

# Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives

*Prepared for*

## Alaska Department of Transportation and Public Facilities

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*Prepared by*



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## Abbreviations

ALARI	Alaska Local and Regional Information
AMHS	Alaska Marine Highway System
DOLWD	Alaska Department of Labor and Workforce Development
DOT&PF	Alaska Department of Transportation and Public Facilities
IFA	Inter-Island Ferry Authority
USACE	United States Army Corps of Engineers
USDE	U.S. Department of Education



# 1 Introduction

This document provides basic demographic information as well as ticket revenue and volume data for Alaska communities that are affected by the Alaska Marine Highway System (AMHS). AMHS communities are grouped within this document according to the service regions defined by AMHS: Southeast, Southwest, and Southcentral. Some AMHS-specific information is organized by route groups (defined in Table 1) that are constructed by Northern Economics, Inc. to conduct meaningful economic analyses for the AMHS Reshaping Study. Each community is included within only one service region but can be included within more than one route group. This appendix supplements the reshaping study by compiling community specific information into a single document.

**Table 1. Route Group Definitions and the Vessels and AMHS Ports they Comprise**

Long Name (Short)	Primary Vessels	Communities in the Route Group (with 3-letter Port Code)
Lynn Canal	<i>LeConte, Tazlina, and Mainline vessels</i>	Juneau (JNU), Haines (NHS), Skagway (SGY). See also the text below regarding travel to/from Haines and Skagway involving ports other than Juneau.
Mainline	<i>Columbia, Malaspina, Matanuska</i>	Juneau (JNU), Sitka (SIT), Kake (KAE), Petersburg (PSG), Wrangell (WRG), Ketchikan (KTN), Prince Rupert (YPR), Bellingham (BEL). Please note that Mainline ferries also provide service into Haines and Skagway. Passengers and vehicles moving to/from Haines and Skagway to Mainline communities other than Juneau are considered part of the Mainline traffic and revenues.
Southeast Feeder (SE Feeder)	<i>LeConte with occasional service from Mainline and Lynn Canal vessels.</i>	Hoonah (HNH), Gustavus (GUS), Pelican (PEL), Tenakee Springs (TKE), Angoon (ANG). Note that Juneau and Sitka also serve as primary hubs for SE Feeder, and that occasionally mainline vessels will make port calls to SE Feeder communities. All traffic and revenues that involves one of the SE Feeder communities as either the origin or destination is attributed to the SE Feeder route group.
Metlakatla	<i>Lituya</i>	Metlakatla (ANB). Note that ANB stands for Annette Bay the location of the terminal for Metlakatla and that this route group also includes Ketchikan.
Prince William Sound (PWS)	<i>Aurora, Hubbard</i>	Whittier (WTR), Cordova (CDV), Valdez (VDZ), Tatitlek (TAT). Note that Chenega Bay (CHB) which is located in the Southwest portion of Prince William Sound is considered part of the Cross-Gulf route group.
Homer-Kodiak	<i>Tustumena, Kennicott</i>	Homer (HOM), Kodiak (KOD), Seldovia (SDV), Ouzinkie (OUZ), Port Lions (ORI).
Southwest	<i>Tustumena, Kennicott</i>	Old Harbor (OLD), Chignik (CHG), Sandpoint (SDP), King Cove (KCV), Cold Bay (CBY), False Pass (FPS), Akutan (AKU), Unalaska/Dutch Harbor (UNA). Note that Homer and Kodiak are considered hub ports for the Southwest route group.
Cross-Gulf	<i>Kennicott</i>	Only two communities are considered to be exclusively in the Cross-Gulf route group—Yakutat (YAK) and Chenega Bay (CHB). Currently the primary west-to-east Cross-Gulf route runs from KOD-HOM-CHB-WTR-YAK-JNU and may continue on down to BEL.

Additional sections are provided for communities that are served by the Inter-Island Ferry Authority (IFA) and those communities which are closely associated to AMHS communities by geography and infrastructure—i.e. roads and/or IFA service. These closely associated communities are included within the profile of the AMHS port community where those residents are most likely to receive AMHS service.

## 1.1 Data Methodology

Each profile provides the following information:

**Population Forecast:** Each profile provides historic estimates and a forecast of community population out through the year 2045. This series of figures is based on Alaska Department of Labor and Workforce Development (DOLWD) historic population estimates for communities and five-year projections at the borough level. The Study Team uses the borough projections to construct intermediate community level forecast values between the DOLWD five-year increments. Sudden population changes in some forecasts can be observed in years 2019 and 2020. This is due to variation of historic estimates from the DOLWD trend projection for the year 2020, and the intermediate forecast values adjust to reconcile the differences between the two population data sources. Long-term trends in population are important to assessing the fiscal health of AMHS because a significant portion of revenue is derived from AMHS community resident ridership.

**Waterborne Freight:** Marine freight volumes are reported by the United States Army Corps of Engineers (USACE) at some ports for the communities of interest. When those data are available, they are presented for each community from 2000 to 2017. While there are known reporting issues within the data, each series serves as an indicator of alternative cargo capacity for marine transport.<sup>1</sup>

**Alternative Travel/Cargo Options:** The primary alternative method of travel in most AMHS affected communities is aviation. The profiles therefore include one-way passenger airfare quotes, obtained from online travel booking portals, from each community to nearby hub communities if those services were available. For the Southeast region, hub communities include Seattle, Anchorage, Juneau, Sitka, and Ketchikan; hub communities for the Southcentral and Southwest regions include Seattle, Anchorage, Unalaska, and Kodiak. Most air rates for small regional carriers do not vary between summer and winter, while larger carriers (e.g. Alaska Airlines) have more variable prices. Flight schedules to some communities change depending on the season, with slightly fewer flights available in the winter.<sup>2</sup>

The profiles also provide a summary of other currently available means of moving people, freight and cargo into and out of the community, along with quotes or estimates of cost. For many communities this means barge service, although some larger communities are served by dedicated cargo vessels. In some cases, communities are currently served by cruise ships, private ferries, and water taxis. Private ferry and water taxi services were documented for companies which have a website and are noted within the profiles. In addition, five AMHS Communities (Haines, Skagway, Valdez, Whittier, and Homer) are connected to the road system.

**School Enrollment:** School enrollment by grade is also presented within each profile, including available totals for elementary (K–6<sup>th</sup> grade), middle school (7<sup>th</sup> and 8<sup>th</sup> grades), and high school (9<sup>th</sup>–12<sup>th</sup> grade) students. Interviews and community input have indicated that the AMHS is important for school functions including sports tournaments and other field trips. School enrollment is also an important indicator of community vulnerability. Currently the State of Alaska funds public schools in communities

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<sup>1</sup> An investigation of USACE Waterborne Commerce data for the Alaska Department of Transportation and Public Facilities Southeast Alaska Transportation Plan found that not all marine freight operators reported their manifests, and cargo amounts were underestimated in the data for some ports.

<sup>2</sup> Rates were based on a July 10<sup>th</sup> (summer) and December 10<sup>th</sup> (winter) departure and were quoted more than one month in advance of the departure date. In some cases, winter rates were not available simply because small aircraft operators do not schedule their flight services more than a few months in advance. Those flights are shown as “not reported”. When the air carrier actually does not operate flights during a particular season, those flights are shown as “No Service”.

as long as 10 or more students are enrolled in the community's public schools. If enrollment falls below that level, the future viability of a community is much less certain.

**Employment:** Employment data by place of residency are published by DOLWD through the Alaska Local and Regional Information (ALARI) online database. Each community profile provides employment estimates for 12 unique industry sectors—sector-based estimates are key indicators of whether employers in the community are likely to be significant users of AMHS or other transportation services. If, for example, we can determine that fish processing is an important employer in the community, then we can infer that outbound freight services are an important component of the demand for transportation services. DOLWD's ALARI database is somewhat unique because it provides employment estimates at the community level. Most employment estimates are reported at the borough or census area level, using quarterly reports submitted by employers to the department of labor. However, in Alaska the Quarterly Census of Employment and Wages can be linked to employee address by use of the Alaska Permanent Fund Dividend database. This allows DOLWD to report employment by place of residence at the community level.

**Mayoral Survey/Interviews:** The profiles also include summaries of a survey and interview of leaders of each community reflecting their insights on the interactions between AMHS and individuals and businesses within their community. The interview process allowed community leaders to voice their concerns about the ways that changes in service could affect their community and offer suggestions on ways to improve AMHS.

#### **Land-based AMHS Facilities and Valuation**

Northern Economics, Inc. contracted with PND Engineers, Inc. to provide a technical summary of the docking and loading facilities used by AMHS in each community. The land-based sites used by AMHS include a mix of state and non-state-owned terminals. In Southeast Alaska and Prince William Sound almost all of the terminals are state owned, while in Homer and all points west, terminals are owned by the city in which they are located (AMHS 2018). PND estimated values for each of the state-owned terminals are included within the respective community profile report sections. A summary of PND's findings, recommendations, and methods is included below, with text provided by PND (2019).

The state-owned AMHS facilities have been specifically designed to accommodate select vessels of the AMHS fleet. Spacing of breasting dolphins, mooring points, and other appurtenances are laid out for the vessels that provide service to the facility. All of the state-owned ferry terminals contain a primary transfer bridge capable of adjusting to site's tidal conditions using either floating supports or syncrolifts that are optimized for site conditions and offload requirements for the AMHS vessels. Estimated values for each of the state-owned facilities were developed on a component-cost basis for the various structures, adjusted for the age of the facility. The presented values are believed to be within the range of plus or minus 30 percent. The estimated values include the complete terminal facilities including uplands, buildings, marine structures and associated tidelands. The values have not been adjusted considering costs for potential modifications, unfunded planned capital projects or anticipated long-term maintenance.

The largest challenge associated with evaluating alternative facility uses is that the marine based infrastructure at state-owned terminals have been specifically designed for the AMHS fleet. Based on the desktop evaluation, the terminals would likely require modification and significant capital investment to accommodate alternative vessel usage. Likely modifications required include; addition of berthing structures and mooring points, changes to the height/elevation of ramps and aprons, and modifications to the transfer bridges. The scope, details and costs associated with required modifications were not fully evaluated as part of this study.

The original design loading for the facilities would likely limit the suitability for use on heavy freight offload. Standard freight transfer equipment loads (container handlers, etc.) would likely exceed the capacity of the vessel to shore structures. Freight transfer would be limited to truck-based, roll-on-roll off (roro) transfer meeting standard highway legal load limits unless significant modifications were made to the facilities.

All of the non-state owned AMHS facilities are operated by their respective cities, corporations, or boroughs. As such, most were built to service various types of vessels. The majority of the non-state-owned facilities are used by barges, freighters, and fishing boats in addition to the AMHS vessels. If AMHS were to discontinue, these multi-purpose use facilities would see continued use. However, many of the facilities would be subject to payback requirements of FHWA grants if passenger service were discontinued.

#### **AMHS Revenue and Volume Summary:**

Ticket and Sailing data provided by Alaska Department of Transportation and Public Facilities (DOT&PF) (2019a) are used to generate the volume (number of sailings, passengers, cars, vans) and revenue data for each AMHS port for fiscal years 2009 through 2018. Revenues are calculated by three primary fare types, passenger, car deck, and cabin, along with basic counts of traffic volume. Each AMHS port community has its own volume and revenue table organized by routes to and from connecting ports. Based on the sailing origin and destination, city-pair segments were assigned to one of eight "route groups": Lynn Canal, Southeast (SE) Feeder, Metlakatla, Mainline, Prince William Sound, Homer-Kodiak, Southwest, and Cross-Gulf. These route groups provide more detailed geographic focus compared to the three broad AMHS service regions. Volume and revenue data within the summary tables are reported separately for each route group.

Within most of the AMHS community profiles there are one or more figures that graphically represent AMHS revenues for travel between that community and other AMHS communities. These figures provide insight on long term trends, seasonality, and utilization by residents. In general, city-pair figures that are included are important travel links or are directly discussed in the assessment. Providing figures for all city-pairs for each of the included communities would have made this appendix excessively long.

Revenue data used to compare local and non-local residency are available only through April of 2016, so revenues for the latter period (May 2016 through December 2019) are shown only as a grand total. The figures also show the number of departure-arrival sailings per month, each of which represents a single opportunity to travel between two ports. In other words, a route pattern with three cities (A to B to C) represents three potential sailings (A-B, A-C, and B-C) as defined in the figures.

## 2 AMHS Southeast Service Region

Figure 1 shows the communities and route types in the AMHS Southeast service region. Each of the following subsections within this chapter provide demographic summary data, as well as AMHS specific analyses. In addition to the communities with AMHS service, there are profiles for closely associated communities those which commonly use AMHS by first traveling to a city with an AMHS port call. The associated city profiles are included as subsections within their respective AMHS city report section.

**Figure 1. AMHS Communities of the Southeast Service Region**

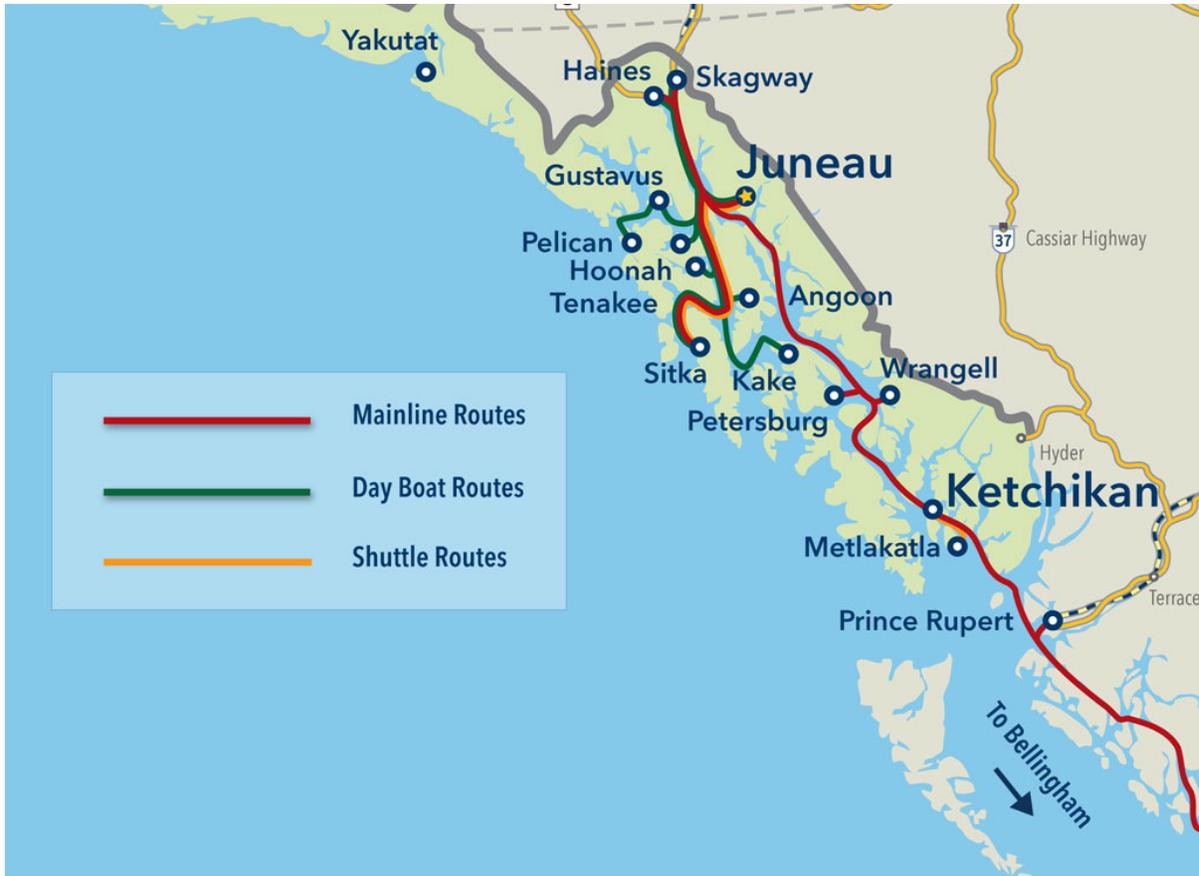


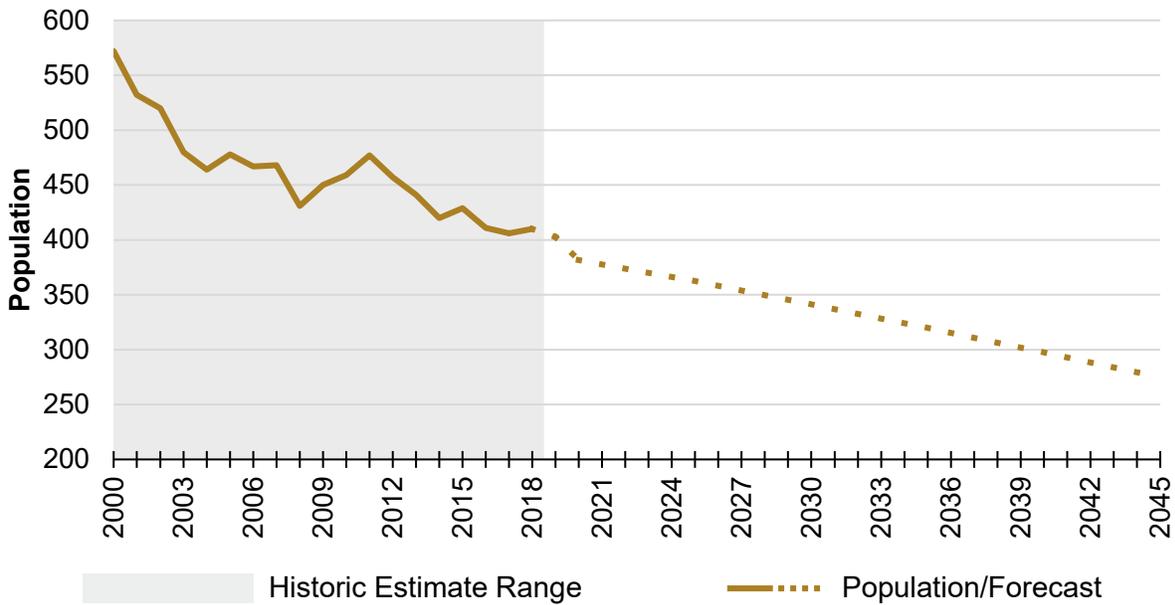
Image Source: DOT&PF, 2019b

## 2.1 Angoon Community Profile

### 2.1.1 Demographic Summary

Figure 2 shows the population of Angoon with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 410 permanent residents, but the population of Angoon is expected to decrease steadily over time.

**Figure 2. Angoon Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 2 shows student enrollment in all Angoon schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

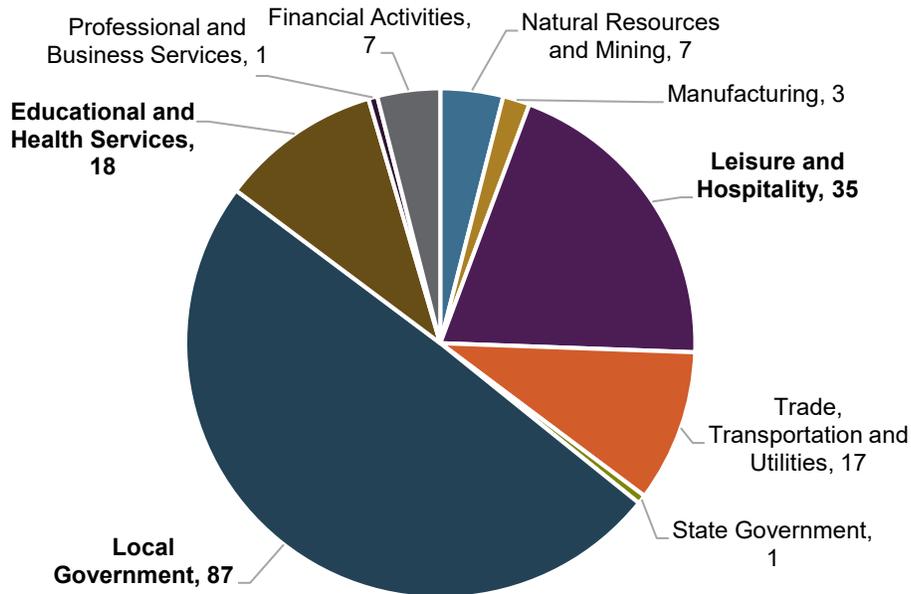
**Table 2. Angoon All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	6	7	8	8	6	7	7	4	5	5	7	5	4	6
<b>Total</b>	49							9		21			6	

Data Source: U.S. Department of Education (USDE), 2016.

Figure 3 shows the number of workers in various industries for Angoon, and the top three industries are shown in bold.

**Figure 3. Angoon Resident Employment by Industry, 2016**



Data Source: ALARI, 2019

## 2.1.2 AMHS Summary

### Community Leader Perspectives

Mayor Joshua Bowen of Angoon provided information via survey and interview on how AMHS is used by individuals and businesses within the community. His responses are summarized below.

#### *How Residents Use the Ferry*

The ferry moves passengers, vehicles, and freight on a reliable and affordable schedule. Angoon residents primarily travel to Juneau for medical appointments and shopping. They visit other Southeast Alaska communities to see family and attend tribal gatherings. When poor weather prevents Medevac flights from departing, people use the ferry. It's also used to transport the deceased back to their hometowns for burials and ceremonies.

The school relies on the ferry to transport students and faculty to other communities for sporting events, music festivals, tournaments, and educational field trips throughout Southeast Alaska. At least once a month, the school sends a box truck on the ferry to Juneau for food and other supplies.

The ferry is the only way to move vehicles into and out of Angoon. However, the cost of transporting vehicles is high enough that residents are selective about when to put vehicles on the ferry.

#### *Commercial Uses*

Local businesses move personnel, heavy equipment, groceries, lumber, and hardware to and from the village on the ferry. Angoon Trading transports good on the ferry throughout the year. Whalers Cove Lodge and Favorite Bay Sportfishing Lodge use the ferry in summer. Alaska Seaplanes uses the ferry when the planes and mail are backed up. IPEC, the local power company, transports transformers,

backhoes, and other heavy freight. Tlingit-Haida regional housing authority transports materials and equipment. The city transports large loads of water treatment chemicals, including polymer and bleach.

### ***Transportation Options***

The ferry is the safest, most reliable transportation option for freight and passengers in a place frequently beset by inclement weather.

Seaplanes are the only means of travel and freight transport by air as there is no runway. But freight costs on seaplanes can be prohibitively high and their inability to fly in bad weather means Angoon will go for quite a while in the winter without a plane. Angoon may have a runway built in the next several years that can accommodate smaller wheeled planes.

There is no commercial barge landing in Angoon. When ferry service has been interrupted in the past, the community relied on landing crafts and catamarans from Juneau., but they expose vehicles and other freight to wear and tear caused by exposure to salt and the weather. Currently, no commercial marine passenger services have the ferry's ability to safely sail in adverse weather conditions. With adequate funding, a commercial barge landing could be established that would facilitate freight and equipment transportation.

### ***Minimum Level of Service***

For residents, the minimum acceptable level of service would be the current level of service, which is two ferries per week to Juneau, two days apart. But to reduce the fiscal burden, Mayor Bowen suggests removing and alternating the Thursday or Saturday run every other week:

Week 1: Thursday and Saturday

Week 2: Saturday

Week 3: Thursday and Saturday

Week 4: Thursday

Angoon residents routinely pay for two nights at a hotel and transportation, only to have one business day to shop and conduct all their business. It would be more worthwhile to bring vehicle over there if it was more than one day. That is why vehicle traffic on the ferry out of Angoon is low. You only get one day to do your shopping and it's hard to take the children.

The mayor said businesses have indicated that a level of service allowing loaded trucks to come to town and immediately return to Juneau on the ferry would be acceptable. This can be done by changing the schedule to allow more time docked in Angoon so that trucks can come off the ferry, unload, and load back onto the ferry to return to Juneau.

### ***Tolerance for a 10 Percent Fare Increase or Reduction in Service***

It's not clear how a fare increase would impact consumer behavior, but there is a lack of alternatives to go to doctor's appointments, go to the DMV, and shop. If the number of ferries were cut, the number of users would likely remain consistent, again because of the lack of safe and affordable alternatives.

### ***Effects of Reduced Service***

The town would be devastated without a ferry. We're already battling losing people because it's expensive to live here and takes a lot of work and coordination. The ferry is our lifeline, our main connection to the mainland. I think the option of getting to Juneau weekly keeps this town sane. Everyone has a closeness to the big blue canoe.

In time, the overall health of the community would go down without a ferry because people would only travel for emergency care, not preventative care and we wouldn't be able to receive fresh produce as frequently. The state would need to transport people for medical appointments by plane. That would add more burden on Medicaid and reduction in service. Businesses would also suffer.

### ***Ideas for Improving Fiscal Health***

- The ferry landing is underutilized as it is restricted to use by the ferry only. If AMHS could monetize the downtime of the ramps, that would bring in more money. In the past, we have asked about using it for barges.
- The state could build a road from Greens Creek Mine through Angoon and on to the southern tip of Admiralty Island. The road would allow residents to drive to narrow channel crossings, driving the creation of private small ferries that could displace AMHS altogether. If we're costing the state millions of dollars a year on our run, maybe a road would be worth it.

### **Historic Revenue and Traffic Volumes**

Table 3 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with Angoon as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). Angoon is an origin/destination in the Southeast Feeder Route Group, connecting to five ports. The route between Angoon and Juneau generates the most revenue and transports the most passengers.

**Table 3. Angoon as the Origin or Destination—AMHS Volume and Revenue, 2009–2018**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>SE Village Routes</b>										
<b>Travel to and from Juneau</b>										
Sailings	224	240	225	203	188	202	204	183	212	208
Passengers	8,396	8,412	7,975	7,368	5,726	6,213	6,842	6,313	5,150	5,523
# on Car-deck	1,865	1,695	1,682	1,670	1,422	1,336	1,595	1,480	1,311	1,391
Vans	17	21	45	61	18	11	219	23	36	10
\$ (1,000s)	\$333	\$323	\$320	\$309	\$236	\$279	\$316	\$335	\$360	\$430
<b>Travel to and from Hoonah</b>										
Sailings	37	62	32	37	56	34	85	23	11	6
Passengers	222	246	157	638	452	316	673	302	113	49
# on Car-deck	63	121	100	242	138	76	296	76	9	2
Vans	1	7	38	56	9	3	199	5	0	0
\$ (1,000s)	\$6	\$4	\$2	\$9	\$14	\$11	\$34	\$14	\$3	\$2
<b>Travel to and from Tenakee Springs</b>										
Sailings	80	76	65	62	73	95	95	70	14	12
Passengers	523	555	308	428	329	467	405	380	27	19
# on Car-deck	15	4	0	0	0	0	0	0	0	2
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$6	\$9	\$4	\$5	\$5	\$7	\$7	\$5	\$1	\$1

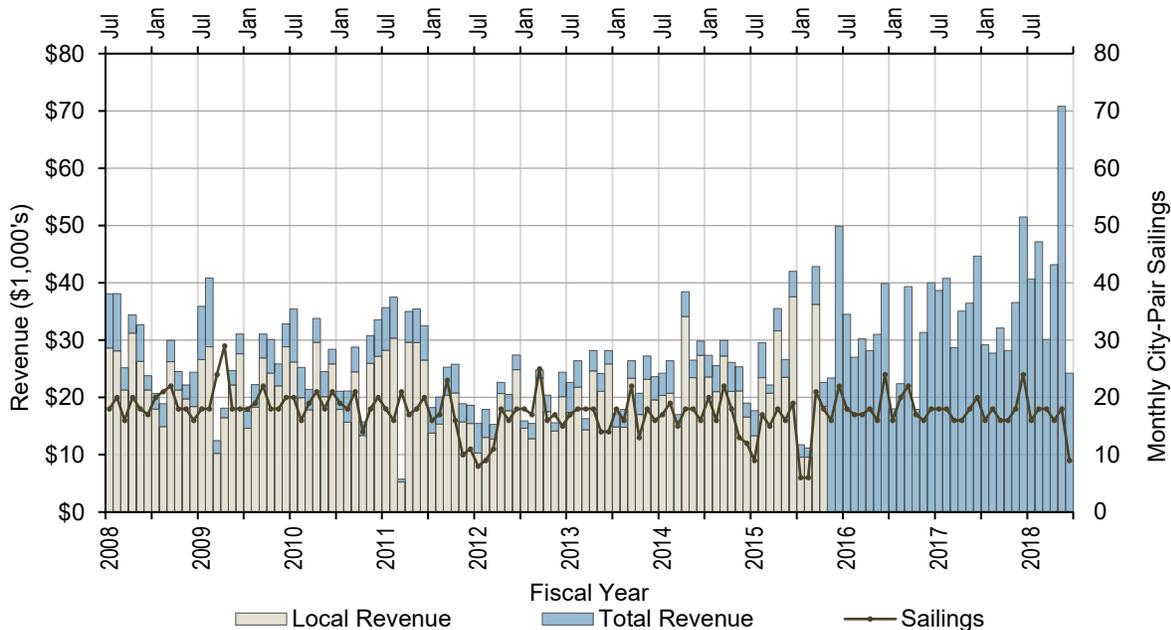
**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Sitka</b>										
Sailings	34	0	1	19	46	35	36	32	19	2
Passengers	270	0	11	503	1,526	1,024	1,016	541	98	30
# on Car-deck	42	0	2	111	289	223	187	96	13	5
Vans	1	0	0	1	2	0	1	3	0	0
\$(1,000s)	\$9	\$0	\$0	\$12	\$35	\$27	\$25	\$14	\$4	\$2
<b>Travel to and from Kake</b>										
Sailings	0	0	6	0	0	0	1	6	2	7
Passengers	0	0	65	0	0	0	0	116	36	60
# on Car-deck	0	0	3	0	0	0	0	28	0	1
Vans	0	0	0	0	0	0	0	0	0	0
\$(1,000s)	\$0	\$0	\$2	\$0	\$0	\$0	\$0	\$4	\$1	\$3

Source: Northern Economics analysis using data from AMHS (2019)

The figures below show local and non-local revenue for selected city-pair combinations involving Angoon. Figure 4 shows monthly revenues and sailings for travel between Angoon and Juneau in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available—approximately 68 percent of revenue was locally based.

**Figure 4. Monthly Local Resident and Total Angoon-Juneau Revenues and Sailings, by Fiscal Year**



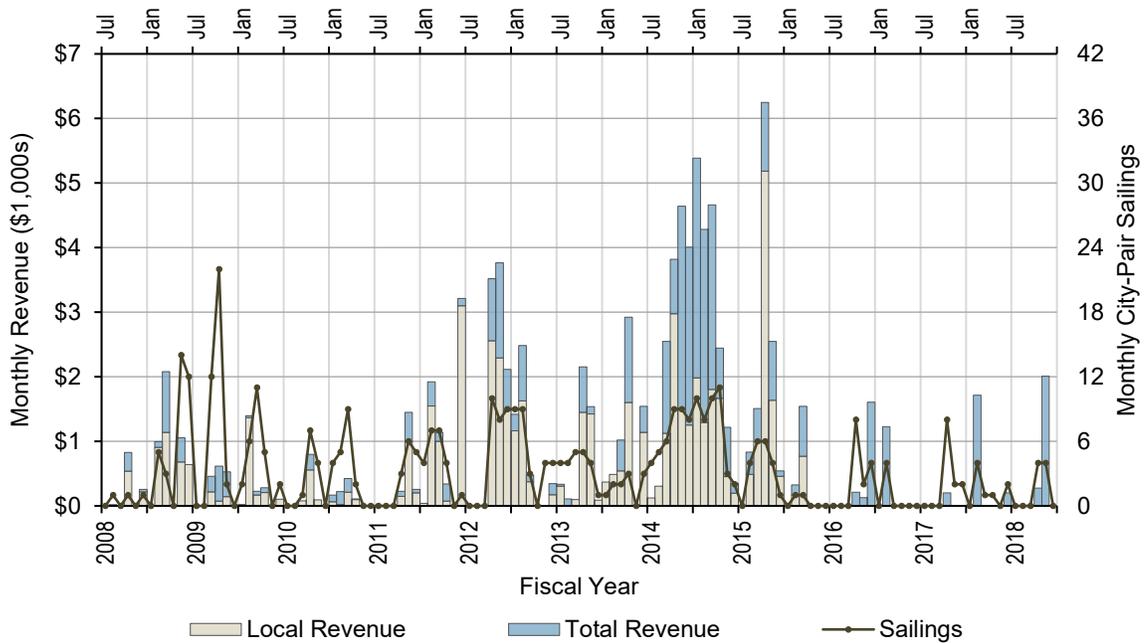
Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

Figure 5 shows monthly revenues and sailings for travel between Angoon and Hoonah in either direction, with revenues separated by local and non-local resident ticket purchasers when data are

available. Late 2012 through early 2013 and late 2014 through early 2016 had relatively high percentages of non-local revenue.

**Figure 5. Monthly Local Resident and Total Angoon-Hoonah Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Land-based Facilities**

The land-based AMHS facility in Angoon is owned by the State of Alaska. Table 4 shows which currently operating AMHS vessels are capable of docking at the facilities in Angoon.

**Table 4. Vessels Capable of Docking at Angoon Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Angoon	X			X	X*				

Notes:

X indicates the vessel is compatible with this terminal.

\* It is likely that the vessel is compatible with this terminal, but it has not been fully tested.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value of the facility was constructed by PND (2019).

**Angoon Facility**

*Docking Orientation:* Stern/Bow Alaska Class Ferries

*Description:* The Angoon facility was reconstructed in 2011 and is located in relatively shallow water (-25 MLLW). The terminal contains a steel transfer bridge, adjustable intermediate ramp and apron, steel support float (flexifloat), and five steel pile fender dolphins. The five dolphins run along the port side of the vessels while at berth. The stern berth was customized for the fast ferry but it no longer runs to this facility.

*Alternative Usage:* The orientation of the berth would likely limit the terminal's suitability for alternative usage. The height of the transfer bridge, ramp and apron would likely require significant modifications/upgrades to accommodate alternative vessels. Barge or landing craft transfer of freight is a potential use for the facility; however, significant changes to the on-float components of the transfer bridge/apron system would be required to match the freeboard/side shell height of barge or vessels being used. Offload equipment would need to be limited to highway-legal design loads, further restricting the suitability of the terminal. The suitability for use for alternative smaller passenger-only vessels is believed to be limited due to orientation of berth and height of the transfer bridge/apron system.

Table 5 shows a range of estimated values for the Angoon Facility including uplands and associated infrastructure but does not account for any potential modifications required for the facilities to be used by non-AMHS vessels.

**Table 5. Estimated Value of the Angoon Facility**

Estimate Range	-30%	Avg	+30%
Facility Value (\$)	3,150,000	4,490,000	5,837,000

Data Source: PND (2019)

**2.1.3 Transportation Alternatives**

One carrier provides regularly scheduled passenger air service to Angoon, and rates to hub airports are shown in Table 6.

**Table 6. Angoon Flight Services and Rates for Single Adult Passenger, by Carrier**

Airline Carrier	One Way Destination	Summer Rate (\$)	Winter Rate (\$)
Alaska Seaplanes	Juneau	154	154

Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.

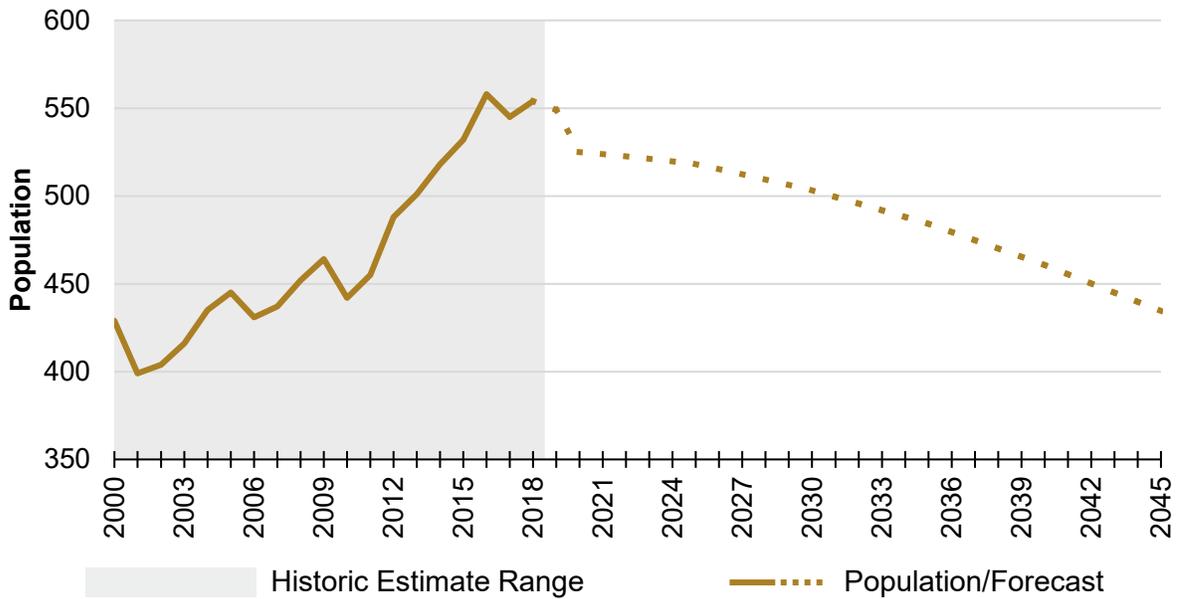
Data Source: Alaska Seaplanes, 2019

## 2.2 Gustavus Community Profile

### 2.2.1 Demographic Summary

Figure 6 shows the population of Gustavus with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 554 permanent residents, but the population of Gustavus is expected to decrease steadily over time.

**Figure 6. Gustavus Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 7 shows student enrollment in all Gustavus schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

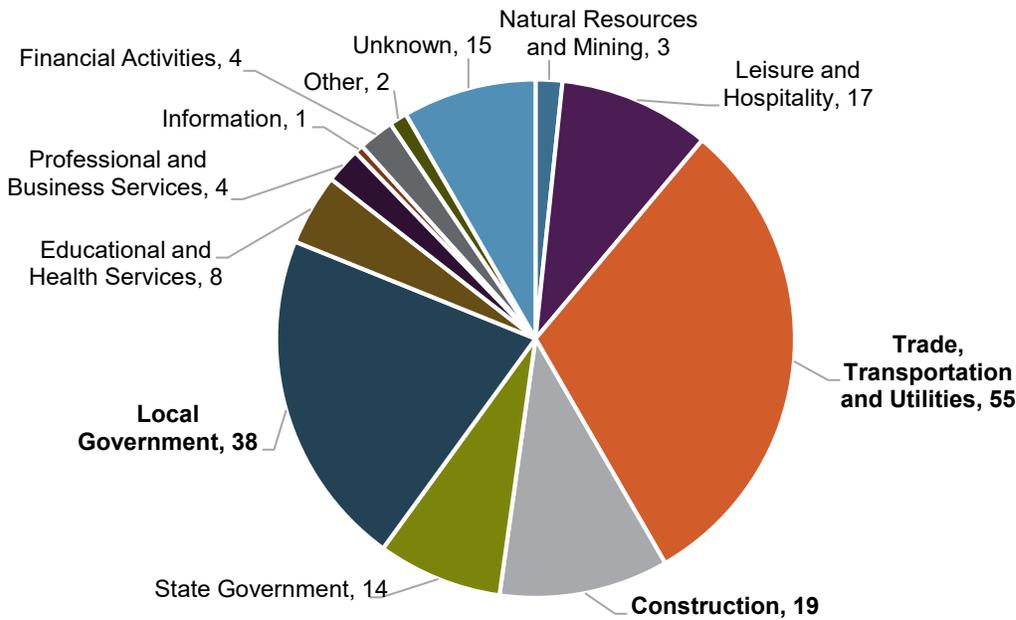
**Table 7. Gustavus All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	8	5	4	7	3	7	7	7	7	6	2	5	4	4
<b>Total</b>	41							14		17				4

Data Source: USDE, 2016.

Figure 7 shows the number of workers in various industries for Gustavus, and the top three industries are shown in bold.

Figure 7. Gustavus Resident Employment by Industry, 2016



Data Source: ALARI, 2019

## 2.2.2 AMHS Summary

### Community Leader Perspectives

Gustavus Mayor Calvin Casipit provided information via survey and interview on how AMHS is used by individuals and businesses within the community. His responses are summarized below.

#### *How Residents Use the Ferry*

AMHS is the lifeblood of the City of Gustavus. It is the only practicable way to get vehicles, container vans, and other freight to our community. Passengers (both Gustavus residents and visitors) rely on the LeConte to provide reliable cost-effective all-weather service to Juneau, for medical needs, shopping, specialty services, and connecting with transportation to the lower 48 and points north.

The AMHS is essential to our school for safely transporting students across the region and beyond for athletics, activities, and scholarly pursuits.

Other communities that access the ferry through Gustavus are Excursion Inlet, Elfin Cove, and Inian Islands Institute (Hobbit Hole).

#### *Commercial Uses*

This town lives on tourism. There are other towns in Southeast with fishing, logging, mining, or big cruise ships. We don't have the big cruise ships in Gustavus. Our tourism is independent travelers. They love to get on the ferry to come over here. That's how most of them get here. The ferry also brings the food and supplies needed in Gustavus during tourist season.

The biggest commercial users of the ferry are probably Frontier Freight, which uses the ferry to fulfill bulk orders from multiple parties, and Toshco, the grocery store. The two companies are owned by the same family and will bring anything in, including furniture, appliances, and construction materials.

The success of the Glacier Bay National Parks front-country plan and the economic development it could bring to Gustavus and the Icy Straits region depends on the continued operation and possible increase in AMHS service to Icy Straits communities.

### ***Transportation Options***

The decision points for choosing transportation options in and out of Gustavus are cost, reliability in poor weather, safety, and freight costs. The ferry is the best option because it's all-weather and fairly economical. When you come back from your shopping trip in Juneau, there are no worries about weight limitations; it's safe; you get your ticket and you're on to Gustavus. There was only one time in the last year when the ferry couldn't come in because of wind.

No cost-effective alternatives to the ferry exist for Gustavus. Alaska Marine Lines cannot land in Gustavus because the port is not deep enough to accommodate their vessels. The only other way is to fly or take a private boat, but both have significant downsides. Two people can ride to Juneau on the ferry for less than the cost of one person flying to Juneau. I've taken a private boat to Juneau and it was cheaper, but 2.5 to 3 hours in Icy Straits and Lynn Canal in a little boat—you don't want to be doing that.

Another alternative is a highly priced small-capacity landing craft arriving via the Salmon River that requires a 16+ foot high tide to land. It carries propane tanks and bulk oil, stuff that can't go on the ferry. Before we had a ferry, that's how everything got here, but it is expensive.

### ***Minimum Level of Service***

Gustavus needs service at least twice a week Mondays and Thursdays in the winter and four times a week in the summer (Monday, Wednesday Friday, and Sunday) to accommodate increased independent travelers, residents, and tourism businesses.

### ***Tolerance for a 10 Percent Fare Increase or Reduction in Service***

If prices for passengers increased by 10 percent, it would not decrease ridership, but if the vehicle fare went up, that might cause some reductions. It's kind of spendy to take a vehicle now. Having that ferry to get to doctor's appointments in Juneau is literally a lifesaver. Transportation alone for medical is a huge thing here. There are a lot of retirees and an aging population in Gustavus, so the medical stuff is pretty darn important.

### ***Effects of Reduced Service***

If service was reduced, it would end this city. If you cut back the ferry schedule, you reduce the ability for independent travelers to get here and we rely on them to purchase activities, such as kayak tours into bay and sport fishing charters. The charter fishing industry here is huge since Icy Straits is the best place to catch halibut in Alaska.

We barely got by this winter on two sailings a week. That ferry kept us afloat. Any weeks during the summer when we only had two sailings, it was a huge stress on Frontier Freight and others trying to get items to Gustavus. Tourism businesses are ordering food for the following week for the patrons. With only Monday and Wednesday sailings, the food for the following week has to come in on Wednesday, meaning a huge spoilage issue before you have clients. That was a huge issue last year, but this year we have Monday, Wednesday, Friday, and an additional Sunday every other week. That's been important

for getting food here for clients. Summer tourist season is how everybody makes their money here and the city is run on the sales, bed, and fish box taxes.

Combining a passenger-only with a less-frequent vehicle ferry would likely not work during the summer. We need that freight every week. It's irresponsible for legislators in the Matanuska-Susitna Borough and the rest of the state to think we're getting something special down here. It's our highway, just like the Parks and Seward highway up north. If the bridge over the Knik River fell down, do you think the state would consider not rebuilding it? No. So why do they think we can cut our bridge here? The ferry is our bridge to Juneau. All the things people want to see here in Alaska are in rural areas and Southeast is one of the most important rural areas of the state. For them to cut off our transportation to get people to these resources—timber, mining, and tourism—is ridiculous. We would never consider cutting off Fairbanks or Wasilla from the rest of the state.

Cutting the number of departures by half, would negatively impact people's lives, I know that. You might have to fly one way and take the ferry the other. Reducing the number of departures would also disrupt grocers and other businesses.

### ***Ideas for Improving Fiscal Health***

- If AMHS increased reliable service in Icy Straits, it would pay for itself through increased ridership and freight transport. As the communities develop economically, so will profitability of AMHS.
- The bars should be brought back at least on the mainline ferries. What a money maker that would be!
- Install coffee machines in the terminals.
- Increase the sailings, especially in the summertime, so we could market trips from Juneau to Gustavus for the weekend staycation market.
- Ensure the ferry plays a key role in increasing independent travel to Bartlett Cove. The National Park Service is trying to open Glacier Bay to more tourism, so the traffic is more comparable to Denali National Park. We're seeing potential for much increased economic activity and that ties right back into the ferry.
- A reliable schedule is key to increasing ridership

### **Historic Revenue and Traffic Volumes**

Table 8 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with Gustavus as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). Gustavus is an origin/destination in Southeast Feeder Route Group connecting to three ports, and there have been a few past sailings from Gustavus to the Mainline Route Group. The route between Gustavus and Juneau generates the most revenue and transports the most passengers.

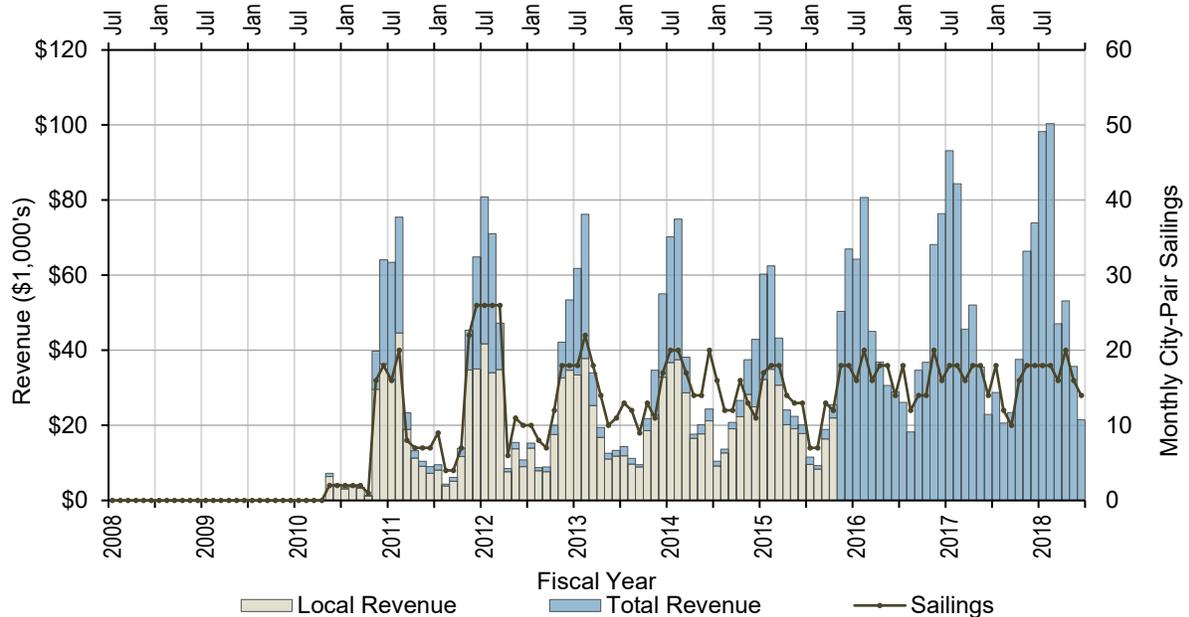
Table 8. Gustavus as the Origin or Destination—AMHS Volume and Revenue, 2009–2018

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>SE Village Routes</b>										
<b>Travel to and from Juneau</b>										
Sailings	0	0	45	137	178	168	185	166	196	190
Passengers	0	0	2,602	6,653	7,830	7,228	7,074	6,895	7,520	7,686
# on Car-deck	0	0	812	2,116	2,432	2,167	2,357	2,277	2,641	2,545
Vans	0	0	55	168	272	266	266	304	289	275
\$ (1,000s)	\$0	\$0	\$127	\$339	\$382	\$364	\$397	\$415	\$547	\$584
<b>Travel to and from Hoonah</b>										
Sailings	0	0	8	62	48	69	29	71	66	58
Passengers	0	0	127	657	294	1,273	377	1,159	545	202
# on Car-deck	0	0	61	303	168	454	204	479	124	58
Vans	0	0	1	38	9	77	25	62	0	0
\$ (1,000s)	\$0	\$0	\$5	\$12	\$18	\$60	\$19	\$59	\$22	\$11
<b>Travel to and from Pelican</b>										
Sailings	0	0	10	2	8	18	15	14	0	2
Passengers	0	0	194	8	12	38	152	84	0	1
# on Car-deck	0	0	0	10	3	3	4	1	0	2
Vans	0	0	0	2	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$3	\$1	\$1	\$1	\$3	\$3	\$0	\$0
<b>Mainline Routes</b>										
<b>Travel to and from Wrangell</b>										
Sailings	0	0	0	1	0	0	0	4	0	0
Passengers	0	0	0	0	0	0	0	0	0	0
# on Car-deck	0	0	0	0	0	0	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Travel to and from Ketchikan</b>										
Sailings	0	0	0	1	10	0	0	4	0	0
Passengers	0	0	0	0	0	0	0	0	0	0
# on Car-deck	0	0	0	0	0	0	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Source: Northern Economics analysis using data from AMHS (2019)

Figure 8 shows monthly revenues and sailings for travel between Gustavus and Juneau in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available—approximately 68 percent of travel was locally based.

**Figure 8. Monthly Local Resident and Total Gustavus-Juneau Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Land-based Facilities**

The land-based AMHS facility in Gustavus is owned by the State of Alaska. Table 9 shows which currently operating AMHS vessels are capable of docking at the facility in Gustavus.

**Table 9. Vessels Capable of Docking at Gustavus Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Gustavus	X	X*	X†	X	X*	X*	X	X*	

Notes:

X indicates the vessel is compatible with this terminal.

\* It is likely that the vessel is compatible with this terminal, but it has not been fully tested.

† *Kennicott* can only access the terminal in fair weather when there is no current due to poor line leads.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value of the facility was constructed by PND (2019).

### ***Gustavus Facility***

*Docking Orientation:* Side Berth

*Description:* This multi-use facility was constructed in 2011. This facility consists of a 600ft long trestle, 0.75 acre staging and parking island, 175ft long approach trestle with a 75x75ft dock, sheet pile wave barrier, pontoon supported transfer bridge with adjustable ramp and apron, six steel pile dolphins, and catwalks/gangways for line handling access.

*Alternative Usage:* The Gustavus terminal is a multi-use facility. The existing facility contains the primary ferry berth, a barge landing, small pile supported dock section and mooring floats. Pile supported dock and trestle may have limited suitability for freight transfer equipment depending on original design vehicles (assumed HS-20). The marine structures provided at the terminal offer a variety of potential alternative uses; however, use of the existing ferry terminal vehicle transfer ramp and apron for alternative vessels would likely require modification.

Table 10 shows a range of estimated values for the Gustavus Facility including uplands and associated infrastructure but does not account for any potential modifications required for the facilities to be used by non-AMHS vessels.

**Table 10. Estimated Value of the Gustavus Facility**

<b>Estimate Range</b>	<b>-30%</b>	<b>Avg</b>	<b>+30%</b>
Facility Value (\$)	9,220,000	13,170,000	17,120,000

Data Source: PND (2019)

### **2.2.3 Transportation Alternatives**

Three carriers provide regularly scheduled passenger air service to Gustavus, and rates to hub airports are shown in Table 11. Alaska Airlines flights to Gustavus are seasonal and run for about twelve weeks from June-August.

**Table 11. Gustavus Flight Services and Rates for Single Adult Passenger, by Carrier**

<b>Airline Carrier</b>	<b>One Way Destination</b>	<b>Summer Rate (\$)</b>	<b>Winter Rate (\$)</b>
Alaska Seaplanes	Juneau	119	119
Harris Air	Juneau	105	Not reported
Alaska Airlines	Juneau	105	No Service

Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.

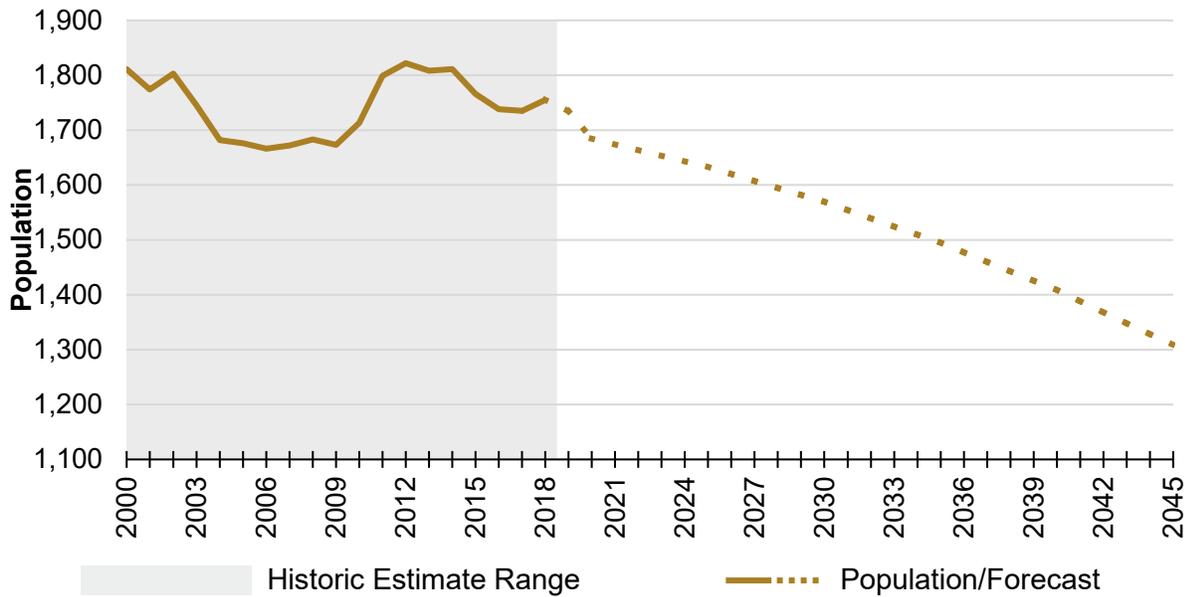
Data Source: Alaska Seaplanes, 2019. Harris Aircraft Services, 2019. Alaska Airlines, Inc., 2019.

## 2.3 Haines Community Profile

### 2.3.1 Demographic Summary

Figure 9 shows the population of Haines with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 1,755 permanent residents, but the population of Haines is expected to decrease steadily over time.

**Figure 9. Haines Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 12 shows student enrollment in all Haines schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

**Table 12. Haines All Schools Enrollment by Grade, 2016–2017 School Year**

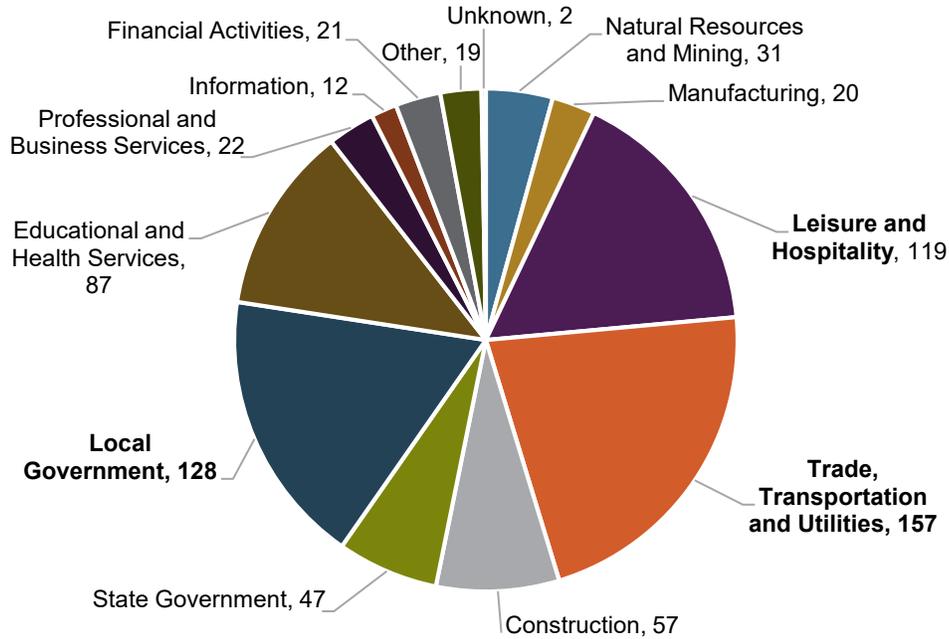
Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	27	22	23	19	23	16	17	14	20	26	15	22	18	8
Total	147							34		81				8

Data Source: USDE, 2016.

Figure 10 shows the number of workers in various industries for Haines, and the top three industries are shown in bold. The current natural resources and mining employment sector is relatively small but could grow in the future as Constantine Metal Resources Ltd. continues development of a mineral property about 40 road miles northwest of Haines. It is considered an advanced exploration project

and is in a favorable location for importing equipment and supplies and exporting mineral concentrates. Marine traffic at Haines could potentially increase if

**Figure 10. Haines Resident Employment by Industry, 2016**



Data Source: ALARI, 2019

### 2.3.2 AMHS Summary

#### **Community Leader Perspectives**

Mayor Wilmer Beetus of Haines provided information via survey on how AMHS is used by individuals and businesses within the community. His responses are summarized below.

#### ***How Residents Use the Ferry***

Residents use the ferry to travel for business, medical appointments, school events, shopping, and access to all other ports in southeast Alaska. Haines is on the road system, with access to the northern and interior regions of Alaska and the northwest regions of Canada. Military families pass through Haines on the ferry on their way north and south.

#### ***Transportation Options***

Private ferry services might be a possibility, but vehicle transport might not be available.

#### ***Minimum Level of Service***

Daily service in the summer and five days per week during the rest of the year.

#### ***Ideas for Improving Fiscal Health***

More reliable service; lower costs for vehicles; food service while in port; gift shops; lounges (bars)

### Historic Revenue and Traffic Volumes

Table 13 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with Haines as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). Haines is an origin/destination in the Lynn Canal and Southeast Feeder Route Groups, connecting to ten ports. The route between Haines and Bellingham generates the highest revenue. The route between Haines and Juneau transports the most passengers and cars.

**Table 13. Haines as the Origin or Destination—AMHS Volume and Revenue, 2009–2018**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Lynn Canal Routes</b>										
<b>Travel to and from Juneau</b>										
Sailings	624	646	677	655	623	606	592	582	566	536
Passengers	41,574	42,126	42,221	44,275	43,771	42,480	42,244	39,880	40,755	38,531
# on Car-deck	12,840	13,162	13,320	13,994	14,154	13,793	13,474	12,768	14,836	14,035
Vans	515	544	426	471	395	446	371	135	50	10
\$ (1,000s)	\$2,287	\$2,319	\$2,328	\$2,421	\$2,396	\$2,532	\$2,651	\$2,683	\$2,982	\$2,967
<b>Travel to and from Skagway</b>										
Sailings	506	541	581	605	571	508	524	490	490	551
Passengers	13,700	14,104	13,774	13,863	15,523	14,730	16,781	13,683	13,581	16,086
# on Car-deck	5,847	6,217	6,059	6,108	6,566	6,341	6,848	6,099	6,510	7,505
Vans	121	60	75	99	44	19	57	15	7	1
\$ (1,000s)	\$687	\$742	\$751	\$736	\$781	\$770	\$871	\$762	\$805	\$972
<b>SE Village Routes</b>										
<b>Travel to and from Hoonah</b>										
Sailings	0	2	2	1	22	27	6	21	9	3
Passengers	0	2	4	1	34	10	6	27	37	4
# on Car-deck	0	1	3	1	6	4	1	13	6	3
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$1	\$0	\$2	\$1	\$1	\$4	\$4	\$1
<b>Travel to and from Sitka</b>										
Sailings	52	58	53	54	74	83	78	75	69	64
Passengers	466	599	377	353	739	536	594	639	482	521
# on Car-deck	159	179	136	133	255	243	251	236	283	291
Vans	9	5	4	14	49	59	50	43	46	37
\$ (1,000s)	\$68	\$74	\$57	\$60	\$109	\$107	\$111	\$124	\$140	\$152
<b>Travel to and from Kake</b>										
Sailings	43	32	13	8	33	42	36	36	11	7
Passengers	30	2	3	0	60	17	18	7	19	17
# on Car-deck	6	1	2	0	7	5	14	1	9	8
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$4	\$0	\$1	\$0	\$6	\$4	\$8	\$1	\$6	\$4

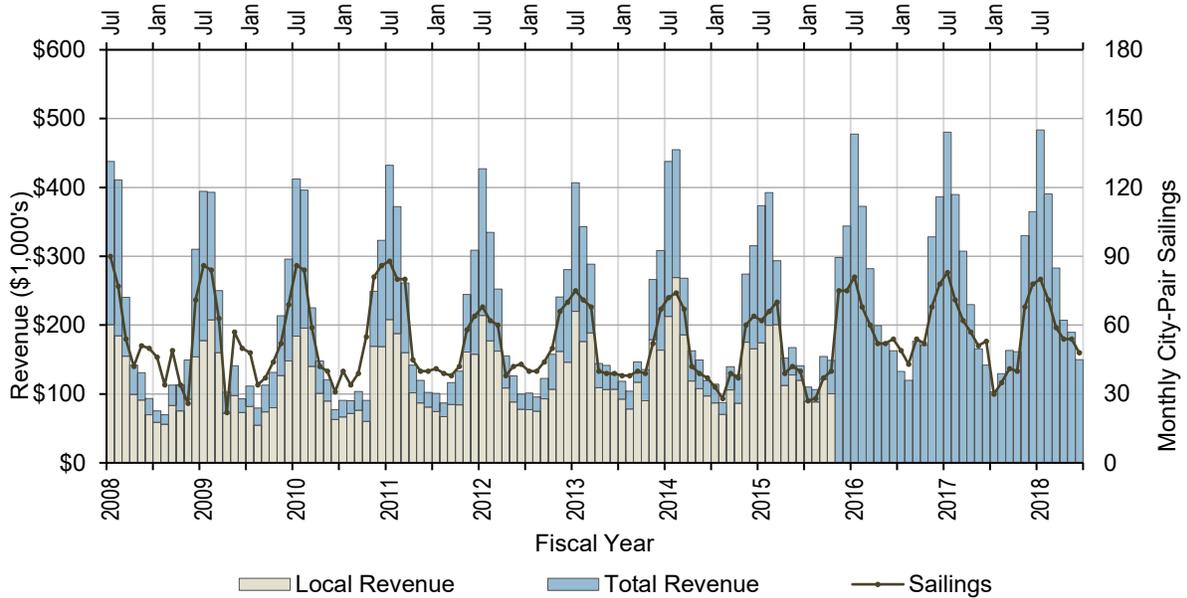
**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Petersburg</b>										
Sailings	188	187	171	151	195	204	183	197	108	106
Passengers	473	455	552	349	494	449	437	453	439	334
# on Car-deck	161	212	190	141	152	147	158	167	151	161
Vans	3	2	3	0	1	2	0	0	0	4
\$ (1,000s)	\$92	\$109	\$110	\$74	\$92	\$85	\$100	\$104	\$96	\$99
<b>Travel to and from Wrangell</b>										
Sailings	187	187	171	151	193	204	184	185	92	93
Passengers	329	268	339	451	399	456	370	446	306	303
# on Car-deck	124	99	91	105	104	101	98	106	137	123
Vans	0	0	0	1	2	4	1	0	0	0
\$ (1,000s)	\$82	\$66	\$74	\$89	\$81	\$83	\$87	\$96	\$91	\$91
<b>Travel to and from Ketchikan</b>										
Sailings	189	188	172	151	195	205	184	198	169	167
Passengers	1,466	1,192	1,289	1,065	1,201	1,498	1,013	1,107	868	974
# on Car-deck	555	541	542	438	513	624	419	597	547	609
Vans	42	28	38	42	93	98	78	26	2	2
\$ (1,000s)	\$450	\$415	\$432	\$361	\$458	\$569	\$396	\$472	\$381	\$426
<b>Travel to and from Prince Rupert</b>										
Sailings	84	83	63	47	70	72	70	75	64	60
Passengers	1,321	1,417	1,337	1,028	1,088	1,257	1,082	1,021	1,137	1,030
# on Car-deck	699	718	651	524	561	608	550	502	703	557
Vans	0	0	0	0	0	1	0	0	0	1
\$ (1,000s)	\$603	\$643	\$600	\$463	\$486	\$577	\$520	\$491	\$616	\$563
<b>Travel to and from Bellingham</b>										
Sailings	100	101	102	102	102	99	102	98	97	97
Passengers	5,514	6,598	6,599	6,378	6,567	5,933	6,245	4,872	3,911	3,623
# on Car-deck	2,723	3,184	3,261	3,198	3,275	2,925	3,144	2,514	2,732	2,587
Vans	0	0	0	0	0	0	0	1	0	0
\$ (1,000s)	\$5,010	\$5,818	\$5,957	\$5,878	\$6,049	\$5,453	\$6,019	\$5,220	\$5,146	\$4,903

Source: Northern Economics analysis using data from AMHS (2019)

The figures below show local and non-local revenue for selected city-pair combinations involving Haines. Figure 11 shows monthly revenues and sailings for travel between Haines and Juneau in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available. Approximately 61 percent of revenue was locally based. Figure 12 shows monthly revenues and sailings for travel between Haines and Skagway in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available. Most revenue in the winter months is from local residents, while most of the peak summer season revenue is from non-locals.

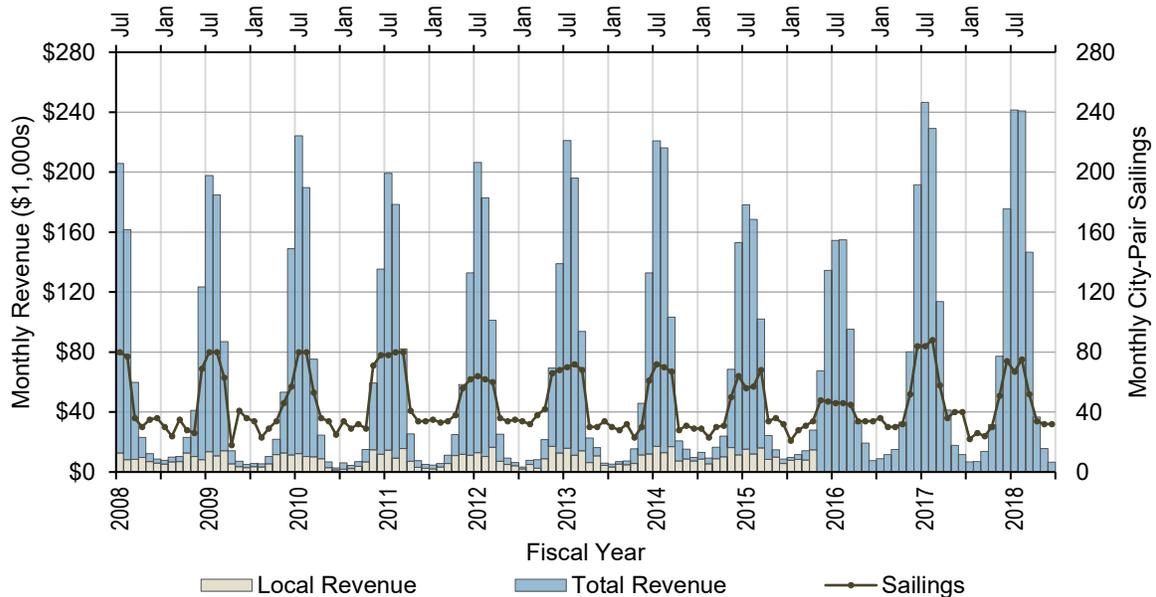
**Figure 11. Monthly Local Resident and Total Haines-Juneau Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Figure 12. Monthly Local Resident and Total Haines-Skagway Revenues and Sailings, by Fiscal Year**

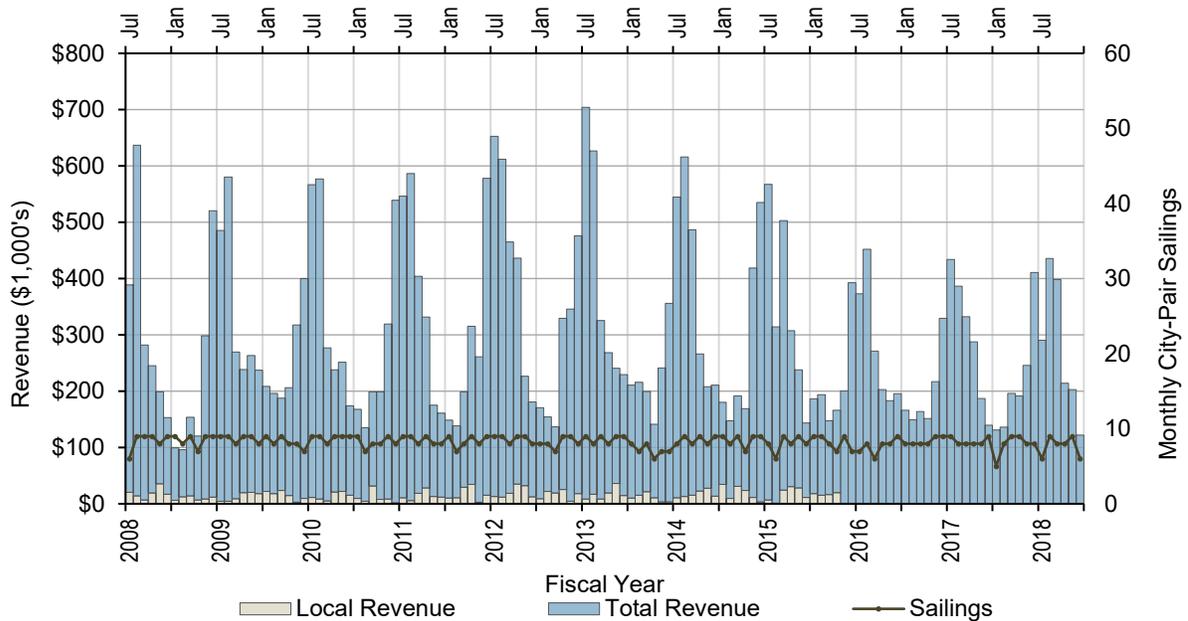


Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

Figure 13 shows monthly revenues and sailings for travel between Haines and Bellingham in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available—on average only 5 percent of revenue is locally based.

**Figure 13. Monthly Local Resident and Total Haines-Bellingham Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Land-based Facilities**

The land-based AMHS facility in Haines is owned by the State of Alaska. Table 14 shows which currently operating AMHS vessels are capable of docking at the facility in Haines.

**Table 14. Vessels Capable of Docking at Haines Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Haines	X	X	X	X	X*	X	X	X*	

Notes:

X indicates the vessel is compatible with this terminal.

\* It is likely that the vessel is compatible with this terminal, but it has not been fully tested.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value of the facility was constructed by PND (2019).

**Haines Facility**

*Docking Orientation:* Side Berth

*Description:* This facility consists of a transfer bridge, twin lift tower (Syncrolift), three steel pile and two timber dolphins, sheet pile cell structure with timber fenders, and catwalks/gangways for line handling access. The terminal building was built in 1980 and upgraded as recently as 2015. There was a proposed project scope to construct offshore and uplands improvements to accommodate stern/bow loading of AMHS vessels.

*Alternative Usage:* The Haines terminal could likely be used as a small cruise ships terminal for vessels with lengths and parameters similar to the AMHS mainline ferries. Modifications would likely be required to the transfer bridge and syncrolift system to accommodate baggage and passenger door locations on vessels under consideration. The use of the terminal for offload of freight appears limited due to restrictions of offload equipment to highway-legal design loads. Modifications to the transfer bridge and syncrolift system would likely be required to match the freeboard/side shell height of barge of vessels being used. The suitability of small passenger-only vessels is likely limited due to the spacing of berthing and mooring structures.

Table 15 shows a range of estimated values for the Haines Facility including uplands and associated infrastructure but does not account for any potential modifications required for the facilities to be used by non-AMHS vessels.

**Table 15. Estimated Value of the Haines Facility**

Estimate Range	-30%	Avg	+30%
Facility Value (\$)	9,090,000	12,980,000	16,880,000

Data Source: PND (2019)

**2.3.3 Transportation Alternatives**

Two carriers provide regularly scheduled passenger air service to Haines, and rates to hub airports are shown in Table 16. There are also two private ferry operators that provide passenger service to Haines. The Haines Skagway Fast Ferry operates May through September with one way 5 trips per day between Haines and Skagway. They also provide charter services upon request. Alaska Fjordlines, Inc. operates a morning route from Skagway to Haines to Juneau and an evening return route from Juneau to Haines to Skagway.

**Table 16. Haines Flight Services and Rates for Single Adult Passenger, by Carrier**

Airline Carrier	One Way Destination	Summer Rate (\$)	Winter Rate (\$)
Alaska Seaplanes	Juneau	134	134
Harris Air	Juneau	126	Not reported

Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.

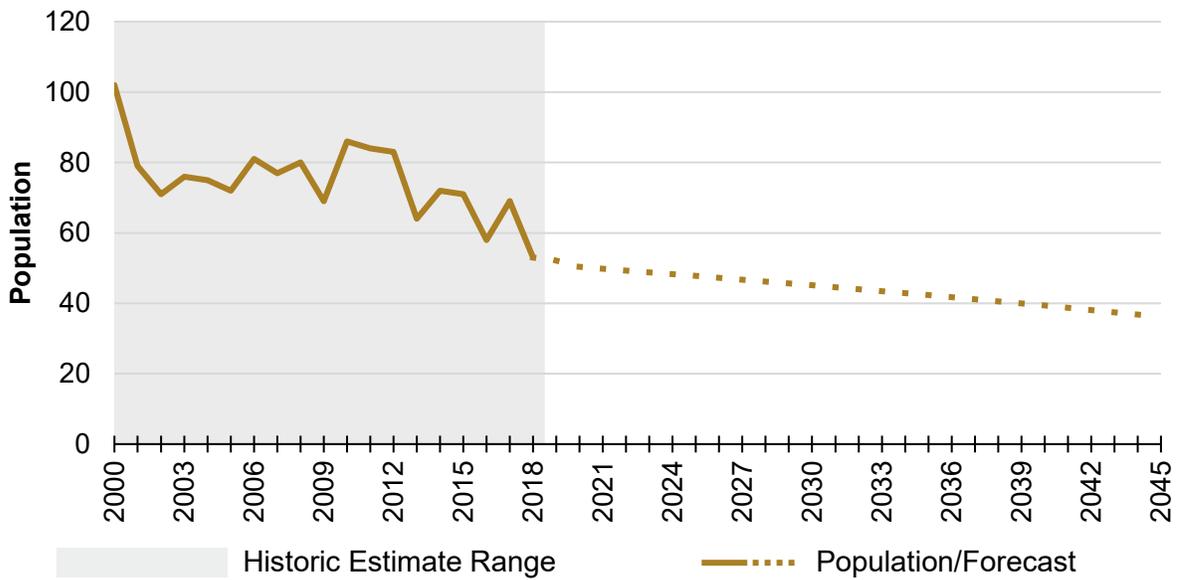
Data Source: Alaska Seaplanes, 2019. Harris Aircraft Services, 2019.

### 2.3.4 Covenant Life Community Profile

#### Demographic Summary

Figure 14 shows the population of Covenant Life with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 53 permanent residents, but the population of Covenant Life is expected to decrease gradually over time.

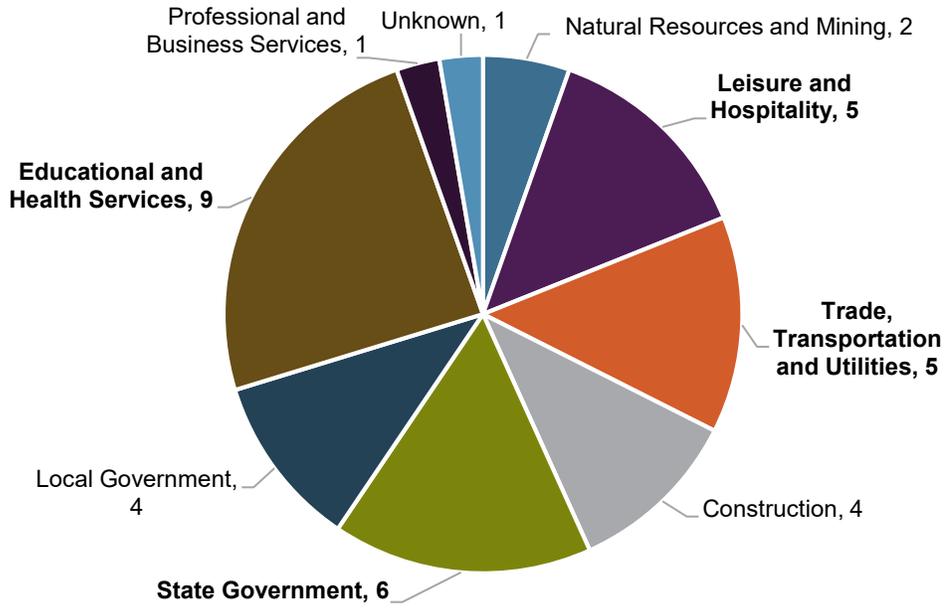
**Figure 14. Covenant Life Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Figure 15 shows the number of workers in various industries for Covenant Life, and the top three industries are shown in bold.

**Figure 15. Covenant Life Resident Employment by Industry, 2016**



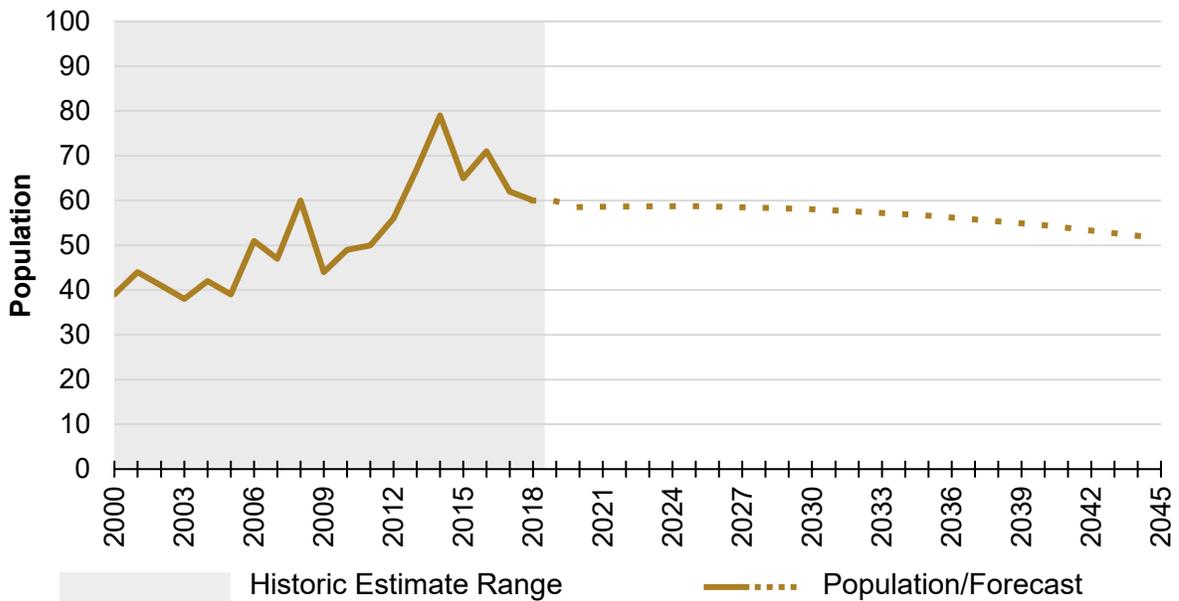
Data Source: ALARI, 2019

### 2.3.5 Lutak Community Profile

#### Demographic Summary

Figure 16 shows the population of Lutak with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 60 permanent residents, but the population of Lutak is expected to decrease slightly over time. There are no Alaska public schools in Lutak. Lutak is located in the Haines Borough School District, which has schools in Haines.

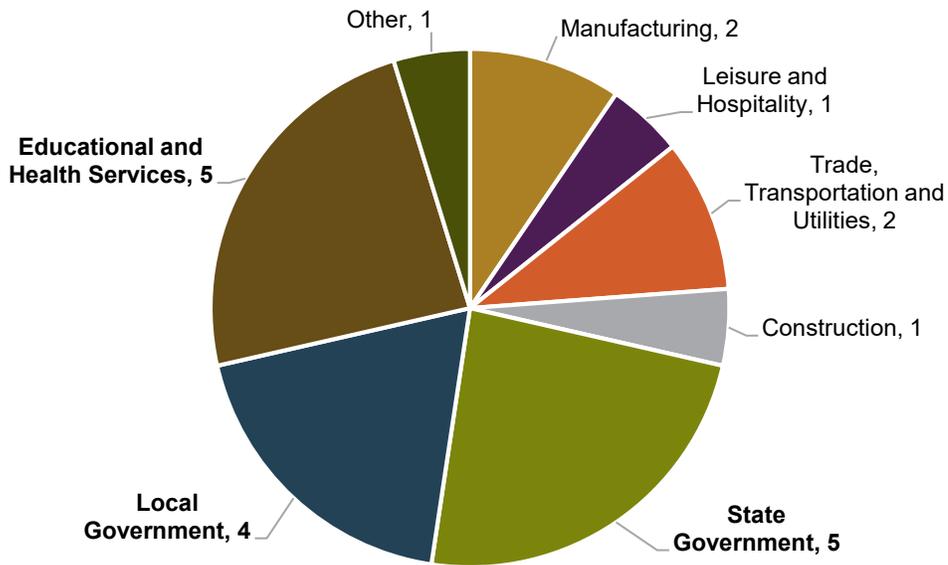
**Figure 16. Lutak Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Figure 17 shows the number of workers in various industries for Lutak, and the top three industries are shown in bold.

**Figure 17. Lutak Resident Employment by Industry, 2016**



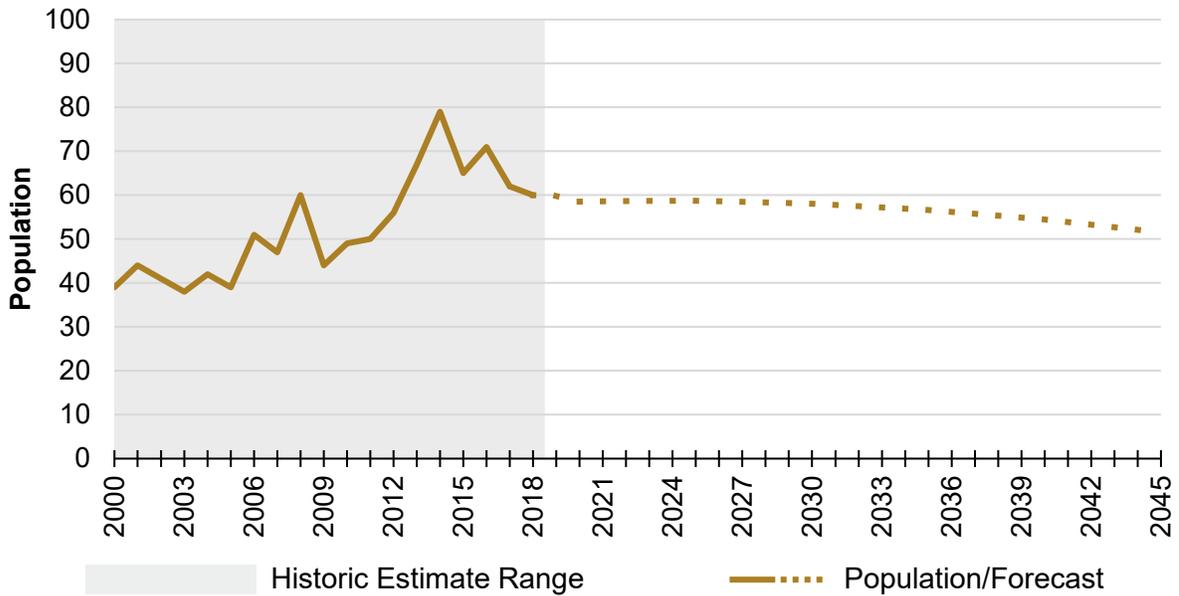
Data Source: ALARI, 2019

### 2.3.6 Mosquito Lake Community Profile

#### Demographic Summary

Figure 18 shows the population of Mosquito Lake with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 280 permanent residents, but the population of Mosquito Lake is expected to decrease gradually over time.

**Figure 18. Mosquito Lake Historic Estimates and Population Forecast, 2000–2045**

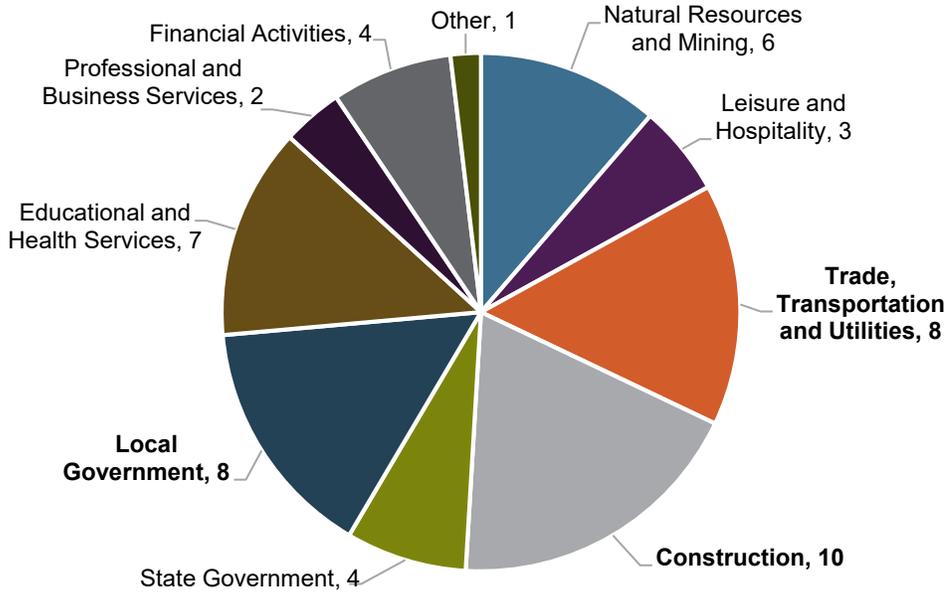


Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

There are no Alaska public schools in Mosquito Lake. There was previously one school in the community, Mosquito Lake Elementary, that served kindergarten through eighth grade with a last reported enrollment of 9 students in 2013-14 (AK DEED, 2019). Mosquito Lake is located in the Haines Borough School District, which has schools in Haines.

Figure 19 shows the number of workers in various industries for Mosquito Lake, and the top three industries are shown in bold.

**Figure 19. Mosquito Lake Resident Employment by Industry, 2016**



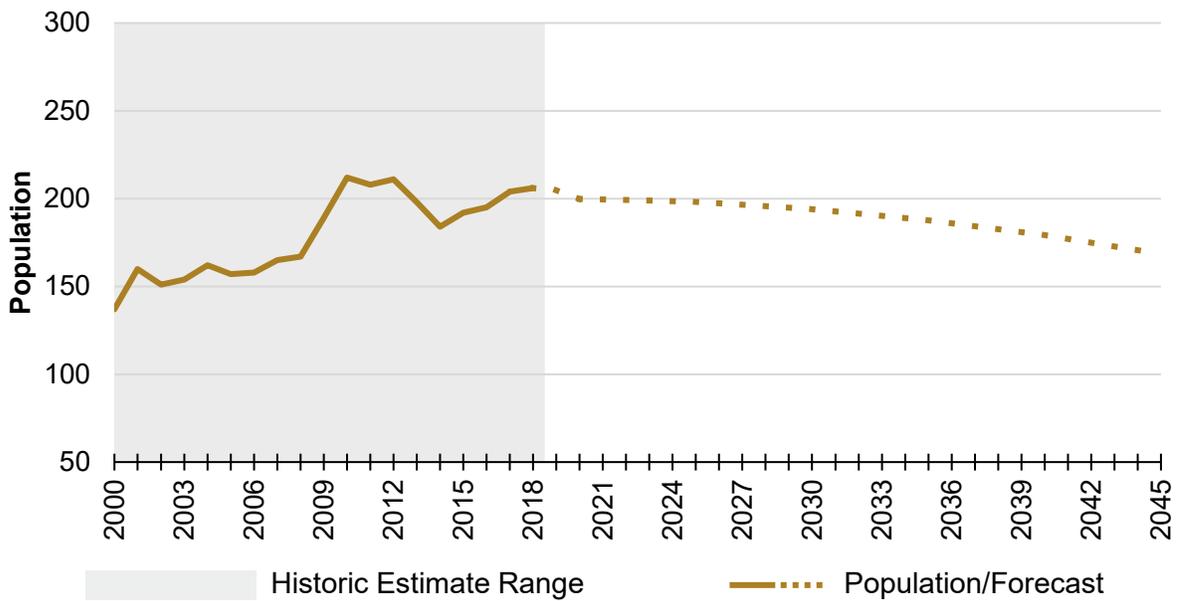
Data Source: ALARI, 2019

### 2.3.7 Mud Bay Community Profile

#### Demographic Summary

Figure 20 shows the population of Mud Bay with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 206 permanent residents, but the population of Mud Bay is expected to decrease gradually over time. There are no Alaska public schools in Mud Bay, but it is located within the Haines Borough School District which has schools in Haines.

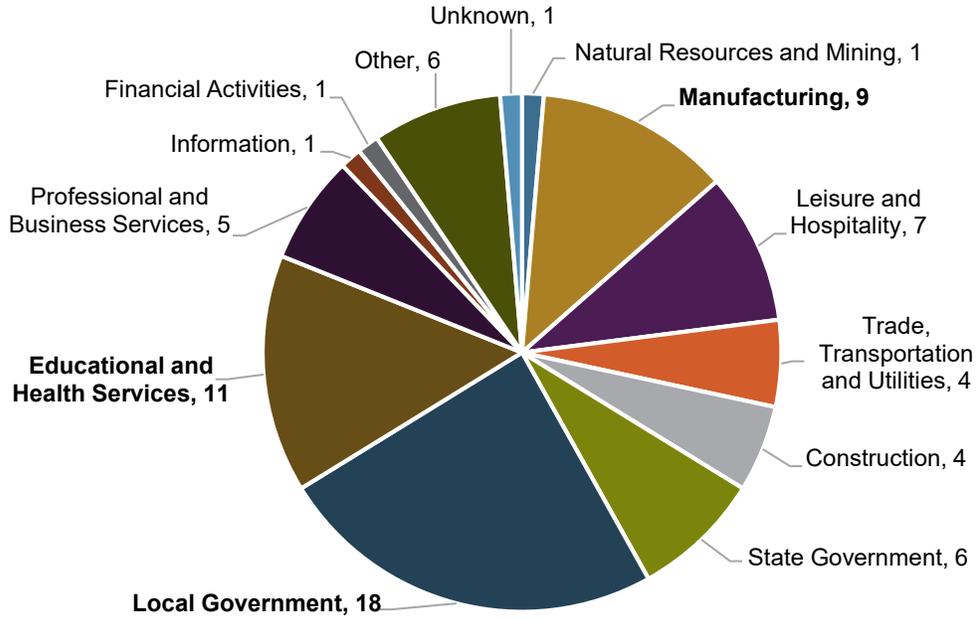
**Figure 20. Mud Bay Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Figure 21 shows the number of workers in various industries for Mud Bay, and the top three industries are shown in bold.

**Figure 21. Mud Bay Resident Employment by Industry, 2016**



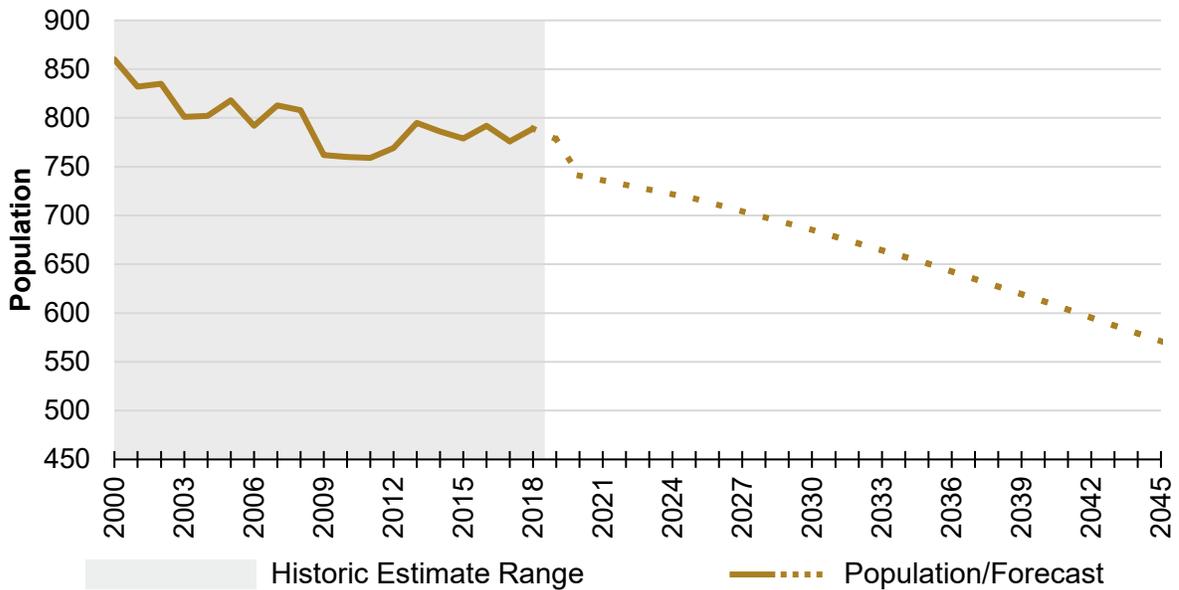
Data Source: ALARI, 2019

## 2.4 Hoonah Community Profile

### 2.4.1 Demographic Summary

Figure 22 shows the population of Hoonah with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 789 permanent residents, but the population of Hoonah is expected to decrease steadily over time.

**Figure 22. Hoonah Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 17 shows student enrollment in all Haines schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

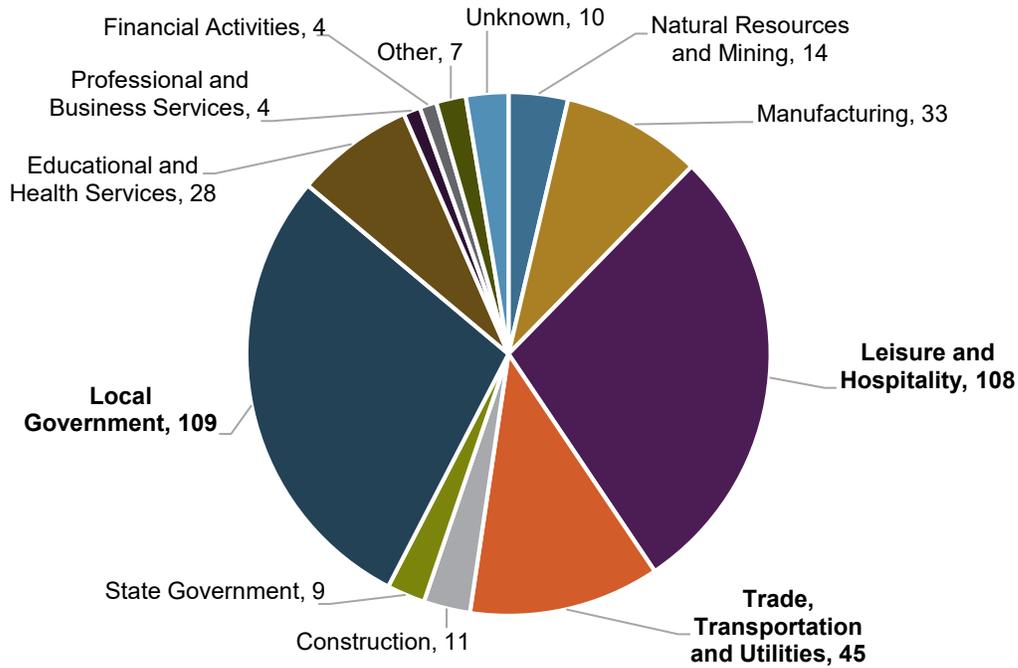
**Table 17. Hoonah All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	9	14	11	6	9	7	12	5	7	6	7	9	7	4
<b>Total</b>	68							12		29				4

Data Source: USDE, 2016.

Figure 23 shows the number of workers in various industries for Hoonah, and the top three industries are shown in bold. Hoonah Cold Storage operates a seafood processing plant in the community.

**Figure 23. Hoonah Resident Employment by Industry, 2016**



Data Source: ALARI, 2019

## 2.4.2 AMHS Summary

### **Community Leader Perspectives**

Mayor Gerald Byers of Hoonah provided information via survey and interview on how AMHS is used by individuals and businesses within the community. His responses are summarized below.

#### ***How Residents Use the Ferry***

Hoonah uses the ferry year-round to access medical services, shop, and visit family. Typically doctor appointments are scheduled around ferry trips and schedules.

Residents of Freshwater Bay also access the ferry through Hoonah.

#### ***Commercial Uses***

In Hoonah there are two grocery stores, with 85 percent of the groceries in town supplied by the ferries. A third store uses barge service in the summer but depends on the ferry for supplies from Seattle in the winter. During the ferry strike there were no other real options to bring in food. There was some coming in by air, but at significantly higher prices.

There is also a fair amount of tourism, including cruise ship passengers, in the summer, which increases the demand for groceries.

**Transportation Options**

No other services provide year-round travel like the ferry system does. There is some barge service in the summer because of the fish processor.

**Minimum Level of Service**

The minimum service level would be one round trip every three to four days. That would give people enough time to get things accomplished in Juneau.

The new schedule will leave Hoonah without ferry service for six weeks in December–January. They will struggle for groceries during that period. What will happen during the six-week shut-down this winter is yet to be determined.

**Effects of Reduced Service**

Reductions in the ferry system will undoubtedly lead to more online shopping. This will probably have an impact on retail employment in Juneau.

**Ideas for Improving Fiscal Health**

Reduce the number of ferry workers

**Historic Revenue and Traffic Volumes**

Table 18 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with Hoonah as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). Hoonah is an origin/destination in the Southeast Feeder Route Group, connecting to twelve ports. The route between Hoonah and Juneau generates the most revenue and transports the most passengers.

**Table 18. Hoonah as the Origin or Destination—AMHS Volume and Revenue, 2009–2018**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>SE Village Routes</b>										
<b>Travel to and from Juneau</b>										
Sailings	334	285	237	241	304	271	220	219	261	234
Passengers	11,984	9,994	10,220	9,253	9,805	10,035	8,251	8,467	7,650	7,889
# on Car-deck	3,826	3,157	3,233	2,986	3,345	3,510	3,035	3,103	3,004	2,868
Vans	284	306	233	214	227	291	136	266	205	222
\$ (1,000s)	\$521	\$443	\$438	\$417	\$455	\$489	\$441	\$504	\$528	\$568
<b>Travel to and from Angoon</b>										
Sailings	37	62	32	37	56	34	85	23	11	6
Passengers	222	246	157	638	452	316	673	302	113	49
# on Car-deck	63	121	100	242	138	76	296	76	9	2
Vans	1	7	38	56	9	3	199	5	0	0
\$ (1,000s)	\$6	\$4	\$2	\$9	\$14	\$11	\$34	\$14	\$3	\$2

**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Gustavus</b>										
Sailings	0	0	8	62	48	69	29	71	66	58
Passengers	0	0	127	657	294	1,273	377	1,159	545	202
# on Car-deck	0	0	61	303	168	454	204	479	124	58
Vans	0	0	1	38	9	77	25	62	0	0
\$ (1,000s)	\$0	\$0	\$5	\$12	\$18	\$60	\$19	\$59	\$22	\$11
<b>Travel to and from Pelican</b>										
Sailings	0	0	0	0	0	0	3	0	0	4
Passengers	0	0	0	0	0	0	1	0	0	13
# on Car-deck	0	0	0	0	0	0	3	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Travel to and from Tenakee Springs</b>										
Sailings	70	69	66	71	76	43	50	25	0	2
Passengers	19	34	12	98	219	145	6	48	0	2
# on Car-deck	0	2	2	0	0	0	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$1	\$1	\$0	\$4	\$8	\$4	\$1	\$1	\$0	\$0
<b>Travel to and from Sitka</b>										
Sailings	51	38	33	39	54	55	33	39	27	9
Passengers	138	118	236	257	367	384	130	141	149	86
# on Car-deck	38	37	68	65	112	109	54	63	57	30
Vans	0	0	0	0	2	0	1	0	1	0
\$ (1,000s)	\$8	\$7	\$15	\$14	\$22	\$23	\$9	\$13	\$14	\$9
<b>Travel to and from Haines</b>										
Sailings	0	2	2	1	22	27	6	21	9	3
Passengers	0	2	4	1	34	10	6	27	37	4
# on Car-deck	0	1	3	1	6	4	1	13	6	3
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$1	\$0	\$2	\$1	\$1	\$4	\$4	\$1
<b>Travel to and from Kake</b>										
Sailings	53	45	33	34	54	55	32	38	5	4
Passengers	20	25	10	15	14	68	23	57	5	8
# on Car-deck	6	17	1	6	2	7	9	6	20	2
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$2	\$4	\$1	\$2	\$1	\$4	\$3	\$4	\$9	\$1
<b>Travel to and from Petersburg</b>										
Sailings	53	50	34	41	57	57	33	43	4	2
Passengers	15	33	37	1	3	12	8	21	6	2
# on Car-deck	7	6	13	5	3	5	2	7	2	2
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$2	\$3	\$3	\$2	\$1	\$2	\$1	\$3	\$1	\$1

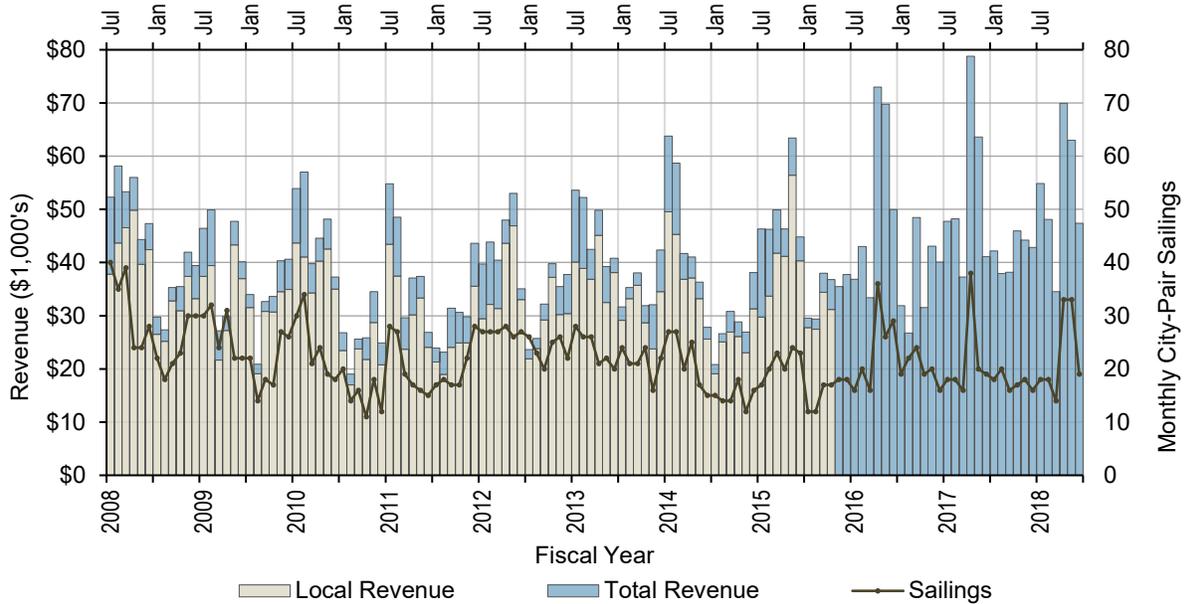
**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Wrangell</b>										
Sailings	52	50	33	41	56	57	33	43	0	0
Passengers	4	5	5	7	2	9	2	9	0	0
# on Car-deck	2	4	4	3	0	4	2	4	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$1	\$1	\$1	\$2	\$0	\$2	\$1	\$2	\$0	\$0
<b>Travel to and from Ketchikan</b>										
Sailings	53	50	33	41	57	57	33	43	16	5
Passengers	66	55	33	42	75	101	31	67	73	9
# on Car-deck	10	17	10	16	24	24	12	6	11	4
Vans	0	0	2	3	2	3	0	0	0	0
\$ (1,000s)	\$8	\$10	\$11	\$13	\$18	\$19	\$7	\$8	\$12	\$2
<b>Travel to and from Prince Rupert</b>										
Sailings	53	48	28	39	48	47	28	40	5	2
Passengers	21	15	3	1	15	13	3	11	12	4
# on Car-deck	7	6	2	1	8	8	2	6	12	2
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$7	\$5	\$1	\$0	\$5	\$5	\$2	\$5	\$9	\$2

Source: Northern Economics analysis using data from AMHS (2019)

The figures below show local and non-local revenue for selected city-pair combination involving Hoonah. Figure 24 shows monthly revenues and sailings for travel between Hoonah and Juneau in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available. Both local and non-local revenue increase during the peak season with approximately 85 percent of revenue from local residents. Figure 25 shows monthly revenues and sailings for travel between Hoonah and Sitka in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available. Revenue is primarily from local residents throughout all seasons.

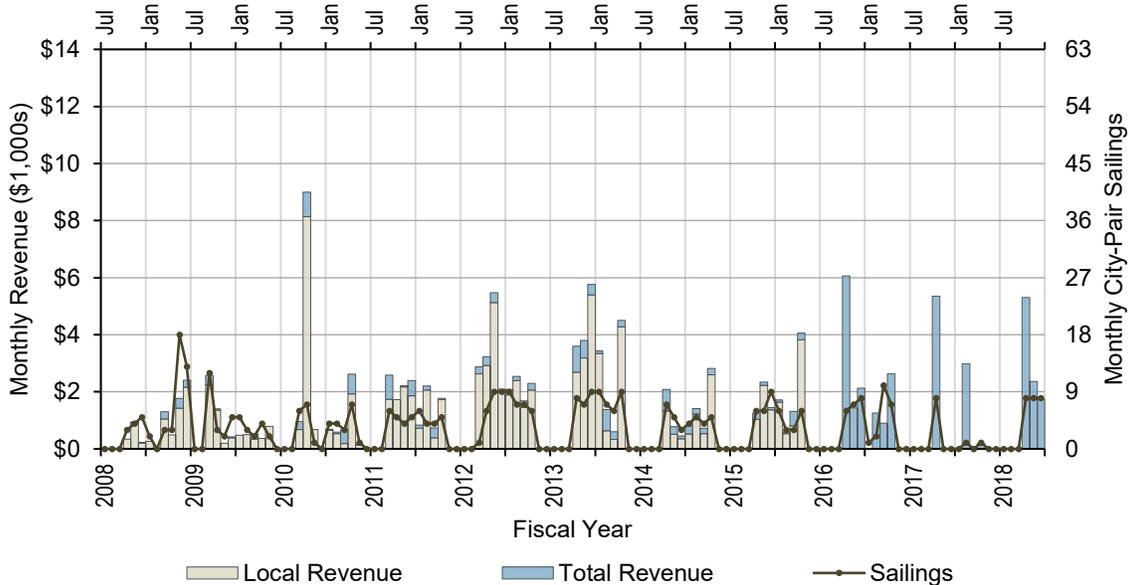
**Figure 24. Monthly Local Resident and Total Hoonah-Juneau Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Figure 25. Monthly Local Resident and Total Hoonah-Sitka Revenues and Sailings, by Fiscal Year**

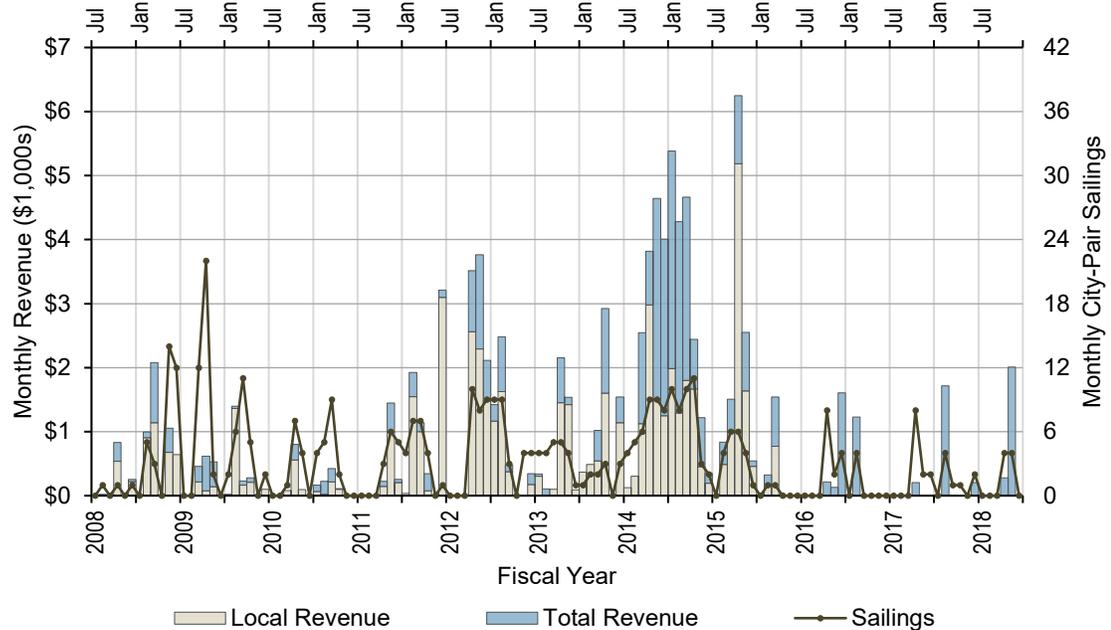


Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

Figure 26 shows monthly revenues and sailings for travel between Angoon and Hoonah in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available. Late 2012 through early 2013 and late 2014 through early 2016 had relatively high percentages of non-local revenue.

**Figure 26. Monthly Local Resident and Total Angoon-Hoonah Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Land-based Facilities**

The land-based AMHS facility in Hoonah is owned by the State of Alaska. Table 19 shows which currently operating AMHS vessels are capable of docking at the facility in Hoonah.

**Table 19. Vessels Capable of Docking at Hoonah Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Hoonah	X			X	X*	X	X	X*	

Notes:

X indicates the vessel is compatible with this terminal.

\* It is likely that the vessel is compatible with this terminal, but it has not been fully tested.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value of the facility was constructed by PND (2019).

***Hoonah Facility***

*Docking Orientation:* Side Berth

*Description:* This facility consists of a transfer bridge, steel support float, and eight steel moorings dolphins. The uplands were reconstructed in 2010 and include an open waiting shelter, paved parking, and overhead lighting. A transfer bridge, float system, and five new mooring dolphins were constructed in 2011. This facility is now capable of handling all of the AMHS and FVF ferries.

*Alternative Usage:* The Hoonah facility could likely be used as a small cruise ships terminal for vessels with lengths and parameters similar to the AMHS mainline ferries. Modifications would likely be required to the transfer bridge and float system (potentially requiring complete replacement) to meet freeboard, baggage and passenger door locations on vessels under consideration. The use of the terminal for offload of freight would likely require significant modifications to the float and transfer bridge system to match the freeboard/side shell height of barge or vessels being used. Offload equipment would need be limited to highway-legal design loads, further restricting the suitability of the terminal for freight transfer. The use of small passenger vessels would also require modifications to the transfer bridge/ramp system. Additional berthing and mooring structures would also likely be required, depending on the vessel dimensions under consideration.

Table 20 shows a range of estimated values for the Hoonah Facility including uplands and associated infrastructure but does not account for any potential modifications required for the facilities to be used by non-AMHS vessels.

**Table 20. Estimated Value of the Hoonah Facility**

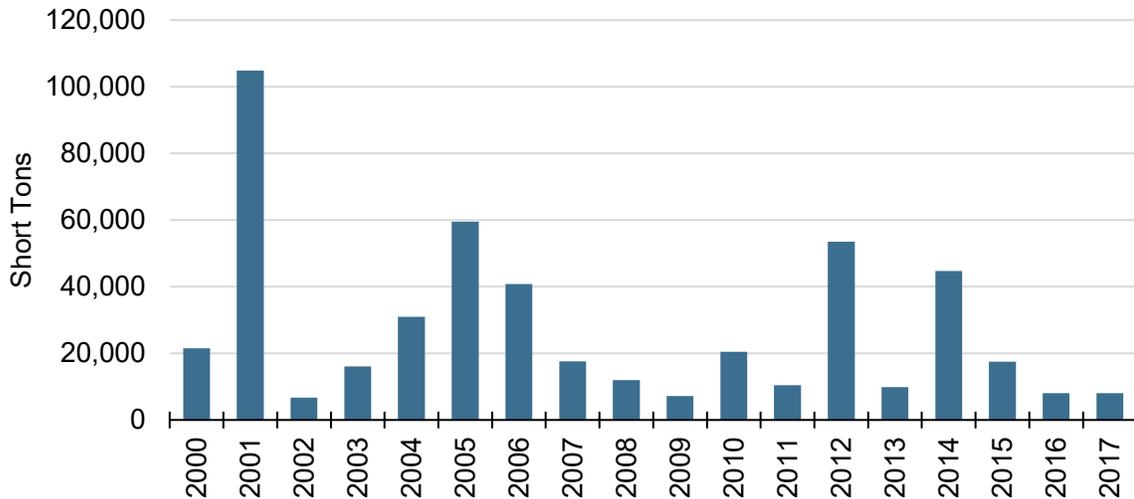
<b>Estimate Range</b>	<b>-30%</b>	<b>Avg</b>	<b>+30%</b>
Facility Value (\$)	5,310,000	7,590,000	9,860,000

Data Source: PND (2019)

### 2.4.3 Transportation Alternatives

Figure 27 shows marine freight data for Hoonah. A wide variety of commodities pass through Hoonah as marine freight, with distillate fuel oil, gasoline, manufactured products, and groceries as top categories by volume for most years. Very large volumes of wood in the rough, ranging from 50-90% of Hoonah’s total marine freight volume, were reported in 2001, 2005, 2006, 2012 and 2014.

**Figure 27. Hoonah Inbound and Outbound Annual Marine Freight, 2000–2017**



Data Source: USACE, 2019. USACE, 2018.

One carrier provides regularly scheduled passenger air service to Hoonah, and rates to hub airports are shown in Table 21. There is also one water taxi service based in Hoonah which provides transportation for up to 6 passengers per trip to various remote locations. The company provides a variety of services like chartered fishing, whale watching, and professional diving in addition to water taxi trips.

**Table 21. Hoonah Flight Services and Rates for Single Adult Passenger, by Carrier**

Airline Carrier	One Way Destination	Summer Rate (\$)	Winter Rate (\$)
Alaska Seaplanes	Juneau	94	94

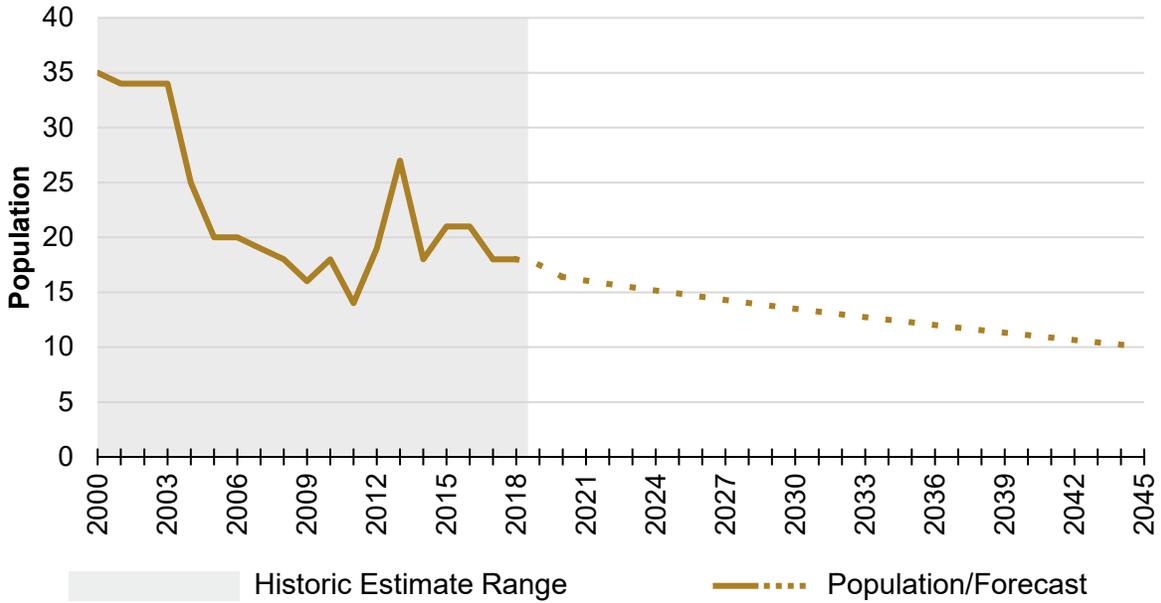
Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.  
Data Source: Alaska Seaplanes, 2019.

### 2.4.4 Game Creek Community Profile

#### Demographic Summary

Figure 28 shows the population of Game Creek with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 18 permanent residents, but the population of Game Creek is expected to decrease gradually over time.

**Figure 28. Game Creek Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.

Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

There are no Alaska public schools in Game Creek. Game Creek is located in the Chatham School District, which has schools in Klukwan, Gustavus, and Angoon and runs the Chatham Correspondence Program<sup>3</sup> providing homeschooling resources for students living in the school district (Chatham School District, 2019). The closest schools to Game Creek are located in nearby Hoonah, part of Hoonah City School District.

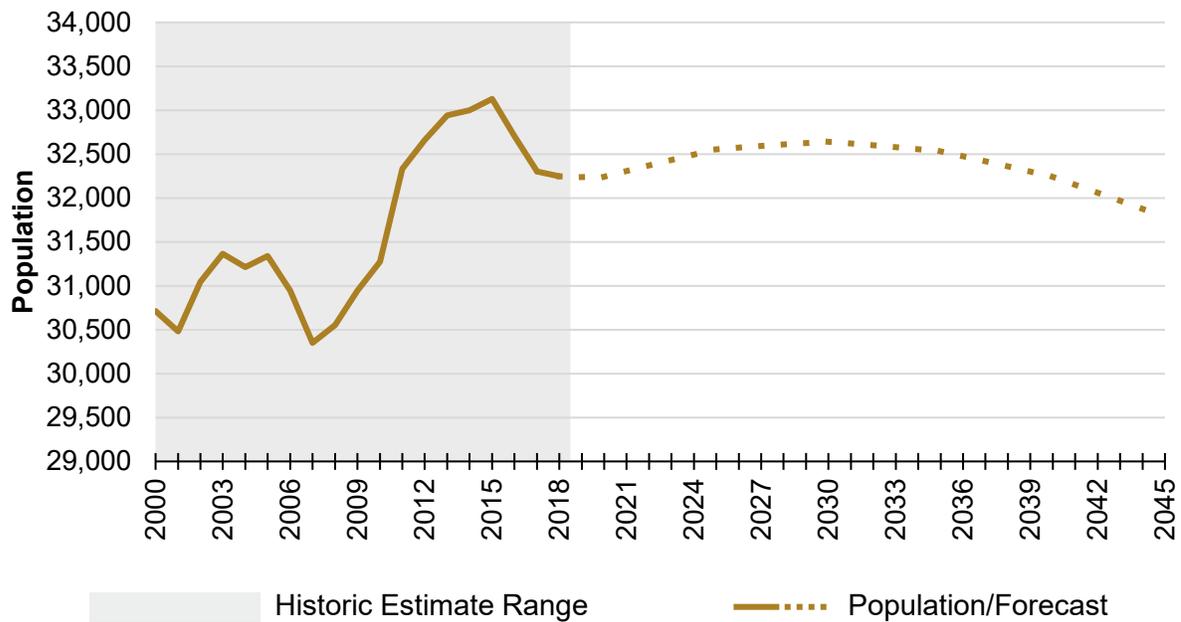
<sup>3</sup> Enrollment totals for the Chatham Correspondence Program are included in Angoon’s School Enrollment totals. The Chatham School District’s office is in Angoon.

## 2.5 Juneau Community Profile

### 2.5.1 Demographic Summary

Figure 29 shows the population of Juneau with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 32,247 permanent residents, and the population of Juneau is expected to increase slightly before gradually decreasing over time.

**Figure 29. Juneau Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 22 shows student enrollment in all Juneau schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

**Table 22. Juneau All Schools Enrollment by Grade, 2016–2017 School Year**

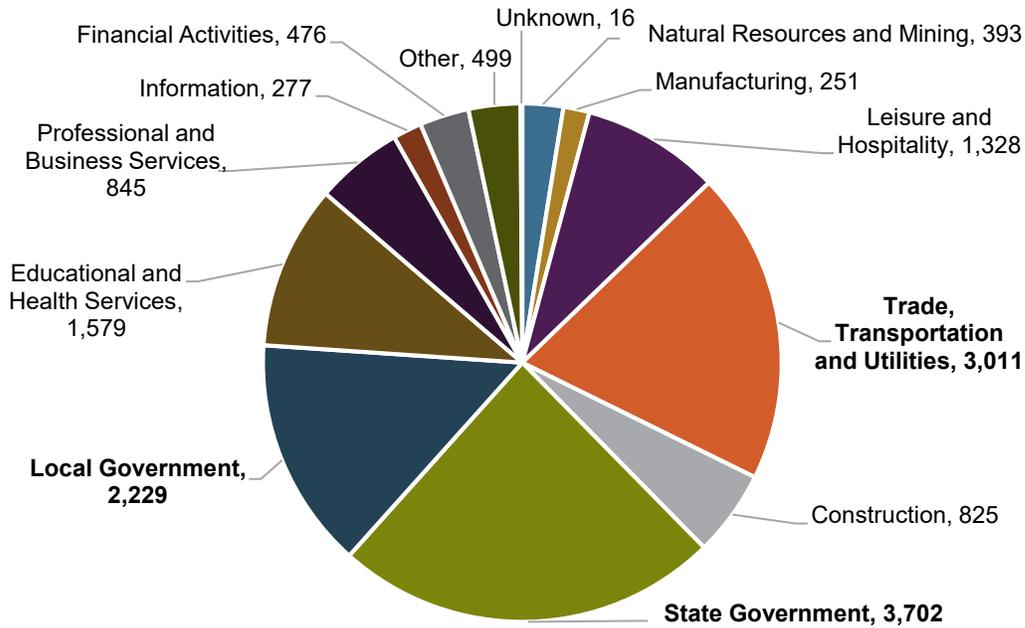
Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	313	307	316	324	335	327	329	356	335	361	387	358	381	276
Total	2251							691		1487				276

Data Source: USDE, 2016.

Figure 30 shows the number of workers in various industries for Juneau, and the top three industries are shown in bold. Mining is a significant source of employment in Juneau due to Hecla’s Greens Creek and Coeur Mining’s Kensington mines. Both of which are within commuting distance from Juneau. However, natural resource industry employment is small relative to employment in government at the

State Capitol. Juneau is also a hub to outlying communities in southeast Alaska, and therefore has medical, educational, transportation, and retail services that are not available in smaller communities. Large seafood processing plants in Juneau include Taku Fisheries and Alaska Glacier Seafoods, processing over seven million and ten million pounds of fish each year, respectively (Taku Fisheries, 2019. Alaska Glacier Seafoods, Inc., 2019.) Alaska Glacier Seafoods employs up to 150 people during peak season.

**Figure 30. Juneau Resident Employment by Industry, 2016**



Data Source: ALARI, 2019

## 2.5.2 AMHS Summary

### Community Leader Perspectives

Juneau City Manager Rorie Watts (via survey) and Deputy City Manager Mila Cosgrove (via interview) provided information on how AMHS is used by individuals and businesses within the community. Their responses are summarized below.

#### *How Residents Use the Ferry*

Many ferry riders arrive in Juneau from surrounding communities. The ferry system is an integral part of the community's transportation system as Juneau is not connected to the road system. Residents use the ferry system to work in or visit other communities, and to bring cars and other freight into the community or to the Lower 48. School and community groups use the ferry system to regularly visit other communities.

The ferry's ability to accommodate vehicles and goods is a major factor in deciding whether to fly or take the ferry. Unlike planes, the ferry accommodates vehicles and larger amounts of goods. Transporting vehicles on the ferry is not inexpensive, but personal vehicles are frequently necessities for

people arriving in Juneau from outlying communities, whether they are there to shop or stay for extended medical care. Sometimes groups of residents will share the expense of putting a vehicle on board to obtain consumer goods.

The ferry is the primary means for Southeast residents to stay connected with each other without the road system. Ms. Cosgrove described the ferry as “part of our lifestyle.” Her family has a summer cabin in Haines and she uses the ferry all summer long to access their property and transport a vehicle at the beginning and end of the season. Everyone she knows is a regular ferry user, traveling to Skagway for recreation, Sitka to visit family, or other communities to play sports. She considers the ferry routes to be the region’s road system.

### ***Commercial Uses***

Businesses use the ferry system to transport freight, to move construction equipment between communities and to transport visiting tourists to other communities.

### ***Transportation Options***

The major transportation options are Alaska Airlines and smaller private air carriers, the barge line, and the ferry. Elimination of any of those makes it harder for everyone in Juneau. Removing or limiting a basic transportation system will limit economic stability and retard growth. Flying is more expensive and can be cost prohibitive. Barge service is increasingly expensive. Alaska Marine Lines would benefit from a lack of competition, to the detriment of the communities.

Southeast Alaska is geographically vulnerable, with very limited transportation networks and shipping networks. We don’t have a road system. Travel is all by air and by sea and very few entities provide those services. We love living here and that’s the price we pay for living in this place, but if we gut the ferry system too much, it will be hard to attract people to this area. It’s a quality of life, economic diversity and economic prosperity issue. We need creative, analytical, logical minds that make good decisions for the system to make it as economically viable as possible.

### ***Minimum Level of Service***

Juneau is a hub for staff and ferries going in and out on the way to other places. Juneau officials have a harder time specifying their desired minimum level of service without knowing exactly what the impact would be on surrounding smaller communities. Officials said the minimal acceptable service is one that is consistent and reliable, with a system that is well managed, and well maintained.

### ***Tolerance for a 10 Percent Fare Increase or Reduction in Service***

If fares increased by 10 percent, use of the AMHS out of Juneau would have some impact, but would not cause a corresponding 10 percent drop. People would continue to use the ferry as long as the price did not rise to the price of a small-plane ticket and they did not need to take a vehicle or other heavy cargo. In many places, the ferry is the main option, so a 10 percent increase would not keep them from taking the ferry. In addition, many people are afraid to fly, especially in small planes.

### ***Effects of Reduced Service***

There are concerns about reduced levels of service. People would adapt to less ferry service, although there is a pain point that would be really challenging. Predictability is important. Passengers need to rely on some reasonable, standard trip frequency. If you have medical appointments, you must be able to keep them.

Combining passenger-only ferries with a less-frequent vehicle ferry could possibly work in the summer but would not be ideal. Reducing service in the summer would have a negative economic impact on tourism—particularly in the smaller communities, which travelers access by ferry.

If the number of departures were cut in half, the few people who had options and could afford to fly would maybe do that. But there are times of the year when the ferries are packed. Making cuts to service during those times would threaten ridership numbers.

***Ideas for Improving Fiscal Health***

- Multi-year funding is necessary for service predictability and maintaining or increasing ridership.
- Efficient routes are important
- Consider trimming labor staff, if they are overstaffed
- Explore the possibility of increasing ticket prices as people would probably pay a little more
- The governance of the Ferry system must be resolved. Working with the Southeast Conference effort would be a good start.
- Consider that it may not be possible and necessarily reasonable or desirable to have the ferry system pay for itself as it is part of the State of Alaska’s transportation network and part of government’s role is to support transportation.

**Historic Revenues and Traffic Volume**

Table 23 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with Juneau as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). Juneau is an origin/destination in the Lynn Canal, Southeast Feeder, Mainline, and Cross-Gulf Route Groups, connecting to 19 ports. The route between Juneau and Bellingham generates the most revenue. The route between Juneau and Haines transports the most passengers.

**Table 23. Juneau as the Origin or Destination—AMHS Volume and Revenue, 2009–2018**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Lynn Canal Routes</b>										
<b>Travel to and from Haines</b>										
Sailings	624	646	677	655	623	606	592	582	566	536
Passengers	41,574	42,126	42,221	44,275	43,771	42,480	42,244	39,880	40,755	38,531
# on Car-deck	12,840	13,162	13,320	13,994	14,154	13,793	13,474	12,768	14,836	14,035
Vans	515	544	426	471	395	446	371	135	50	10
\$(1,000s)	\$2,287	\$2,319	\$2,328	\$2,421	\$2,396	\$2,532	\$2,651	\$2,683	\$2,982	\$2,967
<b>Travel to and from Skagway</b>										
Sailings	611	586	612	616	574	514	548	523	501	497
Passengers	28,916	26,239	24,225	25,260	25,410	23,329	23,432	22,464	23,597	23,069
# on Car-deck	6,899	6,415	5,821	6,254	6,453	5,739	5,674	5,702	6,282	6,011
Vans	130	102	61	126	157	92	145	110	95	148
\$(1,000s)	\$1,898	\$1,776	\$1,675	\$1,734	\$1,760	\$1,666	\$1,748	\$1,855	\$1,987	\$2,066

**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>SE Village Routes</b>										
<b>Travel to and from Hoonah</b>										
Sailings	334	285	237	241	304	271	220	219	261	234
Passengers	11,984	9,994	10,220	9,253	9,805	10,035	8,251	8,467	7,650	7,889
# on Car-deck	3,826	3,157	3,233	2,986	3,345	3,510	3,035	3,103	3,004	2,868
Vans	284	306	233	214	227	291	136	266	205	222
\$ (1,000s)	\$521	\$443	\$438	\$417	\$455	\$489	\$441	\$504	\$528	\$568
<b>Travel to and from Angoon</b>										
Sailings	224	240	225	203	188	202	204	183	212	208
Passengers	8,396	8,412	7,975	7,368	5,726	6,213	6,842	6,313	5,150	5,523
# on Car-deck	1,865	1,695	1,682	1,670	1,422	1,336	1,595	1,480	1,311	1,391
Vans	17	21	45	61	18	11	219	23	36	10
\$ (1,000s)	\$333	\$323	\$320	\$309	\$236	\$279	\$316	\$335	\$360	\$430
<b>Travel to and from Gustavus</b>										
Sailings	0	0	45	137	178	168	185	166	196	190
Passengers	0	0	2,602	6,653	7,830	7,228	7,074	6,895	7,520	7,686
# on Car-deck	0	0	812	2,116	2,432	2,167	2,357	2,277	2,641	2,545
Vans	0	0	55	168	272	266	266	304	289	275
\$ (1,000s)	\$0	\$0	\$127	\$339	\$382	\$364	\$397	\$415	\$547	\$584
<b>Travel to and from Pelican</b>										
Sailings	36	40	34	34	34	34	29	26	24	28
Passengers	1,824	1,494	1,146	1,046	1,074	832	648	709	538	808
# on Car-deck	171	144	139	149	174	159	160	149	160	204
Vans	0	0	6	2	4	0	0	0	0	0
\$ (1,000s)	\$86	\$72	\$66	\$62	\$74	\$68	\$62	\$66	\$58	\$84
<b>Travel to and from Tenakee Springs</b>										
Sailings	130	134	133	141	136	112	117	111	188	183
Passengers	2,839	3,562	3,054	3,211	3,152	2,252	2,258	2,102	2,486	2,710
# on Car-deck	72	72	13	0	0	0	0	60	425	422
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$83	\$97	\$97	\$104	\$99	\$81	\$79	\$81	\$109	\$126
<b>Mainline Routes</b>										
<b>Travel to and from Sitka</b>										
Sailings	396	398	425	367	412	349	313	285	180	133
Passengers	25,281	25,488	26,731	24,214	26,286	23,154	19,427	15,899	8,319	6,506
# on Car-deck	6,779	7,018	7,172	6,674	7,247	6,481	5,329	4,822	3,200	2,567
Vans	159	132	168	151	119	99	80	67	50	63
\$ (1,000s)	\$1,373	\$1,416	\$1,492	\$1,366	\$1,469	\$1,430	\$1,298	\$1,267	\$963	\$928

**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Kake</b>										
Sailings	169	176	186	171	173	149	150	112	119	92
Passengers	3,293	3,087	3,232	3,297	3,259	3,005	2,424	2,128	1,599	1,929
# on Car-deck	588	534	599	672	614	592	494	473	428	507
Vans	6	3	0	2	2	0	0	0	3	0
\$ (1,000s)	\$271	\$251	\$265	\$299	\$274	\$279	\$244	\$235	\$219	\$268
<b>Travel to and from Petersburg</b>										
Sailings	401	445	450	420	409	376	374	331	268	242
Passengers	7,766	7,833	8,022	7,382	7,105	6,761	6,523	4,867	3,892	2,962
# on Car-deck	2,003	2,068	1,962	2,029	1,974	1,828	1,810	1,535	1,318	1,149
Vans	12	4	7	5	17	8	22	19	14	4
\$ (1,000s)	\$805	\$790	\$744	\$732	\$723	\$738	\$738	\$650	\$568	\$505
<b>Travel to and from Wrangell</b>										
Sailings	362	383	384	382	375	348	353	305	243	223
Passengers	2,629	2,423	2,676	2,837	2,576	2,685	2,555	2,394	1,825	1,754
# on Car-deck	601	600	682	712	737	698	631	624	612	585
Vans	3	2	5	7	3	22	23	19	7	3
\$ (1,000s)	\$361	\$331	\$366	\$377	\$387	\$405	\$388	\$379	\$316	\$333
<b>Travel to and from Ketchikan</b>										
Sailings	392	404	410	415	419	377	383	334	304	276
Passengers	6,318	7,163	7,879	7,167	6,662	7,392	6,072	6,189	4,415	4,526
# on Car-deck	1,652	1,838	1,806	1,744	1,598	1,627	1,587	1,584	1,450	1,316
Vans	121	104	87	82	41	43	19	21	24	11
\$ (1,000s)	\$1,201	\$1,283	\$1,325	\$1,289	\$1,146	\$1,253	\$1,171	\$1,212	\$1,041	\$1,091
<b>Travel to and from Prince Rupert</b>										
Sailings	282	289	290	277	240	185	191	148	137	118
Passengers	5,797	5,299	5,457	4,713	4,159	4,027	3,524	2,980	2,765	2,142
# on Car-deck	1,915	1,802	1,950	1,561	1,408	1,402	1,127	1,116	1,156	865
Vans	312	276	293	281	342	330	244	259	261	181
\$ (1,000s)	\$2,010	\$1,824	\$1,915	\$1,618	\$1,527	\$1,521	\$1,280	\$1,255	\$1,270	\$1,018
<b>Travel to and from Bellingham</b>										
Sailings	102	101	108	127	119	126	133	122	124	121
Passengers	6,013	5,254	5,587	5,573	6,557	4,824	5,439	4,354	3,104	3,247
# on Car-deck	2,548	2,244	2,394	2,426	2,921	2,079	2,457	2,210	1,934	2,144
Vans	110	115	105	122	249	226	206	107	60	56
\$ (1,000s)	\$4,625	\$4,198	\$4,450	\$4,638	\$5,562	\$4,196	\$4,919	\$4,454	\$3,808	\$4,269
<b>Cross-Gulf Routes</b>										
<b>Travel to and from Yakutat</b>										
Sailings	36	19	25	33	46	32	29	26	22	26
Passengers	256	224	352	453	346	262	217	177	159	226
# on Car-deck	145	133	152	165	169	137	121	108	134	157
Vans	11	13	8	7	10	12	9	12	5	6
\$ (1,000s)	\$60	\$55	\$71	\$80	\$71	\$61	\$59	\$63	\$79	\$88

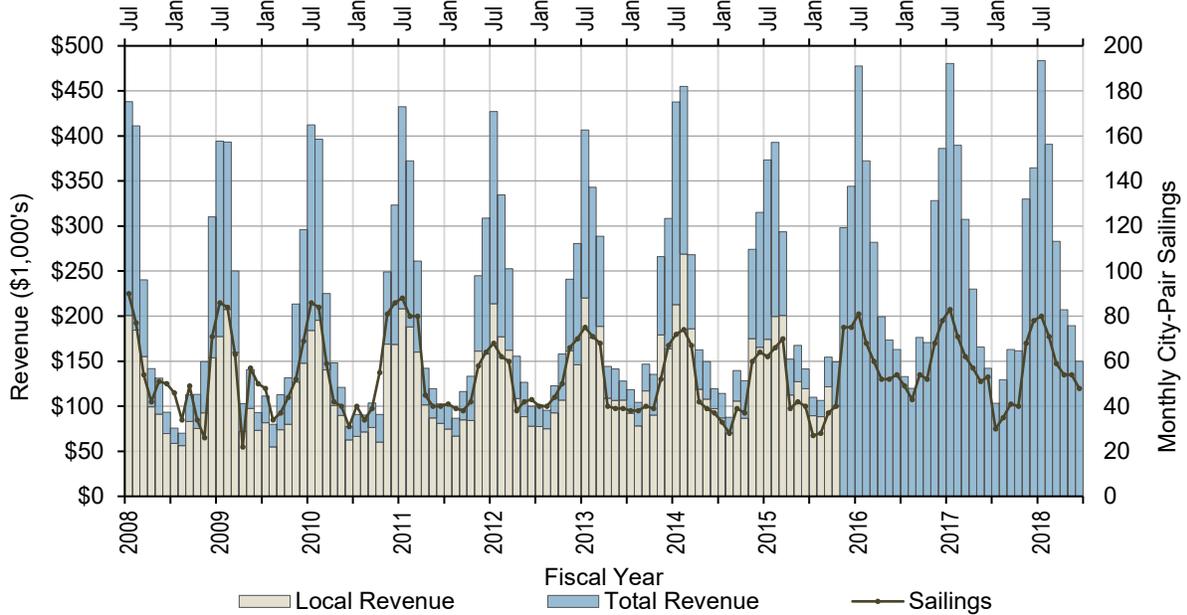
**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Whittier</b>										
Sailings	33	23	27	33	46	30	35	27	26	26
Passengers	2,662	1,965	2,279	1,331	2,542	917	1,067	866	591	646
# on Car-deck	1,439	944	1,086	652	1,462	472	541	450	278	332
Vans	0	3	14	35	69	42	64	24	17	15
\$ (1,000s)	\$1,576	\$1,179	\$1,332	\$813	\$1,652	\$622	\$741	\$633	\$438	\$540
<b>Travel to and from Chenega Bay</b>										
Sailings	0	0	0	19	44	31	27	18	0	0
Passengers	0	0	0	0	0	0	0	0	0	0
# on Car-deck	0	0	0	0	0	0	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Travel to and from Homer</b>										
Sailings	0	0	0	19	41	35	28	24	17	22
Passengers	0	0	0	9	81	137	31	88	26	43
# on Car-deck	0	0	0	5	22	102	5	132	13	19
Vans	0	0	0	0	0	1	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$12	\$78	\$148	\$19	\$187	\$25	\$43
<b>Travel to and from Kodiak</b>										
Sailings	0	0	0	19	44	32	33	26	20	20
Passengers	0	0	0	28	166	73	64	134	43	70
# on Car-deck	0	0	0	24	74	27	35	50	19	46
Vans	0	0	0	2	2	4	2	2	3	10
\$ (1,000s)	\$0	\$0	\$0	\$38	\$145	\$70	\$64	\$113	\$48	\$142

Source: Northern Economics analysis using data from AMHS (2019)

The figures below show local and non-local revenue for selected city-pair combination involving Juneau. Figure 31 shows monthly revenues and sailings for travel between Juneau and Haines in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available. Approximately 61 percent of revenue was locally based. Figure 32 shows monthly revenues and sailings for travel between Juneau and Skagway—approximately 49 percent of revenue was locally based.

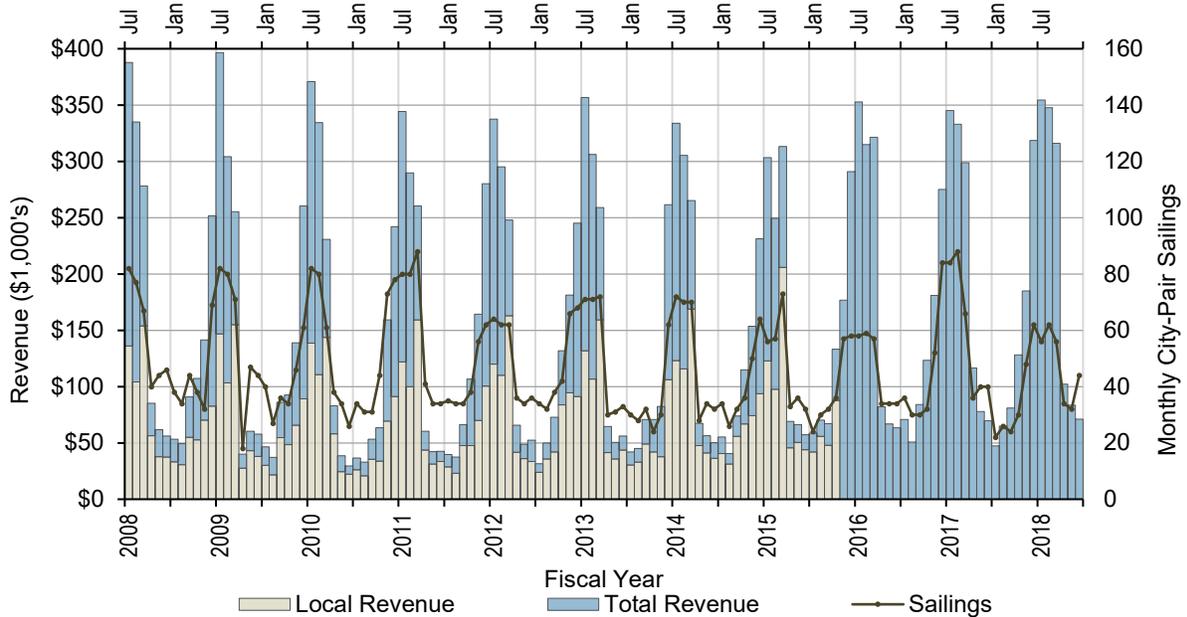
**Figure 31. Monthly Local Resident and Total Juneau-Haines Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Figure 32. Monthly Local Resident and Total Juneau-Skagway Revenues and Sailings, by Fiscal Year**

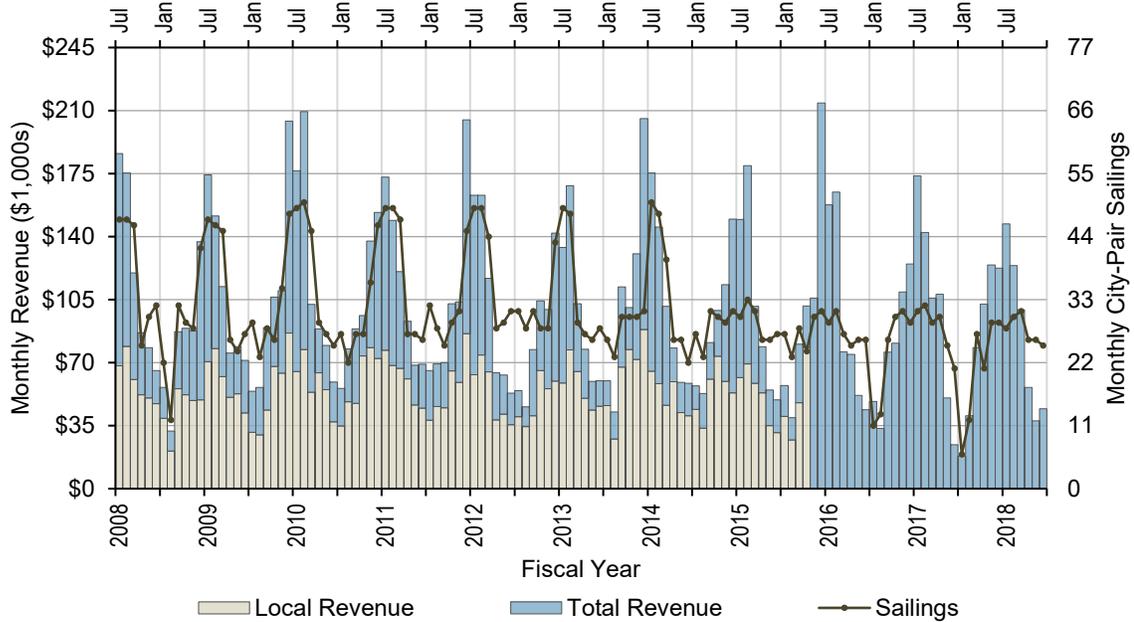


Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

Figure 33 shows monthly revenues and sailings for travel between Ketchikan and Juneau in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available. Most revenue during the winter months is from local residents, while peak season revenue is mostly from non-locals or is a more even split between local and non-local revenue.

**Figure 33. Monthly Local Resident and Total Ketchikan-Juneau Revenues and Sailings, by Fiscal Year**

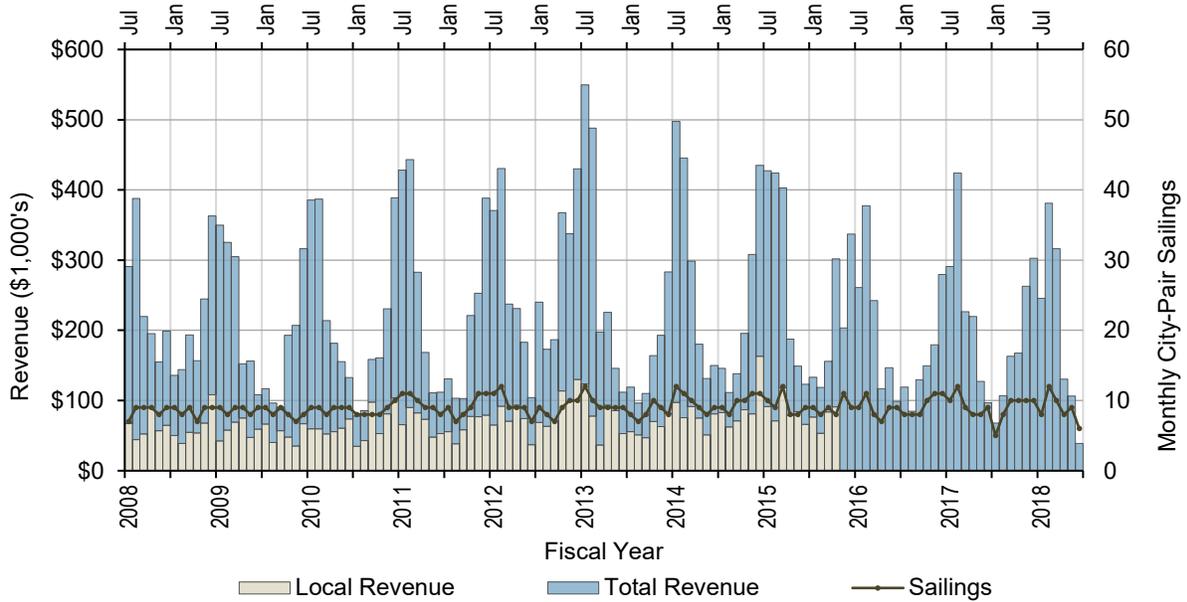


Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

Figure 34 shows monthly revenues and sailings for travel between Juneau and Bellingham in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available. Over all months from which data are available, 30 percent of revenue is locally based. In peak months (June–August) locally based revenue averages 21 percent, while in winter months (November–March) locally based revenue averages 45 percent. Figure 35 shows monthly revenues and sailings for travel between Juneau and Whittier in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available. Across all seasons, almost all revenue is from non-locals.

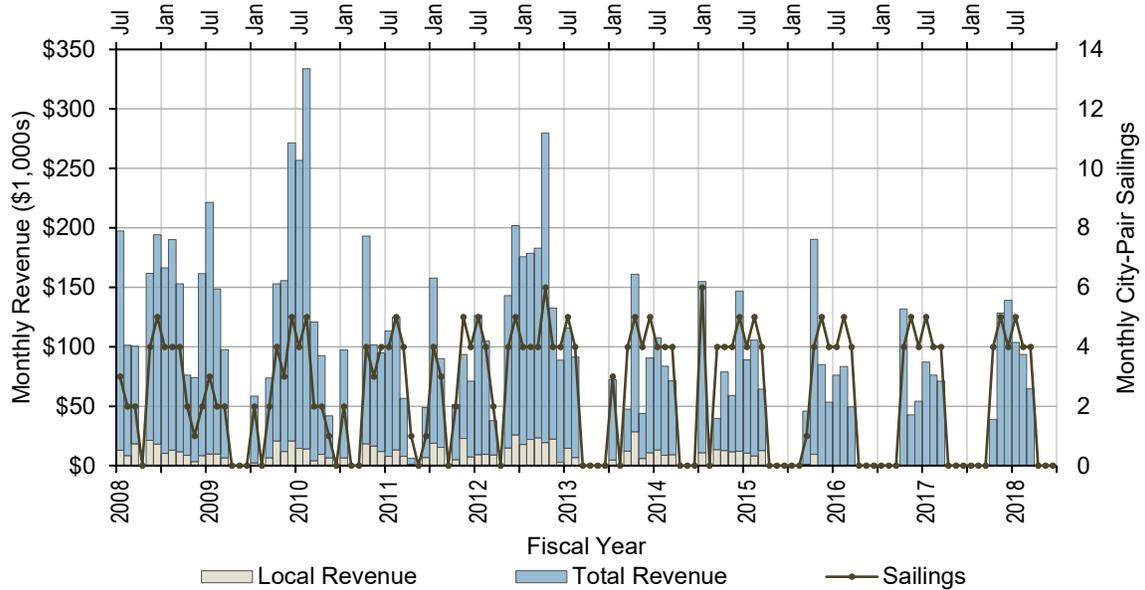
**Figure 34. Monthly Local Resident and Total Juneau-Bellingham Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Figure 35. Monthly Local Resident and Total Juneau-Whittier Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

### Land-based Facilities

The land-based AMHS facilities in Juneau are owned by the State of Alaska and include three vessel berths in Auke Bay: the east and west berths, and the stern berth. Table 24 shows which currently operating AMHS vessels are capable of docking at the facilities in Juneau.

**Table 24. Vessels Capable of Docking at Juneau (Auke Bay) Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Auke Bay	X	X	X	X	X*	X	X	X*	
Auke Bay GITGOV									X

Notes:

X indicates the vessel is compatible with this terminal.

\* It is likely that the vessel is compatible with this terminal, but it has not been fully tested.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value for each facility was constructed by PND (2019).

#### ***Auke Bay East and West Berths***

*Docking Orientation:* Side Berth

*Description:* The Auke Bay East Berth facility was constructed in 1982 to handle mainline vessels. It is a side-loading facility consisting of a transfer bridge steel support float, six steel dolphins, and catwalks/gangways for line handling access. The Auke Bay West Berth was constructed in 1989 and consists of a transfer bridge, steel support float, eight steel pile dolphins, and catwalks/gangways for line handling access. Total length of combined East and West berth is over 1000-feet.

*Alternative Usage:* Auke Bay East and West Berths could likely be used as a small cruise ships terminal for vessels with lengths and parameters similar to the AMHS mainline ferries. Modifications would likely be required to the transfer bridge and float system (potentially requiring complete replacement) to meet freeboard, baggage and passenger door locations on vessels under consideration. The use of the terminals for offload of freight would likely require significant modifications to the float and transfer bridge system to match the freeboard/side shell height of barge or vessels being used. Offload equipment would need be limited to highway-legal design loads, further restricting the suitability of the terminal for freight transfer. The use of small passenger vessels would also require modifications to the transfer bridge/ramp system. Additional berthing and mooring structures would also likely be required, depending on the vessel dimensions under consideration.

Table 25 shows a range of estimated values for the Auke Bay East and West Berth Facilities including uplands and associated infrastructure but does not account for any potential modifications required for the facilities to be used by non-AMHS vessels.

**Table 25. Estimated Value of Auke Bay East and West Berth Facilities**

Estimate Range	-30%	Avg	+30%
Facility Value (\$)	16,110,000	23,000,000	29,900,000

Note: Value includes uplands facilities associated with all berths

Data Source: PND (2019)

**Auke Bay Stern Berth**

*Docking Orientation:* Stern

*Description:* The Auke Bay Stern Berth facility is an all-tide stern loading facility that consists of an approach, transfer bridge, steel support float, employee access gangways, four floating rubber fender dolphins, and one fixed fender panel dolphin.

*Alternative Usage:* The orientation of the berth would likely limit the terminals suitability for alternative usage. The height of the transfer bridge, ramp and apron would likely require significant modifications/upgrades to accommodate alternative vessels. Barge or landing craft transfer of freight is a potential use for the facility; however, significant changes to the on-float components of the transfer bridge/apron system would be required to match the freeboard/side shell height of barge or vessels being used. Offload equipment would need be limited to highway-legal design loads, further restricting the suitability of the terminal. The suitability for use for alternative smaller passenger-only vessels is believed to be limited due to orientation of berth and height of the transfer bridge/apron system.

Table 26 shows a range of estimated values for the Auke Bay Stern Berth Facilities where the value of uplands and associated infrastructure has already been accounted for in Table 25, and does not account for any potential modifications required for the facilities to be used by non-AMHS vessels.

**Table 26. Estimated Value of Auke Bay Stern Berth Facility**

Estimate Range	-30%	Avg	+30%
Facility Value	3,520,000	5,020,000	6,526,000

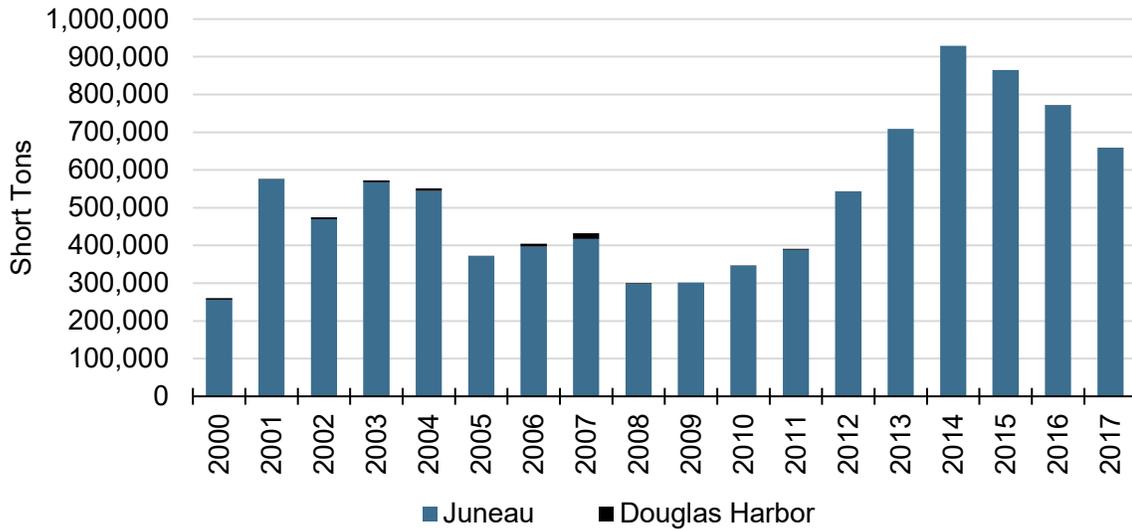
Note: Does not include value of uplands (see Berths 1 &2)

Data Source: PND (2019)

**2.5.3 Transportation Alternatives**

Figure 36 shows marine freight data for Juneau and Douglas Harbor. A wide variety of commodities pass through Juneau as marine freight, with alcoholic beverages, cement/concrete, distillate fuel oil, gasoline, groceries, and manufactured products reported as top categories by volume. About 30% of Juneau’s total marine freight from 2001–2004 was non-ferrous ores, making it Juneau’s top reported marine freight commodity during that time. Similar levels have not been reported since then. Douglas Harbor’s top marine freight commodity is distillate fuel, and the remaining freight volume is primarily gasoline.

**Figure 36. Juneau Inbound and Outbound Annual Marine Freight, 2000–2017**



Data Source: USACE, 2019. USACE, 2018.

Several carriers provide regularly scheduled passenger air service to Juneau, and rates to hub airports are shown in Table 27. The Delta Air Lines flight to Seattle operates seasonally only.

**Table 27. Juneau Flight Services and Rates for Single Adult Passenger, by Carrier**

Airline Carrier	One Way Destination	Summer Rate (\$)	Winter Rate (\$)
Alaska Airlines	Anchorage	175	175
Alaska Airlines	Seattle	143	189
Delta Air Lines	Seattle	113	No Service

Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.  
Data Source: Alaska Airlines, Inc., 2019. Delta Air Lines, 2019.

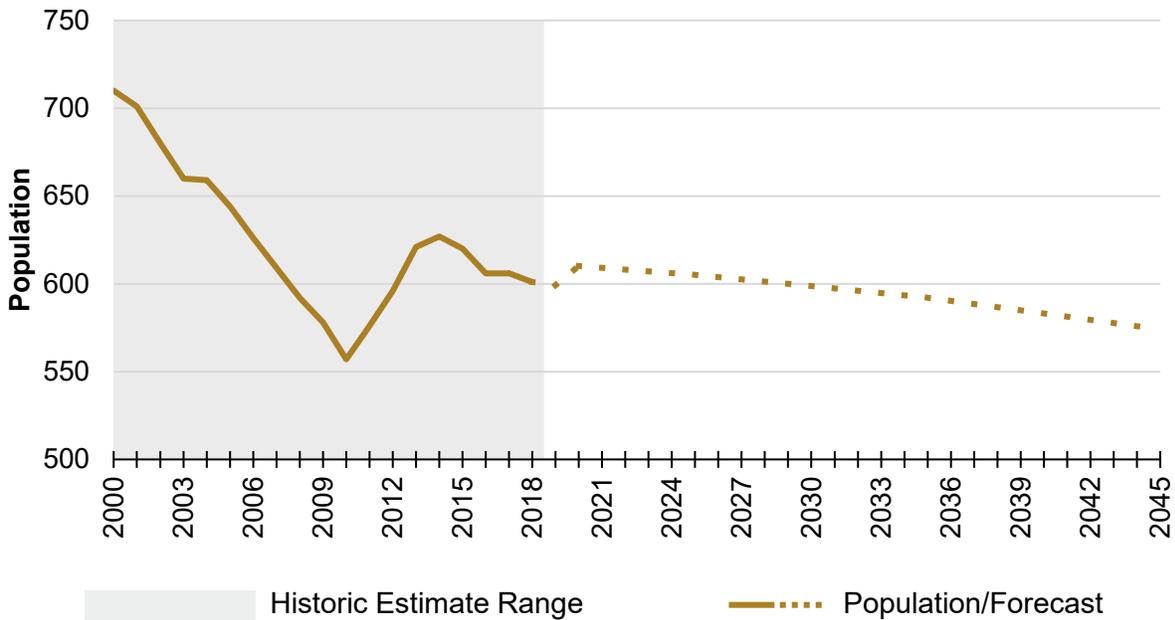
There are also at least five water taxi service companies based in Juneau that provide passenger transportation to a several AMHS communities as well as numerous remote locations. Most of these companies specialize in guided services like whale watching or fishing charters, but also transport kayakers and hikers to forest service cabins or trailheads. The largest operator in Juneau is Allen Marine which operates a 145-passenger catamaran along with two other vessels. The company offers a variety of tour packages, with fleets in Ketchikan and Sitka as well. There is also daily passenger service to Juneau from private ferry operator Alaska Fjordlines, Inc, which operates a morning sailing from Skagway to Haines to Juneau, and an evening sailing from Juneau to Haines to Skagway. There are also daily commuter sailings between Juneau and Admiralty Island, the location of Hecla’s Greens Creek Mine which employs about 420 people (AMA 2019).

## 2.6 Kake Community Profile

### 2.6.1 Demographic Summary

Figure 35 shows the population of Kake with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 601 permanent residents, but the population of Kake is expected to decrease gradually over time.

**Figure 37. Kake Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 28 shows student enrollment in all Kake schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

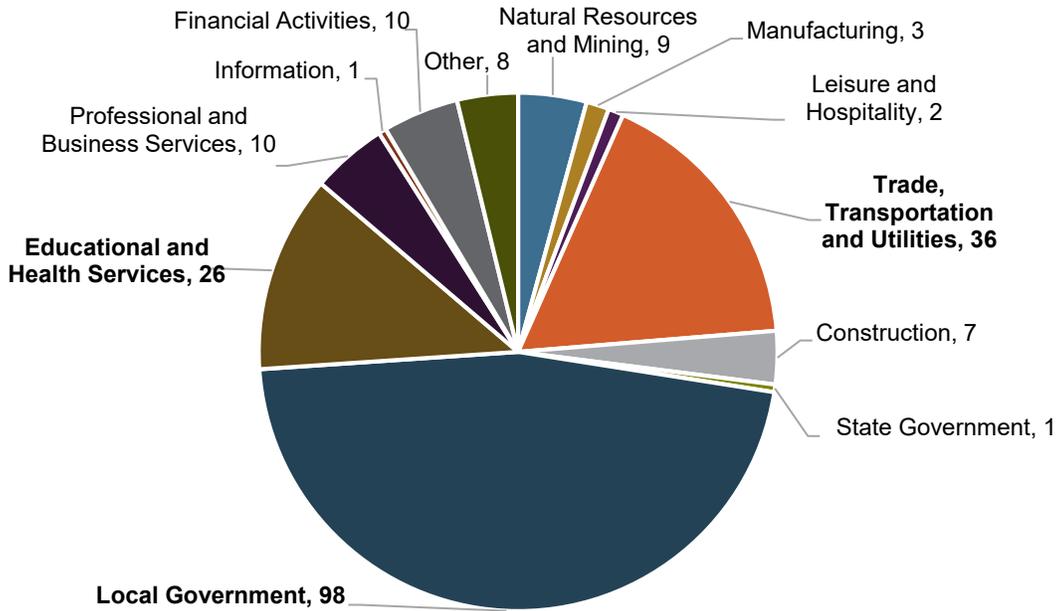
**Table 28. Kake All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	3	5	9	11	6	10	7	8	7	9	7	6	5	6
Total	51							15		27				6

Data Source: USDE, 2016.

Figure 36 shows the number of workers in various industries for Kake, and the top three industries are shown in bold.

**Figure 38. Kake Resident Employment by Industry, 2016**



Data Source: ALARI, 2019

## 2.6.2 AMHS Summary

### Community Leader Perspectives

Rudy Bean, City Administrator of Kake provided information via survey and interview on how AMHS is used by individuals and businesses within the community. His responses are summarized below.

#### *How Residents Use the Ferry*

Residents use the ferry to travel to medical appointments, shop, move freight, and travel for school-related events. The ferry strike had a big impact on Kake residents, particularly elders and children who were unable to get needed medical care. Kake does not have the medical infrastructure to deal with serious issues. We have always assumed that folks can get to Southeast Alaska Regional Health Consortium (SEARHC) medical facilities in Sitka, or Juneau if needed. Most residents can't afford the high cost of flying.

Kake residents typically shop in Juneau, as prices are quite high in Kake, and seek medical care in Sitka, making it difficult to coordinate multipurpose trips.

Few non-residents travel to Kake. Most tend to be in the community to work on construction projects.

**Commercial Uses**

There are three salmon permit holders in Kake, but no fish processors. The stores in Kake rely more on the barge for moving freight than they do on the ferry.

**Transportation Options**

Kake needs ferry service as it is the only affordable means of passenger and vehicle transportation to and from the community.

Other existing transportation services do not provide the same options for vehicle transport. The costs would be too high for any private contractor to deliver ferry service to and from Kake.

Kake has regular, fairly reliable barge service for moving freight.

There has been talk of finishing the road over to Petersburg. That would be beneficial, but residents of Kake would still need to go to Sitka for medical care and would still travel to Juneau to shop since the prices are significantly better.

**Minimum Level of Service**

Once a week from north and south

**Ideas for Improving Fiscal Health**

Make Kake the hub to move traffic from south to north and make Petersburg the hub to move traffic from north to south.

**Historic Revenue and Traffic Volumes**

Table 29 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with Kake as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). Kake is an origin/destination in the Southeast Feeder and Mainline Route Groups, connecting to 10 ports. The route between Kake and Juneau generates the most revenue and transports the most passengers.

**Table 29. Kake as the Origin or Destination—AMHS Volume and Revenue, 2009–2018**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>SE Village Routes</b>										
<b>Travel to and from Angoon</b>										
Sailings	0	0	6	0	0	0	1	6	2	7
Passengers	0	0	65	0	0	0	0	116	36	60
# on Car-deck	0	0	3	0	0	0	0	28	0	1
Vans	0	0	0	0	0	0	0	0	0	0
\$(1,000s)	\$0	\$0	\$2	\$0	\$0	\$0	\$0	\$4	\$1	\$3

**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Hoonah</b>										
Sailings	53	45	33	34	54	55	32	38	5	4
Passengers	20	25	10	15	14	68	23	57	5	8
# on Car-deck	6	17	1	6	2	7	9	6	20	2
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$2	\$4	\$1	\$2	\$1	\$4	\$3	\$4	\$9	\$1
<b>Mainline Routes</b>										
<b>Travel to and from Sitka</b>										
Sailings	67	84	79	95	91	81	85	55	56	30
Passengers	493	624	664	746	615	641	602	330	373	204
# on Car-deck	121	119	136	150	94	143	144	62	62	54
Vans	4	4	1	5	0	0	0	1	0	0
\$ (1,000s)	\$29	\$36	\$38	\$43	\$30	\$35	\$33	\$21	\$28	\$26
<b>Travel to and from Juneau</b>										
Sailings	169	176	186	171	173	149	150	112	119	92
Passengers	3,293	3,087	3,232	3,297	3,259	3,005	2,424	2,128	1,599	1,929
# on Car-deck	588	534	599	672	614	592	494	473	428	507
Vans	6	3	0	2	2	0	0	0	3	0
\$ (1,000s)	\$271	\$251	\$265	\$299	\$274	\$279	\$244	\$235	\$219	\$268
<b>Travel to and from Haines</b>										
Sailings	43	32	13	8	33	42	36	36	11	7
Passengers	30	2	3	0	60	17	18	7	19	17
# on Car-deck	6	1	2	0	7	5	14	1	9	8
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$4	\$0	\$1	\$0	\$6	\$4	\$8	\$1	\$6	\$4
<b>Travel to and from Skagway</b>										
Sailings	43	26	15	8	9	13	30	19	3	2
Passengers	21	10	0	0	0	5	19	4	5	2
# on Car-deck	1	2	0	0	0	0	0	2	1	2
Vans	2	1	0	0	0	0	0	0	0	0
\$ (1,000s)	\$2	\$1	\$0	\$0	\$0	\$0	\$1	\$1	\$1	\$1
<b>Travel to and from Petersburg</b>										
Sailings	168	177	155	171	173	149	147	93	67	56
Passengers	512	587	477	653	589	589	330	171	291	126
# on Car-deck	140	147	140	223	176	201	90	63	65	64
Vans	23	6	2	0	0	9	0	2	0	0
\$ (1,000s)	\$28	\$28	\$27	\$37	\$32	\$42	\$18	\$15	\$17	\$14

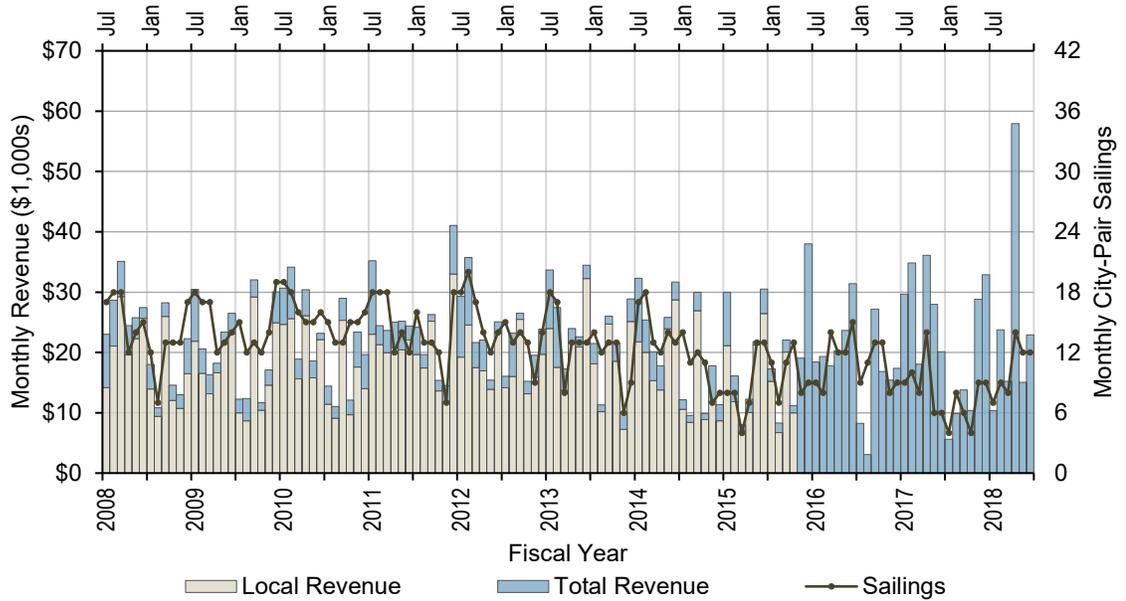
**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Wrangell</b>										
Sailings	167	177	155	170	171	149	147	90	20	13
Passengers	98	87	80	119	164	66	35	98	39	22
# on Car-deck	14	17	24	44	45	11	17	15	11	8
Vans	0	0	0	0	0	0	0	2	0	0
\$ (1,000s)	\$6	\$6	\$8	\$12	\$17	\$5	\$5	\$9	\$5	\$4
<b>Travel to and from Ketchikan</b>										
Sailings	168	177	155	170	173	149	147	97	85	51
Passengers	641	441	423	415	508	627	387	239	252	144
# on Car-deck	100	71	73	79	67	113	66	57	64	49
Vans	6	0	0	1	0	1	0	0	0	0
\$ (1,000s)	\$64	\$42	\$46	\$46	\$52	\$71	\$41	\$36	\$37	\$32
<b>Travel to and from Prince Rupert</b>										
Sailings	155	167	146	162	142	116	115	67	12	12
Passengers	22	16	20	62	35	56	32	38	25	21
# on Car-deck	11	11	13	22	17	19	15	17	13	11
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$6	\$5	\$6	\$16	\$9	\$13	\$10	\$11	\$7	\$8

Source: Northern Economics analysis using data from AMHS (2019)

Figure 39 through Figure 41 show monthly travel for selected city-pairs involving Kake, with revenues separated by local and non-local resident ticket purchasers when data are available. Figure 39 shows monthly revenues and sailings for travel between Kake and Juneau in either direction—an average of 82 percent of revenue is from local residents. Figure 40 shows monthly revenues and sailings for travel between Kake and Sitka in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available. On average 84 percent of revenue is from local residents.

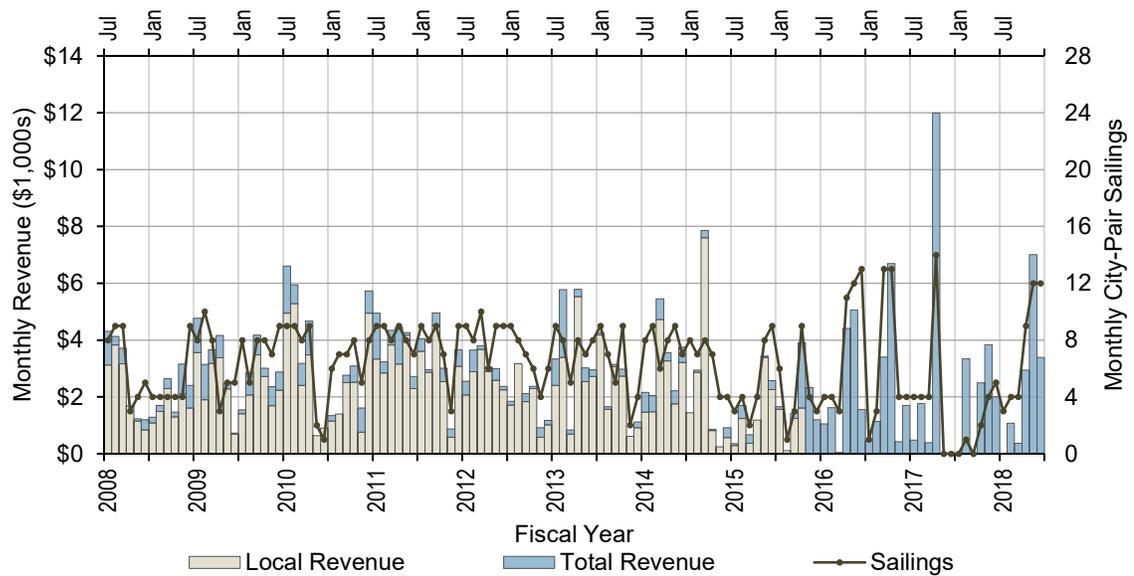
**Figure 39. Monthly Local Resident and Total Kake-Juneau Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Figure 40. Monthly Local Resident and Total Kake-Sitka Revenues and Sailings, by Fiscal Year**

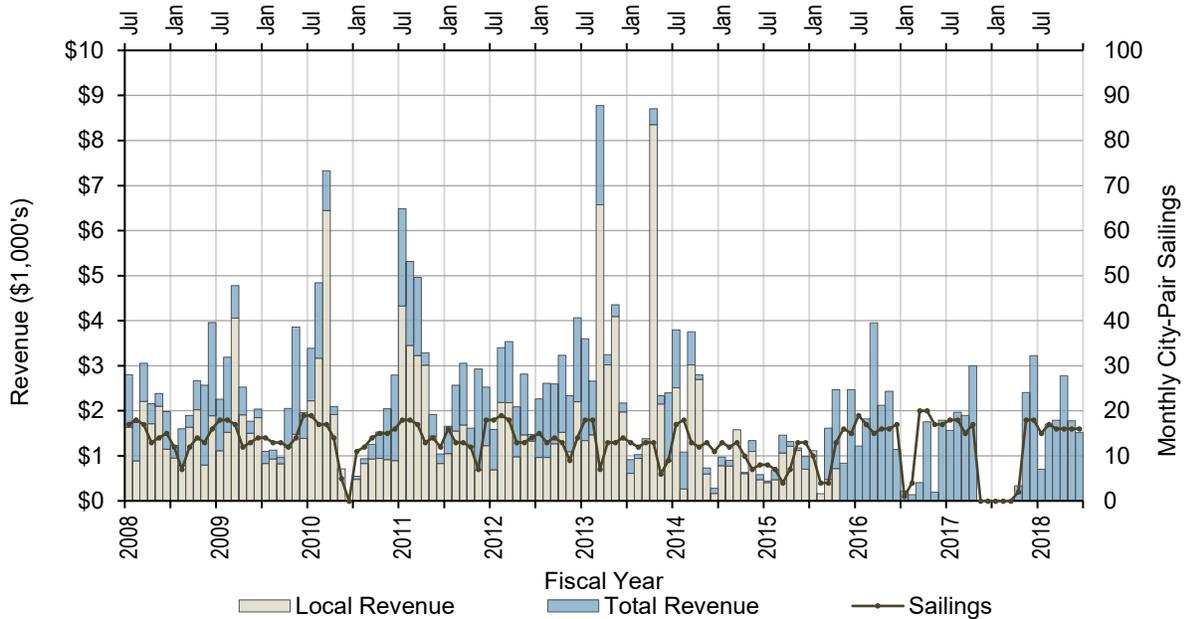


Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

Figure 41 shows monthly revenues and sailings for travel between Kake and Petersburg in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available. For months when data are available an average of 67 percent of revenue is from local residents.

**Figure 41. Monthly Local Resident and Total Kake-Petersburg Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Land-based Facilities**

The land-based AMHS facility in Kake is owned by the State of Alaska. Table 30 shows which currently operating AMHS vessels are capable of docking at the facility in Kake.

**Table 30. Vessels Capable of Docking at Kake Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Kake	X			X	X*	X	X	X*	

Notes:

X indicates the vessel is compatible with this terminal.

\* It is likely that the vessel is compatible with this terminal, but it has not been fully tested.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value of the facility was constructed by PND (2019).

**Kake Facility**

*Docking Orientation:* Side Berth

*Description:* This facility consists of a transfer bridge, steel support float, and eight steel mooring dolphins. A new mooring dolphin (W5) was added in 2006 to allow service by larger AMHS vessels. This terminal is capable of berthing all AMHS vessels. The uplands were reconstructed in 2011 and include an open waiting shelter, paved parking, and overhead lighting. This facility is operated by city employees when the ferries come in.

*Alternative Usage:* The Kake facility could likely be used as a small cruise ships terminal for vessels with lengths and parameters similar to the AMHS mainline ferries. Modifications would likely be required to the transfer bridge and float system (potentially requiring complete replacement) to meet freeboard, baggage and passenger door locations on vessels under consideration. The use of the terminal for offload of freight would likely require significant modifications to the float and transfer bridge system to match the freeboard/side shell height of barge or vessels being used. Offload equipment would need be limited to highway-legal design loads, further restricting the suitability of the terminal for freight transfer. The use of small passenger vessels would also require modifications to the transfer bridge/ramp system. Additional berthing and mooring structures would also likely be required, depending on the vessel dimensions under consideration.

Table 31 shows a range of estimated values for the Kake Facility including uplands and associated infrastructure but does not account for any potential modifications required for the facilities to be used by non-AMHS vessels.

**Table 31. Estimated Value of the Kake Facility**

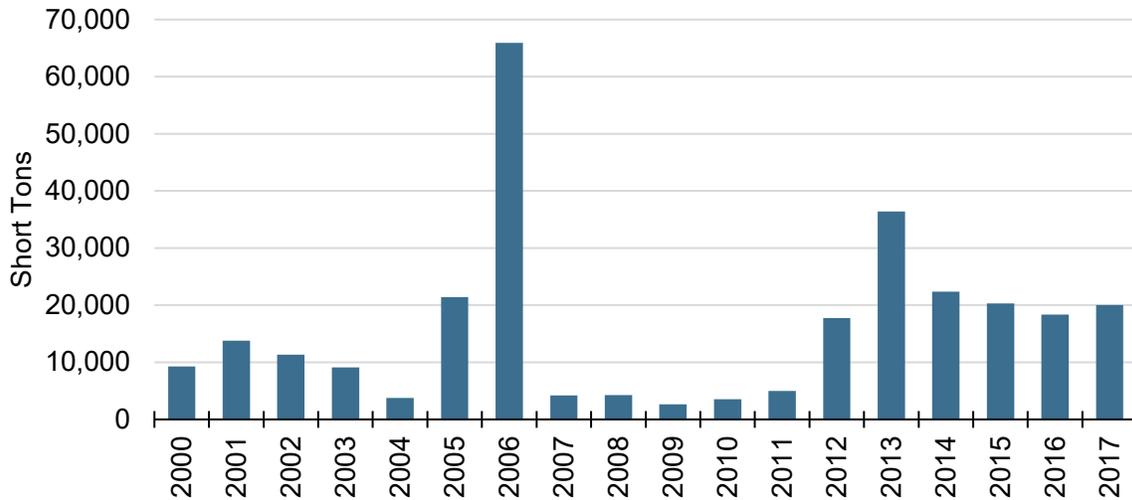
Estimate Range	-30%	Avg	+30%
Facility Value (\$)	4,430,000	6,330,000	8,230,000

Data Source: PND (2019)

### 2.6.3 Transportation Alternatives

Figure 42 shows marine freight data for Kake. A variety of commodities pass through Kake as marine freight, with distillate fuel oil, gasoline, groceries, machinery, and manufactured products as the top commodities by volume. The 2005 and 2006 peaks in marine freight volume were driven by high reported volumes of wood in the rough, which comprised approximately 75% and 83%, respectively, of Kake’s total reported marine freight in those years.

**Figure 42. Kake Inbound and Outbound Annual Marine Freight, 2000–2017**



Data Source: USACE, 2019. USACE, 2018.

One carrier provides regularly scheduled passenger air service to Kake, and rates to hub airports are shown in Table 32.

**Table 32. Kake Flight Services and Rates for Single Adult Passenger, by Carrier**

Airline Carrier	One Way Destination	Summer Rate (\$)	Winter Rate (\$)
Alaska Seaplanes	Juneau	165	165
Alaska Seaplanes	Sitka	165	165

Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.

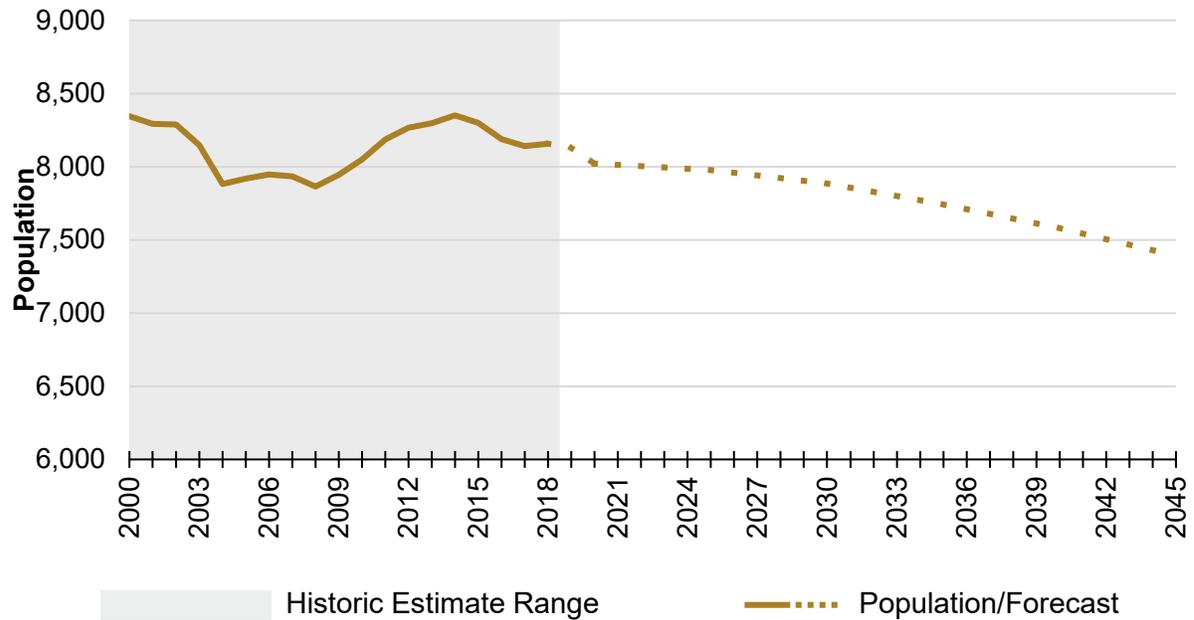
Data Source: Alaska Seaplanes, 2019.

## 2.7 Ketchikan Community Profile

### 2.7.1 Demographic Summary

Figure 43 shows the population of Ketchikan with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 8,157 permanent residents, but the population of Ketchikan is expected to decrease steadily over time.

**Figure 43. Ketchikan Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 33 shows student enrollment in all Ketchikan schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

**Table 33. Ketchikan All Schools Enrollment by Grade, 2016–2017 School Year**

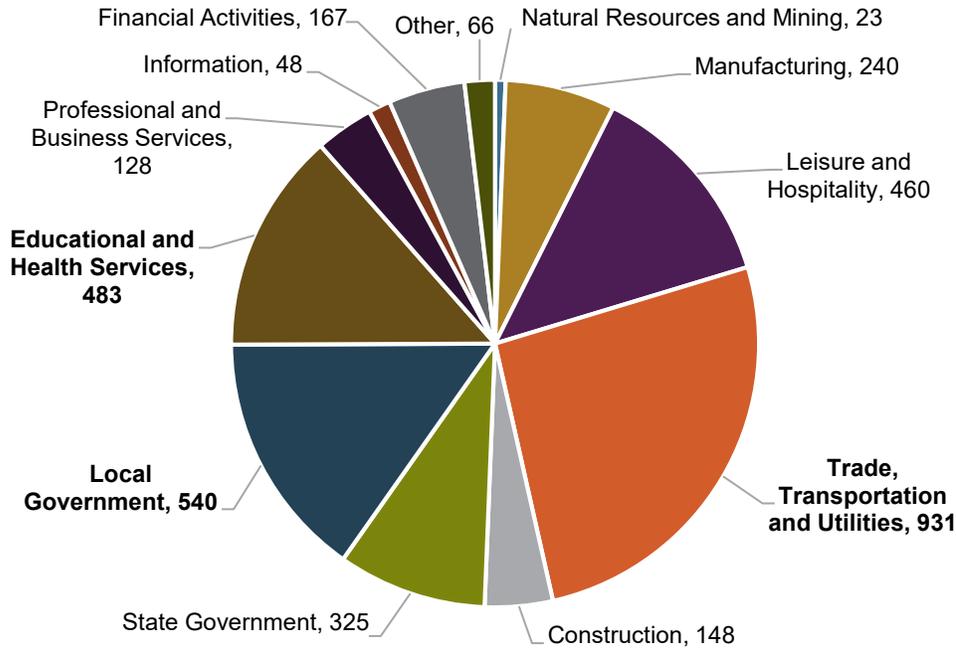
Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	143	136	130	145	140	107	142	186	171	163	172	177	197	128
<b>Total</b>	943							357		709				128

Data Source: USDE, 2016.

Figure 44 shows the number of workers in various industries for Ketchikan, and the top three industries are shown in bold. Seafood processors in Ketchikan largely focus on producing a variety of salmon product forms, including salmon roe. The Trident Seafoods plant in Ketchikan is focused exclusively on

the production of canned and frozen salmon products and has up to 500 employees in peak summer season (Trident Seafoods, 2019).

**Figure 44. Ketchikan Resident Employment by Industry, 2016**



Data Source: ALARI, 2019

## 2.7.2 AMHS Summary

### Community Leader Perspectives

Mayor Bob Sivertson of the City of Ketchikan provided information via survey and an interview on how AMHS is used by individuals and businesses within the community. His responses are summarized below. The Ketchikan Gateway Borough was also contacted but elected not to respond to the survey.

#### *How Residents Use the Ferry*

Being an island community, we use the ferry system for a variety of purposes. We use it commercially, industrially, governmentally, medically and privately. It brings services such as a mobile mammogram clinic, DOT crews for state highway stripping, chip sealing, and sharing equipment between state service areas. Contractors ship equipment back and forth for projects. Our schools use the ferry as a cheaper option to air travel when sending teams to compete in other communities. It is our link to the mainland. When individuals are medically prevented from flying, they can use the ferries. When air travel is impossible because of bad weather, we look to the ferry system. We also use AMHS to travel out of state. Sometimes residents will send their vehicle on the ferry unaccompanied to Seattle or Bellingham, fly down, pick up the vehicle, and use it to travel. Southeast Alaska is one community with a logistics problem.

There is no car dealership in Ketchikan, so if your vehicle needs work done, it goes south on the ferry to Seattle or North to Juneau. The ability to send a vehicle is also key for bringing bulk goods back to the community. Neighbors, families, or other groups will put in an order to Costco and one person will pick up the requested items in his truck and bring it up. It makes the trip worthwhile coming back. When bringing back a new car to the community, the owner will load it with building supplies, food, or other items.

Metlakatla residents rely on AMHS for daily service to Ketchikan.

### ***Commercial Uses***

Tyler Rental ships equipment to and from remote communities on the ferry. They rent out construction vehicles and equipment across Southeast and Washington State.

The ferry also transports government employees, including state project inspectors; Department of Transportation workers, road-building materials, vehicles, and equipment; and U.S. Forest Service employees.

Alaska Native corporations use the ferry for transportation to meetings and cultural events, such as pole-raising. The fishing industry uses the ferry to ship fresh and frozen products to the road system; the catch is ferried to Prince Rupert and driven through Canada to markets in the rest of the country. The fish reach consumers much faster via the ferry-to-road link than they would on a barge service. Sending the fish via air freight would be cost-prohibitive.

In addition to the canneries, there are the business that support them, like electrical and plumbing shops in Ketchikan that send crews out to work on the canneries, be it maintenance and repairs or building projects. These businesses also take their construction materials on the ferry.

Tourists use the ferry to move their motorhomes. We have a large contingency of visitors that come here for salmon fishing. They'll fish for three to four weeks and live out of their motorhome.

We also have a hazardous waste handling service that uses the ferry system to pick up and deliver waste from all the communities (Ketchikan, Metlakatla, Prince of Wales, etc.)

### ***Transportation Options***

Other transportation providers could not provide the same passenger and cargo services without a subsidy of some kind. AMHS is our only combined passenger and vehicle link to the mainland.

Ketchikan is a hub, so we have a small air taxi service with mail contracts that also runs some freight in and out of surrounding communities. Small items can go by air, but larger items, like vehicles or furnaces, need to be shipped by ferry. There are barge services, but they often have logistics issues and run on schedules that might not meet your needs because the ferry and airline passenger services don't necessarily go where the barge service goes. Plus, you can't ride on a barge with your vehicle like you can do on the ferry. And if you sent your vehicle separately on the barge, you'd either have to fly or take the ferry and would be without your vehicle for a day or more since both the ferry and planes travel much more quickly than the barge. Plus, it's not clear whether using the barge to move a vehicle would be cheaper.

People from smaller communities come to Ketchikan by ferry to access the medical services here. Families from Wrangell, Petersburg, Prince of Wales, and other communities travel to Ketchikan and stay here until babies are born. Because pregnant women can't fly when they're close to their due dates, they use the AMHS to come here.

One of other reasons the ferry system works for people is Canada has strict DWI laws, so if someone wants to go from Juneau to Seattle through Canada, they may not be able to drive. They can use the ferry instead. Or lots of people have medical procedures done in Seattle and are not medically cleared to fly, so they take the AMHS instead.

If you need to get somewhere quickly for a business meeting, you would go by air, but if you have to bring your vehicle, take kids to college, or go to work for the Legislature in Juneau, then you use the ferry because you can bring a large amount of clothing and household goods.

### ***Minimum Level of Service***

When the system first started with three ships and, I believe, seven ports of call we had great service on a schedule you could set your clock by. The state should look at past schedules and try to meet those standards. Look at that 1963 schedule with three boats. There was a boat in here almost every day going in one direction or the other. I haven't studied it, so can't say whether we're already below the minimum level of service. Prince Rupert is really important to us because gets us connected to the mainland. The capital is in Juneau and we go there quite often.

### ***Tolerance for a 10 Percent Fare Increase or Reduction in Service***

With a 10 percent fare increase, many people that are lower income will still schedule ferry service and adjust because freight service by air is chartered and very expensive. A fair assessment is that a 10 percent increase would not cause a corresponding ridership reduction of 10 percent. I think the last consideration is probably cost. We're like all other Southeast communities in that we are isolated without ferry service to the mainland road systems. It's our tie to the rest of the state.

### ***Effects of Reduced Service***

Not knowing exactly what that reduction would be, I think Ketchikan residents would adapt. People would, I think, try to adjust, say, medical visits in accordance with what the Marine Highway would allow them to do. Reduced service might make it more difficult for construction because of the busy summer season. We need that robust summer service, so it would be interesting to see if reductions were seasonal or year-round. Lots of tourists use it in the summer as well.

Ketchikan is a hub community, so even if we get shipments by barge, those shipments will get broken down here and shipped to Metlakatla and Prince of Wales by ferry. That means their groceries would be more expensive and less fresh. (Northern Sales, a wholesaler with a Ketchikan warehouse receives freight, breaks down the loads, and sends the shipments to smaller communities.)

If the number of departures were cut in half the overall level of use of AMHS be affected because patients aren't going to make some of the timetables for their medical appointments. The mainline route needs to have some frequency to make it economically feasible. When you know the ferry is going to be reliable, you'll use it more.

### ***Ideas for Improving Fiscal Health***

AMHS hasn't done a great job of adapting and trying to provide vessels that work for Alaska. Sometimes you try to replace something that's working with something you think is going to work (Alaska class and fast ferries, specifically).

The ferry system has to run on a subsidy, we always knew that. You've grown into a situation with 11 boats and 33 stops and the subsidy grows when you go to those smaller communities with low ridership. The reality is that the fare box isn't going to pay for that.

- A more dependable schedule will help people commit to taking the ferry because if you don't know if the boat is going to be there, you take the most dependable way for your trip.
- Have a main run between larger communities and then maybe a Prince of Wales system run by that authority. The most successful example is the ferry Lituya, which runs between Ketchikan and Metlakatla.

### Historic Revenue and Traffic Volumes

Table 34 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with Ketchikan as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). Ketchikan is an origin/destination in the Metlakatla, Mainline, and Cross-Gulf Route Groups, connecting to 17 ports. The route between Ketchikan and Bellingham generates the most revenue. The routes between Ketchikan and Bellingham, Juneau, and Prince Rupert transport the most passengers.

**Table 34. Ketchikan as the Origin or Destination—AMHS Volume and Revenue, 2009–2018**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Metlakatla Route</b>										
<b>Travel to and from Metlakatla</b>										
Sailings	0	0	0	0	2	1,021	973	962	1022	929
Passengers	0	0	0	0	17	29,774	31,515	30,812	33,088	25,347
# on Car-deck	0	0	0	0	6	10,415	10,418	10,127	9,955	8,436
Vans	0	0	0	0	0	0	0	8	1	0
\$(1,000s)	\$0	\$0	\$0	\$0	\$0	\$775	\$876	\$948	\$1,202	\$1,165
<b>Mainline Routes</b>										
<b>Travel to and from Prince Rupert</b>										
Sailings	296	311	302	282	244	188	194	150	140	122
Passengers	9,155	8,659	9,043	7,750	7,080	6,488	6,720	5,764	6,045	5,445
# on Car-deck	3,320	3,398	3,497	2,835	2,721	2,508	2,574	2,568	3,254	3,076
Vans	57	79	97	169	182	73	55	88	40	33
\$(1,000s)	\$948	\$946	\$962	\$855	\$805	\$756	\$815	\$823	\$890	\$863
<b>Travel to and from Bellingham</b>										
Sailings	104	106	111	132	122	131	136	127	128	123
Passengers	7,261	7,360	7,161	7,488	7,491	7,656	6,946	5,994	4,504	4,133
# on Car-deck	2,764	2,848	2,687	3,022	3,048	3,041	2,852	2,771	2,669	2,629
Vans	16	17	12	18	19	23	13	14	1	3
\$(1,000s)	\$3,526	\$3,559	\$3,426	\$3,835	\$3,850	\$4,092	\$3,866	\$3,996	\$3,532	\$3,213
<b>Travel to and from Wrangell</b>										
Sailings	361	386	384	381	375	349	352	314	277	248
Passengers	6,271	6,229	5,773	6,028	5,629	5,377	5,633	4,256	3,561	2,872
# on Car-deck	1,465	1,538	1,439	1,605	1,697	1,556	1,391	1,256	1,200	1,067
Vans	44	17	18	46	63	94	44	28	29	26
\$(1,000s)	\$330	\$331	\$313	\$345	\$342	\$352	\$341	\$296	\$290	\$273

**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Petersburg</b>										
Sailings	362	386	385	382	379	349	351	313	254	234
Passengers	4,057	3,439	3,418	3,274	3,341	2,677	2,904	2,517	2,159	1,754
# on Car-deck	806	792	693	713	750	627	561	510	483	442
Vans	17	9	7	2	9	13	6	4	3	5
\$ (1,000s)	\$335	\$304	\$275	\$278	\$282	\$243	\$247	\$238	\$225	\$232
<b>Travel to and from Juneau</b>										
Sailings	392	404	410	415	419	377	383	334	304	276
Passengers	6,318	7,163	7,879	7,167	6,662	7,392	6,072	6,189	4,415	4,526
# on Car-deck	1,652	1,838	1,806	1,744	1,598	1,627	1,587	1,584	1,450	1,316
Vans	121	104	87	82	41	43	19	21	24	11
\$ (1,000s)	\$1,201	\$1,283	\$1,325	\$1,289	\$1,146	\$1,253	\$1,171	\$1,212	\$1,041	\$1,091
<b>Travel to and from Haines</b>										
Sailings	189	188	172	151	195	205	184	198	169	167
Passengers	1,466	1,192	1,289	1,065	1,201	1,498	1,013	1,107	868	974
# on Car-deck	555	541	542	438	513	624	419	597	547	609
Vans	42	28	38	42	93	98	78	26	2	2
\$ (1,000s)	\$450	\$415	\$432	\$361	\$458	\$569	\$396	\$472	\$381	\$426
<b>Travel to and from Skagway</b>										
Sailings	188	177	174	149	152	138	191	152	81	123
Passengers	607	569	552	466	439	561	640	542	347	383
# on Car-deck	96	90	121	87	96	103	80	79	58	76
Vans	0	0	0	0	1	1	10	0	0	0
\$ (1,000s)	\$136	\$125	\$122	\$105	\$128	\$141	\$131	\$130	\$89	\$110
<b>Travel to and from Kake</b>										
Sailings	168	177	155	170	173	149	147	97	85	51
Passengers	641	441	423	415	508	627	387	239	252	144
# on Car-deck	100	71	73	79	67	113	66	57	64	49
Vans	6	0	0	1	0	1	0	0	0	0
\$ (1,000s)	\$64	\$42	\$46	\$46	\$52	\$71	\$41	\$36	\$37	\$32
<b>Travel to and from Sitka</b>										
Sailings	130	151	158	168	164	150	152	133	164	141
Passengers	2,044	1,879	1,825	1,810	1,617	1,466	1,444	1,271	968	914
# on Car-deck	533	582	466	429	477	485	437	341	280	239
Vans	9	5	9	4	1	8	3	2	1	0
\$ (1,000s)	\$311	\$291	\$283	\$258	\$261	\$264	\$240	\$197	\$173	\$192
<b>Travel to and from Hoonah</b>										
Sailings	53	50	33	41	57	57	33	43	16	5
Passengers	66	55	33	42	75	101	31	67	73	9
# on Car-deck	10	17	10	16	24	24	12	6	11	4
Vans	0	0	2	3	2	3	0	0	0	0
\$ (1,000s)	\$8	\$10	\$11	\$13	\$18	\$19	\$7	\$8	\$12	\$2

**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

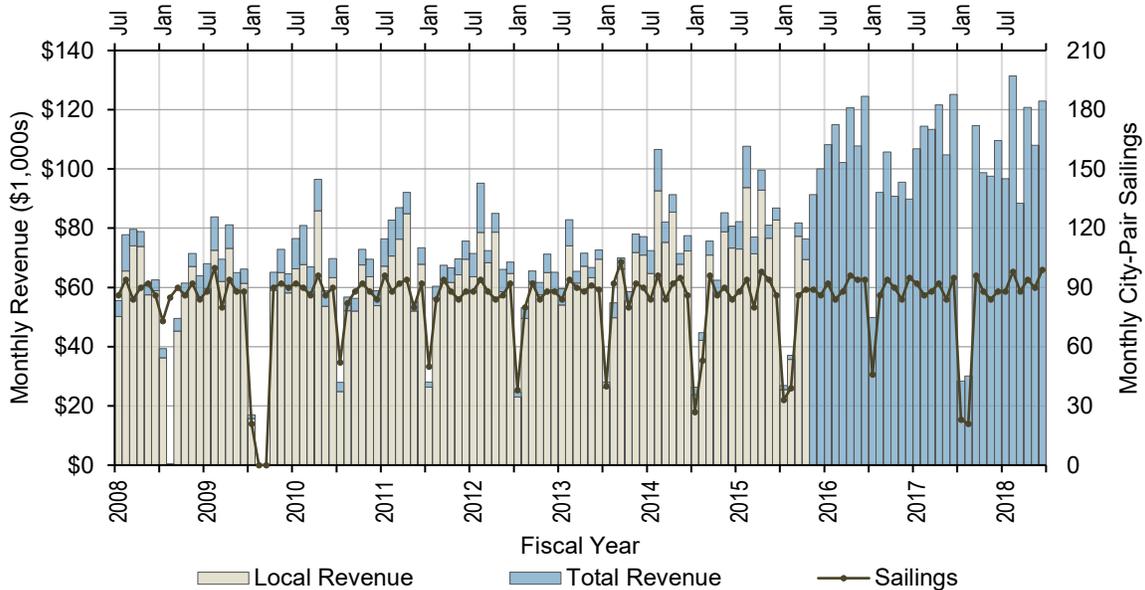
	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Gustavus</b>										
Sailings	0	0	0	1	10	0	0	4	0	0
Passengers	0	0	0	0	0	0	0	0	0	0
# on Car-deck	0	0	0	0	0	0	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Cross-Gulf Routes</b>										
<b>Travel to and from Yakutat</b>										
Sailings	35	18	24	33	40	28	29	14	2	3
Passengers	5	4	21	6	5	21	10	6	5	3
# on Car-deck	1	2	4	5	14	8	0	3	0	1
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$1	\$2	\$6	\$5	\$9	\$9	\$2	\$3	\$1	\$1
<b>Travel to and from Whittier</b>										
Sailings	33	19	24	33	40	25	29	21	23	22
Passengers	365	297	281	254	332	133	143	114	111	116
# on Car-deck	222	150	162	131	195	59	54	56	73	79
Vans	0	1	0	0	2	6	6	1	1	1
\$ (1,000s)	\$324	\$270	\$280	\$221	\$306	\$152	\$138	\$113	\$120	\$144
<b>Travel to and from Homer</b>										
Sailings	0	0	0	19	38	28	27	15	12	11
Passengers	0	0	0	5	30	33	14	5	16	23
# on Car-deck	0	0	0	2	12	14	7	0	5	12
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$5	\$30	\$37	\$18	\$3	\$21	\$29
<b>Travel to and from Seldovia</b>										
Sailings	0	0	0	13	29	12	13	6	2	0
Passengers	0	0	0	0	0	2	2	0	1	0
# on Car-deck	0	0	0	0	0	0	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$0	\$0	\$1	\$2	\$0	\$1	\$0
<b>Travel to and from Kodiak</b>										
Sailings	0	0	0	19	39	26	27	14	8	5
Passengers	0	0	0	11	44	47	17	15	44	13
# on Car-deck	0	0	0	3	18	4	4	7	15	5
Vans	0	0	0	0	0	0	0	0	12	0
\$ (1,000s)	\$0	\$0	\$0	\$10	\$41	\$25	\$19	\$21	\$100	\$16

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Special Routes</b>										
<b>Travel to and from Revillagigedo Island</b>										
Sailings	0	0	0	0	1	0	0	0	0	0
Passengers	0	0	0	0	445	0	0	0	0	0
# on Car-deck	0	0	0	0	0	0	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$(1,000s)	\$0	\$0	\$0	\$0	\$51	\$0	\$0	\$0	\$0	\$0

Source: Northern Economics analysis using data from AMHS (2019)

Figure 45 through Figure 49 show monthly travel for selected city-pairs involving Ketchikan, with revenues separated by local and non-local resident ticket purchases when data are available. Figure 45 shows monthly revenues and sailings for travel between Metlakatla and Ketchikan in either direction. Across all seasons, most revenue is from local residents. The percentage of non-local revenue increases only slightly during the peak season.

**Figure 45. Monthly Local Resident and Total Metlakatla-Ketchikan Revenues and Sailings, by Fiscal Year**

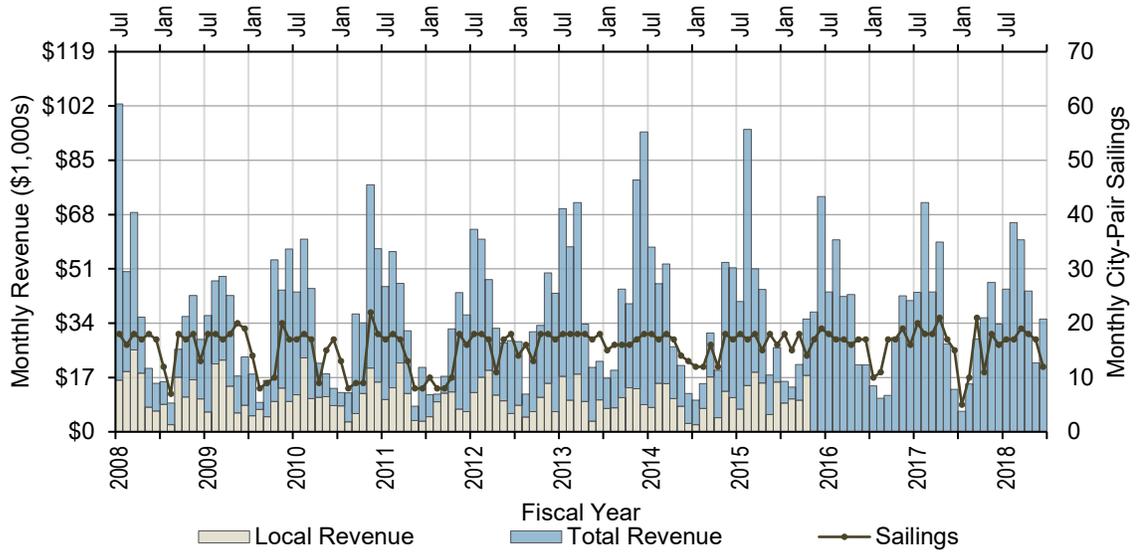


Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

Figure 46 shows monthly revenues and sailings for travel between Ketchikan and Haines in either direction. The breakdown of local and non-local revenue during the winter months varied, but on average, 78 percent revenue during the peak season is from non-locals. Figure 47 shows monthly revenues and sailings for travel between Ketchikan and Juneau in either direction. Most revenue during the winter months is from local residents, while peak season revenue is mostly from non-locals or is a more even split between local and non-local revenue.

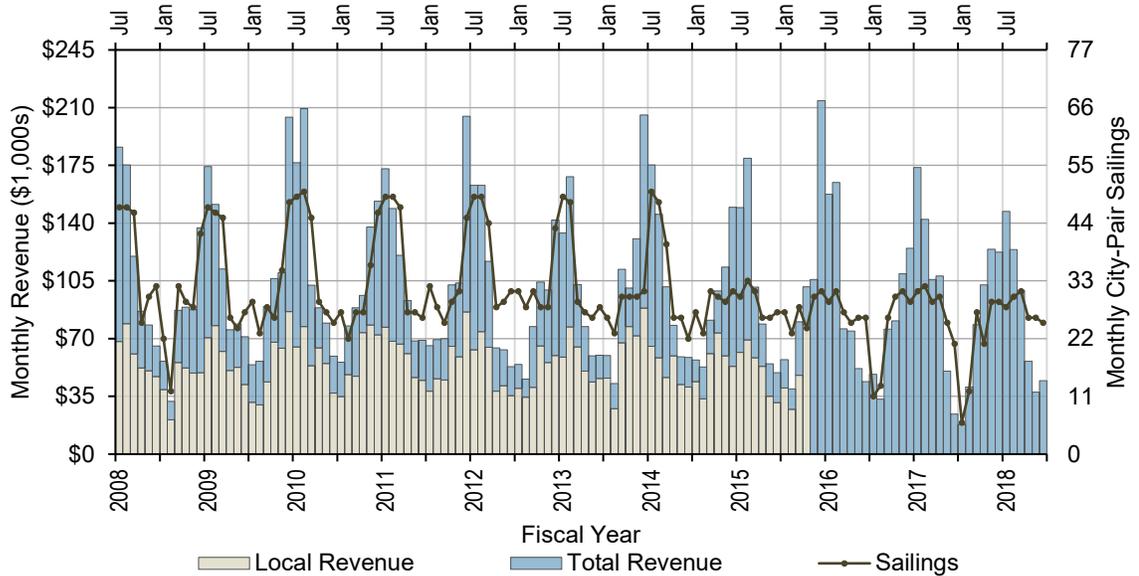
**Figure 46. Monthly Local Resident and Total Ketchikan-Haines Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Figure 47. Monthly Local Resident and Total Ketchikan-Juneau Revenues and Sailings, by Fiscal Year**

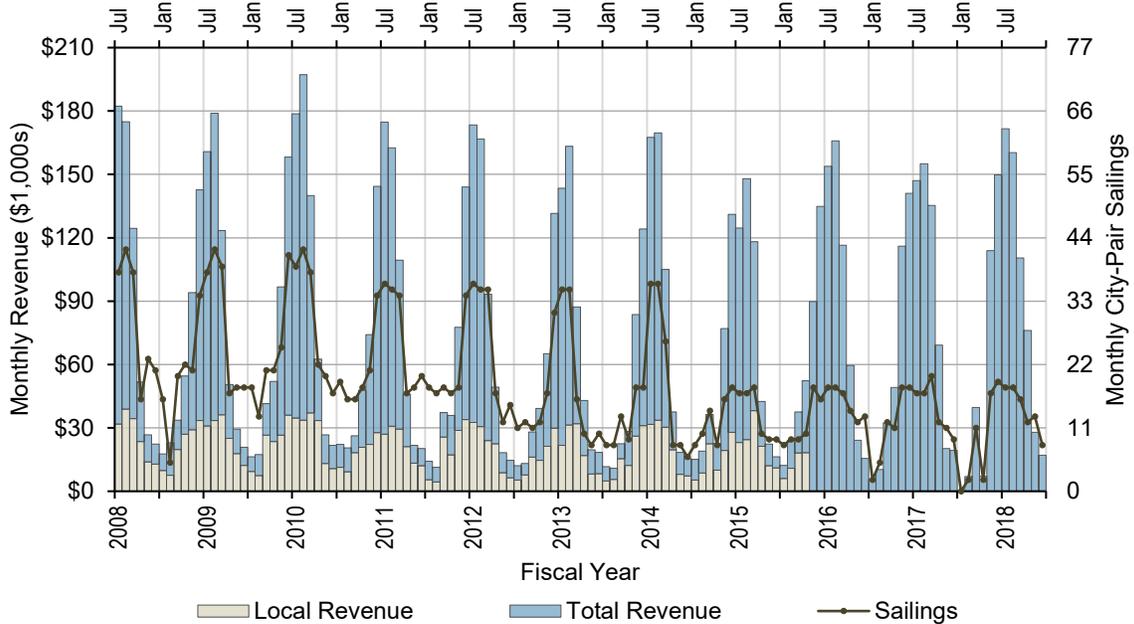


Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

Figure 48 shows monthly revenues and sailings for travel between Ketchikan and Prince Rupert in either direction. Most revenue in the winter months is from local residents, while over half the peak season revenue is from non-locals. The seasonal fluctuations in non-local revenues are dramatic and suggest this is an important route for tourists.

**Figure 48. Monthly Local Resident and Total Ketchikan-Prince Rupert Revenues and Sailings, by Fiscal Year**

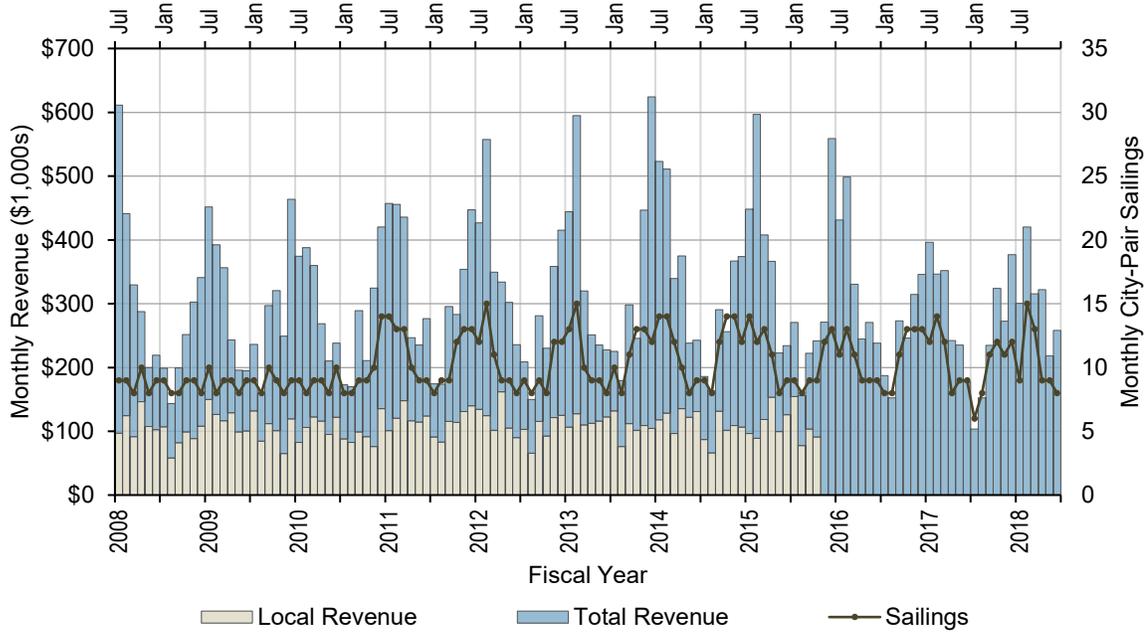


Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

Figure 49 shows monthly revenues and sailings for travel between Ketchikan and Bellingham in either direction. Most revenue during the peak season is from non-locals, while revenue during the winter months is more evenly split between local and non-local revenue.

**Figure 49. Monthly Local Resident and Total Ketchikan-Bellingham Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Land-based Facilities**

The land-based AMHS facilities in Ketchikan are owned by the State of Alaska and include three vessel berths in Ketchikan. Table 35 shows which currently operating AMHS vessels are capable of docking at the facilities in Ketchikan.

**Table 35. Vessels Capable of Docking at Ketchikan Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Ketchikan Berth 1- Main	X	X	X	X	X	X	X	X*	
Ketchikan Berth 2- South	X	X	X	X	X	X	X		X†
Ketchikan Berth 3- Stern	X			X	X				

Notes:

X indicates the vessel is compatible with this terminal.

\* It is likely that the vessel is compatible with this terminal, but it has not been fully tested.

† *Tustumena* at Ketchikan Berth 2: The vehicle elevator & ramp does not match up with shore side transfer bridges and therefore Berth 2 can provide passenger access only.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value for each facility was constructed by PND (2019).

***Ketchikan Berth 1***

*Docking Orientation:* Side Berth

*Description:* Ketchikan handles some of the largest volumes moving through AMHS facilities and this berth is the main berth in Ketchikan. This facility consists of a transfer bridge, steel support float, and steel catwalks that provide access to ten steel mooring dolphins.

*Alternative Usage:* The Berth 1 facility could likely be used as a small cruise ships terminal for vessels with lengths and parameters similar to the AMHS mainline ferries. Modifications would likely be required to the transfer bridge and float system (potentially requiring complete replacement) to meet freeboard, baggage and passenger door locations on vessels under consideration. The use of the terminal for offload of freight would likely require significant modifications to the float and transfer bridge system to match the freeboard/side shell height of barge or vessels being used. Offload equipment would need be limited to highway-legal design loads, further restricting the suitability of the terminal for freight transfer. The use of small passenger vessels would also require modifications to the transfer bridge/ramp system. Additional berthing and mooring structures would also likely be required, depending on the vessel dimensions under consideration.

Table 36 shows a range of estimated values for Ketchikan Berth 1 including uplands and associated infrastructure but does not account for any potential modifications required for the facilities to be used by non-AMHS vessels.

**Table 36. Estimated Value of Ketchikan Berth 1**

<b>Estimate Range</b>	<b>-30%</b>	<b>Avg</b>	<b>+30%</b>
Facility Value (\$)	8,440,000	12,050,000	15,660,000

Note: Includes value of uplands associated with all berths.

Data Source: PND (2019)

***Ketchikan Berth 2***

*Docking Orientation:* Side Berth

*Description:* This facility is an all-tide side berth consisting of a transfer bridge, steel support float, two mooring floats, and access bridges. A sheet pile wharf of the bridge provides fixed moorage and is in-line with the mooring floating fenders. This facility has 15ft of freeboard. This berth is often used as a layup berth for off-system AMHS vessels.

*Alternative Usage:* The Berth 2 facility could likely be used as a small cruise ships terminal for vessels with lengths and parameters similar to the AMHS mainline ferries. Modifications may be required to the transfer bridge and float system to meet freeboard, baggage and passenger door locations on vessels under consideration. However, the adjacent mooring floats and associated access bridges provide greater flexibility of use. The use of the terminal for offload of freight would likely require significant modifications to the float and transfer bridge system to match the freeboard/side shell height of barge or vessels being used. Offload equipment would need be limited to highway-legal design loads, further restricting the suitability of the terminal for freight transfer. The use of small passenger vessels could be accommodated on the north and south mooring floats.

Table 37 shows a range of estimated values for Ketchikan Berth 2 but does not account for any potential modifications required for the facilities to be used by non-AMHS vessels.

**Table 37. Estimated Value of Ketchikan Berth 2**

Estimate Range	-30%	Avg	+30%
Facility Value (\$)	4,230,000	6,040,000	7,850,000

Data Source: PND (2019)

***Ketchikan Berth 3***

*Docking Orientation:* Stern

*Description:* This facility was constructed in 2001 and is an all-tide stern loading berth consisting of a transfer bridge, steel support float with mooring float, and access gangway. This berth was made custom for and mainly used by IFA vessels and M/V Lituya. These vessels often run to Annette Bay.

*Alternative Usage:* The orientation of the berth would likely limit the terminal’s suitability for alternative usage. The height of the transfer bridge, ramp and apron would likely require significant modifications/upgrades to accommodate alternative vessels. Barge or landing craft transfer of freight is a potential use for the facility; however, significant changes to the on-float components of the transfer bridge/apron system would be required to match the freeboard/side shell height of barge or vessels being used. Offload equipment would need be limited to highway-legal design loads, further restricting the suitability of the terminal. The suitability for use for alternative smaller passenger-only vessels is believed to be limited due to orientation of berth and height of the transfer bridge/apron system.

Table 38 shows a range of estimated values for Ketchikan Berth 3; it does not account for any potential modifications required for the facilities to be used by non-AMHS vessels.

**Table 38. Estimated Value of Ketchikan Berth 3**

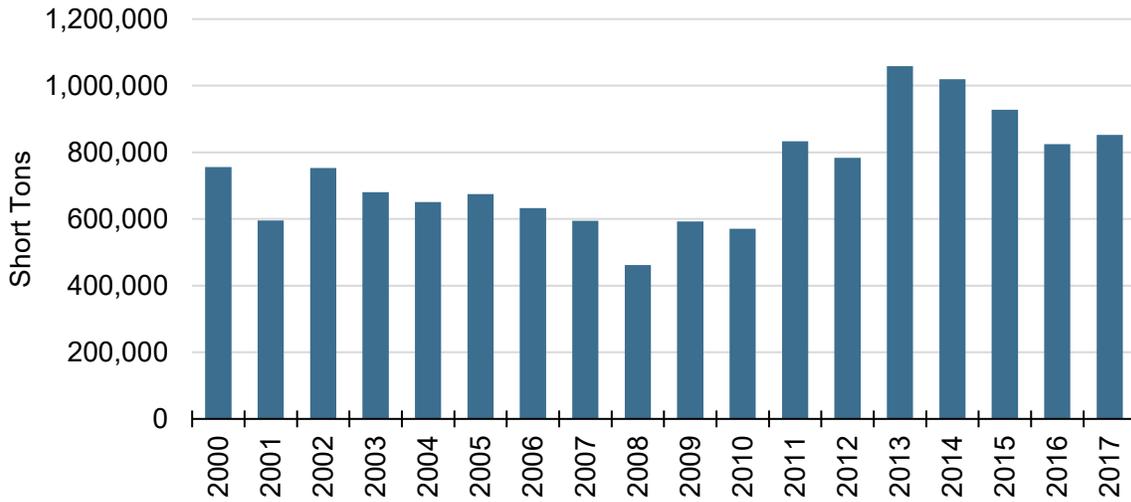
Estimate Range	-30%	Avg	+30%
Facility Value (\$)	4,220,000	6,030,000	7,830,000

Data Source: PND (2019)

**2.7.3 Transportation Alternatives**

Figure 50 shows marine freight data for Ketchikan. A wide variety of commodities pass through Ketchikan as marine freight, with distillate fuel oil and gasoline as top commodities. Other top commodities include fish (not shellfish), groceries, manufactured products, and wood in the rough. Reported wood in the rough freight has decreased substantially since the early 2000s, while most other top other commodities have generally increased in freight volume in recent years.

**Figure 50. Ketchikan Inbound and Outbound Annual Marine Freight, 2000–2017**



Data Source: USACE, 2019. USACE, 2018.

Several carriers provide regularly scheduled passenger air service to Ketchikan, and rates to hub airports are shown in Table 39. There is also at least one company that provides water taxi services in Ketchikan. SoutheastExposure specializes in passenger service to remote locations for kayaking and other recreational activities. They operate a landing craft but do not advertise freight service on their web page. The other operator in Ketchikan is Allen Marine which operates a 145-passenger catamaran along with two other vessels. The company offers a variety of tour packages, with fleets in Juneau and Sitka as well.

**Table 39. Ketchikan Flight Services and Rates for Single Adult Passenger, by Carrier**

Airline Carrier	One Way Destination	Summer Rate (\$)	Winter Rate (\$)
Alaska Airlines	Sitka	99	99
Alaska Airlines	Juneau	145	145
Alaska Airlines	Seattle	118	199
Delta Connection operated by SkyWest Airlines	Seattle	118	No Service

Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.

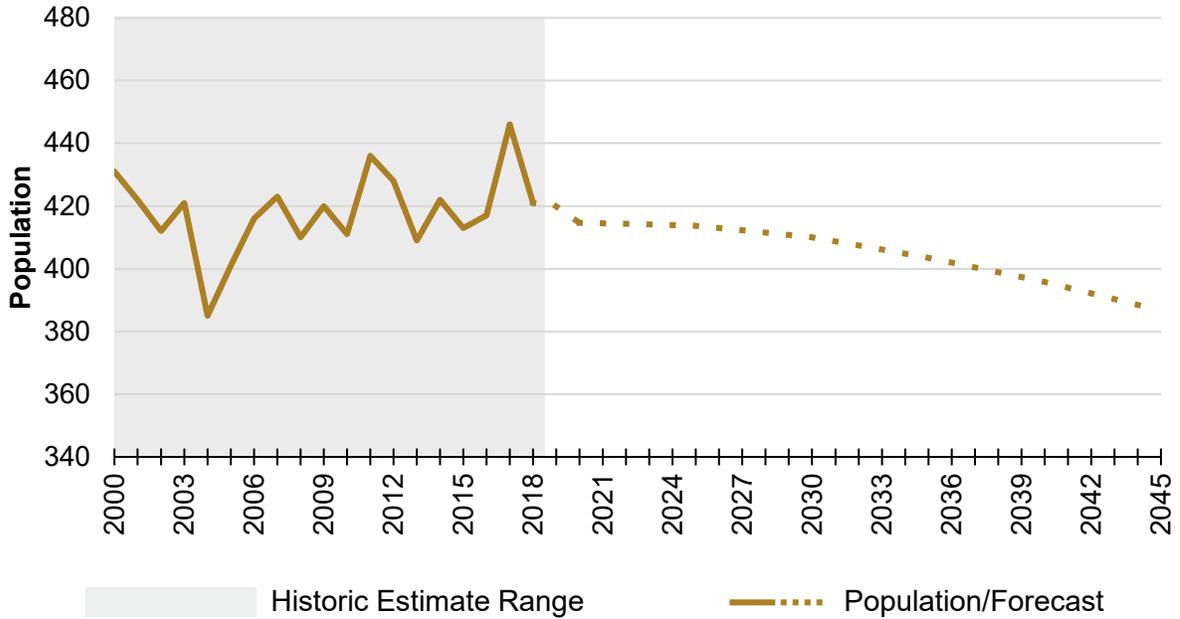
Data Source: Alaska Airlines, Inc., 2019. Delta Air Lines, 2019.

## 2.7.4 Saxman Community Profile

### Demographic Summary

Figure 51 shows the population of Saxman with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018, there were 421 permanent residents, but the population of Saxman is expected to decrease gradually over time.

**Figure 51. Saxman Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 40 shows student enrollment in all Saxman schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

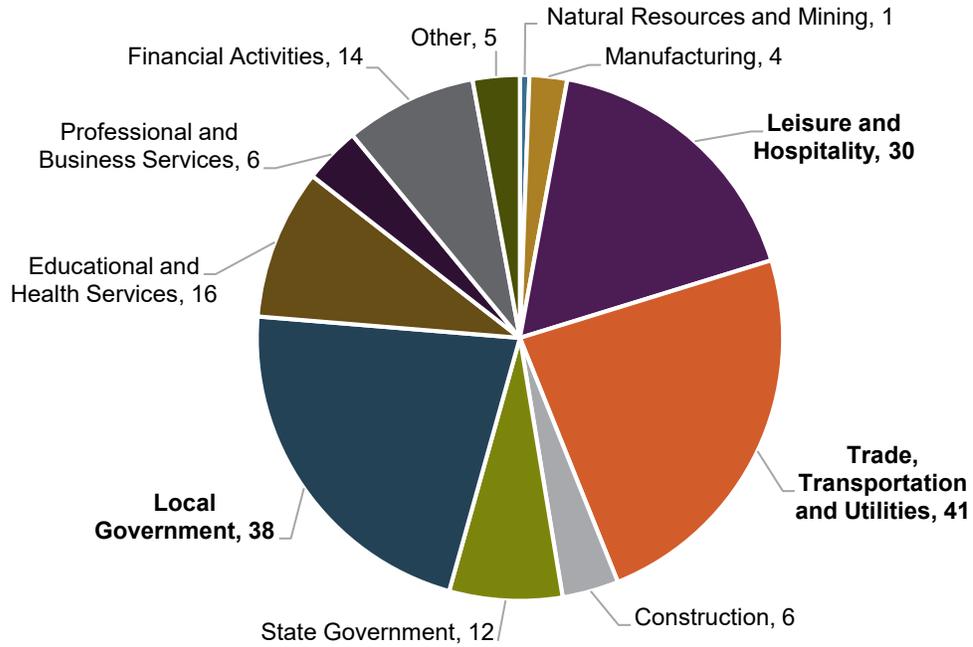
**Table 40. Saxman All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	39	33	33	30	42	40	30	0	0	0	0	0	0	82
Total	247							0		0				82

Data Source: USDE, 2016.

Figure 52 shows the number of workers in various industries for Saxman, and the top three industries are shown in bold.

**Figure 52. Saxman Resident Employment by Industry, 2016**



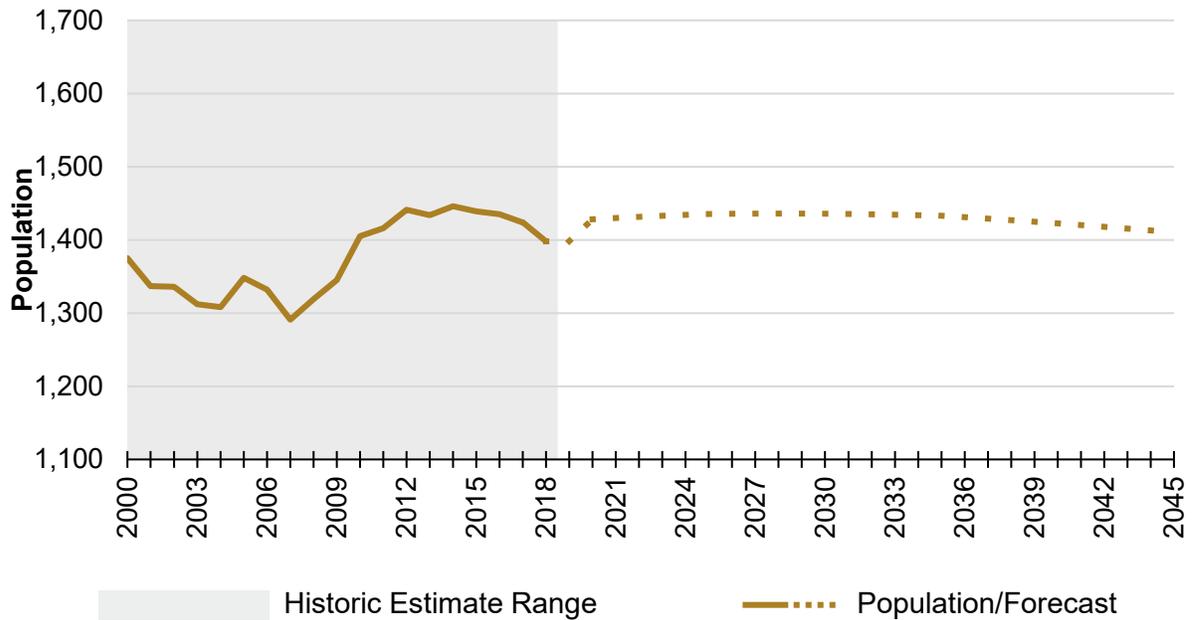
Data Source: ALARI, 2019

## 2.8 Metlakatla Community Profile

### 2.8.1 Demographic Summary

Figure 53 shows the population of Metlakatla with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 1,398 permanent residents, and the population of Metlakatla is expected to remain about the same over time.

**Figure 53. Metlakatla Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 41 shows student enrollment in all Metlakatla schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

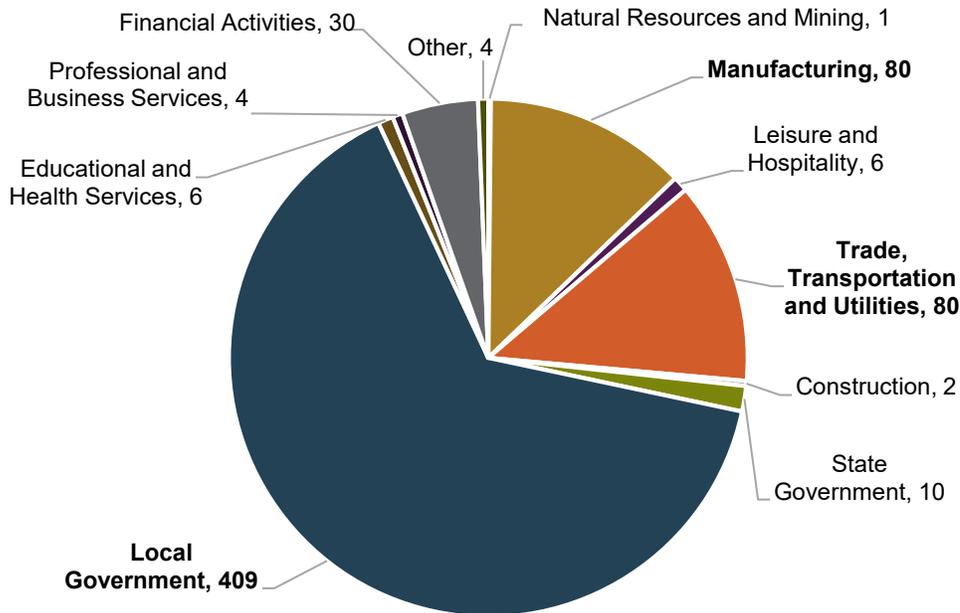
**Table 41. Metlakatla All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	29	29	22	28	29	19	22	17	16	24	22	30	14	28
Total	178							33		90			28	

Data Source: USDE, 2016.

Figure 54 shows the number of workers in various industries for Metlakatla, and the top three industries are shown in bold.

**Figure 54. Metlakatla Resident Employment by Industry, 2016**



Data Source: ALARI, 2019

## 2.8.2 AMHS Summary

### **Community Leader Perspectives**

Mayor Albert Smith of Metlakatla responded to the study’s survey request with a copy of written testimony to the Alaska House Transportation Committee in March 2019. Gavin Hudson, Metlakatla Indian Community Tribal Council member also provided information via interview on how AMHS is used by individuals and businesses within the community. Their responses are summarized below.

### ***How Residents Use the Ferry***

Every sector of our community uses the AMHS between Metlakatla and Ketchikan. It’s the primary mode of transportation between our two communities. Everyone uses the ferry, from students on academic travel to senior citizens who have difficulty climbing in and out of small floatplanes. The ferry is easier to ride for disabled people and others with medical issues. Many services, such as medical care, access to the court system, and the ability to obtain a driver’s license can only be done in Ketchikan or other larger community.

People frequently take their vehicles on the ferry to go shopping and will load up their vehicle with items. The savings is substantial because the cost of living in Metlakatla is quite high. Vehicles are often necessary in order to maximize the efficiency of the trip and shop for large items such as appliances, building materials, car tires, furniture or bulk foods. Cabs are available in Ketchikan, but they are much more expensive. Personal vehicles are also necessary for taking driver’s license tests.

### ***Commercial Uses***

Some small businesses pick up produce and other supplies in Ketchikan using the ferry system, but also use the barge service quite a bit. Lumber and other large items also come over on the barge once a week. Some businesses need to pick up materials and can't wait for the barge.

Metlakatla's clinic often sends more than 1,000 patients in a single year to Ketchikan via the state ferry, occasionally on an ambulance.

### ***Transportation Options***

The ferry is the only option for anyone wanting to ride with their car or truck to Ketchikan.

Floatplanes are another means of transportation but are more vulnerable than the ferry to the region's inclement and unpredictable weather. It's extremely rare for the Lituya to interrupt its schedule due to inclement weather. While valuable, the local floatplane services cannot replace the ferries. As in other Southeast Alaskan communities, the fear of flying is quite common. Cost is also a major factor in turning people away from flying; a round-trip ticket on the Lituya is half the cost of a round-trip floatplane ticket to Ketchikan. People with limited means and on fixed incomes rely on the ferry as an affordable way to travel off island when needed.

During the ferry strike in July 2019, the community's fire department emergency boat was on-call for medevacs and was delivering patients to Ketchikan. Residents also chartered boats or flights to make appointments, go to the airport, or do their shopping, according to a report on the website of Ketchikan radio station KRBD. The barge can also carry vehicles and equipment and a parcel delivery services does mass orders and delivers weekly to Metlakatla.

### ***Minimum Level of Service***

The current service of five days a week is the minimum Metlakatla can tolerate. Community officials believe the Lituya should be running seven days a week.

### ***Tolerance for a 10 Percent Fare Increase or Reduction in Service***

If fares increased by 10 percent, use of AMHS would drop as the economy there is pretty fragile. As transportation costs rise, it influences people's decision-making and reduces options, especially for people on fixed incomes like senior citizens.

If the number of departures were cut in half, people would be forced to either stay overnight in Ketchikan or charter a boat or plane to return to Metlakatla and either leave their vehicles in Ketchikan or not take them at all. An overnight stay would mean incurring the cost of a hotel, meals, and other incidental travel expenses. Our expenses go up as ferry service gets more infrequent because every other transportation option is more expensive.

Reduced ferry service would restrict medical access and the concern is that people's lives would be at greater risk. Recreational and cultural activities would be restricted. For example, basketball is such an important part of life in Southeast and other rural parts of Alaska. It might not seem important, but in rural communities, those types of healthy activities significantly help in maintaining overall well-being. The school district is a big user when they have academic or athletic travel. They might have to spend more money on travel to suit their itinerary.

Introducing a non-vehicle ferry option would not make sense in Metlakatla as the Lituya is already the smallest, most efficient ferry in the fleet.

***Ideas for improving the ferry’s fiscal health***

Restore gift shops.

The AMHS is viewed by many people in the legislature as a budget line item. All they see is an expense, but they are missing the value it provides to a lot of people along the coast and isolated rural communities and economies. Metlakatla has always been and always will be a supporter of the AMHS and an opponent of budget cuts to the marine highway.

**Historic Revenue and Traffic Volumes**

Table 42 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with Metlakatla as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). Metlakatla is an origin/destination in the Metlakatla Ferry Route Group connecting to Ketchikan.

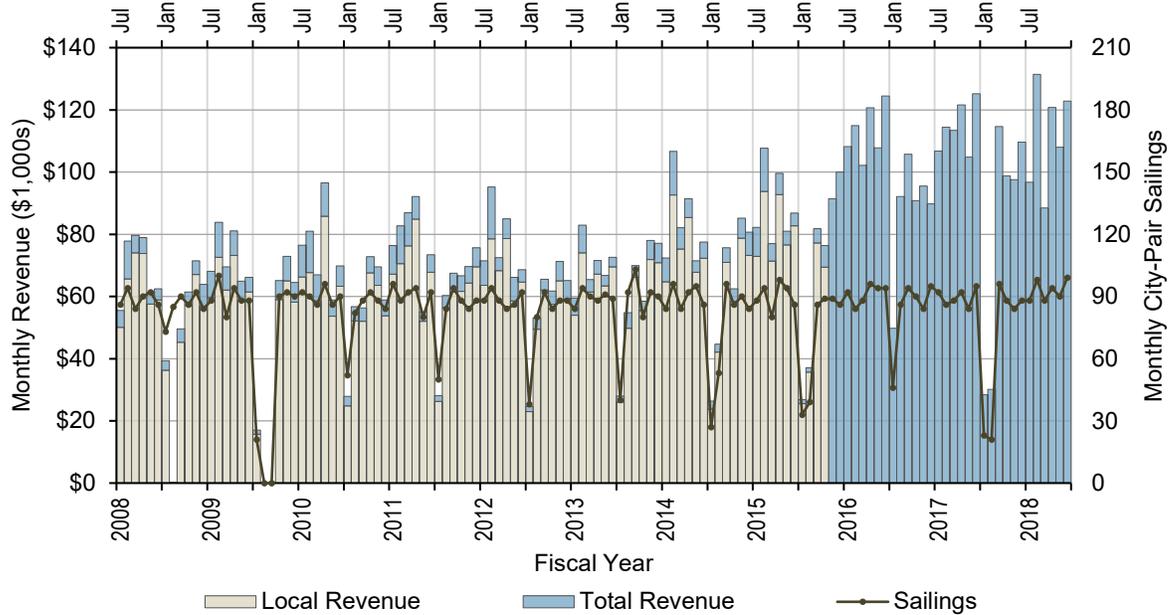
**Table 42. Metlakatla as the Origin or Destination—AMHS Volume and Revenue, 2009–2018**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Metlakatla Route</b>										
<b>Travel to and from Ketchikan</b>										
Sailings	1,042	831	1,026	1,030	1,002	1,033	973	962	1022	929
Passengers	29,375	26,624	33,230	35,274	33,304	30,140	31,515	30,812	33,088	25,347
# on Car-deck	10,178	9,389	11,459	11,585	10,900	10,527	10,418	10,127	9,955	8,436
Vans	97	61	87	95	78	2	0	8	1	0
\$ (1,000s)	\$702	\$653	\$792	\$835	\$800	\$785	\$876	\$948	\$1,202	\$1,165

Source: Northern Economics analysis using data from AMHS (2019)

Figure 55 shows monthly revenues and sailings for travel between Metlakatla and Ketchikan in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available. Across all seasons, most revenue is from local residents. The percentage of non-local revenue increases only slightly during the peak season.

**Figure 55. Monthly Local Resident and Total Metlakatla-Ketchikan Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Land-based Facilities**

The land-based AMHS facilities in Metlakatla are owned by the State of Alaska and include two vessel berths: Annette Bay and Port Chester. Table 43 shows which currently operating AMHS vessels are capable of docking at the facilities in Metlakatla.

**Table 43. Vessels Capable of Docking at Metlakatla Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Metlakatla	X			X	X				

Notes:

X indicates the vessel is compatible with this terminal.

\* It is likely that the vessel is compatible with this terminal, but it has not been fully tested.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value for each facility was constructed by PND (2019).

**Annette Bay**

Docking Orientation: Side Berth

*Description:* This terminal was built in 2013 and consists of a 140ft vehicle transfer bridge and breasting fender panels that are supported by a series of Flexifloats. The uplands are paved and striped for parking and staging areas have overhead lighting. There is an open air waiting shelter, public pit toilets, and a generator building. There is no terminal building at the facility.

*Alternative Usage:* The use of the terminal for offload of freight would likely require modifications to the float and transfer bridge system to match the freeboard/side shell height of barge or vessels being used. Offload equipment would need be limited to highway-legal design loads, further restricting the suitability of the terminal for freight transfer. The use of small passenger vessels would likely require modifications to the transfer bridge/ramp system.

Table 44 shows a range of estimated values for the Annette Bay Facility including uplands and associated infrastructure but does not account for any potential modifications required for the facilities to be used by non-AMHS vessels.

**Table 44. Estimated Value of the Annette Bay Facility in Metlakatla**

<b>Estimate Range</b>	<b>-30%</b>	<b>Avg</b>	<b>+30%</b>
Facility Value (\$)	3,310,000	4,730,000	6,150,000

Data Source: PND (2019)

**Port Chester**

*Docking Orientation:* Side Berth

*Description:* After the Annette Bay facility was built in 2013, ferry operations were moved there. The Port Chester facility is no longer used; however, it remains in active operation status. This facility consists of an orthotropic steel deck bridge, seven steel pipe pile dolphins (six breasted and one mooring), and HDPE mooring float, and a steel bridge pontoon. It is inspected every two years and was modified in 2004 to by the layup berth for M/V Lituya.

*Alternative Usage:* The use of the terminal for offload of freight would likely require modifications to the float and transfer bridge system to match the freeboard/side shell height of barge or vessels being used. Offload equipment would need be limited to highway-legal design loads, further restricting the suitability of the terminal for freight transfer. Small passenger vessels could likely be accommodated on the mooring float located at the terminal.

Table 45 shows a range of estimated values for the Port Chester Facility including uplands and associated infrastructure but does not account for any potential modifications required for the facilities to be used by non-AMHS vessels.

**Table 45. Estimated Value of the Port Chester Facility in Metlakatla**

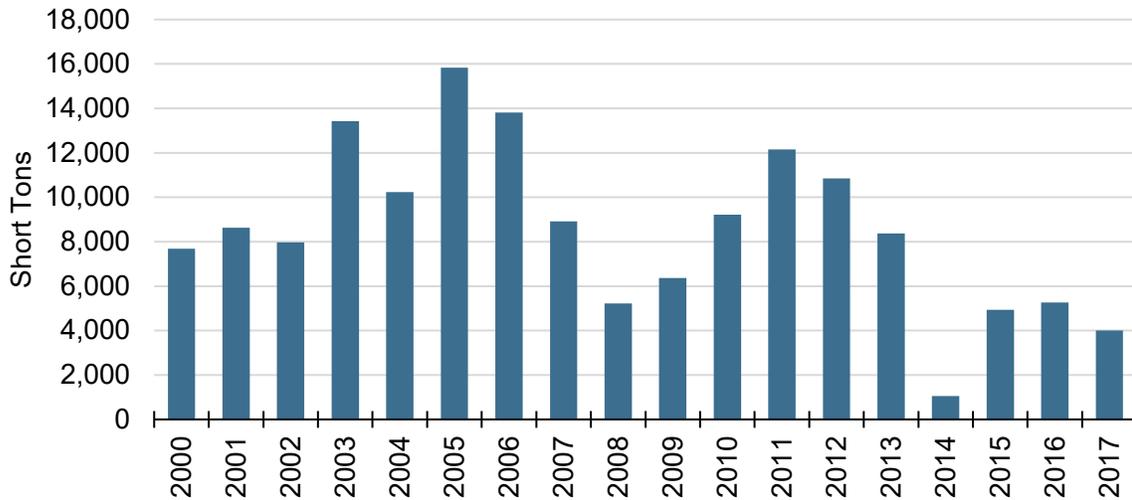
<b>Estimate Range</b>	<b>-30%</b>	<b>Avg</b>	<b>+30%</b>
Facility Value (\$)	2,520,000	3,590,000	4,670,000

Data Source: PND (2019)

### 2.8.3 Transportation Alternatives

Figure 56 shows marine freight data for Metlakatla. A variety of commodities pass through Metlakatla as marine freight, with distillate fuel oil, fish (not shellfish), gasoline, and manufactured products as top commodities by volume. Reported freight from 2014 through 2016 was much lower than past years and only a few commodity categories were reported, including higher reported levels for not-elsewhere-classified petroleum products and unknown/not-elsewhere classified products.

**Figure 56. Metlakatla Inbound and Outbound Annual Marine Freight, 2000–2017**



Data Source: USACE, 2019. USACE, 2018.

Two carriers provide regularly scheduled passenger air service to Metlakatla, and rates to hub airports are shown in Table 46. The Taquan Air route does not operate on Sundays. The Pacific Airways route operates seven days per week in the summer and Monday-Friday in the winter.

**Table 46. Metlakatla Flight Services and Rates for Single Adult Passenger, by Carrier**

Airline Carrier	One Way Destination	Summer Rate (\$)	Winter Rate (\$)
Taquan Air	Ketchikan	55	55
Pacific Airways	Ketchikan	70	Not reported

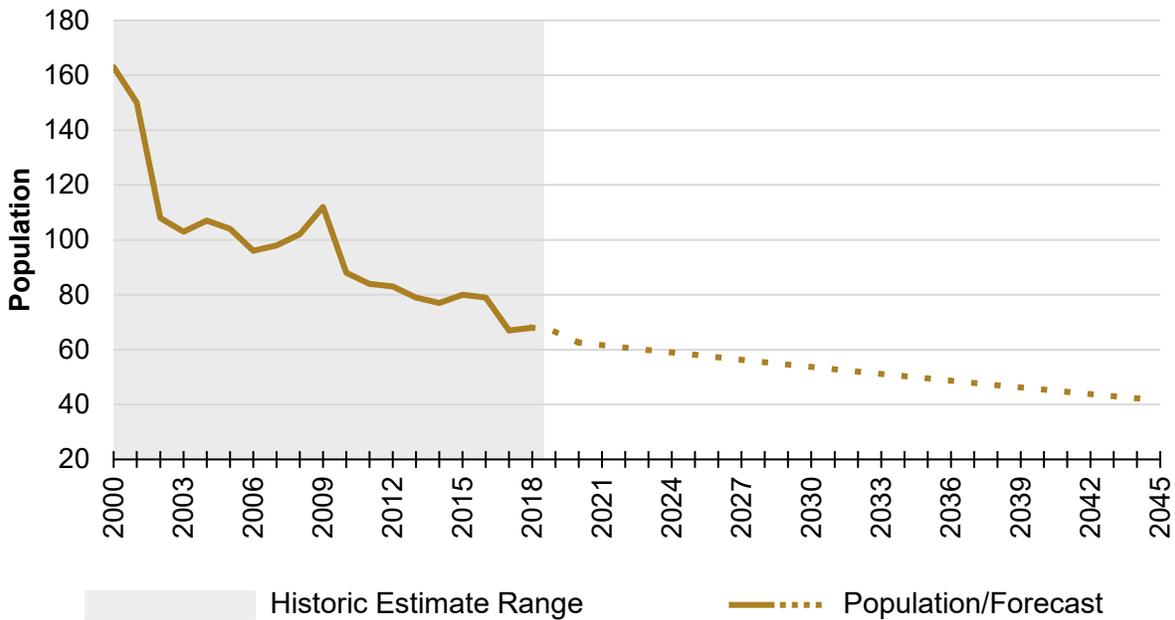
Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.  
Data Source: Taquan Air, 2019. Pacific Airways, 2019.

## 2.9 Pelican Community Profile

### 2.9.1 Demographic Summary

Figure 57 shows the population of Pelican with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 68 permanent residents, but the population of Pelican is expected to decrease gradually over time.

**Figure 57. Pelican Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 47 shows student enrollment in all Pelican schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

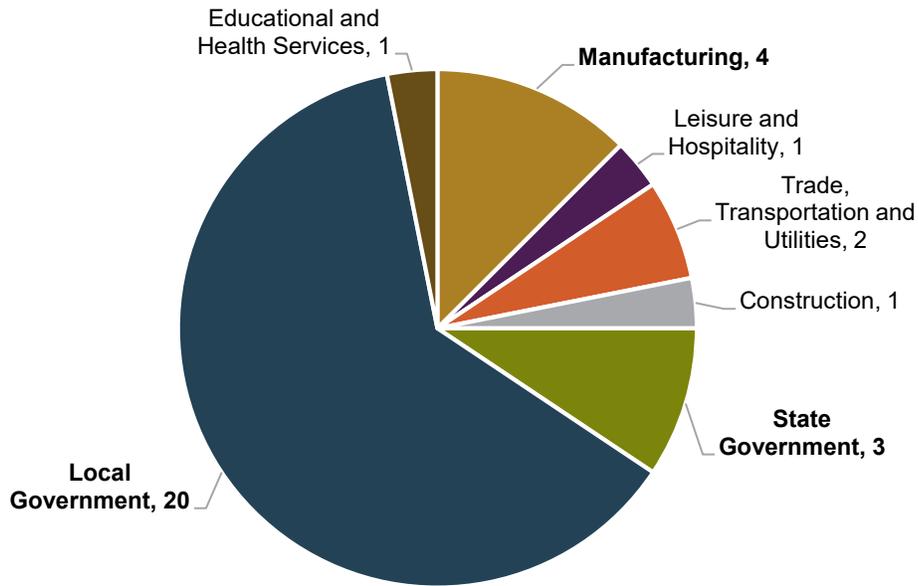
**Table 47. Pelican All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	0	1	0	1	3	2	0	0	1	0	2	0	0	0
<b>Total</b>				7				1		2				0

Data Source: USDE, 2016.

Figure 58 shows the number of workers in various industries for Pelican, and the top three industries are shown in bold.

Figure 58. Pelican Resident Employment by Industry, 2016



Data Source: ALARI, 2019

## 2.9.2 AMHS Summary

### Community Leader Perspectives

Mayor Walt Weller of Pelican provided information via survey on how AMHS is used by individuals and businesses within the community. Mayor Weller and Seth Stewart, owner of Yakobi Fisheries in Pelican, also provided an interview. Their responses are summarized below.

#### *How Residents Use the Ferry*

In Pelican, the primary ferry users include people who come and go for medical appointments. They work their appointments around the ferry schedule as it would be difficult and expensive to go by plane. People also use the ferry to bring back goods purchased in Juneau and bring boats and household goods here.

Most Pelican residents do not own a vehicle. They take cabs or ride with friends to do their errands in Juneau. They usually fly to Juneau and spend a few days there, load their items onto the ferry, and bring it back to unload here. It's not rare for people to put a couple hundred pounds on there. The ferries are too far apart for someone to go to town, finish their appointments and shopping, then come back.

The school system also uses the ferry for taking students to athletic events or field trips.

#### *Commercial Uses*

Yakobi Fisheries is the single largest business freight user of the ferry in Pelican. The company catches and processes halibut, black cod, rockfish, and salmon, its main product.

Drew and Smith will pick up groceries and other items from stores in Juneau, load them on trucks on the ferry, then unload everything in Pelican.

Yakobi Fisheries moves so much freight, it has contracted with Frontier Freight to pull semi-trailers onto the ferries to avoid taking all the capacity from Drew and Smith. The trailers take fish to a freezer facility in Juneau. Normally we send out two containers every two weeks. We have had situations when we're sending out four containers every four weeks instead. When that happens, we are sitting on much more product before we can get the product to the customer and receive payment. Last year we stopped processing fish because we had to sit on fish until the ferry showed up and we maxed out the backhaul in Pelican. Our season starts in April at the earliest. Production kicks up in June, July and lasts through end of September. Samson AML barge gets the product out of Juneau or we fly it out.

Yakobi advises its crews to come and go on the ferry because the cost is significantly lower than a plane ticket. Its employees use the ferry to ship groceries and other items.

The City of Pelican is a major ferry user, using it to bring in building supplies and equipment. The city maintains a fuel storage facility, a utility, sewer system, 100,000 square feet of buildings, and a plank boardwalk. It rents construction equipment that comes and goes on the ferry. Pump trucks come out on the ferry to maintain the sewer system.

Charter lodges also use the ferry to bring in supplies. A lot of tourists came out on the ferry when there was an overnight option.

Kelp farming is a potential new industry with the possibility of significant growth and would likely depend on the ferry for moving people, product, equipment, and materials.

### ***Transportation Options***

A significant amount of freight that comes out here via modes of transportation that don't do all that the ferry does.

We have no landing strip, so flights are limited to floatplane only, which adds to complications with weather. Pelican can often go weeks without a plane because of weather and the ferry is the only way to get in and out. The ferry LeConte is big enough that it shows up in all kinds of bad weather. Right before Christmas, for example, everything will need to come out on the ferry. Freight charges on the plane are also expensive. The primary floatplane operator, Alaska Seaplanes, charges \$1 a pound to fly our food out here. And some people prefer the ferry because they find it difficult to get in and out of a float plane.

Other boats come to and from the community, but none with drive-on-drive-off capabilities, like the ferry. They are also all significantly more expensive for users than the ferry.

From the perspective of Yakobi Fisheries, is it possible to have a business out here without the ferry? Maybe, but we know no other transportation carrier serving Pelican will let us be competitive on price.

### ***Minimum Level of Service***

We're the hardest community to get to and have no reason to believe more ferries is economically feasible. We could function with a ferry every six weeks outside the summer season and twice a month in summer. The plan would reduce the size of the fish plant, but would be much more widely accepted than no ferry.

We want to say, we know the state has a cost, we know about budgets, so we're willing to work with the state to reduce ferry service and offer the state real savings. That will give us extra time to look at alternatives if we have to go that route. Is it wildly popular? No. But it is realistic.

**Tolerance for a 10 Percent Fare Increase or Reduction in Service**

People understand that an increase of 10 to 25 percent is a possibility in order to keep AMHS service. A plane ticket is \$200 one way, while a passenger-only ferry ticket is \$50.

As a business, Yakobi Fisheries would be willing to pay more for the ferry since they only make a couple trips a year, as opposed to a fish processor moving tens of thousands of pounds. We suggest circulating a proposed rate schedule and see what people think of it.

Any rate increase must be economically feasible for Yakobi Fisheries, which employs two dozen people in the summer. Those jobs are a big deal for Pelican.

**Effects of Reduced Service**

We go to Juneau two to three times a year and ridership wouldn't increase or decrease much if ferry service went up or down.

**Ideas for Improving Fiscal Health**

- The big expense for AMHS is the size of the boat. We should spend two to four years producing the correct-sized boat to serve Pelican.
- On having another party take over: I need to get with other mayors and have somebody develop a business model for us on how we could replace AMHS and have another party take over. It could take six months to a year to develop a business model to make realistic cost comparisons.
- We have spoken with Robert Venables, executive director of the Southeast Conference, about restructuring the ferry system. We're early in the process of looking at options. With this governor coming in and making the decisions he's made, the "What do we do without it?" question is fairly new. You're going to have different answers from different towns because services and transportation alternatives are so different.

**Historic Revenue and Traffic Volumes**

Table 48 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with Pelican as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). Pelican is an origin/destination in the Southeast Feeder Route Group, connecting to three ports. The route between Pelican and Juneau generates the most revenue and transports the most passengers.

**Table 48. Pelican as the Origin or Destination—AMHS Volume and Revenue, 2009–2018**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>SE Village Routes</b>										
<b>Travel to and from Gustavus</b>										
Sailings	0	0	10	2	8	18	15	14	0	2
Passengers	0	0	194	8	12	38	152	84	0	1
# on Car-deck	0	0	0	10	3	3	4	1	0	2
Vans	0	0	0	2	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$3	\$1	\$1	\$1	\$3	\$3	\$0	\$0

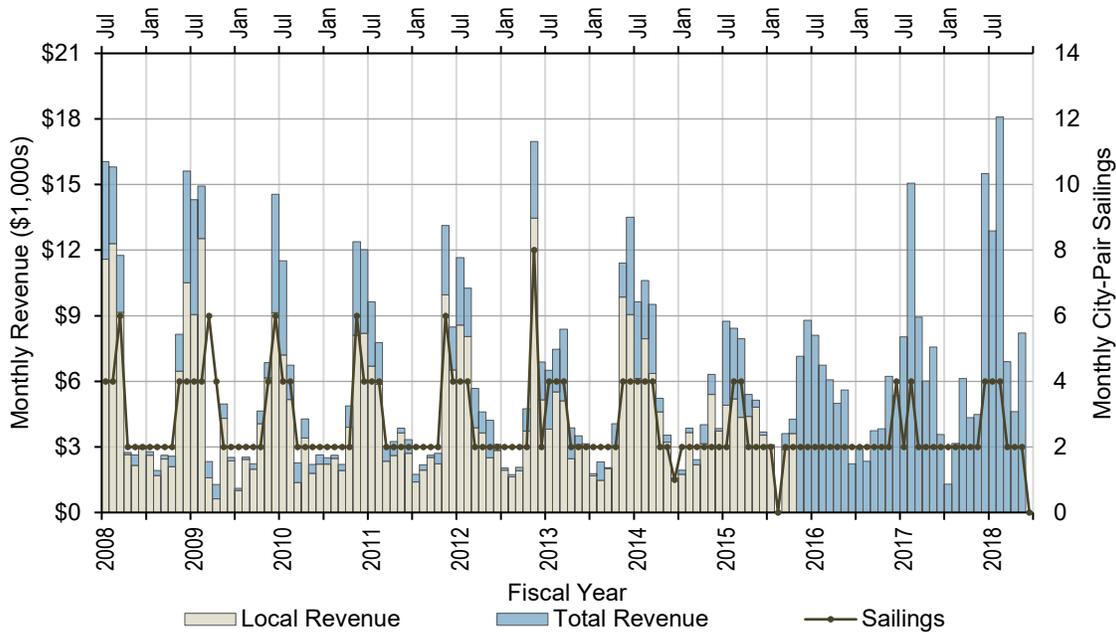
**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Hoonah</b>										
Sailings	0	0	0	0	0	0	3	0	0	4
Passengers	0	0	0	0	0	0	1	0	0	13
# on Car-deck	0	0	0	0	0	0	3	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$(1,000s)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Travel to and from Juneau</b>										
Sailings	36	40	34	34	34	34	29	26	24	28
Passengers	1,824	1,494	1,146	1,046	1,074	832	648	709	538	808
# on Car-deck	171	144	139	149	174	159	160	149	160	204
Vans	0	0	6	2	4	0	0	0	0	0
\$(1,000s)	\$86	\$72	\$66	\$62	\$74	\$68	\$62	\$66	\$58	\$84

Source: Northern Economics analysis using data from AMHS (2019)

Figure 59 shows monthly revenues and sailings for travel between Juneau and Pelican in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available. Across all seasons, most revenue is from local residents. The percentage of non-local revenue increases during the peak season.

**Figure 59. Monthly Local Resident and Total Juneau-Pelican Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Land-based Facilities**

The land-based AMHS facility in Pelican is non-state owned. Table 49 shows which currently operating AMHS vessels are capable of docking at the facilities in Pelican.

**Table 49. Vessels Capable of Docking at Pelican Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Pelican	X			X	X*				

Notes:

X indicates the vessel is compatible with this terminal.

\* It is likely that the vessel is compatible with this terminal, but it has not been fully tested.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value of the facility was constructed by PND (2019).

***Pelican Facility***

*Docking Orientation:* Stern

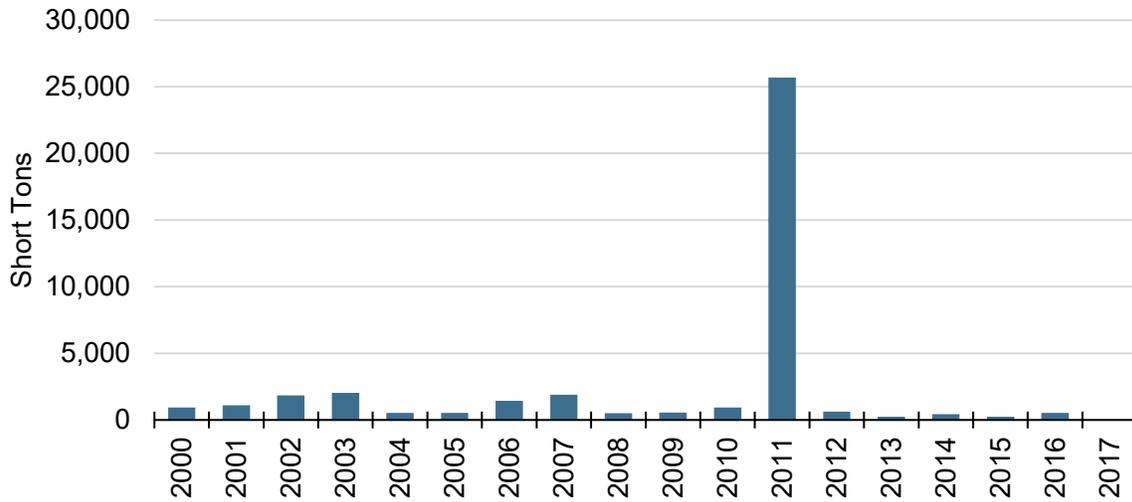
*Description:* This facility was completely rebuilt in 2012. It consists of a fixed platform dock, two tidal ramps, a breakwater, and four mooring structures that accommodates LeConte class vessels, barges, and landing crafts. The City owns the facility and uplands, ADOT has provided construction funds and maintenance, and AMHS does not have exclusive use of the facility. City personnel meet the vessel and assist with the tie up. While this facility is classified as a multi-use facility, nobody else uses it due to the placement of the dolphins and the high and low tide ramps. If AMHS services are discontinued, Federal aid payback is estimated to be between eight to ten million dollars.

*Alternative Usage:* Possible barge and landing crafts but not currently in use with those types of vessels.

### 2.9.3 Transportation Alternatives

Figure 60 shows marine freight data for Pelican. Pelican’s top marine freight commodities are distillate fuel oil and gasoline. The 2011 peak in freight volume is due to a large reported amount of gasoline, which comprised over 98 percent of that year’s reported volume. The majority of Pelican’s freight volume in other years is typically a more even split between gasoline and distillate fuel.

**Figure 60. Pelican Inbound and Outbound Annual Marine Freight, 2000–2017**



Data Source: USACE, 2019. USACE, 2018.

One carrier provides regularly scheduled passenger air service to Pelican, and rates to hub airports are shown in Table 50. The Alaska Seaplanes flight route does not operate on Sundays in the winter.

**Table 50. Pelican Flight Services and Rates for Single Adult Passenger, by Carrier**

Airline Carrier	One Way Destination	Summer Rate (\$)	Winter Rate (\$)
Alaska Seaplanes	Juneau	189	189

Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.

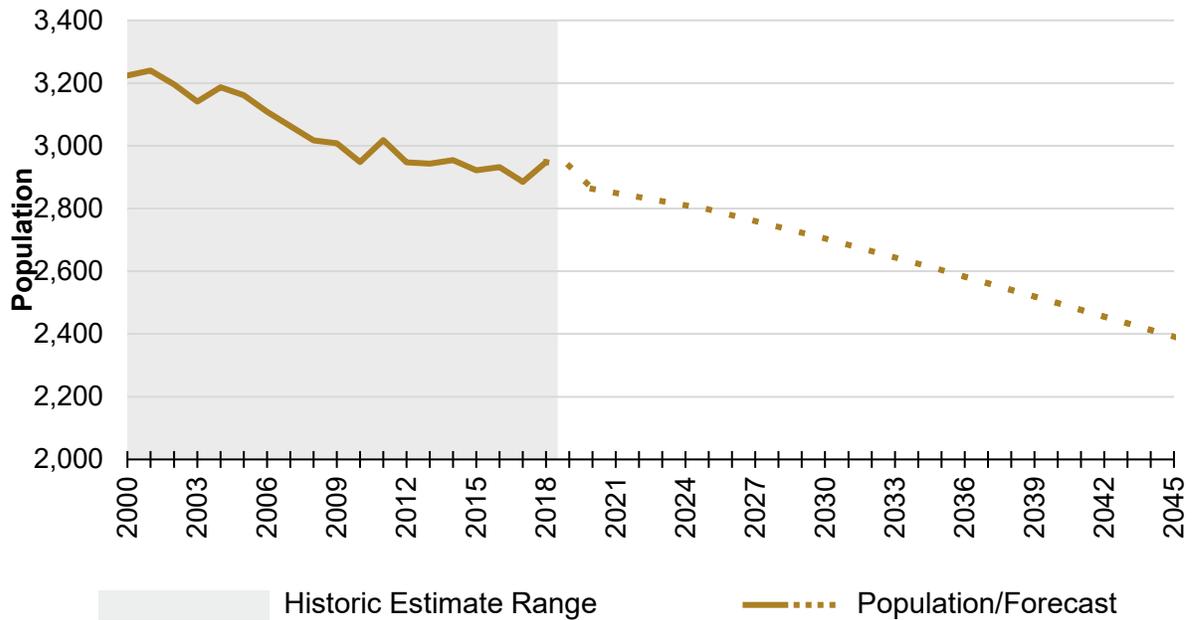
Data Source: Alaska Seaplanes, 2019.

## 2.10 Petersburg Community Profile

### 2.10.1 Demographic Summary

Figure 61 shows the population of Petersburg with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 2,948 permanent residents, but the population of Petersburg is expected to decrease steadily over time.

**Figure 61. Petersburg Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 51 shows student enrollment in all Petersburg schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

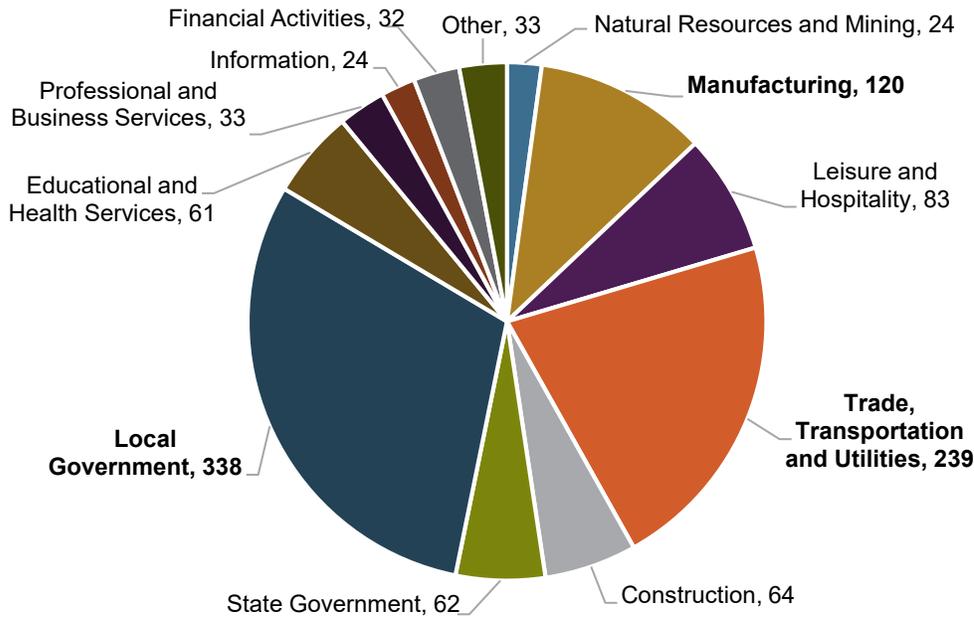
**Table 51. Petersburg All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	41	44	32	27	41	38	29	30	33	39	35	46	36	8
<b>Total</b>	252							63		156			8	

Data Source: USDE, 2016.

Figure 62 shows the number of workers in various industries for Petersburg, and the top three industries are shown in bold. Seafood processing plants in Petersburg are largely focused on salmon products, including fresh, frozen, and canned products. One of the larger processors in Petersburg, Ocean Beauty, employs up to 180 people during peak summer season (Ocean Beauty Seafoods, 2019).

Figure 62. Petersburg Resident Employment by Industry, 2016



Data Source: ALARI, 2019

## 2.10.2 AMHS Summary

### Community Leader Perspectives

Petersburg Borough Manager Steven Giesbrecht provided information via survey and interview on how AMHS is used by individuals and businesses within the community. His responses are summarized below.

#### *How Residents Use the Ferry*

Residents use the ferry to transport goods and services for individuals and businesses. Price, convenience, and the purpose of travel are key factors in the decision to take the ferry. The school travels for sports, music, and other extracurricular activities. People who cannot or will not fly use it to get to medical appointments. We go south to Seattle to buy building supplies and appliances and bring them back to Petersburg on the ferry. Residents also use the ferry to take leisure trips on the road system in the lower 48 and Alaska. Many people like to take cars to Juneau and fill up on gas at Costco.

When vehicle recalls occur, the only way to get the issues addressed properly is to have the dealer or a qualified mechanic look at it. I just took my vehicle to Juneau because I had a recall on my Honda. No one here can do that kind of work.

#### *Commercial Uses*

Many construction crews use the ferry as it is the easiest way to get vehicles, people, and materials to Petersburg, but the frequency of visits and the reliability of the schedule can be issues. Fish processors, like Icicle, Ocean Beauty, and Trident, used to send a lot of fish on the ferry, but again, reliability has

become an issue. State vehicles come and go frequently on the ferry. Regional and smaller-scale contractors, like a mold remediation company out of Juneau or a plumber out of Ketchikan, also use it.

We have a farmer's market here that no longer uses the ferry because it is so unreliable.

Vacationers will use the ferry to bring their recreational vehicles to Petersburg. They'll stay here for a few days and then leave. The reverse is also true. Locals can take their RV to Bellingham and see a national park. Or to Prince Rupert, which is a pretty drive with some good camping. Tourists sometimes head north to Homer, while locals tend to do the northern trip less frequently.

### ***Transportation Options***

All our groceries and large construction equipment come in on the barge service, Alaska Marine Lines (AML). The barge does a decent job getting items. It's just really slow and really expensive compared to the ferry. AML, while reliable, is clearly in business to make money. With no competition, or as the ferry has become less of a competitor to them, their rates have increased dramatically. AML has a monopoly and the ferry has become less of a competitor, so AML's rates have gone up well over 30 percent over last 4-5 years. We've heard people repeatedly say they have canceled projects because it's too expensive to ship in materials. AML is very reliable, with good service, you're just going to pay a lot for it.

Petersburg has two Alaska Airlines flights each day, southbound to Wrangell to Ketchikan to Seattle on the milk run. You can get off at Ketchikan and fly back north. The northbound flight goes from Petersburg to Juneau. We also have charter flights, but they are not a huge part of the local transportation business, at least currently.

With reduced competition from the ferry, I would expect other providers to raise their rates for travel and transportation without raising service levels. This would include the barge service and Alaska Airlines. They are both a monopoly at our location and without the competition from the ferry, they will take advantage.

### ***Minimum Level of Service***

The minimum level of service would vary depending on whether the ferry was heading north or south. The mainline ferry to Bellingham, Washington, should leave Petersburg once a week throughout the year. We should also have "shuttles" to other communities in Southeast, twice a week, both north and south.

Going north to Juneau just once a week is really hard to live with. Any less than that and the ridership will go away because the hotel bills would become unaffordable. People would take the trip to Juneau as long as they didn't have to stay there for five days. Only those who need to ship their car would take the ferry. With the state cutting services so much, people are immediately jumping to the airplane. The ferry used to be the cheapest way to come and go, but now it's very comparable to airfare, not including a vehicle.

### ***Tolerance for a 10 Percent Fare Increase or Reduction in Service***

I think in the past if fares increased by 10 percent, ridership wouldn't have been affected, but I'm less sure about that now. The feeling in Southeast is that the state has purposely reduced the schedule in order to have fewer people ride the ferry, and then says, "Look, ridership is down, so the ferry is not worth it." I think there was more rate flexibility at one time, but that may not be the case anymore. Also, the ferries are not maintained like they once were. I just don't know how flexible people are anymore because the ferries are becoming less and less something to be proud of.

### ***Effects of Reduced Service***

Not everything we need is available here on our island. Reduced ferry service will lead to increases in household costs and there's a fear those costs could drive some people out of town. Every business in town is looking to hire, but there is no one here to take those jobs.

Potentially people would respond to more service cuts by getting inventive, by pooling ferry trips and using the post office more, although we're limited on what we can ship through the post office Petersburg is fairly affluent, so it's about convenience some of the time. Online shopping through Amazon could take place of some shopping. You're eventually going to be in the position where people who are tighter on budgets either won't travel or save up and make fewer trips to Juneau or Anchorage and fly instead.

We're worried about federal employees with the U.S. Forest Service and the Coast Guard who use the ferry to bring their household goods.

We already see fewer mainline trips that come through here and those that do fill up faster. Fewer people are taking shopping trips to Juneau because the ferry is so infrequent, you need to stay for three to five nights.

I think some combination of a passenger-only ferry with a less-frequent vehicle ferry could work as long as the schedule was consistent. If I needed to take my vehicle on the ferry, either to buy it or get it repaired and I knew it was only once a month, I could probably live with that. With a more frequent passenger-only ferry, people could rent a car in Juneau, haul a bunch of stuff onto the ferry, and unload it at the dock in Petersburg. A once-a-month vehicle ferry would also work for medical visits. Vacation travel is a little different. People are also bringing their RV or another vehicle so a once-a-month vehicle ferry would hurt vacation travel. So, going south from Petersburg, we'd need vehicle ferries, but reducing vehicle ferries and adding more passenger-only service going north (to Juneau) would work.

If the number of departures were cut in half going south, you could fill the boats up more because people plan to take the southern route in advance. It might not work the same way going north.

### ***Ideas for Improving Fiscal Health***

For us, the ferry is our highway system. We focus on the costs of the ferry and how to make more money and improve efficiency when the real issue is that the folks up north have no use for it. How do you make AMHS useful to people in Anchorage or the Matanuska-Susitna Borough?

- Outsource the food, bars, onboard customer service, and housekeeping.
- Add and charge for ancillary services like cots, blankets, pillows, sleeping areas, wi-fi and movies.
- Charge more for out-of-state ridership.
- Examine the pay structure on the ferry
- Plan routes based on what makes sense, not on politics.
- Market the ferries to corporate groups for meetings. This would involve refurbishing ferries to accommodate business gatherings.
- Slot machines on ferries.
- None of us understand the closing of the bars. You make a fortune off that. If you can't make money selling booze to people, give it up!

### Historic Revenue and Traffic Volumes

Table 52 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with Petersburg as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). Petersburg is an origin/destination in the Mainline Route Group, connecting to ten ports. The routes between Petersburg and Bellingham and Juneau generate the most revenue. The routes between Petersburg and Wrangell and Ketchikan transport the most passengers.

**Table 52. Petersburg as the Origin or Destination—AMHS Volume and Revenue, 2009–2018**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Mainline Routes</b>										
<b>Travel to and from Wrangell</b>										
Sailings	360	386	384	382	374	349	351	311	250	222
Passengers	2,404	2,649	2,598	2,445	2,241	2,301	2,225	1,822	1,310	1,197
# on Car-deck	581	680	687	642	712	703	609	559	516	476
Vans	17	12	24	23	8	5	3	7	3	10
\$ (1,000s)	\$103	\$110	\$112	\$109	\$107	\$114	\$108	\$100	\$86	\$86
<b>Travel to and from Ketchikan</b>										
Sailings	362	386	385	382	379	349	351	313	254	234
Passengers	4,057	3,439	3,418	3,274	3,341	2,677	2,904	2,517	2,159	1,754
# on Car-deck	806	792	693	713	750	627	561	510	483	442
Vans	17	9	7	2	9	13	6	4	3	5
\$ (1,000s)	\$335	\$304	\$275	\$278	\$282	\$243	\$247	\$238	\$225	\$232
<b>Travel to and from Prince Rupert</b>										
Sailings	256	274	273	271	223	186	191	143	122	100
Passengers	969	896	881	744	770	710	616	554	625	465
# on Car-deck	328	338	300	277	280	315	249	275	401	286
Vans	80	74	58	90	77	90	53	64	45	31
\$ (1,000s)	\$229	\$221	\$196	\$195	\$186	\$201	\$169	\$179	\$210	\$171
<b>Travel to and from Bellingham</b>										
Sailings	100	101	101	102	102	99	102	101	91	92
Passengers	1,054	1,078	1,092	1,109	969	916	1,100	820	639	551
# on Car-deck	326	320	351	370	348	297	362	340	315	283
Vans	32	30	22	35	20	38	20	38	18	21
\$ (1,000s)	\$591	\$590	\$620	\$674	\$604	\$587	\$689	\$674	\$567	\$532
<b>Travel to and from Kake</b>										
Sailings	168	177	155	171	173	149	147	93	67	56
Passengers	512	587	477	653	589	589	330	171	291	126
# on Car-deck	140	147	140	223	176	201	90	63	65	64
Vans	23	6	2	0	0	9	0	2	0	0
\$ (1,000s)	\$28	\$28	\$27	\$37	\$32	\$42	\$18	\$15	\$17	\$14

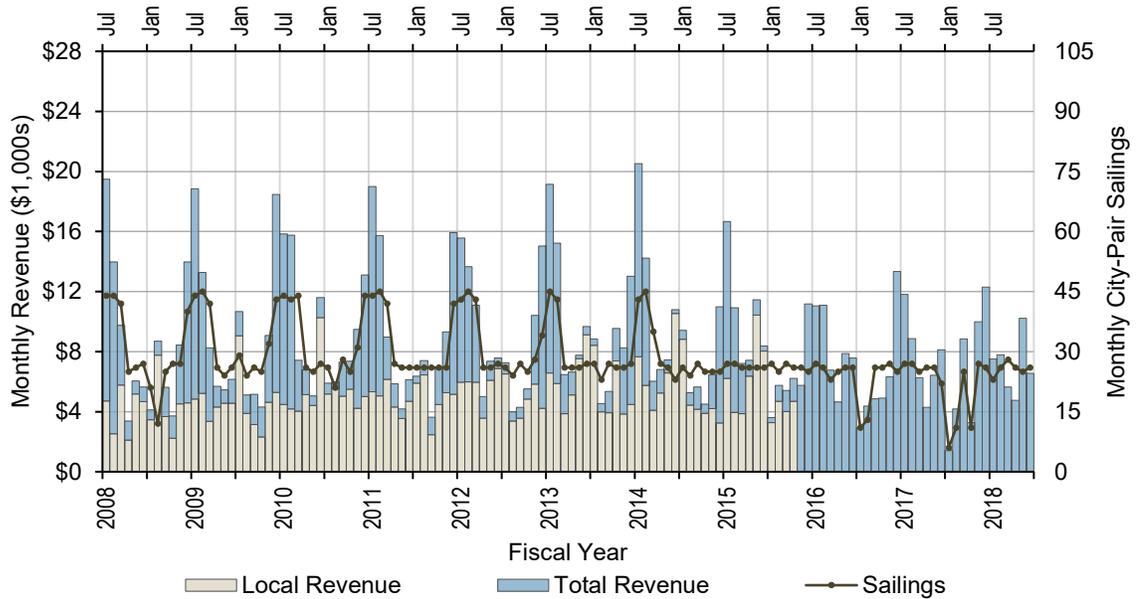
**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Sitka</b>										
Sailings	130	151	158	168	163	150	152	134	150	117
Passengers	1,378	1,624	1,210	1,404	1,392	982	1,136	955	828	557
# on Car-deck	434	427	346	394	363	271	306	278	302	195
Vans	6	3	7	5	13	1	0	1	1	0
\$ (1,000s)	\$122	\$119	\$99	\$116	\$105	\$80	\$91	\$91	\$105	\$88
<b>Travel to and from Hoonah</b>										
Sailings	53	50	34	41	57	57	33	43	4	2
Passengers	15	33	37	1	3	12	8	21	6	2
# on Car-deck	7	6	13	5	3	5	2	7	2	2
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$2	\$3	\$3	\$2	\$1	\$2	\$1	\$3	\$1	\$1
<b>Travel to and from Juneau</b>										
Sailings	401	445	450	420	409	376	374	331	268	242
Passengers	7,766	7,833	8,022	7,382	7,105	6,761	6,523	4,867	3,892	2,962
# on Car-deck	2,003	2,068	1,962	2,029	1,974	1,828	1,810	1,535	1,318	1,149
Vans	12	4	7	5	17	8	22	19	14	4
\$ (1,000s)	\$805	\$790	\$744	\$732	\$723	\$738	\$738	\$650	\$568	\$505
<b>Travel to and from Haines</b>										
Sailings	188	187	171	151	195	204	183	197	108	106
Passengers	473	455	552	349	494	449	437	453	439	334
# on Car-deck	161	212	190	141	152	147	158	167	151	161
Vans	3	2	3	0	1	2	0	0	0	4
\$ (1,000s)	\$92	\$109	\$110	\$74	\$92	\$85	\$100	\$104	\$96	\$99
<b>Travel to and from Skagway</b>										
Sailings	187	176	173	149	152	137	190	148	62	62
Passengers	305	241	181	151	162	170	214	249	164	165
# on Car-deck	55	42	45	38	25	48	49	31	65	62
Vans	2	0	0	0	0	0	2	0	0	0
\$ (1,000s)	\$49	\$39	\$36	\$29	\$26	\$33	\$40	\$34	\$38	\$41

Source: Northern Economics analysis using data from AMHS (2019)

Figure 63 and Figure 64 show monthly travel between Petersburg and Wrangell and Petersburg and Juneau, with revenues separated by local and non-local resident ticket purchases when data are available. Figure 63 shows monthly revenues and sailings for travel between Petersburg and Wrangell in either direction. Most revenue in the winter months (86 percent) is from local residents, while 67 percent of peak season revenue is from non-locals. Figure 64 shows monthly revenues and sailings for travel between Petersburg and Juneau—on average 74 percent of revenue is locally based.

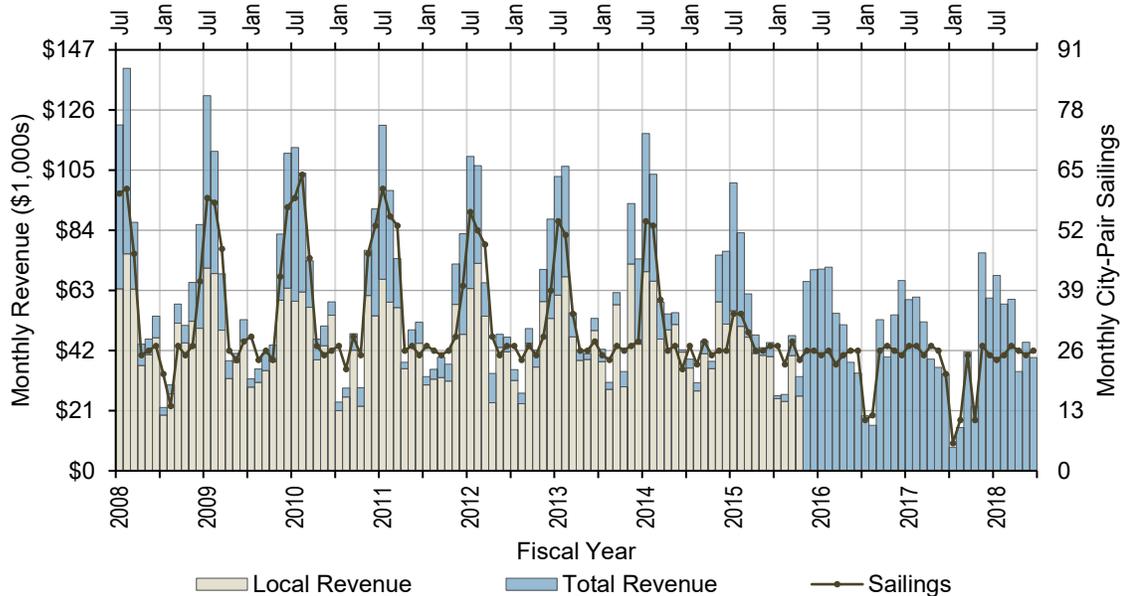
**Figure 63. Monthly Local Resident and Total Petersburg-Wrangell Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Figure 64. Monthly Local Resident and Total Petersburg-Juneau Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

### Land-based Facilities

The land-based AMHS facility in Petersburg is owned by the State of Alaska. Table 53 shows which currently operating AMHS vessels are capable of docking at the facility in Petersburg.

**Table 53. Vessels Capable of Docking at Petersburg Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Petersburg	X	X	X	X	X*	X	X	X*	

Notes:

X indicates the vessel is compatible with this terminal.

\* It is likely that the vessel is compatible with this terminal, but it has not been fully tested.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value for each facility was constructed by PND (2019).

#### **Petersburg Facility**

*Docking Orientation:* Side Berth

*Description:* This facility consists of a staging and parking area, terminal building, emergency generator facilities, covered walkways, eight steel mooring structures, two new dolphins, a 140ft bridge and a transit ramp. This facility can berth any boat in the fleet.

*Alternative Usage:* The Petersburg facility could likely be used as a small cruise ships terminal for vessels with lengths and parameters similar to the AMHS mainline ferries. Modifications would likely be required to the transfer bridge and float system (potentially requiring complete replacement) to meet freeboard, baggage and passenger door locations on vessels under consideration. The use of the terminal for offload of freight would likely require modifications to the float and transfer bridge system to match the freeboard/side shell height of barge or vessels being used. Offload equipment would need be limited to highway-legal design loads, further restricting the suitability of the terminal for freight transfer. The use of small passenger vessels would also require modifications to the transfer bridge/ramp system. Additional berthing and mooring structures would also likely be required, depending on the vessel dimensions under consideration.

Table 54 shows a range of estimated values for the Petersburg Facility including uplands and associated infrastructure but does not account for any potential modifications required for the facilities to be used by non-AMHS vessels.

**Table 54. Estimated Value of the Petersburg Facility**

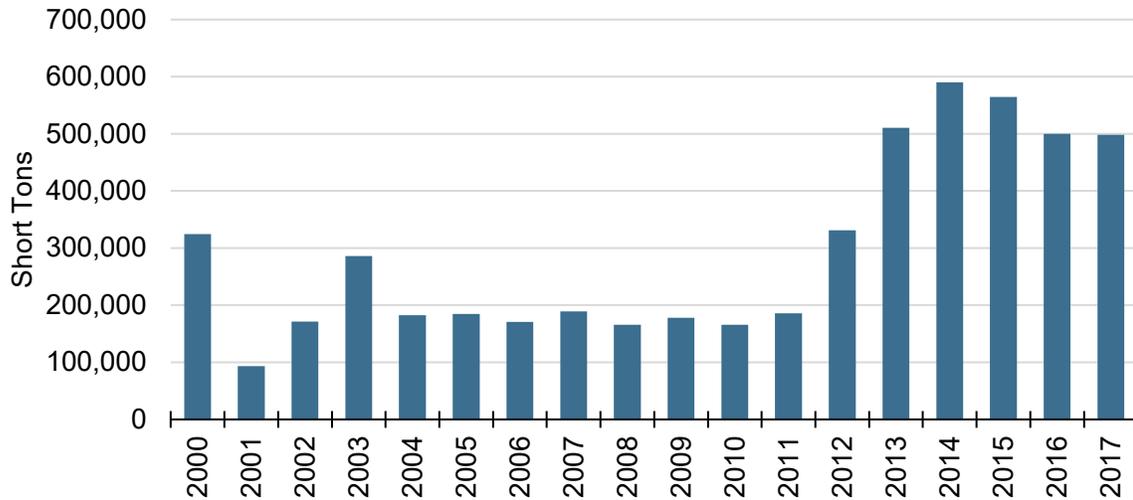
Estimate Range	-30%	Avg	+30%
Facility Value (\$)	7,410,000	10,590,000	13,760,000

Data Source: PND (2019)

### 2.10.3 Transportation Alternatives

Figure 65 shows marine freight data for Petersburg. A variety of commodities pass through Petersburg as marine freight, with fabricated metal products, fish (not shellfish), groceries, manufactured products, and waste/scrap as top commodities by volume over the years reported. After relatively low reported amounts in the early and mid-2000s, alcoholic beverages and cement/concrete have recently emerged as significant commodities by volume from 2012 through 2016.

**Figure 65. Petersburg Inbound and Outbound Annual Marine Freight, 2000–2017**



Data Source: USACE, 2019. USACE, 2018.

One carrier provides regularly scheduled passenger air service to Petersburg, and rates to hub airports are shown in Table 55.

**Table 55. Petersburg Flight Services and Rates for Single Adult Passenger, by Carrier**

Airline Carrier	One Way Destination	Summer Rate (\$)	Winter Rate (\$)
Alaska Airlines	Juneau	207	120

Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.

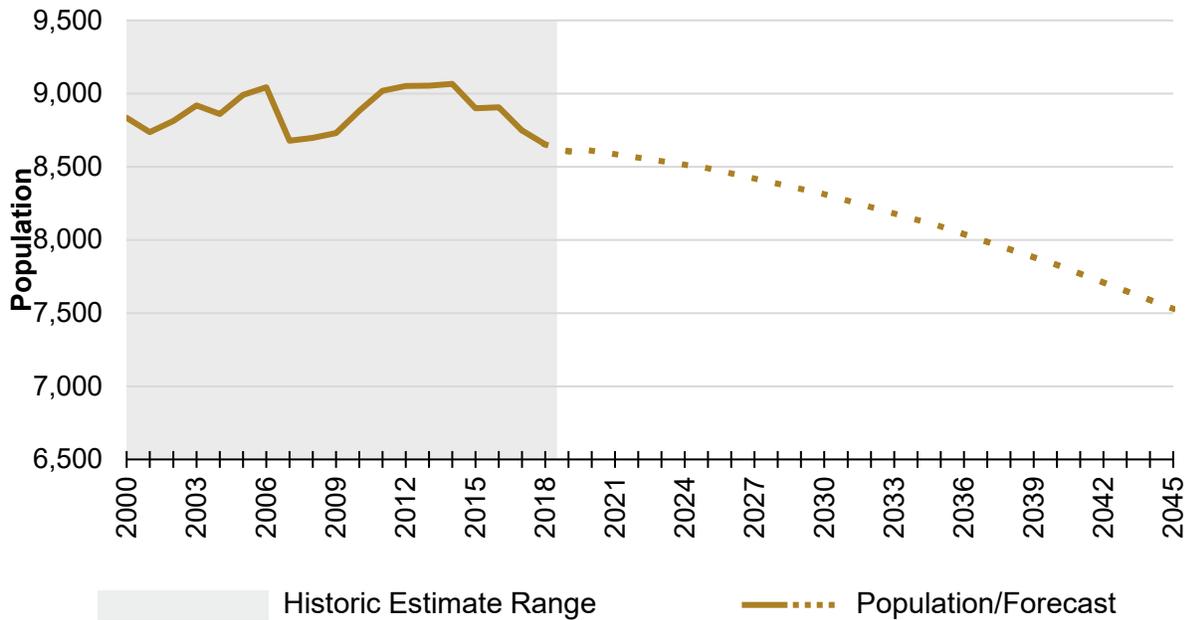
Data Source: Alaska Airlines, Inc., 2019.

## 2.11 Sitka Community Profile

### 2.11.1 Demographic Summary

Figure 66 shows the population of Sitka with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 8,652 permanent residents, but the population of Sitka is expected to decrease steadily over time.

**Figure 66. Sitka Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 56 shows student enrollment in all Sitka schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

**Table 56. Sitka All Schools Enrollment by Grade, 2016–2017 School Year**

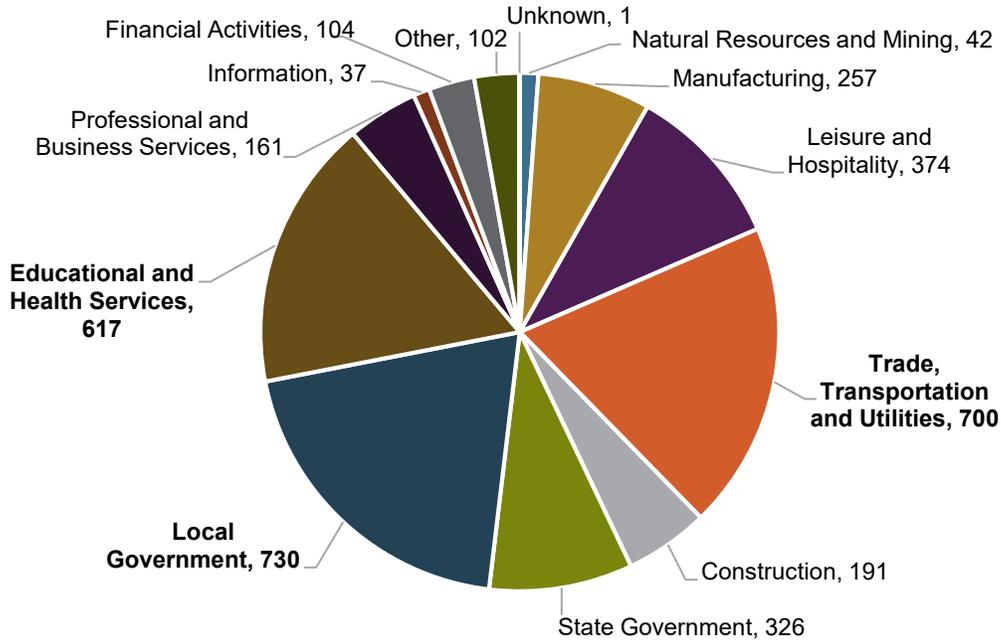
Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	87	99	102	104	109	102	81	87	90	209	191	219	188	36
Total	684							177		807				36

Data Source: USDE, 2016.

Figure 67 shows the number of workers in various industries for Sitka, and the top three industries are shown in bold. Seafood processors located in Sitka, including Silver Bay Seafoods and North Pacific Seafoods, process all Pacific salmon species and other species caught in the Southeast region. North

Pacific Seafoods’ Sitka plant, also known as Sitka Sound Seafoods, operates from March through October and employs up to 200 people during peak season (North Pacific Seafoods, 2019).

**Figure 67. Sitka Resident Employment by Industry, 2016**



Data Source: ALARI, 2019

### 2.11.2 AMHS Summary

#### Community Leader Perspectives

Sitka City Administrator Keith Brady provided information via survey and Mayor Gary Paxton via interview on how AMHS is used by individuals and businesses within the community. Their responses are summarized below.

#### *How Residents Use the Ferry*

Since the early 1960s the coastal communities have developed and existed with the commitment from the state to provide connections to other communities and access to the road system. People and businesses use the ferry to move around Southeast Alaska to see family, visit areas and transport goods and vehicles. The communities of Southeast Alaska are all very interconnected because of this commitment to provide transportation. Reductions in ferry service as planned by the governor will have a huge negative impact on communities.

#### *Commercial Uses*

In Sitka they have developed a significant infrastructure for medical service through SEARHC. Residents of Southeast Alaska come to Sitka for medical care if they can’t get it in their smaller communities. This health care infrastructure depends on AMHS service.

### Transportation Options

There are other ways to transport goods and people in Southeast: Barges for goods and airplanes for people. A public-private partnership could work with the right partners. The business needs to make money and the government can help subsidize the partnership with an agreement in place.

### Minimum Level of Service

Twice every other week would work, for example, a Friday and a Sunday departure to Juneau. If Juneau is the hub, we could get rides to other places from Juneau. More people would ride the ferry if there was regularity.

### Ideas for Improving Fiscal Health

- Do not sell the fast ferries. A trip from Juneau to Sitka is about 8-10 hours on a regular ferry. A fast ferry makes it in 4-5 hours. That's a big difference. Especially if one is making a weekend trip to Juneau.
- Unions appear to be over the top in their demands.

### Historic Revenue and Traffic Volumes

Table 57 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with Sitka as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). Sitka is an origin/destination in the Southeast Feeder, Lynn Canal, and Mainline Route Groups, connecting to twelve ports. The route between Sitka and Juneau generates the most revenue and transports the most passengers.

**Table 57. Sitka as the Origin or Destination—AMHS Volume and Revenue, 2009–2018**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>SE Village Routes</b>										
<b>Travel to and from Tenakee Springs</b>										
Sailings	18	0	0	0	0	0	0	4	13	0
Passengers	14	0	0	0	0	0	0	7	43	0
# on Car-deck	1	0	0	0	0	0	0	0	3	0
Vans	0	0	0	0	0	0	0	0	0	0
\$(1,000s)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2	\$0
<b>Travel to and from Hoonah</b>										
Sailings	51	38	33	39	54	55	33	39	27	9
Passengers	138	118	236	257	367	384	130	141	149	86
# on Car-deck	38	37	68	65	112	109	54	63	57	30
Vans	0	0	0	0	2	0	1	0	1	0
\$(1,000s)	\$8	\$7	\$15	\$14	\$22	\$23	\$9	\$13	\$14	\$9

**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Angoon</b>										
Sailings	34	0	1	19	46	35	36	32	19	2
Passengers	270	0	11	503	1,526	1,024	1,016	541	98	30
# on Car-deck	42	0	2	111	289	223	187	96	13	5
Vans	1	0	0	1	2	0	1	3	0	0
\$ (1,000s)	\$9	\$0	\$0	\$12	\$35	\$27	\$25	\$14	\$4	\$2
<b>Lynn Canal Routes</b>										
<b>Travel to and from Juneau</b>										
Sailings	396	398	425	367	412	349	313	285	180	133
Passengers	25,281	25,488	26,731	24,214	26,286	23,154	19,427	15,899	8,319	6,506
# on Car-deck	6,779	7,018	7,172	6,674	7,247	6,481	5,329	4,822	3,200	2,567
Vans	159	132	168	151	119	99	80	67	50	63
\$ (1,000s)	\$1,373	\$1,416	\$1,492	\$1,366	\$1,469	\$1,430	\$1,298	\$1,267	\$963	\$928
<b>Travel to and from Haines</b>										
Sailings	52	58	53	54	74	83	78	75	69	64
Passengers	466	599	377	353	739	536	594	639	482	521
# on Car-deck	159	179	136	133	255	243	251	236	283	291
Vans	9	5	4	14	49	59	50	43	46	37
\$ (1,000s)	\$68	\$74	\$57	\$60	\$109	\$107	\$111	\$124	\$140	\$152
<b>Travel to and from Skagway</b>										
Sailings	52	53	55	53	53	50	73	59	33	35
Passengers	320	349	364	482	485	500	619	380	161	177
# on Car-deck	164	148	177	235	210	216	274	188	79	55
Vans	0	2	0	1	0	0	0	0	0	0
\$ (1,000s)	\$40	\$37	\$39	\$46	\$48	\$49	\$50	\$37	\$40	\$37
<b>Mainline Routes</b>										
<b>Travel to and from Kake</b>										
Sailings	67	84	79	95	91	81	85	55	56	30
Passengers	493	624	664	746	615	641	602	330	373	204
# on Car-deck	121	119	136	150	94	143	144	62	62	54
Vans	4	4	1	5	0	0	0	1	0	0
\$ (1,000s)	\$29	\$36	\$38	\$43	\$30	\$35	\$33	\$21	\$28	\$26
<b>Travel to and from Petersburg</b>										
Sailings	130	151	158	168	163	150	152	134	150	117
Passengers	1,378	1,624	1,210	1,404	1,392	982	1,136	955	828	557
# on Car-deck	434	427	346	394	363	271	306	278	302	195
Vans	6	3	7	5	13	1	0	1	1	0
\$ (1,000s)	\$122	\$119	\$99	\$116	\$105	\$80	\$91	\$91	\$105	\$88

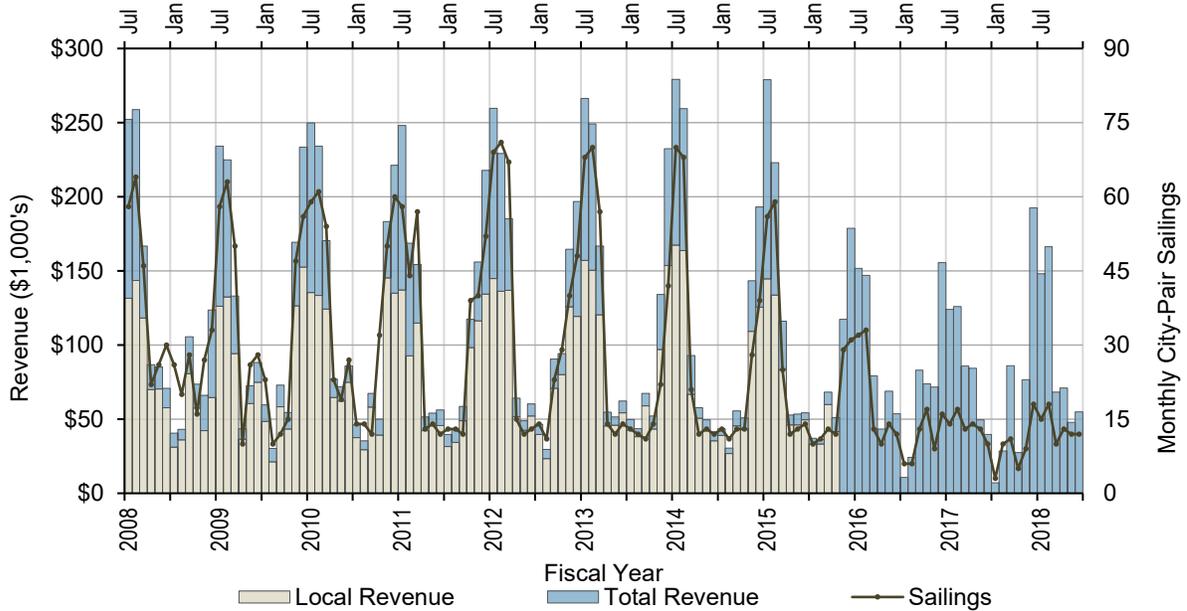
**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Wrangell</b>										
Sailings	130	151	158	168	161	150	152	126	111	111
Passengers	695	636	541	597	831	632	618	655	458	323
# on Car-deck	137	192	168	143	269	196	180	140	98	131
Vans	1	2	2	5	0	1	0	2	0	0
\$ (1,000s)	\$63	\$70	\$65	\$65	\$100	\$79	\$80	\$70	\$56	\$60
<b>Travel to and from Ketchikan</b>										
Sailings	130	151	158	168	164	150	152	133	164	141
Passengers	2,044	1,879	1,825	1,810	1,617	1,466	1,444	1,271	968	914
# on Car-deck	533	582	466	429	477	485	437	341	280	239
Vans	9	5	9	4	1	8	3	2	1	0
\$ (1,000s)	\$311	\$291	\$283	\$258	\$261	\$264	\$240	\$197	\$173	\$192
<b>Travel to and from Prince Rupert</b>										
Sailings	78	97	103	114	103	84	88	73	74	57
Passengers	637	800	741	636	700	475	552	359	523	364
# on Car-deck	247	360	320	284	297	218	240	203	369	275
Vans	4	0	0	1	0	0	0	1	0	0
\$ (1,000s)	\$173	\$227	\$209	\$177	\$192	\$135	\$160	\$128	\$192	\$153
<b>Travel to and from Bellingham</b>										
Sailings	49	47	50	52	50	50	51	55	93	93
Passengers	611	567	683	757	865	684	726	553	779	729
# on Car-deck	279	270	275	316	381	271	322	356	600	589
Vans	3	4	2	1	4	7	0	1	0	1
\$ (1,000s)	\$470	\$427	\$477	\$533	\$636	\$499	\$564	\$601	\$1,014	\$966

Source: Northern Economics analysis using data from AMHS (2019)

Figure 68 and Figure 69 show monthly travel for Sitka-Juneau and Sitka-Kake with revenues separated by local and non-local resident ticket purchases when data are available. Figure 68 shows monthly revenues and sailings for travel between Sitka and Juneau in either direction. The vast majority of revenue in the winter months (84 percent) is from local residents, while 42 percent of peak season revenue is from non-locals. Figure 69 shows monthly revenues and sailings for travel between Sitka and Kake—on average 84 percent of revenue is locally based.

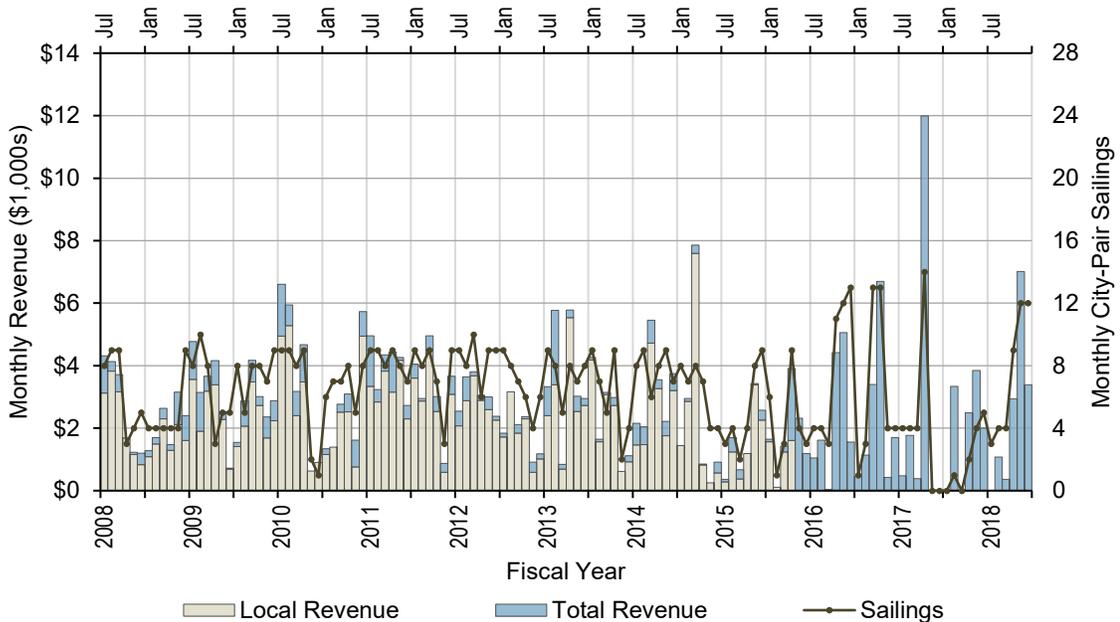
**Figure 68. Monthly Local Resident and Total Sitka-Juneau Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Figure 69. Monthly Local Resident and Total Kake-Sitka Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Land-based Facilities**

The land-based AMHS facility in Sitka is owned by the State of Alaska. Table 58 shows which currently operating AMHS vessels are capable of docking at the facility in Sitka.

**Table 58. Vessels Capable of Docking at Sitka Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Sitka	X	X	X	X	X*	X	X	X*	

Notes:

X indicates the vessel is compatible with this terminal.

\* It is likely that the vessel is compatible with this terminal, but it has not been fully tested.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value for each facility was constructed by PND (2019).

**Sitka Facility**

*Docking Orientation:* Side Berth

*Description:* This facility consists of staging and parking areas, a terminal building, emergency generator facilities, transfer bridge, covered walkways, and five steel mooring structures connected by catwalks. This facility accommodates almost all the ferries. AMHS owns seven-twelfths and the City of Sitka owns five-twelfths of this facility.

*Alternative Usage:* The Sitka facility could likely be used as a small cruise ships terminal for vessels with lengths and parameters similar to the AMHS mainline ferries. Modifications would likely be required to the transfer bridge and float system (potentially requiring complete replacement) to meet freeboard, baggage and passenger door locations on vessels under consideration. However, the adjacent concrete docks provide greater flexibility in potential use. The use of the terminal for offload of freight would likely require significant modifications to the float and transfer bridge system to match the freeboard/side shell height of barge or vessels being used. Offload equipment would need be limited to highway-legal design loads, further restricting the suitability of the terminal for freight transfer. The use of small passenger vessels would also require modifications to the transfer bridge/ramp system. Additional berthing and mooring structures would also likely be required, depending on the vessel dimensions under consideration.

Table 59 shows a range of estimated values for the Sitka Facility including uplands and associated infrastructure but does not account for any potential modifications required for the facilities to be used by non-AMHS vessels.

**Table 59. Estimated Value of the Sitka Facility**

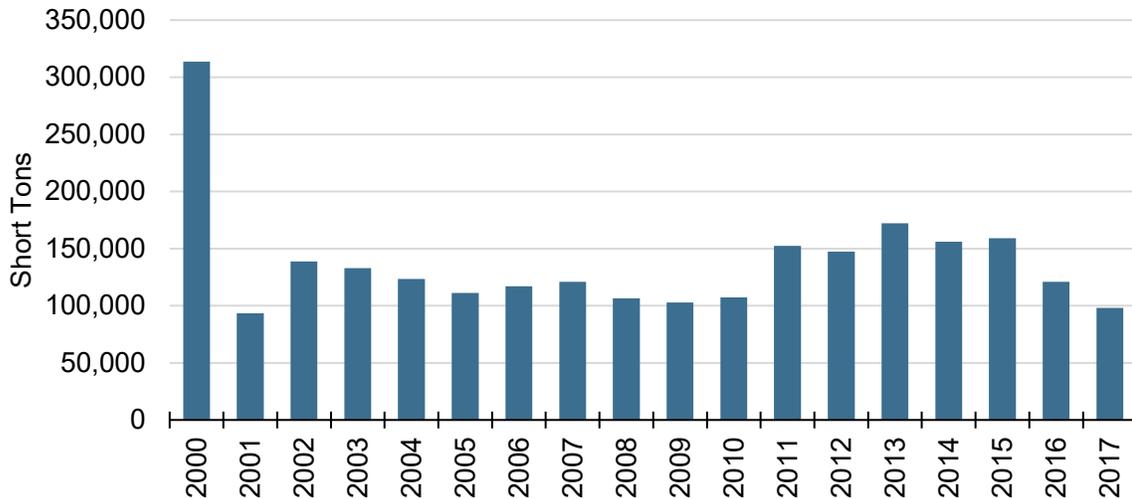
Estimate Range	-30%	Avg	+30%
Facility Value (\$)	5,010,000	7,160,000	9,310,000

Data Source: PND (2019)

### 2.11.3 Transportation Alternatives

Figure 70 shows marine freight data for Sitka. A variety of commodities pass through Sitka, with distillate fuel oil, fish (not shellfish), gasoline, groceries, and manufactured products as top commodities by volume. The high reported volume in 2000 was driven by the reported volume of cement/concrete, which comprised just over 72 percent of Sitka’s total reported marine freight that year.

**Figure 70. Sitka Inbound and Outbound Annual Marine Freight, 2000–2017**



Data Source: USACE, 2019. USACE, 2018.

Four carriers provide regularly scheduled passenger air service to Sitka, and rates to hub airports are shown in Table 60. The Delta Air Lines flight to Seattle operates seasonally. There are at least six companies providing water taxi services in Sitka. Most specialize in guided services like wildlife viewing tours or fishing charters, and also provide passenger transportation to remote locations. Two of the companies operate landing craft but only one advertised freight transportation service. The largest operator in Sitka is Allen Marine which operates a 100-passenger catamaran along with several other vessels. The company offers a variety of tour packages, with fleets in Ketchikan and Juneau as well.

**Table 60. Sitka Flight Services and Rates for Single Adult Passenger, by Carrier**

Airline Carrier	One Way Destination	Summer Rate (\$)	Winter Rate (\$)
Alaska Seaplanes	Juneau	174	174
Harris Air	Juneau	158	Not reported
Alaska Airlines	Juneau	99	99
Alaska Airlines	Seattle	114	213
Delta Connection operated by SkyWest Airlines	Seattle	114	No Service

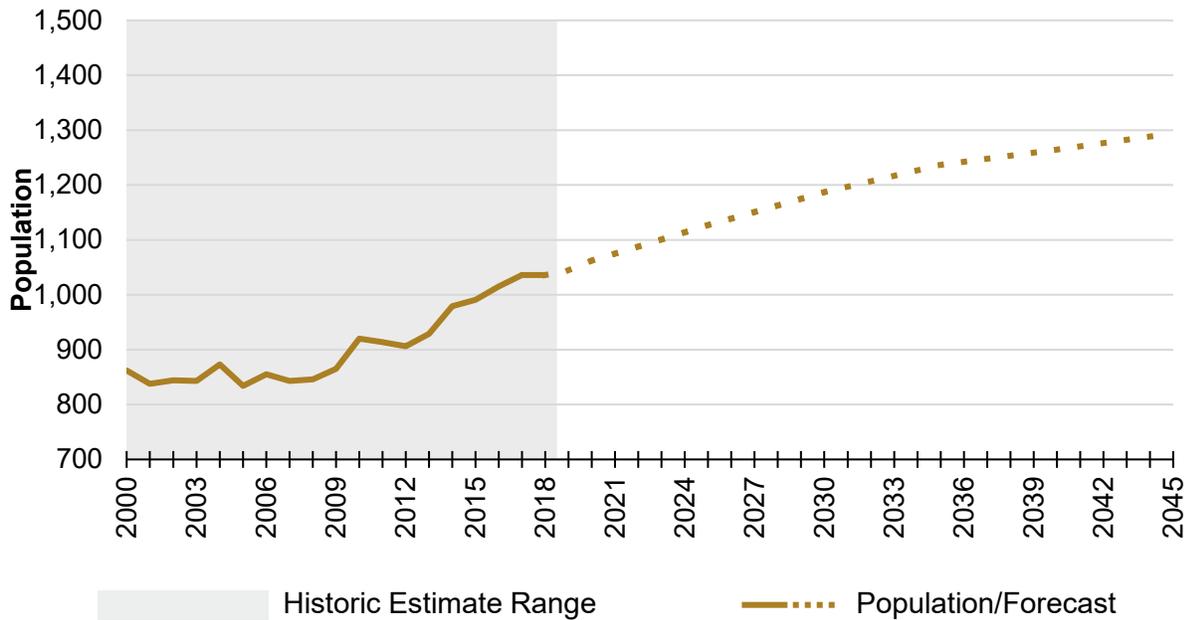
Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites. Data Source: Alaska Seaplanes, 2019. Harris Aircraft Services, 2019. Alaska Airlines, Inc., 2019. Delta Air Lines, 2019.

## 2.12 Skagway Community Profile

### 2.12.1 Demographic Summary

Figure 71 shows the population of Skagway with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 1,036 permanent residents, and the population of Skagway is expected to increase steadily over time.

**Figure 71. Skagway Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 61 shows student enrollment in all Skagway schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

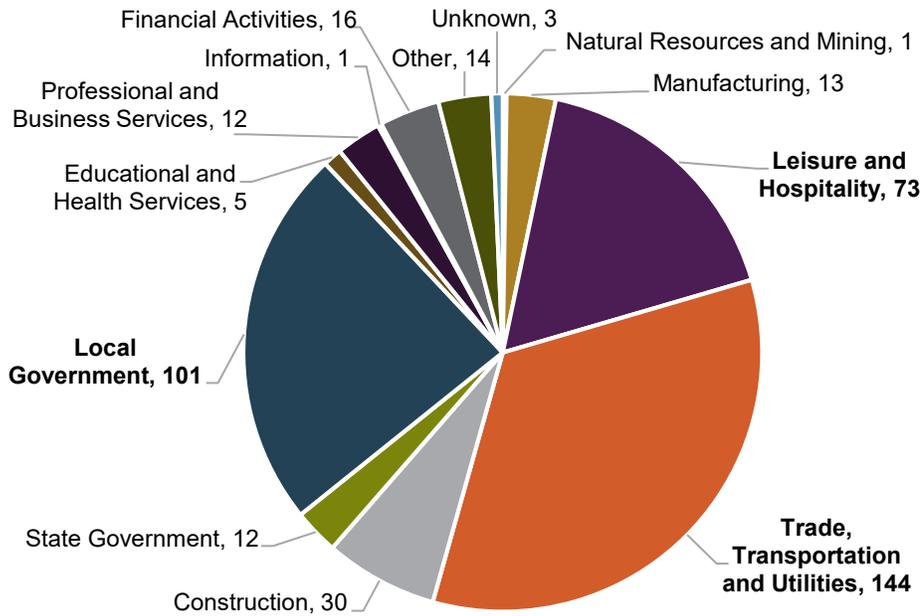
**Table 61. Skagway All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	13	10	13	13	8	10	10	5	7	6	5	7	11	28
Total	77							12		29			28	

Data Source: USDE, 2016.

Figure 69 shows the number of workers in various industries for Skagway, and the top three industries are shown in bold.

**Figure 72. Skagway Resident Employment by Industry, 2016**



Data Source: ALARI, 2019

## 2.12.2 AMHS Summary

### **Community Leader Perspectives**

Mayor Andrew Cremata of Skagway provided information via survey and interview on how AMHS is used by individuals and businesses within the community. His responses are summarized below.

#### ***How Residents Use the Ferry***

Residents use the ferry to go to the doctor (Skagway does not have a doctor or a pharmacy); get to Juneau (planes often do not fly); ship vehicles, materials, and food for personal use and business use; to take students to extracurricular activities; to take vacations; and for emergencies. The ferry is not a luxury for Skagway. It is essential. Without ferry service, residents will die. This is not sensationalist and is well-documented.

#### ***Commercial Uses***

The largest commercial users are likely the independent tour operators because they use the ferry to bring buses to and from Skagway for repairs and maintenance.

#### ***Transportation Options***

There are only two options for local travel. There is the road going north, but it goes into Canada so is not useful for going to the doctor because you're in a different country. Whitehorse, in Canada's Yukon

Territory, is two hours away by road, but the road is closed from 11 pm to 8 am every day and is frequently closed in the winter due to avalanches. Also, if you don't have a passport, it's not a viable option. You also need to own a vehicle and be able to afford a trip up to Whitehorse. Going for the day is unreasonable since you have to stay overnight in a hotel.

The best option is the ferry since flying is frequently limited by the weather. We get into September, October, and November and flying is a roll of the dice. We only have one air provider and they cannot fly by instruments, which means we often cannot fly. During those times, there are no alternatives to the ferry.

If you're on the ferry without a vehicle, it's about half the price to take the ferry versus flying. If you own a vehicle, and you need to go to the grocery store in Juneau, you bring it. Unless you have just a single appointment and not buying lots of groceries, you need to bring your car. The grocery store here is pretty limited, expensive, and runs out of items often. There is no place to shop for clothes.

The only shipping options are through Alaska Marine Lines and the ferry.

### ***Minimum Level of Service***

4 days a week

### ***Tolerance for a 10 Percent Fare Increase or Reduction in Service***

With a 10 percent fare increase, ridership would not be noticeably affected. People would still pay to go to a doctor's appointment or even go on vacation. You're not going to cancel your ferry trip over a 10 percent increase.

### ***Effects of Reduced Service***

There's no way to adapt if there's no alternative. I suppose if there was an emergency and road were open, you could seek emergency care in Whitehorse, but I don't think that's a realistic option.

People in Skagway have the following concerns about reduced service: that they would be pretty much stuck here without access to emergency care; getting prescriptions, getting their cars worked on since there are no mechanics (e.g. there is a recall and you need to take it to the dealer); buying clothes for the kids; and catching flights out of Juneau. You're just not going anywhere. If your mother dies or family member gets in car accident, you're just stuck.

If the number of departures were cut in half, would the overall level of use of AMHS be affected? A lot of the ferries are full. We're pretty loaded up. The LeConte is full, even in the winter. Fewer boats will just mean fewer people will be able to get from point A to point B. The small villages will have the most problems with service reductions because they don't have the resources to take care of themselves.

### ***Ideas for Improving Fiscal Health***

- Reopen the bar and create an adults-only space
- Attract more riders with improvements to comfort (provide baggage handling assistance, show more movies or shows, create quiet spaces, and add more power outlets) and charge for the use of those extra amenities and services
- Create an affordable paid area for people who just want to use sleeping bags,
- Improve the marketing

- The state has excess land at the ferry terminal in Skagway and could sell some of the waterfront area to the municipality. We're trying to figure out who to talk to at the state about acquiring some of that land.
- Skagway is looking at the possibility of its own ferry authority.

### Historic Revenue and Traffic Volumes

Table 62 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with Skagway as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). Skagway is an origin/destination in the Lynn Canal and Mainline Route Groups, connecting to nine ports. The route between Skagway and Juneau generates the most revenue and transports the most passengers.

**Table 62. Skagway as the Origin or Destination—AMHS Volume and Revenue, 2009–2018**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Lynn Canal Routes</b>										
<b>Travel to and from Haines</b>										
Sailings	506	541	581	605	571	508	524	490	490	551
Passengers	13,700	14,104	13,774	13,863	15,523	14,730	16,781	13,683	13,581	16,086
# on Car-deck	5,847	6,217	6,059	6,108	6,566	6,341	6,848	6,099	6,510	7,505
Vans	121	60	75	99	44	19	57	15	7	1
\$ (1,000s)	\$687	\$742	\$751	\$736	\$781	\$770	\$871	\$762	\$805	\$972
<b>Travel to and from Juneau</b>										
Sailings	611	586	612	616	574	514	548	523	501	497
Passengers	28,916	26,239	24,225	25,260	25,410	23,329	23,432	22,464	23,597	23,069
# on Car-deck	6,899	6,415	5,821	6,254	6,453	5,739	5,674	5,702	6,282	6,011
Vans	130	102	61	126	157	92	145	110	95	148
\$ (1,000s)	\$1,898	\$1,776	\$1,675	\$1,734	\$1,760	\$1,666	\$1,748	\$1,855	\$1,987	\$2,066
<b>Mainline Routes</b>										
<b>Travel to and from Sitka</b>										
Sailings	52	53	55	53	53	50	73	59	33	35
Passengers	320	349	364	482	485	500	619	380	161	177
# on Car-deck	164	148	177	235	210	216	274	188	79	55
Vans	0	2	0	1	0	0	0	0	0	0
\$ (1,000s)	\$40	\$37	\$39	\$46	\$48	\$49	\$50	\$37	\$40	\$37
<b>Travel to and from Kake</b>										
Sailings	43	26	15	8	9	13	30	19	3	2
Passengers	21	10	0	0	0	5	19	4	5	2
# on Car-deck	1	2	0	0	0	0	0	2	1	2
Vans	2	1	0	0	0	0	0	0	0	0
\$ (1,000s)	\$2	\$1	\$0	\$0	\$0	\$0	\$1	\$1	\$1	\$1

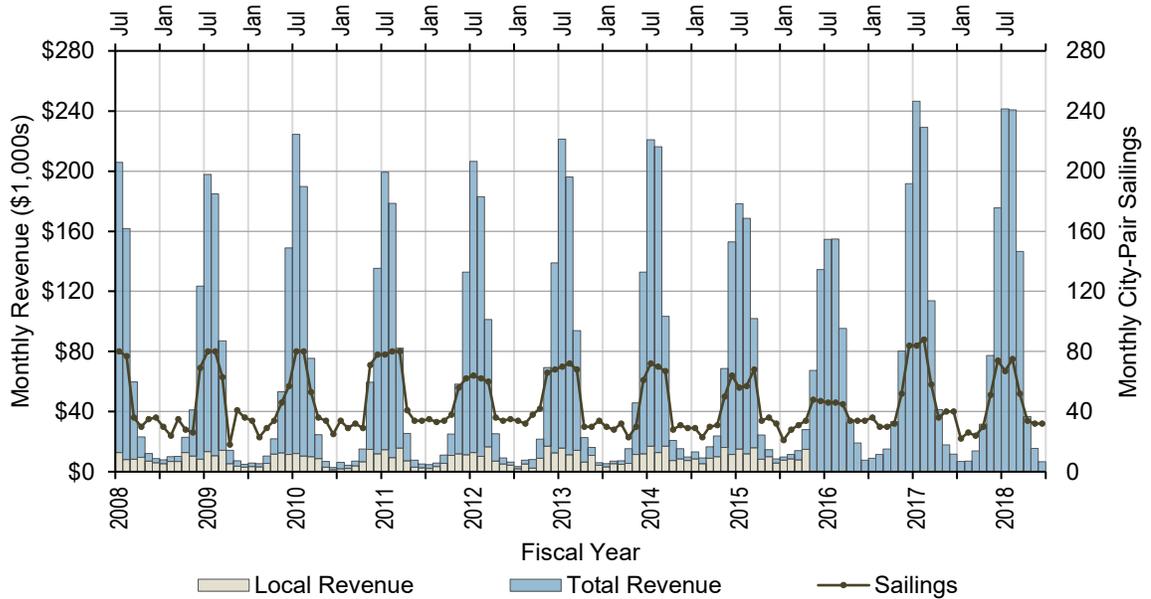
**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Petersburg</b>										
Sailings	187	176	173	149	152	137	190	148	62	62
Passengers	305	241	181	151	162	170	214	249	164	165
# on Car-deck	55	42	45	38	25	48	49	31	65	62
Vans	2	0	0	0	0	0	2	0	0	0
\$ (1,000s)	\$49	\$39	\$36	\$29	\$26	\$33	\$40	\$34	\$38	\$41
<b>Travel to and from Wrangell</b>										
Sailings	186	176	173	149	150	137	191	145	37	42
Passengers	189	129	166	136	160	152	254	188	79	128
# on Car-deck	30	9	28	15	16	19	27	23	26	29
Vans	0	1	2	0	0	0	0	0	0	0
\$ (1,000s)	\$36	\$24	\$36	\$26	\$30	\$30	\$34	\$37	\$22	\$31
<b>Travel to and from Ketchikan</b>										
Sailings	188	177	174	149	152	138	191	152	81	123
Passengers	607	569	552	466	439	561	640	542	347	383
# on Car-deck	96	90	121	87	96	103	80	79	58	76
Vans	0	0	0	0	1	1	10	0	0	0
\$ (1,000s)	\$136	\$125	\$122	\$105	\$128	\$141	\$131	\$130	\$89	\$110
<b>Travel to and from Prince Rupert</b>										
Sailings	82	73	64	47	49	39	65	53	47	50
Passengers	1,540	1,348	1,661	1,498	1,500	1,186	1,282	1,166	1,107	1,104
# on Car-deck	377	413	350	317	347	282	286	259	298	292
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$521	\$509	\$578	\$509	\$529	\$421	\$466	\$434	\$465	\$474
<b>Travel to and from Bellingham</b>										
Sailings	101	100	102	100	100	92	102	97	83	88
Passengers	2,049	1,933	1,899	2,286	2,200	2,175	2,169	1,566	1,190	1,331
# on Car-deck	497	505	575	679	586	563	678	484	324	340
Vans	0	2	2	0	0	0	0	0	0	0
\$ (1,000s)	\$1,455	\$1,397	\$1,441	\$1,728	\$1,607	\$1,606	\$1,733	\$1,375	\$1,115	\$1,281

Source: Northern Economics analysis using data from AMHS (2019)

Figure 73 through Figure 75 show monthly revenues and sailings for travel selected city-pairs involving Skagway, with revenues separated by local and non-local resident ticket purchasers when data are available. Figure 73 shows monthly revenue between Skagway and Haines. Most revenue (60 percent) in the winter months is from local residents, while most of the peak summer season revenue (93 percent) is from non-locals. Figure 74 shows monthly revenue between Skagway and Juneau. Most revenue (70 percent) in the winter months is from local residents, while most of the peak summer season revenue (64 percent) is from non-locals.

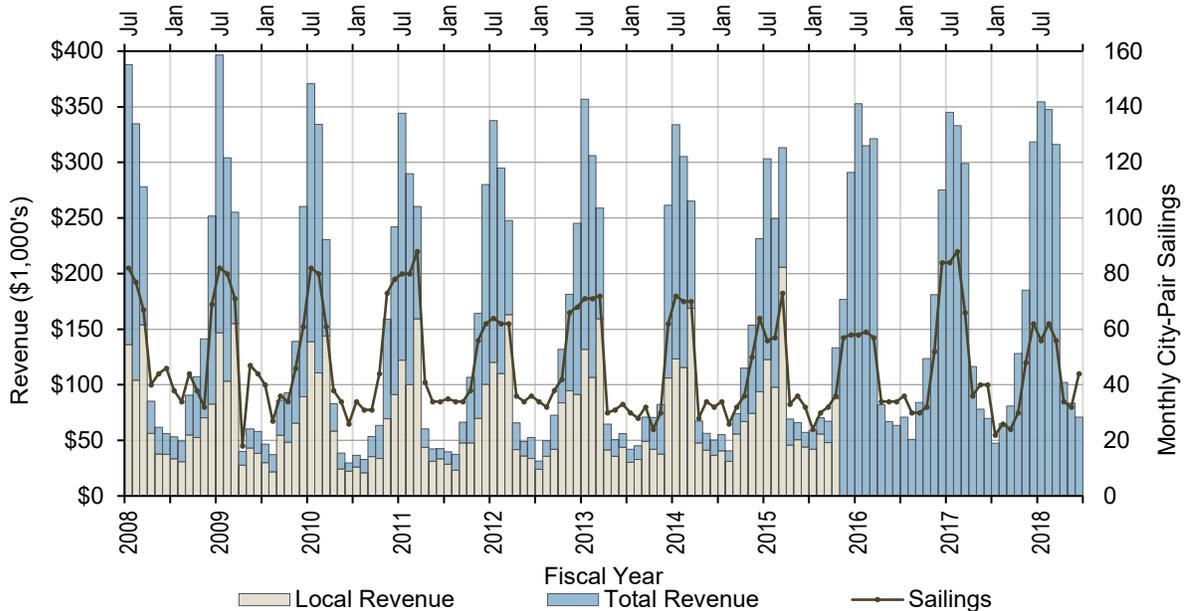
**Figure 73. Monthly Local Resident and Total Skagway-Haines Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Figure 74. Monthly Local Resident and Total Skagway-Juneau Revenues and Sailings, by Fiscal Year**

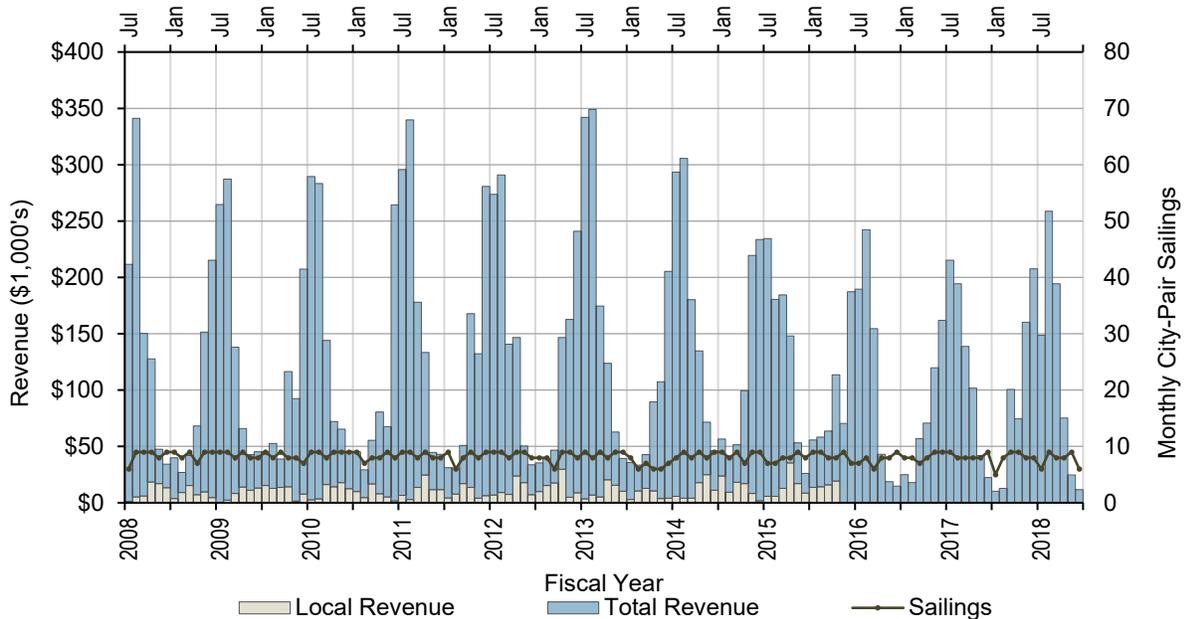


Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

Figure 75 shows monthly revenue between Skagway and Bellingham. The vast majority (92 percent) of revenue over all months is from non-locals. In winter months local revenues comprise 29 percent of the total.

**Figure 75. Monthly Local Resident and Total Skagway-Bellingham Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Land-based Facilities**

The land-based AMHS facility in Skagway is non-state owned. Table 63 shows which currently operating AMHS vessels are capable of docking at the facilities in Skagway

**Table 63. Vessels Capable of Docking at Skagway Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Skagway	X	X	X	X	X*	X	X	X*	

Notes:

X indicates the vessel is compatible with this terminal.

\* It is likely that the vessel is compatible with this terminal, but it has not been fully tested.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value of the facility was constructed by PND (2019).

**Skagway Facility**

*Docking Orientation:* Side Berth

*Description:* This facility consists of a floating side berth, terminal building, staging and parking areas, three mooring dolphins, concrete mooring float, and separate vehicle and passenger transfer bridges. This facility is the northernmost terminal on the Southeast AMHS route. Ownership of the facility is shared between the State and the City with 7/12's and 5/12's ownership, respectively.

*Alternative Usage:* The floating dock structure at the Skagway terminal offers increased flexibility for alternative uses. The facility could likely be used as a small cruise ships terminal for vessels with lengths and parameters similar to the AMHS mainline ferries. The freeboard height of the floating dock (approximately 5-ft) could complicate berthing and service for smaller passenger vessels. Barge or landing craft transfer of freight is a potential use for the facility; however, the ability of the transfer bridge system to accommodate heavy offload equipment is not known.

Table 20 shows a range of estimated values for the Skagway Facility including uplands and associated infrastructure but does not account for any potential modifications required for the facilities to be used by non-AMHS vessels.

**Table 64. Estimated Value of the Skagway Facility**

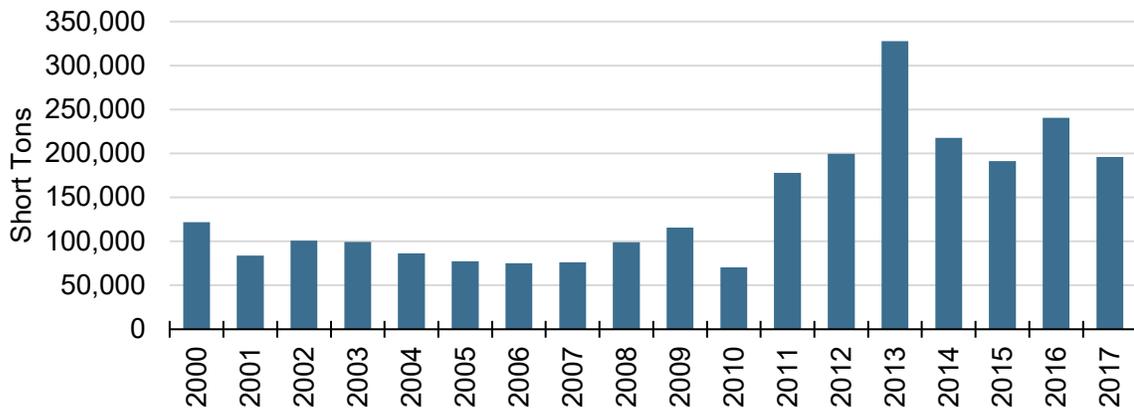
Estimate Range	-30%	Avg	+30%
Facility Value (\$)	10,260,000	14,650,000	19,040,000

Data Source: PND (2019)

**2.12.3 Transportation Alternatives**

Figure 76 shows marine freight data for Skagway. A variety of commodities pass through Skagway, with distillate fuel oil and gasoline as top commodities by volume over this entire time period. Reported volumes of alcoholic beverages, cement/concrete, copper ore, food products, groceries, machinery, and manufactured products increased to become top commodities around 2011 or 2012 and have continued to be reported in high volumes since then. Naphtha & Solvents was a top commodity from about 2004–2010 but was not reported or was reported in very small volumes outside those years.

**Figure 76. Skagway Inbound and Outbound Annual Marine Freight, 2000–2017**



Data Source: USACE, 2019. USACE, 2018.

One carrier provides regularly scheduled passenger air service to Skagway, and rates to hub airports are shown in Table 65. The flight route to Haines only operates in the winter.

**Table 65. Skagway Flight Services and Rates for Single Adult Passenger, by Carrier**

<b>Airline Carrier</b>	<b>One Way Destination</b>	<b>Summer Rate (\$)</b>	<b>Winter Rate (\$)</b>
Alaska Seaplanes	Juneau	144	144
Alaska Seaplanes	Haines	No Service	95

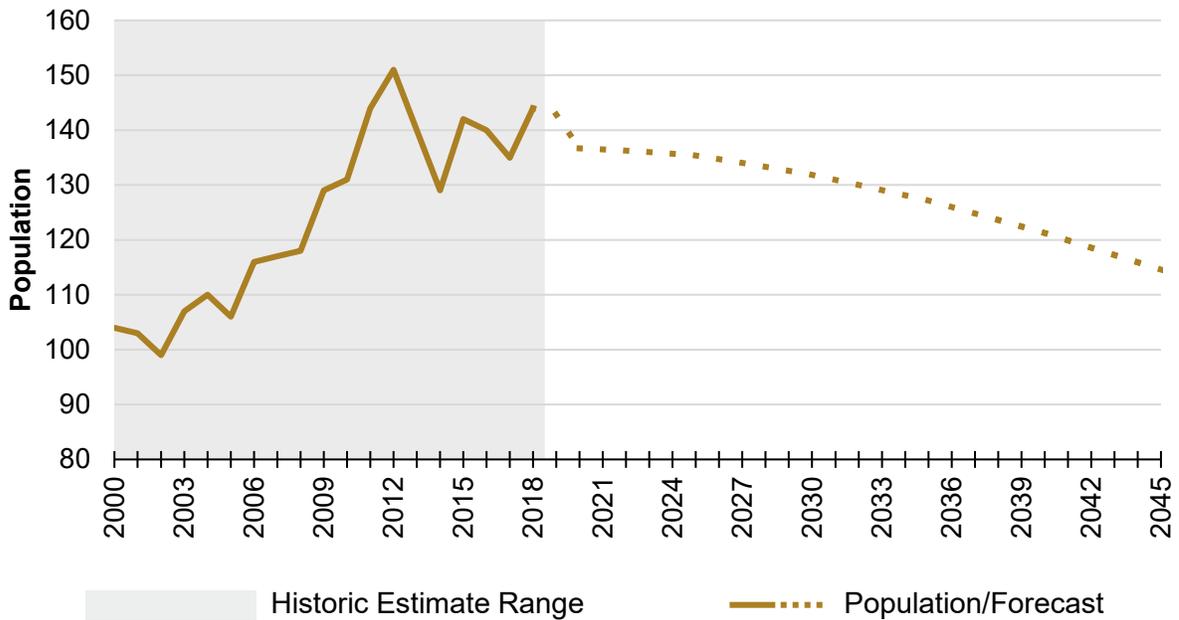
Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.  
Data Source: Alaska Seaplanes, 2019.

## 2.13 Tenakee Springs Community Profile

### 2.13.1 Demographic Summary

Figure 77 shows the population of Tenakee Springs with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 144 permanent residents, but the population of Tenakee Springs is expected to decrease steadily over time.

**Figure 77. Tenakee Springs Historic Estimates and Population Forecast, 2000–2045**



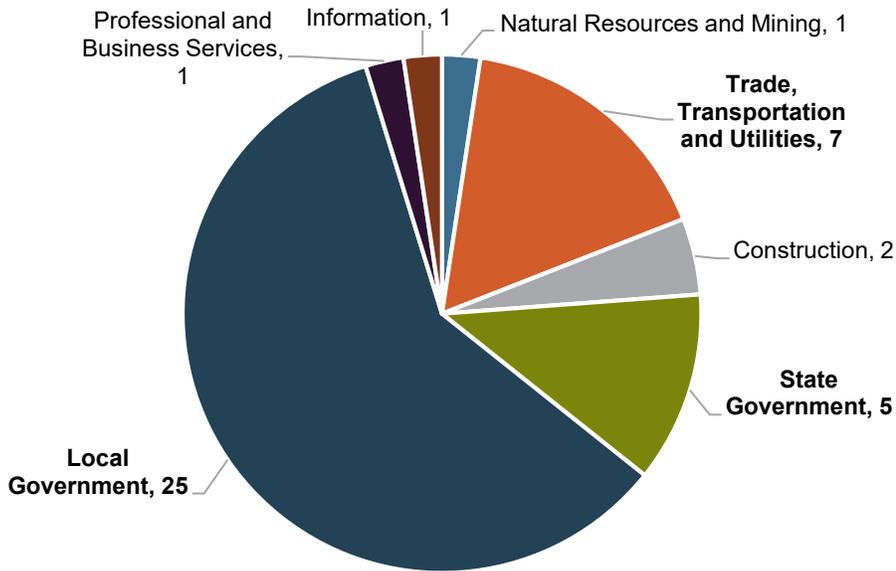
Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

There are no Alaska public schools in Tenakee Springs. There was previously one school in the community, Tenakee Springs School, that served kindergarten through high school with a last reported enrollment of 7 students in 2015-16 (AK DEED, 2019). Tenakee Springs is located in the Chatham School District, which has schools in Klukwan, Gustavus, and Angoon and runs the Chatham Correspondence Program<sup>4</sup> providing homeschooling resources for students living in the school district (Chatham School District, 2019). The Correspondence Program includes the Tenakee Independent Learning Center located in Tenakee.

<sup>4</sup> Enrollment totals for the Chatham Correspondence Program are included in Angoon’s School Enrollment totals. The Chatham School District’s office is in Angoon.

Figure 78 shows the number of workers in various industries for Tenakee Springs, and the top three industries are shown in bold.

**Figure 78. Tenakee Springs Resident Employment by Industry, 2016**



Data Source: ALARI, 2019

## 2.13.2 AMHS Summary

### **Community Leader Perspectives**

Dan Kennedy, Mayor of Tenakee Springs provided information via survey on how AMHS is used by individuals and businesses within the community. His responses are summarized below.

#### ***How Residents Use the Ferry***

The ferry is integral to the well-being of Tenakee in a number of ways. Individuals transport supplies that cannot be flown due to size, weight, etc. The ferry becomes even more vital during winter months for access to medical care as the shorter days and inclement weather cause many flights to be cancelled, sometimes for weeks at a time, leaving the ferry as our only option.

People with rental cabins depend on the ferry for reliable transportation for visitors to access Tenakee.

Most school travel also is done by ferry as the cost is lower and the ferry more reliable than other forms of transportation.

#### ***Commercial Uses***

Our store receives most of its freight from Juneau aboard the ferry. Builders utilize the ferry to transport building materials from Juneau.

**Transportation Options**

During inclement weather this is our only access to medical care. The ferry also brings the U.S. mail when flying it is not possible for extended periods.

**Minimum Level of Service**

Anything less than the existing schedule of two ferries a week would be detrimental to our community both economically and from a public safety viewpoint.

We value our ferry service and feel that the ferry crew members do an outstanding job in their service to Tenakee. Please keep service as it is to maintain a healthy productive community in Tenakee Springs.

**Ideas for Improving Fiscal Health**

It is hard to imagine this being a profitable endeavor for the private sector. Remember, this is our highway and highways usually cost money rather than turn a profit.

I always questioned the closing of the bars on the LeConte and Aurora. If you can't make money selling cans of beer for \$5, something is wrong.

**Historic Revenue and Traffic Volumes**

Table 66 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with Tenakee Springs as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). Tenakee Springs is an origin/destination in the Southeast Feeder Route Group, connecting to four ports. The route between Tenakee Springs and Juneau generates the most revenue and transports the most passengers.

**Table 66. Tenakee Springs as the Origin or Destination—AMHS Volume and Revenue, 2009–2018**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>SE Village Routes</b>										
<b>Travel to and from Angoon</b>										
Sailings	80	76	65	62	73	95	95	70	14	12
Passengers	523	555	308	428	329	467	405	380	27	19
# on Car-deck	15	4	0	0	0	0	0	0	0	2
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$6	\$9	\$4	\$5	\$5	\$7	\$7	\$5	\$1	\$1
<b>Travel to and from Hoonah</b>										
Sailings	70	69	66	71	76	43	50	25	0	2
Passengers	19	34	12	98	219	145	6	48	0	2
# on Car-deck	0	2	2	0	0	0	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$1	\$1	\$0	\$4	\$8	\$4	\$1	\$1	\$0	\$0

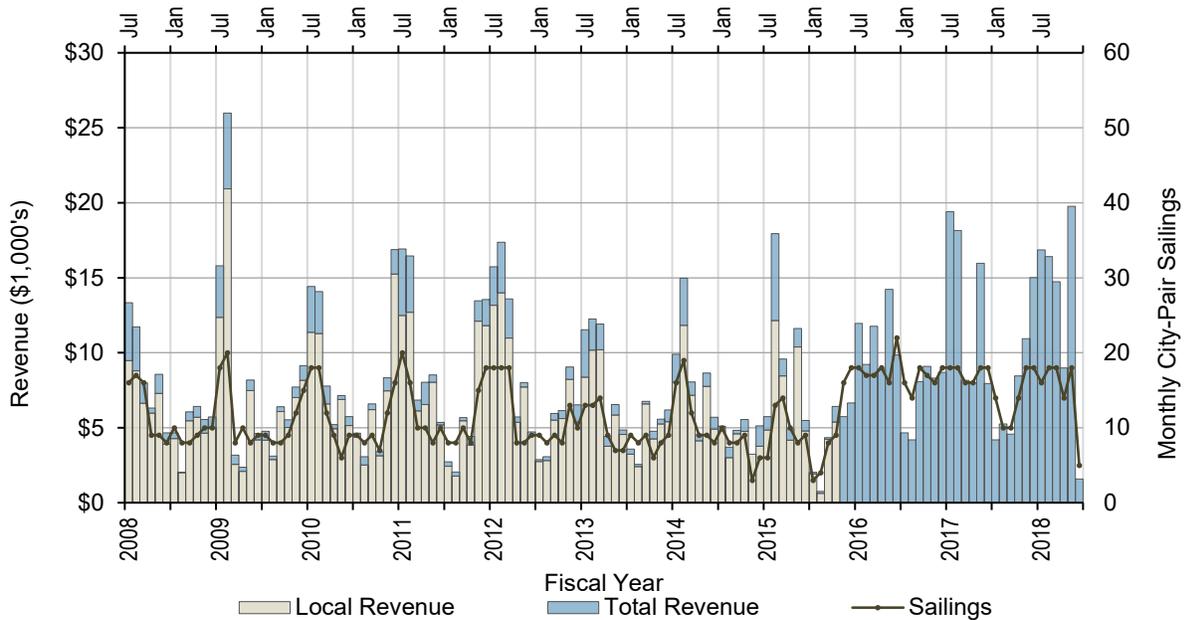
**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Juneau</b>										
Sailings	130	134	133	141	136	112	117	111	188	183
Passengers	2,839	3,562	3,054	3,211	3,152	2,252	2,258	2,102	2,486	2,710
# on Car-deck	72	72	13	0	0	0	0	60	425	422
Vans	0	0	0	0	0	0	0	0	0	0
\$(1,000s)	\$83	\$97	\$97	\$104	\$99	\$81	\$79	\$81	\$109	\$126
<b>Travel to and from Sitka</b>										
Sailings	18	0	0	0	0	0	0	4	13	0
Passengers	14	0	0	0	0	0	0	7	43	0
# on Car-deck	1	0	0	0	0	0	0	0	3	0
Vans	0	0	0	0	0	0	0	0	0	0
\$(1,000s)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2	\$0

Source: Northern Economics analysis using data from AMHS (2019)

Figure 79 shows monthly revenues and sailings for travel between Tenakee Springs and Juneau, with revenues separated by local and non-local resident ticket purchasers when data are available. Most revenue (86 percent) over all months is from local residents.

**Figure 79. Monthly Local Resident and Total Tenakee Springs-Juneau Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

### Land-based Facilities

The land-based AMHS facility in Tenakee is owned by the State of Alaska. Table 67 shows which currently operating AMHS vessels are capable of docking at the facility in Tenakee.

**Table 67. Vessels Capable of Docking at Tenakee Springs Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Tenakee	X			X					

Notes:

X indicates the vessel is compatible with this terminal.

\* It is likely that the vessel is compatible with this terminal, but it has not been fully tested.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value for each facility was constructed by PND (2019).

#### Tenakee Facility

*Docking Orientation:* Side Berth

*Description:* This facility has a 40ft x 52ft main dock section with a 12ft x 240ft approach span to shore and consists of concrete panels supported by steel pipe piles. This facility has three steel pile moorings with timber fenders that are used by AMHS for port side mooring. City dock also supports fuel and freight operations and a small city storage building and jib crane are located on the southeast corner of the dock. The dock has limited capacity with a posted load rating of a single 4-ton axle. The AMHS ferry terminal is accessed from the City Dock by a pile supported steel platform structure and steel gangway. This platform was widened by ADOT in 2011. The open steel grade approach extends to the east, perpendicular to the City Dock. At the end of the approach is a gangway down to a floating platform supported by a steel pontoon. The facility is near the end of its service life; ADOT is currently designing a replacement for the existing facility.

*Alternative Usage:* The existing facility is currently used as a multi-purpose dock. The condition and limited capacity of the existing pile support dock and approach trestle restricts freight offload to the posted load ratings. The use of alternative passenger vessels at the ferry terminal would likely require modifications to the transfer bridge/ramp system.

Table 68 shows a range of estimated values for the Tenakee Facility including uplands and associated infrastructure but does not account for any potential modifications required for the facilities to be used by non-AMHS vessels.

**Table 68. Estimated Value of the Tenakee Facility**

Estimate Range	-30%	Avg	+30%
Facility Value (\$)	1,250,000	1,780,000	2,320,000

Data Source: PND (2019)

### 2.13.3 Transportation Alternatives

One carrier provides regularly scheduled passenger air service to Tenakee Springs, and rates to hub airports are shown in Table 69.

**Table 69. Tenakee Springs Flight Services and Rates for Single Adult Passenger, by Carrier**

Airline Carrier	One Way Destination	Summer Rate (\$)	Winter Rate (\$)
Alaska Seaplanes	Juneau	154	154

Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.

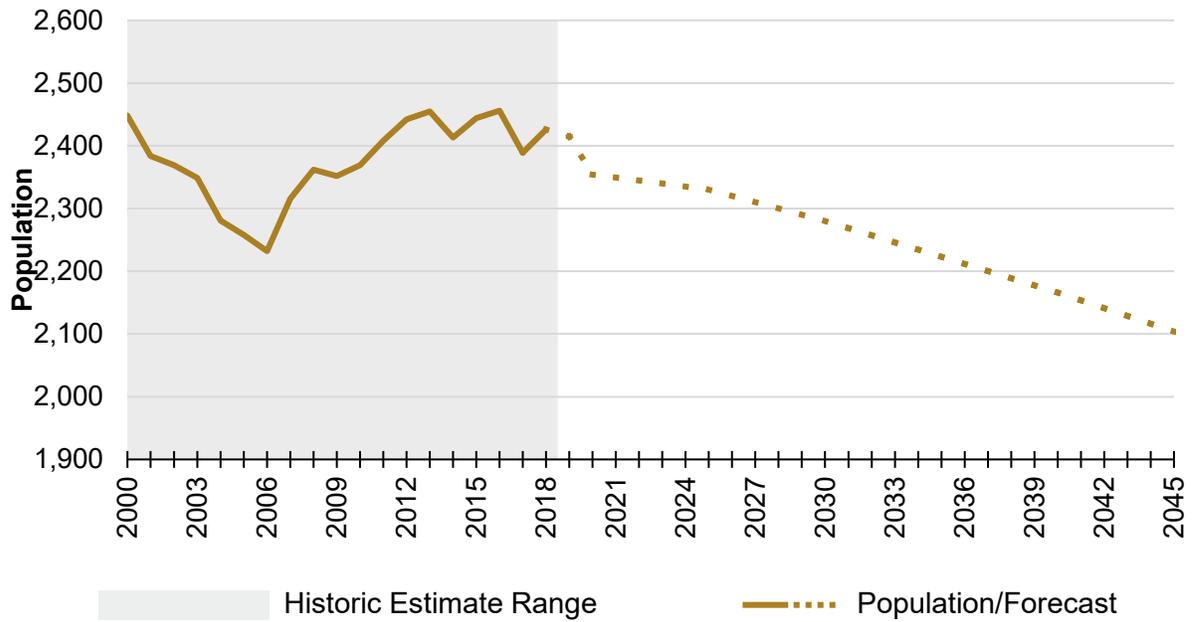
Data Source: Alaska Seaplanes,

## 2.14 Wrangell Community Profile

### 2.14.1 Demographic Summary

Figure 80 shows the population of Wrangell with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 2,426 permanent residents, but the population of Wrangell is expected to decrease steadily over time.

**Figure 80. Wrangell Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 70 shows student enrollment in all Wrangell schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

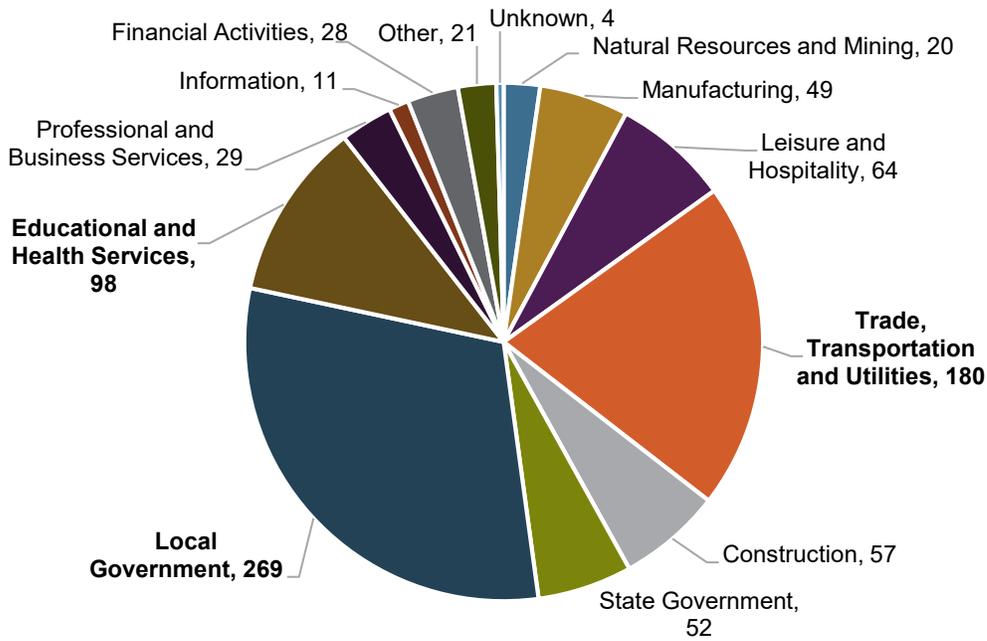
**Table 70. Wrangell All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	22	23	24	26	17	17	17	20	14	26	17	23	25	4
<b>Total</b>	146							34		91			4	

Data Source: USDE, 2016.

Figure 81 shows the number of workers in various industries for Wrangell, and the top three industries are shown in bold. Seafood processing plants in Wrangell process all species of Alaska-caught salmon, and Trident Seafood’s Wrangell plant employs up to 250 people during the peak summer season (Trident Seafoods, 2019). The Pacific Seafoods facility, known as Sealevel Seafoods, processes other species, including halibut and black cod, in addition to salmon (Sealevel Seafoods, 2019).

**Figure 81. Wrangell Resident Employment by Industry, 2016**



Data Source: ALARI, 2019

## 2.14.2 AMHS Summary

### Community Leader Perspectives

Wrangell Borough Clerk Kim Lane provided information via survey on how AMHS is used by individuals and businesses within the community. Her responses are summarized below.

#### ***How Residents Use the Ferry***

Individuals use the ferry to transport their vehicles from all over Southeast as well as from Seattle. The Wrangell Public School uses AMHS throughout the school year for sports travel and academic functions. Also, quite a few graduates of our high school travel with their vehicle from and to Anchorage via the Haines AMHS terminal.

#### ***Commercial Uses***

Businesses use the ferry to transport goods from Ketchikan or Petersburg.

#### ***Transportation Options***

The main alternatives to the ferry are an air charter service and Alaska Airlines, but they are more expensive. The school is anticipating spending an additional \$75,000 in air service for sports travel for the FY2019–20 school year.

We have boat charter services available; however, they hold a limited number of students and are more expensive than the ferry, costing \$500 round-trip between Wrangell and Petersburg.

AMHS also goes to Southeast communities that the other air/boat transport options do not visit, or if they do, the costs are prohibitively expensive for most residents.

**Minimum Level of Service**

Two to three times a week.

**Ideas for Improving Fiscal Health**

Possibly reducing the number of on-ferry employees.

**Historic Revenue and Traffic Volumes**

Table 71 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with Wrangell as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). Wrangell is an origin/destination in the Mainline Route Group, connecting to eleven ports. The route between Wrangell and Bellingham generates the most revenue. The route between Wrangell and Ketchikan and transports the most passengers.

**Table 71. Wrangell as the Origin or Destination—AMHS Volume and Revenue, 2009–2018**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Mainline Routes</b>										
<b>Travel to and from Ketchikan</b>										
Sailings	361	386	384	381	375	349	352	314	277	248
Passengers	6,271	6,229	5,773	6,028	5,629	5,377	5,633	4,256	3,561	2,872
# on Car-deck	1,465	1,538	1,439	1,605	1,697	1,556	1,391	1,256	1,200	1,067
Vans	44	17	18	46	63	94	44	28	29	26
\$ (1,000s)	\$330	\$331	\$313	\$345	\$342	\$352	\$341	\$296	\$290	\$273
<b>Travel to and from Prince Rupert</b>										
Sailings	254	274	272	270	221	186	191	141	114	95
Passengers	1,223	1,022	1,001	913	864	817	764	725	682	603
# on Car-deck	295	314	319	286	277	259	245	237	363	331
Vans	85	82	82	61	47	43	66	30	25	14
\$ (1,000s)	\$207	\$196	\$191	\$171	\$160	\$148	\$162	\$147	\$176	\$157
<b>Travel to and from Bellingham</b>										
Sailings	100	101	101	102	101	99	102	101	92	90
Passengers	818	857	733	879	863	779	836	628	581	397
# on Car-deck	260	261	251	269	314	241	282	227	288	238
Vans	2	1	10	18	16	12	7	19	15	13
\$ (1,000s)	\$388	\$416	\$381	\$459	\$492	\$433	\$482	\$438	\$468	\$386

**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

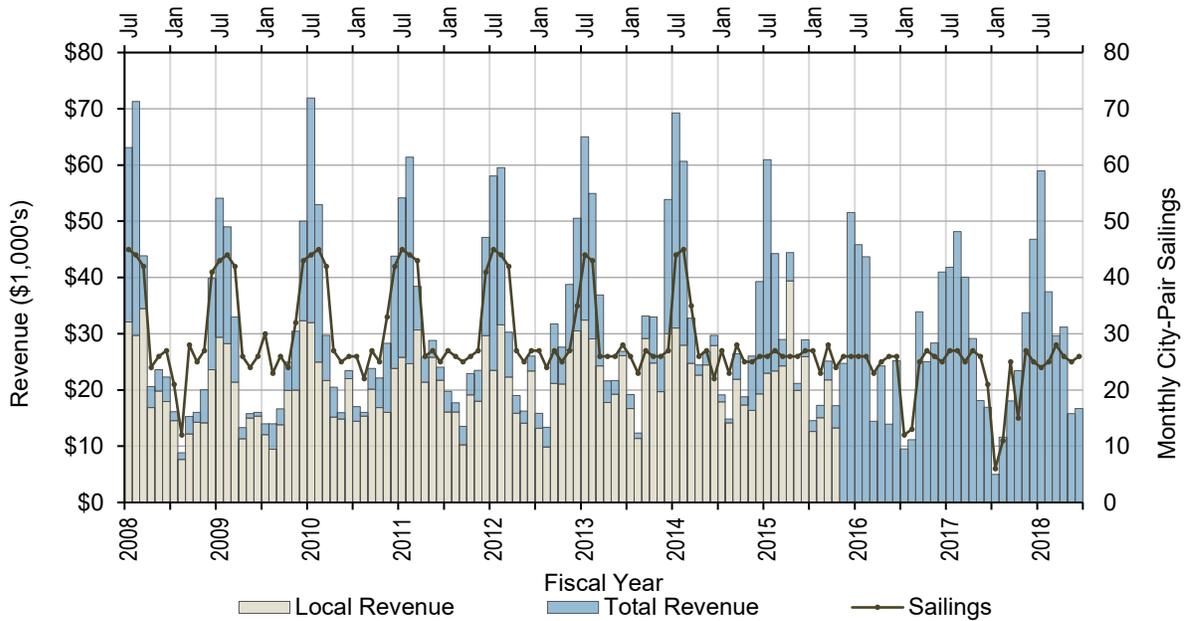
	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Petersburg</b>										
Sailings	360	386	384	382	374	349	351	311	250	222
Passengers	2,404	2,649	2,598	2,445	2,241	2,301	2,225	1,822	1,310	1,197
# on Car-deck	581	680	687	642	712	703	609	559	516	476
Vans	17	12	24	23	8	5	3	7	3	10
\$ (1,000s)	\$103	\$110	\$112	\$109	\$107	\$114	\$108	\$100	\$86	\$86
<b>Travel to and from Kake</b>										
Sailings	167	177	155	170	171	149	147	90	20	13
Passengers	98	87	80	119	164	66	35	98	39	22
# on Car-deck	14	17	24	44	45	11	17	15	11	8
Vans	0	0	0	0	0	0	0	2	0	0
\$ (1,000s)	\$6	\$6	\$8	\$12	\$17	\$5	\$5	\$9	\$5	\$4
<b>Travel to and from Sitka</b>										
Sailings	130	151	158	168	161	150	152	126	111	111
Passengers	695	636	541	597	831	632	618	655	458	323
# on Car-deck	137	192	168	143	269	196	180	140	98	131
Vans	1	2	2	5	0	1	0	2	0	0
\$ (1,000s)	\$63	\$70	\$65	\$65	\$100	\$79	\$80	\$70	\$56	\$60
<b>Travel to and from Hoonah</b>										
Sailings	52	50	33	41	56	57	33	43	0	0
Passengers	4	5	5	7	2	9	2	9	0	0
# on Car-deck	2	4	4	3	0	4	2	4	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$1	\$1	\$1	\$2	\$0	\$2	\$1	\$2	\$0	\$0
<b>Travel to and from Gustavus</b>										
Sailings	0	0	0	1	0	0	0	4	0	0
Passengers	0	0	0	0	0	0	0	0	0	0
# on Car-deck	0	0	0	0	0	0	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Travel to and from Juneau</b>										
Sailings	362	383	384	382	375	348	353	305	243	223
Passengers	2,629	2,423	2,676	2,837	2,576	2,685	2,555	2,394	1,825	1,754
# on Car-deck	601	600	682	712	737	698	631	624	612	585
Vans	3	2	5	7	3	22	23	19	7	3
\$ (1,000s)	\$361	\$331	\$366	\$377	\$387	\$405	\$388	\$379	\$316	\$333
<b>Travel to and from Haines</b>										
Sailings	187	187	171	151	193	204	184	185	92	93
Passengers	329	268	339	451	399	456	370	446	306	303
# on Car-deck	124	99	91	105	104	101	98	106	137	123
Vans	0	0	0	1	2	4	1	0	0	0
\$ (1,000s)	\$82	\$66	\$74	\$89	\$81	\$83	\$87	\$96	\$91	\$91

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Skagway</b>										
Sailings	186	176	173	149	150	137	191	145	37	42
Passengers	189	129	166	136	160	152	254	188	79	128
# on Car-deck	30	9	28	15	16	19	27	23	26	29
Vans	0	1	2	0	0	0	0	0	0	0
\$(1,000s)	\$36	\$24	\$36	\$26	\$30	\$30	\$34	\$37	\$22	\$31

Source: Northern Economics analysis using data from AMHS (2019)

Figure 82 through Figure 84 show monthly revenues and sailings for travel selected city-pairs involving Wrangell, with revenues separated by local and non-local resident ticket purchasers when data are available. Figure 82 shows monthly revenue between Wrangell and Juneau. Most revenue (68 percent) over all months is from local residents, while during the peak summer season revenue is split evenly between locals and non-locals.

**Figure 82. Monthly Local Resident and Total Wrangell-Juneau Revenues and Sailings, by Fiscal Year**

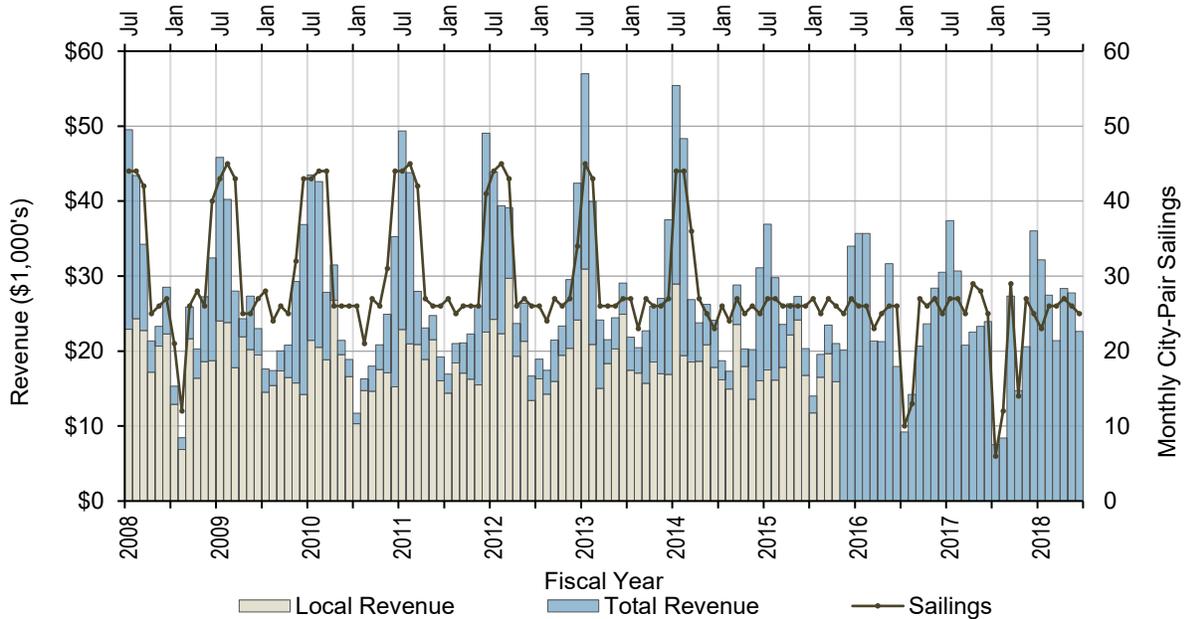


Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

Figure 83 shows monthly revenue between Wrangell and Ketchikan. Most revenue (68 percent) over all months is from local residents, while during the peak summer season, revenue is split evenly between locals and non-locals. Figure 84 shows monthly revenue between Wrangell and Bellingham. During winter months, 72 percent of revenue comes from local residents, while during the peak summer season 74 percent of revenue is derives from non-locals.

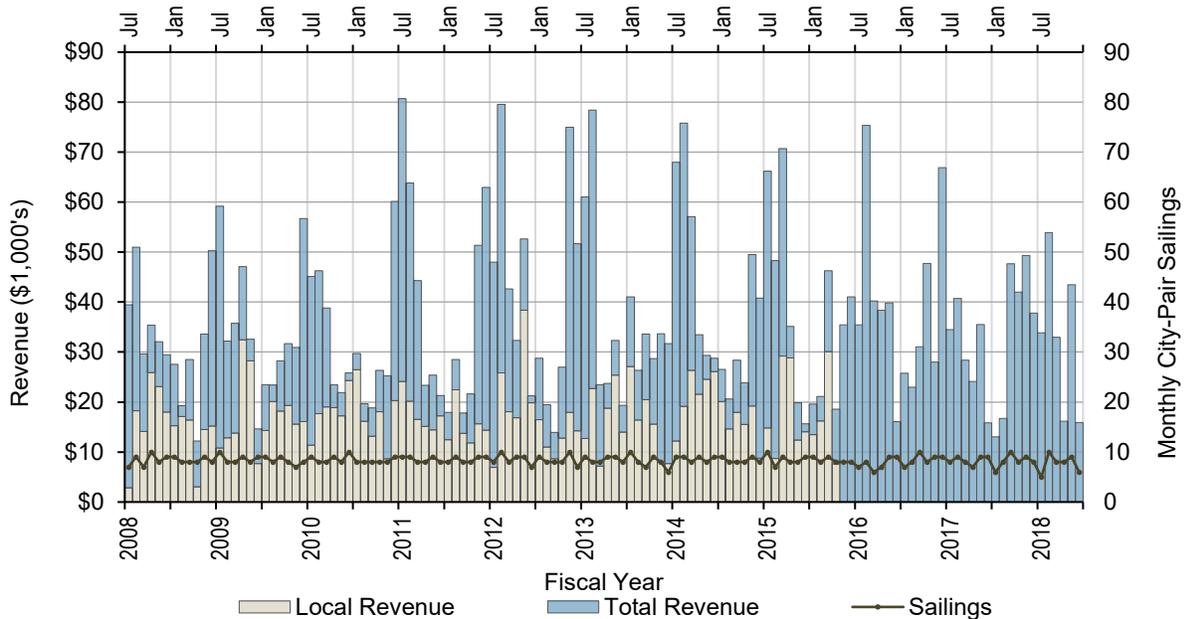
**Figure 83. Monthly Local Resident and Total Wrangell-Ketchikan Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Figure 84. Monthly Local Resident and Total Wrangell-Bellingham Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Land-Based Facilities**

The land-based AMHS facility in Wrangell is owned by the State of Alaska. Table 72 shows which currently operating AMHS vessels are capable of docking at the facility in Wrangell.

**Table 72. Vessels Capable of Docking at Wrangell Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Wrangell	X	X	X	X	X*	X	X	X*	

Notes:

X indicates the vessel is compatible with this terminal.

\* It is likely that the vessel is compatible with this terminal, but it has not been fully tested.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value for each facility was constructed by PND (2019).

**Wrangell Facility**

*Docking Orientation:* Side Berth

*Description:* This facility consists of a 110ft long transfer bridge, cable supported bridge lift (Syncrolift), ten steel pile dolphins, and associated catwalks/gangways for line handling access. This facility is able to berth any boat and has a terminal building. The fuel tank is currently being replaced.

*Alternative Usage:* The Wrangell terminal could likely be used as a small cruise ships terminal for vessels with lengths and parameters similar to the AMHS mainline ferries. Modifications would likely be required to the transfer bridge and syncrolift system to accommodate baggage and passenger door locations on vessels under consideration. The use of the terminal for offload of freight appears limited due to restrictions of offload equipment to highway-legal design loads. Modifications to the transfer bridge and syncrolift system would likely be required to match the freeboard/side shell height of barge of vessels being used. The suitability of small passenger-only vessels is likely limited due to the spacing of berthing and mooring structures.

Table 73 shows a range of estimated values for the Wrangell Facility including uplands and associated infrastructure but does not account for any potential modifications required for the facilities to be used by non-AMHS vessels.

**Table 73. Estimated Value of the Wrangell Facility**

Estimate Range	-30%	Avg	+30%
Facility Value (\$)	5,530,000	7,900,000	10,270,000

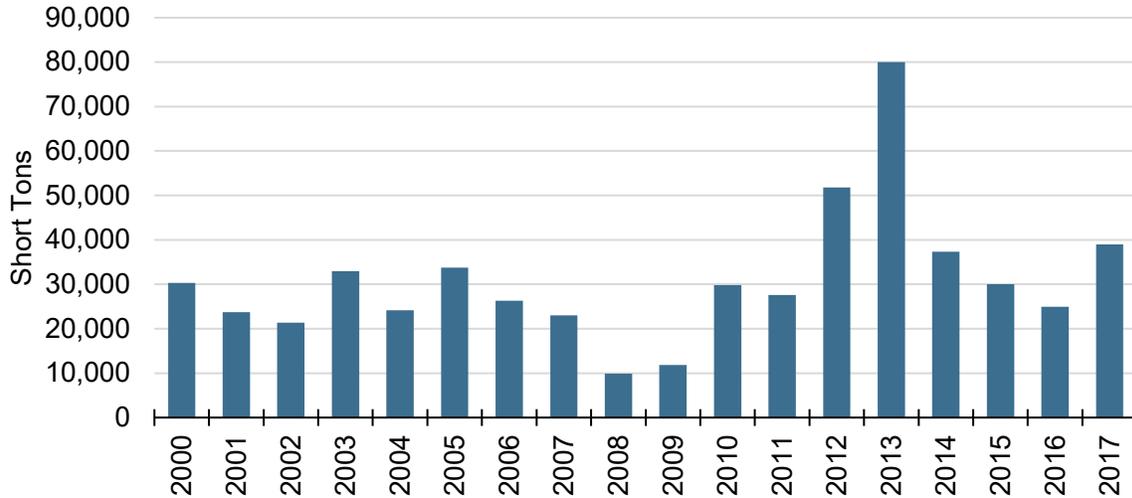
Data Source: PND (2019)

**2.14.3 Transportation Alternatives**

Figure 85 shows marine freight data for Wrangell. A variety of commodities pass through Wrangell, with distillate fuel oil, fish (not shellfish), gasoline, and manufactured products as the top commodities. Prepared fish was not reported as a large commodity by volume relative to Wrangell’s other marine

freight until 2012, and since then relatively high volumes have been reported each year. Gasoline was a significant commodity for most years but had very low reported levels from 2013-16.

**Figure 85. Wrangell Inbound and Outbound Annual Marine Freight, 2000–2017**



Data Source: USACE, 2019. USACE, 2018.

One carrier provides regularly scheduled passenger air service to Wrangell, and rates to hub airports are shown in Table 74. There are at least three companies that provide water taxi services in Wrangell, and one of them has advertised freight transportation to Coffman Cove and numerous other communities and remote locations.

**Table 74. Wrangell Flight Services and Rates for Single Adult Passenger, by Carrier**

Airline Carrier	One Way Destination	Summer Rate (\$)	Winter Rate (\$)
Alaska Airlines	Ketchikan	111	111
Alaska Airlines	Petersburg	111	111

Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.

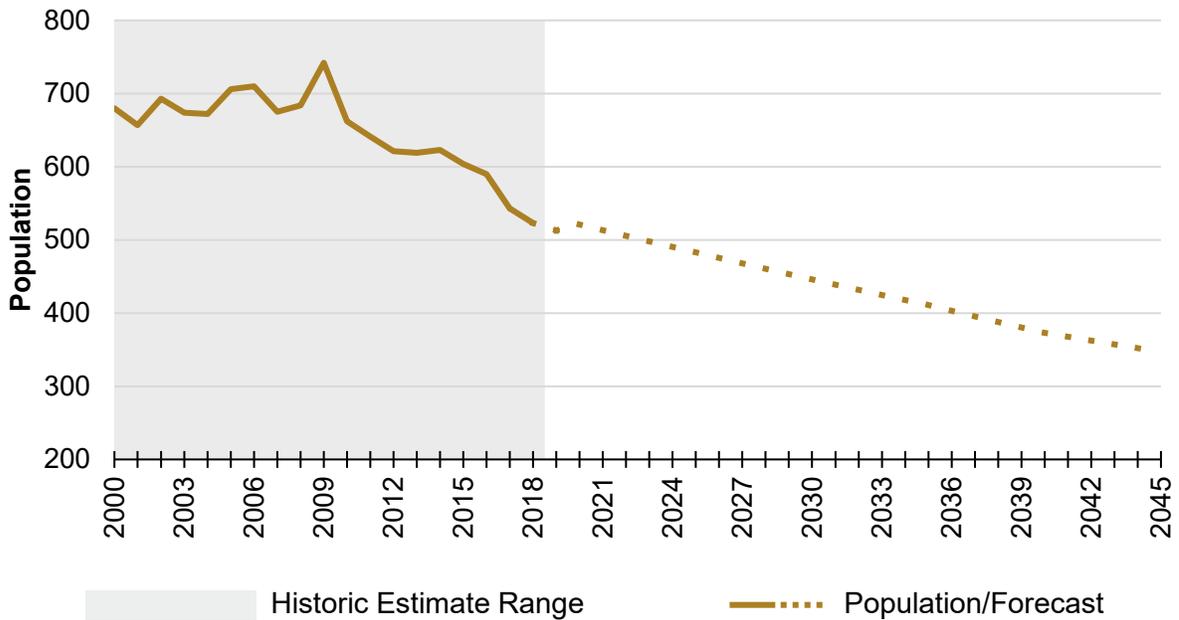
Data Source: Alaska Airlines, Inc., 2019.

## 2.15 Yakutat Community Profile

### 2.15.1 Demographic Summary

Figure 86 shows the population of Yakutat with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 523 permanent residents, but the population of Yakutat is expected to decrease steadily over time.

**Figure 86. Yakutat Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 75 shows student enrollment in all Yakutat schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

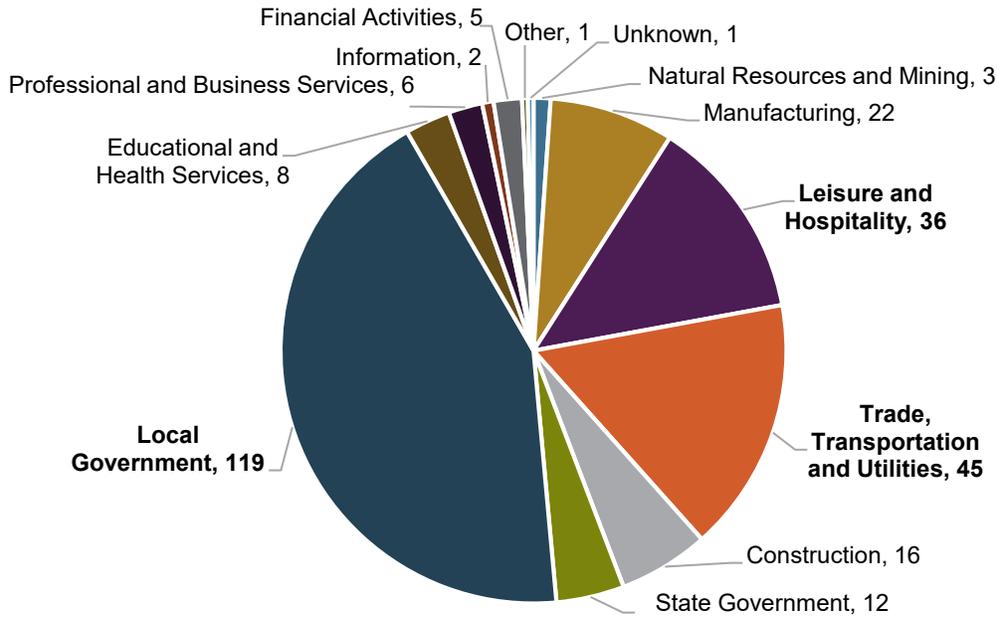
**Table 75. Yakutat All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	10	3	7	8	9	6	7	7	2	7	10	2	7	0
<b>Total</b>	50							9		26			0	

Data Source: USDE, 2016.

Figure 87 shows the number of workers in various industries for Yakutat, and the top three industries are shown in bold. Yakutat is home to Yakutat Seafoods’ processing plant, which is the northern most plan in the Southeast region and processes salmon, halibut and black cod (E&E Foods, Inc., 2019).

**Figure 87. Yakutat Resident Employment by Industry, 2016**



Data Source: ALARI, 2019

## 2.15.2 AMHS Summary

### **Community Leader Perspectives**

Jon Erickson, Yakutat City and Borough Manager provided information via survey on how AMHS is used by individuals and businesses within the community. His responses are summarized below.

#### ***How Residents Use the Ferry***

The Alaska Marine Highway is the only affordable way to get vehicles to Yakutat. Most of Yakutat’s building materials come via ferry. Tourists, researchers, newly hired personnel, and utility company staff also travel to Yakutat on the ferry.

#### ***Commercial Uses***

Lodges, logging and mining companies use the ferry to access Yakutat’s deep-water, ice-free port and from there send supplies and staff to Icy Bay, Dry Bay, and Yakutaga. Yakutat Hardware, Yakutat Tlingit Tribe, and Yakutat Seafood also use the ferry to transport people and materials.

#### ***Transportation Options***

Yakutat is 200 miles across the Gulf of Alaska to the nearest road access. There are no other widely affordable alternatives to the AMHS. Vehicles must come by ferry as there are no auto repair shops in Yakutat.

The Alaska Marine Lines barge only runs once a month. If a vehicle is shipped out for repair it would not likely return for 2 to 3 months, weather permitting. The Alaska Marine Lines barge system charges four times as much or more than AMHS and goes through Seattle. For people who do not make a lot of money and have a car or truck that needs repair these high costs would mean the vehicle is totaled when comparing repair cost to value.

For passengers, Alaska Airlines provides daily flights between Yakutat and Juneau, and to Anchorage via Cordova.

**Minimum Level of Service**

We are currently only getting ferry service from May through October, with two trips north and two trips south per month. Make no changes to Yakutat’s service schedule. Reservations are very difficult to get, and any cuts to current service would eliminate Yakutat’s opportunity to travel on the Alaska Marine Highway. Reducing service even a little will make reserving a space for a vehicle impossible.

**Historic Revenue and Traffic Volumes**

Table 76 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with Yakutat as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). Yakutat is an origin/destination in the Cross-Gulf Route Group, connecting to six ports. The routes between Yakutat and Juneau and Whittier generate the most revenue. The route between Yakutat and Juneau transports the most passengers.

**Table 76. Yakutat as the Origin or Destination—AMHS Volume and Revenue, 2009–2018**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Cross-Gulf Routes</b>										
<b>Travel to and from Juneau</b>										
Sailings	36	19	25	33	46	32	29	26	22	26
Passengers	256	224	352	453	346	262	217	177	159	226
# on Car-deck	145	133	152	165	169	137	121	108	134	157
Vans	11	13	8	7	10	12	9	12	5	6
\$ (1,000s)	\$60	\$55	\$71	\$80	\$71	\$61	\$59	\$63	\$79	\$88
<b>Travel to and from Ketchikan</b>										
Sailings	35	18	24	33	40	28	29	14	2	3
Passengers	5	4	21	6	5	21	10	6	5	3
# on Car-deck	1	2	4	5	14	8	0	3	0	1
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$1	\$2	\$6	\$5	\$9	\$9	\$2	\$3	\$1	\$1
<b>Travel to and from Bellingham</b>										
Sailings	0	0	5	25	17	27	29	17	12	11
Passengers	0	0	15	12	11	17	23	7	12	10
# on Car-deck	0	0	4	5	3	12	21	10	24	19
Vans	0	0	0	0	0	0	0	1	1	0
\$ (1,000s)	\$0	\$0	\$12	\$16	\$11	\$28	\$47	\$28	\$42	\$33
<b>Travel to and from Whittier</b>										
Sailings	33	20	24	33	46	27	27	28	21	23
Passengers	78	83	161	132	150	62	106	91	90	80
# on Car-deck	108	90	130	126	134	61	95	86	91	80
Vans	5	0	0	2	0	0	0	0	1	1
\$ (1,000s)	\$72	\$62	\$89	\$88	\$91	\$47	\$74	\$64	\$65	\$63

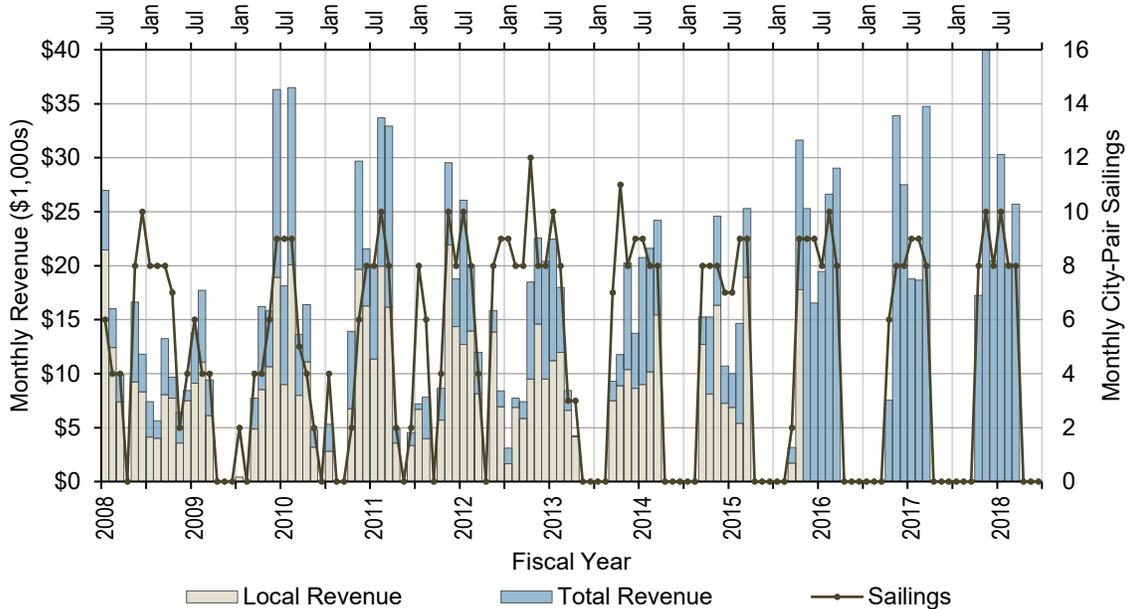
**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Homer</b>										
Sailings	0	0	0	19	41	32	26	17	3	2
Passengers	0	0	0	0	2	14	0	0	2	4
# on Car-deck	0	0	0	1	0	13	0	1	4	1
Vans	0	0	0	0	0	0	0	0	0	0
\$(1,000s)	\$0	\$0	\$0	\$0	\$1	\$16	\$0	\$1	\$4	\$2
<b>Travel to and from Kodiak</b>										
Sailings	0	0	0	19	44	29	26	19	0	0
Passengers	0	0	0	0	1	1	0	2	0	0
# on Car-deck	0	0	0	0	1	3	0	1	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$(1,000s)	\$0	\$0	\$0	\$0	\$2	\$3	\$0	\$2	\$0	\$0

Source: Northern Economics analysis using data from AMHS (2019)

Figure 88 shows monthly revenues and sailings for travel between Yakutat and either Juneau or Whittier, with revenues separated by local and non-local resident ticket purchasers when data are available. Most revenue in the winter months is from local residents, while revenue during the peak season is more evenly split between local residents and non-locals.

**Figure 88. Monthly Local Resident and Total Yakutat-Juneau and Yakutat-Whittier Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Land-based Facilities**

The land-based AMHS facility in Yakutat is non-state owned. Table 77 shows which currently operating AMHS vessels are capable of docking at the facilities in Yakutat.

**Table 77. Vessels Capable of Docking at Yakutat Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Yakutat			X						X

Note: X indicates the vessel is compatible with this terminal.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value of the facility was constructed by PND (2019).

**Yakutat Facility**

*Docking Orientation:* Side Berth

*Description:* This facility is owned, operated, and maintained by the City. This facility consists of an L-shaped dock in plan with a face 237ft long by 50ft wide and an approach 70ft wide by 169ft long. The dock is constructed of precast concrete deck panels atop cast-in-place concrete caps and steel support piles. Two mooring dolphins are located at each end of the dock and lie off-line from the dock face. This facility is a multi-purpose dock and could be used by other vessels.

*Alternative Usage:* The Yakutat Ferry Terminal is a multi-use facility and is currently used by various vessels. Alternative uses are feasible without major upgrades. Accommodating smaller passenger vessels with low freeboard would likely be challenging due to the fixed dock elevation; however, the City owns an additional facility with a floating dock that could be used for passenger transfer.

**2.15.3 Transportation Alternatives**

One carrier provides regularly scheduled passenger air service to Yakutat, and rates to hub airports are shown in Table 78.

**Table 78. Yakutat Flight Services and Rates for Single Adult Passenger, by Carrier**

Airline Carrier	One Way Destination	Summer Rate (\$)	Winter Rate (\$)
Alaska Airlines	Juneau	161	161
Alaska Airlines	Cordova	164	164

Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.

Data Source: Alaska Airlines, Inc., 2019.

### 3 AMHS Southwest and Southcentral Service Regions

Figure 89 shows the communities in the AMHS Southwest and Southcentral service regions. Each of the following subsections within this chapter provide demographic summary data, as well as AMHS-specific analyses. In addition to the communities with AMHS service, there are profiles for closely associated communities which commonly use AMHS by first traveling to a city with an AMHS port call. The associated city profiles are included as subsections under their respective AMHS city’s community profile. The community profiles in this section are organized with generally the same structure used for communities in the Southeast Region with the exception that communities are ordered from the western-most community (Dutch Harbor/Unalaska) to the eastern-most community (Cordova). Additionally, because of the low frequency of sailings, monthly revenue figures showing local and non-local revenues are not provided for communities on the Aleutian Islands or the Alaska Peninsula.

**Figure 89. AMHS Communities of the Southwest and Southcentral Service Regions**



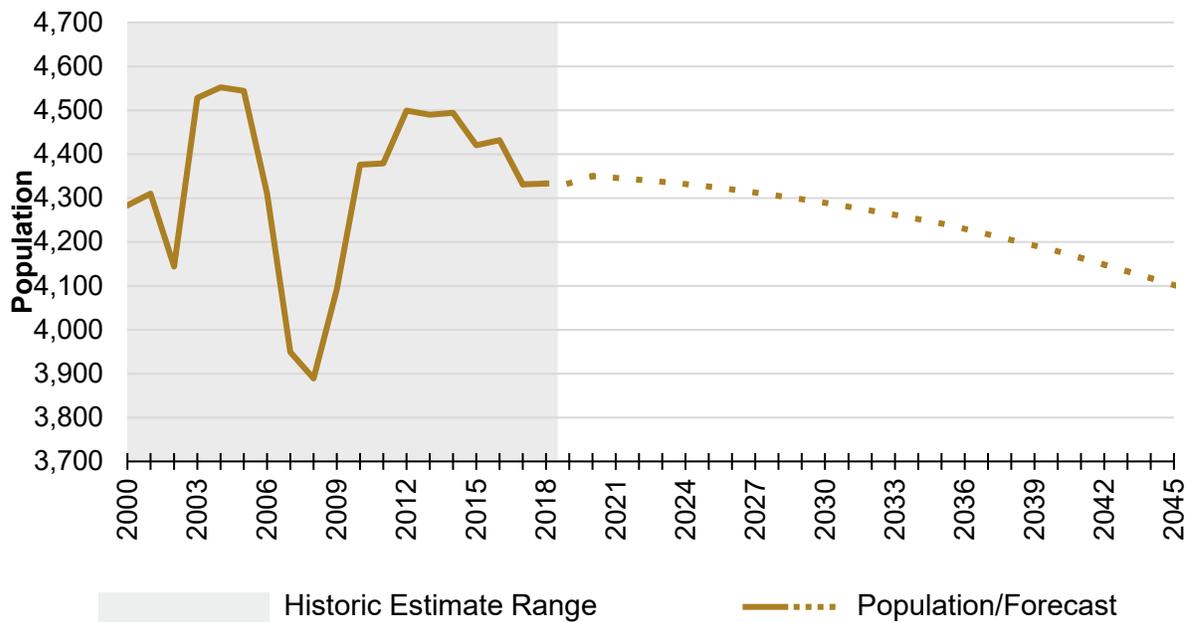
Image Source: DOT&PF, 2019b

### 3.1 Unalaska (Dutch Harbor) Community Profile

#### 3.1.1 Demographic Summary

Figure 90 shows the population of Unalaska (Dutch Harbor) with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 4,333 permanent residents, but the population of Unalaska (Dutch Harbor) is expected to decrease steadily over time.

**Figure 90. Unalaska (Dutch Harbor) Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 79 shows student enrollment in all Unalaska schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

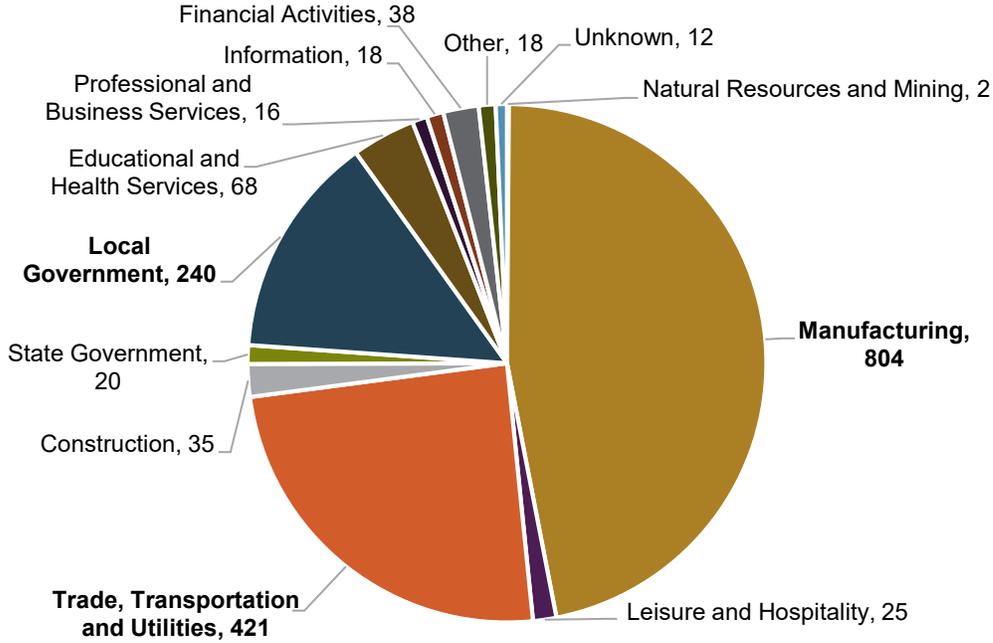
**Table 79. Unalaska (Dutch Harbor) All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	23	35	31	29	26	26	27	25	29	39	35	31	31	0
<b>Total</b>	197							54		136				0

Data Source: USDE, 2016.

Figure 91 shows the number of workers in various industries for Unalaska (Dutch Harbor), and the top three industries are shown in bold. UniSea, Westward Seafoods, and Alyeska Seafoods operate processing plants in Dutch Harbor for Bering Sea pollock, cod, crab, halibut, and black cod fisheries. In 2017 alone, 769 million pounds of seafood were landed in Unalaska (Dutch Harbor) (NMFS, 2018).

**Figure 91. Unalaska (Dutch Harbor) Resident Employment by Industry, 2016**



Data Source: ALARI, 2019

### 3.1.2 AMHS Summary

#### Community Leader Perspectives

Mayor Frank Kelty of Unalaska provided information via survey and interview on how AMHS is used by individuals and businesses within the community. His responses are summarized below.

#### *How Residents Use the Ferry*

Residents use the ferry to bring vehicles and household goods purchased in Anchorage to Unalaska. They also use it to visit friends and family in other Aleutian Island communities. Groceries are available on Unalaska, so residents are not loading their vehicles onto the ferry to go shopping elsewhere. Students going to school in Anchorage or Fairbanks use the ferry as a cheaper way to move their car and belongings to those cities from Unalaska.

Unalaska City schools use the ferry to take students to athletic events. Teams from King Cove, Akutan, and Sandpoint arrive on the morning ferry and return to their villages in the evening. Many of the new incoming teachers use the ferry as an affordable way to get their cars and household goods to Unalaska and other Aleutian Chain communities. New teachers, who don't have a lot of money, will typically put a vehicle on the ferry and will load it up with household goods. When the Tustumena broke down, that really screwed up many teachers who were planning to move here. We had teachers who were not going to come out because they could not afford the cost of shipping their belongings to Unalaska without the ferry. Gov. Bill Walker's administration finally figured out how to get teachers' vehicles and belongings on a boat out here.

Residents from St. Paul, St. George, Atka, and Adak do not have AMHS service. They come to Unalaska by plane and use the ferry service as passengers or transship goods from the ferry back to their villages

using a domestic freighter that makes calls to their islands. We believe the Aleutian communities deserve some amount of ferry service.

### ***Commercial Uses***

Construction companies use the ferry to move equipment for the summer construction season and ship it back to Anchorage or wherever it came from on the last ferry trip in October. Employees of construction firms and the fishing industry usually fly here by plane.

The ferry is the only affordable way for tourists to see the whole area. In the summer, the ferry brings tourists to the Aleutian Islands Marine Refuge area to see World War II sites, go birding or sport fishing, and view marine mammals. They stop in Kodiak and all these small communities along the way. A common itinerary is to take the ferry one way and fly Alaska Airlines in the other direction.

The local Unalaska clinic also takes the breast cancer testing mobile truck on the ferry to test women along the Aleutian chain.

### ***Transportation Options***

Marine freight and jet service are the other major transportation options.

We have weekly marine freight service from Anchorage on Matson, SeaLand, Coastal Transportation, and Alaska Marine Lines. They all bring groceries, construction materials, cartons, supplies, and salt for the processors. But these freight carriers are very expensive. The ferry, when it is running, is the only way to get household items and vehicles purchased in Alaska to the Aleutian chain communities at rates most people can afford.

Air freight via ACE cargo planes is available in most Aleutian chain communities, but the planes are small and move only 5,000 to 6,000 lb. Alaska Airline passenger flights are very expensive, at more than \$1,000 round-trip between Unalaska and Anchorage. The ferry is significantly less expensive for passengers.

### ***Minimum Level of Service***

One trip in April. Two trips a month from May through September, but one trip a month could also be acceptable in order to maintain some service to the Aleutian Chain. One trip in October.

We only have one ferry—the Tustumena—and it breaks down all the time, so we only have partial service as it is. For the last three years, we have had no service or once-a-month service. If we reduce summer service to once a month, opportunities to for families in different Aleutian Chain communities to visit each other will continue to be reduced.

One month of service would be better than nothing. We've barely had any service because of all the breakdowns.

### ***Tolerance for a 10 Percent Fare Increase or Reduction in Service***

If the price had to go up by 10 percent, we could probably grin and bear it, and the people that want to see the beautiful area would still take the ferry. But the main thing is we need scheduled service. And I don't think we should be treated any differently from the communities on the road system. This is our highway and to be totally axed out as a program, is not right. If they privatize the ferry system, or just the Aleutian run, I would ask the State of Alaska to help subsidize it. You could still get the state out of the business of owning the vessel and taking care of the crews, but provide a subsidy to keep the service in place.

### Effects of Reduced Service

If service in the summer drops to one trip a month, people will still use the ferry, but there will be some impacts. People who want to come out from other villages to visit relatives might not be able to do so anymore. My bigger concern is that reduced service would have a bigger impact on the smaller surrounding communities, including King Cove, Sand Point, Chignik, Akutan, and Cold Bay. Unalaska has more freight options than they do, plus planes every day.

Combining a passenger-only with a less-frequent vehicle ferry would not work for Unalaska because that freight option for vehicles is very important. AMHS, on this route, would lose more money by not keeping the vehicle transport option.

### Ideas for Improving Fiscal Health

- You’ve got a union workforce on the boats so that’s a big cost.
- The big costs on this route is Tustumena always breaking down. We strongly believe the Tustumena needs to be replaced with another oceangoing vessel to serve the Aleutian Island communities and Kodiak. It would be more reliable and more people would use it. So reliable service, keep the schedule on would give you increased usage.
- If the system is privatized, the state should subsidize the Aleutian Route so we can have continued service.

### Historic Revenue and Traffic Volumes

Table 80 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with Unalaska as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). Unalaska is an origin/destination in the Southwest Route Group, connecting to ten ports. The route between Unalaska and Homer generates the most revenue. The routes between Unalaska and Homer and Akutan transport the most passengers.

**Table 80. Unalaska as the Origin or Destination—AMHS Volume and Revenue, 2009–2018**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Southwest Routes</b>										
<b>Travel to and from Akutan</b>										
Sailings	12	18	22	26	12	10	18	18	14	12
Passengers	435	492	704	961	445	184	466	319	272	223
# on Car-deck	2	10	1	0	0	0	0	3	1	3
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$14	\$17	\$25	\$32	\$16	\$8	\$15	\$11	\$11	\$9
<b>Travel to and from False Pass</b>										
Sailings	12	18	22	20	6	5	9	8	0	1
Passengers	15	5	20	19	22	12	18	19	0	1
# on Car-deck	5	3	4	9	16	4	11	14	0	0
Vans	0	0	0	0	0	3	0	0	0	0
\$ (1,000s)	\$2	\$1	\$2	\$4	\$5	\$5	\$6	\$6	\$0	\$0

**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Cold Bay</b>										
Sailings	12	18	22	26	16	12	18	17	7	11
Passengers	35	50	23	15	18	2	14	23	16	14
# on Car-deck	6	5	7	3	9	2	5	4	1	9
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$6	\$5	\$5	\$3	\$6	\$1	\$4	\$4	\$3	\$5
<b>Travel to and from King Cove</b>										
Sailings	12	18	22	26	16	12	18	16	4	9
Passengers	17	46	68	52	35	11	38	20	3	55
# on Car-deck	8	1	11	6	13	2	7	11	4	2
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$5	\$6	\$9	\$6	\$6	\$3	\$7	\$4	\$2	\$9
<b>Travel to and from Sand Point</b>										
Sailings	12	18	22	26	16	12	18	18	6	7
Passengers	30	16	41	26	39	10	28	37	7	33
# on Car-deck	12	8	11	11	9	3	3	8	1	7
Vans	0	0	1	4	0	0	0	0	0	0
\$ (1,000s)	\$12	\$7	\$15	\$19	\$9	\$2	\$5	\$8	\$2	\$10
<b>Travel to and from Chignik</b>										
Sailings	12	18	22	24	10	8	13	12	1	0
Passengers	5	4	3	13	0	0	2	1	1	0
# on Car-deck	0	0	1	3	3	0	0	1	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$1	\$2	\$1	\$6	\$2	\$0	\$1	\$1	\$0	\$0
<b>Travel to and from Old Harbor</b>										
Sailings	0	0	0	2	2	4	5	4	0	0
Passengers	0	0	0	0	0	0	0	0	0	0
# on Car-deck	0	0	0	0	0	0	1	2	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Travel to and from Kodiak</b>										
Sailings	12	18	22	26	16	12	18	19	13	13
Passengers	137	83	130	138	167	67	147	171	118	81
# on Car-deck	7	13	10	6	12	12	14	16	3	10
Vans	0	0	0	0	0	2	0	0	0	0
\$ (1,000s)	\$62	\$50	\$65	\$63	\$81	\$43	\$76	\$91	\$60	\$50
<b>Travel to and from Seldovia</b>										
Sailings	12	15	22	24	13	10	18	13	0	2
Passengers	5	6	9	11	8	6	14	11	0	4
# on Car-deck	0	0	0	0	0	0	0	0	0	2
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$2	\$2	\$5	\$6	\$4	\$4	\$7	\$3	\$0	\$2

**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Homer</b>										
Sailings	12	18	22	26	14	12	19	18	13	14
Passengers	246	299	406	546	242	246	445	406	304	301
# on Car-deck	34	57	61	86	59	62	64	63	50	40
Vans	0	0	1	0	0	1	1	0	0	1
\$ (1,000s)	\$155	\$207	\$259	\$343	\$172	\$181	\$293	\$265	\$207	\$222

Source: Northern Economics analysis using data from AMHS (2019)

**Land-based Facilities**

The land-based AMHS facility in Unalaska is non-state owned. Table 81 shows which currently operating AMHS vessels are capable of docking at the facilities in Unalaska.

**Table 81. Vessels Capable of Docking at Unalaska (Dutch Harbor) Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Dutch Harbor Berth 3			X						X
Dutch Harbor USCG Piers 1&2			X						X

Note: X indicates the vessel is compatible with this terminal.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value of the facility was constructed by PND (2019).

**Unalaska Facility**

*Docking Orientation:* Side Berth

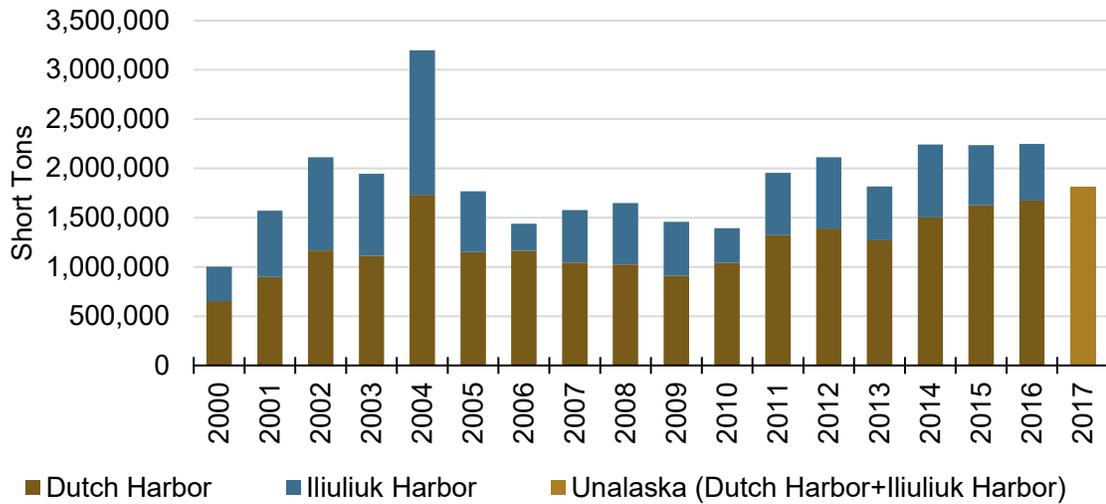
*Description:* The ferry berth occupies portions of two City owned docks; designated by the City as Position 3 and Position 4, respectively. The facility was upgraded in 2018 with a sheet pile bulkhead dock with steel pin-pile fender units. This facility is owned and operated by the City.

*Alternative Usage:* This dock is a multi-purpose facility utilized by other vessels.

### 3.1.3 Transportation Alternatives

Figure 92 shows marine freight data for Unalaska (Dutch and Iliuliuk Harbors). A variety of commodities pass through Unalaska, with distillate fuel oil and fish (not shellfish) as top commodities by volume. Following those two categories, prepared fish, gasoline, and manufactured products are also top commodities by volume passing through Unalaska. The prominence of fish commodities aligns with Unalaska’s (Dutch Harbor) ranking as the top seafood port by volume in the U.S. for the 21<sup>st</sup> consecutive year (NMFS, 2018).

**Figure 92. Unalaska (Dutch & Iliuliuk Harbors) Inbound and Outbound Annual Marine Freight, 2000–2017**



Data Source: USACE, 2019. USACE, 2018.

One carrier provides regularly scheduled passenger air service to Unalaska (Dutch Harbor), and rates to hub airports are shown in Table 82.

**Table 82. Unalaska (Dutch Harbor) Flight Services and Rates for Single Adult Passenger, by Carrier**

Airline Carrier	One Way Destination	Summer Rate (\$)	Winter Rate (\$)
Alaska Airlines operated by PenAir	Anchorage	490	490

Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.

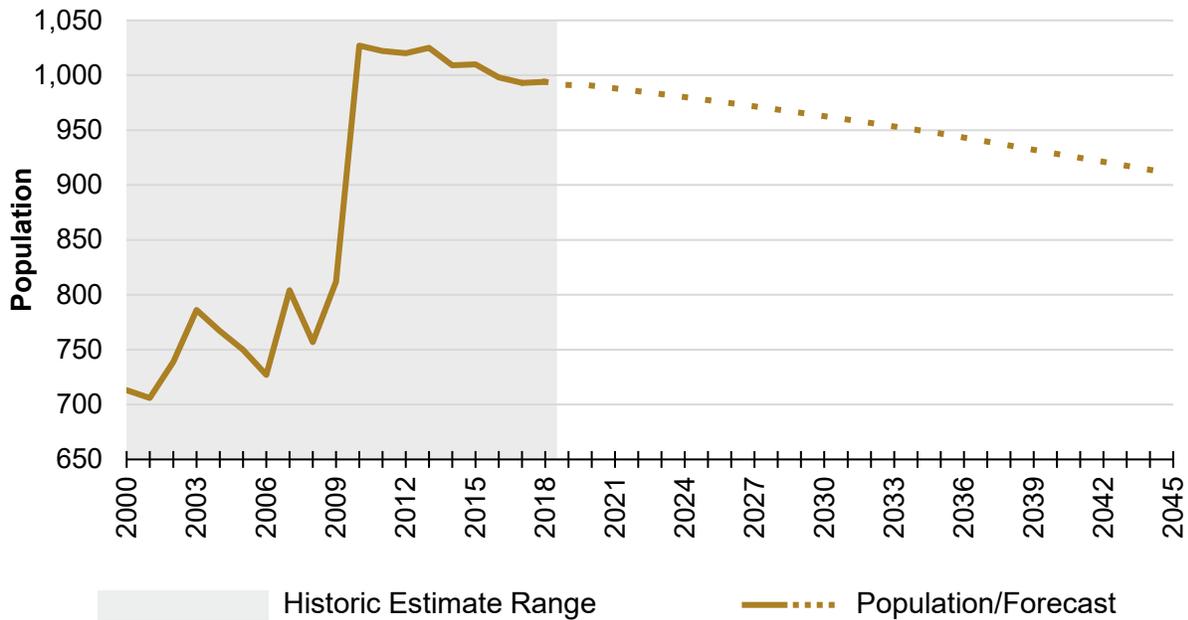
Data Source: Alaska Airlines, Inc., 2019.

## 3.2 Akutan Community Profile

### 3.2.1 Demographic Summary

Akutan was affected by changes in U.S. Census methodology, which caused a significant increase in population between DOLWD 2009 estimates and U.S. Census estimates in 2010. Akutan’s population is expected to decrease gradually over time with 994 permanent residents in 2018 (Figure 93).

**Figure 93. Akutan Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 83 shows student enrollment in all Akutan schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. AMHS is important for students who use the ferries to travel for competitive sports tournaments, however there are few middle and high school-aged students in Akutan, so this is not a significant concern.

**Table 83. Akutan School Enrollment by Grade**

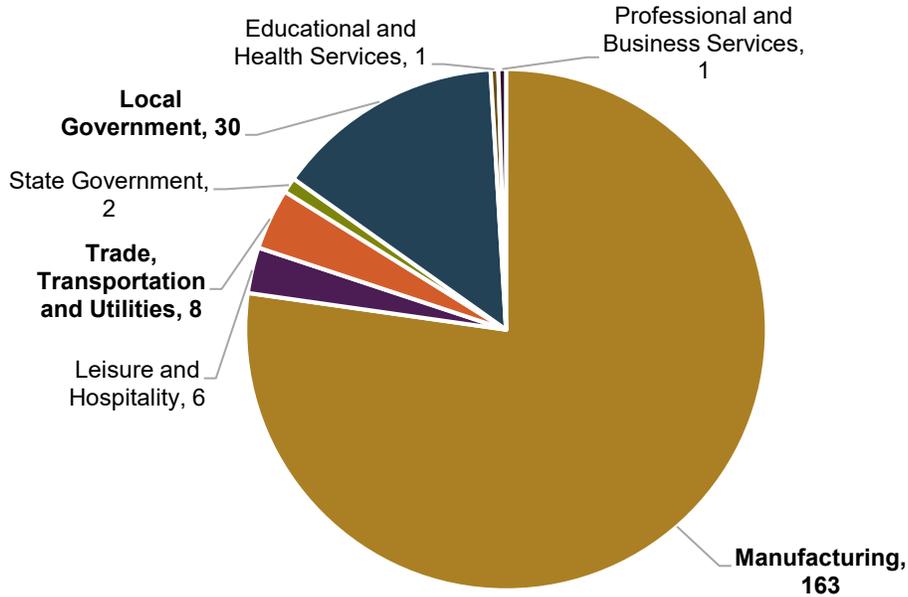
Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	0	3	3	1	0	2	0	0	0	0	0	0	1	0
Total	9							0		1			0	

Data Source: USDE, 2016.

Figure 94 shows the number of workers in various industries for Akutan, and the top three industries are shown in bold. Manufacturing is the number one employment sector in Akutan and includes fish

processing jobs. In Akutan, Trident Seafoods operates the largest seafood production facility in North America which can process more than three million pounds of raw fish per day (Trident Seafoods 2019).

**Figure 94. Akutan Resident Employment by Industry, 2016**



Data Source: ALARI, 2019, 2016

### 3.2.2 AMHS Summary

#### **Community Leader Perspectives**

Mayor Joseph Bereskin of Akutan provided information via survey on how AMHS is used by individuals and businesses within the community. His responses are summarized below.

#### ***How Residents Use the Ferry***

Individuals use the ferry to travel to the hub community of Dutch Harbor to go grocery shopping, see family, and do other errands.

#### ***Minimum Level of Service***

Two times a month. Currently, the hours do not allow for much time for visitors to spend in Akutan.

#### ***Commercial Uses***

Trident Seafoods uses the Tustumena to bring workers in and out.

#### **Historic Revenue and Traffic Volumes**

Table 84 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with Akutan as the origin or destination. These data were generated using

historic revenue and sailings data provided by DOT&PF (2019a). Akutan is an origin/destination in the Southwest Route Group, connecting to eight ports. The route between Akutan and Unalaska generates the most revenue and transports the most passengers.

**Table 84. Akutan as the Origin or Destination—AMHS Volume and Revenue, 2009–2018**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Southwest Routes</b>										
<b>Travel to and from Unalaska</b>										
Sailings	12	18	22	26	12	10	18	18	14	12
Passengers	435	492	704	961	445	184	466	319	272	223
# on Car-deck	2	10	1	0	0	0	0	3	1	3
Vans	0	0	0	0	0	0	0	0	0	0
\$(1,000s)	\$14	\$17	\$25	\$32	\$16	\$8	\$15	\$11	\$11	\$9
<b>Travel to and from False Pass</b>										
Sailings	12	18	22	20	6	5	9	7	3	3
Passengers	0	0	6	1	0	0	3	2	3	1
# on Car-deck	0	0	0	0	0	0	0	0	1	1
Vans	0	0	0	0	0	0	0	0	0	0
\$(1,000s)	\$0	\$0	\$1	\$0	\$0	\$0	\$1	\$0	\$0	\$0
<b>Travel to and from Cold Bay</b>										
Sailings	12	18	22	26	12	10	18	14	1	4
Passengers	4	3	10	24	18	0	2	6	0	14
# on Car-deck	0	0	0	0	0	0	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$(1,000s)	\$0	\$0	\$1	\$3	\$2	\$0	\$0	\$1	\$0	\$1
<b>Travel to and from King Cove</b>										
Sailings	12	18	22	26	12	10	18	15	3	2
Passengers	8	14	21	17	10	1	15	17	4	4
# on Car-deck	0	0	0	0	0	0	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$(1,000s)	\$1	\$2	\$2	\$3	\$1	\$0	\$2	\$2	\$1	\$0
<b>Travel to and from Sand Point</b>										
Sailings	12	18	22	26	12	10	18	17	8	2
Passengers	30	6	21	24	8	3	35	45	17	31
# on Car-deck	0	0	0	0	0	0	0	1	4	0
Vans	0	0	0	0	0	0	0	0	0	0
\$(1,000s)	\$6	\$1	\$5	\$6	\$2	\$1	\$6	\$9	\$5	\$5
<b>Travel to and from Chignik</b>										
Sailings	12	18	22	24	10	8	13	11	3	2
Passengers	21	11	29	18	6	15	6	19	4	4
# on Car-deck	0	0	0	0	0	0	0	1	2	0
Vans	0	0	0	0	0	0	0	0	0	0
\$(1,000s)	\$4	\$3	\$5	\$4	\$2	\$3	\$1	\$5	\$2	\$1

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Kodiak</b>										
Sailings	12	18	22	26	12	10	18	15	1	0
Passengers	0	0	1	5	5	0	6	2	1	0
# on Car-deck	0	0	0	0	0	0	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$2	\$1	\$0	\$2	\$1	\$0	\$0
<b>Travel to and from Homer</b>										
Sailings	12	18	22	26	12	10	19	14	2	5
Passengers	15	19	6	11	10	0	12	9	2	9
# on Car-deck	0	0	0	0	0	0	0	1	0	1
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$5	\$6	\$3	\$7	\$4	\$0	\$5	\$7	\$1	\$5

Source: Northern Economics analysis using data from AMHS (2019)

### Land-based Facilities

The land-based AMHS facility in Akutan is non-state owned. Table 85 shows which currently operating AMHS vessels are capable of docking at the facilities in Akutan.

**Table 85. Vessels Capable of Docking at Akutan Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Akutan City Pier									X*
Akutan Trident Pier									X*

Notes:

X indicates the vessel is compatible with this terminal.

\* There are vehicle weight restrictions.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value of the facility was constructed by PND (2019).

#### **Akutan Facility**

*Docking Orientation:* Side Berth

*Description:* This facility consists of a platform dock constructed of concrete panels, steel pile caps, steel support piling, and two mooring dolphins at each end of the dock. The back of the dock is an earth filled sheet pile bulkhead for the full length of the dock. In line with the western dolphins is a sheet pile wall that acts as a wave barrier. This facility is owned by the Aleutians East Borough but is used at the City dock. AMHS used to only drop off passengers but they have begun to drop off vehicles as well.

*Alternative Usage:* The Akutan terminal is the multi-purpose City dock and can accommodate most freight and fishing vessels in addition to the listed AMHS vessels.

### 3.2.3 Transportation Alternatives

Two carriers provide regularly scheduled passenger air service to Akutan Airport (Akun Island) or Akutan City (Akutan Island), and rates to hub airports are shown in Table 86. Both flight routes do not operate on Sundays.

**Table 86. Akutan Available Flight Services and Rates, by Carrier**

Airline Carrier	Flight Segment	Summer Rate (\$)	Winter Rate (\$)
Grant Aviation	Akutan Airport to Unalaska	100	Not reported
Maritime Helicopters, Inc. (Akutan Airport Link)	Akutan Airport to Akutan City	100	Not reported

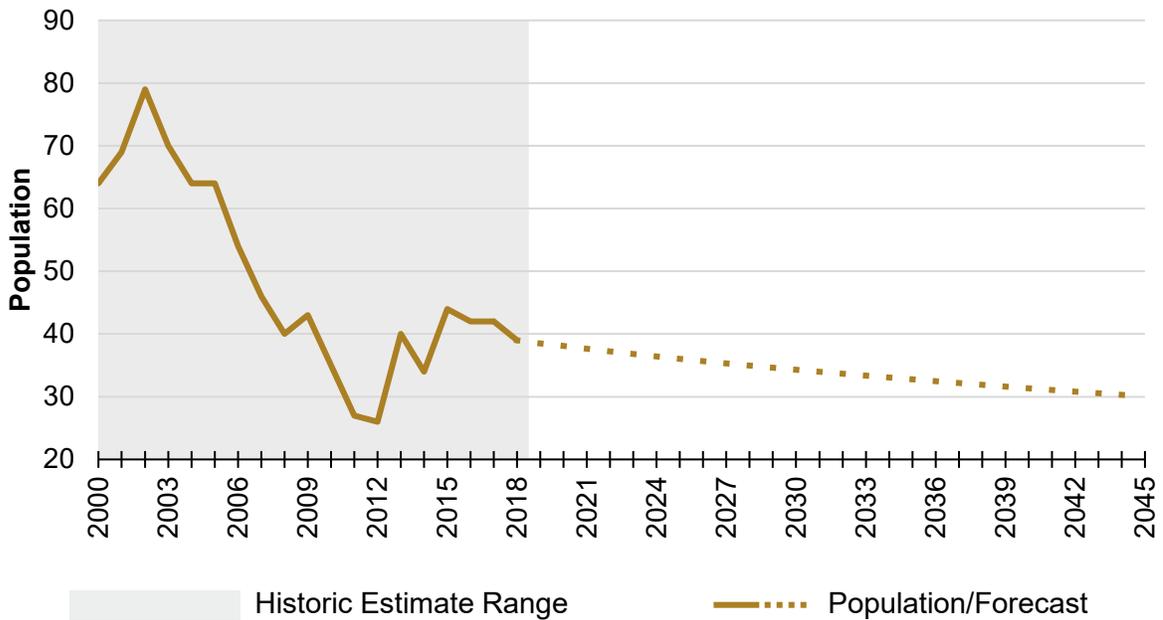
Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.  
Data Source: Grant Aviation, 2019. Akutan Airport Link, 2019.

### 3.3 False Pass Community Profile

#### 3.3.1 Demographic Summary

Figure 95 shows the population of False Pass with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 39 permanent residents, but the population of False Pass is expected to decrease gradually over time.

**Figure 95. False Pass Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 87 shows student enrollment in all False Pass schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

**Table 87. False Pass All Schools Enrollment by Grade, 2016–2017 School Year**

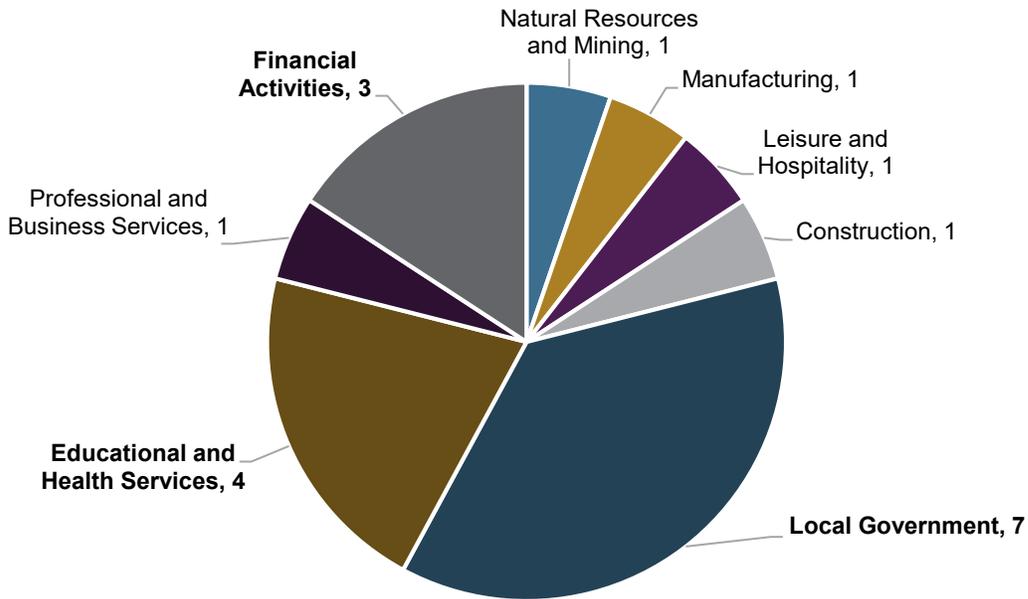
Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	0	1	1	0	3	0	1	0	3	0	1	0	1	0
<b>Total</b>	6							3		2			0	

Data Source: USDE, 2016.

Figure 96 shows the number of workers in various industries for False Pass, and the top three industries are shown in bold. Due to the geographic location of False Pass, seafood processing plants in this area process fish delivered from both the Bering Sea and Gulf of Alaska, including cod and salmon. In addition to existing plants operated by Trident Seafoods and Bering Pacific Seafoods, a new Silver Bay

Seafoods plant opened in 2019 (Trident Seafoods, 2019. Bering Pacific Seafoods, 2019. Silver Bay Seafoods, 2019).

Figure 96. False Pass Resident Employment by Industry, 2016



Data Source: ALARI, 2019

### 3.3.2 AMHS Summary

#### Community Leader Perspectives

False Pass community leaders did not respond to the study's request for information.

### Historic Revenue and Traffic Volumes

Table 88 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with False Pass as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). False Pass is an origin/destination in the Southwest Route Group, connecting to eight ports. The route between False Pass and Homer generates the most revenue.

**Table 88. False Pass as the Origin or Destination—AMHS Volume and Revenue, 2009–2018**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Southwest Routes</b>										
<b>Travel to and from Akutan</b>										
Sailings	12	18	22	20	6	5	9	7	3	3
Passengers	0	0	6	1	0	0	3	2	3	1
# on Car-deck	0	0	0	0	0	0	0	0	1	1
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$1	\$0	\$0	\$0	\$1	\$0	\$0	\$0
<b>Travel to and from Unalaska</b>										
Sailings	12	18	22	20	6	5	9	8	0	1
Passengers	15	5	20	19	22	12	18	19	0	1
# on Car-deck	5	3	4	9	16	4	11	14	0	0
Vans	0	0	0	0	0	3	0	0	0	0
\$ (1,000s)	\$2	\$1	\$2	\$4	\$5	\$5	\$6	\$6	\$0	\$0
<b>Travel to and from Cold Bay</b>										
Sailings	12	18	22	20	6	5	9	7	2	1
Passengers	0	5	8	11	2	0	19	1	1	4
# on Car-deck	2	0	2	2	2	4	2	1	1	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$1	\$1	\$0	\$0	\$1	\$0	\$0	\$0
<b>Travel to and from King Cove</b>										
Sailings	12	18	22	20	6	5	9	10	6	5
Passengers	23	21	40	51	8	3	8	33	17	7
# on Car-deck	5	4	9	10	4	1	4	5	7	5
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$2	\$1	\$3	\$3	\$1	\$0	\$1	\$2	\$2	\$1
<b>Travel to and from Sand Point</b>										
Sailings	12	18	22	20	6	5	9	9	6	2
Passengers	29	4	22	8	6	8	5	7	8	1
# on Car-deck	10	3	5	0	2	0	3	4	1	2
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$4	\$1	\$2	\$1	\$1	\$1	\$1	\$2	\$1	\$1

**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Chignik</b>										
Sailings	12	18	22	19	5	4	7	5	1	1
Passengers	0	1	0	0	0	0	0	0	2	1
# on Car-deck	0	0	0	0	0	0	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1	\$0
<b>Travel to and from Kodiak</b>										
Sailings	12	18	22	20	6	5	9	7	2	2
Passengers	4	2	1	0	0	0	3	1	0	0
# on Car-deck	5	1	1	1	0	0	1	0	2	2
Vans	2	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$8	\$2	\$1	\$1	\$0	\$0	\$1	\$0	\$1	\$1
<b>Travel to and from Homer</b>										
Sailings	12	18	22	20	6	5	10	9	7	7
Passengers	14	13	28	31	0	11	8	12	14	4
# on Car-deck	10	15	23	25	7	7	7	12	11	11
Vans	2	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$15	\$17	\$35	\$36	\$7	\$10	\$10	\$13	\$9	\$12

Source: Northern Economics analysis using data from AMHS (2019)

**Land-based Facilities**

The land-based AMHS facility in False Pass is non-state owned. Table 89 shows which currently operating AMHS vessels are capable of docking at the facilities in False Pass.

**Table 89. Vessels Capable of Docking at False Pass Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
False Pass									X

Note: X indicates the vessel is compatible with this terminal.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value of the facility was constructed by PND (2019).

**False Pass Facility**

*Docking Orientation:* Side Berth

*Description:* This facility consists of an L-shaped 175' x 40' dock, 450' long approach trestle, with a mooring dolphin located on each end of the dock and connected via a steel catwalk, a 100' x 100' staging area upland of the dock. The facility is a multi-purpose facility and could be in use by other vessels when the ferry arrives. AMHS is not in control of the operation or maintenance of this facility.

*Alternative Usage:* This is a multi-purpose dock that can accommodate barges and other vessels. Accommodating small passenger or similar vessels with low freeboard would likely be challenging due to the fixed dock elevation.

### **3.3.3 Transportation Alternatives**

One carrier provides regularly scheduled passenger air service to False Pass, and rates to hub airports are shown in Table 90. This route to Cold Bay only operates Mondays, Wednesdays, and Fridays.

**Table 90. False Pass Flight Services and Rates for Single Adult Passenger, by Carrier**

<b>Airline Carrier</b>	<b>One Way Destination</b>	<b>Summer Rate (\$)</b>	<b>Winter Rate (\$)</b>
Grant Aviation	Cold Bay	100	Not reported

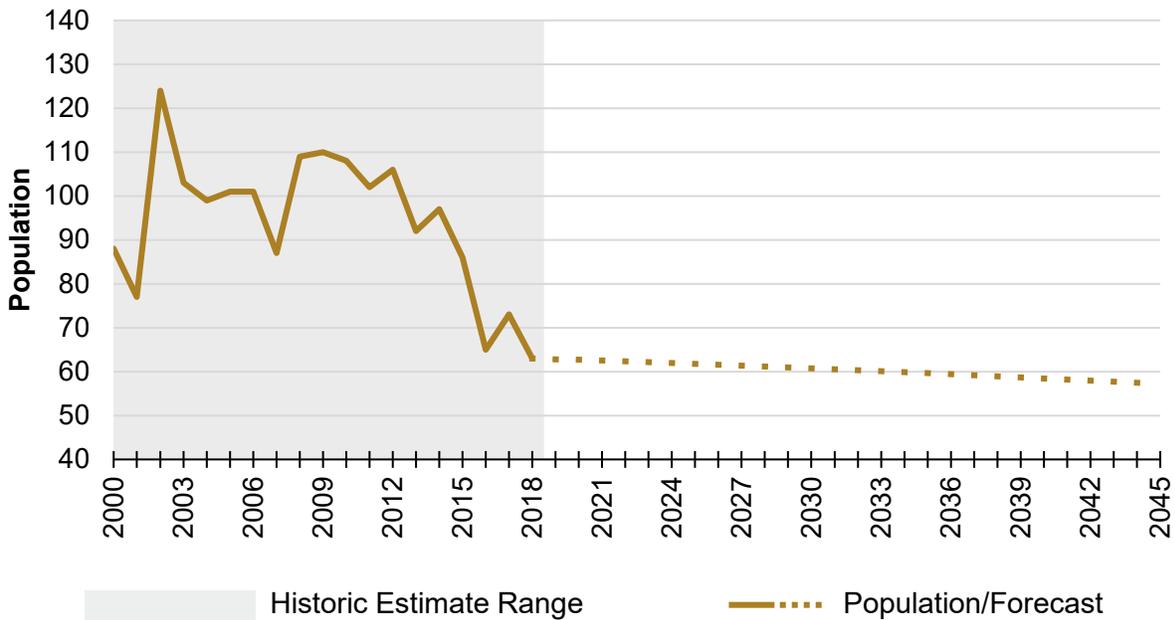
Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.  
Data Source: Grant Aviation, 2019

### 3.4 Cold Bay Community Profile

#### 3.4.1 Demographic Summary

Figure 97 shows the population of Cold Bay with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 63 permanent residents, and the population of Cold Bay is expected to stay about the same followed by a slight decrease over time.

**Figure 97. Cold Bay Historic Estimates and Population Forecast, 2000–2045**

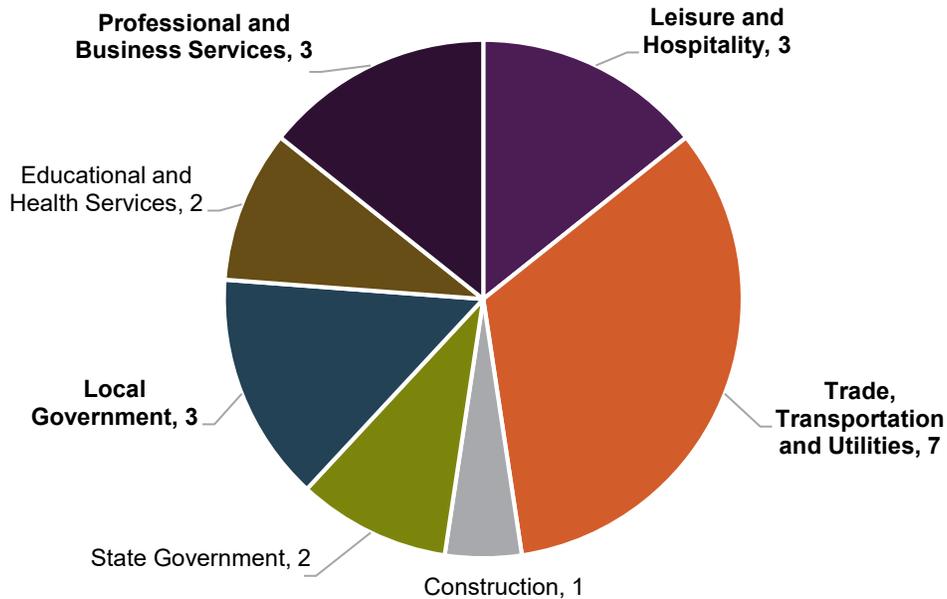


Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

There are no Alaska public schools currently operating in Cold Bay. There was previously one school in the community, Cold Bay School, that served preschool through high school with its last reported enrollment of 5 students in 2014-15 (AK DEED, 2019). Cold Bay is located in the Aleutians East Borough School District, which currently has schools in Akutan, False Pass, King Cove, and Sand Point.

Figure 98 shows the number of workers in various industries for Cold Bay, and the top three industries are shown in bold. Trident Seafoods operates a year-round processing plant in Sand Point that can process 1.5 million pounds of pollock or 350,000 pounds of salmon per day and employs up to 400 employees during peak season (Trident Seafoods, 2019).

**Figure 98. Cold Bay Resident Employment by Industry, 2016**



Data Source: ALARI, 2019

### 3.4.2 AMHS Summary

#### **Community Leader Perspectives**

Mayor Dailey Schaack of Cold Bay provided information via survey on how AMHS is used by individuals and businesses within the community. His responses are summarized below.

#### ***How Residents Use the Ferry***

Cold Bay residents use the ferry for purchasing vehicles and filling them with goods, specifically groceries, to transport into the community. The ferry is the only service available for getting our vehicles to a certified shop to handle repairs. When individuals move in or out of a community this is generally the only affordable option to move goods in or out of the community. Students do not ride the ferry as there has not been a school in Cold Bay since 2015.

#### ***Commercial Uses***

Various businesses use the ferry to bring items to Cold Bay. For specialized construction or environmental remediation projects at military sites, companies bring in all equipment (trucks and other heavy equipment) on the ferry. The State of Alaska Department of Transportation uses the ferry to move

equipment between DOT&PF stations to complete work projects. Lodge businesses utilize the ferry at the start and end of each season to bring in boxed truck of all goods so they can serve clients.

A limited number of visitors ride the ferry into camp in the community so they can participate in hunting and fishing activities.

### Transportation Options

It is not likely that other forms or providers of transportation services could respond to changes to AMHS service in our community. Cold Bay does not receive any other set schedule for barge services through private companies such as Samson Tug & Barge, etc. The other option available would be air freight, which would not be a financially feasible option.

### Minimum Level of Service

Optimally we would have the same level service of every other week during the summer months. If we needed to change the level of service, we would like to see the ferry arrive once per month for six months per year. This way folks can effectively plan projects for the necessary arrival and departure of equipment and materials.

### Ideas for Improving Fiscal Health

Replace the *Tustumena* with a more economical vessel that can reliably complete the trips as scheduled.

### Historic Revenue and Traffic Volumes

Table 91 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with Cold Bay as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). Cold Bay is an origin/destination in the Southwest Route Group, connecting to eight ports. The route between Cold Bay and Homer generates the most revenue. The route between Cold Bay and King Cove transports the most passengers.

**Table 91. Cold Bay as the Origin or Destination—AMHS Volume and Revenue, 2009–2018**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Southwest Routes</b>										
<b>Travel to and from False Pass</b>										
Sailings	12	18	22	20	6	5	9	7	2	1
Passengers	0	5	8	11	2	0	19	1	1	4
# on Car-deck	2	0	2	2	2	4	2	1	1	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$1	\$1	\$0	\$0	\$1	\$0	\$0	\$0
<b>Travel to and from Akutan</b>										
Sailings	12	18	22	26	12	10	18	14	1	4
Passengers	4	3	10	24	18	0	2	6	0	14
# on Car-deck	0	0	0	0	0	0	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$1	\$3	\$2	\$0	\$0	\$1	\$0	\$1

**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Unalaska</b>										
Sailings	12	18	22	26	16	12	18	17	7	11
Passengers	35	50	23	15	18	2	14	23	16	14
# on Car-deck	6	5	7	3	9	2	5	4	1	9
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$6	\$5	\$5	\$3	\$6	\$1	\$4	\$4	\$3	\$5
<b>Travel to and from King Cove</b>										
Sailings	12	18	22	25	17	12	18	18	14	13
Passengers	133	238	242	352	269	94	237	292	168	166
# on Car-deck	58	65	67	119	92	33	81	89	42	55
Vans	0	0	0	0	1	3	0	1	0	0
\$ (1,000s)	\$6	\$9	\$10	\$15	\$12	\$5	\$12	\$16	\$8	\$9
<b>Travel to and from Sand Point</b>										
Sailings	12	18	22	25	17	12	18	18	9	7
Passengers	12	5	21	26	36	6	35	28	9	10
# on Car-deck	11	6	18	17	36	4	12	13	6	3
Vans	0	0	0	0	0	0	0	1	0	0
\$ (1,000s)	\$4	\$2	\$8	\$6	\$12	\$2	\$5	\$5	\$2	\$2
<b>Travel to and from Chignik</b>										
Sailings	12	18	22	23	11	8	13	10	1	0
Passengers	0	0	0	0	0	0	0	0	1	0
# on Car-deck	0	0	0	0	0	0	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Travel to and from Kodiak</b>										
Sailings	12	18	22	25	17	12	18	15	7	3
Passengers	10	7	7	9	2	0	14	7	7	1
# on Car-deck	10	8	7	6	9	5	3	3	12	8
Vans	0	0	0	2	0	0	0	0	0	0
\$ (1,000s)	\$10	\$9	\$8	\$13	\$10	\$5	\$7	\$6	\$8	\$6
<b>Travel to and from Homer</b>										
Sailings	12	18	22	25	15	12	19	18	9	13
Passengers	9	16	29	25	24	22	12	21	16	16
# on Car-deck	41	39	45	57	48	44	44	73	35	72
Vans	0	0	1	3	2	0	0	0	0	0
\$ (1,000s)	\$42	\$38	\$55	\$74	\$65	\$55	\$47	\$82	\$52	\$108

Source: Northern Economics analysis using data from AMHS (2019)

### Land-based Facilities

The land-based AMHS facility in Cold Bay is non-state owned. Table 92 shows which currently operating AMHS vessels are capable of docking at the facilities in Cold Bay.

**Table 92. Vessels Capable of Docking at Cold Bay Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Cold Bay			X						X

Note: X indicates the vessel is compatible with this terminal.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value of the facility was constructed by PND (2019).

#### **Cold Bay Facility**

*Docking Orientation:* Side Berth

*Description:* This dock is owned by the Aleutians East borough and is managed by the City. This facility consists of two dock sections that were constructed at different times. The original structure consists of a 100x40ft concrete panel dock, a 1,320ft long pile supported, concrete panel approach, a mooring dolphin, and catwalk northwest of the original dock. The newer section is on the seaward side of the dock and consists of a 360x60ft addition constructed on the northeast side of the dock.

*Alternative Usage:* Since this is the only dock in Cold Bay, and the three nearby towns, it is currently used by the ferry, barges, fishing boats, and other vessels. Accommodating small passenger or similar vessels with low freeboard would likely be challenging due to the fixed dock elevation.

### 3.4.3 Transportation Alternatives

One carrier provides regularly scheduled passenger air service to Cold Bay, and rates to hub airports are shown in Table 93. This route to Anchorage does not operate on Sundays. The route is nonstop service to Anchorage on certain days of the week and has a stop in Sand Point on the other days, but each service has the same rate.

**Table 93. Cold Bay Flight Services and Rates for Single Adult Passenger, by Carrier**

Airline Carrier	One Way Destination	Summer Rate (\$)	Winter Rate (\$)
Ravn Alaska operated by PenAir	Anchorage	479	479

Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.

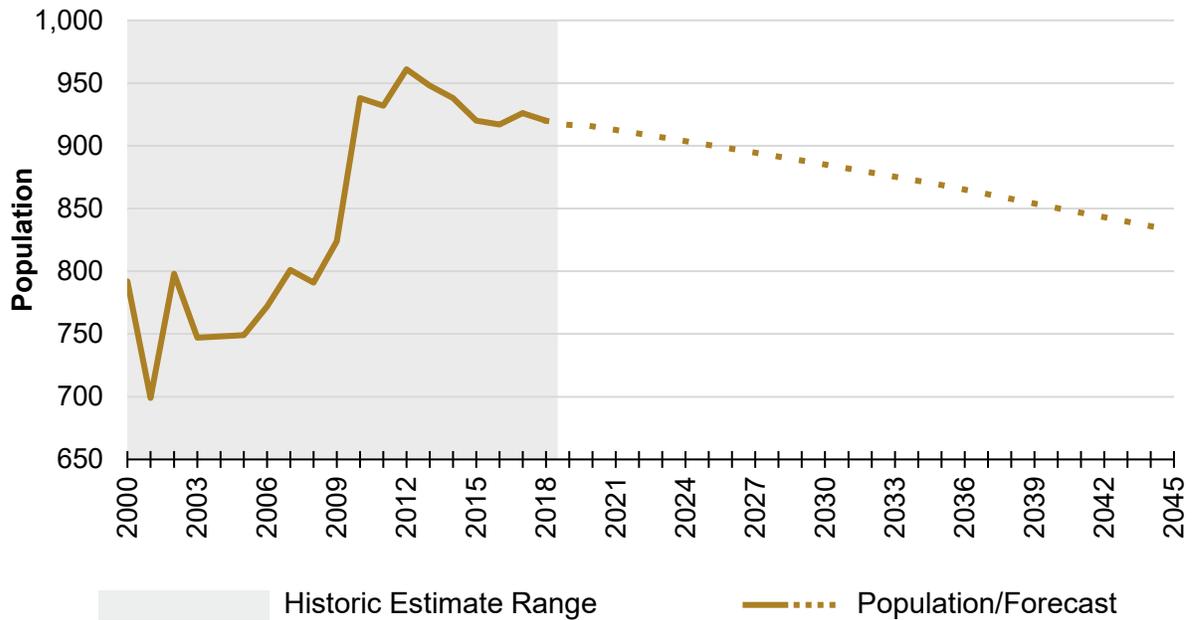
Data Source: Ravn Alaska, 2019.

### 3.5 King Cove Community Profile

#### 3.5.1 Demographic Summary

Figure 99 shows the population of King Cove with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 920 permanent residents, but the population of King Cove is expected to decrease steadily over time.

**Figure 99. King Cove Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 94 shows student enrollment in all King Cove schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

**Table 94. King Cove All Schools Enrollment by Grade, 2016–2017 School Year**

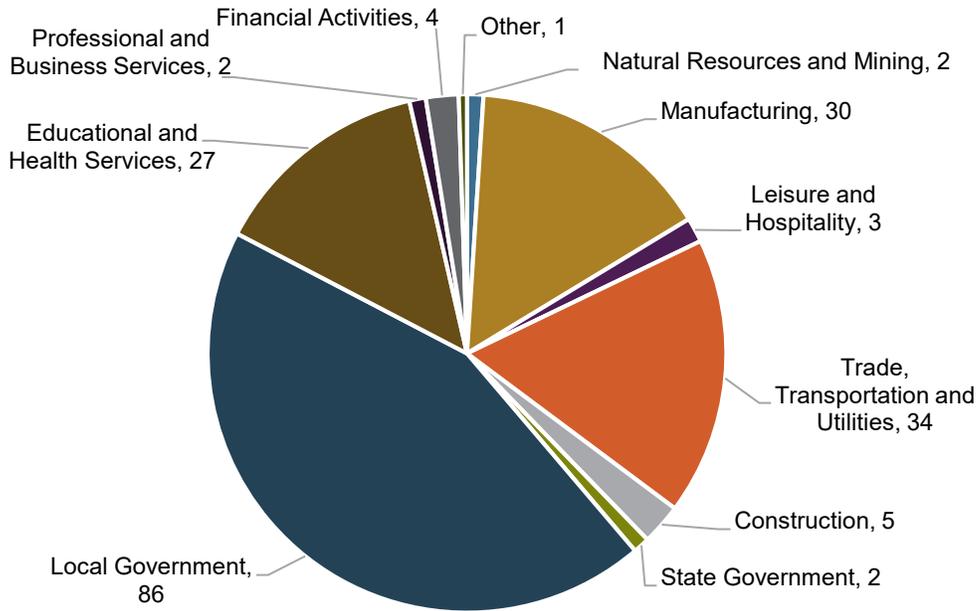
Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	4	8	6	7	7	9	7	3	9	6	10	6	4	12
<b>Total</b>	48							12		26			12	

Data Source: USDE, 2016.

Figure 100 shows the number of workers in various industries for King Cove, and the top three industries are shown in bold. Peter Pan Seafoods’ largest processing facility is in King Cove and operates year-round, employing up to 500 people during peak seasons in both winter and summer. The plant processes a variety of species caught in the Bering Sea and Gulf of Alaska including crab, pollock, cod,

halibut, and block cod. The plant has recently expanded whitefish operations and has the largest canning capacity for salmon of any Alaska processing plant. (Peter Pan Seafoods, Inc. 2019)

**Figure 100. King Cove Resident Employment by Industry, 2016**



Data Source: ALARI, 2019

### 3.5.2 AMHS Summary

#### **Community Leader Perspectives**

Mayor Henry Mack of King Cove provided information via survey on how AMHS is used by individuals and businesses within the community. His responses are summarized below.

#### ***How Residents Use the Ferry***

The City of King Cove utilizes the ferry. Residents use it to take vacations, bring vehicles to King Cove, and travel from town to town and return home.

#### ***Transportation Options***

The other form of vehicle transportation we have is extremely expensive. Other than that, we only have plane travel. The ferry is the cheapest option for bringing vehicles to town.

#### ***Minimum Level of Service***

Two runs a year, preferably more

### Historic Revenue and Traffic Volumes

Table 95 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with King Cove as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). King Cove is an origin/destination in the Southwest and Homer-Kodiak Route Groups, connecting to nine ports. The route between King Cove and Homer generates the most revenue. The route between King Cove and Sand Point transports the most passengers.

**Table 95. King Cove as the Origin or Destination—AMHS Volume and Revenue, 2009–2018**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Southwest Routes</b>										
<b>Travel to and from Cold Bay</b>										
Sailings	12	18	22	25	17	12	18	18	14	13
Passengers	133	238	242	352	269	94	237	292	168	166
# on Car-deck	58	65	67	119	92	33	81	89	42	55
Vans	0	0	0	0	1	3	0	1	0	0
\$ (1,000s)	\$6	\$9	\$10	\$15	\$12	\$5	\$12	\$16	\$8	\$9
<b>Travel to and from False Pass</b>										
Sailings	12	18	22	20	6	5	9	10	6	5
Passengers	23	21	40	51	8	3	8	33	17	7
# on Car-deck	5	4	9	10	4	1	4	5	7	5
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$2	\$1	\$3	\$3	\$1	\$0	\$1	\$2	\$2	\$1
<b>Travel to and from Akutan</b>										
Sailings	12	18	22	26	12	10	18	15	3	2
Passengers	8	14	21	17	10	1	15	17	4	4
# on Car-deck	0	0	0	0	0	0	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$1	\$2	\$2	\$3	\$1	\$0	\$2	\$2	\$1	\$0
<b>Travel to and from Unalaska</b>										
Sailings	12	18	22	26	16	12	18	16	4	9
Passengers	17	46	68	52	35	11	38	20	3	55
# on Car-deck	8	1	11	6	13	2	7	11	4	2
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$5	\$6	\$9	\$6	\$6	\$3	\$7	\$4	\$2	\$9
<b>Travel to and from Sand Point</b>										
Sailings	12	18	22	25	17	12	18	18	14	13
Passengers	346	293	385	429	395	299	373	460	287	200
# on Car-deck	55	48	51	51	58	35	39	62	28	25
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$20	\$19	\$24	\$25	\$24	\$17	\$22	\$29	\$19	\$16

**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Chignik</b>										
Sailings	12	18	22	23	11	8	13	10	0	3
Passengers	4	6	3	0	0	0	0	2	0	3
# on Car-deck	0	1	0	0	0	0	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$1	\$1	\$1	\$0	\$0	\$0	\$1	\$1	\$0	\$1
<b>Travel to and from Kodiak</b>										
Sailings	12	18	22	25	17	12	18	17	10	6
Passengers	8	10	20	18	47	5	9	4	29	7
# on Car-deck	8	12	8	3	17	11	6	8	4	6
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$6	\$9	\$8	\$6	\$17	\$9	\$6	\$6	\$10	\$7
<b>Travel to and from Homer</b>										
Sailings	12	18	22	25	15	12	19	18	13	13
Passengers	65	80	127	101	138	92	164	74	70	83
# on Car-deck	75	72	95	81	66	64	66	63	56	63
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$72	\$68	\$108	\$80	\$83	\$70	\$90	\$68	\$65	\$90
<b>Homer-Kodiak Routes</b>										
<b>Travel to and from Seldovia</b>										
Sailings	12	15	22	23	14	10	18	13	0	1
Passengers	0	0	0	0	0	0	0	1	0	2
# on Car-deck	0	0	0	0	0	1	0	1	0	4
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$0	\$0	\$1	\$0	\$1	\$0	\$2

Source: Northern Economics analysis using data from AMHS (2019)

**Land-based Facilities**

The land-based AMHS facility in King Cove is non-state owned. Table 96 shows which currently operating AMHS vessels are capable of docking at the facilities in King Cove.

**Table 96. Vessels Capable of Docking at the King Cove Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
King Cove			X						X

Note: X indicates the vessel is compatible with this terminal.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value of the facility was constructed by PND (2019).

**King Cove Facility**

*Docking Orientation:* Side Berth

*Description:* This terminal consists of a sheet pile cell structures about 125ft long with two steel pile moorings on each side of the dock connected by steel catwalks. The approach has a bridge partway down to allow juvenile fish migration which consists of a steel girder and concrete deck bridge with open sheet pile cells to protect the abutments.

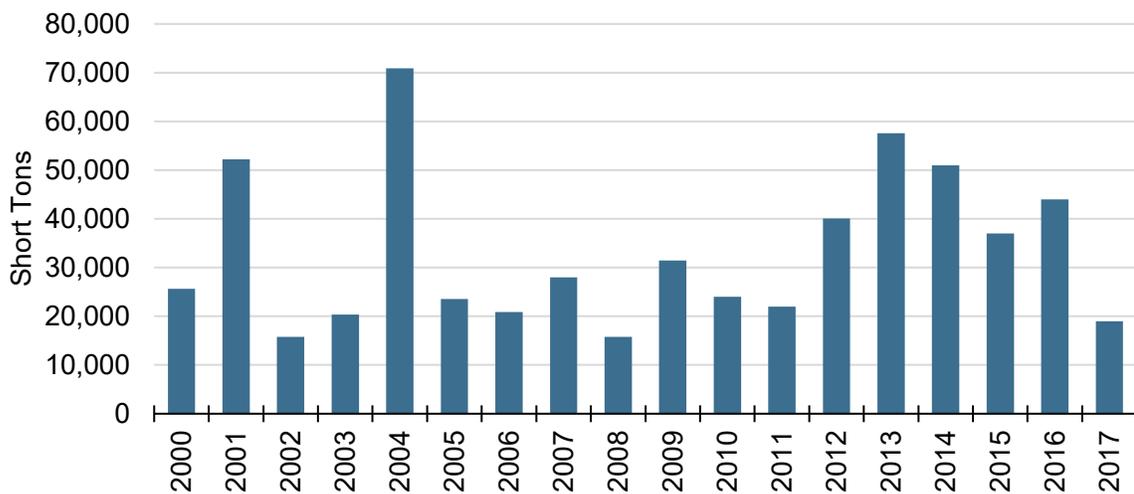
AMHS does not have control of operations or maintenance at this facility.

*Alternative Usage:* This is a multi-purpose dock that can accommodate barges and other vessels. Accommodating small passenger or similar vessels with low freeboard would likely be challenging due to the fixed dock elevation.

**3.5.3 Transportation Alternatives**

Figure 101 shows marine freight data for King Cove. King Cove’s top commodities by volume are distillate fuel oil and fish (not shellfish). Other marine freight commodities include fabricated metal products, gasoline, manufactured products, non-metallic mineral products, and paper products. The peak freight volume in 2004 was driven by the reported distillate fuel oil volume, the largest reported in this time series.

**Figure 101. King Cove Inbound and Outbound Annual Marine Freight, 2000–2017**



Data Source: USACE, 2019. USACE, 2018.

One carrier provides regularly scheduled passenger air service to King Cove, and rates to hub airports are shown in Table 97. This route to Cold Bay does not operate on Sundays.

**Table 97. King Cove Flight Services and Rates for Single Adult Passenger, by Carrier**

Airline Carrier	One Way Destination	Summer Rate (\$)	Winter Rate (\$)
Grant Aviation	Cold Bay	50	Not reported

Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.

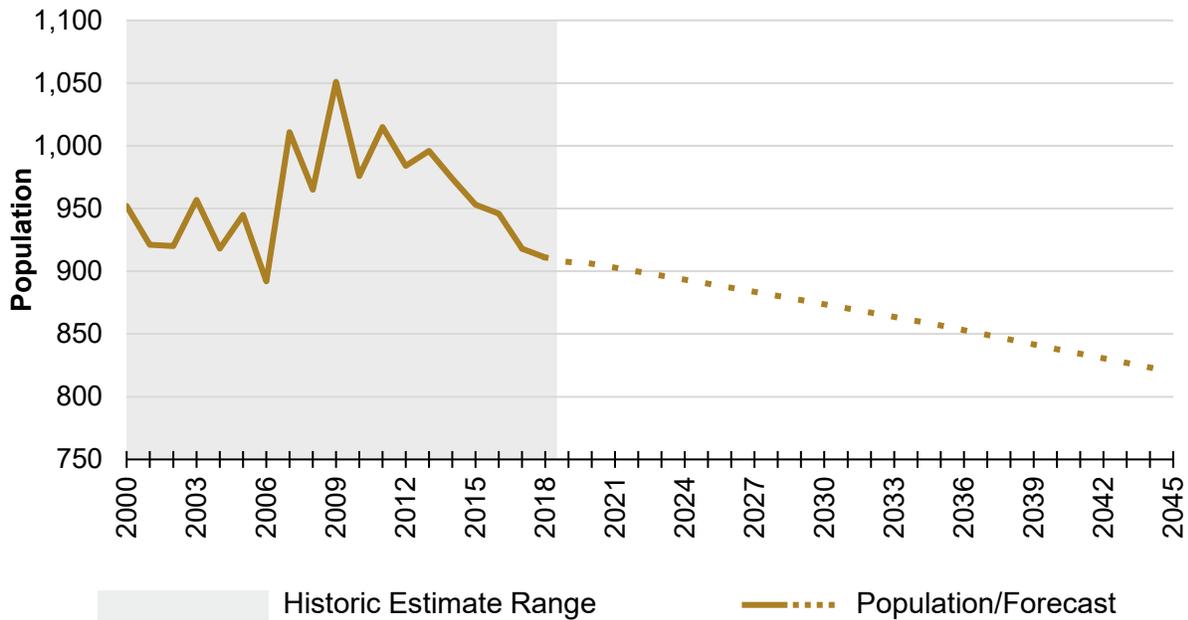
Data Source: Grant Aviation, 2019.

### 3.6 Sand Point Community Profile

#### 3.6.1 Demographic Summary

Figure 102 shows the population of Sand Point with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 911 permanent residents, but the population of Sand Point is expected to decrease steadily over time.

**Figure 102. Sand Point Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 98 shows student enrollment in all Sand Point schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

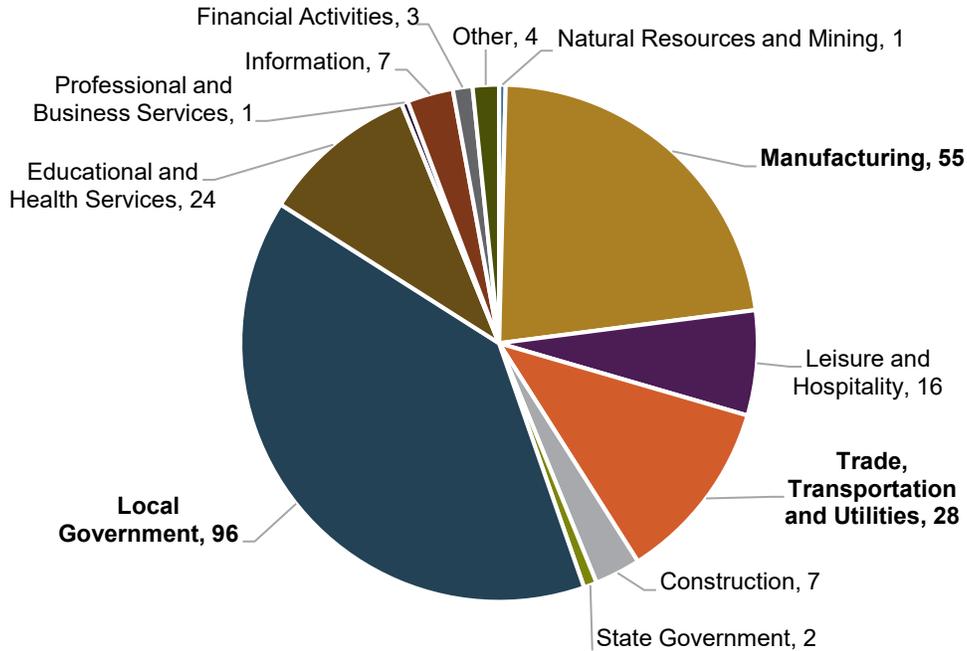
**Table 98. Sand Point All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	9	7	11	5	12	7	8	7	6	11	5	13	9	32
Total	59							13		38			32	

Data Source: USDE, 2016.

Figure 103 shows the number of workers in various industries for Sand Point, and the top three industries are shown in bold.

**Figure 103. Sand Point Resident Employment by Industry, 2016**



Data Source: ALARI, 2019

### 3.6.2 AMHS Summary

#### Community Leader Perspectives

Sand Point City Administrator Jordan Keeler provided information via survey and interview on how AMHS is used by individuals and businesses within the community. His responses are summarized below.

#### *How Residents Use the Ferry*

Residents use the ferry to transport vehicles, often loaded with consumer goods purchased in Anchorage, as well as a method of travel. Businesses and the school will use the ferry to transport commercial vehicles and equipment. We don't get much in the way of visitors, so I'm not sure how they factor in.

The biggest reasons to take the ferry for residents of Sandpoint seem to be travel to medical and other professional services appointments. Medical services are quite limited in Sandpoint. The ferry also allows residents to shop in larger communities, where the retail environment offers larger supply and variety and lower costs for consumer products.

Generally, residents with insurance can receive insurance reimbursements for medical or dental service not available in the community, whether they travel by air or by ferry. However, the cost of taking a

vehicle on AMHS is generally not covered. At least one insurance company will reimburse for other out-of-pocket expenses, including fuel.

The Aleutians East Borough School District uses the ferries to move teachers in and out of town. That option might not be available if summer services become more limited. Sports teams take the ferry and have adapted to the lack of winter service.

Everyone on the Aleutian Island chain has family and relations in other communities on the chain. The ferry is really the only way to get to another community on a scheduled service, with at least one exception (King Cove residents can get to Cold Bay). Residents also have year-round barge service for freight but tend to rely on the ferry service as much as possible.

### ***Commercial Uses***

The biggest use periods are in late May in preparation for the salmon season and then in August and September after the salmon season has ended. The processors don't really use the Tustumena to move workers and instead work deals with air carriers.

Businesses use barge service for larger shipments. Trident, the largest fish processor, uses the barge. The AC (the primary store in Sandpoint) uses the barge more often than it uses AMHS.

### ***Transportation Options***

It's possible that cargo service could increase from the current levels, but that depends on the price charged by the cargo service, both marine and air, and the ability and willingness of users to pay. The ferry is the most economical way to get back to the road system.

Without ferry service, air transportation will be the sole means for individuals to reach the island. We currently pay about \$1,000 round-trip by plane from Anchorage.

It is very difficult and expensive to get an entire family onto an airplane. Sandpoint has the most expensive airfares in the U.S. other than Cold Bay.

### ***Minimum Level of Service***

Sand Point could accept two sailings in May, one sailing per month from June through August, and two sailings in September. A schedule that makes more sense would also be helpful.

### ***Ideas for Improving Fiscal Health***

- Get exemptions for the ridiculous sourcing requirements that the federal government imposes for shipbuilding.
- Charge non-residents a small premium like the railroad does.

### Historic Revenue and Traffic Volumes

Table 99 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with Sand Point as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). Sand Point is an origin/destination in the Southwest route group, connecting to eight ports. The route between Sand Point and Homer generates the most revenue. The route between Sand Point and King Cove transports the most passengers.

**Table 99. Sand Point as the Origin or Destination—AMHS Volume and Revenue, 2009–2018**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Southwest Routes</b>										
<b>Travel to and from King Cove</b>										
Sailings	12	18	22	25	17	12	18	18	14	13
Passengers	346	293	385	429	395	299	373	460	287	200
# on Car-deck	55	48	51	51	58	35	39	62	28	25
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$20	\$19	\$24	\$25	\$24	\$17	\$22	\$29	\$19	\$16
<b>Travel to and from Cold Bay</b>										
Sailings	12	18	22	25	17	12	18	18	9	7
Passengers	12	5	21	26	36	6	35	28	9	10
# on Car-deck	11	6	18	17	36	4	12	13	6	3
Vans	0	0	0	0	0	0	0	1	0	0
\$ (1,000s)	\$4	\$2	\$8	\$6	\$12	\$2	\$5	\$5	\$2	\$2
<b>Travel to and from False Pass</b>										
Sailings	12	18	22	20	6	5	9	9	6	2
Passengers	29	4	22	8	6	8	5	7	8	1
# on Car-deck	10	3	5	0	2	0	3	4	1	2
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$4	\$1	\$2	\$1	\$1	\$1	\$1	\$2	\$1	\$1
<b>Travel to and from Akutan</b>										
Sailings	12	18	22	26	12	10	18	17	8	2
Passengers	30	6	21	24	8	3	35	45	17	31
# on Car-deck	0	0	0	0	0	0	0	1	4	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$6	\$1	\$5	\$6	\$2	\$1	\$6	\$9	\$5	\$5
<b>Travel to and from Unalaska</b>										
Sailings	12	18	22	26	16	12	18	18	6	7
Passengers	30	16	41	26	39	10	28	37	7	33
# on Car-deck	12	8	11	11	9	3	3	8	1	7
Vans	0	0	1	4	0	0	0	0	0	0
\$ (1,000s)	\$12	\$7	\$15	\$19	\$9	\$2	\$5	\$8	\$2	\$10

**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Chignik</b>										
Sailings	12	18	22	23	11	8	13	13	2	5
Passengers	9	7	7	9	4	2	3	9	1	5
# on Car-deck	5	7	4	5	0	0	0	3	1	1
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$1	\$1	\$1	\$2	\$1	\$0	\$0	\$1	\$0	\$1
<b>Travel to and from Kodiak</b>										
Sailings	12	18	22	25	17	12	18	19	9	12
Passengers	27	30	39	37	25	15	33	29	13	22
# on Car-deck	9	9	36	53	54	26	32	32	9	19
Vans	0	0	0	11	2	8	9	0	0	0
\$ (1,000s)	\$10	\$11	\$35	\$62	\$39	\$26	\$32	\$30	\$22	\$20
<b>Travel to and from Homer</b>										
Sailings	12	18	22	25	15	12	19	18	11	12
Passengers	45	55	83	109	111	54	109	79	39	67
# on Car-deck	41	65	64	79	49	48	62	58	19	69
Vans	0	0	8	16	2	0	0	0	0	0
\$ (1,000s)	\$32	\$54	\$70	\$94	\$59	\$48	\$68	\$57	\$29	\$72

Source: Northern Economics analysis using data from AMHS (2019)

**Land-based Facilities**

The land-based AMHS facility in Sand Point is non-state owned. Table 100 shows which currently operating AMHS vessels are capable of docking at the facilities in Sand Point.

**Table 100. Vessels Capable of Docking at Sand Point Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Sand Point			X						X

Note: X indicates the vessel is compatible with this terminal.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value of the facility was constructed by PND (2019).

**Sand Point Facility**

*Docking Orientation:* Side Berth

*Description:* This facility consists of a dock approximately 200ft long and 60ft wide constructed of pre-stressed concrete deck panels supported by steel beams and steel pipe piles. There are six fenders along the dock face. Each fender has two steel pin piles, a steel framework with timber face and is attached to the dock with rubber fenders. Steel mooring dolphins with fender systems are located at each end of the dock and accessed by catwalks. The breakwater serves as a single-lane access road. Construction of a new, modern pile supported dock is currently in progress to replace the existing ferry terminal.

*Alternative Usage:* This is a multi-purpose facility that can accommodate barges and other vessels. Accommodating small passenger or similar vessels with low freeboard would likely be challenging due to the fixed dock elevation.

### **3.6.3 Transportation Alternatives**

One carrier provides regularly scheduled passenger air service to Sand Point, and rates to hub airports are shown in Table 101. This route does not operate on Sundays.

**Table 101. Sand Point Flight Services and Rates for Single Adult Passenger, by Carrier**

<b>Airline Carrier</b>	<b>One Way Destination</b>	<b>Summer Rate (\$)</b>	<b>Winter Rate (\$)</b>
Ravn Alaska operated by PenAir	Anchorage	479	479

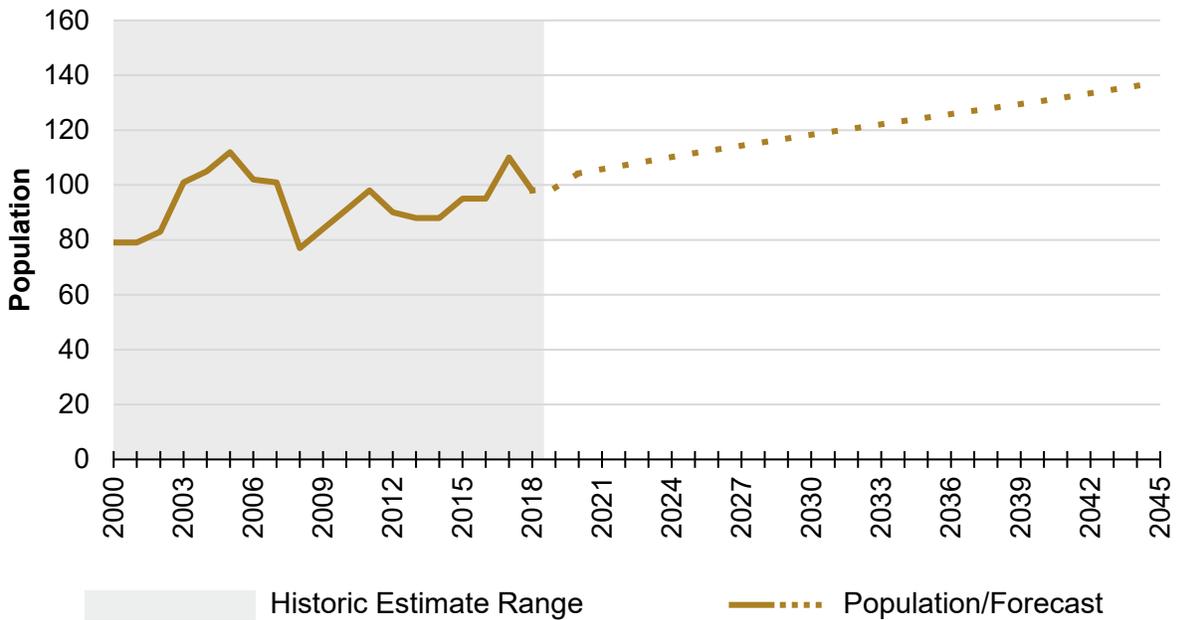
Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.  
Data Source: Ravn Alaska, 2019.

### 3.7 Chignik Community Profile

#### 3.7.1 Demographic Summary

Figure 104 shows the population of Chignik with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 98 permanent residents, and the population of Chignik is expected to increase steadily over time.

**Figure 104. Chignik Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 102 shows student enrollment in all Chignik schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

**Table 102. Chignik All Schools Enrollment by Grade, 2016–2017 School Year**

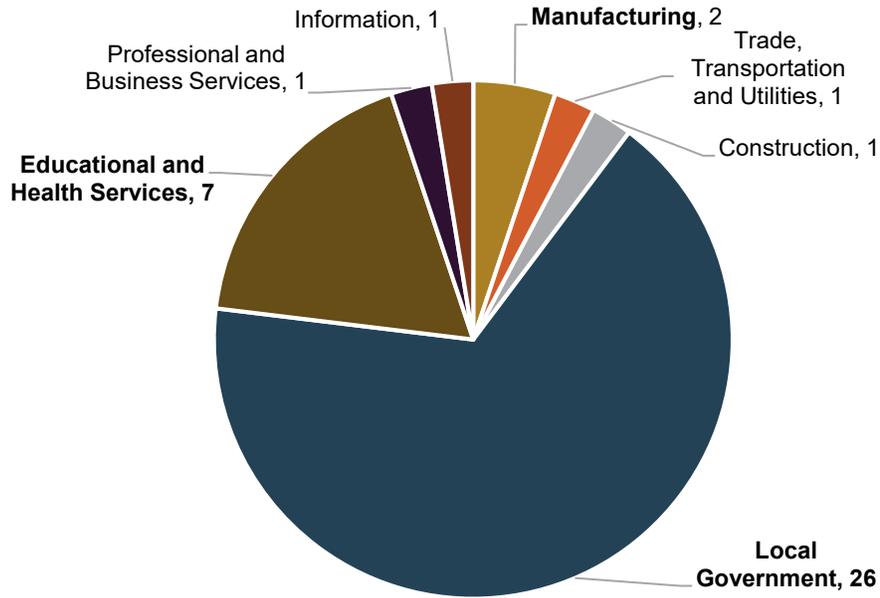
Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	1	3	1	3	2	2	0	1	1	0	0	1	0	0
<b>Total</b>	12							2		1			0	

Data Source: USDE, 2016.

Figure 105 shows the number of workers in various industries for Chignik, and the top three industries are shown in bold. During the summer months, Trident Seafoods operates a shoreside support facility in Chignik to support local salmon fisheries, including the Chignik Lagoon sockeye fishery. This support

facility employs about 35 people during the summer, while processing is done offshore (Trident Seafoods 2019).

**Figure 105. Chignik Resident Employment by Industry, 2016**



Data Source: ALARI, 2019

### 3.7.2 AMHS Summary

#### Community Leader Perspectives

Chignik community leaders did not respond to the study's request for information.

### Historic Revenue and Traffic Volumes

Table 103 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with Chignik as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). Chignik is an origin/destination in the Southwest Route Group, connecting to nine ports. The route between Chignik and Homer generates the most revenue and transports the most passengers.

**Table 103. Chignik as the Origin or Destination—AMHS Volume and Revenue, 2009–2018**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Southwest Routes</b>										
<b>Travel to and from Kodiak</b>										
Sailings	12	18	22	23	11	8	13	15	10	11
Passengers	90	128	153	135	112	74	142	144	42	84
# on Car-deck	17	29	26	28	38	13	24	31	11	18
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$14	\$24	\$27	\$25	\$26	\$12	\$23	\$27	\$10	\$19
<b>Travel to and from Homer</b>										
Sailings	12	18	22	23	11	8	14	14	12	13
Passengers	185	247	307	338	143	112	242	151	117	127
# on Car-deck	40	69	65	83	39	28	48	44	20	35
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$47	\$73	\$83	\$101	\$46	\$34	\$65	\$49	\$31	\$45
<b>Travel to and from Seldovia</b>										
Sailings	12	15	22	21	11	7	14	9	0	0
Passengers	0	0	1	2	0	0	0	1	0	0
# on Car-deck	0	1	0	0	0	0	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Travel to and from Sand Point</b>										
Sailings	12	18	22	23	11	8	13	13	2	5
Passengers	9	7	7	9	4	2	3	9	1	5
# on Car-deck	5	7	4	5	0	0	0	3	1	1
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$1	\$1	\$1	\$2	\$1	\$0	\$0	\$1	\$0	\$1
<b>Travel to and from King Cove</b>										
Sailings	12	18	22	23	11	8	13	10	0	3
Passengers	4	6	3	0	0	0	0	2	0	3
# on Car-deck	0	1	0	0	0	0	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$1	\$1	\$1	\$0	\$0	\$0	\$1	\$1	\$0	\$1

**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Cold Bay</b>										
Sailings	12	18	22	23	11	8	13	10	1	0
Passengers	0	0	0	0	0	0	0	0	1	0
# on Car-deck	0	0	0	0	0	0	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Travel to and from False Pass</b>										
Sailings	12	18	22	19	5	4	7	5	1	1
Passengers	0	1	0	0	0	0	0	0	2	1
# on Car-deck	0	0	0	0	0	0	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1	\$0
<b>Travel to and from Akutan</b>										
Sailings	12	18	22	24	10	8	13	11	3	2
Passengers	21	11	29	18	6	15	6	19	4	4
# on Car-deck	0	0	0	0	0	0	0	1	2	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$4	\$3	\$5	\$4	\$2	\$3	\$1	\$5	\$2	\$1
<b>Travel to and from Unalaska</b>										
Sailings	12	18	22	24	10	8	13	12	1	0
Passengers	5	4	3	13	0	0	2	1	1	0
# on Car-deck	0	0	1	3	3	0	0	1	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$1	\$2	\$1	\$6	\$2	\$0	\$1	\$1	\$0	\$0

Source: Northern Economics analysis using data from AMHS (2019)

**Land-based Facilities**

The land-based AMHS facility in Chignik is non-state owned. Table 104 shows which currently operating AMHS vessels are capable of docking at the facilities in Chignik.

**Table 104. Vessels Capable of Docking at Chignik Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Chignik			X						X

Note: X indicates the vessel is compatible with this terminal.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value of the facility was constructed by PND (2019).

**Chignik Facility**

*Docking Orientation:* Side Berth

*Description:* The ferry uses the City dock. This facility is a sheet pile bulkhead structure with steel pin-pile fender units and a mooring dolphin. The dock was built in 2017 and is connected to a 5-acre approach lot. The dock face is 220ft long with four fender units along the seaward face.

*Alternative Usage:* This is a multi-purpose dock that can accommodate barges and other vessels. Accommodating small passenger or similar vessels with low freeboard would likely be challenging due to the fixed dock elevation.

**3.7.3 Transportation Alternatives**

One carrier provides regularly scheduled passenger air service to Chignik (Chignik Bay), and rates to hub airports are shown in Table 105. Grant Aviation’s daily route from Chignik Bay stops in Chignik Lagoon, Chignik Lake, Perryville and Port Heiden before arriving in King Salmon.

**Table 105. Chignik Flight Services and Rates for Single Adult Passenger, by Carrier**

Airline Carrier	One Way Destination	Summer Rate (\$)	Winter Rate (\$)
Grant Aviation	King Salmon	150	Not reported

Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.

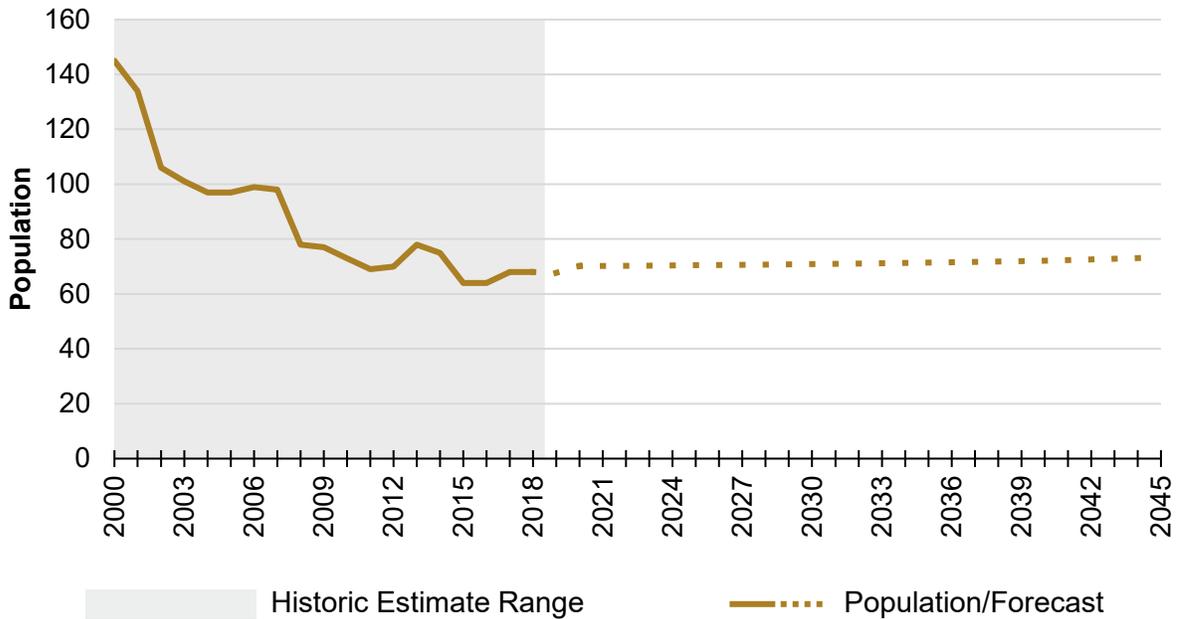
Data Source: Grant Aviation, 2019.

### 3.7.4 Chignik Lake Community Profile

#### Demographic Summary

Figure 106 shows the population of Chignik Lake with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 68 permanent residents, and the population of Chignik Lake is expected to stay about the same over time.

**Figure 106. Chignik Lake Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 106 shows student enrollment in all Chignik Lake schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

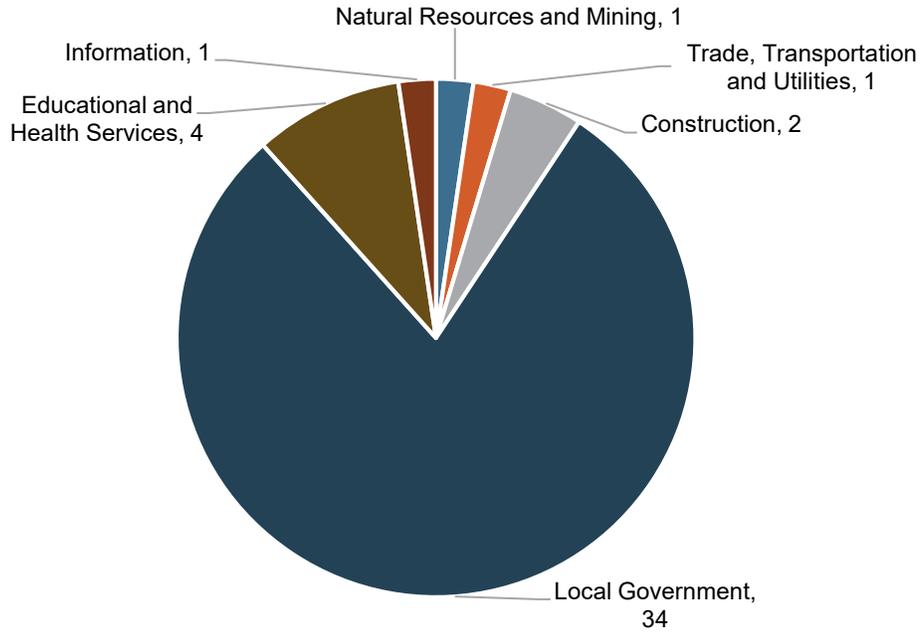
**Table 106. Chignik Lake All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	2	2	0	0	1	1	1	3	3	1	0	2	2	8
Total	7							6		5			8	

Data Source: USDE, 2016.

Figure 107 shows the number of workers in various industries for Chignik Lake, and the top three industries are shown in bold.

**Figure 107. Chignik Lake Resident Employment by Industry, 2016**



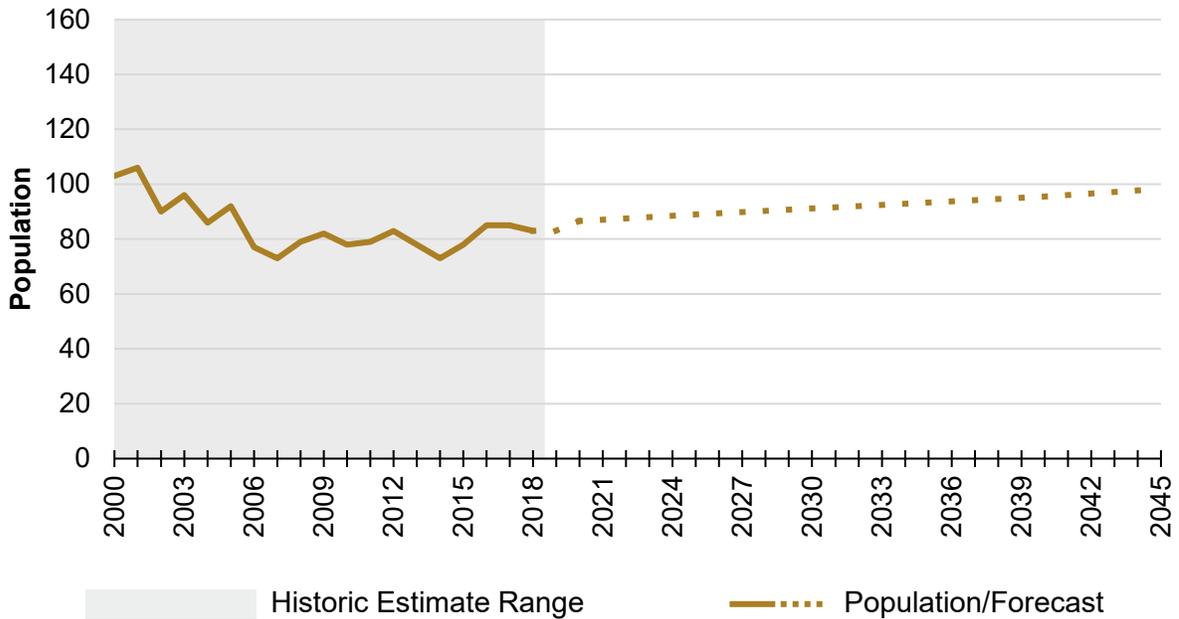
Data Source: ALARI, 2019

### 3.7.5 Chignik Lagoon Community Profile

#### Demographic Summary

Figure 108 shows the population of Chignik Lagoon with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 83 permanent residents, and the population of Chignik Lagoon is expected to increase gradually over time.

**Figure 108. Chignik Lagoon Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 107 shows student enrollment in all Chignik Lagoon schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

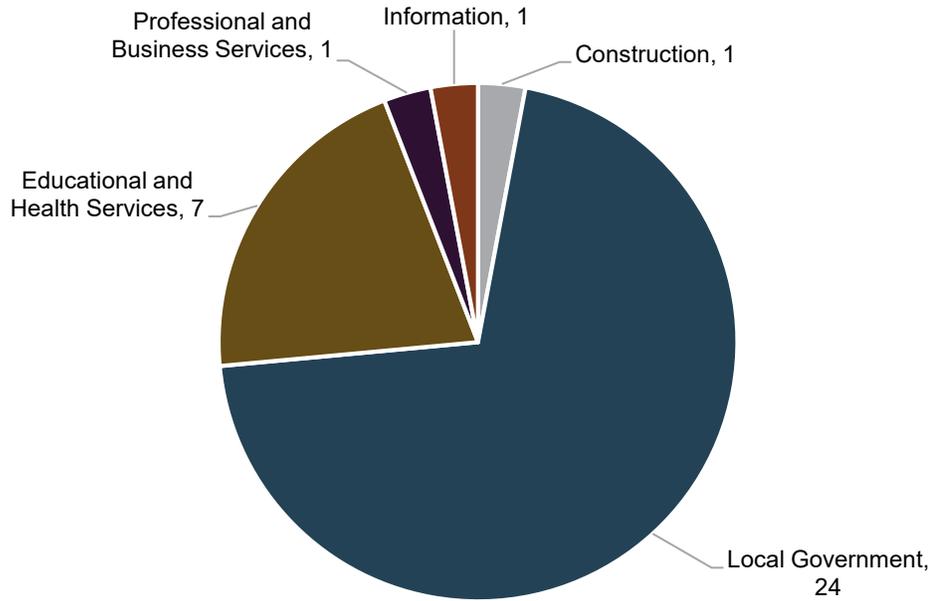
**Table 107. Chignik Lagoon All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	0	0	1	0	3	0	0	3	1	0	0	2	0	4
Total	4							4		2			4	

Data Source: USDE, 2016.

Figure 109 shows the number of workers in various industries for Chignik Lagoon, and the top three industries are shown in bold.

**Figure 109. Chignik Lagoon Resident Employment by Industry, 2016**



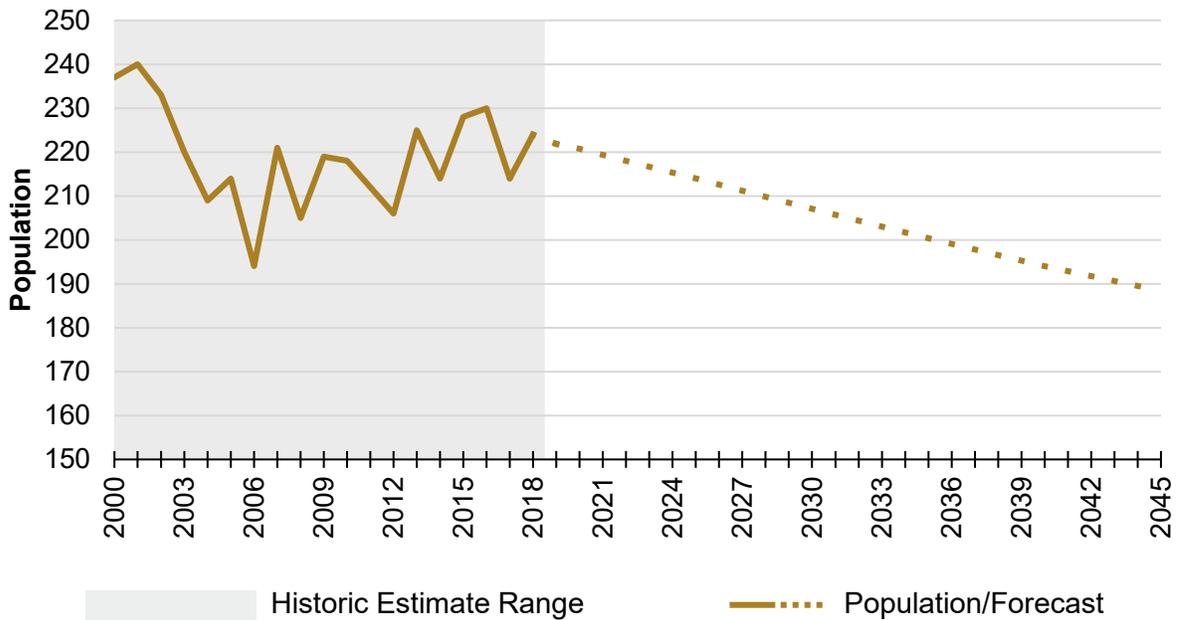
Data Source: ALARI, 2019

### 3.8 Old Harbor Community Profile

#### 3.8.1 Demographic Summary

Figure 110 shows the population of Old Harbor with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 224 permanent residents, but the population of Old Harbor is expected to decrease steadily over time.

**Figure 110. Old Harbor Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 108 shows student enrollment in all Old Harbor schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

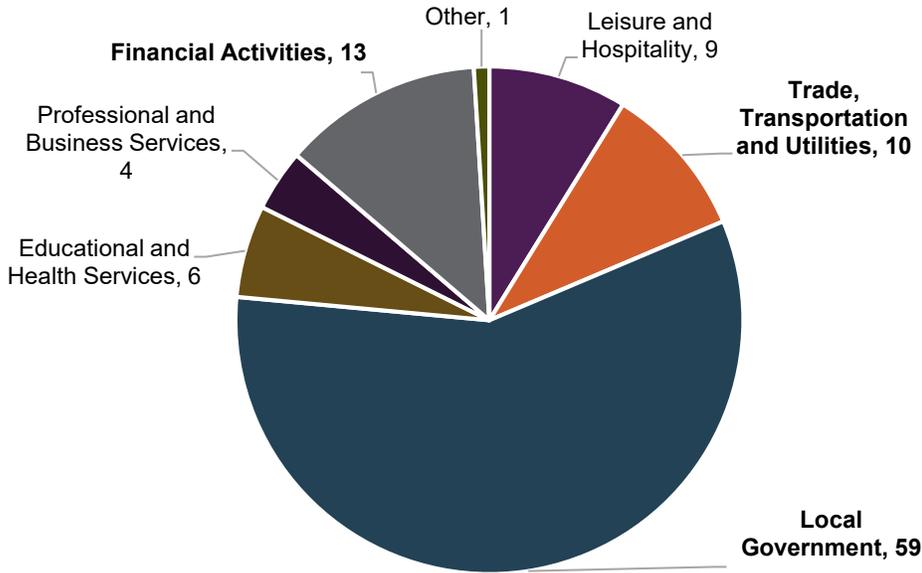
**Table 108. Old Harbor All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	4	5	5	2	1	2	3	1	3	0	2	1	0	0
Total	22							4		3			0	

Data Source: USDE, 2016.

Figure 111 shows the number of workers in various industries for Old Harbor, and the top three industries are shown in bold.

**Figure 111. Old Harbor Resident Employment by Industry, 2016**



Data Source: ALARI, 2019

### 3.8.2 AMHS Summary

#### **Community Leader Perspectives**

Old Harbor Mayor Rick Berns provided information via survey on how AMHS is used by individuals and businesses within the community. His responses are summarized below.

#### ***How Residents Use the Ferry***

Residents use the ferry to move vehicles and freight. It provides a way for families to return home more economically.

#### ***Commercial Uses***

Commercial users include the Alutiiq Tribe of Old Harbor, Old Harbor Native Corporation, Nuniag Food Market, and the Smoken Crow’s Nest.

#### ***Transportation Options***

No other forms or providers of transportation services could respond to changes to AMHS service in Old Harbor, including passenger and cargo services. The only other freight service is a chartered landing craft that will come when there is a community trip big enough to make it worthwhile. No other transportation option provides the ability to travel with your group or family and all your supplies, belongings, vehicles, and equipment.

**Minimum Level of Service**

The minimum level of service acceptable for Old Harbor would be four times per year (two trips in spring or early summer and two in late summer or early fall).

**Ideas for Improving Fiscal Health**

More freight services. Cut back on people’s catering service

**Historic Revenue and Traffic Volumes**

Table 109 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with Old Harbor as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). Old Harbor is an origin/destination in the Southwest Route Group, connecting to three ports. The route between Old Harbor and Kodiak generates the most revenue and transports the most passengers.

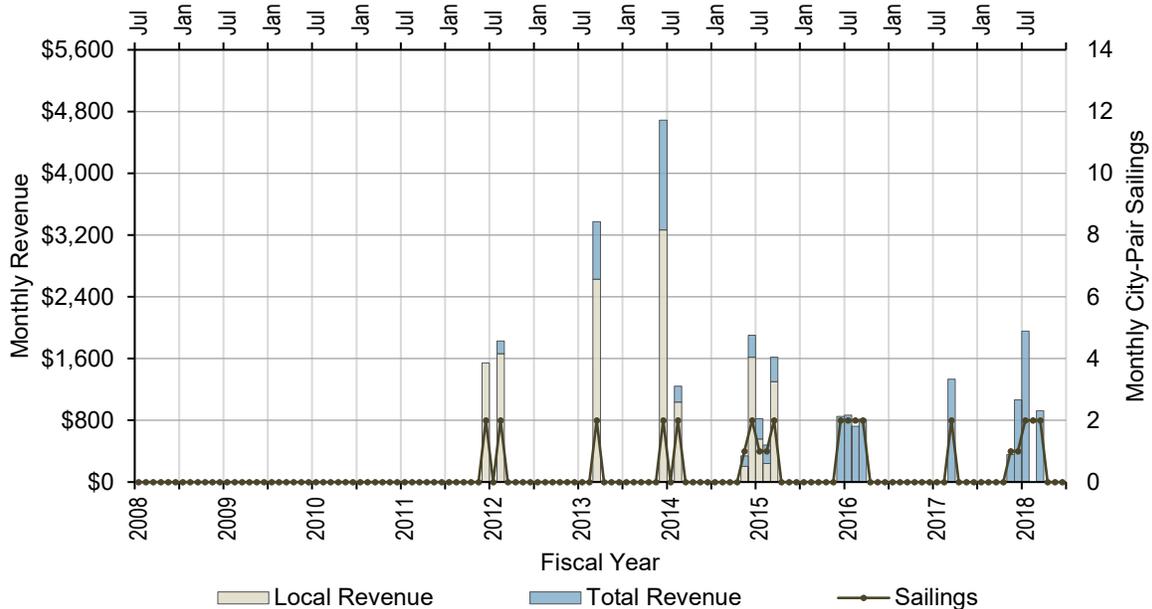
**Table 109. Old Harbor as the Origin or Destination—AMHS Volume and Revenue, 2009–2018**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Southwest Routes</b>										
<b>Travel to and from Kodiak</b>										
Sailings	0	0	0	2	2	4	5	5	4	4
Passengers	0	0	0	18	9	57	22	22	13	8
# on Car-deck	0	0	0	6	8	37	19	17	12	13
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$2	\$2	\$8	\$3	\$4	\$2	\$3
<b>Travel to and from Homer</b>										
Sailings	0	0	0	2	2	4	5	4	3	2
Passengers	0	0	0	8	3	14	7	17	7	4
# on Car-deck	0	0	0	1	0	0	4	3	5	2
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$1	\$0	\$1	\$2	\$3	\$2	\$4
<b>Travel to and from Unalaska</b>										
Sailings	0	0	0	2	2	4	5	4	0	0
Passengers	0	0	0	0	0	0	0	0	0	0
# on Car-deck	0	0	0	0	0	0	1	2	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Source: Northern Economics analysis using data from AMHS (2019)

Figure 112 shows monthly revenues and sailings for travel between Kodiak and Old Harbor in either direction, with revenues separated by local and non-local resident ticket purchasers when data is available. Most revenue during the shoulder and peak seasons are from local residents.

**Figure 112. Monthly Local Resident and Total Kodiak-Old Harbor Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Land-based Facilities**

The land-based AMHS facility in Old Harbor is non-state owned. Table 110 shows which currently operating AMHS vessels are capable of docking at the facilities in Old Harbor.

**Table 110. Vessels Capable of Docking at Old Harbor Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Old Harbor			X						X

Note: X indicates the vessel is compatible with this terminal.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value of the facility was constructed by PND (2019).

**Old Harbor Dock Facility**

Docking Orientation: Side Berth

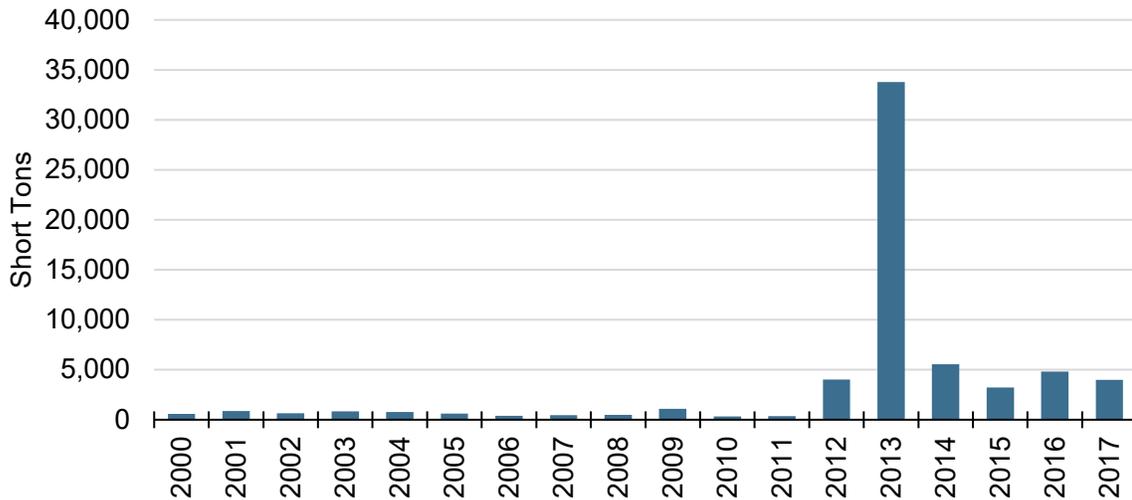
*Description:* This facility is a multi-purpose dock that was constructed by the City in 2012. The facility consists of a 55'x102' pile-supported dock with 3 fender panels, 3 mooring dolphins with access to the dock by steel catwalks, and an 18'x 280' pile-supported approach trestle connected to shore.

*Alternative Usage:* This facility is the city dock and is multi-purpose. It is used to receive barges, the ferry, and other vessels such as fishing vessels. Accommodating small passenger or similar vessels with low freeboard would likely be challenging due to the fixed dock elevation.

### 3.8.3 Transportation Alternatives

Figure 113 shows marine freight data for Old Harbor. Top commodities passing through Old Harbor are distillate fuel oil and gasoline, with a relatively large amount of kerosene reported in 2016, about 24 percent of that year's total volume, after not being reported in any prior years. The spike in marine freight in 2013 is due to the reported amount of gasoline, which comprised about 80 percent of that peak year's volume.

**Figure 113. Old Harbor Inbound and Outbound Annual Marine Freight, 2000–2017**



Data Source: USACE, 2019. USACE, 2018.

One carrier provides regularly scheduled passenger air service to Old Harbor, and rates to hub airports are shown in Table 111.

**Table 111. Old Harbor Flight Services and Rates for Single Adult Passenger, by Carrier**

Airline Carrier	One Way Destination	Summer Rate (\$)	Winter Rate (\$)
Island Air Service	Kodiak	115	115

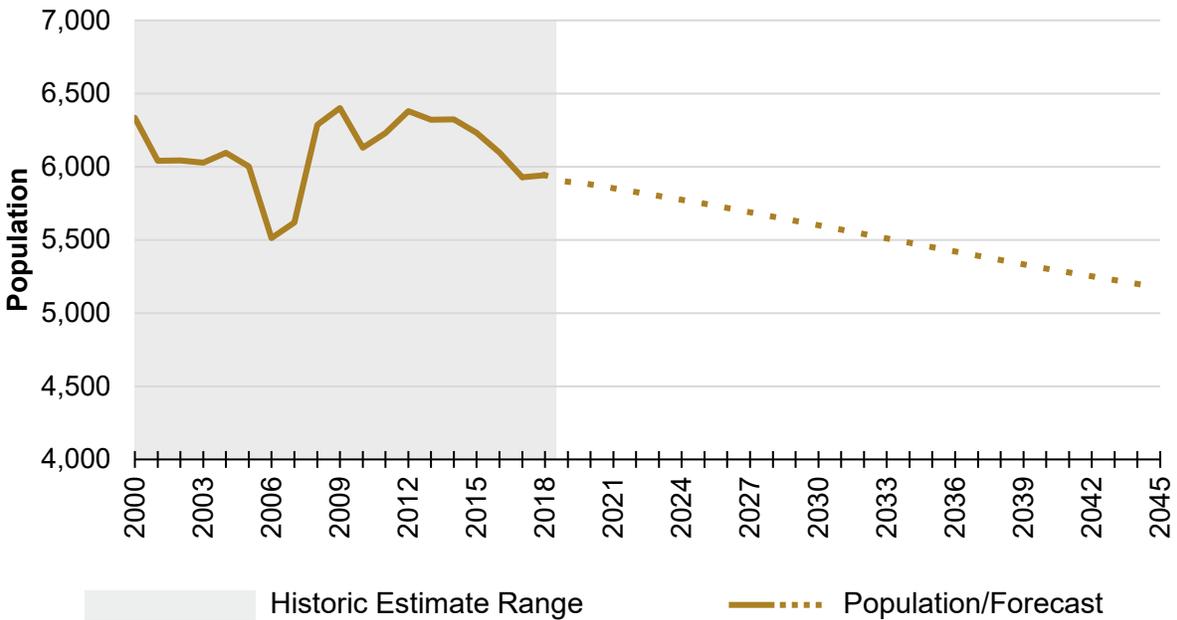
Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.  
Data Source: Island Air Service, 2019.

### 3.9 Kodiak Community Profile

#### 3.9.1 Demographic Summary

Figure 114 shows the population of Kodiak with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 5,942 permanent residents, but the population of Kodiak is expected to decrease steadily over time.

**Figure 114. Kodiak Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 112 shows student enrollment in all Kodiak schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

**Table 112. Kodiak All Schools Enrollment by Grade, 2016–2017 School Year**

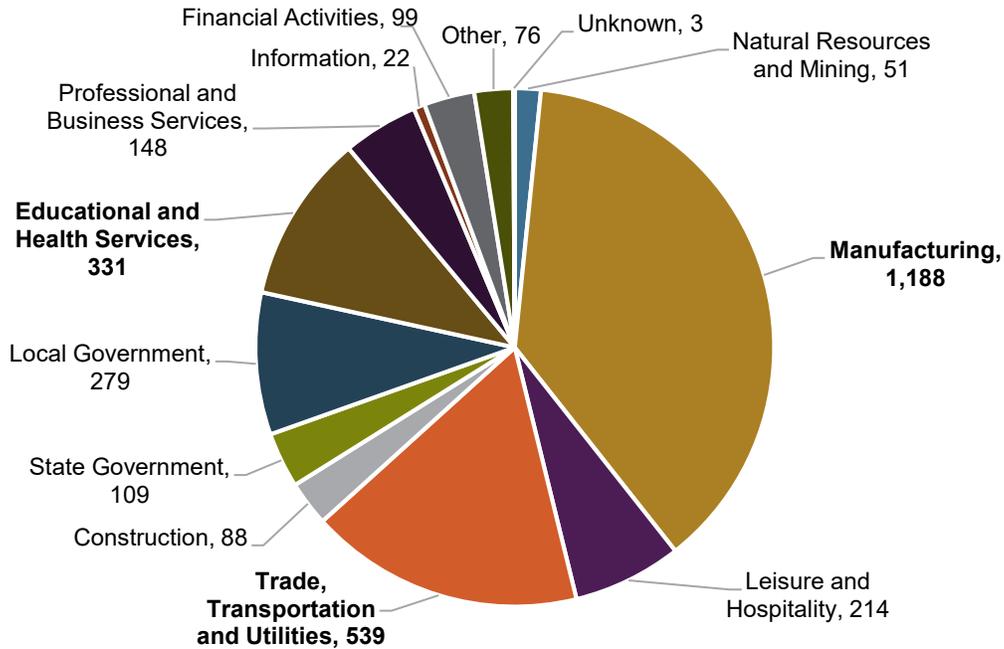
Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	225	262	221	249	244	215	234	149	161	177	168	176	196	110
<b>Total</b>	1650							310		717				110

Data Source: USDE, 2016.

Figure 115 shows the number of workers in various industries for Kodiak, and the top three industries are shown in bold. Kodiak is the third-largest seafood port by volume in the U.S. with 530 million pounds landed in 2017 (NMFS, 2018). Several year-round seafood processing plants are located in Kodiak, with some employing over 300 people during peak season. The plants process a variety of

species from the Gulf of Alaska, including cod, salmon, pollock, black cod, crab, and halibut. (Trident Seafoods 2019.; Ocean Beauty Seafoods 2019; North Pacific Seafoods 2019; Island Seafoods 2019; Global Seafoods 2019)

**Figure 115. Kodiak Resident Employment by Industry, 2016**



Data Source: ALARI, 2019

### 3.9.2 AMHS Summary

#### **Community Leader Perspectives**

The study team contacted both the City of Kodiak and the Kodiak Island Borough for their perspectives on how AMHS is used by individuals and businesses within the community. City of Kodiak Mayor Pat Branson provided information via survey and interview, as did Kodiak Island Borough Mayor Dan Rohrer. Their responses are summarized below.

#### ***City of Kodiak***

##### *How Residents Use the Ferry*

Most every Kodiak resident uses the ferry, as it is really the island’s road to the mainland. Residents take it to medical and other appointments on the mainland. Students ride it to athletic events in Anchorage or Fairbanks or on the Kenai Peninsula. They can’t afford to fly. That is just cost-prohibitive.

We have the largest Coast Guard base in the country on Kodiak. Coast Guard families routinely ship their household goods on the ferry when moving on and off the island, including their cars and the items they pack in them.

Vehicles are very important for people as they want to have transportation on the mainland. The cost of renting a car in Anchorage is certainly cost-prohibitive. Plus, they may have doctor, dental, or other appointments where they need their own car. They might have a van and be staying in the van instead of a hotel because a hotel is very expensive. They might have a camper, or a tent they take with them.

All six Kodiak Island villages rely on the ferry, whether they are directly served by it or not. Those communities are Old Harbor, Ouzinkie, Larsen Bay, Ahkiok, Karluk and Port Lions. They use the ferry to get from Kodiak to the mainland and to transport goods to their communities. Students from the villages travel on the ferry to athletic events and other school-related activities.

The ferry has served all Alaskans for more than 50 years. It serves not only coastal communities, but also many military families who are assigned to Anchorage and Fairbanks. It is just as important as the Parks Highway. Those who choose to live on the coast should not be penalized for not having roads. It is our road system for getting off the island. I haven't heard of anything but get rid of the ferry system. Getting rid of it is not an option.

#### Commercial uses

The ferry is vital to our economy. Fish processors use the ferry to ship fish off the island. Many businesses in town use the ferry to get their goods here, including furniture and other large items. They also use barge services, but they are certainly more expensive. Every commercial business on the island uses the ferry at different times. It's just a lot cheaper than the alternatives.

#### Transportation Options

Kodiak Island is in the middle of the Gulf of Alaska and oceangoing vessels are necessary. Usually we get two barges a week bringing deliveries to the big commercial sellers on the island. Alaska Airlines also serves Kodiak.

#### Minimum Level of Service

There really is no acceptable minimum service as we on Kodiak Island are very isolated. If I had to answer this question it would be a minimum of three times a week. We don't get enough service now and any reduction being limited with just two oceangoing ferries, one of which is over 50 years old. It makes it very difficult.

#### Tolerance for a 10 Percent Fare Increase or Reduction in Service

If fares increased by 10 percent, I think it would depend on passenger needs whether they would be willing to pay more. The Coast Guard would need to pay more because they don't have much of a choice. They are stuck here. Willingness to pay would also depend on the need to have a vehicle, where they are going, and the accessibility of appointments and events. They would also compare the cost to flying. Flying here is very expensive. You can't fly to and from Anchorage for less than \$500. The ferry is substantially cheaper.

#### Effects of Reduced Service

If there were reduced levels of service, the response would depend on the magnitude of the reduction. Southwest Alaska, compared to Southeast, does not have the same level of service. Here it's sporadic. We only have two oceangoing vessels. Sometimes those vessels go down to Bellingham, Washington, rather than come here. Sometimes they're used to transport Legislator's cars to Juneau and we don't have the service. There is no other way to get off the island except to fly. The reduction in service would affect our economy. It's that simple.

A passenger-only service would not work. That's not what we have or need. We are served with two ocean-going vehicles and they happen to have room for cars.

If the number of departures were halved, I don't know whether the overall level of use of AMHS would be affected. It may not suit people's travel needs. They maybe just wouldn't go. If you have something that doesn't work, you're not going to use it.

#### Ideas for Improving Fiscal Health

I think this situation has been a long time coming. We have not had a reason to look at the overall AMHS due to the budgets that have been in place.

- We need consistent ferry service. You can't be cancelling in the summer or going beyond the overhaul dates when people are counting on this. This sometimes happens with the Tustumena being more than 50 years old.
- Abide by the plan issued by the AMHS advisory board and the planning committee. It was well-thought out and well-researched. Why the governor and Legislature didn't use it I don't understand. The foundation has already been laid and they need to go back and look at what's already been researched. It's a waste of time and money not to have done that.
- Legislators and the governor need to understand that this isn't run like a business and no public transportation system pays for itself. When you have someone at OMB cutting the ferry budget who has never ridden a ferry, that's insulting to an Alaska resident.

#### **Kodiak Island Borough**

##### How Residents Use the Ferry

The ferry has long been a key factor in Kodiak. It is the only means of moving cars and freight to Anchorage, and new vehicles getting shipped up to Anchorage for warranty work. It is critical for the Coast Guard Base during the annual Permanent Change of Stations that typically occurs during the summer months for about 700 members of the guard and their families. About 350 personnel and their families move out each year and the same number arrive to take their places.

##### Commercial uses

Salmon crews are big users of the ferry in May and again in September. Golden Wheel Amusement brings in its equipment for our annual community fair, and visitors also use it to come over from the mainland, including sports fisherman and hunters, and youth sports teams.

##### Transportation Options

There are not likely any good options at a reasonable cost. The big issue would be the Gulf of Alaska in the winter. In the summer it is possible that we could see something for freight. Highly unlikely that we will see anything for passengers. It is far enough to Homer or Whittier that it really needs to be a bigger ship. Passenger and passenger-vehicle transportation are not replaceable by any other means

##### Minimum Level of Service

During the summer months there are ferries five times a week. For residents of the borough it would be better to have the ferries spread out more consistently throughout the year. It would seem like three times a week would be about perfect and on a somewhat fixed schedule so that the community knew that it was basically always Tuesday, Thursday, Sunday or whatever. Additionally, this would allow for

the ferries to periodically tie up for a day to save on fuel cost and allow them to get caught up in the winter when they have weather delays.

For Port Lions, Ouzinkie, and Old Harbor, the primary destination is Kodiak. It would be good if passengers coming to Kodiak had a longer layover, giving them more time to get things done before returning home.

Residents of Kodiak go to Homer and continue on to Anchorage. They need two to three days to get things done. For residents a more thoughtful schedule with fewer sailings would be acceptable.

I am very concerned with the feast or famine service that we received last year and are currently projected to receive this year. We have weeks where both the Tustumena and the Kennicott are in and out of town multiple times and are not full and then we have 4 months with no service because in part it is expensive to keep the Kennicott in service. I think we would see an increase in the usage of the ferry if there was a more reliable schedule with flexibility built in during the winter to get back on track after a weather event.

#### Ideas for Improving Fiscal Health

- There seems to be a “keep it moving philosophy” at AMHS. To save on fuel costs why not simply keep the boats in place longer?
- If there isn't a better alternative if ferry service is cut back, can scheduling be better?
- The current contract for the Tustumena and Kennecott requires two crews on board without a change out. That means all the employees are getting paid for twelve hours per day whether they work or not. (Ed. the study team acknowledges for these vessels, there are no fixed crew-change schedules, with the exception of pre-scheduled maintenance and lay-up periods.)

By normalizing the schedule as referenced above people could plan ahead more and have more consistency. Also, with slightly fewer sailings than we currently have, they should all be closer to full.

Another thing to consider is bulk discounting of passenger tickets. Often the car deck is fairly full but there is plenty of room for more passengers. I think it would be wise to work with the Kodiak Island Borough School Districts athletic director about their needs. Currently they purchase thousands of airline tickets a year. Some of that could be ferry travel if the ferry always left Kodiak on say a Thursday night and came back on Sundays (I am not sure that is the exact days but you get my point). For me it is all about increasing the ridership (i.e. income) to the ferry system while not increasing costs.

### Historic Revenue and Traffic Volumes

Table 113 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with Kodiak as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). Kodiak is an origin/destination in the Homer-Kodiak, Southwest, and Cross-Gulf Route Groups, connecting to 18 ports. The route between Kodiak and Homer generates the most revenue and transports the most passengers.

**Table 113. Kodiak as the Origin or Destination—AMHS Volume and Revenue, 2009–2018**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Homer-Kodiak Routes</b>										
<b>Travel to and from Port Lions</b>										
Sailings	97	137	135	149	60	104	150	152	136	104
Passengers	1,473	2,422	2,349	2,154	603	1,300	1,654	1,319	1,115	952
# on Car-deck	658	1,003	883	821	263	537	658	561	489	422
Vans	0	0	0	0	0	0	0	6	0	0
\$ (1,000s)	\$73	\$102	\$97	\$89	\$30	\$62	\$89	\$84	\$74	\$69
<b>Travel to and from Ouzinkie</b>										
Sailings	0	0	0	8	18	43	88	119	106	103
Passengers	0	0	0	135	289	940	1,276	1,726	1,484	1,389
# on Car-deck	0	0	0	22	45	167	255	353	313	246
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$5	\$11	\$34	\$46	\$70	\$62	\$55
<b>Travel to and from Seldovia</b>										
Sailings	227	235	239	244	146	163	210	192	9	3
Passengers	78	86	44	118	56	72	103	106	19	6
# on Car-deck	24	14	9	29	11	9	12	16	5	1
Vans	1	0	0	0	0	0	0	1	0	0
\$ (1,000s)	\$12	\$14	\$8	\$17	\$8	\$10	\$10	\$10	\$3	\$1
<b>Travel to and from Homer</b>										
Sailings	310	346	326	306	206	229	262	269	247	236
Passengers	17,038	19,365	18,422	18,405	15,166	12,463	17,055	15,148	12,265	10,504
# on Car-deck	6,093	7,182	6,733	6,921	5,461	4,971	6,119	5,942	5,569	5,272
Vans	473	700	634	623	575	689	840	752	523	508
\$ (1,000s)	\$2,576	\$3,022	\$2,855	\$2,933	\$2,407	\$2,265	\$3,019	\$3,099	\$2,753	\$2,684
<b>Southwest Route</b>										
<b>Travel to and from Old Harbor</b>										
Sailings	0	0	0	2	2	4	5	5	4	4
Passengers	0	0	0	18	9	57	22	22	13	8
# on Car-deck	0	0	0	6	8	37	19	17	12	13
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$2	\$2	\$8	\$3	\$4	\$2	\$3

**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Chignik</b>										
Sailings	12	18	22	23	11	8	13	15	10	11
Passengers	90	128	153	135	112	74	142	144	42	84
# on Car-deck	17	29	26	28	38	13	24	31	11	18
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$14	\$24	\$27	\$25	\$26	\$12	\$23	\$27	\$10	\$19
<b>Travel to and from Sand Point</b>										
Sailings	12	18	22	25	17	12	18	19	9	12
Passengers	27	30	39	37	25	15	33	29	13	22
# on Car-deck	9	9	36	53	54	26	32	32	9	19
Vans	0	0	0	11	2	8	9	0	0	0
\$ (1,000s)	\$10	\$11	\$35	\$62	\$39	\$26	\$32	\$30	\$22	\$20
<b>Travel to and from King Cove</b>										
Sailings	12	18	22	25	17	12	18	17	10	6
Passengers	8	10	20	18	47	5	9	4	29	7
# on Car-deck	8	12	8	3	17	11	6	8	4	6
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$6	\$9	\$8	\$6	\$17	\$9	\$6	\$6	\$10	\$7
<b>Travel to and from Cold Bay</b>										
Sailings	12	18	22	25	17	12	18	15	7	3
Passengers	10	7	7	9	2	0	14	7	7	1
# on Car-deck	10	8	7	6	9	5	3	3	12	8
Vans	0	0	0	2	0	0	0	0	0	0
\$ (1,000s)	\$10	\$9	\$8	\$13	\$10	\$5	\$7	\$6	\$8	\$6
<b>Travel to and from False Pass</b>										
Sailings	12	18	22	20	6	5	9	7	2	2
Passengers	4	2	1	0	0	0	3	1	0	0
# on Car-deck	5	1	1	1	0	0	1	0	2	2
Vans	2	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$8	\$2	\$1	\$1	\$0	\$0	\$1	\$0	\$1	\$1
<b>Travel to and from Akutan</b>										
Sailings	12	18	22	26	12	10	18	15	1	0
Passengers	0	0	1	5	5	0	6	2	1	0
# on Car-deck	0	0	0	0	0	0	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$2	\$1	\$0	\$2	\$1	\$0	\$0
<b>Travel to and from Unalaska</b>										
Sailings	12	18	22	26	16	12	18	19	13	13
Passengers	137	83	130	138	167	67	147	171	118	81
# on Car-deck	7	13	10	6	12	12	14	16	3	10
Vans	0	0	0	0	0	2	0	0	0	0
\$ (1,000s)	\$62	\$50	\$65	\$63	\$81	\$43	\$76	\$91	\$60	\$50

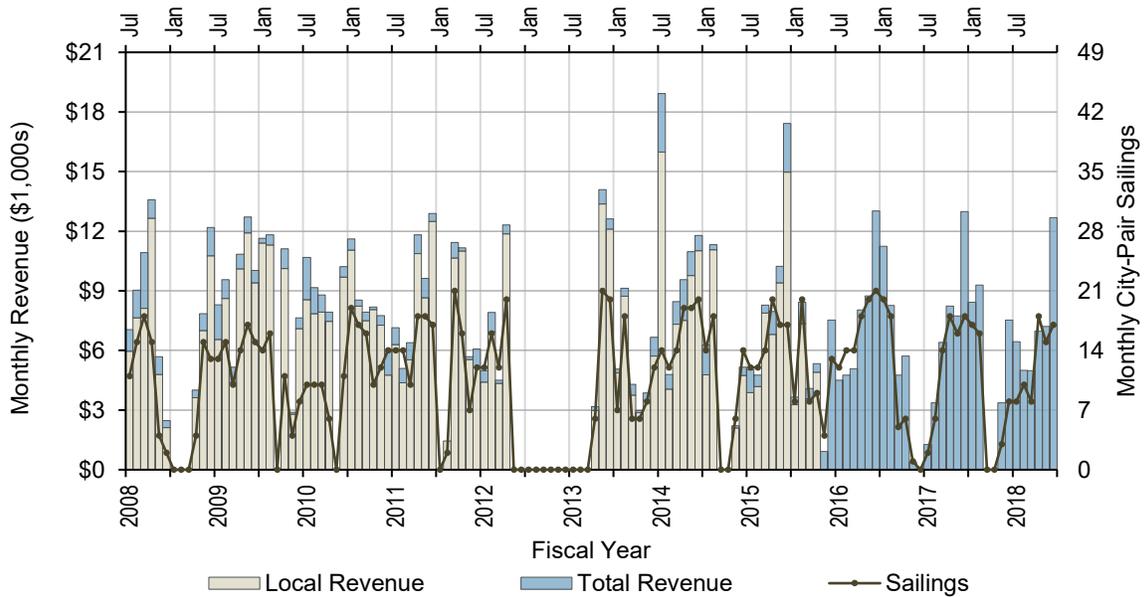
**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Cross-Gulf</b>										
<b>Travel to and from Chenega Bay</b>										
Sailings	34	18	23	33	46	29	26	21	0	2
Passengers	36	17	9	14	31	2	0	1	0	1
# on Car-deck	6	1	1	5	7	0	0	1	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$6	\$2	\$2	\$2	\$3	\$0	\$0	\$1	\$0	\$0
<b>Travel to and from Whittier</b>										
Sailings	32	20	24	33	46	30	32	29	26	26
Passengers	997	752	1,056	1,074	1,426	1,002	1,200	952	615	562
# on Car-deck	651	421	540	596	930	580	644	583	437	432
Vans	118	102	100	98	167	95	115	105	33	42
\$ (1,000s)	\$335	\$263	\$325	\$336	\$499	\$308	\$373	\$367	\$261	\$272
<b>Travel to and from Yakutat</b>										
Sailings	0	0	0	19	44	29	26	19	0	0
Passengers	0	0	0	0	1	1	0	2	0	0
# on Car-deck	0	0	0	0	1	3	0	1	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$0	\$2	\$3	\$0	\$2	\$0	\$0
<b>Travel to and from Juneau</b>										
Sailings	0	0	0	19	44	32	33	26	20	20
Passengers	0	0	0	28	166	73	64	134	43	70
# on Car-deck	0	0	0	24	74	27	35	50	19	46
Vans	0	0	0	2	2	4	2	2	3	10
\$ (1,000s)	\$0	\$0	\$0	\$38	\$145	\$70	\$64	\$113	\$48	\$142
<b>Travel to and from Ketchikan</b>										
Sailings	0	0	0	19	39	26	27	14	8	5
Passengers	0	0	0	11	44	47	17	15	44	13
# on Car-deck	0	0	0	3	18	4	4	7	15	5
Vans	0	0	0	0	0	0	0	0	12	0
\$ (1,000s)	\$0	\$0	\$0	\$10	\$41	\$25	\$19	\$21	\$100	\$16
<b>Travel to and from Bellingham</b>										
Sailings	0	0	0	12	16	26	27	21	24	21
Passengers	0	0	0	258	312	446	342	388	308	248
# on Car-deck	0	0	0	105	124	184	131	201	184	183
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$413	\$498	\$735	\$537	\$702	\$642	\$596

Source: Northern Economics analysis using data from AMHS (2019)

Figure 116 and Figure 117 show monthly revenues and sailings for Kodiak-Port Lions and Kodiak-Uzinkie respectively, with revenues separated by local and non-local resident ticket purchasers when data are available. For both city-pairs local revenues account for over 90 percent of total revenues.

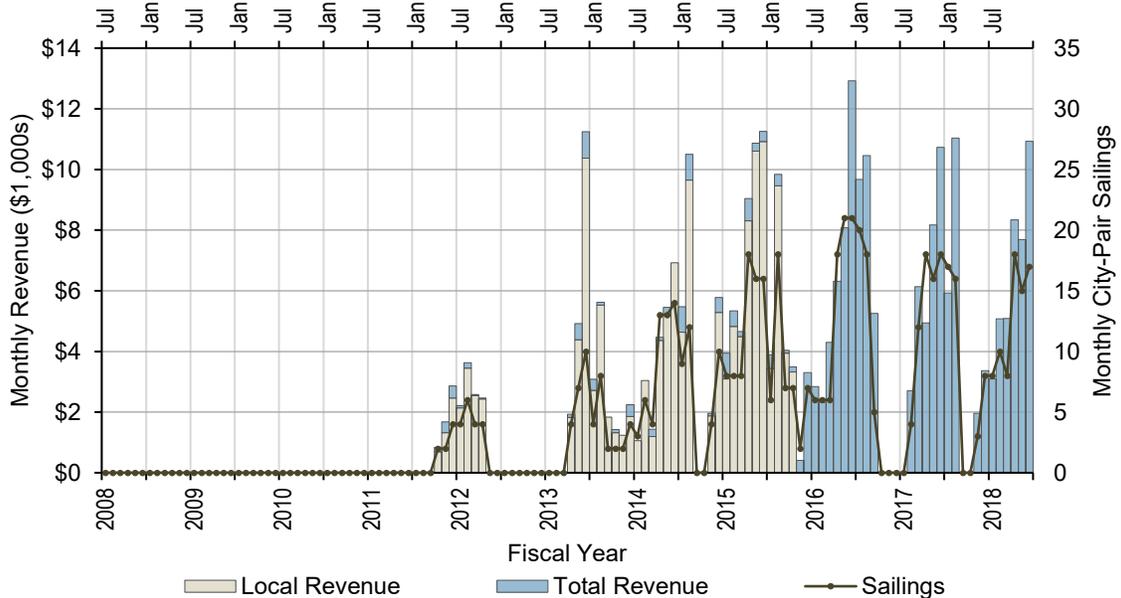
**Figure 116. Monthly Local Resident and Total Kodiak-Port Lions Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Figure 117. Monthly Local Resident and Total Kodiak-Ouzinkie Revenues and Sailings, by Fiscal Year**

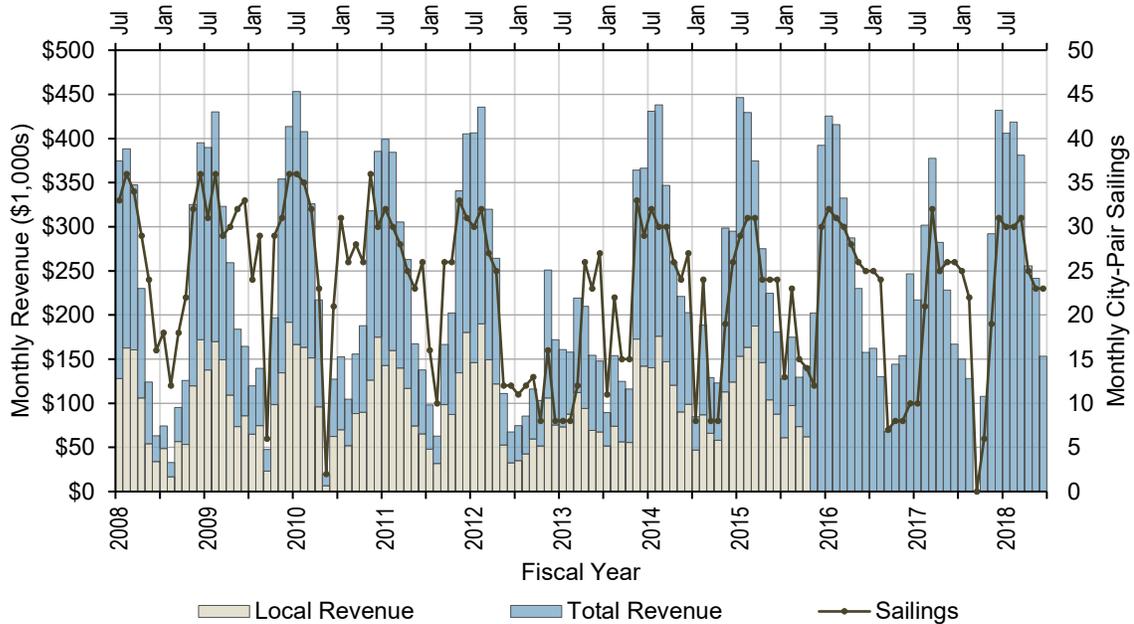


Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

Figure 118 shows monthly revenues and sailings between Kodiak and Homer, with revenues separated by local and non-local resident ticket purchasers when data are available. In winter months, revenues are 49 percent local, while during the three peak summer months local revenues comprise only 40 percent of the total.

**Figure 118. Monthly Local Resident and Total Kodiak-Homer Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Land-based Facilities**

The land-based AMHS facilities in Kodiak are non-state owned and include two piers: Kodiak City Dock (Pier 1) and Pier 2. Table 114 shows which currently operating AMHS vessels are capable of docking at the facilities in Kodiak.

**Table 114. Vessels Capable of Docking at Kodiak Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Kodiak Terminal									X
Kodiak City Dock			X						X

Note: X indicates the vessel is compatible with this terminal.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value of the facility was constructed by PND (2019).

### ***Kodiak City Dock Pier 1***

*Docking Orientation:* Side Berth

*Description:* This facility consists of a concrete structure with a main dock section approximately 230x25ft, and a 103ft long approach trestle at each end of the dock. The paved area between the street and the terminal building is used for both parking and vehicle staging. Embarking vehicles line up on the adjacent city street, in the paved area and along the 75ft-wide north approach trestle. The wharf is crowded between a marine fuel service depot to the north and a shore-based seafood processor to the south. Vessels moored at the adjacent facilities encroach on berthing the dock.

*Alternative Usage:* In addition to the ferry, the dock is currently used as a bulk fuel facility, and general use for moorings, repairs, loading and unloading and crane work. Accommodating small passenger or similar vessels with low freeboard would likely be challenging due to the fixed dock elevation.

### ***Kodiak Pier 2***

*Docking Orientation:* Side Berth

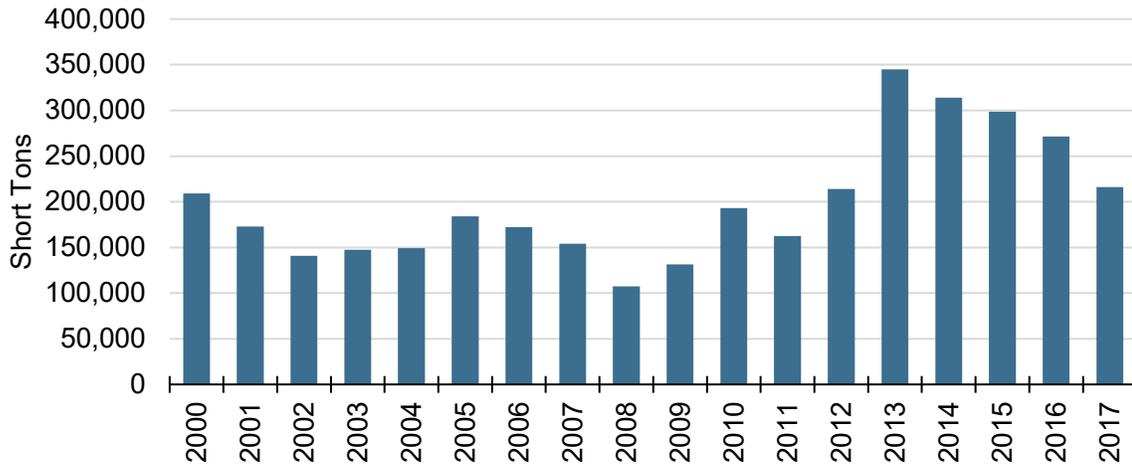
*Description:* This facility, known as the fisherman's terminal, consists of a rectangular dock comprised of two adjacent and undivided dock sections of which AMHS uses the west dock. The west dock is approximately 418x75ft.

*Alternative Usage:* This facility is used for the loading and unloading of commercial freight, cruise ship terminal, government vessels, vessel repairs, moorage, crane work, gear storage, fishing gear repairs, warehouse, used oil handling facility, and ferry terminal. Accommodating small passenger or similar vessels with low freeboard would likely be challenging due to the fixed dock elevation.

## **3.9.3 Transportation Alternatives**

Figure 119 shows marine freight data for Kodiak. A variety of commodities pass through Kodiak, with distillate fuel oil, gasoline, and manufactured products as top commodities by volume. Wood in the Rough was not consistently reported as marine freight until 2009, and since then it has comprised between 7 and 37 percent of Kodiak's total reported marine freight volume each year.

**Figure 119. Kodiak Inbound and Outbound Annual Marine Freight, 2000–2017**



Data Source: USACE, 2019. USACE, 2018.

Two carriers provide regularly scheduled passenger air service to Kodiak, and rates to hub airports are shown in Table 115. Island Air Service provides passenger service to destinations around Kodiak Island.

**Table 115. Kodiak Flight Services and Rates for Single Adult Passenger, by Carrier**

Airline Carrier	One Way Destination	Summer Rate (\$)	Winter Rate (\$)
Alaska Airlines	Anchorage	135	135
Ravn Alaska operated by Corvus Airlines	Anchorage	137	137

Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.

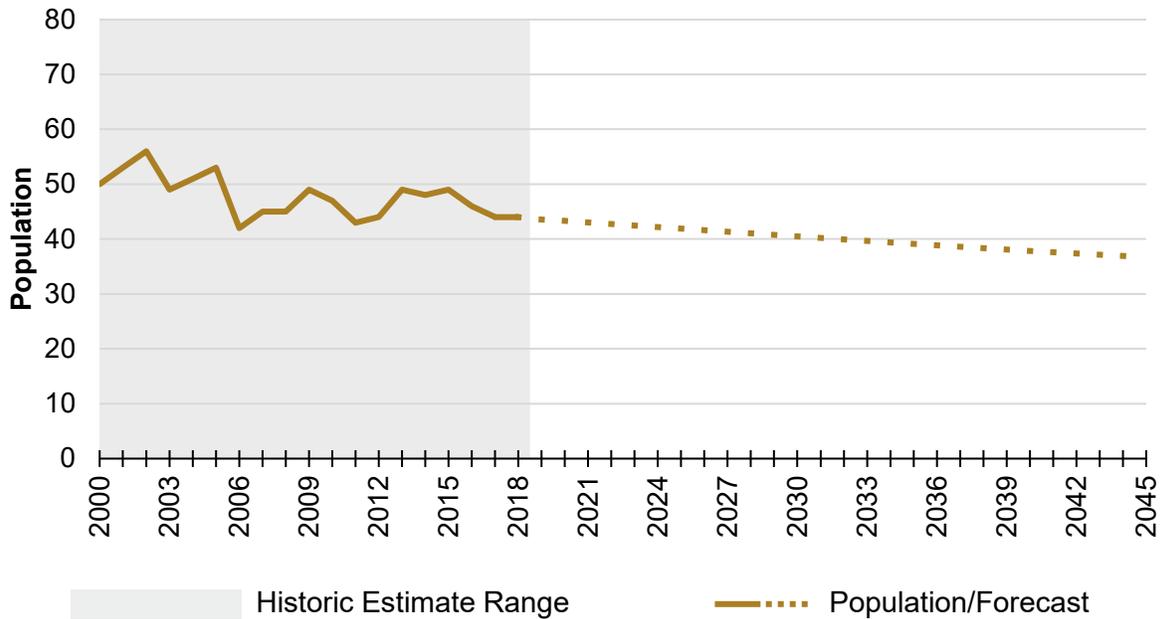
Data Source: Alaska Airlines, Inc., 2019. Ravn Alaska, 2019.

### 3.9.4 Chiniak Community Profile

#### Demographic Summary

Figure 120 shows the population of Chiniak with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 43 permanent residents, but the population of Chiniak is expected to decrease slightly over time.

**Figure 120. Chiniak Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.

Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 116 shows student enrollment in all Chiniak schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

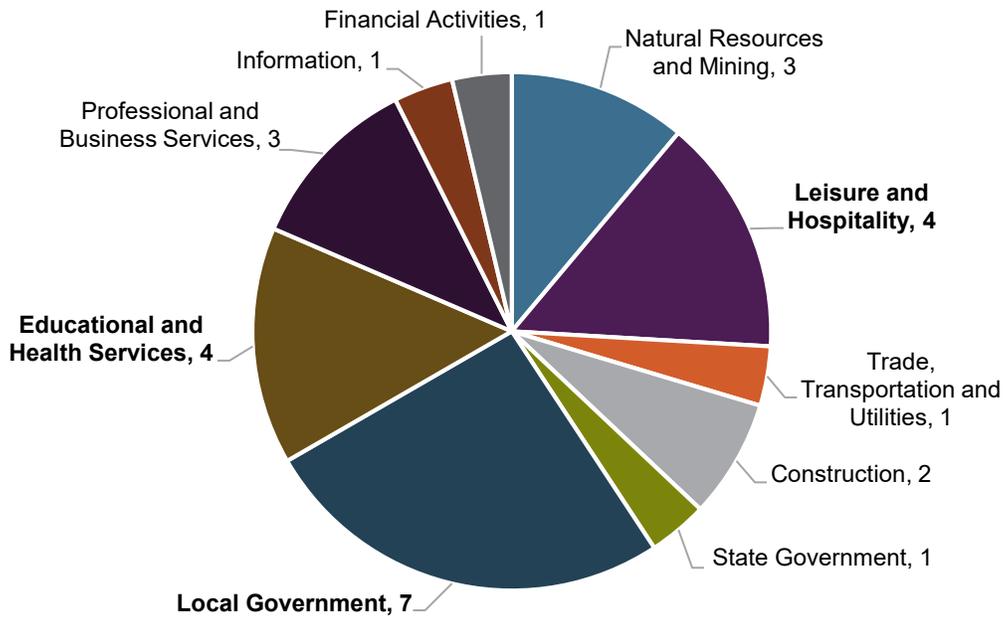
**Table 116. Chiniak All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	4	2	4	4	2	3	1	1	0	2	1	1	1	0
Total	20							1		5			0	

Data Source: USDE, 2016.

Figure 121 shows the number of workers in various industries for Chiniak, and the top three industries are shown in bold.

**Figure 121. Chiniak Resident Employment by Industry, 2016**



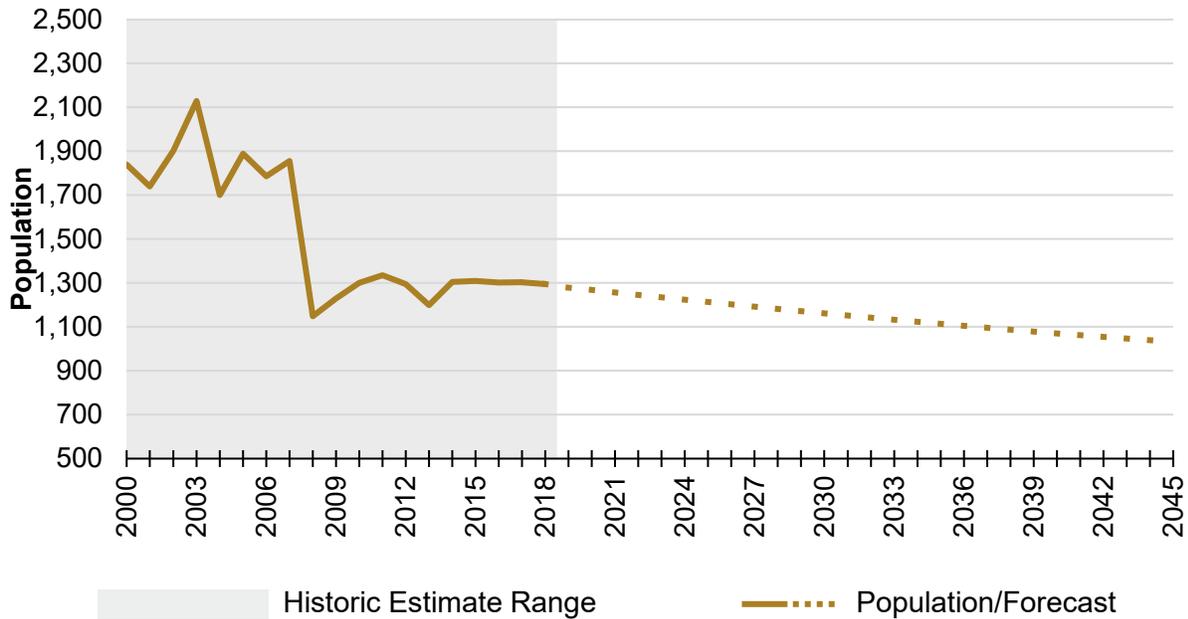
Data Source: ALARI, 2019

### 3.9.5 Kodiak Station Community Profile

#### Demographic Summary

Figure 122 shows the population of Kodiak Station with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 1,295 permanent residents, but the population of Kodiak Station is expected to decrease gradually over time.

**Figure 122. Kodiak Station Historic Estimates and Population Forecast, 2000–2045**



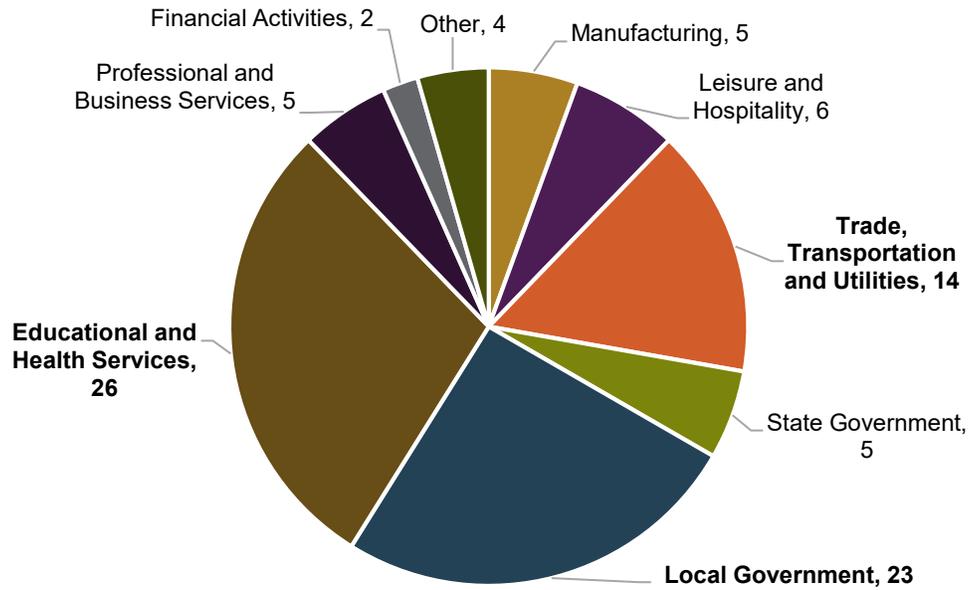
Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.

Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

There is one Alaska public school in Kodiak Station, Peterson Elementary School, which is part of the Kodiak Island Borough School District and is included in school enrollment totals for the Kodiak (see section 3.9.1, Table 112). Peterson Elementary serves kindergarten through fifth grade for the nearby U.S. Coast Guard Base and the Bells Flats Community (part of Womens Bay) (Kodiak Island Borough School District, 2019).

Figure 123 shows the number of workers in various industries for Kodiak Station, and the top three industries are shown in bold. The largest U.S. Coast Guard base in the United States is located on Kodiak Island and is based in Kodiak Station. A major part of the base is Coast Guard Air Station Kodiak, which is the largest command in the Coast Guard’s Seventeenth District (all Alaska) and its Pacific Area (USCG, 2019). Across the Coast Guard’s commands on Kodiak Island, there are approximately 2,600 military personnel and dependents. Maintenance support and construction of the Coast Guard facilities results in contract expenditures of about \$40 million per year (Kodiak Chamber of Commerce, 2019).

Figure 123. Kodiak Station Resident Employment by Industry, 2016



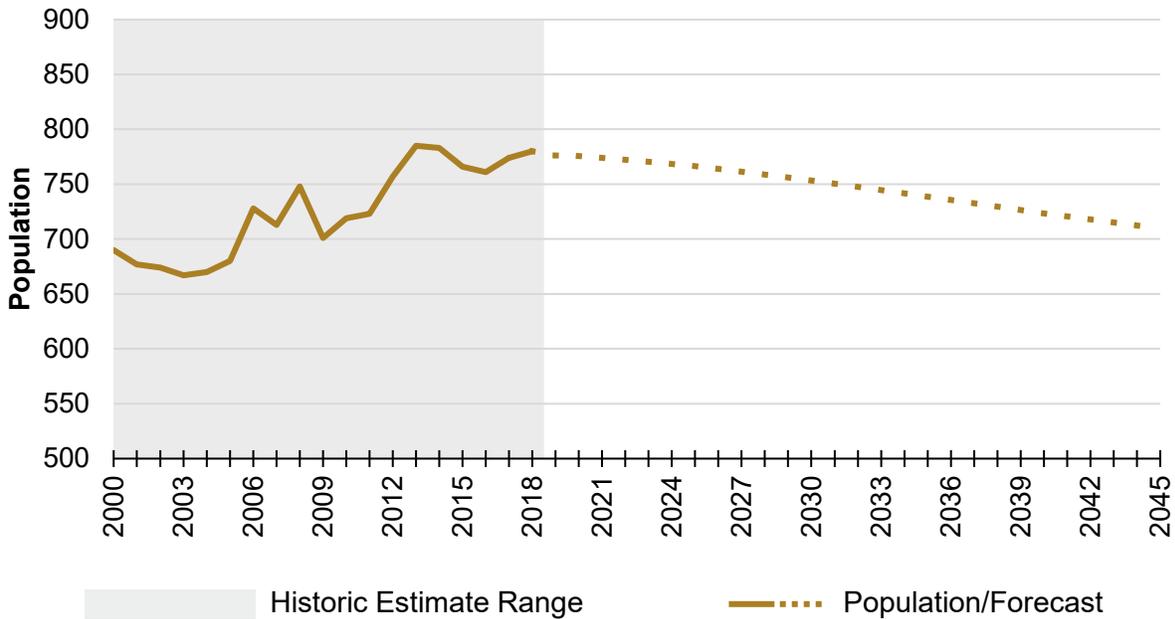
Data Source: ALARI, 2019

### 3.9.6 Womens Bay Community Profile

#### Demographic Summary

Figure 124 shows the population of Women’s Bay with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 780 permanent residents, but the population of Women’s Bay is expected to decrease gradually over time.

**Figure 124. Women’s Bay Historic Estimates and Population Forecast, 2000–2045**



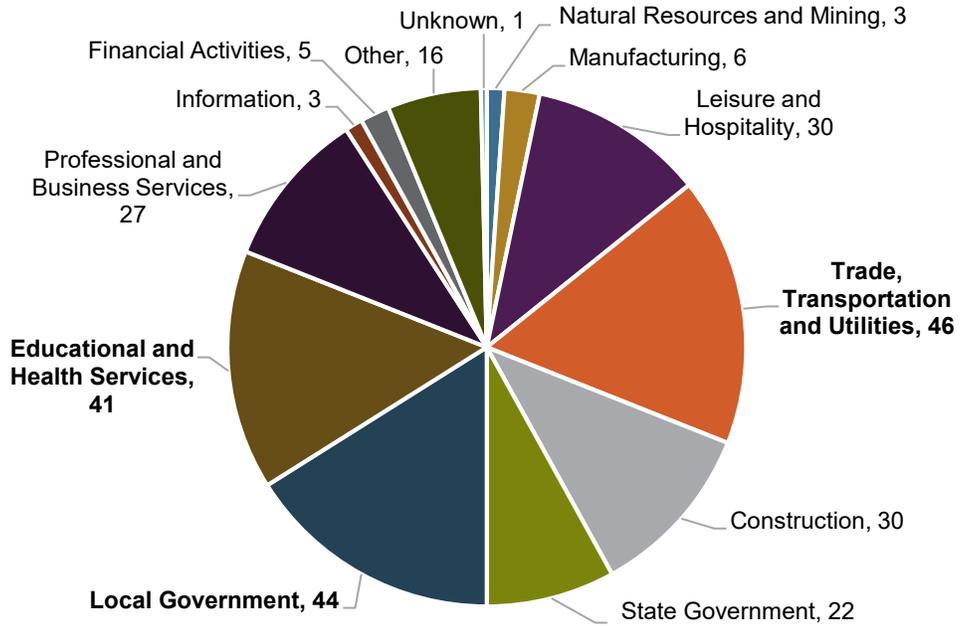
Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

There are no Alaska public schools in Women’s Bay. Women’s Bay is part of the Kodiak Island Borough School District, which includes Peterson Elementary School<sup>5</sup> in nearby Kodiak Station. Peterson Elementary serves kindergarten through fifth grade for the U.S. Coast Guard Base in Kodiak Station and the Bells Flats Community (part of Women’s Bay) (Kodiak Island Borough School District, 2019).

<sup>5</sup> School enrollment for Peterson Elementary are included in Kodiak’s School Enrollment totals.

Figure 125 shows the number of workers in various industries for Women’s Bay, and the top three industries are shown in bold.

**Figure 125. Womens Bay Resident Employment by Industry, 2016**



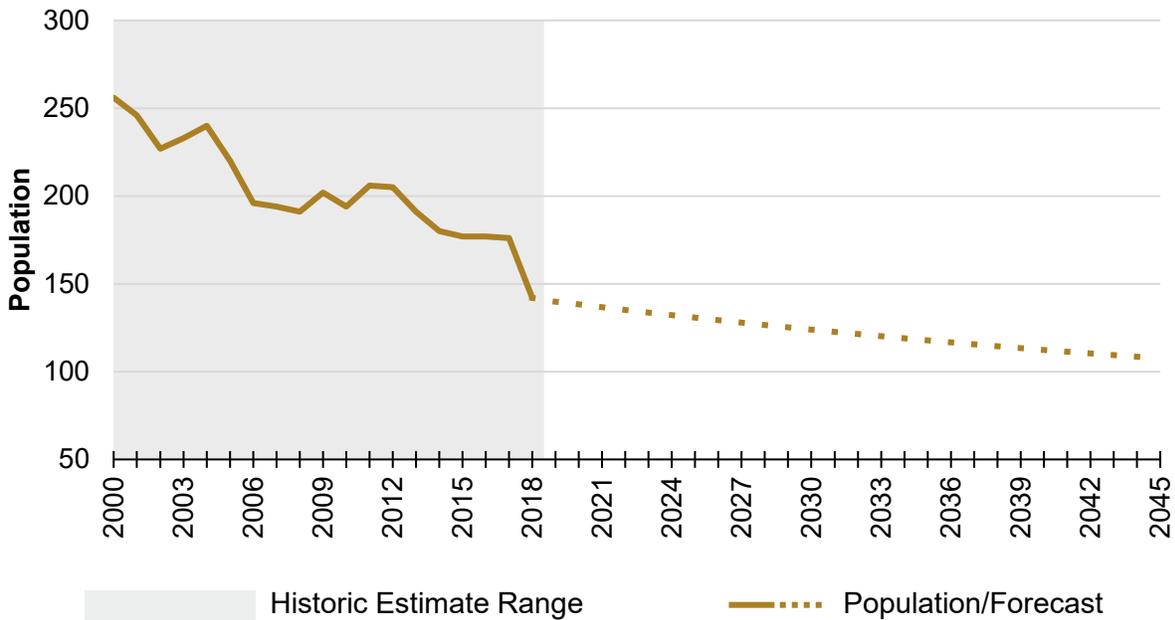
Data Source: ALARI, 2019

### 3.10 Port Lions Community Profile

#### 3.10.1 Demographic Summary

Figure 126 shows the population of Port Lions with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 142 permanent residents, but the population of Port Lions is expected to decrease gradually over time.

**Figure 126. Port Lions Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 117 shows student enrollment in all Port Lions schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

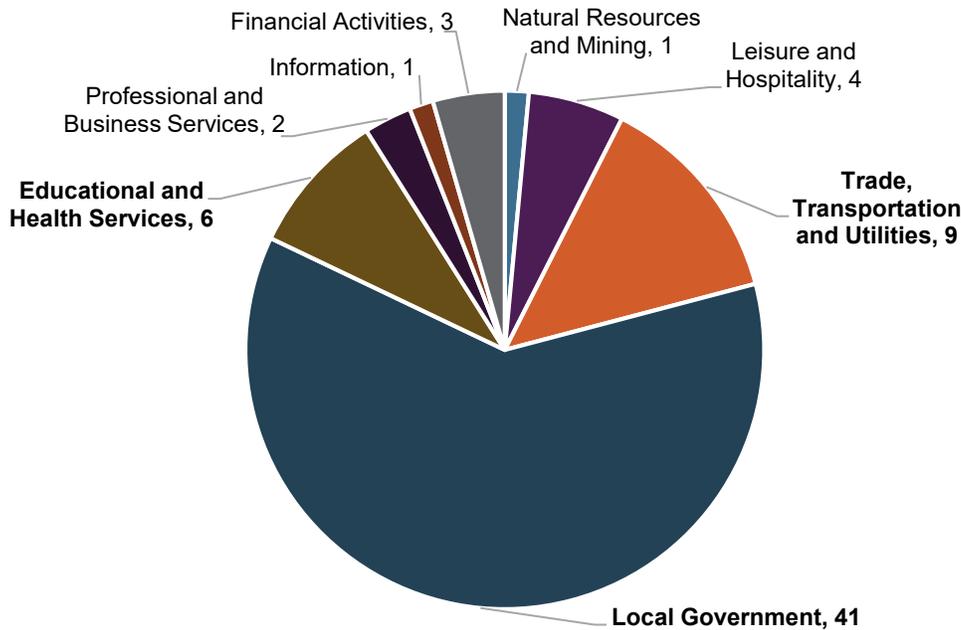
**Table 117. Port Lions All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	1	0	3	0	0	3	0	1	3	0	0	0	1	0
Total	7							4		1			0	

Data Source: USDE, 2016.

Figure 127 shows the number of workers in various industries for Port Lions, and the top three industries are shown in bold.

**Figure 127. Port Lions Resident Employment by Industry, 2016**



Data Source: ALARI, 2019

### 3.10.2 AMHS Summary

#### **Community Leader Perspectives**

Mayor Dorinda Kewan of Port Lions provided information via survey and interview on how AMHS is used by individuals and businesses within the community. Her responses are summarized below.

#### ***How Residents Use the Ferry***

Port Lions residents use AMHS to transport groceries, fuel, building materials and other items that will not fit on a small plane. They take the ferry to travel to the road system and from there access jet service to the Alaska mainland and beyond. Elders travel for appointments and medical care. Students travel for educational trips and sports events. Heavy equipment comes here on the ferry for construction and road maintenance.

Without the ferry, we would have no way to transport vehicles or construction materials. For an individual who owns a vehicle, nine times out of ten trips on the ferry they will take the vehicle with them. Mostly, the vehicle is for transportation in Kodiak or for bringing back sizeable freight. People will go “foot traffic” (passenger-only) to Kodiak if they already have a vehicle in Kodiak; have a family or friend with vehicle; plan to pick up a vehicle; or don’t own a vehicle.

If we are going to send a vehicle on the ferry, we try to load it up as much as possible with groceries and other household goods on the return trip. Rarely will people take their vehicle on the ferry where

they are not planning to fill it up. Supplies for a single household, including elderly family members, can easily fill a vehicle.

We call the ferry our lifeline. We've had it for years. So many people would not be able to live here or run their businesses if it went away. Without the ferry, our elders would not be able to live their final years at home. They can do so because the ferry allows them to travel to and from their medical appointments in Kodiak. It changes everything for them. It's easier to get on and off the ferry than it is to get into a plane. Plus, the planes are subject to weather.

### ***Commercial Uses***

The biggest single local ferry user is the tribal organization. The tribe hauls freight and takes significant amounts of plastic, cardboard and aluminum to a company that receives recyclables in Kodiak. And then they bring back freight, including large amounts of calcium chloride to keep down the dust once a year. We have horrible dusty roads. It would be very expensive to fly all those items in and would require multiple planes. The tribe also brings in cases and cases of dry goods for the senior meals program. They also bring back non-medical materials and cleaning supplies for the health clinic.

The lodge and charter boat operations are the largest industry user. Lodges and sportfishing charter boats bring in drums of fuel, building supplies, and large quantities of groceries on the ferry. Their clients travel here on the ferry as well.

The city is also a major ferry user. We most recently transported a new scanner/copier on the ferry and at Christmas we brought in turkeys and prime rib for employees. The city also brings in all office supplies, chemicals for the water treatment facility, chains, tires, and other items we need to maintain services to the community.

### ***Transportation Options***

Heavy equipment and building supplies and large items could come in on a freighter, but passenger and vehicles have no other option. The weather is a huge factor for small planes they need certain visibility and ceiling, but the ferry goes in any weather. The planes that serve our community are small and you are limited to 50 pounds. Kitchen appliances, household appliances, very few of those fit on the plane. It's a nightmare to take anything on the plane other than groceries and people.

### ***Minimum Level of Service***

Port Lions needs a round-trip ferry to Kodiak at least once every two weeks.

### ***Tolerance for a 10 Percent Fare Increase***

People without other options will continue to use the ferry for vehicles and large items and pay the higher fare. But at some point, if you raise the passenger fare to the point of being comparable with a plane fare, you will lose the foot traffic. Remember that it takes two to three hours on the ferry to Kodiak, while the plane takes 15 minutes on a clear day and 30 minutes on a cloudy day.

### ***Effects of Reduced Service***

Our biggest concern about the effects of reduced service is that it will lead to outmigration. Would service be cut back so drastically that lodge owners would not be able to operate their small businesses? Would elders no longer be able to live with their families? Would the community be unable to get the things we need here because of the high expense? Reducing service would cause the loss of a rural lifestyle. Rural Alaska is disappearing. We are doing our best to stop the bleeding, to attract people here with jobs and housing, and the ferry is a huge part of that.

If we can't get the things we need, to upgrade homes and facilities and maintain infrastructure, that affects our quality of life. And there would be effects to people's personal health based on the ability to access medical care and healthy foods.

We could not have a passenger-only ferry exclusively. But combining a passenger-only ferry with a vehicle ferry could work. For us, the first we think about is vehicle traffic and then foot traffic. So, yes to a combined. Or you could just reduce the frequency the Tustumena or Kennecott comes in. We just need reliable service. That's the main thing—reliability. We can get by with reduced schedule, but it must be published and available and forward-funded so we can see that ferry schedule a year in advance.

If the number of departures were cut in half, the overall level of use would not be affected. We would just have to know the schedule so we could plan way in advance because the problem for us is that if it comes out of Homer full, we're not getting on board.

### ***Ideas for Improving Fiscal Health***

- Forward fund the ferry at the Legislative level so people, especially tourists, can book their trips at least a year in advance. We're losing revenue because people can't book their travel when they want to.
- Kodiak should and could be served by a day ferry. I know a day ferry isn't going to be able to handle the open water to Homer, but communities on Kodiak could be served by it. A day ferry is smaller and uses less fuel. It would do away with the huge expense of having people living and working on the vessel. An island-wide transportation study from about 10 years ago showed that a day ferry would be a huge savings. The day ferry could be parked in Kodiak, run its route, and be back in Kodiak by the end of the day.
- The employees that live on board the boats are a huge cost to AMHS. They should stop the practice wherever they can.
- Study the last five years of travel to find the routes with the highest number of empty ferries and reduce service on those routes.

### Historic Revenue and Traffic Volumes

Table 118 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with Port Lions as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). Port Lions is an origin/destination in the Homer-Kodiak and Cross-Gulf Route Groups, connecting to five ports. The route between Port Lions and Homer generates the most revenue. The route between Port Lions and Kodiak transports the most passengers.

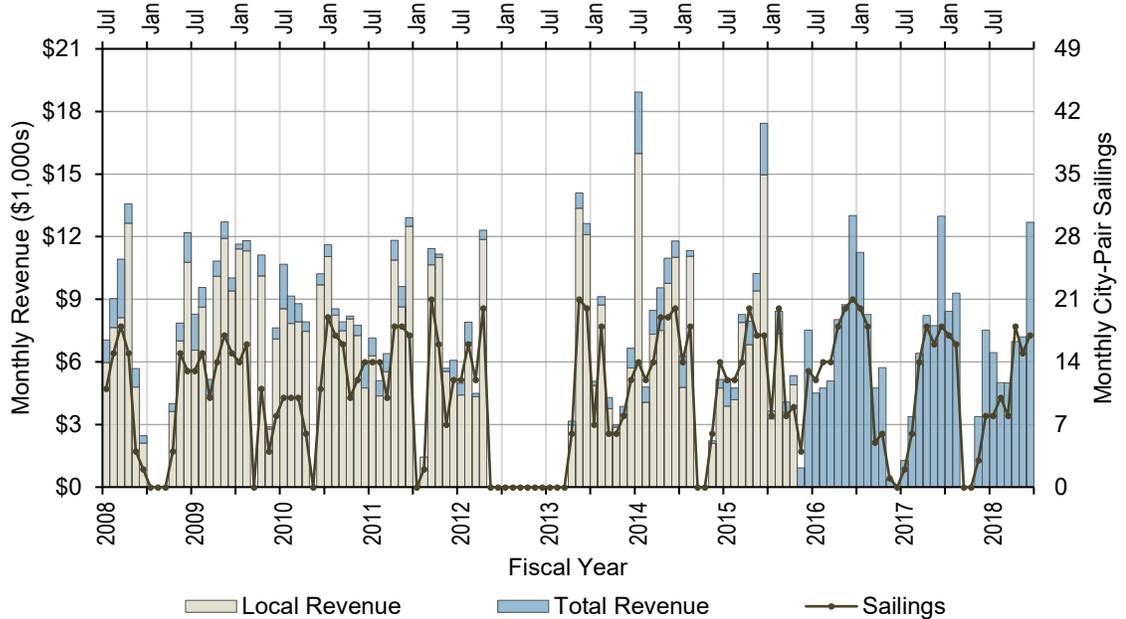
**Table 118. Port Lions as the Origin or Destination—AMHS Volume and Revenue, 2009–2018**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Homer-Kodiak Routes</b>										
<b>Travel to and from Kodiak</b>										
Sailings	97	137	135	149	60	104	150	152	136	104
Passengers	1,473	2,422	2,349	2,154	603	1,300	1,654	1,319	1,115	952
# on Car-deck	658	1,003	883	821	263	537	658	561	489	422
Vans	0	0	0	0	0	0	0	6	0	0
\$ (1,000s)	\$73	\$102	\$97	\$89	\$30	\$62	\$89	\$84	\$74	\$69
<b>Travel to and from Ouzinkie</b>										
Sailings	0	0	0	8	18	43	88	115	17	17
Passengers	0	0	0	12	0	6	13	39	44	25
# on Car-deck	0	0	0	1	1	2	4	9	9	4
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1	\$1	\$1
<b>Travel to and from Seldovia</b>										
Sailings	72	98	112	124	47	75	108	107	0	0
Passengers	0	2	0	0	0	0	0	5	0	0
# on Car-deck	1	0	1	0	0	0	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Travel to and from Homer</b>										
Sailings	95	133	134	137	56	85	120	135	103	87
Passengers	594	912	858	801	266	355	710	816	630	534
# on Car-deck	309	442	342	362	149	175	338	402	344	314
Vans	0	0	0	0	0	0	0	6	0	0
\$ (1,000s)	\$102	\$138	\$122	\$119	\$45	\$60	\$124	\$161	\$142	\$136
<b>Cross-Gulf Route</b>										
<b>Travel to and from Whittier</b>										
Sailings	0	0	0	0	0	1	3	0	2	1
Passengers	0	0	0	0	0	1	6	0	3	1
# on Car-deck	0	0	0	0	0	1	3	0	3	1
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$0	\$0	\$0	\$1	\$0	\$1	\$1

Source: Northern Economics analysis using data from AMHS (2019)

Figure 128 shows monthly revenues and sailings for travel between Kodiak and Port Lions in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available. Across all seasons, most revenue is from local residents.

**Figure 128. Monthly Local Resident and Total Kodiak-Port Lions Revenues and Sailings, by Fiscal Year**

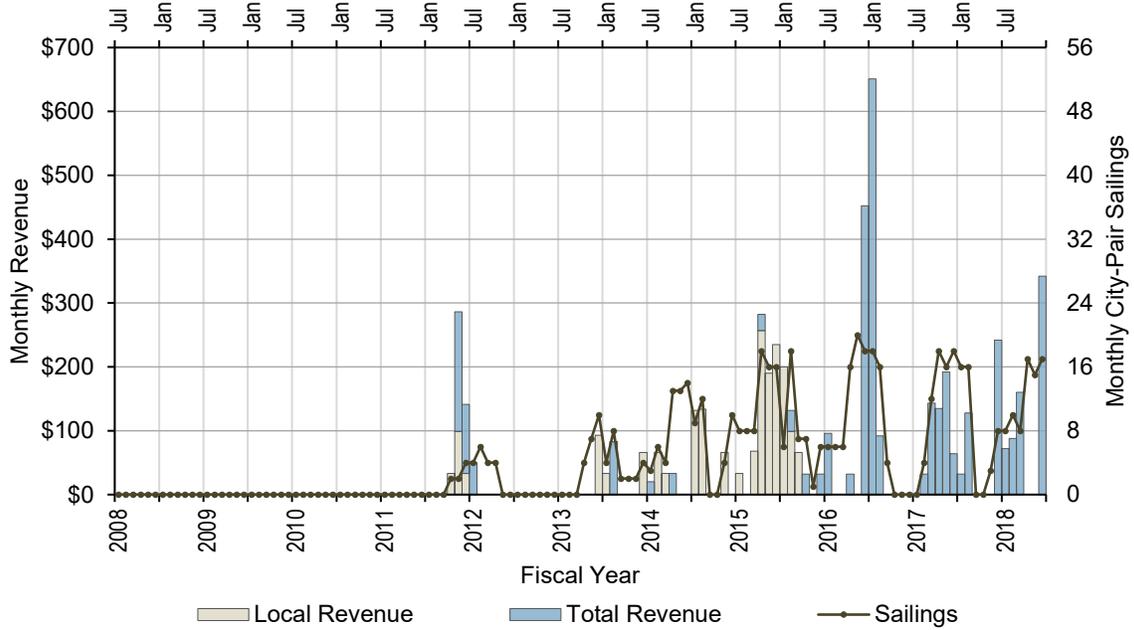


Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

Figure 129 shows monthly revenues and sailings for travel between Ouzinkie and Port Lions in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available. For the few years with sailings data for this route, most revenue was from local residents.

**Figure 129. Monthly Local Resident and Total Ouzinkie-Port Lions Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Land-based Facilities**

The land-based AMHS facility in Port Lion is non-state owned. Table 119 shows which currently operating AMHS vessels are capable of docking at the facilities in Port Lions.

**Table 119. Vessels Capable of Docking at Port Lions Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Port Lions			X						X

Note: X indicates the vessel is compatible with this terminal.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value of the facility was constructed by PND (2019).

**Port Lions Facility**

*Docking Orientation:* Side Berth

*Description:* The Port Lions dock consists of an earth-filled open cell sheet pile wharf constructed in 2014. The dock has a 214ft long berthing face with two mooring dolphins along the north end. This dock is owned and operated by the City.

*Alternative Usage:* This is a multi-purpose facility that can accommodate barges and other vessels. Accommodating small passenger or similar vessels with low freeboard would likely be challenging due to the fixed dock elevation.

**3.10.3 Transportation Alternatives**

One carrier provides regularly scheduled passenger air service to Port Lions, and rates to hub airports are shown in Table 120. On Sundays, this route operates as a loop from Kodiak to Ouzinkie to Port Lions and back to Kodiak

**Table 120. Port Lions Flight Services and Rates for Single Adult Passenger, by Carrier**

Airline Carrier	One Way Destination	Summer Rate (\$)	Winter Rate (\$)
Island Air Service	Kodiak	66	66

Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.

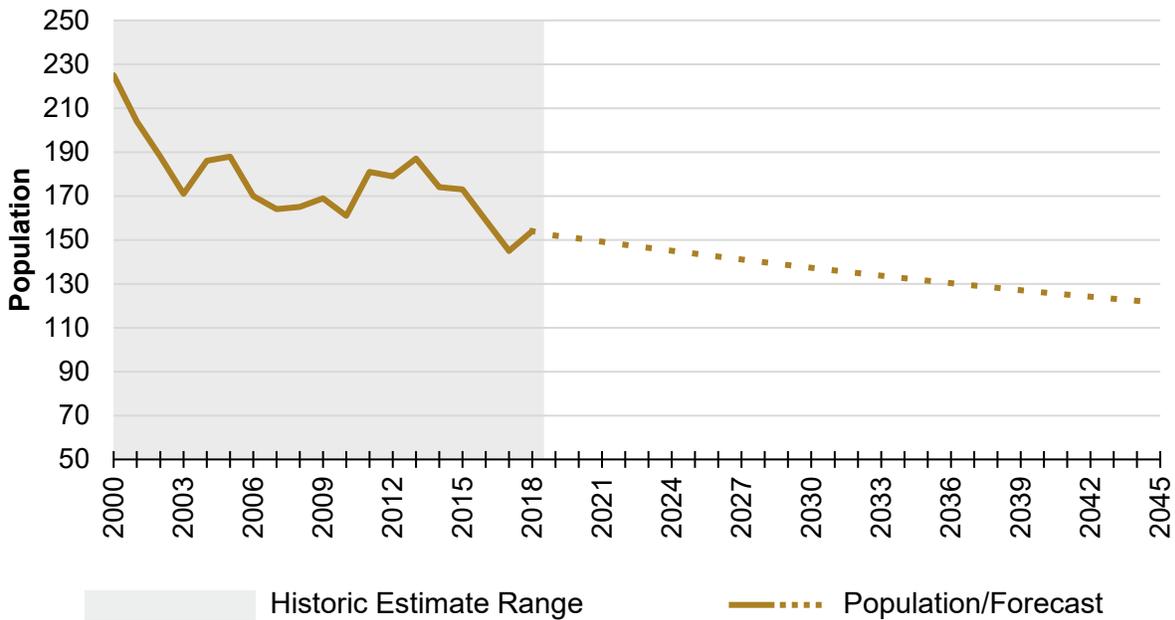
Data Source: Island Air Service, 2019.

### 3.11 Ouzinkie Community Profile

#### 3.11.1 Demographic Summary

Figure 130 shows the population of Ouzinkie with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 154 permanent residents, but the population of Ouzinkie is expected to decrease gradually over time.

**Figure 130. Ouzinkie Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 121 shows student enrollment in all Ouzinkie schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

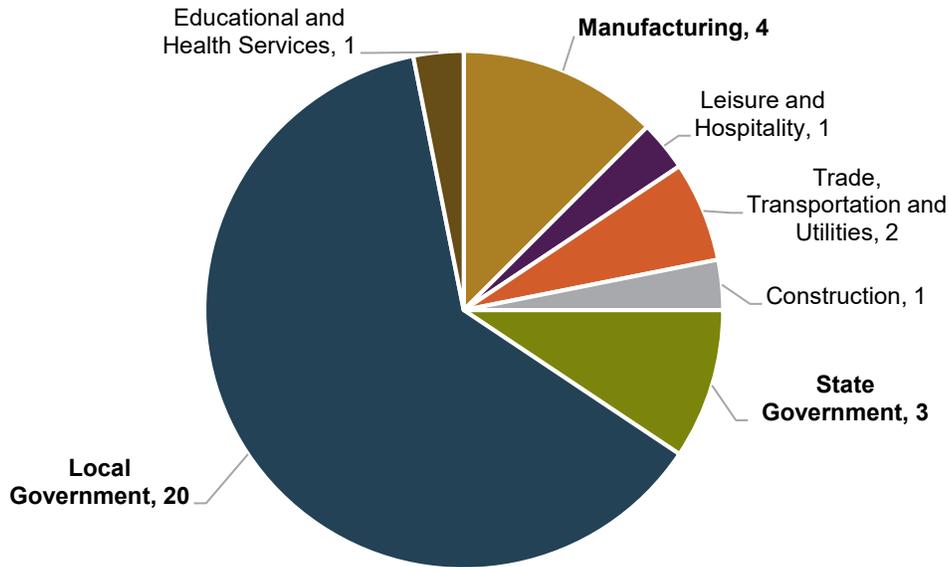
**Table 121. Ouzinkie All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	1	0	2	3	3	1	2	1	3	1	2	0	0	0
Total	12							4		3			0	

Data Source: USDE, 2016.

Figure 131 shows the number of workers in various industries for Ouzinkie, and the top three industries are shown in bold.

**Figure 131. Ouzinkie Resident Employment by Industry, 2016**



Data Source: ALARI, 2019

### 3.11.2 AMHS Summary

#### **Community Leader Perspectives**

Ouzinkie City Clerk Teresa Muller provided information via survey on how AMHS is used by individuals and businesses within the community. Her responses are summarized below.

#### ***How Residents Use the Ferry***

The City of Ouzinkie greatly appreciates and utilizes the AMHS; it is vital for our community. Ouzinkie's residents and businesses use the ferry for: groceries, moving vehicles/equipment for purchase and/or repairs, medical appointments, school field trips, business networking/meetings, moving/purchasing material/supplies, access to mainland with vehicles, attend social events. Sunny Cove and Pleasant Harbor also rely on the ferry to Ouzinkie

#### ***Transportation Options***

There are no other affordable services for our community for moving Vehicles/Equipment and bulk material/supplies from Kodiak and/or Homer(mainland).

#### ***Minimum Level of Service***

The MINIMUM acceptable level of service for our community would be once a week, round trip.

### Ideas for Improving Fiscal Health

Fewer runs in the winter or raise the rates.

### Historic Revenue and Traffic Volumes

Table 122 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with Ouzinkie as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). Ouzinkie is an origin/destination in the Homer-Kodiak Route Group, connecting to three ports. The route between Ouzinkie and Homer generates the most revenue and transports the most passengers.

**Table 122. Ouzinkie as the Origin or Destination—AMHS Volume and Revenue, 2009–2018**

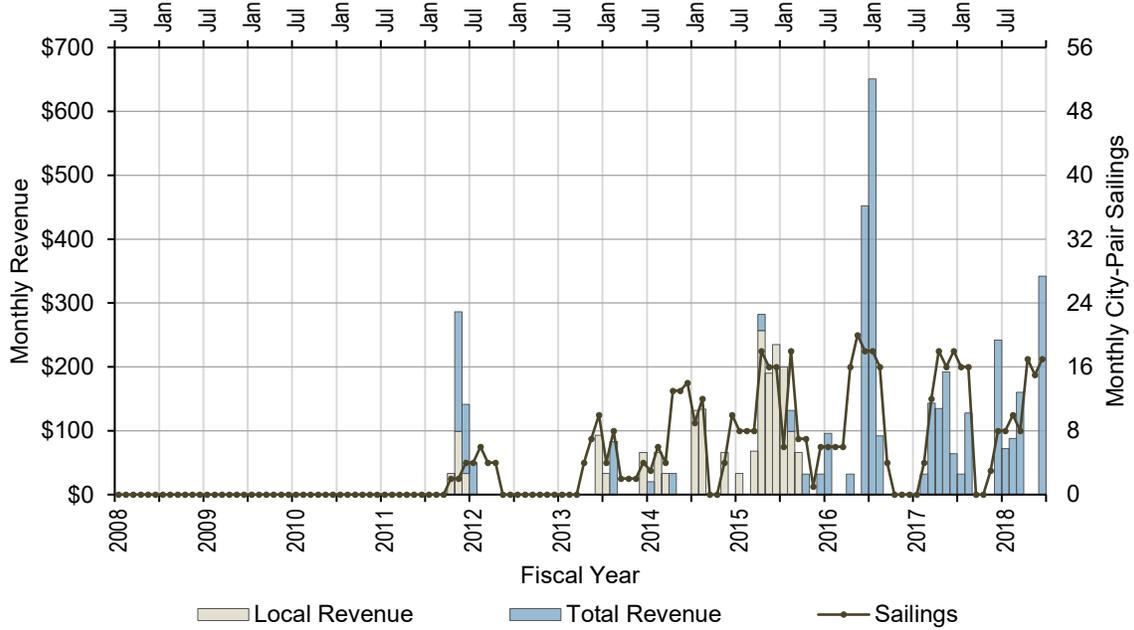
	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Homer-Kodiak Routes</b>										
<b>Travel to and from Kodiak</b>										
Sailings	0	0	0	8	18	43	88	119	106	103
Passengers	0	0	0	135	289	940	1,276	1,726	1,484	1,389
# on Car-deck	0	0	0	22	45	167	255	353	313	246
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$5	\$11	\$34	\$46	\$70	\$62	\$55
<b>Travel to and from Port Lions</b>										
Sailings	0	0	0	8	18	43	88	115	17	17
Passengers	0	0	0	12	0	6	13	39	44	25
# on Car-deck	0	0	0	1	1	2	4	9	9	4
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1	\$1	\$1
<b>Travel to and from Homer</b>										
Sailings	0	0	0	7	18	41	80	103	46	50
Passengers	0	0	0	27	40	35	154	128	117	171
# on Car-deck	0	0	0	8	16	24	62	42	42	65
Vans	0	0	0	0	0	1	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$4	\$6	\$9	\$27	\$21	\$21	\$36

Source: Northern Economics analysis using data from AMHS (2019)



Figure 133 shows monthly revenues and sailings for travel between Ouzinkie and Port Lions in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available. For the few years with sailings data for this route, most revenue was from local residents.

**Figure 133. Monthly Local Resident and Total Ouzinkie-Port Lions Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Land-based Facilities**

The land-based AMHS facility in Ouzinkie is non-state owned. Table 123 shows which currently operating AMHS vessels are capable of docking at the facilities in Ouzinkie.

**Table 123. Vessels Capable of Docking at Ouzinkie Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Ouzinkie			X*						X

\* Fair weather conditions only—poor fit.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value of the facility was constructed by PND (2019).

**Ouzinkie City Dock Facility**

*Docking Orientation:* Side Berth

*Description:* This facility consists of an open cell sheet pile wharf built in 2012. The ship breasts against four fender panels on the 175ft long southeast dock face. This facility is operated and maintained by the City.

*Alternative Usage:* This dock is the only one of its kind in Ouzinkie and services all large vessels including the ferry, barges, fishing vessels, and more. Accommodating small passenger or similar vessels with low freeboard would likely be challenging due to the fixed dock elevation.

**3.11.3 Transportation Alternatives**

One carrier provides regularly scheduled passenger air service to Ouzinkie, and rates to hub airports are shown in Table 124. On Sundays, this route operates as a loop from Kodiak to Ouzinkie to Port Lions and back to Kodiak.

**Table 124. Ouzinkie Flight Services and Rates for Single Adult Passenger, by Carrier**

Airline Carrier	One Way Destination	Summer Rate (\$)	Winter Rate (\$)
Island Air Service	Kodiak	66	66

Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.

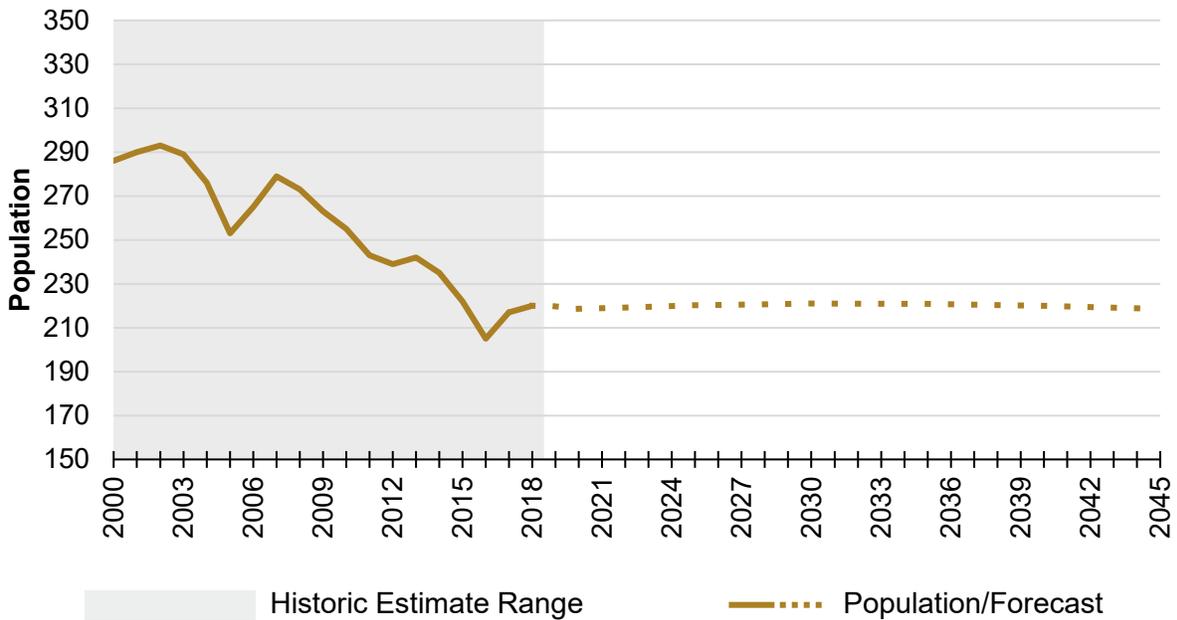
Data Source: Island Air Service, 2019.

### 3.12 Seldovia Community Profile

#### 3.12.1 Demographic Summary

Figure 134 shows the population of Seldovia with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 220 permanent residents, and the population of Seldovia is expected to stay about the same over time.

**Figure 134. Seldovia Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 125 shows student enrollment in all Seldovia schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

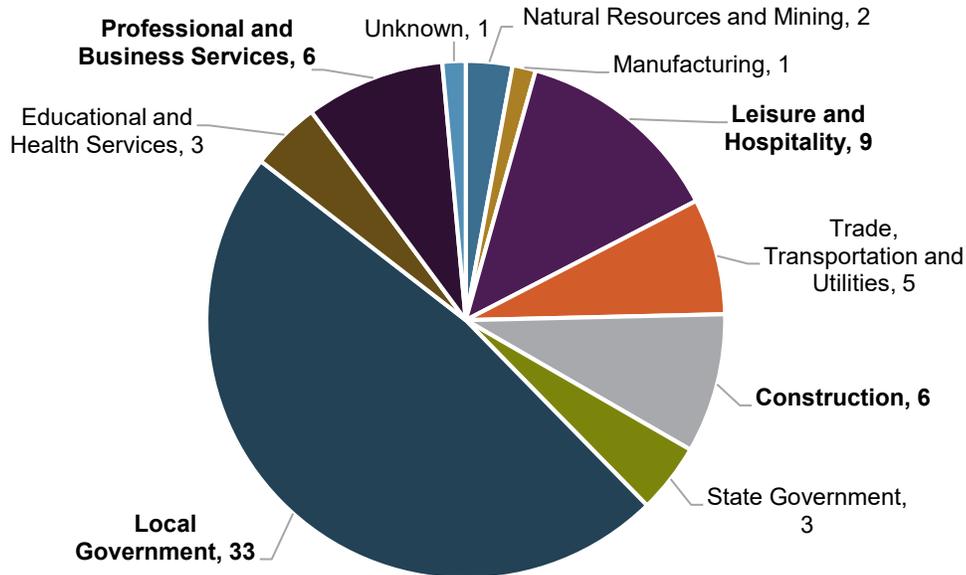
**Table 125. Seldovia All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	1	3	3	6	0	1	2	3	3	3	2	2	3	0
Total	16							6		10			0	

Data Source: USDE, 2016.

Figure 135 shows the number of workers in various industries for Seldovia, and the top three industries are shown in bold.

**Figure 135. Seldovia Resident Employment by Industry, 2016**



Data Source: ALARI, 2019

### 3.12.2 AMHS Summary

#### Community Leader Perspectives

Seldovia City Manager Cassidi Cameron provided information via survey and interview on how AMHS is used by individuals and businesses within the community. Her responses are summarized below.

#### *How Residents Use the Ferry*

Being off the road system, our community uses the ferry to transport goods for businesses, homes, construction, and families. Residents use it to travel to and from medical appointments, professional appointments, and for many other reasons. Our school uses it to travel for extra-curricular events. Seldovia residents rely on the AMHS for their livelihoods. It's the equivalent of a state highway.

When most people take a ferry trip, they try to accomplish as much as possible. They'll schedule the whole family's dentist or doctor appointments all on the same day and tie in a large bulk Costco order or other grocery run. It's a matter of logistics and scheduling. Seldovians don't use the ferry for light entertainment. It helps us do essential tasks that we can't normally do. The ferry is a huge piece of that. We schedule everything around that ferry schedule.

Seldovians typically take a vehicle on the ferry if they plan to travel beyond Homer. To rent a car over there is something like \$100 a day, so cost-wise it makes sense to take a vehicle. Plus, you need a vehicle to bring back materials and food. Our one fuel station is very expensive. You can take a 55-

gallon drum across the water and fill up for cheaper. The fuel is used for heating and vehicles. The cost of a ferry ticket (passenger plus vehicle), plus overnight lodging is still cheaper than buying 55 gallons of fuel in Seldovia. It makes sense for people to go over and get those commodities.

### ***Commercial Uses***

Kar-a-van Transfer, a big shipping company, absolutely depends on the ferry. The company's trucks in Homer pick up big orders and bring the good to Seldovia. Our grocery store, bar and grill, liquor store, and restaurants all use the ferry because it's much cheaper than a landing craft. Flying freight over is ridiculously expensive and not very efficient because you can't fit that much on planes. The ferry is crucial for the profit margins of every single business in our community.

Tourists also use the ferry system to visit Seldovia.

### ***Transportation Options***

Alternative forms of transportation are landing craft, air service, and barge, but no other service provides the safety and dependability of the ferry. Makos Water Taxi has a limited number of landing craft that can take a limited amount of cargo and supplies, but their prices are considerably higher than that of the ferry. We have air service, but there are significant space and weight constraints, and it costs considerably more. Large barges can transport vehicles, but not passengers, and they are not affordable for most individuals. Sometimes the weather is not conducive to travel by air or small boat. There really is no other safe, affordable way to travel with a vehicle, not to mention boats, trailers, large commercial truck/trailers, or heavy equipment.

If necessary, you can put a vehicle on the ferry unattended and then you can go over on the water taxi or other boat, which tend to have more flexible schedules. Sometimes you can send two vehicles with one person on the ferry and that person unloads both vehicles in Homer. People will do that when they know they need a second vehicle but haven't determined the date. They will park the vehicle in Homer so it's ready when they need it.

In the summer, we rely less on the ferry than we do in the winter because there are more options and the weather is better. The water taxi runs five or six times a day and the airline flies every day in summer. In the winter, the ferry is one of the only options. We need more service in the winter.

### ***Minimum Level of Service***

Twice a week would be optimal. At a minimum we could have a ferry once a week. Since February we have had several town hall meetings and a solid majority of residents realize three times a week is probably a little excessive, but they don't agree to just cutting off ferry service for nine months. The policy should not be all or nothing. There has to be something in the middle.

We also suggest stopping in Seldovia on the way to Homer from Kodiak and reserving a certain number of spaces for Seldovia traffic. We also suggest the reverse: a Homer to Seldovia to Kodiak run. Currently, the ferry passes Seldovia from Kodiak and there is a special run between Seldovia and Homer.

### ***Tolerance for a 10 Percent Fare Increase or Reduction in Service***

I don't think ridership would go down by 10 percent with a 10 percent fare increase because people don't have another option. If you want to get across the water and up to the highway and take care of your business, the reality is you need to take the ferry. It's a hard reality for some, but most people know what they are getting into when they choose to reside here year-round.

For visitors, I'm not sure I would have the same answer. It would be neat to have ridership data for residents versus visitors and maybe base the service off that.

### ***Effects of Reduced Service***

A long gap in service would be a hardship and very detrimental to having people stay in business and keeping inventories stocked without having to mark up for additional freight costs.

People would figure out a way to schedule themselves as long as they can rely on whatever ferry is available. The concern is mostly regarding the all-or-nothing approach. We see zero ferries scheduled for the winter after September. That's concerning. Plus, our tourist season generally lasts longer than Labor Day so seasonal businesses try to accommodate that shoulder season. If they can't stock up, they will have to close up shop early based on the ferry service. That just trickles down to less sales tax revenue and less economic vibrancy in our community. If ferry doesn't come after September, they are dictating what our tourist season is.

Combining passenger-only ferries with a less-frequent vehicle ferry would not work for Seldovia. People who go on the ferry want to take their vehicles more often than not and that is what they really use our ferry for because they can't get their vehicle back and forth any other way. The vehicle transport is key to why people depend on the ferry in Seldovia.

If the number of departures were cut in half, I don't think usage would go down. People would adjust their schedules or put their vehicle on one day, get it to Homer, and have it waiting until they got over there. I think it would stretch people's schedules out. I don't know. That's a tough question. I don't want the sentiment to be, 'Oh, we can just cut service and people would adjust and it would all be fine.' I think people would adjust, but they would have a hard time riding the ferry if it was only coming once every three months. At that point, what's the point? It's got to be functional for them.

### ***Ideas for Improving Fiscal Health***

- Please keep the ferry service—even an abbreviated service—to our community, especially in the fall and winter months. We are isolated and depend heavily on the ferry for regular transportation in the winter as most days planes and small watercraft cannot operate due to weather.
- Consider selling ferry reservations like an airline. Sell lower priced reservations when they are booked early. Increase the ticket price as the sailing date get closer. People would be more committed to planning ahead and sticking to their plans.
- Perhaps work with communities and sell advertising space on the ferry to Chamber of Commerce, Economic Development organizations, tribes, and municipalities to promote themselves and reach a broad audience.
- Perhaps cut back the day run schedules in Southeast. Mainline runs are vital for our communities and it is easy for us to understand why they are necessary. Please offer more information on what the day and shuttle runs are used for and what kind of ridership there is.
- Analyze data, fees, and schedules based on Alaskan community needs because the success of Alaska and its economy depends on how well services can come to these rural communities. The availability of services also affects visitor numbers; communities need to survive and be economically viable in order to attract visitors.

### **Historic Revenue and Traffic Volumes**

Table 126 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with Seldovia as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). Seldovia is an origin/destination in the

Homer-Kodiak, Southwest, and Cross-Gulf Route Groups, connecting to seven ports. The route between Seldovia and Homer generates the most revenue and transports the most passengers.

**Table 126. Seldovia as the Origin or Destination—AMHS Volume and Revenue, 2009–2018**

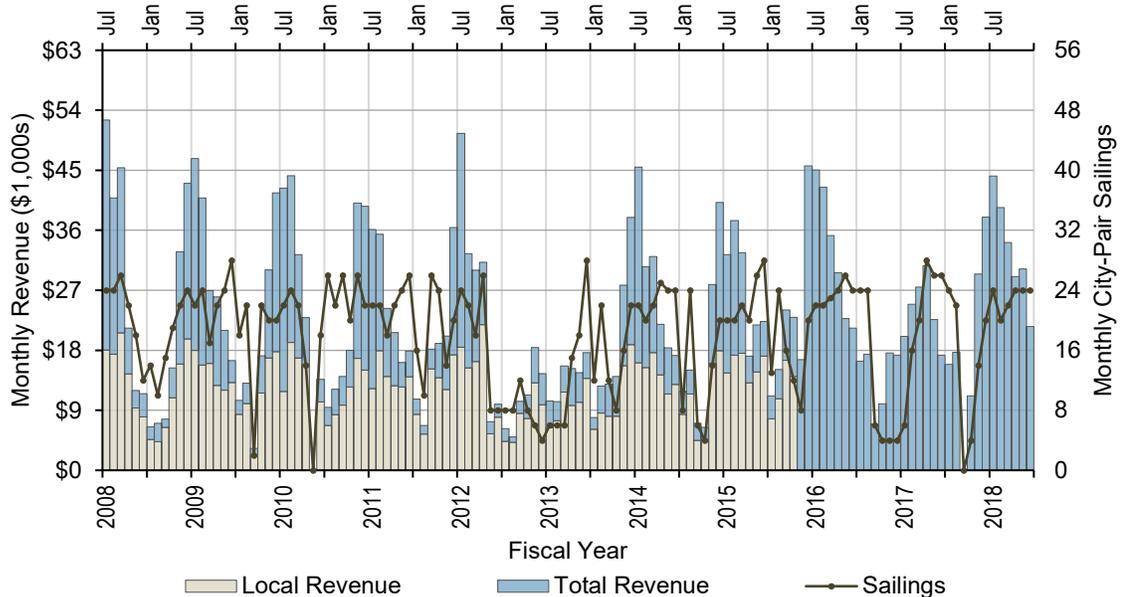
	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Homer-Kodiak Routes</b>										
<b>Travel to and from Homer</b>										
Sailings	230	241	242	244	152	171	213	229	204	200
Passengers	6,319	6,068	5,873	5,381	4,280	3,148	5,008	4,602	3,767	3,278
# on Car-deck	2,808	2,814	2,786	2,664	2,212	1,777	2,257	2,271	2,293	2,029
Vans	209	211	203	164	166	177	164	209	204	172
\$ (1,000s)	\$296	\$294	\$289	\$262	\$227	\$197	\$274	\$299	\$282	\$255
<b>Travel to and from Kodiak</b>										
Sailings	227	235	239	244	146	163	210	192	9	3
Passengers	78	86	44	118	56	72	103	106	19	6
# on Car-deck	24	14	9	29	11	9	12	16	5	1
Vans	1	0	0	0	0	0	0	1	0	0
\$ (1,000s)	\$12	\$14	\$8	\$17	\$8	\$10	\$10	\$10	\$3	\$1
<b>Travel to and from Port Lions</b>										
Sailings	72	98	112	124	47	75	108	107	0	0
Passengers	0	2	0	0	0	0	0	5	0	0
# on Car-deck	1	0	1	0	0	0	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Southwest Route</b>										
<b>Travel to and from King Cove</b>										
Sailings	12	15	22	23	14	10	18	13	0	1
Passengers	0	0	0	0	0	0	0	1	0	2
# on Car-deck	0	0	0	0	0	1	0	1	0	4
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$0	\$0	\$1	\$0	\$1	\$0	\$2
<b>Travel to and from Unalaska</b>										
Sailings	12	15	22	24	13	10	18	13	0	2
Passengers	5	6	9	11	8	6	14	11	0	4
# on Car-deck	0	0	0	0	0	0	0	0	0	2
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$2	\$2	\$5	\$6	\$4	\$4	\$7	\$3	\$0	\$2

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Cross-Gulf Route</b>										
<b>Travel to and from Ketchikan</b>										
Sailings	0	0	0	13	29	12	13	6	2	0
Passengers	0	0	0	0	0	2	2	0	1	0
# on Car-deck	0	0	0	0	0	0	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$0	\$0	\$1	\$2	\$0	\$1	\$0
<b>Travel to and from Bellingham</b>										
Sailings	0	0	0	6	7	12	13	6	0	1
Passengers	0	0	0	2	0	3	0	0	0	1
# on Car-deck	0	0	0	0	0	1	0	0	0	1
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$2	\$0	\$8	\$0	\$0	\$0	\$1

Source: Northern Economics analysis using data from AMHS (2019)

Figure 136 shows monthly revenues and sailings for travel between Homer and Seldovia in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available. Most revenue in the winter months is from local residents, while just over half the peak season revenue is from non-locals for most years.

**Figure 136. Monthly Local Resident and Total Homer-Seldovia Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Land-based Facilities**

The land-based AMHS facility in Seldovia is non-state owned. Table 127 shows which currently operating AMHS vessels are capable of docking at the facilities in Seldovia.

**Table 127. Vessels Capable of Docking at Seldovia Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Seldovia			X						X

Note: X indicates the vessel is compatible with this terminal.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value of the facility was constructed by PND (2019).

**Seldovia Facility**

*Docking Orientation:* Side Berth

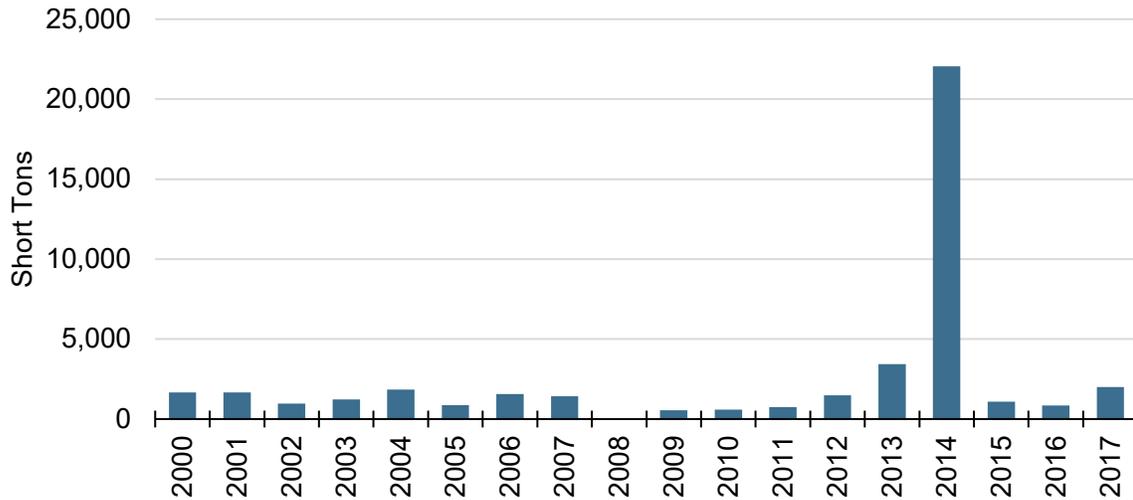
*Description:* This facility is a multi-purpose dock owned and operated by the City. The City and AMHS have an agreement for docking use. The dock is supported on steel pipe piling and has a steel and concrete substructure with a steel wale, and timber faced fender system. AMHS has a designated staging area but no terminal building or other uplands facilities. The staging area does not appear to be utilized by ferry traffic. The dock and approach has a fueling station, fuel storage facilities, and serves as a freight wharf.

*Alternative Usage:* The Seldovia terminal is a deep-water, multi-purpose dock and its approach is used as a freight wharf. As it is the only dock of its kind in Seldovia, it is used to for freight, materials, equipment, and vehicles transfer using barges and others large vessels.

### 3.12.3 Transportation Alternatives

Figure 137 shows marine freight data for Seldovia. Almost all freight passing through Seldovia is distillate fuel oil or gasoline.

**Figure 137. Seldovia Inbound and Outbound Annual Marine Freight, 2000–2017**



Data Source: USACE, 2019. USACE, 2018.

Two carriers provide regularly scheduled passenger air service to Seldovia, and rates to hub airports are shown in Table 128. Alaska Air Taxi flight schedules are variable, and their flights are contingent on weather, passenger and freight load, as noted on their website which also identifies a Facebook group (Seldovia ChatterBox) as a resource for daily flight updates (Alaska Air Taxi, 2019).

**Table 128. Seldovia Flight Services and Rates for Single Adult Passenger, by Carrier**

Airline Carrier	One Way Destination	Summer Rate (\$)	Winter Rate (\$)
Smokey Bay Air	Homer	62	62
Alaska Air Taxi	Anchorage	180	180

Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.

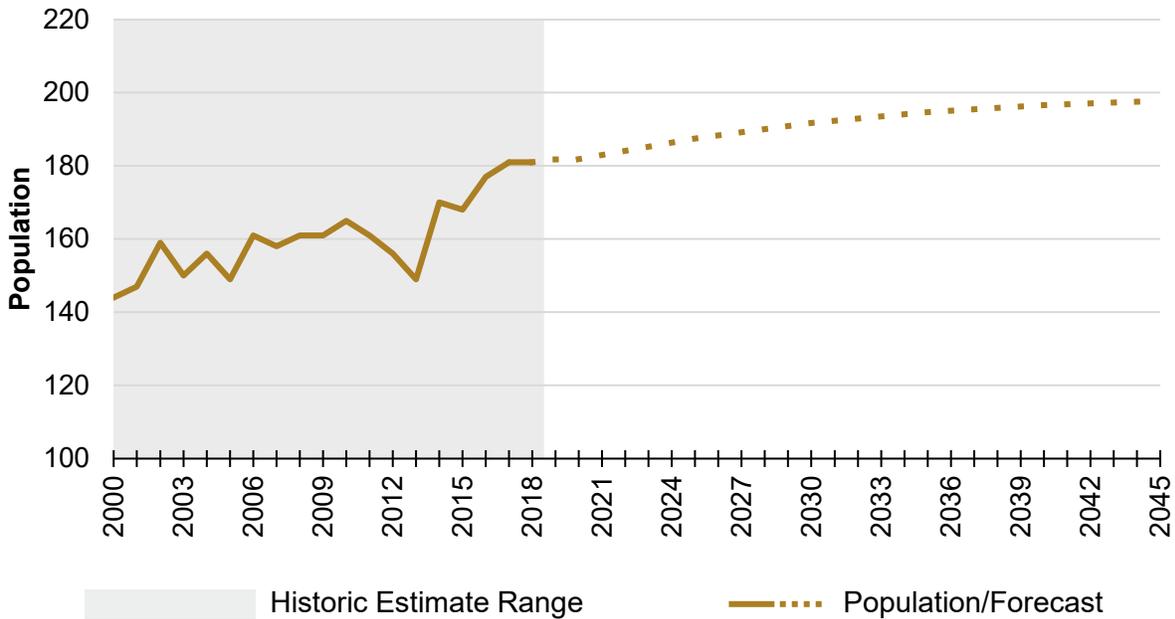
Data Source: Smokey Bay Air, 2019. Alaska Air Taxi, 2019.

### 3.12.4 Seldovia Village Community Profile

#### Demographic Summary

Figure 138 shows the population of Seldovia Village with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 181 permanent residents, and the population of Seldovia Village is expected to increase gradually over time.

**Figure 138. Seldovia Village Historic Estimates and Population Forecast, 2000–2045**



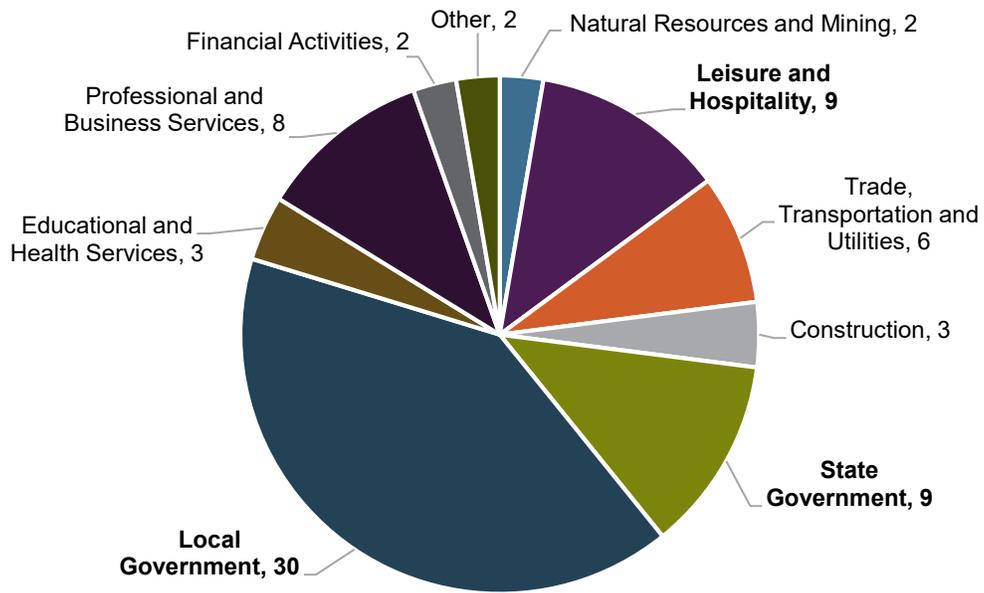
Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.

Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

There are no Alaska public schools in Seldovia Village. Seldovia Village is located in the Kenai Peninsula Borough School District with the closest school being the public school in Seldovia.

Figure 139 shows the number of workers in various industries for Seldovia Village, and the top three industries are shown in bold.

**Figure 139. Seldovia Village Resident Employment by Industry, 2016**



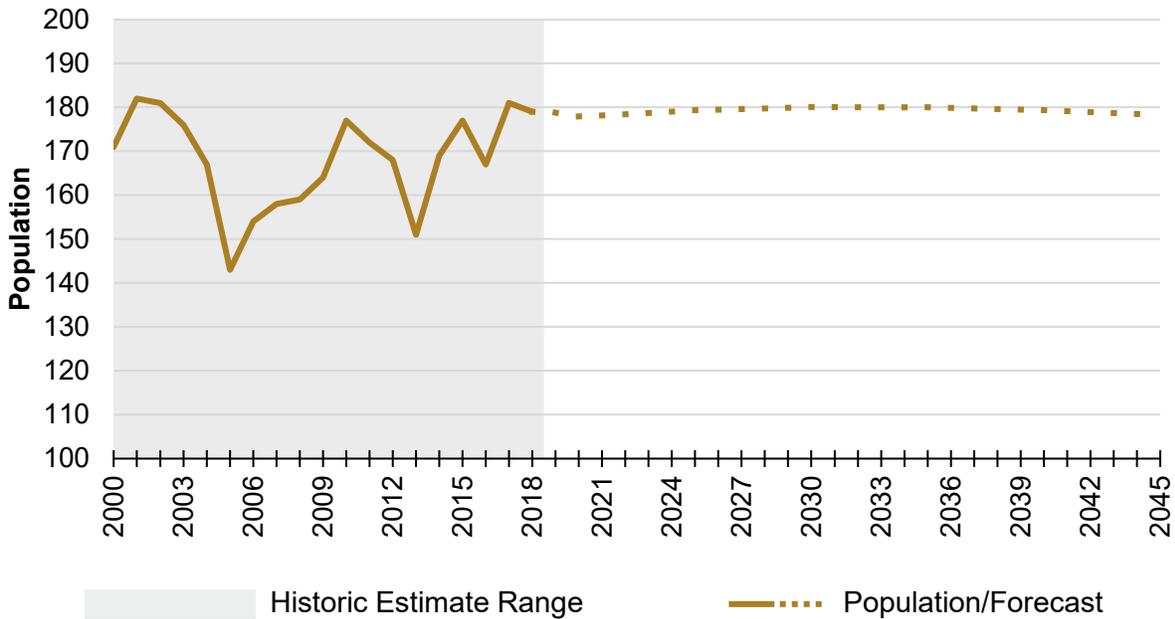
Data Source: ALARI, 2019

### 3.12.5 Port Graham Community Profile

#### Demographic Summary

Figure 140 shows the population of Port Graham with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 179 permanent residents, but the population of Port Graham is expected to stay about the same over time.

**Figure 140. Port Graham Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

One carrier provides regularly scheduled passenger air service to Port Graham, and rates to hub airports are shown in Table 129. Smokey Bay Air provides multiple daily flights to/from Homer with stops in Seldovia, Port Graham, and Nanwalek.

**Table 129. Port Graham Flight Services and Rates for Single Adult Passenger, by Carrier**

Airline Carrier	One Way Destination	Summer Rate (\$)	Winter Rate (\$)
Smokey Bay Air	Homer	90	90

Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.  
 Data Source: Smokey Bay Air, 2019.

Table 130 shows student enrollment in all Port Graham schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

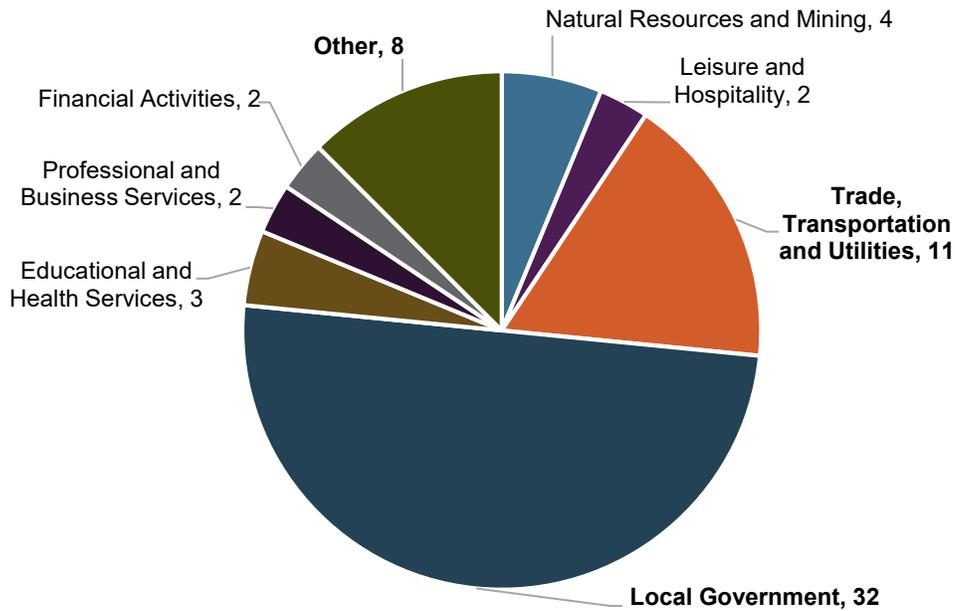
**Table 130. Port Graham All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	3	4	4	4	3	2	4	2	2	1	2	2	3	2
<b>Total</b>	24							4		8				2

Data Source: USDE, 2016.

Figure 141 shows the number of workers in various industries for Port Graham, and the top three industries are shown in bold.

**Figure 141. Port Graham Resident Employment by Industry, 2016**



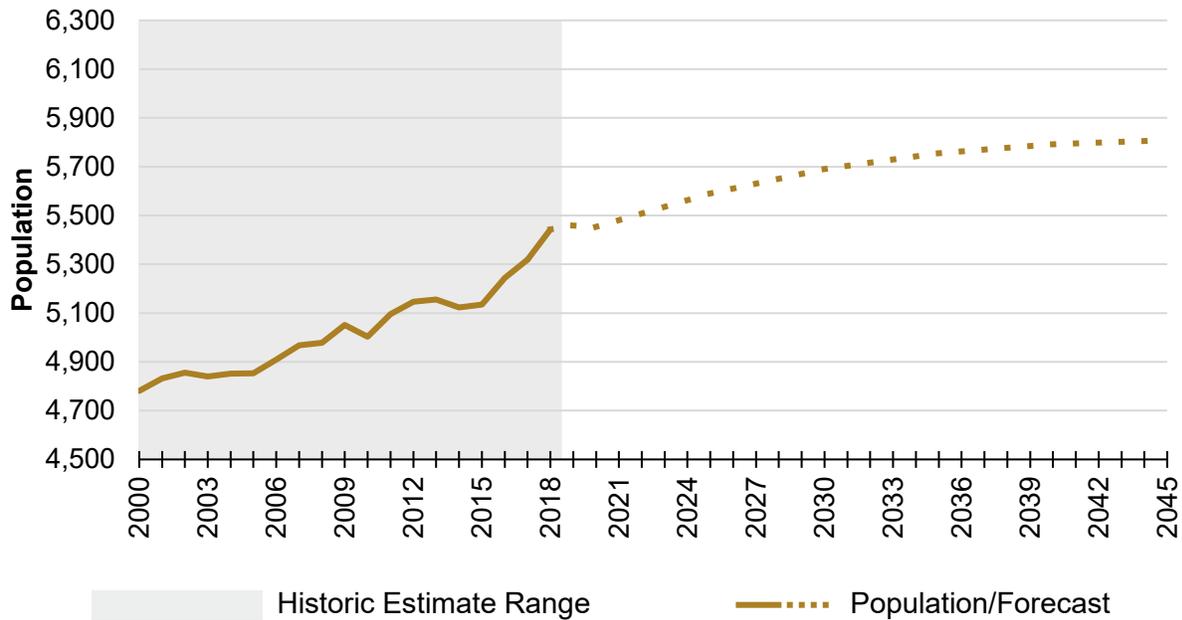
Data Source: ALARI, 2019

### 3.13 Homer Community Profile

#### 3.13.1 Demographic Summary

Figure 142 shows the population of Homer with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 5,443 permanent residents, and the population of Homer is expected to increase gradually over time.

**Figure 142. Homer Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 131 shows student enrollment in all Homer schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

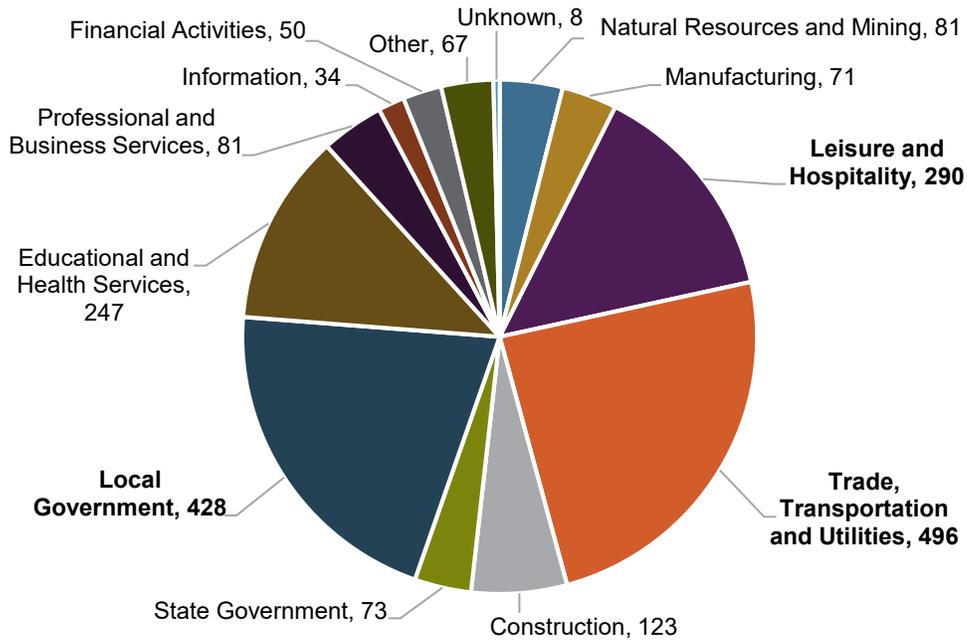
**Table 131. Homer All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	107	97	109	41	41	47	38	107	112	116	124	101	94	64
<b>Total</b>	480							219		435			64	

Data Source: USDE, 2016.

Figure 143 shows the number of workers in various industries for Homer, and the top three industries are shown in bold. Homer is a town characterized by its tourist accommodations, and guided services like fishing charters and marine wildlife viewing. There are other supporting industries like lodging, retail gift shops, and transportation that are also derived from tourism.

Figure 143. Homer Resident Employment by Industry, 2016



Data Source: ALARI, 2019

### 3.13.2 AMHS Summary

#### Community Leader Perspectives

Homer Mayor Ken Castner provided information via survey on how AMHS is used by individuals and businesses within the community. His responses are summarized below.

#### *How Residents Use the Ferry*

Homer is a connection port for Southcentral Alaska to the roadless communities of Seldovia, Kodiak, Port Lions, and Unalaska. Schools, fishermen, merchants and fishermen from inside and outside of those communities depend on AMHS to dependably move people, vehicles and freight. Kodiak is notorious for having long spells of weather that close its airport. Sometimes the ferry is the only way to get on or off the island.

#### *Transportation Options*

There are several large landing craft and/or tug and barge businesses that can fill in some of the transportation of coastal freight and construction support. There is no other maritime business I am aware of that moves passengers to and from Kodiak.

These other transportation services cannot replace passenger service as they do not provide dependable, enclosed transportation of vehicles.

### Effects of Reduced Service

It would be an inconvenience to Homer residents, and a totally isolating experience for the roadless communities.

### Ideas for Improving Fiscal Health

- Port services was at one time contracted out but AMHS decided to take on the risk of hiring more state employees. I don't think it was a wise fiscal choice
- The marine highway is a key component of the national transportation plan. The fact that it does not need to be sanded or plowed should justify some subsidy of the transportation method.

### Historic Revenue and Traffic Volumes

Table 132 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with Homer as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). Homer is an origin/destination in the Homer-Kodiak, Southwest, and Cross-Gulf Route Groups, connecting to 18 ports. The route between Homer and Kodiak generates the most revenue and transports the most passengers.

**Table 132. Homer as the Origin or Destination—AMHS Volume and Revenue, 2009–2018**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Homer-Kodiak Routes</b>										
<b>Travel to and from Seldovia</b>										
Sailings	230	241	242	244	152	171	213	229	204	200
Passengers	6,319	6,068	5,873	5,381	4,280	3,148	5,008	4,602	3,767	3,278
# on Car-deck	2,808	2,814	2,786	2,664	2,212	1,777	2,257	2,271	2,293	2,029
Vans	209	211	203	164	166	177	164	209	204	172
\$(1,000s)	\$296	\$294	\$289	\$262	\$227	\$197	\$274	\$299	\$282	\$255
<b>Travel to and from Ouzinkie</b>										
Sailings	0	0	0	7	18	41	80	103	46	50
Passengers	0	0	0	27	40	35	154	128	117	171
# on Car-deck	0	0	0	8	16	24	62	42	42	65
Vans	0	0	0	0	0	1	0	0	0	0
\$(1,000s)	\$0	\$0	\$0	\$4	\$6	\$9	\$27	\$21	\$21	\$36
<b>Travel to and from Port Lions</b>										
Sailings	95	133	134	137	56	85	120	135	103	87
Passengers	594	912	858	801	266	355	710	816	630	534
# on Car-deck	309	442	342	362	149	175	338	402	344	314
Vans	0	0	0	0	0	0	0	6	0	0
\$(1,000s)	\$102	\$138	\$122	\$119	\$45	\$60	\$124	\$161	\$142	\$136

**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Kodiak</b>										
Sailings	310	346	326	306	206	229	262	269	247	236
Passengers	17,038	19,365	18,422	18,405	15,166	12,463	17,055	15,148	12,265	10,504
# on Car-deck	6,093	7,182	6,733	6,921	5,461	4,971	6,119	5,942	5,569	5,272
Vans	473	700	634	623	575	689	840	752	523	508
\$ (1,000s)	\$2,576	\$3,022	\$2,855	\$2,933	\$2,407	\$2,265	\$3,019	\$3,099	\$2,753	\$2,684
<b>Southwest Route</b>										
<b>Travel to and from Old Harbor</b>										
Sailings	0	0	0	2	2	4	5	4	3	2
Passengers	0	0	0	8	3	14	7	17	7	4
# on Car-deck	0	0	0	1	0	0	4	3	5	2
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$1	\$0	\$1	\$2	\$3	\$2	\$4
<b>Travel to and from Chignik</b>										
Sailings	12	18	22	23	11	8	14	14	12	13
Passengers	185	247	307	338	143	112	242	151	117	127
# on Car-deck	40	69	65	83	39	28	48	44	20	35
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$47	\$73	\$83	\$101	\$46	\$34	\$65	\$49	\$31	\$45
<b>Travel to and from Sand Point</b>										
Sailings	12	18	22	25	15	12	19	18	11	12
Passengers	45	55	83	109	111	54	109	79	39	67
# on Car-deck	41	65	64	79	49	48	62	58	19	69
Vans	0	0	8	16	2	0	0	0	0	0
\$ (1,000s)	\$32	\$54	\$70	\$94	\$59	\$48	\$68	\$57	\$29	\$72
<b>Travel to and from King Cove</b>										
Sailings	12	18	22	25	15	12	19	18	13	13
Passengers	65	80	127	101	138	92	164	74	70	83
# on Car-deck	75	72	95	81	66	64	66	63	56	63
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$72	\$68	\$108	\$80	\$83	\$70	\$90	\$68	\$65	\$90
<b>Travel to and from Cold Bay</b>										
Sailings	12	18	22	25	15	12	19	18	9	13
Passengers	9	16	29	25	24	22	12	21	16	16
# on Car-deck	41	39	45	57	48	44	44	73	35	72
Vans	0	0	1	3	2	0	0	0	0	0
\$ (1,000s)	\$42	\$38	\$55	\$74	\$65	\$55	\$47	\$82	\$52	\$108

**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from False Pass</b>										
Sailings	12	18	22	20	6	5	10	9	7	7
Passengers	14	13	28	31	0	11	8	12	14	4
# on Car-deck	10	15	23	25	7	7	7	12	11	11
Vans	2	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$15	\$17	\$35	\$36	\$7	\$10	\$10	\$13	\$9	\$12
<b>Travel to and from Akutan</b>										
Sailings	12	18	22	26	12	10	19	14	2	5
Passengers	15	19	6	11	10	0	12	9	2	9
# on Car-deck	0	0	0	0	0	0	0	1	0	1
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$5	\$6	\$3	\$7	\$4	\$0	\$5	\$7	\$1	\$5
<b>Travel to and from Unalaska</b>										
Sailings	12	18	22	26	14	12	19	18	13	14
Passengers	246	299	406	546	242	246	445	406	304	301
# on Car-deck	34	57	61	86	59	62	64	63	50	40
Vans	0	0	1	0	0	1	1	0	0	1
\$ (1,000s)	\$155	\$207	\$259	\$343	\$172	\$181	\$293	\$265	\$207	\$222
<b>Cross-Gulf Routes</b>										
<b>Travel to and from Chenega Bay</b>										
Sailings	31	18	22	32	42	30	26	19	0	0
Passengers	0	3	1	2	4	28	6	10	0	0
# on Car-deck	0	2	1	0	0	24	0	4	0	0
Vans	0	2	1	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$3	\$2	\$0	\$1	\$14	\$1	\$3	\$0	\$0
<b>Travel to and from Whittier</b>										
Sailings	31	20	23	32	42	26	27	20	13	8
Passengers	70	69	67	49	72	40	20	38	32	20
# on Car-deck	12	21	18	4	8	6	3	2	0	5
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$17	\$23	\$24	\$12	\$22	\$13	\$5	\$9	\$4	\$7
<b>Travel to and from Yakutat</b>										
Sailings	0	0	0	19	41	32	26	17	3	2
Passengers	0	0	0	0	2	14	0	0	2	4
# on Car-deck	0	0	0	1	0	13	0	1	4	1
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$0	\$1	\$16	\$0	\$1	\$4	\$2

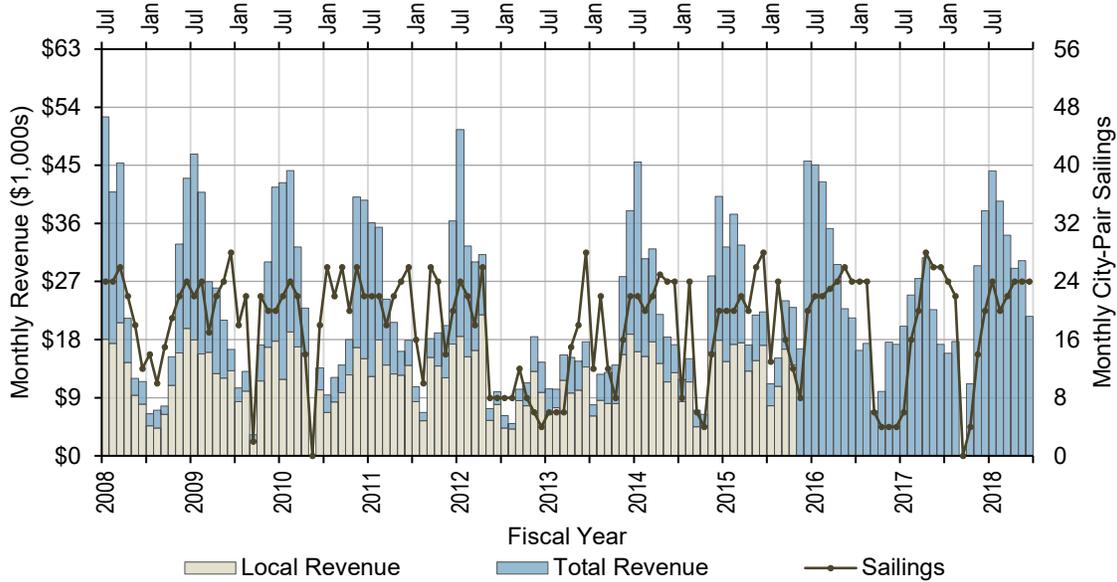
**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Juneau</b>										
Sailings	0	0	0	19	41	35	28	24	17	22
Passengers	0	0	0	9	81	137	31	88	26	43
# on Car-deck	0	0	0	5	22	102	5	132	13	19
Vans	0	0	0	0	0	1	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$12	\$78	\$148	\$19	\$187	\$25	\$43
<b>Travel to and from Ketchikan</b>										
Sailings	0	0	0	19	38	28	27	15	12	11
Passengers	0	0	0	5	30	33	14	5	16	23
# on Car-deck	0	0	0	2	12	14	7	0	5	12
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$5	\$30	\$37	\$18	\$3	\$21	\$29
<b>Special Routes</b>										
<b>Travel to and from Bellingham</b>										
Sailings	0	0	0	12	15	27	27	18	21	20
Passengers	0	0	0	15	71	226	105	86	71	81
# on Car-deck	0	0	0	5	11	107	28	23	31	34
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$27	\$85	\$362	\$161	\$133	\$154	\$169

Source: Northern Economics analysis using data from AMHS (2019)

Figure 144 shows monthly revenues and sailings for travel between Homer and Seldovia in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available. Most revenue in the winter months is from local residents, while just over half the peak season revenue is from non-locals for most years. Figure 145 shows monthly revenues and sailings for travel in either direction between Homer and either Ouzinkie or Port Lions, with revenues separated by local and non-local resident ticket purchasers when data are available. Most revenue in the winter months is from local residents, the peak season revenue is more evenly split between local and non-local revenue.

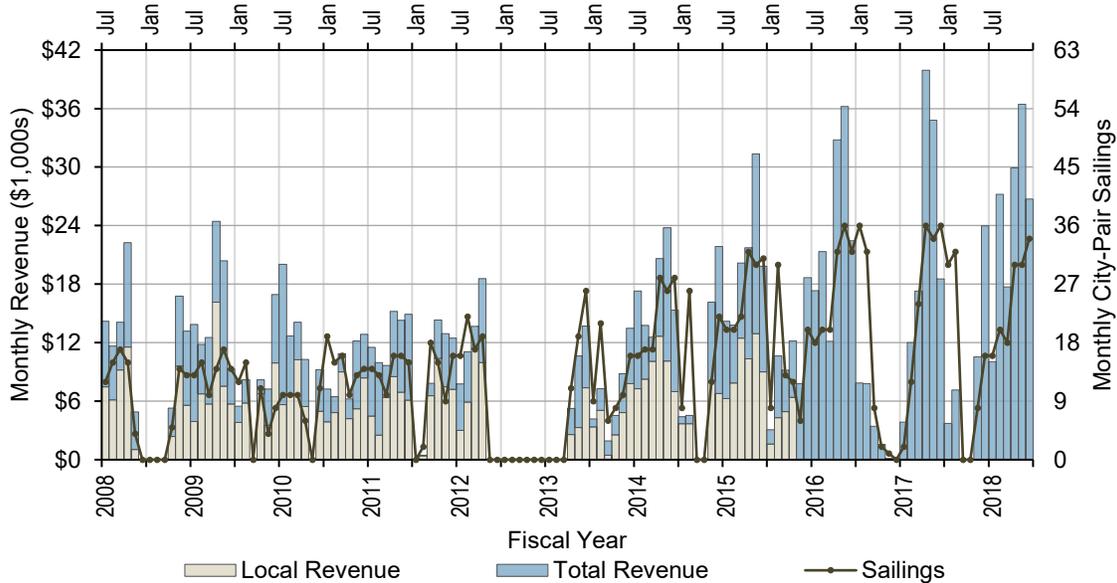
**Figure 144. Monthly Local Resident and Total Homer-Seldovia Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Figure 145. Monthly Local Resident and Total Revenues and Sailings Between Homer and Ouzinkie or Port Lions, by Fiscal Year**

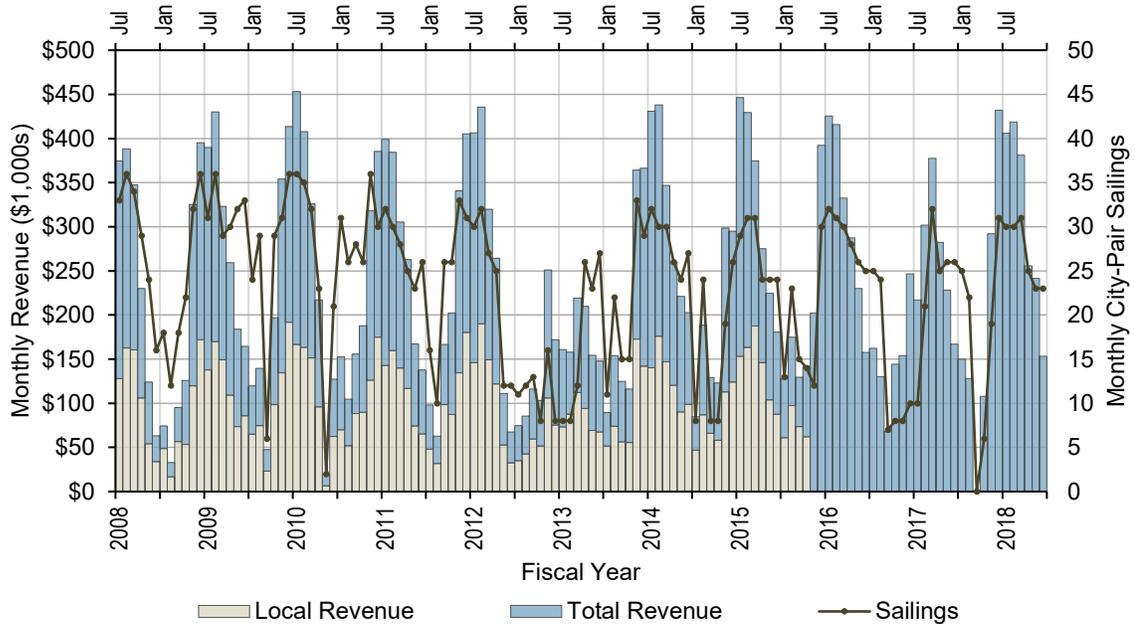


Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

Figure 146 shows monthly revenues and sailings for travel between Kodiak and Homer in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available. About half or just over half of revenue in the winter months is from local residents, while over half of the peak summer season revenue is from non-locals.

**Figure 146. Monthly Local Resident and Total Kodiak-Homer Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Land-based Facilities**

The land-based AMHS facility in Homer is non-state owned. Table 133 shows which currently operating AMHS vessels are capable of docking at the facilities in Homer.

**Table 133. Vessels Capable of Docking at Homer Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Homer Pioneer Dock			X						X

Note: X indicates the vessel is compatible with this terminal.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value of the facility was constructed by PND (2019).

**Homer Facility**

*Docking Orientation:* Stern, Side Berth

*Description:* This facility is a modern U-shaped concrete deck built around the original timber city dock in and is owned and operated by the City. The facility consists of a terminal building and uplands staging area, east and west approach trestles connected to the main dock, two breasting dolphins, and one mooring dolphin with one access catwalk. Vehicle and passenger transfer takes place on the City dock.

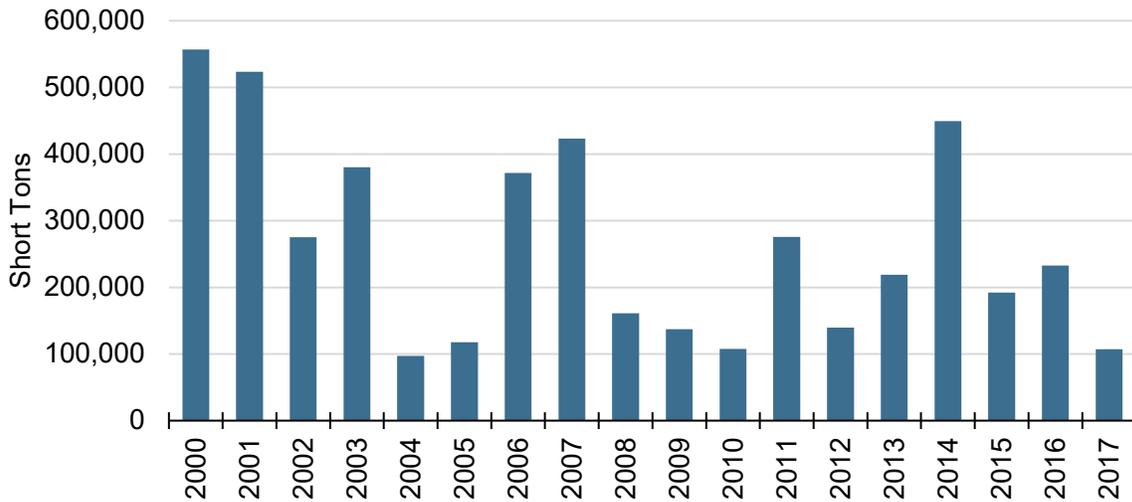
The north side of the dock is used by the Coast Guard as a berth for the USCGC Hickory buoy tender. Homer harbor traffic has caused docking conflicts in the past. The State provided a portion of construction funding, has priority use and does not pay a docking fee per the MOA with the City.

*Alternative Usage:* The Homer Ferry Terminal is a multi-use facility and is currently used by various vessels. The Coast Guard currently uses the north side of the dock for moorage of the USCGC Hickory. Accommodating small passenger or similar vessels with low freeboard would likely be challenging due to the fixed dock elevation; however, other facilities exist in the adjacent small boat harbor that currently provide for offload of this type of vessel.

**3.13.3 Transportation Alternatives**

Figure 147 shows marine freight data for Homer. A variety of commodities pass through Homer, with crude petroleum, distillate fuel oil, gasoline, and kerosene as top commodities for most reported years. High amounts of lumber, nitrogenous fertilizer, pulp/wastepaper, and wood passed through Homer in the early-mid 2000s but have not been reported since then. High amounts of Naphtha & Solvents were reported from 2013–2016 after not being reported since 2001.

**Figure 147. Homer Inbound and Outbound Annual Marine Freight, 2000–2017**



Data Source: USACE, 2019. USACE, 2018.

Two carriers provide regularly scheduled passenger air service to Homer, and rates to hub airports are shown in Table 134. Smokey Bay Air is based in Homer and provides daily flights to three villages. Homer is also the base for numerous water taxi service companies. Most specialize in passenger and light cargo (Kayaks, camping gear, etc.) transport to remote locations in Kachemak Bay. At least four

companies also operated landing craft and/or advertised freight transportation service in the Kachemak Bay area.

**Table 134. Homer Flight Services and Rates for Single Adult Passenger, by Carrier**

<b>Airline Carrier</b>	<b>One Way Destination</b>	<b>Summer Rate (\$)</b>	<b>Winter Rate (\$)</b>
Ravn Alaska operated by Corvus Airlines	Anchorage	134	134

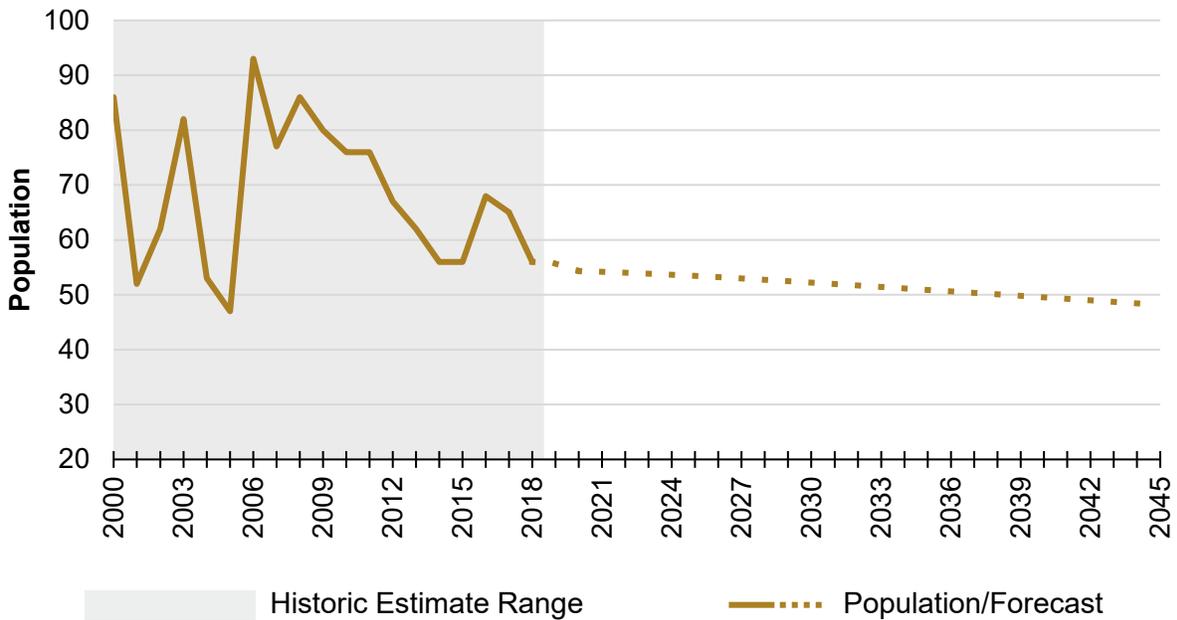
Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.  
Data Source: Ravn Alaska, 2019.

### 3.14 Chenega Community Profile

#### 3.14.1 Demographic Summary

Figure 148 shows the population of Chenega with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 56 permanent residents, but the population of Chenega is expected to decrease slightly over time.

**Figure 148. Chenega Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 135 shows student enrollment in all Chenega schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

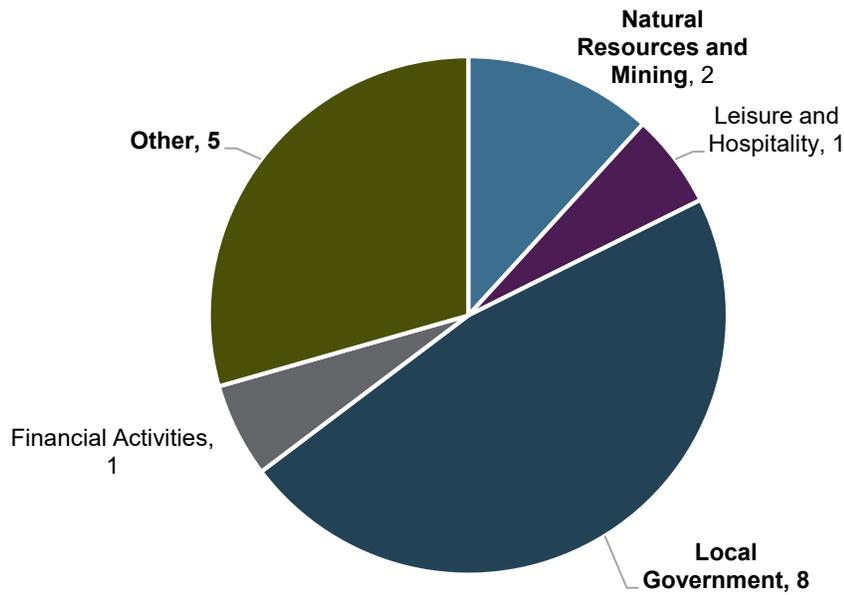
**Table 135. Chenega All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	1	1	0	0	0	0	2	1	1	2	1	0	2	10
<b>Total</b>	4						2		5					10

Data Source: USDE, 2016.

Figure 149 shows the number of workers in various industries for Chenega, and the top three industries are shown in bold.

Figure 149. Chenega Resident Employment by Industry, 2016



Data Source: ALARI, 2019

### 3.14.2 AMHS Summary

#### Community Leader Perspectives

Buell Russell, General Manager of the Native Village of Chenega provided information via survey on how AMHS is used by individuals and businesses within the community. His responses are summarized below.

#### *How Residents Use the Ferry*

The ferry is used extensively for transportation of vehicles, food, and building materials.

#### *Transportation Options*

It is very unlikely given the small population that other forms or providers of transportation services could respond to changes to AMHS service in Chenega Bay. No other service offers transportation of large items, such as vehicles and building materials.

#### *Minimum Level of Service*

Once per week.

#### *Ideas for Improving Fiscal Health*

Prioritize service to communities based on need.

**Historic Revenue and Traffic Volumes**

Table 136 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with Chenega Bay as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). Chenega Bay is an origin/destination in the Prince William Sound and Cross-Gulf Route Groups, connecting to four ports. The route between Chenega Bay and Whittier generates the most revenue and transports the most passengers.

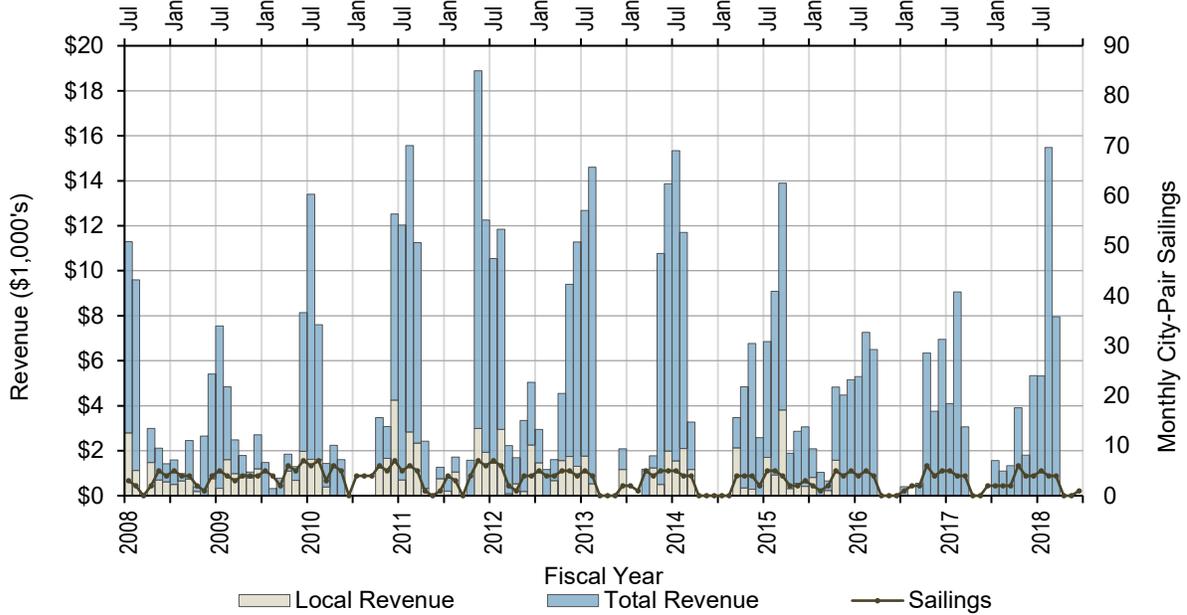
**Table 136. Chenega Bay as the Origin or Destination—AMHS Volume and Revenue, 2009–2018**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Prince William Sound Routes</b>										
<b>Travel to and from Whittier</b>										
Sailings	36	53	57	42	51	33	27	40	27	28
Passengers	253	218	226	354	417	263	222	320	213	198
# on Car-deck	108	85	111	175	167	137	108	141	117	99
Vans	2	2	1	14	5	0	0	0	0	0
\$ (1,000s)	\$41	\$34	\$45	\$78	\$66	\$57	\$48	\$56	\$37	\$31
<b>Travel to and from Cordova</b>										
Sailings	4	27	4	3	1	7	0	11	1	2
Passengers	22	9	2	2	0	0	0	0	2	8
# on Car-deck	12	2	0	0	5	3	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$2	\$1	\$0	\$0	\$1	\$1	\$0	\$0	\$0	\$0
<b>Cross-Gulf Routes</b>										
<b>Travel to and from Homer</b>										
Sailings	31	18	22	32	42	30	26	19	0	0
Passengers	0	3	1	2	4	28	6	10	0	0
# on Car-deck	0	2	1	0	0	24	0	4	0	0
Vans	0	2	1	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$3	\$2	\$0	\$1	\$14	\$1	\$3	\$0	\$0
<b>Travel to and from Kodiak</b>										
Sailings	34	18	23	33	46	29	26	21	0	2
Passengers	36	17	9	14	31	2	0	1	0	1
# on Car-deck	6	1	1	5	7	0	0	1	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$6	\$2	\$2	\$2	\$3	\$0	\$0	\$1	\$0	\$0

Source: Northern Economics analysis using data from AMHS (2019)

Figure 150 shows monthly revenues and sailings for travel between Chenega Bay and Whittier in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available. When residency data were available (prior to May 2016), approximately 20 percent of revenue was generated by local residents.

**Figure 150. Monthly Local Resident and Total Chenega Bay-Whittier Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Land-based Facilities**

The land-based AMHS facility in Chenega Bay is non-state owned. Table 137 shows which currently operating AMHS vessels are capable of docking at the facilities in Chenega Bay.

**Table 137. Vessels Capable of Docking at Chenega Bay Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Chenega Bay	X		X	X*					X

Notes:

X indicates the vessel is compatible with this terminal.

\* It is likely that the vessel is compatible with this terminal, but it has not been fully tested.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value of the facility was constructed by PND (2019).

**Chenega Bay Facility**

*Docking Orientation:* Stern, Side Berth

*Description:* This facility consists of an approach dock, and two tidal ramps constructed of pre-stressed concrete panels welded to bridge beams supported by steel pipe piles socketed to the underlying

bedrock. The M/V Tustumena has used the east face of the dock for moorage and the M/V Aurora uses the tidal ramps located along the north face of the dock for stern loading. This facility is owned by the North Pacific Rim Housing Authority.

*Alternative Usage:* The Chenega Ferry Terminal is a multi-use facility and is currently used by various vessels. Alternative uses are feasible without major upgrades.

### **3.14.3 Transportation Alternatives**

One carrier provides regularly scheduled passenger air service to Chenega, and rates to hub airports are shown in Table 138. This route operates on Mondays, Wednesdays, and Fridays only and operated as a triangle flight between Anchorage, Chenega, and Tatitlek.

**Table 138. Chenega Flight Services and Rates for Single Adult Passenger, by Carrier**

<b>Airline Carrier</b>	<b>One Way Destination</b>	<b>Summer Rate (\$)</b>	<b>Winter Rate (\$)</b>
Alaska Air Transit	Anchorage	240*	Not reported

\*190 for self-paid Chenega Bay residents

Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.

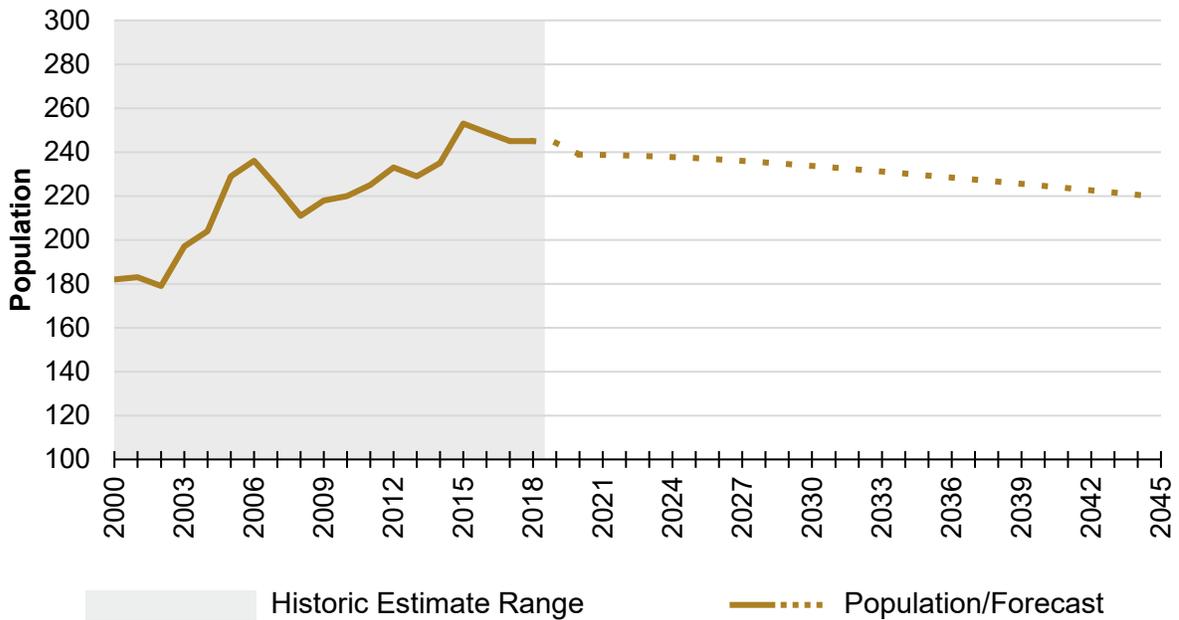
Data Source: Alaska Air Transit, 2019.

### 3.15 Whittier Community Profile

#### 3.15.1 Demographic Summary

Figure 151 shows the population of Whittier with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 245 permanent residents, but the population of Whittier is expected to decrease gradually over time.

**Figure 151. Whittier Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 139 shows student enrollment in all Whittier schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

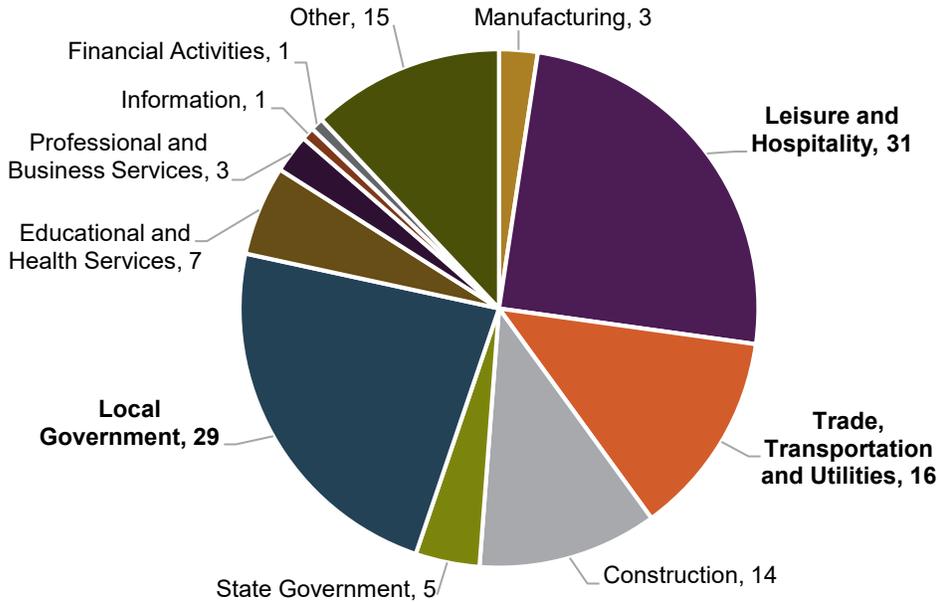
**Table 139. Whittier All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	4	2	3	3	3	2	2	3	3	2	3	5	2	8
<b>Total</b>	19							6		12			8	

Data Source: USDE, 2016.

Figure 152 shows the number of workers in various industries for Whittier, and the top three industries are shown in bold. Whittier Seafood’s processing plant employs over 300 people and operates from June-September processing all five Pacific salmon species from the Prince William Sound salmon fisheries (Whittier Seafood, 2019).

Figure 152. Whittier Resident Employment by Industry, 2016



Data Source: ALARI, 2019

### 3.15.2 AMHS Summary

#### Community Leader Perspectives

Jim Hunt, Whittier City Manager provided information via survey and Mayor Dan Blair provided an interview on how AMHS is used by individuals and businesses within the community. Their responses are summarized below.

#### *How Residents Use the Ferry*

Whittier residents are not major users of the ferry. The community instead is a conduit for AMHS traffic. An exception is student travel. The school sends its students to other schools in the Chugach School District which comprises Whittier, Chenega Bay and Tatitlek. The ferry has been a vital link between the three schools for their students, parents, and faculties. Changes in ferry schedules have made this harder. Cancellation of service during several months this coming winter will be difficult for the district. The school district helps cement vital links between the three communities.

Whittier, Cordova, and Valdez are all linked economically. When one suffers, they all suffer. If one is doing well it lifts the others. The key link is the ferry.

The ferry also plays an important role in the Prince William Sound oil spill response plan. (ed. Details were not provided.)

**Commercial Uses**

Several businesses in Whittier rely heavily on the ferry. The Bear Valley Road Runner, for example, relies heavily on AMHS customers who don't have vehicles. Coffee shops restaurants and other tourism-related business rely on AHMS customers for much of their business.

**Transportation Options**

We currently have barge and cruise ships serving Whittier. There are no other options to provide service to other Prince William Sound communities.

(ed. Respondents did not mention that Whittier is on the road system. There is a tunnel that allows for Seward Highway access through Portage Valley. The drive to Anchorage typically takes less than two hours. The Alaska Railroad also connects Whittier to Railbelt communities through the tunnel.)

**Minimum Level of Service**

Twice a week would be the minimal acceptable level of service. Ferry service could be improved with arrivals that are scheduled to match the Whittier tunnel schedule. If the ferry (the Kennicott in particular) arrives when the tunnel is closed passengers and vehicle are stranded in Whittier with little to do and no real infrastructure to accommodate them.

**Ideas for Improving Fiscal Health**

Homeport the ferry in Whittier because the community is on the road system and has lower housing expenses.

**Historic Revenue and Traffic Volumes**

Table 140 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with Whittier as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). Whittier is an origin/destination in the Prince William Sound and Cross-Gulf Route Groups, connecting to 12 ports. The routes between Whittier and Cordova, Bellingham, and Valdez generate the most revenue. The routes between Whittier and Cordova and Valdez transport the most passengers.

**Table 140. Whittier as the Origin or Destination—AMHS Volume and Revenue, 2009–2018**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Prince William Sound Routes</b>										
<b>Travel to and from Cordova</b>										
Sailings	614	562	517	512	600	445	459	586	431	443
Passengers	20,370	20,638	22,118	21,175	22,122	16,162	18,757	16,835	13,913	13,163
# on Car-deck	8,695	9,397	9,855	9,462	9,921	6,915	8,101	7,569	7,477	7,082
Vans	158	191	234	295	195	189	175	84	64	67
\$(1,000s)	\$2,064	\$2,182	\$2,409	\$2,356	\$2,372	\$1,950	\$2,396	\$2,354	\$2,091	\$2,034

**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Tatitlek</b>										
Sailings	1	6	2	2	2	0	1	5	6	9
Passengers	0	0	82	72	3	0	32	78	104	79
# on Car-deck	0	0	5	4	2	0	1	33	33	33
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$4	\$4	\$0	\$0	\$2	\$7	\$6	\$7
<b>Travel to and from Valdez</b>										
Sailings	373	348	420	364	321	276	242	229	154	160
Passengers	16,476	14,832	17,792	18,522	16,300	15,836	16,433	13,800	9,836	9,791
# on Car-deck	5,377	5,095	6,202	6,246	5,343	5,254	5,339	4,369	3,488	3,408
Vans	10	3	0	0	1	8	0	1	0	0
\$ (1,000s)	\$2,062	\$1,865	\$2,265	\$2,250	\$1,980	\$1,959	\$2,053	\$1,705	\$1,246	\$1,197
<b>Travel to and from Chenega Bay</b>										
Sailings	36	53	57	42	51	33	27	40	27	28
Passengers	253	218	226	354	417	263	222	320	213	198
# on Car-deck	108	85	111	175	167	137	108	141	117	99
Vans	2	2	1	14	5	0	0	0	0	0
\$ (1,000s)	\$41	\$34	\$45	\$78	\$66	\$57	\$48	\$56	\$37	\$31
<b>Cross-Gulf Routes</b>										
<b>Travel to and from Homer</b>										
Sailings	31	20	23	32	42	26	27	20	13	8
Passengers	70	69	67	49	72	40	20	38	32	20
# on Car-deck	12	21	18	4	8	6	3	2	0	5
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$17	\$23	\$24	\$12	\$22	\$13	\$5	\$9	\$4	\$7
<b>Travel to and from Kodiak</b>										
Sailings	32	20	24	33	46	30	32	29	26	26
Passengers	997	752	1,056	1,074	1,426	1,002	1,200	952	615	562
# on Car-deck	651	421	540	596	930	580	644	583	437	432
Vans	118	102	100	98	167	95	115	105	33	42
\$ (1,000s)	\$335	\$263	\$325	\$336	\$499	\$308	\$373	\$367	\$261	\$272
<b>Travel to and from Port Lions</b>										
Sailings	0	0	0	0	0	1	3	0	2	1
Passengers	0	0	0	0	0	1	6	0	3	1
# on Car-deck	0	0	0	0	0	1	3	0	3	1
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$0	\$0	\$0	\$1	\$0	\$1	\$1

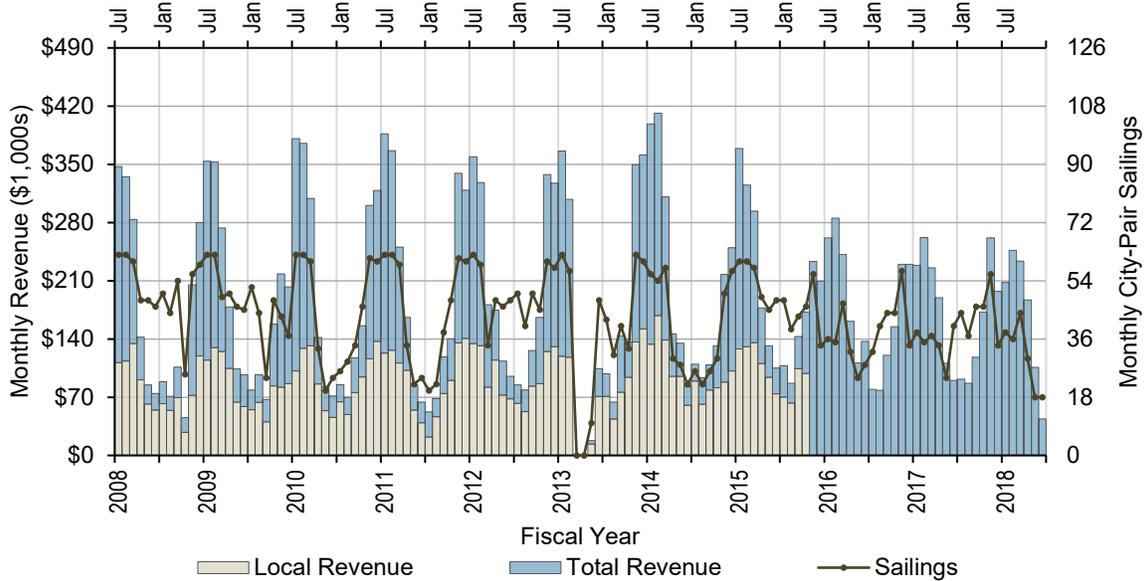
**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Yakutat</b>										
Sailings	33	20	24	33	46	27	27	28	21	23
Passengers	78	83	161	132	150	62	106	91	90	80
# on Car-deck	108	90	130	126	134	61	95	86	91	80
Vans	5	0	0	2	0	0	0	0	1	1
\$ (1,000s)	\$72	\$62	\$89	\$88	\$91	\$47	\$74	\$64	\$65	\$63
<b>Travel to and from Juneau</b>										
Sailings	33	23	27	33	46	30	35	27	26	26
Passengers	2,662	1,965	2,279	1,331	2,542	917	1,067	866	591	646
# on Car-deck	1,439	944	1,086	652	1,462	472	541	450	278	332
Vans	0	3	14	35	69	42	64	24	17	15
\$ (1,000s)	\$1,576	\$1,179	\$1,332	\$813	\$1,652	\$622	\$741	\$633	\$438	\$540
<b>Travel to and from Ketchikan</b>										
Sailings	33	19	24	33	40	25	29	21	23	22
Passengers	365	297	281	254	332	133	143	114	111	116
# on Car-deck	222	150	162	131	195	59	54	56	73	79
Vans	0	1	0	0	2	6	6	1	1	1
\$ (1,000s)	\$324	\$270	\$280	\$221	\$306	\$152	\$138	\$113	\$120	\$144
<b>Travel to and from Prince Rupert</b>										
Sailings	32	17	17	6	17	0	0	0	0	1
Passengers	355	270	283	8	46	0	0	0	0	6
# on Car-deck	142	110	128	4	28	0	0	0	0	2
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$306	\$257	\$265	\$7	\$41	\$0	\$0	\$0	\$0	\$7
<b>Travel to and from Bellingham</b>										
Sailings	0	0	6	25	17	25	29	21	26	23
Passengers	0	0	845	2,510	1,665	2,116	2,281	1,805	1,709	1,397
# on Car-deck	0	0	301	949	579	793	888	855	1,012	807
Vans	0	0	0	1	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$1,027	\$3,250	\$2,072	\$2,673	\$3,049	\$2,879	\$3,012	\$2,573

Source: Northern Economics analysis using data from AMHS (2019)

Figure 153 on the next page shows monthly revenues and sailings for travel between Cordova and Whittier in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available. Most revenue in the winter months is from local residents, while over half the peak season revenue is from non-locals. Figure 154 shows monthly revenues and sailings for travel between Valdez and Whittier in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available. Most revenue in the winter months is from local residents, while almost all the peak season revenue is from non-locals.

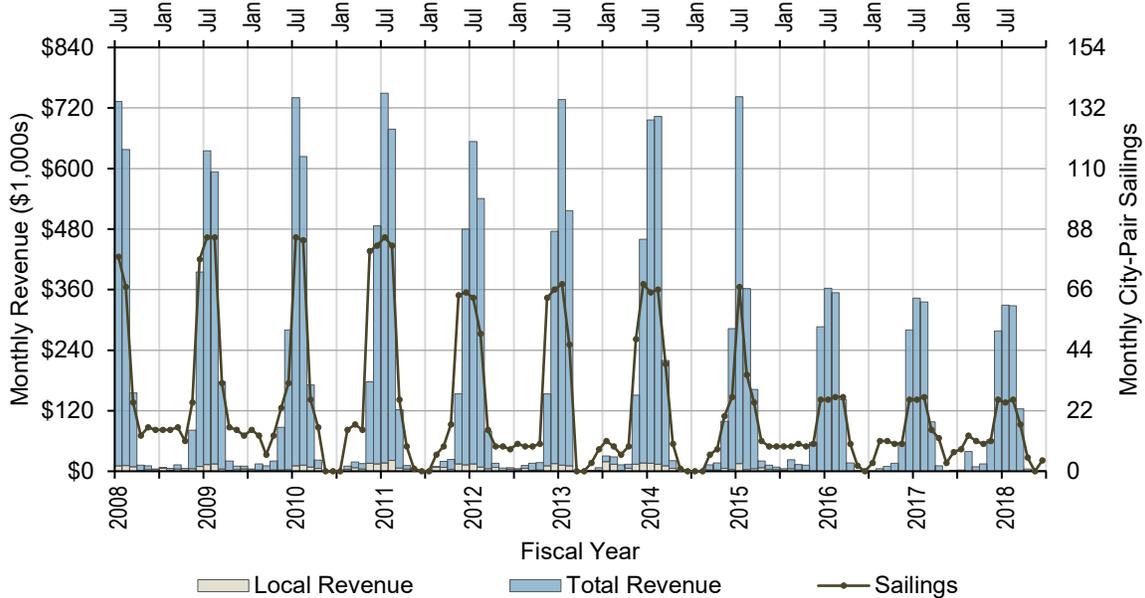
**Figure 153. Monthly Local Resident and Total Cordova-Whittier Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Figure 154. Monthly Local Resident and Total Valdez-Whittier Revenues and Sailings, by Fiscal Year**

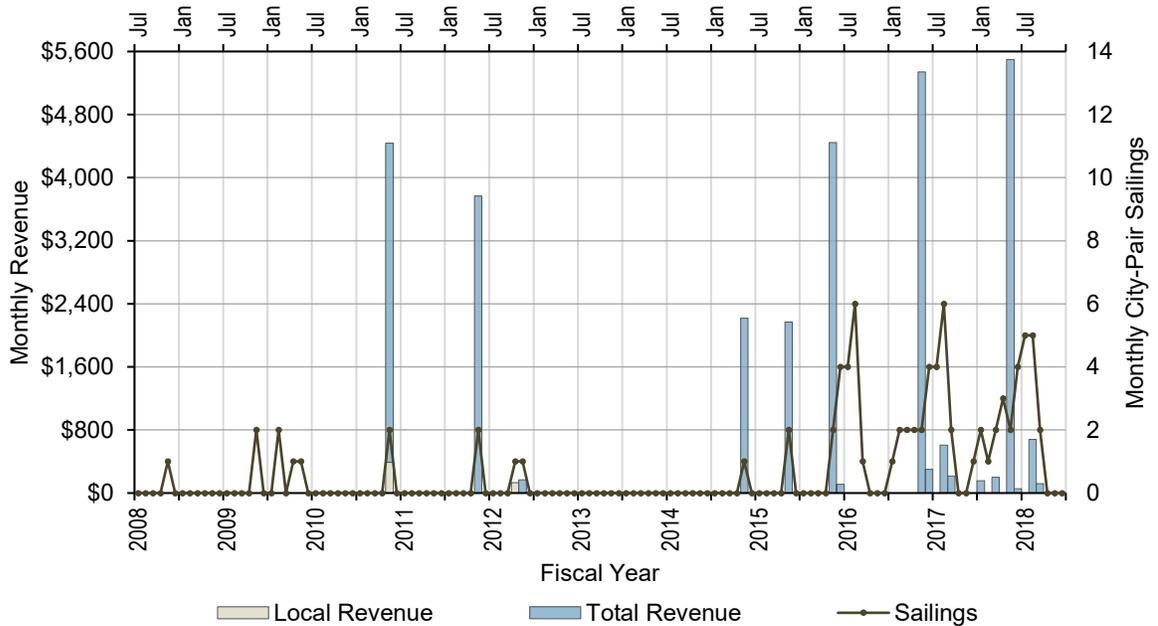


Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

Figure 155 shows monthly revenues and sailings for travel between Tatitlek and Whittier in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available. There were only sailings on this route a few months per year with more sailings in recent years.

**Figure 155. Monthly Local Resident and Total Tatitlek-Whittier Revenues and Sailings, by Fiscal Year**

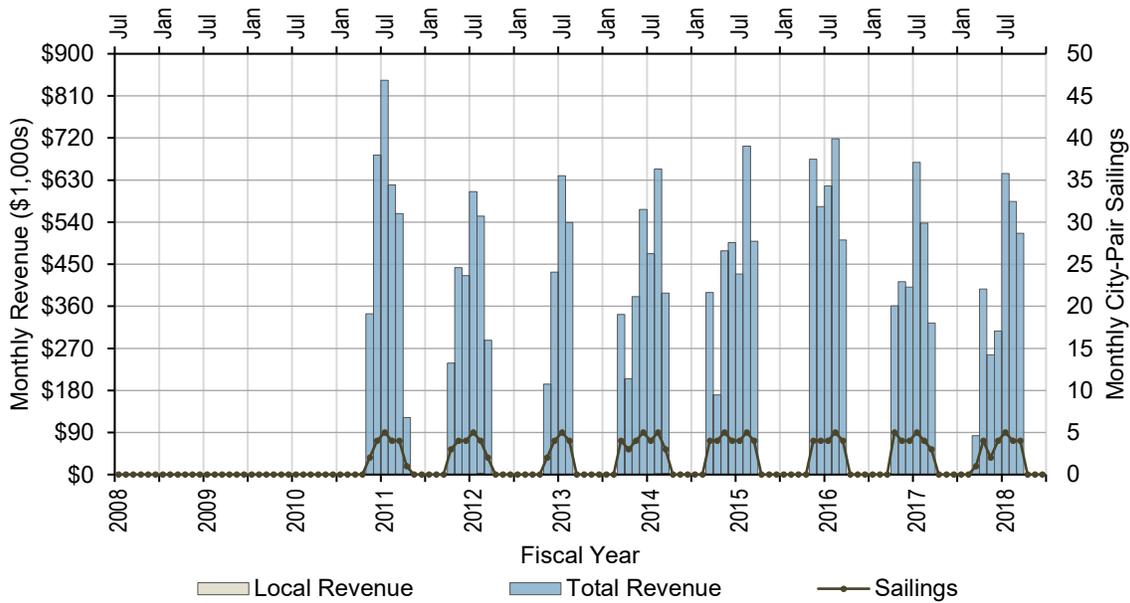


Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

Figure 156 on the next page shows monthly revenues and sailings for travel between Whittier and Bellingham in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available. Almost all revenue is from non-locals. Figure 157 shows monthly revenues and sailings for travel between Juneau and Whittier in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available. Across all seasons, almost all revenue is from non-locals.

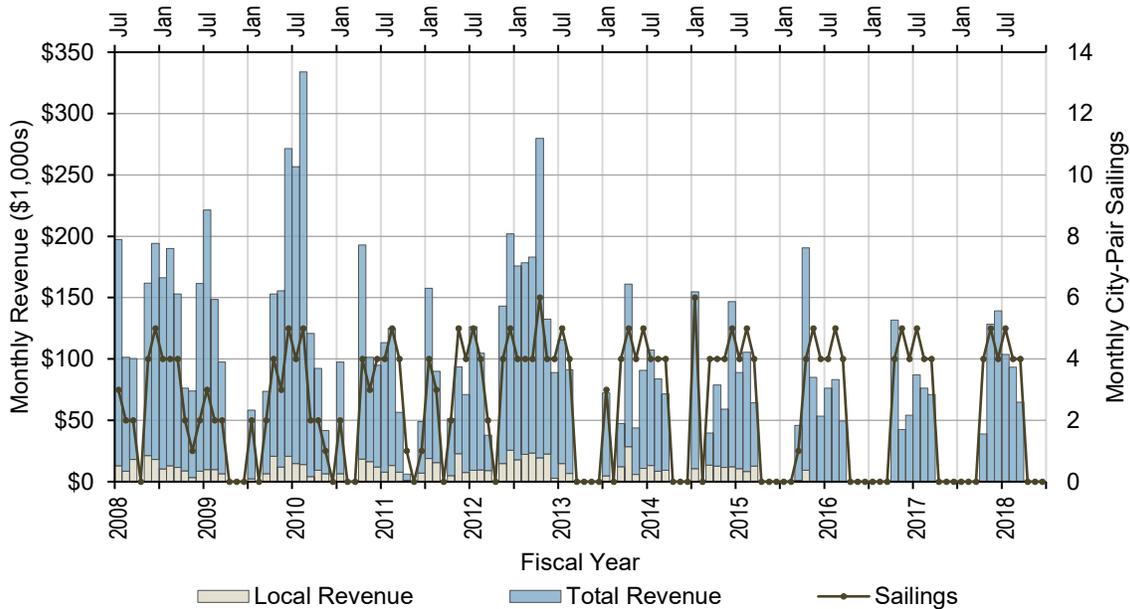
**Figure 156. Monthly Local Resident and Total Whittier-Bellingham Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Figure 157. Monthly Local Resident and Total Juneau-Whittier Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

### Land-based Facilities

The land-based AMHS facility in Whittier is owned by the State of Alaska. Table 141 shows which currently operating AMHS vessels are capable of docking at the facility in Whittier.

**Table 141. Vessels Capable of Docking at Whittier Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Whittier Cruise Ship Pier									X
Whittier	X	X*	X	X	X*	X*	X*	X*	X†

**Notes:**

X indicates the vessel is compatible with this terminal.

\* It is likely that the vessel is compatible with this terminal, but it has not been fully tested.

† The *Tustumena* does have a stern door for access to the terminal. In fair weather the vessel can use the Cruise Ship Dock with special Yokohama fenders in place.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value for each facility was constructed by PND (2019).

### Whittier Facility

*Docking Orientation: Stern Berth*

*Description:* This facility consists of a transfer bridge, twin lift tower syncrolift, ten steel pile dolphins, and associated catwalks/gangways for line handling access. This facility was customized in 2005 to accommodate the M/V Aurora, M/V Kennicott, and fast ferry M/V Chenega.

*Alternative Usage:* The orientation of the berth would likely limit the terminals suitability for alternative usage. The height of the transfer bridge, ramp and apron would likely require significant modifications/upgrades to accommodate alternative vessels. Barge or landing craft transfer of freight is a potential use for the facility; however, significant changes to the on-float components of the transfer bridge/apron system would be required to match the freeboard/side shell height of barge or vessels being used. Offload equipment would need be limited to highway-legal design loads, further restricting the suitability of the terminal. The suitability for use for alternative smaller passenger-only vessels is believed to be limited due to orientation of berth and height of the transfer bridge/apron system.

Table 142 shows a range of estimated values for the Whittier Facility including uplands and associated infrastructure but does not account for any potential modifications required for the facilities to be used by non-AMHS vessels.

**Table 142. Estimated Value of the Whittier Facility**

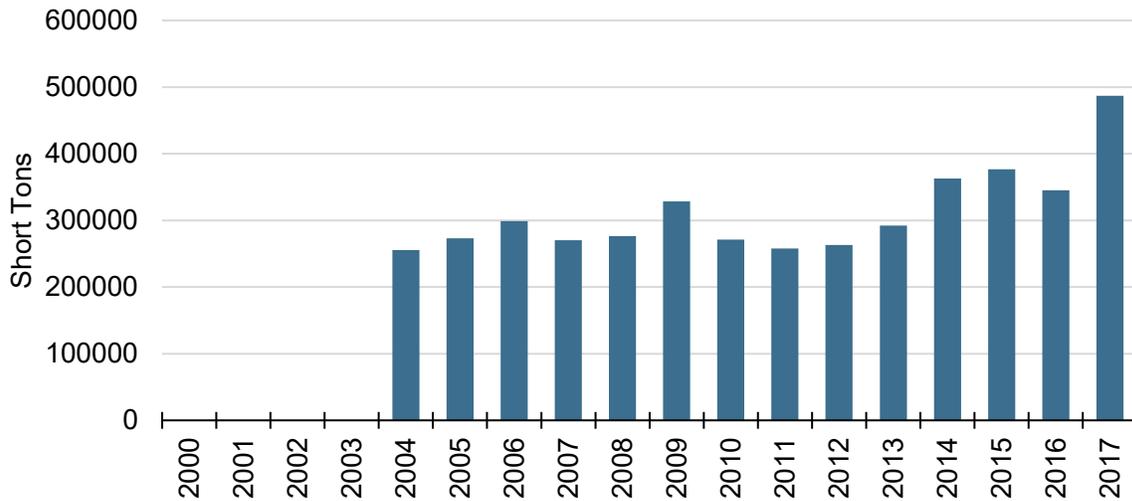
Estimate Range	-30%	Avg	+30%
Facility Value (\$)	5,230,000	7,470,000	9,710,000

Data Source: PND (2019)

### 3.15.3 Transportation Alternatives

Figure 158 shows marine freight data for Whittier. Freight passing through Whittier includes a wide variety of commodities, with alcohol, fabricated metal products, fish (not shellfish) and prepared fish, food products, groceries, machinery (not electric), and manufactured products as the top commodity categories by volume. High freight tonnage of fish products aligns with the large seafood processing plant in Whittier. Cement/concrete and paper/paperboard used to be some of Whittier’s top commodities, but freight tonnage for these commodities has decreased by over 90% since the early 2000s.

**Figure 158. Whittier Inbound and Outbound Annual Marine Freight, 2000–2017**



Data Source: USACE, 2019. USACE, 2018.

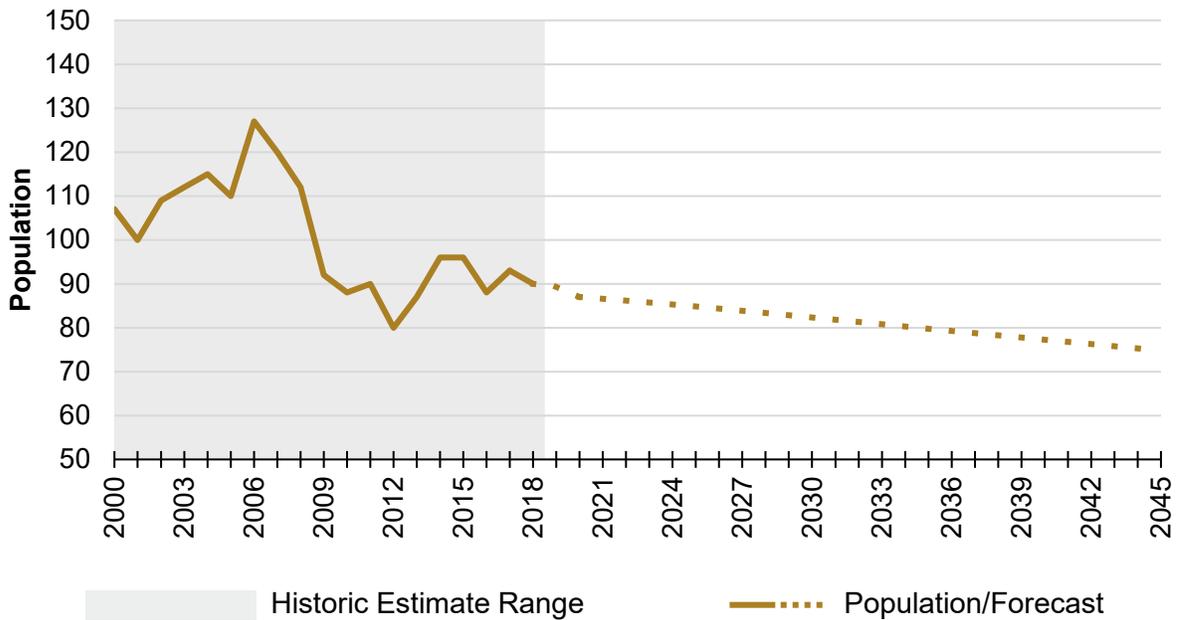
There are at least three companies that provide water taxi service in Whittier, and one specifically offers freight transportation. Each of the three also offers guided services like tours or wildlife viewing.

### 3.16 Tatitlek Community Profile

#### 3.16.1 Demographic Summary

Figure 159 shows the population of Tatitlek with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 90 permanent residents, but the population of Tatitlek is expected to decrease gradually over time.

**Figure 159. Tatitlek Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 143 shows student enrollment in all Tatitlek schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

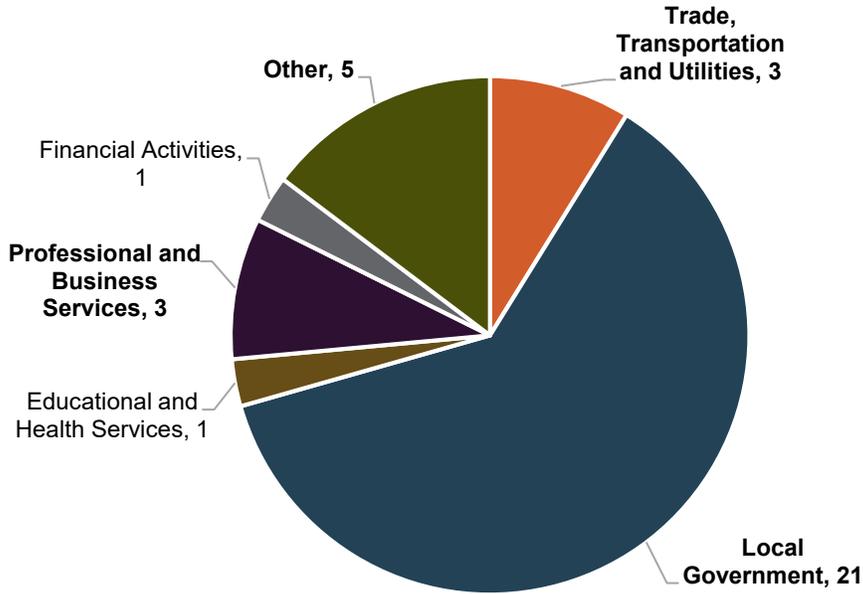
**Table 143. Tatitlek All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	0	4	0	3	1	0	1	0	3	0	1	0	3	2
Total	9							3		4				2

Data Source: USDE, 2016.

Figure 160 shows the number of workers in various industries for Tatitlek, and the top three industries are shown in bold.

**Figure 160. Tatitlek Resident Employment by Industry, 2016**



Data Source: ALARI, 2019

### 3.16.2 AMHS Summary

#### **Community Leader Perspectives**

Nanci Robart, Tatitlek Village Indian Reorganization Act Council President provided information via survey on how AMHS is used by individuals and businesses within the community. Her responses are summarized below.

#### ***How Residents Use the Ferry***

We have several young families, mine included, who rely on the ferry for a cost-effective way of traveling together. No matter the reason for the trip, be it family fun, or for stocking up groceries, it is much more affordable, and sometimes our only option, to book five tickets on the ferry rather than book five seat fares on one of Tatitlek’s three scheduled flights. The cost of five tickets on the ferry is \$257, compared to \$625 for five one-way plane tickets to Anchorage.

The fact that you can travel with a vehicle is huge also. I have a Toyota RAV4 that I have transported between Valdez and Tatitlek for our annual cultural heritage week. Tatitlek invites 100+ guests for cultural heritage week (the majority traveling in and out on the ferry!), and having my own vehicle was a major plus since our council office only has three vehicles total and they couldn’t all be used for transportation of guests. Many of our cultural heritage week guests travel from Nenana, Anchorage, Seward, and Valdez. AMHS makes it possible for them to come every year since flying or chartering boats is incredibly expensive.

The Alaska Department of Transportation sends their equipment (grader and loader) out every summer for servicing. This would not be possible without ferry service as this equipment will not fit on anything other than the ferry.

The community of Ellamar is approximately two miles away from Tatitlek and we do have families traveling from there to hop on the ferry for many of the same reasons that Tatitlek residents use the ferry. The affordability makes most trips incredibly easy.

***Transportation Options***

In addition to flights, we have a landing craft that runs out of Valdez. They can run passengers and most cargo, but do not have regular runs and can only transport vehicles in the summer.

***Minimum Level of Service***

The ferry arrives twice a month and our residents make it work. It just takes more careful planning with the dates and stops. We need the twice-a-month schedule at the very least.

Right now, the schedule is tricky, with the ferry coming from Valdez one day, then traveling from Whittier the next. It would be easier for some families to have our stops to and from Valdez, rather than from Whittier and Valdez. Or at least have the stops alternated each month—to and from Valdez one month, to and from Whittier the next.

**Historic Revenue and Traffic Volumes**

Table 144 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with Tatitlek as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). Tatitlek is an origin/destination in the Prince William Sound Route Group, connecting to three ports. The route between Tatitlek and Valdez generates the most revenue and transports the most passengers.

**Table 144. Tatitlek as the Origin or Destination—AMHS Volume and Revenue, 2009–2018**

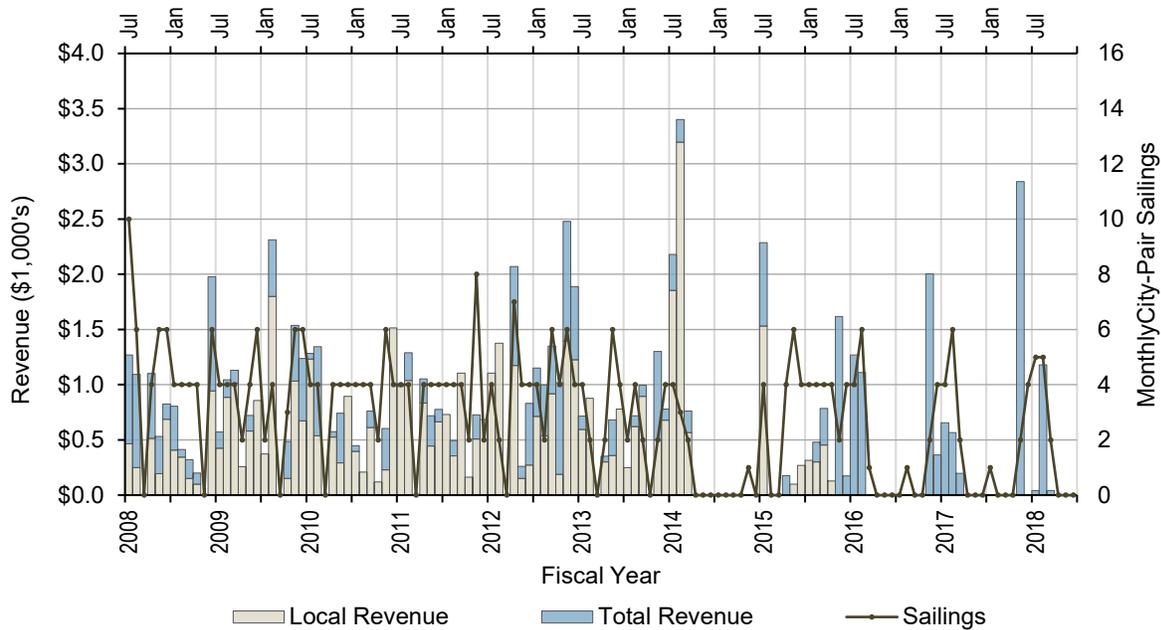
	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Prince William Sound Routes</b>										
<b>Travel to and from Cordova</b>										
Sailings	54	39	18	10	27	20	2	31	5	6
Passengers	118	64	8	14	26	39	4	44	14	9
# on Car-deck	18	12	2	11	13	2	1	8	0	3
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$5	\$3	\$1	\$2	\$2	\$2	\$0	\$3	\$0	\$1
<b>Travel to and from Valdez</b>										
Sailings	54	45	44	44	47	32	10	38	8	8
Passengers	97	165	151	178	191	82	56	121	97	120
# on Car-deck	35	48	26	20	50	32	27	19	7	10
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$9	\$11	\$8	\$9	\$15	\$7	\$6	\$6	\$5	\$4

Travel to and from Whittier										
Sailings	1	6	2	2	2	0	1	5	6	9
Passengers	0	0	82	72	3	0	32	78	104	79
# on Car-deck	0	0	5	4	2	0	1	33	33	33
Vans	0	0	0	0	0	0	0	0	0	0
\$(1,000s)	\$0	\$0	\$4	\$4	\$0	\$0	\$2	\$7	\$6	\$7

Source: Northern Economics analysis using data from AMHS (2019)

Figure 161 shows monthly revenues and sailings for travel between Tatitlek and Valdez in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available. On average local revenues comprised 72 percent of total revenue.

**Figure 161. Monthly Local Resident and Total Tatitlek-Valdez Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

### Land-based Facilities

The land-based AMHS facility in Tatitlek is non-state owned. Table 145 shows which currently operating AMHS vessels are capable of docking at the facilities in Seldovia.

**Table 145. Vessels Capable of Docking at Tatitlek Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Tatitlek	X		X	X*					X

Notes:

X indicates the vessel is compatible with this terminal.

\* It is likely that the vessel is compatible with this terminal, but it has not been fully tested.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value of the facility was constructed by PND (2019).

#### ***Tatitlek Facility***

*Docking Orientation:* Stern

*Description:* This facility is a multi-purpose dock structure that consists of a staging area, an approach, a dock, and two tidal ramps constructed of concrete panels welded supported by steel beams and piles. AMHS has an agreement for use of the dock for ferry operations. This facility is owned by Northern Pacific Rim Housing Authority.

*Alternative Usage:* The Tatitlek/Ellamar terminal is a multi-purpose dock and the only dock of its kind in the two towns.

### 3.16.3 Transportation Alternatives

One carrier provides regularly scheduled passenger air service to Tatitlek, and rates to hub airports are shown in Table 146. This route operates on Mondays, Wednesdays, and Fridays only and operated as a triangle flight between Anchorage, Chenega, and Tatitlek.

**Table 146. Tatitlek Flight Services and Rates for Single Adult Passenger, by Carrier**

Airline Carrier	One Way Destination	Summer Rate (\$)	Winter Rate (\$)
Alaska Air Transit	Anchorage	230*	Not reported

\*125 for self-paid Tatitlek residents

Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.

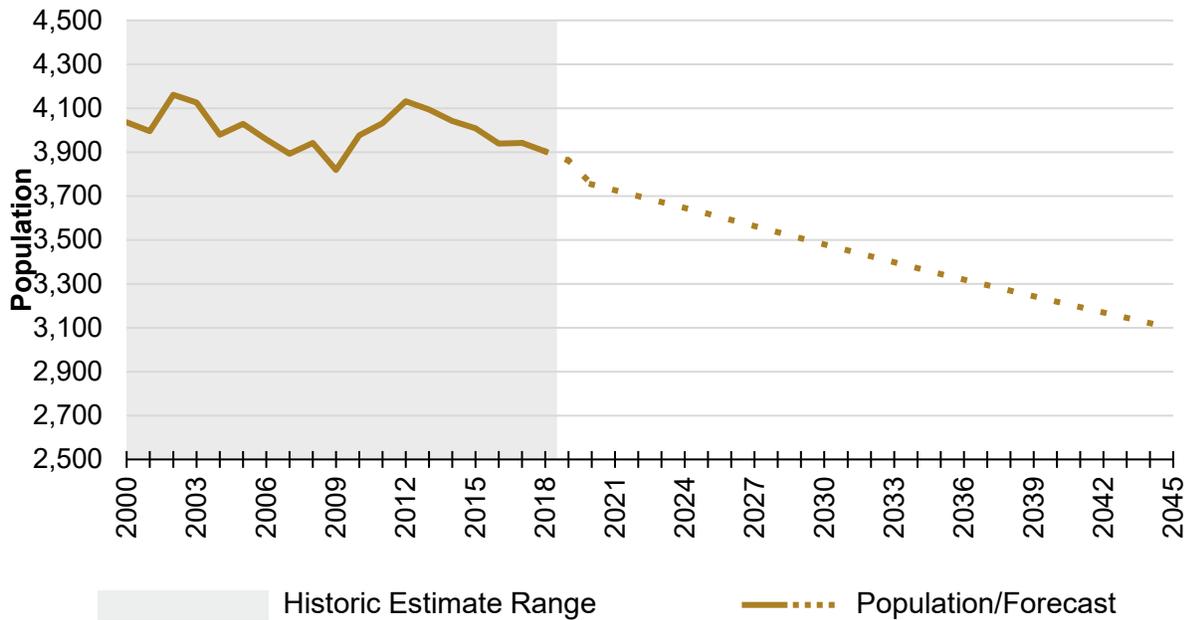
Data Source: Alaska Air Transit, 2019.

### 3.17 Valdez Community Profile

#### 3.17.1 Demographic Summary

Figure 162 shows the population of Valdez with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 3,903 permanent residents, but the population of Valdez is expected to decrease steadily over time.

**Figure 162. Valdez Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 147 shows student enrollment in all Valdez schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

**Table 147. Valdez All Schools Enrollment by Grade, 2016–2017 School Year**

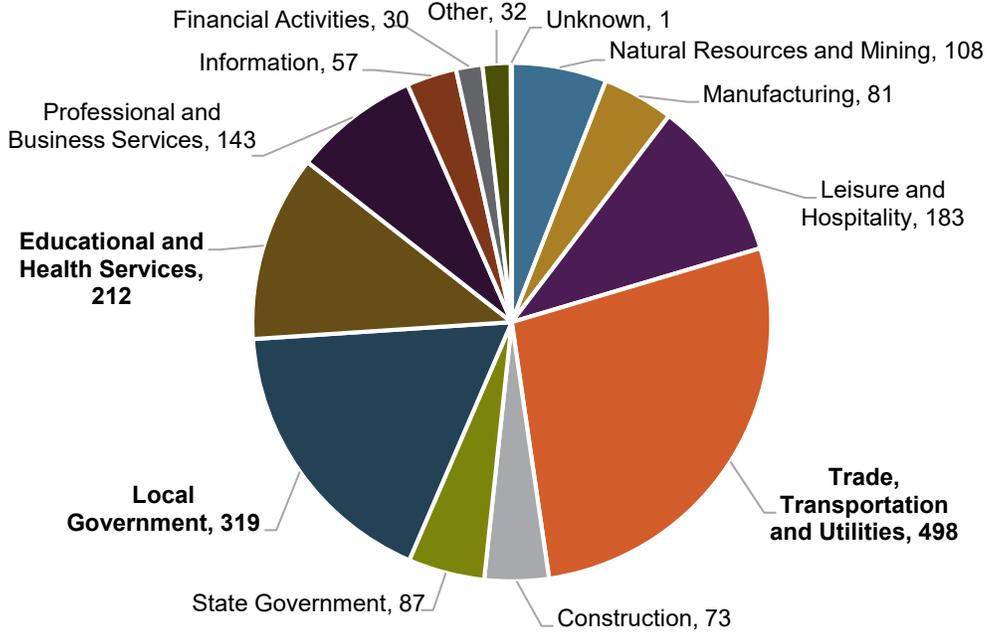
Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	49	52	52	52	48	48	52	37	49	57	48	35	49	36
<b>Total</b>	353							86		189				36

Data Source: USDE, 2016.

Figure 163 shows the number of workers in various industries for Valdez, and the top three industries are shown in bold. Peter Pan Seafoods and Silver Bay Seafoods operate processing plants in Valdez supporting salmon fisheries, including the Copper River salmon fishery, as well as other fisheries like

halibut and black cod. Peter Pan’s Valdez plant employs up to 350 people (Peter Pan Seafoods, Inc., 2019).

**Figure 163. Valdez Resident Employment by Industry, 2016**



Data Source: ALARI, 2019

### 3.17.2 AMHS Summary

#### Community Leader Perspectives

Valdez community leaders did not respond to the study’s request for information.

#### Historic Revenue and Traffic Volumes

Table 148 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with Valdez as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). Valdez is an origin/destination in the Prince William Sound and Cross-Gulf Route Groups, connecting to ten ports. The route between Valdez and Whittier generates the most revenue and transports the most passengers.

Table 148. Valdez as the Origin or Destination—AMHS Volume and Revenue, 2009–2018

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Prince William Sound Routes</b>										
<b>Travel to and from Tatitlek</b>										
Sailings	54	45	44	44	47	32	10	38	8	8
Passengers	97	165	151	178	191	82	56	121	97	120
# on Car-deck	35	48	26	20	50	32	27	19	7	10
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$9	\$11	\$8	\$9	\$15	\$7	\$6	\$6	\$5	\$4
<b>Travel to and from Cordova</b>										
Sailings	303	243	252	197	153	232	161	208	230	207
Passengers	6,500	5,569	6,797	5,112	3,742	6,357	3,473	3,258	2,287	2,464
# on Car-deck	2,227	1,984	2,231	1,730	1,136	2,484	1,171	1,085	723	715
Vans	15	2	8	22	2	11	15	10	4	3
\$ (1,000s)	\$471	\$412	\$508	\$385	\$267	\$517	\$289	\$287	\$196	\$232
<b>Travel to and from Whittier</b>										
Sailings	373	348	420	364	321	276	242	229	154	160
Passengers	16,476	14,832	17,792	18,522	16,300	15,836	16,433	13,800	9,836	9,791
# on Car-deck	5,377	5,095	6,202	6,246	5,343	5,254	5,339	4,369	3,488	3,408
Vans	10	3	0	0	1	8	0	1	0	0
\$ (1,000s)	\$2,062	\$1,865	\$2,265	\$2,250	\$1,980	\$1,959	\$2,053	\$1,705	\$1,246	\$1,197
<b>Travel to and from Chenega Bay</b>										
Sailings	6	7	10	7	4	2	1	0	0	0
Passengers	17	6	14	8	1	11	0	0	0	0
# on Car-deck	7	1	3	0	2	8	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$4	\$0	\$2	\$1	\$1	\$2	\$0	\$0	\$0	\$0
<b>Cross-Gulf Routes</b>										
<b>Travel to and from Homer</b>										
Sailings	1	1	0	0	0	1	0	0	0	0
Passengers	0	0	0	0	0	0	0	0	0	0
# on Car-deck	0	0	0	0	0	0	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Travel to and from Kodiak</b>										
Sailings	3	1	0	0	0	1	0	0	0	0
Passengers	17	0	0	0	0	24	0	0	0	0
# on Car-deck	17	0	0	0	0	13	0	0	0	0
Vans	0	0	0	0	0	2	0	0	0	0
\$ (1,000s)	\$6	\$0	\$0	\$0	\$0	\$8	\$0	\$0	\$0	\$0

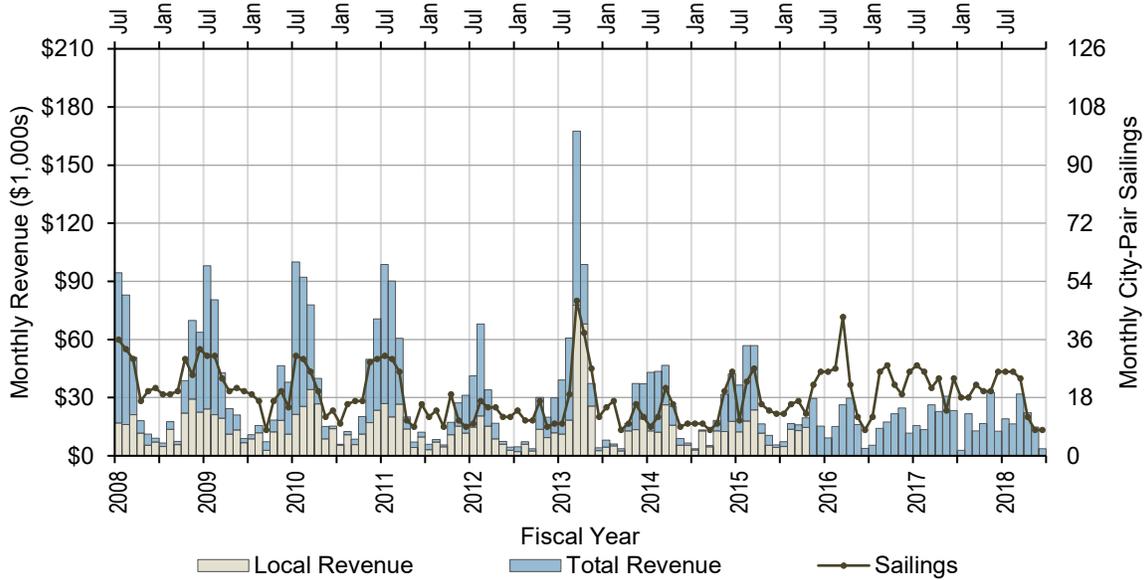
**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Travel to and from Yakutat</b>										
Sailings	3	0	0	0	0	1	0	0	0	0
Passengers	17	0	0	0	0	10	0	0	0	0
# on Car-deck	14	0	0	0	0	4	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$6	\$0	\$0	\$0	\$0	\$3	\$0	\$0	\$0	\$0
<b>Travel to and from Juneau</b>										
Sailings	3	0	0	0	0	1	0	0	0	0
Passengers	114	0	0	0	0	0	0	0	0	0
# on Car-deck	103	0	0	0	0	0	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$68	\$0	\$0	\$0	\$0	\$1	\$0	\$0	\$0	\$0
<b>Travel to and from Ketchikan</b>										
Sailings	2	0	0	0	0	1	0	0	0	0
Passengers	31	0	0	0	0	0	0	0	0	0
# on Car-deck	21	0	0	0	0	0	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$25	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Travel to and from Prince Rupert</b>										
Sailings	2	0	0	0	0	0	0	0	0	0
Passengers	11	0	0	0	0	0	0	0	0	0
# on Car-deck	7	0	0	0	0	0	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$8	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Source: Northern Economics analysis using data from AMHS (2019)

Figure 164 on the following page shows monthly revenues and sailings for travel between Valdez and Cordova in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available. In the winter months most revenue (72 percent) is from local residents, while 71 percent of peak season revenue is typically from non-locals. Figure 165 shows monthly revenues and sailings for travel between Valdez and Whittier in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available. Over all months, only 4 percent of total revenue is from local residents.

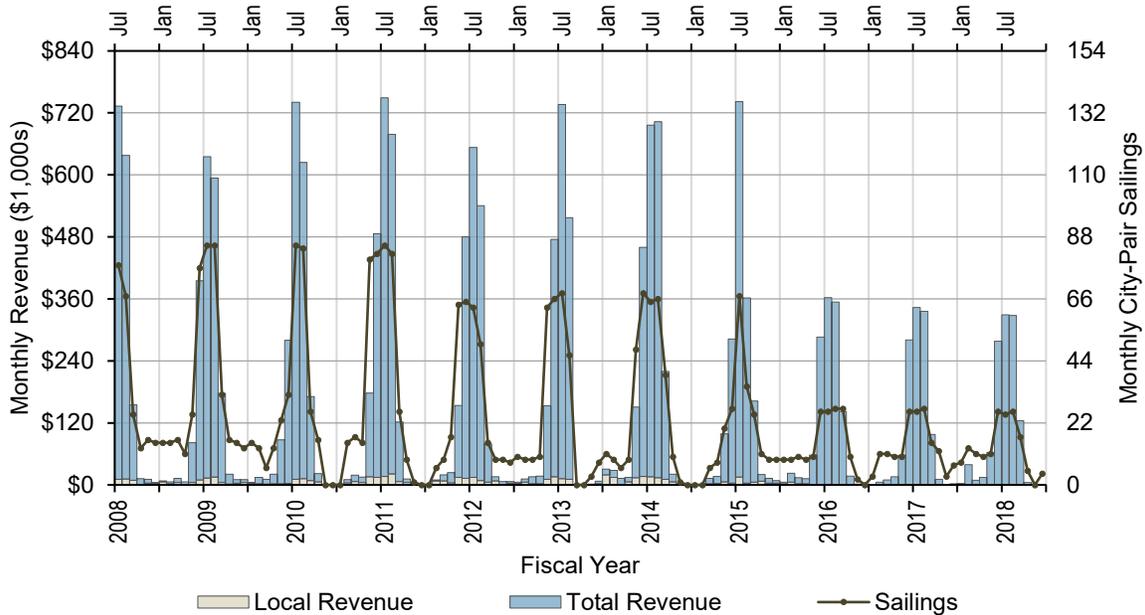
**Figure 164. Monthly Local Resident and Total Valdez-Cordova Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Figure 165. Monthly Local Resident and Total Valdez-Whittier Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

### Land-based Facilities

The land-based AMHS facility in Valdez is owned by the State of Alaska. Table 149 shows which currently operating AMHS vessels are capable of docking at the facility in Valdez.

**Table 149. Vessels Capable of Docking at Valdez Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Valdez Terminal	X	X*	X	X	X*	X*	X*	X*	
Valdez City Dock			X*						X
Valdez Container Pier			X*						X

Notes:

X indicates the vessel is compatible with this terminal.

\* It is likely that the vessel is compatible with this terminal, but it has not been fully tested.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value for each facility was constructed by PND (2019).

### Valdez Facility

*Docking Orientation:* Side Berth

*Description:* This facility consists of dedicated staging and parking areas, a terminal building, covered pedestrian walkways, steel transfer bridge with a cable supported bridge lift (Syncrolift) system, eight steel pile dolphins, and catwalks/gangways for line-handling access. This terminal is manned year-round and was remodeled in 2009.

*Alternative Usage:* The Valdez facility could likely be used as a small cruise ships terminal for vessels with lengths and parameters similar to the AMHS mainline ferries. Modifications would likely be required to the transfer bridge and float system (potentially requiring complete replacement) to meet freeboard, baggage and passenger door locations on vessels under consideration. The use of the terminal for offload of freight would likely require significant modifications to the float and transfer bridge system to match the freeboard/side shell height of barge or vessels being used. Offload equipment would need be limited to highway-legal design loads, further restricting the suitability of the terminal for freight transfer. The use of small passenger vessels would also require modifications to the transfer bridge/ramp system. Additional berthing and mooring structures would also likely be required, depending on the vessel dimensions under consideration.

Table 150 shows a range of estimated values for the Valdez Facilities including uplands and associated infrastructure but does not account for any potential modifications required for the facilities to be used by non-AMHS vessels.

**Table 150. Estimated Value of Valdez Facilities**

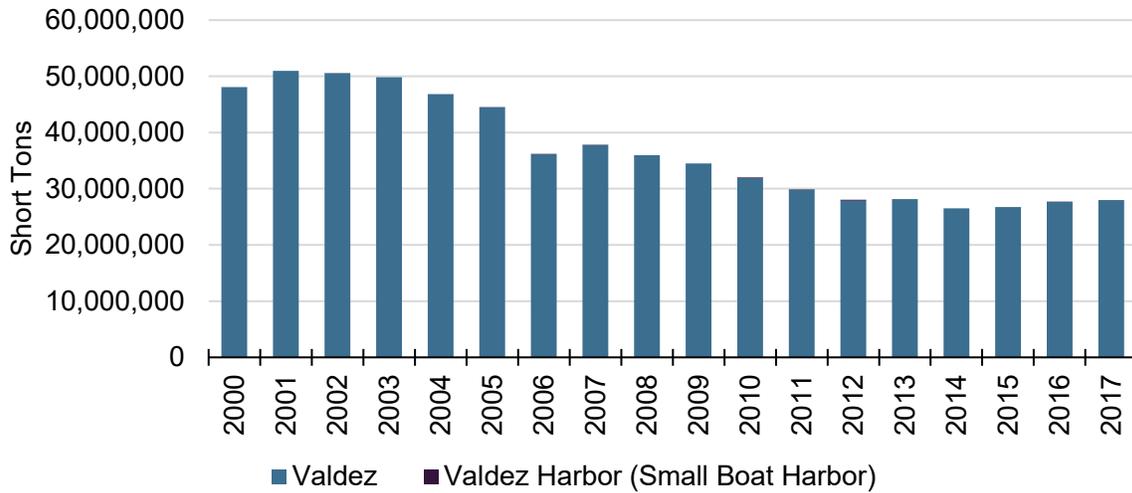
Estimate Range	-30%	Avg	+30%
Facility Value (\$)	6,760,000	9,660,000	12,550,000

Data Source: PND (2019)

### 3.17.3 Transportation Alternatives

Figure 166 shows marine freight data for Valdez and its Small Boat Harbor. Freight passing through Valdez is over 90% crude petroleum, followed by gasoline and distillate fuel oil as the next highest commodities by volume. Other commodities passing through Valdez include residual fuel oil and fish. Freight passing through Valdez’s Small Boat Harbor is almost entirely gasoline and fuel oil.

**Figure 166. Valdez Inbound and Outbound Annual Marine Freight, 2000–2017**



Data Source: USACE, 2019. USACE, 2018.

One carrier provides regularly scheduled passenger air service to Valdez, and rates to hub airports are shown in Table 151. There are at least three companies that provide water taxi service in Valdez, and one specifically noted transportation to Whittier and Cordova.

**Table 151. Valdez Flight Services and Rates for Single Adult Passenger, by Carrier**

Airline Carrier	One Way Destination	Summer Rate (\$)	Winter Rate (\$)
Ravn Alaska operated by Corvus Airlines	Anchorage	124	124

Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.

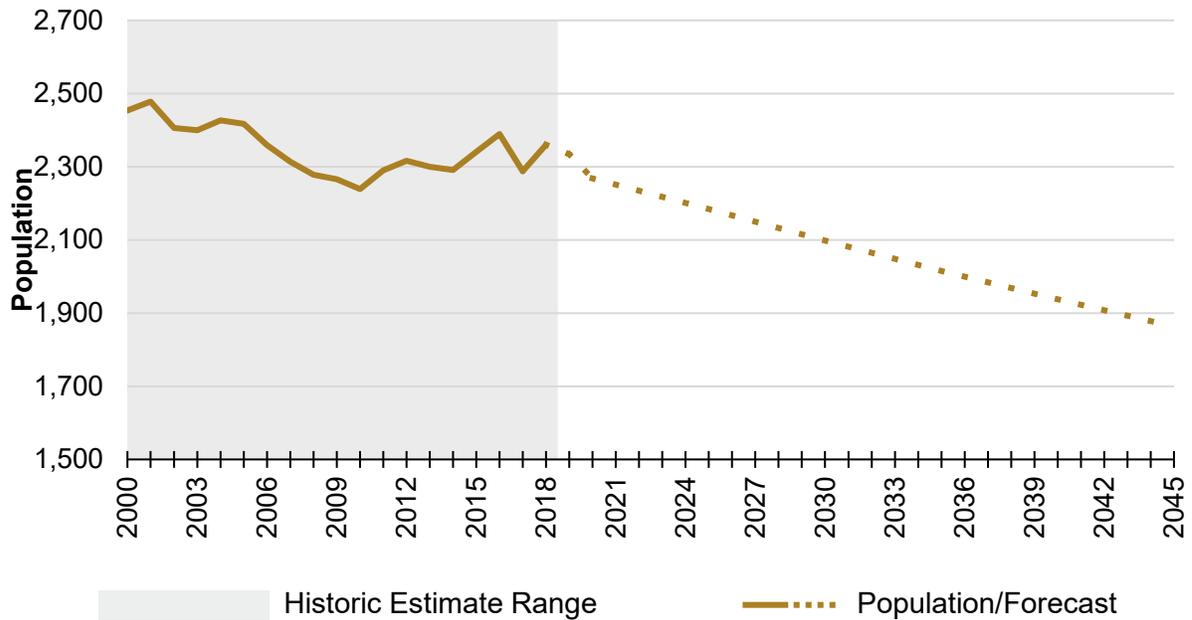
Data Source: Ravn Alaska, 2019.

### 3.18 Cordova Community Profile

#### 3.18.1 Demographic Summary

Figure 167 shows the population of Cordova with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 2,360 permanent residents, but the population of Cordova is expected to decrease steadily over time.

**Figure 167. Cordova Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 152 shows student enrollment in all Cordova schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

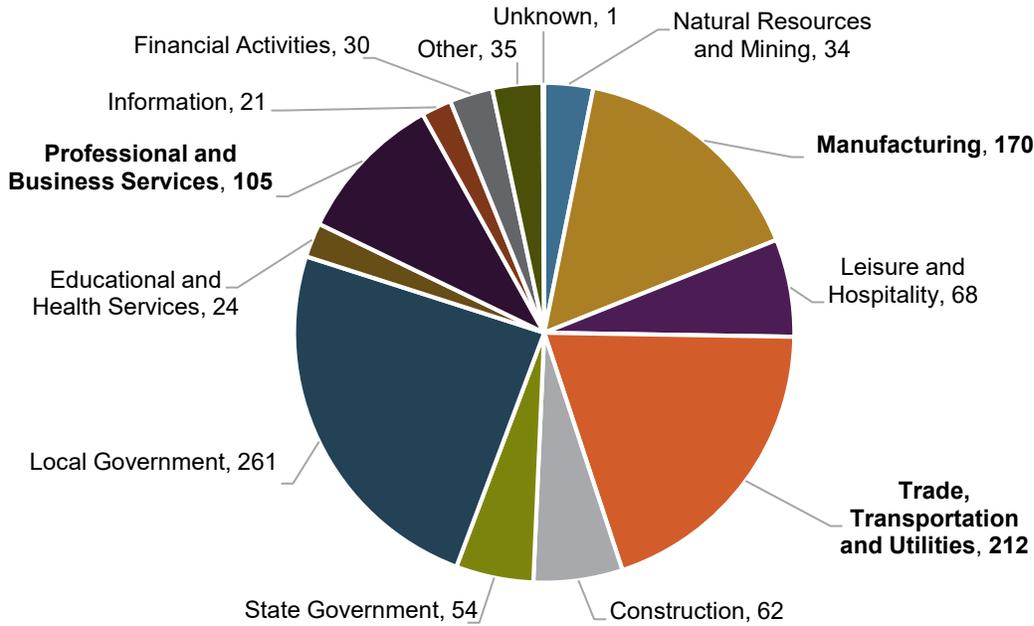
**Table 152. Cordova All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	19	19	36	24	21	23	24	21	18	38	27	17	24	32
Total	166							39		106			32	

Data Source: USDE, 2016.

Figure 168 shows the number of workers in various industries for Cordova, and the top three industries are shown in bold. Several seafood processors operate in Cordova specializing in salmon products from both the Copper River and Prince William Sound salmon fisheries. During peak season in the summer, over 500 people are employed by Trident Seafoods alone across their two Cordova plants (Trident Seafoods, 2019).

**Figure 168. Cordova Resident Employment by Industry, 2016**



Data Source: ALARI, 2019

### 3.18.2 AMHS Summary

#### Community Leader Perspectives

Mayor Clay Koplín of Cordova provided information via survey and interview on how AMHS is used by individuals and businesses within the community. His responses are summarized below.

#### *How Residents Use the Ferry*

Individuals travel on the ferry for medical, groceries, appliances, auto repair and just to take a trip out of town. They will consolidate many errands into a single trip because nobody can afford to go to Anchorage that frequently.

Cordovans primarily use the ferry to head to Anchorage for errands, but some go to the Mat-Su Valley, or Fairbanks or the Kenai Peninsula. We tend to take the ferry to Whittier over Valdez. But if you're going north to Fairbanks it's generally quicker to go to Valdez.

Cordova has a high-performing school system that relies heavily on the ferry to take students to science competitions, band and choir events, and athletics. (Twenty-one students made state in band last year). The school has large groups using walk-on fares.

Residents usually take their own vehicles when traveling on the ferry.

I estimate business from Cordova generates about \$20 million annually for Anchorage's economy. The 2016 McDowell report on the economic impacts of AMHS, provides a good overview of the Anchorage-Cordova connection. The AMHS is critical, not just to individual communities, but to the state. It's an economic and a cultural tie.

### ***Commercial Uses***

Cordova is the 13th largest fishery in the U.S. and our commercial fishing companies move their product to market on the ferry. Copper River Seafoods spent \$1.4 million on AMHS in one year. Once, when the ferry Aurora was laid up on mechanical during a black cod season, Cordova lost \$1 million. The company had to freeze the black cod for three weeks in the winter, when Cordova runs on diesel, instead of hydroelectric, which we use in the summer.

For the commercial fishing industry, the ferry is not just about shipping fish. If a freezer compressor breaks and you can get it on the ferry, you can have shops in Anchorage and the Valley that can do the specialty repair work. The ferry also connects the industry to professional services, such as accounting and legal.

Of the participants in Cordova's fisheries, about 30 percent live in Cordova, 40 percent live elsewhere in Alaska, and 30 percent live Outside. The Alaskans who aren't Cordova residents bring their boats, trucks and trailers, gear, families, and RVs and use the ferry to move a lot of it. Many Old Believers are an important part of the fleet, holding between 100 and 150 of the 550 permits. They suffer if cuts to ferry service or schedule disruptions make it difficult for them to move their gear and equipment. In-state fisheries participants board the ferry in Whittier. They need the ferry because it can handle rough weather. Their boats are too small to transport the trucks, trailers, and RVs they need for the season.

The Cordova Electric Cooperative hydroelectric utility uses the ferry to move diesel generators and hydroelectric turbines to Anchorage and the Kenai Peninsula for repairs. If the ferry isn't running, all that business goes to Seattle.

Tourists also take the ferry to Cordova. Many are Alaskans trying to escape the crowds, and they'll bring campers, trucks, and/or boats on the ferry. It's a popular alternative to the elbow-to-elbow situation on the Kenai Peninsula. They'll also come for the Copper River Salmon Jam music festival, scouting retreats, or art camps.

Stores buy their products in Anchorage and transport them to Cordova. The Reluctant Fishermen and other eateries bring in ingredients and supplies on the ferry. Recent changes to both air and ferry service mean we have the worst-quality produce in my 20 years in Cordova.

We have a large heliskiing business in Cordova called Points North, which operates from February through April. It attracts filmmakers of extreme winter sports, who use the ferry to transport equipment and people.

The ferry also facilitates Coast Guard transitions in and out of Cordova.

### ***Transportation Options***

Transport of vehicles and large shipments of lumber and commercial fish products are all services AMHS provides that are not replaceable by other services.

We have looked at rebuilding the Copper River Highway, but it would be impossible to keep a road—or a railroad—open in the winter because silt and snow drift in almost every day. Maritime transportation is the cheapest form of transportation—cheaper than a train or truck.

Air transport could be an alternative, but Alaska Airlines has phased out combi flights carrying both passengers and freight. They were more affordable than the aircraft they have now because you could fill a whole plane with both passengers and freight. We had daily north and southbound jet services and commercial fishermen could send their catch north to Anchorage or south to Seattle and get them to market within 24 hours. With the planes now, which are dedicated to freight, you don't usually fill a whole plane. Alaska Airlines recently raised freight rates from \$0.70/lb to \$1/lb. And then Ravn

cancelled its Cordova service. The ferry has customer service and convenience that air travel doesn't provide.

Also, even if the private sector were more involved in the ferry system, I think it would require a hefty state subsidy to keep it rolling and you'd likely lose the federal government's involvement in paying for infrastructure.

### ***Minimum Level of Service***

At least three round trips per week in the summer and one or two round trips per week in the winter. The schedule through August 2019 was sufficient and then it's a black hole.

### ***Tolerance for a 10 Percent Fare Increase or Reduction in Service***

Our walk-on fare is a higher cost per mile than anywhere in the system. We think they should reduce it. It's a legacy rate that's arbitrary.

### ***Effects of Reduced Service***

If service were reduced even further, I would start working several angles, including going to Delta Airlines to promote competition with Alaska Airlines. We would approach existing water taxi businesses in Prince William Sound. And we'd look at the tribal transportation model as well.

Losing AMHS is literally choking off our growing economy since you can't build a business model around the ferry anymore. Orca Lodge lost a significant number of bookings when the ferry schedule canceled. Three weeks later when the state got the supplemental budget, the lodge didn't get the business back.

Cordovans prefer to shop in Anchorage, but if the ferry is unreliable, people will do more errands in Seattle and online, rather than taking all their business in Anchorage. For example, we might complete our utility repairs in Seattle.

### ***Ideas for Improving Fiscal Health***

- Lower the cost to ride the ferry from Cordova to Whittier and bring back winter discounts to increase ridership.
- The bulk of ferry service should be given to the Prince William Sound communities that do not have road access. Why would you plan to reduce ferry service to Cordova, which has no road access to anywhere, yet continue ferry service to Valdez?
- Institute a state income tax.
- Market the ferries, and community events that would attract passengers, more aggressively.
- Accept or provide matching for more federal dollars to refurbish the ferries.
- Sit down on region-by-region basis and talk to terminal operators to understand how to operate this system more effectively.
- Homeport the Aurora here in Cordova.
- Combine a sensible schedule with the right price point.
- Reduce policy inconsistencies from one administration to the next.
- Make policies that are responsive to concerns and points raised by both customers and AMHS staff. You have walls between staff operating the ferry and someone making the decisions in a tower in Juneau.

- The bargaining units have costs, but those people live and work in our communities and their wages circulate back to our communities. However, AMHS employees are frequently moved and getting housing and per diem every time. You need people staying in place.
- Assess alternative uses for AMHS facilities. Could we rent out space on the ferries to augment lodging in the local communities? Offer custom trips or charters? Participate in search and rescue exercises with the Coast Guard?

### **Historic Revenue and Traffic Volumes**

Table 153 shows the fiscal year number of sailings, passengers, cars, and vans, as well as the revenue generated, on AMHS sailings with Cordova as the origin or destination. These data were generated using historic revenue and sailings data provided by DOT&PF (2019a). Cordova is an origin/destination in the Prince William Sound Route Group, connecting to four ports. The route between Cordova and Whittier generates the most revenue and transports the most passengers.

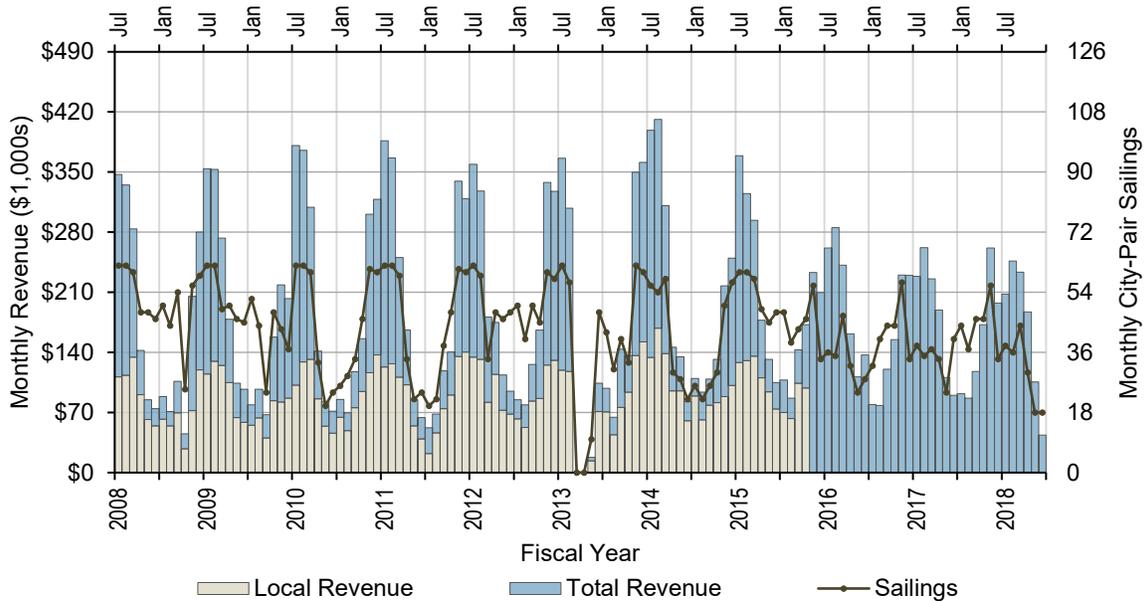
**Table 153. Cordova as the Origin or Destination—AMHS Volume and Revenue, 2009–2018**

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
<b>Prince William Sound Routes</b>										
<b>Travel to and from Tatitlek</b>										
Sailings	54	39	18	10	27	20	2	31	5	6
Passengers	118	64	8	14	26	39	4	44	14	9
# on Car-deck	18	12	2	11	13	2	1	8	0	3
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$5	\$3	\$1	\$2	\$2	\$2	\$0	\$3	\$0	\$1
<b>Travel to and from Valdez</b>										
Sailings	303	243	252	197	153	232	161	208	230	207
Passengers	6,500	5,569	6,797	5,112	3,742	6,357	3,473	3,258	2,287	2,464
# on Car-deck	2,227	1,984	2,231	1,730	1,136	2,484	1,171	1,085	723	715
Vans	15	2	8	22	2	11	15	10	4	3
\$ (1,000s)	\$471	\$412	\$508	\$385	\$267	\$517	\$289	\$287	\$196	\$232
<b>Travel to and from Whittier</b>										
Sailings	614	562	517	512	600	445	459	586	431	443
Passengers	20,370	20,638	22,118	21,175	22,122	16,162	18,757	16,835	13,913	13,163
# on Car-deck	8,695	9,397	9,855	9,462	9,921	6,915	8,101	7,569	7,477	7,082
Vans	158	191	234	295	195	189	175	84	64	67
\$ (1,000s)	\$2,064	\$2,182	\$2,409	\$2,356	\$2,372	\$1,950	\$2,396	\$2,354	\$2,091	\$2,034
<b>Travel to and from Chenega Bay</b>										
Sailings	4	27	4	3	1	7	0	11	1	2
Passengers	22	9	2	2	0	0	0	0	2	8
# on Car-deck	12	2	0	0	5	3	0	0	0	0
Vans	0	0	0	0	0	0	0	0	0	0
\$ (1,000s)	\$2	\$1	\$0	\$0	\$1	\$1	\$0	\$0	\$0	\$0

Source: Northern Economics analysis using data from AMHS (2019)

Figure 169 shows monthly revenues and sailings for travel between Cordova and Whittier in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available. Most revenue (67 percent) in the winter months is from local residents, while 63 percent of the peak season revenue is from non-locals.

**Figure 169. Monthly Local Resident and Total Cordova-Whittier Revenues and Sailings, by Fiscal Year**

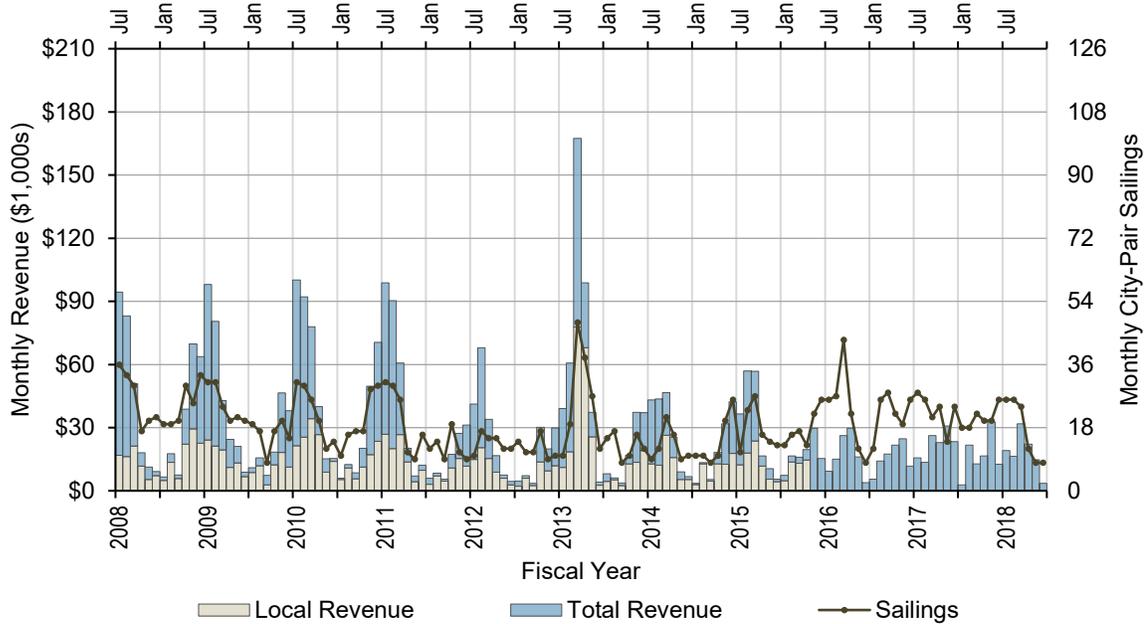


Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

Figure 170 shows monthly revenues and sailings for travel between Cordova and Valdez in either direction, with revenues separated by local and non-local resident ticket purchasers when data are available. Most revenue in the winter months is from local residents, while over half the peak season revenue is typically from non-locals.

**Figure 170. Monthly Local Resident and Total Cordova-Valdez Revenues and Sailings, by Fiscal Year**



Note: Total revenues for each month are represented by the blue vertical bars, with the portion of those revenues attributable to local buyers indicated by the tan portion of each bar. The local revenue component has not been reported by AMHS since the implementation of its new ticketing system in May 2016.

Source: Northern Economics analysis using data from AMHS (2019).

**Land-based Facilities**

The land-based AMHS facility in Cordova is owned by the State of Alaska. Table 154 shows which currently operating AMHS vessels are capable of docking at the facility in Cordova.

**Table 154. Vessels Capable of Docking at Cordova Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Cordova Terminal	X	X*	X	X	X*	X*	X*	X*	
Cordova Ocean Dock			X						X

Notes:

X indicates the vessel is compatible with this terminal.

\* It is likely that the vessel is compatible with this terminal, but it has not been fully tested.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value for each facility was constructed by PND (2019).

***Cordova Facility***

*Docking Orientation:* Stern, Side Berth

*Description:* Cordova has two berths, each connected by a 40ft approach and a 60ft x 120ft Flexifloat steel float system. The stern berth consists of an intermediate ramp and lift system, six mooring dolphins, and catwalks/gangways for line handling access. The side loading facility consists of an intermediate ramp and lift system, six steel pile dolphins, and catwalks/gangways for line handling access.

*Alternative Usage (Stern Berth):* The orientation of the berth would likely limit the terminals suitability for alternative usage. The height of the transfer bridge, ramp and apron would likely require significant modifications/upgrades to accommodate alternative vessels. Barge or landing craft transfer of freight is a potential use for the facility; however, significant changes to the on-float components of the transfer bridge/apron system would be required to match the freeboard/side shell height of barge or vessels being used. Offload equipment would need be limited to highway-legal design loads, further restricting the suitability of the terminal. The suitability for use for alternative smaller passenger-only vessels is believed to be limited due to orientation of berth and height of the transfer bridge/apron system.

*Alternative Usage (Side Berth):* The use of the terminal for offload of freight would likely require significant modifications to the float and transfer bridge system to match the freeboard/side shell height of barge or vessels being used. Offload equipment would need be limited to highway-legal design loads, further restricting the suitability of the terminal for freight transfer. The use of small passenger vessels would also require modifications to the transfer bridge/ramp system. Additional berthing and mooring structures would also likely be required, depending on the vessel dimensions under consideration.

Table 155 shows a range of estimated values for the Cordova Facility including uplands and associated infrastructure but does not account for any potential modifications required for the facilities to be used by non-AMHS vessels.

**Table 155. Estimated Value of the Cordova Facility**

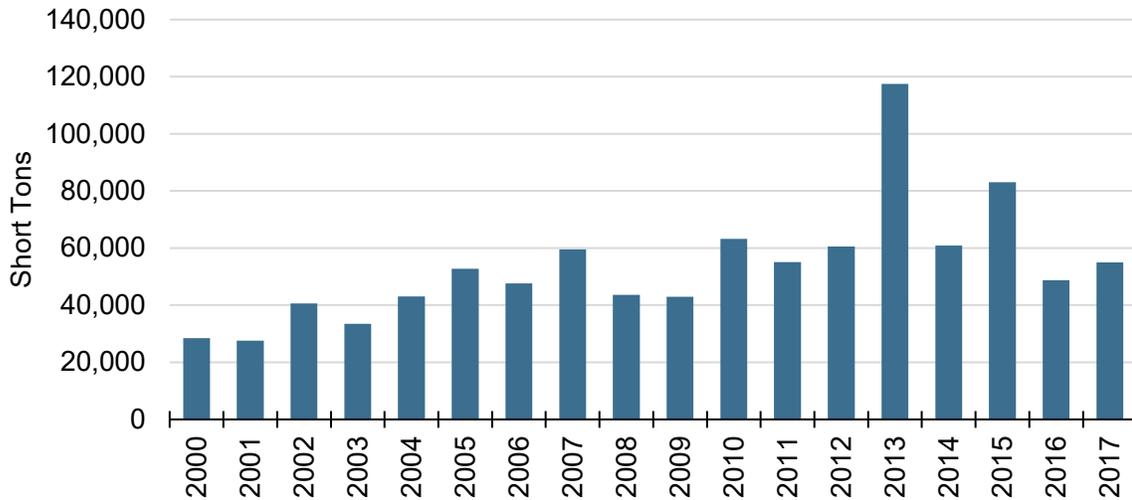
<b>Estimate Range</b>	<b>-30%</b>	<b>Avg</b>	<b>+30%</b>
Facility Value (\$)	6,380,000	9,110,000	11,840,000

Data Source: PND (2019)

### 3.18.3 Transportation Alternatives

Figure 171 shows marine freight data for Cordova. A variety of commodities pass through Cordova, with distillate fuel oil, fish (not shellfish), prepared fish, gasoline, and manufactured products as top commodities by volume. The peak in 2013 was largely driven by high reported volumes of distillate fuel oil and gasoline that year, which were the highest reported volumes of those commodities during this time period.

**Figure 171. Cordova Inbound and Outbound Annual Marine Freight, 2000–2017**



Data Source: USACE, 2019. USACE, 2018.

One carrier provides regularly scheduled passenger air service to Cordova, and rates to hub airports are shown in Table 156.

**Table 156. Cordova Flight Services and Rates for Single Adult Passenger, by Carrier**

Airline Carrier	One Way Destination	Summer Rate (\$)	Winter Rate (\$)
Alaska Airlines	Anchorage	150	150

Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.

Data Source: Alaska Airlines, Inc., 2019.

### 3.18.4 Eyak Community Profile

#### **Demographic Summary**

In 2017, the population of the Eyak Alaska Native village statistical area (ANVSA) was 254, an increase of 59 percent since the last US census in 2010 (Headwaters Economics EPS 2019). The population of Eyak is included within estimates for the City of Cordova.

There are no Alaska public schools in Eyak. Eyak is located in the Cordova City School District, which has schools in nearby Cordova.

## 4 Inter-Island Ferry Association Service Communities

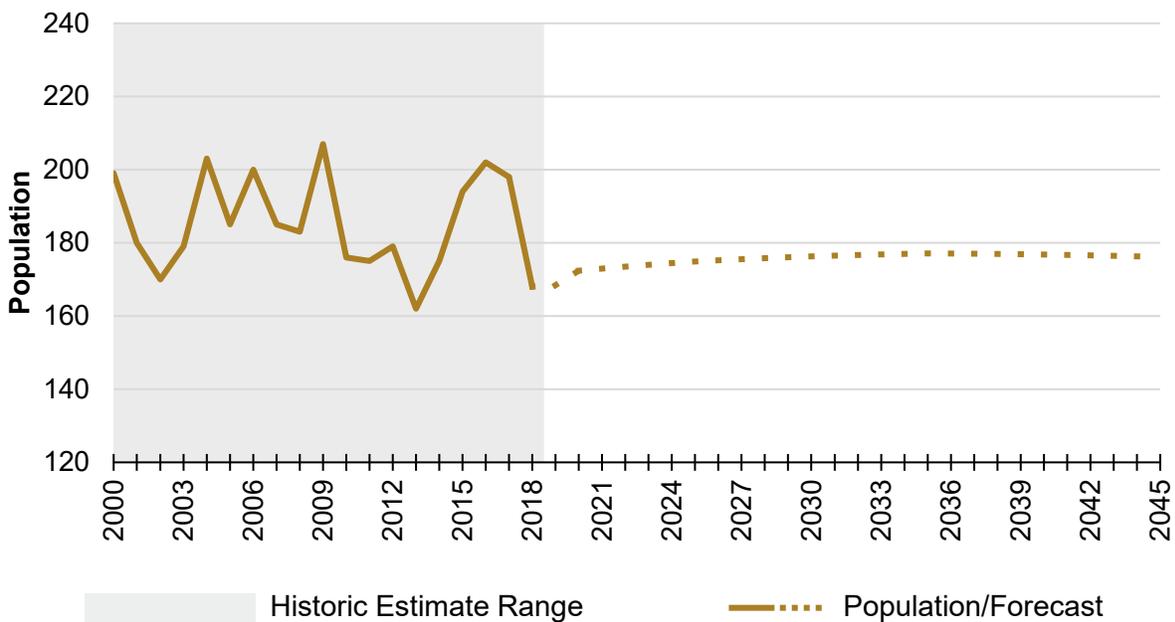
The Inter-Island Ferry Association provides service between Ketchikan and several outlying communities in Southeast Alaska. While these communities are not directly associated with AMHS, it is common for IFA users to board an AMHS ferry in Ketchikan on a multi-segment trip to reach larger cities like Juneau, Sitka, Bellingham, or Anchorage via sailings with a Homer or Whittier destination. The community profiles included within this subsection represent Alaska residents who are likely to be affected by changes in the AMHS.

### 4.1 Coffman Cove Community Profile

#### 4.1.1 Demographic Summary

Figure 171 shows the population of Coffman Cove with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 168 permanent residents, and the population of Coffman Cove is expected to stay about the same over time.

**Figure 172. Coffman Cove Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 157 shows student enrollment in all Coffman Cove schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

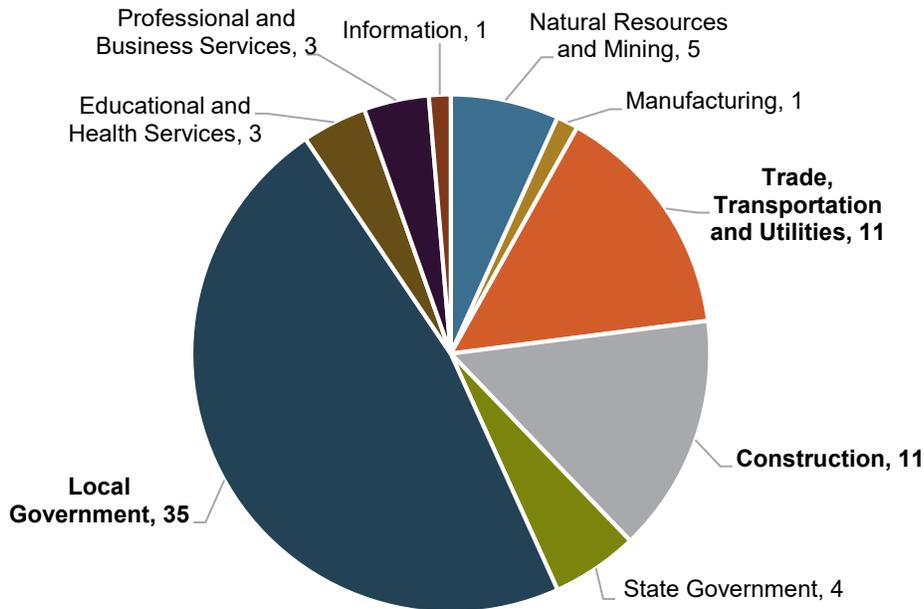
**Table 157. Coffman Cove All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	3	3	0	1	1	2	2	2	0	2	0	2	0	0
Total	12							2		4				0

Data Source: USDE, 2016.

Figure 172 shows the number of workers in various industries for Coffman Cove, and the top three industries are shown in bold.

**Figure 173. Coffman Cove Resident Employment by Industry, 2016**



Data Source: ALARI, 2019

## 4.1.2 AMHS Summary

### Land-based Facilities

The land-based AMHS Clark Bay facility in Coffman Cove is non-state owned.

The following technical description, alternative usage, and estimated value of the facility was constructed by PND (2019).

**Coffman Cove Facility**

*Docking Orientation:* Stern

*Description:* This facility was constructed in 2006 and consists of a steel approach trestle, a transfer bridge with steel support float, and four steel pile mooring dolphins. This terminal serves the Prince of Wales Island communities by linking them via IFA’s M/V Prince of Wales vessel to the AMHS mainline service to Petersburg. The City ran and operated this facility from 2006 to 2008.

*Alternative Usage:* The orientation of the berth would likely limit the terminals suitability for alternative usage. The height of the transfer bridge, ramp and apron would likely require significant modifications/upgrades to accommodate alternative vessels. The Coffman Cove area has several other docks that can be used by other types of vessels.

**4.1.3 Transportation Alternatives**

One carrier provides regularly scheduled passenger air service to Coffman Cove, and rates to hub airports are shown in Table 158. This route has two stops (Edna Bay and Naukati) and only operates on Tuesday, Wednesday, and Saturday in the summer and on Tuesday, Thursday, and Saturday in the winter. There are also two companies in Wrangell that offered water taxi and freight transportation service to Coffman Cove.

**Table 158. Coffman Cove Flight Services and Rates for Single Adult Passenger, by Carrier**

Airline Carrier	One Way Destination	Summer Rate (\$)	Winter Rate (\$)
Taquan Air	Ketchikan	140	140

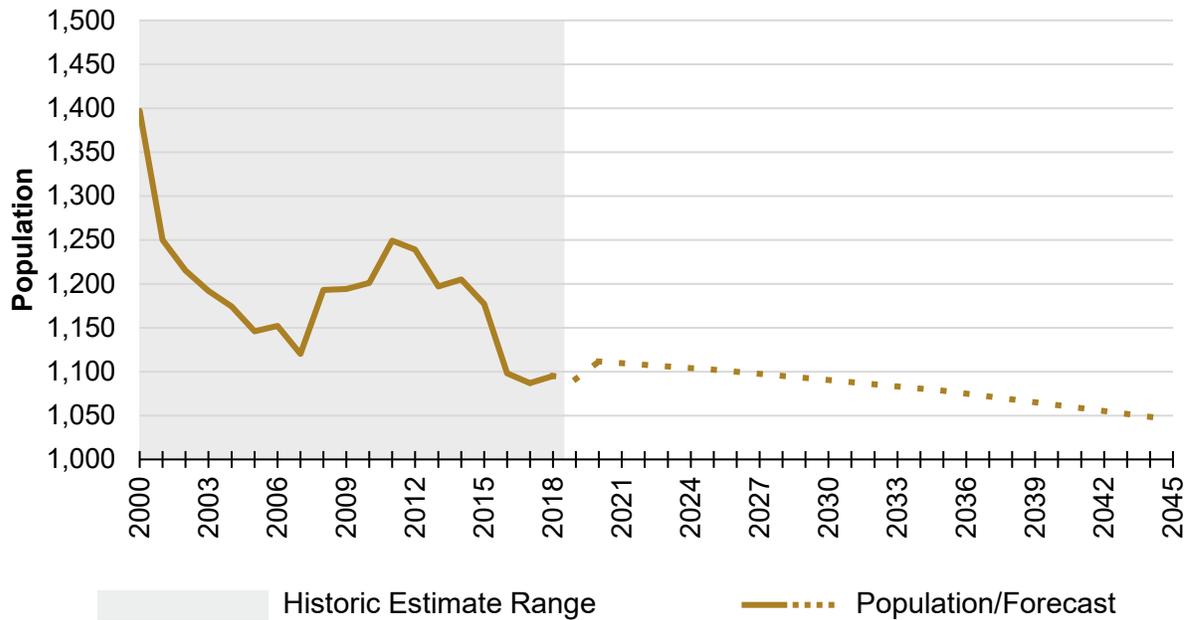
Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.  
Data Source: Taquan Air, 2019.

## 4.2 Craig Community Profile

### 4.2.1 Demographic Summary

Figure 173 shows the population of Craig with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 1,095 permanent residents, but the population of Craig is expected to decrease gradually over time.

**Figure 174. Craig Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 159 shows student enrollment in all Craig schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

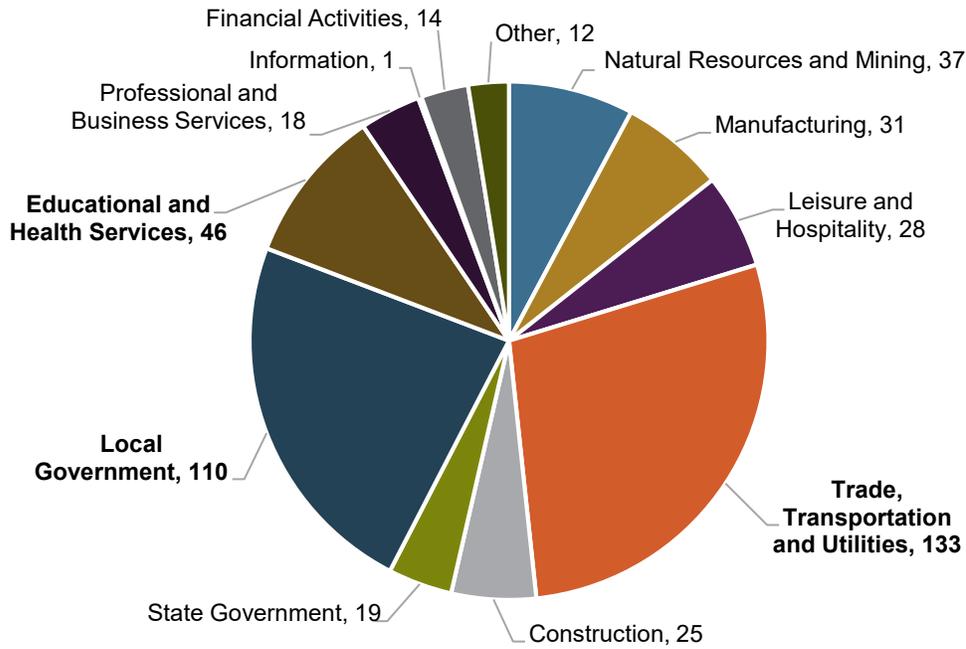
**Table 159. Craig All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	30	41	35	60	44	65	38	44	41	33	35	30	35	6
<b>Total</b>	313						85		133				6	

Data Source: USDE, 2016.

Figure 174 shows the number of workers in various industries for Craig, and the top three industries are shown in bold. Seafood processors in Craig include Silver Bay Seafoods, Noyes Island Smokehouse and Craig Fisheries. The Silver Bay plant has a daily processing capacity of 1.3 million pounds at its peak and processes mostly pink and chum salmon (Silver Bay Seafoods, 2019).

**Figure 175. Craig Resident Employment by Industry, 2016**

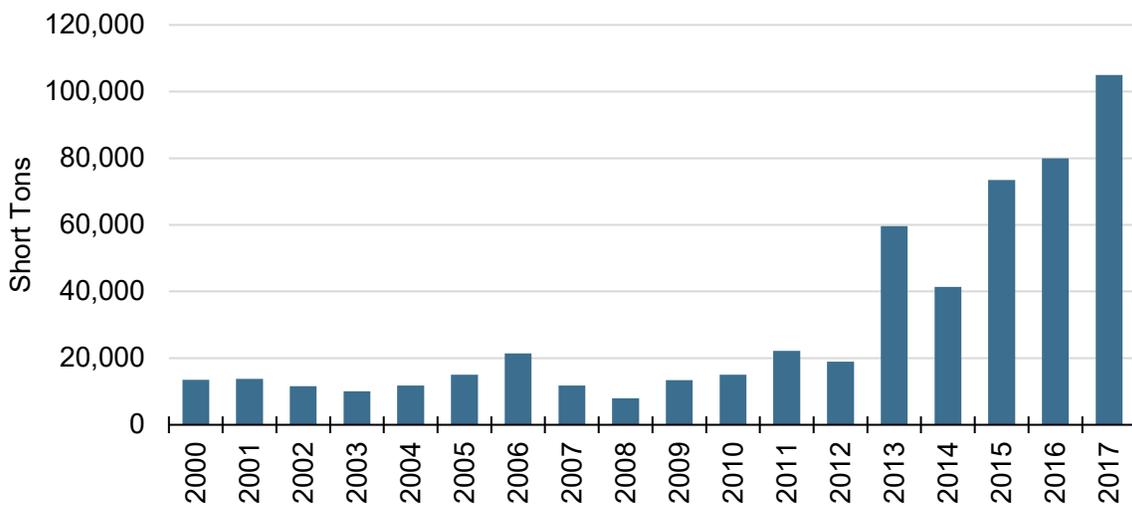


Data Source: ALARI, 2019

#### 4.2.2 Transportation Alternatives

Figure 175 shows marine freight data for Craig. For all years, reported freight passing through Craig is almost entirely distillate fuel oil and gasoline, with small amounts of other petroleum products in some years.

**Figure 176. Craig Inbound and Outbound Annual Marine Freight, 2000–2017**



Data Source: USACE, 2019. USACE, 2018.

Two carriers provide regularly scheduled passenger air service to Craig, and rates to hub airports are shown in Table 160. The Taquan Air route does not operate on Sundays. The Pacific Airways route does not operate in the winter, but Pacific Airways provides ground transportation from Craig to Hollis during that time.

**Table 160. Craig Flight Services and Rates for Single Adult Passenger, by Carrier**

<b>Airline Carrier</b>	<b>One Way Destination</b>	<b>Summer Rate (\$)</b>	<b>Winter Rate (\$)</b>
Taquan Air	Ketchikan	135	135
Pacific Airways	Ketchikan	157	No Service

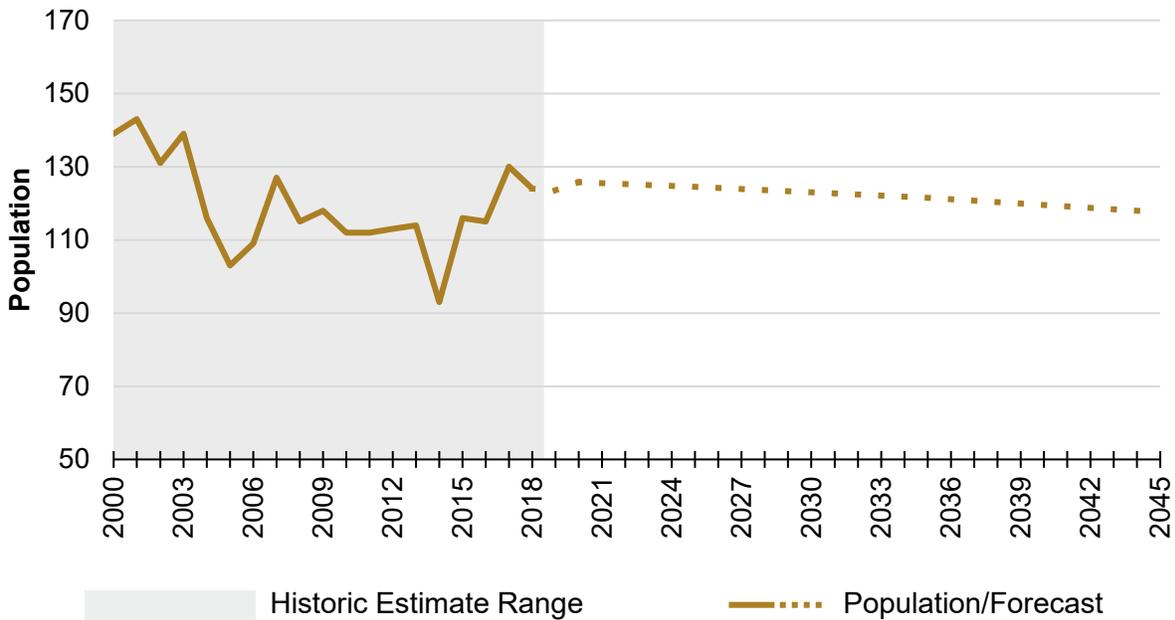
Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.  
Data Source: Taquan Air, 2019. Pacific Airways, 2019.

### 4.3 Hollis Community Profile

#### 4.3.1 Demographic Summary

Figure 176 shows the population of Hollis with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 124 permanent residents, but the population of Hollis is expected to decrease slightly over time.

**Figure 177. Hollis Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 161 shows student enrollment in all Hollis schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

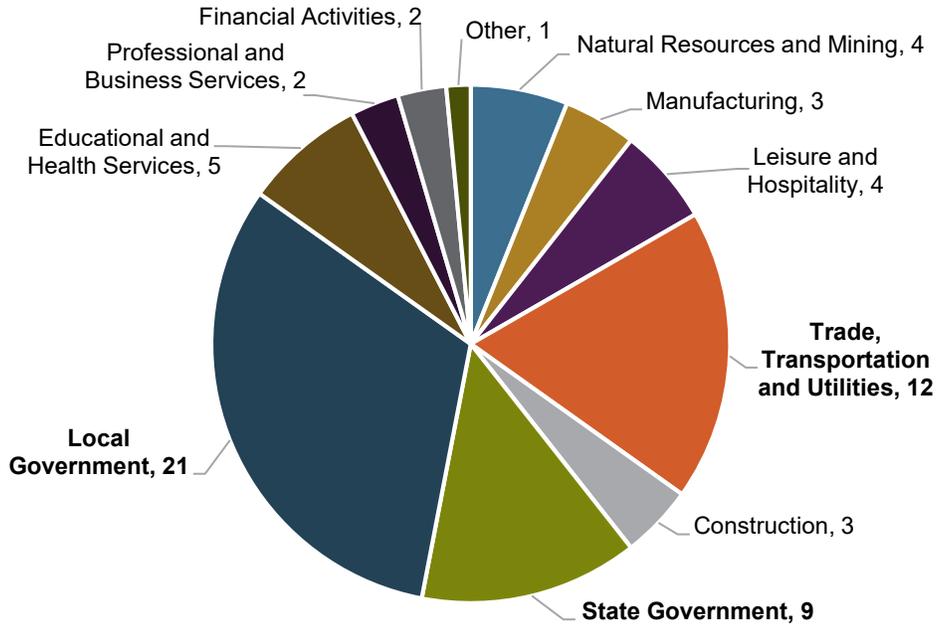
**Table 161. Hollis All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	5	2	3	1	3	1	2	2	1	1	0	1	1	2
Total	17							3		3			2	

Data Source: USDE, 2016.

Figure 177 shows the number of workers in various industries for Hollis, and the top three industries are shown in bold.

**Figure 178. Hollis Resident Employment by Industry, 2016**



Data Source: ALARI, 2019

### 4.3.2 AMHS Summary

#### Land-based Facilities

The land-based AMHS Clark Bay facility in Hollis is owned by the State of Alaska. Table 162 shows which currently operating AMHS vessels are capable of docking at the Clark Bay facility in Hollis.

**Table 162. Vessels Capable of Docking at Hollis Facilities**

	Aurora	Columbia	Kennicott	LeConte	Lituya	Malaspina	Matanuska	Tazlina & Hubbard	Tustumena
Hollis	X			X	X			X*	

Notes:

X indicates the vessel is compatible with this terminal.

\* It is likely that the vessel is compatible with this terminal, but it has not been fully tested.

Data Source: DOT&PF 2017

The following technical description, alternative usage, and estimated value of the facility was constructed by PND (2019).

### Clark Bay Facility

*Docking Orientation:* Side Berth

*Description:* This facility is owned by the Inter Island Ferry Authority (IFA) and was built in 1975. It consists of a transfer bridge, steel support float, and six steel mooring dolphins. The uplands were redone in 2010 and consist of a terminal building, maintenance warehouse, secure (fenced) staging area, paved parking, and overhead lighting. The IFA vessels that run to this facility overnight at Clark Bay and dock at Berth 3 in Ketchikan.

*Alternative Usage:* The use of the terminal for offload of freight would likely require significant modifications to the float and transfer bridge system to match the freeboard/side shell height of barge or vessels being used. Offload equipment would need be limited to highway-legal design loads, further restricting the suitability of the terminal for freight transfer. Additional berthing structures would potentially be required, depending on the vessels being used. The use of small passenger vessels would also require modifications to the transfer bridge/ramp system. Additional berthing and mooring structures would also likely be required, depending on the vessel dimensions under consideration.

Table 163 shows a range of estimated values for the Clark Bay Facility including uplands and associated infrastructure but does not account for any potential modifications required for the facilities to be used by non-AMHS vessels.

**Table 163. Estimated Value of the Clark Bay Facility in Hollis**

Estimate Range	-30%	Avg	+30%
Facility Value (\$)	4,880,000	6,960,000	9,050,000

Data Source: PND (2019)

### 4.3.3 Transportation Alternatives

Two carriers provide regularly scheduled passenger air service to Hollis, and rates to hub airports are shown in Table 164. The Taquan Air route does not operate on Sundays. The Pacific Airways route operates seven days per week in the summer and Monday-Friday in the winter.

**Table 164. Hollis Flight Services and Rates for Single Adult Passenger, by Carrier**

Airline Carrier	One Way Destination	Summer Rate (\$)	Winter Rate (\$)
Taquan Air	Ketchikan (stop in Craig)	120	120
Pacific Airways	Ketchikan	131	Not reported

Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.

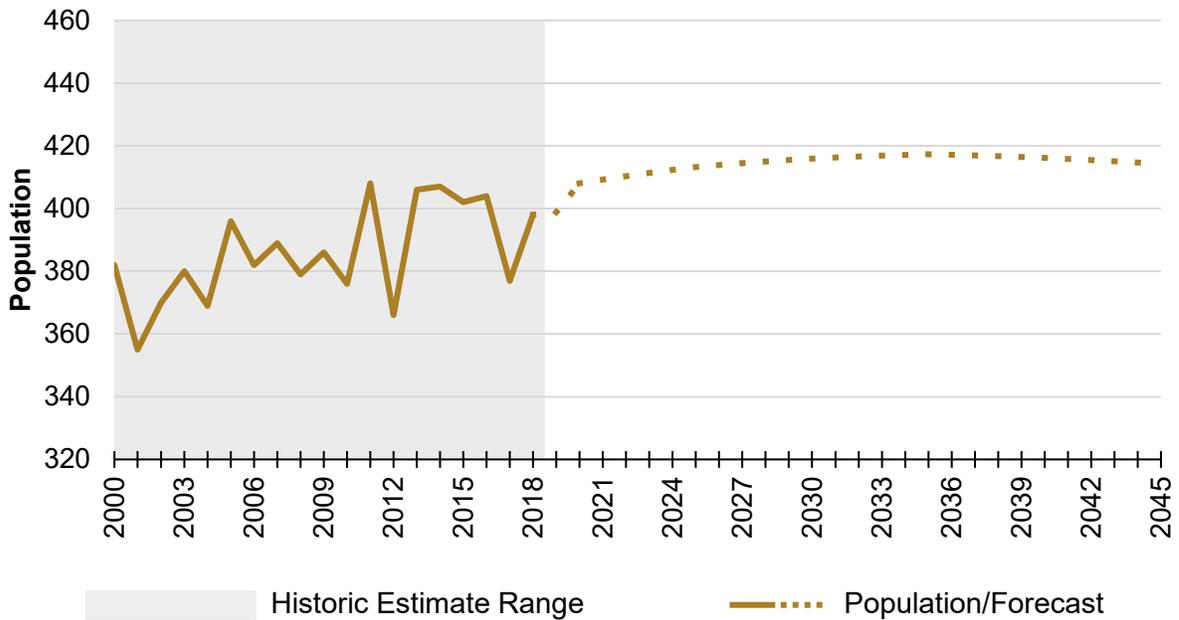
Data Source: Taquan Air, 2019. Pacific Airways, 2019.

## 4.4 Hydaburg Community Profile

### 4.4.1 Demographic Summary

Figure 178 shows the population of Hydaburg with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 398 permanent residents, and the population of Hydaburg is expected to stay the same over time.

**Figure 179. Hydaburg Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 165 shows student enrollment in all Hydaburg schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

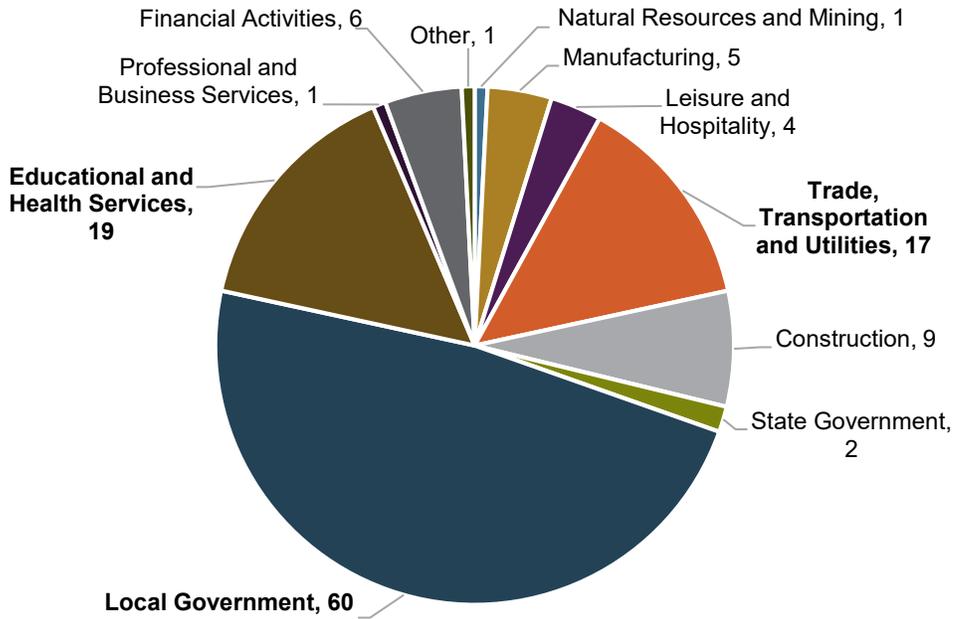
**Table 165. Hydaburg All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	6	5	3	11	9	5	4	3	3	7	5	4	5	12
Total	43							6		21				12

Data Source: USDE, 2016.

Figure 179 shows the number of workers in various industries for Hydaburg, and the top three industries are shown in bold.

**Figure 180. Hydaburg Resident Employment by Industry, 2016**

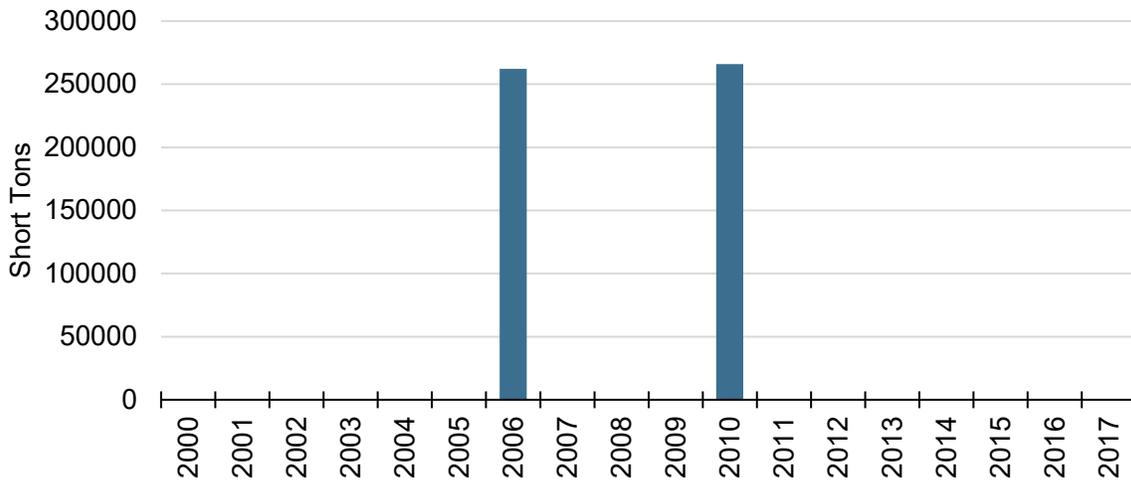


Data Source: ALARI, 2019

#### 4.4.2 Transportation Alternatives

Figure 180 shows marine freight data for Hydaburg in 2006 and 2010, the only years with available data. All or almost all of the freight in these years was wood in the rough.

**Figure 181. Hydaburg Inbound and Outbound Annual Marine Freight, 2000–2017**



Data Source: USACE, 2019. USACE, 2018.

One carrier provides regularly scheduled passenger air service to Hydaburg, and rates to hub airports are shown in Table 166. This route operates Monday, Wednesday, and Friday only and has a stop in Dora Bay.

**Table 166. Hydaburg Flight Services and Rates for Single Adult Passenger, by Carrier**

<b>Airline Carrier</b>	<b>One Way Destination</b>	<b>Summer Rate (\$)</b>	<b>Winter Rate (\$)</b>
Taquan Air	Ketchikan	135	135

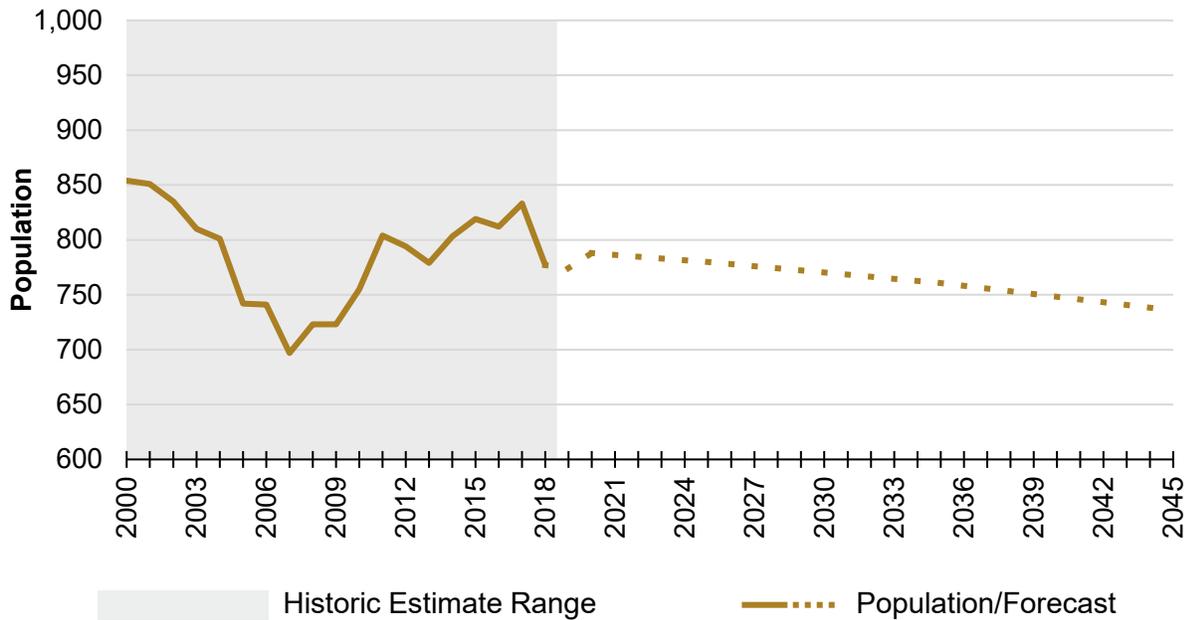
Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.  
Data Source: Taquan Air, 2019.

## 4.5 Klawock Community Profile

### 4.5.1 Demographic Summary

Figure 181 shows the population of Klawock with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 777 permanent residents, but the population of Klawock is expected to decrease gradually over time.

**Figure 182. Klawock Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 167 shows student enrollment in all Klawock schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

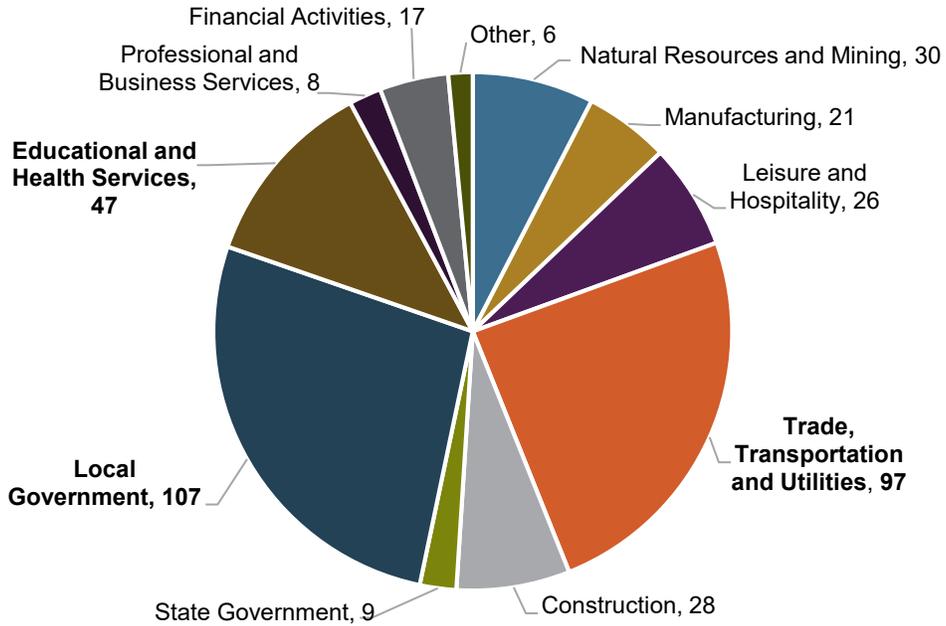
**Table 167. Klawock All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	16	9	11	12	10	10	6	7	8	13	5	14	6	0
Total	74							15		38			0	

Data Source: USDE, 2016.

Figure 182 shows the number of workers in various industries for Klawock, and the top three industries are shown in bold.

**Figure 183. Klawock Resident Employment by Industry, 2016**

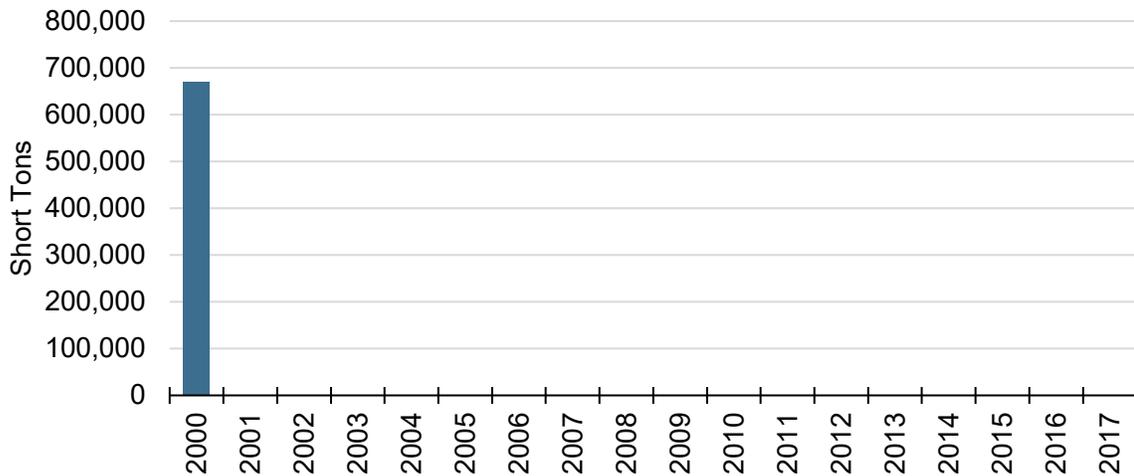


Data Source: ALARI, 2019

#### 4.5.2 Transportation Alternatives

Figure 183 shows marine freight data for Klawock in 2000, the only year with available data, and more than 98 percent of the freight was wood in the rough and wood chips.

**Figure 184. Klawock Inbound and Outbound Annual Marine Freight, 2000–2017**



Data Source: USACE, 2019. USACE, 2018.

Four carriers provide regularly scheduled passenger air service to Klawock, and rates to hub airports are shown in Table 168. The Alaska Seaplanes route to Juneau makes a stop in Sitka. The Taquan Air flight does not operate on Sundays.

**Table 168. Klawock Flight Services and Rates for Single Adult Passenger, by Carrier**

<b>Airline Carrier</b>	<b>One Way Destination</b>	<b>Summer Rate (\$)</b>	<b>Winter Rate (\$)</b>
Alaska Seaplanes	Juneau	299	299
Alaska Seaplanes	Sitka	230	230
Island Air Express	Ketchikan	153	153

Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.

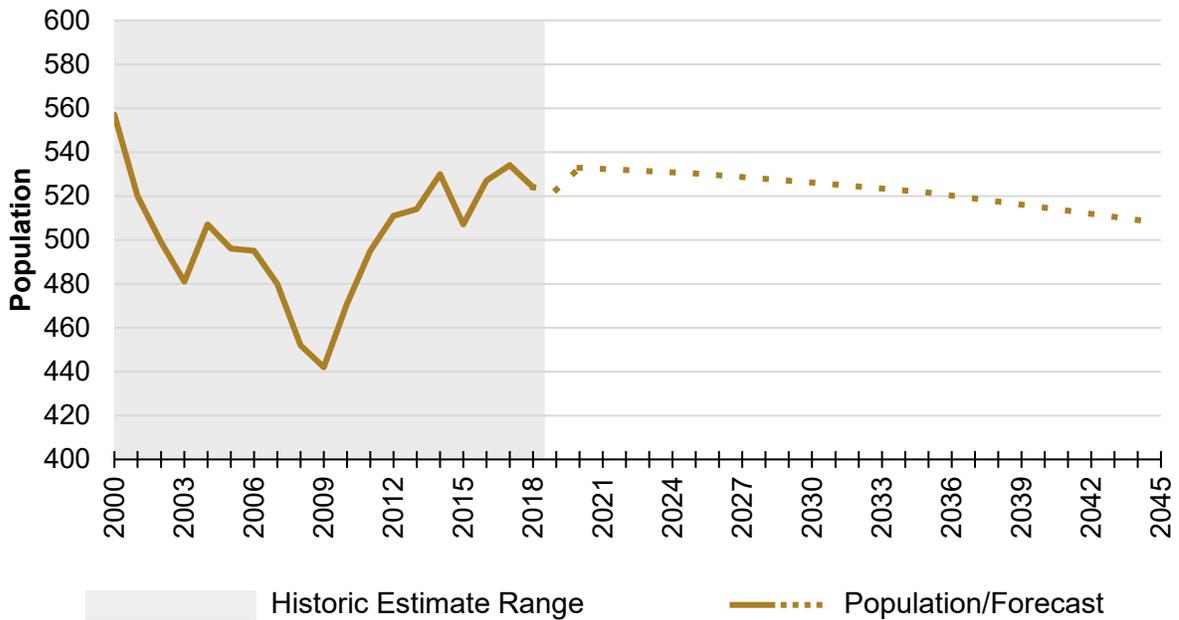
Data Source: Alaska Seaplanes, 2019. Island Air Express, 2019.

## 4.6 Thorne Bay Community Profile

### 4.6.1 Demographic Summary

Figure 184 shows the population of Thorne Bay with the forecasted values as a dashed line and the historic estimate range shaded in grey. In 2018 there were 524 permanent residents, but the population of Thorne Bay is expected to decrease gradually over time.

**Figure 185. Thorne Bay Historic Estimates and Population Forecast, 2000–2045**



Note: Northern Economics interpolates DOLWD borough level projection forecasts to the community level.  
 Source: Northern Economics analysis using data from DOLWD (2019a, 2019b)

Table 169 shows student enrollment in all Thorne Bay schools by grade, as well as subtotals for elementary, middle, and high school age students in the 2016–2017 school year. The AMHS is important for students who use the ferries to travel for competitive sports tournaments.

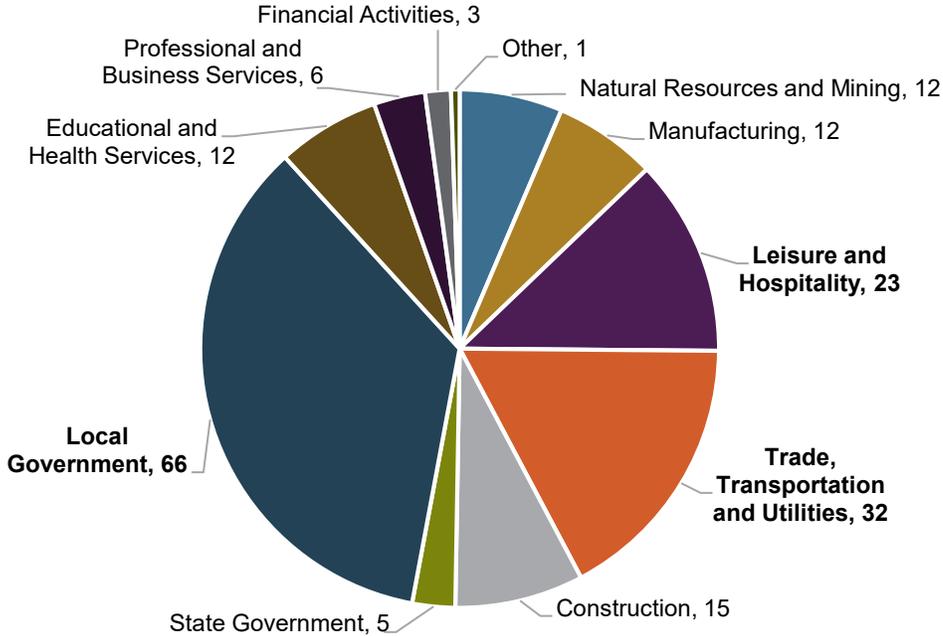
**Table 169. Thorne Bay All Schools Enrollment by Grade, 2016–2017 School Year**

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12	Other
Enrollment	7	3	7	5	2	4	7	4	4	8	8	7	5	0
Total	35							8		28				0

Data Source: USDE, 2016.

Figure 185 shows the number of workers in various industries for Thorne Bay, and the top three industries are shown in bold.

**Figure 186. Thorne Bay Resident Employment by Industry, 2016**



Data Source: ALARI, 2019

#### 4.6.2 Transportation Alternatives

Two carriers provide regularly scheduled passenger air service to Thorne Bay, and rates to hub airports are shown in Table 170. The Taquan Air route has stops in Craig and Hollis and does not operate on Sundays. The Pacific Airways route operates seven days per week in the summer and Monday-Friday in the winter.

**Table 170. Thorne Bay Flight Services and Rates for Single Adult Passenger, by Carrier**

Airline Carrier	One Way Destination	Summer Rate (\$)	Winter Rate (\$)
Taquan Air	Ketchikan	120	120
Pacific Airways	Ketchikan	131	Not reported

Note: As of June 2019, rates for the upcoming winter season were not reported on some airline websites.

Data Source: Taquan Air, 2019. Pacific Airways, 2019.

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Kodiak Island Borough School District, 2019. Peterson Elementary. Available at <https://www.kibsd.org/domain/281>.

Chatham School District, 2019. Chatham Correspondence Program. Available at <https://chathamsd.org/correspondence-program/>.

**Table 171. Web Data Sources**

<b>Company Name</b>	<b>Web Link</b>
<b>Air Carrier Companies</b>	
Akutan Airport Link	<a href="http://www.akutanairportlink.com/">http://www.akutanairportlink.com/</a>
Alaska Air Taxi	<a href="https://www.alaskaairtaxi.com/">https://www.alaskaairtaxi.com/</a>
Alaska Air Transit	<a href="http://www.flyaat.com/alaska_air_charter_home.html">http://www.flyaat.com/alaska_air_charter_home.html</a>
Alaska Airlines, Inc.	<a href="https://www.alaskaair.com/">https://www.alaskaair.com/</a> .
Alaska Seaplanes	<a href="https://www.flyalaskaseaplanes.com/">https://www.flyalaskaseaplanes.com/</a>
Delta Air Lines	<a href="https://www.delta.com/">https://www.delta.com/</a>
Grant Aviation	<a href="https://www.flygrant.com/">https://www.flygrant.com/</a> .
Harris Aircraft Services	<a href="https://harrisair.com/">https://harrisair.com/</a> .
Island Air Express	<a href="https://www.islandairx.com/index.html">https://www.islandairx.com/index.html</a>
Island Air Service	<a href="https://www.flyadq.com/">https://www.flyadq.com/</a>
Pacific Airways	<a href="https://booknow.flypacificairways.com/">https://booknow.flypacificairways.com/</a>
Ravn Alaska	<a href="https://www.flyravn.com/">https://www.flyravn.com/</a>
Smokey Bay Air	<a href="https://www.smokeybayair.com/daily-flights">https://www.smokeybayair.com/daily-flights</a>
Taquan Air	<a href="https://taquanair.com/">https://taquanair.com/</a>
<b>Water Taxi Companies</b>	
Haines Skagway Fast Ferry	<a href="http://www.hainesskagwayfastferry.com/haines.html">http://www.hainesskagwayfastferry.com/haines.html</a>
Alans Water Taxi	<a href="https://www.alanswatertaxi.com/water-taxi/">https://www.alanswatertaxi.com/water-taxi/</a>
Ashore Water Taxi	<a href="http://www.homerwatertaxi.com/">http://www.homerwatertaxi.com/</a>
Bay Excursions	<a href="https://www.bayx.net/water-taxi">https://www.bayx.net/water-taxi</a>
Bay Roamers Water Taxi	<a href="https://halibutcovealaska.com/kachemak-bay-water-taxi.htm">https://halibutcovealaska.com/kachemak-bay-water-taxi.htm</a>
Central Charter	<a href="https://www.centralcharter.com/">https://www.centralcharter.com/</a>
Coldwater Alaska	<a href="http://coldwaterak.com/freight/">http://coldwaterak.com/freight/</a>
Mak's Water Taxi	<a href="http://www.makoswatertaxi.com/faq.html">http://www.makoswatertaxi.com/faq.html</a>
Red Mountain Marine	<a href="http://www.redmountainmarine.com/">http://www.redmountainmarine.com/</a>
Seldovia Bay Ferry	<a href="https://seldoviabayferry.com/book/#homer">https://seldoviabayferry.com/book/#homer</a>
True North Adventures	<a href="https://truenorthkayak.com/water-taxi.html">https://truenorthkayak.com/water-taxi.html</a>
Hookedadventures	<a href="https://www.hookedadventures.com/water-taxi/">https://www.hookedadventures.com/water-taxi/</a>
Alaska Fish N Trips	<a href="https://alaskanfishntrips.com/our-trips/water-taxi/">https://alaskanfishntrips.com/our-trips/water-taxi/</a>
Alaska Sea to Shore	<a href="https://www.alaskaseatoshore.com/">https://www.alaskaseatoshore.com/</a>
Allen Marine Tours	<a href="https://allenmarinetours.com/charters/fleet/">https://allenmarinetours.com/charters/fleet/</a>
Melinos Marine Services	<a href="http://www.melinosmarineservices.com/water-taxi.php">http://www.melinosmarineservices.com/water-taxi.php</a>
Moore Charters	<a href="https://www.moorecharters.com/our-boats/">https://www.moorecharters.com/our-boats/</a>
Sunshine Water Taxi	<a href="https://juneauwatertaxi.wixsite.com/water-taxi/destinations">https://juneauwatertaxi.wixsite.com/water-taxi/destinations</a>

**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

<b>Company Name</b>	<b>Web Link</b>
Southeast Exposure	<a href="http://southeastexposure.com/water-taxi.html">http://southeastexposure.com/water-taxi.html</a>
Millers Landing	<a href="https://www.millerslandingak.com/seward-water-taxi/">https://www.millerslandingak.com/seward-water-taxi/</a>
Baranof Tours LLC	<a href="https://www.baranoftours.com/water-taxi">https://www.baranoftours.com/water-taxi</a>
Kayak Sitka	<a href="https://www.kayaksitka.com/wp-content/cache/wp-rocket/www.kayaksitka.com/water-taxi-service/index.html_gzip">https://www.kayaksitka.com/wp-content/cache/wp-rocket/www.kayaksitka.com/water-taxi-service/index.html_gzip</a>
SeaMarine LLC	<a href="http://www.sitkaseamarine.com/services---rates.html">http://www.sitkaseamarine.com/services---rates.html</a>
Sitka Alaska Outfitters	<a href="https://www.sitkaalaskaoutfitters.com/water-taxi">https://www.sitkaalaskaoutfitters.com/water-taxi</a>
Tongass Troll	<a href="https://tongasstroll.com/">https://tongasstroll.com/</a>
Alaska Fjordlines, Inc.	<a href="https://alaskafjordlines.com/schedule-and-rates/">https://alaskafjordlines.com/schedule-and-rates/</a>
Pangaea Adventures	<a href="https://www.alaskasummer.com/our-trips/alaska-water-taxi-services/">https://www.alaskasummer.com/our-trips/alaska-water-taxi-services/</a>
Valdez Outfitters	<a href="https://valdezoutfitters.com/about-us/the-boats/">https://valdezoutfitters.com/about-us/the-boats/</a>
Valdez Water Taxi and Charters	<a href="https://valdezwatertaxiandcharters.com/water-taxi">https://valdezwatertaxiandcharters.com/water-taxi</a>
Epic Charters	<a href="http://www.epichartersalaska.com/contact-us.php">http://www.epichartersalaska.com/contact-us.php</a>
Eshamay Bay Lodge	<a href="https://www.eshamybaylodge.com/eshamy-bay-water-taxi/">https://www.eshamybaylodge.com/eshamy-bay-water-taxi/</a>
Lazy Otter Charters	<a href="https://www.lazyottercharters.com/whittier-marine-services/">https://www.lazyottercharters.com/whittier-marine-services/</a>
Alaska Vistas	<a href="https://www.alaskavistas.com/water-taxi.html">https://www.alaskavistas.com/water-taxi.html</a>
Breakaway Adventures	<a href="https://www.breakawayadventures.com/water-taxi.html">https://www.breakawayadventures.com/water-taxi.html</a>
Muddy Water Adventures	<a href="https://www.muddywateradventures.com/prices.html">https://www.muddywateradventures.com/prices.html</a>
<b>Seafood Processing Companies</b>	
Trident Seafoods	<a href="https://www.tridentseafoods.com/Our-Story/Our-Plants">https://www.tridentseafoods.com/Our-Story/Our-Plants</a>
Bering Pacific Seafoods	<a href="http://unimak.us/bering_pacific_seafoods.shtml">http://unimak.us/bering_pacific_seafoods.shtml</a>
Silver Bay Seafoods	<a href="https://www.silverbayseafoods.com/">https://www.silverbayseafoods.com/</a>
Ocean Beauty Seafoods	<a href="https://www.oceanbeauty.com/alaska-locations/">https://www.oceanbeauty.com/alaska-locations/</a>
Copper River Seafoods	<a href="http://www.copperverseafoods.com/contact-us/">http://www.copperverseafoods.com/contact-us/</a>
Sixty North Seafoods	<a href="https://www.sixtynorthseafoods.com/about/">https://www.sixtynorthseafoods.com/about/</a>
E.C. Phillips Alaska	<a href="https://www.ecphillipsalaska.com/">https://www.ecphillipsalaska.com/</a>
Alaska General Seafoods	<a href="http://www.akgen.com/">http://www.akgen.com/</a>
Peter Pan Seafoods, Inc.	<a href="https://www.ppsf.com/locations/category/alaska-processing">https://www.ppsf.com/locations/category/alaska-processing</a>
North Pacific Seafoods	<a href="http://www.northpacificseafoods.com/facilities.html">http://www.northpacificseafoods.com/facilities.html</a>
Pacific Seafood	<a href="https://www.pacificseafood.com/">https://www.pacificseafood.com/</a>
Global Seafoods North America	<a href="https://globalseafoods.com/pages/about-us">https://globalseafoods.com/pages/about-us</a>
Icicle Seafoods, Inc.	<a href="http://www.icicleseafoods.com/operations/">http://www.icicleseafoods.com/operations/</a>
UniSea	<a href="http://www.unisea.com/About">http://www.unisea.com/About</a>
Westward Seafood	<a href="https://www.westwardseafoods.com/company.php">https://www.westwardseafoods.com/company.php</a>
Alyeska Seafoods	<a href="https://www.westwardseafoods.com/company.php">https://www.westwardseafoods.com/company.php</a>
Whittier Seafood	<a href="https://www.whittierseafood.com/">https://www.whittierseafood.com/</a>
Sealevel Seafoods (Pacific Seafood)	<a href="http://chamberorganizer.com/wrangellchamber/mem_Sealevel">http://chamberorganizer.com/wrangellchamber/mem_Sealevel</a>
Island Seafoods (Pacific Seafood)	<a href="https://www.islandseafoods.com/">https://www.islandseafoods.com/</a>
E&E Foods, Inc. (Yakutat Seafoods)	<a href="http://eefoods.com/page/yakutat-seafoods">http://eefoods.com/page/yakutat-seafoods</a>
Alaska Glacier Seafoods, Inc.	<a href="http://www.alaskaglacierseafoods.com/about-us/">http://www.alaskaglacierseafoods.com/about-us/</a>
Taku Fisheries	<a href="http://www.takustore.com/Aboutus.asp">http://www.takustore.com/Aboutus.asp</a>

**Table 172. Survey and Interview Respondents**

Community	Respondent	Survey	Interview
<b>Lynn Canal</b>			
Haines	Wilmer Beetus, Mayor	✓	
Juneau	Rorie Watts, City Manager	✓	
	Mila Cosgrove, Deputy City Manager		✓
Skagway	Andrew Cremata, Mayor	✓	✓
<b>Mainline</b>			
Kake	Rudy Bean, City Administrator	✓	✓
Ketchikan (City)	Bob Sivertson, Mayor	✓	✓
Petersburg	Steven Giesbrecht, Borough Manager	✓	✓
Sitka	Keith Brady, City Administrator	✓	
	Gary Paxton, Mayor		✓
Wrangell	Kim Lane, City Clerk	✓	
<b>Metlakatla</b>			
Metlakatla	Albert Smith, Mayor	✓*	
	Gavin Hudson, Metlakatla Indian Community Tribal Council member		✓
<b>Cross Gulf</b>			
Yakutat	Jon Erickson, City and Borough Manager	✓	
<b>Southeast Feeder</b>			
Angoon	Joshua Bowen, Mayor	✓	✓
Gustavus	Calvin Casipit, Mayor	✓	✓
Hoonah	Gerald Byers, Mayor	✓	✓
Pelican	Walt Weller, Mayor	✓	✓
	Seth Stewart owner of Yakobi Fisheries		✓
Tenakee Springs	Dan Kennedy, Mayor	✓	
<b>Prince William Sound</b>			
Chenega Bay	Buell Russell, General Manager, Native Village of Chenega	✓	
Cordova	Clay Koplín, Mayor	✓	✓
Tatitlek	Nanci Robart, Indian Reorganization Act Council President	✓	
Whittier	Jim Hunt, City Manager	✓	
	Dan Blair, Mayor		✓
<b>Homer-Kodiak</b>			
Homer	Ken Castner, Mayor	✓	
City of Kodiak	Pat Branson, Mayor	✓	✓
Kodiak Island Borough	Dan Rohrer, Borough Mayor	✓	✓
Ouzinkie	Teressa Muller, City Clerk	✓	
Port Lions	Dorinda Kewan, Mayor	✓	✓
Seldovia	Cassidi Cameron, City Manager	✓	✓

**Draft Appendix B: Profiles of Communities Currently Served by AMHS Including Community Leader Perspectives**

<b>Community</b>	<b>Respondent</b>	<b>Survey</b>	<b>Interview</b>
Southwest			
Akutan	Joseph Bereskin, Mayor	✓	
Cold Bay	Dailey Schaack, Mayor	✓	
King Cove	Henry Mack, Mayor	✓	
Old Harbor	Rick Berns, Mayor	✓	
Sand Point	Jordan Keeler, Administrator	✓	✓
Unalaska/Dutch Harbor	Frank Kelty, Mayor	✓	✓