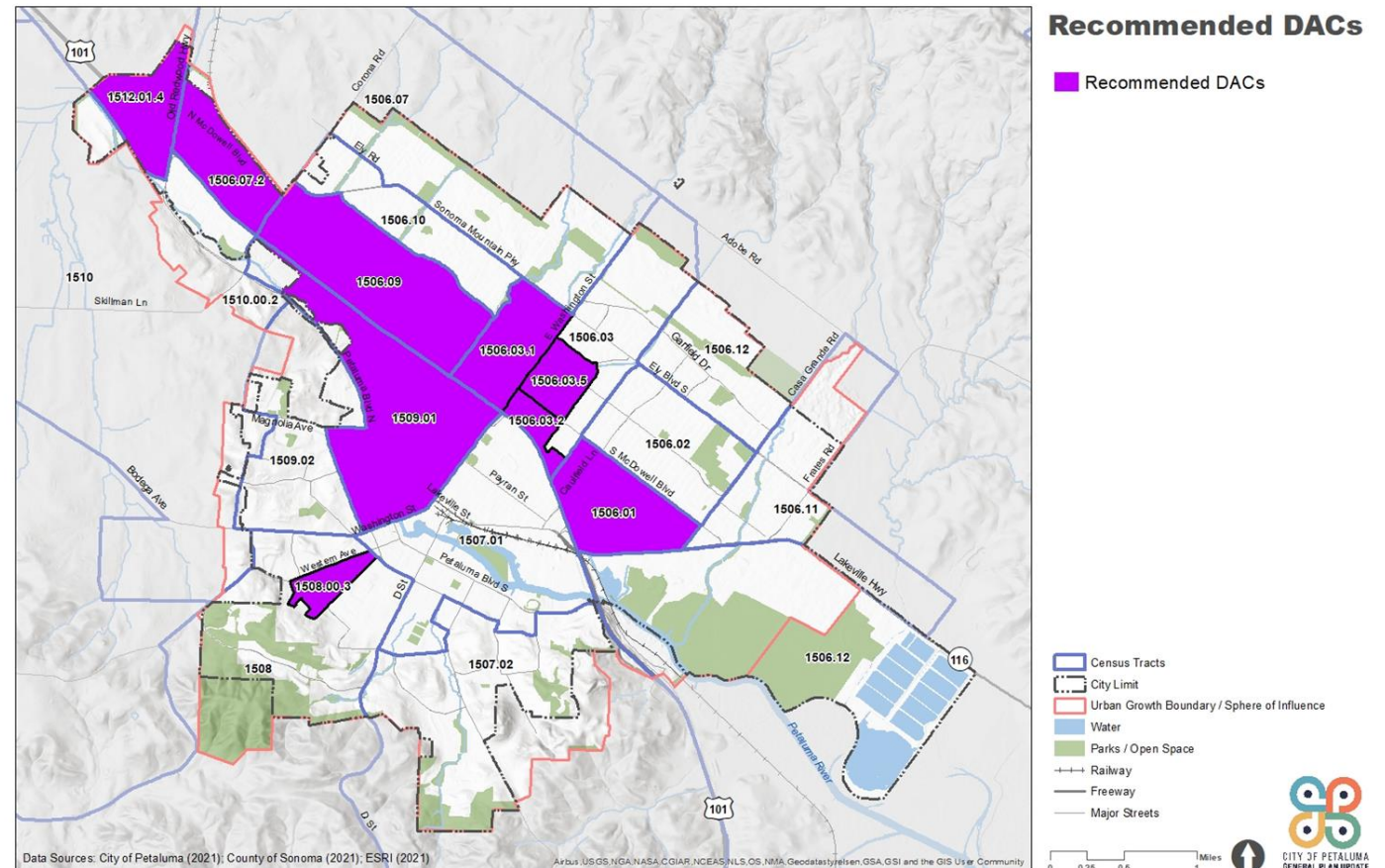


Imagery provided by Microsoft Bing and its licensors © 2021.  
Additional data provided by CalFire, 2021; Wildfire Severity Hazard Class - City of Petaluma, CalFire. Fire Responsibility Area, Historic Fire

# Health and Environmental Justice

## Petaluma must address environmental justice.

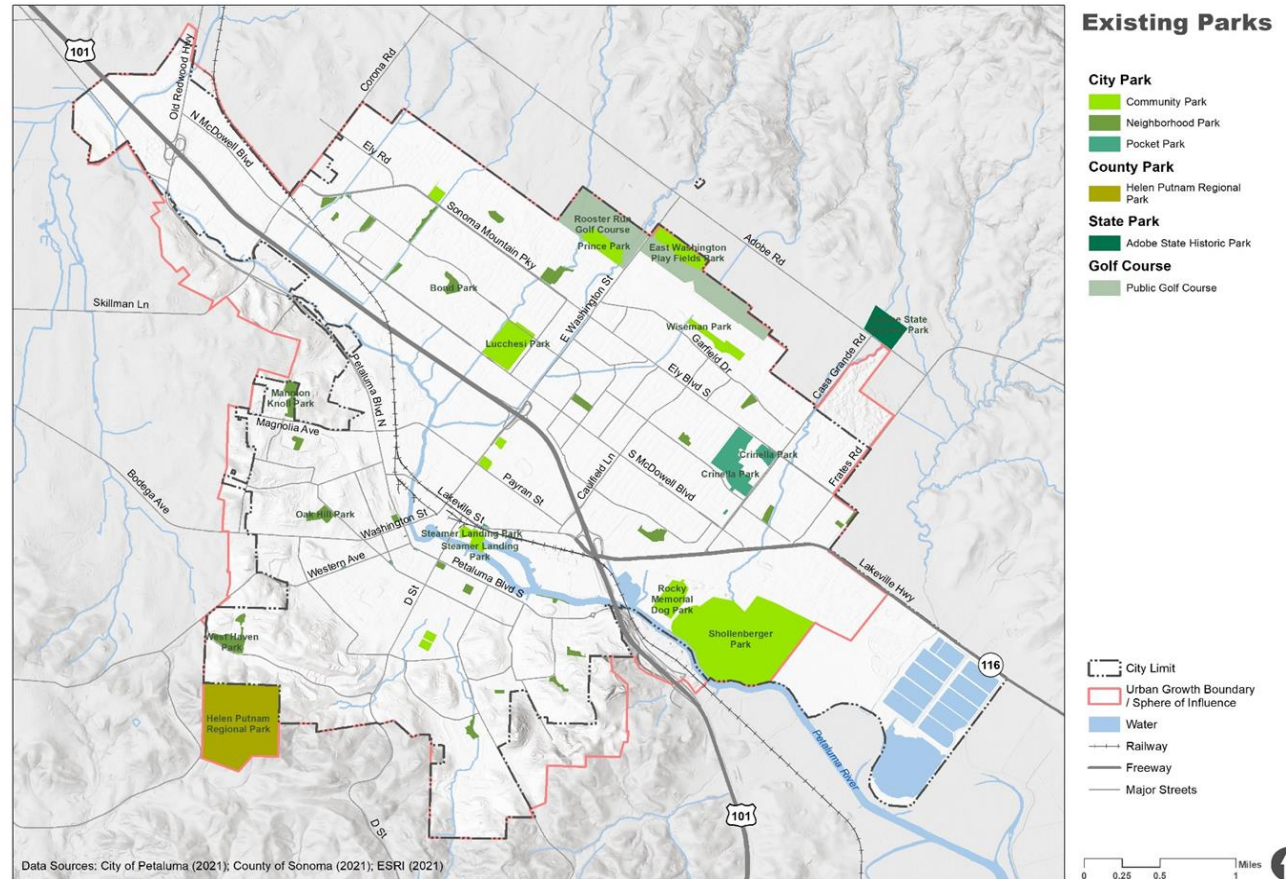
- Multiple areas considered “disadvantaged communities,” which is a combination of low income and environmental pollution
- Issues primarily related to transportation are:
  - Highway-related air pollution
  - Low access to transit
  - High diesel particulate matter
- General Plan must include an Environmental Justice Element



# Parks

Petaluma enjoys its parks but struggles with maintenance.

- Diversity of parks throughout the city
- Excellent park access for most residents
- New parks needed in some areas
- Park maintenance and funding generally lacking
- Citywide Parks Master Plan needed

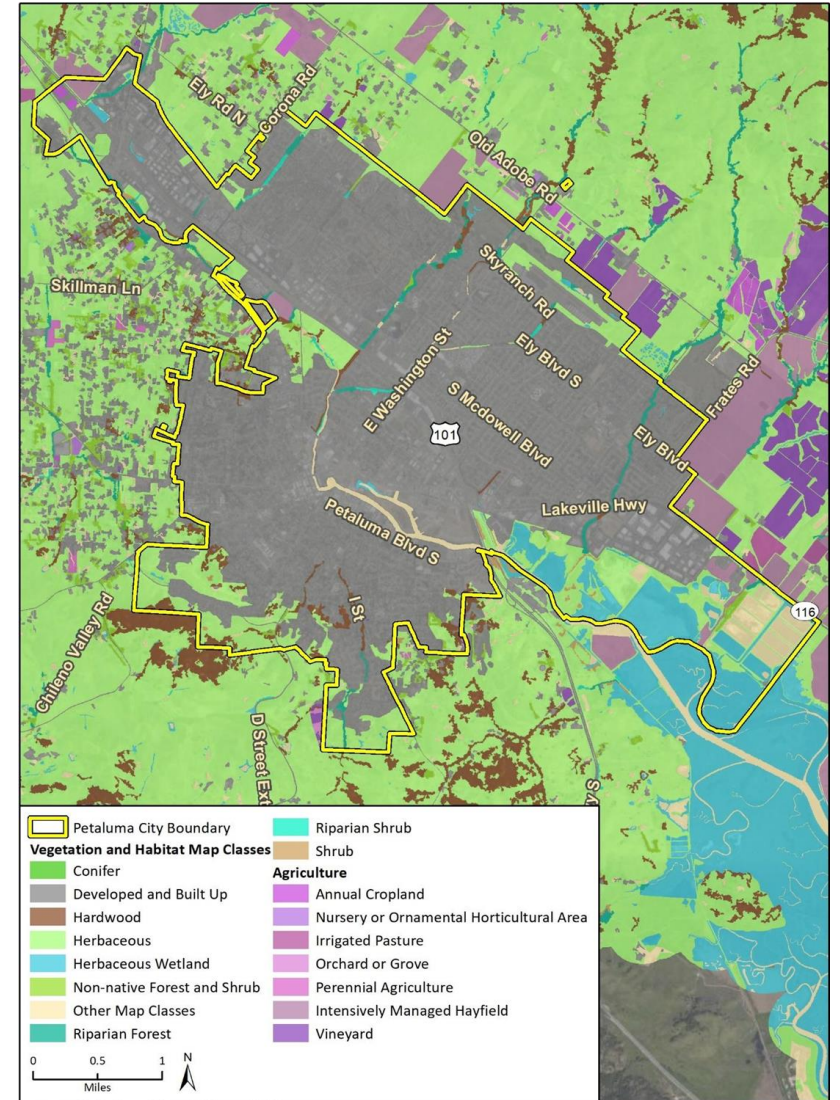




# Natural Environment

Petaluma is a steward of the environment.

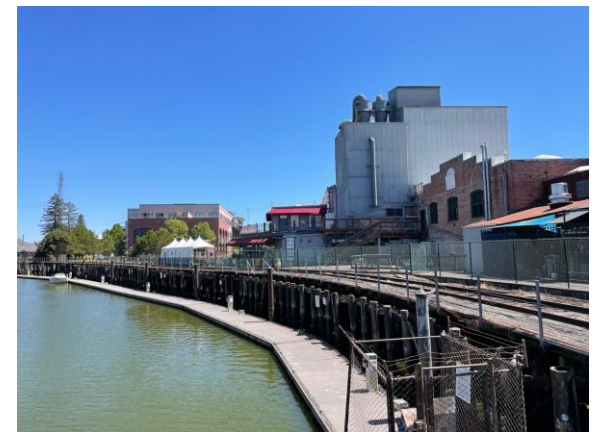
- Petaluma River is the “spine” of the city but needs further enhancement and preservation
- Strong legacy of preserving open space, watersheds and habitat
- Urban Growth Boundary preserves agriculture and open space
- Region home to many important plants and animal species
- Tension between accommodating new development and preservation of natural areas



# Historic Resources

Petaluma is rich in historic resources that enhance its identity.

- History and historic resources contribute to character and identity
- Home to protected historic buildings, sites and districts in and around the Downtown
- Stronger regulatory frameworks and record-keeping needed to expand preservation
- Adaptive reuse can balance preservation with enhancement of historic areas

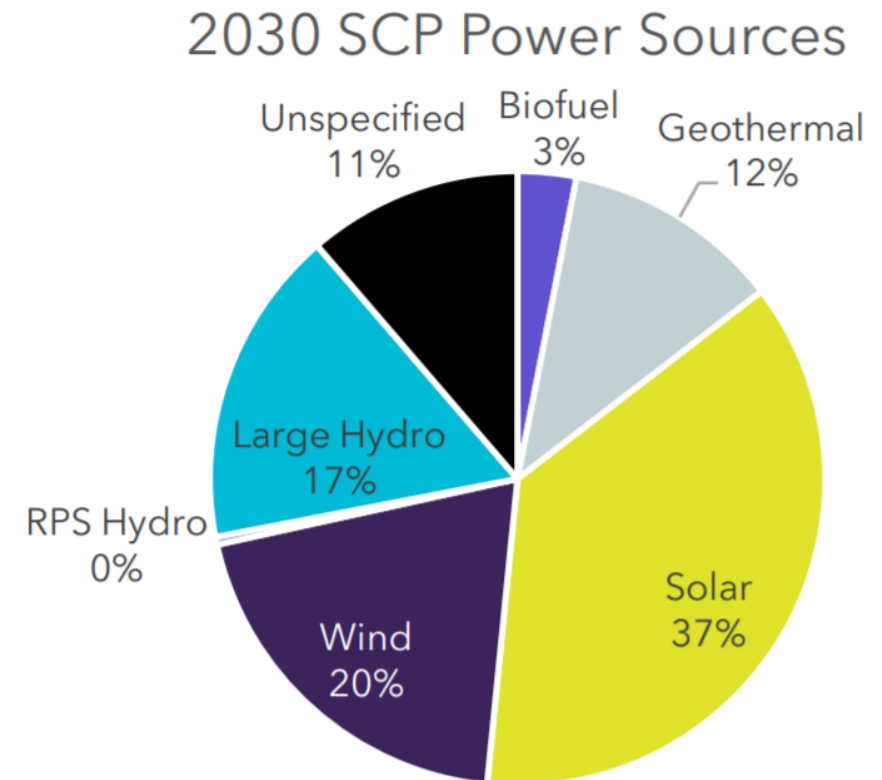




# Infrastructure and Utilities

Petaluma's utilities need some upgrades and enhancement.

- Water and wastewater meet demand
- Stormwater system upgrades needed
- Electrical power from 100% renewable sources
- Access to affordable broadband lacking



# Topic-Specific Information

# Content of Topic-Specific Slides

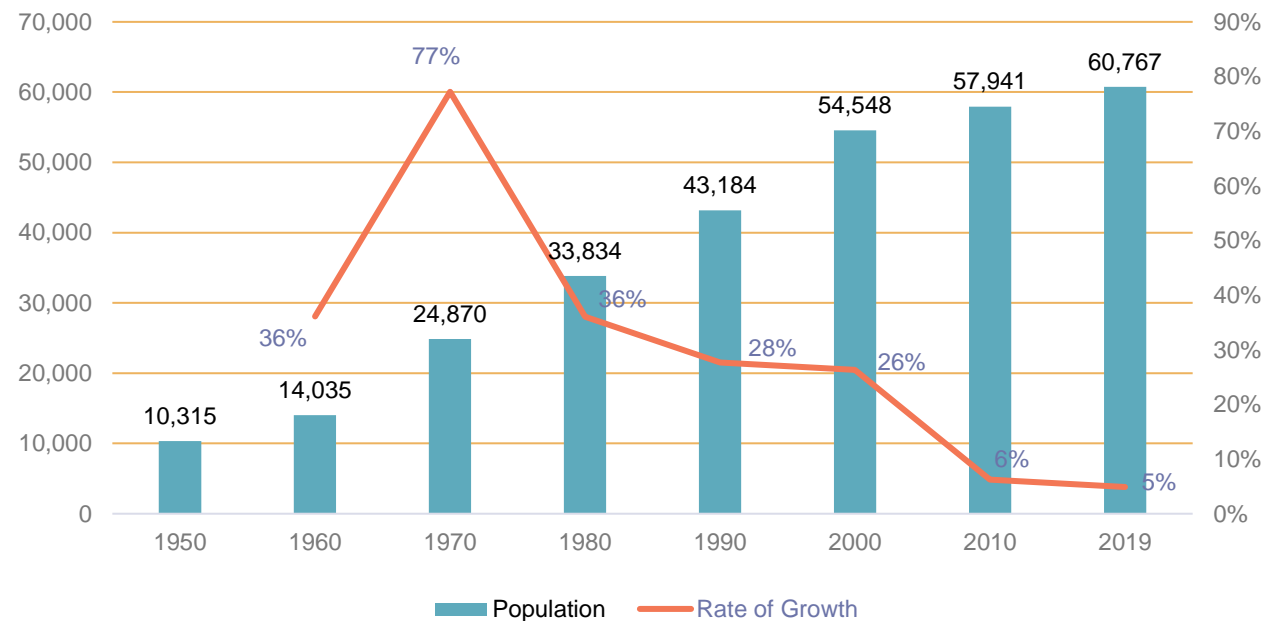
- The following slides contain summary information from the General Plan Team's existing conditions reports.
- The slides are not comprehensive; more detailed and varied information can be found in individual reports.
- Each section generally includes:
  - High-level conclusions
  - Key data points
  - A list of relevant policies, plans and regulations
  - Issues and opportunities

# demographic & socioeconomic conditions

# Total Population

- The city continues to grow but the total amount and pace of population growth slowed after 2000
- In 2019, Petaluma had 60,767 residents, which is 12% of Sonoma County's population
- Between 2010 and 2019 the population increased from about 58,000 to just under 60,800, a growth rate of 5%
- Petaluma's population has grown at a faster rate over the past decade than that of Sonoma County (3%)

Population - City of Petaluma (1950-2019)

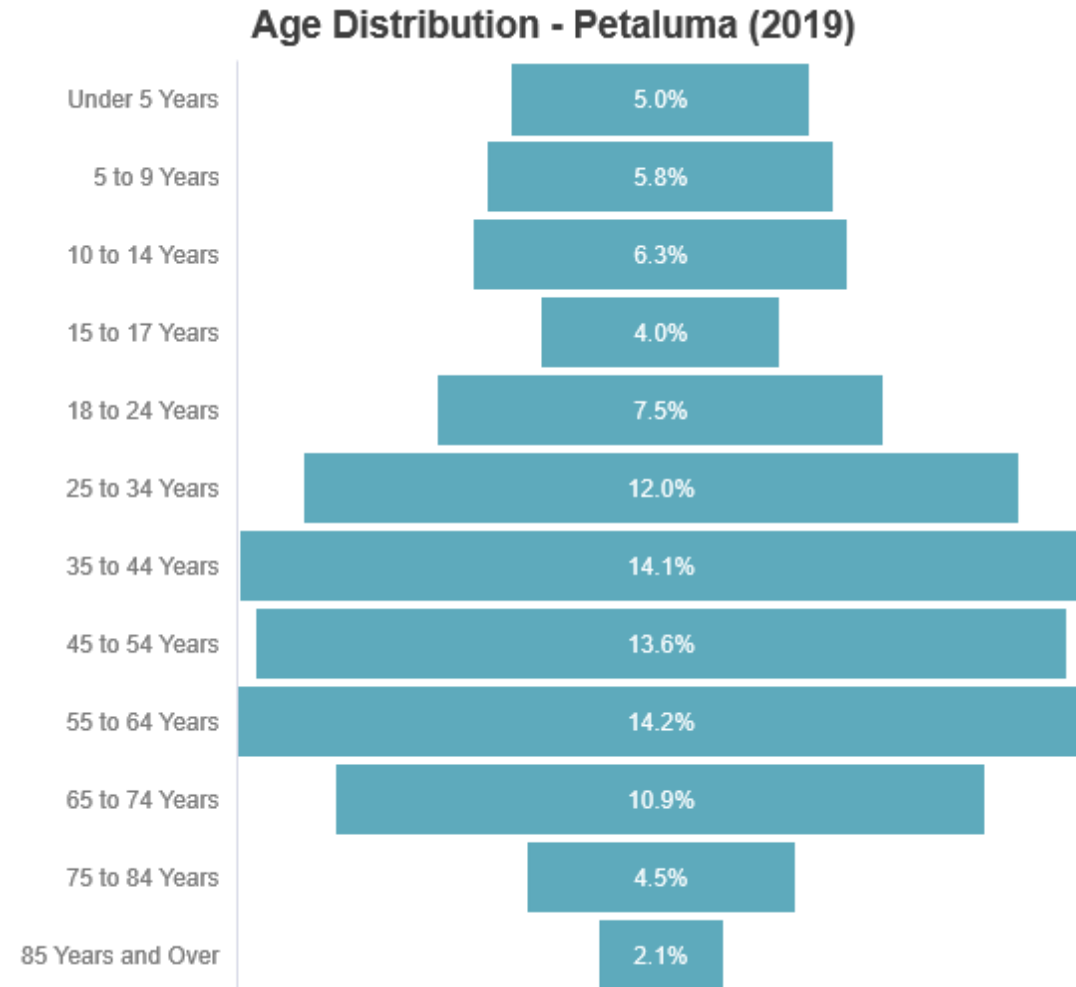


Source: U.S. Census Bureau Decennial Census and American Community Survey (5-year estimates, 2015-2019)



# Age & Household Size

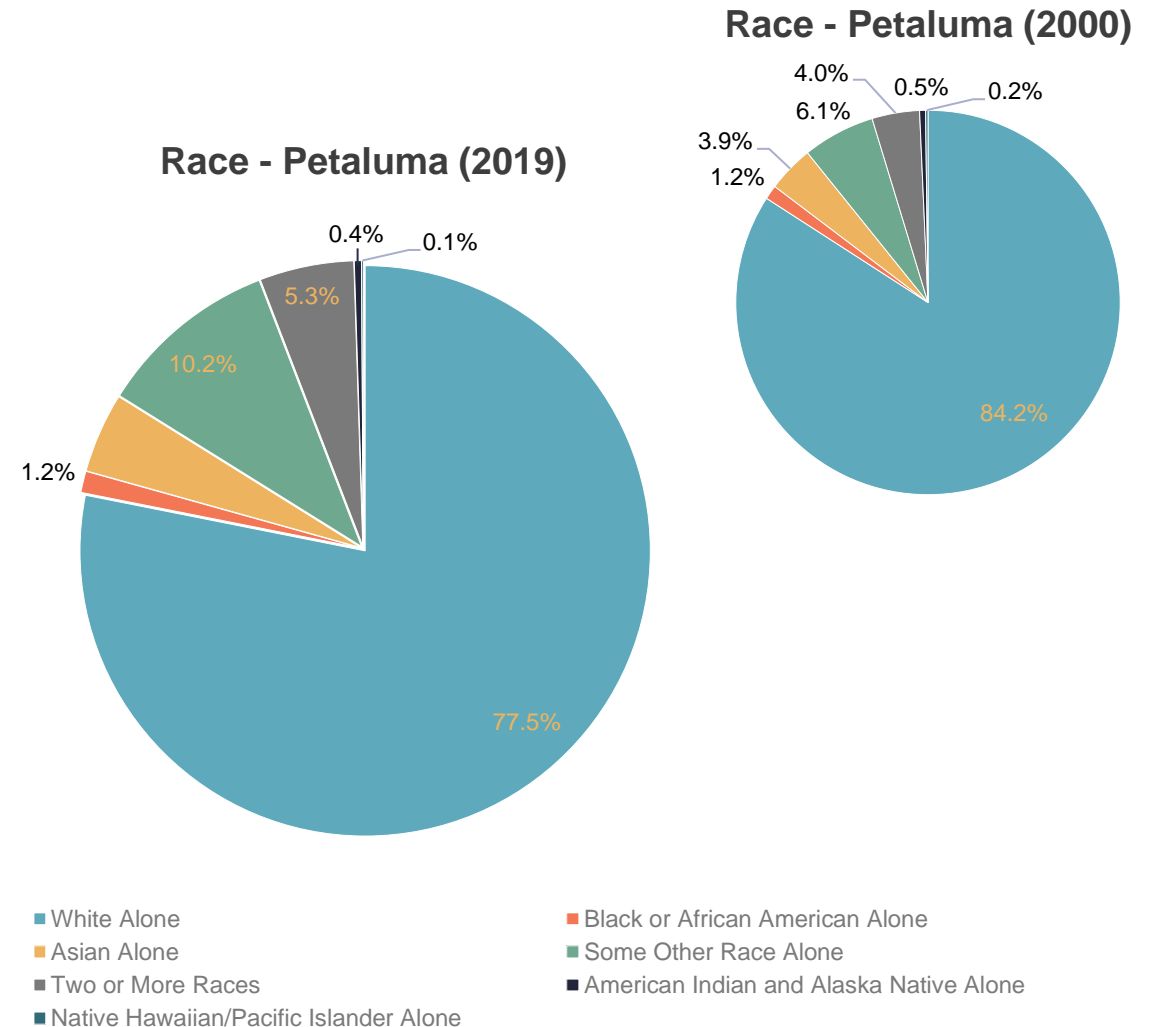
- Petaluma's population is aging and at a faster rate than the County or State
- 21.1% of the population is under the age of 18
- 6.6% of the population is 75 and older and 31.7% is 55 or older
- Since 2000, the share of population age 65+ has increased by 57.7% (more than double the rate in California and higher than in Sonoma County)
- For the last 20 years, the average household size in Petaluma has been 2.7 persons



Source: American Community Survey (5-year estimates, 2015-2019)

# Race

- Petaluma has become more racially diverse over the past two decades but significantly less diverse than the State.
- Between 2000 and 2019, the city's White population declined from 84.2% to 77.5%.
- The city currently has a higher percentage of White residents than Sonoma County (74.7%) or California (59.7%)
- The proportion of non-White Petaluma residents increased between 2000 and 2019.
  - Asian increased from 6.1% to 10.2%
  - Two or more races increased from 4% to 5.3%

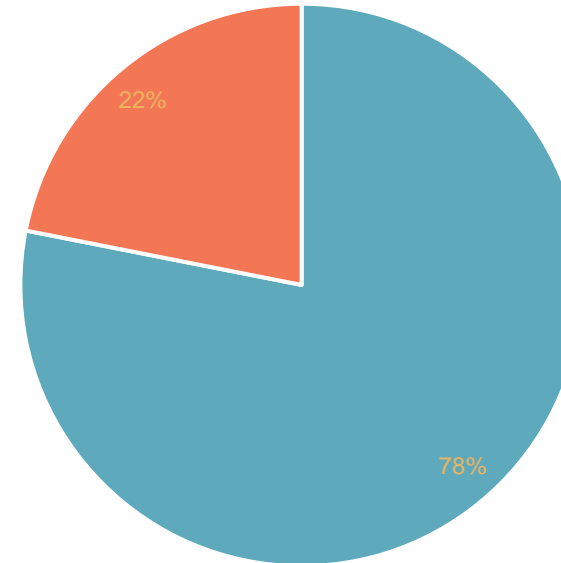


Source: Census Bureau Decennial Census and American Community Survey (5-year estimates, 2015-2019)

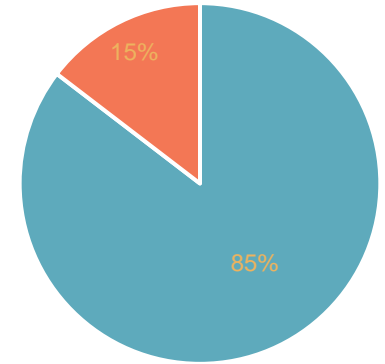
# Ethnic Origin

- **The Hispanic/Latino population is growing but remains a smaller proportion than the County or State**
- Residents identifying as Hispanic or Latino grew from 15% to 22% between 2000 and 2019
- A smaller proportion of Petaluma residents identify as Hispanic or Latino (22%) than countywide (27%) or statewide (39%)

Ethnic Origin - Petaluma (2019)



Ethnic Origin - Petaluma (2000)



■ Not Hispanic or Latino: ■ Hispanic or Latino:

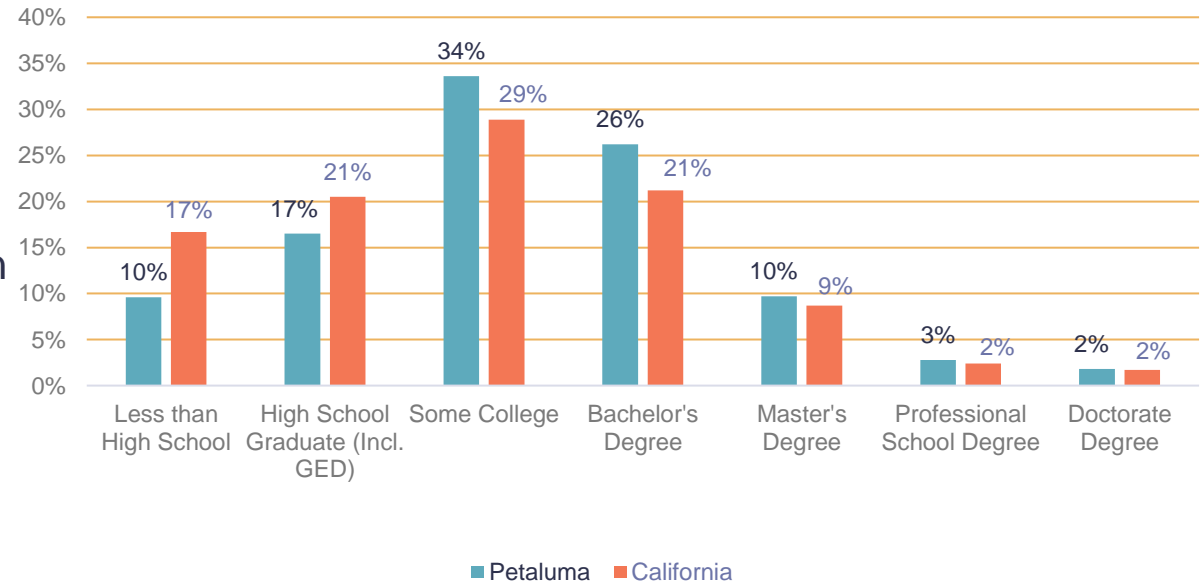
\*The U.S. Census collects race data according to five defined racial groups: White, Black or African American, American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander. The Census also allows respondents to select a sixth category - Some Other Race – or to report more than one race. People who identify their origin as Hispanic or Latino may be of any race. The concept of race is distinct from the concept of Hispanic origin.

Source: Census Bureau Decennial Census and American Community Survey (5-year estimates, 2015-2019)

# Educational Attainment

- **Petaluma residents have a higher educational attainment than the County or State**
- As of 2019, 41% of Petaluma residents over the age of 25 earned a bachelor's degree or higher; this is higher than the State (34%)
- 14% had earned an advanced degree (master's, professional degree, or doctorate)
- 27% have a high school degree or less; this is lower than the State (38%)

**Educational Attainment for Age 25+ -  
Petaluma and California (2019)**

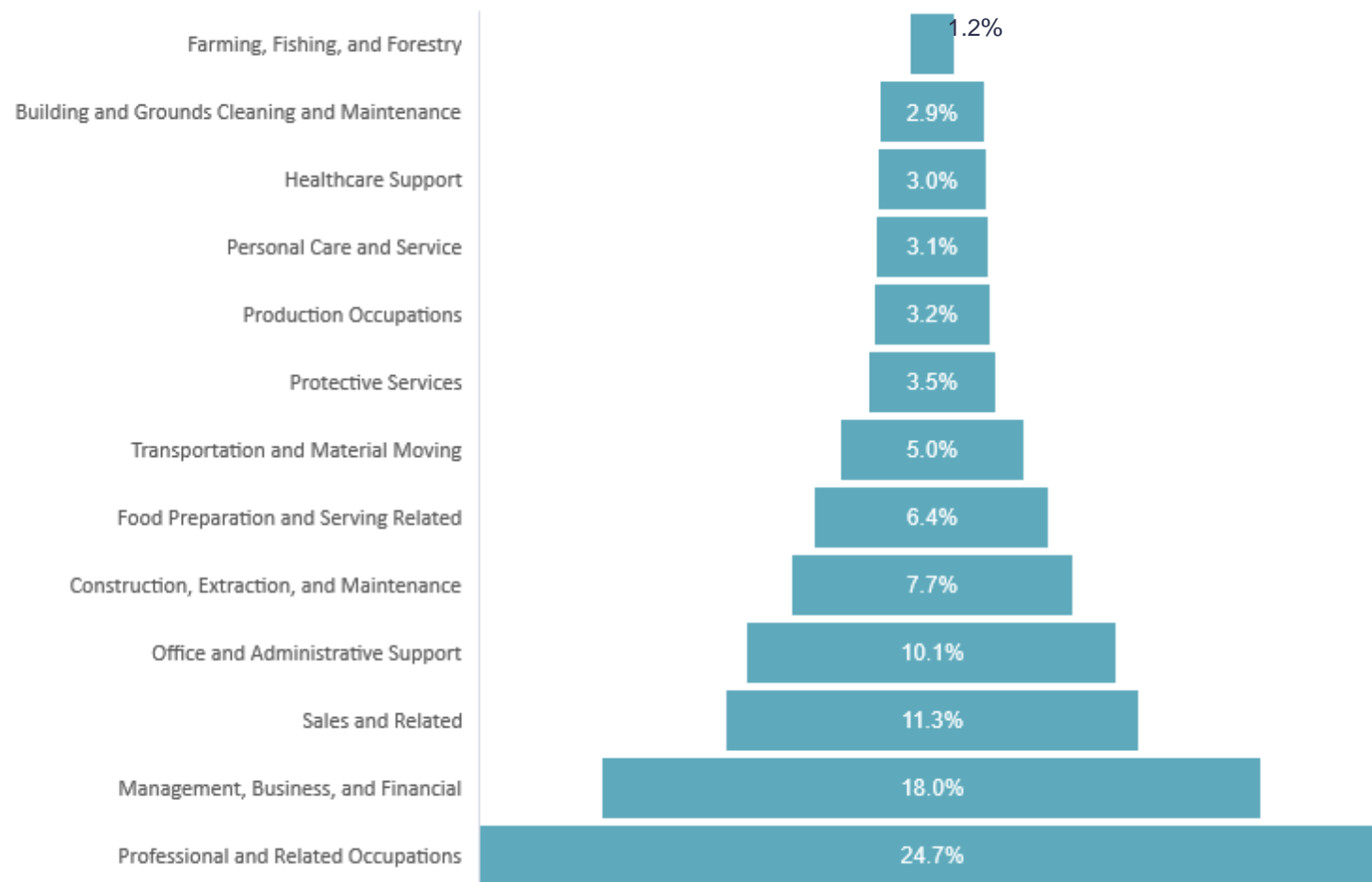


Source: American Community Survey (5-year estimates, 2015-2019)

# Occupations

- **Petaluma residents have a wide diversity of occupations and a high proportion employed in office-related jobs.**
- Nearly a quarter of Petaluma residents aged 16+ worked in professional occupations as of 2019
- A large number of Petaluma residents work in office-related jobs of professional occupations, management, business, financial services and office/administrative support.
- Fewer Petaluma residents work in the healthcare, production, agriculture and forestry, and transportation and material moving industries than in Sonoma County and California

Jobs of Petaluma Residents (2019)\*



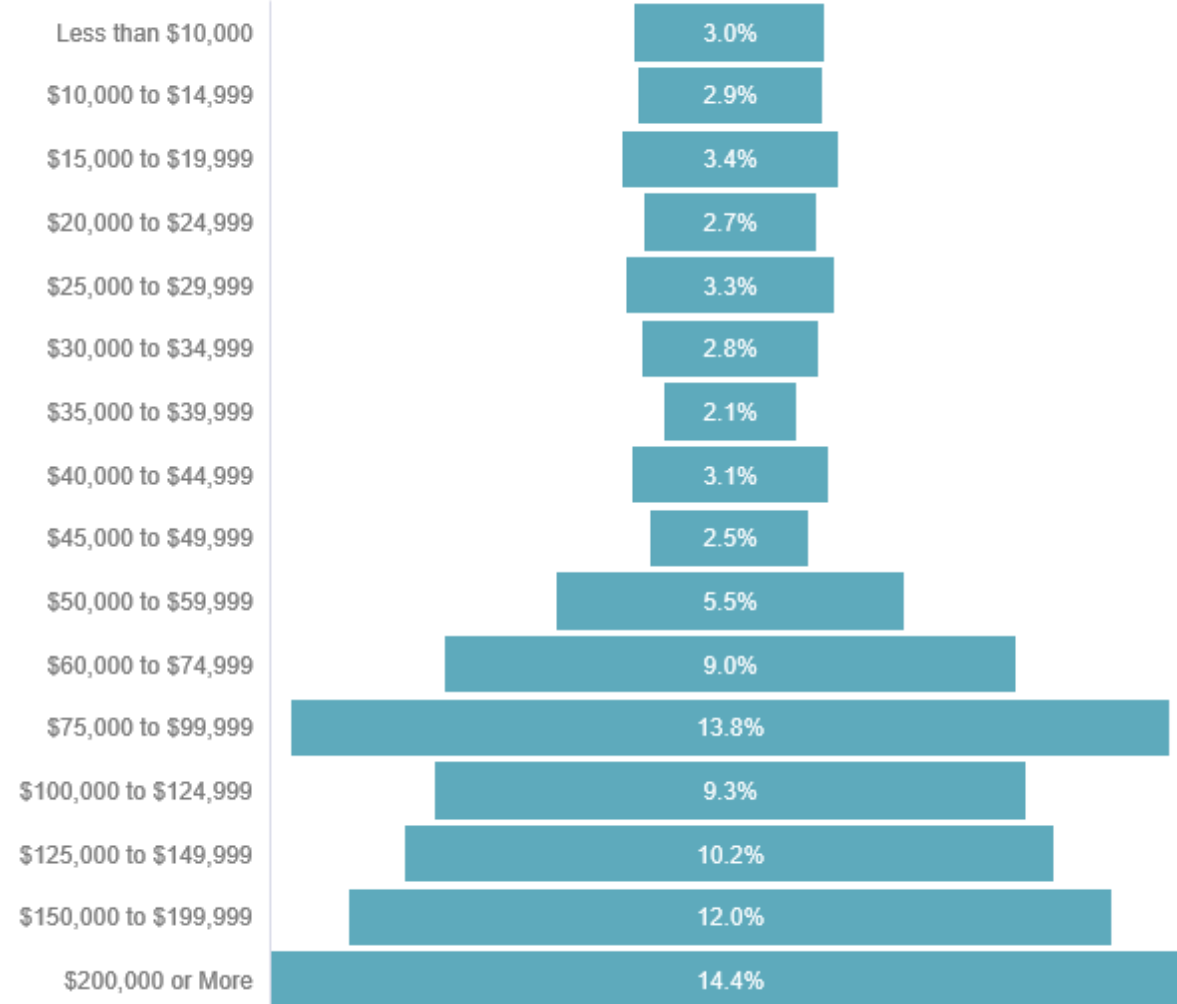
\*Occupations of people aged 16 and older who live in Petaluma

Source: American Community Survey (5-year estimates, 2015-2019)

# Income

- **Petaluma is a relatively affluent community with incomes higher than the County and State**
- The median household income in 2019 is \$91,528
- 26.4% of households make \$150,000 or more per year
- Median household income in Petaluma is 13% higher than Sonoma County and 22% higher than California
- The percentage of the population living below the poverty level is lower in Petaluma (7%) than in Sonoma County or the state

Household Income Distribution - Petaluma (2019)

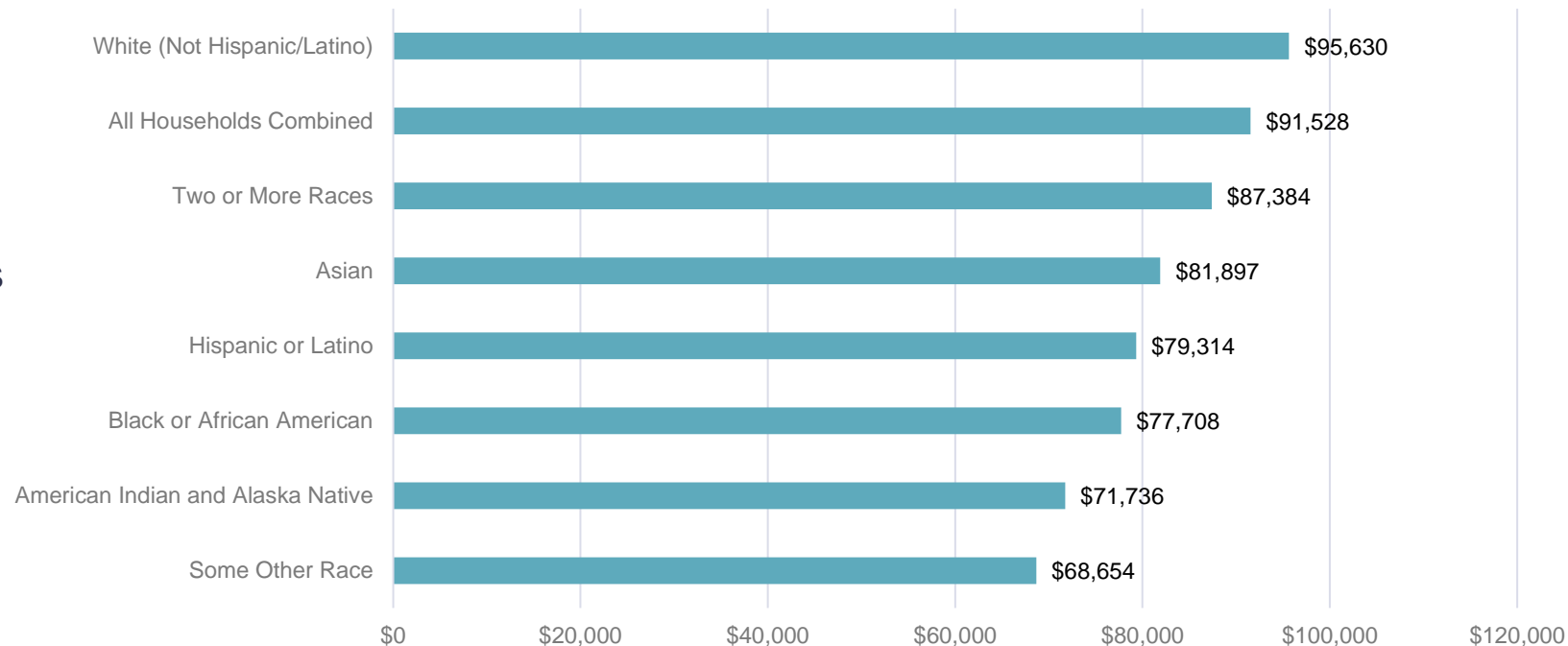


Source: American Community Survey (5-year estimates, 2015-2019)

# Income Disparities

- There are significant racial and ethnic disparities in income disparities in income in Petaluma
- The 2019 median income for White households (\$95,630) is:
  - 9% higher than for biracial and multiracial households (\$87,384)
  - 17% higher for Asian households (\$81,897)
  - 21% higher than for Hispanic households (\$79,314)
  - 23% higher than for Black households (\$77,708)

Median Household Income by Race and Ethic Origin - Petaluma (2019)



Source: American Community Survey (5-year estimates, 2015-2019)

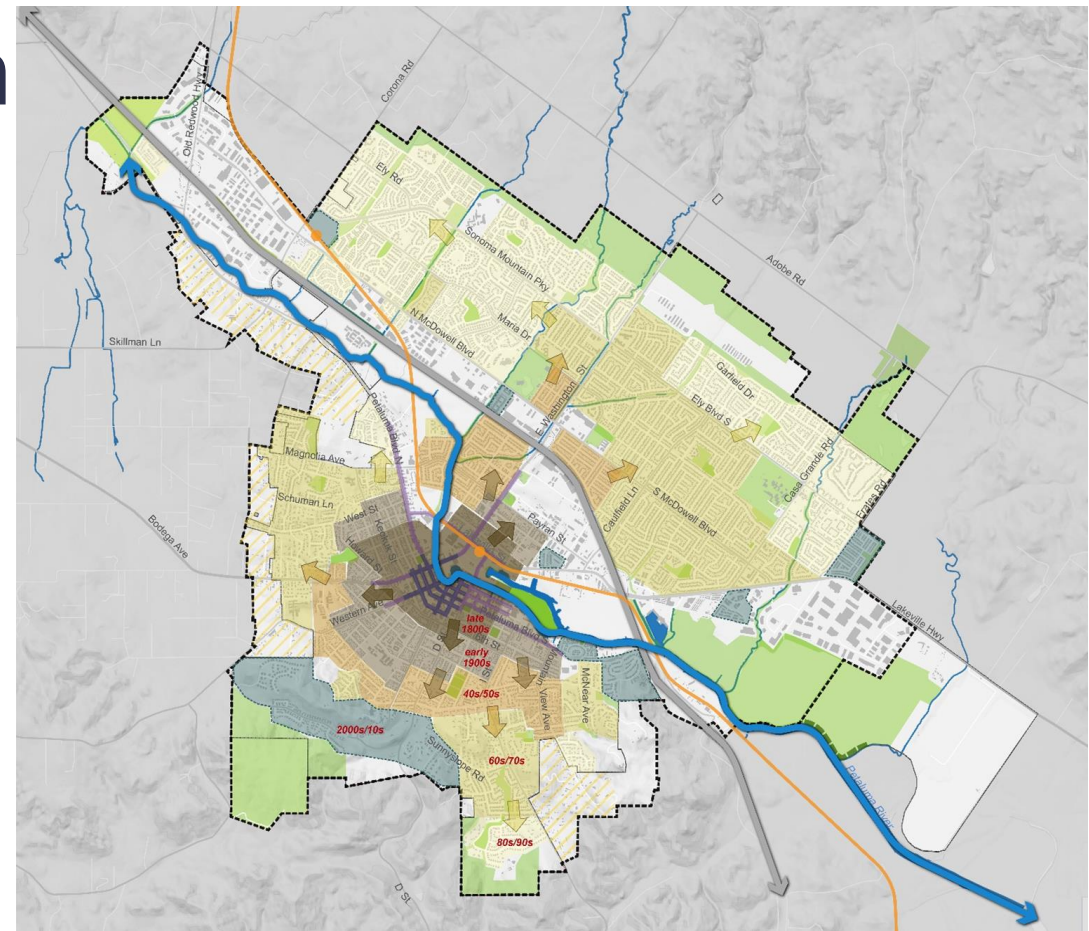
# land use



# Historical Growth Pattern

Petaluma's history began in the downtown core, adjacent to the River, and expanded East and West over the years.

- **Old Petaluma:** Founded in the 1800s around the river
- **Early Growth:** Grew slowly to the north & south in a regular grid block pattern
- **Postwar Expansion:** Built new subdivisions, first in Midtown and then across the 101 freeway
- **First Subdivision Era (60s & 70s):** Grew South East neighborhood
- **Second Subdivision Era (80s & 90s):** Built out the North East neighborhood
- **Recent Infill / Greenfield (Since 2000):** Added new infill or around the city edges



## Legend

- Old Petaluma (1800s)
- Early Growth (1900 to 1940)
- Postwar Expansion (40s and 50s)
- First Subdivision Era (60s and 70s)
- Second Subdivision Era (80s/90s)
- Recent Infill/Greenfield (2000s to present)
- Mixed Era Rural (70s to today)
- City Limit
- Urban Growth Boundary / Sphere of Influence
- Water
- Railway
- Freeway
- Major Streets

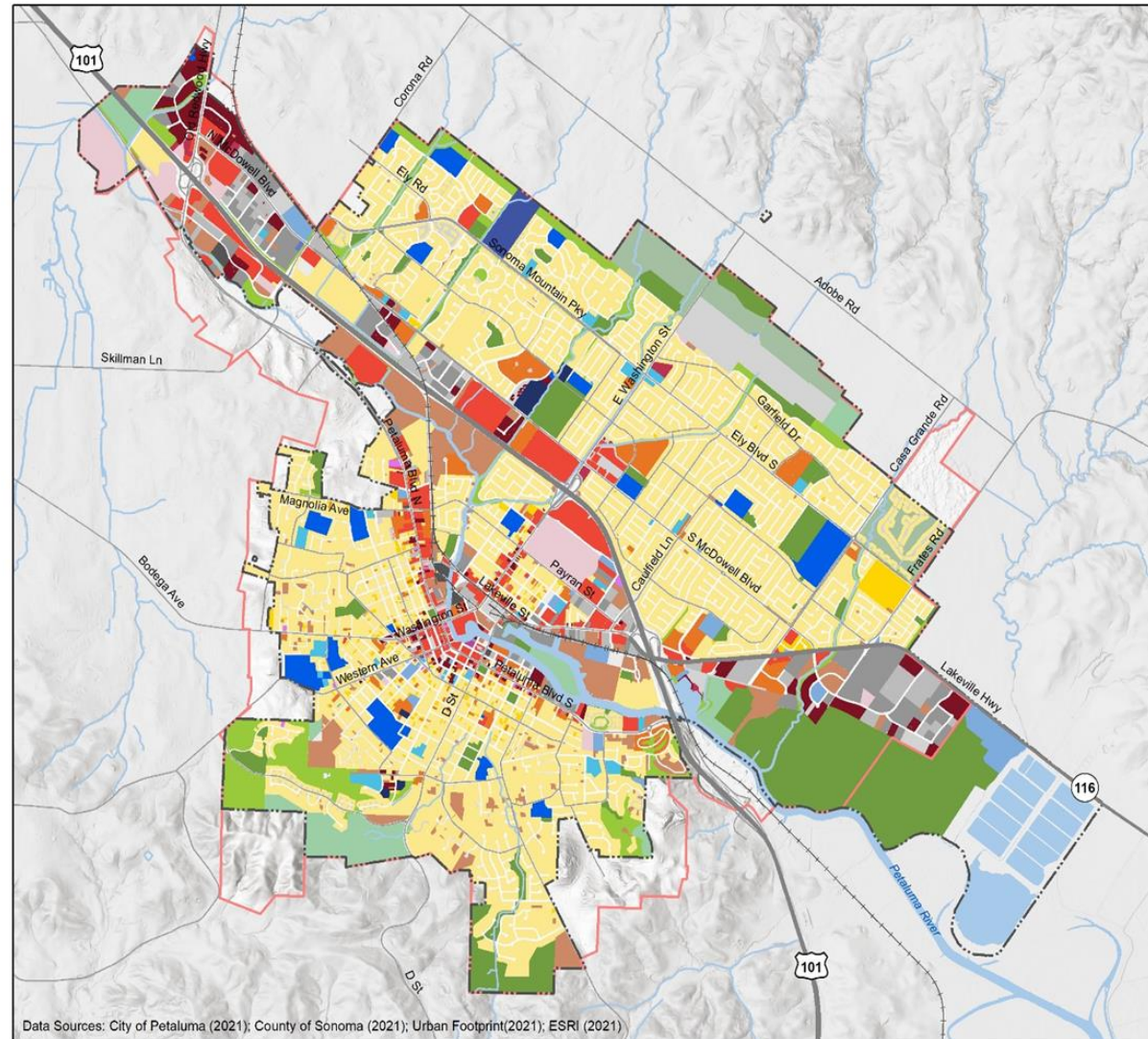
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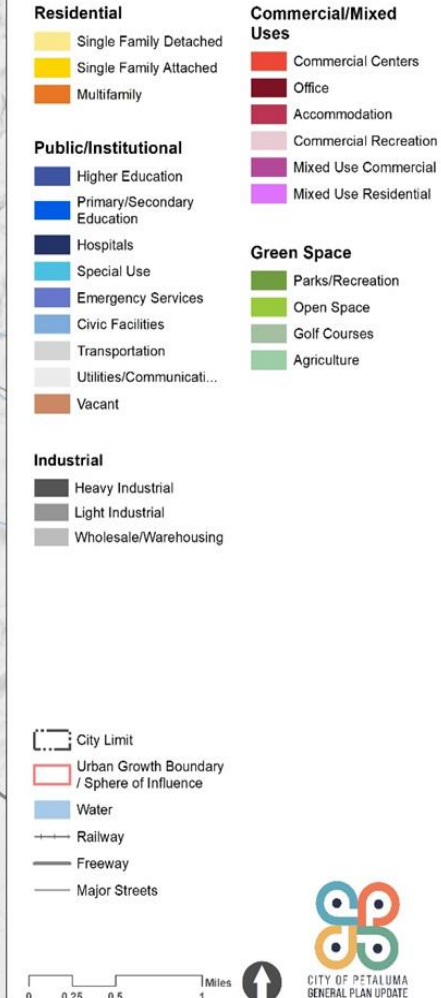
CITY OF PETALUMA  
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# Existing Land Use Pattern

- Petaluma is a built-out city with a diverse mix of uses.
- Petaluma has an urban growth boundary that limits outward expansion and protects open spaces.
- A mixed-use riverfront core forms the heart of the city
- Lower-density, suburban neighborhoods extend from core to the urban periphery
- Parks, cover 11% of land in the City Limits and 15% in the SOI
- Two business parks on the southern and northern ends of the city contain many employment uses



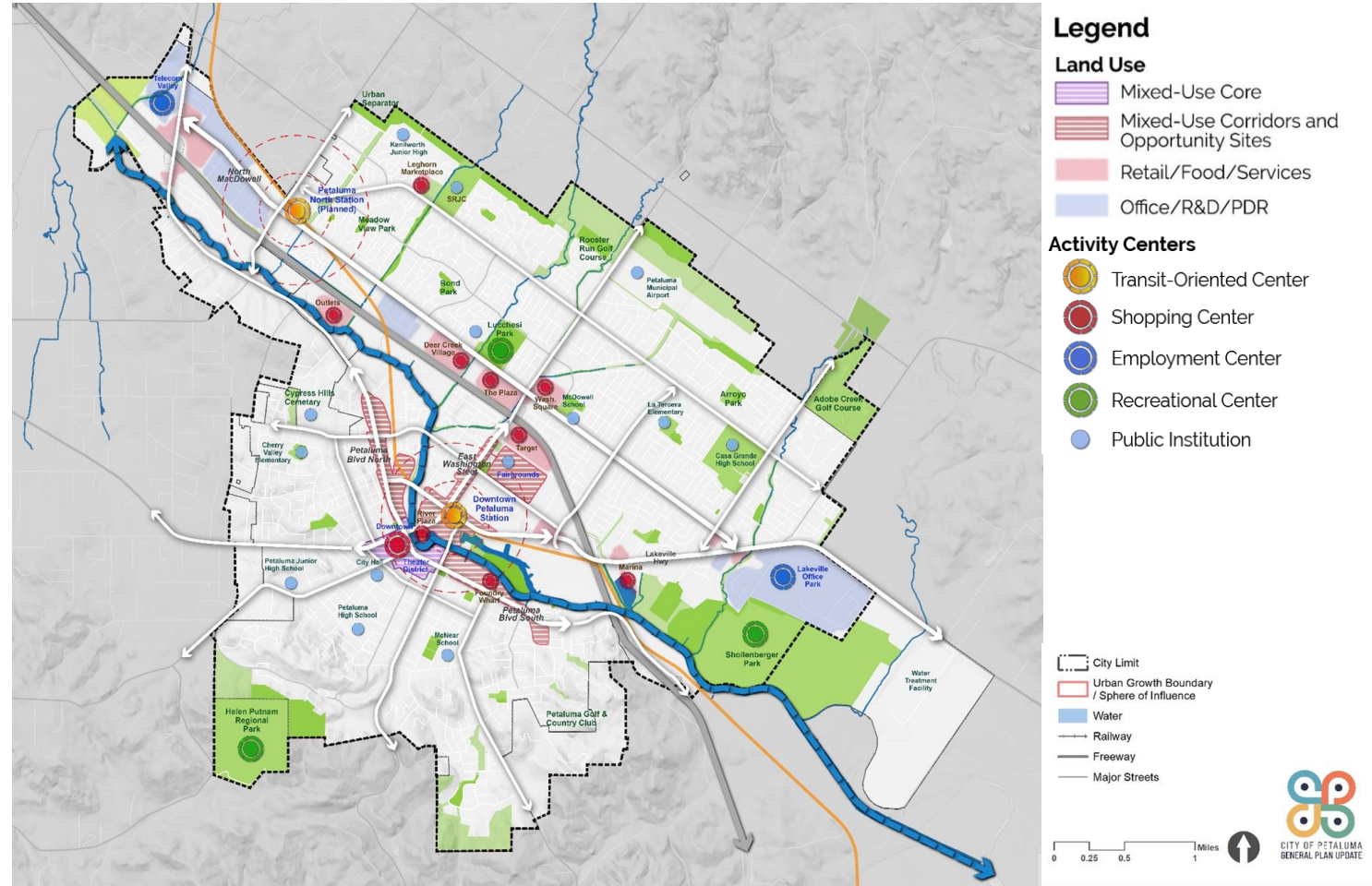
## Existing Land Use



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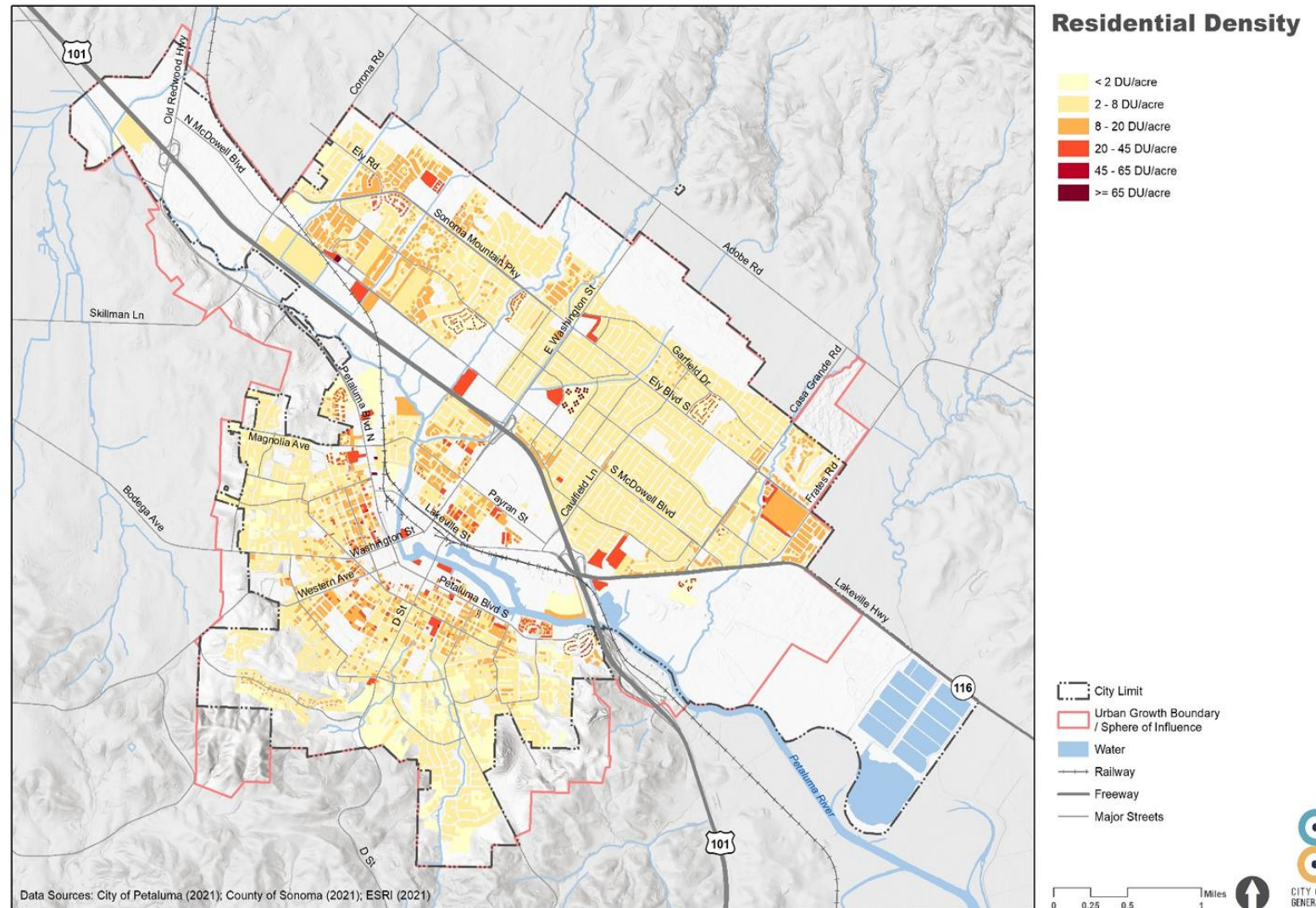
# Activity Centers

- **Downtown is the heart of Petaluma, with other activity centers spread throughout the city**
- Downtown has a diverse mix of uses including retail, shopping, dining, entertainment, and housing.
- Commercial uses (retail, dining, entertainment, services, offices) are mostly located in Downtown, along Petaluma Blvd North and South, along McDowell Blvd and East and West Washington Blvd
- Employment uses (light industrial, food/beverage, office and R&D) are located in 2 primary areas: the Lakeville Office Park and near the intersection of North McDowell Blvd
- The Fairgrounds is a regional destination with a fair and other events throughout the year.



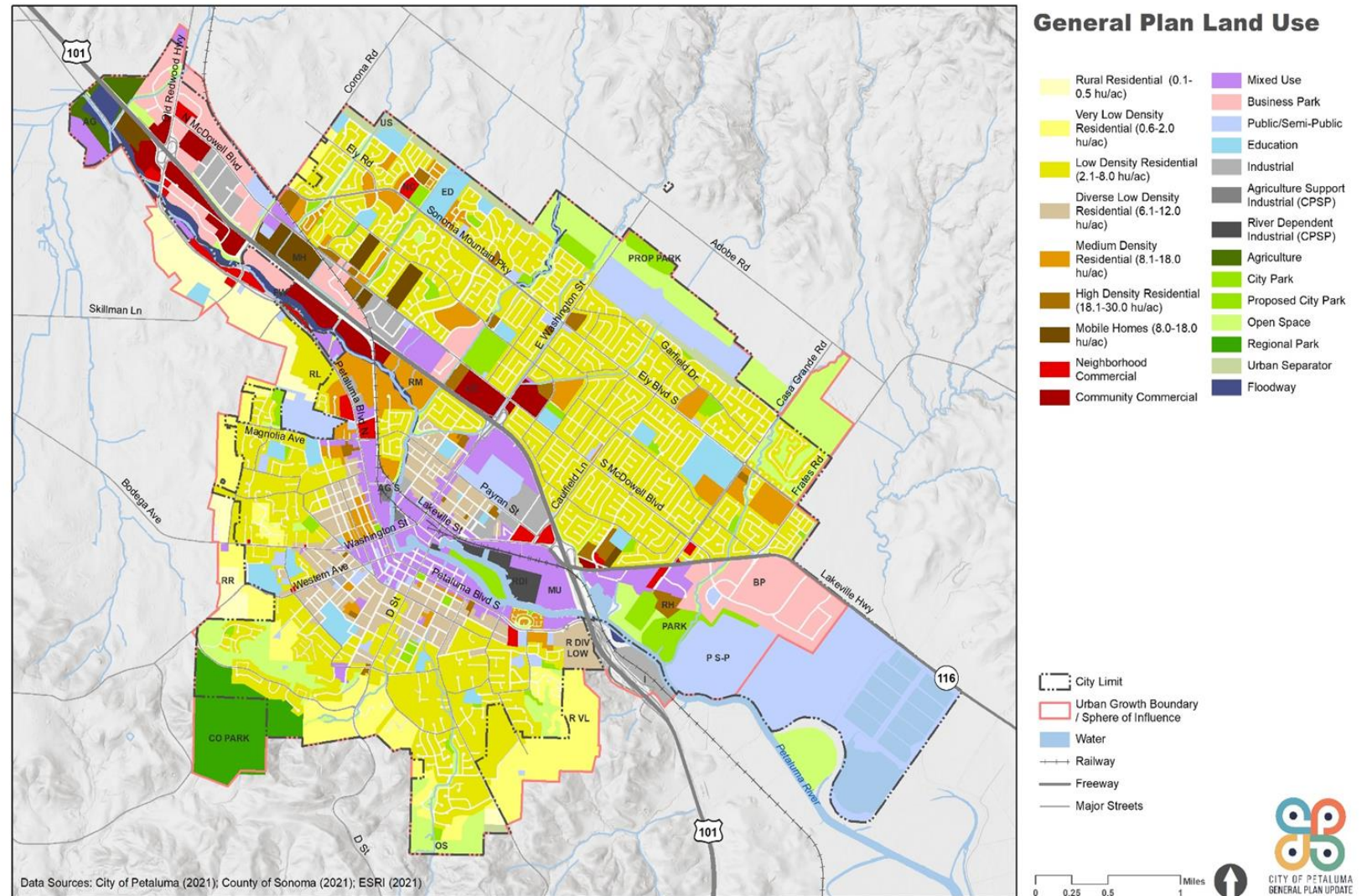
# Residential Uses

- Residential uses occupy the largest share of land within the city (44%)
- Single-family homes comprise the predominant housing type
- Duplexes, triplexes, 4-plexes are common at the north end of the city near Sonoma Mtn Parkway
- Six mobile home parks are found in the north end of the city
- Most parcels are low density, with only one-third exceeding 8 units/acre
- Density in Downtown is mixed, with many properties exceeding 20 units/acre



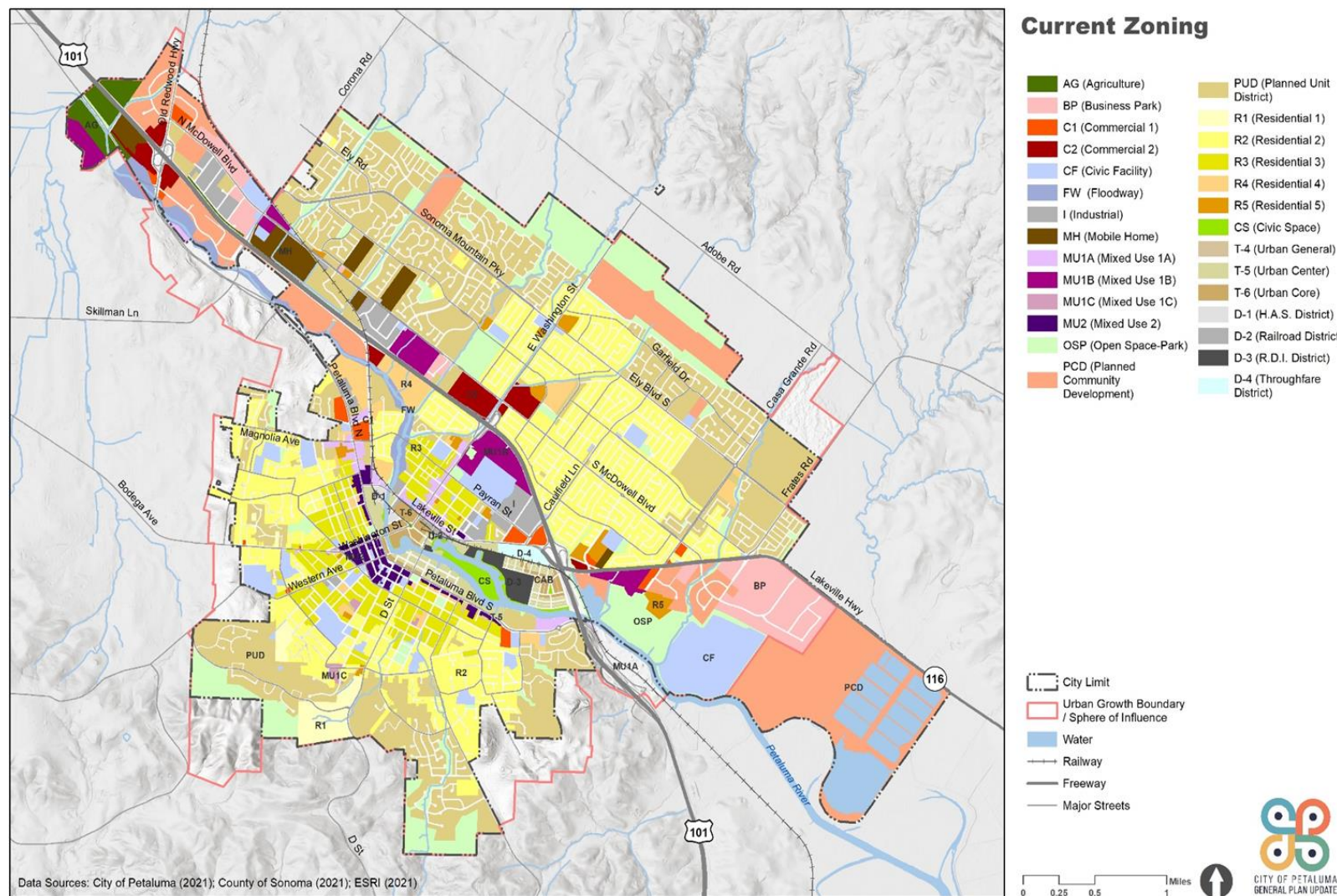
# General Plan Land Use Designations

- Land Use Designations establishes the proposed distribution, location, and extent of land uses and density in the city
- Land use designation maps identify the future, desired pattern of land uses, not necessarily what is currently built.
- The overarching land use goal from the 2008 General Plan is to: *Maintain a balanced land use program that meets the long-term residential, employment, retail, institutional, education, recreation, and open space needs of the community.*



# Zoning Considerations

- Zoning implements General Plan policy direction through development standards and guidelines
- Several documents contain zoning regulations: municipal zoning code; SmartCode; Central Petaluma Specific Plan; Downtown SMART TOD Master Plan
- 25% of the City has PCD zoning with varying development standards
- In the Downtown, there are several layers of regulation, including zoning, the SmartCode, and historic districts



# Important Policies, Plans, and Programs

## Regulatory:

- General Plan (updated 2008)
- Municipal Zoning Code
- SmartCode
- Central Petaluma Specific Plan (2003)
- Downtown SMART TOD Master Plan (2013)
- River Access Enhancement Plan

## Overlays:

- Floodplain Overlay Zones
- Theater District
- Historic Districts
- Parking District

## Growth Management:

- Urban Growth Boundary (UGB)
- Community & Urban Separators (greenbelts between Petaluma and neighboring cities)
- Residential Growth Management System / Environmental Design Plan of 1972 and 1978 (500 units per year cap)
- Urban Limit Line (ULL), precursor to UGB

# Issues and Opportunities

- **Downtown/TOD Focus:** Recent planning efforts have been aimed at promoting infill of underused sites to create denser and more walkable mixed-use development, especially in the city center and near both SMART stations (PDAs)
- **Infill Priority:** Infill development will be key given the physical limits imposed by the Urban Growth Boundary and surrounding constraints such as active agricultural uses, natural conservation areas and community separators
- **Corridor Revitalization Potential:** Petaluma's corridors are candidates for land use changes (greater use diversity and higher utilization of land) and character enhancements (streetscape/frontage improvements); attention should be focused on East Washington, Petaluma Blvd North, Petaluma Blvd South, and corridors in Downtown
- **Floodplain Constraints:** Some of the land most readily available for development is along the Petaluma River; some of this land is also subject to flooding

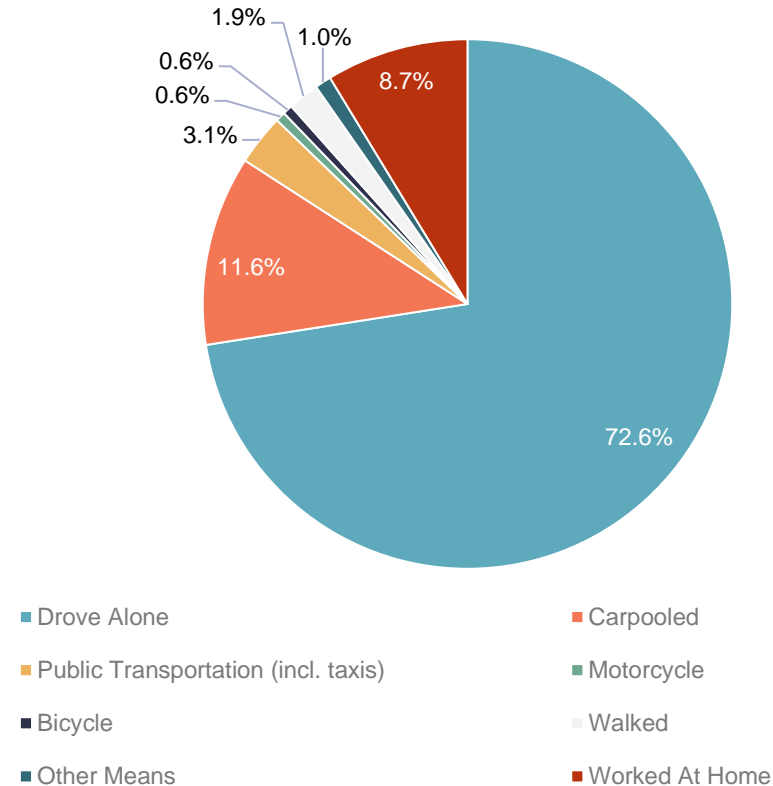


# transportation

# Means of Transportation to Work

- Residents of Petaluma use many different modes of transportation for daily trips, but most commuters drive alone or carpool to work
- In 2019, 73% of employed residents of Petaluma drove to work alone, which is slightly lower than the county (75%) or state (74%)
- Only 3% of Petaluma workers commuted by public transit- down from 5% in 2000
- Walking and bicycling have remained small proportions of overall commute trips at 2% and 1%
- The largest increase since 2000 was work from home, from 5% to 9%

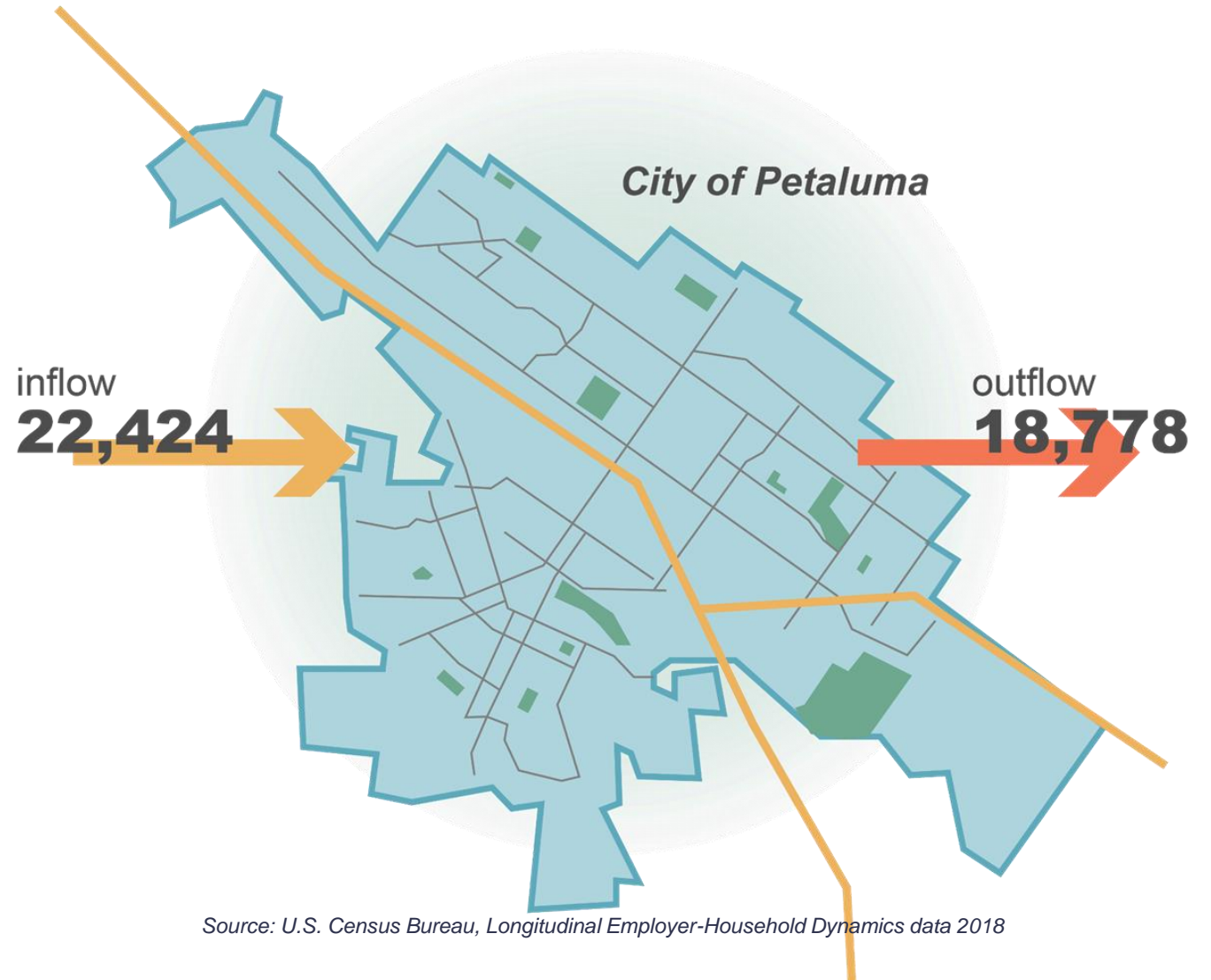
Means of Transportation to Work – Petaluma (2019)



Source: American Community Survey (5-year estimates, 2015-2019)

# Commute Patterns—Inflow-Outflow

- Petaluma experiences an influx of workers each day
- Over 22,000 workers traveled to Petaluma each day in 2018, while 19,000 commuted to jobs outside the city
- 6,000 Petaluma residents live and work in the city

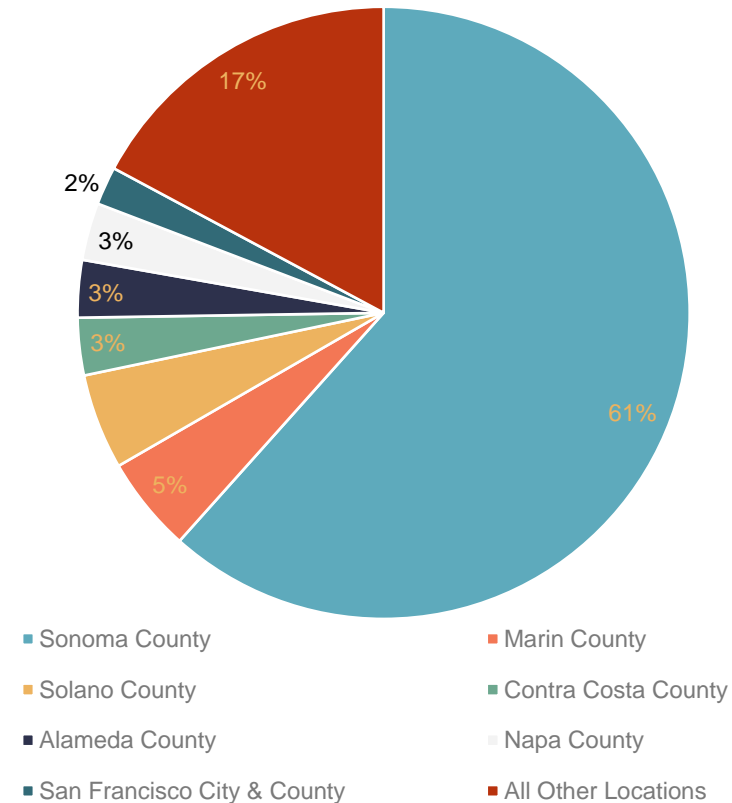


Source: U.S. Census Bureau, Longitudinal Employer-Household Dynamics data 2018

# Commute Patterns

- **COVID-19 has affected commuting patterns, but as of 2018, most Petaluma workers travel to the city for work**
- A significant proportion of commute trips, both for Petaluma residents and for people whose jobs are in Petaluma, were relatively local in scale (e.g., within Petaluma or Sonoma County)
- 61% of people who work in Petaluma lived in Sonoma county, with 21% living and working in Petaluma
- Approximately 21% of the workforce in Petaluma commuted from other Bay Area counties, and 17% were residents of locations outside the Bay Area

Home Location of Petaluma Workers (2018)

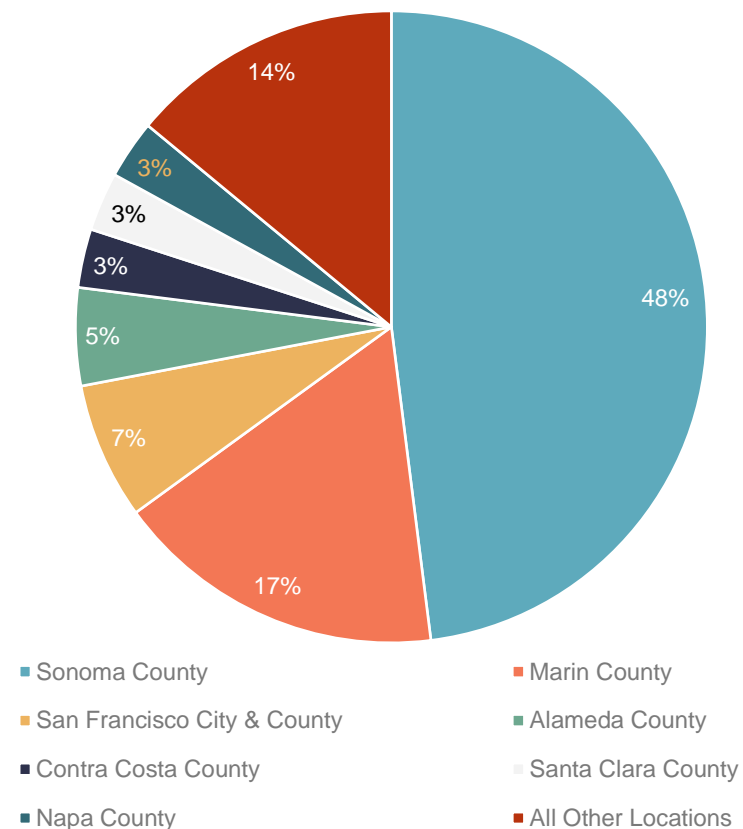


Source: U.S. Census Bureau, Longitudinal Employer-Household Dynamics data

# Commute Patterns

- About half of employed Petaluma residents travel outside Sonoma County for work
- 48% of employed Petaluma residents worked in Sonoma County, with half of these people residing in Petaluma
- About 17% of Petaluma's working population was employed in neighboring Marin County, and 7% was employed in San Francisco
- The remaining 28% of Petaluma residents commuted to jobs in other parts of the Bay Area and beyond

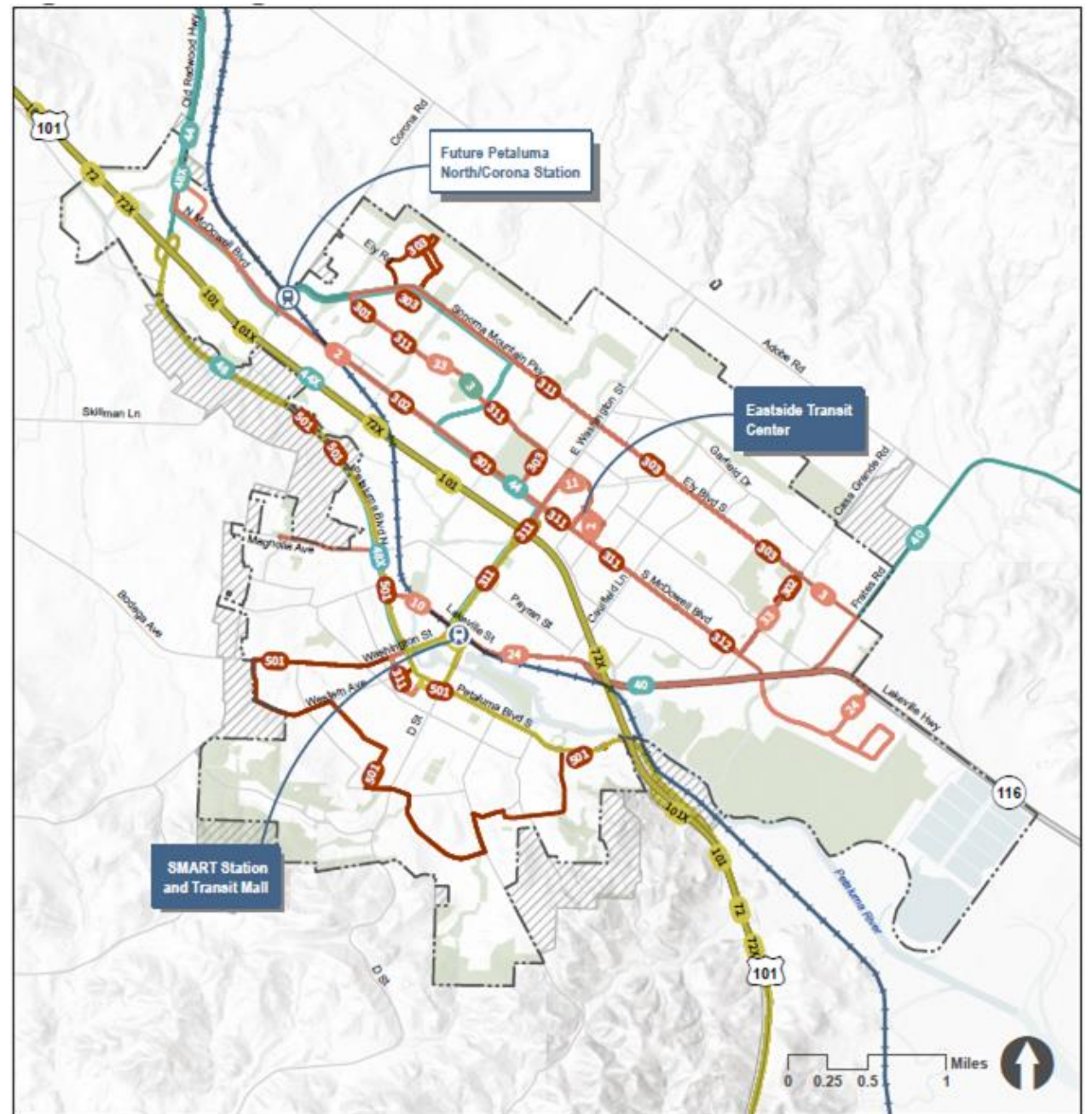
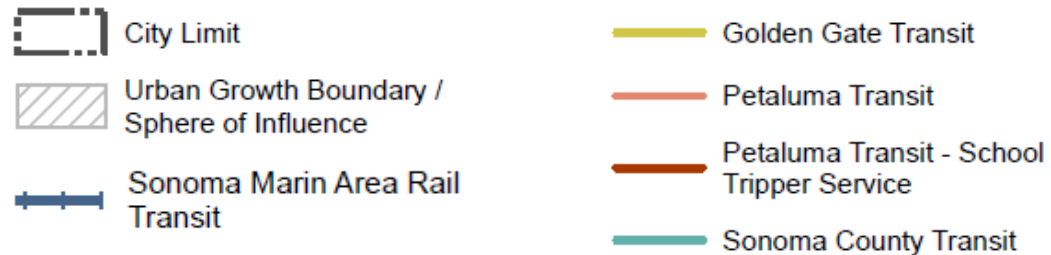
Work Location of Petaluma Residents (2018)



Source: U.S. Census Bureau, Longitudinal Employer-Household Dynamics data

# Transit Network

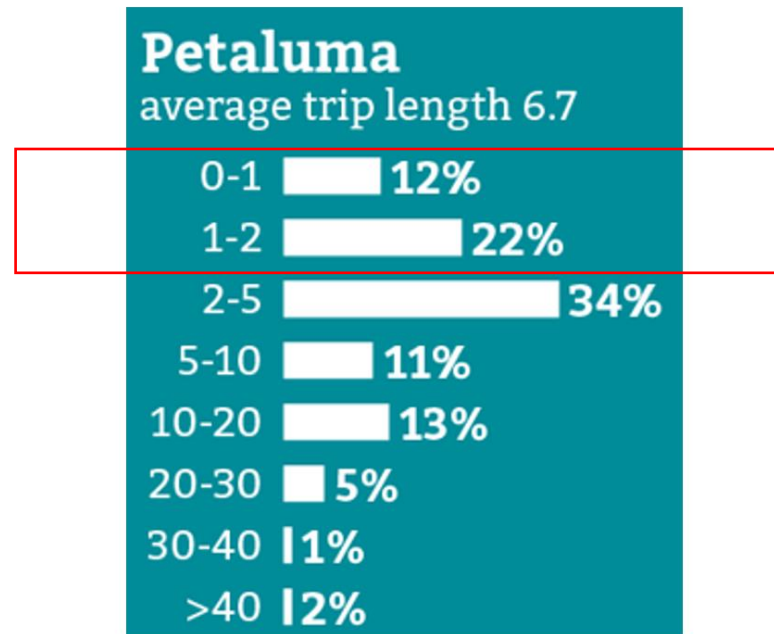
- Transit providers serving Petaluma include local and intercity bus as well as passenger rail including:
  - SMART (Sonoma-Marín Area Rail Transit)
  - Petaluma Transit
  - Sonoma County Transit
  - Golden Gate Transit
  - Other paratransit services
- The center of the city has a transit-oriented core with walkable areas in Downtown



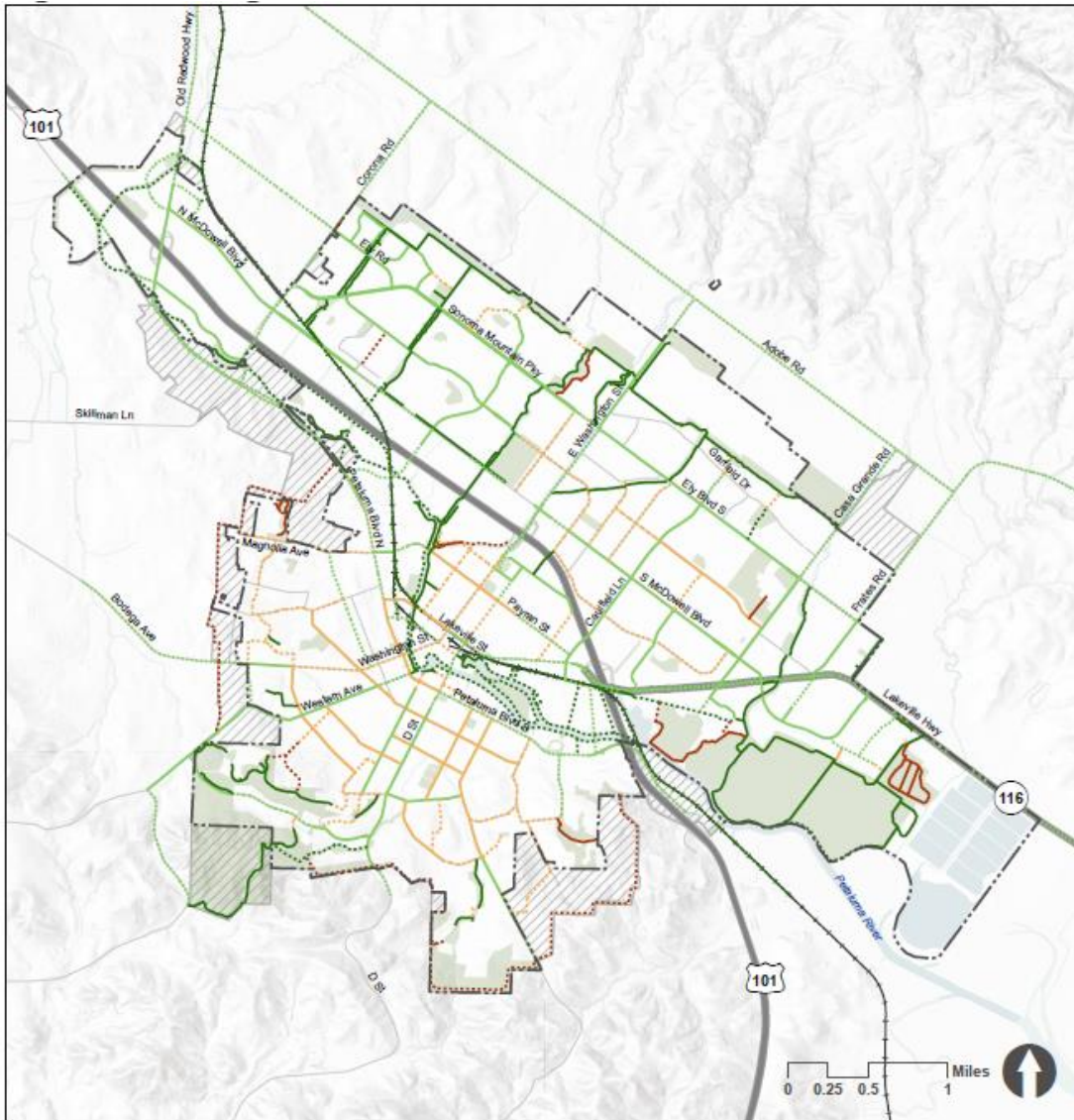
# Transportation Patterns

- Average trip length in Petaluma is 6.7 miles
- Approximately 1/3 of all trips are less than 2 miles and 2/3 of all trips are less than 5 miles
- The short trip length of 1/3 of trips creates opportunities for walking, biking, and rolling

## Trip Length Distribution By jurisdiction, in Miles



# Connecting the Bicycle and Pedestrian Network



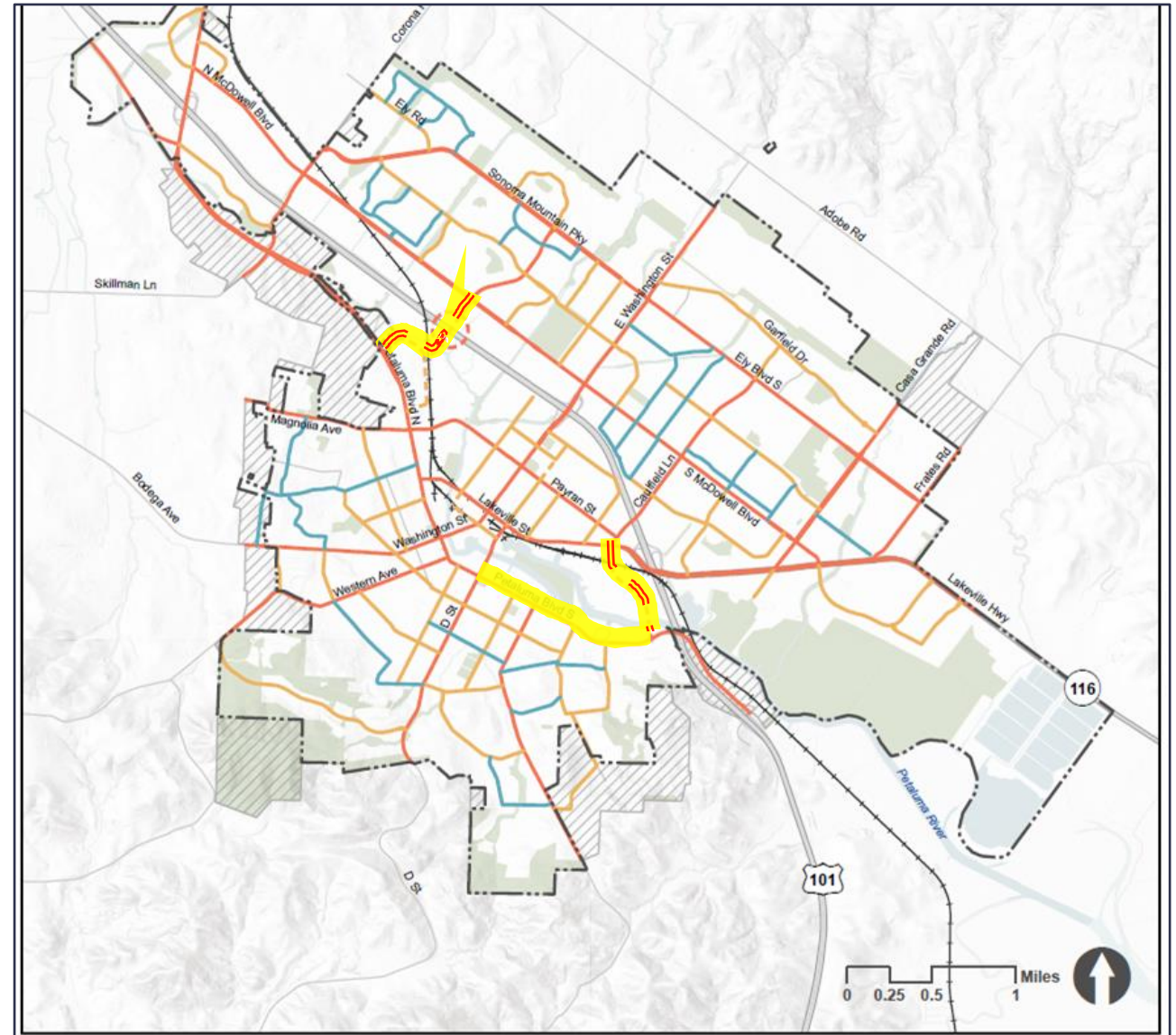
- While the city has an extensive bike and pedestrian network, barriers and speeds make active mobility more difficult
- Barriers include:
  - The Petaluma River, U.S. 101, the SMART railroad tracks as well as large arterial roadways
  - Existing biking facilities are located on roadways with high vehicle volumes and/or speeds
- There are several planned bicycle facilities in downtown Petaluma
- More crosstown connectors are needed for people walking/biking between the east and west sides of Petaluma





# Roadway Network: Projects and Proposals to discuss as part of General Plan process

- The city has a robust roadway network, and there are opportunities to discuss new east/west connections
- Petaluma's local road network includes approximately 177 miles of streets, 8 bridges, 52 signalized intersections, and 5,458 streetlights
- Key roadway changes creating connections between the east and west sides of the city are points of discussion during the General Plan process



# Important Policies, Plans, and Programs

**The Existing General Plan provides guiding principles and goals related to mobility:**

- Stimulate and increase public access and use of pathways as alternative transportation routes by providing a safe, efficient, and interconnected trail system
- Provide for a range of attractive and viable transportation alternatives, such as bicycle, pedestrian, rail, and transit.
- Integrate and connect the east and west sides of town
- 8 goals related to improving efficiency and safety of the transportation network, encouraging sustainable travel, expanding transit use, and enhancing quality of life

**There are 53 transportation policies and programs. Examples include:**

- 5-P-10 Maintain an intersection level of service (LOS) standard for motor vehicle circulation
- 5-P-15 through 5-P-41 – Half of all the policies and programs are related to bicycle and pedestrian improvements
- 5-P-42 Expand the bus transit system so that it is convenient and provides frequent, regular service along major City corridors serving education, shopping, and employment destinations, and SMART park-and-ride lots

# Issues and Opportunities

- **Reducing vehicle travel:** Critical for addressing the climate emergency
- **Barriers and gaps:** Crosstown travel is inhibited, especially for people walking and bicycling
- **Shifting priorities from automobile throughput:** Accessibility and roadway safety should be prioritized over automobiles
- **Land use patterns drive future transportation patterns:** Transit centers and Downtown provide a transit-oriented and walkable core for growth

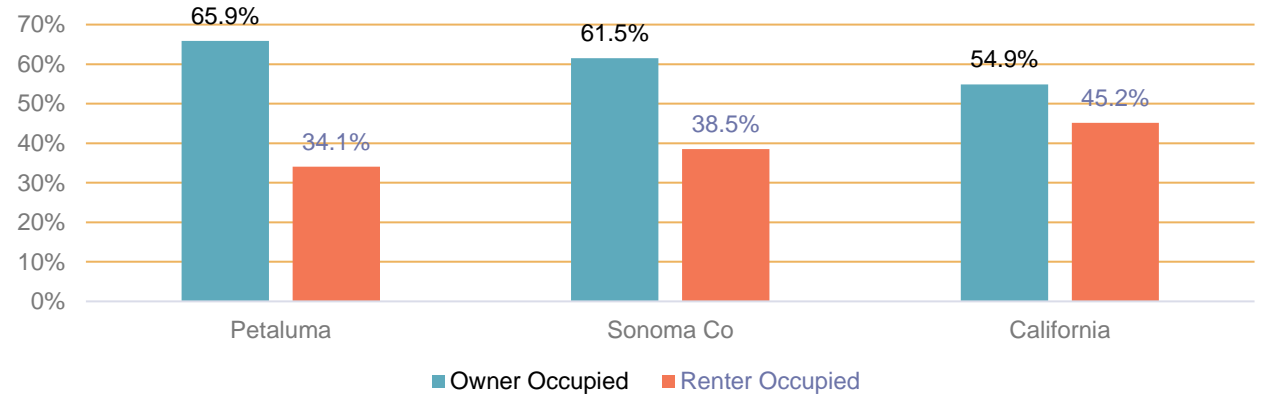


# housing

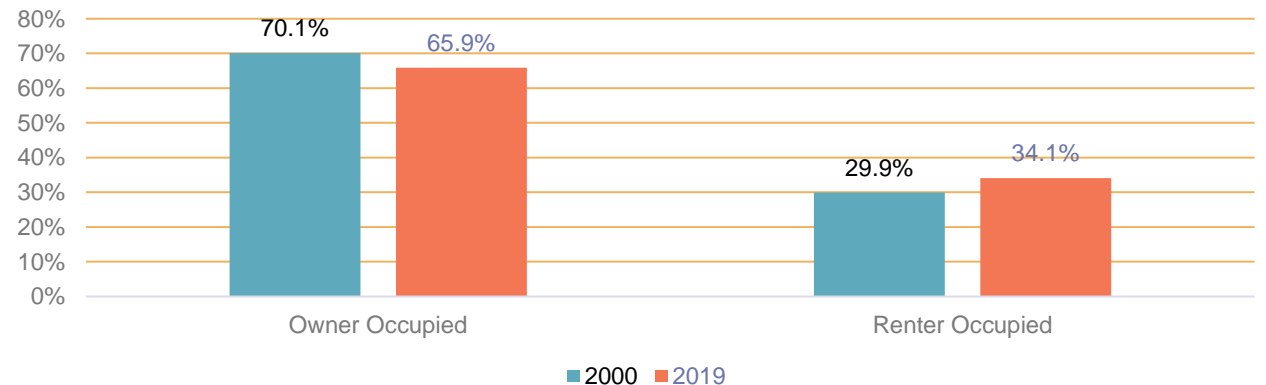
# Housing Tenure

- Petaluma has a higher rate of homeownership than Sonoma County or the state
- Approximately 65.9% of Petaluma's units were owner-occupied in 2019, as opposed to 64.1% in the county and 54.9% statewide
- Despite these relatively high rates of owner occupancy, homeownership rates have fallen in Petaluma over the last 20 years
- The percentage of owner-occupied homes in 2019 was down about 6% from 2000, when 70.1% of units were owner-occupied

Housing Tenure - Petaluma, Sonoma Co. and California (2019)



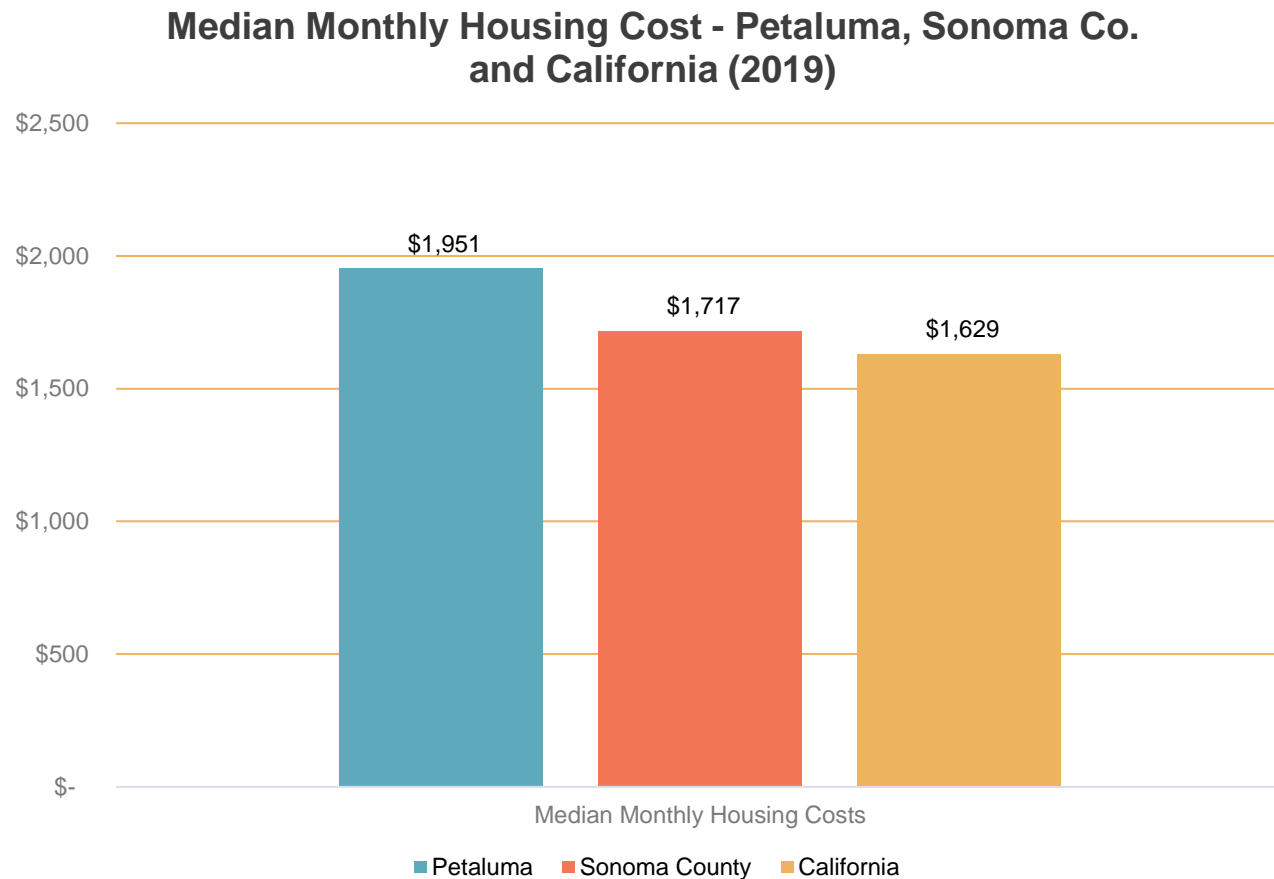
Housing Tenure - Petaluma (2000 and 2019)



Source: Census Bureau Decennial Census and American Community Survey (5-year estimates, 2015-2019)

# Housing Cost

- **Housing is more expensive in Petaluma than the County or the State.**
- The median monthly housing cost in Petaluma in 2019 was \$1,951
  - Approximately 13.6% higher than the Sonoma County median housing cost (\$1,717 per month)
  - 20% higher than the statewide median housing cost (\$1,629 per month)
- The overall rate of increase in housing costs in Petaluma over the past several years has been less than the rate of inflation



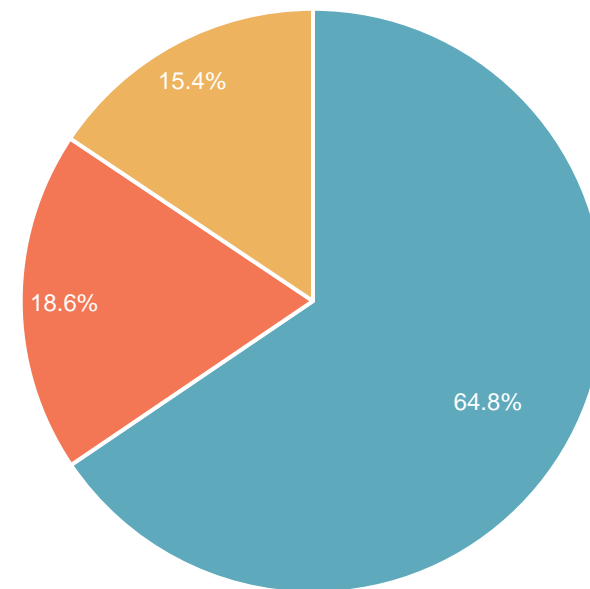
Source: American Community Survey (5-year estimates, 2015-2019)

# Cost Burden

- **Housing cost burden\* is a significant concern in Petaluma**
- In 2017, 18.6% of households spent 30 to 50% of their income on housing
- 15.4% of households spent more than 50 percent of income on housing (34.1 % of households are moderately or severely housing cost burdened)
- This trend has improved since 2012, when 42.0 percent of households were moderately or severely cost-burdened in terms of housing.

\*The U.S. Dept. of Housing and Urban Development (HUD) defines housing cost burden as paying more than 30 percent of income for housing costs, and severe housing cost burden as paying more than 50 percent of income for housing costs.

Housing Cost Burden, Petaluma (2017)



- No Cost Burden <=30%
- Cost Burdened (>30% to <=50% of income spent on housing)
- Severely Cost Burdened (>50% of income spent on housing)

Source: U.S. Dept of Housing and Urban Development (HUD), Comprehensive Housing Affordability Strategy (CHAS) Data

# Important Policies, Plans, and Programs

- **Petaluma has a diversity of programs and policies that address its housing issues and challenges.**
- **Housing Element (2017):** Provides an analysis of housing needs and strategies to meet these; will be updated as part of General Plan Update
- **Inclusionary Housing Program:** Requires that new development projects either build affordable housing as part of the development or pay a fee that can then be used to help build affordable housing elsewhere
- **Commercial Linkage Fee:** Fees charged to commercial development projects and used to help pay for affordable housing development
- **Density Bonus Program:** Grants development concessions to projects that include affordable housing
- **Accessory Dwelling Units (ADUs):** Petaluma allows homeowners to build units on their lot; to make it easier, the City has reduced the fees and development requirements for these units



# Issues and Opportunities

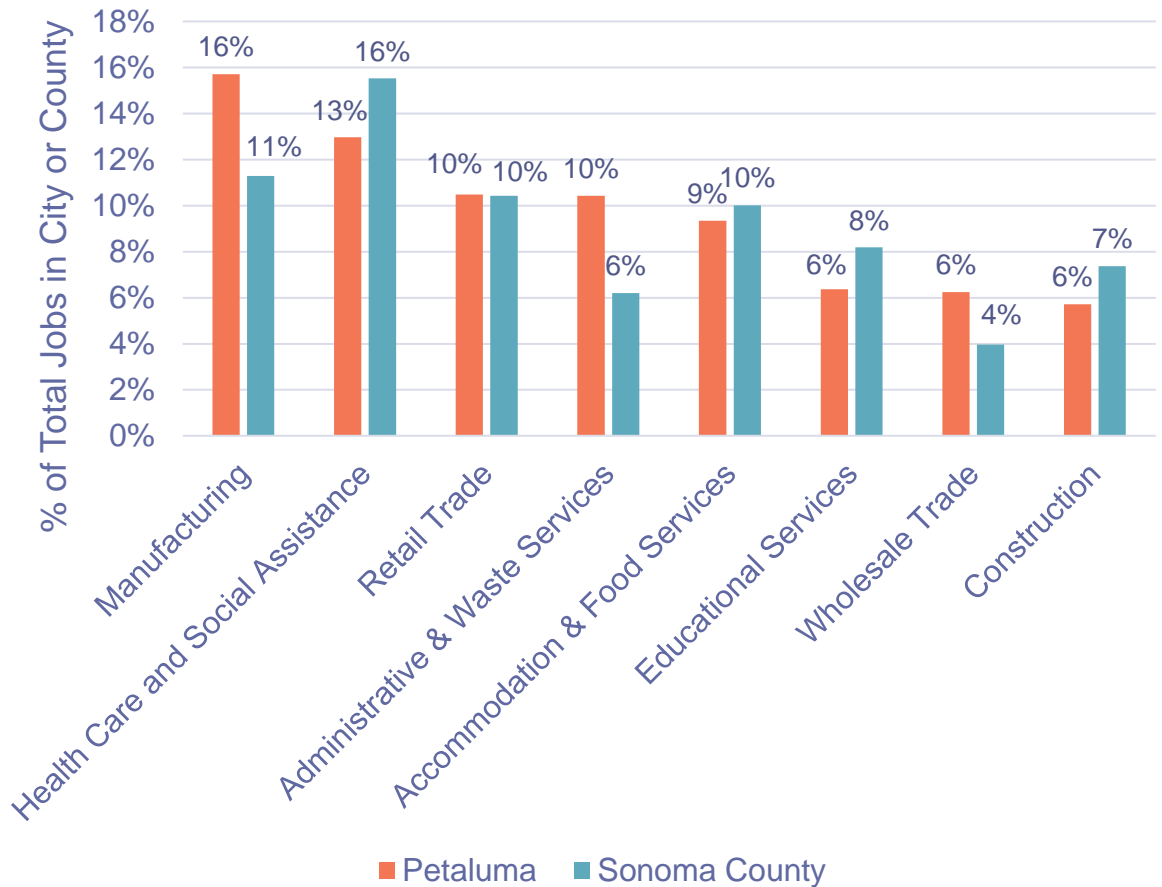
- **Rising Cost of Housing:** Petaluma has the second-highest home values in the market area; in 2020, the median sales price of a single-family home in Petaluma was approximately \$770,000. Single-family homes and condominiums were more expensive in Petaluma than in Rohnert Park, Cotati, and Sonoma County overall
- **Cost Burden:** High Cost of housing is unaffordable for many residents and creates significant challenges
- **Opportunity for More Housing:** Petaluma did not reach its annual permit limit of 500 permits in any year between 2010 and 2020
- **Strong Future Demand:** Indicators suggest that demand will remain strong for both single-family and multifamily housing products
- **Contribute Building Share of Regional Housing:** Between 2015 and 2050, the South Sonoma and North Marin County areas together are projected to grow by 26,000 new housing units

# market, economics and retail

# Economic Composition and Trends

- **Petaluma has a healthy economy and is a significant employment destination**
- Petaluma has 15% of all Sonoma County jobs
- The vast majority of employees (80%) live outside of Petaluma.
- Petaluma's longer-term job growth was double Sonoma County overall
  - 36% versus 18%, 2011-2018
- Petaluma's economy is well balanced between export-oriented and household-serving industries
- Manufacturing jobs are growing in Petaluma
  - Strengths related to agriculture, food manufacturing, medical devices & equipment, variety of smaller technology businesses

Largest Industries, Petaluma and Sonoma County, 2018

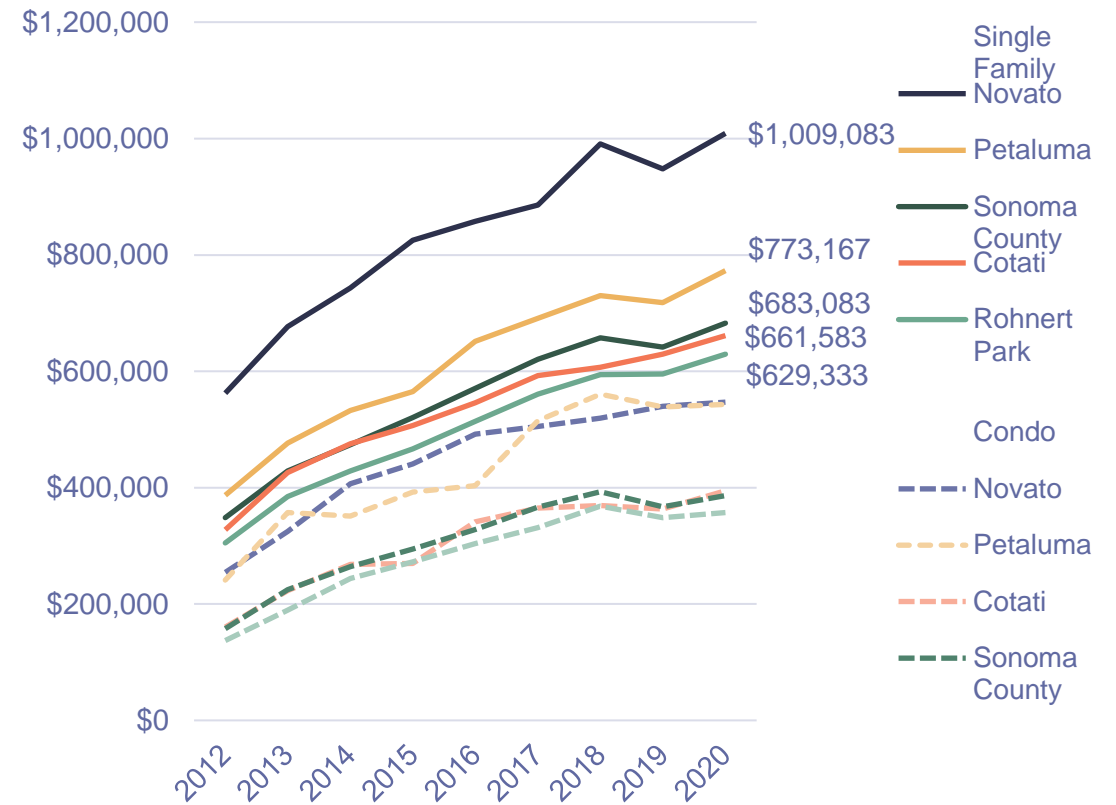


Source: U.S. Census LEHD, 2021; Strategic Economics, 2021.

# Housing Market

- **Petaluma has a strong housing market with high demand and high prices**
- Petaluma added housing units at a faster pace than most neighboring communities and Sonoma County overall
- Housing permits since 2010 were evenly split between new single-family and multifamily homes
- Housing prices and rents grew rapidly in the past decade; median sales prices are among the highest compared to nearby communities
- Additional market-rate and income-restricted affordable housing will be needed to meet demand and retain an economically diverse population and workforce

Median Single-Family and Condominium Price, Petaluma, Market Area Cities, Sonoma County, 2012 to 2020



Source: Redfin, March 2021; Strategic Economics, 2021.

# Hotel Market

- **Petaluma is well-positioned to attract long-term growth in hotel stays and demand for additional hotel rooms**
- Petaluma's primary drivers of hotel stays are positioned for growth:
  - Tourists visiting wine country
  - Business travelers and workers with destinations in Petaluma and communities along Highway 101

City of Petaluma Transient Occupancy Tax Revenues, 2015-2020

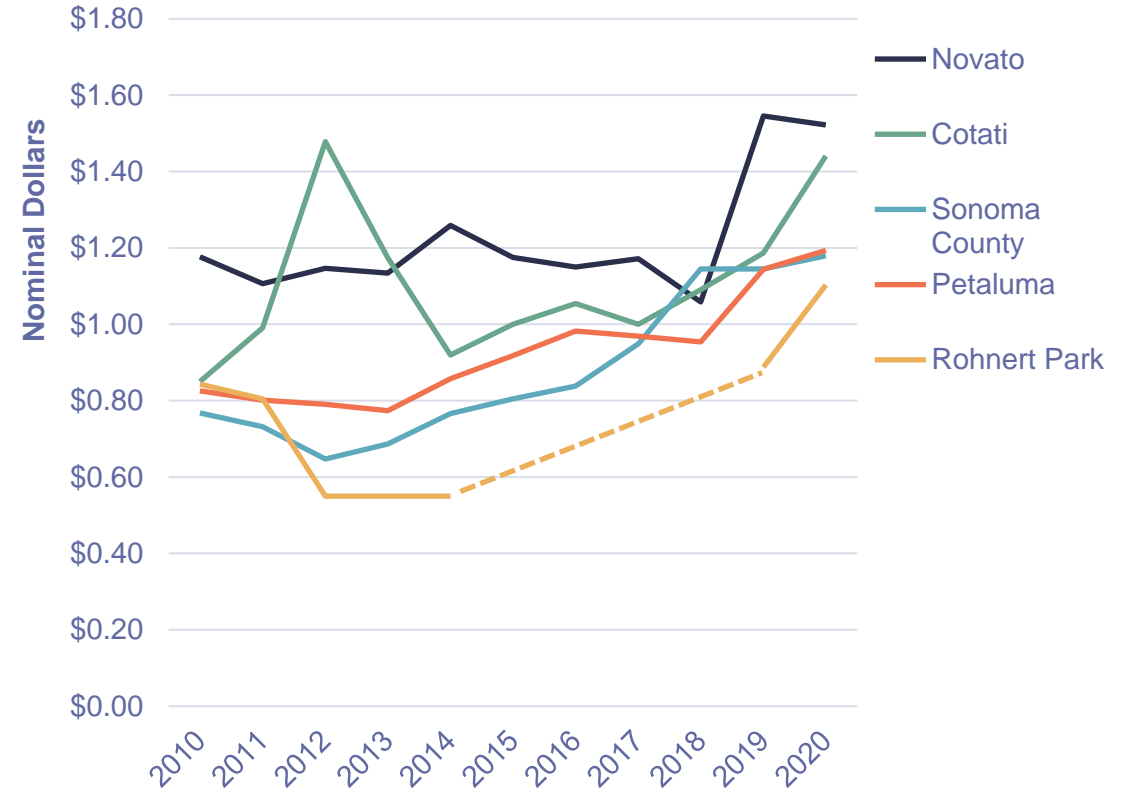


Source: City of Petaluma, 2021; Strategic Economics, 2021.

# Industrial Market

- Demand for industrial space is strong in Petaluma
- Primary industrial uses are:
  - Flex & manufacturing space for food/beverage manufacturing & medical equipment production
  - Distribution facilities to support manufacturing businesses and for local household & business needs
- A number of challenges exist for industrial uses:
  - Increasing rents and sales prices for existing industrial space may price out businesses
  - Rising housing costs make it more difficult for manufacturing employers to attract workers with necessary technical training
  - Traffic congestion
  - Dwindling supply of best-located and accessible development opportunity sites

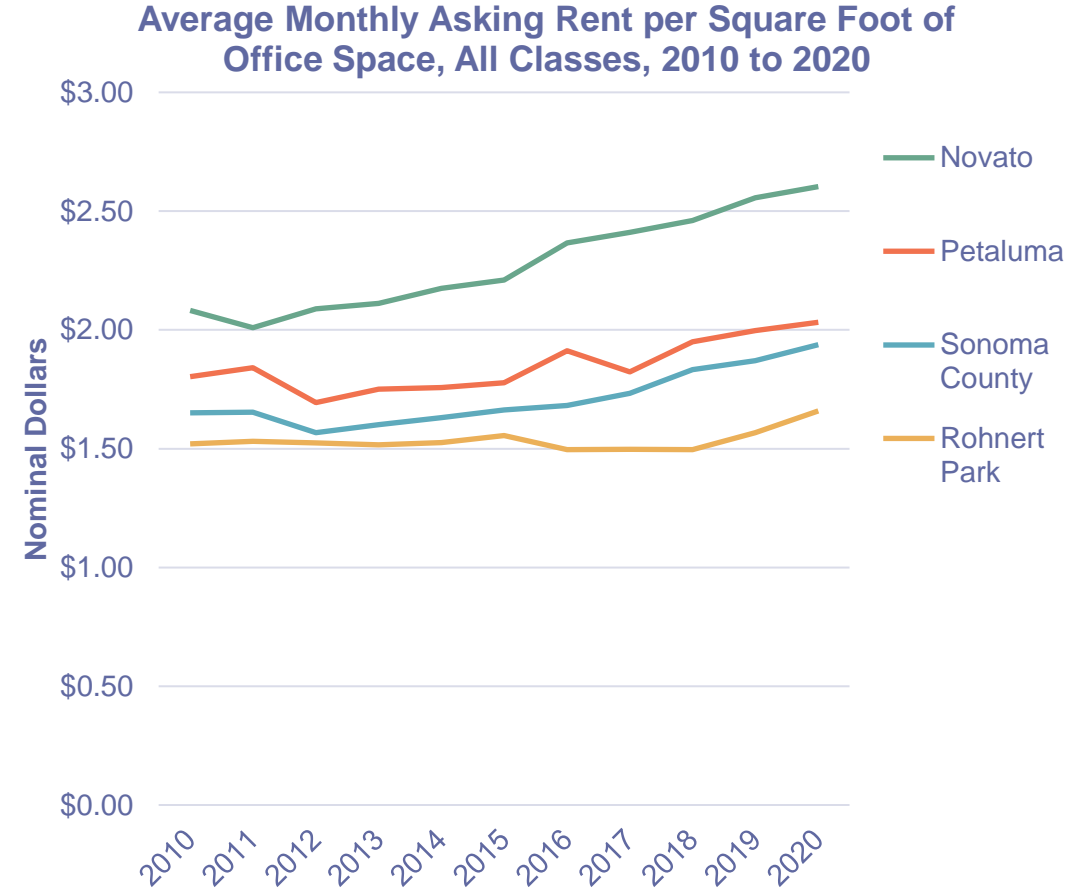
Average Monthly Asking Rent per Square Foot of Industrial Space, All Types, 2010 to 2020



Note: Dashed line represents unavailable data. Rents are shown on a "triple-net" basis.  
Source: Costar, 2021; Strategic Economics, 2021.

# Office Market

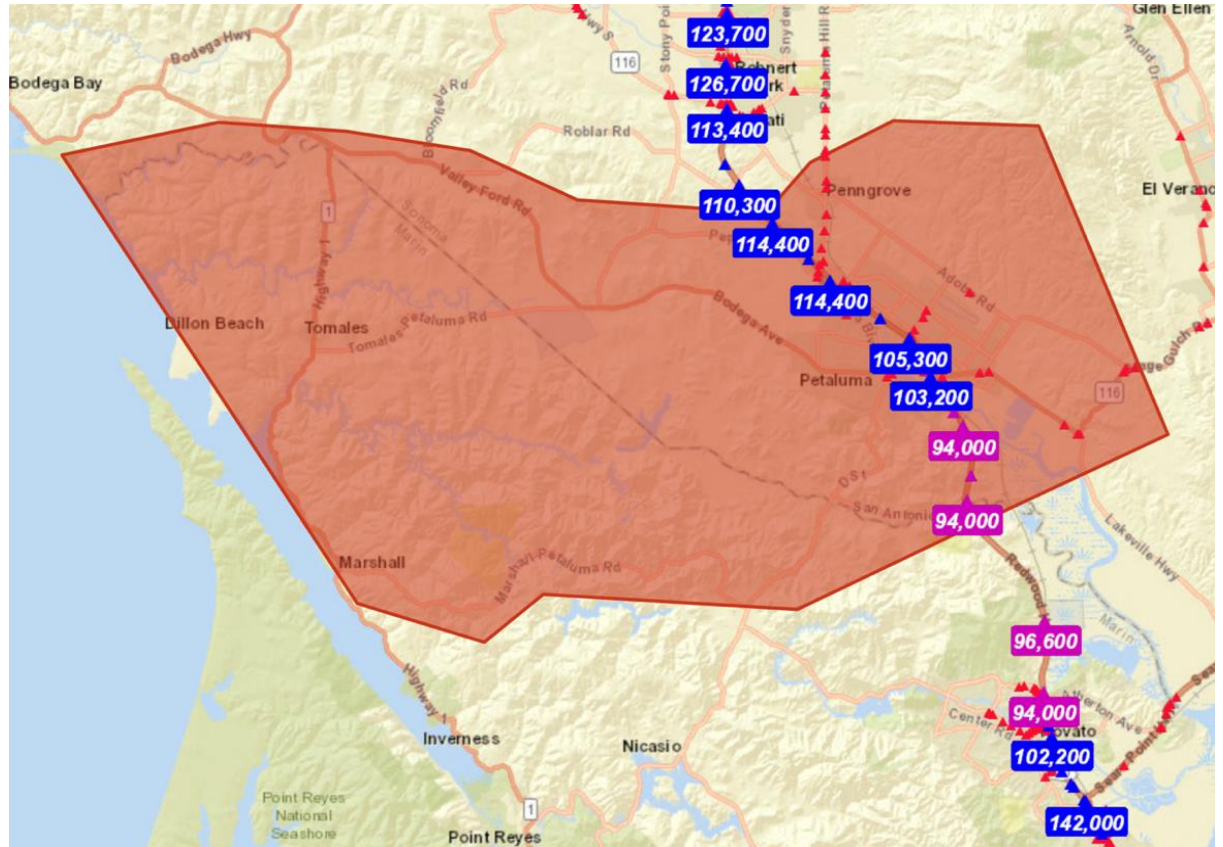
- Overall demand for office space is generally weaker in Petaluma relative to industrial space
- Petaluma should anticipate modest ongoing growth in demand for office space from:
  - Expansion and relocation needs of larger employers
  - Smaller medical and professional service businesses



Note: Rents are shown on a modified gross basis.  
Source: Costar, 2021; Strategic Economics, 2021.

# Retail Market

- Petaluma is a retail destination that attracts a “surplus” of spending (and sales tax revenue) beyond what residents alone could support
- “Big box” stores and the outlet mall draw spending from a larger area outside the city
- Downtown Petaluma attracts additional tourists and visitors from throughout the North Bay
- Petaluma has 2,853,425 SF of retail space on the West Side and 1,471,721 SF on the East Side; however, the majority of the City’s population lives on the East Side



*Petaluma's retail catchment area*



# Changing Face of Retail

- **Retail is changing and should be reimaged to fit current and future needs in Petaluma**
- Specialty goods which have traditionally been purchased through bricks-and-mortar retail channels are increasingly being purchased through on-line channels once reserved for commodity goods
- The pandemic has damaged our well-being, and retail could help fix that by providing places of social resilience
- Obsolete shopping centers often represent a city's highest profile opportunities to remake space and how people live and interact; Petaluma is home to multiple shopping centers which are generally well located, and contain enough land to create meaningful change
- There is more opportunity for specialty retail in Petaluma because these uses draw from a wider catchment and household growth rates in this larger catchment is higher than in Petaluma proper
- Demand for more retail space will only gradually increase in response to population growth

# Important Policies, Plans, and Programs

- **Petaluma Economic Development Strategy (2010):** The City's most recent comprehensive economic development analysis and strategy; implementation is complete, but many findings and areas of focus are still relevant today
- **Economic Health and Sustainability Element (*City of Petaluma General Plan, 2008*):** Still in effect, the current General Plan focused on:
  - Retaining and attracting economic activity
  - Providing employment opportunities in diverse industries
  - Realizing City revenues from economic activity to sustain public services and infrastructure
  - Establishing capacity to support economic development

# Issues and Opportunities

## Issues

- **Congestion:** Highway 101 congestion has adverse effects on commutes and goods movement
- **High Housing Costs:** Prices threaten attraction and retention of the diverse workforce needed by Petaluma businesses
- **Limited supply of well-located commercial and industrial development** opportunity sites could constrain business/job growth
- **Shifting Retail Landscape:** Favors specialty retail, services, and other “experiential” businesses
- **Immediate Access to Day-to-Day Retail:** Some areas of the City day-to-day retail and services is more limited

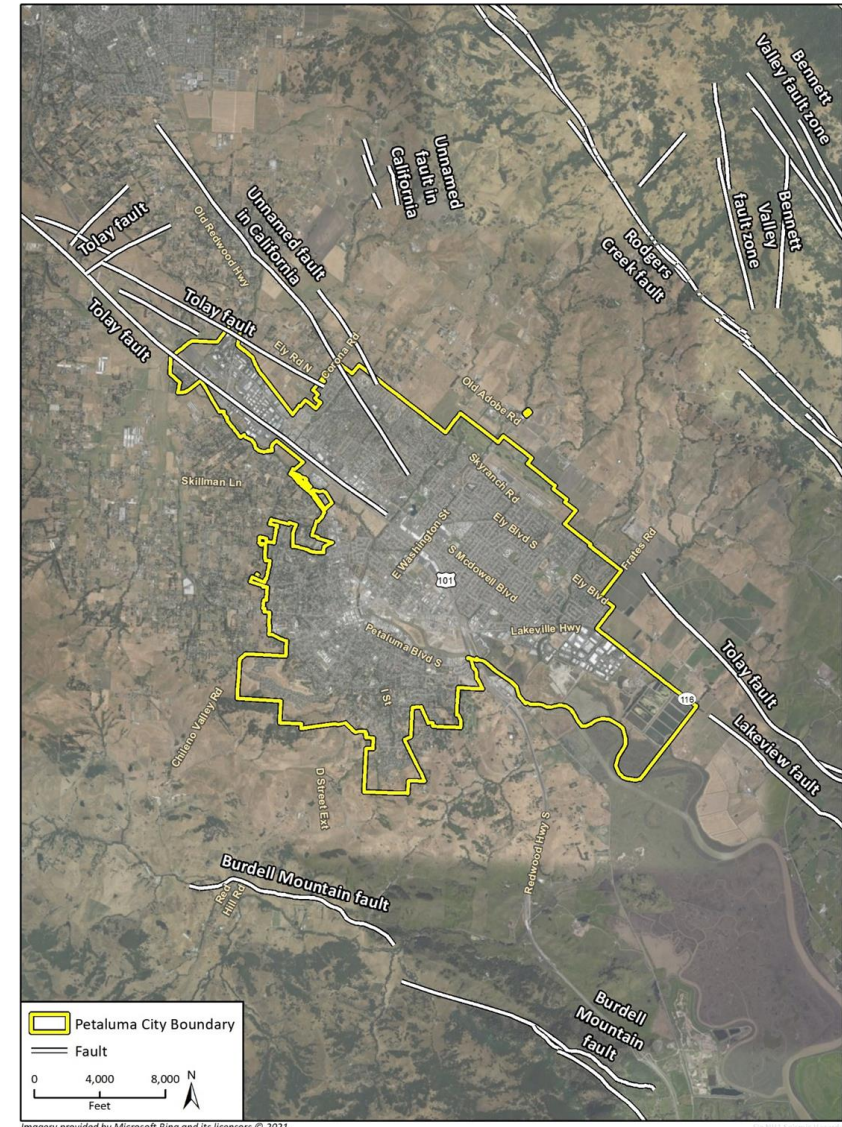
## Opportunities

- **Meeting Demand for Housing Addressing Multiple Needs/Trends:**
  - Aging population, growth in households without children
  - Housing affordable to the city’s diverse workforce
  - Locations that provide or create access to retail and services
- **SMART:** Leverage new access provided by SMART stations to attract businesses and residents
- **Manufacturing and Distribution:** Continue to accommodate growth of manufacturing and distribution businesses
- **Enhance Downtown:** there is the opportunity to position Downtown as a North Bay shopping, dining, and entertainment destination
- **Shopping Centers:** Diversify uses within shopping centers and commercial districts

# hazards & climate change

# Natural Hazards

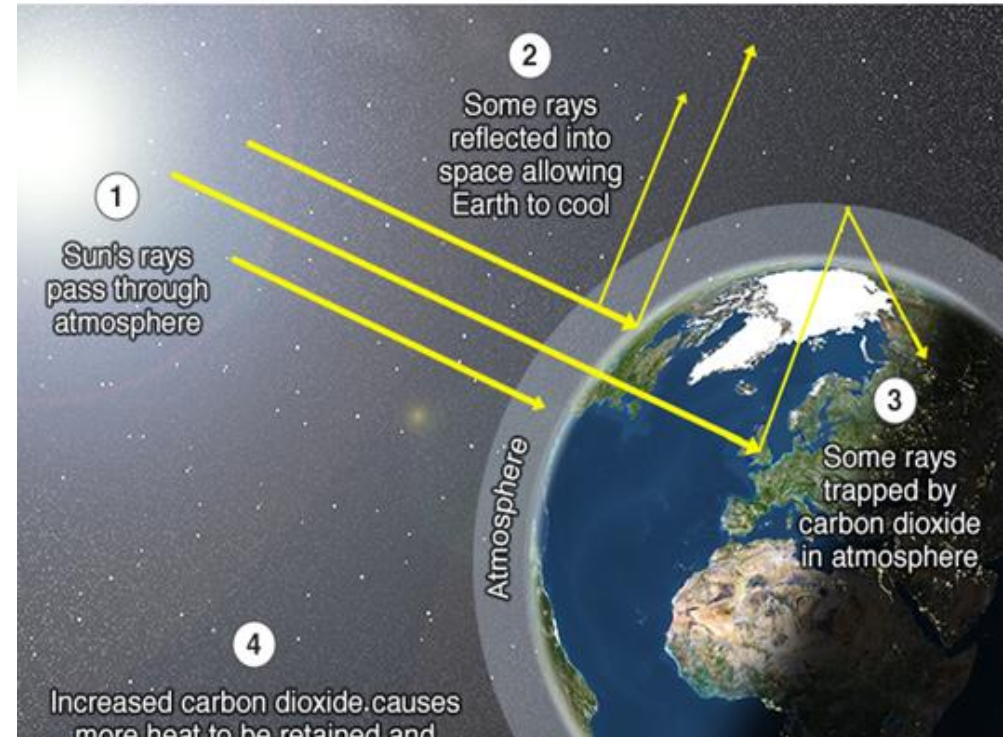
- Petaluma is exposed to a variety of natural and man-made hazards, many of which will be exacerbated by climate change
- Seismic activity continues to be a significant hazard risk
- Heavy precipitation events have a high risk of causing flooding events on the back side of Industrial Ave and within the Payran neighborhood where there has been a history of flooding
- There are high fire hazards areas near the city, particularly near the WUI
- Areas like Downtown and the southwest may be exposed to multiple hazards, including flooding, sea level rise, seismic, and wildfire



# What is Climate & the Greenhouse Effect?

- **Climate is the long-term behavior of the atmosphere**  
– typically represented as averages
- Includes average annual temperature, snowpack, and rainfall
- Greenhouse gases trap heat in the atmosphere, resulting in warming over time
- Most common greenhouse gases, include water vapor, carbon dioxide, methane, nitrous oxide, ozone, chlorofluorocarbons (CFCs), hydrochlorofluorocarbons and Hydrofluorocarbons (HCFCs and HFCs)

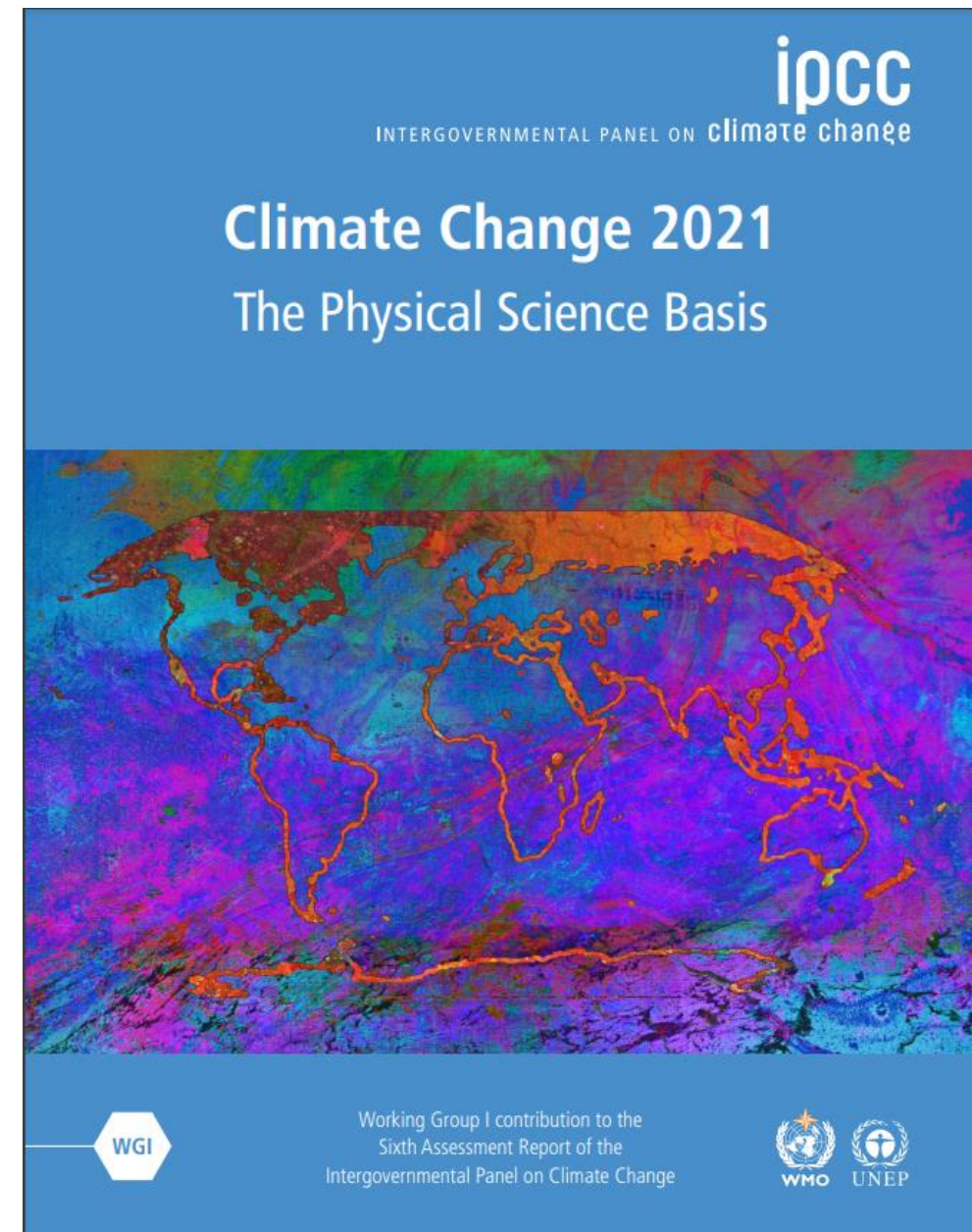
The greenhouse effect



# Current State of the Climate

- It is “unequivocal” that human emissions of carbon dioxide and other greenhouse gas emissions have warmed the atmosphere, ocean, and land
- Recent changes across the climate system are unprecedented. Human-induced climate change is already affecting many weather and climate extremes in every region across the globe
- Evidence of observed changes include heatwaves, heavy precipitation, droughts, and hurricanes

Source: Intergovernmental Panel on Climate Change 2021. Summary for Policymakers. In: Climate Change 2021: The Physical Science Basis



# Climate Change Implications for Hazards

## Increasing Temperatures

- Extreme heat days will increase considerably in the city
- Increasing temperatures and changing precipitation patterns can create periods of abnormally dry weather that create drought
- Warmer, drier summers, high wind events, such as the Diablo winds, and increased vegetation growth, can create conditions suitable for wildfires

## Changing Precipitation Patterns

- The Bay Area will continue to see larger precipitation fluctuations over the next century with very wet and very dry years
- Boom to bust rainfall patterns will make it far more likely for wildfires to occur in the region and for “atmospheric rivers”, which can bring up to 50% of the region’s rainfall in a few days

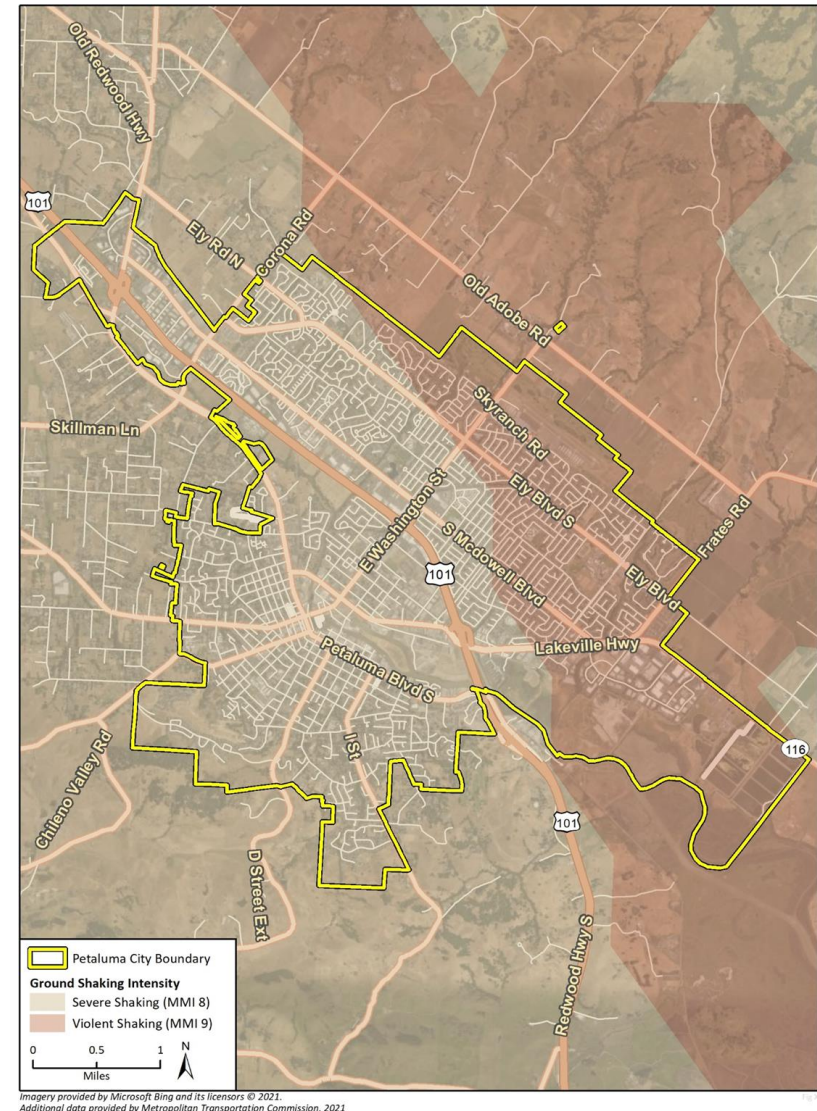
## Rising Sea Levels

- More extensive coastal flooding during storm events
- Higher groundwater table
- Stormwater flooding may increase as high bay levels can impede drainage of stormwater runoff



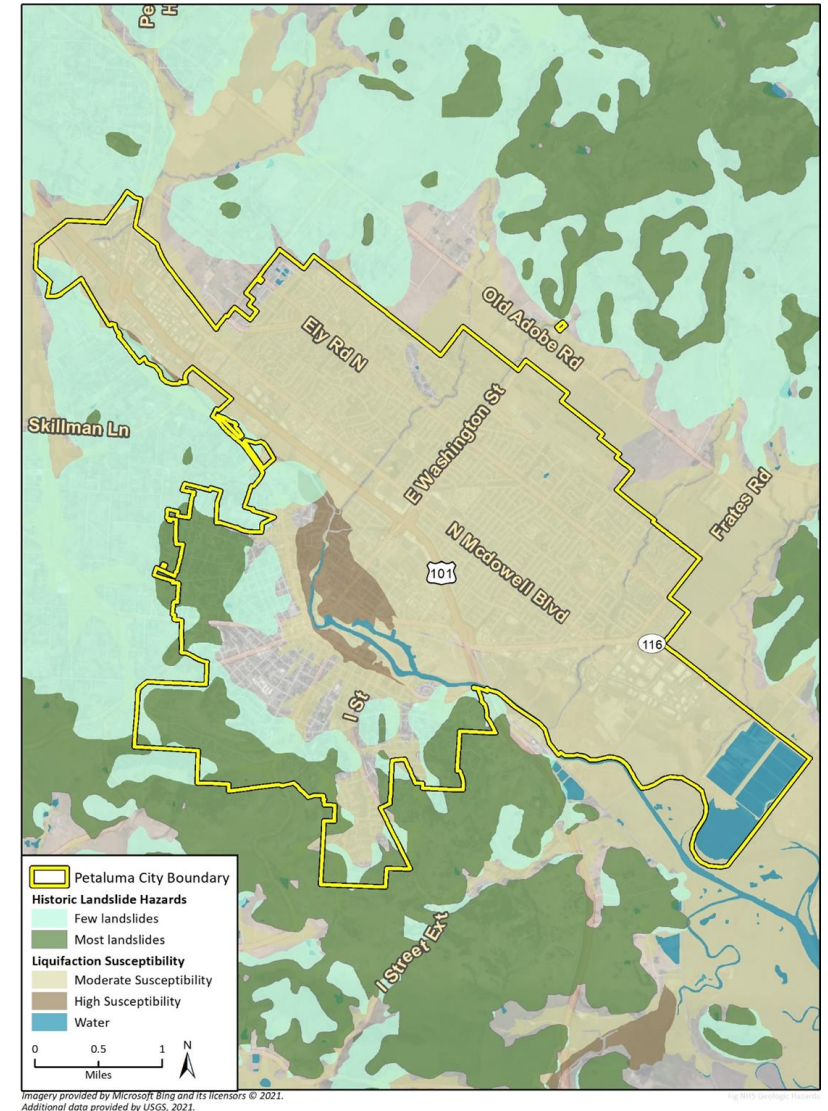
# Seismic Hazards

- The eastern and southeastern areas of the city will be most impacted by groundshaking in the event of a severe earthquake.
- The southeastern areas are also potentially exposed to flooding and sea level rise



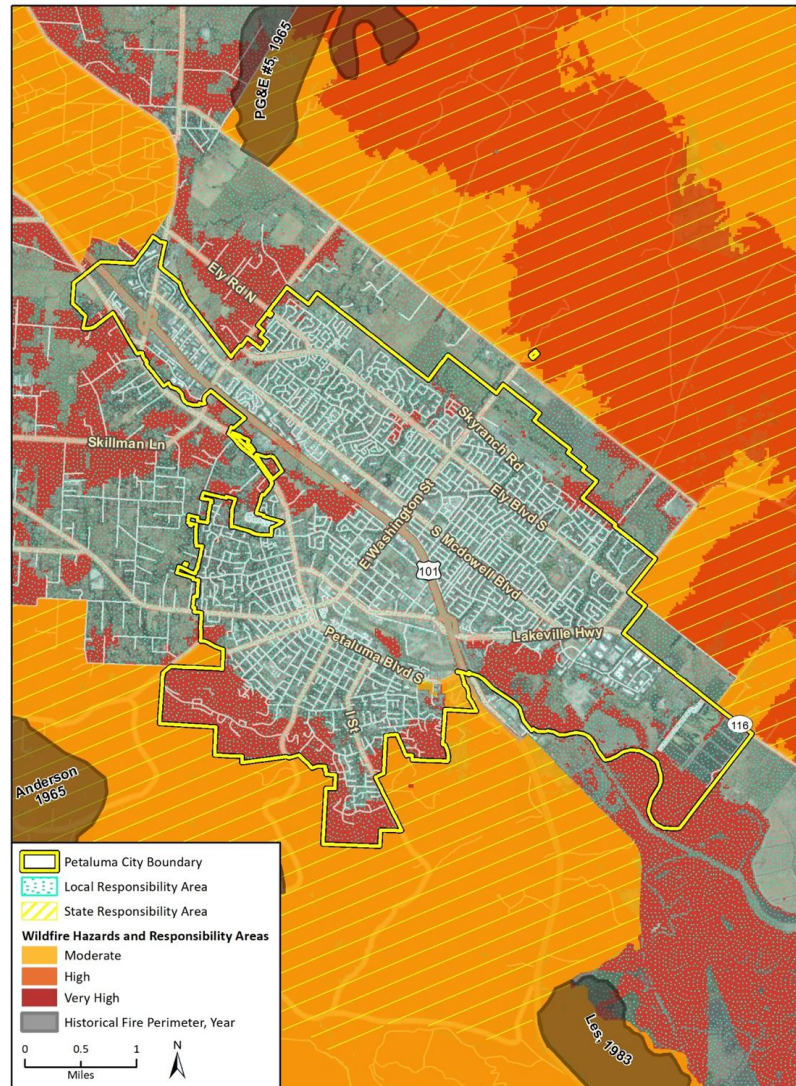
# Landslide Hazards

- Most of Petaluma is moderately susceptible to landslides
- The hills to the northeast and southeast of the city have historically had the most landslide issues

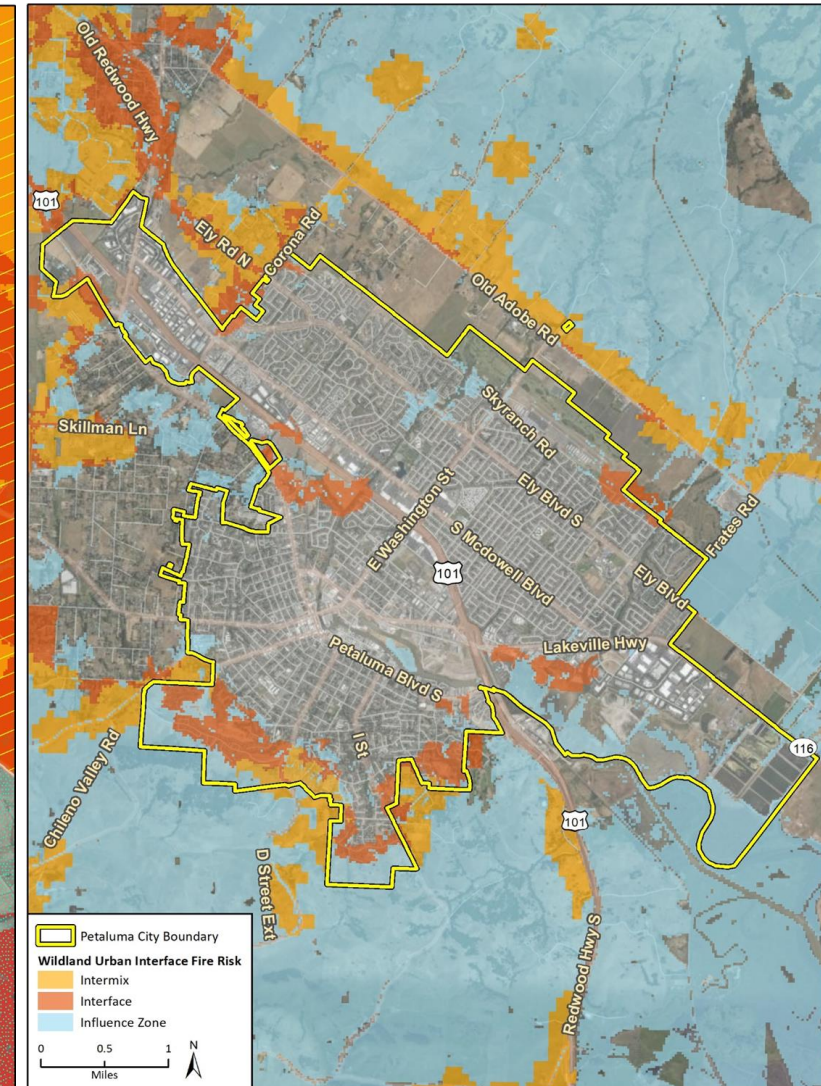


# Wildfire Hazards

- Petaluma is mostly surrounded by areas in the Moderate or High Fire Hazard Severity Zone
- Many areas in the wildland-urban interface are residential areas near fire-prone vegetation



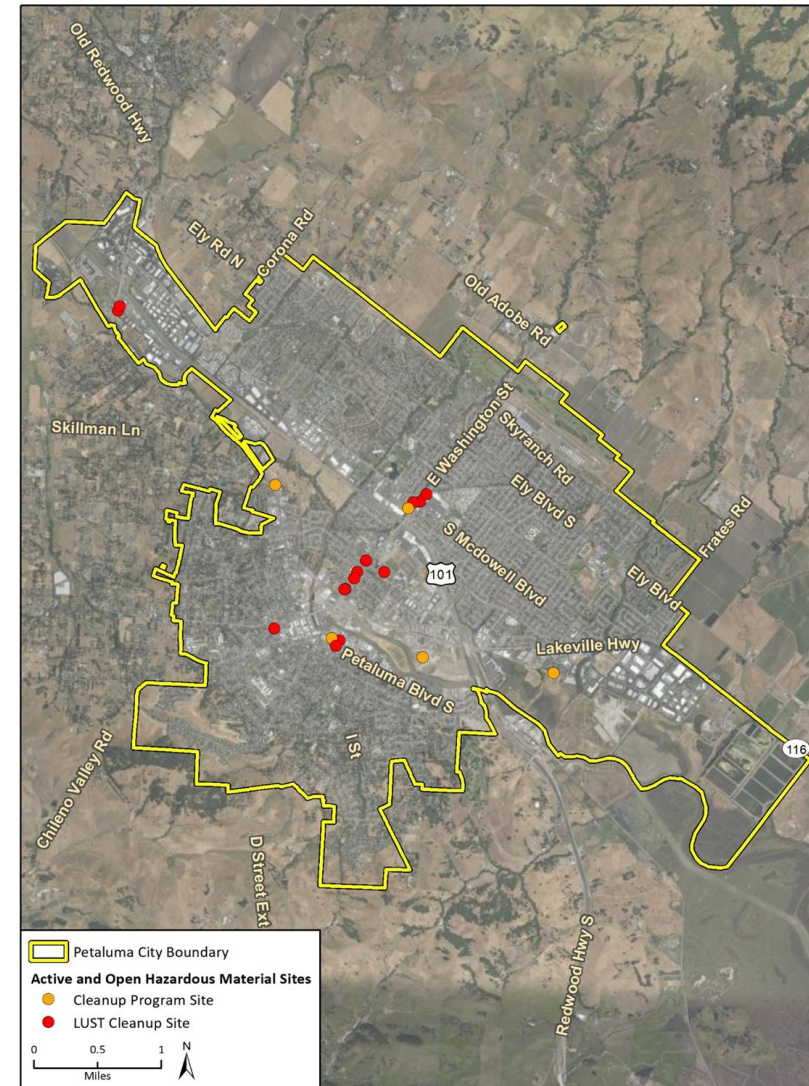
Imagery provided by Microsoft Bing and its licensors © 2021.  
Additional data provided by CalFire, 2021; Wildfire Severity Hazard Class - City of Petaluma, California; Fire Responsibility Area, Historic Fire



Imagery provided by Microsoft Bing and its licensors © 2021.  
Additional data provided by Cal Fire and Resource Assessment Program, 2021

# Manmade Hazards

- There are currently 20 active hazardous material sites in the city
- Most of the hazardous material sites are concentrated in the Downtown area
- Sites include 14 Leaking Underground Storage Tank Cleanup Sites and a previous superfund site along Highway 116 near South McDowell Boulevard was removed from superfund by EPA following cleanup



Imagery provided by Microsoft Bing and its licensors © 2021.  
Additional data provided by Geotracker, 2021.

# Flooding Hazards

- **River Flooding**

- Caused by rainwater runoff during storm events
- Current risks are described by FEMA maps
- “100 Year” FEMA map has 1% chance of recurring each year

- **Storm Surge**

- Increased water level due to storm forcing bay water up the Petaluma River
- 20 Year storm surge has 5% risk of recurring each year

- **Sea Level Rise**

- Increased water level in the tidal portions of the Petaluma River due to climate change
- The City experiences daily Mean Higher High Water (MWWH High Tides) and additionally King Tides (+12-24”) 1-3 times per year

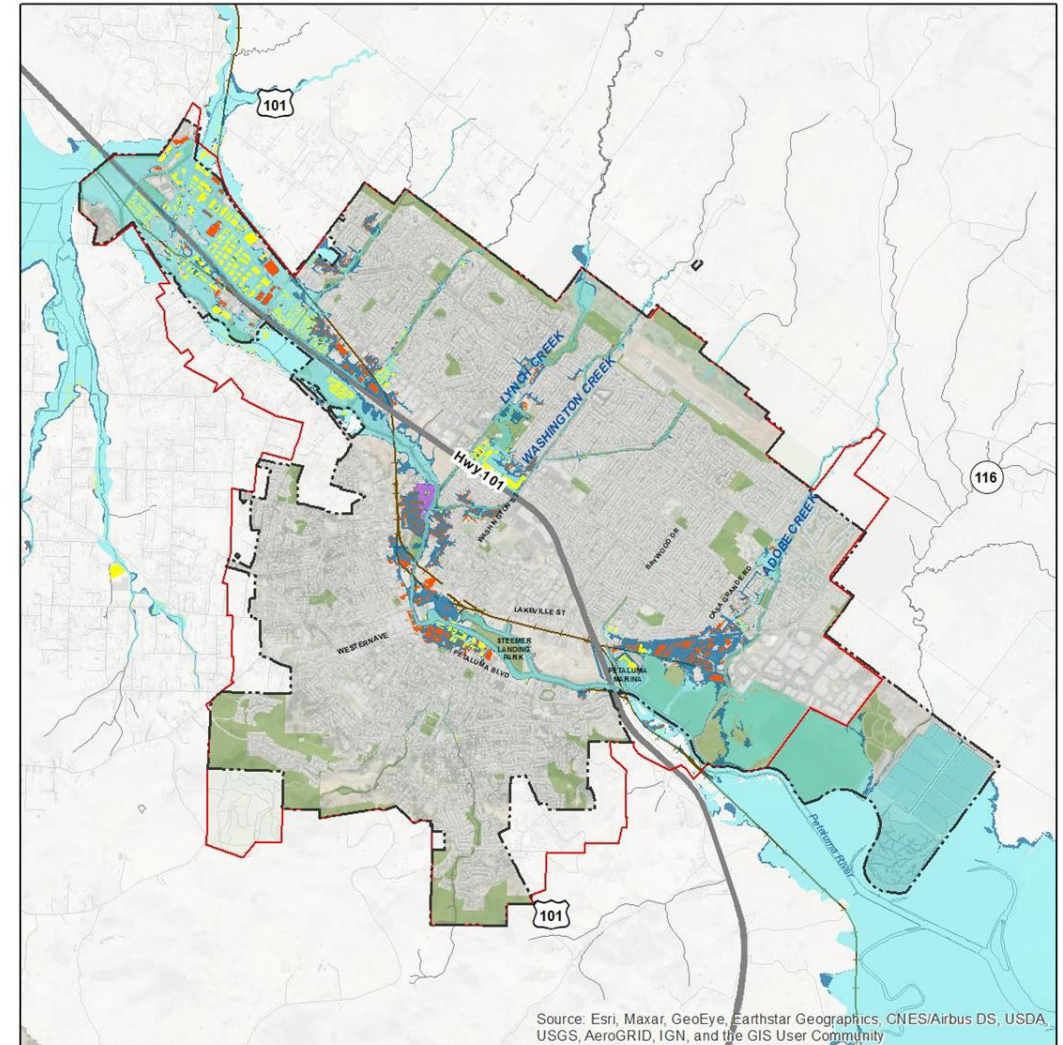


*Petaluma Bridge, November 15, 2020.  
Source: California King Tides Project*

# FEMA Flood Mapping / River Flooding

- FEMA maps show modeling based on historic precipitation data and existing land use
- Utilized to meet regulations required for funding mechanisms and compliance
- FEMA maps do not consider climate change considerations, including increased precipitation, changes to development patterns and sea level rise, and do not compound with the following sea level rise maps

Buildings Affected by the 1% and 0.2% Annual Likelihood Rainfall Floods



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

## Legend

- City Boundary
- Urban Growth Boundary
- Zone A99 - 1% Annual Chance Flood (ACF) protected by Federal Flood Control System
- Buildings affected by the 1% Annual Chance Flood (ACF)
- Buildings affected by the 0.2% Annual Chance Flood (ACF)
- 0.2% Annual Chance Flood (ACF) = FEMA 500-Year Rain Event
- 1% Annual Chance Flood (ACF) = FEMA 100-Year Rain Event

Data Sources: City of Petaluma (2021); County of Sonoma (2021); ESRI (2021)  
\* Per LHMP 2020



# Sea Level Rise Considerations

## Place-Based Considerations

- City already experiences periods of flooding, including from rainwater runoff and King Tides
- Tidal influence extends from the San Pablo Bay to the above the confluence of the Petaluma River and Lynch Creek
- Infrequent King Tides were considered
- River flooding will worsen as sea levels increases

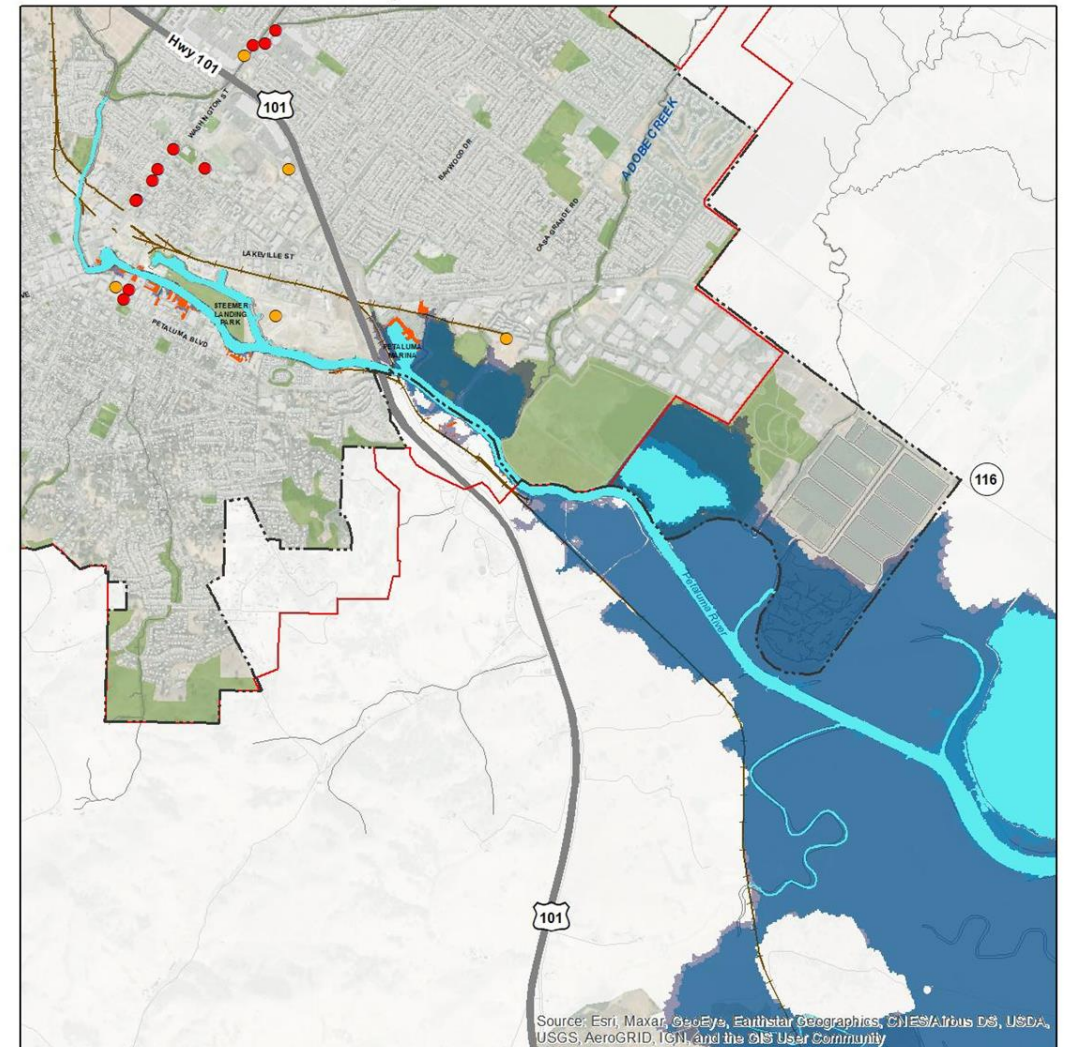
## Planning Practice & Guidance

- Sea level rise projections based on the California Sea Level Rise Guidance 2018 (California Ocean Protection Council) following RCP 8.5 high emissions scenario
- SF Bay Plan Climate Change Policy Guidance describes the high emissions scenario as increasingly likely
- Standard practice to couple sea level rise projections with storm surge events
- Sea level rise predictions match those from Petaluma planning documents such as LHMP 2020

# Sea Level Rise Likely w/ Storm Surge Scenario

- **Likely Scenario has a 66% chance of occurring** in high emissions scenarios
  - 2050 0.8'
  - 2100 3.3'
- Shows likely flood impacts during severe storm events
- Appropriate as a planning tool for **adaptive, low consequence projects, or those with a relatively short functional lifespan** (CA SLR Guidance 2018)
- Limited flooding impacts to city under Likely Scenario even at King Tide
- Structures in orange have a 66% chance of being flooded during large storms in 2100

Buildings Affected by Sea Level Rise - 2018 State Guidance "Likely" Scenarios (66% Probability) w/ 20-Year and 100-Year Storm Surges



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

## Legend

- City Boundary
- Urban Growth Boundary
- Cleanup Program Site\*
- Leaking Underground Storage Tanks (LUST) Cleanup Site\*
- Buildings affected by the flooded area

- 2050 Likely SLR w/ Mean Higher High Water (MHHW) (0.8') w/ 100-Year Storm Surge
- 2050 Likely SLR w/ Mean Higher High Water (MHHW) (0.8') w/ 20-Year Storm Surge
- 2100 Likely SLR w/ Mean Higher High Water (MHHW) (3.3') w/ 100-Year Storm Surge
- 2100 Likely SLR w/ Mean Higher High Water (MHHW) (3.3') w/ 20-Year Storm Surge

Data Sources: City of Petaluma (2021); County of Sonoma (2021); ESRI (2021)

\* Per LHMP 2020

NOTE: 20-Year Storm may induce greater flooding than 100-Year.



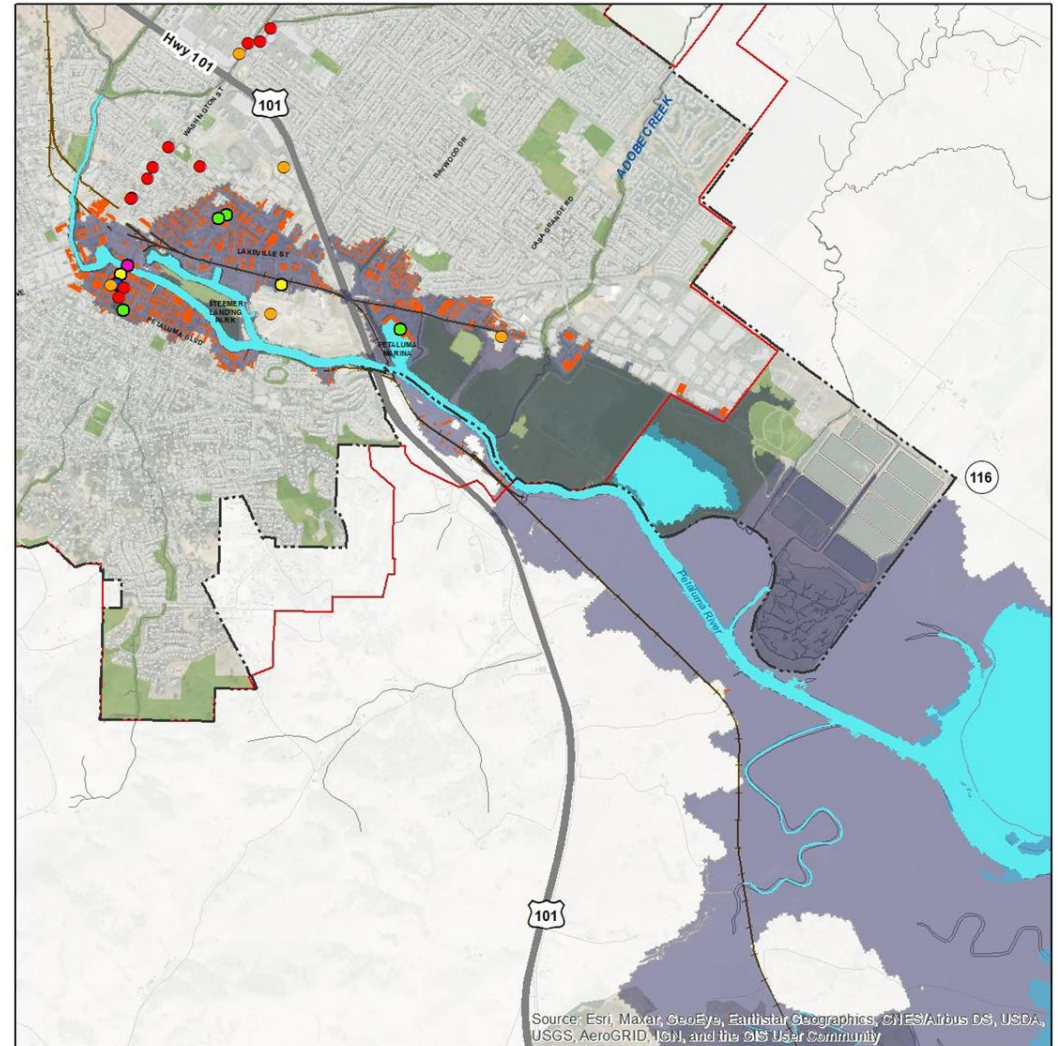
CITY OF PETALUMA  
GENERAL PLAN UPDATE



# Sea Level Rise High Risk w/ Storm Surge Scenario

- High Risk scenario has a 0.5% chance of occurring
  - 2030 0.8'
  - 2050 1.6'
  - 2100 6.6'
- Shows high risk flood impacts during severe storm events
- Appropriate as a planning tool for **less adaptive, more vulnerable projects, or populations that will experience medium to high consequences** as a result of flooding (e.g. residential and commercial development, or those with limited ability for adaptation)
- Useful as a planning tool for locations that **do not** have the ability to resist storm events using temporary mitigations
- Sea level rise and storm surge flooding in 2100 has potential for significant impacts to the city

Buildings Affected by Sea Level Rise - 2018 State Guidance "Medium-High Risk Aversion" Scenarios (0.5% Probability) w/ 20-Year Storm Surges



## Legend

- City Boundary
- Urban Growth Boundary
- Cleanup Program Site\*
- Leaking Underground Storage Tanks (LUST) Cleanup Site\*
- Emergency Services affected by the flooded area\*
- High Potential Loss Facilities affected by the flooded area\*
- Lifeline Utility Systems affected by the flooded area\*
- Transportation affected by the flooded area\*
- Buildings affected by the flooded area
- 2030 Medium-High Risk Aversion Sea Level Rise (0.8') w/ Mean Higher High Water (MHHW) w/ 20-Year Storm
- 2050 Medium-High Risk Aversion Sea Level Rise (1.6') w/ Mean Higher High Water (MHHW) w/ 20-Year Storm
- 2100 Medium-High Risk Aversion Sea Level Rise (6.6') w/ Mean Higher High Water (MHHW) w/ 20-Year Storm

Data Sources: City of Petaluma (2021); County of Sonoma (2021); ESRI (2021)

\*For LHMIP 2020

NOTE: 20-Year Storm may induce greater flooding than 100-Year.



CITY OF PETALUMA  
GENERAL PLAN UPDATE

# Critical Planning Issues

- **Disadvantaged Populations:** Natural and climate hazards and their impacts are likely to disproportionately affect the most sensitive populations in the city. The city has seen a significant increase in older adults (age 65+) and residents who identify as Asian and Pacific Islander or Latino. These populations have an increased sensitivity to climate change that can affect their ability to cope with natural hazards.
- **Housing:** Natural hazards and climate change will put additional burdens on residents. Housing costs have rapidly increased in Petaluma. Some residents may have limited resources for coping with hazards, including disruptions in housing, employment, childcare, and transportation.
- **Transportation:** Natural and climate hazards expose a number of regional and local transportation assets to disruption. This includes SMART and Highway 101. Assets like Highway 101 are exposed to multiple hazards including seismic and flooding.
- **Utilities:** While nearly invisible, utilities (communications, water, sanitary sewer, electricity, and natural gas) are essential to daily life, public health, and the regional and local economy. More frequent and intense storm events and rising sea levels expose utility assets to disruption, but also change the demand and availability of energy and water supplies and may increase costs. Post-disaster utility restoration is critical for recovery as are redundancies to reduce damage and disruption.

# Important Policies, Plans, and Programs

- **Flood Control Zone 2A Advisory Committee (2021):** Stormwater management and flood reduction recommendations
- **Local Hazard Mitigation Plan (2020):** Multi-sector risk and vulnerability assessment
- **Climate Emergency Action Framework (2021):** Led by the Petaluma Climate Action Commission
- **Upper Petaluma River Watershed Flood Control Project Scoping Study (2012):** watershed restoration strategies to provide flood risk mitigation
- **Flooding modeling update:** The City is currently updating their flood modeling for FEMA Map Revision
- **City of Petaluma Certified Unified Program Agency (CUPA):** required by state law, CUPA is formed to manage the acquisition, maintenance, and control of hazardous waste by industrial and commercial businesses

# Issues and Opportunities

- **Local Resiliency Efforts:** Petaluma has strong a resiliency planning and implementation framework through the LHMP, climate collaborative, and other efforts
- **General Plan Update:** The General Plan update creates an opportunity to consider the trade-offs, of the location of new development and hazard exposure.
- **Hazardous Material Sites:** There is a concentration of hazardous material sites in the downtown area of Petaluma
- **Nature-Based Opportunities:** There are opportunities to preserve and enhance green spaces to create areas of adaptability and flood management for a changing future
- **Need for Comprehensive Model:** Future hydrological modeling creates and opportunity to integrate rainfall flooding, sea level rise King Tides, and storm surge to better understand asset exposure

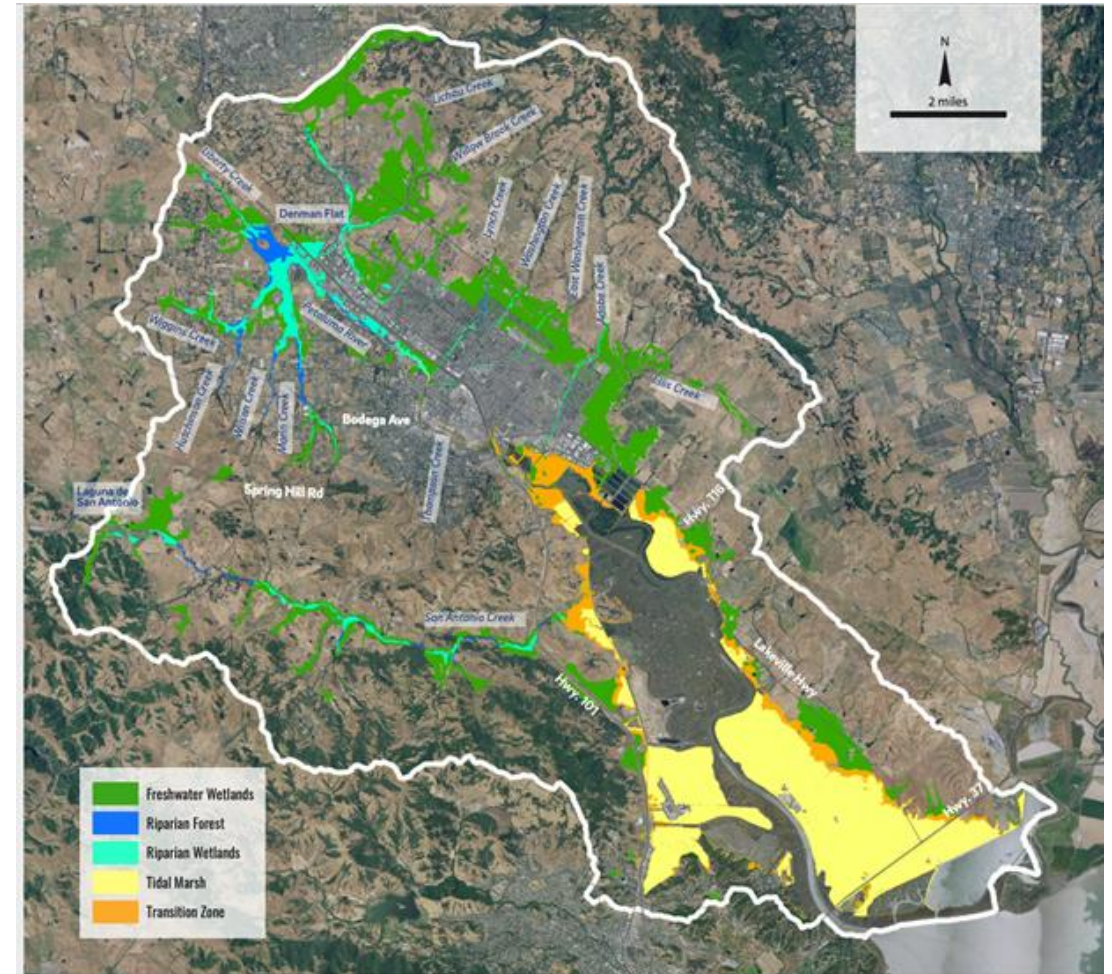


Figure 7.2. Potential opportunities to restore a range of wetland and riparian habitat types, including tidal marsh (yellow), tidal-terrestrial transition zones (orange), freshwater wetlands (green), riparian forests (blue), and riparian wetlands (teal), exist on relatively undeveloped lands throughout the watershed (including lands currently in agricultural use). These potential restoration opportunity areas meet basic physical criteria necessary to support various types of wetland habitats, such as poorly drained soils, periodic flooding, and/or elevations within or near the tidal range. Further analysis, taking into account landowner interest and a range of other physical characteristics, will be needed to determine the feasibility and priority of restoration for particular sites. (NAIP 2016)

# greenhouse gas emissions

# Why We Need to Care about GHGs (Greenhouse Gas Emissions)?

- **Aggressive strategies are needed to meet the city's climate goals and combat GHG emissions**
- Climate change resulting from GHG emissions leads to more frequent extreme-weather events, with localized impacts
- Example climate hazards in Petaluma include:
  - Sea level rise and flooding
  - Wildfire and poor air quality from smoke
  - Excessive heat days
  - Periods of drought
- Climate change will not affect everyone equally
- California passed Senate Bill 32 (SB 32) which requires the State to reduce its GHG emissions to 40% below 1990 levels by 2030

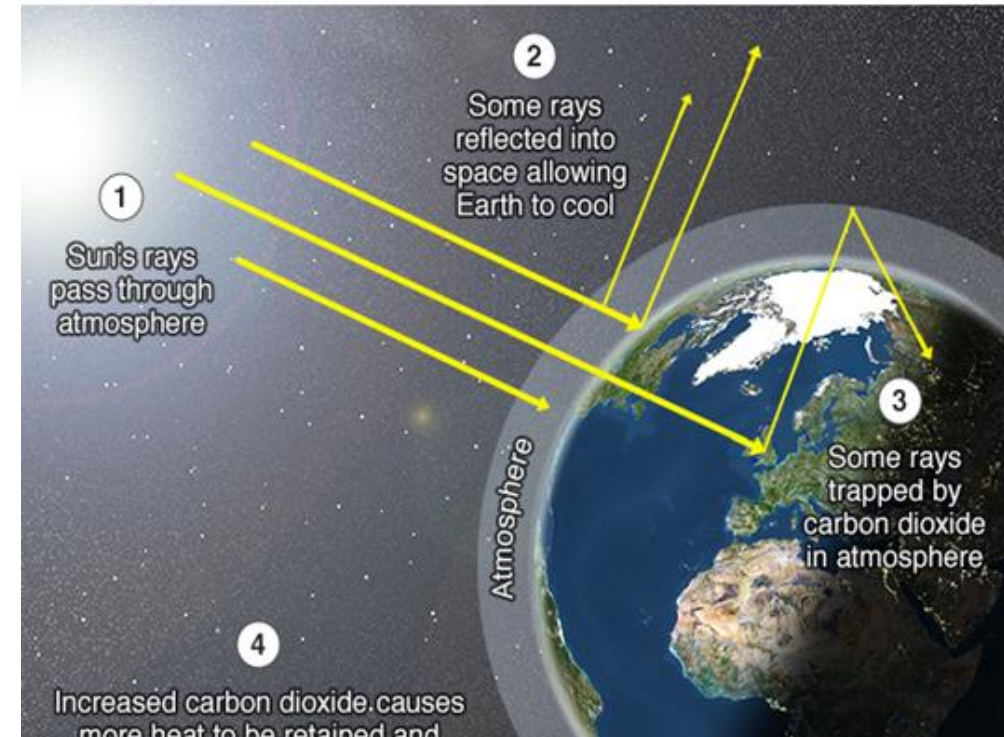


*Petaluma Bridge, November 15, 2020.  
Source: California King Tides Project*

# What are Greenhouse Gas Emissions (GHGs)?

- Gases that absorb energy from the sun and trap the energy within the Earth's atmosphere, causing a warming effect (e.g., the greenhouse effect)
- Most common GHGs:
  - Water Vapor (H<sub>2</sub>O)
  - Carbon Dioxide (CO<sub>2</sub>)
  - Methane (CH<sub>4</sub>)
  - Nitrous Oxide (N<sub>2</sub>O)
  - Ozone (O<sub>3</sub>)
  - Chlorofluorocarbons (CFCs)
  - Hydrochlorofluorocarbons and Hydrofluorocarbons (HCFCs and HFCs)
- Naturally-occurring or human-caused

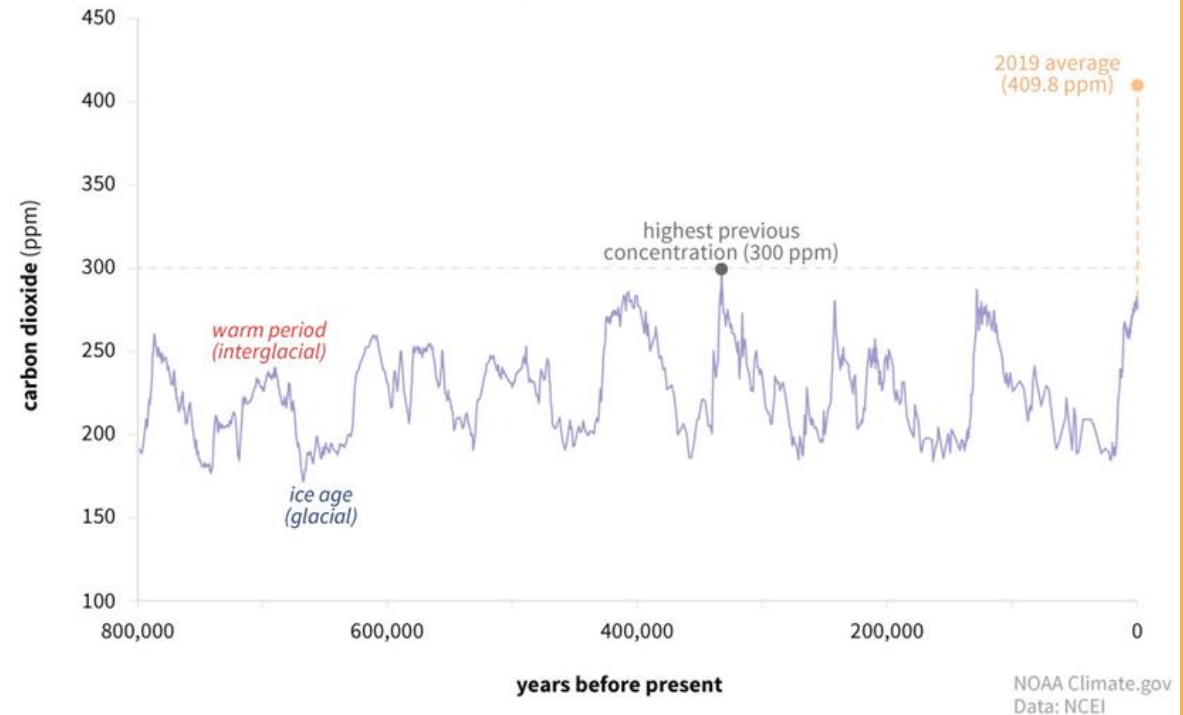
The greenhouse effect



# Change in GHGs

- **GHGs have been relatively constant throughout history but have increased sharply**
- Since the industrial revolution, human-caused GHG emissions have sharply increased driven by:
  - Fossil fuel combustion
  - Deforestation other land use changes
  - Agricultural practices

## CARBON DIOXIDE OVER 800,000 YEARS

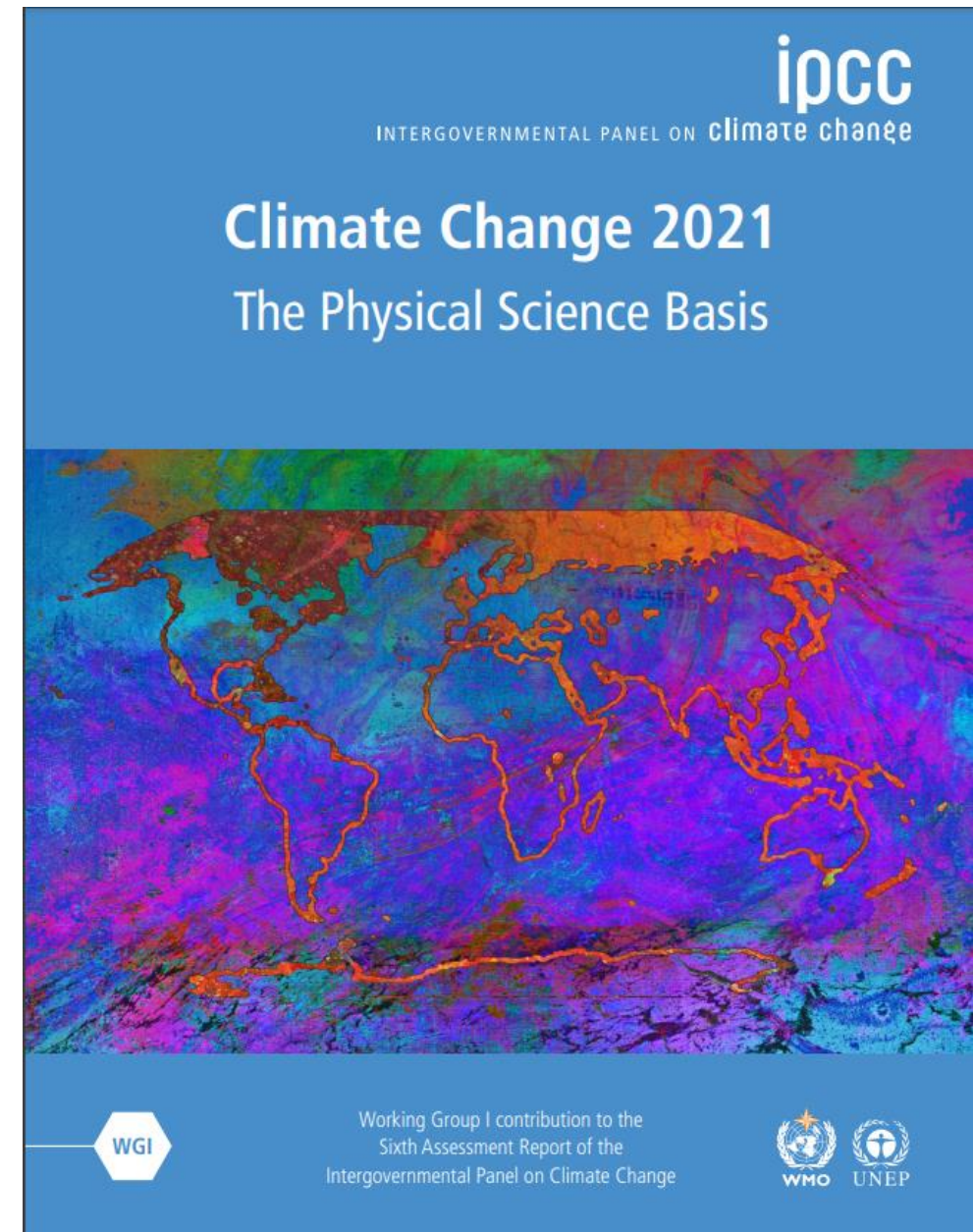




# Current State of the Climate

- It is “unequivocal” that human emissions of carbon dioxide and other greenhouse gas emissions have warmed the atmosphere, ocean, and land
- Recent changes across the climate system are unprecedented. Human-induced climate change is already affecting many weather and climate extremes in every region across the globe
- Evidence of observed changes include heatwaves, heavy precipitation, droughts, and hurricanes

Source: Intergovernmental Panel on Climate Change 2021. Summary for Policymakers. In: Climate Change 2021: The Physical Science Basis



# Example Sources of GHGs in Petaluma



On-Road  
Transportation



Energy Use  
(Electricity and  
Natural Gas)



Solid Waste



Water Use and  
Wastewater

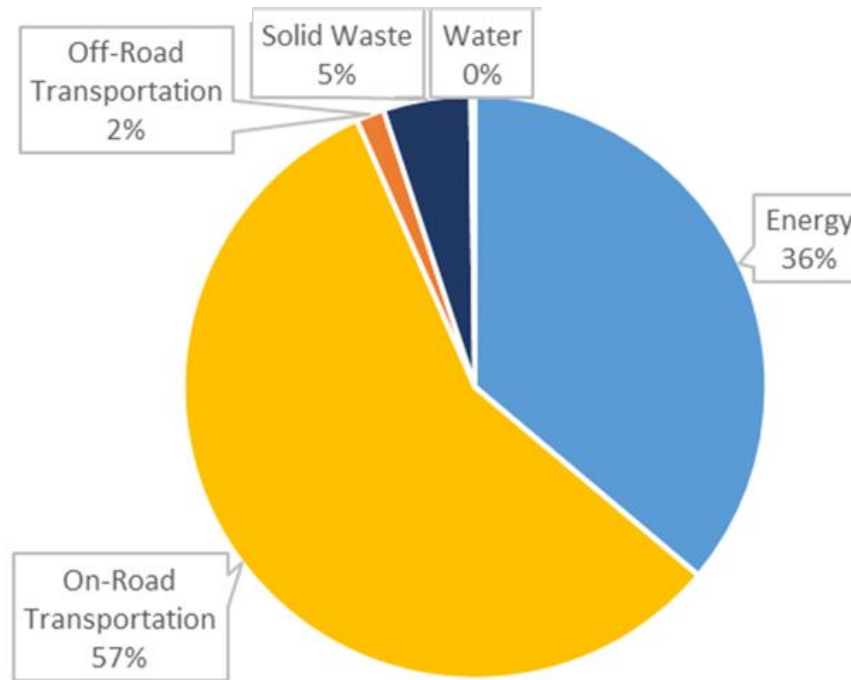


Off-Road Transportation  
(Construction and Lawn  
Equipment)

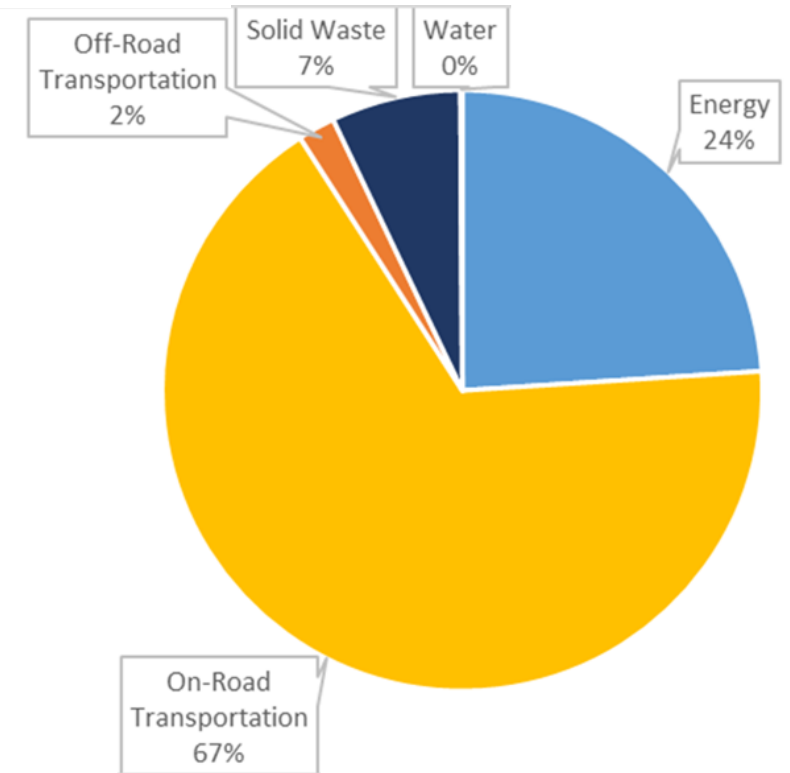
# Community Wide Greenhouse Gas Emissions

- Petaluma's total emissions are increasing but are falling per service population
- Community-wide, Petaluma emitted 472,422 metric tons of carbon dioxide equivalent (MTCO<sub>2</sub>e) in 2018, up 3% from the 2010 greenhouse gas emissions estimate
- Despite a 3% increase in overall emissions, annual per service population (number of residents plus number of jobs) emissions decreased from 2010 to 2018 by 3%

2010 Emissions  
(460,355 MTCO<sub>2</sub>e, 5.3 MTCO<sub>2</sub>e per service population)



2018 Emissions  
(472,422 MTCO<sub>2</sub>e, 5.2 MTCO<sub>2</sub>e per service population)



# Trends in GHG Emissions (2010-2018)

**+20%**



**Why?**

More vehicle miles traveled contributed most significantly to the increased on-road transportation emissions

**+49%**



**Why?**

Landfill waste emissions increased significantly due in part to the Redwood Landfill processing methane less efficiently

**-31%**



**Why?**

Emissions fell largely due to establishment of Sonoma Clean Power

**-41%**

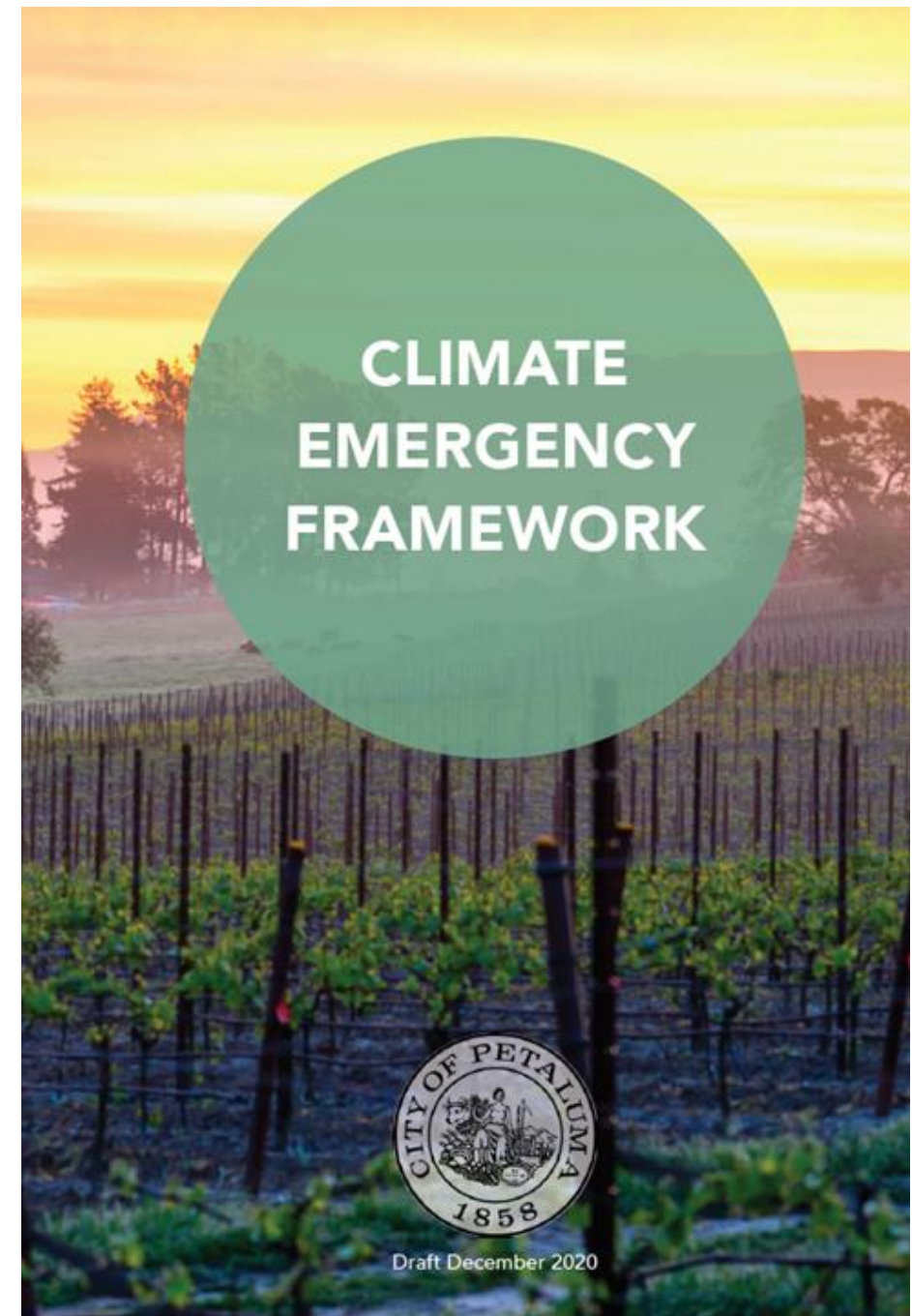


**Why?**

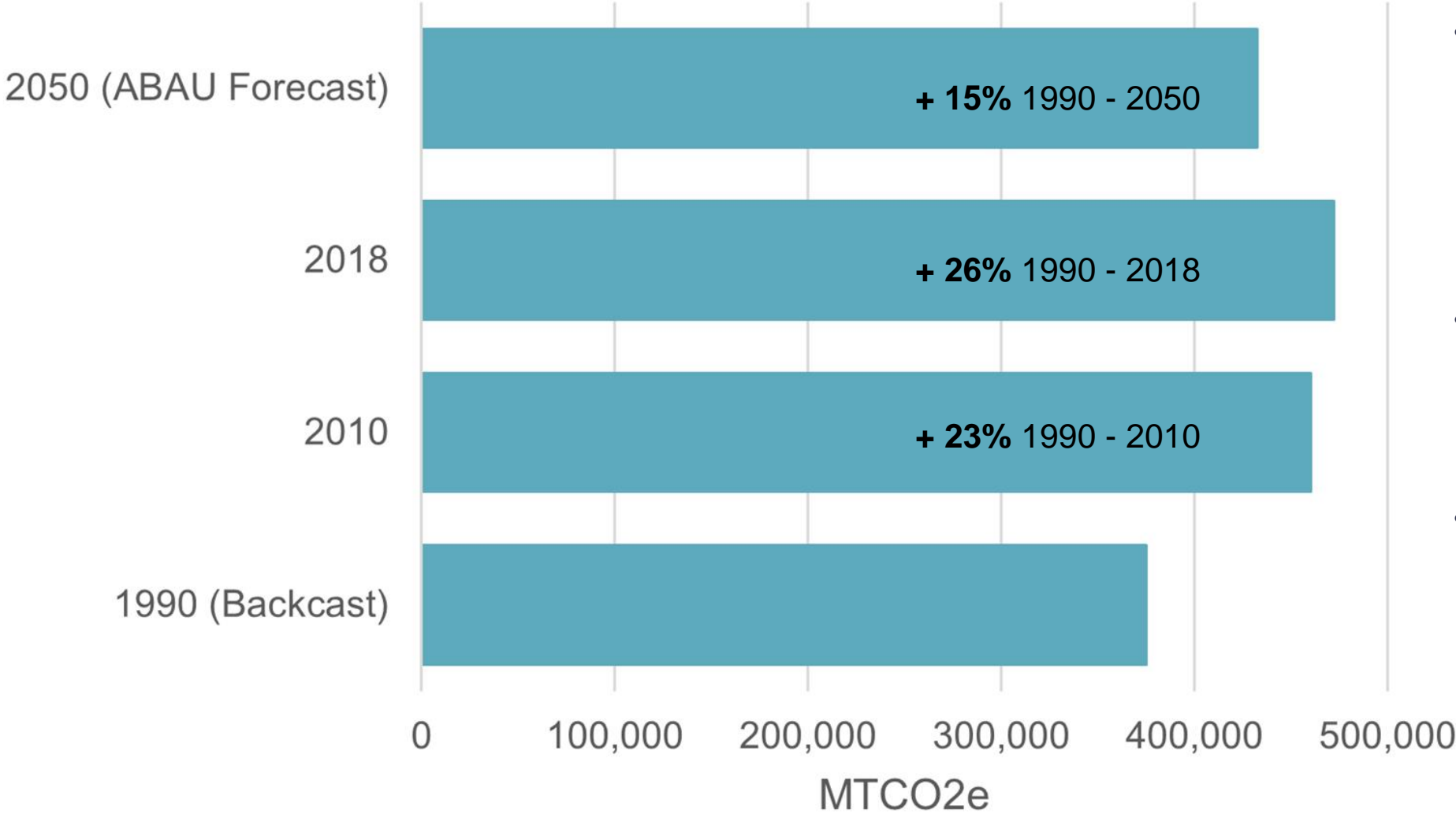
Emissions fell largely due Sonoma Clean Power's cleaner energy which is used to convey water

# Carbon Neutrality Goal

- Acting decisively by joining and inspiring others across the world to initiate a massive local economic impulse and model 21st century green architecture, landscape design, and engineering to restore ecological balance and economic stability.
- **To this end, we aim to achieve greenhouse gas carbon neutrality for the City of Petaluma by 2030.**

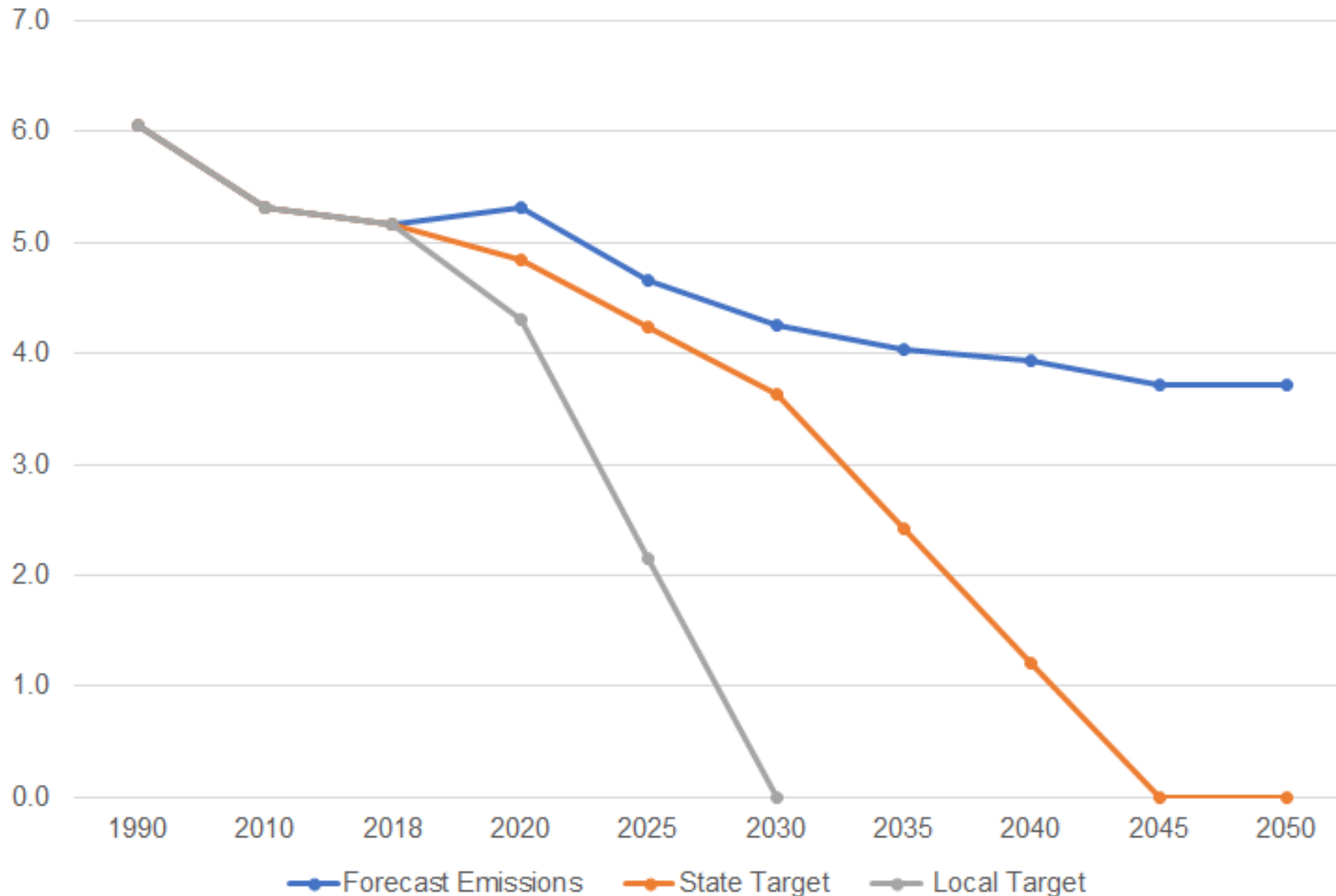


# Greenhouse Gas Emissions Backcast + Forecast



- A forecast of the City’s emissions was developed using demographic and socio-economic forecasts to understand how emissions would change over time
- **Total GHG emissions, adjusted for State policy, are projected to decrease 8% from 2018 to 2050**
- Per service population emissions are projected to decrease 28%

# Forecast Compared to State and Local GHG Reduction Targets (per service population)



- Projected emissions are expected to fall but not enough to meet GHG reduction targets without additional measures
- Significant gap between forecast emissions (blue) and State (orange) and local carbon neutral target (gray)
- Requires local action to meet target

# Important Policies, Plans, and Programs

## State Policy + Reduction Measures:

- **SB 100:** Renewable Portfolio Standard - 100% carbon free electricity by 2045
- **Pavley Clean Car Standards:** emissions standards for passenger vehicles
- **SB 1383:** divert 75% of food scraps and other organic material by 2025

## Local Policy + Reduction Measures:

- **Sonoma Clean Power:** 100% renewable option
- **Building Electrification:** adopted all-electric reach code for new construction
- **Water:** water reduction through Urban Water Management Plan



# Issues and Opportunities

## **Petaluma's emissions are increasing but are expected to fall with State policy and programs:**

- Total community-wide GHG emissions grew from 2010-2018
- Projected emissions are expected to decline with State measure implementation but a significant gap exists
- Key sector challenges:
- Natural gas use in existing buildings
- On-road transportation

## **Petaluma can achieve emissions reductions from local measures:**

- Implement building electrification ordinance
- Need to reduce natural gas use in existing buildings
- Implement the resolution for zero waste by 2030
- Drive down vehicle miles traveled through demand management, parking, and land use

# health and environmental justice

# Environmental Justice Element

- The Environmental Justice Element is a new General Plan element to comply with recent state law (the Planning for Healthy Communities Act)
- Requires identification of “disadvantaged communities” (DACs), which are low-income areas with high pollution and health burden
- Must minimally address five topic areas (see list to the right)
- Requires goals, policies, and actions that address health, equity, and environmental justice priorities in DACs
- Requires outreach and engagement with identified DAC's

**Reduce Pollution Exposure:** air quality, water quality, soil quality, and land use compatibility

**Promote Food Access:** grocery stores, farmers' markets, community gardens, etc.

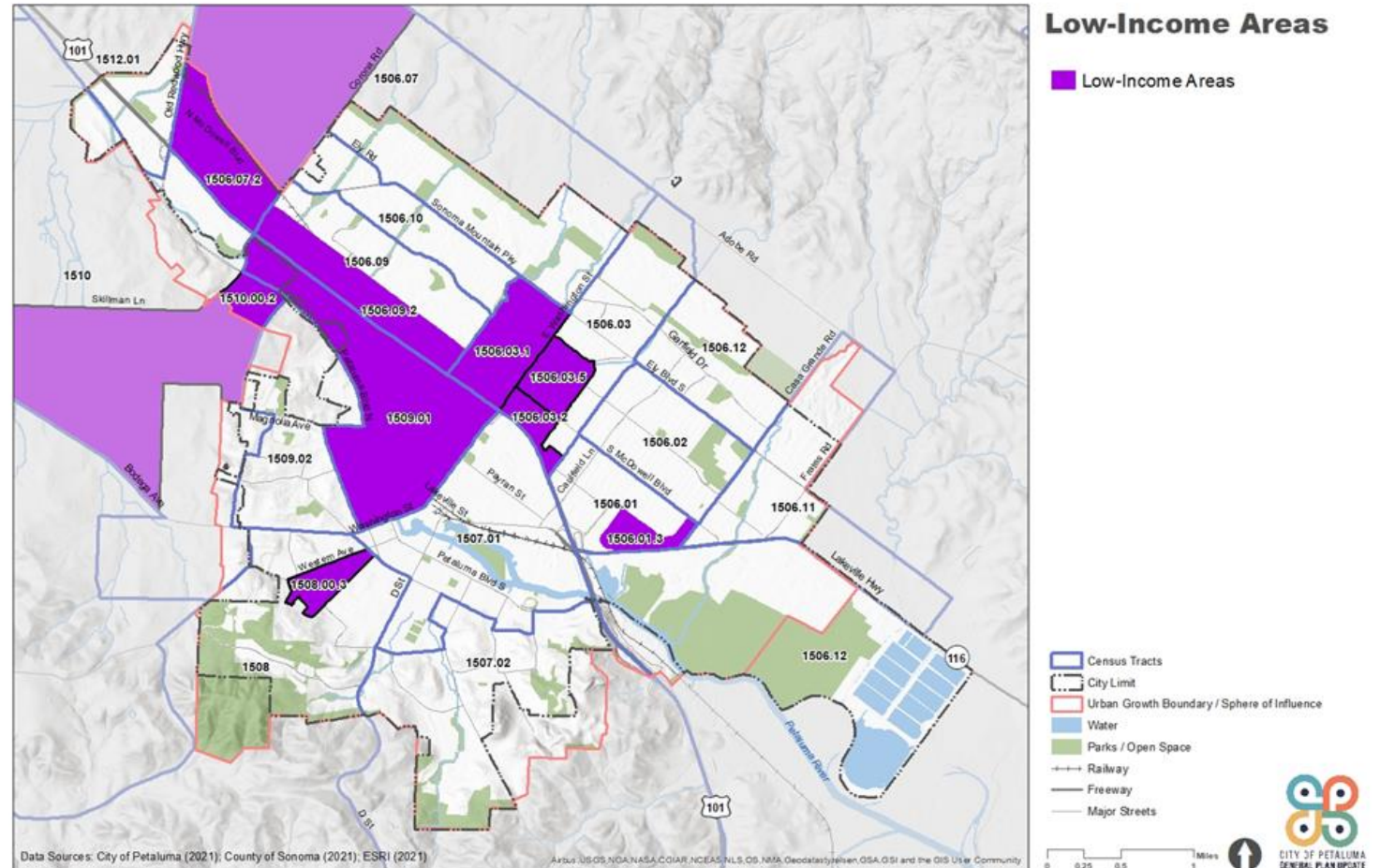
**Promote Physical Activity:** walkable and bikeable communities, access to transit, safety

**Promote Public Facilities:** parks, schools, health facilities, etc.

**Promote Safe and Sanitary Homes:** housing location, quality, and affordability

# Low-Income Areas

- Petaluma has multiple areas defined as "low-income" for the Environmental Justice Analysis
- Low income is defined as 80% of County Area Median Income (AMI) which is \$74,640
- Income by census tract and block group compared to \$74,640
- Multiple block groups and census tracts have median incomes below 80% of County AMI



# Environmental Justice Data Analysis

- The analysis included over 30 indicators related to health, equity, and environmental justice (see right)
- Relied on state and local data sources of environmental pollution and health risk factors
- Analyzed data at the U.S. census tract and block group geographic scales
- Spatially compared all data results to low-income areas in Petaluma
- Analytically compared to demographic and land use conditions

## Pollution Exposure

- Air quality: ozone
- Air quality: particulate matter 2.5
- Children's lead risk from housing
- Diesel particulate matter
- Drinking water contaminants
- Pesticide use
- Toxic releases from facilities
- Traffic impacts
- Cleanup sites
- Groundwater threats
- Hazardous waste generators and facilities
- Impaired waterbodies
- Solid waste sites and facilities
- Proximity to high-volume roadways

## Food Access

- Access to healthy food
- Food insecurity

## Indices

- CalEnviroScreen 4.0
- CDC's Social Vulnerability Index

## Physical Activity

- Adult walking rates
- Active commuting rates

## Public Facilities

- Proximity to high-frequency transit
- Access to parks
- Tree canopy

## Housing

- Cost-burdened households
- Overcrowded households

## Health Outcomes

- Life expectancy at birth
- Adult asthma rate
- Asthma hospitalization rate
- Adult heart disease rate
- Heart disease hospitalization rate
- Infant low birth weight rate
- Adult obesity rate



# Summary of Health & EJ Conditions in DACs

- Of the over 30 indicators analyzed, Petaluma’s DACs were disproportionately burdened for only eight indicators
- Three of the most prevalent burdens are: highway-related air pollution, low proximity to high-frequency transit, and traffic impacts
- Census tract 1506.09 in the city’s Northeast and North MacDowell Blvd subareas is particularly burdened

		Recommended Disadvantaged Communities								
		Tract 1506.01	Tract 1506.09	Tract 1509.01	1506.03 BG 1	1506.03 BG 2	1506.03 BG 5	1506.07 BG 2	1508.00 BG 3	1512.01 BG 4
Health and Environmental Burdens	Traffic Impacts									
	Groundwater Threats									
	Solid Waste Sites									
	Diesel Particulate Matter									
	Low Life Expectancy									
	Highway-related Air Pollution									
	Low Active Commuting Rates									
	Low Proximity to High-Frequency Transit									

# Demographic and Land Use Conditions in DACs

- Over 1/3 of Petaluma's population lives in DACs; people of color and Hispanic/Latinx populations are disproportionately in DACs.
- DAC's contain a diversity of uses but most include a large amount of housing, especially single-family housing

DACs	Population Size	Race/Ethnicity			Existing Land Uses
		White (non-Hispanic)	All People of Color (non-White)	Hispanic / Latinx	
Tract 1506.01	4,413	57%	43%	30%	Mostly single-family. Some multi-family and commercial.
Tract 1506.09	5,033	65%	35%	24%	Mostly industrial and single-family. Some commercial, office, and hospital.
Tract 1509.01	5,053	57%	43%	32%	Mix of single-family, commercial, and vacant. Some multi-family and industrial.
1506.03 BG 1	1,633	71%	29%	23%	Mix of single-family, commercial, and parks.
1506.03 BG 2	1,258	44%	56%	49%	Mostly single-family.
1506.03 BG 5	1,240	65%	35%	28%	Mix of single-family, multi-family, and commercial.
1506.07 BG 2	521	64%	36%	23%	Mix of commercial, office, and industrial. Although this area currently has no residential buildings, it may be a site for future residential zoning to comply with the City's regional housing needs allocation from the State.
1508.00 BG 3	950	52%	48%	44%	Mostly single-family. Some multi-family.
1512.01 BG 4	1,663	82%	18%	8%	Mostly office. Some open space and residential. Although this area is mostly outside the City's limits, there is one mobile home park within Petaluma next to Highway 101 that faces health and pollution burdens.



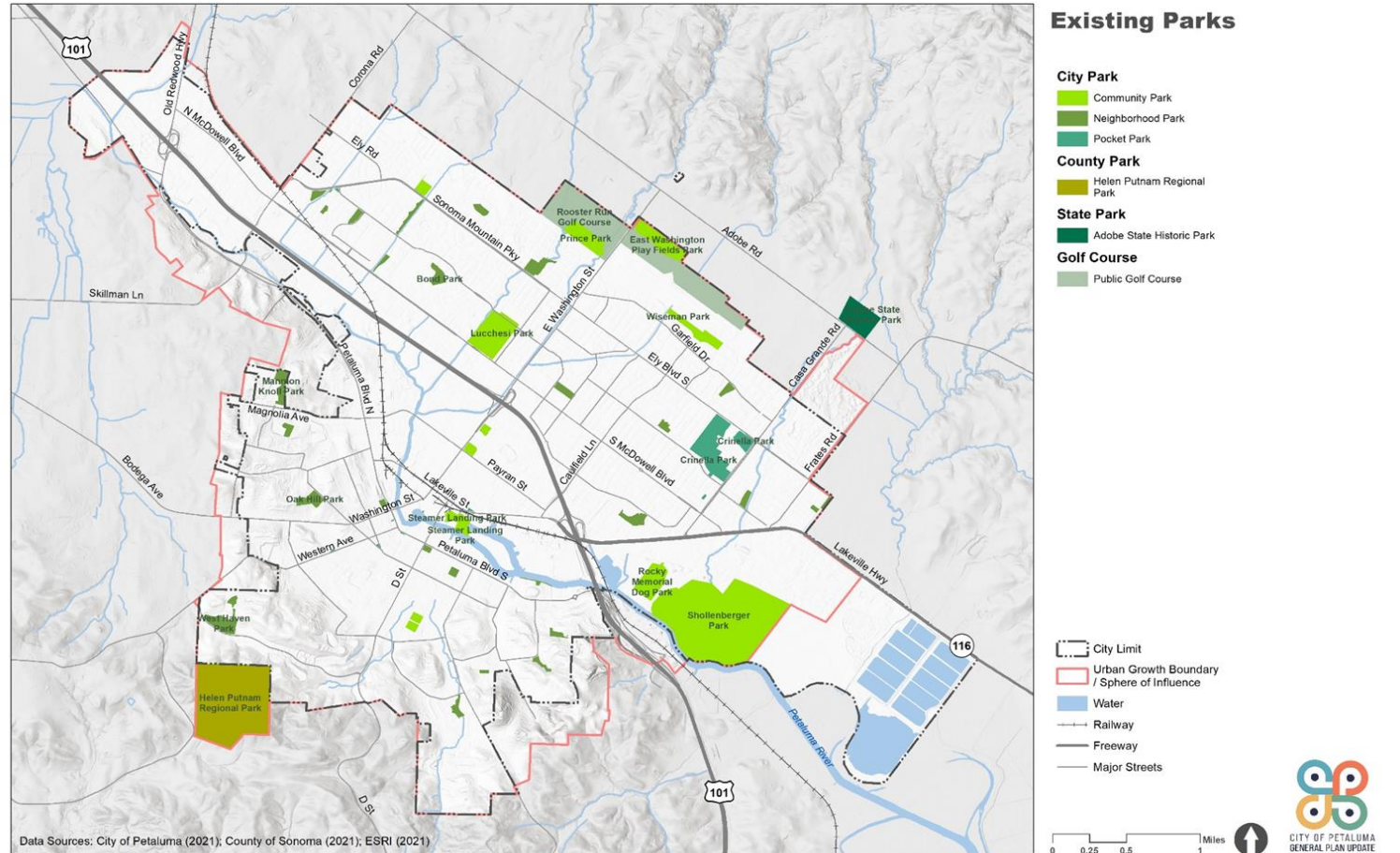
# Important Policies, Plans, and Programs

- **Petaluma has a wide range of programs, plans and policies that address topics related to environmental justice.**
- **Emergency Climate Action Resolution:** Goal of carbon neutrality of 2030 and net zero by 2045
- **Ad Hoc Community Advisory Committee (AHCAC):** Developing recommendations to improve diversity, equity, and inclusion in the city
- **Police Department Initiatives:** The Petaluma Police Department has several programs to advance equity, including a community policing model and a mobile crisis intervention team. Staff have also received trainings on de-escalation tactics, recognizing implicit bias, and understanding diversity, equity, and inclusion.
- **Parks and Recreation Department:** maintains over 50 parks and open spaces totaling over 500 acres that provide places for physical activity, recreational programming, and social cohesion
- **Food access:** City oversees four community gardens and has attracted several farmers' markets, grocery stores, and other healthy food retailers that accept CalFresh benefits
- **Bicycle and Pedestrian Master Plan** (being updated): includes regional trail system and will help to decrease reliance on motor vehicles in the city

# parks and public facilities

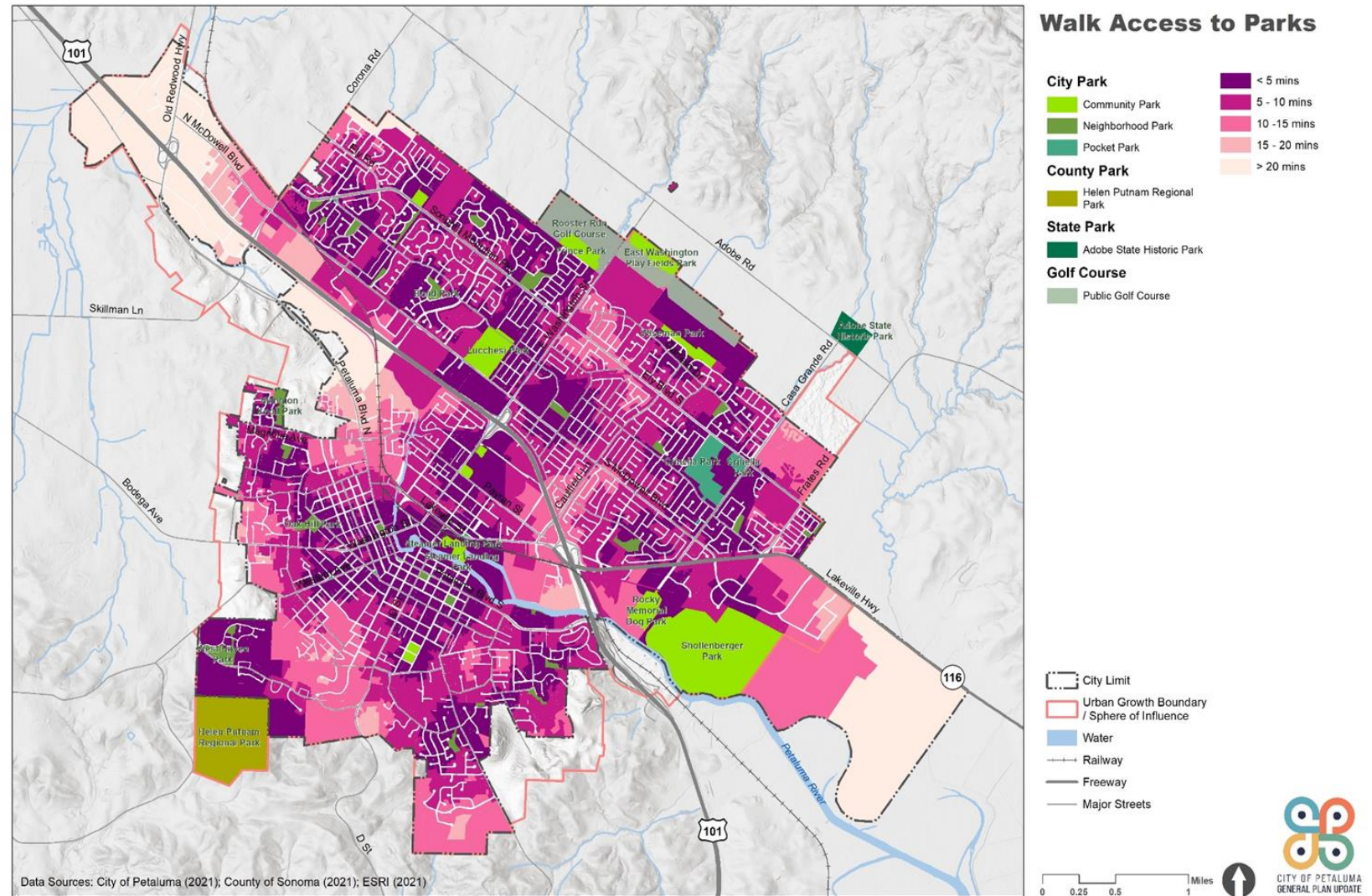
# Existing Parks

- There is a diversity of parks and recreational spaces throughout Petaluma
- The City currently owns 11 community parks, 27 neighborhood parks and nine pocket parks
- The total open space owned by the City totals over 953 acres
- The county owns Helen Putnam Regional Park and the state Petaluma Adobe State Historic Park
- Decreases in funding and parks staff coupled with an increase in the quantity of acreage owned have made parks maintenance an ongoing and growing challenge



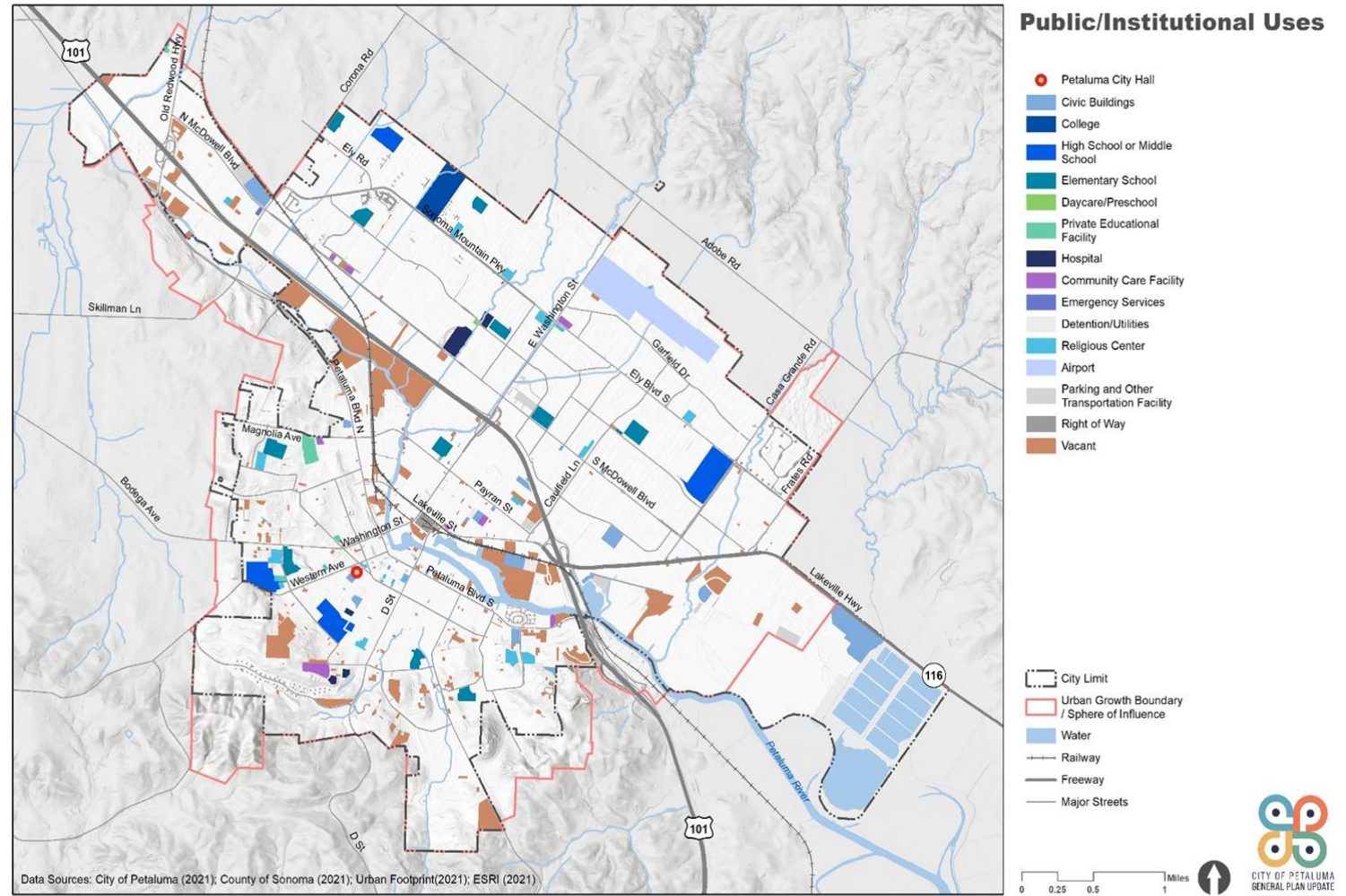
# Walk Access to Parks

- Petaluma residents generally enjoy good access to parks, although not equally across the city
- Approximately 41% of Petaluma's population lives within a 5-minute walk to a park and 85% live within 10-minute walk



# Public and Civic Facilities

- **Public/institutional uses are the third-largest land use category in Petaluma, covering 20% of land in the City Limits**
- There is a broad range of community-serving uses, including schools, hospitals, healthcare facilities, civic buildings, religious centers, parking and transportation facilities, utilities, and airports
- Most schools are dispersed across Petaluma's many residential neighborhoods to service the local population
- Other notable institutions include the Petaluma Valley Hospital, Petaluma Municipal Airport, and Northern California University



# Important Policies, Plans, and Programs

- **Petaluma Municipal Code (Chapters 13 Petaluma Parks Ordinance & 17 Tree Preservation Ordinance):**  
Set the parameters of use within parks and regulate tree protection and replacement
- **The Petaluma River Access and Enhancement Plan (1996):** Riverfront uses, activities, and development
- **Bicycle and Pedestrian Master Plan (being updated):**  
Includes regional trail system

# Issues and Opportunities

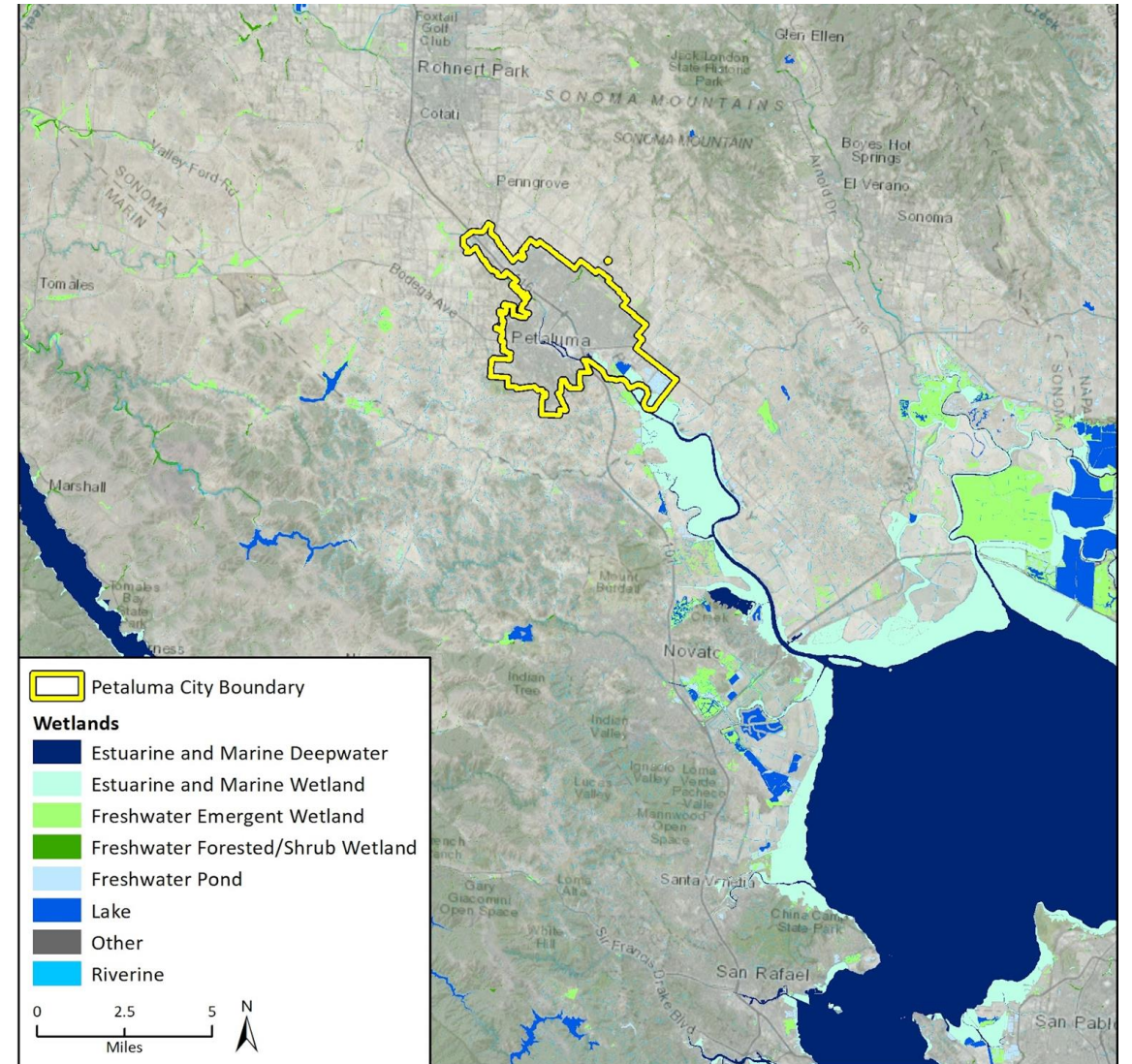
- **Assessing and Measuring Adequacy of Park Facilities:** Instead of the traditional metric of park acreage per 1,000 residents, the City seeks a new approach for evaluating how well the City's parks and recreational facilities are serving community needs
- **Park Maintenance:** A tracking system for routine, deferred, and long-term maintenance is needed
- **Park Master Plan:** A Parks Master Plan would greatly assist the City to better plan for ongoing operations and maintenance, recreational programming, and future park expansions
- **Role in Meeting Climate Goals:** Explore how parks can play a more active role in helping the City reach its climate goals through restorative land management practice
- **Park Funding:** Strategies are needed to assess required staffing levels and address the funding shortfall for parks operations and maintenance

# natural environment



# Biological Resources

- **Petaluma is a steward of the environment and has numerous biological resources which are subject to federal and state regulations and that shape planning decisions**
- The City contains numerous wetlands and waterways subject to the rules and regulations of the Federal Clean Water Act
- Wetlands in the area provide critical habitat for species and play a significant role in reducing flood risk from severe weather and sea-level rise while supporting biodiversity
- Adjacent to the City of Petaluma is a biologically significant habitat that makes up the western side of the Sonoma Valley Wildlife Corridor Project (a conservation effort led by the Sonoma Land Trust to protect critical movement corridors for wildlife)

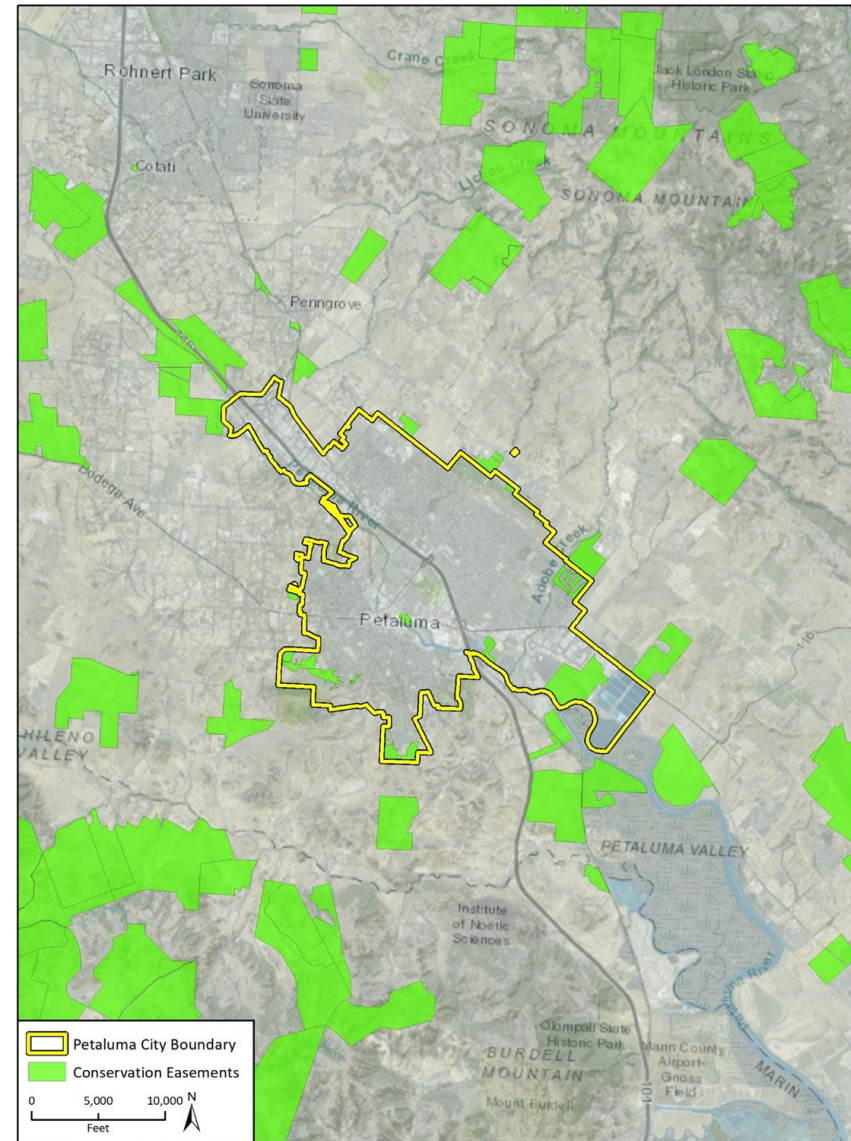


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Additional data provided by Sonoma County, 2021.

Fig 110 Surrounding Wetlands

# Natural Resource Areas

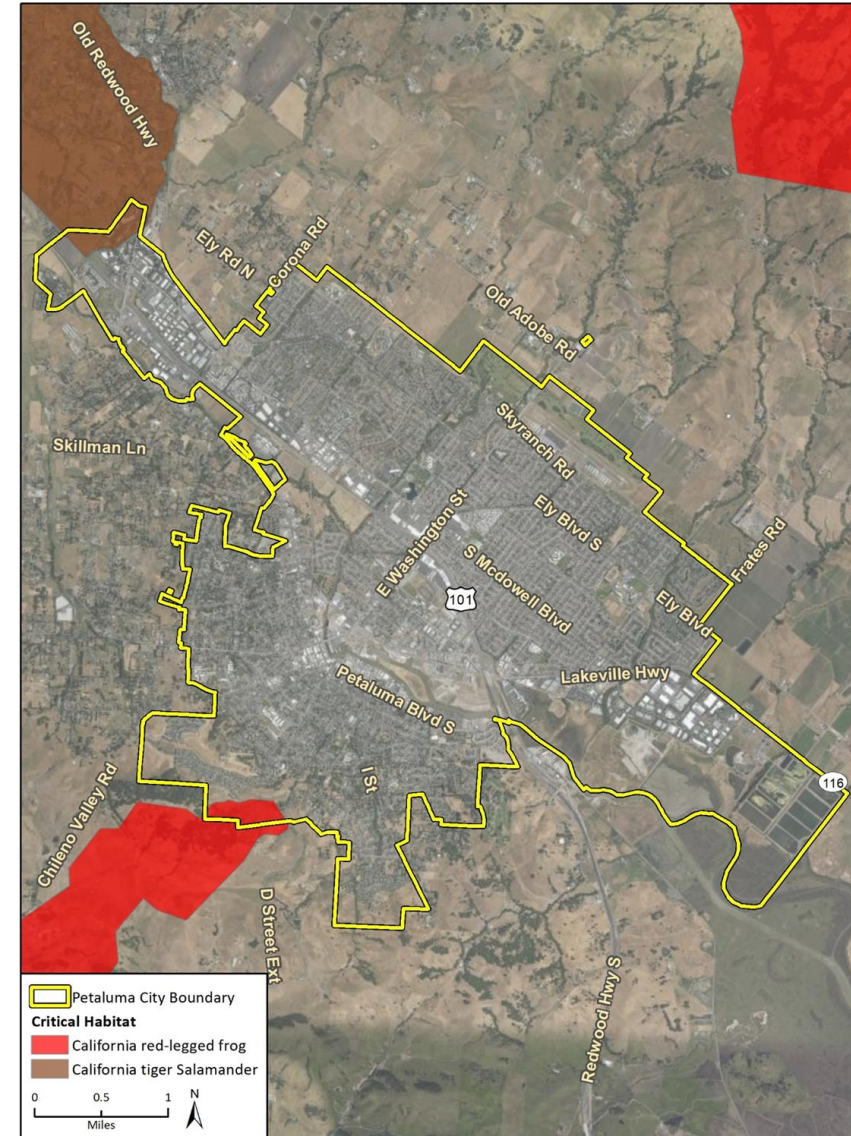
- The city has numerous natural resources though a network of conservation easements primarily managed by the Sonoma Land Trust and regional and state parks
- Several conservation easements are surrounding the city's vicinity, providing visual access to the city's residents and visitors
- There is opportunity for an expansion of these protections in the form of new conservation easement



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Additional data provided by CCED, 2019.

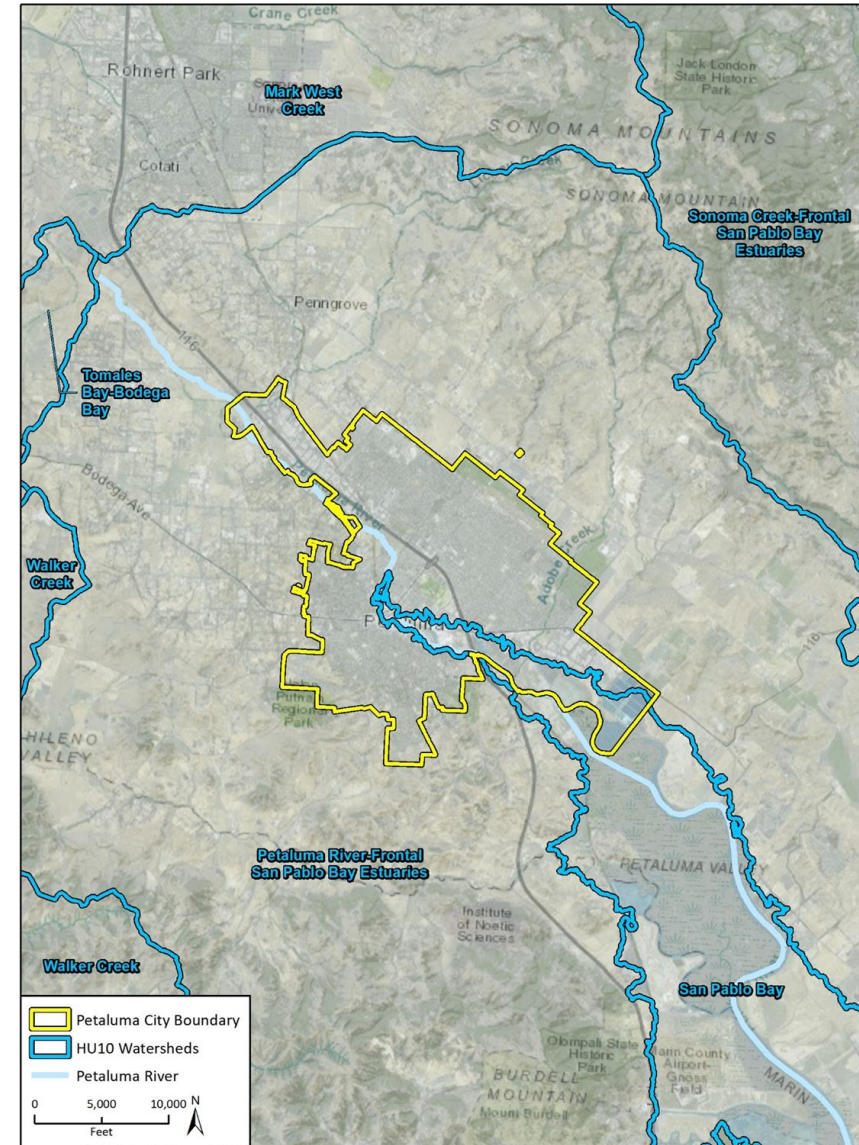
# Special-Status Species

- Petaluma is home to several special-status plant and animal species
- Most notably, the California Red-legged frog (*Rana draytonii*) and the California tiger salamander (*Ambystoma californiense*), both have critical habitat within the City's boundary
- The presence of multiple sensitive species provides an opportunity for the City to protect these resources



# Water Resources and Quality

- The city's water use is projected to increase but its supply is not considered vulnerable to climate change impacts
- The City is projected to increase its water usage into the future, with demand reaching 9,137 by 2030 and 9,757 by 2040
- The water supply is experiencing the stresses of persisting drought conditions, and future droughts will be exacerbated due to climate change



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Additional data provided by Geotracker, 2021.

# Important Policies, Plans, and Programs

- **Petaluma Groundwater Sustainability Program:** a 20-year plan to ensure sustainable groundwater management practices.
- **Petaluma River Access and Enhancement Plan:** developed by the City of Petaluma to improve access and character of the Petaluma River.
- **Landscape Assessment Districts (LADs):** requires the City to fund maintenance and amenities on public lands for all new subdivisions.
- **Adobe Creek Restoration Plan and Management Program:** developed by the City of Petaluma and SCWA to enhance, restore, and manage Adobe Creek.

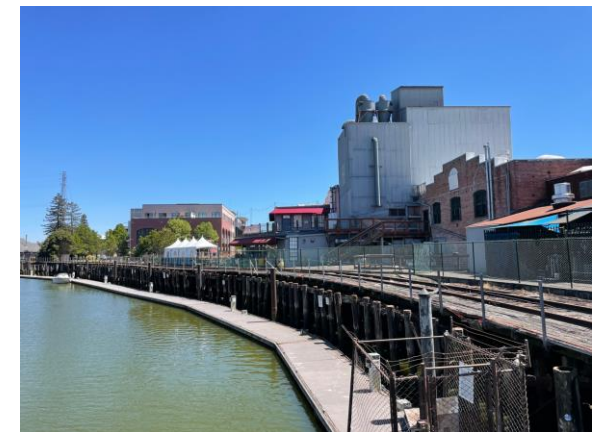
# Issues and Opportunities

- **Greenbelts:** The greenbelt strategy enables cooperation with the Sonoma Land Trust to protect natural resources through additional conservation easements
- **Sonoma Valley Wildlife Corridor Project:** The City of Petaluma has an opportunity to protect biological and natural resources that support its greenbelt program as well as the goals of the Sonoma Valley Wildlife Corridor Project
- **Trail Access and Connectivity:** The SCWA lands within the City of Petaluma provide opportunities to increase connectivity and access to green spaces in the city
- **Water Demand:** Future water demand increases for the city combined with climate change exacerbated droughts will challenge water resources providers to meet the future water needs for the city

# historic resources

# Historic Resources in Petaluma

- **Petaluma is rich in historic resources that enhance its identity**
- The City has a unique, dense concentration of high quality and intact residential, commercial, and industrial buildings in its historic core, which give Petaluma its distinctive character
- The existing built environment represents Petaluma's important river-related and agricultural history





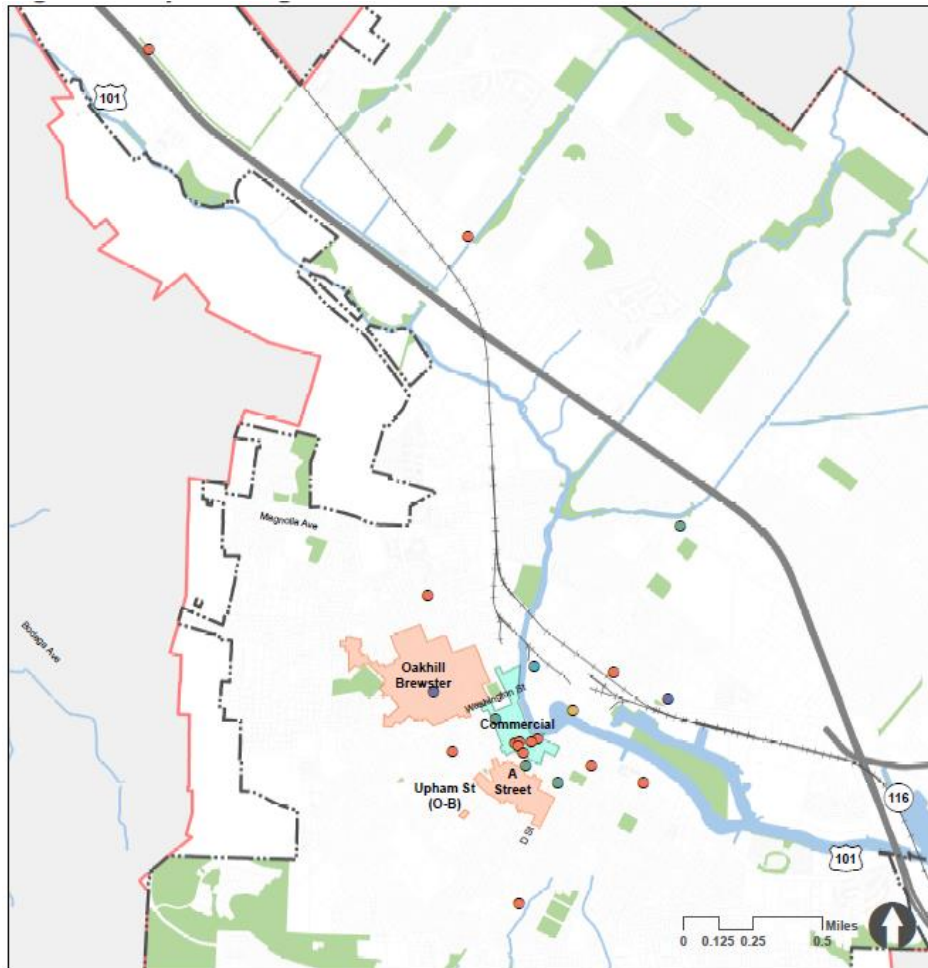
# CEQA & Historical Resources

- **The California Environmental Quality Act (CEQA) requires state and local government agencies to identify potential adverse effects to historical resources**
- Historical resources for CEQA include:
  - Properties *listed in* a national, state, or local register
  - Properties identified as *eligible for* listing in the National Register or California Register
- In Petaluma, a clear process for evaluating potential historic resources (and not just already designated historic resources) per standards under CEQA could further strengthen existing regulatory framework
- Age-eligibility for listing in the National Register is 50 years or older
- California Office of Historic Preservation recommends documenting, and taking into consideration in the planning process, any cultural resource that is 45 years or older

# Designated Historic Resources in Petaluma

The City is home to multiple historic resources:

- National Register Listed
  - 6 individual properties
  - Downtown Commercial District
- California Register Listed
  - 2 individual properties
- Petaluma Historic Landmarks
  - 4 historic districts (Downtown Commercial, A Street, Oakhill Brewster, and Upham Street)
  - 20 individual properties (1 also list in CR, 4 also listed in NR, 1 since demolished)



## Designated Historic Districts

- Local Petaluma Historic District
- Local Petaluma Historic District & National Register Historic District

## Designated Individual Historic Resources (# parcels)

- National Register-Listed (2)
- California Register-Listed (1)
- Petaluma Historic Landmark (14)
- Petaluma Historic Landmark & National Register-Listed (4)
- Petaluma Historic Landmark & California Register-Listed (1)

- City Limit
- Urban Growth Boundary / Sphere of Influence
- Railway
- Freeway
- Water
- Parks / Open Space

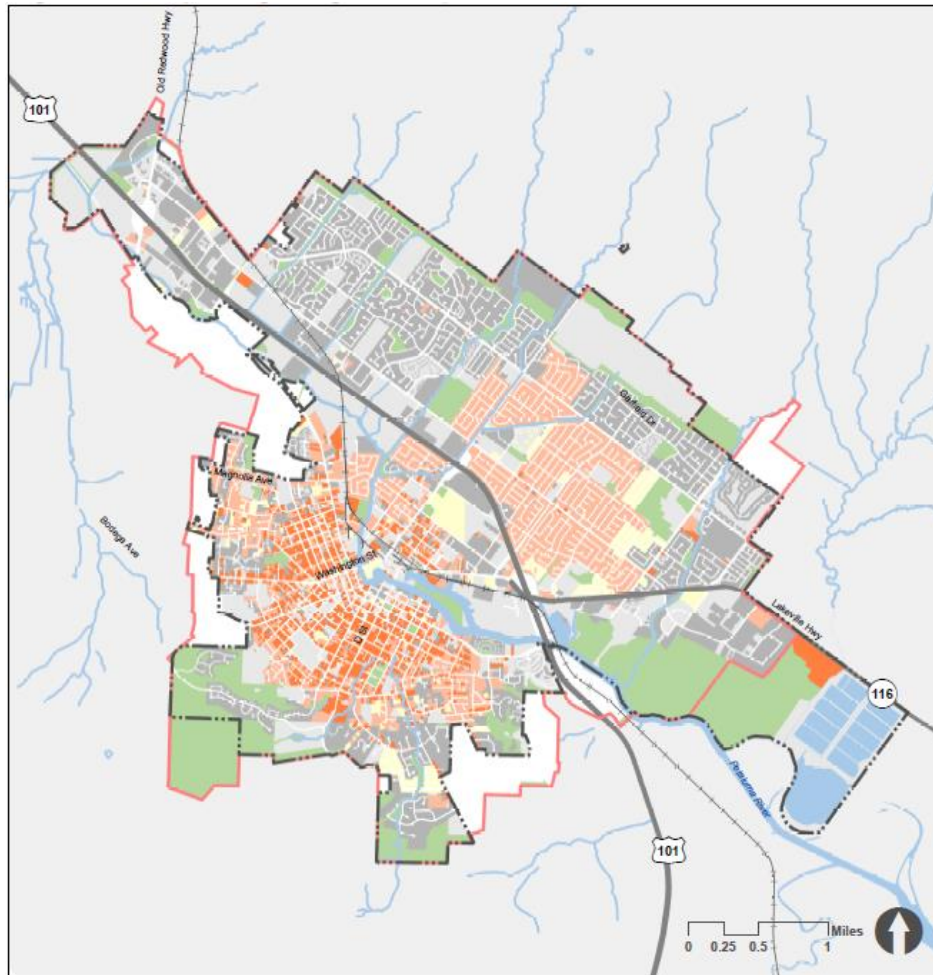


# Eligible & Potentially Eligible Historic Resources

- **The City of Petaluma does not maintain a comprehensive list of identified eligible historic resources, but several other sources identify assets:**
- California Built Environment Resource Directory (BERD) for Petaluma:
  - 274 properties in listed districts or that have been identified as eligible for local, state or national registers
  - 221 properties that require evaluation for the California Register (found ineligible for the National Register but not yet evaluated for the California Register or need reevaluation)
- 2001 Central Petaluma Specific Plan (CPSP) Area Windshield Survey:
  - Over 100 eligible resources identified
- 1977 Petaluma Historic Resource Survey:
  - 380 properties surveyed that include potentially eligible individual resources and/or historic districts or district extensions
- Additional city and environmental review documents, as well as City staff and members of the public, have identified potentially eligible historic resources that require further evaluation

# Age-Eligible Properties in Petaluma

- Approximately 40% of the properties in Petaluma are age-eligible for potential historic significance (excluding properties already listed as historic resources)
- Approximately 43% of properties in Petaluma will be age-eligible by 2050



## Year Built\* (# parcels)

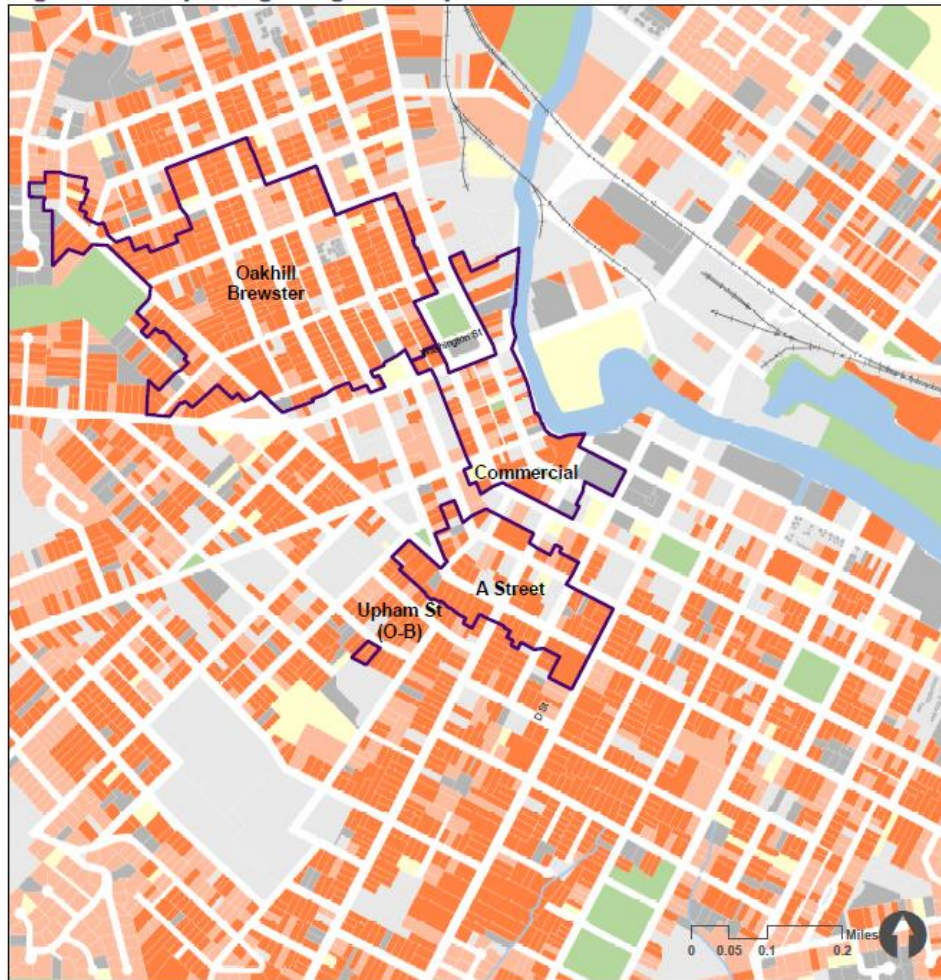
0   No Year Built Data Available (1,762)
1840 - 1945   Currently 76-181 Years Old* (2,282)
1946 - 1971   Currently 50-75 Years Old* (8,057)
1972 - 1976   Currently 45-49 Years Old (976)
1977 - 2019   Currently Less Than 45 Years Old (9,429)

City Limit
Urban Growth Boundary / Sphere of Influence
Water
Parks / Open Space
Railway
Freeway

\* Buildings that are 50 years or older are generally considered "age-eligible" as potential historic resources for the purposes of CEQA review.  
Data Sources: City of Petaluma (2021); County of Sonoma (2021); ESRI (2021)



# Age-Eligible Properties Around Historic Districts



- Majority of buildings Downtown were built between 1840 – 1945, making them 75 years or older
- Age-eligible buildings surrounding existing historic districts could be district contributors if the boundaries were expanded
- Additional historic districts may be eligible for listing (such along D Street or a Riverfront Warehouse District)

**Year Built\* (# parcels)**

- 0 | No Year Built Data Available (374)
- 1840 - 1945 | Currently 76-181 Years Old\* (1,891)
- 1946 - 1971 | Currently 50-75 Years Old\* (880)
- 1972 - 1978 | Currently 45-49 Years Old (83)
- 1977 - 2019 | Currently Less Than 45 Years Old (382)

**Historic Districts**

**City Limit**

**Urban Growth Boundary / Sphere of Influence**

**Water**


**Parks / Open Space**

**Railway**

**Freeway**

*\* Buildings that are 50 years or older are generally considered "age-eligible" as potential historic resources for the purposes of CEQA review.*

Data Sources: City of Petaluma (2021); County of Sonoma (2021); ESRI (2021)



CITY OF PETALUMA  
GENERAL PLAN UPDATE

# Important Policies, Plans, and Programs

- **Petaluma IZO (Chapters 5 & 15):** Definitions and designation procedure for local landmarks, Historic District Overlay Zoning, sets *Secretary of the Interior's Standards* as the standard for review of historic resources
- **Historic Site Plan & Architectural Review (SPAR):** Permit review process, including Historic & Cultural Preservation Committee (HCPC) review, for historic resources
- **Demolition of Historic Buildings** (Resolution NO. 2017-122 N.C.S.): Approval required for demolition of buildings built in 1945 or earlier
- Other plans with sections addressing historic resources:
  - **General Plan 2025** (Chapter 3)
  - **Central Petaluma Specific Plan** (2003)
  - **SmartCode** (Section 7)
  - **Petaluma Station Area Master Plan** (2013)

# Issues and Opportunities

- **Preservation with Increased Development:** Balancing protection of historic resources and Petaluma's unique built character with increased density within the Urban Growth Boundary is key
- **Consider Infill Within and Adjacent to Historic districts or Sites Carefully:** Sensitive areas include those with a high density of eligible historic resources that have not yet been officially designated (such as riverfront warehouse district) and corridors with scattered potential historic resources (such as Petaluma Blvd. and E. Washington)
- **Accessory Dwelling Units (ADUs):** Objective design standards for ADUs in historic districts and sites with historic resources could help protect neighborhood historic character while providing more housing
- **Climate Change and Natural Hazards:** Central Petaluma has a high density of historic resources facing significant risks from sea level rise
- **Strengthen Petaluma's Existing Programs:** Relatively robust regulatory framework and preservation planning program can be bolstered with additional policies and programs
- **Recommended Preservation Actions:**
  - Citywide Historic Context Statement
  - Citywide or focused historic resource surveys to provide a more comprehensive understanding of the city's historic resources and consistent framework for evaluation
  - Living historic resource inventory database
  - Additional or updated objective design standards
- **Clarification of Language:** Some zoning and ordinance language should be further clarified and updated including status of certain properties identified in IZO Section 15.040 and clarification of the Historic District Overlay Zoning application for individual resources
- **A New or Revised Demolition Review Process:** Needed for properties that are 50+ years old or that may be eligible historic resources, in order to comply with CEQA

# Issues and Opportunities

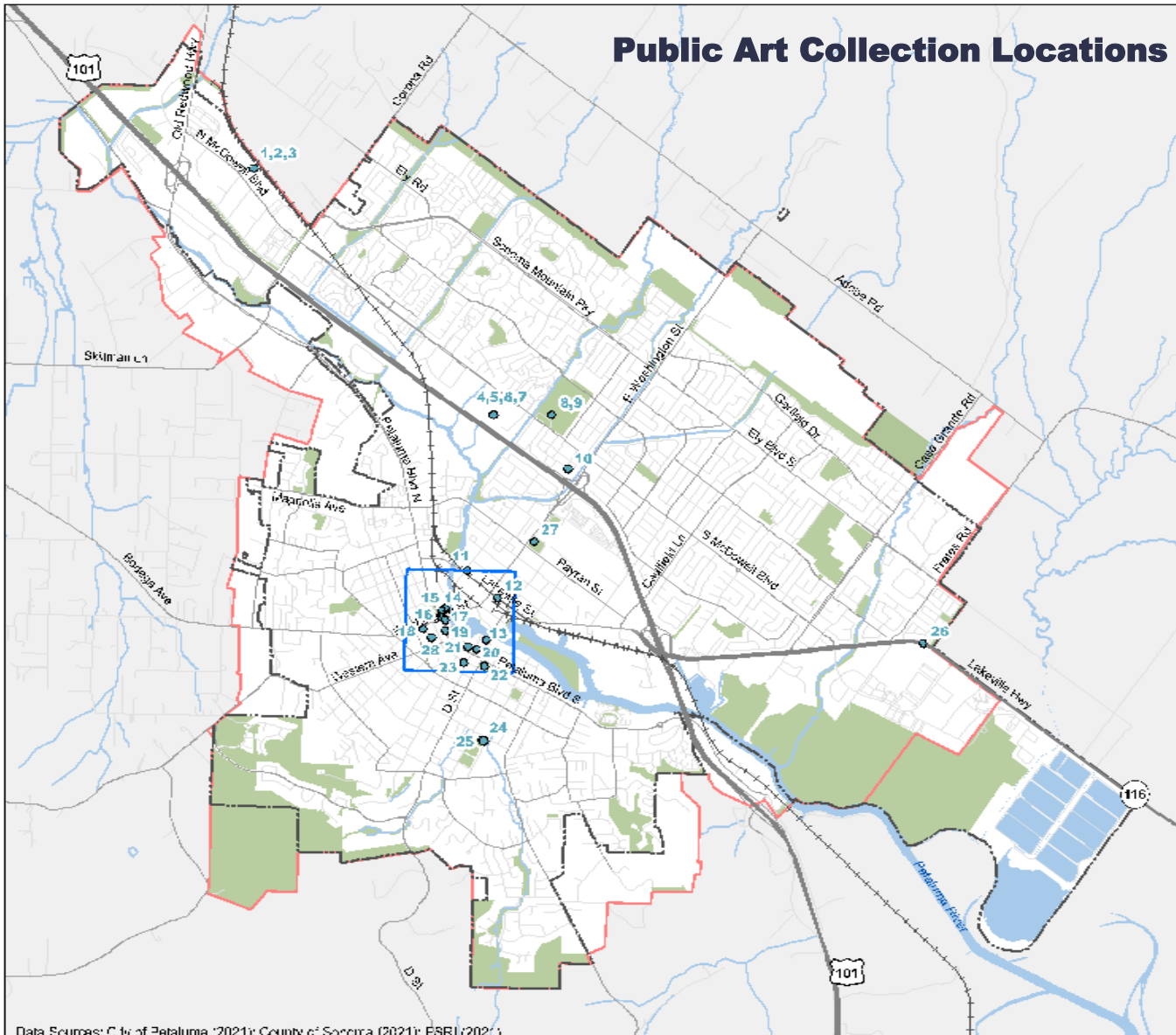
- **Prioritize Rehabilitation:** Rehabilitation (adaptive reuse) can be prioritized as a mechanism to enhance Petaluma's central core while maintaining its distinctive historic character
- **Take Advantage of Incentive Programs:**
  - Mill Act Contracts
  - State Historic Building Code
  - Funding of programs similar to former Storefront Improvement Loan Program
- **Clear Implementation Plan:** A clear plan assigning a responsible entity, timeline, and success metrics may help prioritize preservation planning goals that are outlined in the General Plan and other city plans but have not yet been implemented



# arts and culture

*Petaluma's Current Creative Environment*

# Current Role of the City in Arts and Culture



- City government has a longstanding but limited role in arts and culture, primarily through public art and parks and recreation programs
- The public art collection has 28 works concentrated in and near downtown
- Since public art is free and publicly accessible, the collection could better serve the community with more locations and greater diversity

# Petaluma's Creative Identity

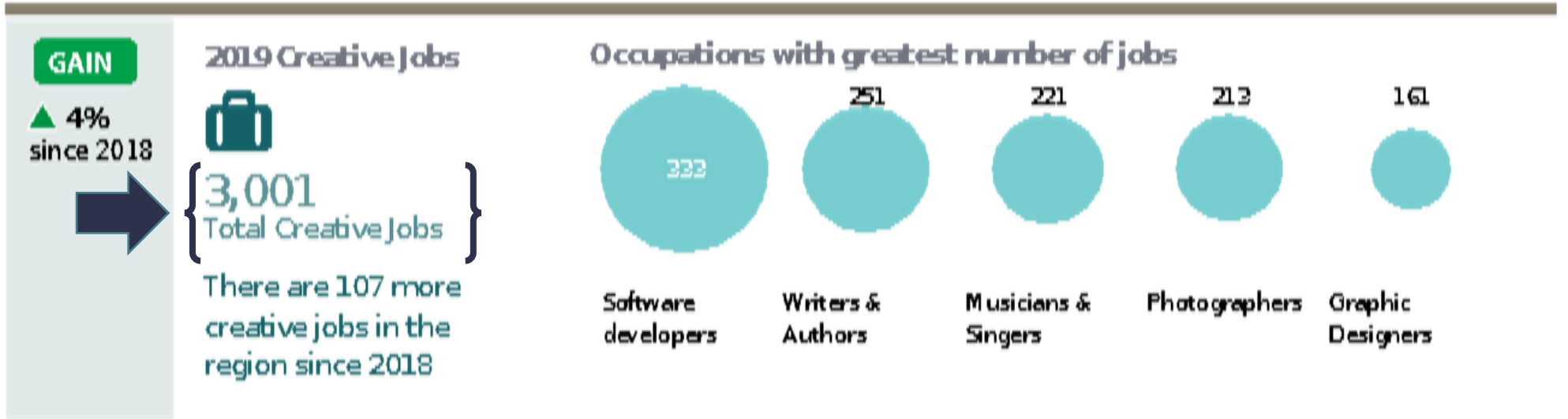
- Petaluma has a lively creative identity shaped by varied art, music, creative initiatives, community events, and local pride
  - Diverse and vital arts and music scene
  - Strong presence of established and emerging artists, creatives, makers and artisans
  - Fine and commercial art forms
  - An overall creative sector that is less institutional and more about individual creatives
  - “Petaluma Pride” in local history, agriculture, food craft, arts and more
  - Arts infused into city and community events



Black Lives Matter Street Mural. Photo: Benny Villareal

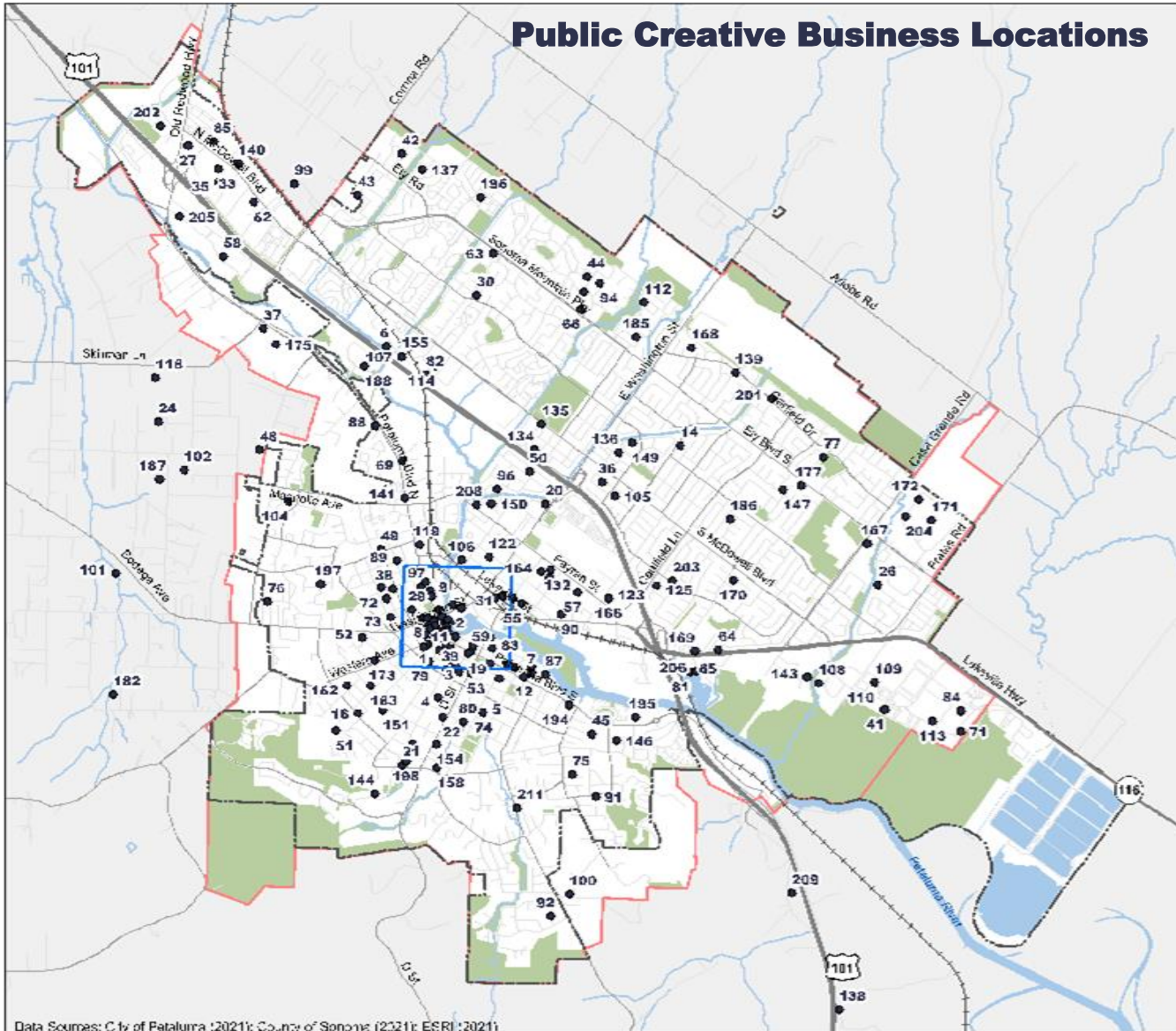
# Petaluma's Creative Economy

- Creative jobs make up about 10% of all employment in Petaluma
- The number of both creative jobs and creative industry earnings has been growing since 2018



# Petaluma's Creative Businesses

**Public Creative Business Locations**



Data Sources: City of Petaluma (2021); County of Sonoma (2021); ESRI (2021)

- Petaluma is home to more than 200 creative businesses:
- Located everywhere throughout the City
- Design services, retail, wineries, breweries, recording studios, etc.
- Some serve a local market; others are regional or national
- In addition, some of Petaluma's 144 restaurants are creative businesses (not included on map)

# Petaluma's Market for Arts and Culture

- Petaluma's consumer demand for arts and cultural activities is very strong across multiple areas and population segments

<b>Consumer Market Potential Index (100 = National Average)</b>		
<b>Arts Activity</b>	<b>Local Households (10-Minute Drive)</b>	<b>Regional Households (30-Minute Drive)</b>
Visual Arts/Museums	136	128
Performing Arts	129	123
Lifelong Learning	122	117
Literary Arts	120	115
Personal Creativity	115	114
Nightlife	110	108
Commercial Concerts	106	100

# Important Policies, Plans, and Programs

- **General Plan (2008):** Contains a section, The Arts, that conveys a broad understanding of the multiple roles they play in the community and a commitment to cultural development
- **City Goals and Priorities (2019):**
  - Spaces and Places That Inspire (Objective 3): Create inspirational spaces with diverse public art installations
  - An Economy That Prospers (Objective 1): Attract and retain businesses that generate revenues and provide jobs that pay [living wages]. This addresses small and start-up businesses, which can include arts-related businesses
  - An Economy That Prospers (Objective 2): Promote Petaluma as a destination for both locals and visitors. This objective includes City support for cultural and entertainment events, and related tourism promotion
- **Petaluma Public Art Master Plan (2013):** Addresses program goals plus policies and procedures for administration, maintenance and conservation of the collection, sites for future artworks, and other issues; serves as the guiding policy and procedural framework

# Issues and Opportunities

- **Broader City Focus on Arts and Culture:** Consider expanding City arts and cultural functions, potentially including developing a citywide cultural plan and possibility a Cultural Affairs Commission
- **Updated Public Art Program and Policies:** The Public Art Committee and staff cite opportunities to better meet community interests through updates to the program, including an updated Public Art Master Plan
- **Enhanced City Coordination of Arts and Culture:** The City currently lacks the capacity to coordinate and take the best advantage of its vibrant cultural resources
- **Artists in City Government:** US cities are increasingly incorporating artists into the work of city government
- **Equity and Connectivity:** The community believes arts and culture serve as a means of community connection in Petaluma and can be further developed to increase connectivity across the city and among its diverse populations
- **Creative Economy:** Ample opportunity exists to build on the existing arts and cultural activities, music scene, and businesses
- **Arts in Everyday Life:** Community members express the desire for arts and creativity to be more visible in their everyday life, e.g., more informal, accessible, and enlivening vacant spaces across the city
- **Arts Learning:** There is a need to continue efforts to support and expand arts learning opportunities in schools and community settings, building on existing resources and policies

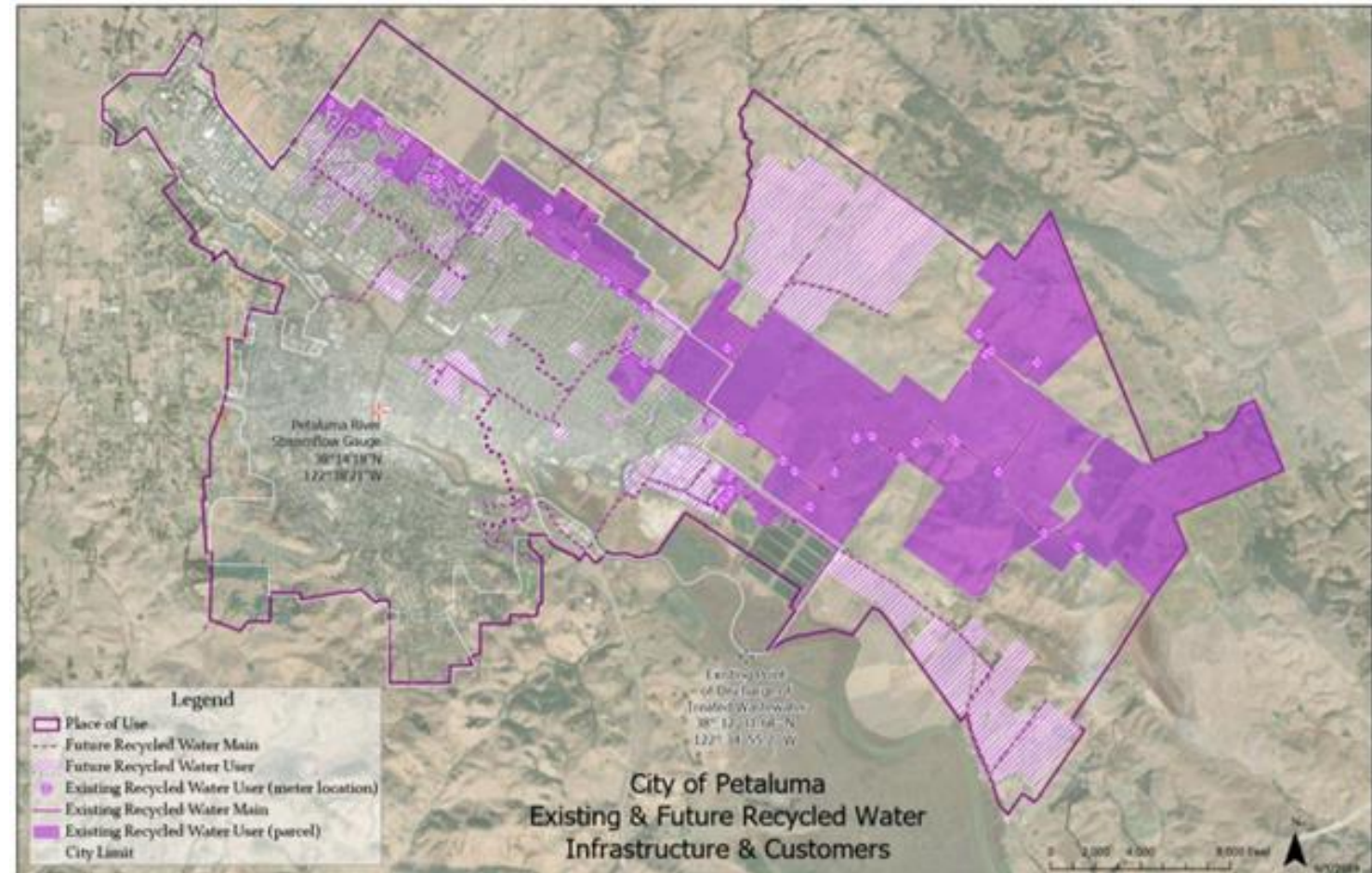


# Infrastructure & utilities



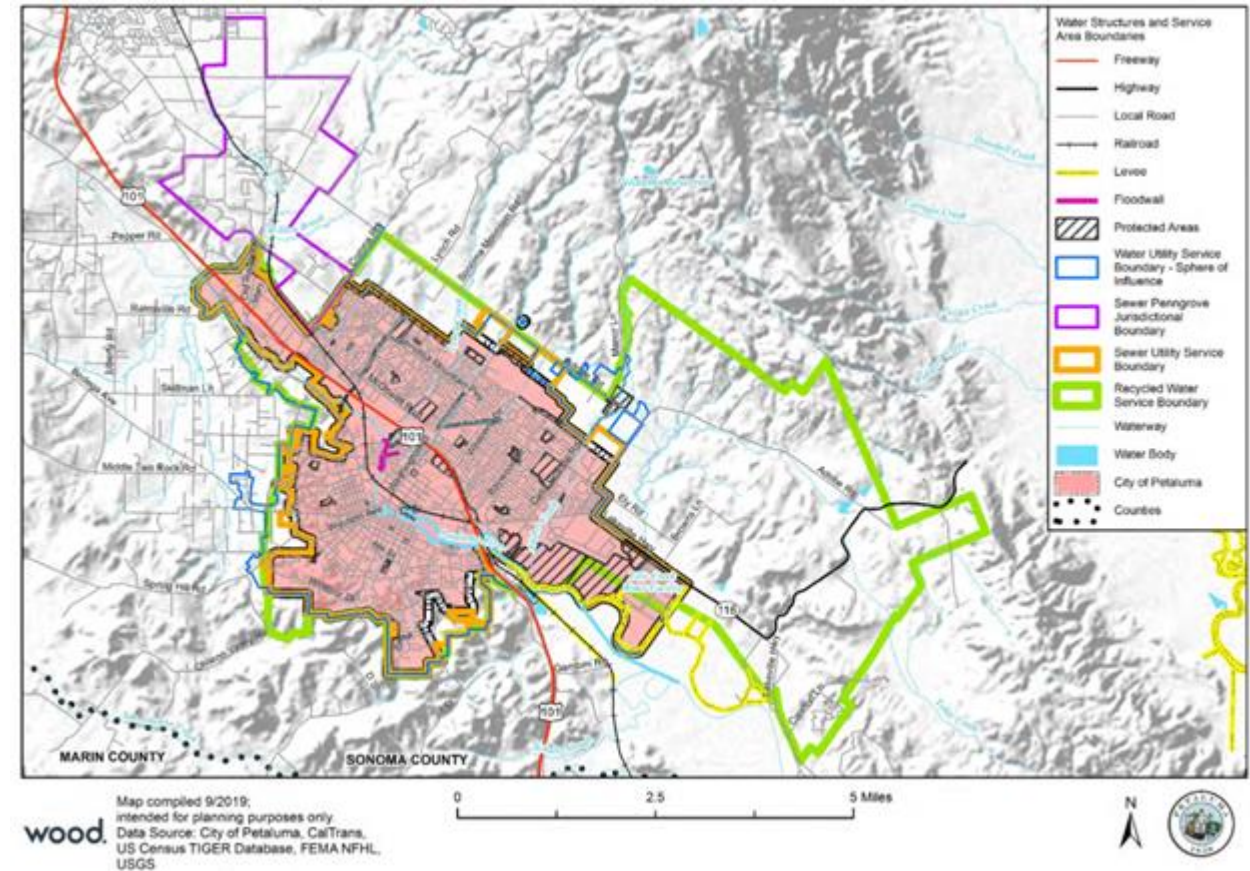
# Wastewater Treatment & Water Recycling

- **Petaluma's wastewater treatment capacity will meet future demand.**
- Approximately 4.5 million gal/day transported to the ECWRF (6.7 Mgal/day capacity)
- Produces ~600 Mgal of recycled water / year
- Planned expansion of recycled water system to meet 2045 demand of 2540 AF
- Required upgrades include C Street Pump Station capacity enhancements, forcemain and sewer main replacement, biosolid management and optimization of the ECWRF



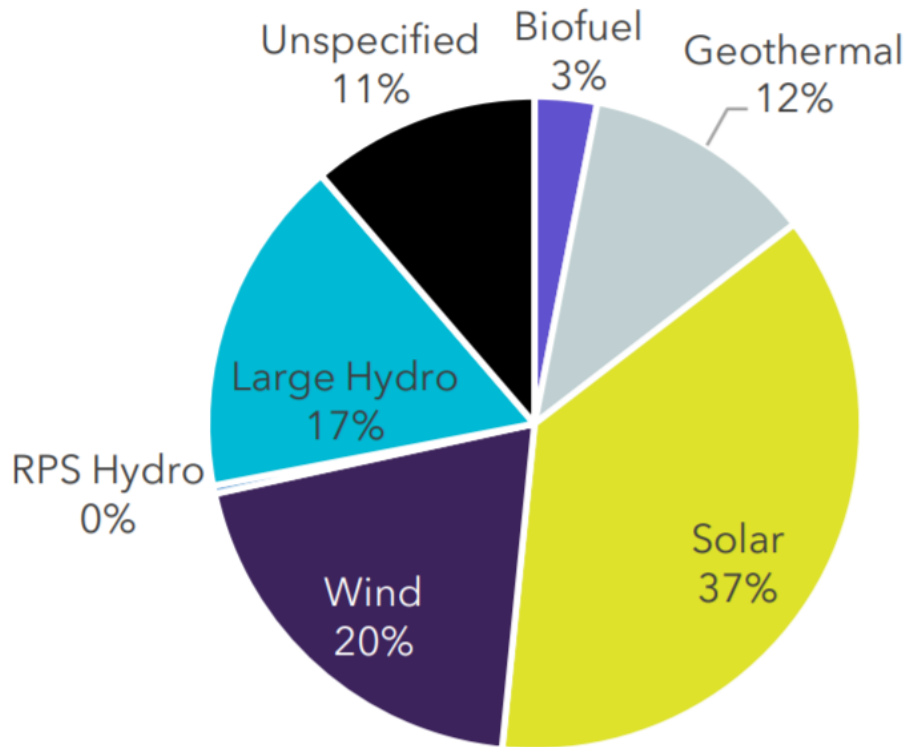
# Stormwater

- **The current stormwater system requires improvements with climate change likely to require additional improvements**
- No current stormwater diversion for beneficial use
- Not a combined sewer-stormwater system
- Water quality challenges due to chemicals and debris
- Several storm drain improvement projects through 2020
- No utility funds allocated for stormwater maintenance and stormwater networks extremely vulnerable to climate change and increased precipitation events



# Electric and Natural Gas

2030 SCP Power Sources



- **The electricity network is sourced nearly 100% by renewable energy (PG&E and SCP)**
- There is a potential to increase the percentage of solar production in the City.
- City subject to rotating power shutoffs during high-load events and high fire risk
- Multiple critical facilities subject to planned outages
- Adopted all-electric new construction ordinance in 2021, with existing buildings utilizing natural gas

# Solid Waste

- Trash, recycling and compost services are provided by the City
- City adopted zero waste resolution in 2020 with the goal of reducing 90% of all materials to landfills by 2030

# Telecom and Data

- Utilizes undergrounded fiber optic lines
- Broadband Action Plan endeavors to improve access in underserved communities
- Potential for microtrenching of utility lines to improve installation

# Important Policies, Plans, and Programs

- **Southern Sonoma County Storm Water Resources Plan (2019):** stormwater capture, recharge and reuse in the Petaluma Watershed
- **All-Electric Construction in New Constructed Buildings ordinance:** carbon neutrality by 2030
- **Sanitary Sewer Management Plan, System Evaluation and Capacity Assurance Plan, and Overflow Emergency Response Plan:** sewer and wastewater system functioning

# Issues and Opportunities

- **Stormwater is the most critical utility requiring enhancements and targeted strategies:**
  - Lack of funding with growing deferred maintenance costs
  - Portions of the city underserved by stormwater infrastructure
  - Flood event intensity will continue to increase, and further hydraulic modeling is necessary to understand these risks
  - Additional water quality protection measures necessary to address TDML goals
  - Many regional project opportunities to improve WQ and reduce flood risk
- **Power shut-offs:** Some critical facilities have the potential to be impacted by electricity shut-offs. City investigating clean energy backup systems.
- **Current water use demands can be met through 2045 (LHMP 2020):** Despite meeting current demands climate change induced drought poses new risks