

Draft Socioeconomic Assessment

Tongass National Forest Plan Revision



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Tongass National Forest Plan Revision

Forest Service, Alaska Region

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Introduction

The Tongass National Forest encompasses and sustains the people of Southeast Alaska. Spanning almost 17 million acres or 80 percent of the total land base of the region, the Tongass supports 31 unique Southeast Alaskan communities. The numerous streams, geologic features, flora, and fauna in the forest supply important ecological and social benefits, acknowledging that ecological well-being and social and economic systems are closely linked. The social and economic conditions of the communities within the forest are described in this assessment, including a detailed assessment of the contributions that the Tongass makes to social and economic sustainability in Southeast Alaska.

The preamble of the 2012 Planning Rule for National Forest System land management planning recognizes that ecological, social, and economic systems are interdependent. The planning rule requires consideration of these factors and how they interact within all phases of the planning process. The planning rule also recognizes that while forest management can influence social and economic conditions related to the planning area, it cannot wholly ensure social and economic sustainability in the region. For that reason, the planning rule requires that plan components contribute to social and economic sustainability within the confines of Forest Service authority and capability of the plan area. The planning rule defines sustainability as the capability to meet the needs of the present generation without compromising the ability of future generations to meet their needs (36 CFR 219.19). It further defines three types of sustainability:

- Ecological sustainability refers to the capability of ecosystems to maintain ecological integrity:
- Economic sustainability refers to the capability of society to produce and consume or otherwise benefit from goods and services including contributions to jobs and market and nonmarket benefits; and,
- Social sustainability refers to the capability of society to support the network of relationships, traditions, culture, and activities that connect people to the land and to one another and support vibrant communities.

The central purpose of this section is to answer three questions:

1. What are the key benefits of the Tongass National Forest? A key benefit is one that a.) contributes to social and economic sustainability and b.) may be influenced by the forest plan.
2. What social and economic conditions might be impacting these key benefits of the Tongass National Forest?
3. What other risks, stressors and conditions (broader landscape, climate trends, conflicting benefit, etc.) might be impacting these key benefits of the Tongass National Forest?

Process and Methods

For this assessment, social, economic and cultural themes are discussed in two sections. The first analyzes the best available information on current social and economic conditions in the area of influence. For this Forest, it is the Southeast Alaska Region, also known as the Alaska panhandle (Figure 1). The second section analyzes the ways in which management of the Tongass National Forest may impact these social and economic conditions.

This assessment also considers different scales of analysis when appropriate; that of communities living in and around the forest, as well as how forest benefits may affect communities at a national or

international scale. These distinctions in scale of influence necessitate clear definitions of the communities assessed.

This assessment will first assess indicators of social and economic conditions for communities in the area of influence. The directives define the area of influence as “where the management of the plan area substantially affects social, cultural, and economic conditions” (Forest Service Handbook 1909.12, section 13.21). The area of interest for the Tongass Forest Plan revision is defined as Southeast Alaska. The social and economic conditions assessed in this section will include:

- Population size, age structure, racial and ethnic composition.
- Types of income and economic diversity.
- Prevalence of poverty and other socioeconomic conditions.
- Indicators of social resilience or well-being.

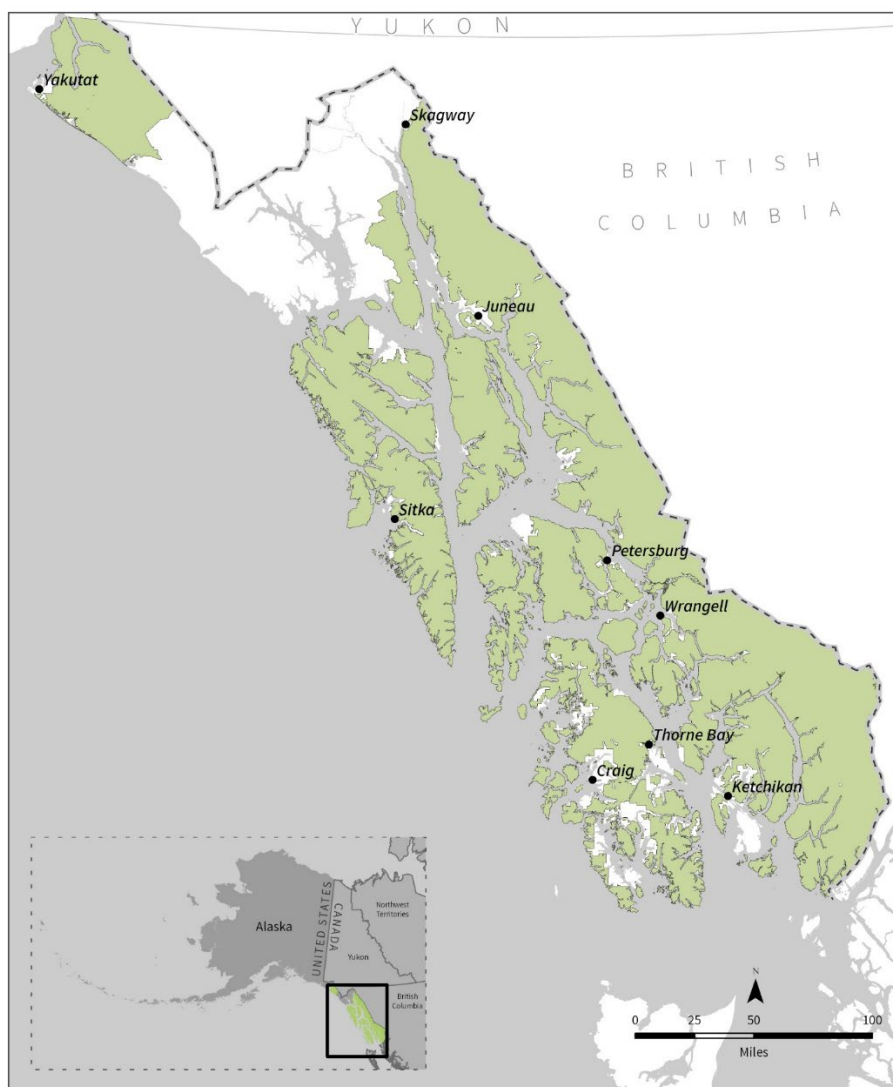


Figure 1. Map showing Southeast Alaska, which is the area of influence used in this assessment. The area of influence includes all land outside of Canada in Southeast Alaska. Tongass National Forest lands are shown in green shading.

Because social and economic benefits of forests often expand past the boundaries of a defined geographic area of influence, social researchers advocate for a nuanced approach that addresses local knowledge, linkages in adjacent land parcels, and non-local interest groups (Endter-Wada and Blahna 2011). This second part of this analysis will therefore consider social and economic conditions affected by Tongass National Forest management and will consider effects mostly on a local scale, applying broader scales when appropriate.

Forest benefits to people will include ecosystem services frameworks. An understanding of these benefits is important for establishing monitoring goals that balance ecosystem management and human interests.

Ecosystem services include:

- Provisioning services: provide society with direct goods, such as food, fresh water, fuel, and fiber
- Regulating services: refer to processes affecting climate, water, disease regulation, and pollination.
- Supporting Services: Processes necessary for proper functioning of other services, such as soil formation and nutrient cycling.
- Cultural services: educational, aesthetic, and cultural values as well as recreation and tourism.

All management decisions may have consequences for the human community. For instance, erosion prevention on streams may impact fishery health, which may impact fish harvest levels. In this way, planners must understand the interconnected nature of ecosystems and the people who live there, and the consequences of different alternatives from a human dimensions perspective (Kline & Mazzotta 2012).

Existing Information Sources

Information gathered for this assessment comes from existing secondary data sources and follows guidelines for identifying best available science. Demographic information is primarily sourced from the United States Census Bureau and the Economic Profile System from Headwaters Economics, which both draw from the Decennial Census and the American Community Survey. As the Decennial Census is only collected every ten years, the American Community Survey allows economists to display trends between those years. There are some drawbacks. While the Decennial Census attempts to catalogue data from every household in the United States, the American Community Survey uses sample populations to describe a larger population. This means there are margins of errors in any American Community Survey statistics. In rural and remote areas like Southeast Alaska, the American Community Survey data may have large margins of error that affect their reliability, which will be denoted with an asterisk throughout this assessment. Additional data sources include mapping tools such as the Council on Environmental Quality's Climate and Economic Justice Screening Tool, the Center for Disease Control, agencies within the Alaska state government, and Southeast Conference. Data on Tongass National Forest resources will be sourced when available from the Forest Service. For example, the Natural Resource Manager database includes data on timber harvest volume and contracts, receipts, educational programs, partnerships, and recreation use.

Most of the data shown below is displayed by borough or census area (Figure 2). It is not shown by individual community, because the census data used is available by borough or census area (for unorganized borough areas). Further, many communities have such low populations that the margins of error on the data that is available for communities are very large.

Lastly, during the assessment writing process, Forest Service engagement staff collected qualitative data from community feedback on the plan revision in public meetings across Southeast Alaska. Information was collected in three ways:

1. Publicly available online survey
2. Email messages submitted to a Forest Plan inbox
3. In-person community workshops conducted in 25 communities in Southeast Alaska

When relevant to the topic, feedback from community members has been included.

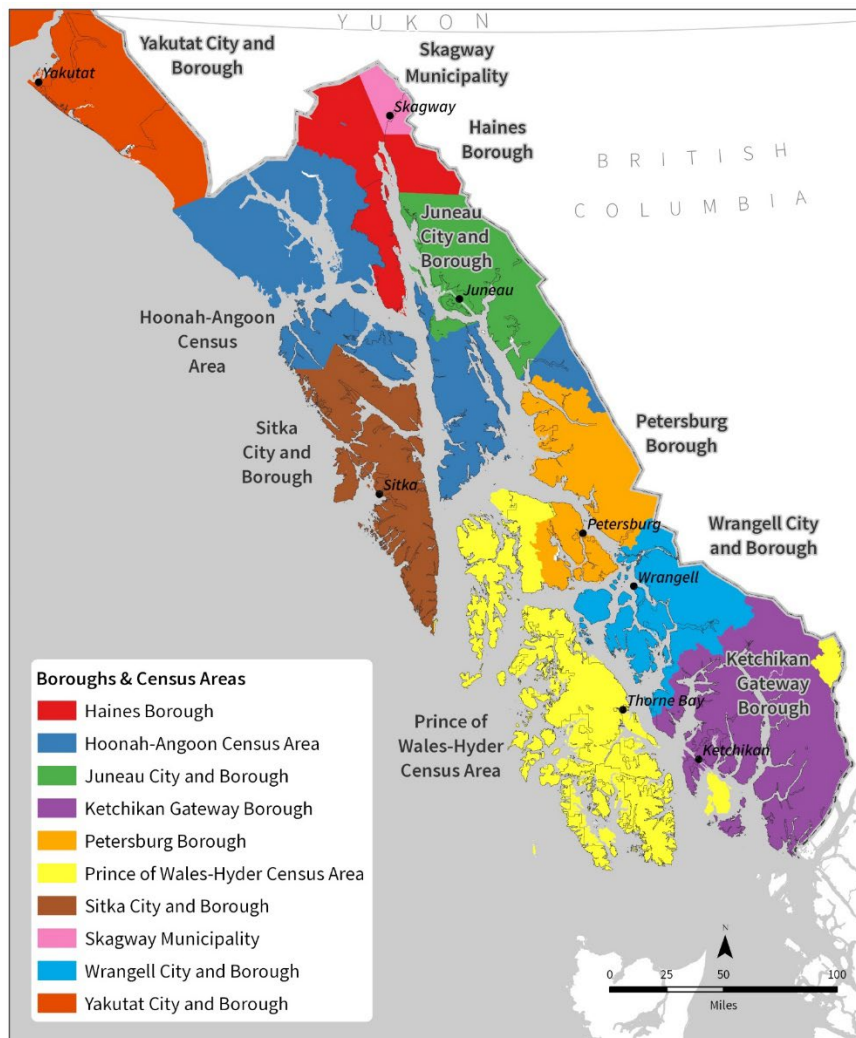


Figure 2. Boroughs and census areas within Southeast Alaska.

Current Forest Plan Direction

The goals and objectives of the current Forest Plan focus on maintaining resources consistent with the needs of regional economies, including identifying community assistance opportunities, supporting employment opportunities in natural resources, meeting the demands of current recreation trends and maintaining recreation spaces. Scenery viewing opportunities are managed through various scenic integrity objectives, standards and guidelines to guide different types of projects in different land use

designations. Transportation maintenance and development is considered to support resource management and access for local communities. Resources are managed for the continuation of wild resource harvest and effects on harvest are evaluated in management decisions. Timber resources in young-growth stands are managed for wood products and timber. Ecological goals and objectives are designed to maintain human benefits from these resources.

Social, Cultural, and Economic Conditions in the Area of Influence

This section assesses current socioeconomic trends and conditions in Southeast Alaska. Understanding the demographics, economic values, and community dynamics of the communities within the Tongass National Forest will inform management decisions. In Southeast Alaska, the geographic span of the Tongass National Forest has a great impact on communities in the region. All Southeast Alaskan communities are adjacent to, or entirely surrounded by the Tongass, use Forest infrastructure to travel to other parts of the region, recreate locally, and harvest food, fiber, and fuel resources important for maintaining cultural, spiritual, and economic ways of life.

Population size, characteristics, and change are important to understand. If populations around the forest change significantly, there may be a change in community needs or values. For instance, aging residents may demand more developed transportation and recreation opportunities than younger residents. Rural populations may be more interested in gathering and harvesting opportunities than more urban populations. Declining population numbers may affect Forest Service staffing levels in the area. The following is an analysis of current social and economic conditions, community trends, and how management may affect them.

Environmental Justice

Environmental justice focuses on how different socioeconomic factors make some populations more susceptible to negative impacts of an environmental change. Environmental justice policies ensure that there will be fair and meaningful treatment of all people regardless of race, color, national origin, or income in the planning process (E.O. 12898, E.O. 14096).

Groups of people are burdened by environmental issues differently, influenced by different socioeconomic identities (Bakkensen et al. 2024) and differing exposure to environmental risks. Although some environmental justice indicators may correlate with heightened occurrence of environmental justice concerns, the mere existence of one or more indicators does not directly determine whether a community has environmental justice concerns. This report will identify indicators of environmental justice concern and discuss their potential impacts to community resilience where appropriate. This report uses threshold analysis, which is the current Environmental Justice analysis guidance for the Forest Service (Periman and Grinspoon 2014).

The Forest Service Geospatial Technology & Applications Center has developed an approach to environmental justice analysis that identifies the “spatial concentration” of demographic indicators of environmental justice concern. Comparative concentration is determined compared to regional levels at a sub-borough unit of analysis, and accounts for estimated error in data to provide a more nuanced picture of demographic information. This analysis has been performed for three indicators in Southeast Alaska: age, race and ethnicity, and low income. The maps produced for this analysis are included in those sections.

Another mapping tool for climate and social justice information is the Climate and Economic Justice Screening Tool (herein referred to as CEJST). In addition to supplying data on over thirty specific

indicators of justice concerns, it also synthesizes this wide array of health and economic data to determine if a census tract is considered “disadvantaged.” Environmental justice concerns are not only limited to socioeconomic indicators, but also the presence of environmental burdens. The EPA’s Environmental Justice Screen uses data on exposure to thirteen different environmental burdens to determine environmental justice concerns. Data from these sources are used in sections where discussion of environmental burdens is applicable.

Urban, Rural, and Native Communities

The Tongass National Forest, spanning 17 million acres, makes up 80% of Southeast Alaska. Southeast Alaska is considered Nonmetropolitan on the U.S.D.A. Urban Continuum index, with the most-populous borough (Juneau City and Borough) containing less than 40,000 people. According to the Urban Continuum Index, there are three urban areas in Southeast Alaska: Juneau, Sitka, and Ketchikan, which have populations of 32,000, 9,000, and 8,000 people respectively (Headwaters Economics 2024). Remaining communities are considered rural on the Index.

The Tongass National Forest includes two National Monuments: Admiralty Island National Monument outside of Juneau and Misty Fjords National Monument near Ketchikan. The forest is also adjacent to Glacier Bay National Park and Preserve and the Wrangell-St. Elias National Park and Preserve managed by the Park Service.

Unlike many rural areas in the contiguous United States, Southeast Alaska is unique in its remoteness; most communities are only accessible by plane or boat. This remoteness facilitates strong and distinct community identities; shared reliance on harvesting from the land to supplement household food, heating, and other supplies; and unique challenges to travel and infrastructure planning. Economic trends in the last 20 years have changed the relationship of local communities to the land, as mining and timber harvest have faced challenges and the growing tourism industry has brought an influx of visitors to the region.

Demographics

Population Dynamics

Population size and change can give context to economic and social trends in a community. Low growth or population loss can indicate a struggling economic situation. Growth in a community can indicate growing economic opportunities, but may also create economic stress, such as increased housing costs and income stratification. From a forest management perspective, growing local populations may place greater demand on forest infrastructure. Growing cultural centers may also attract more tourist visits, increasing crowding and diminishing aesthetic values in forests and communities alike. Community feedback from workshops showed a concern among locals about increased tourism traffic on forests and the conflicts between tourist and local forest use. Taken with other economic, standard of living, and quality of life data, managers can add some context as to how fluctuating population dynamics may affect forest resources and the social and economic well-being of the area.

In 2022, the population in Southeast Alaska was estimated to be around 72,062 people. Overall, population growth was slower in the region over the last 12 years than the state as a whole. Petersburg and Yakutat experienced negative population growth while Haines, Hoonah-Angoon, and Skagway all increased population (Table 1). Although Southeast Alaska’s population has grown at a slower rate than state or national levels, the population change by borough does not consistently mirror nationwide trends of shrinking rural communities (Parker et al. 2018). Boroughs with larger populations like Juneau and Ketchikan saw increases in population from 2010 to 2022, but others experienced negative population

growth rates. It is important to note the low reliability of population change estimates in certain smaller boroughs and census areas.

Table 1. Comparative Population Change between 2010 and 2022 in the United States, Alaska, and Southeast Alaska.

Source: U.S. Department of Commerce. 2023. Census Bureau, American Community Survey Office, Washington, D.C., as reported in Headwaters Economics' Economic Profile System (headwaterseconomics.org/eps).

	Population 2010	Population 2022	Population Percent Change
United States	303,965,272	331,097,593	8.9%
Alaska	691,189	734,821	6.3%
Southeast Alaska	70,416	72,062	2.3%
Haines Borough	1,658	2,079	25.4%*
Hoonah-Angoon Census Area	2,029	2,329	14.8%*
Juneau City and Borough	30,975	32,108	3.7%
Ketchikan Gateway Borough	13,396	13,910	3.8%
Petersburg Borough	3,841	3,374	-12.2%
Prince of Wales-Hyder Census Area	5,507	5,799	5.3%
Sitka City and Borough	8,894	8,462	-4.9%
Skagway Municipality	1,140	1,303	14.3%*
Wrangell City and Borough	2,338	2,134	-8.7%
Yakutat City and Borough	638	564	-11.6%

Note: asterisks denote data with confidence intervals greater than 40%, indicating less certainty. Headwaters Economics

The Alaska Department of Labor and Workforce Development projects a population decline across Alaska through the year 2040. All boroughs and census areas in the region are projected to see negative population change (Table 2), signaling potential concerns around workforce capacity, aging community needs, economic development, and other social and economic consequences attributed to declining population levels. Wrangell City and Borough in particular is projected to have a large drop in population during the next 17 years (Table 2). Local reporting on this projected decline cites negative net migration and an aging population, which correlates with a decline in births and an increase in deaths (Brooks 2024a, Brooks 2024b).

Southeast Alaska's influx of seasonal workers may influence population numbers in ways not evident in the above population reports. Both fisheries and tourism employ seasonal staff in the summer, impacting the population in some communities during those times. A 2022 report published by the Alaska Department of Labor and Workforce Development on non-resident workers finds that a little over 25% of the workforce in Southeast Alaska are non-residents, and an additional ~10% are nonlocal Alaskans (Kreiger et al. 2024). Nonresident temporary populations are lowest in rural areas without seafood processing facilities and with limited tourism opportunities and are also lower in more urban areas with larger populations and more diverse economic sectors. In boroughs where seasonal fish processing is the dominant industry, most workers are nonresidents. This 2022 report from the Alaska Department of Labor and Workforce Development is focused on workforce data and does not include non-working seasonal residents, who may move to the area seasonally for recreation and leisure purposes.

Table 2. Projected population change between 2023 and 2040. Source: Howell and Sandberg 2024.

	2023	2040	Population Change
Southeast Alaska	71077	64587	-9%
Haines Borough	2530	2323	-8.2%
Hoonah-Angoon Census Area	2298	2150	-6.4%
Juneau City and Borough	31549	29378	-6.9%
Ketchikan Gateway Borough	13475	11991	-11.0%
Petersburg Borough	3367	3140	-6.7%
Prince of Wales-Hyder Census Area	5784	5191	-10.3%
Sitka City and Borough	8231	7092	-13.8%
Skagway Municipality	1127	1081	-4.1%
Wrangell City and Borough	2039	1572	-22.9%
Yakutat City and Borough	677	669	-1.2%

Age

Trends in population age over the last 12 years provides insight into the seasonal nature of life in Southeast Alaska and the issues associated with aging communities. Rural areas tend to have a higher population of older adults than suburban and urban areas (Pew Research 2018), indicating that aging communities and their needs are a particularly rural interest. There are many unique effects that ageing may have on a rural population. On one hand, rural green spaces are correlated with positive health outcomes in older populations; however, remoteness and transportation limitations can affect access to specialized care and other healthcare needs (Cohen 2023).

The change in the median age in Southeast Alaska between 2010 and 2022 is consistent with statewide and nationwide trends, however, median age in Southeast Alaska is greater than both the state of Alaska and the United States (Table 3). Figure 1 displays the distribution of ages in the region compared to the state of Alaska and shows that Southeast Alaska has an older distribution of people. At the borough level, Skagway Municipality and Juneau Borough have a younger distribution of people compared to other boroughs, while Hoonah-Angoon Census Area and Petersburg Borough skew older (Figure 3).

Table 3. Median Age in Southeast Alaska, Alaska, and the United States in 2010 and 2022. Source U.S. Department of Commerce. 2023. Census Bureau, American Community Survey Office, Washington, D.C., *as reported in Headwaters Economics' Economic Profile System (headwaterseconomics.org/eps)*. Note that in Southeast Alaska, median age was calculated by averaging the individual median ages of all Southeast Alaska boroughs

	Southeast Alaska (average)	Alaska	United States
Median Age 2010	41.2	33.8	36.9
Median Age 2022	43.7	35.3	38.5
Net change in age	+2.5	+1.5	+1.6

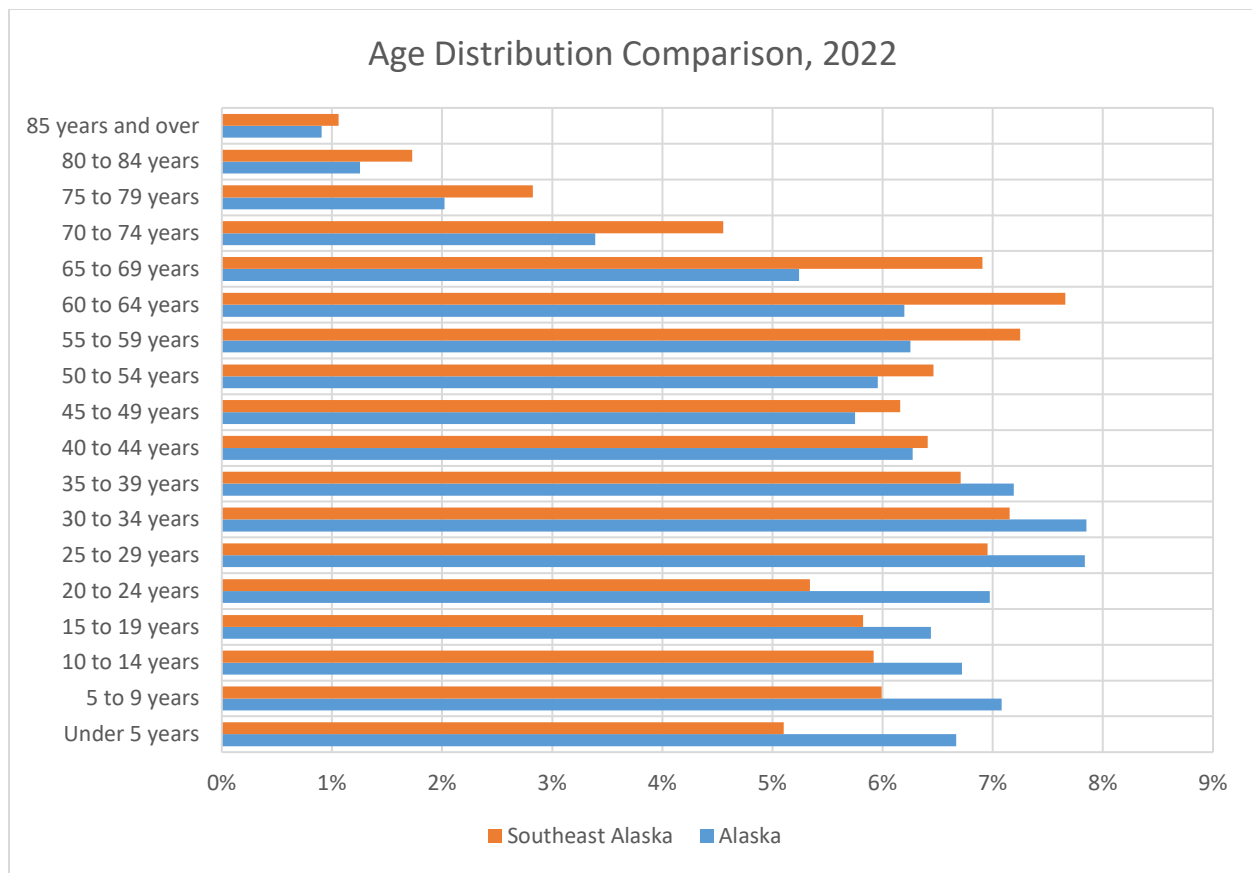


Figure 3. A comparison of Age distribution between Southeast Alaska and the State of Alaska in 2022. Source: U.S. Department of Commerce. 2023. Census Bureau, American Community Survey Office, Washington, D.C., as reported in Headwaters Economics' Economic Profile System (headwaterseconomics.org/eps).

Age distribution in a population can inform economic conditions. Retirees may earn income from investments, pensions, and social security, raising the rates of non-labor income in a region. A population with more retirees may be less sensitive to job or salary changes affected by management of the national forest. In rural and remote areas like Southeast Alaska, changes to management activities may greatly affect harvested resources that retirees with limited income and limited mobility rely upon. Likewise, fewer young adults and children can result in school closures, workforce capacity issues, and an overall decline in population due to lower birth rates. A reduction in workforce can lead to less economic diversity, as well as a loss of businesses in an area. Younger populations also affect housing development and prices, which may decrease with older populations and less demand.

Additionally, understanding the age profile of a community can help users determine the types of services likely to be needed. Older adults and young children are both vulnerable segments of the population. Older populations often see an increase in health concerns and may have difficulty accessing necessary medical care, leaving them vulnerable and potentially compounding on serious medical issues. On the other hand, children are dependent on others for access to survival necessities and face greater issues advocating for themselves during emergencies. During and after environmental catastrophes, both older and younger populations may face unique challenges because of their age.

Spatial concentration mapping of age in the Tongass area of influence show that high concentrations of populations aged 65 or older tend to be in less populous and more geographically isolated communities in

the region (Figure 4). Low concentrations of 65+ populations are found in areas with greater connectivity to places outside of the region, like Sitka, Juneau, and Skagway.

Conversely, populations under age 18 are highly concentrated in Sitka, the Mendenhall Valley area in Juneau, and in Haines (Figure 5). The presence of a residential high school facility in Sitka may account for this high concentration. There are some low concentrations of populations under 18 in the city center of Juneau.

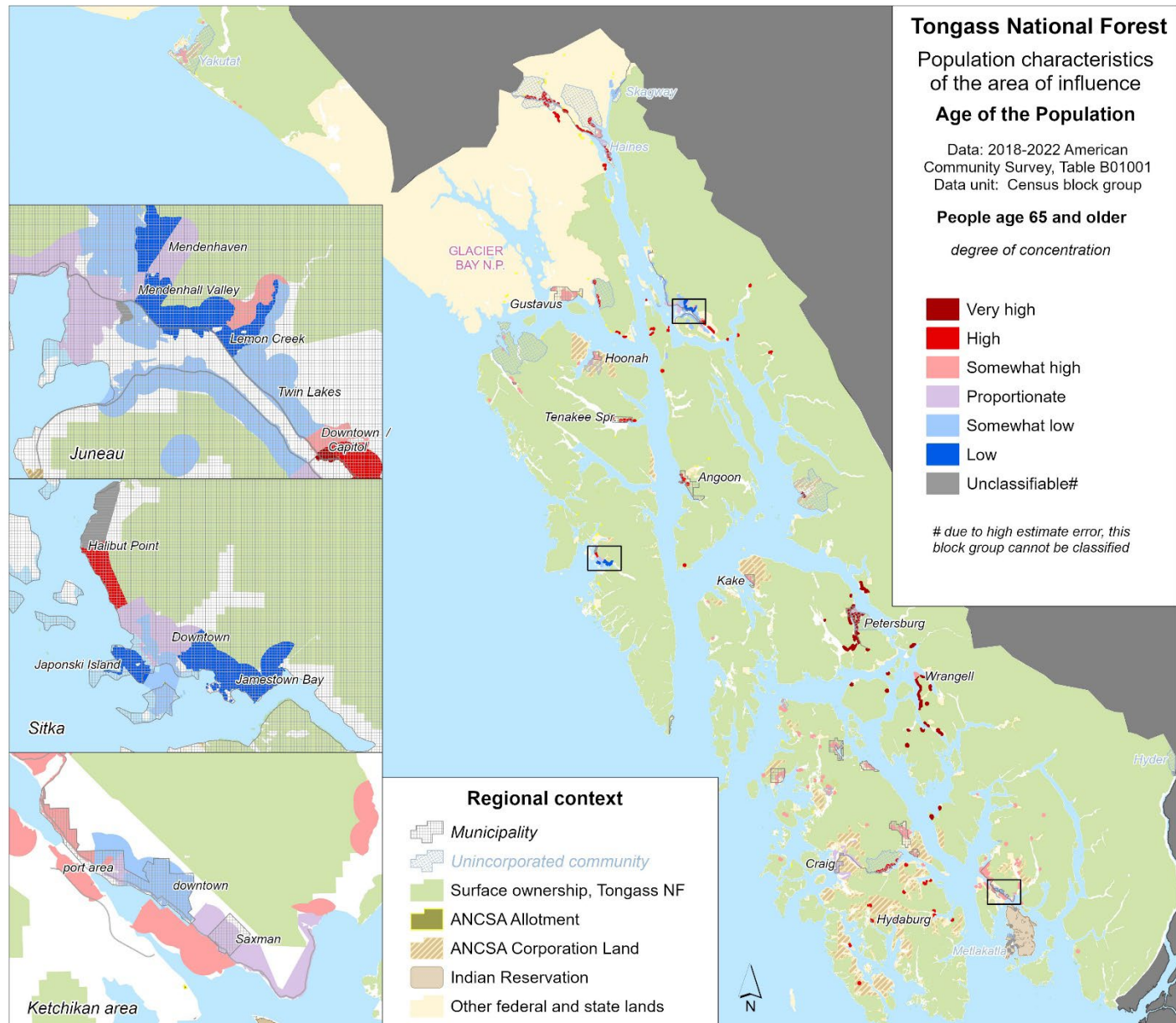


Figure 4. Concentration determinations for population 65 years and older throughout Southeast Alaska, and in finer detail in the cities of Juneau, Sitka and Ketchikan. Between 11,700 and 13,300 people (Source: U.S. Forest Service GTAC 2024). About 17% people living in the Tongass area of influence are age 65 or older. High concentrations span much of Southeast Alaska even though only about 1 in 6 people in the region are 65 or older. Low or somewhat low concentrations of older populations are only found within Sitka, Juneau, Skagway and parts of Ketchikan – all places with relatively greater connectivity to places outside of Southeast Alaska.

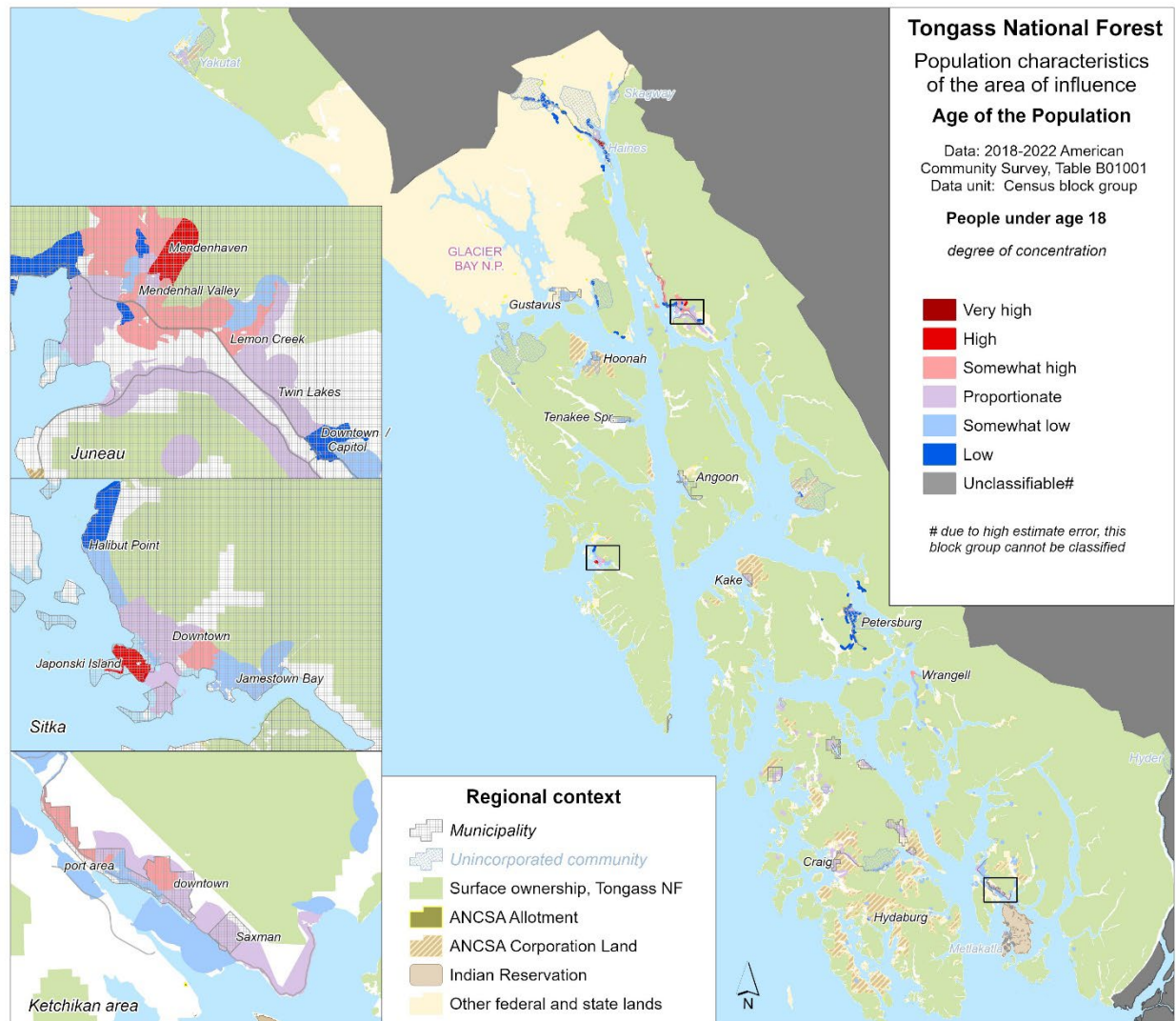


Figure 5. Concentration determinations for populations under the age of 18 in Southeast Alaska. Source: U.S. Forest Service GTAC 2024. About one in five people in the Tongass National Forest area of influence are under age 18, a significantly lower proportion than in Alaska’s statewide population. There are few areas with disproportionately high or low populations under 18. Notable low concentration areas are in the Juneau city center, Petersburg and Skagway, and the Excursion Inlet and Gustavus area. The relatively few high concentrations include neighborhoods in the Mendenhall Valley area of Juneau (one in every six children in Southeast Alaska), on Japonski Island in Sitka, and in Haines.

Mortality Rates & Life Expectancy

Mortality rates and life expectancy are often used as indicators to measure social vulnerability. The Centers for Disease Control and Prevention (CDC) tracks life expectancy at birth for census tracts in the United States. One tract in Prince of Wales-Hyder Census Area, and one census tract in Juneau City and Borough have life expectancy levels at least one year less than the Alaska state levels. Several census tracts do not have information provided due to their small population size. Mortality rates are also indicators of community resilience; higher mortality rates may indicate barriers to healthcare, proximity to environmental hazards, and low socioeconomic status among other things. The CDC reports the gap in death rates between urban and rural communities is widening (Curtin and Spencer 2021), which may be due to limited access to healthcare institutions, insurance, as well as higher overall poverty rates in rural

communities (Leider et al. 2020). Analyzing 2018, 2020, and 2022 data, Prince of Wales-Hyder Census Area and Wrangell City and Borough both consistently have a higher mortality rate than the State levels, however the difference is small.

Infant mortality is also an important indicator of community resilience as high rates may indicate socio-economic and environmental changes that directly affect survival, as infant deaths are not as dependent on time lags and co-morbidities as with adult populations (Sherrieb et al. 2010). Between 2016 and 2022, infant death rates for Southeast Alaska have stayed between 5.5 and 7.6 deaths per 1,000 live births, consistent with statewide totals, however data in the region is listed as statistically unreliable due to the small population and sample size (Alaska Vital Statistics 2022).

Race and Ethnicity

Race and ethnicity are important drivers of culture and social norms in communities. Land management decisions can impact activities and resources valued by different ethnic communities. Some cultures have different recreation preferences (Flores 2018), feel different barriers to access (Johnson et al. 1998), or have different place-based meanings for the lands surrounding them (Johnson et al. 1997).

Southeast Alaska is predominantly white, consistent with state and national levels. Southeast Alaska has a higher American Indian or Alaska Native population than the nation, and slightly exceeds state levels. Southeast Alaska has a slightly higher population of people who selected “Two or more races” on the census than those of the state or the nation (Table 4).

Although the race and ethnicity of Southeast Alaska residents has not substantially shifted from 2010 to 2020, the population of white people in the area has declined by 5.7 percent; the same pattern is also found at the statewide and national scale. At the borough and census area level, a few boroughs have seen a large shift in racial demographics between 2010 and 2020 (Table 4). Petersburg and Yakutat had a larger increase in Asian population compared to other boroughs. Yakutat and the Hoonah-Angoon Census Area have experienced relative decreases in their Alaska Native populations. Nine out of ten boroughs and census areas had a moderate increase in people who identify as two or more races, but Sitka City and Borough exceeds national levels with 9.3 percent increase.

It is important to look at demographic shifts in the context of population size, districts, and economic characteristics. Some of the changes mentioned above may be due to the migration of only a few people into an already small population or may be the result of the decline in overall population shifting demographic ratios. Certain economic influences may also draw different demographic groups to an area, influencing those numbers. For instance, the community of Hoonah in the Hoonah-Angoon Census area is home to a large Alaska Native population, but the community of Gustavus, near Glacier National Park and home to a National Park Service office, may draw non-Alaska Native workers to the area, which may account for a shift in the proportion of Alaska Native peoples.

Table 4. Percentage of people of different races for each Borough or Census area, only for those who identified as one race alone. Source: U.S. Census Borough 2024 (ACS 5-Year Estimates, 2010, 2022)

		Haines Borough	Hoonah- Angoon Census Area	Juneau City and Borough	Ketchikan Gateway Borough	Petersburg Census Area	Prince of Wales- Hyder Census Area	Sitka City and Borough	Skagway Municipality	Wrangell City and Borough	Yakutat City and Borough	Southeast Alaska	Alaska	United States
Total Population	2010	1,658	2,029	30,975	13,396	3,841	5,507	8,894	1,140	2,338	638	70,416	691,189	303,965,272
	2022	2,079	2,329	32,108	13,910	3,374	5,799	8,462	1,303	2,134	564	72,062	734,821	331,097,593
	Change	421	300	1,133	514	-467	292	-432	163	-204	-74	1,646	43,632	27,132,321
White	2010	81.8%	44.9%	70.3%	68.9%	72.9%	50.5%	66.2%	89.0%	69.0%	31.5%	67.6%	67.2%	74.0%
	2022	80.9%	53.2%	64.0%	64.0%	57.7%	45.1%	62.3%	78.1%	57.0%	30.7%	61.9%	61.3%	65.9%
	Change	-0.9%	8.3%	-6.3%	-4.9%	-15.2%	-5.4%	-3.9%	-10.9%	-12.0%	-0.8%	-5.7%	-5.9%	-8.1%
Black or African American	2010	0.2%	0.2%	0.8%	0.4%	0.0%	0.2%	0.2%	2.1%	0.9%	0.0%	0.5%	3.3%	12.5%
	2022	0.0%	0.4%	1.1%	0.7%	1.2%	0.4%	0.7%	3.1%	0.0%	2.1%	0.9%	3.2%	12.5%
	Change	-0.2%	0.2%	0.3%	0.3%	1.2%	0.2%	0.5%	1.0%	-0.9%	2.1%	0.4%	-0.1%	0.0%
American Indian or Alaska Native	2010	7.1%	41.4%	10.6%	13.3%	13.1%	39.2%	18.7%	1.9%	18.3%	53.1%	15.8%	14.2%	0.8%
	2022	6.2%	28.9%	9.4%	14.6%	7.9%	38.5%	9.4%	4.9%	22.9%	26.1%	13.7%	14.3%	0.8%
	Change	-0.9%	-12.5%	-1.2%	1.3%	-5.2%	-0.7%	-9.3%	3.0%	4.6%	-27.0%	-2.1%	0.1%	0.0%
Asian	2010	1.4%	0.4%	5.9%	6.0%	2.2%	1.4%	4.6%	1.0%	0.2%	1.7%	4.6%	5.2%	4.7%
	2022	3.3%	0.8%	7.2%	8.5%	17.8%	1.4%	7.9%	2.2%	0.8%	20.2%	7.1%	6.5%	5.8%
	Change	1.9%	0.4%	1.3%	2.5%	15.6%	0.0%	3.3%	1.2%	0.6%	18.5%	2.5%	1.3%	1.1%
Native Hawaiian and other Pacific Islander	2010	0.0%	0.7%	0.6%	0.0%	0.0%	0.3%	0.0%	0.0%	0.3%	0.6%	0.3%	0.9%	0.2%
	2022	0.0%	0.2%	1.4%	0.2%	0.5%	0.8%	1.2%	0.0%	2.2%	2.1%	1.0%	1.5%	0.2%
	Change	0.0%	-0.5%	0.8%	0.2%	0.5%	0.5%	1.2%	0.0%	1.9%	1.5%	0.7%	0.6%	0.0%
Other	2010	0.4%	1.0%	1.7%	1.4%	0.4%	0.5%	2.1%	0.0%	0.5%	0.9%	1.4%	1.4%	5.5%
	2022	0.1%	0.0%	1.9%	1.6%	3.6%	0.5%	1.1%	0.0%	1.0%	1.4%	1.5%	2.0%	6.0%
	Change	-0.3%	-1.0%	0.2%	0.2%	3.2%	0.0%	-1.0%	0.0%	0.5%	0.5%	0.1%	0.6%	0.5%
Two or more races	2010	9.2%	11.4%	10.1%	10.1%	11.4%	8.0%	8.2%	6.0%	10.9%	12.1%	9.7%	7.8%	2.4%
	2022	9.5%	16.6%	15.0%	10.5%	11.3%	13.5%	17.5%	11.7%	16.1%	17.4%	14.0%	11.3%	8.8%
	Change	0.3%	5.2%	4.9%	0.4%	-0.1%	5.5%	9.3%	5.7%	5.2%	5.3%	4.3%	3.5%	6.4%

Table 5 displays demographic information that includes both people who identify as a race alone and those who identify that race in combination with others. Comparing this with the previous table, it shows that several areas have a large proportion of people who identify as two or more races with one being American Indian and Alaska Native. Hoonah-Angoon Census Area and Yakutat City and Borough both report a decline in populations that identify as Alaska Native alone, however when combined with data from “Two or more races,” Alaska Native populations still far exceed levels for the region. Prince of Wales-Hyder also shows a higher population of Alaska Native-identifying people. Consistent with Table 5, when combining both Asian races alone and Asian in combination with another race, Yakutat and Petersburg boroughs both see a higher Asian population than Southeast Alaska levels.

Table 5. Percent of people who identify as one race alone or in combination with another race. U.S. Census Bureau, 2024 (ACS 5-Year Estimates, CP05, 2022)

Borough or Census Area	Total population	White	Black or African American	American Indian and Alaska Native	Asian	Native Hawaiian and Other Pacific Islander	Some Other Race
Haines Borough	2,079	90.3%	2.1%	8.8%	11.6%	0.0%	0.3%
Hoonah-Angoon Census Area	2329	68.6%	1.7%	40.8%	3.6%	0.6%	3.5%
Juneau City and Borough	32,108	77.6%	2.4%	18.7%	11.2%	2.2%	5.1%
Ketchikan Gateway Borough	13,910	73.9%	1.5%	21.6%	10.1%	0.5%	3.3%
Petersburg Borough	3,374	68.2%	1.9%	13.6%	22.5%	2.7%	4.9%
Prince of Wales-Hyder Census Area	5,799	57.8%	0.5%	50.0%	3.7%	1.0%	2.0%
Sitka City and Borough	8,462	78.6%	1.5%	20.8%	10.4%	2.2%	5.0%
Skagway Municipality	1,303	89.8%	5.0%	5.9%	11.7%	0.0%	1.2%
Wrangell City and Borough	2,134	72.9%	0.1%	35.4%	2.3%	2.4%	3.6%
Yakutat City and Borough	564	47.7%	3.0%	37.9%	20.2%	9.6%	2.3%
Southeast Alaska	72062	74.9%	1.9%	22.6%	10.4%	1.7%	4.2%
Alaska	733,406	72.2%	5.4%	20.5%	9.1%	2.5%	5.8%
United States	334,914,896	72.3%	14.4%	2.6%	7.4%	0.5%	16.4%

Alaska Native populations have unique social and cultural values in Southeast Alaska. Alaska Native communities’ social prominence in the area will be covered in later portions of this specialist report, and fully covered in the assessment “Tongass as an Indigenous Place”. Individuals with tribal affiliation may identify with several racial or ethnic demographics. Note that census data is self-reported, and selecting a racial identity during this process does not necessarily indicate tribal affiliation.

The proportion of people identifying as Hispanic and/or Latino is significantly lower in Southeast Alaska (5.37%) and the state of Alaska (6.79%) than the United States (18.73%) (Table 6). Recall from Table 4 that within Southeast Alaska, no boroughs show a significant difference in Hispanic or Latino population than regional totals.

Table 6. Proportion of people identifying as Hispanic or Latino by borough. U.S. Census Bureau (Decennial Census, DP02, 2020).

Borough	Hispanic and/or Latino Population
Haines Borough	3.22%
Hoonah-Angoon Census Area	5.07%
Juneau City and Borough	6.44%
Ketchikan Gateway Borough	4.66%
Petersburg Borough	4.83%
Prince of Wales-Hyder Census Area	2.78%
Sitka City and Borough	5.92%
Skagway Municipality	3.31%
Wrangell City and Borough	3.57%
Yakutat City and Borough	4.38%
Southeast Alaska	5.37%

The highest spatial concentrations of Hispanic and/or, Black, Indigenous, and People of Color (referred to in Figure 6 as HISBIPOC) are in Alaska Native Villages and neighboring communities, notably Yakutat, Klukwan, Hoonah, Angoon, Kake, and Metlakatla. While less concentrated, two neighborhoods in Juneau; Mendenhall Valley and Lemon Creek, have the highest Hispanic and/or, black, Indigenous, and people of color populations (Figure 6).

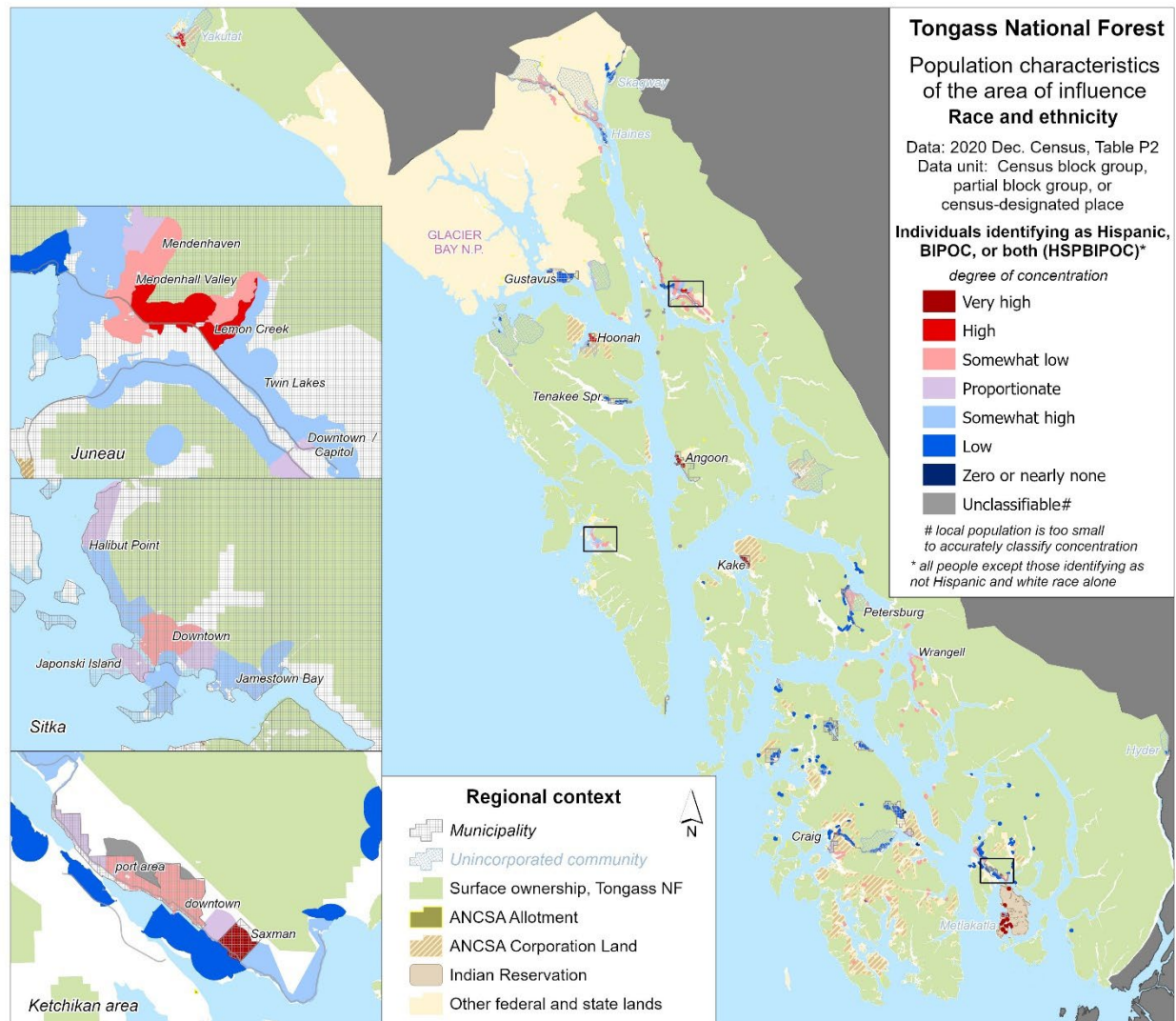


Figure 6. Map of Census Tract Concentration of Hispanic and/or Black, Indigenous, and People of Color populations. The HISBIPOC designator for this figure is defined as everyone identifying as not Hispanic and white race alone. The highest concentrations of HISBIPOC populations occur in predominantly Alaska Native Villages, such as Yakutat, Klukwan, Hoonah, Angoon, Kake and Metlakatla. There are also high concentrations in the Mendenhall Valley and Lemon Creek areas of Juneau. Source: U.S. Forest Service GTAC, 2024.

Disability

People with disabilities often have unique needs and barriers. Transportation access, increased insurance and healthcare costs, and access to recreation and subsistence sites may be limited for communities with a high proportion of residents with disabilities. In Southeast Alaska, remoteness of communities and unique transportation needs may further affect groups with disabilities. The Tongass National Forest supports access and maintains some travel routes to remote communities, and management decisions can affect disabled community members disproportionately. Disabilities vary widely and not all disabilities are easily visible to others, so land managers may need to consider planning for a variety of disability access needs.

Table 7 displays the proportion of population by borough that has a disability. The proportion of Southeast Alaska residents with a disability is 14.26%. Four boroughs—Hoonah-Angoon Census Area, Prince of

Wales-Hyder Census Area, Petersburg Borough, and Wrangell City and Borough—exceed this regional level by a substantial amount.

Table 7. Proportion of population with a disability by borough in 2022. Source: U.S. Census Bureau, 2024 (ACS 5-Year Estimates, S1810, 2022)

Borough	Proportion of population with a disability
Haines Borough	15.07%
Hoonah-Angoon Census Area	19.88%
Juneau City and Borough	11.55%
Ketchikan Gateway Borough	14.13%
Petersburg Borough	19.04%
Prince of Wales-Hyder Census Area	21.32%
Sitka City and Borough	14.15%
Skagway Municipality	14.27%
Wrangell City and Borough	23.07%
Yakutat City and Borough	9.63%
Southeast Alaska	14.26%
State of Alaska	13.24%
United States	13.45%

Language Diversity and English Proficiency

English proficiency may increase an individual’s chances at getting hired, retaining a job, accessing and navigating the healthcare system, and making social connections with other English speakers in the area. These factors can greatly affect the physical, economic, and mental well-being of an individual.

Understanding linguistic diversity is important for outreach, community engagement and to ensure communications are understandable to all constituents. Community members that are not proficient in the English language may need information and materials tailored to their language of origin, including culturally competent translations that disperse accurate information about land management activities.

Table 8 shows that most boroughs do not have a significant number of households with limited English-speaking proficiency. Of these households, Spanish, Asian and Pacific Island languages are the most popular languages spoken at home. Hoonah-Angoon Census Area and Sitka City and Borough have the highest levels of limited-English Spanish speaking households, and Juneau, Petersburg, and Ketchikan have the highest level of limited-English households that speak Asian and Pacific Island languages. Hoonah-Angoon also has a high percentage of limited-English households that speak other languages not listed in the American Community Survey (Table 9).

Language revitalization is ongoing and important to the identity of all cultures. As reported in the “Tongass as an Indigenous Place” assessment, Tribes in Southeast Alaska broadly support language revitalization efforts and would like to see place names reintegrated into the landscape through interpretive services and structures.

Table 8. Limited English proficiency in each Southeast Alaska Borough or Census Area. Source: US Census Bureau 2022 (American Community Survey 5-Year Estimates 2021, 2022)

Borough or Census Area	Total Households	Percent of limited English-Speaking Households
Haines Borough	786	0%
Hoonah-Angoon Census Area	867	1.7%
Juneau City and Borough	13,017	2.9%
Ketchikan Gateway Borough	5,568	2.3%
Petersburg Borough	1,254	5.8%
Prince of Wales-Hyder Census Area	2,334	0%
Sitka City and Borough	3,459	1.4%
Skagway Municipality	410	0%
Wrangell City and Borough	928	0%
Yakutat City and Borough	231	0%
<i>Southeast Alaska</i>	<i>28,854</i>	<i>2.2%</i>

Table 9. Primary languages spoken in households with limited English proficiency in each Southeast Alaska Borough and Census Area. Source: US Census Bureau 2022 (American Community Survey 5-Year Estimates 2021, 2022)

Borough or Census Area	Percent of limited English households that speak Spanish	Percent of limited English households that speak other Indo-European languages	Percent of limited English households that speak Asian and Pacific Island languages	Percent of limited English households that speak other languages
Haines Borough	No English limited households reported	No English limited households reported	No English limited households reported	No English limited households reported
Hoonah-Angoon Census Area	33.3%	0%	0%	66.7%
Juneau City and Borough	17.3%	0%	60.4%	22.3%
Ketchikan Gateway Borough	5.5%	7.8%	72.7%	14.1%
Petersburg Borough	6.9%	0%	93.2%	0%
Prince of Wales-Hyder Census Area	No English limited households reported	No English limited households reported	No English limited households reported	No English limited households reported
Sitka City and Borough	75%	0%	14.6%	10.4%
Skagway Municipality	No English limited households reported	No English limited households reported	No English limited households reported	No English limited households reported
Wrangell City and Borough	No English limited households reported	No English limited households reported	No English limited households reported	No English limited households reported
Yakutat City and Borough	No English limited households reported	No English limited households reported	No English limited households reported	No English limited households reported
<i>Southeast Alaska</i>	<i>18.4%</i>	<i>1.6%</i>	<i>61.7%</i>	<i>18.3%</i>

Economy

Management of National Forest System lands contributes to economic sustainability in rural economies. Types of employment, unemployment levels, and income levels can indicate the realities of economic health in the area. In the assessment process, it is important to understand the economic dynamics of Southeast Alaska and to consider the economic sectors that may be affected by an updated Forest plan.

Comparing the local economy to a regional or state benchmark provides insight into the relative economic vitality of a community, while tracking per capita income changes over time can supply information on local economic trends. The management of the Tongass National Forest can influence multiple industries in Southeast Alaska. Timber, fisheries and mining industries have historically been very important to Southeast Alaska economic sustainability.

Recovery from the 2020 COVID-19 pandemic was a key issue for communities in Southeast Alaska. In 2023, there were 2,000 fewer jobs in Southeast Alaska than pre-pandemic 2019, and the region's job recovery was slower than national levels. Retail, government, seafood processing, and leisure and hospitality sectors have not recovered, while mining, health care, construction and Tribal government made modest increases in employment compared to pre-pandemic levels (Southeast Conference 2023).

Employment and Income

Employment

Total employment numbers have fluctuated in the ten years between 2013 and 2023 (Table 10). In 2013, Job numbers totaled 46,015 but decreased slightly each year until 2019 when total employment jumped by over four hundred jobs to the highest level in the ten-year period (46,097 total jobs). The next year, due to COVID-19 shut-downs, the total numbers plummeted by nearly six thousand jobs. Since that time, jobs have slowly increased to 45,882 in 2023, signaling a recovery from pandemic losses. Most economic sectors have followed a similar pattern in employment, with some exceptions. Mining employment and private healthcare employment have steadily increased between 2013-2023. The visitor industry saw a 1,694 increase in jobs between 2022 and 2023, the largest shift in employment in any sector.

Table 10. Number of jobs by economic sector, Southeast Alaska, 2013-2023. Source: Rain Coast Data 2014-2024)

Economic Sector	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Construction	2,268	2,168	2,120	2,033	1,932	1,909	1,903	1,946	2,026	2,038	2,110
Financial	1,825	1,756	1,765	1,688	1,964	1,830	1,833	1,775	1,748	1,746	1,776
Government (includes Coast Guard)	13,718	13,602	13,499	13,052	13,256	13,148	12,994	12,501	12,586	12,644	12,778
Health Care (private only)	2,552	2,465	2,411	2,448	2,732	2,852	3,025	2,926	2,954	3,023	3,095
Information	530	537	563	584	571	541	535	431	428	479	372
Mining	756	783	795	798	886	889	934	861	898	1,002	1,061
Professional and Business Services	2,678	2,756	2,911	2,972	2,869	2,910	2,941	2,725	2,676	2,937	2,746
Retail and Wholesale Trade	4,908	4,636	4,741	4,350	4,474	4,490	4,472	4,131	4,202	4,254	4,515
Seafood	4,252	4,372	4,365	3,854	3,829	3,711	3,743	3,305	3,919	3,653	3,604
Social Services	1,699	1,645	1,662	1,703	1,580	1,476	1,414	1,354	1,382	1,265	1,238
Timber	325	328	321	313	354	337	372	321	312	294	291
Visitor	6,707	6,923	7,401	7,752	7,739	8,004	8,394	4,599	6,252	6,569	8,263
Warehousing, Utilities, Transportation	985	961	974	1,006	903	943	977	983	970	1,968	1,200
Other	2,812	2,762	2,617	2,707	2,551	2,602	2,560	2,328	1,923	2,582	2,833
Total	46,015	45,694	46,145	45,260	45,640	45,642	46,097	40,186	42,276	44,454	45,882

Note: Shading indicates sectors traditionally associated with federal land management.

Economic Sectors

Many economic sectors in Southeast Alaska have direct ties to the Tongass National Forest and rely on it for income and economic well-being. For the Southeast Alaska region, the top five economic sectors for employment are government, the visitor industry, the seafood industry, trade (both retail and wholesale), and the healthcare industry (Rain Coast Data 2023). Table 11 shows earning by industry for 2013, 2018, and 2023.

In 2022, government positions accounted for 32 percent of all employment earnings. Federal employment makes up about 15 percent of government positions and account for 8 percent of all employment earnings. At the state level, the number of government positions has declined by 25 percent in the last 10 years. In total, government employment related earnings totaled almost 843 million dollars in 2022. Local government employment dropped in 2020 but remained at stable level through 2023. Forty-four percent of local government employment is focused on public administration, 40% on public education, and 16 percent on health care. Tribal government accounted for about 3 percent of government sector jobs in 2023 and about 3 percent of total employment earnings.

The visitor industry in Southeast Alaska has grown steadily since 2013, barring 2020, when the COVID-19 pandemic decreased visitation in the area for the year. Between 2022 and 2023, employment in the visitor sector grew by over 1,000 jobs, and employment earnings increased by 105,462,002 dollars. In total, the visitor industry accounted for 13% of total employment earnings in the region in 2023. However, there are workforce challenges to meet the demand of the industry. A business leaders survey from 2023 reports that a lack of affordable housing for workers and a lack of childcare slowed the return of visitor industry employees in the 2021 and 2022 season (Rain Coast Data 2023).

Employment and earnings in the seafood industry have fluctuated in the last 10 years due to several factors. The industry is dependent on fish populations, which can be affected by environmental changes, over-fishing, and disease. In 2023, the commercial fishing and seafood industry employed 3,604 people in Southeast Alaska and accounted for 8 percent of all employment earnings, totaling over 200 million dollars. Harvest and earnings were up from the year before; however, there were fewer seafood industry jobs. In addition, the Alaska Department of Labor and Workforce Analysis reported that out of the 3,434 processing workers in 2020, 73 percent were non-resident workers, indicating that much of the money earned in processing is spent outside of the Southeast Alaska region.

In 2023, the mining industry employed just over 1,000 people in Southeast Alaska, bringing in total employment earnings of over 100 million dollars. This accounts for about 2 percent of all employment earnings in the region. Jobs in mining are the highest paying in the region, averaging more than 126,000 dollars in annual wages, over twice the regional average wage (Southeast Conference 2024).

The timber industry has historically been important economically and culturally in Southeast Alaska. Fluctuations in international and domestic wood product markets and other competitive suppliers over the last few decades have challenged the vitality of the industry. In 2022, 295 individuals were employed by the timber industry, down 16% from 5 years prior. Timber industry earnings during the same time saw modest growth.

Table 11. Total employment earnings for 2013, 2018, 2023 by industry in Southeast Alaska. Source: Rain Coast Data, 2014, 2019, 2024

Economic Sector	2013	2018	2023
Construction	\$149,400,439	\$121,645,702	\$167,381,933
Financial	\$113,891,079	\$122,151,761	\$140,268,119
Government (includes Coast Guard)	\$755,176,583	\$776,927,330	\$892,400,274
Health Care (private only)	\$124,680,038	\$168,608,150	\$248,577,965
Information	\$21,205,936	\$23,548,083	\$17,285,279
Mining	\$79,042,069	\$93,027,768	\$133,808,694
Professional and Business Services	\$116,639,255	\$122,998,495	\$154,868,898
Retail and Wholesale Trade	\$149,135,692	\$145,071,013	\$178,512,788
Seafood	\$244,535,299	\$237,442,458	\$224,837,336
Social Services	\$48,029,336	\$46,442,089	\$46,829,320
Timber	\$17,050,899	\$18,764,683	\$19,241,564
Visitor	\$179,902,469	\$249,342,975	\$347,356,808
Warehousing, Utilities, Transportation	\$61,769,775	\$61,754,395	\$84,253,154
Other	\$79,619,530	\$94,476,751	\$109,101,740
Total	\$2,140,078,399	\$2,282,201,653	\$2,764,723,873

Labor Hours and Unemployment

Unemployment and under-employment levels impact the health of the local economy. These indicators are often low during good economic times and tend to rise during economic slumps. Unemployed and under-employed groups may see burdens due to limited household income, lapses in health insurance access, and increases in mental and emotional stress.

The annual unemployment rate in 2023 for Southeast Alaska was 3.8%, consistent with the national rate of 3.6% (Table 12). Juneau City and Borough and Sitka City and Borough had the lowest unemployment rates that year while Prince of Wales-Hyder Census Area had the highest. Unemployment rates in all boroughs declined between 2018 and 2023, consistent with state and national changes.

Table 12. Annual unemployment rates 2018, 2023 (not seasonally adjusted). Source: Alaska Department of Labor and Workforce Development 2024.

	2018	2023	Change
Haines Borough	8.9	6.6	-2.3
Hoonah-Angoon Census Area	11.7	5.6	-6.1
Juneau City and Borough	4	3	-1
Ketchikan Gateway Borough	5.5	3.7	-1.8
Petersburg Borough	8	5.1	-2.9
Prince of Wales-Hyder Census Area	9.9	6.7	-3.2
Sitka City and Borough	3.8	3	-0.8
Skagway Municipality	8.9	5.8	-3.1
Wrangell City and Borough	6.4	4.9	-1.5
Yakutat City and Borough	7.7	6	-1.7
Southeast Alaska	5.5	3.8	-1.7
Alaska	6	4.2	-1.8
United States	3.9	3.6	-0.3

Table 13 shows the number of weeks worked per year for the population of each Borough and Census Area, which reflects the seasonality of employment in Southeast Alaska. The 2022 American Community Survey data reports that Southeast Alaska’s employment by number of weeks worked are consistent with the state and nation; however a slightly larger proportion of the population in Alaska and Southeast Alaska worked less than 50 weeks in a year compared to national levels.

Table 13. Weeks worked for Southeast Alaska’s population aged 16 to 64, 2022. U.S. Census Bureau (ACS 5-Year Estimates, S2303, 2022).

	Population	50-52 Weeks	48-49 Weeks	40-47 Weeks	27-39 Weeks	14-26 Weeks	1-13 Weeks	Did not work
Haines Borough	1,077	53.9%	1.8%*	8.4%	3.0%*	9.1%	5.9%	18.0%
Hoonah-Angoon Census Area	1,485	43.8%	0.7%*	8.9%	7.8%	15.1%	9.1%	14.6%
Juneau City and Borough	21,511	58.6%	1.9%	4.2%	4.9%	5.3%	6.4%	18.6%
Ketchikan Gateway Borough	9,014	61.9%	1.2%	4.5%	4.2%	4.6%	7.1%	16.6%
Petersburg Borough	2,003	55.8%	2.8%	5.7%	8.7%	7.9%	6.1%	13.0%
Prince of Wales-Hyder Census Area	3,593	47.7%	2.0%	6.6%	8.3%	7.0%	9.8%	18.6%
Sitka City and Borough	5,544	61.9%	2.1%	5.5%	4.1%	4.9%	6.5%	14.9%
Skagway Municipality	930	60.8%	1.7%*	5.8%*	1.4%	11.2%	4.7%	14.4%
Wrangell City and Borough	1,135	53.3%	0.6%	7.1%	3.8%	3.3%	13.5%	18.4%
Yakutat City and Borough	324	45.1%	2.2%*	6.2%*	16.7%	16.0%	7.4%*	6.5%
Southeast Alaska	46,616	57.9%	1.8%	5.0%	5.1%	5.9%	7.0%	17.2%
Alaska	479,838	56.1%	1.5%	5.2%	4.8%	5.5%	6.6%	20.3%
United States	211,674,325	60.1%	1.3%	3.9%	3.4%	3.8%	5.1%	22.4%

Note that the category “Did not work” includes retirees, people who cannot work, and people who do not meet the conditions of unemployed.

Economic Contributions from the Tongass National Forest

The Tongass National Forest directly contributes to the employment and labor income in Southeast Alaska and through the generation of receipts (from uses within the Tongass National Forest where entities pay the US Forest Service), and payments to counties (from the US Forest Service). A breakdown of these contributions can be found at the Forest Service economic contributions dashboard (Forest Level Economic Contributions Dashboard – 2019 | US Forest Service ([usda.gov](https://www.usda.gov))). Table 14 below shows that in 2019, the Tongass National Forest contributed 3,720 direct and secondary jobs in Southeast Alaska.

Table 14. Employment and labor income contributions from Tongass National Forest by program area, 2019. Source: U.S. Department of Agriculture, Forest Service, 2024.

Program Area	Employment (number)	Labor Income (\$)
Minerals & Energy	2,120	112,324,000
Agency Operations	570	44,322,000
All Recreation	670	26,236,000
Forest Products	190	8,844,000
Payments to State/County	170	10,209,000
All Program Areas	3,720	201,935,000

Figure 7 shows the Tongass National Forest’s 2019 estimated contribution to the national gross domestic product (GDP) by industry. Overall, the Forest Service estimates the Tongass National Forest contributed \$410,905,000 to GDP in 2019, primarily from the mining, quarrying, and oil and gas extraction industry. For comparison, the gross domestic product for Southeast Alaska in 2022 (the closest year for which we could find this data by region) was \$5.5 billion (Southeast Alaska by the Numbers 2022).

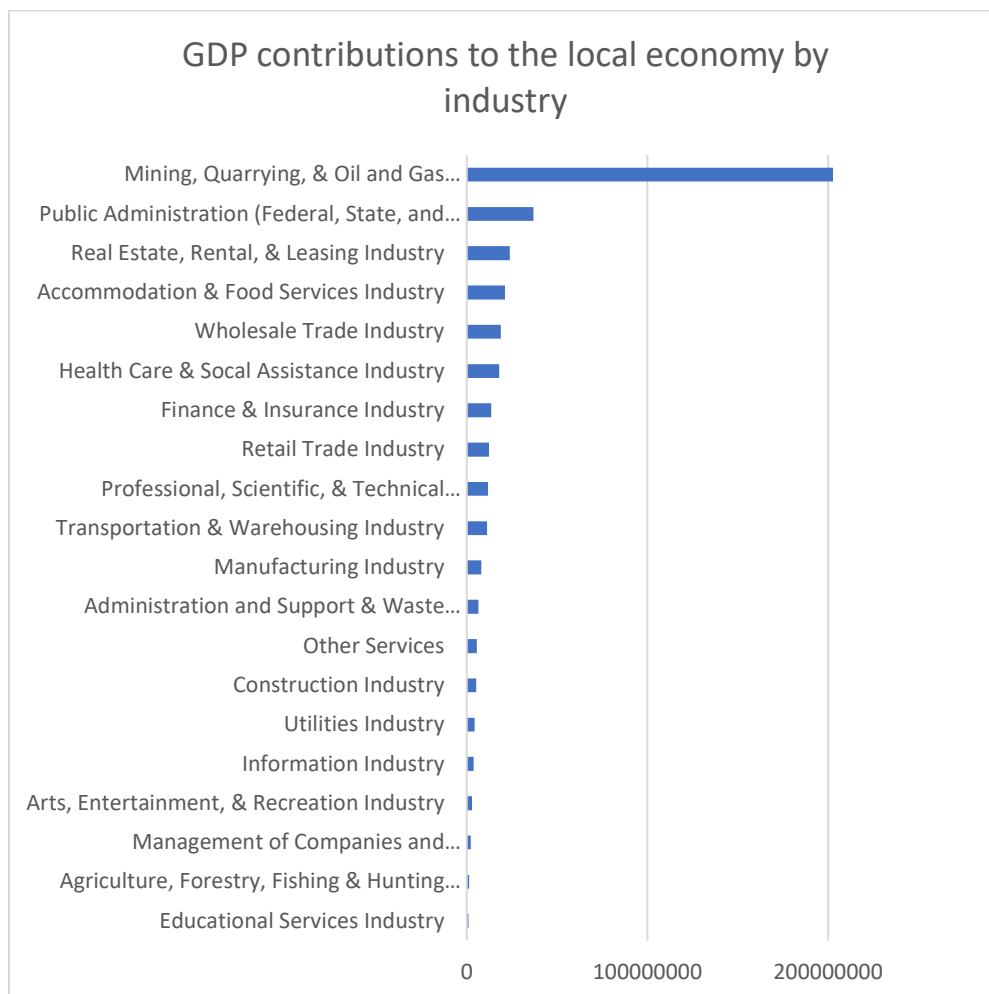


Figure 7. The Tongass National Forest’s GDP contributions to the local economy by industry, 2019. Source: U.S. Forest Service, 2024.

Income

Table 15 shows that the median income of Southeast Alaska in 2022 was more than 10,000 dollars lower than the state median, but greater than the national median income. Cost of living in Alaska is on average higher than the contiguous American states, and therefore the higher median income on the state level may offset some of that cost burden. Compared to the State of Alaska and the United States, some boroughs in Southeast Alaska have not seen income growth to the same extent as state or national levels (Table 15). In these boroughs, it may be harder for households to meet cost of living expenses. In 2022, workers in the Southeast Alaska region made an average of \$76,141 per job. This total is fairly close to the national average that same year. At a borough level, however, there is variability in earnings between communities, with over a \$20,000 difference between the lowest average earning borough (Wrangell) and the highest (Juneau).

Table 15. Median income in the past 12 months by borough 2012-2022. Data is adjusted for inflation. Source: U.S. Census Bureau 2024 (ACS 5-Year Estimates, S1901, 2012, 2022).

	2012	2022	Percent Change
Haines Borough	\$50,208	\$68,276	36.0%
Hoonah-Angoon Census Area	\$48,942	\$62,344	27.4%
Juneau City and Borough	\$78,947	\$95,711	21.2%
Ketchikan Gateway Borough	\$59,736	\$82,763	38.5%
Petersburg Borough	\$61,696	\$77,826	26.1%
Prince of Wales-Hyder Census Area	\$45,774	\$61,779	35.0%
Sitka City and Borough	\$66,895	\$95,261	42.4%
Skagway Municipality	\$71,583	\$79,583	11.2%
Wrangell City and Borough	\$47,348	\$61,000	28.8%
Yakutat City and Borough	\$71,705	\$76,875	7.2%
Southeast Alaska	\$60,283	\$76,141	26.0%
State of Alaska	\$69,917	\$88,121	26.0%
United States	\$53,046	\$75,149	41.7%

Non-Labor Income

Non-Labor income is any income that does not come from providing a supply of labor. This type of income can come from investments; workers and retirement benefits; or social programs like Medicaid, unemployment insurance compensation, and other public assistance programs.

In the 2022 American Community Survey data on labor and non-labor income, a little over 20% of Southeast Alaska's income is attributed to a non-labor source (Table 16). Social security and retirement income accounted for the majority of that 20%, indicating a large percentage of retirees in Southeast Alaska, and consistent with aging data for the region, discussed above.

Public assistance is largely accessed by populations with a higher proportion of retired people or people living with disabilities. Non-labor income that comes from public assistance programs and food stamps and can indicate higher social or economic assistance needs. Prince of Wales-Hyder Census Area and Hoonah Angoon Census Area have notably high proportions of income attributed to SNAP benefits, which directly addresses food insecurity. These communities may be more reliant on harvesting and hunting to bolster food supply. According to the Alaska Division of Public Assistance (2024), 23,954 Southeast Alaskans were enrolled in public assistance programs in April of 2024.

Table 16. Proportion of labor and non-labor income sources by borough. Source: U.S. Department of Commerce. 2023. Census Bureau, American Community Survey Office, Washington, D.C., as reported in Headwaters Economics' Economic Profile System (headwaterseconomics.org/eps)

	Labor Earnings	Social Security	Retirement Income	Supplemental Security Income	Cash Public Assistance Income	SNAP* (Previously Food Stamps)
Haines Borough	65.9%	39.8%	27.1%	7.1%*	3.8%*	2.4%*
Hoonah-Angoon Census Area	73.5%	41.5%	33.6%	3.6%	7.3%	15.5%
Juneau City and Borough	79.5%	27%	29%	4.2%	6.1%	7%
Ketchikan Gateway Borough	79.7%	29.9%	25.6%	4.3%	6.4%	9.8%
Petersburg Borough	80.6%	34.5%	27.5%	5.3%	8.6%	10.6%
Prince of Wales-Hyder Census Area	78.1%	32.6%	21.8%	4%	6%	15.4%
Sitka City and Borough	85.3%	27.3%	24.8%	2.9%	5.6%	6.2%
Skagway Municipality	76.8%	31%	29.3%	1.5%*	2.7%	1.7%*
Wrangell City and Borough	69.7%	45.8%	31.5%	2.5%	3.4%	13.4%
Yakutat City and Borough	80.1%	46.8%	19%	3%*	7.8%*	3.9%*
Southeast Alaska	79.3%	30%	27.3%	4.1%	6.1%	8.5%

*Supplemental Nutrition Assistance Program

Spatial concentration mapping of public assistance use shows that more public assistance is used in small population communities, like Hoonah, Angoon, Hydaburg, and Petersburg (Figure 8). Larger communities like Sitka, Juneau, and Ketchikan typically have lower concentrations of public assistance use, but also contain high concentration areas. For instance, Mendenhall Valley in Juneau Alaska has a very high concentration of public assistance users.

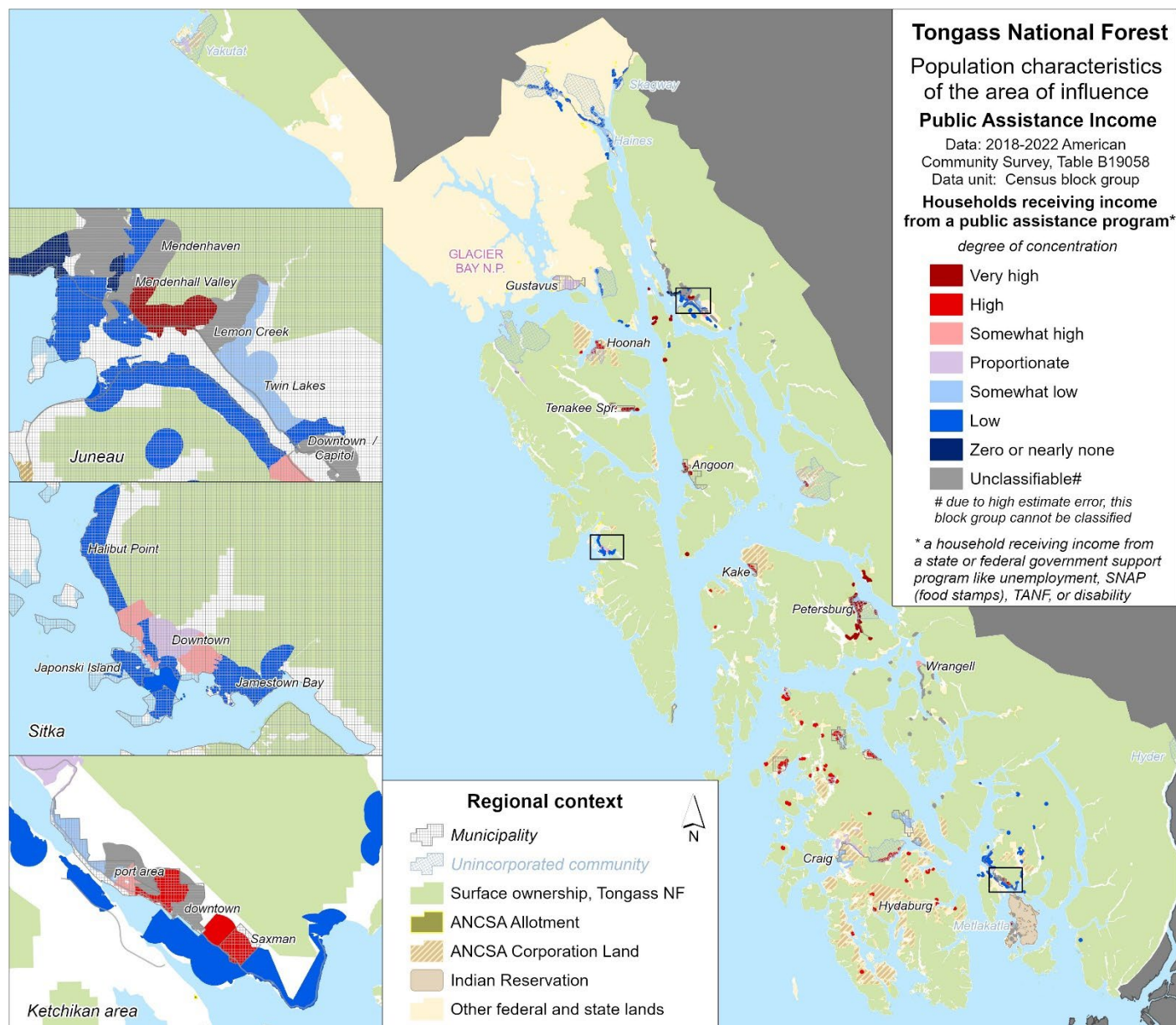


Figure 8. Map of households receiving public assistance for Southeast Alaska. The map shows that there is not a strong pattern of higher and lower concentrations of households receiving public assistance. Island communities with smaller populations tend to have higher concentrations, and low concentrations are more typical in the larger cities, though each has one or more block groups with somewhat high to high concentrations. Source: U.S. Forest Service GTAC 2024

Cost of Living and Poverty

On a national inflation level, household goods are approximately 1.3 times more expensive in 2022 than in 2012. Because of the remoteness of Alaska, many household goods and food must be imported from the lower 48, making the cost of living in Alaska higher than much of the contiguous United States. In 2023 the Alaska Department of Labor and Workforce Development reported that the cost of living in Juneau was about 28% above the national average, and even higher for utilities payments and healthcare costs (Robinson and Schultz, 2023).

Poverty levels in Southeast Alaska remained stable between 2017 and 2022, while state levels increased slightly, and national levels decreased (Table 17). In most boroughs, the poverty level decreased by less than a percent, but Haines Borough, Sitka City and Borough and Petersburg Borough saw a steeper decline than other boroughs, while Yakutat saw a steeper increase.

Table 17. Percent of population below poverty level, 2017 and 2022. Source: U.S. Census Bureau 2024 (ACS 5-Year estimates, S1701, 2017, 2022).

	2017	2022	Percent Change
Haines Borough	8.4%	5.8%	-2.6%
Hoonah-Angoon Census Area	11.1%	11.6%	0.5%
Juneau City and Borough	7.4%	6.9%	-0.5%
Ketchikan Gateway Borough	10.6%	9.7%	-0.9%
Petersburg Borough	7.8%	4.6%	-3.2%
Prince of Wales-Hyder Census Area	16.0%	15.3%	-0.7%
Sitka City and Borough	9.2%	6.9%	-2.3%
Skagway Municipality	5.6%	6%	0.6%
Wrangell City and Borough	11.7%	10.1%	-1.6%
Yakutat City and Borough	6.2%	10%	3.8%
Southeast Alaska	9.2%	8.2%	-0.1%
State of Alaska	10.2%	10.5%	0.3%
United States	14.6%	12.5%	-2.1%

Spatial concentration mapping for low-income populations does not reveal much of a pattern, however, Native Village statistical areas and ANCSA corporation areas tended to associate with a higher concentration of low-income individuals and communities like Juneau, Sitka, and Ketchikan all had at least one area with a high concentration of low-income populations (Figure 9).

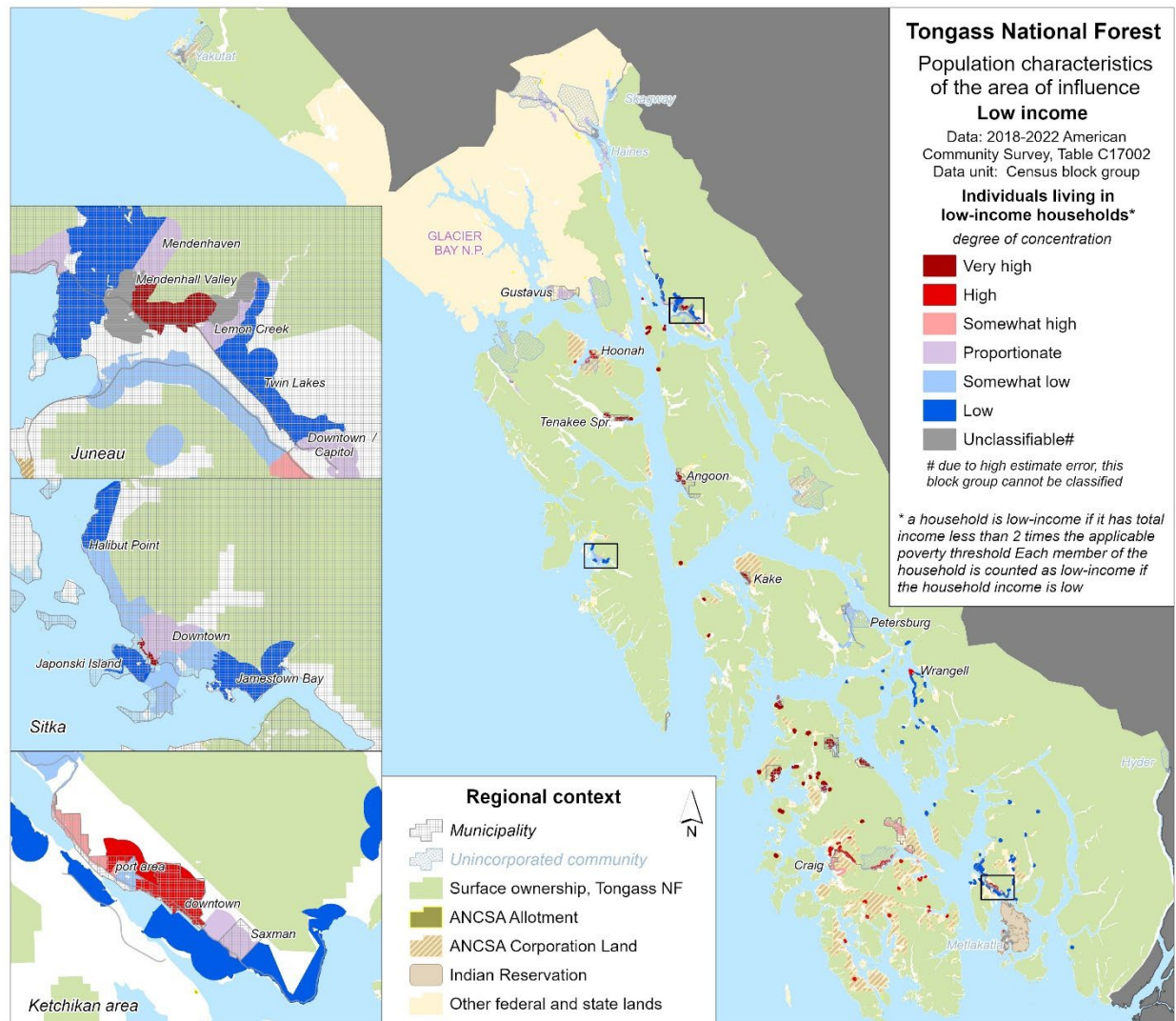


Figure 9. Concentrations of Low-Income population in Southeast Alaska. The maps show that there is no one clear spatial pattern for low income households in the Tongass area of influence, there are several themes. There is a tendency for high concentrations of low income households to occur in Native Village statistical areas, each of the region's largest towns has a high concentration area within it, and communities in the Chilkat/Chilkoot inlets typically lack high concentrations of low-income population. Source: U.S. Forest Service GTAC, 2024

Energy Costs

High energy costs can greatly inflate cost of living in a community and tends to impact low-income and BIPOC communities disproportionately ([Drehobl et al. 2020](#)). There are several reasons why energy burden may exist in a community. Homes may be older, less energy efficient, and rely on more expensive fuel systems. Likewise, cost of fuel could be inflated due to import costs to an area. Communities facing high energy costs may also face barriers to accessing new and more efficient energy technology due to affordability issues (Drehbol et al. 2020). As a state, Alaska's per capita energy consumption outpaces other states due to the harsh climate and energy-intensive industry sectors. About 50 percent of households in Alaska use natural gas for heating purposes, and prices have remained relatively stable over time. However, natural gas use is largely confined to a few more urban areas in Alaska. Rural residents

tend to rely on oil or diesel-fueled generators, making these energy sources particularly important in the state (Robinson and Schultz 2023).

Table 18 displays average annual energy costs and energy burden for each borough. Haines and Yakutat face the highest energy burdens in the region, 3 to 4 percent higher than the regional level. Juneau and Ketchikan face the lowest energy burdens, consistent with state levels. Every borough in Southeast Alaska pays about 1,000 dollars more in average annual energy costs than the national levels, signaling a high burden for households in the region, and particularly in boroughs where the average annual income is significantly lower than state and national averages, like Wrangell, Prince of Wales-Hyder, Hoonah, Angoon, and Haines.

Table 18. Average annual energy costs and energy burden (percent of household income spent on energy costs annually) for 2022. Source: U.S. Department of Energy Office of State and Community Energy Programs LEAD Tool, 2024.

Borough or Census Area	Average Annual Energy Cost	Energy Burden
Haines Borough	\$6,517	8%
Hoonah-Angoon Census Area	\$4,671	6%
Juneau City and Borough	\$3,416	3%
Ketchikan Gateway Borough	\$3,453	3%
Petersburg Borough	\$5,321	5%
Prince of Wales-Hyder Census Area	\$5,394	6%
Sitka City and Borough	\$5,857	6%
Skagway Municipality	\$4,367	5%
Wrangell City and Borough	\$3,901	5%
Yakutat City and Borough	\$6,527	7%
Southeast Alaska	\$3,927	4%
Alaska	\$3,866	3%
United States	\$2,427	2%

Housing Costs & Living Situations

High housing costs can indicate a higher economic burden on a community, which can in turn affect population levels, workforce retainment and public assistance needs. Across Alaska, communities are calling the lack of affordable housing a crisis. A March 2023 survey of rental prices across 10 communities in the state showed steep increases in rental prices in just the last year. Most notably, Ketchikan Gateway Borough rents had risen 16% since 2022 ([Schultz and Kreiger 2023](#)). This trend is consistent with national trends; however, Alaska's high annual inflation rates, lowering vacancy rates, declines in new house construction and rising home prices may leave communities vulnerable to housing insecurity. As discussed in the employment section of this assessment, business owners have expressed worries that there is a lack of affordable housing for workers, and a continuation of these trends could put more strain on economic sectors that rely on large, seasonal workforces. In 2022, most of the occupied housing in Southeast Alaska was owned by the occupant (Table 19). A lack of available rental housing in the competitive rental market and higher rental costs may make individuals who can afford a house more interested in the housing stability that comes with owning a house.

Table 19. Percentage of households that rent versus own properties in Southeast Alaska 2022 Source: U.S. Census Bureau, 2024(ACS 5-Year Estimate, DP04, 2022).

Borough or Census Area	Percent Rent	Percent Own
Haines Borough	30%	70%
Hoonah-Angoon Census Area	25%	75%
Juneau City and Borough	36%	64%
Ketchikan Gateway Borough	34%	66%
Petersburg Borough	27%	73%
Prince of Wales-Hyder Census Area	27%	73%
Sitka City and Borough	36%	64%
Skagway Municipality	34%	66%
Wrangell City and Borough	35%	65%
Yakutat City and Borough	44%*	56%*
Southeast Alaska	34%	66%

* Denotes low reliability estimate due to high margin of error

Rent and mortgage payments are highest in Juneau City and Borough (Table 20). While mortgage payments have decreased in some boroughs over the last 5 years, rental prices have steadily increased across most of boroughs. Yakutat City and Borough rental prices have increased the most over the time period in question; by 27 percent. Interestingly, Yakutat also saw a steep decrease in monthly mortgage payment prices, making renting much more expensive in the borough. In small communities like Yakutat, rentals may be scarce and drive rental prices up. Preliminary studies on rental prices for 2023 from Alaska Department of Labor and Workforce Development show that in selected Southeast Alaska boroughs, prices have increased from the 2022 averages.

Table 20. Median rent and mortgage prices in 2018 and 2022. Source: U.S. Census Bureau 2024 (ACS 5-Year Estimates DP04, 2018, 2022).

Borough or Census Area	Median Rent 2010	Median Rent 2022	Change	Median Mortgage 2010	Median Mortgage 2022	Change
Haines Borough	\$924	\$889	-4%	\$1,059	\$895	-15%
Hoonah-Angoon Census Area	\$897	\$996	11%	\$470	\$427	-9%
Juneau City and Borough	\$1,226	\$1,464	19%	\$1,762	\$1,660	-6%
Ketchikan Gateway Borough	\$1,165	\$1,275	9%	\$1,380	\$1,553	13%
Petersburg Borough	\$950	\$1,074	13%	\$792.00	\$1,049	32%
Prince of Wales-Hyder Census Area	\$834	\$883	6%	\$437.00	\$539	23%
Sitka City and Borough	\$1,123	\$1,309	17%	\$1,132	\$1,538	36%
Skagway Municipality	\$1,056	\$1,044	-1%	\$1,294	\$861	-33%
Wrangell City and Borough	\$809	\$966	19%	\$656	\$698	6%
Yakutat City and Borough	\$1,027	\$1,304	27%	\$696	\$498	-28%
Southeast Alaska	\$1,001	\$1,120	12%	\$968	\$972	0%
Alaska	\$1,231	\$1,345	9%	\$1,420	\$1,548	9%
United States	\$1,023	\$1,268	24%	\$1,113	\$1,282	15%

Most homeowners in Southeast Alaska spend more than 20 percent of their household income on mortgage payments, while the national median in 2022 was 17 percent. Likewise, in 2022 the national median for rental payments was 32 percent of household income (Board of Governors of the Federal Reserve System [2024](#)). Paying more than 30 percent of household income on housing costs can increase

economic burdens for individuals, increasing the high cost of living for an area. A high proportion of renters in Juneau, Ketchikan, and Sitka pay more than 30 percent of their income on rent (Table 21). These same boroughs see a similar trend in mortgage payment burden. Monthly mortgage payments in these places are higher compared to other boroughs, as are rental prices. While the cost burden to renters and homeowners in Southeast Alaska may be slightly lower than the national levels, in the context of the high cost of living detailed above, as well as the concerns about rental property shortages reported by business leaders, there is a pressing need for affordable housing in the area.

Table 21. Percent of households with monthly housing costs greater than 30 percent of household income. Source: U.S. Census Bureau 2024 (ACS 5-Year Estimates, S2503, 2018, 2022).

	Renter Occupied 2018	Renter Occupied 2022	Change	Owner Occupied 2018	Owner Occupied 2022	Change
Haines Borough	17.7%*	24.4%*	7%	25.9%*	24.6%*	-1%
Hoonah-Angoon Census Area	17.2%*	27.1%*	10%	13.7%*	12.8%*	-1%
Juneau City and Borough	38.1%	35.9%	-2%	22.6%	21.7%	-1%
Ketchikan Gateway Borough	50.4%	47.2%	-3%	24.5%	25.2%	1%
Petersburg Borough	42.3%	41.0%	-1%	13.6%	17.2%*	4%
Prince of Wales-Hyder Census Area	29.4%	31.5%	2%	11.7%	11.7%	0%
Sitka City and Borough	40.0%	46.0%	6%	25.8%	21.8%	-4%
Skagway Municipality	21.1%*	17.0%*	-4%	17.0%*	18.6%*	2%
Wrangell City and Borough	40.0%	32.5%*	-7%	14.9%*	13.6%*	-1%
Yakutat City and Borough	24.1%*	9.8%*	-14%	15.2%*	3.1%*	-12%
Southeast Alaska	39.0%	38.1%	-1%	21.3%	20.6%	-1%
Alaska	42.3%	41.7%	-1%	22.8%	22.8%	0%
United States	48.8%	48.5%	0%	23.9%	22.7%	-1%

* Denotes low reliability estimate due to high margin of error

Land Ownership

Presence of Federal Land, Receipts, and Federal Land Payments

Boroughs and census areas containing federal lands are typically more dependent economically, infrastructurally, and culturally on land management decisions. Federal lands cover 94% Southeast Alaska (Rain Coast Data 2024), including Tongass National Forest (Forest Service), Glacier Bay National Park and Preserve (National Park Service), Wrangell-St. Elias National Park and Preserve (National Park Service), Klondike Gold Rush National Historical Park (National Park Service), and Bureau of Land Management. The Forest Service manages land in every borough, indicating that communities across Southeast Alaska may experience impacts from changes in federal land management policies (Table 22).

In addition to supporting employment, federal lands produce revenue for local governments through federal land payments and receipts from commercial activities. Receipts from commercial activities are payments to the Federal government by entities who are operating within the boundaries of the Tongass National Forest. Federal land payments are funded by federal appropriations to compensate communities for non-taxable federal land. These may be paid in the form of payments in lieu of taxes, agency revenue sharing, and federal mineral royalties. These payments supplement other Federal land receipt-sharing payments received by local governments, including timber and mineral material sales receipts and Secure Rural Schools Payments.

Table 22. Percentage of land in each borough managed by the US Forest Service. Source: U.S. Geological Survey, Gap Analysis Program. 2022. Protected Areas Database of the United States (PADUS) version 3.0, as reported in *Headwaters Economics' Economic Profile System* (headwaterseconomics.org/eps).

	Total acres (approx.)	Percent Forest Service managed acres
Haines Borough	1,515,620	51%
Hoonah-Angoon Census Area	4,172,860	47%
Juneau City and Borough	1,739,640	94%
Ketchikan Gateway Borough	3,096,800	97%
Petersburg Borough	1,867,880	95%
Prince of Wales-Hyder Census Area	3,356,660	80%
Sitka City and Borough	1,838,080	97%
Skagway Municipality	276,340	31%
Wrangell City and Borough	1,639,190	97%
Yakutat City and Borough	4,845,900	25%
Southeast Alaska	24,348,970	68%

Payment in Lieu of Taxes (PILT) are issued each year to mitigate a county's loss in property taxes for tax-exempt Federal lands. Payments are based on community population, revenue-sharing payments, and the proportion of Federal Land in the county. In 2022, Southeast Alaska was issued over 8 million dollars in payments in lieu of taxes. Because they have the greatest proportion of federal lands, Juneau City and Borough, Ketchikan Gateway Borough, Yakutat City and Borough, and Prince of Wales-Hyder census area consistently receive the greatest payments in lieu of taxes (Table 23), which in turn fund local public works projects and important services.

Table 23. Payments In-lieu of Taxes, from all Federal agencies, 2019-2022. Source: Department of the Interior 2024

Borough	2019	2020	2021	2022
Haines Borough	\$372,862	\$382,424	\$391,954	\$401,458
Hoonah-Angoon Census Area	\$399,865	\$409,282	\$415,093	\$423,272
Juneau City and Borough	\$2,373,449	\$2,472,385	\$2,527,473	\$2,677,870
Ketchikan Gateway Borough	\$1,188,897	\$1,219,385	\$1,249,843	\$1,280,362
Petersburg Borough	\$611,636	\$612,876	\$631,144	\$651,615
Prince of Wales-Hyder Census Area	\$1,047,460	\$1,069,164	\$1,085,856	\$1,110,885
Sitka City and Borough	\$714,261	\$778,774	\$807,410	\$877,397
Skagway Municipality	\$197,074	\$198,607	\$210,375	\$218,598
Wrangell City and Borough	\$469,959	\$476,259	\$483,502	\$496,223
Yakutat City and Borough	\$112,783	\$114,926	\$111,890	\$125,934
Southeast Alaska Total	\$7,488,246	\$7,734,082	\$7,914,540	\$8,263,614

Federal lands produce receipts from commercial activities, such as campground fees. Each year the Forest Service releases data on gross national forest fund receipts it receives from commercial activities. Receipts are grouped in nine class codes (sources of receipts) associated with the national forest fund (NFF) and five additional class codes of receipts, deposits, or credits associated with the timber sale program. For more information on all codes, see [Headwaters Economics 2019](#). The NFF classes related to Tongass receipts are described below:

- Class 1, Timber: amounts collected from the sale of timber and other forest products
- Class 3, Land Use: amounts collected from pasture permit fees and trespass settlements
- Class 4, Recreation Special Uses: amounts collected for recreation fees (excepting user fees)
- Class 5, Power: amounts collected for permits and easements for power generating and transmitting projects
- Class 6, Minerals: amounts collected from mineral sales and permit fees

The additional class codes of receipts, deposits, or credits associated with the timber sale program related to the Tongass are described below:

- KV Revenue: amounts collected under the Knutson-Vandenberg Act which authorizes collection for sale area improvement work, including reforestation.
- Specified Road Credits: credits to payments by purchasers of timber sale contracts
- Salvage Sales: payment for salvageable material used in the removal of timber damaged by natural events.

Overall, total NFF receipts have remained relatively stable over the last ten years, however some individual receipt classes are highly variable, especially timber and minerals (Table 24). Timber receipts have dramatically decreased in the last ten years, while other receipt classes have increased moderately. Power, mineral, and land use classifications have all increased since 2013. KV revenue collected from timber purchasers has increased while receipts from salvage sales declined.

Table 24. Tongass National Forest Statement of Receipts 2013, 2018, 2023. Source: U.S. Department of Agriculture, Forest Service 2024a

Activity Class	2013	2018	2023
Class 1- Timber	\$360,333	\$174,428	\$5,956
Class 2- Grazing East	\$0.00	\$0.00	\$0.00
Class 3- Land Use	\$332,954	\$476,157	\$502,340
Class 4- Recreation Spec. Uses	\$111,319	\$75,299	\$96,426
Class 5- Power	\$83,797	\$134,247	\$161,597
Class 6- Minerals	\$9,420	\$0.00	\$112,835
Class 7- Recreation User Fees	\$0.00	\$0.00	\$0.00
Class 8- Grazing West	\$0.00	\$0.00	\$0.00
Class 9- Quartz Crystals	\$0.00	\$0.00	\$0.00
Total National Forest Fund Receipts	\$897,823	\$860,130.67	\$879,155
KV	\$26,865	\$92,445.29	\$181,302
Timber Purchaser Road Credits	\$0.00	\$0.00	\$0.00
Specified Road Credits	\$0.00	\$33,780	\$4,016
Salvage Sales	\$181,246	\$152,069	\$40,817
TPTP Revenue	\$0.00	\$0.00	\$0.00
Grand Total	\$1,105,933	\$1,138,424	\$1,105,290

The Secure Rural Schools program was established by the Secure Rural Schools and Community Self-Determination Act of 2000. It replaced the 25 percent revenue sharing model with a guaranteed level of payments, giving forest-dependent rural communities more reliable funding by decoupling payments from forest commercial activity. In 2022, Southeast Alaska received over 12 million dollars in Secure Rural

Schools payments (Table 25). Ketchikan Gateway Borough and Wrangell City and Borough received the most in payments. Hoonah-Angoon Census area and Prince of Wales-Hyder Census area did not receive Secure Rural Schools payments.

Table 25. Secure Rural Schools Payments, 2022. Source: U.S. Department of Agriculture Forest Service 2022

Borough	SRS payment	Percent of SRS funding from Tongass National Forest
Haines Borough	\$251,138	100%
Hoonah-Angoon Census Area	N/A	N/A
Juneau City and Borough	\$714,616	100%
Ketchikan Gateway Borough	\$1,398,098	100%
Petersburg Borough	\$708,095	100%
Prince of Wales-Hyder Census Area	N/A	N/A
Sitka City and Borough	\$776,942	100%
Skagway Municipality	\$41,425	100%
Wrangell City and Borough	\$1,007,897	100%
Yakutat City and Borough	\$636,966	100%
Unorganized	\$6,578,263	55%
Southeast Alaska	\$12,113,440	76%

Community Resiliency

The link between forest management and the well-being of communities in forested areas has traditionally been defined by forest sector employment. Attempts to redefine this relationship have produced more comprehensive approaches by combining economic, ecologic, and social indicators to evaluate community sustainability and well-being. The concept of community resilience has emerged, which focuses on the ability of a community to successfully cope with and adapt to natural disturbances and change. Community resilience is the capacity of a community to mitigate, adapt to, and overcome changes directly or indirectly related to Forest Service management of the Tongass National Forest.

During community feedback sessions (explained in the existing information section of this assessment), Forest Service staff asked community members what existing conditions need to be addressed in forest management. Communities were most concerned about climate change and environmental stressors, increased tourism and its strain on communities, the future of timber harvesting and resource management for functioning terrestrial and aquatic ecosystems. All of these conditions and trends can put stress on communities.

Community resilience is a complex web of adaptive capacities that can affect mental, behavioral, and physical health of a community and are important indicators of capacity to withstand the risks of disasters and adapt to large scale changes (Norris et al. 2008). Resilience is built by community participation, protecting social support, creating strong links between community organizations, and minimizing resource inequities. In contrast, social vulnerability refers to socioeconomic factors, such as poverty and lack of access to healthcare, that adversely affect communities that encounter hazards and other community level stressors.

The Social Vulnerability Index (SVI), produced by the Center for Disease Control, is a place-based mapping application designed to identify and quantify communities experiencing social vulnerability to better prepare for emergency events or sudden change. Social vulnerability index rankings are at the

census tract level and can be compared against state or national benchmarks. The Social Vulnerability Index considers factors like socioeconomic status, household makeup, disability, minority status, language, housing, and transportation access and assesses vulnerability on a scale from 0 to 1, with 1 the highest vulnerability. Compared to national levels, the Prince of Wales-Hyder Census Area has the highest social vulnerability index score in Southeast Alaska of 0.818 and Skagway has the lowest of 0.333 (Table 26). Southeast Alaska vulnerability scores are lower compared to State levels because several boroughs on Alaska’s Northwest coast have high social vulnerability.

Table 26. Social Vulnerability levels in Southeast Alaska compared to national levels and state levels, 2022 data. Source: CDC Social Vulnerability Index 2024

Borough or Census Area	SVI using national benchmark	SVI using state benchmark
Haines Borough	0.4594 Low to Medium	0.069 Low
Hoonah-Angoon Census Area	0.6376 Medium to High	0.5517 Medium to High
Juneau City and Borough	0.3528 Low to Medium	0.1034 Low
Ketchikan Gateway Borough	0.5027 Medium to High	0.3103 Low to Medium
Petersburg Borough	0.6857 Medium to High	0.5862 Medium to High
Prince of Wales-Hyder Census Area	0.818 High	0.6897 Medium to High
Sitka City and Borough	0.4442 Low to Medium	0.3448 Low to Medium
Skagway Municipality	0.3328 Low to Medium	0.1379 Low
Wrangell City and Borough	0.5342 Medium to High	0.4483 Low to Medium
Yakutat City and Borough	0.3723 Low to Medium	0.2069 Low

Education

Education is linked with many positive socio-economic outcomes; it builds human capital (the economic value of experience and skills in a work setting) and social capital (the value of creating and maintaining relationships) and increases community and individual resiliency. Communities with high education levels often have lower unemployment rates ([U.S. Bureau of Labor Statistics 2024](#)), positive economic growth ([Lutz et al. 2008](#)), and higher health metrics ([Baker et al. 2011](#)). Remote areas often have lower education attainment levels than more urban areas for a few reasons. Physical remoteness and income barriers may prevent rural youth from reaching similar educational attainment as urban counterparts. There is also less workforce demand in rural areas for college degree holders, resulting in a migration to urban areas with a wider diversity of jobs and higher earning. However, strong community and family investment, as well as the natural amenities of a rural area, may mitigate these effects ([Marre, 2014](#)).

Educational attainment in Southeast Alaska is comparable to the U.S. population. Table 27 shows that 94.3 percent of people 25 years or older in Southeast Alaska had a high school (or equivalent) degree, 33.3 percent had a bachelor’s degree or higher, and 11.5 percent had a graduate or professional degree. Haines Borough and Juneau City and Borough have the highest proportion of graduate or professional degree holders, while Petersburg Borough and Wrangell City and Borough had the highest proportion of citizens with no high school degree. Southeast Alaska has a lower rate of people who did not graduate high school than the national average.

Table 27. Education attainment in Southeast Alaska Boroughs, 2022. Source: U.S. Census Bureau 2024 (ACS 5-Year Estimates, DP02, 2022)

	No High School degree	High School graduate	Associate's degree	Bachelor's degree or higher	Graduate or professional degree
Haines Borough	2.3%	97.7%	4.4%	33.7%	16.9%
Hoonah-Angoon Census Area	6.0%	94.0%	9.6%	27.5%	7.1%
Juneau City and Borough	4.6%	95.4%	9.2%	40.7%	14.9%
Ketchikan Gateway Borough	5.3%	94.7%	6.6%	28.5%	9.2%
Petersburg Borough	13.0%	87.0%	8.0%	24.8%	7.1%
Prince of Wales-Hyder Census Area	7.5%	92.5%	8.6%	19.4%	5.8%
Sitka City and Borough	4.8%	95.2%	9.9%	34.2%	11.3%
Skagway Municipality	7.3%	92.7%	6.4%	27.8%	5.8%
Wrangell City and Borough	12.9%	87.1%	9.6%	18.0%	4.1%
Yakutat City and Borough	6.0%	94.0%	10.3%	10.8%	1.3%
Southeast Alaska	5.7%	94.3%	8.5%	33.3%	11.5%
Alaska	6.5%	93.5%	8.9%	30.7%	11.5%
United States	10.9%	89.1%	8.7%	34.3%	13.4%

The decline in school-aged populations across the region, as well as budget shortfalls, has led some school boards to consider closing schools ([Anastas 2022, 2024](#)). Schools may be consolidated, leading to longer commute times and larger class sizes. These factors may affect student success. The Alaska Developmental Profile (ADP) for each school district in Alaska is provided in Table 28 (Alaska Department of Education and Early Development 2024). The profile reports data for 13 developmental goals in kindergarten students in five categories: physical well-being, social and emotional development, approaches to learning, cognition and general knowledge, and communication, language and literacy. Most school districts in Southeast Alaska exceeded the state average in all 13 goals, although due to the sample size in some rural districts, data is sometimes not listed or listed as a range.

Table 28. Alaska Developmental Profile scores, 2023-2024 ADP Source: Alaska Department of Education and Early Development, 2024. Asterisks indicate insufficient data available.

Group	Count of students with ratings	Consistently met all 13 goals	Consistently met at least 11 of the 13 goals
Haines Borough School District	20	30%	55%
Hoonah City School District	4	*	*
Juneau Borough School District	238	30.67%	44.12%
Ketchikan Gateway Borough School District	137	19.71%	35.77%
Petersburg Borough School District	38	42.11%	63.16%
Sitka School District	67	25.37%	34.33%
Skagway School District	7	<=40%	>=60%
Wrangell Public School District	19	42.11%	52.63%
Yakutat School District	4	*	*
Craig City School District	49	30.61%	42.86%
Annette Island School District	17	<=20%	<=20%
Kake City School District	10	<=20%	<=20%

Group	Count of students with ratings	Consistently met all 13 goals	Consistently met at least 11 of the 13 goals
Klawock City School District	15	46.67%	46.67%
Hydaburg City School District	6	50%	50%
Southeast Island School District	9	<=25%	<=25%
Chatham School District (Angoon)	6	<=40%	<=40%
Statewide	8,148	18.35%	30.87%

Access to Transportation

The Climate and Economic Justice Screening Tool does not list any census tracts in Southeast Alaska as having significant transportation barriers or proximity to traffic. Airplane and boating infrastructure is uniquely important in the region due to island geography. Public and private boat travel is a necessity to travel in some areas. Waterways are also used for the cruise ship industry in Alaska, which has grown steadily over the last ten years. The Alaska Marine Highway system contains a fleet of more than ten vessels that carry passengers and vehicles each year. An updated draft of Alaska Department of Transportation's 2014 Southeast Alaska Transportation plan was recently released for public comment. The plan seeks to construct roads, ferry terminals and airports in more isolated areas of the region, and also retire ferries with low travel demand and replace older models (Southeast Region Planning Division 2014). Projects are projected to be completed in 2031. Forest Service management decisions on travel management and infrastructure could affect these connectivity proposals.

Access to Broadband Internet and Computer Technology

Access to broadband internet is increasingly important to access educational and employment opportunities, connect with community resources, and gather information. Access to the internet also allows quick and efficient information dispersal in the event of an emergency, making internet access a key emerging environmental justice indicator. Internet access is tracked locally by the Alaska Division of Community and Regional Affairs, which reports that parts of Hoonah-Angoon Census Area and Prince of Wales-Hyder Census Area have a larger proportion of households with no access to the internet than the rest of the region (Figure 10). These two areas have higher social vulnerability index scores than many communities in Southeast Alaska and internet access challenges may compound existing vulnerabilities.

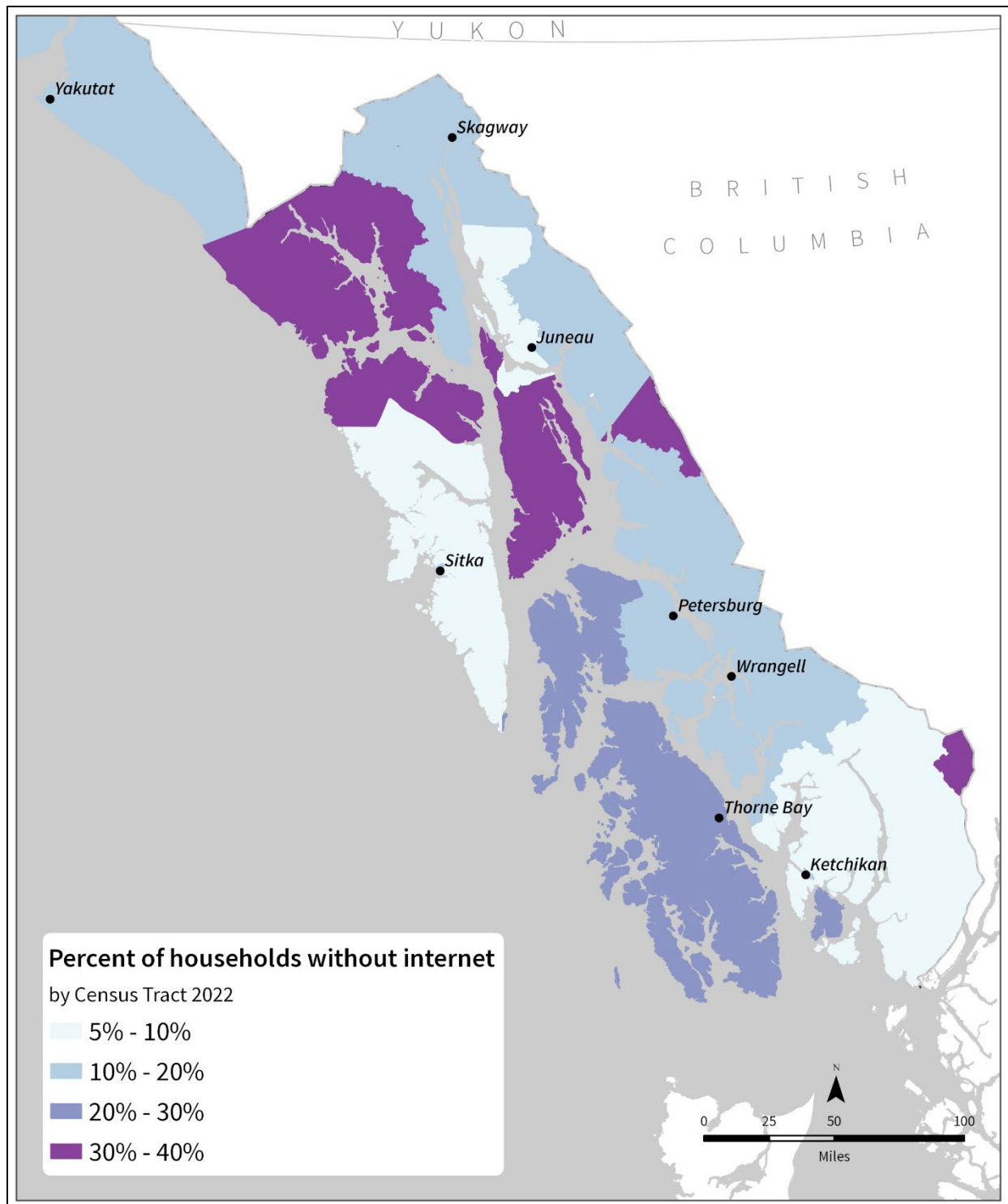


Figure 10. Map of Southeast Alaska internet access. Source: Alaska Division of Community and Regional Affairs 2022. For more information on internet and broadband infrastructure, see the Alaska Division of Community and Regional Affairs 2022 Taskforce report.

Access to Healthcare

Access to quality healthcare in rural and remote areas is an important indicator of community resilience. Healthier communities create less of a burden on the regional economy, and access to quality preventative healthcare can put less burden on the emergency healthcare system. One major barrier to healthcare access in America is lack of insurance for preventative and emergency needs. The National Institutes of Health provides county-level health insurance information for youth and working-age adults. Compared to Alaska rates of insured working-age individuals, Yakutat City and Borough, Wrangell City and Borough, Prince of Wales-Hyder Census Area, and Petersburg Borough are at least 5 percent lower than the state average (Table 29). The gap in insurance coverage for youth between the state and Southeast boroughs mimics the trend for working-age rates of insurance.

Table 29. Percent of population with health insurance. Source: [HD Pulse 2024](#)

Borough	Ages 18-64	Younger than 19
Haines Borough	87.7%	92.5%
Hoonah-Angoon Census Area	81.5%	89.5%
Juneau City and Borough	87.5%	92.1%
Ketchikan Gateway Borough	83.6%	90.4%
Petersburg Borough	79.3%	85.5%
Prince of Wales-Hyder Census Area	78.2%	86.8%
Sitka City and Borough	83.4%	90.1%
Skagway Municipality	83.1%	89.2%
Wrangell City and Borough	77.7%	82.9%
Yakutat City and Borough	76.0%	80.4%
Alaska	84.8%	91.7%

Although data for preventable hospital stays for individuals 65 years and older for more rural areas of Southeast Alaska is not available, the NIH provides information for four boroughs in the region (Table 30). In an aging population like Southeast Alaska, there is also a predicted increase in the need for long-term medical care. Combined with a steady migration of younger people from rural areas to more urban centers, demand for healthcare workers in more rural regions is likely to increase. Measuring preventable hospital stays in older populations may indicate the strain on the emergency healthcare system and the lack of access to proper elderly care. In the four boroughs for which data was available, none of the totals far exceeded state or national totals, although Sitka City and Borough had a higher rate of preventable hospital stays than the state.

Table 30. Preventable Hospital Stays per 100,000 people, ages 65 and older in 2020. Source: Health [HD Pulse 2024](#)

Area	Preventable Hospital Stays per 100,000 people, ages 65 and older, 2020
Haines Borough	487
Ketchikan Gateway Borough	1,720
Juneau City and Borough	1,367
Sitka City and Borough	2,204
State of Alaska	1,866
United States	2,681

Access to healthcare is a potential environmental justice concern because increased climate events may put more burden on an already strained healthcare system. Populations living through extreme changes in

climate may face worse health outcomes as their access to resources and sense of place may be inalterably changed. Areas with warming ocean temperatures or altered flood patterns may experience impacts to water quality, subsistence food resources, and wildlife and scenery related industries such as fishing or tourism (Hess et al., 2008). Any resulting physical and mental impacts on human health will necessitate more healthcare intervention. Understanding access to healthcare allows managers to assess the current resilience of a population to climate and other environmental challenges as they make decisions on forest readiness to respond to these changes.

Asthma Rates

Asthma and other pulmonary health issues are often chronic conditions that necessitate consistent healthcare and can be exacerbated by environmental changes like air pollution levels. Understanding levels of risk for asthma attacks in a region allows for effective public health intervention and response (Holt et al., 2019). Mortality from asthma in Alaska (17.3 per million) is higher than the national median (11.4 per million), indicating that access to healthcare for asthma may be an issue in the state. Chronic lower respiratory diseases have been listed as the #6 cause of death in Alaska from 2020-2022 and was as high as the #4 cause of death in 2018 (Alaska Vital Statistics 2022). Land management decisions can directly and indirectly affect air and environmental quality in communities surrounding Forests. In particular, there is concern about effects of the cruise ship industry on regional air quality, discussed later in the Benefits to People section of this assessment.

The Historical & Cultural Importance of Land

Sense of place is an important factor in community resilience. Deep ties to the places we live can impact our way of life, survival needs, and community relationships. Strong relationships to land can also create resilience to climate change (Hess et al. 2008). Communities and the land in which they live are inextricably linked, making even the smallest ecological feature or organism important to the continued cultural traits of a group of people. Sense of place research attempts to cover aspects of this connection and how it can affect community resilience, public health concerns, and sense of identity.

The *Tongass as an Indigenous Place*, and *Recreation and Tourism* assessments cover this topic in detail.

Benefits to People (including multiple uses, other forest benefits, operations and infrastructure)

This section summarizes the socioeconomic impacts of established forest programs and activities. The following information is written as a socioeconomic summary of other assessments. This section is intended to supplement these subjects from a socioeconomic perspective, not to fully cover the nuance of each subject. When appropriate, the assessment relevant to the subject will be referenced for the reader.

Budget

The Tongass National Forest supports personnel, programming, facilities, and transportation infrastructure that benefit the region of Southeast Alaska. Therefore, The Tongass National Forest's budget and expenditure on programs is important to the livelihood of communities that rely on Forest supported industries. Forest Service employees are local community members themselves, and they spend their income on housing, food and other local goods in the area, directly affecting the local economy.

Climate Resilience

Changing climate has the potential to trigger several economic and social consequences in Southeast Alaska. The National Oceanic and Atmospheric Administration predicts that in the next 30 years, the sea

level along the coastal United States will rise 10-12 inches on average (Sweet et al. 2022) . While Southeast Alaska’s topography and active land surface uplift may lessen the effects of this rise, there may still be land loss in the southern part of the region, and even more if sea level rise outpaces uplift. Changing snowfall and glacial melt patterns have also already increased or changed the timing of flood risk in some areas. The Environmental Protection Agency’s Environmental Justice Screening and Mapping Tool (EJScreen) shows data for five climate change related risks (flood risk, wildfire risk, 100-year floodplain, sea level rise, and extreme heat). Although the risk for the other four indicators is low, flood risk is high for a large proportion of Southeast Alaska (Figure 11).

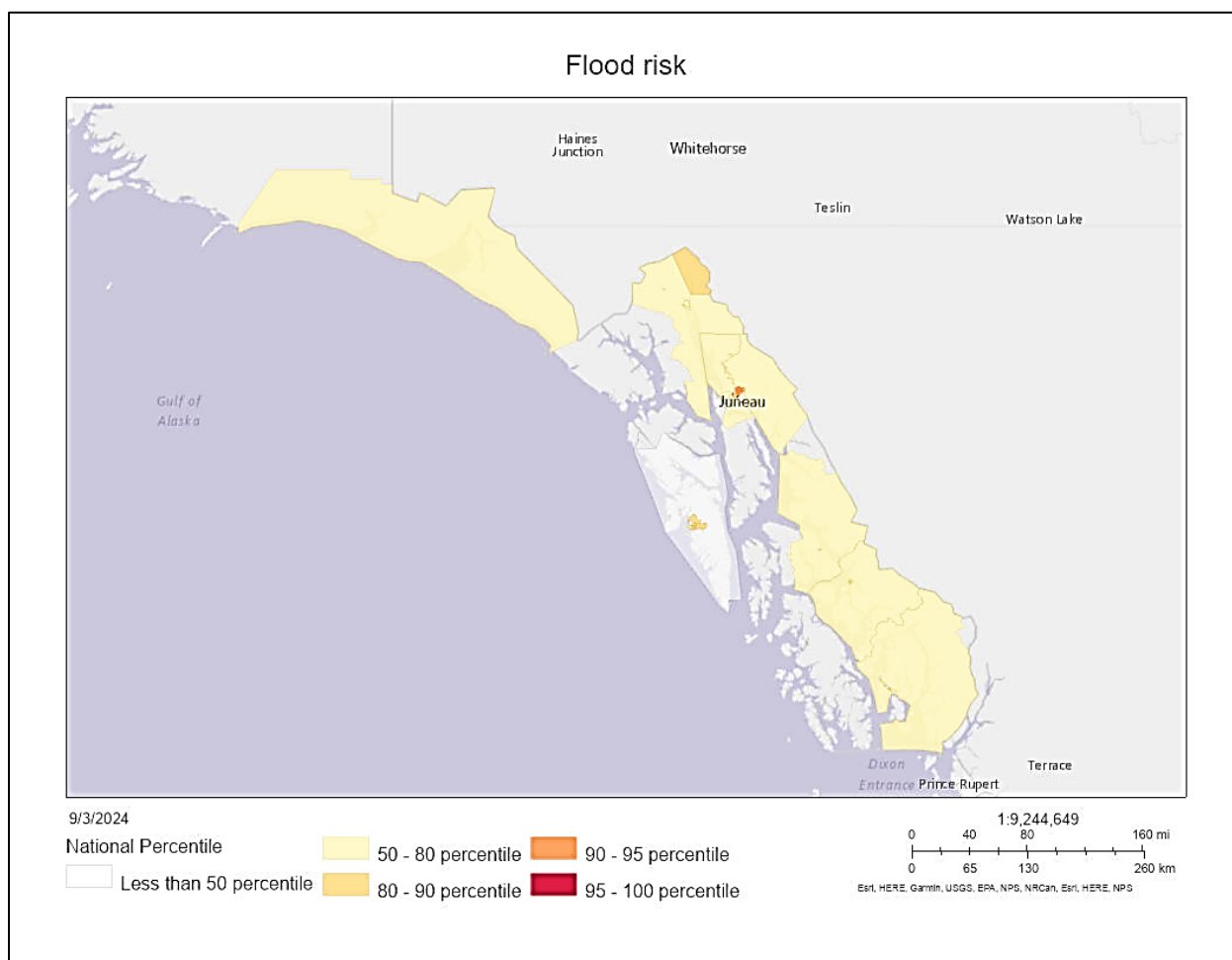


Figure 11. Flood risk by borough for Southeast Alaska from the EJ Screen mapping tool (Environmental Protection Agency 2024).

Studies on climate change in the Southeast region also predict more rain and higher temperatures. Increases in temperature is largely concentrated to winter and summer months, making winters milder and summers more intense. Southeast Alaska’s tourism seasons are highly dependent on weather and temperature, and a change in these factors could impact the growth of the tourism industry. This sort of change can also affect the lifecycles and habitat of important species, as discussed in the Terrestrial and Aquatic Ecosystems Assessments. Combined with predicted decreases in snowfall and warming ocean temperatures, these changes could severely impact salmon spawning habitat (among other species). Thousands of residents in Southeast Alaska depend on several species for commercial sales and subsistence harvesting, and hardships for these species would greatly affect the regions food supply and

economy. Additionally, increased rainfall may result in more landslides, potentially threatening resident’s homes and important local infrastructure (Powell 2022).

Outdoor Recreation and Forest Visitors

The Tongass National Forest spans across most of the Southeast region and provides public land access for local and tourist visits. The forest draws more than 2.8 million visitors annually (Tongass National Forest 2020 Visitors Guide). Visitation can include local visitors and non-local visitors alike, although their use of the Forest and recreation patterns may be very different. Local visitation accounts for approximately half of all Tongass National Forest visits. According to community feedback sessions, local residents value the more remote features of Tongass National Forest, including subsistence gathering activities, wilderness use, solitude, and spiritual and emotional connection to the land. Although non-local visitors may have interest in those activities, they are more likely to participate in guided trips, favor activities closer to amenities and city centers, and have less time to visit remote areas.

Community feedback differs on opinions about recreation on the forest. Respondents were asked “What are your ideas for how to balance the economic benefits of tourism and recreation with impacts on ecosystems and quality of life?” Figure 12 shows that managing the amount of tourism on the forest and increasing infrastructure were two of the most popular responses.

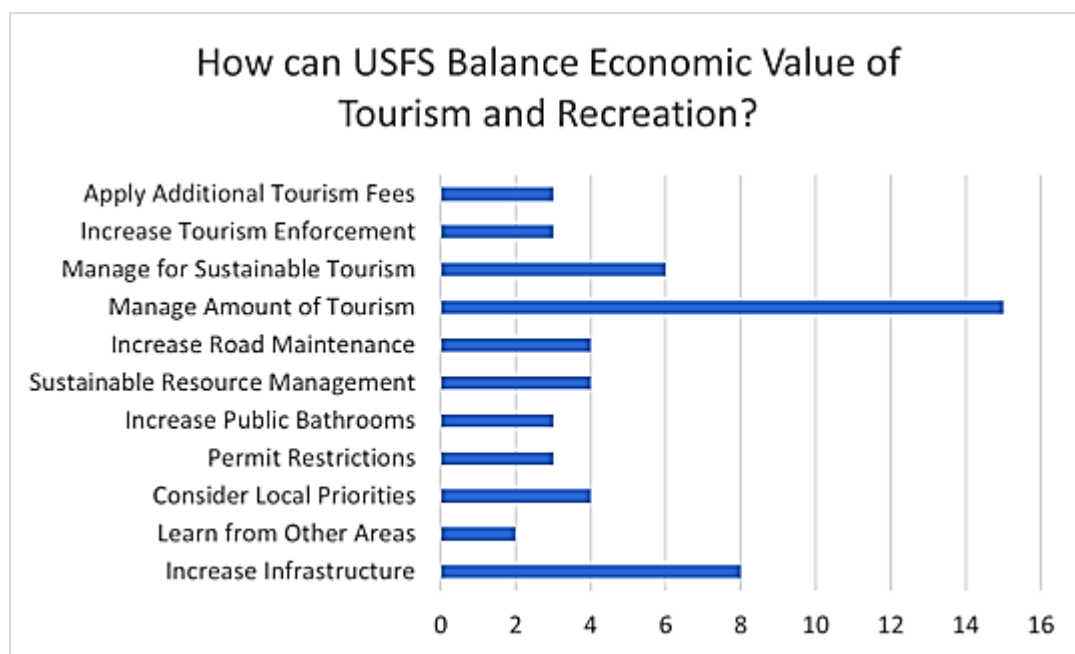


Figure 12. Community feedback on balancing the economic value of tourism and recreation with its impact to the community. Source: U.S. Forest Service 2024b.

The number of visitors greatly stimulates economic activity. Spending from national forest visitors ranges from \$36 a day for local day trips to over \$700 for multi-day guided expeditions (White 2017). From 2014 to 2024 there was an average of 180 outfitters or guides permitted by the Tongass National Forest. Management decisions can greatly affect local economic growth by influencing visitor numbers. Increased forest infrastructure may attract more visitation, impacting residents in nearby communities. Economically, industries that rely on forest visitation may prefer more relaxed visitor management and increased infrastructure. The Juneau Economic Development Council’s (JEDC) survey of outfitters and guides (2024) found that they wanted greater flexibility in available guiding locations and an ease on

strict group-size limits. For more information about outdoor recreation, please see the Recreation and Tourism Assessment section.

Cruise Ships

In 2023, 36 large or midsize ships visited Juneau carrying a total of 1,670,000 passengers that year. The Economic Impact of Juneau's Cruise Industry report, presented by McKinley Research Group in 2023 reports that cruise passengers spent an estimated \$320 million dollars in Juneau alone on shopping, food, guiding, transportation, lodging, and other attractions. Cruise ship passengers rarely exit their ship onto the national forest, but take in scenery from the deck, making interest in scenery preservation a high priority for the cruise industry. Once on shore, cruise participants will often book services with local tour operators and outfitters if they want to visit the forest.

While cruise ship tourism critically supports the local economy in Southeast Alaska, there have been concerns about the consequences of the industry's quick growth. In community feedback groups, many locals worried about the increased importance of the large cruise-ship industry in their area. One of the biggest concerns is that cruise ship tourism does not allow for independent travel, decreasing the amount of money spent at local businesses, including limited use of the Tongass National Forest beyond viewshed enjoyment. One respondent in a community feedback meeting mentioned "independent travelers usually contribute more to local economies." Economic reliance on the cruise ship industry worried some, as fluctuations in cruise ships could hurt local economic resilience. There were also concerns that cruise ship tourists do not understand their environmental impact on the region, citing air pollution, over-fishing, and sound pollution.

Wildlife and Nature Viewing

According to visitor activity reports, viewing natural features is the second most popular activity on Tongass National Forest. This indicates that the aesthetic value of the forest is important for many visitors. A change in aesthetic quality by, for example, new infrastructure development, air particulate matter, natural disasters or effects of management on scenery, may impact visitor experience and lead to less visitation overall. Glaciers in particular draw tourists from around the world to the region, but as they recede due to warming in the region, the area may attract fewer visitors.

Wildlife viewing is a lucrative activity for outfitters and guides. Bear viewing in particular is a seasonal activity that necessitates a lot of management oversight from Tongass staff. There are 12 wildlife observation sites that range in accessibility and restrictions and require active staffing and management during busy seasons. An average of about 35 special permits per year included scenery and wildlife viewing activities (through the years 2014-2023). Wildlife viewing on the Tongass National Forest is accessed by vehicle, boat, airplane, on ski equipment and by foot, contributing to multiple and diverse transportation infrastructure needs.

Cultural and Historical Tours

Cultural tourism activities give visitors an opportunity to learn about the deep cultural history of Southeast Alaska. Particularly for Alaska Native Tribes, cultural and historic tours offer spaces to highlight the importance of cultural and spiritual practices to their communities. There is an increased interest in cultural heritage tourism worldwide (Richards 2018).

On the Tongass National Forest, 0.8% of visitors visited historic sites, spending an average of three hours on the activity. While the National Forest system has noticed the increased desire for cultural heritage programs amongst visitors, the Tongass National Forest has not fully realized its goal to fully integrate cultural heritage projects into its programming, partly due to workforce capacity gaps. For more

information on Tongass National Forest Cultural Heritage programs, please see the Cultural Heritage section of this assessment.

Guided Hunting and Fishing

Guided hunting is also a big draw for visitors to Tongass National Forest. In 2023, 418 guided hunting trips took place on the forest, for black and brown bears, deer, elk, moose, mountain goat, waterfowl and small game. In 2012 in the state of Alaska, guided hunting provided \$13 million in wages statewide and \$3.4 million in spending for goods and services in Southeast Alaska (McDowell Group 2014). That same year, the Alaska Professional Hunters Association reported that nine out of ten guides were Alaska residents, meaning wages remain in local economies for goods and services. Additionally, Alaska guides distributed tens of thousands of pounds of game meat to residents in the state, supporting food supplies in rural areas.

Over 2,700 guided freshwater fishing trips took place on Tongass National Forest land in 2023. This number is significantly lower than past years, which usually numbered around 4,000 trips (with the exception of 2020, the beginning of the COVID-19 pandemic). Anglers in the national forest fish for salmon species, Dolly Varden, brook trout, rainbow/steelhead trout, cutthroat trout, grayling, halibut and lingcod. Recreational salmon fishing in the region generated about \$174 million dollars spending in 2007 (USDA Tourism and Recreation Economic Impact from the FEIS Plan Amendment June 2016).

Fish, Wildlife, and Plants

Fish, wildlife and plant species contribute to economic, cultural, and social values in Southeast Alaska. The tourism industry in the region is dependent on the maintenance of unique and scenic ecosystems as well as popular game species. Cultural history and practices also rely on important species. Alaska Native communities have many species used in cultural ceremony, and for culturally important foods and artisan crafts. These include but are not limited to various seaweeds and kelps, huckleberries, Sitka spruce, and yellow cedar (SEARHC No Date). Further, subsistence harvesting on the Tongass National Forest is incredibly important for boosting food and energy security in the region. Southeast Alaskans may gather anywhere from 48 to 550 pounds of various species per person per year, when averaged across a community. This adds up to 5.6 million pounds total, with a worth of \$28 million if each pound is worth an average of five dollars (Kessler 2011). For more information on harvesting in the region, please see the Subsistence and Other Harvest section of the assessment.

The Tongass National Forest is considered a salmon forest, with 12,930 miles of streams and 3,432 lakes and ponds. As 22 percent of Alaska's annual commercial salmon catch relies on the Tongass National Forest, it is important to ensure water quality is maintained through active management and planning ([U.S. Forest Service 2024b](#)). The economic importance of the national forest to mariculture and fisheries is discussed later in the "economic sectors" portion of the benefits to people section.

Clean Water and Aquatic Ecosystems

National Forests supply high quality drinking water to six million Americans ([U.S. Forest Service 2024b](#)). The Tongass National Forest acts as a natural water catchment and treatment for surrounding communities. Further, glacier melt in the borders of the National Forest flow into the stream systems. Management of streams and streambeds on the Tongass National Forest is crucial to supplying quality water in the area. As of 2019, 93 percent of Tongass' watersheds are classified as near natural condition, and analyses of watershed conditions informs restoration efforts. Monitoring includes landslide frequency analysis, stream temperature surveying, and assessment of fish passages.

Commercial Sectors

Timber

Timber harvesting has been key to the development of the region. The commercial timber industry grew steadily between the mid-1950s to the late 1990s. Wood pulp milling in particular became an important industry in Ketchikan and Sitka through the last half of the 20th century. The industry saw a sharp downturn when these pulp mills closed in the 1990's and there was no longer a market for lower grade logs. Timber harvest remains an important economic sector. See the *Timber Resources Assessment* for more information about timber on the Tongass National Forest.

In addition to Alaska Native uses for timber and wood products, local community members rely on wood for personal use like firewood and other household needs. With the prevalence of high energy costs in the region, the collection of firewood on the Tongass National Forest can mitigate some energy costs. This usage is further considered in the *Timber* section of the assessment.

In community feedback discussions, many comments focused on developing an interest in high value, low volume timber products, as well as thoughtful timber management for conservation of other subsistence-use species such as deer. Some comments showed interest in preserving old growth near more populated areas and cutting second growth in more remote area to protect viewsheds. There was also interest in keeping processing local, minimizing export of logs, and investing in timber production for local Alaskan needs. Comments also showed a negative opinion of even-aged management. Overall, there was strong interest in regenerative and sustainable practices that consider whole ecosystems.

Mining

The mining sector in Southeast Alaska has grown steadily over the last decade as the price of gold and silver have increased, facilitating an increase in mining exploration projects in the area.

Although there are thousands of unpatented federal mining claims on the Tongass, only two large mines operate within the Forest boundaries: Greens Creek Mine and Kensington Gold Mine. In 2023, Greens Creek was the largest private sector employer in Juneau, contributing heavily to the region's economy through employment and tax payments (Southeast Conference, 2024). Kensington Gold Mine has seen decreases in production and staffing over the last three years.

In the last fifteen years, reclamation efforts have been carried out on inactive mines. Proximity to abandoned mine sites does have the potential to affect communities and is listed as a CEJST disadvantage theme in reporting. Environmental impacts of mines differ depending on the operation and status, but the release of toxins into the nearby environment may be a large concern to communities, even years after shut-down of operations. Nine census tracts in the region are listed as being close to abandoned-mine operations (Table 31). For more information about mining on Tongass National Forest, see the energy and minerals section of the assessment.

Table 31. Census Tracts in Southeast Alaska that are near abandoned mines. Source: U.S. Council on Environmental Quality Climate and Economic Justice Screening Tool 2024.

Borough	Number of Census Tracts in Proximity to Abandoned Mines	Total Census Tracts in Borough
Haines Borough	1	1
Hoonah-Angoon Census Area	1	2
Juneau City and Borough	2	6
Ketchikan Gateway Borough	1	4
Petersburg Borough	1	1
Prince of Wales-Hyder Census Area	1	4
Sitka City and Borough	1	2
Skagway Municipality	1	1
Wrangell City and Borough	0	1
Yakutat City and Borough	0	1

Mariculture and Fisheries

Fisheries contribute greatly to the economic landscape of Southeast Alaska. Due to the spawning habits of some aquatic species (namely Alaskan salmon species) the Tongass National Forest plays an important role in the sustainability of the fisheries industry. There are two commercial salmon management areas offshore of the Tongass National Forest: The Yakutat management area and the Southeastern management area. Within those areas, approximately 75 percent of pacific salmon harvests originated from the Tongass National Forest. A 2019 study estimates that, between the two national forests in Alaska (the Tongass and the Chugach), the average annual forest contribution to commercial fisheries ranged between 35-53 million dollars (2007-2016) (Johnson and Bellmore 2019). This is approximately 25 percent of the reported value of the industry. The Tongass National Forest supports robust pink salmon harvests in particular; while the species brings in a lower price relative to other species of salmon, pink salmon had a high commercial value due to the abundance of fish originating from the Tongass National Forest.

Aquaculture is an important industry in Southeast Alaska and relies on a healthy aquatic ecosystem. Southeast Alaska had a total of 690 acres permitted for aquaculture in 2023, with 40 individual sites farming seaweed and shellfish (NOAA Fisheries Aquaculture Program 2024). Threats to the industry include diseases and pollution, bacteria, as well as ocean acidification due to climate change (McDowell Group 2017). Most aquaculture takes place in saltwater that is not managed by the Forest Service.

Education and Volunteering

National Forests serve a unique role in cultural and natural sciences education. Interpretive signage, programming, and facilities allow visitors to learn about the history of the land they stand on. The Tongass National Forest has special historical, ecological and geographic features that offer opportunities for education on climate, glaciers, rainforest habitats, Alaska Native history, and species life cycles.

The Central Council of Tlingit & Haida Indian Tribes of Alaska (T&H), Southeast Alaska Discovery Center, and the Mendenhall Glacier Visitor Center offer a range of different educational talks, cultural activities, films, and materials in the Juneau area. Opportunities for children include the Junior Ranger program, Agents of Discovery, and Fishing Derbies. Visitor centers often act as a first stop for non-local visitors to ground their trip in the environmental, historical, and cultural context of the region. Informational materials and permitting are also key to successful trips for some visitors. According to

visitor survey data, nature center activities accounted for 36 percent of visitor activity participation, the fourth most popular activity on the forest.

The Tongass National Forest partners with education organizations like Discovery Southeast, which is dedicated to fostering a better understanding of the natural world for communities in Southeast Alaska. This organization also operates the book and gift store at one of the visitor centers, giving back all proceeds to support environmental education programs for local youth.

The Tongass National Forest partners with local universities to conduct research and host learning opportunities. These efforts generate research that further promote effective management strategies on the forest.

Co-Stewardship efforts like the Alaska Youth Stewards program and the co-stewardship agreement in place at the Mendenhall Glacier Recreation Area are forging new pathways for the Forest Service to fulfill its trust responsibility to tribes and to work with tribal entities to develop culturally inclusive programs and materials. Volunteering on National forests gives communities a chance to interact with management projects that may affect their region's ecological, economic, and social well-being. Their participation in projects and activities are also of important value to the forest: Tongass National Forest volunteers contribute a value of over one million dollars a year and in the 2023 fiscal year, volunteers worked a total of 52,289 hours on the Forest.

Access

Roads, Trails, and Facilities

The road system on the Tongass National Forest connects communities and visitors to the forest. Locals might use forest roads for daily commutes or to reach places on the Tongass that have personal or cultural importance. Some communities in Southeast Alaska are particularly reliant on Forest Service System roadways, and maintaining infrastructure in those areas is paramount to protecting their quality of life. Out of town visitors may use roadways to access dispersed recreation spaces for hiking, camping, hunting or fishing.

There are over 900 miles of trail on Tongass National Forest. Trails have been maintained and improved consistently according to trail management objectives. An increase in tourism and recreation use may necessitate more diverse trail types as well as more complex maintenance schedules.

Facilities on national forest land vary widely. While administrative and living quarters facilities on the forest require regular maintenance, recreation facilities are most important for public use. Conditions of these types of facilities can impact the ease of use for the public, and increased recreation use may change maintenance schedules. Maintenance of these facilities is dependent on funding and staffing of the Forest, as well as visitor use levels. For more information on forest infrastructure, see the roads, trails, and other infrastructure assessment.

Tribal

Tongass National Forest contains the traditional homelands of many Alaska Native Tribes. Management decisions on the forest may affect lands that the tribes assert have cultural or spiritual significance or that are important for subsistence hunting or gathering activities.

For more information on Tribal history, significance, and cultural practices, please see the *Tongass as an Indigenous Place* assessment.

Subsistence and Other Non-Commercial Harvest

Subsistence and other traditional and customary harvest contribute to the health of the local economy and promotes food and energy security in the region. Communities use harvested goods to trade for services and other goods, supplement their purchased food supplies, heat their homes, and practice reliance on the land. For example, 90 percent of rural households in the region use salmon and harvest an average of 66,146 salmon per year (Tongass NF Visitors Guide 2020). The Tongass National Forest provides a relatively protected area for the species that are important to all Southeast Alaskans who harvest wild resources.

Collecting and analyzing historic knowledge may supply information for restoration and mitigation efforts and is crucial to understanding ecological-human dynamics and patterns in harvest reliant communities of Southeast Alaska. For more information about the important of and impacts to subsistence and other non-commercial harvest, see the *Subsistence and Other Non-Commercial Harvest* and *Tongass as an Indigenous Place* Assessments.

Key Takeaways

Populations

- Southeast Alaska has ten boroughs and census areas of varying population; however most boroughs are classified as rural:
 - Juneau City and Borough is the most populous Borough.
 - Yakutat City and Borough is the least populous Borough.
 - Population growth in Southeast Alaska has been slower than State or National levels.
- There is projected negative population growth in the next decades over the Southeast Alaska Region.
- Southeast Alaska's population skews older than state or national levels:
 - This may put more stress on healthcare systems and assistance programs in the area.
 - School enrollments are decreasing, and schools are closing in the area.
 - Social security and retirement income accounts for a large proportion of non-labor income in the region.

Economic Findings

- Economic sectors are slowly recovering from the Covid-19 pandemic:
 - Construction and Mining sectors employ more people in 2024 than pre-pandemic. Greens Creek Mine was the largest private sector employer in 2023.
- Top economic sectors in the region are:
 - Government
 - Healthcare
 - Seafood
 - Visitor Services
- Seasonal employment in Southeast Alaska is higher than national levels.

- The Tongass National Forest contributes economically to the region through employment and labor income:
 - Estimated to have supplied 3,720 jobs and over two hundred million dollars in labor income in 2019.
- High cost of living:
 - Energy costs are high, and all boroughs face a higher energy burden than the U.S. average
 - The cost of living in Juneau is 28% above the national average
 - Utilities payments and healthcare costs are especially expensive in the region compared to national averages
 - House rental prices in some areas have risen 16% since 2022. Combined with lowering vacancy rates and less new house construction, housing is less affordable to Southeast Alaska residents.

Community interests and concerns:

- Southeast Alaska communities rely on hunting, fishing, and gathering to supplement food and mitigate energy costs, among a number of other uses for plants and animals in the region.
- High cost of living in the region impacts community social and economic sustainability.
- Community feedback meetings reflect a need for balance between growing visitor industry and impacts on the local community.
 - Interest in managing tourism on the National Forest and increasing infrastructure to manage growing numbers
- Community concerns about crowding and emissions from the growing cruise ship industry in the region.
- There is general community interest in cultivating high value, low volume timber harvesting, keeping processing local, and harvesting for the conservation of species used for subsistence and other harvest.

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