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3.3 Biological, Agriculture, and Forestry Resources

3.3.1 Introduction

This section describes existing biological, agricultural, and forestry resources in Humboldt, as well as the relevant regulatory framework. This section evaluates possible direct and indirect impacts to biological resources, including special-status species, sensitive natural communities, regulated waters and wetlands, sensitive habitat and mature native trees, and wildlife movement corridors associated with implementation of the proposed plan. This section also addresses and evaluates potential impacts related to agricultural and forestry resources.

3.3.2 Environmental Setting

Vegetation Communities and Other Land Cover Types

Definitions

Vegetation communities provide wildlife habitat components, including food, shelter, movement corridors, and breeding opportunities for wildlife species. They are classified in general terms with an emphasis on vegetation structure, vegetation species composition, soil structure, and water availability. Some wildlife species are generalists that use a variety of habitats, while other species are adapted to very specific habitats. Species that are limited to a single habitat type are more vulnerable to habitat loss and disturbance than are generalists and therefore, may be more at risk of experiencing population declines.

Humboldt County (Unincorporated and Incorporated)

The RCAP area encompasses the land within both unincorporated and incorporated portions of Humboldt. Humboldt is predominantly fir and montane hardwood forests (61 percent), and redwood forest (18 percent). The proposed plan has the following vegetation communities: annual grassland, aspen, chaparral, coastal oak woodland, coastal scrub, conifer, eucalyptus, fir, montane hardwood, pine, perennial grassland, and redwood riparian. These communities provide resources for a wide variety of wildlife species. The CDFW and USFWS closely monitor communities classified as sensitive native plant communities or that provide habitat for sensitive wildlife species. In addition, the proposed plan has urban land uses, which are not vegetation communities. Nearly 400,000 acres of Humboldt's mountains and coastline are within State and national park systems, leaving large tracts of existing terrestrial habitat in a natural condition.

A signature asset of Humboldt is its aquatic habitats, including rivers, estuaries, and wetlands. Humboldt Bay, one of California's largest coastal estuaries, is second only to San Francisco Bay in size. The bay is home to many invertebrates, fish, birds, and mammals. Humboldt's rivers and the ocean off the coast have tremendous productive potential. In the 1970s, over half the fish produced and consumed in California were landed in the Humboldt Bay area. Restoring this biological productivity to the region, especially the recovery of federally threatened and endangered Evolutionary Significant Units (ESUs) of coho salmon (*Oncorhynchus kisutch*; Southern Oregon and Northern California Coasts and Central California Coast, respectively) and federally threatened Distinct Population Segment (DPS) of steelhead trout (*Oncorhynchus mykiss*; Northern California), is very important to this region of California.

Regional Climate Action Plan and CEQA GHG Emissions Thresholds

Existing information for Humboldt was used to create a list of vegetation communities and land cover types. The plant community descriptions and nomenclature are based on Holland's *Preliminary Descriptions of the Terrestrial Natural Communities of California*.¹ Wildlife species assemblage information are based on existing documentation from the *California Wildlife Habitat Relationships System*² and *A Manual of California Vegetation, Second Edition*.³ Table 3.3-1 and Figure 3.3-1 display the major vegetation communities and other land cover types in Humboldt.

Table 3.3-1 Vegetation Communities and Land Cover Types in Humboldt

| Type ¹ | Acres | Percent |
|-------------------------------|--------------------|------------|
| Agriculture - Crops | 56,635.5 | 2.5 |
| Annual Grassland | 213,847.1 | 9.3 |
| Aspen | 3.8 | <1 |
| Barren | 15,787.1 | <1 |
| Chaparral ² | 44,818.2 | 2 |
| Coastal Oak Woodland | 22,136.4 | <1 |
| Coastal Scrub | 51,165.7 | 2 |
| Conifer ³ | 18,306.6 | <1 |
| Eucalyptus | 81.4 | <1 |
| Fir ⁴ | 664,458.9 | 29 |
| Montane Hardwood ⁵ | 744,432.8 | 32 |
| Pine ⁶ | 6,276.8 | <1 |
| Perennial Grassland | 2,381.8 | <1 |
| Redwood | 408,130.9 | 18 |
| Urban | 18,813.9 | <1 |
| Total | 2,309,735.0 | 100 |

¹ California Department of Fish and Wildlife California Wildlife Habitat Relationships

² Includes Montane Chaparral, Mixed Chaparral, and Chamise-Redshank Chaparral

³ Includes Klamath Mixed Conifer and Subalpine Conifer

⁴ Includes Douglas fir, white fir, and red fir

⁵ Includes Montane Riparian, Montane Hardwood Conifer, and Montane Hardwood

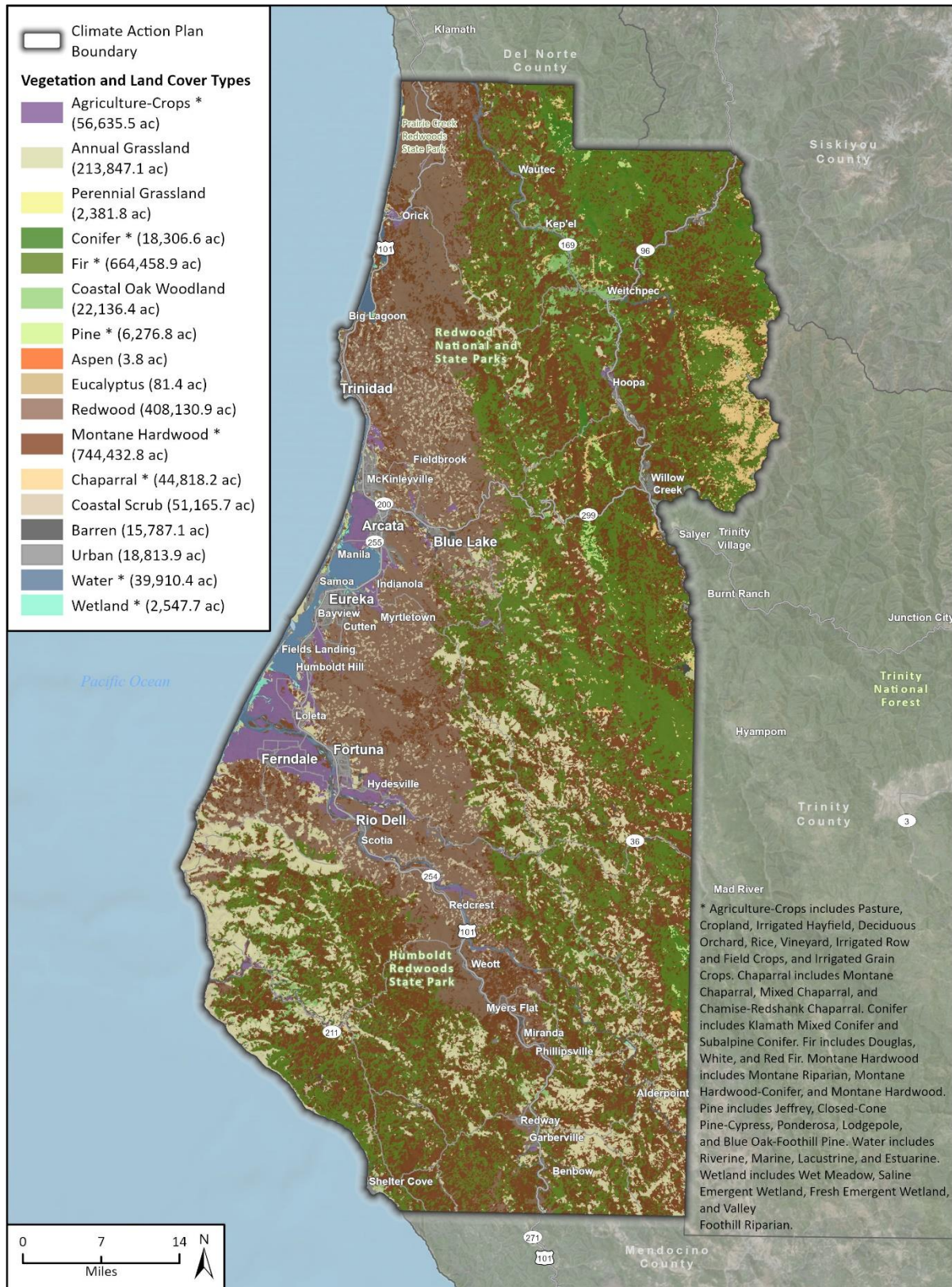
⁶ Includes Jeffery, closed-cone, pine-cypress, Ponderosa, Lodgepole, and blue oak-foothill pine

¹ Holland, R. F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. California Department of Fish and Wildlife, Nongame Heritage Program.

² Mayer, K.E. and W.F. Laudenslayer, Jr. (editors). 1988. A guide to the wildlife habitats of California. State of California, The Resources Agency, Department of Fish and Game. Sacramento, CA. 166 pp. <https://www.wildlife.ca.gov/Data/CWHR/Wildlife-Habitats>.

³ Sawyer, J. O., T. Keeler-Wolf, and J.M. Evens. 2009. *A Manual of California Vegetation, Second Edition*. California Native Plant Society, Sacramento, California.

Figure 3.3-1 Vegetation Communities and Land Cover Types in Humboldt



Basemap and imagery provided by Microsoft Bing, Esri and their licensors © 2024.
 Additional data provided by CAL FIRE FRAP, 2022.

22-13470 EPS EIR
 Fig X Vegetation

AGRICULTURE – CROPS

Agriculture – Crops consists of areas that are subject to frequent human disturbance and regular cultivation activities, which are typically monotypic. Vegetation within this land cover type is variable, with crops ranging in size, shape, and growth pattern. Vegetation within this land cover type may also vary between season due to crop rotation, resulting in different species present during different times of year. Within Humboldt, this land cover type is associated with water sources including bays, lagoons, rivers, and streams and is most concentrated in the western portion of the region, occupying approximately 56,635.5 acres. This land cover type is included in the CDFW California Wildlife Habitat Relationships database as Cropland.⁴

ANNUAL GRASSLAND

Annual Grassland is a primarily non-native vegetation community comprised of annual herbaceous species. Common annual grass species found in this vegetation community include non-native wild oats (*Avena barbata*), soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), red brome (*Bromus rubens*), and foxtail barley (*Hordeum murinum*), as well as native purple needlegrass (*Stipa pulchra*). Common forbs found in this vegetation community include non-native filarees (*Erodium* spp.) and bur clover (*Medicago polymorpha*), as well as native California poppy (*Eschscholzia californica*) and turkey mullein (*Croton setiger*). Species within this vegetation community vary between seasons and years depending on temperature, precipitation, and livestock grazing. Within Humboldt, this vegetation community is most concentrated in the southern portion of the region, particularly along the coast and within eastern valleys, occupying approximately 213,847.1 acres. This vegetation community is included in the CDFW California Wildlife Habitat Relationships database as Annual Grassland.⁵

ASPEN

Aspen is a native vegetation community primarily composed of mature quaking aspen (*Populus tremuloides*) stands. This vegetation community is characterized by a relatively open canopy ranging between 60 and 100 feet in height with a dense herbaceous understory and variable shrub layer. The tree canopy is dominated by quaking aspen, with other deciduous and coniferous tree species including willows (*Salix* spp.), alders (*Alnus* spp.), black cottonwood (*Populus trichocarpa*), pines (*Pinus* spp.), and firs (*Abies* spp.) present at lower cover. The shrub layer is typically comprised of native sagebrushes (*Artemisia* spp.), roses (*Rosa* spp.), and snowberries (*Symphoricarpos* spp.), while the herbaceous understory consists of a variety of forbs and grasses. Within Humboldt, this vegetation community is scattered throughout Humboldt, occupying approximately 3.8 acres. This vegetation community is included in the CDFW California Wildlife Habitat Relationships database as Aspen.⁶

BARREN

Barren consists of areas that are generally devoid of vegetation. This land cover type includes areas comprised of 2 percent or less total cover of herbaceous species and/or 10 percent or less total cover of tree and/or shrub species. This land cover type can be found across a variety of different habitats and its structure and composition may vary greatly depending on region and surrounding

⁴ Mayer, K.E. and W.F. Laudenslayer, Jr. (editors). 1988. A guide to the wildlife habitats of California. State of California, The Resources Agency, Department of Fish and Game. Sacramento, CA. 166 pp <https://wildlife.ca.gov/Data/CWHR/Wildlife-Habitats> (accessed November 2024).

⁵ Ibid

⁶ Ibid

environment. Within Humboldt, this vegetation community is scattered throughout the region, occupying approximately 15,787.1 acres. This land cover type is included in the CDFW California Wildlife Habitat Relationships database as Barren.⁷

CHAPARRAL

Chaparral is a native vegetation community dominated by shrub species ranging between 3 and 10 feet in height. This vegetation community is generally characterized by a dense shrub layer with a sparse to absent herbaceous layer. Emergent trees may also be present at low cover. Common shrub species found in this vegetation community include ceanothus (*Ceanothus* spp.), manzanita (*Arctostaphylos* spp.), chamise (*Adenostoma fasciculatum*), redshank (*Adenostoma sparsifolium*), toyon (*Heteromeles arbutifolia*), mountain mahogany (*Cercocarpus betuloides*), and scrub oak (*Quercus berberidifolia*). This vegetation community is well-adapted to fire, with some species requiring seed scarification to successfully germinate. Within Humboldt, this vegetation community is most concentrated in the eastern portion of the county, particularly in the areas east of Highway 96, occupying approximately 44,818.2 acres. This vegetation community is included in the CDFW California Wildlife Habitat Relationships database as Mixed Chaparral, Montane Chaparral, and Chamise – Redshank Chaparral.⁸

COASTAL OAK WOODLAND

Coastal Oak Woodland is a native vegetation community characterized by a tree canopy comprised of deciduous and evergreen hardwoods (mostly oaks [*Quercus* spp.]), with variable shrub and herbaceous layers. The structure and species composition of this vegetation community is highly variable, ranging between a closed tree canopy with a dense shrub layer comprised of chaparral or coastal scrub to an open woodland with an herbaceous layer comprised of annual or perennial grassland. Dominant tree species within this vegetation community include coast live oak (*Quercus agrifolia*), Oregon white oak (*Quercus garryana*), black oak (*Quercus kelloggii*), canyon live oak (*Quercus chrysolepis*), madrone (*Arbutus menziesii*), and interior live oak (*Quercus wislizeni*). Within Humboldt, this vegetation community is most prevalent in the eastern foothills, particularly within the northeastern portion of the county, occupying approximately 22,136.4 acres. This vegetation community is included in the CDFW California Wildlife Habitat Relationships database as Coastal Oak Woodland.⁹

COASTAL SCRUB

Coastal scrub is a native vegetation community dominated by shrub species ranging between 1 to 7 feet in height with mesophytic branches, flexible branches, semi-woody stems, and shallow roots. The structure and species composition of this vegetation community is highly variable depending on location along the California coast. Common shrub species within this vegetation community include coyote brush (*Baccharis pilularis*), black sage (*Salvia mellifera*), California buckwheat (*Eriogonum californicum*), California sagebrush (*Artemisia californica*), silver bush lupine (*Lupinus albifrons*), coffeeberry (*Frangula californica*), bush monkeyflower (*Diplacus aurentiacus*), California blackberry (*Rubus ursinus*), poison oak (*Toxicodendron diversilobum*), California sunflower (*Encelia californica*), and woolly sunflower (*Eriophyllum lanatum*). Species present within the subshrub and herbaceous

⁷ Mayer, K.E. and W.F. Laudenslayer, Jr. (editors). 1988. A guide to the wildlife habitats of California. State of California, The Resources Agency, Department of Fish and Game. Sacramento, CA. 166 pp. <https://wildlife.ca.gov/Data/CWHR/Wildlife-Habitats> (accessed November 2024).

⁸ Ibid

⁹ Ibid

layers may include bracken fern (*Pteridium aquilinum*), western sword fern (*Polystichum munitum*), yerba buena (*Clinopodium douglasii*), and Indian paintbrush (*Castilleja densiflora*). Within Humboldt, this vegetation community is prevalent throughout the western portion of the county, particularly along the coast between Ferndale and Trinidad, occupying approximately 51,165.7 acres. This vegetation community is included in the CDFW California Wildlife Habitat Relationships Database as Coastal Scrub.¹⁰

CONIFER

Conifer is a native vegetation community dominated by needle-leaved evergreen trees. The structure of this vegetation community is variable, ranging between open forests with trees of low to medium stature to tall, dense forests with patches of broad-leaved evergreen trees, deciduous trees, and shrubs. Dominant tree species within this vegetation community include white fir (*Abies concolor*), Douglas fir (*Pseudotsuga menziesii*), Ponderosa pine (*Pinus ponderosa*), incense cedar (*Calocedrus decurrens*), sugar pine (*Pinus lambertiana*), Lodgepole pine (*Pinus contorta*), western white pine (*Pinus monticola*), and mountain hemlock (*Tsuga mertensiana*). Common shrub species within this vegetation community include western thimbleberry (*Rubus parviflorus*), dwarf rose (*Rosa gymnocarpa*), California huckleberry (*Vaccinium ovatum*), and Oregon grape (*Berberis aquifolium*). The herbaceous layer within this vegetation community typically includes native grasses and forbs, including California brome (*Bromus stichensis* var. *carinatus*), lupines (*Lupinus* spp.), western rattlesnake plantain (*Goodyera oblongifolia*), and Idaho fescue (*Festuca idahoensis*). Within Humboldt, this vegetation community is prevalent within the eastern portion of the county, occupying approximately 18,306.6 acres. This vegetation community is included in the CDFW California Wildlife Habitat Relationships Database as Subalpine Conifer and Klamath Mixed Conifer.¹¹

EUCALYPTUS

Eucalyptus is a naturalized non-native vegetation community characterized by scattered to dense eucalyptus (*Eucalyptus* spp.) stands. The structure of this vegetation community is highly variable, as most eucalyptus stands in California have been planted into rows for wind protection or groves for hardwood production. Species composition within this vegetation community is also variable, ranging from one to several different eucalyptus species. Dominant species within this community typically include blue gum (*Eucalyptus globulus*) and red gum (*Eucalyptus camaldulensis*). Dense eucalyptus stands tend to support sparse herbaceous layers comprised of non-native annual grasses and forbs, while scattered eucalyptus stands support a more diverse shrub layer comprised of chaparral and coastal scrub species, including chamise, manzanitas, buckwheats (*Eriogonum* spp.), and toyon. Within Humboldt, this vegetation community occupies approximately 81.4 acres. This vegetation community is included in the California Wildlife Habitat Relationships Database as Eucalyptus.¹²

FIR

Fir is a native vegetation community characterized by nearly monotypic stands of tall, needle-leaved, evergreen trees. The structure and species composition of this vegetation community is highly variable, ranging from a dense, monotypic tree canopy with sparse shrub and herbaceous

¹⁰Mayer, K.E. and W.F. Laudenslayer, Jr. (editors). 1988. A guide to the wildlife habitats of California. State of California, The Resources Agency, Department of Fish and Game. Sacramento, CA. 166 pp. (accessed November 2024).

¹¹Ibid

¹²Ibid

layers to a more diverse, multi-layered tree canopy with well-developed shrub and herbaceous layers. Dominant tree species within this vegetation community include white fir (*Abies concolor*), red fir (*Abies magnifica*), and Douglas fir (*Pseudotsuga menziesii*). If present, common associate tree and shrub species within this vegetation community include canyon live oak (*Quercus chrysolepis*), giant chinquapin (*Chrysolepis chrysophylla*), Oregon grape (*Berberis aquifolium*), California blackberry (*Rubus ursinus*), dwarf rose (*Rosa gymnocarpa*), and poison oak (*Toxicodendron diversilobum*). Common species within the herbaceous layer include Pacific trillium (*Trillium ovatum*), western swordfern (*Polystichum munitum*), California honeysuckle (*Lonicera hispidula*), bracken fern (*Pteridium aquilinum*), and western fescue (*Festuca occidentalis*). This vegetation community is one of the most prevalent in Humboldt, occupying approximately 664,458.9 acres along the eastern and southwestern portions of the county. This vegetation community is included in the California Wildlife Habitat Relationships Database as White Fir, Red Fir, and Douglas Fir.¹³

MONTANE HARDWOOD

Montane Hardwood is a native vegetation community dominated by hardwoods. The structure and species composition of this vegetation community is highly variable but tends to support a dense tree canopy comprised of hardwoods and conifers, with sparse shrub and herbaceous layers. Common tree species within this vegetation community include black cottonwood (*Populus trichocarpa*), bigleaf maple (*Acer macrophyllum*), canyon live oak (*Quercus chrysolepis*), California black oak (*Quercus kelloggii*), Oregon white oak (*Quercus garryana*), tanoak (*Notholithocarpus densiflorus*), ponderosa pine (*Pinus ponderosa*), Douglas fir (*Pseudotsuga menziesii*), and Pacific madrone (*Arbutus menziesii*). If present, the shrub layer is comprised of native woody shrub species including manzanita (*Arctostaphylos* spp.), dogwood (*Cornus sericea*), mountain-mahogany (*Cercocarpus betuloides*), and poison oak (*Toxicodendron diversilobum*). Mountain Hardwood is the most prevalent vegetation community in Humboldt, occupying approximately 744,432.8 acres. This vegetation community is included in the California Wildlife Habitat Relationships Database as Montane Hardwood, Mixed Hardwood-Conifer, and Montane Riparian.¹⁴

PINE

Pine is a native vegetation community that varies greatly in structure and species composition but is typically characterized by a mix of conifers and hardwoods in the tree layer, with variable shrub and herbaceous layers. Common species within the tree layer include foothill pine (*Pinus sabiniana*), Lodgepole pine (*Pinus contorta*), Jeffrey pine (*Pinus jeffreyi*), Ponderosa pine (*Pinus ponderosa*), and blue oak (*Quercus douglasii*). The shrub layer is typically comprised of native shrub species including ceanothus (*Ceanothus* spp.), manzanita (*Arctostaphylos* spp.), coffeeberry (*Frangula californica*), poison oak (*Toxicodendron diversilobum*), redbud (*Cercis occidentalis*), and dogwood (*Cornus sericea*). If present, the herbaceous layer is comprised of native grasses, forbs, and sedges including bedstraw (*Galium* spp.), bracken fern (*Pteridium aquilinum*), lupine (*Lupinus* spp.), sedge (*Carex* spp.), jewelflower (*Streptanthus* spp.), and iris (*Iris* spp.). This vegetation community is most concentrated in the eastern portion of Humboldt, occupying approximately 6,276.8 acres. This vegetation community is included in the California Wildlife Habitat Relationships Database as Blue Oak – Foothill Pine, Closed-Cone Pine – Cypress, Lodgepole Pine, Ponderosa Pine, and Jeffrey Pine.¹⁵

¹³ Mayer, K.E. and W.F. Laudenslayer, Jr. (editors). 1988. A guide to the wildlife habitats of California. State of California, The Resources Agency, Department of Fish and Game. Sacramento, CA. 166 pp. (accessed November 2024).

¹⁴ Ibid

¹⁵ Mayer, K.E. and W.F. Laudenslayer, Jr. (editors). 1988. A guide to the wildlife habitats of California. State of California, The Resources Agency, Department of Fish and Game. Sacramento, CA. 166 pp. (accessed November 2024).

PERENNIAL GRASSLAND

Perennial Grassland is a native vegetation community comprised of perennial herbaceous species. Common species within this vegetation community include California oatgrass (*Danthonia californica*), California hairgrass (*Deschampsia cespitosa*), American dune grass (*Elymus mollis* ssp. *mollis*), goldfields (*Lasthenia* spp.), and bracken fern (*Pteridium aquilinum*). The structure of this vegetation community may vary based on grazing by domestic livestock or wild herbivores, including elk and deer, but typically measures between 0 and 5 feet in height. Within Humboldt, this vegetation community is most prevalent along the coast, particularly within the northwest portion of the county near Big Lagoon, Orick, and Prairie Creek Redwoods State Park. This vegetation occupies approximately 2,381.8 acres within Humboldt. This vegetation community is included in the California Wildlife Habitat Relationships Database as Perennial Grassland.¹⁶

REDWOOD

Redwood is a native vegetation community characterized by an open-to-dense tree canopy dominated by coast redwood (*Sequoia sempervirens*). The structure and species composition of this vegetation community varies based on age; second-growth redwood forests tend to be more open with sparse shrub and herbaceous layers, while old-growth redwoods forests support dense canopies with well-developed shrub and herbaceous layers. Common associate species within the tree canopy include Douglas fir (*Pseudotsuga menziesii*), Sitka spruce (*Picea sitchensis*), grand fir (*Abies grandis*), and red alder (*Alnus rubra*). The shrub layer is typically comprised of native species including California huckleberry (*Vaccinium ovatum*), coyote bush (*Baccharis pilularis*), ceanothus (*Ceanothus* spp.), poison oak (*Toxicodendron diversilobum*), west salmonberry (*Rubus spectabilis*), and western thimbleberry (*Rubus parviflorus*). Native herbaceous species including sword fern (*Polystichum munitum*), giant chain fern (*Woodwardia fimbriata*), Idaho fescue (*Festuca idahoensis*), and western fescue (*Festuca occidentalis*) comprise the herbaceous layer of this vegetation community. This is one of the most prevalent vegetation communities within Humboldt, occupying approximately 408,130.9 acres within the western portion of the region. This vegetation community is included in the California Wildlife Habitat Relationships Database as Redwood.¹⁷

URBAN

Urban consists of areas that have been developed or physically modified to the extent that they no longer contain native soil and habitat conditions and no longer support most vegetation. When present, vegetation within this land cover type typically includes tree groves, street strips, shade trees, lawns, and ornamental shrubs. Structure and species composition within this land cover type varies greatly based on purpose, design, and climate. Within Humboldt, this land cover type is associated with existing development including buildings, paved areas, and roadways, occupying approximately 18,813.9 acres. This land cover type is included in the California Wildlife Habitat Relationships Database as Urban.¹⁸

¹⁶ Ibid

¹⁷ Ibid

¹⁸ Ibid

Waters and Wetlands

Definitions

The term “waters of the United States.” has a broad meaning and incorporates both deep-water aquatic habitats and special aquatic sites, including wetlands. Generally, this term applies to the jurisdictional limits of the authority of the U.S. Army Corps of Engineers (USACE) under the Clean Water Act (CWA). Waters of the U.S. includes essentially all surface waters such as all navigable waters and their tributaries, all interstate waters and their tributaries, all wetlands adjacent to these waters, and all impoundments of these waters.

Wetlands are driven by hydrology and occur where water is present near the soil surface resulting in soil and plant characteristics that are not found in upland (mostly dry) or aquatic (almost always wet and un-vegetated) habitats. Wetlands are generally found in transition zones between upland and aquatic habitats. These terms are further defined along with their application in federal and state regulations below under Section 3.3.3, *Regulatory Framework*.

Humboldt County (Unincorporated and Incorporated)

The USFWS NWI is a publicly available resource that provides detailed information on the abundance, characteristics, and distribution of waters and wetlands. It should be noted that some wetland and stream features, such as freshwater seeps and springs, are generally not identified as part of the NWI because of the general scale of the mapping effort. The extent of the major wetlands and waterways in Humboldt, based on NWI mapping, is shown on Humboldt’s marine habitat stretches along its rugged Pacific coastline and includes diverse ecosystems, such as kelp forests, rocky intertidal zones, sandy beaches, and subtidal areas. The cold, nutrient-dense waters off the coast fuel a productive marine environment, supporting species like sea otter (*Enhydra lutris*), harbor seal (*Phoca vitulina*), California sea lion (*Zalophus californianus*), and a variety of fish, invertebrates, and seabirds. Kelp forests, thriving in the coastal waters, provide food, shelter, and breeding grounds for numerous species, while intertidal zones create unique habitats for tidepool organisms. Marine habitats in the county are integral to the health of coastal fisheries and attract recreation and tourism, supporting the local economy (Figure 3.3-2).

Wetland features that have been mapped within Humboldt include freshwater forested/shrub wetland, freshwater ponds, and riverine habitat.¹⁹ Wetlands and waters provide habitat for a variety of special-status plant and animal species and are typically subject to USACE jurisdiction under Section 404 of the CWA. In addition, the State of California has adopted a no-net-loss policy for wetlands which is administered by the CDFW and State Water Resources Control Board (SWRCB). A description of each of these aquatic features and their location within Humboldt is provided below.

¹⁹ USFWS NWI, op. cit.

FRESHWATER EMERGENT WETLAND

Freshwater emergent wetlands in Humboldt are dynamic ecosystems that support a wide range of plants and wildlife, thriving in saturated soils and seasonally inundated conditions. Found along riverbanks, around lakes, and in floodplains, these wetlands feature tall grasses, reeds, sedges, and rushes (*Juncus* spp.) that emerge above the water's surface. The NWI also includes within this category wetlands that lack vegetation if they also exhibit the same criteria as described for freshwater emergent wetlands. Freshwater forested/shrub wetlands are generally dominated by woody vegetation, such as shrubs and trees. This wetland category also can include riparian habitats.

LACUSTRINE

Lacustrine habitats in Humboldt encompass its natural lakes, ponds, and reservoirs, including Big Lagoon and Freshwater Lagoon located within Humboldt Lagoons State Park between Trinidad and Orick and Ruth Lake located within Six Rivers National Forest between two unincorporated communities, Sids Place and Forest Glen, as well as smaller highland and coastal lakes. These freshwater bodies provide essential habitat for a range of species, from fish like largemouth bass (*Micropterus salmoides*) and bluegill (*Lepomis macrochirus*) to amphibians, waterfowl, and aquatic invertebrates. Surrounded by diverse landscapes of forests, grasslands, and wetlands, these lakes support rich riparian zones, where vegetation, such as willows and cattails (*Typha* spp.), stabilize shorelines and provide food and shelter for wildlife. Lacustrine habitats in Humboldt play a critical role in supporting migratory birds, particularly during the winter months, and serve as recreational resources for fishing, boating, and birdwatching.

MARINE

Humboldt's marine habitat stretches along its rugged Pacific coastline and includes diverse ecosystems, such as kelp forests, rocky intertidal zones, sandy beaches, and subtidal areas. The cold, nutrient-dense waters off the coast fuel a productive marine environment, supporting species like sea otter (*Enhydra lutris*), harbor seal (*Phoca vitulina*), California sea lion (*Zalophus californianus*), and a variety of fish, invertebrates, and seabirds. Kelp forests, thriving in the coastal waters, provide food, shelter, and breeding grounds for numerous species, while intertidal zones create unique habitats for tidepool organisms. Marine habitats in the county are integral to the health of coastal fisheries and attract recreation and tourism, supporting the local economy.

SALINE EMERGENT WETLAND

Saline emergent wetlands in Humboldt are unique coastal ecosystems characterized by salt-tolerant plants, seasonal flooding, and fluctuating salinity levels. Primarily found around Humboldt Bay, located between Eureka and Arcata along with several unincorporated communities and towns, and the Eel River estuary, located between Ferndale and Loleta, these wetlands are home to salt marsh vegetation like pickleweeds (*Salicornia* spp.), saltgrass (*Distichlis spicata*), and cordgrasses (*Spartina* spp.), which thrive in the brackish and saline waters. These plant communities provide essential habitat for a range of wildlife, including migratory shorebirds, waterfowl, and fish species that rely on the wetlands for feeding, nesting, and nursery grounds. Saline emergent wetlands serve as critical buffers against coastal erosion, floodwaters, and pollution, filtering contaminants and maintaining water quality.

RIVERINE

Humboldt's riverine habitats are dominated by an extensive network of rivers, including the Eel, Klamath, Trinity, Mad, Mattole, and Van Duzen rivers, which flow through diverse landscapes of forests, mountains, and valleys. In Humboldt, the Klamath, Trinity, Eel, and Van Duzen Rivers were classified as wild, scenic, or recreational under the federal Wild and Scenic Rivers Act and California Wild and Scenic Rivers Act. These rivers provide critical habitats for anadromous fish species, such as Chinook salmon (*Oncorhynchus tshawytscha*), coho salmon, and steelhead trout, which migrate from the ocean to freshwater to spawn. The rivers also support amphibians, aquatic insects, and riparian vegetation, creating a rich ecosystem that sustains both aquatic and terrestrial wildlife. Riverine habitats in the county are not only biologically significant but also essential to local communities, providing water for agriculture, recreation, and cultural practices for local Native American Tribes.

WET MEADOW

Wet meadows in Humboldt are seasonal, grass-dominated ecosystems found in areas with poor drainage, typically near rivers, streams, or at higher elevations where groundwater is close to the surface. These meadows are characterized by grasses, sedges, rushes, and wildflowers that flourish in moist, nutrient-rich soils, supporting a range of wildlife, including amphibians, small mammals, and insects like butterflies and bees. Wet meadows are also crucial feeding and nesting sites for migratory and resident bird species. During the wet season, these areas act as natural sponges, absorbing and slowly releasing water, which helps maintain stream flows and reduces the impacts of flooding downstream. In summer, the soils may dry, but the meadow vegetation remains green and vibrant, offering continuous habitat value.

Sensitive Natural Communities and Critical Habitats

Definitions

Sensitive natural communities are vegetation types, associations, or sub-associations that support concentrations of special-status plant and/or wildlife species, are of relatively limited distribution, and/or are of particular value to wildlife. Currently, the CDFW publishes the California Sensitive Natural Communities List online. Natural communities are evaluated using NatureServe's Heritage Methodology, the same system used to assign Global and State rarity ranks for plant and animal species in the CNDDDB. Evaluation is done at both the Global (full natural range within and outside of California) and State (within California) levels resulting in a single G (global) and S (State) rank, ranging from 1 (very rare and threatened) to 5 (demonstrably secure). According to the CDFW Vegetation Program, natural communities with State ranks of S1-S3 and certain other specified associations are considered imperiled, and thus, potentially of special concern. Riparian areas are also considered sensitive natural communities by the CDFW.

Critical habitat is a term used in the federal Endangered Species Act (ESA) and is defined as a specific geographic area (or areas) that contain features essential for the conservation of a threatened or endangered species and that may require special management and protection. Critical habitat may include an area that is not currently occupied by the species but that will be needed for its recovery. These areas provide notice to the public and land managers of the importance of these areas to the conservation of a listed species. Special protections and/or restrictions are possible in these areas when federal funding, permits, licenses, authorizations, or actions occur or are required.

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The CDFW's CNDDDB lists eight sensitive natural communities that occur within the U.S. Geological Survey (USGS) topographic quadrangles encompassing Humboldt. These natural communities include Coastal and Valley Freshwater Marsh, Coastal Douglas Fir Western Hemlock Forest, Coastal Terrace Prairie, Northern Coastal Salt Marsh, Northern Foredune Grassland, Sitka Spruce Forest, Sphagnum Bog and Upland Douglas Fir Forest. The USFWS Critical Habitat Mapper²⁰ depicts designated critical habitats within the plan area. The USFWS designated critical habitats in Humboldt include Kneeland Prairie penny-cress (*Thlaspi californicum*), Lassics lupine (*Lupinus constancei*), marbled murrelet (*Brachyramphus marmoratus*), northern spotted owl (*Strix occidentalis caurina*), Pacific marten (*Martes caurina*), tidewater goby (*Eucyclogobius newberryi*), and western snowy plover (*Charadrius alexandrinus*).

The NMFS designated critical habitats in Humboldt include green sturgeon (*Acipenser medirostris*, Southern DPS), killer whale (*Orcinus orca*, Southern Resident DPS), humpback whale (*Megaptera novaeangliae*, Central America DPS and Mexico DPS), eulachon (*Thaleichthys pacificus*), Chinook salmon (*Oncorhynchus tshawytscha*), coho salmon, and steelhead. The Essential Fish Habitats (EFHs) located in Humboldt include highly migratory species (such as albacore tuna [*Thunnus alalunga*], blue shark [*Prionace glauca*], broadbill swordfish [*Xiphias gladius*], common thresher shark [*Alopias vulpinus*], northern bluefin tuna [*Thunnus thynnus*], shortfin mako shark [*Isurus oxyrinchus*]), coastal pelagic species, groundfish (finfish and market squid), and krill (*Thysanoessa spinifera*, *Euphausia pacifica*, other krill species). Eelgrass (*Zostera* spp.) is a flowering marine plant that is designated as a Habitat Area of Particular Concern (HAPC) and EFH by NOAA.

²⁰ USFWS Critical Habitat Mapper, op. cit.

Figure 3.3-3 USFWS Critical Habitat in Humboldt

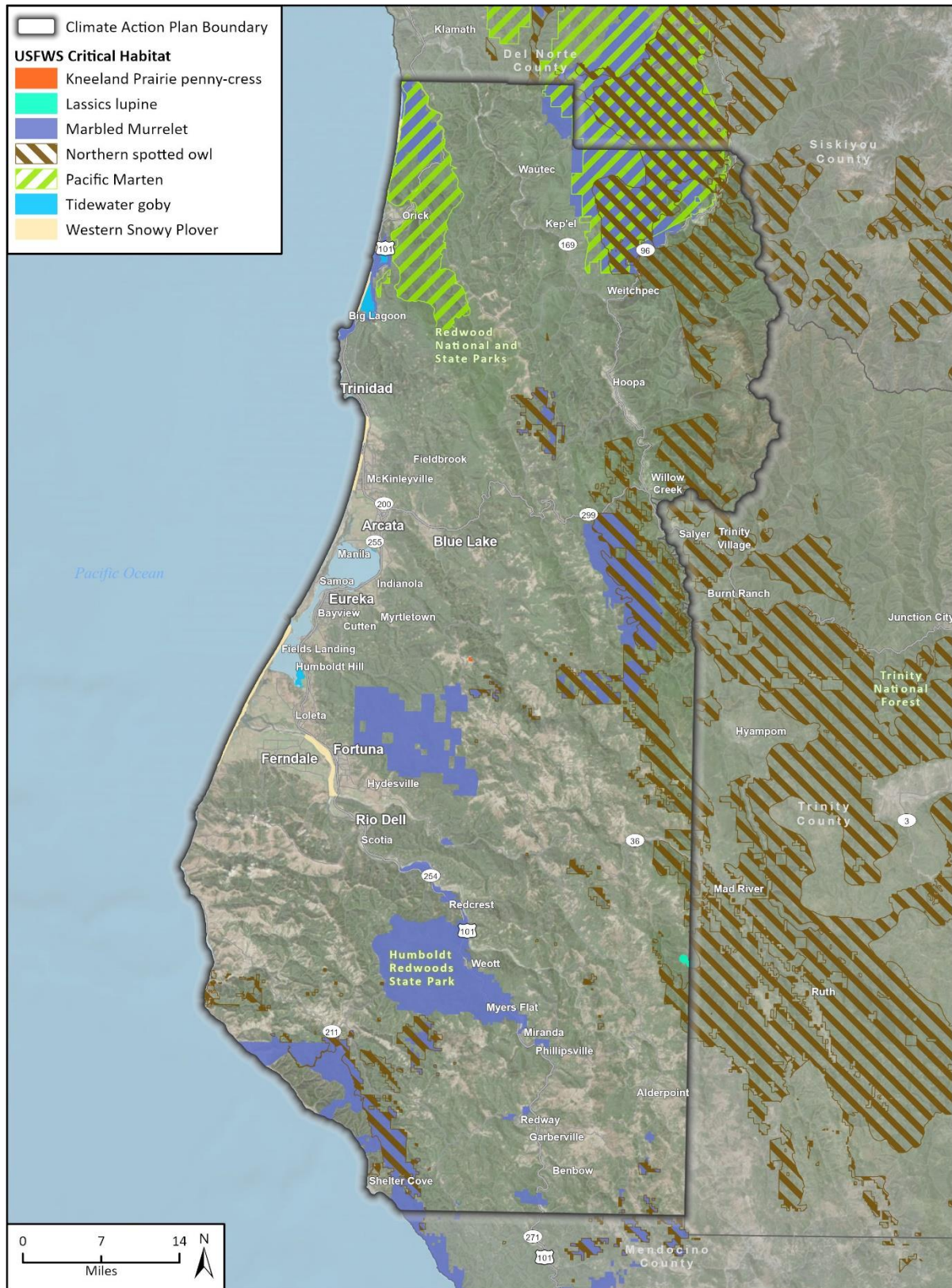
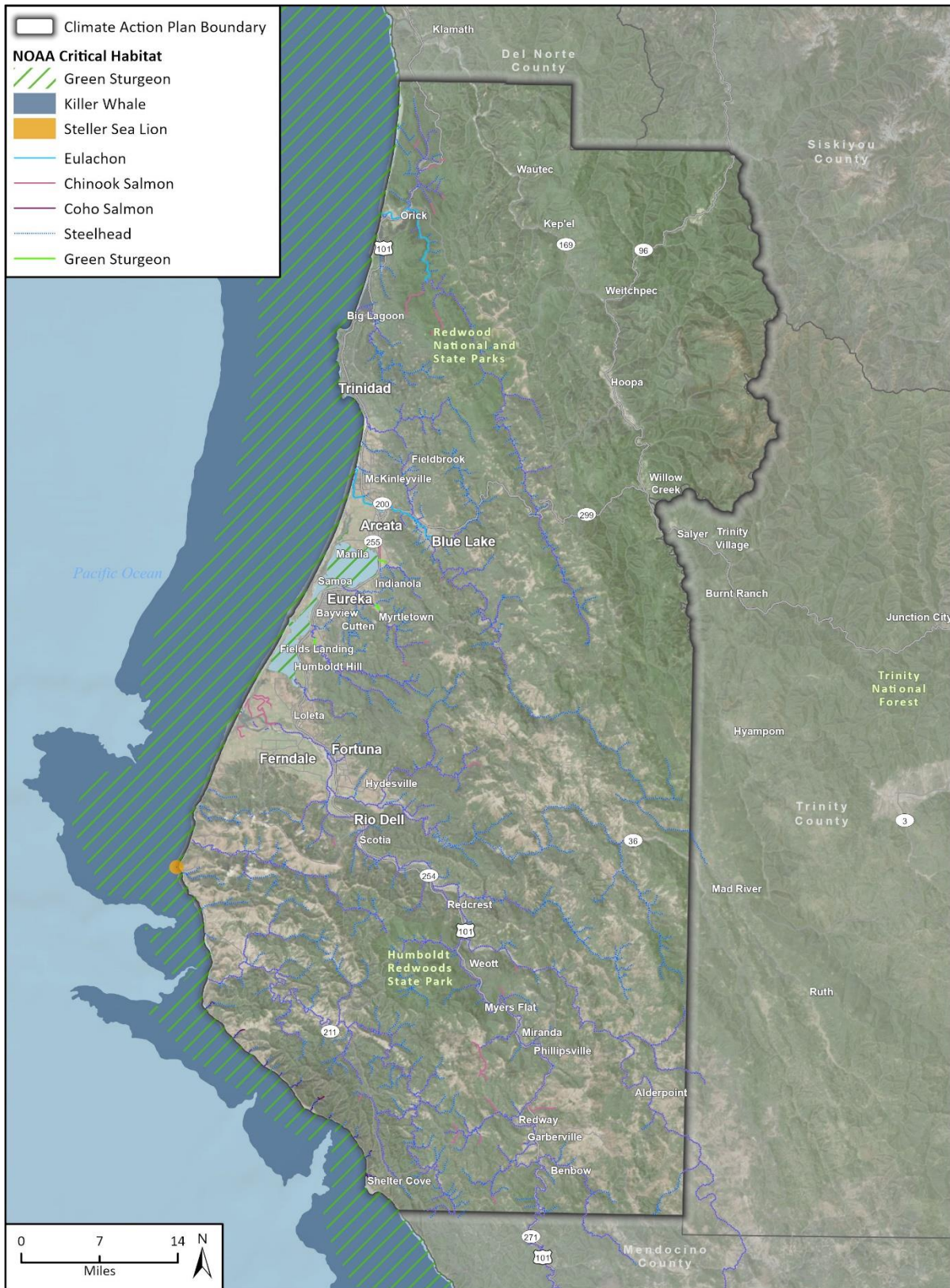


Figure 3.3-4 NOAA Critical Habitat in Humboldt



Basemap and imagery provided by Microsoft Bing, Esri and their licensors © 2024.
 Additional data provided by NOAA, 2023.

22-13470 EPS EIR
 Fig X NOAA Critical Habitat

Special-Status Species

Definitions

For the purpose of this analysis, special-status species are those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the USFWS and/or NMFS under the ESA; those listed or proposed for listing as threatened or endangered by the CDFW under the California Endangered Species Act (CESA); plants listed as rare by the CDFW under the Native Plant Protection Act; and animals designated as “Species of Special Concern,” “Fully Protected,” or “Watch List” by the CDFW. Those plants ranked as California Rare Plant Rank (CRPR) 1 or 2 are typically regarded as rare, threatened, or endangered under CEQA by lead agencies and were considered as such in this EIR. The CRPR uses the following code definitions:

- **List 1A** = Plants presumed extinct in California
- **List 1B.1** = Rare or endangered in California and elsewhere; seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)
- **List 1B.2** = Rare or endangered in California and elsewhere; fairly endangered in California (20-80 percent occurrences threatened)
- **List 1B.3** = Rare or endangered in California and elsewhere, not very endangered in California (less than 20 percent of occurrences threatened, or no current threats known)
- **List 2** = Rare, threatened or endangered in California, but more common elsewhere

CRPR List 3 species are “review list,” and CRPR 4 species are considered “watch list” species. CRPR 3 and 4 species do not typically warrant analysis under CEQA except where they are part of a unique community, from the type locality, or designated as rare or significant by local governments, or where cumulative impacts could result in population-level effects. The CRPR 3 and 4 species reported from the region are not locally designated as rare or significant by the Humboldt County General Plan and are not part of a unique community. Therefore, potential impacts to CRPR 3 and CRPR 4 species were not considered in this analysis and were not included in the special-status species tables in Appendix B.

Species of Special Concern (SSC) is a category used by the CDFW for those species which are considered indicators of regional habitat changes or are considered to be potential future protected species. SSC do not have any special legal status except that which may be afforded by the California Fish and Game Code. The SSC category is intended by the CDFW for use as a management tool to include these species into special consideration when decisions are made concerning the development of natural lands, and these species are considered sensitive as described under the CEQA Appendix G questions. Special-status species ranked globally (G) and subnationally (S) 1 through 3 based on NatureServe’s methodologies were not considered in this analysis.

Queries of the USFWS IPaC²¹, CDFW CNDDDB²², and CNPS Inventory²³ were conducted. These queries were conducted to obtain comprehensive information regarding State and federally listed species known or considered to have potential to occur within Humboldt.

²¹ USFWS IPaC, op. cit.

²² CDFW CNDDDB, op. cit.

²³ CNPS op. cit.

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Humboldt is home to several species protected by federal and State agencies. Important animal species can be found in a variety of habitats in the region. The CDFW CNDDDB,²⁴ CNPS Inventory,²⁵ and USFWS IPaC²⁶ together list 175 special-status plant and animal species (95 plant species and 80 animal species) that occur or have potential to occur within Humboldt. The status and habitat requirements of these species are presented in Appendix B as Tables B-1 and B-2, respectively.

SPECIAL-STATUS PLANTS

Based on the database and literature review, 95 special-status plant species are known to occur, or have potential to occur in Humboldt. Humboldt is composed of a very diverse range of habitat types. These include chaparral, woodland, forest, alpine, grassland, meadows, and riparian, among others. Within these broad habitat types, there are cismontane forests and woodlands, lower montane forests, subalpine forests, foothill grasslands, riparian forests, bogs and fens, and chaparral, among others. This diverse plant mosaic within the region allows for some of the most diverse plant communities in the state. Within these plants communities there are numerous special-status plants, many of which only occur in the region (endemic). Table B-1 in Appendix B lists these special-status plant species and their listing and/or rarity status.

SPECIAL-STATUS WILDLIFE

Based on the database and literature review, 80 special-status wildlife species are known, or have potential, to occur within Humboldt. Table B-2 in Appendix B lists these special-status wildlife species and their listing status and/or other status designations.

INVERTEBRATES

There are nine special-status invertebrates known or with potential to occur within Humboldt. These include Crotch's bumble bee (*Bombus crotchii*), western bumble bee (*Bombus occidentalis*), conservancy fairy shrimp (*Branchinecta conservation*), Shasta crayfish (*Pacifiastacus fortis*), vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardi*), Suckley's cuckoo bumble bee (*Bombus suckleyi*), monarch butterfly (*Danaus plexippus*), and sunflower sea star (*Pycnopodia helianthoides*). These bumble bee species typically nest underground, occasionally in old animal burrows, logs and stumps and require plants that bloom and provide adequate nectar and pollen. Monarch butterflies require a variety of habitats throughout their life cycle and migration. They rely on milkweed plants in grasslands, meadows, prairies, and open fields for laying their eggs, as milkweed is the only plant their caterpillars can eat. Their overwintering habitats are typically specific, sheltered sites in mountain forests, such as the oyamel fir forests in central Mexico, where they find the cool, moist climate needed to survive the winter months. Monarchs also overwinter along the California coast, where eucalyptus, pine, and cypress groves offer roosting spots. Sunflower sea stars are large, multi-armed sea stars that inhabit rocky reefs, kelp forests, eelgrass beds, and soft-bottomed ocean floors, ranging from the intertidal zone down to depths of about 1,000 feet. They prefer habitats with rich biodiversity and abundant prey, as they are voracious predators, feeding on sea urchins, clams, snails, and other invertebrates.

²⁴ CDFW CNDDDB, op. cit.

²⁵ Ibid.

²⁶ USFWS IPaC, op. cit.

REPTILES AND AMPHIBIANS

There are nine special-status reptiles and amphibians known or with potential to occur in Humboldt. These include: Pacific tailed frog (*Ascaphus truei*), which is restricted to perennial montane streams; northwestern pond turtle (*Actinemys marmorata*), which requires aquatic environments located along ponds, marshes, rivers, and ditches; Del Norte salamander (*Plethodon elongatus*), which is associated with old-growth forests; foothill yellow-legged frog (*Rana boylei*, North Coast DPS), which occurs in partly shaded and shallow streams with rocky soils; southern torrent salamander (*Rhyacotriton variegatus*), which is found in cold, well-shaded, permanent streams and seepages; northern red-legged frog (*Rana aurora*), which occurs in usually near dense riparian cover near permanent water, but can be found far from water, in damp woods and meadows, during non-breeding season; and the red-bellied newt (*Taricha rivularis*), which occurs in coastal drainages with moderate flow and clean, rocky substrate. There are two marine turtles with the potential to occur in Humboldt: green sea turtle (*Clelonia mydas*) and leatherback sea turtle (*Dermodochelys coriacea*). These species are associated with aquatic habitat.

FISH

There are 14 special-status fish species known or with potential to occur in Humboldt. These include: green sturgeon (Southern and Northern DPSs), lower Klamath marbled sculpin (*Cottus klamathensis polporus*), Pacific lamprey (*Entosphenus tridentatus*), tidewater goby, western brook lamprey (*Lampetra planeri*), coast cutthroat trout (*Oncorhynchus clarkii clarkii*), coho salmon Southern Oregon and Northern California Coasts and Central California Coast ESUs, steelhead northern California DPS, Chinook salmon – upper Klamath and Trinity Rivers and California coastal ESUs, longfin smelt (*Spirinchus thaleichthys*), and eulachon. All of these species are associated with aquatic habitat.

BIRDS

There are 24 special-status birds known or with potential to occur in Humboldt. These include: American goshawk (*Accipiter gentilis*), Cooper's hawk (*Accipiter cooperii*), sharp-shinned hawk (*Accipiter striatus*), tricolored blackbird (*Agelaius tricolor*), grasshopper sparrow (*Ammodramus savannarum*), golden eagle (*Aquila chrysaetos*), ruffed grouse (*Bonasa umbellus*), marbled murrelet, rhinoceros auklet (*Cerorhinca monocerata*), mountain plover (*Charadrius montanus*), western snowy plover, northern harrier (*Circus hudsonius*), western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), white-tailed kite (*Elanus leucurus*), American peregrine falcon (*Falco peregrinus*), tufted puffin (*Fratercula cirrhata*), bald eagle (*Haliaeetus leucocephalus*), fork-tailed storm-petrel (*Hydrobates furcatus*), double-crested cormorant (*Phalacrocorax auritus*), osprey (*Pandion haliaetus*), short-tailed albatross (*Phoebastria albatrus*), Hawaiian petrel (*Pterodroma sandwichensis*), bank swallow (*Riparia riparia*) and northern spotted owl. These bird species live in a broad range of habitat types within Humboldt.

MAMMALS

There are 10 special-status mammals with potential to occur in Humboldt. These include: pallid bat (*Antrozous pallidus*), white-footed vole (*Arborimus albipes*), Sonoma tree vole (*Arborimus pomo*), gray wolf (*Canis lupus*), Townsend's big-eared bat (*Corynorhinus townsendii*), western red bat (*Lasiurus blossevillii*), Humboldt marten (*Martes caurina humboldtensis*), Pacific marten, fisher (*Pekania pennanti*), and American badger (*Taxidea taxus*). These mammal species live in a broad range of habitat types within Humboldt.

MARINE MAMMALS

There are 12 special-status mammals with potential to occur in Humboldt. These include: fin whale (*Balaenoptera physalus*), blue whale (*Balaenoptera musculus*), gray whale (*Eschrichtius robustus*), north Pacific right whale (*Eubalaena japonica*), Steller sea lion (*Eumetopias jubatus*), humpback whale, northern elephant seal (*Mirounga angustirostris*), southern resident killer whale, harbor seal (*Phoca vitulina*), harbor porpoise (*Phocoena phocoena*), common bottlenose dolphin (*Tursiops truncatus*), and California sea lion (*Zalophus californianus*). All these species are associated with marine habitat.

Wildlife Movement Corridors

Definitions

Wildlife movement corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as providing a linkage between foraging and denning areas, or they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Others may be dispersal corridors for young animals. A group of habitat linkages in an area can form a wildlife corridor network.

The habitats within the link do not necessarily need to be the same as the habitats that are being linked. Rather, the link merely needs to contain sufficient cover and forage to allow temporary habitation by ground-dwelling species. Typically, habitat linkages are contiguous strips of natural areas, though dense plantings of landscape vegetation can be used by certain disturbance-tolerant species. Depending upon the species using a corridor, specific physical resources (such as rock outcroppings, vernal pools, or oak trees) may need to be located within the habitat link at certain intervals to allow slower-moving species to traverse the link. For highly mobile or aerial species, habitat linkages may be discontinuous patches of suitable resources spaced sufficiently close together to permit travel along a route in a short period of time.

Wildlife movement corridors can be both large and small scale. Essential Connectivity Areas (ECA) are mapped in the report *California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California* and represent principal connections between Natural Landscape Blocks. ECAs are regions in which land conservation and management actions should be prioritized to maintain and enhance connectivity between areas of high ecological importance.²⁷ ECAs are mapped based on coarse ecological condition indicators, rather than the needs of particular species and thus serve most of the species in each region. It is important to recognize that even areas outside of Natural Landscape Blocks and ECAs support important ecological values and should not be immediately discounted as lacking conservation value without further review.

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Wildlife movement corridors in Humboldt are crucial areas that facilitate the movement and migration of animal species across the landscape. These corridors enable animals to move between habitats for foraging, breeding grounds, and suitable living conditions, especially as they respond to seasonal changes, habitat fragmentation, and climate change. In Humboldt, corridors often connect

²⁷ Spencer, W.D., P. Beier, K. Penrod, K. Winters, C. Paulman, H. Rustigian-Romsos, J. Strittholt, M. Parisi, and A. Pettler. 2010. California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California. Prepared for California Department of Transportation, California Department of Fish and Game, and Federal Highways Administration.

the coastal regions, forested lands, riparian zones, and mountainous areas of the North Coast Range, including areas in and around Redwood National and State Parks, Six Rivers National Forest, and other conservation areas. The riparian corridors that follow rivers and streams, like the Eel, Mattole, Mad, Trinity and Klamath rivers, provide pathways for species, such as otters, beavers, amphibians, and fish. These areas offer crucial connectivity for aquatic and semi-aquatic species, as well as birds and small mammals. Humboldt's old-growth redwood and mixed conifer forests are vital habitats for many terrestrial species. The expansive forests in the county offer high canopy connectivity, allowing species, such as the northern spotted owl, Pacific fisher, and mountain lion (*Puma concolor*) to traverse large distances. The lower-elevation, more open habitats are important for species like deer (*Odocoileus* spp.), Roosevelt elk (*Cervus canadensis roosevelti*), and coyote (*Canis latrans*), providing linkages between forested regions and coastal prairies. They often act as foraging and travel corridors for herbivores and the predators that follow them.

The marine portion of wildlife movement corridors in Humboldt encompasses coastal waters, estuaries, and nearshore marine environments along the Pacific coast. This marine corridor plays a vital role for a diverse range of species, facilitating seasonal migrations, foraging, breeding, and habitat connectivity. Humboldt's marine corridor is influenced by the California Current, a major upwelling system that provides nutrient-rich waters, supporting a high diversity of marine life. The nearshore areas along Humboldt's coastline are critical habitats for migratory fish, seabirds, marine mammals, and invertebrates. Species like salmon, California halibut (*Paralichthys californicus*), and herring (*Clupea* spp.) use these waters as part of their migration routes, moving between rivers and the open ocean. Marine mammals, such as gray whales, use these coastal waters to migrate between feeding grounds in Alaska and breeding areas in Baja California, passing through Humboldt's coast seasonally.

Humboldt Bay is a vital hub in this marine corridor. Estuaries serve as nurseries for fish species like salmon, steelhead, and Dungeness crab (*Metacarcinus magister*), as well as feeding grounds for shorebirds and wading birds. These areas provide refuge and a resource-rich environment for juvenile species before they transition to open waters. The deeper offshore waters, part of the California Current System, act as migratory routes for large pelagic species such as sharks, tuna, and ocean sunfish (*Mola mola*). Seabirds like albatrosses and petrels, as well as marine mammals like dolphins, seals, and sea lions, also rely on these areas for migration, foraging, and connecting with other regions of the Pacific.

Protecting and restoring these wildlife corridors in Humboldt is essential for long-term ecological health and biodiversity conservation, making it a key focus for regional environmental management.

NATIVE ANADROMOUS FISH

Chinook salmon, coho salmon, green sturgeon, Pacific lamprey and steelhead are anadromous fish species. Coho Salmon is listed as threatened under the ESA and are a focus of conservation efforts due to declining populations. Coho salmon are located within the Eel River and its tributaries, especially in the South Fork and Van Duzen River branches. The Mad River and its smaller tributaries also support coho populations, though in smaller numbers. These rivers offer spawning grounds and rearing habitats for the species. Chinook salmon primarily use the Eel River watershed, including its South Fork and the mainstem, as their primary spawning and rearing grounds. The Mad River and Klamath River, particularly where it borders northern Humboldt, are also vital habitats for Chinook, especially for the fall-run. Steelhead is present in the Eel, Mad and Trinity River Basins. Green sturgeon use Humboldt's rivers and coastal marine corridors to travel between their oceanic feeding grounds and freshwater spawning sites. Green sturgeon generally spawn in the upper reaches of

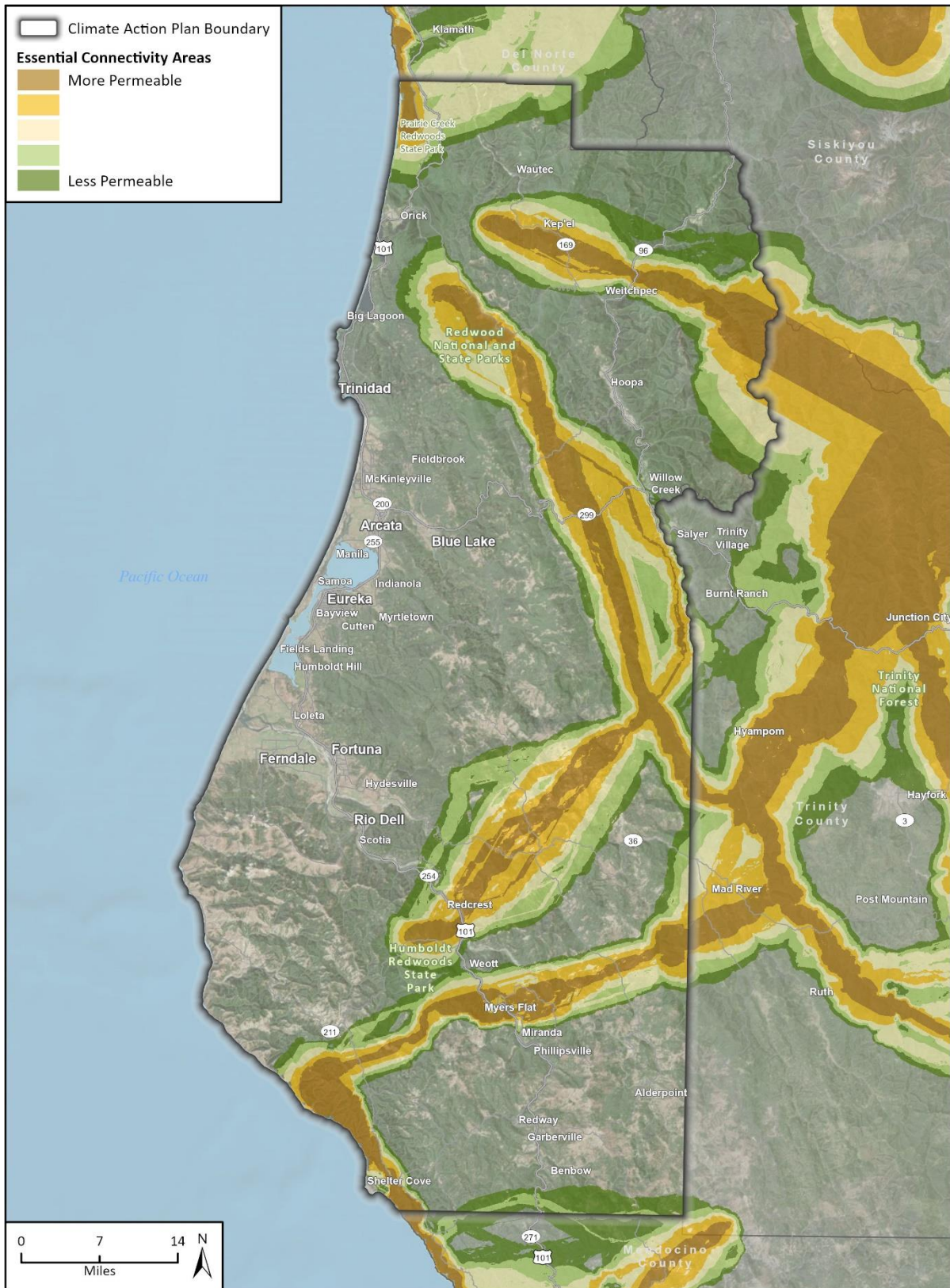
large rivers, like the Klamath and occasionally the Eel River, during spring and summer. Adult Pacific lamprey migrate from the ocean into Humboldt's freshwater rivers to spawn, typically between winter and spring. This migration can span hundreds of miles, with lamprey navigating upstream through rivers like the Eel and Klamath. Steelhead are found in both the main river systems and their smaller tributaries, where they spawn and rear before migrating to the ocean.

MARINE MAMMALS

Humboldt's marine wildlife corridor is part of the larger Pacific Coastal Migratory Corridor, influenced by the nutrient-rich California Current, which supports diverse marine species. Several specific marine mammal species use this marine corridor, each in unique ways depending on their habitat needs, behaviors, and life cycles. These species include gray whales, humpback whales, California sea lions, harbor seals, and occasionally orcas. Each species relies on this corridor for migration, foraging, resting, and, in some cases, breeding.

Gray whales are among the most well-known marine mammals that use Humboldt's corridor. Humboldt's coastal waters provide a stopover during their migration from the Arctic to Mexico, where particularly mothers with calves, swim close to shore. Gray whales can often be spotted near Trinidad Head or Sue-meg State Park. Humpback whales also use Humboldt's marine corridor, especially in the summer and fall when they migrate to Northern California's nutrient-rich waters to feed on anchovies, sardines, and krill. The upwelling zones along Humboldt's coast, particularly around the edges of the continental shelf, create feeding hotspots that attract humpbacks. California sea lions and harbor seals are common along Humboldt's nearshore waters. Often California sea lions gather at haul-out sites along rocky shores and docks, including those in Humboldt Bay and Trinidad Harbor. Harbor seals frequent sandy beaches like Mad River Beach, rocky shores, and sheltered bays, particularly around the Eel River estuary and Humboldt Bay, which provide them with protected haul-out sites. Orcas are occasionally sighted off Humboldt's coast, generally as part of transient populations that specialize in hunting marine mammals like seals, sea lions, and sometimes smaller whales.

Figure 3.3-5 Essential Connectivity Areas in Humboldt



Basemap and imagery provided by Microsoft Bing, Esri and their licensors © 2024.
 Additional data provided by CDFW, 2014.

22-13470 EPS EIR
 Fig X Essential Connectivity Areas

Important Farmland Resources

Definitions

The land best suited for a wide range of agricultural crops is called “prime” agricultural land. There is neither a single fixed definition of “prime” agricultural land nor is there a single prescribed system for classifying lands as “prime”. A number of different systems of agricultural land classifications are in use in California, as described below.

USDA Farmland Definitions and Land Capability Classification System. The United States Department of Agriculture (USDA) provides the following definitions for farmland²⁸:

- Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil quality, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. The water supply is dependable and of adequate quality. Prime farmland is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent.
- Unique farmland is land other than prime farmland that is used for the production of specific high-value food and fiber crops, such as citrus, tree nuts, olives, cranberries, and other fruits and vegetables. It has the special combination of soil quality, growing season, moisture supply, temperature, humidity, air drainage, elevation, and aspect needed for the soil to economically produce sustainable high yields of these crops when properly managed. The water supply is dependable and of adequate quality. Nearness to markets is an additional consideration. Unique farmland is not based on national criteria. It commonly is in areas where there is a special microclimate, such as the wine country in California.
- Farmland of statewide importance is land that does not meet the criteria for prime or unique farmland but may still be important for the production of food, feed, fiber, forage, and oilseed crops. The criteria for defining and delineating farmland of statewide importance are determined by the appropriate State agencies. Generally, this land includes areas of soils that nearly meet the requirements for prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some areas may produce as high a yield as prime farmland if conditions are favorable. Farmland of statewide importance may include tracts of land that have been designated for agriculture by State law.
- Farmland of local importance is land not identified as having national or statewide importance but is considered to be locally important for the production of food, feed, fiber, forage, and oilseed crops. This farmland is identified by the appropriate local agencies. Farmland of local importance may include tracts of land that have been designated for agriculture by local ordinance.

²⁸ USDA. 2024. Soil Data Access (SDA) Prime and other Important Farmlands.
https://efotg.sc.egov.usda.gov/references/public/LA/Prime_and_other_Important_Farmland.html (accessed December 2024).

The USDA Land Capability Classification System is an interpretive classification system for agricultural purposes which uses soil and climatic data to place delineated soil areas into groups of similar management options or problems. The basic foundation of the system is the soil mapping unit found in the soil survey report. Arable soils are placed into groups according to their potentialities and limitations for sustained production of cultivated crops. Non arable soils are grouped according to their potential and limitations for the production of permanent vegetation and according to their risks of soil damage if mismanaged. Classes I and II in the system are often referred to as “prime” agricultural lands.²⁹

Storie Index. The Storie Index Rating (SIR) is a quantitative system which rates four soil factors on the basis of 0-100 points. This system rated agricultural land according to its quality which was determined on the basis of productivity data from a number of major soils in California that were classified in the 1920-s and 30’s. These factors included soil profile, soil texture, slope and soil limitations (such as drainage, pH, nutrient levels, erosion, etc.). Each of these factors were rated and then multiplied together to produce the composite index rating. Thus, a poor rating in any one factor may greatly affect the overall grade. Prime agricultural land was not a part of the SIR but “excellent” agricultural land was considered to rate between 80 -100 points.³⁰

California Farmland Mapping and Monitoring Program. The California Farmland Mapping and Monitoring Program (FMMP) was established in 1982 in response to a critical need for assessing the location, quality, and quantity of agricultural lands and conversion of these lands over time. The FMMP is a nonregulatory program and provides a consistent and impartial analysis of agricultural land use and land use changes throughout California. The modern soil surveys produced by the Natural Resources Conservation Service (NRCS) are the basis for FMMP’s qualitative soil ratings range in age, scale, and coverage. Humboldt is currently in the process of having a countywide soil survey produced by the NRCS (formerly known as the Soil Conservation Service). Therefore, Humboldt is not included in the California Department of Conservation’s Farmland Mapping and Monitoring Program (FMMP).

California Legislative Definition of Prime Land. The California Land Conservation Act or Williamson Act of 1965 defines prime agricultural lands as a combination of soil properties and/or economic considerations (California Government Code Section 51200-51297). Government Code Section 51201(c) defines prime agricultural land as any of the following:

- All land that qualifies for rating as Class I or II in the Natural Resources Conservation Service (NRCS) land use capability classification; or
- Land which qualifies for rating 80 through 100 in the Storie Index Rating; or
- Land which supports livestock used for production of food and fiber and which has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture; or
- Land planted with fruit- or nut-bearing trees, vines, bushes, or crops which have a nonbearing period of less than five years and which will normally return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than \$200 per acre; or

²⁹ USDA. 2011. U.S. Land Use and Soil Classification.

<https://www.ars.usda.gov/ARSUserFiles/np215/Food%20security%20talk%20inputs%20Lunch%203-15-11.pdf> (accessed December 2024).

³⁰ O’Green, A.T., Southard, S.B., and Southard R.J. 2008. A Revised Storie Index for Use with Digital Soils Information.

<https://anrcatalog.ucanr.edu/pdf/8335.pdf> (accessed December 2024).

- Land which has returned from the production of unprocessed agricultural plant products an annual gross value of not less than \$200 per acre for three of the previous five years.

To characterize the environmental baseline for agricultural resources, Humboldt County maps of agricultural soils and agricultural preserves under Williamson Act contract were reviewed.³¹ Unless otherwise expressed, the future use of “Farmland” specifically includes the following definitions utilized by the County³²:

- a. Rated Class I or II by the U.S. Soil Conservation Service.
- b. Rated 80 through 100 percent in the Storie Index.
- c. Land that has a livestock carrying capacity of one animal unit per acre.
- d. Land planted with fruit or nut-bearing trees, vines, bushes or crops which have a non-bearing period of less than five years and which will normally provide a return adequate for economically viable operations during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production.
- e. Land capable of producing an unprocessed plant production adequate for economically viable operations.
- f. Additional lands in proximity to a, b or c above which are necessary to provide for physically and economically viable, coherent agricultural areas. These lands are included to prevent the establishment of incompatible land uses within an area defined by natural or man-made boundaries.

Humboldt County (Unincorporated and Incorporated)

According to the 2022 U.S. Department of Agriculture Census, approximately 27 percent of Humboldt land (544,630 acres) is in agricultural use with 56,635 acres of cropland. While this total includes large ranches that have a significant amount of timber production contributing to their operations, it fairly represents the overall importance of agriculture to Humboldt.

Humboldt’s dairy lands are an integral part of the landscape, history and economy of the region, generating \$38 million of milk products in 2022. The market value of cattle and calves in Humboldt exceeded \$30 million in 2022. Truck farms, located primarily in river valleys, are becoming increasingly important for supplying local fruit and vegetable demands and specialty exports. While agriculture is one of the most enduring industries in the county, agricultural operators face growing challenges to maintaining viable operations. Rising costs, increasingly complex regulatory requirements, and growing development pressures are among the hurdles facing today’s farmers.³³

The Humboldt County GIS mapping system identifies 107,249 acres of land in incorporated and unincorporated Humboldt as Farmland, including approximately 63,288 acres of prime Farmland.³⁴ In addition, there are 1,409 parcels of land within Humboldt under Williamson Act contract agricultural preserves.³⁵ Mapped Farmland and parcels under Williamson Act contract are shown in Figure 3.3-6.

³¹ US Department of Agriculture. 2022. Census of Agriculture. <https://maps.conservation.ca.gov/DLRP/CIFF/> (accessed October 2024).

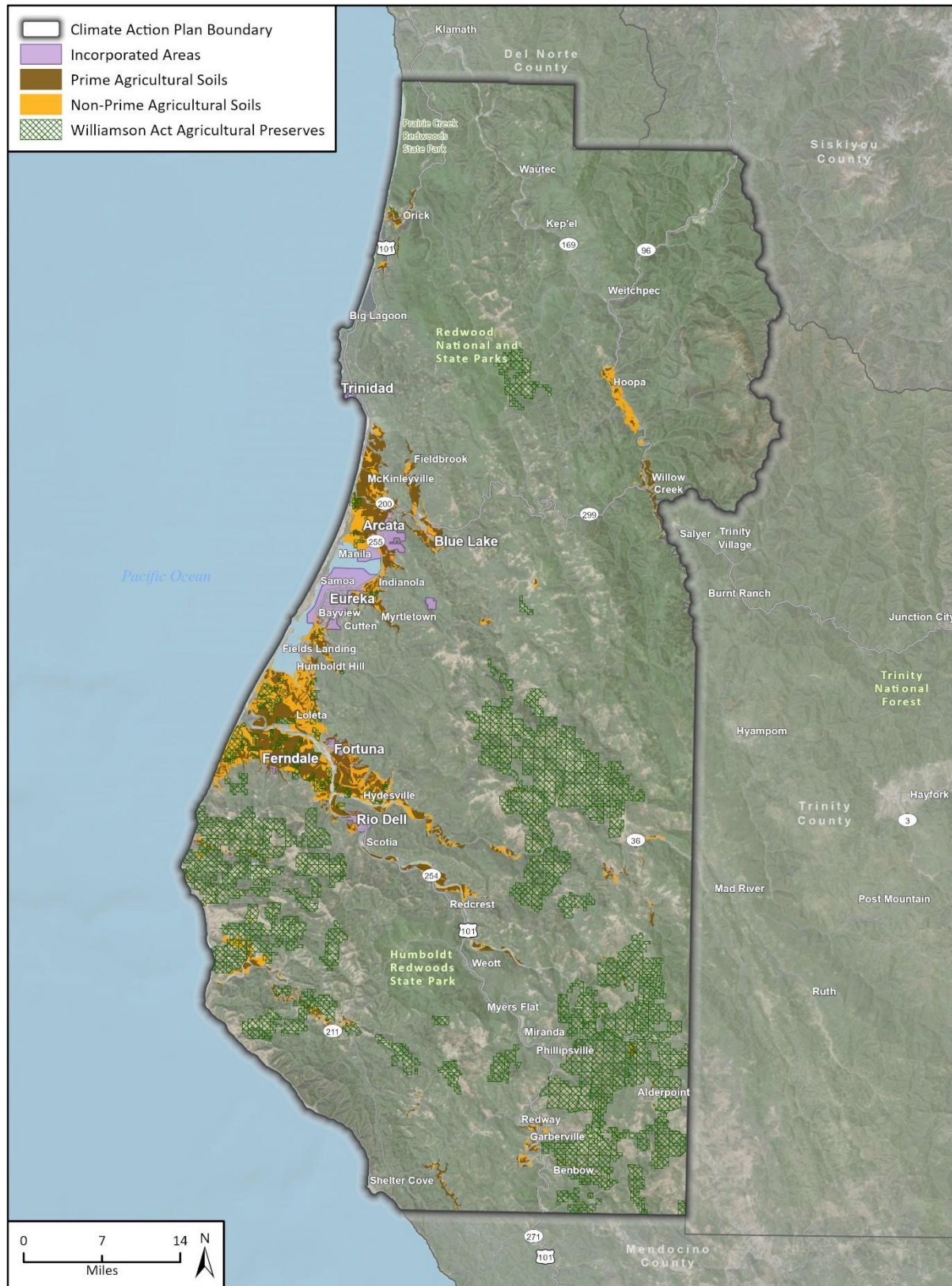
³² Humboldt County. 2017. General Plan Revised Draft Environmental Impact Report. <https://humboldt.gov.org/DocumentCenter/View/58851/Revised-Draft-Environmental-Impact-Report---Complete-Document-PDF> (accessed December 2024).

³³ US Department of Agriculture. 2022. Census of Agriculture. <https://maps.conservation.ca.gov/DLRP/CIFF/> (accessed October 2024).

³⁴ Humboldt County. 2024. Humboldt County Web GIS. <https://webgis.co.humboldt.ca.us/HCEGIS2.0/> (accessed December 2024).

³⁵ Ibid

Figure 3.3-6 Farmland and Williamson Act Contracts in Humboldt



Basemap and imagery provided by Microsoft Bing, Esri and their licensors © 2024.
 Additional data provided by Humboldt County, 2024.

22-13470 EPS EIR
 Fig X Ag Soils and Williamson Act Preserves

Productive Forestry Resources

Definitions

Forestry resources include forestland, timberland, and timberland production zones. Definitions used for forest land, timberland, and timberland production zones are those found in the California Public Resources Code Sections 12220(g) and 4789.2(g) and California Government Code Section 51104(g). These codes define forestland, timberland, and timberland production zones as follows:

- “Forest land” is land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.
- “Timberland” means land on which is growing a significant stand of trees of commercial species, or potential commercial species, either in public or private ownership or that is generally capable of maintaining a stand of trees in perpetuity and not withdrawn or otherwise devoted to uses other than timber production.
- “Timberland production zone” or “TPZ” means an area which has been zoned pursuant to Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses.

Humboldt County (Unincorporated and Incorporated)

Humboldt contains over 1.5 million acres of forest land covering over 80 percent of the land area in the county. National Forests encompass nearly 338,000 acres within Humboldt. National and State parks include 70,000 and 72,000 acres, respectively, while national and state wildlife areas cover 2,600 and 2,000 acres. County parks and community parks account for 1,000 acres. The Bureau of Land Management’s forest reserves cover 7,600 acres. Altogether, these public forested lands (including reserves, parks, and other holdings) total over 679,500 acres or about 36 percent of all forested lands in Humboldt.³⁶ Roughly 990,000 acres are zoned TPZ, two-thirds of which are held by timber companies.³⁷ TPZ land in Humboldt is generally clustered along a north-south axis through the middle of the County, from the western side of the Lower Klamath watershed to the center of the Lower Eel watershed.³⁸

Humboldt’s forested areas are predominantly composed of redwood, Douglas fir, and other coniferous species, contributing to the largest concentration of coastal redwoods in the world. Humboldt is renowned for its extensive forestry resources, encompassing a significant amount of forestland and timberland that play a crucial role in the local economy and ecology. Dedicated timber management of these lands and unique growing conditions have consistently made Humboldt the State’s leading timber producer, contributing more than 20 percent of the State’s total since 2000.³⁹

³⁶ Humboldt County. 2017. General Plan Revised Draft Environmental Impact Report. <https://humboldt.gov/DocumentCenter/View/58851/Revised-Draft-Environmental-Impact-Report---Complete-Document-PDF> (accessed December 2024).

³⁷ Humboldt County. 2017. Humboldt County General Plan. <https://humboldt.gov/DocumentCenter/View/61984/Humboldt-County-General-Plan-complete-document-PDF> (accessed December 2024).

³⁸ Humboldt County. 2017. General Plan Revised Draft Environmental Impact Report. <https://humboldt.gov/DocumentCenter/View/58851/Revised-Draft-Environmental-Impact-Report---Complete-Document-PDF> (accessed December 2024).

³⁹ Humboldt County. 2017. Humboldt County General Plan. <https://humboldt.gov/DocumentCenter/View/61984/Humboldt-County-General-Plan-complete-document-PDF> (accessed December 2024).

3.3.3 Regulatory Framework

Federal Regulations

Federal Endangered Species Act

Under the ESA, authorization is required to “take” a listed species. *Take* is defined under Section 3 of the ESA as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Under federal regulation (50 Code of Federal Regulations [CFR] Sections 17.3, 222.102); “harm” is further defined to include habitat modification or degradation where it would be expected to result in death or injury to listed wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Critical habitat is a specific geographic area(s) that is essential for the conservation of a threatened or endangered species and that may require special management and protection. Critical habitat may include an area that is not currently occupied by the species but that will be needed for its recovery. Section 7 of the ESA outlines procedures for federal interagency cooperation to conserve federally listed species and designated critical habitat.

Section 7(a)(2) of the ESA and its implementing regulations require federal agencies to consult with USFWS or NMFS to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species, or result in the destruction or adverse modification of critical habitat. For projects where federal action is not involved and take of a listed species may occur, the project proponent may seek to obtain an incidental take permit under Section 10(a) of the ESA. Section 10(a) allows USFWS to permit the incidental take of listed species if such take is accompanied by a Habitat Conservation Plan (HCP) that includes components to minimize and mitigate impacts associated with the take.

The USFWS and NMFS share responsibility and regulatory authority for implementing the ESA (7 United States Code [USC] Section 136, 16 USC Section 1531 et seq.).

Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act

The Migratory Bird Treaty Act (MBTA) authorizes the Secretary of the Interior to regulate the taking of migratory birds. The act provides that it is unlawful, except as permitted by regulations, “to pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess, [...] any migratory bird, or any part, nest, or egg of any such bird” (16 USC Section 703(a)). The Bald and Golden Eagle Protection Act is the primary law protecting eagles, including individuals and their nests and eggs. The USFWS implements the MBTA (16 USC Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668). Under the Bald and Golden Eagle Protection Act’s Eagle Permit Rule (50 CFR 22.26), USFWS may issue permits to authorize limited, non-purposeful take of bald eagles and golden eagles.

Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) regulates marine fisheries in U.S. federal waters. The Magnuson-Stevens Act was first passed in 1976 and was revised in 1996 and 2007. The purpose of the Magnuson-Stevens Act is to provide long-term biological and economic sustainability of U.S. marine fisheries.

The NMFS has regulatory authority for implementing the Magnuson-Stevens Act. The NMFS requires regional fishery management councils to develop Fisheries Management Plans (FMP)

specific to their regions, fisheries, and fish stocks. For waters off the U.S. West Coast, the Pacific Fishery Management Council has developed four FMPs, which are implemented through fisheries regulations for coastal pelagic species, groundfish species, highly migratory species, and salmon species. These FMPs also identify EFH, which is broadly defined as those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity.

River and Harbors Act Section 10

Section 10 of the Rivers and Harbors Act of 1899 requires authorization from the Secretary of the Army, acting through the USACE, for the construction of any structure in or over any navigable water of the U.S. Regulated activities include dredging or disposal of dredged materials, excavation, filling, re-channelization and construction of any structure or any other modification of a navigable water of the U.S.

Clean Water Act

Under Section 404 of the CWA, the USACE, with United States Environmental Protection Agency (USEPA) oversight, has authority to regulate activities that result in discharge of dredged or fill material into wetlands or other “waters of the United States” (WOTUS). Perennial and intermittent creeks are considered WOTUS if they are hydrologically connected to other jurisdictional waters. In achieving the goals of the CWA, the USACE seeks to avoid adverse impacts and offset unavoidable adverse impacts on existing aquatic resources. Any discharge of dredged or fill material into jurisdictional wetlands or other jurisdictional WOTUS would require a Section 404 permit from the USACE prior to the start of work. Typically, when a project involves impacts to WOTUS, the goal of no net loss of wetlands is met by compensatory mitigation; in general, the type and location options for compensatory mitigation should comply with the hierarchy established by the USACE/USEPA 2008 Mitigation Rule (in descending order): (1) mitigation banks; (2) in-lieu fee programs; and (3) permittee-responsible compensatory mitigation. Also, in accordance with Section 401 of the CWA, applicants for a Section 404 permit must obtain water quality certification from the SWRCB or appropriate RWQCB.

State Regulations

California Endangered Species Act

CESA (California Fish and Game Code Section 2050 et seq.) prohibits take of State-listed threatened and endangered species without a CDFW Incidental Take Permit. Take under CESA is restricted to direct harm of a listed species and does not prohibit indirect harm by way of habitat modification.

Protection of fully protected species is described in California Fish and Game Code Sections 3511, 4700, 5050 and 5515. These statutes prohibit take or possession of fully protected species. Incidental take of fully protected species may be authorized under an approved Natural Communities Conservation Plan (NCCP).

Natural Community Conservation Planning Act

The Natural Communities Conservation Planning Act was established by the California Legislature, is directed by the CDFW, and is implemented by the State, as well as public and private partnerships to protect habitat in California. The Natural Communities Conservation Planning Act takes a regional approach to preserving habitat. An NCCP identifies and provides for the regional protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity.

Once an NCCP has been approved, CDFW may provide take authorization for all covered species, including fully protected species, Section 2835 of the California Fish and Game Code.

California Fish and Game Code Sections 3503, 3503.5, and 3511

California Fish and Game Code Sections 3503, 3503.5, and 3511 describe unlawful take, possession, or destruction of birds, nests, and eggs. Fully protected birds (California Fish and Game Code Section 3511) may not be taken or possessed except under specific permit. Section 3503.5 protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs.

California Native Plant Protection Act

The CDFW also has authority to administer the Native Plant Protection Act (NPPA) (California Fish and Game Code Section 1900 et seq.). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Under Section 1913(c) of the NPPA, the owner of land where a rare or endangered native plant is growing is required to notify the CDFW at least 10 days in advance of changing the land use to allow for salvage of the plant(s).

Section 1600 et seq. of the California Fish and Game Code

Section 1600 et seq. of the California Fish and Game Code prohibits, without prior notification to CDFW, the substantial diversion or obstruction of the natural flow of, or substantial change or use of any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. For these activities to occur, the CDFW must receive written notification regarding the activity in the manner prescribed by the CDFW and may require a lake or streambed alteration agreement. Lakes, ponds, perennial, and intermittent streams and associated riparian vegetation, when present, are subject to this regulation.

Porter-Cologne Water Quality Control Act

Pursuant to Section 401 of the CWA, projects that apply for a USACE permit for discharge of dredged or fill material must also obtain water quality certification under Section 401 from the RWQCB. Additionally, the SWRCB and each of nine local RWQCBs have jurisdiction over “waters of the State” pursuant to the Porter-Cologne Water Quality Control Act, which are defined as any surface water or groundwater, including saline waters, within the boundaries of the State. The SWRCB has issued general Waste Discharge Requirements regarding discharges to “isolated” waters of the State (Water Quality Order No. 2004-0004-DWQ, Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the USACE to be Outside of Federal Jurisdiction). The local RWQCB implements this general order for isolated waters not subject to federal jurisdiction.

The CWA and associated federal regulations (Title 40 of the CFR 123.25(a)(9), 122.26(a), 122.26(b)(14)(x) and 122.26(b)(15)) require nearly all construction site operators engaged in clearing, grading, and excavating activities that disturb one acre or more, including smaller sites in a larger common plan of development or sale, to obtain coverage under a National Pollutant Discharge Elimination System (NPDES) permit for their stormwater discharges, and develop a Storm Water Pollution Prevention Plan. The NPDES Program is a federal program which has been delegated to the State of California for implementation through the SWRCB and RWQCBs.

California Code of Regulations (Wetlands and Waters Definition)

The State Water Board indicates that no single accepted definition of wetlands exists at the State level, and that RWQCBs may have different requirements and levels of analysis with regard to the issuance of water quality certifications. Generally, an area is a wetland if, under normal circumstances:

1. the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both;
2. the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and
3. the area's vegetation is dominated by hydrophytes, or the area lacks vegetation.

Under California State law, *waters of the State* means "any surface water or groundwater, including saline waters, within the boundaries of the state." As such, water quality laws apply to both surface water and groundwater. After the U.S. Supreme Court decision in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (53 USC 159), the Office of Chief Counsel of the State Water Board released a legal memorandum confirming the State's jurisdiction over isolated wetlands. The memorandum stated that under the California Porter-Cologne Water Quality Control Act, discharges to wetlands and other waters of the State are subject to State regulation, and this includes isolated wetlands. In general, the State Water Board regulates discharges to isolated waters in much the same way as it does for waters of the United States, using Porter-Cologne rather than CWA authority.

California Wild and Scenic Rivers Act

The California and federal system classifies rivers as wild, scenic, or recreational in a similar manner. The state criterion is nearly identical to the federal and is specified in the California Public Resources Code Section 5093.53:

- Wild rivers are those "free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted."
- Scenic rivers are those "free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads."
- Recreational rivers are those "readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past."

Z'berg-Nejedly Forest Practice Act

The Z'berg-Nejedly Forest Practice Act of 1973 is a California law that regulates timber harvesting to ensure sustainable forest management and environmental protection. It requires logging operations to follow specific practices, such as reforestation, erosion control, and wildlife habitat preservation. The law also established the California Board of Forestry and Fire Protection, which oversees the development and enforcement of forest practice rules aimed at balancing timber production with environmental conservation.

Regional and Local Regulations

Humboldt County General Plan, Open Space and Conservation Element

The Humboldt County General Plan Open Space and Conservation Element focuses on preserving open spaces, natural habitats, and agricultural and forest lands within the County.⁴⁰ These goals and policies aim to protect environmentally sensitive areas, promote biodiversity, and enhance the overall quality of life for residents by maintaining access to natural resources and recreational opportunities. The relevant goals and policies are listed below.

BIOLOGICAL RESOURCES

- **Goal ENV-2.** Protect the quality of water resources in Humboldt.
- **Policy ENV-2.6. Creek Preservation.** Creek setbacks, where feasible, should exceed minimum regulatory setback guidelines to protect native vegetation and enhance creek environments.
- **Policy ENV-2.7. Watercourse Preservation.** Preserve natural watercourses or provide naturalized drainage channels within the city. Where feasible, implement restoration and rehabilitation opportunities.
- **Policy ENV-2.8. Creek Clean-up.** Collaborate with local and regional agencies, businesses, property owners, and organizations proactively to reduce litter, illegal dumping, and reestablish native vegetation along local creeks and waterways.
- **Goal ENV-3.** Preserve and restore streams, wetlands, and riparian areas to function as open space and wildlife corridors.
- **Policy ENV-3.1. Creek Protection Zone Establishment for New Development.** Establish creek protection zones for creeks that extend a minimum of 100 feet (measured from the top of a bank and a strip of land extending laterally outward from the top of each bank), with wider buffers where significant habitat areas or high potential wetlands exist. The County shall prohibit development within creek protection zones, except as part of greenway enhancement, including habitat conservation, bike and walking paths, wildlife habitat, and native plant landscaping. County approval is required for the following activities within the creek protection zones:
 - Construction, alteration, or removal of any structure;
 - Excavation, filling, or grading;
 - Removal or planting of vegetation (except for removal of invasive plant species); or
 - Alteration of any embankment.
- **Policy ENV-3.2. Creek Contamination and Sedimentation Prevention.** Require new development to use site preparation, grading, and construction techniques that prevent contamination and sedimentation of creeks and streams.
- **Policy ENV-3.3. Creek Bank Stabilization.** Require new development proposals to include appropriate measures for creek bank stabilization, and any additional steps necessary to reduce erosion and sedimentation but preserve natural creek channels and riparian vegetation.
- **Policy ENV-3.4. Stream, Wetland, and Riparian Reclamation.** Reclaim degraded streams, wetlands, riparian areas, and wildlife migration corridors, where possible, in cooperation with the Flood Control District, and other local and regional organizations.

⁴⁰ Humboldt County. 2017. Humboldt County General Plan. <https://humboldt.gov.org/DocumentCenter/View/61984/Humboldt-County-General-Plan-complete-document-PDF> (accessed December 2024).

- **Policy ENV-3.5. Reclamation with New Development.** Require new development adjacent to creek protection zones to encourage the reclamation of adjacent creeks, wetlands, and riparian areas.
- **Policy ENV-3.6. Natural Stream Corridor Retention and Improvement.** Actively support the use of natural waterways within the city. The County will actively work to avoid any new channelization of creeks and waterways within the city and shall work with regional agencies to restore channelized sections to a more natural channel, where feasible.
- **Policy ENV-3.7. Erosion Control Plans.** Require erosion control plans for new development that require significant grading or are near streams, wetlands, and riparian areas. The plans shall include recommendations for grading practices that prevent erosion, loss of topsoil, and scour of drainageways, consistent with biological and aesthetic values.
- **Policy ENV-3.8. Educational and Research Access.** Work with public and private landowners adjacent to creeks to allow access to creeks, waterways, and riparian areas for educational and research programs.
- **Policy ENV-3.9. Restoration and Creek Maintenance.** Encourage all landowners in the County to remove invasive species, plant native plant species, and prevent pollution from entering local creeks and waterways.
- **Goal ENV-4.** Protect and preserve natural habitat, plants, and wildlife.
- **Policy ENV-4.1. Minimize Development Impacts.** Require new development and construction activities to minimize impacts and disturbances on plants and animals, including sensitive habitat and migration corridors, landforms, and trees.
- **Policy ENV-4.2. Natural Habitat Protection.** Preserve, protect, and improve remaining natural habitats, sensitive habitats for special status species, waterways, and wetlands.
- **Policy ENV-4.4. Biological Resources Assessment.** Require that applicants for development projects proposed to be in or adjacent to critical habitat areas to complete a site-specific biological resources assessment as part of the development review process and modify designs or add mitigations to reduce potential impacts.
- **Policy ENV-4.5. Special Status Species Protection.** Cooperate with State and Federal agencies to ensure that new development does not substantially affect any special status species on State or Federal rare, endangered, or threatened species lists.
- **Goal ENV-4.** Protect and preserve natural habitat, plants, and wildlife.
- **Policy ENV-4.3. Fish Passage Improvement.** Support efforts of the County to replace outdated culverts and other in-stream barriers with fish-friendly designs to facility the upstream and downstream movement of aquatic species.
- **Goal OSP-1.** Preserve, enhance, and protect a continuous system of open space areas, hillsides, and natural features.
- **Policy OSP-1.1. Open Space Preservation.** Keep open space and undeveloped forests free of future development.
- **Policy OSP-1.4. Connected Open Space Areas.** Integrate, wherever possible, the local open space and parks systems with the open space systems of nearby communities and the region to create and preserve a continuous and connected system of open space areas.

AGRICULTURAL RESOURCES

- **Goal AG-G1. Agricultural Production.** Economically viable agricultural operations contributing to the growth and stability of the economy and a strong market demand for agricultural lands dedicated to agricultural production.
- **Goal AG-G2. Preservation of Agricultural Lands.** Agricultural land preserved to the maximum extent possible for continued agricultural use in parcel sizes that support economically feasible agricultural operations.
- **Policy AG-P1. Planned Rural Development.** The County shall provide a Planned Rural Development (PRD) Program for lands designated Agricultural Grazing (AG) that allows voluntary clustering of homesites at a density above what would otherwise be allowed when lands most suitable for agricultural production are retained for permanent continued production. To qualify, identified homesite parcels must be clustered to avoid increasing use conflicts and not be in conflict with any applicable conservation plan. Right-to-Farm agreements shall be secured on lands proposed for conversion to residential uses. The remaining lands most suitable for continued agricultural production shall be retained solely for permanent production.
- **Policy AG-P2. Support Voluntary Purchase of Development Rights.** The County shall support the voluntary purchase of development rights to provide income to farm operations and limit the intrusion of residential development into agricultural lands.
- **Policy AG-P3. Support the Williamson Act Property Tax Incentive Program.** The County shall support the continuation, enhancement and growth of the County Williamson Act program.
- **Policy AG-P4. Supplemental Farm Income.** The County shall support activities compatible with agriculture that enhance the viability of agricultural operations such as cottage industries, farm homestays, sale of farm products, and visitor services and accommodations.
- **Policy AG-P5. Conservation of Agricultural Lands.** Agricultural lands shall be conserved and conflicts minimized between agricultural and non-agricultural uses through all of the following:
 - By establishing stable zoning boundaries and buffer areas that separate urban and rural areas to minimize land use conflicts.
 - By establishing stable Urban Development, Urban Expansion and Community Planning Areas and promoting residential in-filling of Urban Development Areas, with phased urban expansion within Community Planning Areas.
 - By developing lands within Urban Development, Urban Expansion and Community Planning Areas prior to the conversion of agricultural resource production lands (AE, AG) within Urban Expansion Areas.
 - By not allowing the conversion of agricultural resource production lands (AE, AG) to other land use designations outside of Urban Expansion Areas.
 - By assuring that public service facility expansions and non-agricultural development do not inhibit agricultural viability, either through increased assessment costs, degradation of the environment, land fragmentation or conflicts in use.
 - By increasing the effectiveness of the Williamson Act Program.
 - By allowing historical structures and/or sensitive habitats to be split off from productive agricultural lands where it acts to conserve working lands and structures.
 - By allowing lot-line adjustments for agriculturally designated lands only where planned densities are met and there is no resulting increase in the number of building sites.

- **Policy AG-P6. Agricultural Land Conversion - No Net Loss.** Lands planned for agriculture (AE, AG) shall not be converted to non-agricultural uses unless the Planning Commission makes the following findings:
 - There are no feasible alternatives that would prevent or minimize conversion;
 - The facts support an overriding public interest in the conversion; and
 - For lands outside of designated Urban Development Boundaries, sufficient off-setting mitigation has been provided to prevent a net reduction in the agricultural land base and agricultural production. This requirement shall be known as the “No Net Loss” agricultural lands policy. “No Net Loss” mitigation is limited to one or more of the following:
 - Re-planning of vacant agricultural lands from a non-agricultural land use designation to an agricultural plan designation along with the recordation of a permanent conservation easement on this land for continued agricultural use; or
 - The retirement of non-agricultural uses on lands planned for agriculture and recordation of a permanent conservation easement on this land for continued agricultural use; or
 - Financial contribution to an agricultural land fund in an amount sufficient to fully offset the agricultural land conversion for those uses enumerated in subsections a and b. The operational details of the land fund, including the process for setting the amount of the financial contribution, shall be established by ordinance.
- **Policy AG-P7. Agricultural Production in Conservation Areas.** The County shall support continued agricultural production on lands placed into conservation easements or acquired by public agencies for conservation purposes. Enforceable provisions contained in terms of sale, deeds and conservation easements shall require continued management for agricultural production.
- **Policy AG-P8. Right to Farm or Harvest.** The County shall utilize the “Right-to-Farm or Harvest” Ordinance to provide constructive notice about the nature of agricultural activities to residents living adjacent to farm operations.
- **Policy AG-P9. Predator Control.** Support predator control programs that comply with federal, state and local laws in order to reduce livestock and other agricultural production losses.
- **Policy AG-P10. Support Land Trusts.** Support private non-profit land trusts that provide agricultural conservation programs in Humboldt.
- **Policy AG-P11. Support Vegetative Management Programs.** Support vegetation management programs (controlled burning, etc.) when it is found that they improve the availability and quality of rangeland for livestock and wildlife, reduce the hazard of disastrous wildfires, and increase water quality and quantity.
- **Policy AG-P12. Advice from Agricultural Community.** Seek advice from organizations and affected individuals within the agricultural community for any future evaluation of land areas needed for urban development or for any consideration of requests by Humboldt’s Local Agency Formation Commission (LAFCo) to change spheres of influence or urban service boundaries next to or near agricultural lands.
- **Policy AG-P13. Agricultural Zoning and Parcel Size.** Utilize Agricultural Exclusive (AE) and Agricultural Grazing (AG) land use designations to ensure appropriate parcel sizes and land use for continuing availability of the necessary agricultural land base.
- **Policy AG-P14. Residential Uses on Timberland Production Zone (TPZ) Lands within Agricultural Preserves.** Residential uses on TPZ lands within agricultural preserves shall be consistent with the requirements of the Williamson Act and local Williamson Act Guidelines.

- **Policy AG-P15. Compliance with Regulations.** The County shall place a priority on abatement of violations that result in agricultural land conversion, loss of agricultural productivity or conflicts with neighboring agricultural operations.
- **Policy AG-P16. Protect Productive Agricultural Soils.** Development on lands planned for agriculture (AE, AG) shall be designed to the maximum extent feasible to minimize the placement of buildings, impermeable surfaces or non- agricultural uses on land as defined in Government Code Section 51201(c) 1- 5 as prime agricultural lands.

FOREST RESOURCES

- **Goal FR-G1. Forest Resources.** Public and private forests producing a wealth of multiple economic and natural resource values and ecosystem services. Constructive dialog and cooperation between state, federal and local agencies and private property owners and a regulatory framework that maximizes private and public interests and ecosystem services.
- **Goal FR-G2. Forestland Timber Production.** A prosperous timber industry managing a stable inventory of productive forest lands for timber production. Ranches and rural homesteads making full use of the timber production potential of their lands.
- **Goal FR-G3. Supply of Productive Forestlands.** An adequate and stable supply of forestlands whose economic and ecosystem services are sustained by policies and standards governing minimum parcel sizes, public acquisition, incompatible uses, public infrastructure investments, environmental protection and incentives for sustainable uses.
- **Goal FR-G4. Incompatible and Conflicting Uses.** Timberlands protected from the encroachment of incompatible uses and managed for the inclusion of compatible uses.
- **Goal FR-G5. Infrastructure.** A public road system maintained for transportation of logs to mills and forest products to market. Sufficient industrially zoned property to support forest products manufacturing. Wildland fire protection that prevents the loss of timber on private property.
- **Policy FR-P1. Timberland Regulatory Review.** Support efforts by the California Department of Forestry and Fire Protection’s (CAL FIRE) and other agencies to improve a regulatory system that encourages the productivity and resource protection of timberlands.
- **Policy FR-P2. Timber Harvest Plan Review.** Defer to CAL FIRE on timber harvest reviews; comment only where County land-use patterns have significantly contributed to use conflicts as directed by the Board.
- **Policy FR-P3. Timber Management Regulations.** Support fewer, more effective and lower- cost timber management regulations as a strategy to maintain timber production as the primary economic use of forestlands. Coordinate County policies so they are compatible with the State Forest Practice Act and State Forest Practice Rules.
- **Policy FR-P4. Broader Use of Long-Term Timber Management Plan(s).** Support broader use of Nonindustrial Timber Management Plans, Program Timberland Environmental Impact Reports, and other long-term management plans that would include increasing the maximum acreage allowable under such plans and encouraging multiple landowner cooperative plans.
- **Policy FR-P5. Forest and Rangeland Improvement Programs.** Support continuance and funding of forest and rangeland improvement programs.
- **Policy FR-P6. Tax Incentive Programs.** Support tax incentive programs, such as the Timber Production Zone (TPZ), that maintain or increase the economic viability of timber production. Support tax policies that provide tax benefits to land owners for conservation easements.

- **Policy FR-P7. Innovative Forestland Programs.** Support development of innovative forest and rangeland programs that facilitate production and conservation goals. Support forest management and wood product certification and foster development of markets for new forest products and services, such as using bio-mass for energy and carbon storage.
- **Policy FR-P8. Protection of High Quality Timberlands.** Timberlands planned and zoned for timber production should be retained for timber production, harvesting and compatible uses, and reclassification of the Timberland Production Zones (TPZ) shall be done in accordance with the statutory requirements.
- **Policy FR-P9. Residential Construction on TPZ Zoned Parcels.** Recognize the right to construct a residence and accessory buildings under a ministerial permitting process subject to County standard consistent with other Elements of the General Plan when the use does not detract from the growing and harvesting of timber and associated compatible uses.
- **Policy FR-P10. Secondary Residential Construction on TPZ Zoned Parcels.** Accessory dwelling units may be allowed on TPZ parcels greater than 160 acres, and on parcels less than 160 acres only in the area already converted, intended to be converted, or that does not meet the definition of timberlands. Accessory dwelling units may be allowed on TPZ parcels of less than 40 acres within Community Planning Areas. (GP amendments w ADU Ord., Res. 20-78)
- **Policy FR-P11. Substandard Lots and TPZ Rezoning.** The County supports County-initiated zoning of land from the Timberland Production Zone only when it can be found that:
 - The original inclusion was in error or inappropriate; or
 - The conversion is necessary to provide for the logical expansion of an existing community; or the conversion and rezoning is necessary to provide for the reconfiguration of parcels in order to utilize development unit credits for cluster housing; or
 - The parcel is three acres or less; or
 - The parcel does not meet the definition of timberland, or timber production cannot be sustained as the primary use as determined by the Forestry Review Committee.
- **Policy FR-P12. Landowner-initiated Rezoning of TPZ Parcels.** Landowner-initiated rezoning of TPZ parcels shall be done according to state law (California Government Code Section 51120).
- **Policy FR-P13. Lot Line Adjustments.** Lot line adjustments of TPZ parcels may be approved in order to consolidate logical timberland management units or facilitate clustered residential development. Such adjustments shall be in keeping with the spirit and intent of TPZ and shall not result in a net reduction of the area of TPZ available for forest management unless a finding is made by the Board of Supervisors that it is in the public interest.
- **Policy FR-P14. Timberland Ownership.** The County shall provide incentives to maintain large-scale land ownerships for commercial timber production and to protect forest ecosystem services.
- **Policy FR-P15. Planned Rural Development.** The County shall consider, and if appropriate, develop a Planned Rural Development (PRD) program that allows voluntary clustering of home sites when lands most suitable for timber production are retained for permanent continued production. Consider incentives such as density bonuses.
- **Policy FR-P16. Public Utilities on TPZ Lands.** Where feasible avoid locating federal, state, or local public improvements and utilities in TPZ where the project or land acquisition will have a significant adverse effect on the production of timber or ecosystem services.

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- **Policy FR-P17. Conservation Easements.** Support voluntary easement programs consistent with TPZ standards that combine conservation management with sustainable timber production.
- **Policy FR-P18. Transfer of Development Rights (TDR) Program. Research** and develop, if feasible, a voluntary Transfer of Development Rights program as a method of protecting larger tracts of resource lands based on community input. The density credit would not count Accessory Dwelling Units in the calculation.
- **Policy FR-P19. Planned Compatible Uses.** Lands adjacent to areas designated as Timberlands should be planned for uses compatible with timber management, including timber harvesting activities.
- **Policy FR-P20. Fire Safety Hazards.** The County shall continue to implement the State Responsibility Area Fire Safe Standards and Wildland-Urban Interface Building Codes for new development and support voluntary programs for fuels reduction, dwelling fire protection and creation of defensible space for existing development.
- **Policy FR-P21. Right to Harvest.** The County shall utilize the “Right-to-Harvest” Ordinance to provide recorded notice about the nature of timber management activities to residents living adjacent to timberlands.
- **Policy FR-P22. Maintain Public Roads.** The County shall maintain public roads and drainage facilities to support log and forest products transportation.

Humboldt County Local Coastal Program

The County has six Local Coastal Plans under the certified Humboldt County Local Coastal Program (LCP) which guide land use and development along the county’s coastline, ensuring compliance with the California Coastal Act. The LCP aims to protect coastal resources such as beaches, wetlands, and habitats, while promoting sustainable development, public access, and recreation. A key component of the LCP is the Humboldt Bay Area Plan (HBAP), which focuses specifically on the Humboldt Bay region, addressing issues like wetland conservation, bayfront development, and habitat protection. Other LCP plans include the Eel River Area Plan (ERAP), McKinleyville Area Plan (MAP), North Coast Area Plan (NCAP), South Coast Area Plan (SCAP), and the Trinidad Area Plan (TAP). Together, these plans balance environmental conservation with economic activities like agriculture, forestry, and fishing, ensuring responsible coastal management.

Humboldt County Code

STREAMSIDE MANAGEMENT AREAS AND WETLANDS ORDINANCE

Section 314-61, Chapter 4 of the Humboldt County Code (HCC) sets standards for the use and development of land located within Streamside Management Areas, wetlands and other wet areas, such as natural ponds, springs, vernal pools, marshes, and wet meadows. These standards establish buffer zones around these sensitive areas where activities (e.g., construction or vegetation removal) are restricted or require specific permits.

VEGETATION REMOVAL ORDINANCE

Section 313-64, Chapter 3 of the HCC sets provisions to preserve and protect major vegetation within the County Coastal Zone, reduce runoff, provide windbreaks or provide protection to adjacent trees from irreparable wind damage, and enhance property values and local economy by maintaining visual quality, while also respecting private property rights. Major vegetation removal is defined as the following:

- The removal of one or more trees with a circumference of 38 inches or more measured at 4.5 feet vertically above the ground;
- The removal of trees within a total aggregate contiguous or non-contiguous area or areas exceeding 6,000 square feet, measured as the total of the area(s) located directly beneath the tree canopy;
- The Director may determine that a proposal to remove woody vegetation constitutes major vegetation removal if the Director finds that it may result in a significant environmental impact pursuant to this section. In making a finding that the proposed major vegetation removal may result in a significant environmental impact, the Director shall review the proposal and determine if any of the following conditions exist or are proposed:
 - The major vegetation removal involves the use of heavy equipment;
 - The major vegetation removal is proposed on either a steep slope (15 percent or greater), or on a slope designated on the Geological Map of the General Plan with slope stability index of “2” - moderate instability, or “3” - high instability; and may result in soil erosion or landslide;
 - The major vegetation removal is located within or adjacent to an environmentally sensitive habitat as identified in the applicable coastal area plan; or
 - The major vegetation removal may result in significant exposure of adjacent trees to wind damage.

City of Arcata General Plan

The Arcata General Plan includes goals and policies related to open space, natural habitats, and agricultural and forest lands within the City.⁴¹ These goals and policies aim to protect environmentally sensitive areas, promote biodiversity, and preserve important agricultural and forestry resources. The relevant goals and policies are listed below.

POLICY RC-1 NATURAL BIOLOGICAL DIVERSITY/ ECOSYSTEM FUNCTION

- **Objective.** Set an overarching policy that emphasizes the value of biological diversity, and the optimal function of natural resources as part of a healthy ecosystem.
- **RC-1a. Maintain biological and ecological integrity.** Maintaining ecological balance, system function, biological integrity, and natural diversity is the primary focus of the Resource Conservation and Management Element. Protecting the ecological functions of natural habitats, and natural drainage and infiltration processes, will enhance natural ecosystems in the Planning Area. Ecological functions and processes are maintained through the following measures:
 - The structure and composition of ecological systems within the City shall contain the same native plant and animal species, in the same relative abundances and proportions, that are found in the least-disturbed natural ecosystems in the Planning Area.
 - The ecological functions performed by ecological systems in the City shall resemble the functions of the least-disturbed natural ecosystems in the Planning Area.
 - Ecological systems and natural processes shall not be disrupted by non-native organisms to a significant degree.

⁴¹ City of Arcata. 2024. General Plan Resource Conservation and Management Element. https://www.cityofarcata.org/DocumentCenter/View/14688/42_ResourceCons (accessed December 2024).

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- Ecological systems and natural processes shall not be disrupted by land use activities to a significant degree (e.g., a culvert or other drainage device that restricts flow or blocks fish passage).

An “adaptive management” approach shall be used to maintain ecological and biological integrity, including monitoring the status of ecological systems in the City and adjusting the City’s implementation of this Plan, to more closely approximate the conditions provided in the Planning Area’s least-disturbed natural ecosystems.

- **RC-1b. Non-native plant species.** Some non-native plant species, such as pampas grass (*Cortaderia jubata*), Himalayan blackberry (*Rubus discolor*), Scotch broom (*Cytisus scoparius*), blue gum eucalyptus (*Eucalyptus globulus*), English ivy (*Hedera helix*), English holly (*Ilex aquifolium*), cotoneaster (*Cotoneaster franchetii*), and reed canary grass (*Phalaris arundinacea*) are invasive and displace native species. The presence of these non-native species reduces the area’s natural biodiversity, biological integrity, and aesthetics. Only native plant species, or species demonstrated to be non-invasive, shall be used in public landscapes, and native plant species shall be strongly encouraged in private landscapes. The City shall provide public information on invasive plant species, maintain a program that recommends effective but non-toxic eradication measures for invasive plant species, and eradicate non-native plant species on public lands where they are displacing native species.
- **RC-1c. Protection of Environmentally Sensitive Habitat Areas.** Environmentally sensitive habitat areas (ESHA) shall be protected against any significant disruption of their habitat values, and only uses dependent on and compatible with maintaining those resources shall be allowed within ESHAs. Proposed development in areas adjacent to ESHAs shall be sited and designed to prevent impacts that would significantly degrade such areas and must be compatible with the continuance of such habitat areas.
- **RC-1d. Identification of Environmentally Sensitive Habitat Areas.** The City declares the following to be ESHAs within the Planning Area.
 - Rivers, creeks, sloughs, and associated riparian habitats: Mad River; Jacoby Creek; Beith Creek; Fickle Hill Creek; Grotzman Creek; Campbell Creek; Jolly Giant Creek; Janes Creek; Gannon Slough; Butcher Slough; and McDaniel Slough.
 - Wetlands, estuaries, and associated riparian habitats: Arcata Bay; Mad River Slough; Liscom Slough; Butcher Slough; the Aldergrove marshes and ponds; and the Arcata Marsh and Wildlife Sanctuary.
 - Other important habitat areas: waterbird rookeries; shorebird concentration sites; habitat for all rare, threatened, or endangered species on federal or state lists; and vegetated dunes.
 - Public Trust lands such as diked and drained former tidelands that are grazed.
- **RC-1e. Threshold of City review for sensitive habitat effects.** Development on parcels designated Natural Resource [NR] on the Land Use Plan Map, or within 250 feet of such a designation, or development potentially affecting a sensitive habitat area, shall be required to be in conformance with applicable habitat protection policies of this Element. All proposed development plans, including grading and drainage plans, submitted as part of a planning entitlement application for these areas, shall show the precise locations of all sensitive habitat areas on the site plan.
- **RC-1f. Sensitive habitat buffer requirements.** A setback shall be required separating all permitted development from adjacent sensitive habitat areas. The purpose of such setbacks

shall be to prevent any degradation of the ecological functions provided by the habitat area because of the development. The following shall apply to such setbacks:

- The minimum width of setbacks from development to streams and wetlands shall be as provided in policies RC-2 and RC-3, respectively.
 - The minimum width of setbacks from development to all other types of sensitive habitat shall be 100 feet unless the designated setback would eliminate all reasonable use of the property.
 - A definition and map of sensitive habitat will be maintained by the City.
- **RC-1g. Sensitive habitat information required in development application review.** Where there is a question regarding the boundary, buffer requirements, location, or status of an ESHA identified pursuant to General Plan policies, the public or private applicant shall provide the City with the following:
 - Base map delineating topographic lines, adjacent roads, and location of dikes, levees, culverts, flood control channels, and tide gates, as applicable.
 - Vegetation map, including identification of species that may indicate the existence or nonexistence of a sensitive environmental habitat area.
 - Soils map delineating hydric and non-hydric soils.
 - Census of animal species indicating the existence, or non-existence, of an environmentally sensitive habitat area.

This information shall be provided to the California Department of Fish and Wildlife (CDFW), U.S. Fish and Wildlife Service, NOAA Fisheries (also known as the National Marine Fisheries Service), and other affected agencies for review and comment. Any comments and recommendations provided by these state and federal agencies shall be immediately sent to the applicant for their review. The decision concerning the boundary, location, or status of the environmentally sensitive habitat area in question shall be based on the substantial evidence in the record and supported by written findings.

- **RC-1h. Habitat integration for ecological integrity and development of a protected habitat corridor system.** An ecological connection network plan for linking native habitats in the Planning Area, and all the environmentally sensitive habitat areas identified in this Plan, shall be prepared. The network shall incorporate all existing large areas (or “nodes”) of habitat for fish and wildlife species (such as marshes and forests) and “linkages” or “corridors” of natural habitat (such as stream zones and sloughs) for migration and species movement. The plan will link large “nodes” of natural habitat together with the “linkage” connections as a functioning ecological network. Nodes and linkages shall include a “core” of natural ecosystem elements and shall provide a protected “buffer” along the outer margins of the core habitat that shall function to protect the ecological services in the “core” habitat.
- **RC-1i. Use of biocides and other compounds with biological consequences.** Pesticides, herbicides and insecticides (biocides); hormones and antibiotics (growth promoters); and hydrocarbon-based compounds, used both commercially and individually, can accumulate to toxic levels in biological organisms, including humans. Certain substances, even at low levels, can affect reproductive health.

The City shall maintain and make available a current list of alternative, environmentally-safe products for controlling unwanted vegetation and pests, growing crops and enhancing

production of animal products. The use of substances and compounds that can accumulate to toxic levels is restricted by the City (Pesticide Ordinance).and the City shall develop a program for fostering the reduction of pesticides in private use.

POLICY RC-2 STREAMS CONSERVATION AND MANAGEMENT

- **Objective.** Enhance, maintain, and restore the biological integrity of entire stream courses (headwaters to mouth), and their associated riparian habitats, as natural features in the City’s landscape.
- **RC-2a. Designation of protected streams.** The provisions of this policy shall apply to those streams shown on the Protected Watercourse Map (Figure RC-a). These watercourses and their associated riparian areas serve as habitat for fish and wildlife, provide space for the flow of stormwater runoff and flood waters, and furnish open space and recreational areas for city residents.
- **RC-2b. Environmental Buffer Area (EBA).** A streamside protection area is hereby established along both sides of the streams identified on the City Watercourse Map. The purpose of the EBA is to remain in a natural state to protect stream ecosystems and their associated riparian habitat areas. The EBA shall include:
- **RC-2c. Allowable uses and activities in Environmental Buffer Areas.** The following compatible land uses and activities may be permitted in EBAs, subject to all other policies in this Element, including those requiring avoidance of impacts and other mitigation requirements:
 - Outside the Coastal Zone:
 - agricultural operations compatible with maintenance of riparian resources;
 - fencing along property boundaries and along EBA setback boundaries to prevent bank erosion and degradation of natural riparian vegetation by livestock;
 - maintenance of existing roads, driveways, and structures;
 - construction of public road crossings;
 - forest management practices as permitted by the State of California or Arcata’s Forest Management Plan;
 - construction and maintenance of trails for public access;
 - construction and maintenance of utility lines;
 - resource restoration projects;
 - emergency or preventive removal of sediment and vegetation for flood control purposes (only when authorized by the City of Arcata).
 - In the Coastal Zone:
 - all uses and activities listed in (1) above;
 - public coastal access improvements;
 - boat launching facilities.
 - If the provisions herein would result in any legal parcel, not on Public Trust lands, created prior to the date of this plan, being made unusable in its entirety for any purpose allowed by the land-use plan, exceptions to the foregoing may be made to allow a reasonable economic use of the parcel, subject to approval of a conditional use permit. Any land use, construction, grading, or removal of vegetation that is not listed above shall be prohibited.

- **RC-2d. The Wetland and Stream Protection Combining (:WSP) Zone.** The :WSP zone of the Zoning Code shall be applied to all streamside protection areas. [The WSP zone should be a land use designation under the NR district, e.g., NR-WSP.]
- **RC-2e. Review and approval of projects affecting streamside protection areas.** Applications for development on any parcel that is located partially or wholly within an SPA shall be subject to the requirements of Policy RC-1 and RC-2.
- **RC-2f. Conservation easement.** Dedication of a conservation easement, or equivalent deed restriction, encompassing the area within the EBA shall be required as a condition of approval of any discretionary planning permit, including design review, when any portion of the project site falls within an EBA. Such easements may be conveyed to the City of Arcata, or to another governmental agency that shall manage the easement to protect the EBA's functions, or to a mutually agreeable non-profit entity.
- **RC-2g. Maintenance of streams as natural drainage systems.** Arcata's creeks carry a significant amount of the City's stormwater runoff. Drainage controls shall be enforced through implementation of the Drainage Master Plan, to protect water quality, and to minimize erosion, sedimentation, and flood impacts to City creeks. A comprehensive stream maintenance program shall be prepared to augment stormwater utility rehabilitation projects designed to maintain or improve flow capacity, trap sediment and other pollutants that impair water quality, minimize channel erosion, prevent new sources of pollutants from entering the stream, and enhance instream and riparian habitat.
- **RC-2h. Restoration of degraded creek resources.** Portions of Janes, Jolly Giant, Campbell, and Grotzman Creeks are culverted or covered, causing degradation of creek resources. Tide gates on creek systems can be barriers that prevent anadromous salmonids from accessing critical habitat. Furthermore, recreational use can degrade riparian vegetation along upland reaches of certain creeks (e.g., Jolly Giant, Campbell and Jacoby Creeks) within Redwood Park and the Community Forest. Lack of vegetation along creek courses can cause erosion, resulting in water quality and air quality impacts. Restoration activities for improving degraded stream resources shall include:
 - Uncovering of creek courses in public rights-of-way, as part of public works improvement projects.
 - Encouraging landowners to restore degraded EBA and stream resources, including native riparian vegetation establishment and invasive species removal, as part of a new development or renovation.
 - Controlling uses that are damaging to upland reaches of creeks in the Community Forest and Redwood Park.
 - Removing or modifying barriers such as tide gates that prevent migrating anadromous salmonids which are federally listed endangered species from reaching their critical habitat.
 - Exclusionary fencing to keep livestock out of the EBA.
 - Identifying and addressing sources of pollutants that adversely impact water quality, if applicable.

POLICY RC-3 WETLANDS MANAGEMENT

- **Objective.** To protect existing wetlands areas and their functional capacities and services, maintain a standard of "no net loss" of wetland area and services, restore degraded wetland

areas, enhance wetlands functions, and create additional wetland areas to replace historical losses.

- **RC-3a. Requirement for wetland delineation and study.** All proposed development applications shall include a site plan that shows the precise location of any wetlands that exist on the subject property. Any application for development on a parcel where wetlands may be present shall include a wetland reconnaissance or delineation report.
- **RC-3b. Filling of wetlands.** The following shall apply:
 - Filling of wetlands shall be prohibited in the Coastal Zone, unless it can be demonstrated that:
 - the wetland restrictions, if imposed, would render a parcel, not subject to the Public Trust, unusable for any use permitted by the land use plan;
 - there is no feasible, environmentally less damaging alternative to wetland fill for development of a permitted use; and
 - the fill is the least amount necessary to allow development of permitted uses.
 - Filling of wetlands outside the Coastal Zone may be permitted only when the following has been demonstrated by the project proponent:
 - the fill is the least amount necessary to allow a reasonable and harmonious configuration of development on the parcel;
 - the wetlands proposed to be filled are small and isolated, and have limited functional services when compared to larger, contiguous wetland areas.
 - Filling of wetlands shall only be authorized if appropriate mitigation, resulting in “no net loss” in the area and services of wetlands, is provided. Mitigation may consist of creating and maintaining a new wetland of equal or greater functional capacity and services than the wetland proposed to be filled, restoration of previously degraded wetlands, or enhancement of existing wetland areas.
- **RC-3c. Designation of Environmental Buffer Areas for Wetlands.** An Environmental Buffer Area shall be established to separate all permitted development from adjacent existing wetlands that are to be preserved in a natural state, and from new wetland areas that are created as mitigation of wetland infill. The Environmental Buffer Area’s purpose is to remain in a natural state in order to protect wetland ecosystems and their associated habitat areas from destruction or degradation. The extent of the Environmental Buffer Area shall be established based upon analyses and recommendations contained in a site-specific wetland delineation study.
- **RC-3d. Allowable uses and activities in Environmental Buffer Areas for Wetlands.** The following compatible land uses and activities may be permitted in Environmental Buffer Areas for wetlands, subject to all other policies in this Element, including those requiring avoidance of impacts and other mitigation requirements:
 - Resource restoration or enhancement projects.
 - Farming, consistent with policy RC-3l.
 - Outdoor recreation activities, such as bird watching, hiking, boating, horseback riding, and similar activities.
 - Education, scientific research, and use of nature trails.
 - Drainage ditches when compatible with wetland function.
 - Minor modification of existing, serviceable structures.

- Fencing to prevent livestock from degrading wetlands and riparian vegetation.
- Any use, construction, grading, or removal of vegetation that is not listed above shall be prohibited.
- **RC-3e. Wetland and Stream Protection Combining (:WSP) Zone.** The :WSP zone of the City's Zoning Code shall be applied to all Wetland Protection Areas.
- **RC-3f. Review and approval of projects affecting Environmental Buffer Areas for wetlands.** Applications for development on any parcel that is located partially or wholly within an Environmental Buffer Area for wetlands shall be subject to the requirements of Policy RC-1 and RC-3.
- **RC-3g. Conservation easements.** Dedication of a conservation easement, or equivalent deed restriction, encompassing the area within the Environmental Buffer Area for wetlands shall be required as a condition of approval of any discretionary action, including design review, when any portion of the project site falls within an Environmental Buffer Area. Such easements may be conveyed to the City of Arcata, or another governmental agency, or a City-approved non-profit entity that shall manage the easement to protect the Environmental Buffer Area's functions.
- **RC-3h. Designation of wetland protection zones.** The :WSP Zone shall be applied to wetlands, wetland setbacks, wetland buffer areas and modified wetland buffer areas, as defined in the City's Zoning Code, at the time of development review and approval.

A wetlands map, maintained by the City, will show the general location of wetlands, riparian corridors, and uplands within the City limits and urban services zone. All proposed development within or adjacent to the areas identified on the map as wetlands or riparian corridors shall comply with City Wetlands Development Standards.

A Wetlands Buffer Area shall be required to protect the areas shown as wetlands on the Wetlands Map. All proposed development within the buffer areas shall comply with the Wetlands Buffer Area Development Standards of the Coastal Zoning Ordinance.

- **RC-3i. Management of Arcata Marsh for wetlands services as well as wastewater treatment.** The Arcata Marsh and Wildlife Sanctuary serves a variety of purposes and functions, including providing wetland habitat for a variety of species, wastewater treatment, and recreational use. These purposes shall be balanced for the benefit of all users.
- **RC-3j. Minimum mitigation requirements for wetland impacts.** Diking or filling of a wetland that is otherwise in accordance with the policies of this General Plan, shall, at a minimum, require mitigation measures, a monitoring program, and acceptable funding.
- **RC-3k. Wetland functional capacity maintenance requirement.** Diking, filling, or dredging of a wetland or estuary shall maintain or enhance the functional capacity of these resources. Functional capacity means the ability of the wetland or estuary to be physically and biologically self-sustaining and to maintain natural species diversity. To establish that the functional capacity is being maintained, all the following must be demonstrated:
 - Presently-occurring plant and animal populations in the ecosystem will not be altered in a manner that would impair the long-term stability of the ecosystem (i.e., natural species diversity, abundance and composition are essentially unchanged as the result of the project).
 - A species that is rare or endangered will not be significantly adversely affected.

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- Consumptive uses (e.g., fishing, aquaculture and hunting) or non-consumptive functions (e.g., water quality improvement and research opportunity) of the wetland or estuary ecosystem will not be significantly reduced.
- **RC-3I. Uses allowed in diked and drained reclaimed former tidelands.** Allowable uses and development in grazed or farmed wetlands are limited to uses compatible with the Public Trust doctrine. These uses are specified in Land Use Element Policy LU-6 and are summarized below.
 - Agricultural operations limited to accessory structures, apiaries, field and truck crops, livestock raising, greenhouses (provided they are not located on slab foundations and crops are grown in the existing soil on site), and orchards.
 - Farm-related structures, including barns, sheds, and farmer-occupied housing, are necessary for the performance of agricultural operations. Such structures may be located on an existing grazed or farmed wetland parcel only if no
 - alternative upland location is available for such purpose and the structures are sited and designed to minimize adverse environmental effects on Public Trust resources and uses. No more than one primary and one secondary residential unit shall be allowed per parcel.
 - Restoration projects.
 - Nature study, aquaculture, and similar resource-dependent activities compatible with Public Trust resources and uses.
 - Incidental public service purposes that may temporarily impact the resources of the area (such as burying cables or pipes).

Expanding farming operations into non-farmed wetlands, by diking or otherwise altering the functional capacity of the wetland is not permitted. Farm-related structures (including barns, sheds, and farm-owner occupied housing) necessary for the continuance of the existing operation of the farmed wetlands may be located on an existing farmed wetland parcel, only if no alternative upland location is viable for such purpose and the structures are sited and designed to minimize the adverse environmental effects on the farmed wetland. Clustering and other construction techniques to minimize both the land area covered by such structures and the amount of fill necessary to protect such structures will be required.

POLICY RC-4 OPEN WATERS OF ARCATA BAY AND TIDELANDS

- **Objective.** Maintain existing Bay wetlands and tide lands, protect them from urban and agricultural encroachments or degradation, and manage the open waters of Arcata Bay for their wildlife, fisheries, and ecological services, as well as navigation, recreation, and tourism uses.
- **RC-4a. Protection of open waters and tideland areas of Arcata Bay.** The open water areas and tidelands of Arcata Bay constitute a fragile Public Trust resource and access shall be controlled to avoid resource degradation, while maintaining the public’s right to navigation. Tidal marshes shall be enhanced and maintained, especially in the areas of McDaniel, Gannon, and Butcher’s Sloughs, to protect wetland services.
- **RC-4b. Access to Arcata Bay.** The following bicycle and pedestrian routes are designated as Public Access Corridors and shall be properly signed and identified as approved Bay access points.
 - “I” Street from Samoa Boulevard, south through the Arcata Marsh and Wildlife Sanctuary to the boat launching facility on Arcata Bay.
 - South “G” Street south of “H” Street, to Highway 101.

- Humboldt Bay Trail from Samoa Boulevard (Highway 255), south to Bayside Cutoff and beyond.
- Samoa Boulevard from Highway 101 west to Mad River Slough.

A system of foot trails and interpretive sites shall be established along the Arcata Bay shore westward to the City limit, subject to the following guidelines:

- All planning and development in the area that is both south of Samoa Boulevard and west of Highway 101, and that is identified as tidelands, former tidelands, wetlands or riparian corridor on the adopted Wetlands Map shall be reviewed by the Wetlands and Creeks Committee and coordinated with California Department of Fish and Wildlife.
- Development in the area bounded by Butcher’s Slough and Gannon Slough shall occur in conjunction with management of the USFWS National Wildlife Refuge, Arcata Marsh and Wildlife Sanctuary and the Jacoby Creek Gannon Slough Wildlife Area.
- Motorized vehicles shall be restricted to paved roads and parking lots.
- Pedestrians shall be restricted to designated trails and facilities.
- Valid scientific and educational studies of wetlands and tidelands are encouraged with a City Nature Area Entrance Permit.
- **RC-4c. Coastal-dependent and Public Trust uses of Arcata’s tidelands.** Tidelands of Arcata Bay support a variety of wildlife, as well as human activities. The following provisions shall be made for managing tideland areas.
 - Tidelands and open water areas of Arcata Bay shall be designated Natural Resource-Public Trust lands [NR-PT] and identified as passive use recreational areas.
 - The Arcata Marsh and Wildlife Sanctuary shall be designated as Natural Resource [NR], and the recreational component of the project identified as a passive use recreational area.
 - The continued use of the tidelands for scientific and educational studies is encouraged.
 - The Arcata Marsh and Wildlife Sanctuary shall be maintained, and any new facilities shall be built consistent with the Arcata Marsh and Wildlife Sanctuary plan adopted by the City Council.
 - The South “I” Street boat launch shall be enhanced or relocated to accommodate small watercraft and windsurfing.
 - The placement of interpretative sites along the Arcata Bay shore, including Nature and Wildlife Centers, shall be coordinated with other agencies, and serve as an educational focal point for Arcata’s natural resource areas.
 - Access on the levee from the Arcata Marsh and Wildlife Sanctuary westward to the City limit shall be provided for passive recreation and nature observation.
- **RC-4d. Diking, dredging, filling, and shoreline structures.** Diking, dredging, or filling of Bay waters, wetlands, and estuaries is discouraged and only permitted where it has been demonstrated that the Public Trust resources and values are being protected, and mitigation measures have been provided, which minimize adverse environmental effects, for the following limited uses:
 - Incidental public service purposes including, but not limited to, burying cables and pipes, and maintaining existing dikes and public facilities.
 - Maintaining a channel adequate to serve the boat ramp at current levels of use.

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- Resource restoration purposes.
- Nature study, aquaculture, or similar Public Trust resource dependent activities.
- 5. Agriculture as currently practiced within existing diked former tidelands but not including the expansion thereof.

In order to protect existing development, shoreline structures (such as dikes or tide gates) that may alter the natural shoreline, shall be permitted only when they do not adversely affect any federally listed endangered or threatened species; and no other feasible, less environmentally-damaging alternative is available, and only when the structures are not located within a wetland, unless the wetland will be the primary beneficiary of the structure.

The placement of dredge material on existing wetlands shall not be permitted unless such placement is necessary for either a Public Trust resource restoration project, or for the maintenance of existing agricultural operations in diked former tidelands.

Wetland fill shall be allowed for aquaculture projects if it can be shown that it is necessary for the project, is required to be located within the wetland, and there is no other feasible, less environmentally-damaging, alternative.

- **RC-4e. Aquaculture use of coastal wetlands and tidelands.** To protect aquaculture activities in Arcata Bay, the City shall:
 - Ensure that its wastewater discharge does not exacerbate existing problems with coliform bacteria levels in Arcata Bay.
 - Take measures to reduce coliform loading of perennial streams within its jurisdiction, as part of a stream maintenance program. These measures shall include controlling identified sources of coliform loading such as septic tank leachate and runoff from agricultural operations.

Aquaculture shall not adversely impact natural ecological processes nor native wildlife or fisheries or their habitat in the Bay. No new aquaculture uses shall be permitted unless it can be demonstrated that adequate precautions will be taken to prevent new adverse impacts to natural ecological processes. The City shall continue its management of:

- Integrated wetland enhancement and wastewater treatment
- The tidelands, for commercial and native oyster harvesting.
- **RC-4f. Management of bayfront and marsh areas for coastal access, recreation, and tourism.** Tidelands and open water areas of Arcata Bay shall be designated Natura Resource-Public Trust land [NR-PT] and protected from uncontrolled access. The following guidelines shall be used when permitting access to these areas:
 - Motorized vehicles shall be restricted to paved roads and parking lots.
 - Pedestrians shall be restricted to designated trails and facilities.
 - Valid scientific and educational studies of the wetlands and tidelands shall be encouraged.

New development shall not restrict public access to the shoreline. Public access to the shoreline shall be required of new development. Where consistent with the Humboldt Bay National Wildlife Refuge Complex Comprehensive Conservation Plan, controlled public access to the Refuge's Jacoby Creek Unit shall be developed along Arcata Bay from the AMWS to the City's westward limit.

POLICY RC-5 AGRICULTURAL RESOURCES MANAGEMENT

- **Objective.** Protect and enhance agricultural uses on prime agricultural lands within the City and encourage more productive agricultural use of agriculturally suitable lands.
- **RC-5a. Promotion of and participation in agricultural production within the City.** Diverse and intensive agricultural production and increased participation in agricultural production, shall be promoted, to maintain the value of agricultural lands, improve the economic base, and increase employment and food production. The City does not, however, advocate more intensive agricultural uses and practices that would have adverse environmental impacts. Agricultural operations, such as Community Supported Agriculture (CSA) are strongly encouraged.
- **RC-5b. Community and farm protection.** Maintaining a compatible relationship between agricultural and residential uses shall be based on:
 - Recognizing the rights of owners of productive agricultural land to make agricultural use of their land.
 - Identifying and minimizing potential conflicts between agricultural operations and adjacent residential, commercial, and community facility uses.
- **RC-5c. Permanent protection for agricultural lands.** Protection of agricultural resources shall be secured through the purchase of conservation easements, development rights, and outright acquisition. The City shall work in conjunction with other entities such as land trusts, whenever possible, to preserve agricultural buffers and maintain and enhance agricultural uses on prime agricultural soils.

POLICY RC-6 FOREST RESOURCES MANAGEMENT

- **Objective.** Protect and enhance private and public forest lands (e.g., the Arcata Community Forest Tracts) to maintain the resiliency and integrity of the ecosystem while protection timber production, recreation, habitat values, and opportunities for education and research.
- **RC-6a. Management of Arcata Community Forest.** The City's 2022 Forest Management plan includes the following policies:
 - 1. Recreation and aesthetics resource management - The community forest will emphasize dispersed, day-use opportunities. Recreational use shall not be allowed to impact other resources such as fish, wildlife, or watershed.
 - 2. Timber resource management - To ensure the sustainable and long-term production of forest products, the rate of harvesting must not exceed the rate of production. Long-term productivity refers to the continuing ability of the forest to produce timber while retaining the associated values of watershed, wildlife, soils, recreation and aesthetics. This is dependent upon the use of management practices that do not allow for the deterioration or impairment of soil productivity. For planning purposes, long term means that exceeding fifty years.
 - Watershed resource management - Water quality, soil, riparian, and aquatic biological productivity shall be maintained and enhanced through the application of City forest management standards and the implementation of watershed improvement projects.
 - Wildlife resource management - Wildlife habitat is managed to promote species diversity and to ensure that populations of indigenous species are maintained. This can best be achieved through the maintenance and enhancement of habitat values. Habitat values that lead to species diversity include the following elements: breeding, foraging, watering, rearing, hiding and thermal cover.

Regional Climate Action Plan and CEQA GHG Emissions Thresholds

- Vegetation and botanical resources - Maintain the native biodiversity of species found in a redwood forest habitat, both by controlling exotics and managing for a species mix that would naturally occur in a redwood forest habitat.

- **RC-6b. Management of Jacoby Creek Forest.** The management policies for the Jacoby Creek Forest are the same as those for the Arcata Community Forest, listed above, except that the Jacoby Creek Forest is not open to recreational use.
- **RC-6c. Allocation of forest funds.** Forest fund revenues derived from timber harvest and carbon projects shall be deposited into a special revenue account within the City to be utilized for forest management purposes. Excess net forest fund revenues, when available, may be directed towards park acquisition, maintenance, and development. This can include acquisition of stream corridors, and riparian and greenbelt areas.

These areas contribute to the diversity of parks and, in the case of linear parks along stream corridors, provide passive recreation areas compatible with the environment. The acquisition of open space shall be emphasized as an appropriate use for the remaining revenues.

- **RC-6d. Management practices for private timberlands.** The management of private timberlands shall be encouraged to use current principles of sustainable forestry for all aspects of forest use and function: recreation; timber production; biodiversity; air and water quality; and carbon storage. Timber owners are encouraged to apply for conservation easements, certified forestry, or compensation for carbon storage.
- **RC-6e. Timber harvest plans.** The City, in cooperation with California Department of Forestry, shall request review of all Timber Harvest Plans (THP) within the Planning Area. The City shall review THPs for measures that protect water quality, control erosion and flooding, and preserve the City viewshed. The city shall recommend that THPs that do not include these measures not be approved.
- **RC-6f. Urban conversions.** The sustainable management of timber resources, and related uses, shall be encouraged, so that the long-term economic return from productive timber production will provide sufficient incentives to prevent urban conversions. Urban conversions are discouraged within the Urban Services Boundary.
- **RC-6g. Setbacks.** Development adjacent to the Community Forest boundary shall be setback at least 150 feet, unless this would make the use of the parcel infeasible for its designated purpose. However, larger setbacks may be required to prevent exposure to potential hazards and to maintain forest integrity.
- **RC-6h. Monitoring.** Monitoring of forest practices, to ensure consistency with adopted management and harvest plans, shall be carried out as an implementation measure of this Element. The general objectives of the monitoring will be to:
 - Determine the effectiveness of management practices at multiple scales (i.e., individual sites to watersheds).
 - Validate ecosystem functions and processes have been maintained as predicted.

POLICY RC-7 WATER RESOURCES MANAGEMENT

- **Objective.** Manage Arcata’s water resources from a watershed perspective, to maintain surface water and ground water quality and quantity. Runoff will be managed for the benefit of aquatic habitats, native and non-invasive vegetation, and soil conservation, and to recharge groundwater.

- **RC-7a. Protection of surface waters from point and nonpoint pollution sources.** The use of natural stormwater drainage systems, which preserve and enhance natural features, shall include the following:
 - Efforts to acquire land or obtain easements for drainage and other public uses of floodplains, where desirable to maintain stream courses in a natural state, shall be supported.
 - Recreational opportunities and aesthetics shall be considered in the design of stormwater retention, detention, treatment, and conveyance facilities.
 - Sound soil conservation practices shall be required, and impacts of proposed developments, with regard to water quality and effects on watersheds, wetlands and drainage courses, shall be carefully examined.
 - The quality of runoff from urban and suburban development shall be improved through use of appropriate and feasible Best Management Practices (BMPs) including, but not limited to, bioretention basins, artificial wetlands, grassy swales, oil/grit separators, with an emphasis on a Low Impact Development approach to stormwater management.
 - New development shall be required to minimize increases in stormwater peak flows and/or volume, to the extent feasible. Stormwater management measures shall take into consideration potential adverse impacts on the Mad River, Arcata Bay, and adjoining lands in the City and Planning Area.
 - New development projects shall be designed to minimize drainage concentrations, maximize permeable surfaces (such as unpaved parking areas) and maintain, to the extent feasible, natural site drainage conditions.
 - New development projects that may adversely affect the quantity and quality of stormwater runoff shall be required to allocate land necessary for detaining post-project flows and/or for incorporating measures to minimize water quality impacts from urban runoff. To the maximum extent feasible, new development shall not produce a net increase in peak stormwater runoff.
 - All development shall comply with the City's post construction stormwater management program (under the MS4 General Permit) which includes stormwater management measures for site design, source control, runoff reduction, stormwater treatment, and baseline hydromodification controls, as applicable based on project type and size.
- **RC-7b. Protection of groundwater sources.** Septic systems and onsite disposal of toxic substances are the leading causes of groundwater contamination. Septic systems within the Urban Services Boundary shall not be permitted, and incidents of onsite toxics disposal shall be referred to the appropriate county and state agencies.
- **RC-7c. Watershed and urban runoff management.** To protect structures, critical facilities, existing habitat values and water quality, flooding shall be managed on a watershed basis, using a combination of biotechnical solutions, flood protection practices, and Drainage Master Plan's management practices.
- **RC-7d. Water quality monitoring.** Water quality and quantity shall be monitored on a regular basis to ensure that City policies are being adhered to.

City of Arcata Local Coastal Program

Portions of the City of Arcata are located in the coastal zone. The City has a Certified LCP which guides land use and development along the City's coastline, ensuring compliance with the California

Coastal Act. It aims to protect coastal resources such as agricultural lands, wetlands, and habitats, while promoting sustainable development, public access, and recreation.

City of Arcata Forest Management Plan

The Arcata Community Forest Management Plan provides a comprehensive framework for managing the city's forest resources. The plan emphasizes ecological, social, and economic sustainability, aiming to balance forest health with community needs. Key management priorities include:

- **Watershed Protection:** Ensuring the health of water resources within the forest.
- **Wildlife Habitat:** Enhancing and preserving habitats for diverse species.
- **Recreation:** Providing opportunities for public enjoyment without compromising ecological integrity.
- **Carbon Sequestration:** Utilizing the forest's capacity to absorb carbon dioxide, contributing to climate change mitigation.
- **Timber Harvest Revenue:** Generating income through sustainable timber practices to support forest management and community projects.

Approximately 35 percent of the forest is designated as reserves, with the maximum allowable annual harvest set at half of the annual growth increment on the working landscape portion. This approach ensures the forest's volume and age increase over time. The plan also integrates community-based forestry principles, promoting engagement, education, and local economic development. It serves as a model for managed redwood forests, demonstrating sustainable practices that balance ecological health with community benefits.⁴²

City of Blue Lake General Plan

The City of Blue Lake General Plan Land Use Element includes goals and policies related to open space, natural habitats, and agricultural and forest lands within the City.⁴³ These goals and policies aim to protect environmentally sensitive areas, promote biodiversity, and preserve important agricultural and forestry resources. The relevant goals and policies are listed below.

ENVIRONMENTAL PROTECTION

- **Goal:** to promote and protect the quality of the natural and human environment in Blue Lake and its environments.
- **Policy 1.** The City shall consider all development with respect to potential impacts on environmental quality.
- **Policy 2.** Developers shall be encouraged to design projects so as to avoid topography changes and unnecessary stripping of natural foliage. Where feasible, existing trees and terrain shall be preserved by fitting streets and building sites into the landscape with minimum disturbance of the land, its natural vegetation and creek ways. Developers shall be encouraged to use existing natural vegetation and topographic features to provide required open space and landscaping.

⁴² City of Arcata. 2020. Arcata Community Forest Management Plan Update 2020.

<https://www.cityofarcata.org/DocumentCenter/View/10327/Draft-2020-Forest-Management-Plan-Update-12-2020?bidId=> (accessed December 2025).

⁴³ City of Blue Lake. 2021. General Plan Land Use Element. https://bluelake.ca.gov/wp-content/uploads/2023/05/Blue-Lake-Land-Use-Element-Update_Amended-4-27-21.pdf (accessed December 2024).

- **Policy 3.** The City shall minimize the impacts of flooding, in areas designated by F.E.M.A. to be subject to flooding, by:
 - Restricting or prohibiting uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
 - Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
 - Controlling the alteration of natural flood plains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;
 - Controlling filling, grading, dredging and other development which may increase flood damage; and
 - Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas.
- **Policy 4.** The City shall encourage site design that maximizes on-site retention of stormwater and minimizes discharge to the City's storm water system.

PRESERVATION OF OPEN SPACE AND AGRICULTURAL LANDS

- **Goal:** Agriculture and open space lands shall be preserved as a buffer around the city to retain the character and sense of community of blue lake. Designated open space within the city shall be enhanced and coordinated with other city facilities.
- **Policy 1.** Land suited for agriculture shall be used for that purpose, where prime or potentially prime agricultural soils occur in economically viable units.
- **Policy 2.** There shall be an agricultural land use designation that permits exclusively agricultural uses, including a single-family residence per land unit.
- **Policy 3.** Uses considered compatible with agricultural uses shall be permitted in agriculturally designated areas; such uses shall not preclude the viability or use of the land for agricultural purposes.
- **Policy 4.** Areas devoted to agricultural use shall be coordinated with Open Space and Public Safety policies of the City and other agencies.
- **Policy 5.** Agricultural uses (non-cannabis), open spaces, recreational uses and similar areas shall be used to provide a green belt to separate Blue Lake from adjacent communities.
- **Policy 6.** Agricultural and potentially incompatible uses shall be separated, where possible, by such natural or man-made features as roads, vegetation, stream courses or topographical features.
- **Policy 7.** A pedestrian/equestrian pathway system should be developed to connect open space and recreational areas, utilizing existing open space corridors.
- **Policy 8.** Flood-prone areas should be designated for agricultural or recreational uses and kept free from urban development wherever possible.
- **Policy 9.** Property owners should be encouraged to keep areas with unique natural features in a natural or enhanced condition. Such areas include the Mad River, Powers Creek, and the site of the historic lake.
- **Policy 10.** Areas on the river side of the levee, and the levee shall be retained in undeveloped open space; public access to this area, for recreational purposes, shall be encouraged.

Regional Climate Action Plan and CEQA GHG Emissions Thresholds

- **Policy 11.** Minimal outdoor spaces, such as “pocket parks” and street landscaping shall be developed for public use whenever feasible, especially in the central part of the City.
- **Policy 12.** Maximum use of school land, utility rights-of-way and other public lands for parks, recreation and open space purposes shall be encouraged.
- **Policy 13.** The City shall provide levels of service appropriate for agricultural land, in order to encourage its continued use for agriculture and discourage its conversion to other uses.
- **Policy 14.** The City shall pursue acquiring forest lands to the east of City limits for use as a community forest.
- **Policy 15.** The City shall not oppose the conversion of agricultural land in the Sphere of Influence for low density residential uses, so as to preclude or minimize the development of cannabis uses.

POWERS CREEK MANAGEMENT

- **Goal:** To protect and enhance powers creek and the various wetlands throughout the city as attractive natural features and valuable resources, and to minimize flood, erosion and other property damage.
- **Policy 1.** Powers Creek shall be managed to maintain the creek as a scenic and natural resource, and to protect adjacent properties and structures to the greatest degree possible.
- **Policy 2.** Vegetation, necessary to maintain the natural character of the creek without creating a hazard to adjacent properties, shall be maintained along the creek except where inconsistent with public access needs.
- **Policy 3.** Maintenance of the creek shall be encouraged. Maintenance goals shall be to preserve its scenic and resource value and to prevent flooding.
- **Policy 4.** The City should develop access across the creek, where necessary and appropriate to improve circulation within the City of Blue Lake.
- **Policy 5.** City actions relating to the creek shall be considered and implemented with sensitivity for the adjacent property owners. This shall include development of bridges or other access to and/or across the creek.
- **Policy 6.** The City shall pursue funding and collaboration with local groups, agencies, and non-profit organizations for the restoration of Powers Creek.
- **Policy 7.** The various wetland areas throughout the City shall be maintained as a scenic and habitat resource, and to prevent flooding impacts due to the modification of existing hydrology

Eureka General Plan

The City of Eureka General Plan includes goals and policies related to open space, natural habitats, and agricultural and forest lands within the City.⁴⁴ These goals and policies aim to protect environmentally sensitive areas, promote biodiversity, and preserve important agricultural and forestry resources. The relevant goals and policies are listed below.

WATER RESOURCES AND WATER QUALITY

- **Goal NR-1.** Protection, enhancement and restoration of surface water resources, and their associated riparian habitats, and groundwater, as well as improvement of water quality.

⁴⁴ City of Eureka. 2018. 2040 General Plan. <https://www.eureka.gov/DocumentCenter/View/1190/2040-General-Plan-PDF?bidId=> (accessed December 2024).

- **Policy NR-1.1. Surface Water.** Preserve, protect, and restore all surface water resources (including bays, rivers, streams, wetlands, and sloughs) to their natural state, to the maximum extent feasible. (RDR, IGC) (Imp NR-1)
- **Policy NR-1.2. Groundwater Recharge Areas.** Regularly review and update Figure NR-1 to identify, map, protect, and preserve important groundwater recharge areas. (IGC)
- **Policy NR-1.3. Natural Open Space Areas.** Preserve undeveloped natural open space areas that provide important groundwater recharge, stormwater management, and water quality benefits, such as undeveloped open spaces, gulches, natural habitat, riparian corridors, wetlands, and other drainage areas. (RDR)
- **Policy NR-1.4. Watershed Management.** Manage water resources at the watershed level, to maintain high ground and surface water quality. (RDR, IGC)
- **Policy NR-1.5. Best Management Practices.** Require the implementation of Best Management Practices (BMPs) to minimize erosion, sedimentation, and water quality degradation resulting from the construction of new impervious surfaces. (RDR)
- **Policy NR-1.6. Water Quality.** Regulate construction and operational activities to incorporate stormwater protection measures and Best Management Practices in accordance with the City's National Pollution Discharge Elimination System to minimize adverse effects of wastewater and stormwater discharges. (RDR, MP)
- **Policy NR-1.7. Groundwater Protection.** Continue to encourage septic system users to connect to City services, and prevent onsite disposal of toxic substances per local and State regulations to reduce groundwater contamination. (RDR)
- **Policy NR-1.8. Biological Productivity.** Maintain and, where feasible, restore the biological productivity and quality of rivers, streams, and wetlands to maintain optimum populations of aquatic organisms and protect human health. (MP, OFB)
- **Policy NR-1.9. Alterations to Rivers and Streams.** Require channelization or other substantial alterations that could significantly disrupt the habitat or hydrologic values of rivers and streams to incorporate all feasible Best Management Practices. Limit such activities to trails, bridges, flood control projects, and fish and wildlife habitat restoration projects. (RDR)
- **Policy NR-1.10. Regional Coordination.** Coordinate and collaborate with agencies in the region and within the watershed to address water quality issues. (IGC)
- **Policy NR-1.11. Pervious Pavement.** Encourage the installation of pervious pavement and surfaces. (RDR)

BIOLOGICAL RESOURCES

- **Goal NR-2.** Protection of sensitive biological resources on a sustainable basis to generate long-term public, economic, and environmental benefits.
- **Policy NR-2.1. Development in Gulches and Greenways.** Allow limited development within Eureka's gulches and greenways and permit private property owners adjacent to gulch and greenway areas to develop, provided sensitive species habitat, fish and wildlife corridors, and the hydrologic capacity of the resource are protected, and vegetation removal does not occur below the high water mark or in areas subject to flooding, consistent with local, State, and federal regulations. (RDR)
- **Policy NR-2.2. Gulch Greenway Preservation and Management Guidelines.** Prepare and adopt Gulch Greenway Preservation / Management Guidelines that identify and protect sensitive species habitat and the hydrologic capacity of Eureka's gulches and greenways. Include

provisions in these guidelines for defining the boundaries of gulches and greenways, as generally indicated in Figure NR-1, identifying the boundaries of all affected parcels lying wholly or partly within the gulches and greenways, ensuring new development is compatible with the environmental and public safety values of the gulches and greenways, and restoring gulch vegetation, wetlands, and sensitive species habitat as appropriate. (RDR)

- **Policy NR-2.3. Trails in Gulches and Greenways.** Work with private landowners and Humboldt County to establish a publicly accessible trail network in and along Eureka’s gulches and greenways that would not adversely impact sensitive species habitats. (MP, IGC, JP)
- **Policy NR-2.4. Wetlands Preservation.** Require appropriate public and private preservation and restoration of wetlands, and/or rehabilitation through compensatory mitigation in the development process for impacts to wetlands, consistent with State and federal permitting requirements. (Imp NR-1)
- **Policy NR-2.5. Sensitive Species Habitat.** Require development in or adjacent to sensitive species habitats that may contain special-status species to be compatible with the long-term sustainability of the habitat, and (in discretionary projects) be conditioned to prevent significant habitat degradation or harm to rare, threatened, or endangered species. (RDR)
- **Policy NR-2.6. Buffers.** Require the provision and maintenance of reasonably- sized buffers between sensitive habitat and adjacent urban uses to minimize disturbance of the resources, as appropriate. Buffers need not be larger than is recommended by a qualified professional ecologist (such as an ecologist, biologist, or wetland scientist). (RDR)
- **Policy NR-2.7. Tree and Native Vegetation Preservation and Use.** Encourage preservation of existing healthy trees and native vegetation through site planning and maintenance, promote the use of low-maintenance, low water-use native plants and trees, prohibit the use of highly invasive plants, and discourage the use of invasive species in landscaping. (RDR)
- **Policy NR-2.8. Non-native Invasive Species on Public Lands.** Maintain a program to identify, evaluate, and eradicate non-native invasive species on public lands where they are displacing native species. (MP) (Imp NR-2)
- **Policy NR-2.9. Regional Coordination.** Maintain an active relationship with adjacent communities and government agencies to encourage cooperative management of natural resources and ecosystems in the Eureka Study Area. (IGC)

OPEN SPACE

- **Goal NR-3.** Protection and enhancement of valuable open space resources in and around Eureka.
- **Policy NR-3.1. Preserve Open Space.** Preserve unique and valuable areas within and around the city that provide visual and physical relief to the cityscape, as well as critical habitat, natural drainage, farming opportunities, timber extraction, passive recreation or outdoor education in their natural state to define and enhance the city’s distinct character and heritage. (MP)
- **Policy NR-3.2. Wildlife Movement.** Preserve, enhance, and create interconnected open space and natural areas along sloughs, rivers, creeks, gulches and greenways, and other naturalized areas to provide for wildlife movement and protect biodiversity. (MP)

AGRICULTURE AND TIMBERLANDS PRESERVATION

- **Goal AG-1.** Preservation of agricultural and timber lands and aquaculture and fishing operations within and surrounding Eureka, enhanced forest ecosystems, reduced land use conflicts, and a sustained yield of forest, agricultural, and fisheries products.
- **Policy AG-1.1. Agricultural Lands within Coastal Zone.** Protect and conserve designated agricultural lands within Eureka's Coastal Zone consistent with the California Coastal Act and the Local Coastal Program. (RDR, MP)
- **Policy AG-1.6. Productive Use of Timberlands.** Continue to work with Humboldt County and the California Department of Forestry and Fire Protection (CDF) to encourage the sustained productive use of timberland as a means of providing open space, conserving other natural resources, and preventing urban conversions. (IGC)
- **Policy AG-1.7. Discourage Conflicts with Timberland Management.** Continue to work with Humboldt County and the California Department of Forestry and Fire Protection (CDF) to discourage development that conflicts with timberland management. (IGC)
- **Policy AG-1.8. McKay Tract Community Forest.** Collaborate with Humboldt County to establish public transit, non-motorized access routes, and public access points to the McKay Tract Community Forest for use by Eureka's residents. (IGC)
- **Policy AG-1.9. Setbacks.** Set back development adjacent to the McKay Tract Community Forest boundary to a sufficient distance to prevent exposure to potential hazards and to maintain forest integrity. (RDR)
- **Policy AG-1.10. Timber Harvest Plans.** Request review of all Timber Harvest Plans (THP) within Eureka's sphere of influence in cooperation with California Department of Forestry. THPs should be reviewed for measures that protect water quality, control erosion and flooding, and preserve the forested character surrounding the City of Eureka. (IGC)
- **Policy AG-1.11. Wood Waste.** Encourage and promote the productive use of wood waste generated in the Eureka area. (MP)
- **Policy AG-1.12. Timber Management in Residential Zones.** Allow management of timberlands and hazardous trees, including removal of trees on residentially zoned properties, balanced with protection of timber as a resource. (RDR)

SEA LEVEL RISE

- **Goal SL-1.** Anticipated effects of sea-level rise are understood, prepared for, and successfully mitigated.
- **Policy SL-1.5. Natural Shoreline Areas.** Encourage the preservation and habitat enhancement of natural shoreline areas as identified in the most recent shoreline mapping assessment. (MP) (Imp SL-2)
- **Policy SL-1.6. Protect Key Coastal Assets.** Prioritize the development and implementation of adaptation measures to protect key coastal assets. (MP) (Imp SL-2)

City of Eureka Local Coastal Program

Portions of the City of Eureka west of Broadway, north of 3rd Street and east of Myrtle Avenue are located in the Coastal Zone. The land use designations within the Coastal Zone are part of the City's LCP that includes policies and regulations to protect coastal resources.

City of Eureka Municipal Code

The City of Eureka Municipal Code Chapter 155 includes tree removal regulations, and landscaping regulations that prohibit invasives and require at least 75 percent of required landscaping by plant count be native. If a project is not large enough for a Stormwater Pollution Prevention Plan, the City still requires a construction-phase Erosion and Sediment Control Plan. A post-construction Stormwater Control Plan is required consistent with the MS4 Permit, Humboldt Low Impact Development Stormwater Manual, and City stormwater regulations.

City of Ferndale General Plan

The City of Ferndale General Plan includes policies related to natural features, open space, and agricultural and forest lands within the City.⁴⁵ These goals and policies aim to protect environmentally sensitive areas, promote biodiversity, and preserve important agricultural and forestry resources. The relevant policies are listed below.

- **Policy LU-3.1 - Conservation:** Preserve existing open space and agricultural land at the edges of and surrounding the City.
- **Policy LU-3.2 – Improve Drainage and Landscaping:** Incorporate drainage improvements and low impact development (LID) features in all areas of the City to increase onsite retention, protect water quality and associated aquatic habitats, and reduce flooding. The quality of runoff from urban and suburban development shall be improved through use of appropriate and feasible Best Management Practices (BMPs) including, but not limited to, bioretention basins, artificial wetlands, grassy swales, oil/grit separators, with an emphasis on a Low Impact Development approach to stormwater management. Landscaping and vegetated LID features should avoid the use of noxious weeds or other invasive plants identified by the California Invasive Plant Council (Cal-IPC) and prioritize use of locally-appropriate native vegetation.
 - a. New development shall be required to minimize increases in stormwater peak flows and/or volume, to the extent feasible.
 - b. New development projects shall be designed to minimize drainage concentrations, maximize permeable surfaces, and maintain, to the extent feasible, natural site drainage conditions.
- **Policy LU-3.3 – Manage Flood Plains:** Development is to be encouraged outside the 100-year floodplain. Development within the 100-year flood zone must have ground floor elevations above 100-year flood elevation and shall not significantly increase downstream flow levels and be in compliance with the Drainage Ordinance.
- **Policy LU-3.4 – Francis Creek Corridor:** The Francis Creek riparian corridor shall be maintained or improved to permit natural flow where possible, prevent flooding in developed areas, and maintain natural habitat uses where appropriate.
- **Policy LU-3.5 – Forest Lands Preservation:** Encourage preservation of forest resources and require timber management plans for any proposed forested lands conversion or harvesting that address erosion control and revegetation. The management of timberlands shall be encouraged to use current principles of sustainable forestry for all aspects of forest use and function: recreation, timber production, biodiversity, air and water quality, and carbon storage.

⁴⁵ City of Ferndale. 2024. General Plan Land Use Element. <https://www.dropbox.com/scl/fi/tmc0cortefgcksfilp92p/ADOPTED-Land-Use-Element-11.20.24.pdf?rlkey=7z2c7snake8wn1e4xev6rhiie&st=mle4j1ef&dl=0> (accessed January 2025).

- **Policy LU-3.6 – Funding:** Develop a program and pursue funding to coordinate acquisition of important open space property from willing landowners through conservation and/or drainage easements or other mechanisms.
- **Policy LU-3.7 – Regional Coordination:** Maintain an active relationship with adjacent communities and government agencies to encourage cooperative management of natural resources and ecosystems in the surrounding area. Coordinate open space planning, acquisition, and development efforts with those of Humboldt County and regional and State agencies.
- **Policy LU-3.8 – Wetland Delineation Requirement:** Any application for new development involving ground disturbance on a parcel where wetlands may be present according to the National Wetland Inventory or other site-specific evidence shall include a wetland reconnaissance and delineation report prepared by a qualified professional. The site plan shall show all proposed new development is located outside of any wetlands that exist on the subject property and appropriate wetland buffers based upon analyses and recommendations in the site-specific study. New development proposed within wetlands or wetland buffer areas shall require consultation and required regulatory approvals from the U.S. Army Corps of Engineers (USACE), the North Coast Regional Water Quality Control Board (NCRWQCB), and/or California Department of Fish and Wildlife (CDFW).
- **Policy LU-4.3 – Agricultural Use Preservation:** Encourage infill development and revitalization of existing residential and commercial uses with setbacks and other measures to preserve prime agricultural lands on the outer edges of the City.

Fortuna General Plan

The City of Fortuna General Plan includes policies related to natural features, open space, and agricultural and forest lands within the City.⁴⁶ These goals and policies aim to protect environmentally sensitive areas, promote biodiversity, and preserve important agricultural and forestry resources. The relevant policies are listed below.

WATER RESOURCES

- **Goal NCR-1.** To ensure that the City has access to a quality water supply that is free from pollution.
- **Policy NCR-1.1. Watershed Protection.** The City shall condition development to minimize point source and non-point source pollutant discharges to local watersheds. The City shall also require mitigation for development that may change runoff quality and/or quantity for pollution prevention.
- **Policy NCR-1.2. Reclaimed Water.** The City shall support programs that would supply reclaimed water for park irrigation and agricultural uses.
- **Policy NCR-1.3. Groundwater.** The City shall seek additional groundwater locations to supplement existing drinking water sources.
- **Policy NCR-1.4.** The City shall require proposed new projects that result in parcels less than one (1) acre in size to connect to the result in parcels less than one (1) acre in size to connect to the City's municipal water wastewater, and storm drain systems.

⁴⁶ City of Fortuna. 2010. City of Fortuna General Plan.

https://cms8.revize.com/revize/fortunaca/Document%20center/Department/Planning%20Division/General%20Plan%20and%20EIR%20Documents/Fortuna%20General%20Plan%202030%20-%20Policy%20Document_web.pdf (accessed December 2024).

Regional Climate Action Plan and CEQA GHG Emissions Thresholds

- **Policy NCR-1.5.** The City shall develop a standard to require the use of impervious paving surfaces and/or other low impact designs (LID) to reduce stormwater runoff.
- **Policy NCR-1.6.** The City shall require the integration of best management practices in new development and re-development projects to control pollutant sources and prevent pollutants in runoff during and following development.
- **Policy NCR-1.7.** The City shall require the use of basic water quality strategies that self-treat runoff in new development and re- development projects. These strategies may include infiltrating runoff, retaining/detaining runoff, conveying runoff slowly through vegetation, and/or treatment of runoff on a flow- through basis using other standard treatment technologies.
- **Policy NCR-1.8.** The City shall comply with Clean Water Act requirements with the intent of minimizing pollutant discharges from point and non-point sources to surface waters. Mitigation may include, but may not be limited to, wetland restoration, off- site replacement for no net loss, or project design/operation modification.

BIOLOGICAL RESOURCES

- **Goal NCR-2.** To protect and maintain, or relocate through mitigation, existing sensitive habitats and species, including riparian corridors, wetlands, and Environmentally Sensitive Habitat Areas (ESHA).
- **Policy NCR-2.1. Riparian Corridor Protection.** The City shall establish riparian buffers to provide for fish and terrestrial wildlife habitat protection, enhancement, and movement along riparian corridors through the Planning Area. Activities within these buffers shall be limited to passive recreational uses (hiking, biking, sightseeing, horseback riding) and the movement of wildlife.
- **Policy NCR-2.2. Salmonid Bearing Stream Protection.** The City shall consult with, and require developers of projects to consult, the California Department of Fish and Game (CDFG) and other regulatory agencies for expertise and guidance prior to any restoration activity within salmonid-bearing streams. Some recommendations relative to all tributaries are as follows:
 - Identify and inventory those portions of streams originating within or passing through the General Plan Area that are considered to support salmonid species;
 - Inventory and map sources of stream bank erosion, then prioritize them according to present and potential sediment yield. Identified sites should be treated to reduce the amount of fine sediment entering the stream;
 - Design and construct habitat enhancement structures that yield better gravel sorting, reduce fine sediment retention, increase pool habitat, and allow for juvenile and adult fish passage (i.e., barrier removal);
 - Remove exotic vegetation and replant native vegetation, especially where the stream canopy is deemed less than optimum; and
 - Reduce cattle trampling within the stream and riparian zone by exploring alternatives with landowners.
- **Policy NCR-2.3. CDFG Collaboration.** The City shall work to implement the recommendations put forth in the Recovery Strategy for California Coho Salmon (CDFG, 2004b) to benefit salmonid species present within the General Plan Area by enhancing and restoring riparian ecosystems, improving water quality, and reducing flooding.

- **Policy NCR-2.6. Biological/Ecological Review.** When considering building permit applications, planning applications or development applications, the City shall undertake the three-stage process outlined below:
 - Upon receipt of building permits applications, planning applications or development applications, City staff shall perform an initial screening to determine whether the application would have the potential to impact special status species as defined by CEQA Guidelines §15380. For ministerial projects, the initial screening shall be performed in the context of the application checklist. For discretionary projects, the initial screening shall be performed in the context of Initial Study preparation required under CEQA. For purposes of this screening, the application would have the potential to impact special status species if development or other activities would occur in ESHA areas, wetlands or riparian areas, forested areas, areas within 50 feet of any blue line stream as shown on USGS maps, or any undeveloped rural parcel of greater than one acre in size.
 - If the initial screening indicates the potential for impacts to special status species, the applicant shall have a records search performed in the California Natural Diversity Database (CNDDDB) and the City’s ESHA inventory to determine whether any sensitive species have been documented on or within the vicinity of the subject parcel.
 - If the CNDDDB or ESHA inventory indicates that sensitive species have been documented on or within the vicinity of the subject parcel, or if the proposed activities would occur within wetland, riparian vegetation, or forested areas, within 50 feet of any blue line stream, or would disturb more than 10 acres, or at the discretion of City staff, a biological study shall be performed for the proposal by a qualified biological consultant, the application shall be referred to the appropriate responsible and trustee agencies (CDFG, USFWS, etc.), and any mitigation measures identified by the biologist and the responsible and trustee agencies incorporated into the project. Mitigation may include, but may not be limited to restoration, off-site replacement for no net loss, or project design/operation modification.
- **Policy NCR-2.7. Endangered Species.** The City, as lead agency, shall require that all projects comply with the requirements of the federal Endangered Species Act, California Endangered Species Act, Clean Water Act, CDFG code, and CEQA.
- **Policy NCR-2.8. Native Vegetation.** The City shall coordinate with resource agencies to require the preservation of native vegetation, while managing areas with high concentrations of invasive species and/or noxious weeds and preventing their encroachment into new areas.
- **Policy NCR-2.9. Community Education.** The City shall require the installation of interpretive signs that educate the public on various environmental issues including stormwater runoff and detention, creek biology, and watersheds affecting the city. Appropriate Signs and plaques may be placed at sites near the Eel River and along public trails and bike paths adjacent to creeks.
- **Policy NCR-2.10. Wetland Identification and Protection.** In considering new development projects, the City shall conduct an initial screening, as described in Policy NCR-2.6 in order to determine whether the proposal would have the potential to impact wetlands. If the initial screening indicates the potential presence of wetlands, a wetland assessment/ delineation shall be prepared to determine the presence of jurisdictional wetlands. The assessment/delineation, with proposed mitigation, shall be submitted to the City, and appropriate state (CDFandG) and federal (USCOE) agencies for concurrence prior to permitting. Mitigation may include, but may not be limited to, avoidance, minimization of impacts, restoration, off-site replacement, and/or the use of buffers.

Regional Climate Action Plan and CEQA GHG Emissions Thresholds

- **Policy NCR 2.11. Wildlife Movement Corridors.** Terrestrial wildlife using movement corridors and fish within fish-bearing streams shall not be limited by physical barriers within the Planning Area. Projects proposed within the mapped movement corridors shall be reviewed for consistency with Policies NCR-2.1, NCR- 2.6, NCR-2.7, NCR-2.8 and NCR-2.9.
- **Policy NCR-2.12. Permitted Activities within ESHAs.** The following activities shall be permitted in ESHAs with approval from the Fortuna Planning Department and after consultation with Responsible and Trustee agencies: THPs; removal of dead, dying or diseased trees or downed vegetation within the streambed or streambank; the removal of vegetation obstructing streamflow or causing streambed or streambank erosion; and road crossings.
- **Policy NCR-2.13. Watercourse, Wetland and Riparian Buffers.** The City shall require appropriate watercourse, wetland, and riparian area buffers to protect water quality and biologic values.
- **Policy NCR-15.** The City shall prepare a streamside management/ wetland protection ordinance, following collaboration with resource agencies including but not limited to CDFG, establishing setback recommendations for perennial and intermittent streams, wetlands, and riparian corridors. At a minimum, the City shall implement the following watercourse, wetland and riparian area protection measures:

Watercourses and Riparian Areas

- The City shall maintain Streamside Management Areas (SMAs) of at least 50 feet around perennial streams and 25 feet around ephemeral streams, unless a biological report indicates that such SMA setbacks are not required. The buffers shall be measured from the top of the stream bank (for example, the 50 foot setback would be 50 feet from each stream bank, for a total of a 100 foot wide buffer);
- New development/activities within SMAs shall be limited to: (1) activities for wildlife enhancement/ restoration, flood control or drainage, new fencing so long as it would not impede natural drainage or wildlife, and bank protection; (2) commercial timber management and harvest activities regulated by the Forest Practices Act; (3) road and bridge replacement or construction, when it can be demonstrated that it would not degrade fish and wildlife resources or water quality; (4) removal of vegetation for disease control or public safety; and (5) management and maintenance of trees, shrubs and other plant life; and
- New development within SMAs shall minimize adverse effects, including, at a minimum: retaining snags and live trees with visible evidence of use as nesting sites; replanting disturbed areas with riparian vegetation; and performing erosion control measures.

Wetlands

- The City shall maintain Wetland Buffer Areas of at least 50 feet around jurisdictional wetlands, unless a biological report indicates that such Wetland Buffer Areas are not required;
- New development within Wetland Buffer Areas shall be limited to: fish and wildlife management; wetland restoration; removal of trees for disease control and public safety; and new fencing so long as it does not impede drainage or wildlife movement;
- No new development shall be permitted in Wetland Buffer Areas which degrades the wetland; and

- Wetland Buffer Areas disturbed by permitted activities shall be restored to the original contours and promptly replanted with native riparian vegetation.

Combined Watercourses/Riparian Areas and Wetlands

- Storm water runoff to watercourses and wetlands shall not exceed the existing rate of storm runoff for a 50 year storm of 10 minute duration;
- Sediment in storm water runoff draining to watercourses and wetlands shall be minimized through the use of sediment basins, seeding or replacing bare soil, diversion of runoff away from graded areas and areas heavily used during construction, and limiting grading in buffer areas to the dry season (May through October);
- Stormwater outfalls, culverts, gutters, and other similar facilities draining to watercourses and wetlands shall be dissipated; and
- Septic systems shall not be permitted within wetland buffer areas. Adjacent to these areas, septic systems shall meet County Health Department and RWQCB standards.

AGRICULTURAL AND TIMBER RESOURCES

- **Goal NCR-3.** To encourage the utilization of productive agricultural lands for their value as an economic resource and community identity in the Eel River Valley.
- **Policy NCR-3.1. "Right-to-Farm."** The City shall encourage continuation (e.g., "right-to-farm ordinance") of existing agricultural activities so long as these agricultural activities occur consistent with applicable federal, state, and local regulations.
- **Policy NCR-3.2. Retain Agricultural Lands.** The City shall support and encourage the retention of active cultivation operations until such time that these areas are needed for planned urban or suburban expansion or mitigation for flood projects.
- **Policy NCR-3.3. Urban/Agricultural Conflicts.** The City shall ensure that new developments adjacent to agricultural areas are informed about nearby agricultural operations and the potential for noise, dust, aerial spraying, and odor.
- **Policy NCR-3.4. Agricultural Buffers.** The City shall require proposed development to assess potential impacts from adjacent agricultural uses and recommend buffers and other design features to mitigate the impacts, including air quality impacts.
- **Policy NCR-3.5. County Agricultural Policies.** The City shall support policies adopted by Humboldt County to promote the viability of agriculture.
- **Policy NCR-3.6. Regional Cooperation.** The City shall cooperate with local agricultural organizations and regional and State agencies that provide funds for agricultural conservation/mitigation to promote the viability of local agriculture.
- **Policy NCR-3.7. Retain Timber Lands.** The City shall encourage timber land retention.
- **Policy NCR-3.8.** The City shall support agricultural land conservation and encourage minimal conflicts between agricultural and non- agricultural uses through all of the following:
 - By establishing stable boundaries separating urban and rural areas, when necessary, and buffer areas to minimize land use conflicts;
 - By promoting in-filling to achieve a more logical urban/agricultural boundary;
 - By developing available lands not suited for agriculture, or those located within Urban Study Areas, prior to the conversion of agricultural lands outside of those areas.

Regional Climate Action Plan and CEQA GHG Emissions Thresholds

- By assuring that public service facility expansions and non-agricultural development do not inhibit agricultural viability, either through increased assessment costs or degraded air or water quality.
- By broadening the utility of agricultural preserves and the Williamson Act Program;
- By not allowing residential subdivision of lands planned Agriculture; and
- By allowing lot-line adjustments for agriculturally designated lands only where planned densities remain constant and there is no resulting increase in the number of building sites.

SOIL RESOURCES

- **Goal NCR-5.** To protect, maintain, and conserve the City’s soil resources through reduced erosion and proper agricultural practices.
- **Policy NCR-5.1. Soil Stabilization Measures.** The City shall continue to require soil stabilization measures that mitigate soil erosion and sedimentation.
- **Policy NCR-5.2. Preventing Soil Contamination.** The City shall continue to ensure the proper use, storage, and disposal of toxic chemicals to prevent soil contamination.
- **Policy NCR-5.3. Soil Conservation.** The City shall promote the employment of soil conservation practices as recommended by the U.S. Soil Conservation Service.
- **Policy NCR-5.4. Native Plants.** The City shall require the protection and preservation of native plant communities next to creeks to aid in the prevention of bank and levee erosion.
- **Policy NCR-5.5. Erosion Control Measures.** The City shall require the use of vegetated buffer strips and other “best management practices” to slow runoff from impermeable surfaces and to improve natural pollutant removal when permitting new development.

City of Rio Dell General Plan

The City of Rio Dell General Plan Open Space and Conservation Element includes policies related to natural features, open space, and agricultural and forest lands within the City.⁴⁷ These goals and policies aim to protect environmentally sensitive areas, promote biodiversity, ensure the provision of open space, and preserve important agricultural and forestry resources. The relevant policies are listed below.

- **Goal G1.2-1.** To prevent air, land, and water pollution that would reduce our quality of life.
- **Goal G1.2-2.** To preserve natural and man-made resources which create a unique scenic character for Rio Dell.
- **Goal G1.2-3.** To preserve river, stream, and drainage channels that collect run-off, provide natural habitat, and serve as scenic open space.
- **Goal G1.2-4.** To maintain the small-scale agricultural uses in the Monument and Belleview neighborhoods.
- **Goal G1.2-5.** To protect our citizens by regulating clearing and development of steep slopes and river, stream, and drainage channels, and their flood plains.
- **Goal G1.2-6.** To provide an adequate, consistent, and safe supply of water to meet our domestic, commercial, and fire safety requirements.

⁴⁷ City of Rio Dell. 2013. General Plan Open Space and Conservation Element. https://www.cityofriodell.ca.gov/sites/g/files/vyhlif8526/f/uploads/rio_dell_conservation_and_open_space_element_august_2013_0.pdf (accessed December 2024).

- **P1.2.7-1.** Update the Conservation and Safety Element to identify a system of public parks and open space.
- **P1.2.7-2.** Ensure that environmentally sensitive habitat areas (ESHAs) such as the Eel River corridor, streams and drainage channels with riparian habitat, and forested areas that could potentially support sensitive species, are buffered to protect against any significant disruption of their habitat values.
- **Goal CO 5.2-1.** Provide open space for the preservation of natural resources for the preservation of plant and animal life, such as habitat for fish and wildlife and areas required for ecological and other scientific study (for example: rivers, streams, bays and estuaries, coastal beaches, lakeshores, riverbanks, and watersheds).
- **Policy CO 5.2-1.** Riparian areas within the City shall be protected when adjacent development projects are proposed.
- **Goal CO 5.2-2.** Preserve existing trees and encourage additional trees on hillsides and within the urban developed areas of the City.
- **Policy CO 5.2-2.** Maintain and expand the tree canopy within and outside the developed areas of the City.
- **Policy CO 5.2-3.** Protect distinctive natural vegetation such as riparian corridors and mixed evergreen forests by maintaining the natural features as a whole. Preservation of individual trees or features rather than the larger habitat does not satisfy this policy.
- **Goal CO 5.2-7.** Conserve natural vegetation and wildlife resources.
- **Policy CO 5.2-7.** Conserve and protect the area’s natural vegetation by ensuring that:
 - Drainage and runoff from City sources is not impairing the water quality of the Eel River.
 - Retaining existing riparian vegetation within the conservation buffers along all natural watercourses to preserve riparian vegetation and habitat.
 - Restoring degraded riparian habitats where feasible.
 - Prohibiting agricultural activities within the conservation buffers along all natural watercourses.
 - Avoiding the contamination of groundwater supplies.
- **Goal CO 5.3-1.** Conserve and protect working agricultural lands within and adjacent to the City.
- **Goal CO 5.3-2.** Encourage small scale timber production within the City while minimizing impacts to adjacent properties.

Trinidad General Plan

The City of Trinidad General Plan includes policies related to natural features, open space, and agricultural and forest lands within the City.⁴⁸ These goals and policies aim to protect environmentally sensitive areas, promote biodiversity, ensure the provision of open space, and preserve important agricultural and forestry resources. The City is entirely within the coastal zone and the General Plan acts as the Land Use Plan portion of the LCP. The City is required to comply with the Coastal Act requirements. The relevant policies are listed below.

⁴⁸ City of Trinidad. 2021. City of Trinidad General Plan. <https://www.trinidad.ca.gov/media/5491> (accessed December 2024).

POLICIES TO ELIMINATE/REDUCE AQUATIC POLLUTION AND HYDROLOGIC MODIFICATION

- **CONS-1b.1.** New development shall minimize land disturbance activities from construction (e.g., clearing, grading, soil compaction, and cut-and-fill), and avoid development on steep slopes, unstable areas, and highly erosive soils to the extent feasible in order to minimize erosion. (CONS-5.2)
- **CONS-1b.2.** New development shall minimize disturbance of natural vegetation during construction, including preservation of mature trees and native vegetation. Where vegetation is removed, the root structures shall be maintained, where appropriate, to prevent erosion and sedimentation.
- **CONS-1b.3.** In order to minimize erosion and discharge of sediment and other pollutants (e.g., paint, solvents, vehicle fluids, and debris) during construction, a construction-phase erosion and sediment/pollution control plan shall be required for development that has the potential to adversely affect water quality. The level of detail required in such a plan shall be commensurate with the type and scale of the development, and the potential for adverse impacts to coastal water quality. (CIRC-8.6)
- **CONS-1b.4.** Prohibit grading during the rainy season (from October 15th through April 30th) in areas with slopes of 15% or greater, except in response to emergencies. Grading on slopes less than 15% is discouraged during the rainy season, but may be allowed on a case-by-case basis as long as any areas that are disturbed incorporate appropriate BMPs and monitoring to prevent water quality impacts. (CONS-5.3)
- **CONS-1b.5.** Require stabilization of disturbed areas through revegetation or other appropriate means as soon as feasible. (CONS-5.5)
- **CONS-1b.8.** New development shall demonstrate the adequacy of the OWTS design and capacity. Upgrades shall be required as needed to provide adequate OWTS capacity and protect water quality. (CIRC-10.2.1)
- **CONS-1b.9.** Minimize the area of impervious surfaces in new and existing development to the maximum extent practicable. Development shall be planned, sited, and designed to maintain or enhance onsite infiltration of runoff where appropriate and feasible. (CIRC-8.1)
- **CONS-1b.11.** Require Low Impact Development techniques to manage stormwater, preserve hydrologic function, and maximize on-site infiltration of runoff to the extent practicable, except where it may negatively impact OWTS or slope stability. For development where infiltration is precluded by site conditions, implement appropriate BMPs, such as retention and filtration to attenuate peak flows and reduce the discharge of polluted runoff. (CIRC-8.3)
- **CONS-1b.12.** Avoid construction of new stormwater outfalls. For new development, if infiltration is infeasible, provide onsite treatment and filtration to the extent feasible and direct stormwater to existing facilities. (CIRC-8.4)
- **Goal CONS-2.** Preserve and Enhance the City's Environmentally Sensitive Habitat Areas (ESHAs), including habitat for special status species.

POLICIES TO LIMIT DEVELOPMENT IN ESHAs AND/OR NEAR SPECIAL STATUS SPECIES

- **CONS-2a.1.** Diking, Filling, and Dredging of open coastal waters, wetlands, estuaries, creeks and other bodies of water and shall maintain or enhance the functional capacity of any impacted wetland or estuary. In addition, these activities will only be permitted where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects and shall be limited to the following:

- New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.
- Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.
- In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.
- Incidental public service purposes, including, but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.
- Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.
- Restoration purposes.
- Nature study, aquaculture, or similar resource-dependent activities.
- **CONS-2a.2.** Channelization, dams, or other substantial alterations of coastal streams, shall incorporate the best mitigation measures feasible for and be limited to:
 - Necessary water supply projects, or
 - Flood control projects where no other method for protecting existing structures in the flood plain is feasible and where such protection is necessary for public safety or to protect existing development, or
 - Developments where the primary function is the improvement of fish and wildlife habitat.
- **CONS-2a.3.** Protect ESHAs against any significant disruption of their habitat values, and allow only uses dependent on those resources within ESHAs.
- **CONS-2a.4.** The City shall require the establishment of open space or conservation easements for all ESHA and ESHA buffers as a condition of approval for development on properties containing ESHA.
- **CONS-2a.5.** Landscaping, revegetation, and other plantings associated within new development located within or adjacent to ESHAs shall be from locally native stock (not cultivars) to the extent feasible. At a minimum, the use of plants listed by CNPS or DFW to be invasive, problematic or noxious shall be prohibited, and any existing such plants shall be removed. Maintenance requirements over the life of the development may be required.
- **CONS-2a.6.** Prohibit new land divisions creating new parcels located entirely within an ESHA or Buffer Areas unless the parcel to be created is restricted at the time of its creation solely for open space, public recreation, or conservation.
- **CONS-2a.7.** Require review of any changes in runoff volume, pollutant load, velocity, or duration for development that may affect sensitive plant and animal populations, ESHAs, or their Buffer Areas, by a qualified biologist to ensure that there will not be adverse hydrologic, erosion, nutrient, pollutant-based or sedimentation impacts on sensitive resources. Identify and adopt mitigation measures and compliance monitoring standards to minimize potential adverse runoff impacts.
- **CONS-2a.8.** Preserve, enhance and restore native vegetation within ESHAs, including riparian corridors. Locate allowable new structures and activities outside ESHAs whenever feasible to protect native vegetation. Ensure that areas that must temporarily be disturbed due to special circumstances be kept to a minimum, be carefully reviewed by the City, and be replanted with appropriate native vegetation.

- **CONS-2a.9.** Require permit applications for development in areas that may contain ESHAs to include a Biological Report prepared by a qualified biologist which identifies any resources and provides recommended measures to ensure that the requirements of the Coastal Act and LCP are fully met.

POLICIES FOR DEVELOPMENT IN ESHA BUFFER AREAS

- **CONS-2b.1.** Site and design development in areas adjacent to ESHAs and parks and recreation areas to prevent impacts that would significantly degrade such areas, and to be compatible with the continuance of such habitat areas through the use of appropriate buffers.
- **CONS-2b.2.** Limit development in Buffer Areas to certain resource dependent and compatible uses allowed in the adjacent ESHA consistent with Coastal Act §30240(a), §30233(a) and §30236, and other uses that are sited and designed to prevent impacts which would significantly degrade the ESHA and which are compatible with the sustainable continuance of the adjacent ESHA.
- **CONS-2b.3.** Require a setback separating development from identified ESHAs. In general, ESHA buffers shall be 100 feet unless the designated setback would eliminate all reasonable use of the property. A larger buffer width, adequate to protect the resource from degradation and allow for the continuance of the ESHA, shall be applied if information collected in an analysis of potential adverse impacts of development on adjacent ESHA shows one is necessary. Conversely, analysis by a qualified professional may justify a reduced setback based on specific findings that the development would not significantly degrade the ESHA and would be compatible with the continuance of the ESHA.
- **CONS-2b.4.** Prohibit native vegetation removal in Buffer Areas except for the following activities, which are also subject to other applicable standards and policies and may be subject to additional standards or restrictions to protect ESHA.
 - Vegetation removal authorized through coastal development permit approval to accommodate permissible development;
 - Removal of trees that are diseased or pose a hazard to structures or people as documented by an arborist or other qualified professional;
 - Vegetation removal for public safety purposes to abate a nuisance consistent with Coastal Act Section 30005;
 - Removal of firewood for the personal use of the property owner at his or her residence to the extent that such removal does not constitute major vegetation removal as defined herein;
 - Minor vegetation maintenance to preserve existing yards and viewsheds to the extent that such maintenance does not constitute major vegetation removal;
 - Vegetation removal to restore or enhance habitat values as recommended by a qualified professional.
- **CONS-2b.5.** In addition to complying with City lighting requirements (e.g. CIRC-10.4), all exterior lighting in buffer areas shall be restricted to low intensity fixtures, directed downward (downcast), and shielded so that no light or glare shines into an ESHA. (CD- 5.1)
- **Goal CONS-3.** Identify and protect native plants, animals and their habitats in and around the City.

POLICIES TO PROTECT AND IMPROVE NATIVE HABITAT AND MINIMIZE IMPACTS TO NATIVE SPECIES

- **CONS-3.1.** Preserve, protect, and to the extent feasible restore native habitat areas to their natural state.
- **Program CONS-3.1.1.** Develop additional guidelines for the maintenance of water courses to further assure that native vegetation is not unnecessarily removed and that maintenance minimizes disruption of wildlife breeding activities and wildlife movement. Incorporate these guidelines, where appropriate, into development approvals and the City's maintenance procedures.
- **CONS-3.2.** Marine resources shall be maintained, enhanced, and, where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.
- **CONS-3.3.** The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.
- **CONS-3.4.** Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation.
- **CONS-3.5.** Minimize disturbance of natural vegetation during site planning, construction and maintenance of development, including preservation of mature trees and native vegetation. (CONS-1b.2 partial; CD-7.5))
- **CONS-3.6.** Outside of the core urbanized area, require development to maintain adequate open space to permit effective plant and wildlife corridors for animal movement between open spaces.
- **CONS-3.7.** Construction timing and extent shall be limited as necessary to avoid impacts to sensitive species during nesting and breeding seasons.
- **CONS-3.8.** New development shall not be allowed to utilize any species of invasive non-native plants or native cultivars deemed undesirable by the City, including but not limited species rated as "high" or "moderate" on the Cal-IPC Inventory. Maintenance of the property to prevent identified species from naturalizing or persisting on the project site shall be required.
- **CONS-3.9.** permit major vegetation removal where both habitat values and viewsheds can be adequately protected.
- **CONS-3.10.** Ensure that major vegetation removal occurs outside the nesting season (March 1 – August 15) or that an appropriate survey occurs prior to vegetation removal if work occurs during the nesting season.
- **CONS-3.11.** A planting plan shall be required for proposed development that requires plantings to mitigate adverse impacts, such as to protect the visual character or an area, address erosion and runoff control and/or protect adjacent ESHA from development impacts. Such planting plans shall prioritize native drought-tolerant plants and shall not include invasive plants.

Maintenance provisions may also be required depending on the proposed development and related impacts.

TIMBERLAND

- **Goal CONS-4.** Preserve economically viable timber stands for use as sustainably harvested commercial timber while protecting water quality, special status species and sensitive habitats.

SOIL CONSERVATION

- **Goal CONS-5.** Protect and preserve soil as a natural resource.
- **CONS-5.1.** Minimize land disturbance activities from construction (e.g., clearing, grading, soil compaction and cut-and-fill), and avoid development on steep slopes, unstable areas, and highly erosive soils in order to minimize erosion. (CONS-1b.1)
- **CONS-5.2.** Prohibit grading during the rainy season (from October 15th through April 30th) in areas with slopes of 15% or greater, except in response to emergencies. Grading on slopes less than 15% is discouraged during the rainy season, but may be allowed on a case-by-case basis as long as any areas that are disturbed incorporate appropriate BMPs and monitoring to prevent water quality impacts. (CONS-1b.4)
- **CONS-5.3.** Require stabilization of disturbed areas through revegetation or other appropriate means as soon as feasible. (CONS-1b.5)
- **CONS-5.4.** The long-term productivity of soils and timberlands shall be protected, and conversions of coastal commercial timberlands in units of commercial size to other uses or their division into units of noncommercial size shall be limited to providing for necessary timber processing and related facilities.
- **CONS-5.5.** Require detailed studies of soil characteristics and hydrology for developments in areas with soil limitations (such as instability, clay content or high groundwater) to ensure that the lot size, foundation requirements, stormwater control and OWTS design are adequate to prevent direct or cumulative adverse impacts on soil stability or water resources.

Habitat Conservation Plans within Humboldt

Several habitat conservation plans exist within Humboldt, including:

- **Green Diamond Resource Company Habitat Conservation Plan.** Green Diamond's HCP is one of the largest in Humboldt, covering timberland and focusing on the conservation of species such as the northern spotted owl, marbled murrelet, and salmonid species (e.g., coho, Chinook, and steelhead). This HCP spans over 400,000 acres of timberland owned by Green Diamond Resource Company. The plan sets guidelines for forest management practices that minimize impacts on sensitive species, including habitat retention, road management, and riparian protections.
- **Humboldt Redwood Company Habitat Conservation Plan.** This HCP covers over 200,000 acres in Humboldt and includes protections for species, such as the northern spotted owl, marbled murrelet, and salmonids species. The plan focuses on sustainable timber harvesting practices and long-term conservation commitments to protect habitat for threatened and endangered species while enabling ongoing forestry operations.
- **Humboldt Bay National Wildlife Refuge Comprehensive Conservation Plan.** This plan is focused on protecting habitats in and around Humboldt Bay, including wetlands, estuaries, and riparian areas, which support a wide range of bird species, fish, and marine life. Managed by USFWS, this

CCP aims to enhance habitat for migratory birds along the Pacific Flyway and endangered species, like the western snowy plover and various salmonids. The plan outlines strategies for wetland restoration, invasive species control, and public education.

- **Six Rivers National Forest Land and Resource Management Plan.** Six Rivers National Forest is home to diverse ecosystems that support threatened and endangered species, including salmon, steelhead, northern spotted owls, and marbled murrelets. This plan, managed by the U.S. Forest Service, focuses on ecosystem management, watershed health, and sustainable land use to protect forest ecosystems. It includes guidelines for habitat restoration, recreation management, and fire control.
- **Yurok Tribe Fisheries Program and Salmon Restoration Efforts.** The Yurok Tribe has spearheaded habitat conservation and fisheries restoration along the Klamath River, focusing on coho and Chinook salmon, Pacific lamprey, and green sturgeon. These conservation initiatives aim to improve water quality, restore riparian and spawning habitat, and support traditional subsistence fishing practices for tribal communities, enhancing the health of the Klamath River ecosystem.

3.3.4 Impacts and Mitigation Measures

Significance Criteria

Humboldt County utilizes the following 2024 CEQA Guidelines Appendix G significance criteria questions related to Biological, Agriculture, and Forestry Resources.

Would the RCAP and CEQA GHG Emissions Thresholds:

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?
- c) Have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?
- g) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?
- h) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

- i) Conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timber Production?
- j) Result in the loss of forest land or conversion of forest land to non-forest use?
- k) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

Approach to Analysis

Environmental impacts to biological, agricultural, and forestry resources have been assessed using impact significance criteria from federal, State, and local regulations. CEQA, Chapter 1, Section 21001(c) states that it is the policy of the State of California to “prevent the elimination of fish and wildlife species due to man’s activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities.” Environmental impacts relative to biological, agricultural, and forestry resources have been assessed using impact significance criteria set forth in the *CEQA Guidelines* and federal, State, and local plans, regulations, and ordinances.

Biological Resources

The analysis of impacts related to biological resources is based on review of available literature online record searches of the following databases: the CDFW CNDDDB,⁴⁹ CNPS *Online Inventory of Rare, Threatened and Endangered Plants of California*,⁵⁰ USFWS NWI,⁵¹ USFWS *Critical Habitat Mapper*,⁵² and USFWS IPaC System. Rincon Biologists evaluated impacts on biological resources based on the likelihood that special-status species, sensitive habitats, wildlife corridors, and protected trees are present within Humboldt, and the likely effects of construction or operation on these resources. For the purposes of this EIR, the word “substantial” as used in the significance thresholds below is defined by the following three principal components:

- Magnitude and duration of the impact (e.g., substantial/not substantial),
- Uniqueness of the affected resource (rarity), and
- Susceptibility of the affected resource to disturbance.

Agricultural and Forestry Resources

Pursuant to Appendix G of the CEQA Guidelines, the RCAP would have a significant impact if it would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use. Humboldt does not participate in the statewide Farmland Mapping and Monitoring Program, and is therefore unable to analyze the impacts to these specific categories of Farmland.

Rather, the analysis of agricultural and forestry resources is based on review of available literature. The primary source of information reviewed to evaluate impacts was the Humboldt County database to search for documented areas of prime and non-prime farmlands, Williamson contracts, timber harvest lands and other forestry lands.⁵³

⁴⁹ CDFW CNDDDB, op.cit.

⁵⁰ CNPS op. cit.

⁵¹ USFWS NWI, op.cit.

⁵² USFWS *Critical Habitat Mapper*, op.cit.

⁵³ DOC, op. cit.

EIR Scoping Comments Consideration

This section also addresses comments received in response to the EIR NOP related to the analysis and impacts on biological, agricultural, and forestry resources with implementation of the RCAP (see Table 1-1 in Chapter 1.0, *Introduction*). Specifically, comments regarding biological resources were related to the potential for the RCAP to destroy or degrade wildlife habitat. These topics are addressed under Impacts BIO-1 through BIO-3. Comments regarding agricultural and forestry resources were related to the potential for the RCAP to result in conversion of farmland and forests and result in deforestation due to renewable diesel production. These topics are addressed under Impacts BIO-6 and BIO-7.

CEQA GHG Thresholds Analysis and RCAP EIR Focus Approach

The CEQA GHG Emissions Thresholds is a guidance document and does not propose development or changes to land use designations and zoning. Thus, implementation of the CEQA GHG Emissions Thresholds would not result in direct construction or operational impacts related to biological, agricultural, and forestry resources. Therefore, the analysis in this section focuses on the potential for implementation of the RCAP to result in impacts related to biological, agricultural, and forestry resources in Humboldt.

Specific Thresholds of Significance

For purposes of this analysis, the following thresholds are used to evaluate the significance of Biological, Agriculture, and Forestry Resources impacts resulting from implementation of the proposed plan:

- Result in direct take or habitat removal or alteration for candidate, sensitive, or special-status species
- Adversely affect any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS
- Remove, fill, or damage a federally protected wetland
- Interrupt fish movement in an aquatic channel or impede terrestrial movement via a land corridor
- Remove, damage, or replace trees designated as protected by the County or incorporated cities
- Conflict with the provisions of an applicable HCP
- Result in conversion of Farmland to non-agricultural resources
- Result in conversion of forestry resources to non-forestry resources

Impact Evaluation

Special-Status Species

Significance Criterion a: Would the proposed plan have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Impact BIO-1 INFRASTRUCTURE FACILITATED BY THE RCAP COULD RESULT IN DIRECT OR INDIRECT IMPACTS TO SPECIAL-STATUS SPECIES OR THEIR ASSOCIATED HABITATS INCLUDING IMPACTS TO MIGRATORY BIRD NEST SITES. DIRECT IMPACTS TO SPECIAL STATUS SPECIES WOULD BE LESS THAN SIGNIFICANT WITH IMPLEMENTATION OF MITIGATION MEASURES BIO-1 THROUGH BIO-4. HOWEVER, INDIRECT IMPACTS DUE TO THE LOSS OF COMMON HABITAT WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Construction

The USFWS, CNDDDB, and CNPS databases identified 176 special-status species that occur, or potentially occur within Humboldt (see Appendix B). Some species require localized microhabitats, while others are highly mobile and may occur throughout Humboldt. All special-status species are presumed present at any given time throughout their habitat range. In addition, migratory bird species are protected under the California Fish and Game Code and MBTA and may occur throughout the urbanized and rural areas of Humboldt.

The RCAP is a policy document and does not include specific projects that would have adverse impacts on migratory birds and special-status species. Rather, implementation of RCAP Measure T-3, which promotes infill development and the minimization of urban sprawl, would reduce development pressure on vacant and undeveloped land. This measure would promote the preservation of habitat and open space areas that support special-status species. Nonetheless, construction of future infrastructure projects facilitated by certain RCAP measures could adversely affect migratory birds and special-status species. Construction of renewable energy, electric power, renewable fuel, organic waste, recycled water, and transportation infrastructure facilitated by the RCAP per RCAP Measures BE-1 through BE-4, BE-7, BE-8, T-1, T-2 Urban and Rural, T-6, T-7, T-10, T-11, SW-1, and WW-2 could potentially result in impacts to migratory birds and special status species either directly by causing mortality or indirectly through habitat modification or loss.

Construction-related activities, such as vegetation removal, building demolition and/or relocation, grading, materials laydown, access, infrastructure improvements, and building construction, could result in the disturbance of nesting migratory birds. The most identifiable potential direct impact to migratory bird species would involve the removal of vegetation, particularly trees that may serve as perching or nesting sites for migratory birds. These adverse effects on listed or special-status bird species would represent a potentially significant impact. However, implementation of Mitigation Measures BIO-1 and BIO-2 (conduct pre-construction bird surveys and implement avoidance measures prior to removal) would be required for future projects where mature trees and other habitat are present, and construction activities are scheduled from early spring to late summer. With implementation of Mitigation Measures BIO-1 and BIO-2, direct construction impacts related to migratory birds would be less than significant.

Special-status bats, such as pallid bat, Townsend's big-eared bat, and western red bat, are State SSC and have potential to occur within Humboldt. Pallid bats are found in grasslands, shrublands, woodlands, and forests, and may roost in trees or buildings. Townsend's big-eared bats are found in a wide variety of habitats and may roost in abandoned buildings or large trees. Western red bats prefer habitat edges along conifer forests with open spaces for foraging. Bats prefer open areas or areas under a tree canopy for foraging, and often roost near water. Disturbance of maternity roosts by construction activities resulting in roost destruction or abandonment would constitute a potentially significant impact to bat species and would potentially violate the California Fish and Game Code. Such adverse effects on special-status bats would constitute a potentially significant impact. However, implementation of Mitigation Measures BIO-1 and BIO-3 would be required for RCAP projects where trees, abandoned structures, or other habitat for roosting bats is present and construction activities may occur during seasonal periods of bat activity. With implementation of Mitigation Measures BIO-1 and BIO-3, direct construction impacts related to special-status bats would be less than significant.

RCAP Measure BE-8 includes actions related to the planned Humboldt Bay Offshore Wind project, such as actions related to enhancing energy transmission infrastructure to distribute energy from the offshore wind project throughout Humboldt. Such activities have the potential to occur along the coast. Marine mammals such as blue whales, humpback whale, Steller sea lion, and killer whale are protected under the Marine Mammal Protection Act (MMPA). Construction activities may occur during seasonal periods of marine mammal migration. Disturbance to the marine mammal migration, rookeries and nursery sites by construction activities resulting in abandonment of young marine mammals would constitute a potentially significant impact to marine mammal species and potentially violate the MMPA. Such adverse effects on marine mammals would be a potentially significant impact. However, implementation of Mitigation Measure BIO-1 and BIO-4 would be required for future RCAP projects with the potential to affect marine mammals. With implementation of Mitigation Measures BIO-1 and BIO-4, the direct construction impacts to marine mammals would be less than significant.

In summary, construction activities would be subject to the provisions of the various federal and State natural resources regulations and their respective permitting processes, as well as the requirements of Mitigation Measures BIO-1 through BIO-4. Compliance with regulations and implementation of mitigation would result in the avoidance of direct mortality to migratory birds and special-status species from construction activities by requiring preconstruction surveys, construction monitoring, and avoidance and minimization measures, where warranted. Mitigation measures would apply only if specific projects have potentially significant impacts. With mitigation, direct construction impacts would be less than significant.

Although direct impacts on migratory birds and special-status species would be mitigated, significant indirect impacts on special-status species would occur due to the loss of common, non-sensitive habitat. With the development facilitated by RCAP measures and actions, habitat and biological resources to support special-status species could be reduced. Thus, even with implementation of mitigation measures, indirect impacts on migratory birds and special-status species would remain significant and unavoidable.

Operation

The RCAP includes Measures T-10 and CS-3, which promote the ongoing maintenance of forests through actions such as understory clearing to reduce the potential for wildfires and provide excess biomass for the production of renewable fuels. In addition, RCAP Measure BE-2 may result in the

development of utility-scale wind projects to generate renewable electricity. These measures have the potential to result in operational impacts to migratory birds and special status species.

RCAP Measures T-10 and CS-3 aim to boost biofuel production through sustainable means without contributing to deforestation or logging solely for energy purposes. Instead of increasing logging activities, it focuses on sourcing biofuel from responsible forest management practices, such as forest thinning initiatives that are designed primarily to reduce wildfire risk. Forest thinning involves selectively removing smaller trees and underbrush to create healthier, less fire-prone forests. This method provides biomass for biofuel without compromising forest ecosystems or triggering unnecessary deforestation. Additionally, the RCAP incorporates agricultural biowaste as another significant biofuel source. Agricultural biowaste includes crop residues, animal manure, and other organic byproducts generated by farms, which can be converted into biofuels. By utilizing waste materials from agriculture, the plan supports a circular approach, repurposing existing resources rather than extracting additional natural resources. Overall, these measures would ensure that biofuel production grows in harmony with environmental protection goals, leveraging underutilized organic materials while safeguarding forest health and minimizing the need for disruptive logging or land clearing. These measures would likely have long-term beneficial effects on special status species and their habitat related to improved forest health and less frequent and less intense wildfires.

Utility-scale wind projects that may occur under RCAP Measure BE-2 could result in direct mortality and indirect impacts to birds and bats. Wind projects could cause mortality to avian species and bats that may be hit by spinning wind turbine blades and may also result in injury to bats whose flight can be disrupted by the air pressure differential created around wind turbines. Additionally, wind projects could result in the loss of functional foraging habitat for raptors. Future utility-scale wind projects would be required to be evaluated for project-specific impacts under CEQA at the time of application. Project-specific mitigation, in addition to Mitigation Measures BIO-1 through BIO-4, described below, would minimize or eliminate impacts to special-status species to the extent feasible. However, operation of wind facilities associated with implementation of RCAP Measure BE-2 could still adversely affect special-status species because of the scale and nature of the projects. Impacts would remain significant and unavoidable.

Mitigation Measures

The following mitigation measures would apply to future RCAP-related projects with the potential to significantly affect any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service:

MITIGATION MEASURE BIO-1 CONDUCT PROJECT- LEVEL BIOLOGICAL RESOURCES ASSESSMENT

The reviewing agency (County or specific city) shall require biological resources to be analyzed on a project-specific level by a qualified biological consultant. Prior to or during the preparation of project-level environmental documents, and prior to the start of construction activities, a biological resources assessment shall be conducted to characterize the project site if initial assessment indicates that special status species or sensitive habitat may be present. Suitable buffer areas surrounding the project site shall be included where native habitat is contiguous with off-site habitat areas. The assessment and analysis shall emphasize identifying endangered, threatened, rare, and other special-status species; regionally and locally unique species; and sensitive natural communities, jurisdictional waters, and oak woodlands, as applicable. Focused surveys shall be

conducted as necessary to determine the presence of special-status species (e.g., focused sensitive plant or wildlife surveys). Focused surveys shall be conducted according to established CDFW or USFWS protocols, if available for the object species. Natural communities shall be mapped and identified according to floristic alliance- and/or association-based mapping protocols consistent with CDFW natural communities. A jurisdictional delineation may be required if there are signs of potentially regulated wetlands and non-wetland waters. A biological resources assessment report shall be prepared to characterize the biological resources on-site, analyze direct and indirect impacts on biological resources, and propose mitigation measures to offset those impacts. The report shall include site location, literature sources, methodology, timing of surveys, vegetation map, site photographs, and descriptions of biological resources on-site (e.g., observed and detected species as well as those species with potential to occur on-site).

If there is potential for direct impacts to special-status species with implementation of construction activities, the project-specific biological resources assessment report shall include a mitigation measure requiring pre-construction surveys for special-status species and/or construction monitoring to ensure avoidance, relocation, or safe escape of special-status species from the construction activities, as appropriate. The mitigation measures shall also include consultation with and obtaining permits from USFWS, NMFS, or CDFW prior to construction, if required by FESA or CESA for listed endangered and threatened species. If special-status species are found to be nesting, brooding, denning, etc. on-site during the pre-construction survey or monitoring, construction activity shall be halted until offspring are weaned, fledged, etc. and are able to escape the site or be safely relocated to appropriate offsite habitat areas. Relocation of such species into areas of appropriate restored habitat would have the best chance of replacing/incrementing populations that are lost due to habitat converted to development. Relocation to restored habitat areas shall be the preferred goal of this measure. A qualified biologist shall be on site to conduct surveys, to perform or oversee implementation of protective measures, and to determine when construction activity may resume.

MITIGATION MEASURE BIO-2 CONDUCT PRE-CONSTRUCTION BIRD SURVEYS AND IMPLEMENT AVOIDANCE AND MINIMIZATION MEASURES

For construction activities initiated during the bird nesting season (February 1–September 15) involving removal of vegetation that could potentially serve as habitat for special-status bird species or other nesting bird habitat, including abandoned structures and other man-made features, a pre-construction nesting bird survey shall be conducted no more than 14 days prior to initiation of ground disturbance and vegetation removal activities. The nesting bird pre-construction survey shall be conducted on foot and shall include a buffer around the construction site at a distance determined by a qualified biologist. The survey shall be conducted by a biologist familiar with the identification of avian species known to occur in Humboldt (i.e., qualified biologist). If nests are found, an avoidance buffer shall be determined by a qualified biologist dependent upon the species, the proposed work activity, and existing disturbances associated with land uses outside the site. The buffer shall be demarcated by the biologist with bright orange construction fencing, flagging, construction lathe, or other means to demarcate the boundary. All construction personnel shall be notified as to the existence of the buffer zone and to avoid entering the buffer zone during the nesting season. No ground-disturbing activities shall occur within the buffer until the biologist has confirmed that breeding/nesting is completed, and the young have fledged the nest. Encroachment into the buffer shall occur only at the discretion of the qualified biologist on the basis that the encroachment will not be detrimental to an active nest. A report summarizing the pre-construction

survey(s) shall be prepared by a qualified biologist and shall be submitted to the reviewing agency (County or specific city) prior to the commencement of construction activities.

Future project site plans shall include a statement acknowledging compliance with the MBTA and California Fish and Game Code that includes avoidance of active bird nests and identification of Best Management Practices to avoid impacts to active nests, including checking for nests prior to construction activities during February 1 to September 15 and what to do if an active nest is found so that the nest is not inadvertently impacted during grading or construction activities.

MITIGATION MEASURE BIO-3 CONDUCT PRE-CONSTRUCTION ROOSTING BATS SURVEYS AND IMPLEMENT AVOIDANCE MEASURES PRIOR TO REMOVAL

Prior to the removal or alteration of trees and structures that may serve as roosting habitat for special-status bat species, a qualified biologist shall conduct a focused survey of all trees and structures to be removed or impacted by construction activities to determine whether active roosts of special-status bats are present on site. Tree or structure removal shall be planned for either the spring or the fall and timed to ensure both suitable conditions for the detection of bats and adequate time for tree and/or structure removal to occur during seasonal periods of bat activity exclusive of the breeding season, as described below. Trees and/or structures containing suitable potential bat roost habitat features shall be clearly marked or identified. If no bat roosts are found, the results of the survey will be documented and submitted to the reviewing agency, after which no further action will be required.

If day roosts are present, the biologist shall prepare a site-specific roosting bat protection plan to be implemented by the contractor following the agency's approval. The plan shall incorporate the following guidance as appropriate:

- When possible, removal of trees/structures identified as suitable roosting habitat shall be conducted during seasonal periods of bat activity, including the following:
 - a) Between September 1 and about October 15, or before evening temperatures fall below 45 degrees Fahrenheit and/or more than 0.5 inch of rainfall within 24 hours occurs
 - b) Between March 1 and April 15, or after evening temperatures rise above 45 degrees Fahrenheit and/or no more than 0.5 inch of rainfall within 24 hours occurs
- If a tree/structure must be removed during the breeding season and is identified as potentially containing a colonial maternity roost, then a qualified biologist shall conduct acoustic emergence surveys or implement other appropriate methods to further evaluate if the roost is an active maternity roost. Under the biologist's guidance, the contractor shall implement measures that consist of (or exceed) the following:
 - a) If it is determined that the roost is not an active maternity roost, then the roost may be removed in accordance with the other requirements of this measure.
 - b) If it is found that an active maternity roost of a colonial roosting species is present, the roost shall not be disturbed during the breeding season (April 15 to August 31).
- Tree removal procedures shall be implemented using a two-step tree removal process. This method is conducted over two consecutive days and works by creating noise and vibration by cutting non-habitat branches and limbs from habitat trees using chainsaws only (no excavators or other heavy machinery) on day one. The noise and vibration disturbance, together with the visible alteration of the tree, is very effective in causing bats that emerge nightly to feed to not return to the roost that night. The remainder of the tree is removed on day two.

- Prior to the demolition of vacant structures within the project site, a qualified biologist shall conduct a focused habitat assessment of all structures to be demolished. The habitat assessment shall be conducted enough in advance to ensure the commencement of building demolition can be scheduled during seasonal periods of bat activity (see above), if required. If no signs of day roosting activity are observed, no further actions will be required. If bats or signs of day roosting by bats are observed, a qualified biologist will prepare specific recommendations such as partial dismantling to cause bats to abandon the roost, or humane eviction, both to be conducted during seasonal periods of bat activity, if required.
- If the qualified biologist determines a roost is used by a large number of bats (large hibernaculum), bat boxes shall be installed near the project site. The number of bat boxes installed will depend on the size of the hibernaculum and shall be determined through consultation with CDFW. If a maternity colony has become established, all construction activities shall be postponed within a 500-foot buffer around the maternity colony until it is determined by a qualified biologist that the young have dispersed. Once it has been determined that the roost is clear of bats, the roost shall be removed immediately.

MITIGATION MEASURE BIO-4 DEVELOP A MARINE MAMMAL MONITORING PLAN AND IMPLEMENT AVOIDANCE AND MINIMIZATION MEASURES

A Marine Mammal Monitoring Plan shall be prepared to avoid and minimize potential adverse impacts to these species. The plan shall implement general guidelines set forth in the MMPA. Vessels under power shall remain at least 100 yards (300 feet) away from whales and 50 yards (150 feet) from dolphins, porpoises, seals and sea lions. When encountering marine mammals, the vessel shall slow down, operate at no-wake speed and be put in neutral to let the individual/s pass. If construction activities occur from November 1 to April 30, vessel larger than 65 feet are restricted to 10 knots or less. No survey or construction activities (such as pile-driving) will be performed at night unless an alternative monitoring plan is provided by the reviewing agency. Additionally, a qualified biologist shall be on site (either observing from a dock or aboard a vessel) to monitor the construction activities and vicinity for the presence of marine mammals during all in-water activities.

Level of Significance

Significant and Unavoidable.

Sensitive Natural Communities and Wetlands

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|---|
| <p>Significance Criterion b: Would the proposed plan have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?</p> |
| <p>Significance Criterion c: Would the proposed plan have a substantial adverse effect on State or federally protected wetlands (including but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?</p> |

Impact BIO-2 INFRASTRUCTURE FACILITATED BY THE RCAP COULD ADVERSELY IMPACT RIPARIAN HABITAT, OTHER SENSITIVE NATURAL COMMUNITIES, OR PROTECTED WETLANDS IN HUMBOLDT. IMPLEMENTATION OF MITIGATION MEASURES BIO-5 THROUGH BIO-7 WOULD REDUCE IMPACTS TO A LESS THAN SIGNIFICANT LEVEL.

Construction

Humboldt contains sensitive natural communities, such as riparian, conifer, montane hardwood and redwood forests, streams, rivers and wet meadows. In addition, wetlands, marshes, vernal pools, other types of seasonal and perennial wetland communities exist throughout Humboldt, as described in Section 3.3.2, *Environmental Setting*, above. The RCAP is a policy document and does not include specific projects that would have adverse impacts on sensitive natural communities and wetland resources. Most of the infrastructure improvements facilitated by the RCAP would be located on infill sites that are already developed with structures, parking, and/or transportation infrastructure, such as measures related to existing and new building electrification (e.g., RCAP Measures BE-3 through BE-7), active transportation and public transit (e.g., RCAP Measures T-1 through T-4), and zero emission vehicles (e.g., RCAP Measures T-6 through T-9 and T-11). Because these areas are urbanized and currently developed, they are unlikely to contain sensitive natural communities or wetlands.

However, construction of renewable energy, electric power, renewable fuel, organic waste, and recycled water facilitated by the RCAP per RCAP Measures BE-1, BE-2, BE-8, T-10, SW-1, and WW-2 could potentially occur on undeveloped, rural sites where sensitive natural communities and wetlands may be present. These measures may facilitate new development such as large utility-scale energy projects (e.g., solar, wind, battery storage, substation, transmission), a new organic waste processing facility, hydrogen and renewable fuel production facilities, and water recycling facilities and could result in significant impacts to sensitive natural communities, wetlands, or other waters of the United States by direct removal or conversion of habitat, filling, hydrological interruption (including dewatering), alteration of bed and bank, runoff of pollutants into riparian habitats or wetlands, compaction of soils, and/or indirectly through dust and vegetation thinning.

If future RCAP projects occur on sites containing sensitive natural communities, riparian habitat, wetlands, streams, creeks, or other waters of the United States, an aquatic resources delineation would be required to identify the limits and potential jurisdiction of protected waters, wetlands, and sensitive natural communities. Any proposed development in areas identified as jurisdictional waters and/or wetlands, streambed/banks, or riparian vegetation would be subject to the permit requirements of the USACE, RWQCB, and CDFW, pursuant to Section 404 and 401 of CWA, the Porter-Cologne Water Quality Control Act, and/or California Fish and Game Code Section 1600 et

seq. These include but are not limited to streambed alteration permits from the CDFW and permits for grading near the wetlands and certain watercourses from the USACE and RWQCB. These permit clearances may also be required as conditions of approval for grading work to commence. Approval of permits also requires findings that the proposed grading will not result in erosion, stream sedimentation, or other adverse off-site effects to riparian habitat.

Additionally, for future projects one acre or larger, implementation of the required Storm Water Pollution Prevention Plan Best Management Practices (BMPs), in accordance with the NPDES Construction General Permit, during project construction would reduce the potential for eroded soil and contaminants to affect waterbodies and habitats following a storm event. Additionally, HCC Section 337-13a provides site design standards, source control, runoff reduction and baseline hydromodification management to address erosion and sedimentation. Future developments facilitated by the RCAP would employ erosion and stormwater control measures as outlined in the HCC Section 337-13c to protect and enhance the water quality. The incorporated city municipal codes also contain similar construction and grading BMP requirements, which would apply to any projects occurring within incorporated city limits.

Compliance with the abovementioned regulatory requirements would reduce the potential for future RCAP infrastructure projects to damage riparian habitat, sensitive natural communities, and wetlands. In addition, Mitigation Measures BIO-1 and BIO-5 through BIO-7 would be required to reduce impacts related to wetland resources and sensitive natural communities. Where full avoidance is not possible, the participation in pre-established habitat protection programs or State/federal permit mitigation programs would offset potential impacts associated with project implementation. With regulatory compliance and implementation of Mitigation Measures BIO-1 and BIO-5 through BIO-7, construction impacts to riparian habitat, sensitive natural communities, and wetlands would be less than significant.

Operation

Given that potential impacts to riparian habitats, sensitive natural communities, and wetlands would occur during construction either directly via fill or indirectly related to habitat modification, there would be no RCAP operational impacts related to sensitive natural communities.

Mitigation Measures

The following mitigation measures would apply to future RCAP-related projects with the potential to have a substantial adverse effect on riparian habitat, sensitive natural communities, and/or State or federally protected wetlands:

MITIGATION MEASURE BIO-5 PREPARE AQUATIC ENVIRONMENT DOCUMENTATION

Prior to approval of individual projects, the reviewing agency (County or specific city) shall retain a qualified biologist to perform an assessment of the project area to identify wetlands, riparian, and other sensitive aquatic environments. If wetlands are present the qualified biologist shall perform a wetland delineation following the 1987 *Corps of Engineers Wetlands Delineation Manual* and any applicable regional supplements to the *Corps of Engineers Wetlands Delineation Manual*. The wetland delineation shall be submitted to the USACE for verification.

MITIGATION MEASURE BIO-6 IMPLEMENT AQUATIC ENVIRONMENT AVOIDANCE AND MINIMIZATION MEASURES

If wetlands, riparian, or other sensitive aquatic environments are found within the project limits, the reviewing agency (County or specific city) shall design or modify the project to avoid direct and indirect impacts on these habitats, if feasible. Additionally, the reviewing agency shall minimize the loss of riparian vegetation by trimming rather than removal where feasible.

Prior to construction, the reviewing agency shall install orange construction barrier fencing to identify buffer areas around the seasonal wetland (50 feet from edge), riparian area (100 feet from edge), perennial wetlands (150 feet from edge) and other aquatic habitats (250 feet from edge of vernal pool), or as defined by the agency with regulatory authority over the resource(s). No buffer shall be required for man-made wetlands except wetlands created for mitigation purposes. The location of the fencing shall be marked in the field with stakes and flagging and shown on the construction drawings. The fencing will be installed before construction activities are initiated and will be maintained throughout the construction period. The following paragraph will be included in the construction specifications:

The Contractor's attention is directed to the areas designated as "environmentally sensitive areas." These areas are protected, and no entry by the Contractor for any purpose will be allowed unless specifically authorized in writing by the reviewing agency. The Contractor will take measures to ensure that Contractor's forces do not enter or disturb these areas, including giving written notice to employees and subcontractors.

Temporary fences around the environmentally sensitive areas will be installed as the first order of work. Temporary fences will be furnished, constructed, maintained, and removed as shown on the plans, as specified in the special provisions, and as directed by the project engineer.

Immediately upon completion of construction activities the contractor shall stabilize exposed soil/slopes impacted within the aquatic habitat. On highly erodible soils/slopes, use a nonvegetative material that binds the soil initially and breaks down within a few years. If more aggressive erosion control treatments are needed, geotextile mats, excelsior blankets, or other soil stabilization products will be used. All stabilization efforts should include habitat restoration efforts.

MITIGATION MEASURE BIO-7 COMPENSATE FOR LOSS OF AQUATIC ENVIRONMENTS

If wetlands or riparian habitat are disturbed as part of an individual project, the reviewing agency shall compensate for the disturbance to ensure no net loss of habitat functions and values. Compensation ratios shall be based on site-specific information and determined through coordination with State, federal, and local agencies as part of the permitting process for the project. Unless determined otherwise by the regulatory/permitting agency, the compensation shall be at a minimum ratio of two acres restored, created, and/or preserved for every one acre disturbed.

Compensation may comprise on-site restoration/creation, off-site restoration, preservation, or mitigation credits (or a combination of these elements). The reviewing agency shall develop and implement a restoration and monitoring plan that describes how the habitat shall be created and monitored over a minimum period of time.

Level of Significance

Less than Significant with Mitigation.

Wildlife Movement Corridors and Nursery Sites

Significance Criterion d: Would the proposed plan interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Impact BIO-3 INFRASTRUCTURE FACILITATED BY THE RCAP WOULD RESULT IN IMPACTS TO WILDLIFE MOVEMENT CORRIDORS AND WILDLIFE NURSERY SITES IF THEY NARROW OR REMOVE EXISTING CORRIDORS OR DEGRADE OR REMOVE NURSERY SITES. IMPLEMENTATION OF MITIGATION MEASURE BIO-8 WOULD REDUCE POTENTIAL IMPACTS TO THE EXTENT FEASIBLE. HOWEVER, IMPACTS WOULD REMAIN SIGNIFICANT AND UNAVOIDABLE.

Construction

Most of Humboldt is vastly undeveloped, and the region is known for its dense forests, large diverse river systems, and rugged coastal areas, all of which provide wildlife movement corridors and may also provide wildlife nursery sites. The RCAP is a policy document and does not include specific projects that would have adverse impacts on wildlife corridors, habitat linkages, and native wildlife nursery sites. However, projects facilitated by RCAP measures and actions could adversely affect wildlife corridors, habitat linkages, and native wildlife nursery sites. Most of the infrastructure improvements facilitated by the RCAP would be located on infill sites that are already developed with structures, parking, and/or transportation infrastructure, such as measures related to existing and new building electrification (e.g., RCAP Measures BE-3 through BE-7), active transportation and public transit (e.g., RCAP Measures T-1 through T-4), and zero emission vehicles (e.g., RCAP Measures T-6 through T-9 and T-11). Because these areas are urbanized and currently developed, they are unlikely to serve as wildlife corridors, habitat linkages, or native wildlife nursery sites.

However, construction of renewable energy, electric power, renewable fuel, organic waste, and recycled water facilitated by the RCAP per RCAP Measures BE-1, BE-2, BE-8, T-10, SW-1, and WW-2 could potentially occur on undeveloped, rural sites where wildlife movement corridors and native wild nursery sites may be present. These measures may facilitate new development such as large utility-scale energy projects (e.g., solar, wind, battery storage, substation, transmission), a new organic waste processing facility, hydrogen and renewable fuel production facilities, and water recycling facilities and could result in significant impacts to wildlife corridors, habitat linkages, and native wildlife nursery sites if they narrow or remove existing corridors or degrade or remove nursery sites. Impact associated with narrowing or removing existing wildlife corridors, habitat linkages, and/or native wildlife nursery sites would be considered significant.

Mitigation Measure BIO-8 would require that future RCAP projects are designed to facilitate the movement of sensitive species to the greatest extent feasible. Compliance with Mitigation Measure BIO-8 and existing State, local, and/or federal regulations would reduce RCAP construction impacts related to wildlife movement corridors and nursery sites. However, even with the application of Mitigation Measure BIO-8, construction impacts may not be able to be reduced, and impacts would remain significant and unavoidable.

Operation

Given that potential impacts to wildlife movement corridors and nursery sites would occur during construction via removal or modification, there would be no RCAP operational impacts related to wildlife movement corridors and nursery sites.

Mitigation Measures

The following mitigation measure would apply to future RCAP-related projects with the potential to interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors:

MITIGATION MEASURE BIO-8 INCORPORATE WILDLIFE CORRIDOR MEASURES INTO DESIGN PRIOR TO CONSTRUCTION

Prior to design approval and construction of individual projects that traverse or interface with an existing wildlife corridor, the reviewing agency (County or relevant city) shall incorporate economically viable design measures, as applicable and necessary, to allow wildlife or fish to continue to move through an existing wildlife corridor, both during construction activities and post construction. If the project cannot be designed with these design measures (i.e., due to transportation corridor safety, etc.) the reviewing agency shall coordinate with the appropriate regulatory agencies (i.e., USFWS, NMFS, CDFW) to obtain regulatory permits and implement alternative project-specific mitigation prior to construction activities.

Level of Significance

Significant and unavoidable.

Local Biological Resources Policies or Ordinances Consistency

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| <p>Significance Criterion e: Would the proposed plan conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?</p> |
|--|

Impact BIO-4 INFRASTRUCTURE FACILITATED BY THE RCAP WOULD BE REQUIRED TO CONFORM WITH APPLICABLE LOCAL POLICIES AND ORDINANCES PROTECTING BIOLOGICAL RESOURCES. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

Humboldt County's General Plan and LCP as well as the seven incorporated cities general plans incorporate goals and policies to protect biological resources, such as plant habitats, trees, redwoods, woodlands, wildlife habitats, and rare and endangered species in the county. Additionally, Humboldt County plans to adopt a Significant Tree Ordinance and Landmark Tree Policy (BR-P13), which would preserve trees and enhance the ecological benefit to the community by providing for the regulation of planting, management, maintenance, preservation and, where necessary, removal of trees.

The RCAP is a policy document and does not include specific projects that would have adverse impacts related to trees protected by local tree preservation ordinances or conflicts with other local biological resources policies. Rather, implementation of RCAP Measure T-3, which promotes infill development and the minimization of urban sprawl, would reduce development pressure on vacant

and undeveloped land. The RCAP also contains Measure CS-3, which seeks to protect and increase natural carbon sequestration occurring in the region's forests and wetlands, as well as promote biodiverse forests and wetlands. These measures would promote the preservation of habitat and open space areas, consistent with goals and policies established by the County and city general plans.

The RCAP would promote sustainable infrastructure development and redevelopment including renewable energy, electric power, renewable fuel, organic waste, recycled water, and transportation infrastructure per RCAP Measures BE-1 through BE-4, BE-7, BE-8, T-1, T-2 Urban and Rural, T-6, T-7, T-10, T-11, SW-1, and WW-2. The purpose and intended effect of the RCAP is to reduce GHG emissions generated in Humboldt to help reduce the effects of climate change. Any future RCAP projects that would affect trees protected by a local ordinance would be required to comply with the permitting conditions of the applicable local ordinance, such as preservation and protection measures, or the provision of replacement trees. Therefore, the RCAP would not conflict with or obstruct implementation of the applicable policies for preserving biological resources nor result in the loss of trees protected by local ordinances.

Operation

Given that potential impacts to trees would occur during construction, there would be no RCAP operational impact related to consistency with local biological resources policies and ordinances.

Mitigation Measures

No mitigation is required.

Level of Significance

Less Than Significant without Mitigation.

Habitat or Natural Community Conservation Plans Consistency

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| Significance Criterion f: Would the proposed plan conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? |
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Impact BIO-5 THE RCAP WOULD NOT CONFLICT WITH AN ADOPTED HCP, NCCP, OR OTHER APPROVED LOCAL, REGIONAL, OR STATE HABITAT CONSERVATION PLAN. ANY FUTURE RCAP-RELATED INFRASTRUCTURE PROJECTS OCCURRING WITHIN AN ADOPTED HCP, NCCP, OR OTHER APPROVED LOCAL, REGIONAL, OR STATE HABITAT CONSERVATION PLAN WOULD BE REQUIRED TO COMPLY WITH THE APPLICABLE PLAN'S REQUIREMENTS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Humboldt has several habitat conservation initiatives aimed at protecting wildlife habitats and managing land use to preserve biodiversity. These plans include HCPs and other regional conservation programs, such as the NCCP, established to protect wildlife and fish species (i.e., northern spotted owl, marbled murrelet, salmonid species, Pacific lamprey, green sturgeon, marine mammals, migratory birds) as well as natural habitat (i.e., woodlands, riparian, wetland) while balancing sustainable land use and development. The habitat conservation plans within Humboldt are listed in Section 3.3.3, *Regulatory Setting*.

The RCAP is a policy document and does not include specific projects that would have adverse impacts related to adopted HCCPs/NCCPs. Rather, implementation of RCAP Measure T-3, which

Regional Climate Action Plan and CEQA GHG Emissions Thresholds

promotes infill development and the minimization of urban sprawl, would reduce development pressure on vacant and undeveloped land. The RCAP also contains Measure CS-3, which seeks to protect and increase natural carbon sequestration occurring in the region’s forests, as well as promote biodiverse forests and wetlands. These measures would promote the preservation of habitat and open space areas, consistent with habitat conservation goals and policies.

The RCAP would promote sustainable infrastructure development and redevelopment including renewable energy, electric power, renewable fuel, organic waste, recycled water, and transportation infrastructure per RCAP Measures BE-1 through BE-4, BE-7, BE-8, T-1, T-2 Urban and Rural, T-6, T-7, T-10, T-11, SW-1, and WW-2. The purpose and intended effect of the RCAP is to reduce GHG emissions generated in Humboldt to help reduce the effects of climate change. Any future RCAP projects that would occur in areas protected by adopted HCPs and NCCPs would be required to comply with applicable HCP/NCCP requirements promulgated by local, State, and/or federal agencies to proceed with development. Therefore, the RCAP would not conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or State habitat conservation plan. Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less Than Significant without Mitigation.

Farmland Conversion and Williamson Act Zoning Consistency

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|----------------------------------|---|
| Significance Criterion g: | Would the proposed plan convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? |
| Significance Criterion h: | Would the proposed plan conflict with existing zoning for agricultural use or a Williamson Act contract? |
| Significance Criterion k: | Would the proposed plan involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use? |

Impact AG-1 INFRASTRUCTURE FACILITATED BY THE RCAP HAS THE POTENTIAL TO CONVERT FARMLAND TO NON-AGRICULTURAL USE AND CONFLICT WITH EXISTING ZONING FOR AGRICULTURAL USE OR A WILLIAMSON ACT CONTRACT. MITIGATION MEASURES AG-1 THROUGH AG-4 WOULD BE IMPLEMENTED TO AVOID CONVERSION OF ACTIVELY FARMED LANDS AND REDUCE THE POTENTIAL FOR PERMANENT LOSS OF FARMLAND TO THE EXTENT FEASIBLE. HOWEVER, IMPACTS WOULD REMAIN SIGNIFICANT AND UNAVOIDABLE.

Construction and Operation

Humboldt’s agricultural lands consist of a diverse mix of productive farmland, rangeland, and pastureland, with a focus on dairy operations, cattle grazing, and specialty crops such as wine grapes, organic vegetables, and cannabis. In addition, there are numerous properties currently under Williamson Act contract within Humboldt. The RCAP is a policy document and does not include specific projects that would have adverse impacts related to farmland. Rather,

implementation of RCAP Measure T-3, which promotes infill development and the minimization of urban sprawl, would reduce development pressure on agricultural and rural areas of Humboldt. The RCAP also contains Measure CS-3, which seeks to protect and increase natural carbon sequestration occurring in the region's agricultural and forest lands. The RCAP also contains Measure CS-2 to work with agricultural industries in Humboldt to procure and distribute high-quality compost to farms within the region. These measures would benefit agriculture in Humboldt and promote the preservation of agricultural lands.

Most of the infrastructure improvements facilitated by the RCAP would be located on infill sites that are already developed with structures, parking, and/or transportation infrastructure, such as measures related to existing and new building electrification (e.g., RCAP Measures BE-3 through BE-7), active transportation and public transit (e.g., RCAP Measures T-1 through T-4), and zero emission vehicles (e.g., RCAP Measures T-6 through T-9 and T-11). Because these areas are urbanized and currently developed, they are unlikely to contain Farmland, conflict with zoning for agricultural use or Williamson Act contracts, or result in other changes that could lead to the conversion of Farmland to non-agricultural use.

However, construction of renewable energy, electric power, renewable fuel, organic waste, and recycled water infrastructure facilitated by the RCAP per RCAP Measures BE-1, BE-2, BE-8, T-10, SW-1, and WW-2 could potentially occur on undeveloped, rural sites and result in the conversion of Farmland⁵⁴ to non-agricultural use. In particular, utility-scale renewable energy projects require large tracts of land and present a substantial potential impact to agricultural resources. Elements of utility-scale renewable energy generation facilities may include, but would not be limited to, solar collector arrays, mounting posts, wind turbines, on-site substations, electrical infrastructure, transmission lines, operations and maintenance buildings, battery-storage facilities, and other accessory structures. Utility-scale renewable energy facilities could require development on hundreds of acres; therefore, if developed in agricultural areas, these projects could have a substantial effect on Farmland. Utility-owned substation upgrades to increase load capacity would most likely be contained within the existing substation fence line and would be regulated by the California Public Utilities Commission if owned by an investor-owned utility such as Pacific Gas and Electric. Upgrades to existing transmission lines may also be required at specific tower locations, which could permanently disturb Farmland in the area where the work would occur. Should future utility-scale renewable energy facilities be proposed on Farmland, in particular Farmland that is used for the production of agricultural products (i.e., rather than used for residential, governmental, or other allowable non-agricultural uses of agricultural zoned lands), they could convert an agricultural use to a non-agricultural use. This impact would be significant.

Projects facilitated by the RCAP would be required to comply with County and city general plan goals and policies and zoning requirements that protect and preserve agricultural resources, such as Humboldt General Plan Policies AG-P6 and AG-P16, Arcata General Plan Policies RC-5b and RC-5c, Blue Lake General Plan Preservation Of Open Space And Agricultural Lands Policies 1 through 15,

⁵⁴ "Farmland" specifically includes the following definitions utilized by the County:

- a. Rated Class I or II by the U.S. Soil Conservation Service.
- b. Rated 80 through 100 percent in the Storie Index.
- c. Land that has a livestock carrying capacity of one animal unit per acre.
- d. Land planted with fruit or nut-bearing trees, vines, bushes or crops which have a non-bearing period of less than five years and which will normally provide a return adequate for economically viable operations during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production.
- e. Land capable of producing an unprocessed plant production adequate for economically viable operations.
- f. Additional lands in proximity to a, b or c above which are necessary to provide for physically and economically viable, coherent agricultural areas. These lands are included to prevent the establishment of incompatible land uses within an area defined by natural or man-made boundaries.

Eureka General Plan Policy AG-1.1, Ferndale General Plan agricultural land use policies, Fortuna General Plan Policies NCR-3.1 through 3.6 and NCR-3.8, Rio Dell General Plan Goal CO 5.3-1, and Trinidad General Plan Goal CONS-5. However, conversion of Farmland may still occur depending on future project locations and details.

Mitigation Measure AG-1 would reduce the potential for conversion of Farmland to non-agricultural uses by avoiding the development of actively farmed lands when there is an otherwise suitable site available. Additionally, Mitigation Measures AG-2 through AG-4 would reduce impacts related to the permanent loss of agricultural soils and agricultural activities. However, these measures would not ensure that the conversion of Farmland could be avoided. As such, impacts would remain significant and unavoidable.

Mitigation Measures

The following mitigation measures would apply to future RCAP-related projects with the potential to convert Farmland to non-agricultural use and conflict with existing zoning for agricultural use or a Williamson Act contract:

MITIGATION MEASURE AG-1: AVOID ACTIVELY FARMED LANDS

If a project facilitated by the RCAP is proposed on actively farmed land, the reviewing agency (County or individual city) shall require the project sponsor to demonstrate their consideration of alternate sites not in agricultural use, such as sites that were formerly developed or contaminated lands located within the jurisdictional limits of the reviewing agency when such development is consistent with general plan and zoning requirements of the alternate sites.

MITIGATION MEASURE AG-2 PREPARE AND IMPLEMENT AN AGRICULTURE MANAGEMENT PLAN

If a project facilitated by the RCAP is proposed on actively farmed land, prior to the issuance of a building permit, the project sponsor shall submit to the reviewing agency (County or individual city) an Agricultural Management Plan (AMP) that provides for the ongoing agricultural productivity of the project site for the life of the project to the extent feasible. Agricultural uses may include but are not limited to sheep grazing, the keeping of honeybees, or planting of row crops, on a rotational basis. During rotational periods, the AMP shall include planting and maintenance of locally appropriate native plants, focusing on species that provide the greatest value to bees, moths, butterflies, and other native pollinators. Some potential options include yarrow (*Achillea millefolium*), farewell to spring (*Clarkia amoena*), California poppy (*Eschscholzia californica*), riverbank lupine (*Lupinus rivularis*), California bee plant (*Scrophularia californica*), and rough hedgenettle (*Stachys rigida*). To maintain habitat value, mowing shall not occur during the bloom period, though targeted removal of invasive species is encouraged. The AMP shall summarize the types and duration of agricultural uses as well as operator information for the property. The reviewing agency reserves the right to reject or require revisions to the plan to ensure the effectiveness of the planned agricultural operations.

MITIGATION MEASURE AG-3 PREPARE AND IMPLEMENT A DECOMMISSIONING AND SOIL RECLAMATION PLAN

If a project facilitated by the RCAP is proposed on a site containing prime agricultural soils, prior to the issuance of a building permit, the applicant shall submit, for review and approval by the reviewing agency (County or individual city), a Soil Reclamation Plan (Plan) for the restoration of the site at the end of the project's useful life. The Plan shall contain an analysis of general pre-

construction conditions of the project site, the site shall be photographically documented by the applicant prior to the start of construction. The Plan shall contain specific measures to restore the soil to approximate its pre-project condition, including (1) removal of all above-ground and below-ground project fixtures, equipment, and non-agricultural driveways, (2) tilling to restore the sub-grade material to a density and depth consistent with its pre-project condition, (3) revegetation using a seed mixture approved by the reviewing agency, consisting of native species, and designed to maximize revegetation shall be broadcast or drilled across the project site, and (4) application of weed-free mulch spread, as needed, to stabilize the soil until germination occurs and young plants are established to facilitate moisture retention in the soil. Whether the project area has been restored to pre-construction conditions shall be assessed by reviewing agency staff. Additional seedlings and applications of weed-free mulch shall be applied to areas of the project site that have been determined to be unsuccessfully reclaimed (i.e., restored to pre-project conditions) until the entire project area has been restored to conditions equivalent to pre-construction conditions. All waste shall be recycled or disposed of in compliance with applicable law. The project sponsor shall submit documentation to the reviewing agency to verify the completion of reclamation within 18 months of expiration of the project use permit or vacation of the project site.

MITIGATION MEASURE AG-4 PROVIDE FINANCIAL ASSURANCE TO IMPLEMENT SOIL RECLAMATION PLAN

If a Soil Reclamation Plan is required pursuant to Mitigation Measure AG-3, prior to the issuance of a building permit, the project sponsor shall post a performance or cash bond, submit a Certificate of Deposit, submit a letter of credit, or provide such other financial assurances acceptable to the reviewing agency (County or specific city), in an amount provided in an Engineer's Cost Estimate, approved by the reviewing agency, to ensure completion of the activities under the Soil Reclamation Plan. Every five years from the date of completion of construction of the project, the project sponsor shall submit an updated Engineer's Cost Estimate for financial assurances for the Soil Reclamation Plan, which will be reviewed every five years by the reviewing agency to determine if the amount of the assurances is sufficient to implement the Soil Reclamation Plan. The amount of the assurances must be adjusted if, during the five-year review, the amount is determined to be insufficient to implement the Soil Reclamation Plan.

Level of Significance

Significant and Unavoidable

Forest Land Conversion and Forest/Timberland Zoning Consistency

- Significance Criterion i:** Would the proposed plan conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?
- Significance Criterion j:** Would the proposed plan result in the loss of forest land or conversion of forest land to non-forest use?
- Significance Criterion k:** Would the proposed plan involve other changes in the existing environment which, due to their location or nature, could result in conversion of forest land to non-forest use?

Impact AG-2 THE RCAP INCLUDES MEASURES THAT PROMOTE THE CONSERVATION OF HUMBOLDT'S FOREST LAND AND TIMBERLAND. ADDITIONALLY, INFRASTRUCTURE FACILITATED BY THE RCAP WOULD NOT BE ANTICIPATED TO RESULT IN THE CONVERSION OF FOREST LAND NOR CONFLICT WITH EXISTING ZONING FOR FORESTRY OR TIMBERLAND USE. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction and Operation

As described in Section 3.3.2, *Environmental Setting*, over 80 percent of the land area in Humboldt is forested. The forest land across Humboldt includes a mix of private, State, and federal ownership, and includes parks, forest reserves, and areas of active timber production. Major private timberland owners include companies like Humboldt Redwood Company, Green Diamond Resource Company, and State-managed lands by the California Department of Forestry and Fire (CAL FIRE) also contribute to the region's timber resources.

The RCAP is a policy document and does not include specific projects that would have adverse impacts related to forest land, timberland, or timberland zoned Timberland Production. Rather, implementation of RCAP Measure T-3, which promotes infill development and the minimization of urban sprawl, would reduce development pressure on forested areas of Humboldt. The RCAP also contains Measure CS-3, which seeks to protect and increase natural carbon sequestration occurring in the region's agricultural and forest lands. This measure promotes the conservation of Humboldt's forest and timberlands.

RCAP Measures T-10 and CS-3 aim to boost biofuel production through sustainable means without contributing to deforestation or logging solely for energy purposes. This measure focuses on sourcing biofuel from responsible forest management practices, such as forest thinning initiatives that are designed primarily to reduce wildfire risk. Forest thinning involves selectively removing smaller trees and underbrush to create healthier, less fire-prone forests. This method provides biomass for biofuel without compromising forest ecosystems or triggering unnecessary deforestation. Additionally, the RCAP incorporates agricultural biowaste as another significant biofuel source. These measures would ensure that biofuel production grows in harmony with environmental protection goals, leveraging underutilized organic materials while safeguarding forest health and minimizing the risk of wildfires.

Additionally, future projects facilitated by the RCAP would not be anticipated to substantially affect forested areas and would be required to demonstrate consistency with (depending on jurisdiction) the HCC and city zoning codes, as well as with the County and cities General Plan goals and policies

to safeguard and improve both private and public forest lands to preserve ecosystem integrity and resilience while supporting sustainable timber production, recreational use, habitat conservation, and opportunities for education and research. As such, implementation of the RCAP would not convert forest land to non-forest use. Therefore, RCAP construction and operational impacts related to conversion of forestry uses to non-forestry uses or conflicts with forest/timberland zoning would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance

Less Than Significant without Mitigation

3.3.5 Cumulative Impacts

The geographic scope of the cumulative biological, agriculture, and forestry resources analysis is Humboldt. Regional cumulative analysis considers potential Countywide impacts that would occur from projected long-term Countywide growth identified in Table 3-1 of Section 3, *Environmental Setting*. The general approach to cumulative impact analysis used in this EIR is discussed in Section 3, *Environmental Setting*.

Special-status Wildlife and Plant Species

A list of 175 special-status species that have been documented to occur within Humboldt is provided in Appendix B, *Biological Resources*. Species are accorded special status generally because they are recognized as declining in extent and/or distribution. These species are considered to be sufficiently at risk to warrant some level of protection either through the CEQA review process or by local regulations. Accordingly, a significant cumulative impact of past, present, and reasonably foreseeable projects would occur with respect to these species.

The RCAP would result in a significant direct and indirect incremental contribution to this significant cumulative impact. The RCAP's contribution would be mitigated to a less than cumulatively considerable (less than significant) level for direct impacts through implementation of Mitigation Measures BIO-1 through BIO-4. However, for indirect cumulative impacts resulting from the loss of common habitats and diminished resource availability, the implementation of Mitigation Measures BIO-1 through BIO-4 would not be sufficient to reduce the level of impact to a less than significant level. Additional mitigation opportunities for indirect impacts to special status species are limited or unavailable. Accordingly, the RCAP's incremental contribution, taken into consideration with the cumulative projects' impacts on special-status species over the span of the RCAP, would remain cumulatively considerable and significant and unavoidable.

Sensitive Natural Communities and Wetlands

Riparian habitat, sensitive natural communities, and wetlands are generally considered to have important functions or values for wildlife and/or are recognized as declining in extent and/or distribution. These communities are considered threatened enough to warrant some level of protection either through the CEQA review process or by federal, state, and local regulations, including the permitting jurisdiction of USACE, CDFW, and/or the RWQCB. Past, present, and reasonably foreseeable future projects involving temporary or permanent impacts on riparian

habitat, sensitive natural communities, and jurisdictional waters and/or wetlands through removal, filling, stockpiling, construction access, conversion to a storm drain, channelization, bank stabilization, road or utility line crossings, geotechnical investigations, or any other modifications that involve the discharge of fill and/or alteration of a jurisdictional resource, have contributed to and are expected to continue to contribute to the loss of riparian habitat, sensitive natural communities, and wetlands Countywide. Accordingly, significant cumulative impacts of past, present, and reasonably foreseeable projects exist with respect to these resources.

The RCAP has the potential to result in an incremental contribution to this significant cumulative impact. However, RCAP impacts to riparian habitat, sensitive natural communities, and wetlands would be mitigated to a level that would be less than cumulatively considerable (i.e., less than significant) through implementation of Mitigation Measures BIO-1 and BIO-5 through BIO-7. With the implementation of these mitigation measures and compliance with the regulatory agencies of USACE, CDFW, and RWQCB implementing their “no net loss” of biological resource habitat policies, the plan-specific, incremental contribution would not be cumulatively considerable. Cumulative impacts would be less than significant.

Wildlife Movement Corridors

Wildlife movement corridors in Humboldt are essential pathways that allow animal species to travel and migrate across the landscape. These corridors enable access to habitats needed for foraging, breeding, and survival, particularly as species adapt to seasonal changes, habitat fragmentation, and climate change. In Humboldt, these pathways often link coastal areas, forests, riparian zones, and the mountainous regions of the North Coast Range, including parts of Redwood National and State Parks, Six Rivers National Forest, and other protected areas. Riparian corridors along rivers and streams such as the Eel, Mattole, Mad, Trinity, and Klamath provide critical routes for species like otters, beavers, amphibians, and fish, while also supporting connectivity for birds and small mammals. Past, present, and reasonably foreseeable future projects involving temporary or permanent impacts on wildlife movement corridors and native wildlife nursery sites through habitat removal, fragmentation, and disturbance, have contributed to and are expected to continue to contribute to the loss of wildlife movement corridors and native wildlife nursery sites. Accordingly, significant cumulative impacts of past, present, and reasonably foreseeable projects exist with respect to these resources.

The RCAP would result in a significant incremental contribution to this significant cumulative impact. Even with the implementation of Mitigation Measure BIO-8, the proposed plan’s incremental contribution, taken into consideration with the cumulative projects’ impacts on wildlife corridor, habitat linkages, and wildlife nursery sites over the span of the RCAP, would be cumulatively considerable. Additional mitigation opportunities for wildlife movement are limited or unavailable. A significant and unavoidable cumulative impact from interference with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites would result.

Agricultural Resources

Agriculture is a key industry in Humboldt, and large portions of the region are identified as Farmland. Although the County and cities General Plans contain goals and policies to preserve and protect Farmland, according to the Humboldt General Plan EIR, past, present, and reasonably foreseeable future development have contributed to and are expected to continue to contribute to

the conversion of Farmland to non-agricultural uses Countywide.⁵⁵ Accordingly, significant cumulative impacts of past, present, and reasonably foreseeable projects exist with respect to agricultural resources.

The RCAP would result in a significant incremental contribution to this significant cumulative impact. Even with the implementation of Mitigation Measures AG-1 through AG-4, the proposed plan's incremental contribution, taken into consideration with the cumulative projects' impacts related to the conversion of Farmland to non-agricultural use over the span of the RCAP, would be cumulatively considerable. Additional mitigation opportunities for the loss of Farmland are limited or unavailable. A significant and unavoidable cumulative impact from the conversion of Farmland would result.

Forestry Resources

Over 80 percent of the land area within Humboldt is forested, including a mix of forest land, timberland, and TPZ. Although the County and cities General Plans contain goals and policies to preserve and protect forest land, according to the Humboldt General Plan EIR, past, present, and reasonably foreseeable future development have contributed to and are expected to continue to contribute to the conversion of forest land to non-forest uses Countywide.⁵⁶ Accordingly, significant cumulative impacts of past, present, and reasonably foreseeable projects exist with respect to forestry resources.

Although a significant cumulative impact exists, the RCAP includes measures to conserve and protect Humboldt's forest and timberlands as an important source of carbon sequestration. Future projects occurring under the RCAP would not be anticipated to significantly affect Humboldt's forested areas. As such the RCAP's incremental contribution would not be cumulatively considerable, and cumulative impacts would be less than significant.

Overall Level of Cumulative Significance

Significant and Unavoidable

⁵⁵ Humboldt County. 2017. General Plan Update Revised Draft EIR. <https://humboldt.gov/DocumentCenter/View/58851/Revised-Draft-Environmental-Impact-Report---Complete-Documnt-PDF> (accessed December 2024).

⁵⁶ Humboldt County. 2017. General Plan Update Revised Draft EIR. <https://humboldt.gov/DocumentCenter/View/58851/Revised-Draft-Environmental-Impact-Report---Complete-Documnt-PDF> (accessed December 2024).

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