

9 CONSERVATION

9.1 Purpose of the Chapter

This chapter presents a framework for governing future decisions about how Tiburon will protect, conserve, and maintain natural and cultural resources for today's residents, as well as future generations. Natural resources are the lands, habitat, wildlife, plants and trees, air, water, and other resources that occur naturally in the environment, undisturbed by humanity. These natural resources can provide biodiversity, agricultural and managed natural resources production, flood risk reduction, protection from hazardous conditions, and climate change mitigation and adaptation. Cultural resources are buildings, sites, structures, or objects that may have historical, architectural, archeological, cultural, tribal, or scientific importance. This chapter addresses the state requirements for the conservation elements of the general plan.

The Conservation chapter includes the following sections.

9.2 Natural Communities and Ecological Resources. Describes the diverse array of natural habitats in Tiburon, including grasslands, woodlands, wetlands, and developed lands, and the wildlife and plants that occur in the Tiburon vicinity.

9.3 Watersheds and Waterways. Provides an overview of Tiburon's watersheds and creeks.

9.4 Water Resources. Presents an overview of water resources, supplies, and demand.

9.5 Water Quality. Describes pollutants impacting streams, wetlands and the Richardson and San Francisco Bays and measures to protect water quality for wildlife and natural habitats.

9.6 Air Quality. Describes air quality and pollutants in the Tiburon area.

9.7 Cultural and Historical Resources. Provides an overview of Tiburon's history and describes archaeological, cultural, and historical resources.

9.8 Goals, Policies, and Programs. Identifies goals, policies, and programs to protect and conserve natural, cultural, and historical resources.

9.2 Natural Communities and Ecological Resources

Tiburon is located in the San Francisco Bay bioregion, one of at least ten bioregions in California. The bioregion is one of the most populous areas of the state, stretching from Point Arena to the Santa Cruz Mountains and extending from the continental shelf to the delta of the Sacramento and San Joaquin Rivers. The habitats and vegetation of the bioregion are as varied as the geography. San Francisco Bay is the largest estuary on the Pacific coast and includes marshlands and mudflats that provide food and shelter for over 1,000 species of animals, including threatened and endangered species. The water that

flows through the Delta sustains fish and wildlife, irrigates farmland, and provides fresh water to two-thirds of the state's population.

Population growth and urban development have resulted in habitat loss and fragmentation and the loss of biological diversity in the estuary. Reduced flows of freshwater from the Sierra and water diversions for agriculture have affected fish and waterfowl habitat. Pollution from wastewater treatment plants, oil refineries, and agriculture also impacts biological resources. Urban development continues to threaten the remaining wildlands and habitat of the bioregion and exacerbate air and water quality problems.

Vegetation occurring within the Tiburon planning area primarily consists of ruderal (a plant species that is the first to colonize disturbed lands), riparian, landscaping, and agricultural vegetation. Because of the urban nature of the developed areas within Tiburon, there is limited undisturbed natural vegetation.

Agricultural and ruderal vegetation in the planning area provides habitat for both common and special-status wildlife populations. Some commonly observed wildlife species in the region include California ground squirrel, California vole, black-tailed deer, coyote, raccoon, opossum, striped skunk, red-tailed hawk, northern harrier, American kestrel, white-tailed kite, American killdeer, gopher snake, garter snake, and western fence lizard, as well as several bat species and many native insect species.

Locally common and abundant wildlife species are important components of the ecosystem. Due to habitat loss, many of these species must continually adapt to using agricultural, ruderal, and ornamental vegetation for cover, foraging, dispersal, and nesting. Wildlife movement corridors, which connect populations of wildlife otherwise fragmented by urbanization, are essential to the survival of many species. In Tiburon, riparian habitat, streams, and foothill access serve as important wildlife movement corridors.

The Richardson Bay Audubon Center & Sanctuary is a wildlife refuge located in the Planning Area along Richardson Bay and is comprised of 10.5 acres of uplands and 900 acres of subtidal bay. The sanctuary provides vital habitat for migratory waterbirds and other wildlife.

Plant Communities

The majority of the land within the Tiburon town limits is developed with urban land uses, as shown in Figure C-1. Annual and perennial grasslands and coastal scrub dominate Ring Mountain Preserve, Old St. Hilary's Preserve, and the uplands and ridge of the peninsula. Coastal Oak woodlands are found primarily on the north side of the ridge along Paradise Drive and the north side of Angel Island, while stands of eucalyptus exist throughout the peninsula and on Angel Island.

Figure C-1: Land Cover Types

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Special Status Species

Special-status species are those plants and animals that, because of their recognized rarity or vulnerability to various causes of habitat loss or population decline, are recognized by federal, state, or other agencies. Some of these species receive specific protection that is defined by federal or State endangered species legislation. Others have been designated as "sensitive" on the basis of adopted policies and expertise of State resource agencies or organizations with acknowledged expertise. The California Natural Diversity Database identifies 64 plant and 45 animal special status species within five miles of the Tiburon planning area.

Plant and animal species identified as endangered under the Federal Endangered Species Act are in danger of extinction within the foreseeable future throughout all or a significant portion of its range. Threatened species are likely to become endangered species in the foreseeable future throughout all or a significant portion of its range. Both endangered and threatened species are fully protected from a "take" unless a take permit is issued by the United States Fish and Wildlife Service. A take is defined as the harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting of a wildlife species or any attempt to engage in such conduct, including modification of its habitat. Proposed endangered or threatened species are those species for which a proposed regulation, but not a final rule, has been published in the Federal Register. Federal laws also protect migratory birds, including their nests and eggs, and bald and golden eagles.

The California Endangered Species Act protects certain plant and animal species when they are of special ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the state. There are three listing categories for species under the Act: endangered, threatened, and rare. The rare classification is provided to native plant species when, although not presently threatened with extinction, it is in such small numbers throughout its range that it may become endangered if its present environment worsens.

Table C-2 identifies special status species known or suspected within five miles of the Tiburon planning area. Endangered species include the foothill yellow-legged frog, the California Ridgway's rail, the tidewater goby, the salt-water harvest mouse, and a number of plant species including the Tiburon jewelflower. A full list of all special status species is available in the General Plan Existing Conditions Report.

Table C-2 Special-Status Animal and Plant Species Present or Potentially Present in the Tiburon Vicinity

Species		Status	
Common Name	Scientific Name	Federal Listing Category (USFWS)	State Listing Category (CDFW)
Amphibians			
California red-legged frog	<i>Rana draytonii</i>	T	--

Foothill yellow-legged frog	<i>Rana boylei</i>	--	E
Birds			
California black rail	<i>Laterallus jamaicensis coturniculus</i>	--	T
California Ridgway's rail	<i>Rallus obsoletus</i>	E	E
Fish			
Euchalon	<i>Thaleichthys pacificus</i>	T	-
Longfin smelt	<i>Spirinchus thaleichthys</i>	C	T
Tidewater goby	<i>Eucyclogobius newberryi</i>	E	-
Insects			
Western bumble bee	<i>Bombus occidentalis</i>	-	CE
Mammals			
Salt-marsh harvest mouse	<i>Reithrodontomys raviventris</i>	E	E
Southern sea otter	<i>Enhydra lutris nereis</i>	T	-
Plants <i>Calochortus tiburonensis</i>			
Beach luvia	<i>Luvia carnosa</i>	E	E
Franciscan manzanita	<i>Arctostaphylos franciscana</i>	E	-
Marin western flax	<i>Hesperolinon congestum</i>	T	T
Marsh sandwort	<i>Arenaria paludicola</i>	E	E
North Coast semaphore grass	<i>Pleuropogon hooverianus</i>	-	T
Presidio clarkia	<i>Clarkia franciscana</i>	E	E
Presidio manzanita	<i>Arctostaphylos montana ssp. ravenii</i>	E	E
San Francisco lessingia	<i>Lessingia germanorum</i>	E	E
San Francisco popcornflower	<i>Plagiobothrys diffusus</i>	--	E
Santa Cruz tarplant	<i>Holocarpha macradenia</i>	T	E
Tiburon mariposa lily	<i>Calochortus tiburonensis</i>	T	T

Tiburon jewelflower	<i>Streptanthus glandulosus</i> <i>ssp. niger</i>	E	E
Tiburon paintbrush	<i>Castilleja affinis</i> var. <i>neglecta</i>	E	T
Two-fork clover	<i>Trifolium amoenum</i>	E	--
White-rayed pentachaeta	<i>Pentachaeta bellidiflora</i>	E	E
<p>Listed species are reported by the California Natural Diversity Database (CNDDB) species to occur or suspected to occur within five miles of the Tiburon planning area, 2022. USFWS = U.S Fish and Wildlife Service; CDFW = California Department of Fish and Wildlife Status Designations E = Listed as “endangered” under the federal Endangered Species Act T = Listed as “threatened” under the federal Endangered Species Act C = A species that has been studied by the USFWS, and the Service has concluded that it should be proposed for addition to the federal endangered or threatened species list. CE= Proposed for State listing as “endangered” CT = Proposed for State listing as “threatened”</p>			

Sensitive Natural Communities and Wetlands

The California Department of Fish and Wildlife (CDFW) considers sensitive natural communities to have significant biotic value, with species of plants and animals unique to each community. There are four sensitive natural communities within 15 miles of Tiburon, as shown on Figure C-3. These include coastal brackish marsh, salt marshes where a significant freshwater influx dilutes the seawater to brackish levels of salinity; coastal terrace prairie, a grassland plant community found along the Pacific Coast; and northern coastal salt marsh, a non-tidal, non-forested wetland that is continuously or frequently flooded and contains saltwater; and serpentine bunchgrass.

All of these community types were once more widely distributed throughout California, but have been modified or destroyed by grazing, cultivation, and urban development. Since the remaining examples of these sensitive natural communities are under continuing threat from future development, CDFW considers them “highest inventory priorities” for future conservation.

Figure C-3: Sensitive Natural Communities and Wetlands

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9.3 Watersheds and Waterways

A watershed is a region that is bounded by a divide that drains to a common watercourse or body of water. Watersheds serve an important biological function, often supporting an abundance of aquatic and terrestrial wildlife including special-status species and anadromous and native local fisheries. Watersheds also provide fresh water for domestic and agricultural use and enjoyment of natural resources.

Tiburon is located within three major watersheds as shown in Figure C-4: Angel Island-San Francisco Bay Estuaries, Arroyo Corte Madera Del Presidio-Frontal San Francisco Bay Estuaries, and Larkspur Creek-Frontal San Francisco Bay Estuaries. The Town is drained by multiple small watersheds on the north and south sides of the peninsula. Primarily water drains to the Town stormwater drainage system that runs under Tiburon Boulevard and outlets to Raccoon Strait near the Ferry Terminal, or the secondary outlet which drains south to Belvedere Lagoon. Other portions of Tiburon drain to Railroad Marsh, a pond/marsh feature that serves as a flood control feature.

Tiburon's creeks are also a key part of the Town's open space network. They are valuable physical, aesthetic, recreational, and ecological assets. Protection of creeks not only preserves surface water quality, but also reduces flood risks, preserves biodiversity and habitat, minimizes erosion of stream banks, and prevents downstream siltation.

Figure C-4: Watersheds

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9.4 Water Resources

The Marin Municipal Water District (Marin Water) provides water to the Town of Tiburon as well as the incorporated cities and towns of San Rafael, Mill Valley, Fairfax, San Anselmo, Ross, Larkspur, Corte Madera, Belvedere and Sausalito and communities in unincorporated areas of Marin County. Marin Water's primary water supply is local surface water obtained from rainfall collected from a watershed with six reservoirs. The Marin Water receives a supplemental water supply from the Sonoma County Water Agency, which comes primarily from Lake Sonoma via the Russian River.

Every five years Marin Water prepares an Urban Water Management Plan (UWMP) to ensure the efficient use of available water supplies. The 2020 UWMP determines the existing baseline water consumption; establishes water use targets; describes and evaluates historical and projected water use; evaluates current and projected water supply and reliability; describes and evaluates demand

management measures; and provides a water shortage contingency plan. According to Marin Water's 2020 UWMP, projected water supplies are sufficient to meet projected water demand through 2045 in a normal year as well as in multiple dry years.

Marin Water also prepared the Water Resources 2040 plan to evaluate resiliency in the face of a variety of threats to water resources in its service area, including earthquakes, drought, climate change, wildfire, landslides, and water quality issues, and to identify options to enhance resiliency for its customers. Based on the results of the simulated reliability threats, the Water Resources Plan 2040 recommends actions that Marin Water should take to increase the water supply resiliency, including increased water conservation, investing in watershed management, and exploring groundwater partnering opportunities. No groundwater basins are identified within the Tiburon planning area.

9.5 Water Quality

Water is also an environmental resource because of its effects on wildlife and habitat. Two general types of pollutant discharges affect the quality of surface water in the Tiburon area:

- Discharge from a pipe or other device directly into the receiving waters, such as treated wastewater from a sewer plant or an industrial building. These sources can be managed through periodic monitoring and treatment methods.
- Stormwater runoff that has drained from streets, parking lots, roofed structures, farms, and minor watercourses before it reaches a major creek, river, or other water body. This runoff can contain debris, litter, soil, and other natural and man-made pollutants. Typical pollutants include organic materials that contribute to biochemical oxygen demand, suspended solids, pathogens, sediment from construction and erosion, air pollution fall-out, gasoline additives, oil and grease, nitrogen and phosphorus from chemical fertilizers, animal waste, leached acids from leaves, and pesticides. These pollutants come from a variety of sources, including pet waste, lawn fertilization, cars, construction sites, illegal dumping and spills, and pesticide application. Once pollutants from surface runoff reach the receiving waters, they can cause water quality problems similar to those found in municipal and industrial point source discharges.

Where rain falls on paved surfaces, a much greater amount of runoff is generated compared to runoff from the same storm falling over a vegetated area. These large volumes of water are swiftly carried to local streams and wetlands, can cause flooding and erosion, and wash away important habitat for wildlife that live in the stream.

The most critical period for surface water quality is following a rainstorm which produces significant amounts of drainage runoff into streams at low flow, resulting in poor dilution of contaminants in the low flowing stream. Such conditions are most frequent during the fall at the beginning of the rainy season when stream flows are near their lowest annual levels.

Surface water pollution is also caused by erosion. Excessive and improperly managed grading, vegetation removal, quarrying, logging, and agricultural practices all lead to increased erosion of

exposed earth and sedimentation of watercourses during rainy periods. In slower moving water bodies these same factors often cause a buildup of siltation, which ultimately reduces the capacity of the water system to percolate and recharge groundwater basins, as well as adversely affecting both aquatic resources and flood control efforts.

To counteract the impacts of stormwater runoff, Tiburon has adopted regulations that require management of stormwater for all new development. Stormwater management is the use of specific practices, constructed or natural, to reduce, slow down and/or remove pollutants from stormwater runoff. Stormwater management practices are essentially designed to restore or mimic some of the natural processes provided by the vegetative cover that existed prior to land disturbance. Replacing impervious surfaces with vegetation allows the soil to naturally filter or biodegrade contaminants that would otherwise flow into streams, and wetlands, and the Bay.

State and federal regulations work to protect watershed and recharge areas. In particular, the National Pollutant Discharge Elimination System (NPDES) program and the State Regional Water Quality Control Board mandate control of urban runoff to eliminate the percolation of pollutants from surface runoff into underground water supplies and open bodies of water. The NPDES program requires the Town to inspect, identify, and prevent illicit discharges such as silt, road debris, oil, or discharges from any residential, commercial or construction area into drains, waterways, and wetlands. Discharges of materials must be processed or eliminated where practical.

San Francisco Bay and Richardson Bay are listed by the San Francisco Bay Regional Water Quality Board as having limited water quality. Pollutants include chlordane, DDT, dieldrin, mercury, selenium, dioxin compounds, furan compounds, PCBs, and invasive species.

9.6 Air Quality

Tiburon typically experiences good air quality due to the almost persistent westerly flow of air from the ocean. There are little or no pollution sources to the west of Tiburon. Episodes of high particulate levels can occur in late fall and winter when high pressure over the interior of the western United States (known as the Great Basin High) produces extended periods of light winds and low-level temperature inversions. This condition frequently produces poor atmospheric mixing that results in degraded regional air quality. Air quality may also be compromised by wildfire smoke from around the region, particularly during the dry months.

Tiburon is located within the Bay Area Air Quality Management District (BAAQMD), which is primarily responsible for assuring that national and state standards for air pollutants are attained in the San Francisco Bay Area. BAAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, and monitoring ambient air quality.

Areas that do not violate ambient air quality standards are considered to have attained the standard. Violations of ambient air quality standards are based on air pollutant monitoring data and are judged for

each air pollutant. The Bay Area does not generally meet national or California standards for ozone and particulate matter. BAAQMD's Bay Area 2017 Clean Air Plan contains districtwide control measures to reduce ozone, particulate matter, air toxics, and greenhouse gasses. The Plan notes that Bay Area air quality has improved significantly in recent decades, greatly reducing health effects related to air pollution. Nonetheless, exposure to fine particulate matter (PM_{2.5}) is by far the leading public health risk from air pollution in the Bay Area although communities are disproportionately impacted and there are disparities in health risks.

The closest monitoring station to Tiburon is located in downtown San Rafael, which is the only station in Marin County. Pollutant monitoring results for the years 2017-2019 in San Rafael indicate that air quality standards for particulate matter and ozone have been exceeded in some years. The State standard for respirable particulate matter (PM₁₀) was exceeded four times over the three-year period (vs. 17 times for the Bay Area region) and the federal standard for fine particulate matter (PM_{2.5}) was exceeded 21 times (vs. 37 for the Bay Area). Ozone levels exceeded the State 1-hour and 8-hour standards and the federal 8-hour standard once. The primary sources of these pollutants are wood smoke and local traffic, and their buildup is greatest during the evenings and early morning periods and on cold, stagnant winter evenings when temperature inversions prevent the rise and dispersal of pollutants.

9.7 Cultural and Historical Resources

The term "cultural resources" applies to a variety of natural and humanmade items, including paleontological resources (the fossilized remains of plants and animals), traditional cultural properties (sites with value to Native American communities), and archaeological sites and buildings with historic or architectural significance.

Humans are believed to have resided in southern Marin County for the past 13,000 years. According to U.S. Department of Interior, the Coast Miwok first settled the Tomales Bay area between 2,000 and 4,000 years ago.¹ The Coast Miwok occupied what is now Marin County and part of Sonoma County, as far north as the vicinity of Sebastopol. Southern Popo people are also known to have inhabited Marin before colonization.

Spanish colonization and the development of missionaries dramatically changed the Coast Miwok's ancestral lands and their way of life. In the late 1700s, Coast Miwok were interned in four San Francisco Bay area missions. Forced movement of Coast Miwok to the missions and the determination of the friars to convert the natives to Christianity and destroy all vestiges of their former life, along with epidemic diseases of the whites, dramatically reduced Coast Miwok numbers. By the end of the Spanish occupation, the Coast Miwok population had fallen from 3,000 to between 300 and 500.

The land of the Tiburon Peninsula was first awarded by the Mexican government to John Thomas Reed in 1834 as the Rancho Corte de Madera del Presidio. An Irish sailor, Read had arrived in the area in 1826,

¹ Avery, C. (2009). Tomales Bay environmental history and historic resource study- Point Reyes National Seashore. Pacific West Region National Park Service, U.S. Department of the Interior.

and became a Mexican citizen in 1834. His widow and four children applied for confirmation of the grant of 7,845 acres; it was finally awarded to the family in 1884. Dairying and cod fishing were two major industries in the area.

In 1882, the Reed family made a deal with Peter Donahue for a right-of-way for the North Pacific Railroad (name later changed to Northwestern Pacific). The railroad company built a railroad yard and ferry terminal, with ferries taking commuters and vehicles to San Francisco and Sausalito. Barges hauled loaded freight cars to San Francisco and Richmond. In the 1970s, the abandoned railroad was removed, and the right-of-way purchased by Tiburon for the waterfront path. The railyards were used for housing and commercial projects.

For many years, most of the land of the peninsula was controlled by descendants of the Reed family and used for cattle ranching. Development began after the World War II on smaller tracts. Eventually, the primary landowners finalized a master plan in 1956.

In 1961, Richardson Bay Audubon Center became established, representing a culmination of a seven-year local campaign to protect the bay and shoreland from real estate development. This was followed by the dedication of Old St. Hillary's Historic Preserve, the first hillside open space conserved with wildflower acreage as part of Marin County parks system.

In 1964, the Town of Tiburon was incorporated, and a major preservation effort was launched to revitalize Main Street and Downtown Tiburon.

Cultural Resources

Surveys have found and recorded a total of 142 cultural resources in the Tiburon planning area, including both prehistoric and historic sites.

Most of the prehistoric period resources were identified in the early part of the 20th century by archeologist Nels Nelson who recorded over 400 shell mound midden sites along the Bay Area's shorelines during this period. Many of these shell mound middens were the result of simple shellfish processing and do not possess artifacts or features that indicate habitation, while others are connected with more permanently inhabited prehistoric village sites, some of which continued to be occupied well into the early Spanish Period. In addition to the prehistoric resources identified by Nelson, 11 other prehistoric sites, including prehistoric rock art, habitation, and lithic scatter have been identified in the planning area.

Historic resources include a preponderance of historic period resources relates to Angel Island's military installations and immigration station, as well as assorted historic foundations, walls, and buildings in the planning area.

The National Register of Historic Places evaluates a historic place based on its connection to an event or person of historic significance; distinctive characteristics of its design or construction; or the information it may yield about our past. Historic listing does not guarantee that a site will be preserved, but is a

factor in environmental review, and can inform local regulations. The National Register lists five properties for the Tiburon planning area. These include:

- Angel Island, U.S. Immigration Station;
- San Francisco and North Pacific Railroad Station House-Depot (Peter Donahue Building);
- Lyford’s Stone Tower;
- Benjamin and Hilarita Lyford House (Lyford House); and
- St. Hilary’s Mission Church (Old St. Hilary’s Church).

Two historic districts, the Camp Reynolds District and the Angel Island District, are also on record.

In 1999, forty buildings were evaluated for the Downtown Tiburon Historic Resources Study and in 2001 the Town adopted a Local Historic Inventory for Downtown Tiburon including 23 buildings. In 2010, the Town updated the inventory by resolution and removed the Harbor Light Building, 20 Main Street, from the inventory. In 2011, an initial historic evaluation was conducted for the building at 1694-1696 and found the structure did not possess any characteristics to qualify as a historic resource and the building was subsequently removed from the inventory. The remaining resources listed in the local historic inventory are identified in Table C-1 and shown in Figure DT-3 in the Downtown chapter.

Table C-1: Local Historic Inventory for Downtown Tiburon

Address	Year Built
13, 15, 17, 19 Main Street	1886
16, 18 Main Street	After 1928
21A Main Street (Ark)	1880
24, 26 Main Street	1912
2, 29 Main Street	1925
30 Main Street	1916
31, 33 Main Street	1928
32 Main Street	1921
34. 36 Main Street	1921
35 Main Street	1925
38 Main Street	1900
55 Main Street	1925
72 Main Street	1918
104 Main Street	1895
106 Main Street	1920
108 Main Street	1920
110 Main Street	1920
112 Main Street	1890
116 Main Street	1906
118, 120 Main Street	1896
122 Main Street	1870

9.8 Goals, Policies, and Programs

Goal C-A

Preserve and improve the quality of the environment through resource restoration and conservation, management, and pollution control.

Policy C-1 Open Water Uses

Limit use of open water areas to landings for boats and ferries; boating, swimming, and fishing; and parks.

Policy C-2 Existing Structures Built over Water

Maintenance and replacement of lawfully existing structures built over San Francisco Bay (bayward of the mean high tide line) may be permitted. However, with the exception of piers, docks, and public access facilities approved by the Bay Conservation and Development Commission (BCDC), expansion of existing structures or construction of new structures that would result in new filling of San Francisco Bay shall be prohibited.

Policy C-3 Habitat Preservation

Preserve and enhance the diversity of wildlife and aquatic habitats found in the Planning Area bayfront lands, including tidal marshes, seasonal marshes, lagoons, wetlands, and low-lying grasslands over historical marshlands.

Policy C-4 New Development

Development shall not encroach into sensitive wildlife habitats, limit normal range areas, or create barriers to wildlife that cut off or substantially impede access to food, water, or shelter, or cause damage to fisheries or fish habitats. Access to environmentally sensitive marshland and adjacent habitat shall be restricted, especially during spawning and nesting seasons.

Policy C-5 Use of Lands Underlain by Bay Mud

Reserve those areas underlain by deposits of “young muds” for water-related recreational opportunities, habitat, open space, or limited development subject to approval by the Corps of Engineers and other trustee agencies.

WETLANDS

Policy C-6 Wetland Setbacks

Provide buffer zones of at least 100 feet between development and wetland areas to the maximum extent possible.

Program C-a Wetland and Streamside Regulations

Amend the Zoning Ordinance to incorporate wetland and streamside development setbacks.

Policy C-7 Construction in Jurisdictional Waters and Wetlands

Development and construction shall comply with all federal and state regulations regarding jurisdictional waters and wetlands.

STREAMS AND RIPARIAN CORRIDORS

Policy C-8 Freshwater Streams and Marshes

Preserve and/or expand freshwater habitats in the bayfront areas associated with freshwater streams and small former marshes so that the circulation, distribution, and flow of the fresh water supply are facilitated.

Policy C-9 Stream Setbacks

Require open space buffers of at least 50 feet on each side of the top of the bank of perennial, intermittent, and ephemeral streams on properties less than five acres, and of at least 100 feet on each side of the top of the bank on properties greater than five acres, to minimize disturbance of natural vegetation and maintain the environmental and scenic attributes of the corridor. Where modification of corridors is required for flood control or crossings, such modification shall be made in an environmentally sensitive manner that enhances, replaces, or retains vegetation.

FLOOD-PRONE AREAS

Policy C-10 Flood Hazard Zone

Avoid construction on lands that are shown to be within the 100-year flood hazard zone as shown on the current FEMA Flood Rate Insurance Map.

Policy C-11 Uses of Floodplains

Use areas defined as floodplain for habitat and flood protection.

WILDLIFE AND HABITAT PRESERVATION

Policy C-12 Habitat Preservation

Preserve and protect wildlife, plant, and marine habitat in the open spaces, shoreline, marshes, mudflats, and other biologically sensitive areas to the greatest extent feasible.

Policy C-13 Development Impacts on Special-Status Species and Sensitive Habitats

Assure that new development and construction does not have a significant adverse effect on special-status species or sensitive natural communities to the extent feasible and as regulated by federal and state laws.

TREES

Policy C-14 Tree Protection

Preserve protected trees, as defined in the Municipal Code, tree stands, and tree clusters to the maximum extent feasible.

Program C-b Tree Preservation

Consider revising and expanding the Tiburon Tree Ordinance to provide protection of both individual trees and native woodlands. Factors to consider in expanding the current ordinance include the importance of protecting smaller sapling trees and balancing their protection against those of designated “protected trees”, defining critical management guidelines necessary to maintain healthy woodlands, and methods to encourage natural regeneration in woodland habitats.

Policy C-15 Woodland Protection

Protect natural habitat, and natural wooded areas to the maximum extent feasible.

HISTORICAL AND CULTURAL RESOURCES

Policy C-16 Cultural Resource Protection

Protect significant geological, ecological, archaeological, tribal cultural, and paleontological resources and historic sites.

Program C-c Potential Cultural and Tribal Resources

Require that projects proposed for sites that have the possibility of containing cultural and tribal cultural resources and resulting in ground disturbance be evaluated by a qualified archaeologist prior to project approval and require such projects to implement measures to reduce or avoid impacts to any identified or inadvertently discovered cultural and tribal cultural resources. When encountering unanticipated cultural resources, artifacts, or human remains, contractors shall cease construction activities upon until proper authorities have been notified and a mitigation plan is developed.

Policy C-17 Structures of Historic and Cultural Significance

Preserve and protect structures and properties which have historical, cultural, aesthetic, or other special character or interest to the Town.

Program C-d Historic Building Overlay

Consider adopting an overlay zone for the area containing the Town’s Inventory of Local Historical Buildings and adopting additional protection measures for the structures identified in the Inventory.

WATER CONSERVATION

Policy C-18 Water Conservation

Support the efforts of the Marin Municipal Water District (Marin Water) to conserve the use of water through enforcement of the Town’s water conservation ordinance requiring implementation of water conservation measures.

Program C-e **Development Impacts on Water Retention**

Where impervious surface construction and storm drain system installation and/or hillside stabilization (e.g., landslide repair) are proposed as part of development proposals, or wherever such stabilization is required by the Town to protect public safety, require project applicants to analyze the impacts of these drainage pattern modifications on groundwater recharge and on downslope water wells and their yields. In the event impacts are likely, modifications to the proposed project, including possible downsizing, should be implemented to the extent feasible.

Program C-f **Water Conservation Ordinance**

Continue to implement the Town’s water conservation ordinance through the review of new development proposals involving new landscaping.

Policy C-19 Water Supply Planning

Coordinate planning activities with Marin Water to ensure that both the Town and Marin Water have the latest information with respect to land use and water supply planning.

WATER QUALITY

Policy C-20 Water Quality

Maintain or enhance water quality to promote the continued environmental health of natural waterway habitats.

Program C-g **Implement Stormwater Regulations**

Continue to be an active member agency of the Marin County Stormwater Pollution Prevention Program (MCSTOPPP) to implement best management practices and to comply with federal and state water quality regulations to reduce pollution being conveyed through storm water systems to the Bay.

AIR QUALITY

Policy C-21 Implement the Clean Air Plan

Implement the Bay Area Air Quality Management District’s Clean Air Plan by applying BAAQMD’s rules, best control measures ,and best management practices to construction, property maintenance, commercial operations, and other applicable activities.

Program C-h **Participate in Emission Reduction Efforts**

Participate in efforts to voluntarily reduce activities that pollute on Spare the Air days and help publicize Spare the Air day activities.

Program C-i Reduce Particulate Emissions

Promote the reduction of particulate matter from construction sites, roads, parking lots, and other sources through requiring development projects to implement best management practices (BMPs).

Program C-j Reduce Air Quality Impacts of New Development

Review all development and infrastructure projects for potential air quality impacts to residences, congregate housing, schools, and other sensitive receptors. Ensure that mitigation measures and best management practices are implemented to reduce significant emissions of criteria pollutants to the greatest extent feasible.

Policy C-22 Air Quality Impacts to Sensitive Receptors

Minimize exposure of sensitive receptors to concentrations of air pollutant emissions, toxic air contaminants, and odors.

Program C-k Emission Reductions

Require the use of feasible control measures to reduce PM₁₀, NO_x, and diesel particulate matter related to development, including construction and operational phases.

Program C-l Zero Emission Landscape and Small Off-Road Equipment

Consider adoption of an ordinance requiring the use of zero emission landscape and small off-road equipment instead of gasoline and diesel-powered equipment in all residential and commercial areas.

Policy C-23 Vehicle Emissions Reduction

Encourage the reduction of the number of single-occupant vehicle trips and cumulative emissions that result from auto use through implementation of Mobility Element policies.