

Biological Resources

September 2022

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Responses to Community Feedback on Environmental Existing Conditions Reports

The following responses were drafted by the consultant team in response to extensive community feedback on topics that crosscut the seven Environmental Existing Conditions Reports.

Trees and Urban Canopy: Maintaining and expanding a robust urban forest is a priority for the City and will be incorporated into the updated General Plan goals, policies, and programs to further develop and maintain the urban forest and protect trees of aesthetic, cultural, and biological value to the community. The General Plan Update will capitalize on ways to build on and expand existing plans and programs through tools like tree inventories and tree preservation ordinances.

River Enhancement Program: The River Enhancement Plan will provide an existing foundation for goals, policies, and programs to be implemented as this plan will continue to be in effect and utilized after the General Plan Update. Throughout the General Plan Update process, this plan will be thoroughly reviewed and incorporated into the General Plan.

Wildlife Corridors: The information regarding the wildlife corridors discussion were a compiling of local resources that can be used to understand the stakeholders that the City can partner with in supporting efforts to conserve wildlife corridors, especially in support of efforts by the State, to preserve a statewide network of wildlife movement corridors. There will be opportunities in future steps of the General Plan Update process to include more detail of the wildlife corridors surrounding Petaluma using data from CDFW and other available sources.

Climate Impacts Data: The State of California requires local jurisdictions to use specified data sources for identified hazards such as FEMA for the flood hazards analysis and the Cal Adapt tool for climate change projections. These are the data sources used to conduct the analysis of climate and flood hazards, which will inform various aspects of the General Plan Update.

Integration of Environmental Topics: Environmental issues and considerations will be integrated throughout the General Plan Update process and additional information will be gathered and analyzed during future phases of the project. In particular, environmental analysis will be done during the alternatives and environmental review phases.

Biological Resources

This Chapter highlights the City of Petaluma’s existing biological resources and assets important to the community. It contains an overview of the regulatory framework from the federal, State, and local levels of government, an overview of the important habitat and vegetative communities, special-status species, wildlife corridors, and protected trees. Local government plays an important role in the management of these resources and preserving them for future generations.

Key Findings and Constraints

- There are 14 special-status plant and animal species that have been historically located within the Petaluma Planning Area.
- There are two areas of critical habitat located within the Petaluma Planning Area one critical habitat area belongs to the California red-legged frog (*Rana draytonii*) and the other belongs to the California tiger salamander (*Ambystoma californiense*).
- The City of Petaluma has 27,074 acres of wetland ecosystems within a 10-mile radius to the south and west of the city. The wetland ecosystems provide habitat for fish, wildlife, and plants and have commercial and recreational value in the form of groundwater recharge, flooding prevention, and providing clean drinking water. These wetlands also play an important role at mitigating sea level rise as they provide a buffer between the San Francisco Bay and the City of Petaluma.
- The Sonoma Land Trust initiated the Sonoma Valley Wildlife Corridor Project, and the City of Petaluma lies to the west of the wildlife corridor location. This corridor exists near Glen Ellen and stretches between the Mayacamas Mountains in the east to Sonoma Mountain near Petaluma. This corridor serves as a critical movement connection between habitat patches for a variety of species, which supports biodiversity health for the region. The areas to the north and east of the city have been identified as a greenbelt by the Sonoma Land Trust and the goals of the organization and the city align to protect these areas with conservation easements as a strategy for preserving the integrity of the corridor and surrounding habitat.

Purpose and Overview

The purpose of this document is to provide information on the existing biological resources present or with the potential to be present in the City of Petaluma. This includes descriptions of relevant federal and State regulations, sensitive biological communities, critical habitat, and the role of wetlands and riparian corridors, management of the urban forest, and wildlife movement corridors. Information related to water quality and water resources of those biological communities and habitats is located in the Water Resources section of this background report. This document informs the proceeding steps in updating the City’s General Plan and informs decision making.

Planning and Regulatory Setting

Federal Endangered Species Act

The federal Endangered Species Act, also known as the Endangered Species Act (FESA) of 1973, is the primary national legislation for the conservation of threatened and endangered plants and animals and

their respective habitats. The U.S. Fish and Wildlife Service (FWS) and the U.S. National Oceanic and Atmospheric Administration (NOAA) Fisheries Service help to implement the FESA by ensuring that developments they authorize, fund, and carry out are consistent and compliant with the FESA through regulatory review and permitting processes. The United States Army Corps of Engineers also helps to preserve aquatic ecosystems for FESA designated species and other marine wildlife through its enforcement of Section 404 of the Clean Water Act (CWA) of 1972, which defines waters of the United States as being subject to the CWA's rules and regulations.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918, as amended (MBTA), implements various treaties and conventions between the U.S. and Canada, Japan, Mexico, and the former Soviet Union for the protection of migratory birds. Under the MBTA, taking, killing, or possessing migratory birds is unlawful, as is taking of any parts, nests, or eggs of such birds (16 U.S. Government Code [USC]703). Take is defined more narrowly under the MBTA than under FESA and includes only the death or injury of individuals of a migratory bird species or their eggs. As such, take under the MBTA does not include the concepts of harm and harassment as defined under FESA.

California Endangered Species Act

Administered by California Department of Fish and Wildlife (CDFW), California ESA prohibits the take of listed species and species formally under consideration for listing ("candidate" species) in California. Under CESA take means "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." (Fish and Game Code Section 86.) Under this definition, and in contrast to the FESA, CESA does not prohibit "harm" to a listed species. Furthermore, take under the CESA does not include "the taking of habitat alone or the impacts of the taking." However, the killing of a listed species that is incidental to an otherwise lawful activity and not the primary purpose of the activity constitutes a take under CESA. CESA does not protect insects, but with certain exceptions prohibits the take of plants on private land.

California Environmental Quality Act

The California Environmental Quality Act (CEQA) requires evaluation of the potential effects of governmental actions (including discretionary governmental permits for private actions) on the environment and conflicts or violations with applicable policies, plans, and programs. The analysis under CEQA requires the public disclosure of significant impacts of a proposed project on the environment, and the identification of feasible alternatives and mitigation measures that will avoid or substantially lessen the significant effect. If specific economic, social, or other conditions make it infeasible to avoid the disclosed environmental impacts, a project may be approved in spite of the found significant impacts to the environment.

Adobe Creek Restoration Plan and Management Program

The Adobe Creek Restoration Plan and Management Program was developed by the City of Petaluma and the Sonoma County Water Agency to enhance, restore, and manage Adobe Creek. The Adobe Creek is a tributary of the Petaluma River and flows through the southeastern side of Petaluma. The plan focuses on two stream reaches of Adobe Creek, the McDowell Reach, south of Lakeville Highway; and

Sartori Reach, north of Sartori Drive. It provides guidelines for channel designs and vegetation management that promote the development of a mature riparian canopy to enhance wildlife function while maintaining adequate capacity for flood control. One of the goals of the management guidelines is to show that careful hand pruning of willows and other in-stream plants during the initial restoration period can lead the way to a more self-sustaining system that will reduce the long-term maintenance costs of flood control channels while improving the habitat for fish and wildlife. The plan also seeks to integrate schools, resource agencies, public agencies, local residents, and community organizations in a focused effort to restore Adobe Creek.

Citywide Creeks Maintenance Manual

The Citywide Creeks Maintenance Manual was developed by the City of Petaluma to guide ongoing maintenance activities of creeks. The Manual has three primary activities including sediment, vegetation and tree management, and trash removal. Other related activities include bank stabilization, restoration, dewatering, and channel access road maintenance may occur periodically. Best management practices identified include appropriate timing of work for avoidance, use of silt protection, and implementation of erosion control measures.

Santa Rosa Plain Conservation Strategy

The Santa Rosa Plain Conservation Strategy was developed by a team made up of representatives of federal, State, and local government agencies and other interested parties. The purpose of the Conservation Strategy is to create a long-term conservation program to mitigate potential adverse effects of future development on the Santa Rosa Plain (Plain) to listed species. The Santa Rosa Plain lies to the north of the city, mostly outside the City limits, with only the northernmost tip of the city included in the Conservation Strategy study area. Since 2005, the program contributes to the recovery of California tiger salamander (CTS), Burke's goldfield, Sonoma sunshine, Sebastopol meadowfoam, and the many flowered navarretia genus and the conservation of their sensitive habitat. The objective of the Conservation Strategy is to accomplish the above in a manner that protects stakeholders (both public and private) land use interests, and to support issuance of an authorization for incidental take of CTS and listed plants.

The Strategy framework provides several key components:

- The basis for future regulatory actions to be implemented by the appropriate agencies.
- Appropriate biological information for the listed species that facilitates the preparation of a programmatic biological opinion.
- A mechanism for processing permits for projects within the potential range of the listed species – providing communities and stakeholders with consistency, timeliness and certainty.
- Maps of impact and conservation areas.
- Mitigation ratios for impacts.
- Guidelines for translocation, conservation area management plans, adaptive management, implementation of strategy, and securing potential funding.

Senate Bill 1334

Senate Bill 1334 (SB 1334) requires a jurisdiction to consider whether a project may result in the conversion of oak woodlands such that it may have a significant effect on the environment, or that the jurisdiction must adopt a negative declaration if the project will not have that affect.

Fish and Game Code Section 1361

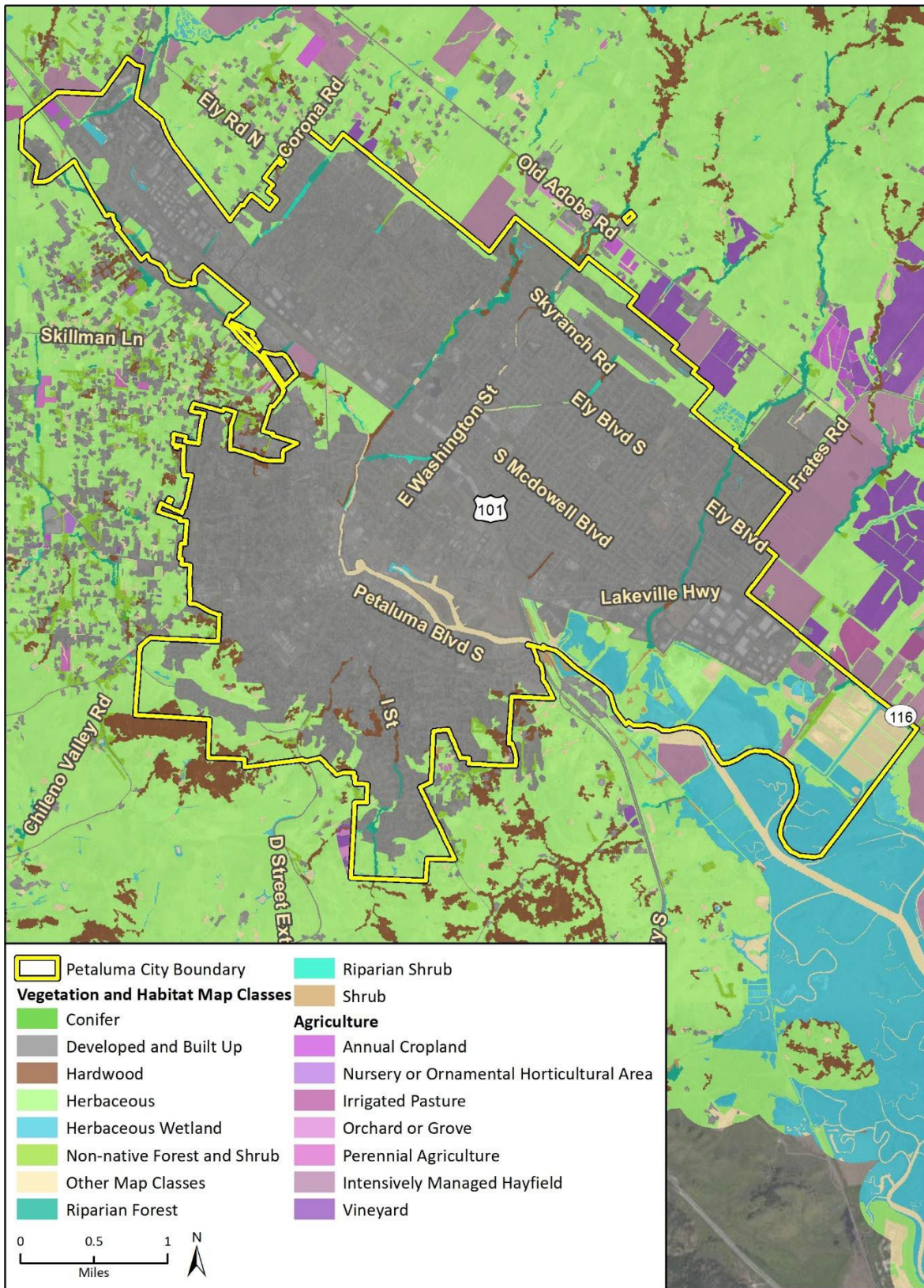
Fish and Game Code Section 1361 through 1363 establishes the Oak Woodlands Conservation Fund, which may be used for the preservation and restoration of oak woodlands, including grants for easement purchases or land improvement, public education and outreach, assistance for the development and implementation of oak conservation policies in general plans, and technical assistance.

Habitat and Vegetation Communities

The Petaluma River runs through the city and drains directly into San Pablo Bay, and waters in the river are thus heavily influenced by tidal forces in its lower reach. Within the City limits, most of the land in the lower reaches is developed. Areas along the Petaluma River and its tributaries, however, provide valuable habitat for several special status plant and animal species, as do grassland and oak savannah habitats along the western portion of the City limits. Petaluma lies within the economic area known as the Sonoma Valley winemaking region, which stretches between Petaluma and Healdsburg to the north and is surrounded by the Coastal Range Mountains to the northeast and southwest, with Sonoma Mountain to the northeast and Mount Tamalpais to the south. The area encompasses a wide range of terrestrial and aquatic habitats, including grassland, oak savannah, fresh emergent wetlands, seasonal wetlands, riparian, northern coastal salt marsh, and brackish water marsh.

As illustrated in **Figure 1** below, the City of Petaluma has a wide variety of habitats and vegetative communities in and around the City and data provided by the Sonoma County Agricultural Preservation and Open Space District. The Hardwood category includes oak woodlands, which are found mostly to the south of the city along the streams, creeks, and rivers that make up the surrounding watersheds that flow into the Petaluma River. Herbaceous and emergent wetlands are the largest vegetative communities in Petaluma. Riparian and riparian forest communities are present along creeks, streams, and rivers in and around Petaluma, which act as important movement corridors for wildlife and play a role in sequestering carbon. To the east of the city there are large swaths of vineyard and irrigated pasture along Frates Road and Ely Boulevard.

Figure 1: Habitat and Vegetation Map of the City of Petaluma



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 Additional data provided by Sonoma County, 2019.

Fig. N1.1 Sensitive Biological Areas and Communities

Special-Status Species

Special-status species are plant and animal species designated by federal or State regulatory agencies as needing protection due to rarity or threats to their existence. There are several species that have historically been present in Petaluma that have State and or federal designations and require special consideration in the planning process. **Table 1** below lists the plant and animal species with potential to occur in Petaluma according to the California Natural Diversity Database (CNDDB) with a listing status as either threatened, endangered, or candidate endangered species under the ESA and/or the CESA.

Table 1: Protected Animal and Plant Species Found in Petaluma and Petaluma River

Species	Designation
California Black Rail (<i>Laterallus jamaicensis coturniculus</i>)	State Status – Threatened
California Red-Legged Frog (<i>Rana draytonii</i>)	Federal Status – Threatened
California Ridgway's Rail (<i>Rallus obsoletus</i>)	Federal Status – Endangered; State Status – Endangered
California Tiger Salamander (<i>Ambystoma californiense</i>)	Federal Status – Threatened; State Status – Threatened
Foothill Yellow-Legged Frog (<i>Rana boylei</i>)	State Status – Endangered
Golden Larkspur (<i>Delphinium luteum</i>)	Federal Status – Endangered
North Coast Semaphore Grass (<i>Pleuropogon hooverianus</i>)	State Status – Threatened
Pitkin Marsh Lily (<i>Lilium pardalinum</i> ssp. <i>Pitkinense</i>)	Federal Status – Endangered; State Status – Endangered
Salt-Marsh Harvest Mouse (<i>Reithrodontomys raviventris</i>)	Federal Status – Endangered; State Status – Endangered
Soft Salty Bird's-Beak (<i>Chloropyron molle</i> ssp. <i>Mole</i>)	Federal Status – Threatened
Sonoma Spineflower (<i>Chorizanthe valida</i>)	Federal Status – Endangered; State Status – Endangered
Swainson's Hawk (<i>Buteo swainsoni</i>)	State Status – Threatened
Two-Fork Clover (<i>Trifolium amoenum</i>)	Federal Status – Endangered
Western Bumble Bee (<i>Bombus occidentalis</i>)	State Status – Candidate Endangered
Notes: CDFW: California Department of Fish and Wildlife ESA: Federal Endangered Species Act USFWS: United States Fish and Wildlife Services Source: CDFW, 2021.	

It should be noted that the American Badger (*Taxidea taxus*) has been identified as a Species of Special Concern (SSC) by the California Department of Fish and Wildlife and is a present species within

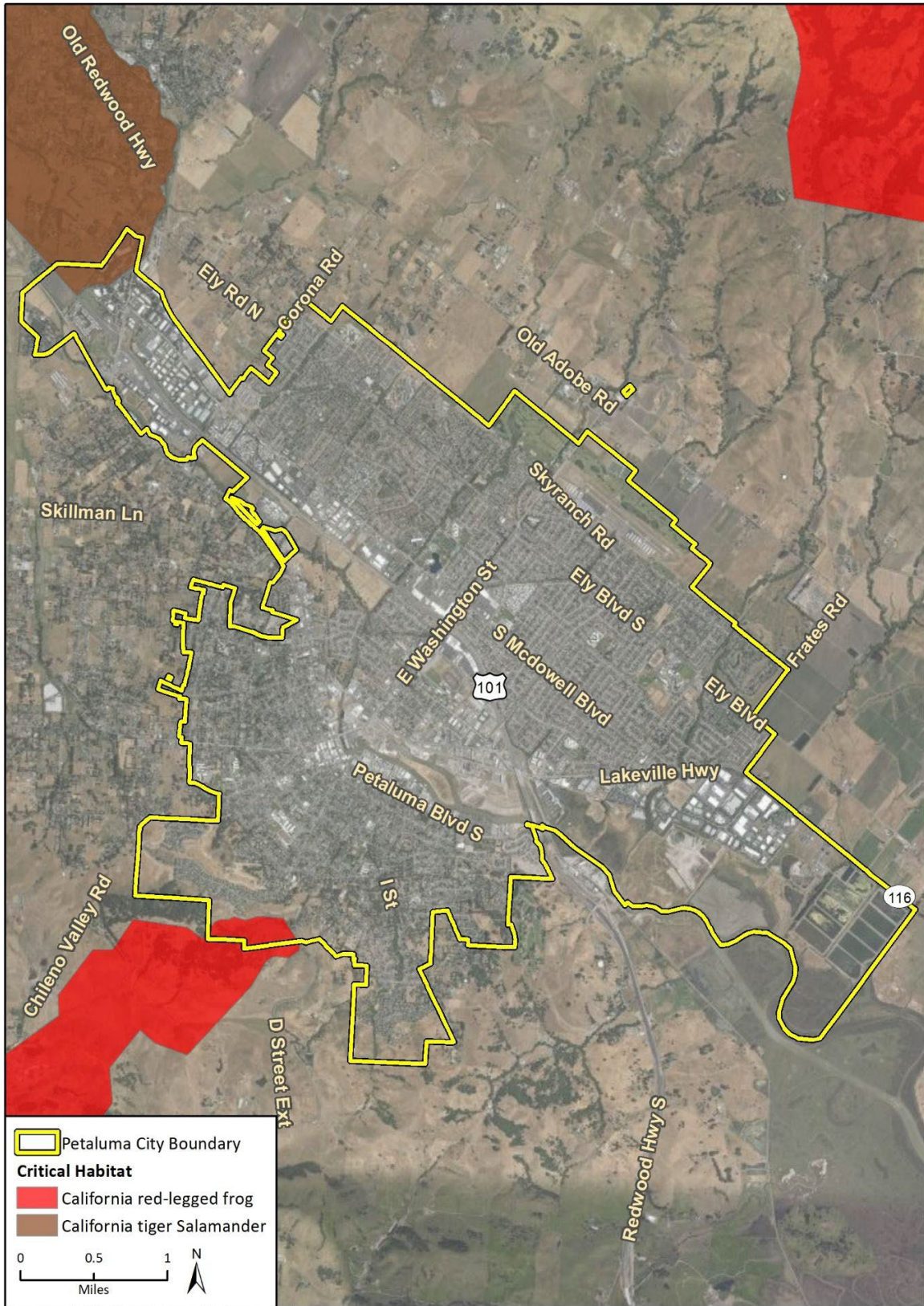
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Petaluma. The SSC designation is a unique label given to a species or subspecies of animal that is susceptible to endangerment or decline but is not formally listed as endangered or threatened. The label has no formal legal status but instead is considered an administrative designation.

Habitat areas essential to the conservation of a listed endangered or threatened species are known as critical habitat. **Figure 2** below shows the areas of critical habitat in and around Petaluma, which include the California red-legged frog habitat and California tiger salamander habitat. The identified California tiger salamander habitat is within City Limits in the northern-most part of Petaluma between Old Redwood Highway North and Highway 101 northbound. This area of critical habitat is also within the Santa Rosa Plain Conservation Strategy area that stretches north of Petaluma. The critical habitat for the California red-legged frog is located in the southwestern part of Petaluma. This area includes the Helen Putnam Regional Park off of Chileno Valley Road. Designated critical habitat areas often include limitations on development and future land uses.

Critical habitat in waterbodies is assessed by the National Marine Fisheries Service (NMFS). According to the NMFS, there are multiple areas of critical habitat located within Petaluma on the Petaluma River and San Pablo Bay. These identified habitats are for the Green Sturgeon and Steelhead. Because NMFS designated critical habitat only includes waterbodies, the potential impacts to future development from these critical habitat areas are limited.

Figure 2: Special Status Species in the City of Petaluma



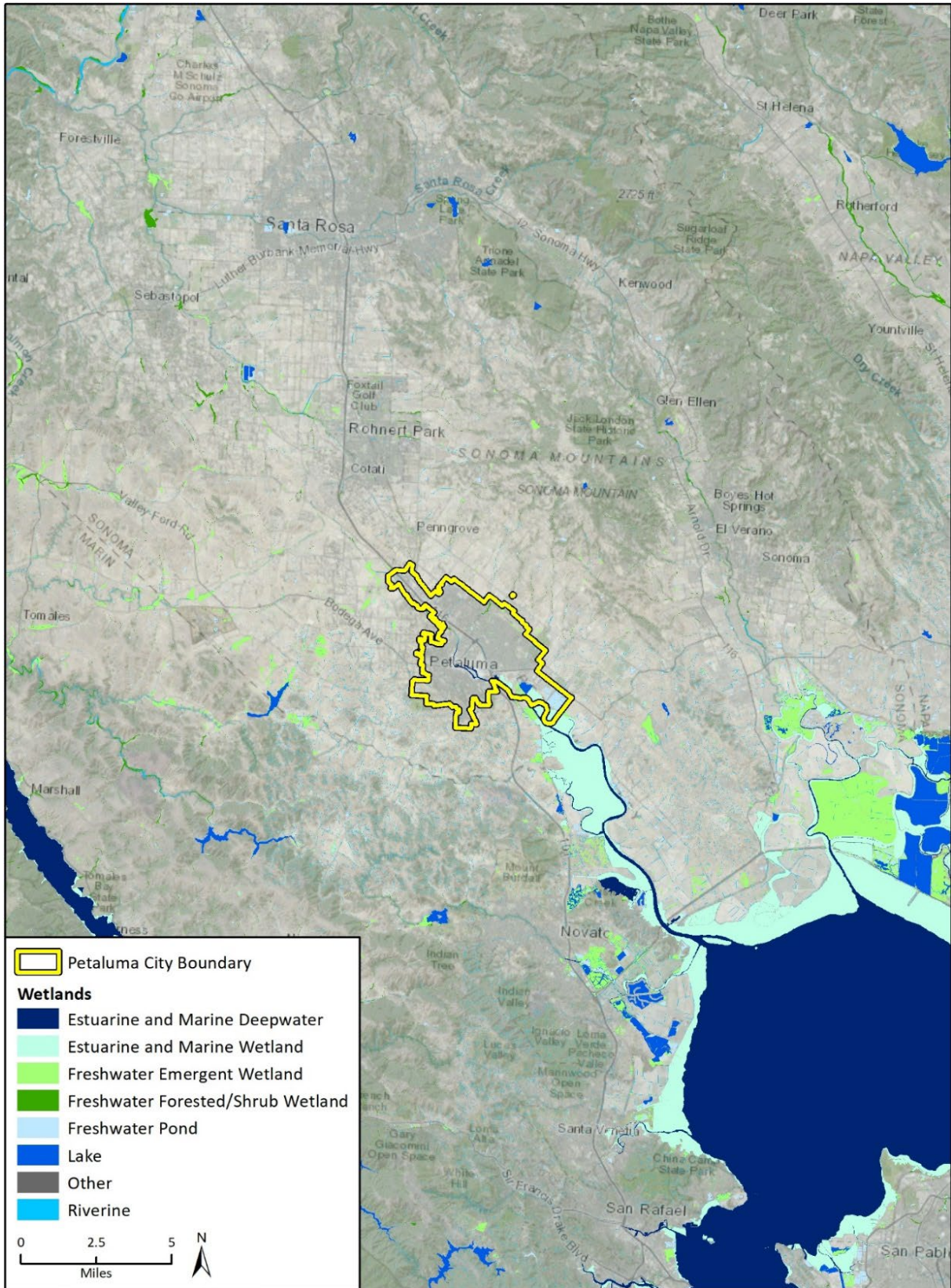
Wetlands and Riparian Habitats of the United States

Wetlands and waters of the United States are water bodies that are subject to the rules and regulations of the Federal Clean Water Act (CWA), first passed in 1972. Petaluma contains US Fish and Wildlife Service (USFWS)-recognized wetlands along the Petaluma River southeast of the McNear Channel, which are registered in the National Wetlands Inventory as Estuarine Systems. The Estuarine System consists of deep water tidal habitats and adjacent tidal wetlands that are usually semi-enclosed by land but have open, partly obstructed, or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land. **Figure 3** below shows the wetlands in and around the City of Petaluma. Wetlands provide habitat for fish, wildlife, and plants and have commercial and recreational value in the form of groundwater recharge, flooding prevention, and providing clean drinking water.

Section 401

The State Water Resources Control Board (SWRCB) has authority over wetlands through Section 401 of the CWA, as well as the Porter-Cologne Act, California Code of Regulations Section 3831(k), and California Wetlands Conservation Policy. The CWA requires that an applicant for a Section 404 permit (to discharge dredged or fill material into waters of the United States) first obtain a CWA, Section 401 water quality certification from the State Water Resources Control Board (SWRCB) or one of the nine Regional Water Quality Control Boards (RWQCB). A request for certification or waiver is submitted to the State or regional board at the same time that an application is filed with the Corps. The water board has 60 days to review the application and act on it. Because no Corps permit is valid under the CWA unless “certified” by the State, these boards may effectively veto or add conditions to any Corps permit. Essentially, the streams, creeks, and waterways of Petaluma including the Petaluma River and its tributaries are subject to permits if there is a potential for impacts.

Figure 3: Wetland Ecosystems in Petaluma



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 Additional data provided by Sonoma County, 2021.

Protected Trees

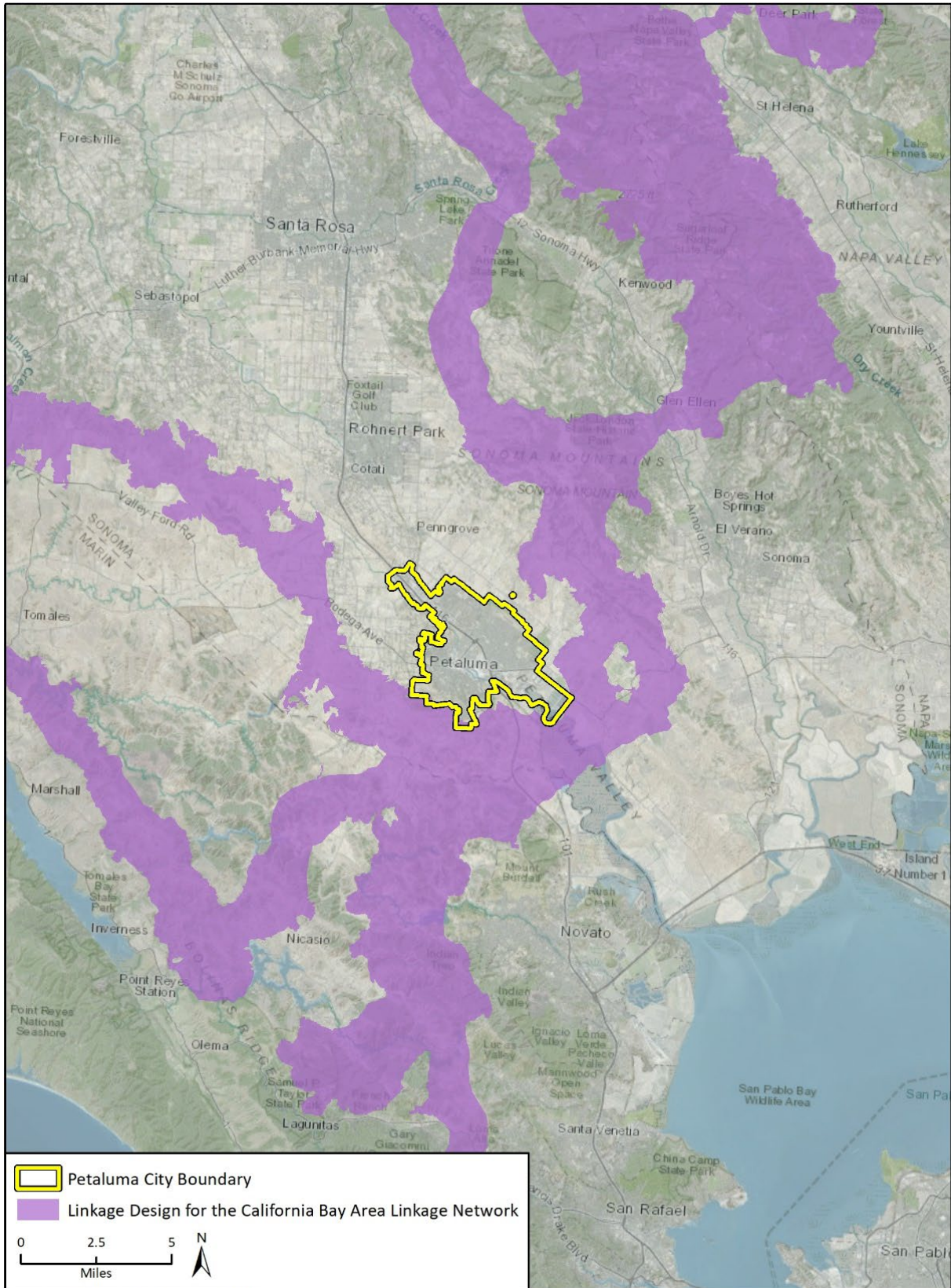
Petaluma is a recognized Tree City by the Arbor Day Foundation. To be recognized, a city must maintain a tree board or department, have a community tree ordinance, spend a required amount on urban forestry, and celebrate Arbor Day. Petaluma has a Tree Advisory Committee that advises on and coordinates tree-related policy and management activities. Petaluma's urban forest is primarily managed through Chapter 17 of the City's Zoning Code, which provides specific language related to the preservation, care, cutting, removal, and management of local trees. The purpose for this Chapter outlines Petaluma's commitment to protecting its urban forest: "Trees are a source of great beauty, provide shade and other environmental benefits, enhance property values, create community identity, and generally enhance the quality of urban life. Trees also serve to mitigate some of the known effects of global warming and climate change." Chapter 17, Tree Preservation, establishes criteria for protected trees and requires a permit for protected tree removal issued by the Community Development Department, as well as specific circumstances that allow for protected trees to be replaced. The Zoning Code also requires tree protection provisions and tree fencing plans to be shown on grading plans to protect trees during grading and construction.

Wildlife Movement Corridors

Wildlife corridors are generally defined as land that connects large areas of habitat where animals live and move. These corridors help animals move through natural areas. The fragmentation of natural areas around Petaluma and throughout Sonoma County due to development patterns can limit the ability of animal populations to move to areas they need for food, shelter, and breeding. The protection and enhancement of existing habitat connectivity linkages is essential to the future health of local wildlife species in and around Petaluma.

Beginning in 2013, the Sonoma Land Trust initiated the Sonoma Valley Wildlife Corridor Project with funding from the Gordon and Betty Moore Foundation and Resources Legacy Fund. The goal is to ensure that the linkage continues to offer safe passage for wildlife by assessing, protecting, and enhancing essential corridor components. The Sonoma Land Trust began to purchase land within the Sonoma Valley Wildlife Corridor. This corridor lies east of the City of Petaluma, entirely within the Jack London State Historic Park and stretches from the Mayacamas Mountains in the east to Sonoma Mountain adjacent to Petaluma. Highway 12 cuts through the wildlife corridor and passes to the south of Glen Ellen. The wildlife corridor linkage network for Sonoma County is depicted in **Figure 4** below.

Figure 4 Sonoma Valley Wildlife Linkage Corridor



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Additional data provided by Sonoma County, 2021.

Fig. 4-10 Linkage Network