

Chapter 2

Project Description and Alternatives

Chapter 2. Project Description

The project analyzed in this recirculated and revised draft Environmental Impact Report (RDEIR) is the proposed Humboldt County General Plan (referred to as the proposed General Plan Update (GPU)). The text reflects the Board of Supervisors Markup Draft from October 19, 2015. The proposed General Plan includes goals, policies, standards, implementation measures, and land use maps as recommended by the Planning Commission. This draft, reviewed by the Planning Commission, was evaluated in the April 2, 2012 Draft Environmental Impact Report. During public hearings between June, 2012 and March, 2016, the Board of Supervisors as made modifications, additions, and deletions to that draft. The RDEIR is focused on environmental effects which may reasonably be expected to occur during the 24-year planning period of the GPU, 2016-2040, as detailed in subchapters 2.1 and 2.5 below.

This chapter provides background information on the regional context of the County; a description of the purpose and need for the GPU, background on the existing plan, the General Plan Update process to date, and a summary of the proposed plan. Alternatives to the proposed project are described in Chapter 4 of this EIR - Evaluation of Alternatives.

2.1 Project Location and Setting

The project location, hereafter referred to as the planning area, is identified as the unincorporated areas of Humboldt County. With 3,570 square miles (nearly 2.3 million acres) of land, Humboldt County is the fourteenth largest county in California as well as one of the more rural counties. There are seven incorporated cities in the County which are not included in the planning area. Incorporated cities occupy 24,040 acres, or just about one percent of the total land area. Approximately 30 percent of the County is either in public ownership or tribal lands. The National Forests, National Parks, and public land controlled by the Bureau of Land Management totals 110,000 acres. The State Parks System includes 76,500 acres, with other state lands comprising approximately 8,500 acres. Tribal lands total approximately 130,500 acres (including reservations, rancherias, and other trust lands), or 5.7 percent of the total land area in the county.

Timber and agriculture lands account for the majority (approximately 60 percent) of the unincorporated County's rural land uses, including approximately 1,175,000 acres of Timberland Production Zone (TPZ) and 289,000 acres in Williamson Act preserves. It should be noted that some Williamson Act preserve areas also include TPZ zoned land. Rural residential land, which may also contain timber, agriculture, and grazing lands, occupies approximately 152,863 acres of the unincorporated area. Single-family residential-zoned lands cover 21,412 acres and an additional 560 acres are designated for multi-family housing.

The natural and man-made setting of Humboldt County is described in great detail in Chapter 3 - Environmental Setting and Impacts.

Population

The Demographic Research Unit (DRU) of the California Department of Finance is designated as the official source of demographic data for state planning and budgeting. This demographic data is used in county land use planning and environmental review because it is the best

available source of information. The DRU provides a discussion of the methodology and other data considerations for each estimate or projection that it publishes. Factors include population, age, cohorts by sex, birth rates, mortality rates, and rates of in-migration and out-migration. Information relating to the Demographics Research Unit is available on the internet at <http://www.dof.ca.gov/Forecasting/Demographics/>.

Demographics Research Unit prepares annual population and housing estimates, benchmarked against the most recent Census for counties and cities. These estimates identify the population of Humboldt County in 2016 to be 135,116. This represents a very slow growth rate of about 100 persons per year being added to the population countywide since 2010. Approximately 47 percent of the population was located within the County's seven cities in 2016, a figure that has not changed significantly since the 1990's as shown in the table below.

With the exception of a population decline that occurred between the years 1960 and 1970 due to a downturn in the local lumber industry, the countywide average annual growth rate has been approximately 0.75 percent per year over the last 35 years. Surges above this rate occurred in the 1970's and 1980's and smaller growth rates occurred in the 1990's and 2000's, with an abnormally high growth rate during the 2005-2008 time period. In the past six years, the population growth of Humboldt County has slowed dramatically, and in the unincorporated areas has actually declined by an estimated 86 persons as shown in the table below.

Table 2.1-1 Historical and Estimated Population in Unincorporated Humboldt County 1970-2016

Year	Total County Population	Unincorporated Areas		Countywide Total		Unincorporated Areas	
		Population	Percent of Countywide Total	Average Annual Increase	Total Percent Change Over Time Period	Average Annual Increase	Percent Change Over Prior Period
1970	99,692	56,586	56.8%				
1980	108,525	59,046	54.4%	0.85%	8.86%	0.43%	4.35%
1990	119,118	62,169	52.2%	0.94%	9.76%	0.52%	5.29%
2000	126,518	67,236	53.1%	0.60%	6.21%	0.79%	8.15%
2010	134,623	71,916	53.4%	0.62%	6.41%	0.68%	6.96%
2016	135,116	71,830	53.2%	0.06%	0.37%	-0.02%	-0.12%

Source: 1970, 1980, 1990, 2000, and 2010 Census; 2016 DOF Estimate

Based on DOF data, the average household size in Humboldt County has declined from 2.49 in 1990 to 2.39 in 2000, and 2.31 in 2010 with no change in 2016 (U.S. Census and DOF Table E-5). The continued decline in average household size ("Avg HH Size") is the main contributor to the difference between the growth rate in housing units ("H/U") and the growth rate in population ("Pop") as shown in the table below. The average annual growth rate ("AAGR") in housing units has been consistently higher than the average annual growth rate in population. Demographic trends also indicate an aging population, where older persons represent an increasing percentage of the populace.

Table 2.1-2. Humboldt County Population and Household Demographics.

1990			2000		
Total Pop	Total H/U	Avg HH Size	Total Pop	Total H/U	Avg HH Size
119,118	51,134	2.49	126,518	55,912	2.39
2010			2016		
Total Pop	Total H/U	Avg HH Size	Total Pop	Total H/U	Avg HH Size
134,623	61,559	2.31	135,116	62,577	2.31
1990-2000					
Pop AAGR	H/U AAGR	Total Δ in Pop	Total Δ in H/U		
0.60%	0.90%	6.21%	9.34%		
2000-2010					
Pop AAGR	H/U AAGR	Total Δ in Pop	Total Δ in H/U		
0.62%	0.97%	6.41%	10.10%		
2010-2016					
Pop AAGR	H/U AAGR	Total Δ in Pop	Total Δ in H/U		
0.14%	0.27%	0.37%	1.65%		

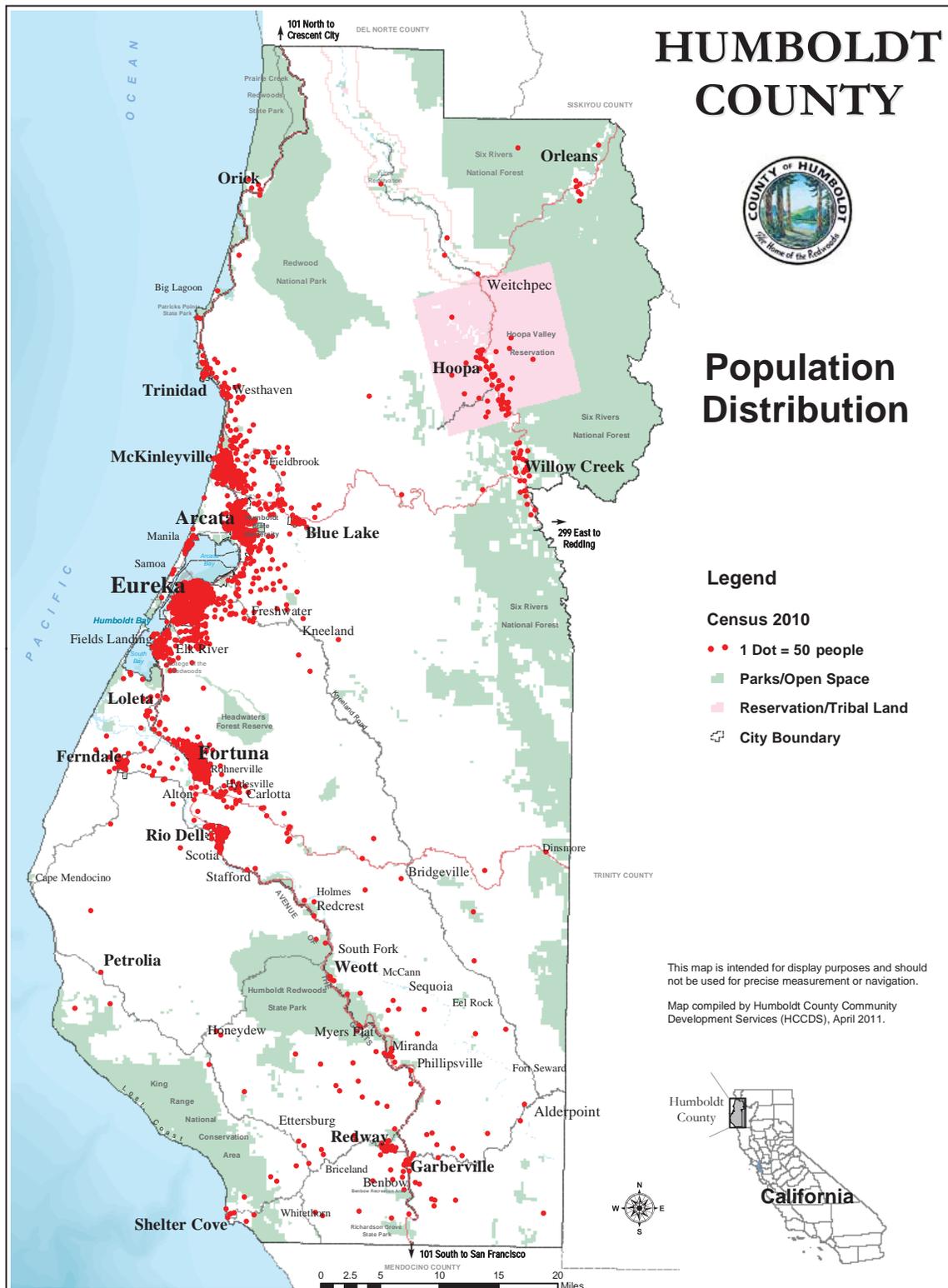
Source: US Census and American Community Survey.

Table 2.1-3 2006-2016 Population and Housing Units – Unincorporated Area Only

	2000		2006	2007	2008	2009	2010
Population	67,236		70,390	70,685	70,992	71,287	71,916
Population Growth				0.42%	0.43%	0.42%	0.88%
Housing Units	29,707		32,330	32,757	33,184	33,550	33,972
Housing Growth				1.32%	1.30%	1.10%	1.26%
	2011	2012	2013	2014	2015	2016	Average Annual 2006 - 2016
Population	72,272	72,023	71,831	71,759	71,779	71,830	144
Population Growth	0.50%	-0.34%	-0.27%	-0.10%	0.03%	0.07%	0.20%
Housing Units	34,053	34,167	34,281	34,369	34,440	34,557	376
Housing Growth	0.24%	0.33%	0.33%	0.26%	0.21%	0.34%	0.67%

Source: DOF Table 2: E-5 City/County Population and Housing Estimates, 2016

Figure 2.1-1. Humboldt County Population Distribution.



Housing

In 2010, there were a total of 61,559 housing units in the entire County, 56,031 of which were considered occupied. Between 2000 and 2010 there were 5,647 new homes added to the housing stock countywide, a 10.1 percent increase. New home construction has slowed since 2010, only 943 housing units have been constructed countywide between 2010 and 2016. Approximately 55 percent of the total units are located in unincorporated area.

The composition of housing types did not change significantly from 1990 to 2000, where multiple-unit housing in the unincorporated areas accounted for six to seven percent of all units during that time period. In 2010, multiple-unit housing increased to about 9.2 percent of the housing stock, and further increased to 9.4 percent in 2016. The vacancy rate in the unincorporated area was over 13 percent in 2016, up from a little over 11 percent in 2010.

In contrast to the unincorporated area, the proportion of multiple-unit housing in Arcata is approximately 40 percent; Fortuna is 32 percent; and Eureka is 24 percent. This statistic is consistent with standard land use density patterns. Higher density development (e.g., multi-family) is usually concentrated in urban areas.

From 1980 to 2000, the County housing stock grew by 10,531 units, a 23 percent increase in total units. Between 2000 and 2015, 6,665 housing units were constructed in the County, an approximately 12 percent increase. The average annual increase in housing units over the past 15 years was about three-quarters of one percent. That is higher than the average annual population growth of about 0.5 percent over the same period. These different rates reflect a continuing decline in persons per household in the County. Table 3-4 below shows the changes in housing that have occurred in the last 15 years.

Table 2.1-4. Humboldt County Changes in Housing Units 1995-2015.

Total Housing Units				
1995	2000	2005	2010	2016
54,509	55,912	58,015	61,559	62,577
New Housing Units				
	1995-2000	2000-2005	2005-2010	2010-2016
	1,403	2,103	3,544	1,018
Average Annual Growth Rate				
	1995-2000	2000-2005	2005-2010	2010-2016
	0.51%	0.74%	1.19%	0.27%
Average New Housing Units Per Year				
	1995-2000	2000-2005	2005-2010	2010-2016
	281	421	709	170
Source: DOF Table E-5, State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties and the State, 2001-2007, with 2000 Benchmark and Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2016, with 2010 Benchmark, Sacramento, California, Census Quickfacts, 2016.				

Growth Projections

The DOF released population projections for California counties in December 2014 (State of California, Department of Finance, Population Projections for California and Its Counties 2010-2060, or Table P-1). Table 2.1-5 shows the population growth between 2000 and 2040. The decade between 2000-2010 saw a population growth of 7,784 people resulting in an annual growth rate of .61%. The period between 2010-2016 has seen a growth of 493 individuals resulting in an annual growth rate of .04%. These projections anticipate a higher growth between 2016-2020 resulting in a total growth of 4,410 people between 2010-2020 (annual growth rate of .32%). The growth rate between 2020 and 2025 is projected to be .24%. Humboldt County's population is projected to grow at a rate of less than until 2028 when the population will reach 141,441 persons. After 2028 the population is expected to decline to 138,307 persons in 2040, at the end of the planning period. There are expected to be 6,325 more persons in 2028 than in 2016, and only 3,134 more persons in 2040 than in 2016.

Table 2.1-5. Humboldt County Population Growth Forecasts

Year	Population (projected after 2010)	Average Annual Growth Rate
2000	126,839	
2005	131,410	0.71%
2010	134,623	0.48%
2016	135,116	0.06%
2020	139,033	0.72%
2025	140,713	0.24%
2030	140,608	-0.01%
2035	139,780	-0.12%
2040	138,307	-0.21%
Overall Growth Rate 2000 - 2040		0.22%
Source: State of California, Department of Finance, Race/Ethnic Population with Age and Sex Detail, 2010-2060. Sacramento, CA, December 2014 and US Census.		

These projections indicate that the population will have an average increase of approximately 360 people per year between 2016 and 2028 until the population reaches 141,441 people, at which time the population will decline at an average of -261 persons per year between 2028 and 2040.

The data suggests an aging population, where older persons represent an increasing percentage of the populace. The number of people over the age of 65 is expected to increase by more than a third by the year 2040, increasing from about 17 percent of the population to 23 percent. During this same period the number of people between 20 and 40 years of age is projected to decrease by over 15 percent, decreasing from about 30 percent of the population to 25 percent.

Table 2.1-6. Historic and Projected Population Growth in Humboldt County, 1980-2040.

Year	Total County Population	Unincorporated Area Population	Percent of Total Population in Unincorporated Areas	Average Annual Increase (Countywide)	Total Percent Change Over Period (Countywide)
1980	108,525	59,046	54.4%		
1990	119,118	62,169	52.2%	0.94%	9.76%
2000	126,518	67,236	53.1%	0.60%	6.21%
2010	134,623	71,916	53.4%	0.62%	6.41%
2016	135,116	71,830	53.2%	0.06%	0.37%
2020	139,033	73,912	53.2%	0.72%	2.90%
2030	140,608	74,750	53.2%	0.11%	1.13%
2040	138,307	73,526	53.2%	-0.16%	-1.64%

Source: Humboldt County Planning and Building Department, California Dept. of Finance, 2014; Humboldt County Planning and Building Department, 2016

If the existing average occupied household size of 2.31 persons remains constant into the future, about 2,738 additional housing units will be required countywide to accommodate the maximum population (141,441) achieved during the planning period. And if the unincorporated share of total county housing remains constant at approximately 53 percent with the same vacancy rate, a projected 1,721 new dwelling units will be needed to support the peak population level in the unincorporated area of the County.

This Revised Draft Environment Impact Report evaluates the impacts associated with the growth expected during the planning horizon lasting until 2040. The peak impacts will be realized in the year 2028 when population reaches 141,441. The years between 2028-2040 will see a decline in the population. The EIR uses the population in 2028 as the point at which the maximum level of impacts will be realized. This RDEIR does not analyze buildout of all allocated land use within the county because based upon foreseeable population trends buildout of all land uses is highly speculative and is not projected to occur within the next 100 years.

Employment

The county includes a productive bay and harbor on the Pacific Ocean and stretches east into rugged, sparsely populated coastal mountains. The transportation distances and restrictions, due largely to narrow winding roads and highways, serve to isolate Humboldt, resulting in an island-like economy. At the geographic center of the five-county Redwood Coast region—including neighboring counties Del Norte, Mendocino, Trinity and Siskiyou—Humboldt has the largest population and workforce and generates the most new jobs and firms in the region.

Humboldt County includes significant portions of the Klamath River, Trinity River, Mad River, Van Duzen River, Mattole River, Eel River, and Redwood Creek watersheds, and their tributaries. Historically, these rivers provided spawning grounds for salmon and steelhead runs that were central to the culture of local California Native American Tribes, and once supported a thriving commercial fishing industry along the northern California coast, which is now in serious decline. Humboldt Bay hosts the largest aquaculture area in California, 320 acres with an estimated production value of \$7,590,000 in 2013.

Approximately seventy-five percent of the county's 2.3 million acres are forested coastal mountains. About fifty percent of this acreage is held as private commercial timberland and 35 percent is state or federal public land, including Redwood National and State Park, Six Rivers National Forest, the King Range National Conservation Area, and Humboldt Redwoods State Park.

Though forests are a defining feature, agriculture is a key part of the landscape and remains an important base industry. Approximately twenty percent of Humboldt County (460,000 acres) remains agricultural, with livestock and dairy operations being the most significant contributors to the economy.

The timber industry's economic activity peaked in the 50s and 60s, but is still a significant contributor to the local economy. In the period 2000-2012 Humboldt County ranked first or second in timber harvest among all California counties, with 16-20% of the total. The reported estimated gross value of timber and agricultural commodities produced in Humboldt County in 2013 are:

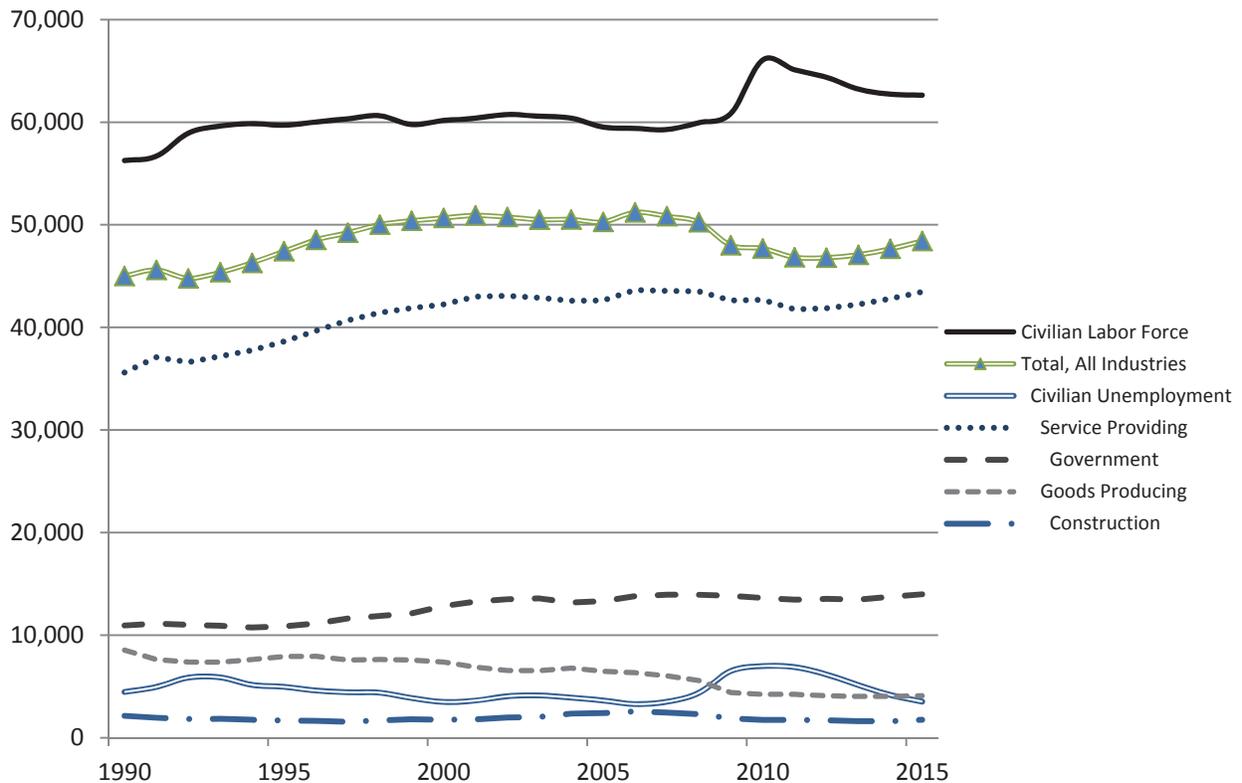
Timber Production -	\$72,520,000
Livestock -	\$76,921,000
Milk and Milk Products	\$61,889,000
Nursery Stock	\$49,811,000
Field Crops (non-cannabis)	\$ 4,860,000
Fruit and Nut Crops	\$ 1,882,000
Vegetable Crops	\$ 1,427,000

Humboldt County experienced a rapid expansion in economic activity from 1985 to 1990, slowing through the 1990s due to the national recession. Employment in timber manufacturing continues to be an important factor in the local economy. The County is the largest timber producer in California and the industry is responsible for approximately half of all manufacturing jobs. However, employment in this sector continues to decline as the industry has become more mechanized, stricter laws have been placed on logging, and as lumber markets have become more competitive. In contrast, retail and service employment has grown strongly in comparison to other sectors.

Humboldt County's labor force has grown as a proportion of the total population. This growth is consistent with current demographic trends toward fewer children born each year and an overall aging of the population, resulting in a larger percentage of the population being of labor force age. Except for slowdowns in the 1990s and 2000's (due to national economic conditions and reduced employment in the forest industries), employment growth rates in Humboldt County have been slightly higher than population growth rates.

The unemployment rate is higher than the state average, but does tend to rise and fall in concert with the state average. State employment projections suggest that between 2016 and 2040 total wage and salary employment will grow from approximately 48,170 to 53,160, an increase of 4,990 jobs (California County-Level Economic Forecast 2015-2040, Caltrans, 2015). However, the working age population (15 to 64 years of age) is projected to steadily decline as a percentage of the total County population from 66.6 percent in 2016 to 62.2 percent in 2040.

Figure 2.1-4. Humboldt County Employment and Labor Trends, 1990-2015.



Source: Industry Employment & Labor Force - by Annual Average March 2015 Benchmark, California Employment Development Labor Market Information Division, June, 2016.

2.2 Purpose and Need

The proposed General Plan Update (GPU) establishes land use patterns and policies to guide development in a manner consistent with State law. The GPU has a 20 - 25 year planning horizon and there is more than enough allocated land use to meet projected demands for residential, commercial, and industrial uses during this period.

State Requirements

State law requires each county and city to prepare and adopt a comprehensive and long-range general plan for its physical development (Government Code Section 65300). A general plan must address seven "elements" including land use, circulation, housing, open-space, conservation, safety, and noise (Government Code Section 65302). It may also include other topics of local interest, as chosen by the County (Government Code Section 65303). The California Supreme Court has called the general plan the "constitution for future development." The general plan expresses the community's development goals and embodies public policy relative to the distribution of future land uses, both public and private.

Together, the seven mandated elements and additional optional elements of a general plan form a comprehensive set of planning policies. The Land Use Element designates the general distribution and intensity of land uses within the planning area. The Circulation Element identifies the general location and extent of existing and proposed transportation facilities and utilities. The Housing Element, updated every five to eight years as mandated by state law, is a comprehensive assessment of current and future housing needs for all segments of the County population, as well as a program for meeting those needs. The Open Space Element describes measures for the preservation of open space, for the protection of natural resources, for the managed production of resources, and for public health and safety. The Conservation Element addresses the conservation, development, and use of natural resources. The Safety Element establishes policies to protect the community from risks associated with natural and man-made hazards such as seismic, geologic, flooding, wildfire hazards, and air quality. The Noise Element identifies major noise sources and contains policies intended to protect the community from exposure to excessive noise levels.

In addition to the seven mandated elements, the GPU includes the following optional elements, based on public interest in these matters that were identified early in the planning process:

- Water Resources Element, which addresses water planning issues including river and stream water quality, stormwater runoff, groundwater management, water needs of fish and wildlife, water consumption, conservation and re-use methods, and state and federal regulations.
- Economic Development Element, which outlines the County's economic development strategy and provides relevant supporting policies.
- Telecommunications Element, which addresses telecommunications access, reliability, and capacity, including basic telephone, wireless telephone, and broadband internet.
- Community Infrastructure and Services Element, which focuses on existing infrastructure and service capacity, future demand, levels of service, timing, and funding issues.
- Energy Element, which provides policies and programs to address energy needs, use, and conservation.
- Air Quality Element, which describes the county's existing air quality, sources of air pollution, and strategies for improving air quality. Policies to reduce greenhouse gas emissions and mitigate climate change are also included.

2.3 Background - Humboldt County General Plan

Existing General Plan

The Humboldt County General Plan – Volume I - Framework Plan was adopted on December 10, 1984. The adoption of the Framework Plan did not specifically supersede the following previously adopted Humboldt County General Plan Elements or components:

- Open Space and Conservation Elements to the Humboldt County General Plan, adopted Dec. 27, 1973 (Resolution 73-164)
- Humboldt County General Plan Recreation Element, adopted July 13, 1976 (Resolution 76-92)
- Noise Element of the Humboldt County General Plan, adopted August 23, 1977 (Resolution 77-134)
- Trails Element of the Humboldt County General Plan, adopted June 26, 1979 (Resolution 79-80)
- Seismic Safety and Public Safety Element of the Humboldt County General Plan, adopted July 31, 1979 (Resolution 79-96)

- Scenic Highway Element of the Humboldt County General Plan, adopted September 16, 1980 (Resolution 80-102)

The Framework Plan contained land use maps for all areas outside of the Coastal Zone and the 18 Community Plan Areas designated in the Plan. Between 1982 and 2002 the County prepared plans with land use maps and policy for ten of the Community Planning Areas (CPAs):

- Jacoby Creek Community Plan (1982)
- Freshwater Community Plan (1985)
- Fortuna Community Plan (1985)
- Willow Creek Community Plan (1986)
- Hydesville-Carlotta Community Plan (1986)
- Garberville-Benbow-Redway-Alderpoint Community Plan (1987)
- Orick Community Plan (1985)
- Eureka Community Plan (1995)
- Avenue of the Giants Community Plan (2000)
- McKinleyville Community Plan (2002)

For the remaining CPAs, land use was governed by land use maps contained the following land use plans that were adopted in the mid 1960's. In addition, the Open Space and Conservation Elements to the Humboldt County General Plan, adopted Dec. 27, 1973, is applied within the CPAs where no plan is adopted.

- Northern Humboldt County General Plan (1965) (covering Orleans, Trinidad-Westhaven (inland), Fieldbrook-Glendale, and Blue Lake unincorporated area)
- Arcata General Plan (1966) (unincorporated area around Arcata not in the coastal zone or Jacoby Creek)
- Southern Humboldt General Plan (1968) (unincorporated Rio Dell and the inland portion of Shelter Cove)

Significant amendments were made to the Framework Plan several times following its adoption in 1984. Two amendments involved the addition of new Elements relating to solid waste:

- Hazardous Waste Management Plan, adopted as an amendment to the Humboldt County General Plan, November 28, 1989 (Resolution 89-157)
- Countywide Siting Element of the Humboldt County Integrated Waste Management Plan, adopted March 87, 1994 (Resolution 94-22)

As required by state law, the County has periodically revised its Housing Element, most recently in May 2014. The Housing Element revisions have propagated some revisions to the community plans and Framework Plan to maintain consistency. The 2014 Housing Element is included in the GPU for reference purposes, but is not considered in this EIR as it was evaluated in a separate environmental document.

The General Plan Update Process

The County initiated the comprehensive General Plan Update with a multi-phased work program in 1999.

Phase 1 - Identifying Issues and Scope of Work for the Plan Update. Phase 1, (completed in early 2001,) focused on an extensive public outreach effort to engage the public in the General Plan update process. It was primarily a public outreach effort to engage the public's interests, listen to major concerns, and scope out the most important policy areas. Over 40 meetings were held, with more than 700 people and organizations contacted between December, 1999 and March, 2001. The Planning Division developed a web site, published a newsletter, undertook a community survey, and created a variety of activities and information pieces to

elicit public input. Phase I culminated in a compilation of public concerns and issues entitled the *Critical Choices Report* (Appendix B). The issues identified in the *Critical Choices Report* provide the direction for Phase 2, data collection and analysis.

The input received during Phase 1 was organized into four major themes:

- Building Communities
- Moving Goods and People
- Managing Natural Resources
- Planning for Hazards

Phase 2 - Writing Background Technical Studies. In Phase 2, the County prepared technical background reports for each of these themes. Supplemental reports were prepared on Agricultural Resources and Forest Resources. These technical background reports were used for defining the environmental setting of the General Plan Update as required under CEQA. The reports also provided an opportunity for refining policy options to go along with the plan alternatives. The following reports were prepared as part of Phase 2:

Building Communities (Appendix C)

Moving Goods and People (Appendix G)

Natural Resources and Hazards (Appendix D)

Agricultural Resources Report (Appendix E)

Forest Resources Report (Appendix F)

Transportation Analysis (Appendix H)

Water Resources Technical Background Report (Appendix P)

Community Infrastructure and Public Facilities Technical Background Report (Appendix Q)

Energy Element Technical Background Report (Appendix R)

These reports are incorporated by reference and discussed in the environmental impact analysis that follows. They are available for review at the Planning Division public counter at 3015 H Street in Eureka or for download at <http://co.humboldt.ca.us/gpu/documentsbackground.aspx>.

Phase 3 - Selecting a Preferred Plan Alternative. Phase 3 was initiated in October of 2003 with a series of deliberative dialogue workshops and the development of several alternative development scenarios, which were described as Sketch Plans 1, 2, 3, and 4. The Sketch Plans Reports (Appendix J) discussed during this phase were then modified into plan alternatives to be considered in development of the updated general plan and the EIR analysis. An Administrative Draft Plan was prepared in 2007 and reviewed by the Planning Commission to provide guidance in the development of the preferred plan and plan alternatives. Fourteen public hearings were conducted by the Planning Commission in 2007-08 on the Administrative Draft Plan. From these public meetings Plan Alternatives A, B, C, and D (see descriptions below) were developed, and the County defined Alternative B as the Proposed Project plan alternative for initial review by the Planning Commission.

Phase 4 – Draft Preliminary Plan and EIR. In this phase, the chosen alternative was used as a guide for writing preliminary drafts of each chapter of the General Plan Update. The Planning Commission held 68 meetings on the proposed plan alternatives from April 2009 through March 2012 and 8 meetings on the proposed Countywide mapping changes. This included a detailed review of the over 1200 distinct policy choices for the alternatives. Through this deliberative process, the Planning Commission on March 19, 2012, developed a draft plan which was an amalgamation many of the policy choices found in Alternatives A, B, C and D as well as new policies crafted by the Commission based upon public testimony. This draft became the project

for which an Environmental Impact Report (EIR) was prepared and was circulated for public comment in 2012.

This round of input guided the preparation of the consolidated Public Hearing Draft Plan and the initial drafting of the Environmental Impact Report (EIR). The Planning Commission Approved Hearing Draft dated March 19, 2012 was the General Plan Update Plan Alternative analyzed by the Draft EIR dated April 2, 2012. The DEIR was released for public comment through May 16, 2012. The Planning Commission held public hearings on the Draft EIR on April 19, May 10, and May 17, 2012. The comment period was extended to June 15, 2012.

Phase 5 Public Review and Adoption of Final Plan

The Board of Supervisors conducted public hearings on individual chapters of the GPU from June, 2012 through March, 2016. On January 13, 2014, the Board of Supervisors directed the Planning Commission review and provide recommendations on the Conservation and Open Space Element. The Planning Commission provided those recommendation on February 25, 2014.

SB 18 consultations with the tribes on the General Plan Update began on September 24, 2013, including consultation on the proposed new land use designations that would be applied to the reservations and Rancherias, the TL - Tribal Lands and TTL - Tribal Trust Land designations.

In response to several comments from tribes, the Board of Supervisors made changes to the draft General Plan, which were sent to the tribes for review in March, 2014. The tribes were also notified in writing of public hearings on the Cultural Resources portion of the GPU that began on October 20, 2014. In addition to the changes made to the GPU in response from the Tribes, in 2014 the County and the Tribes established a standardized protocol for individual SB18 consultations separate from the GPU. The SB18 consultation process is further documented in Appendix T of this revised DEIR.

On December 18, 2015 the Board of Supervisors directed the Planning Commission review and provide recommendations on various specific text changes and changes to the land use maps that had previously had not been considered by the Planning Commission. The Planning Commission provided recommendations on those items on January 7, and April 7, 2016.

This revised DEIR is intended to address comments made on the previous DEIR and to address changes made to the GPU by the Board of Supervisors through March 2016 and to reflect changes in General Plan and CEQA law as well as currently available data.

2.4 The Proposed Plan

Key Features

The proposed GPU is intended to provide a more relevant and up to date planning document for the time frame of 2016 – 2040 that meets future land demand, and is more accessible and useful to decision makers and the public. The GPU is arranged by topical chapters that address the seven mandated elements of a General Plan and several optional elements. The GPU consolidates its numerous land use maps (diagrams) into a single unified digital land use map (diagram) with supporting layers maintained as a Geographic Information System (GIS) database mapping program. The GPU also consolidates most community plans into an Appendix of the General Plan. The Avenue of the Giants, Eureka, and McKinleyville Community

Plans, as well as the coastal land use plans and the Housing Element, will remain as stand-alone documents, but are subject to the mapping and policy revisions of this GPU program.

As part of the process in developing and defining the objectives for the GPU, the Board of Supervisors considered a set of Guiding Principles to guide preparation of the plan. The Planning Commission held multiple public meetings to discuss and deliberate on the Guiding Principles to be included in the Hearing Draft Plan. The Board of Supervisors held several additional hearing to reconsider the Guiding Principles during its review of the Planning Commission recommended Draft Plan and made several revisions. These guiding principles are considered to be the Project objectives for purposes of CEQA analysis.

1. Ensure that public policy is reflective of the needs of the citizenry of a democratic society as expressed by the citizens themselves.
2. Preserve and enhance the diverse character of Humboldt County and the quality of life it offers.
3. Promote and facilitate the creation of affordable housing opportunities to meet current and future demands for all income levels.
4. Cooperate with services providers and promote efficient use of roads, water, and sewer services by encouraging development that is consistent with Land Use maps contained in the General Plan. Support home construction methods and alternative wastewater systems that are proven to minimize threats to human health and safety with a goal of reducing energy and water usage.
5. Support the County's economic development strategy and other efforts to retain and create living-wage job opportunities.
6. Encourage, incentivize and support agriculture, timber ecosystem services and compatible uses on resource lands.
7. Support individual rights to live in urban, suburban, rural or remote areas of the county while using a balanced approach to protect natural resources, especially open space, water resources, fisheries habitat and water quality in cooperation with state and federal agencies.
8. Adhere to practical strategies that can be implemented utilizing constructive cooperation and common sense.
9. Provide a clear statement of land use values and policies to provide clarity in the County's permit processing system and simplify review of projects.
10. Maximize the opportunities to educate the public about the planning process, in order to have meaningful participation in the development and maintenance of the Plan.
11. Support a broad public participation program at all levels of the decision making process; including study, workshops, hearings, a citizens handbook and plan revisions.

In general, the implementation of the proposed GPU land use maps and policy would:

- Generally maintain the characteristics of existing communities.
- Apply land use designations that support mixed-use development and other techniques to increase efficiency of land utilization, including the use of alternative subdivision standards, density bonuses, second unit incentives, live-work commercial centers, etc.
- Maintain current planned residential densities outside of community planning areas and facilitate opportunities for second residential units.

- Increase available resource production land protections using a range of planning tools such as, clustered development incentives, open space standards, conservation easements and regulatory reform.

Plan Organization and Summary

The [General Plan Update](#) is arranged by topical chapters that address the seven mandated elements of a General Plan and several optional elements, organized in functional parts:

PART 1 – SETTING

Chapter 1. Introduction

Chapter 1 explains what a general plan is, its intended uses, and the overall setting and context of the Plan, including the Plan's background and guiding principles. There are no goals and policies in this Chapter.

Chapter 2. Public Guide

This chapter provides a guide for reading and using the Plan. It describes the organization of the Plan, the layout of a typical chapter, and the relationship of this document to other planning documents. This chapter emphasizes the public participation policies and programs in the Governance Policy presented later in Chapter 3. Additionally, this Public Guide provides guidance on the maintenance of the Citizens Handbook, a resource for those who want to participate in local land use decision-making.

Goals and policies contained in this Chapter relate to:

- the comprehensiveness of the General Plan and regional coordination facilitated by community planning (PG-G1, PG-G2);
- General Plan accessibility through opportunities to educate the public, understandable language, meaningful public participation, and access to decision makers (PG-G3, PG-G4, PG-G5, PG-G6, PG-G7, PG-G8, PG-G9).

Chapter 3. Governance Policy

This chapter describes the County's governance policies related to this Plan. Administrative topics include Plan implementation, Plan amendment, public participation, and inter-governmental coordination. This chapter also discusses governance issues such as combining regulations and incentives and balancing private property rights and public interests. Additionally, the topics of environmental justice, sustainability, and climate change are reviewed.

Goals and policies contained in this Chapter relate to:

- Consistent implementation of a General Plan that is kept current through ongoing plan maintenance (GP-1, GP-2);
- General Plan accessibility through opportunities to educate the public, understandable language, and meaningful public participation (GP-3, GP-4, , GP-5, GP-Gx1, GP-Gx1, GP-Gx2, GP-G4);
- Development of An efficient permitting system (GP-G5).

PART 2 – BUILDING COMMUNITIES

Chapter 4. Land Use Element

The Land Use Element addresses the location, mix, timing, and character of land uses, and supporting infrastructure. The sections within this Element include policies specific to Growth Planning (Section 4.2), Urban and Rural Lands (Sections 4.3 and 4.4), Agriculture and Forest Resources (Sections 4.5 and 4.6) Public Lands (Section 4.7) and the Land Use Classifications (Section 4.8). The Land Use Element provides for the distribution, location and extent of uses of land for housing, business, industry, natural resources, open space, recreation, and other uses. The Element guides patterns of development for the county, providing a long-range context for decisions made regarding zoning, subdivision, and public works.

Section 4.2 Growth Planning. This section covers population growth and land supply, urban and rural boundaries, infrastructure and available land inventory. Growth policies are most closely linked to the Land Use Element because they guide the location and timing of development.

Goals and policies contained in this Chapter relate to:

- An adequate supply of land with appropriate services to accommodate growth (GP-G1);
- Planning emphasis on Urban Development Areas to accommodate growth and conservation of open space and resource lands (GP-G2);
- Developments timed with infrastructure improvements and expansion of urban services (GP-G2).

Section 4.3 Urban Lands. This section addresses development within CPAs that can be serviced with public water and wastewater in the near term. The policies of this section are intended to promote the growth of these areas in a manner that compliments and enhances community character.

Goals and policies contained in this Chapter relate to:

- Urban Development Areas as centers of business, residential growth and infrastructure and services investments (UL-G1);
- Unique design, function, community character and identify of Urban Development Areas and mixed use neighborhoods and town centers that are designed and planned for convenient access to work, shopping, recreation and neighborhoods (UL-G2, UL-G3, UL-G4)

Section 4.4 Rural Lands. This section balances the stability and productivity of the county's resource lands while providing for the orderly development of rural residential properties and contains policies and standards to provide clear guidelines for land use decisions relating to timber and agricultural land outside of Community Planning Areas.

Goals and policies contained in this Chapter relate to:

- Orderly development of rural residential land that minimizes fire risks, impacts to water resources, public service demands and conflicts with resource production. (RL-G1, RL-G2)

Section 4.5 Agricultural Resources. This section establishes policies to ensure the stability and productivity of the county's agricultural lands and industries. Prime soils maps for the County are contained in Appendix F, Map Book.

Goals and policies contained in this Chapter relate to:

- The preservation of agricultural land in parcel sizes that support economically feasible agricultural operations and support the local economy (AG-G1, AG-G2)

Section 4.6 Forest Resources. This section includes policies that support the conservation, development, and utilization of forest resources, consistent with the California Timberland Productivity Act.

Goals and policies contained in this Chapter relate to:

- An adequate and stable supply of forestlands that provide multiple economic and natural resource values and a prosperous timber industry working in cooperation with state, federal and local agencies (FR-G1, FR-G2, FR-G3);
- Timberlands protected from incompatible land uses that would conflict with their primary use and infrastructure and services such as a road and fire protection to provide access to market and protect the resource (FR-G4, FR-G53)

Section 4.7 Public Lands. This section establishes policies to provide clear guidelines for land use decisions for private lands adjacent to public lands and a mechanism for coordination between jurisdictions for the management and acquisition of public lands.

Goals and policies contained in this Chapter relate to:

- Coordinated planning, management, and acquisition of public land between the County of Humboldt and federal and state agencies where land is managed for resource production purposes (PL-G1, PL-G2, PL-G3)

Section 4.8 Land Use Classifications. The following table lists the land use designations contained in the General Plan Update, two of which are applied only within the coastal zone. These land use designations are applied in each Community Planning Area and within all rural lands. For each land use designation, the table lists its abbreviation, a very brief description, an indication as to where the land use designation is applied (e.g., urban or rural), and the allowable density or intensity. Allowable density means the number of dwelling units per acre (when more than one are allowed per acre) or acres per dwelling unit (when one or more acre per unit is required) and allowable intensity means the maximum number of square feet of non-residential building area allowed, which is expressed as a ratio of the building floor area on a lot divided by the lot area. Land use maps showing where land use designations are applied are contained in Appendix F, Map Book, as well as Circulation and Public Facility maps, which show where the Railroad land use designation is applied. This information is also available through the County Web GIS system at <http://webgis.co.humboldt.ca.us/HCEGIS2.0>.

Table 2.1-7. General Plan Update Land Use Designations.

Land Use Designation	Description/Density Range or Commercial Intensity
RESIDENTIAL	
<i>Residential Medium Density (RM)</i>	Multifamily residential-urban; 7 to 30 units per acre
<i>Residential Low Density (RL)</i>	Single family residential-urban; 1-8 units per acre
<i>Residential Estates (RE)</i>	Single family residential and agriculture-adjacent to urban; 1 to 5 acres per unit
<i>Residential Agriculture (RA)</i>	Rural residential and agriculture-rural; 5 to 160 acres per unit
COMMERCIAL	
<i>Commercial General (CG)</i>	Neighborhood to regional scale; max FAR = 3.0

Land Use Designation	Description/Density Range or Commercial Intensity
<i>Commercial Services (CS)</i>	Heavy commercial and light industrial; max FAR = 3.0
<i>Commercial Recreation (CR)</i>	Recreation/tourist oriented; max FAR = 3.0
MIXED USE & URBAN RESERVE	
<i>Mixed Use (MU)</i>	Commercial, office, and residential uses-urban; 16 units per acre and max FAR = 3.0
<i>Village Center (VC)</i>	Small scale mixed-use development-urban or adjacent to urban; 2 to 4 units per acre and max FAR = 2.0
<i>Rural Community Center (RCC)</i>	Rural residential with limited retail and services-rural; 2 to 4 units per acres and max FAR = 2.0
<i>Urban Reserve (UR/)</i>	Applied with another designation and annexation is required for service extension and full build-out
INDUSTRIAL	
<i>Industrial, General (IG or MG)</i>	General industrial and manufacturing uses-urban; max FAR = 3.0
<i>Industrial, Resource Related (IR)</i>	Resource-related industrial processing-rural; max FAR = 3
<i>Industrial, Coastal Dependent (MC)</i>	Industrial use that requires access to a maintained navigable channel-urban or rural; max FAR = 3.0
<i>Business Park (MB)</i>	Planned mixed industrial and commercial areas-urban; max FAR = 3.0
RESOURCE PRODUCTION	
<i>Timberland (T) or (TC)</i>	Land suitable for the growing, harvesting and production of timber-rural; one dwelling unit per 40-160 acres
<i>Agricultural Exclusive (AE)</i>	Bottomland farms and lands that can be irrigated-rural; one dwelling unit per 60 acres
<i>Agricultural Grazing (AG)</i>	Dry-land grazing areas; rural; one dwelling unit per 20-160 acres
OPEN SPACE, AND PUBLIC LANDS, AND TRIBAL LAND	
<i>Conservation Floodway (CF)</i>	Channels of river and streams allowing agricultural and recreational uses
<i>Natural Resources (NR)</i>	Valuable habitats identified for protection and enhancement
<i>Open Space (OS)</i>	Land devoted to open space use
<i>Public Facility (PF)</i>	Public lands serving health, safety, convenience, or welfare
<i>Public Recreation (PR)</i>	Public recreation or resource protection
<i>Public Lands (P)</i>	Public lands
<i>Resource Dependent (MR/)</i>	Coastal wetland and upland resource protection
<i>Tribal Lands (TL)</i>	Lands within the boundaries of Reservations and Rancherias of Native American Tribes
<i>Tribal Trust Lands (TTL)</i>	Lands outside Reservations and Rancherias that is held in trust for a Tribe or its Members
<i>Railroad</i>	Certain contiguous railroad rights of way

Chapter 5. Community Infrastructure and Services Element

This Element identifies community infrastructure and service issues that affect Plan implementation. The Board of Supervisors chose to prepare this optional element because of the pivotal role that infrastructure and services will play in the growth of the County. The Element provides direct focus on existing infrastructure and service capacity, future demand, levels of service, timing, and funding issues.

Goals and policies contained in this Chapter relate to

- Well maintained public infrastructure and services supporting existing and planned development (IS-G1);
- Adequate and sustainable revenue for infrastructure and services (IS-G2);
- Coordinated planning for infrastructure and services across jurisdictional boundaries (IS-G3)

Chapter 6. Telecommunications Element

Telecommunications infrastructure and services include basic telephone, wireless telephone, and broadband internet. This optional element addresses telecommunications access, siting, reliability, and capacity.

Goals and policies contained in this Chapter relate to

- Widely available and affordable broadband internet that is connected to national networks (T-G1, T-G2);
- Orderly planning and appropriate development of communication facilities within the county to achieve reliable access while protecting health and safety, and natural, and cultural resources (T-G3, T-G4)

Chapter 7. Circulation Element

This mandated element addresses the location and extent of existing and proposed major thoroughfares, transportation routes, terminals, and other local transportation facilities. It includes policies, standards, and implementation measures for roads, public transportation, bicycle and pedestrian travel, airports, and marine and rail transportation. As required for circulation elements adopted after January 1, 2011, the element includes "complete streets" policies, which plan for the development of a well-balanced, connected, safe, and convenient multimodal transportation network, consisting of complete streets, and are designed and constructed to serve all users of streets, roads, and highways, regardless of their age or ability, or whether they are driving, walking, bicycling, or taking transit. Circulation and Public Facility maps are contained in Appendix F, Map Book, as well as the County Trails Plan maps.

Goals and policies contained in this Chapter relate to

- Balanced, safe, efficient, accessible and convenient circulation system that is appropriate for each type of unincorporated community (C-G1,CT-G2);
- Coordinated planning design, development, operations, and maintenance between the County and other transportation system service providers (C-G3);
- Access for all transportation mode types with improved opportunities to move goods within, into and out of Humboldt County (C-GX, C-GXXX)

Chapter 8. Housing Element Summary

This chapter is a placeholder for a summary of the mandated Housing Element. The County adopted a revised housing element in 2014, for which a separate EIR was prepared.

Chapter 9. Economic Development Element

This optional element provides an overview of the economy, characterizing the trends, land, and infrastructure needs that will shape the future. A set of goals, policies, and implementation measures are included which reflect the County's economic development strategy to promote and sustain economic prosperity, and to coordinate such policies with the County's general plan.

Goals and policies contained in this Chapter relate to

- A diverse, stable, and growing local economy supported by a clear permitting and licensing processes with economically viable and environmentally sustainable natural and productive resources that supports a broad based and competitive quality of life (ED-G1,ED-G2, ED-G6, ED-G8);
- Cooperative and collaborative economic development planning between cities, neighboring counties, and the private sector with programs that support workers, businesses, service providers (ED-G3, ED-G4, ED-G5);
- Reliable, redundant and modern telecommunications network that promote telecommuting, supports a skilled and ready workforce and a county that welcomes new technological advancements (ED-G7, ED-G9, ED-GX1, ED-GX2);
- A sufficient land inventory and transportation and utility systems to support commercial and industrial expansion including programs to fully utilize brownfield sites (ED-G10, ED-G11, ED-G12, ED-G13)

PART 3 – RESOURCE MANAGEMENT

Chapter 10. Conservation and Open Space Elements

This chapter combines the Plan's required Conservation Element and Open Space Elements. The Conservation Element guides the conservation, development, and utilization of natural resources (water, forests, soils, rivers, mineral deposits, and others), while the Open Space Element guides the comprehensive and long-range preservation and conservation of open-space lands. Together, these elements present a framework of goals and policies for the use and protection of all the natural resource and open space assets of the county. Because these two elements naturally overlap, they have been combined into this single chapter, which has been organized into six related sections: Open Spaces, Biological Resources, Mineral Resources, Waste Management, Cultural Resources, and Scenic Resources.

Section 10.2 Open Space. This subsection of the Conservation and Open Space elements addresses the conservation of open space lands, including issues related to working lands and park lands, the orderly development of residential land, and coordination with other agency programs related to conserving open space lands. Open spaces distinguish and showcase the county's natural environment and rural lands and provide attraction and enjoyment to residents and visitors.

Goals and policies contained in this Chapter relate to

- An Open Space and Conservation Program that is complimentary to other agencies' plans and that preserves the county's unique open spaces (CO-G1,CO-G3);
- Orderly residential development with access to parks and recreation opportunities that protects natural resources and preserves open space to serve as a separation between communities (CO-G4, CO-G5, CO-G6)

Section 10.3 Biological Resources. This section addresses biological resources including wildlife, fisheries, special status species and their habitats. Biological Resource maps are contained in Appendix F, Map Book.

Goals and policies contained in this Chapter relate to

- Mapped sensitive and critical habitat where policies apply to protect fish and wildlife and facilitate the recovery of endangered species (BR-G1, BR-G2, BR-G3);

Section 10.4 Mineral Resources. This chapter identifies the county's known mineral resources and supports the conservation, development, and utilization of these resources.

Goals and policies contained in this Chapter relate to

- A distributed inventory of mineral resources and construction materials permitted and operated to minimize significant environmental impacts (MR-G1, MR-G2);

Section 10.5. Waste Management. This section describes the County's approach to solid waste management and waste diversion. The policies are designed to help implement the Countywide Integrated Waste Management Plan (CIWMP).

Goals and policies contained in this Chapter relate to:

- A flexible and multifaceted system for the management of solid waste emphasizing cooperation and coordination between local jurisdictions and the private sector to protect and improve the county's environment by addressing storage, collection, separation, processing, reduction, reuse and repair, recycling, recovery, marketing, and, when necessary, landfill disposal, and reducing risk of community exposure to toxic waste (WM-G1, WM-G2, WM-G3, WM-G4, WM-G8);
- Encourage widespread participation in recycling and waste diversion programs through local business use of previously discarded materials to help meet or exceed integrated waste management objectives and (WM-G5, WM-G6, WM-G7)
- Establishing disposal capacity or alternatively a contingency plan within the county to achieve self-sufficiency, reduce costs, and address catastrophic events (WM-Gx1)

Section 10.6 Cultural Resources. This section includes policies to protect cultural heritage, including historic, prehistoric, and architectural resources.

Goals and policies contained in this Chapter relate to:

- Protection and enhancement of significant cultural resources, providing heritage, historic, scientific, educational, social and economic values to benefit present and future generations (CU-G1)

Section 10.7 Scenic Resources. This section includes policies to protect outstanding scenic resources that may be adversely affected by land use and development. Signs and billboards are addressed in this chapter as well as in the Land Use Element. Protection programs and the identification of high-value visual resources are identified.

Goals and policies contained in this Chapter relate to:

- Protected scenic areas that contribute to the enjoyment of Humboldt County's beauty and abundant natural resources (SR-G1)
- A system of scenic highways roadways that increase the enjoyment of, and opportunities for, recreational and cultural pursuits and tourism in the County. (SR-Gx)

Chapter 11. Water Resources Element

This optional element provides additional focus on water planning issues including river and stream water quality, stormwater runoff, groundwater management, water needs of fish and wildlife, water consumption, conservation and re-use methods, water export, and state and federal regulations.

Goals and policies contained in this Chapter relate to:

- Coordinated watershed planning and land use decision making to advance management priorities (WR-G3, WR-G4, WR-G5)
- Watershed conservation and restoration efforts aimed at de-listing water bodies and watersheds which are restored to meet all beneficial uses, including water use, salmon and steelhead recovery plans, recreational activities, and the economy (WR-G1, WR-G, WR-G7, WR-G8, WR-G8x)
- Adequate public water supply as well as onsite wastewater systems and natural and developed storm drainage systems that minimize interference with surface and groundwater flows and storm water pollution (WR-G6, WR-G9, WR GX))

Chapter 12. Energy Element

The purpose of this optional element is to present policies and programs to address energy needs, use, and conservation. This chapter provides goals, policies, standards, and implementation measures that strive for sustainable renewable energy and self-sufficiency.

Goals and policies contained in this Chapter relate to:

- Redwood Coast Energy Authority's Comprehensive Energy Action Plan emphasizing self-sufficiency, development of renewable energy resources and energy conservation that is implemented through the General Plans (E-G1)
- Increased land use based energy conservation and efficiency and local energy supply from a distributed and diverse array of renewable energy sources a (E-G2, E-G3)

PART 4 – PUBLIC HEALTH AND SAFETY

Chapter 13. Noise Element

This mandated element identifies the County's approach to managing noise levels to minimize the exposure of community residents to excessive noise. The policy approach follows the guidelines adopted by the Office of Noise Control of the California Department of Health Services.

Goals and policies contained in this Chapter relate to:

- Discourage incompatible uses within communities and reduce excessive noise through the application of standards (N-G1, N-G2)

Chapter 14. Safety Element

The purpose of the Safety Element is to reduce the risk of death, injuries, property damage, and economic and social dislocation resulting from earthquake, fire, flood, and other hazards. The components of this element include geologic/seismic; flooding and drainage; fire; airport safety; and industrial hazards, as well as emergency management. This Element identifies hazards and hazard abatement provisions to guide local decisions related to zoning, subdivisions, and entitlement permits. Flood and Fire Hazard, Seismic Safety, and Earthquake Shape Potential maps are contained in Appendix F, Map Book.

Goals and policies contained in this Chapter relate to:

- Plan and condition development to prevent unnecessary exposure to and minimize the potential for loss of life and property resulting from natural and manmade hazards (S-G1, S-G2, S-G4)

- Planning and management to minimize hazards associated with flooding, airport operation, and industrial development (S-G3, S-G5, S-G6)
- Interagency emergency preparedness and response to reduce loss of life and property, especially relating to Cascadia earthquakes. (S-G7, S-G8)

Chapter 15. Air Quality Element

This optional element describes the county's existing air quality, sources of air pollution, and strategies for improving air quality. Policies to reduce greenhouse gas emissions and mitigate climate change are also included in this element. A Climate Action Plan has been included as a required mitigation for the Air Quality Element plan policies.

The specific issues addressed by this element and the Climate Action Plan are discussed in more detail in this EIR in Section 3.12 – Air Quality and Greenhouse Gas Emissions.

Goals and policies contained in this Chapter relate to:

- Improved air quality to meet current and future state and federal standards, including attainment of particulate matter requirements (AQ-G1, AQ-G2, AQ-G2X)
- Successful reduction of greenhouse gas emissions to levels consistent with state and federal requirements (AQ-G3)

2.5 Proposed Plan Estimated Maximum Feasible Development Potential

Implementation of the Proposed GPU and Land Use Maps are intended to guide growth of population, housing units, and commercial and industrial floor space within the county. Table 2.5-1 shows the acreage of each land use designation within the unincorporated area, including the Coastal Zone¹.

Humboldt County is far from being a flat, featureless plain, with every area having equal access to transportation and public services needed to support development at full density of each land use designation. A realistic analysis of development potential must take into account limitations imposed by federal and state law and by GPU plan policies, standards, and implementation measures. These constraints effectually preclude almost all residential, commercial or industrial development in 100-year flood zones, wetlands, streamside management areas, earthquake fault zones, areas of historic landslide occurrence, and areas with slopes in excess of 30 percent. These physical constraints have been mapped and quantified utilizing a detailed parcel level analysis of these factors by means of the County Graphical Information System (GIS) for each land use designation.

The resulting developable acreage is shown in Table 2.5-1. Approximately 1,491,900 acres will therefore likely remain in open space, resource production, and recreational uses, with little or no development. There remains 748,861 acres of vacant and underdeveloped area available for development without these physical constraints. That area could theoretically provide for as many as 38,972 additional dwelling units in the unincorporated area of the County if developed at the full density allowed for each land use designation as proposed in the GPU. Compare this

¹ Land uses and projected housing units within the Coastal Zone are based on the proposed General Plan Update land use designation which will require certification by the Coastal Commission prior to implementation. The existing land use designations in the six Local Coastal Plan areas of the Coastal Zone are different from those applicable in the remaining inland portion of the county.

Table 2.5-1, General Plan Update Acreage of Land Use Designations, Estimated Maximum Feasible Housing Development Potential and Projected Development 2016 - 2040

Land Use Designation	Total Acres	Vacant Developable Acres*	Estimated Maximum Development Potential (Housing Units)	Projected Development 2016 - 2040	
				Housing Units (2028 Peak)	Commercial / Industrial Sq. Ft.
<i>Residential</i>					
RM	560	495	5,158	40	0
RL	8,965	6,507	12,004	1,526	0
RE	12,447	8,408	1,165	18	0
RA (Formerly RR)	152,863	61,929	2,092	52	0
Subtotals	174,835	77,339	20,419	1,636	0
<i>Commercial</i>					
CG	360	274	176	0	42,431
CS	512	362	239	0	49,149
CR	1,546	952	806	0	146,798
Subtotals	2,418	1,588	1,221	0	238,378
<i>Mixed Use</i>					
MU	252	158	925	0	24,410
VC	93	70	78	0	8,528
RCC	1,444	966	920	0	130,546
UR	231	118	2	0	0
Subtotals	2,019	1,311	1,925	0	163,484
<i>Industrial</i>					
IG or MG	1,914	990	0	0	1,526,824
IR	370	78	0	0	270,505
MC	926	739	0	0	928,483
MB	38	12	0	0	3,044
Subtotals	3,247	1,819	0	0	2,728,856
<i>Resource Production</i>					
T or TC	889,172	304,152	7,814	44	0
AE	72,741	15,425	419	2	0
AG	378,789	159,976	6,713	39	0
Subtotals	1,340,702	479,553	14,946	85	0
<i>Open Space</i>					
CF	2,987	325	0	0	0
NR	8,185	2,603	0	0	0
OS	354	91	0	0	0
PF	4,919	2,288	0	0	0
P	563,455	143,205	0	0	0
PR	10,215	5,686	0	0	0
Other (TL, TTL)	127,424	33,052	461	0	0
Subtotals	717,539	187,251	461	0	0
Total	2,240,761	748,861	38,972	1,721	3,130,717

* Excludes areas in 100-year flood zones, Alquist-Priolo earthquake fault zones, wetlands, streamside management areas, areas with slopes greater than 30 percent, and areas with known history of landslide activity. Source: Humboldt County Planning and Building Department, 2017

with the 34,557 dwelling units existing in 2016 -- after 164 years of development in the unincorporated area of Humboldt County since 1852. The GPU provides ample room for future development, even without the areas with significant physical constraints.

At the current countywide average household size of 2.31 persons per unit, the estimated population growth associated with the eventual buildout of estimated maximum feasible development potential would be approximately 90,025 persons, or a 125 percent increase above the 71,830 current estimated population of the unincorporated county in 2016. Historical rates of development indicate that only a small fraction of the estimated maximum feasible development potential would be realized within the project planning period ending in 2040.

Development at the highest annual average growth rate per five-year period experienced in Humboldt County in the past 30 years (1.19 percent during 2005-2010) compounded annually until the end of the GPU planning period in 2040, could theoretically yield as many as 11,346 new dwelling units – about 29 percent of the estimated maximum feasible development potential. At the .6 percent average annual rate of development since 1990, approximately 5,335 new dwelling units could be possibly be produced, or about 14% of the development potential. There is, however, no evidence that sustained development at these rates is likely to occur.

The only available objective data about future population and housing need in Humboldt County is that provided by the Department of Finance. As shown in Table 2.1-5, DOF projections for the period 2016-2040 forecast a slowing rate of population growth, peaking in 2028, and then declining. The unincorporated County's share of the additional dwelling units needed to accommodate the anticipated peak population is 1,721 units, or about 4 percent of the development potential.

Table 2.5-1 includes the anticipated distribution of those 1,721 dwelling units by land use designation using the same distribution as the 3,119 building permits for dwelling units that were issued during the period 1972-2015. Future development at the scale anticipated given DOF projections is most likely to occur in the vicinity of development activity over this past 43-year period to take advantage of the existing road network, availability of public utility (electricity, water, sewer, drainage, trash, etc.) services, proximity to schools and other public services as well as centers for employment and shopping. These factors reduce the cost of development and are often critical to marketability. More details about methodology used in the distribution is in Appendix T - Assumptions Used in the Development Projections.

In addition to the residential holding capacity of the GPU, the proposed commercial, mixed use and industrial land use designations also accommodate future commercial and industrial development. The square footage for future commercial and industrial development was projected based on employment forecasts and structure area ratios to employment from models developed and used by CalTrans for planning purposes. More details about methodology used in the distribution of commercial and industrial space is also provided in Appendix O - Assumptions Used in the Development Projections. More details about methodology used in the distribution is in Appendix O - Assumptions used in the Development Projections.

2.6 Future Plan Review, Updates and Amendments

Population and housing forecasts over an extended planning horizon are less reliable the further that they project into the future. Events or other factors that were unknown or unforeseeable at the time the projections were originally made can radically alter the assumptions on which the forecasts are based. That is why California General Plan Law (Government Code section 65400) requires city and county planning agencies to make an annual report to the governing body and state agencies on the status of the plan and progress in its implementation, and the degree to which the approved general plan complies with the General Plan Guidelines. The Housing Element of the General Plan must be updated every five to eight years. Each Housing Element update must examine and utilize the most current population and housing data and growth forecasts. If in the future it becomes clear that the General Plan DEIR forecasts in this document are no longer valid, subsequent environmental review will be required for any action which could otherwise tie off this General Plan EIR.

The growth projections put forward in this Revised DEIR are not intended to in any way inhibit development that is currently unforeseen but otherwise consistent with the GPU goals, policies, standards and implementation measures. The purpose of making projections using the best available data is to narrow the focus of the environmental assessment in the EIR to impacts that are likely to occur during the planning period. Overstating development potential likely to be actualized during the planning period could result in overestimating the extent and significance of environmental impacts. Speculating about potential growth in excess of that supported by sound data and analysis could result in the adoption of mitigation measures that are more burdensome and expensive than are necessary or appropriate for a more modest rate and scale of development. Overestimating potential development could have the unintended consequence of making any development more costly and difficult than reasonably warranted.

Chapters 4 and 5 of this EIR provides a brief discussion of the environmental impacts of development if it were to occur at the estimated maximum feasible development potential, as calculated using the same methodology as employed in this chapter.

2.7 Project Approvals Required and Subsequent Actions

As detailed above, the Planning Commission conducted public hearings on the General Plan Update and made a recommendation to the Board of Supervisors. The Planning Commission's recommendation was submitted to the Board of Supervisors. The Board of Supervisors considered the recommendation of the Planning Commission and adoption of the proposed plan and certification of this EIR is completed by the Board of Supervisors.

As part of the Board's adoption of the plan, an Implementation Action Plan will be prepared which organizes the implementation measures listed at the end of each chapter of the plan into a work program which outlines priorities, costs, and schedules for carrying out the implementation measures. Following adoption of the plan, the Implementation Action Plan will be carried out. Key implementing actions include updating the Zoning Code and submitting amendments within the coastal zone to the California Coastal Commission for certification.