

# A Preliminary Analysis of Anchorage's Industries

Challenges and Possibilities for  
a Post-Pandemic City

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## **A Broad View of Industry in Anchorage**

In 2019, the Anchorage economy seemed to be on an upward trajectory, finally inching out of a multi-year recession towards positive growth. In early 2020, the economic optimism cultivated in 2019 was stifled as the coronavirus pandemic rippled through the community and the economy stumbled. A year later, the pandemic has unquestionably changed the economic landscape of Anchorage as the timeline of recovery remains uncertain.

The pandemic did not have uniform impacts on every industry in the municipality. Industries that provided in-person services prior to the pandemic were understandably hard-hit, while other industries added new employees to respond to the unique challenges posed by the pandemic. This report offers a preliminary view into how different sectors of the economy were impacted and considers how each sector might navigate the recovery period.

A major challenge in assessing economic impacts, especially in near real-time, is data availability. Data is often released months, or even years, after its collection to ensure that is properly compiled and thoroughly anonymized. While that ensures that the released data is as accurate as possible, it makes it difficult to completely analyze how an event, like the pandemic, affects an economy until years afterwards. Moreover, in some cases, public data simply does not exist at the level of granularity to consider industry-level impacts, regardless of the data release timeframe.

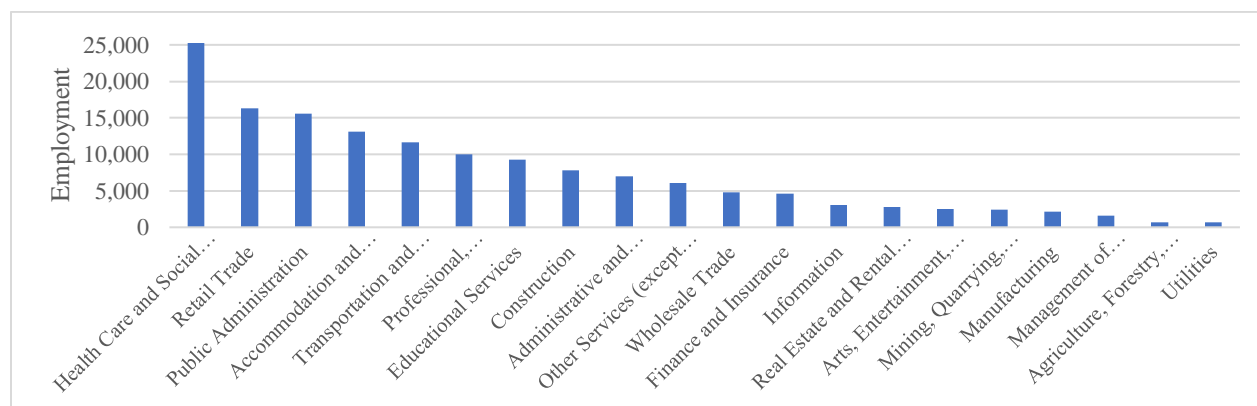
This report is subject to those data constraints. In analyzing how the Anchorage economy changed in 2020, it would be helpful to have tax data to, for example, assess how S-Corporations, which file their corporate income on individual returns, saw their earnings change. Tax data from 2020 is not presently available at any level, and may never be available publicly at a municipal level due to valid concerns about protecting the privacy of taxpayers.

One of the best available methods to quantify industry impact is via changes in employment. Although employment may not always correlate to economic impact, it can, over a short period, roughly demonstrate how the pandemic affected industries, especially in relation to the broader economy and to related sectors. These data are still preliminary and are subject to significant revision in the future. Please see the Data Appendix at the end of this report for additional details about the data used.

In addition to employment data, industry-specific data, where available, is utilized to augment analysis. For some industries that are subject to national trends, published national data can inform about potential obstacles and opportunities at the local level. When data collected outside of Anchorage is used, the assumptions underlying its usage are noted.

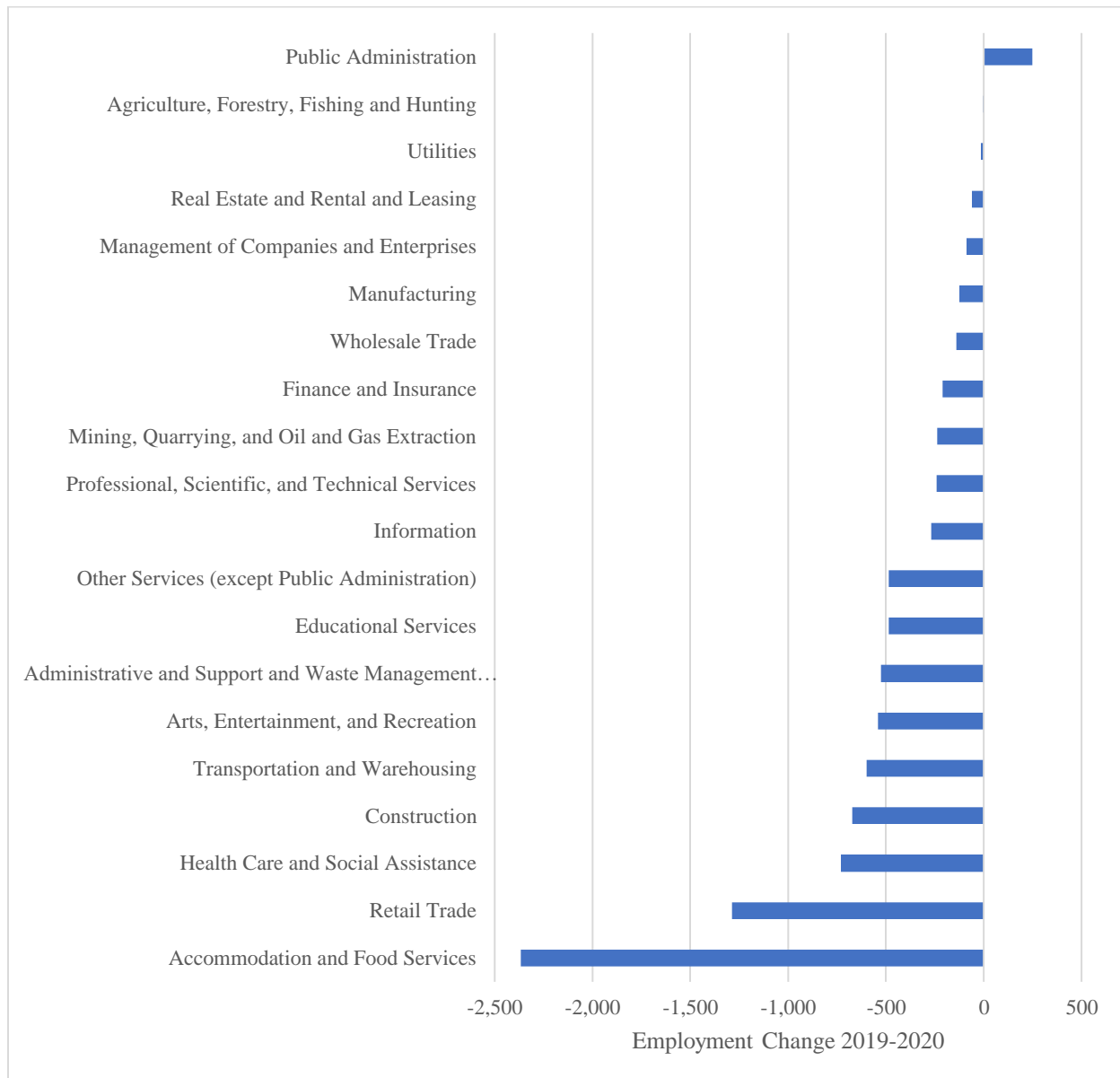
An initial view of the pandemic damage shows that nearly all industries shed employees in 2020 compared to 2019. The figures below highlight the relative size of Anchorage’s industrial sectors, as defined by NAICS, and the employment losses sustained in 2020. The following chapters will highlight each of these sectors and will investigate the potential long-term impacts of the pandemic on their business models.

*Figure 1: Employment by Industry*



Source: JobsEQ, data as of 2020Q3

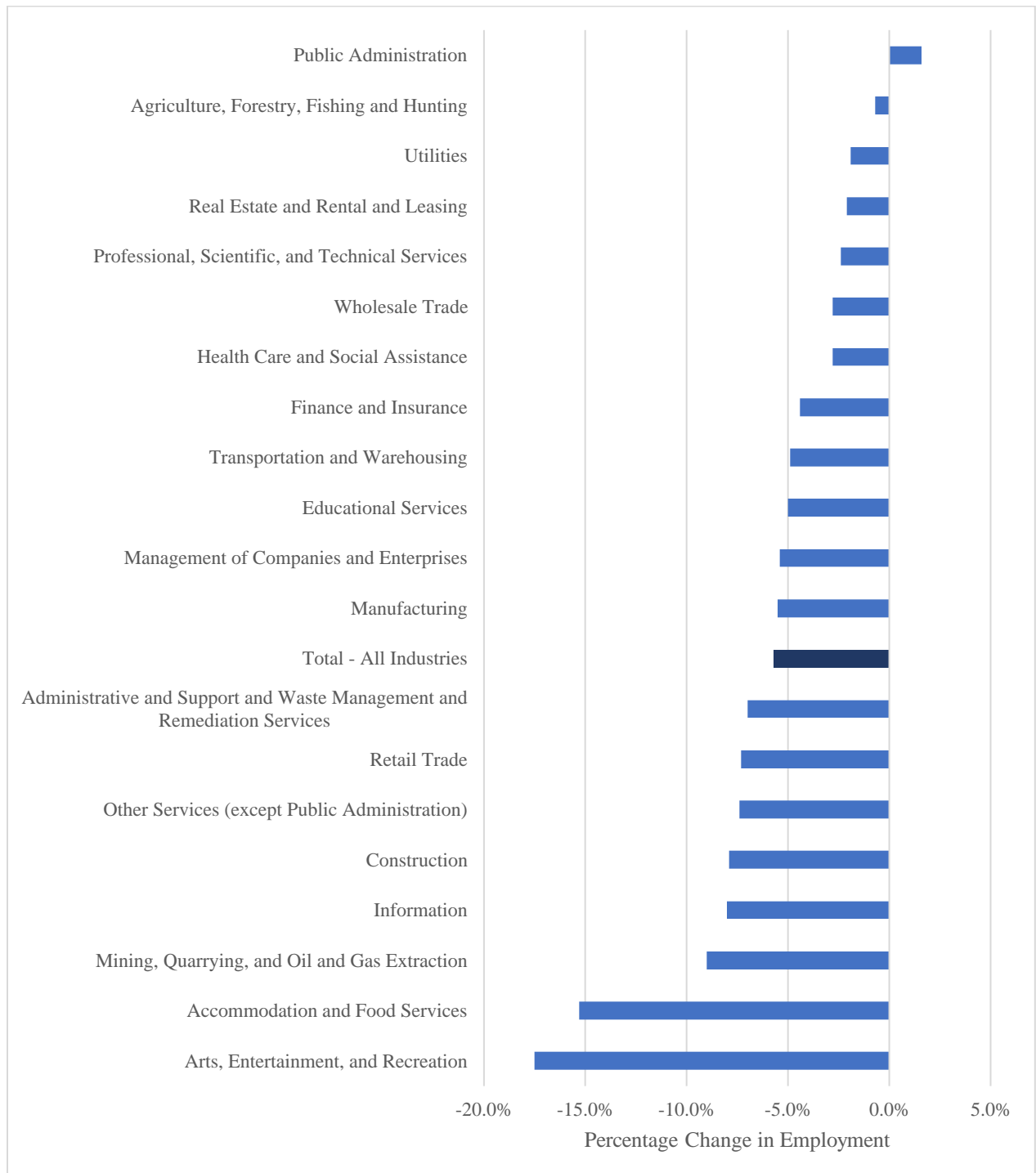
Figure 2: Employment Change by Industry



Source: JobsEQ, data as of 2020Q3



Figure 3: Percentage Change in Employment by Industry



Source: JobsEQ, data as of 2020Q3

## Healthcare and Social Services

### Sector Snapshot

Industry	Current Employment	Current Avg. Annual Wages	1-Year Projected Growth	Projected 1-Year % Growth
General Medical and Surgical Hospitals	6,705	74,999	-34	-0.5%
Offices of Physicians (except Mental Health Specialists)	5489	79,721	112	2.0%
Child Day Care Services	1332	27,491	19	1.4%
Services for the Elderly and Persons with Disabilities	1304	25,974	38	2.9%
Home Health Care Services	1175	25,583	22	1.9%
Offices of Dentists	995	51,241	56	5.6%
Residential Intellectual and Developmental Disability Facilities	659	36,604	1	0.1%
Assisted Living Facilities for the Elderly	624	28,178	10	1.6%
Other Individual and Family Services	605	51,154	16	2.6%
Vocational Rehabilitation Services	531	29,671	14	2.6%

Source: JobsEQ, data as of 2020Q3

One of the strongest sectors pre-pandemic, the healthcare and social assistance industry saw sustained employment and some job growth across numerous sub-sectors due to the system being tasked with pandemic response. Some sectors that specialized in elective or outpatient procedures lost jobs initially, likely due to citizens delaying non-essential procedures out of caution, but these sectors are largely expected to rebound and grow as the public becomes inoculated against the virus. In the future, demographic factors, including an aging population,<sup>1</sup> would suggest that this industry will, at minimum, remain stable, and more likely, will expand to meet increased demand.

*Table 1: Top 5 Healthcare Industries by Employees Lost in 2020*

Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected 1-Year % Growth
Offices of Dentists	-191	-16.1%	56	5.6%
Child Day Care Services	-145	-9.8%	19	1.4%
Offices of Physicians (except Mental Health Specialists)	-80	-1.4%	112	2.0%
Services for the Elderly and Persons with Disabilities	-72	-5.3%	38	2.9%
Specialty (except Psychiatric and Substance Abuse) Hospitals	-71	-27.7%	3	1.8%

Source: JobsEQ, data as of 2020Q3

<sup>1</sup> US Census Bureau, "Older and Growing - Percent Change among the 65 and Older Population: 2010 to 2019," June 25, 2020, <https://www.census.gov/library/visualizations/2020/comm/map-poest-65-and-older.html>.

Dental offices, non-psychiatric physician offices, and specialty hospitals, as outlined above, likely lost jobs due to citizens delaying non-essential and elective procedures due to safety concerns at the outbreak of the pandemic. Offices of dentists are projected to add 56 jobs, and offices of physicians (except mental health) are projected to add 112 jobs, both significant rebounds in 2021. Specialty hospitals are projected to only add three jobs in 2021, as these would still likely cover the most non-essential services required, especially if they specialize in elective procedures.

Child day care services likely lost jobs due to parents taking care of their own children as they worked from home. The timeline for a return to in-office working and the potential for remote work to be more heavily adopted in the future will determine how many jobs are added in this sector moving forward. Currently, it is difficult to project, since recovery will depend on the decisions of individual employers about the return to in-office work.

*Table 2: Top 5 Healthcare Occupations by Employees Added in 2020*

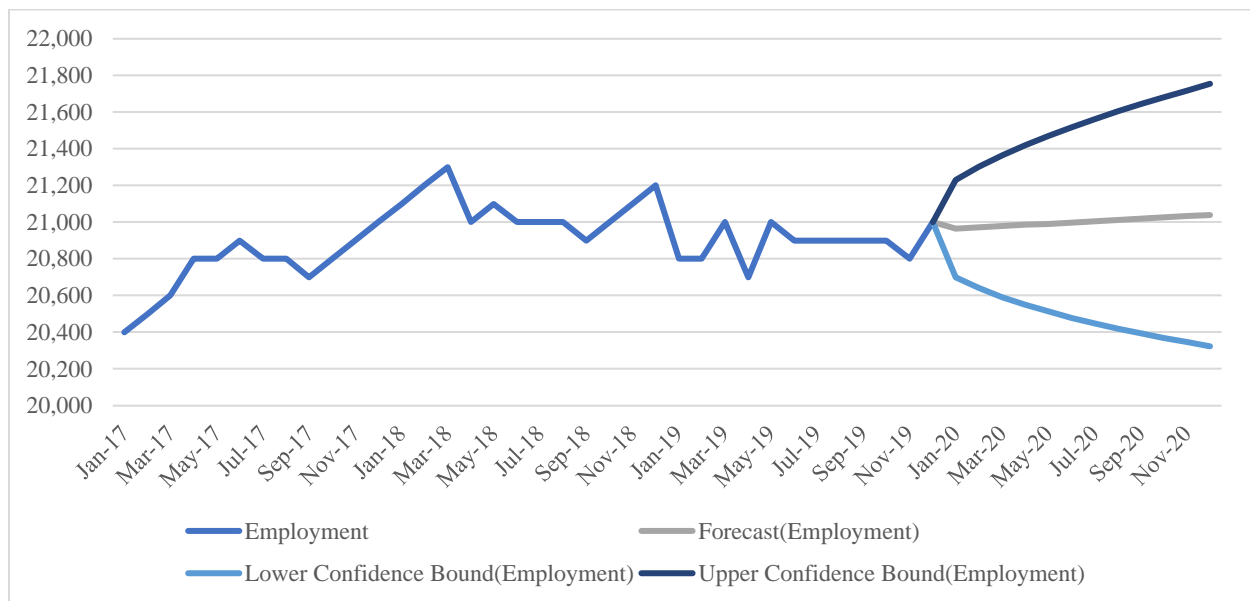
Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected 1- Year % Growth
Psychiatric and Substance Abuse Hospitals	55	19.5%	5	1.4%
Vocational Rehabilitation Services	50	10.4%	14	2.6%
Ambulance Services	44	14.6%	-1	-0.2%
Freestanding Ambulatory Surgical and Emergency Centers	39	13.4%	7	2.3%
Offices of Mental Health Practitioners (except Physicians)	32	13.2%	5	1.8%

Source: JobsEQ, data as of 2020Q3

The growth in each of these sub-sectors can be attributed to either direct or indirect effects from the pandemic. The employment growth at medical laboratories and emergency centers, for example, is likely directly related to COVID-19 testing and treatment, while the increased employment at psychiatric and substance abuse-related establishments is likely due to the detrimental mental health effects of the pandemic.<sup>2</sup> Whether or not those effects, and thus the demand for mental health services, lasts beyond the pandemic, has yet to be determined and will be a topic for academic public health researchers to investigate in the years following the pandemic.

<sup>2</sup> Mayo Clinic Staff, "COVID-19 and Your Mental Health," October 15, 2020, <https://www.mayoclinic.org/diseases-conditions/coronavirus/in-depth/mental-health-covid-19/art-20482731>.

Figure 4: Baseline Projection for Healthcare Industries in 2020

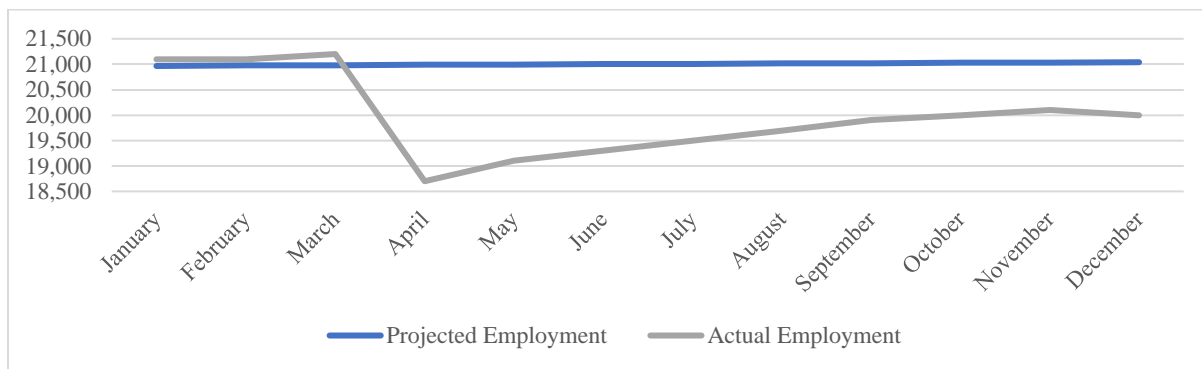


Source: State of Alaska DOLWD, AEDC calculations

Per the State of Alaska Department of Labor and Workforce Development, the average monthly employment in the industry dropped to approximately 20,000 jobs compared to 20,900 jobs in 2019, a loss of 900 jobs. Based on the past three years of average employment, this represented a 4.9% decrease below the expected trend for employment in 2020. According to the State, approximately 81.4% of jobs in the industry were held by residents in 2019,<sup>3</sup> which means, assuming that the trend held in 2020, approximately 730 of the 900 jobs lost in 2020 were lost by locals, while 170 would have otherwise been filled by either non-Alaskans or Alaskans who reside outside of Anchorage.

<sup>3</sup> Dan Robinson and Rob Kreiger, "2019 Nonresidents Working in Alaska" (Alaska Department of Labor and Workforce Development, February 2021).

Figure 5: 2020 Healthcare Employment - Baseline vs. Actual



Source: State of Alaska DOLWD, AEDC calculations

### Looking Forward

Through the end of the pandemic, demand for healthcare services should remain strong, with testing and treatment still necessary. Demographic factors, including an aging population, should ensure that the industry grows sustainably into the future, with elders requiring additional care, such as home health services. As described above, if the pandemic has caused long-term mental health effects, the demand for psychiatric care and counseling may also remain stable.

Table 3: Top 10 Healthcare Industries by 1-Year by Projected Percentage Growth

Industry	Projected 1-Year % Growth	Current Avg. Annual Wages
Offices of Dentists	5.6%	51,241
Services for the Elderly and Persons with Disabilities	2.9%	25,974
Offices of Physical, Occupational and Speech Therapists, and Audiologists	2.7%	55,274
Other Individual and Family Services	2.6%	51,154
Vocational Rehabilitation Services	2.6%	29,671
Child and Youth Services	2.6%	43,540
Offices of Podiatrists	2.5%	69,768
All Other Outpatient Care Centers	2.3%	63,755
Freestanding Ambulatory Surgical and Emergency Centers	2.3%	62,874
Kidney Dialysis Centers	2.3%	56,102

Source: JobsEQ, data as of 2020Q3

Although most of the sector can be expected to continue growing, some sub-sectors may have emerged only as a result of the pandemic. For example, after the pandemic abates, it is difficult to imagine that medical laboratories responsible for interpreting the results of COVID tests and health workers handling vaccine rollout and distribution would have the same need for

employees in a post-pandemic Anchorage. We'd expect that some of these sub-sectors, which added employees to respond to the COVID outbreak, might regress to pre-pandemic levels of employment and growth.

*Table 4: Top 10 Healthcare Industries by Projected 5-Year Percentage Growth*

<b>Industry</b>	<b>Projected 5-Year Avg. Annual % Growth</b>	<b>Current Avg. Annual Wages</b>
Services for the Elderly and Persons with Disabilities	2.9%	25,974
Other Individual and Family Services	2.6%	51,154
Child and Youth Services	2.6%	43,540
Offices of Physical, Occupational and Speech Therapists, and Audiologists	2.5%	55,274
Offices of Podiatrists	2.3%	69,768
Home Health Care Services	1.9%	25,583
Psychiatric and Substance Abuse Hospitals	1.9%	57,035
Residential Mental Health and Substance Abuse Facilities	1.9%	39,692
Blood and Organ Banks	1.9%	52,318
All Other Outpatient Care Centers	1.8%	63,755

Source: JobsEQ, data as of 2020Q3

## Retail Trade

### Sector Snapshot

Industry	Current Employment	Current Avg. Annual Wages	1-Year Projected Growth	Projected 1-Year % Growth
Warehouse Clubs and Supercenters	3,506	35,566	57	1.6%
Supermarkets and Other Grocery (except Convenience) Stores	1479	34,904	1	0.1%
New Car Dealers	1248	61,238	33	2.6%
Home Centers	905	34,426	28	3.1%
Other Building Material Dealers	617	56,373	19	3.1%
Sporting Goods Stores	588	25,430	43	7.2%
Department Stores	585	23,913	35	6.1%
Gasoline Stations with Convenience Stores	551	29,311	-8	-1.5%
Family Clothing Stores	473	19,567	71	15.1%
All Other Miscellaneous Store Retailers (except Tobacco Stores)	446	31,503	16	3.5%

Source: JobsEQ, data as of 2020Q3

As with many industry sectors, the pandemic had mixed effects on employment numbers for retail jobs depending on the type of employer. While stores that stocked essentials, like groceries, added jobs to meet growing demand, others, usually specialty stores, lost jobs as people stayed at home. In general, the losses in affected sub-industries were steep, and as the pandemic wanes, the growth in grocery sales is likely unsustainable and we can expect employment in that sub-sector to regress as consumers feel more comfortable dining out and traveling. Whether this results in a net loss of employment in the industry or rather employee movement between sub-industries without a reduction in overall employment remains to be seen, though the latter is likely to be the case.

*Table 5: Top 5 Retail Industries by Employees Lost in 2020*

Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected Annual % Growth
Department Stores	-211	-26.5%	35	6.1%
Gasoline Stations with Convenience Stores	-202	-26.8%	-8	-1.5%
Sporting Goods Stores	-112	-16.0%	43	7.2%
Family Clothing Stores	-98	-17.1%	71	15.1%
Gift, Novelty, and Souvenir Stores	-94	-34.4%	13	7.1%

Source: JobsEQ, data as of 2020Q3

As one might expect, stores that carry non-essential goods and are dependent on commuters or travelers posted the most significant job losses compared to 2019. Department stores, sporting goods stores, and family clothing stores were likely impacted by consumer preferences shifting further towards e-commerce, particularly during the most restrictive phases of the lockdown, and the slowing local demand for wares other than groceries and home goods. Gasoline stations with convenience stores were likely impacted due to the transition of the workforce from on-site work to remote work, meaning that fewer commuters passed through their stores on a regular basis. Gift, novelty, and souvenir shops were likely impacted by the substantial reduction in tourist thoroughfare this summer, which is where they would usually make the bulk of their sales.

*Table 6: Top 5 Retail Industries by Employees Added in 2020*

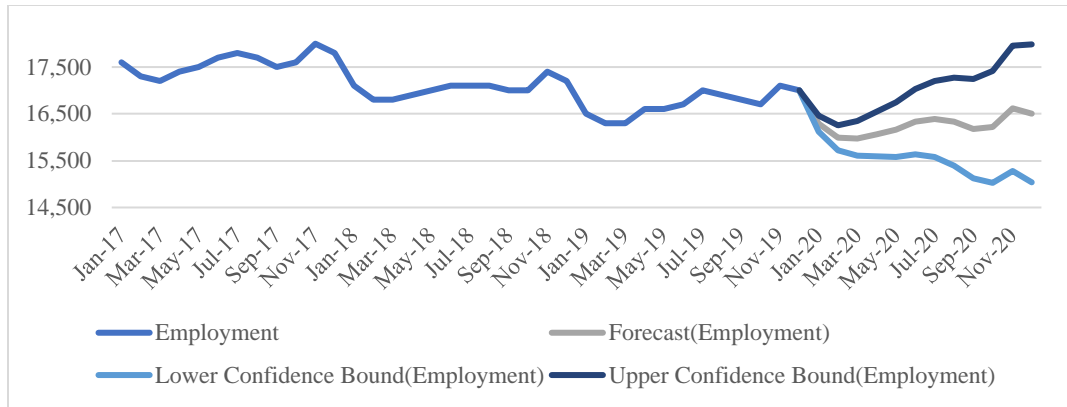
<b>Industry</b>	<b>1-Year Employment Change</b>	<b>1-Year Percentage Change</b>	<b>1-Year Projected Growth</b>	<b>Projected Annual % Growth</b>
Supermarkets and Other Grocery (except Convenience) Stores	114	8.4%	1	0.1%
Home Centers	62	7.4%	28	3.1%
All Other Miscellaneous Store Retailers (except Tobacco Stores)	57	14.6%	16	3.5%
Other Building Material Dealers	20	3.3%	19	3.1%
Tire Dealers	11	7.9%	3	1.8%

Source: JobsEQ, data as of 2020Q3

All of the above establishments sell groceries and other home goods, which were more directly relevant to consumers during social distancing periods where they might be isolated in their house. In particular, the increased employment at home centers and other building material dealers might indicate that those working remotely took their downtime, which may have previously been spent recreating away from home, to engage in home improvement projects due to a lack of alternative options. Similarly, though the increase in employment at automotive parts stores is not as notable as the large increase in jobs at grocery stores and home centers, it could indicate that social distancing mandates urged some consumers to take on more maintenance projects that they may have otherwise outsourced to other local businesses.

*Figure 6: Baseline Projection for Retail Industries in 2020*

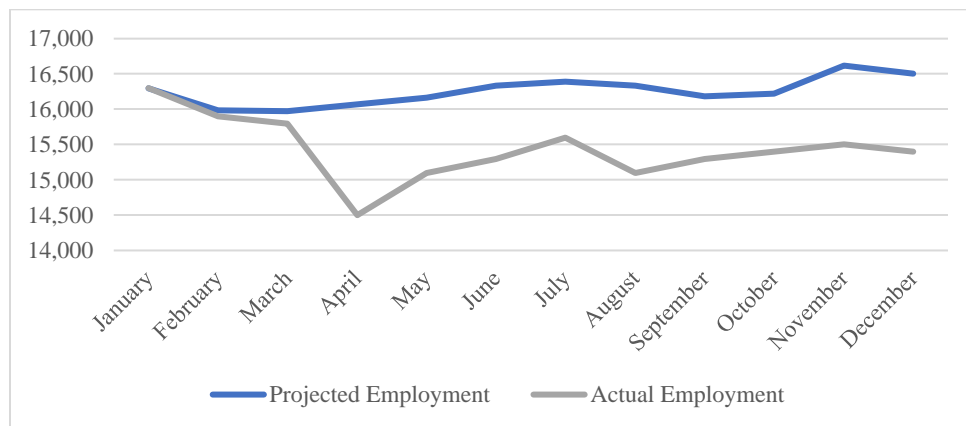




Source: State of Alaska DOLWD, AEDC calculations

According to data from the State of Alaska Department of Labor and Workforce Development, the retail trade sector lost approximately 1,300 average monthly jobs in 2020. Accounting for the last three years of employment numbers in the industry, this is a 5.1% reduction below expectation should previous trends have persisted in 2020. The state estimated that 79.7% of jobs in this industry were held by residents in 2019,<sup>4</sup> which means, assuming that a similar proportion of jobs would have been held by residents in 2020, approximately 1,040 of the 1,300 jobs lost in 2020 were local, and 260 jobs lost would have been held by non-Anchorage residents in a non-pandemic 2020.

Figure 7: 2020 Retail Employment - Baseline vs. Actual



Source: State of Alaska DOLWD, AEDC calculations

<sup>4</sup> Robinson and Kreiger.

### Looking Forward

As vaccine rollout continues, it is likely that several sub-sectors of the industry rebound. In particular, we can expect that specialty stores will begin to see increased foot traffic as more consumers are comfortable going out in public and as disposable income levels stabilize after potential disruptions from the pandemic. Novelty stores and other vendors that capitalize on tourism can expect more business in the coming year, and if they offer a unique product, they likely will be less susceptible to replacement by e-commerce.

*Table 7: Top 10 Retail Industries by Projected 1-Year Percentage Growth*

<b>Industry</b>	<b>Projected 1-Year % Growth</b>	<b>Current Avg. Annual Wages</b>
Family Clothing Stores	15.1%	19,567
Men's Clothing Stores	15.1%	23,372
Other Clothing Stores	14.9%	24,480
Women's Clothing Stores	14.7%	16,637
Clothing Accessories Stores	14.5%	21,474
Children's and Infants' Clothing Stores	11.6%	23,387
Jewelry Stores	11.1%	33,772
Luggage and Leather Goods Stores	10.8%	30,370
Floor Covering Stores	8.2%	44,015
All Other Home Furnishings Stores	8.2%	24,981

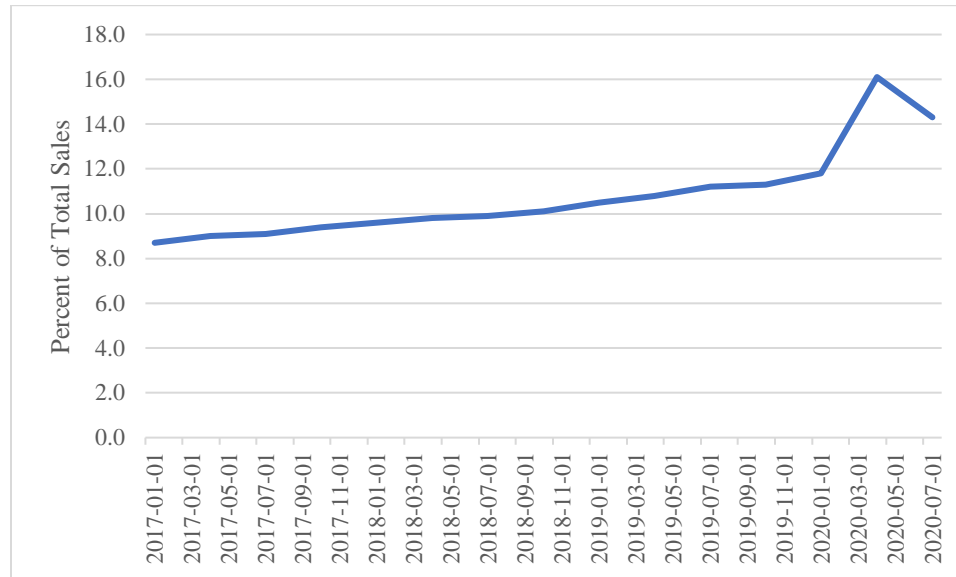
Source: JobsEQ, data as of 2020Q3

Unfortunately, for many retailers that rely on brick-and-mortar stores to fuel their sales, the rise of e-commerce could be a long-term barrier to growth. The pandemic merely hastened a trend that has been noticeable for the last several years, and now that some consumers have discovered the convenience of online shopping, it is possible that they may not patronize local businesses as much as prior to the pandemic. The graph below shows the percentage of retail sales in the U.S. that are made via e-commerce sites, and while specific data about Alaskan consumers' retail preferences is not available, it is reasonable to assume that local preferences are somewhat in line with national trends on this front. The addition of a second daily Amazon Air flight would certainly indicate the appetite for online retail has increased among locals.<sup>5</sup> The long-term impacts of e-commerce on local employment and retail sales is an area that should

<sup>5</sup> "Record ANC Air Cargo Numbers Continue to Soar in Third Quarter," n.d., <https://ancairport.com/pr/record-anc-air-cargo-numbers-continue-to-soar-in-third-quarter/>.

remain open for future study as it will very likely affect many Alaskan businesses and dozens, if not hundreds, of local jobs.

*Figure 8: E-Commerce Retail Sales as a Percentage of Total Sales*



Source: U.S. Census Bureau, E-Commerce Retail Sales as a Percent of Total Sales [ECOMPCTSA], retrieved from FRED, Federal Reserve Bank of St. Louis

*Table 8: Top 10 Retail Industries by Projected 5-Year Percentage Growth*

Industry	Projected 5-Year Avg. Annual % Growth	Current Avg. Annual Wages
Family Clothing Stores	4.2%	19,567
Men's Clothing Stores	4.1%	23,372
Other Clothing Stores	4.0%	24,480
Women's Clothing Stores	3.8%	16,637
Clothing Accessories Stores	3.6%	21,474
Shoe Stores	2.8%	17,404
Sporting Goods Stores	1.6%	25,430
Floor Covering Stores	1.3%	44,015
All Other Home Furnishings Stores	1.3%	24,981
Department Stores	1.2%	23,913

Of course, some businesses are more likely to withstand the headwinds from e-commerce more than others. As mentioned above, gift stores and souvenir shops that cater to tourists seeking to purchase a memento from their visit to Alaska are unlikely to be supplanted in the

long-term by online purchases, and AEDC expects that other retailers offering unique or artisanal products are similarly better positioned to survive the rising popularity of e-commerce. Furthermore, perishable goods, like groceries, are likely to remain local staples, though consumers may prefer to have their goods delivered rather than venturing out to stores themselves. But for those employees working at local branches of large chain retailers, e-commerce poses a real threat to the long-term survival of their livelihoods, especially since the pandemic already disrupted traditional sales to the point that a years-long recovery would have been needed even absent the threat of e-commerce.

Another disruption to the industry that began pre-pandemic and can be expected to last for the next several years is the statewide recession. Even before the pandemic led many non-essential businesses to temporarily close or reduce service, the decline in the overall economy led to less consumer spending and notable brick-and-mortar store closings. Notably, Nordstrom, which had been a staple downtown for 44 years, cited both e-commerce and the waning local economy as primary reasons for its closure, and that occurred in late 2019.<sup>6</sup> Post-pandemic, the recovery of the economy as a whole is likely to influence consumer appetites for retail spending, and could result in more store closures if the recovery lags.

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<sup>6</sup> Zachariah Hughes, “After 44 Years, Nordstrom Store to Leave Anchorage,” *Alaska Public Media*, June 26, 2019, <https://www.alaskapublic.org/2019/06/26/after-44-years-nordstrom-store-to-leave-anchorage/>.

## Public Administration

### Sector Snapshot

Industry	Current Employment	Current Avg. Annual Wages	1-Year Projected Growth	Projected Annual % Growth
National Security	2,713	76,978	-40	-1.5%
Executive and Legislative Offices, Combined	2,680	61,436	-19	-0.7%
Regulation and Administration of Transportation Programs	2,104	91,848	-29	-1.4%
Administration of Public Health Programs	1,497	57,822	-19	-1.2%
Administration of Conservation Programs	1,468	81,043	-2	-0.2%
Administration of Veterans' Affairs	732	92,704	-11	-1.5%
Correctional Institutions	716	59,292	-9	-1.2%
Other General Government Support	489	63,879	-7	-1.3%
American Indian and Alaska Native Tribal Governments	448	56,152	-3	-0.7%
Courts	375	76,226	-5	-1.3%

Source: JobsEQ, data as of 2020Q3

In a year where most sectors contracted, public administration grew as local, state, and federal government entities in Anchorage worked to combat the pandemic and its effects. As with all sectors, however, that growth was not equally distributed. While, for example, departments governing conservation programs declined in employment, departments overseeing economic programs grew.

*Table 9: Top 5 Public Administration Industries by Employees Lost in 2020*

Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected Annual % Growth
Administration of Conservation Programs	-31	-2.0%	-2	-0.2%
Executive and Legislative Offices, Combined	-30	-1.1%	-19	-0.7%
Administration of Public Health Programs	-18	-1.2%	-19	-1.2%
Administration of Air and Water Resource and Solid Waste Management Programs	-5	-2.3%	0	-0.1%
Public Finance Activities	-4	-1.8%	-3	-1.4%

Source: JobsEQ, data as of 2020Q3

A notable sub-industry that declined is the administration of public health programs. Given that this sect of government operations usually oversees programs regarding immunization and diseases, it is unclear why it would have declined during the pandemic. It is possible that this

is an error due to the preliminary nature of the data, but this is something that should be monitored and investigated further in the future.

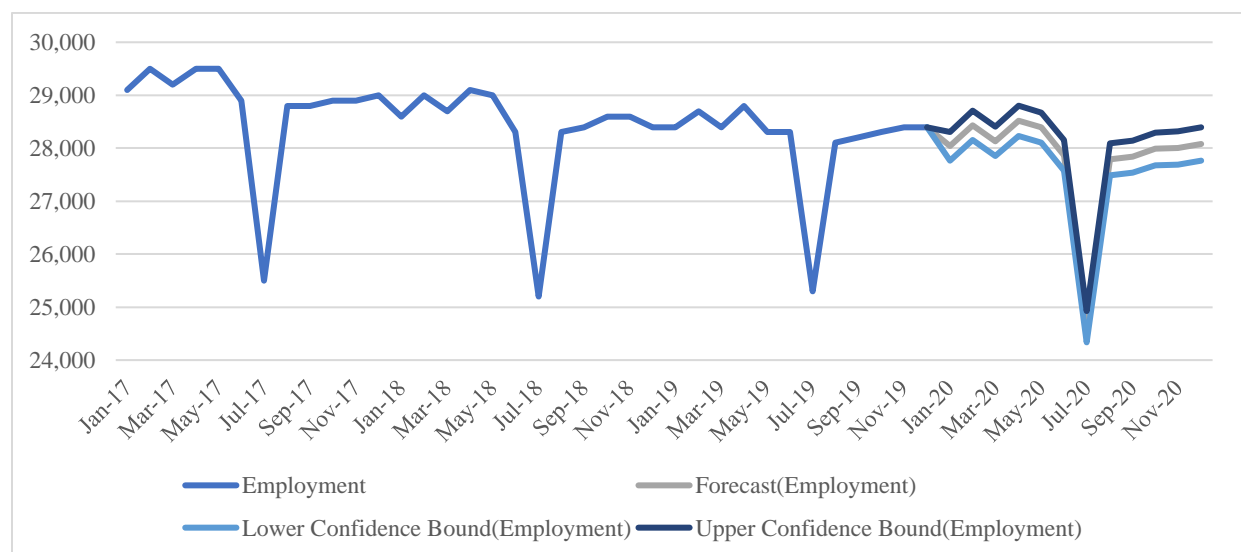
*Table 10: Top 5 Public Administration Industries by Employees Added in 2020*

Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected Annual % Growth
Administration of General Economic Programs	122	54.4%	-5	-1.4%
National Security	66	2.5%	-40	-1.5%
Regulation and Administration of Transportation Programs	58	2.8%	-29	-1.4%
American Indian and Alaska Native Tribal Governments	21	4.9%	-3	-0.7%
Administration of Veterans' Affairs	17	2.3%	-11	-1.5%

Source: JobsEQ, data as of 2020Q3

The military, classified here as national security, provided a consistent, stabilizing source of employment in 2020 as it has for years in southcentral Alaska. The rise in employment for government activities administering economic programs could be due to new programs, such as the AK CARES Grant Program, implemented to ameliorate the impacts of the pandemic.

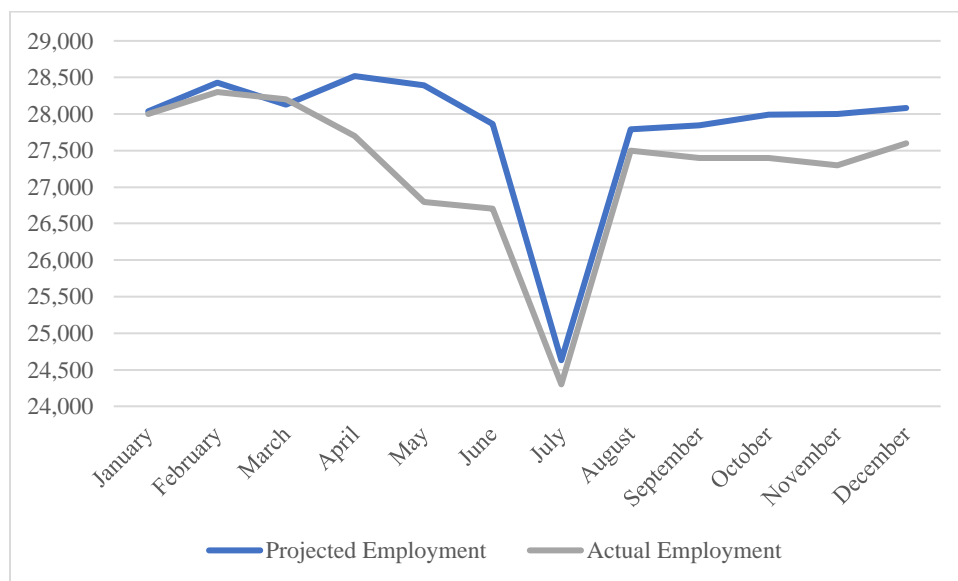
*Figure 9: Baseline Projection of Public Administration Employment in 2020*



Source: State of Alaska DOLWD, AEDC calculations

Based on preliminary data from the Department of Labor and Workforce Development, the average annual employment in “government” occupations in 2020 dropped to 27,300 from 28,100 in 2019, a difference of about 800 employees. In 2019, 88.2% of local government workers resided in Anchorage, while 82.3% of state government workers resided in Anchorage.<sup>7</sup> For local government specifically, average monthly employment declined by around 700 workers, of which, assuming the proportion of workers residing in Anchorage would have been similar to 2019, about 620 would have been residents of Anchorage. Considering state government workers in Anchorage, average monthly employment declined by about 300 workers, 250 of which would likely have resided in the municipality.

*Figure 10: 2020 Public Administration Employment - Baseline vs. Actual*



Source: State of Alaska DOLWD, AEDC calculations

### Looking Forward

In the coming year, most public administration entities are expected to contract. However, given the uncertainty regarding pandemic recovery and, as always, geopolitically, it is fully possible that government sectors add additional jobs or remain relatively stable. Nonetheless, in the long-term, we expect that the ongoing fiscal issues at the state level may prevent significant growth in state offices, and that these issues may also trickle down to the

<sup>7</sup> Robinson and Kreiger, “2019 Nonresidents Working in Alaska.”

local level. Below are projections at the 1-Year and 5-Year levels for public administration offices in Anchorage.

*Table 11: Top 10 Public Administration Industries by Projected 1-Year Percentage Growth*

<b>Industry</b>	<b>Projected 1-Year % Growth</b>	<b>Current Avg. Annual Wages</b>
Administration of Air and Water Resource and Solid Waste Management Programs	-0.1%	83,775
Administration of Conservation Programs	-0.2%	81,043
Fire Protection	-0.6%	90,599
Executive and Legislative Offices, Combined	-0.7%	61,436
American Indian and Alaska Native Tribal Governments	-0.7%	56,152
Administration of Housing Programs	-0.7%	124,846
Administration of Public Health Programs	-1.2%	57,822
Correctional Institutions	-1.2%	59,292
Administration of Education Programs	-1.2%	66,300
Other General Government Support	-1.3%	63,879

Source: JobsEQ, data as of 2020Q3

*Table 12: Top 10 Public Administration Industries by Projected 5-Year Percentage Growth*

<b>Industry</b>	<b>Projected 5-Year Avg. Annual % Growth</b>	<b>Current Avg. Annual Wages</b>
American Indian and Alaska Native Tribal Governments	-0.1%	56,152
Executive and Legislative Offices, Combined	-0.1%	61,436
Fire Protection	-0.6%	90,599
Executive Offices	-0.8%	53,276
Public Finance Activities	-0.8%	68,991
Other General Government Support	-0.8%	63,879
Administration of Air and Water Resource and Solid Waste Management Programs	-1.0%	83,775
Administration of Conservation Programs	-1.1%	81,043
Public Administration	-1.1%	73,730
Administration of Education Programs	-1.2%	66,300

Source: JobsEQ, data as of 2020Q3



## Accommodation and Food Services

### Sector Snapshot

Industry	Current Employment	Current Avg. Annual Wages	1-Year Projected Growth	Projected Annual % Growth
Full-Service Restaurants	4,353	25,483	352	8.1%
Limited-Service Restaurants	3586	20,941	290	8.1%
Hotels (except Casino Hotels) and Motels	2741	28,454	151	5.5%
Snack and Nonalcoholic Beverage Bars	839	17,226	68	8.1%
Food Service Contractors	745	43,332	27	3.6%
Drinking Places (Alcoholic Beverages)	390	21,870	31	7.8%
Mobile Food Services	132	18,543	5	3.4%
All Other Traveler Accommodation	92	37,023	5	5.3%
Caterers	78	22,664	2	3.1%
Rooming and Boarding Houses	57	50,650	2	3.1%

Source: JobsEQ, data as of 2020Q3

One of the industries that saw the heaviest job losses as a result of the pandemic was the food and accommodation industry, referred to at times as the hospitality sector. Public health orders enacted in spring and fall 2020 prohibited and/or limited in-person dining and other indoor recreation activities, limiting the ability of many establishments to operate conventionally. Moreover, steep declines in tourist visits reduced the available customer base for these establishments even further. Although Anchorage is less affected than the southeast region of the state by cruise operators ceasing voyages into the state, air passenger traffic, which accounts for approximately 60% of tourist arrivals to the city,<sup>8</sup> dropped precipitously at the outbreak of the pandemic and remained significantly below 2019 levels through 2020.

<sup>8</sup> McDowell Group, “Alaska Visitor Statistics Program (AVSP) VII” (Alaska Travel Industry Association, 2016).

*Table 13: Top 5 Hospitality Industries by Employees Lost in 2020*

<b>Industry</b>	<b>1-Year Employment Change</b>	<b>1-Year Percentage Change</b>	<b>1-Year Projected Growth</b>	<b>Projected Annual % Growth</b>
Full-Service Restaurants	-1128	-20.6%	352	8.1%
Hotels (except Casino Hotels) and Motels	-652	-19.2%	151	5.5%
Limited-Service Restaurants	-233	-6.1%	290	8.1%
Drinking Places (Alcoholic Beverages)	-149	-27.6%	31	7.8%
Snack and Nonalcoholic Beverage Bars	-128	-13.2%	68	8.1%

Source: JobsEQ, data as of 2020Q3

The only industry to add employees in 2020 was food service contractors. This was likely in response to customers switching to catering and takeout as a result of pandemic restrictions on dine-in establishments. The sustainability of this employment growth is uncertain, as customer preferences may not have permanently changed. The rest of the industries in the sector either maintained 2019 employment levels or lost employees, though to varying degrees.

*Table 14: Top 5 Hospitality Industries by Employees Added/Least Lost in 2020*

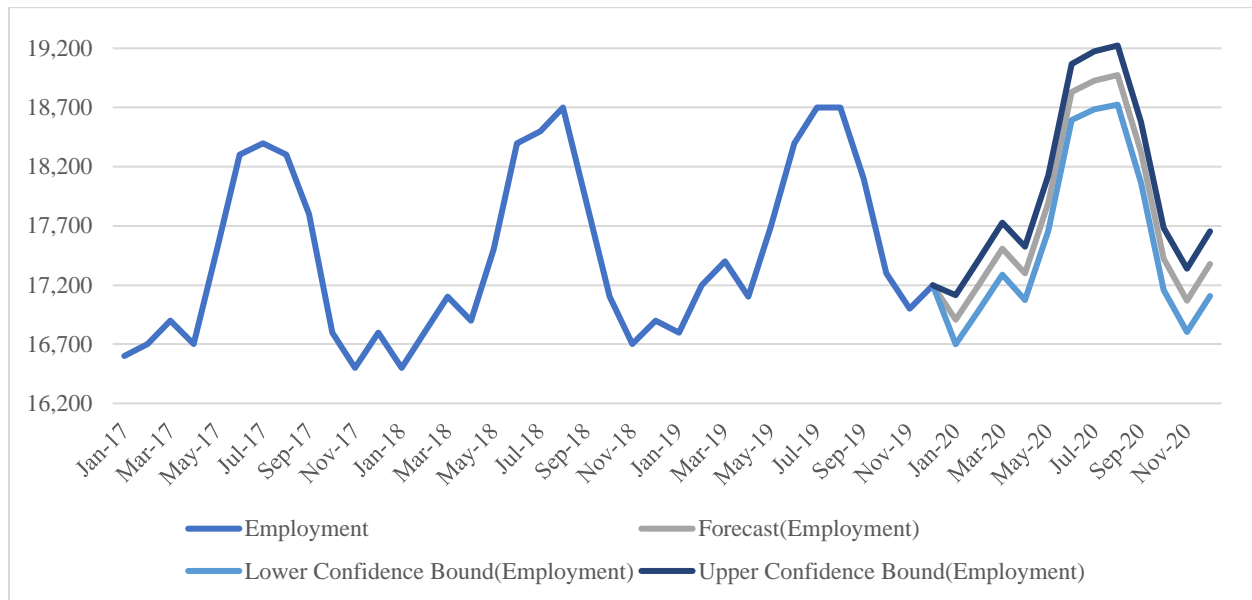
<b>Industry</b>	<b>1-Year Employment Change</b>	<b>1-Year Percentage Change</b>	<b>1-Year Projected Growth</b>	<b>Projected Annual % Growth</b>
Food Service Contractors	16	2.2%	27	3.6%
Cafeterias, Grill Buffets, and Buffets	0	2.7%	1	7.6%
RV (Recreational Vehicle) Parks and Campgrounds	-1	-4.6%	4	17.3%
Bed-and-Breakfast Inns	-3	-9.3%	1	4.5%
Recreational and Vacation Camps (except Campgrounds)	-10	-15.4%	9	17.3%

Source: JobsEQ, data as of 2020Q3

According to data from the State of Alaska Department of Labor and Workforce of Development, average monthly employment in the leisure and hospitality sector, which is primarily food and accommodation industries, decreased by almost 4,200 workers compared to 2019. Given the last three years of employment data, this was almost 25% below what was expected in 2020, demonstrating that COVID-19 was, unsurprisingly, a major shock to businesses operating in the hospitality space. Approximately 74.7% of food service and

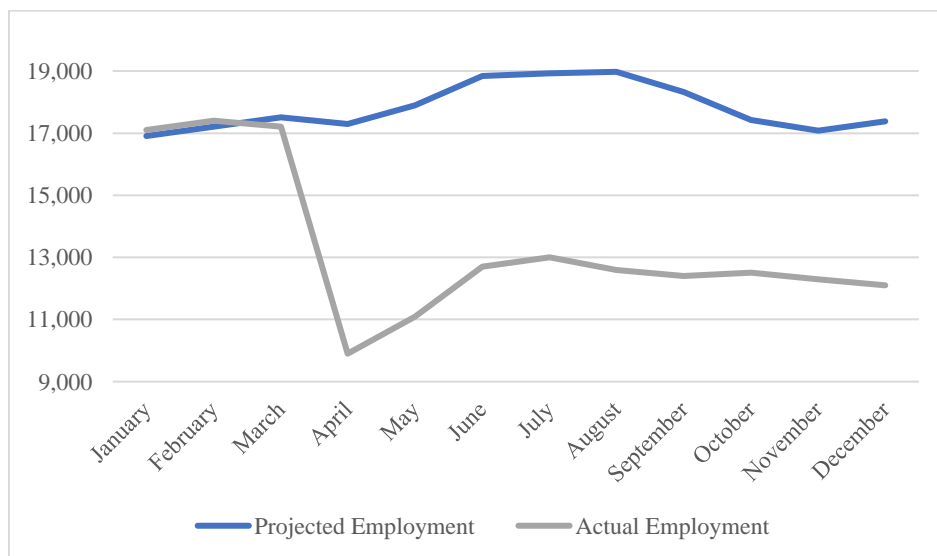
accommodation workers are local to Anchorage,<sup>9</sup> so we estimate that around 3,100 local jobs were lost in this sector as a result of the pandemic.

*Figure 11: Baseline Projection of Leisure and Hospitality Employment in 2020*



Source: State of Alaska DOLWD, AEDC calculations

*Figure 12: 2020 Hospitality Employment - Baseline vs. Actual*



Source: State of Alaska DOLWD, AEDC calculations

<sup>9</sup> Robinson and Kreiger, “2019 Nonresidents Working in Alaska.”

### Looking Forward

Although the pandemic severely impacted this industry, it is unlikely that the situation further deteriorates in 2021. In fact, most of the hardest-hit segments are expected to rebound significantly as vaccination rates rise, though consumer sentiments will still play a large role in recovery efforts. As the pandemic progressed, restaurants and other food service establishments adapted to meet demand for prepared food and there's no reason to suspect that they won't continue to adapt as the situation changes moving forward.

*Table 15: Top 10 Hospitality Industries by Projected 1-Year Percentage Growth*

<b>Industry</b>	<b>Projected 1-Year % Growth</b>	<b>Current Avg. Annual Wages</b>
Recreational and Vacation Camps (except Campgrounds)	17.3%	35,792
RV (Recreational Vehicle) Parks and Campgrounds	17.3%	31,726
Full-Service Restaurants	8.1%	25,483
Limited-Service Restaurants	8.1%	20,941
Snack and Nonalcoholic Beverage Bars	8.1%	17,226
Drinking Places (Alcoholic Beverages)	7.8%	21,870
Cafeterias, Grill Buffets, and Buffets	7.6%	20,263
Hotels (except Casino Hotels) and Motels	5.5%	28,454
All Other Traveler Accommodation	5.3%	37,023
Bed-and-Breakfast Inns	4.5%	15,904

Source: JobsEQ, data as of 2020Q3

Anchorage's desirability as a tourist destination will remain unchanged, and perhaps will gain appeal if international destinations are not a viable option for American travelers due to virus restrictions. For example, the Canadian cruise ship moratorium may impact tourism in the southeastern part of the state, but Anchorage, which received only 35% of its tourists from cruise ships in 2016,<sup>10</sup> could benefit if tourists who planned on cruising the state instead opt for air-travel and independent exploration. If passenger air travel rebounds this summer, and if tourists disembark locally, it should be a boon to hotels, motels, and food service establishments.

<sup>10</sup> McDowell Group, "Alaska Visitor Statistics Program (AVSP) VII."

*Table 16: Top 10 Hospitality Industries by Projected 5-Year Percentage Growth*

<b>Industry</b>	<b>Projected 5-Year Avg. Annual % Growth</b>	<b>Current Avg. Annual Wages</b>
Drinking Places (Alcoholic Beverages)	4.5%	21,870
Recreational and Vacation Camps (except Campgrounds)	3.7%	35,792
RV (Recreational Vehicle) Parks and Campgrounds	3.7%	31,726
Hotels (except Casino Hotels) and Motels	3.6%	28,454
Food Service Contractors	3.5%	43,332
All Other Traveler Accommodation	3.5%	37,023
Mobile Food Services	3.4%	18,543
Caterers	3.1%	22,664
Bed-and-Breakfast Inns	2.6%	15,904
Full-Service Restaurants	2.0%	25,483

Source: JobsEQ, data as of 2020Q3

Another potential opportunity exists in long-term rentals. If the transition to a digital workforce remains stable through the year, workers seeking a new locale to explore in their off time might find Anchorage desirable due its natural beauty and wide-open spaces. These longer-term tourists could, similar to short-term visitors, help stabilize the hospitality industry and would inject additional dollars into the local economy. Of course, this would depend on characteristics of remote workers and what they seek in potential workspaces, an area we leave to others for further study.

The main obstacle preventing full recovery in this sector is consumer sentiment. Should tourists remain wary about traveling and should locals avoid dining in at restaurants, any projected rebounds for this sector might be minimized. Moreover, although the stimulus padded income for many individuals this year, layoffs and unemployment may have altered savings and spending patterns and behavior for the future – the impact of the pandemic on consumer behavior will likely be studied extensively in the future, but is currently difficult to accurately capture or predict in the immediate wake of the pandemic.

## Transportation and Warehousing

### Sector Snapshot

Industry	Current Employment	Current Avg. Annual Wages	1-Year Projected Growth	Projected Annual % Growth
Couriers and Express Delivery Services	2,273	158,167	1	0.0%
Scheduled Passenger Air Transportation	1838	72,046	-75	-4.1%
Postal Service	811	79,630	-21	-2.6%
Scheduled Freight Air Transportation	639	89,662	-26	-4.1%
Other Support Activities for Air Transportation	574	47,594	-7	-1.2%
Line-Haul Railroads	450	68,432	19	4.2%
Other Airport Operations	430	32,224	-5	-1.2%
Used Household and Office Goods Moving	384	45,376	0	0.1%
Nonscheduled Chartered Freight Air Transportation	381	53,995	-1	-0.2%
General Freight Trucking, Local	322	60,968	1	0.3%

Source: JobsEQ, data as of 2020Q3

One of the bright spots in the local economy during the pandemic was the transportation and logistics sector. With the need to move cargo both domestically and internationally, Anchorage's beneficial geography and history as a transportation hub for the rest of the state resulted in job growth in several sub-industries and stability in most others through the pandemic. With passenger transportation expected to recover as the population is vaccinated and expansion opportunities on the horizon, Anchorage's transportation and warehousing industry is well-positioned to be a local economic driver well into the future after recovering from the temporary disruptions in its growth caused by the pandemic.

*Table 17: Top 5 Transportation Industries by Employees Lost in 2020*

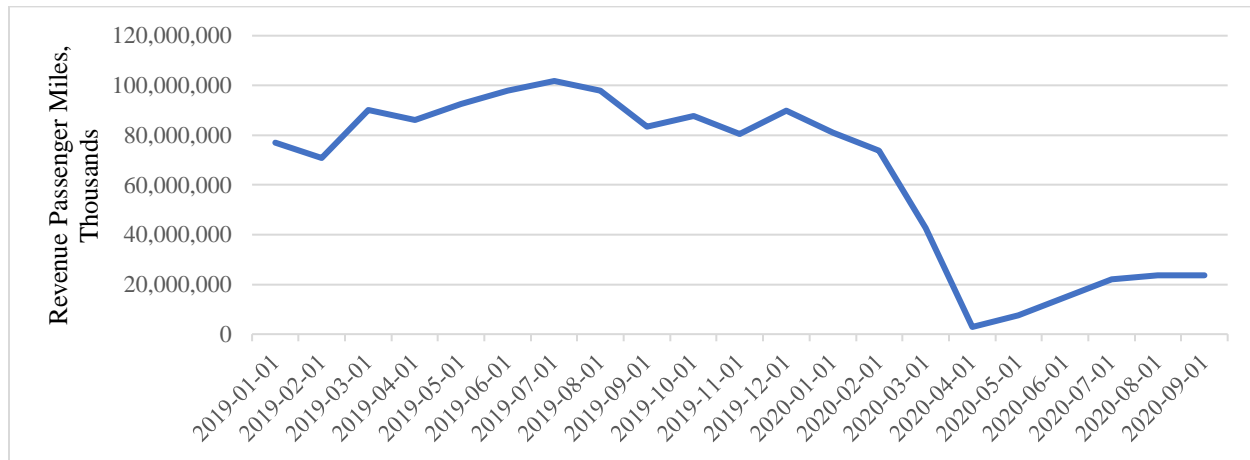
Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected Annual % Growth
Scheduled Passenger Air Transportation	-320	-14.8%	-75	-4.1%
Scenic and Sightseeing Transportation, Land	-150	-52.2%	39	28.7%
Used Household and Office Goods Moving	-69	-15.2%	0	0.1%
Deep Sea Freight Transportation	-46	-28.9%	-2	-1.8%
Other Airport Operations	-41	-8.8%	-5	-1.2%

Source: JobsEQ, data as of 2020Q3

Several of these sub-industries were significantly impacted by the massive reduction in air passenger transportation that occurred due to the outbreak of the pandemic. Nationwide, passenger travel and revenues based on air passenger travel plummeted at the outbreak of the

pandemic, and Anchorage was not an exception. Thus, the decline in employment in sub-sectors that service the passenger air travel industry is expected. It is likely that scenic and sightseeing transportation jobs declined similarly as fewer tourists, almost 60% of which arrive in Anchorage via air travel,<sup>11</sup> patronized the state in 2020.

*Figure 13: Revenue Passenger Miles for U.S. Air Carrier Domestic and International, Scheduled Passenger Flights*



Source: U.S. Bureau of Transportation Statistics, Revenue Passenger Miles for U.S. Air Carrier Domestic and International, Scheduled Passenger Flights [RPMD11], retrieved from FRED, Federal Reserve Bank of St. Louis

*Table 18: Top 5 Transportation Industries by Employees Added in 2020*

Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected Annual % Growth
Couriers and Express Delivery Services	100	4.6%	1	0.0%
General Warehousing and Storage	53	23.1%	0	-0.1%
Nonscheduled Chartered Freight Air Transportation	43	12.8%	-1	-0.2%
General Freight Trucking, Local	23	7.8%	1	0.3%
Coastal and Great Lakes Freight Transportation	23	29.7%	-2	-1.8%

Source: JobsEQ, data as of 2020Q3

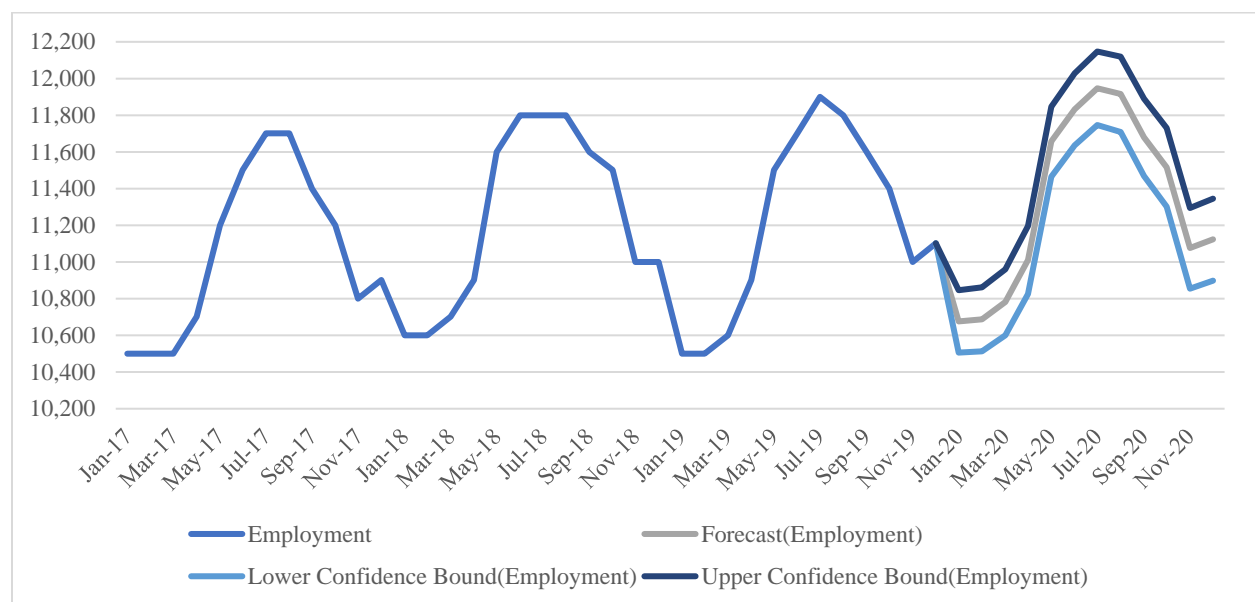
Converse to passenger traffic, cargo operations and volumes boomed during 2020, particularly for freight hauled by air. The reduction in passenger flights meant that cargo that would have otherwise been carried in the belly of those planes was instead shipped on dedicated cargo planes. Given Anchorage's location less than 9.5 hours from 90% of the world, the airport experienced a cargo boom, with more than 3.48 million tons of cargo landing in 2020, a 16%

<sup>11</sup> McDowell Group.

increase over the 2019 volume totals.<sup>12</sup> With e-commerce helping to drive some of the volume increase and the geographic advantage providing a consistent competitive edge, the airport is well-positioned to sustain this growth.

As a result of the growing demand for air freight transportation, more fuel was shipped through the Port of Alaska in 2020 than in 2019.<sup>13</sup> The port, like the airport, serves as a vital intermodal hub to rest of the state, with approximately 90% of the goods distributed throughout the state entering via the port.<sup>14</sup>

*Figure 14: Projection of Baseline Transportation Employment in 2020*



Source: State of Alaska DOLWD, AEDC calculations

In 2020, average monthly employment for transportation, warehousing and utilities was 10,200 per the State of Alaska Department of Labor and Workforce Development, a reduction of 1,000 from 11,200 in 2019. Given that the state estimates approximately 68.5% of workers in the industry were residents in 2019,<sup>15</sup> and assuming that trend would have held into 2020 absent the pandemic, we can estimate that approximately 685 of the 1,000 jobs lost from 2020 to 2019 would have been held by Anchorage residents. Based on the past three years of sector

<sup>12</sup> “Anchorage International Airport Sees Record Setting 3.48 Million Tons of Air Cargo in 2020,” n.d., <https://ancairport.com/pr/2020-record-anc-cargo/>.

<sup>13</sup> “Port of Alaska Tonnage Report 2011-2020” (Port of Alaska, n.d.).

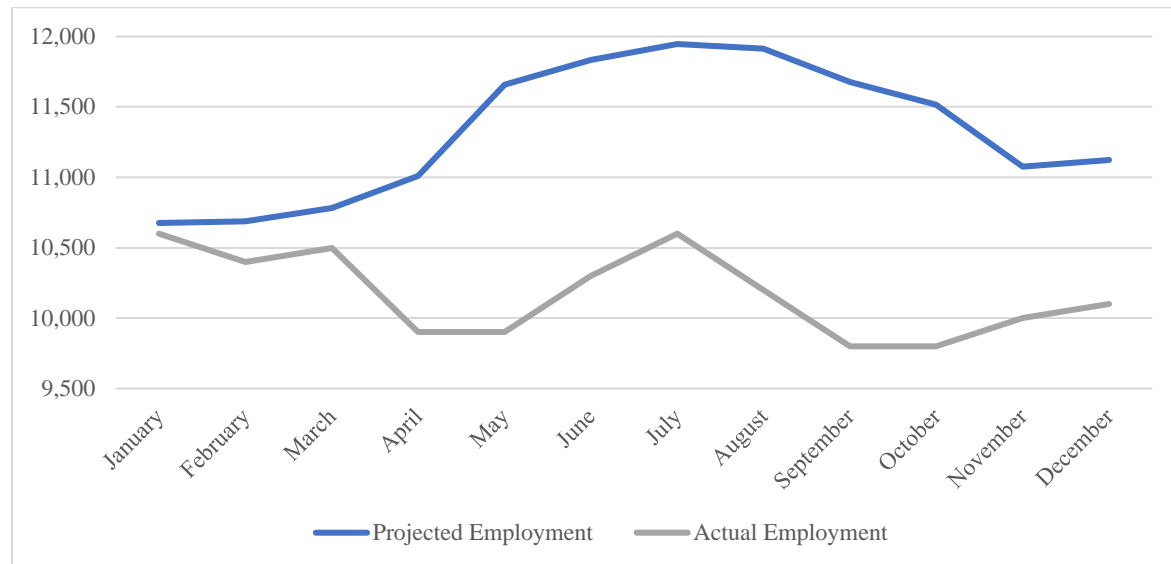
<sup>14</sup> “About Port of Alaska,” n.d., <https://www.portofalaska.com/about-us/>.

<sup>15</sup> Robinson and Kreiger, “2019 Nonresidents Working in Alaska.”



performance, the average monthly employment in 2020 was about 10.2% below what would have been expected in 2020 had the pandemic not occurred.

*Figure 15: 2020 Transportation Employment - Baseline vs. Actual*



Source: State of Alaska DOLWD, AEDC calculations

### Looking Forward

*Table 19: Top 10 Transportation Industries by Projected 1-Year Percentage Growth*

Industry	Projected 1-Year % Growth	Current Avg. Annual Wages
Scenic and Sightseeing Transportation, Land	28.7%	35,152
Scenic and Sightseeing Transportation, Water	25.7%	42,052
Scenic and Sightseeing Transportation, Other	17.5%	90,286
Charter Bus Industry	17.4%	29,438
Special Needs Transportation	7.3%	38,361
All Other Transit and Ground Passenger Transportation	7.3%	31,092
Limousine Service	6.8%	14,007
Taxi Service	6.5%	63,980
Interurban and Rural Bus Transportation	6.3%	70,501
Line-Haul Railroads	4.2%	68,432

Source: JobsEQ, data as of 2020Q3

In the short term, the transportation and warehousing sector is primed for a successful 2021. Passenger air travel is expected to rebound this year,<sup>16</sup> and with the added cargo volume expected to last through the year, the air transportation industry is one of the strongest in Anchorage. Shipping activity via the Port of Alaska should remain equally robust, and with more tourists entering the state, it is likely that sightseeing transportation industries could start to recover from the pandemic damage.

*Table 20: Top 10 Transportation Industries by Projected 5-Year Percentage Growth*

<b>Industry</b>	<b>Projected 5-Year Avg. Annual % Growth</b>	<b>Current Avg. Annual Wages</b>
Scenic and Sightseeing Transportation, Land	8.3%	35,152
Scenic and Sightseeing Transportation, Other	6.2%	90,286
Scenic and Sightseeing Transportation, Water	5.8%	42,052
Charter Bus Industry	4.7%	29,438
Special Needs Transportation	3.2%	38,361
All Other Transit and Ground Passenger Transportation	3.2%	31,092
School and Employee Bus Transportation	2.9%	40,042
Local Messengers and Local Delivery	2.6%	30,755
Interurban and Rural Bus Transportation	1.7%	70,501
Other Support Activities for Air Transportation	1.2%	47,594

Source: JobsEQ, data as of 2020Q3

If possible, the long-term outlook for the sector is even rosier than the expected recovery in the short-term. First, several developments at the airport could lead to even more cargo volume passing through Anchorage. A recently approved cold storage facility set to break ground later this year will be 700,000 sq. ft.<sup>17</sup> and, assuming about 1000 sq. ft. translates to around 1 new, full-time worker, the project could add upwards of 700 jobs to the local economy upon completion. Moreover, a recent agreement and alliance between the Anchorage and Pittsburgh airports could lead to expanded cargo traffic in the future.<sup>18</sup> On the passenger side, expanded international passenger rights granted to the Anchorage airport in late 2020<sup>19</sup> could

<sup>16</sup> “Alaska’s International Airports Respond to Canadian Cruise Restrictions,” February 5, 2021, <https://ancairport.com/pr/ak-airports-respond-to-can-cruise-restrictions/>.

<sup>17</sup> “New 700,000 Square Foot Warehouse Slated for ANC,” n.d., <https://ancairport.com/pr/new-accs/>.

<sup>18</sup> “Anchorage, Pittsburgh Airports Partner to Boost Air Cargo Operations,” n.d., <https://ancairport.com/pr/anchorage-pittsburgh-airports-partner-to-boost-air-cargo-operations/>.

<sup>19</sup> “ANC receives expanded international passenger transfer rights,” n.d., <https://ancairport.com/pr/anc-receives-expanded-international-passenger-transfer-rights/>.

translate in additional passenger thoroughfare in the coming years, and if even 10% of those passengers decide to stay in the state for a few days, that could lead to more tourism dollars in the state.

One significant obstacle facing the sector is the status of port infrastructure. Though construction on the petroleum and cement terminal proceeded in 2020,<sup>20</sup> the port still requires further modernization. Given its importance to the flow of goods into the state, it is vital that the port be updated to ensure that it is operational and efficient in the future.

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<sup>20</sup> “Petroleum and Cement Terminal Construction,” n.d., <https://www.portofalaska.com/petroleum-and-cement-terminal-construction/>.

## Professional Services

### Sector Snapshot

Industry	Current Employment	Current Avg. Annual Wages	1-Year Projected Growth	Projected Annual % Growth
Engineering Services	3,009	96,570	-27	-0.9%
Offices of Lawyers	863	78,827	-6	-0.7%
Other Scientific and Technical Consulting Services	666	126,324	7	1.0%
All Other Professional, Scientific, and Technical Services	489	94,469	1	0.3%
Veterinary Services	472	46,993	5	1.1%
Custom Computer Programming Services	456	80,862	6	1.3%
Administrative Management and General Management Consulting Services	444	82,022	2	0.5%
Other Accounting Services	431	62,030	-3	-0.6%
Environmental Consulting Services	336	84,073	4	1.1%
Offices of Certified Public Accountants	322	61,950	-1	-0.2%

Source: JobsEQ, data as of 2020Q3

It should be no surprise that a sector that specializes in providing services to various other parts of the economy was negatively impacted by a pandemic that hampered the growth of almost every other sector. Some job losses, however, may have proceeded regardless of the pandemic.

*Table 21: Top 5 Professional Services Industries by Employees Lost in 2020*

Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected Annual % Growth
All Other Professional, Scientific, and Technical Services	-71	-12.7%	1	0.3%
Other Services Related to Advertising	-63	-38.6%	2	2.2%
Engineering Services	-55	-1.8%	-27	-0.9%
Administrative Management and General Management Consulting Services	-51	-10.2%	2	0.5%
Tax Preparation Services	-21	-16.9%	0	-0.4%

Source: JobsEQ, data as of 2020Q3

The decline in engineering services is likely a byproduct of the BP sale to Hilcorp,<sup>21</sup> which streamlined operations, and thus the losses may have spilled over into companies that would have consulted on oil and gas projects but weren't directly a part of the sector. Other

<sup>21</sup> Laura Hurst, "BP to Close Hilcorp Alaska Deal With Revised Payment Terms," *Bloomberg*, April 26, 2020, <https://www.bloomberg.com/news/articles/2020-04-27/bp-to-close-hilcorp-alaska-deal-with-revised-payment-terms>.

industries losing employees likely did so in response to the broader contraction of the economy – most of these industries exist in a supporting role to other industries, such as the oil and gas industry or the leisure and hospitality industry. A few sub-industries did add employees, however, especially those industries concentrating on scientific and technical consulting, computing, and research and development. This could be due to the increased demands for teleworking requiring additional computing expertise, and the pandemic creating more demand for scientific research, especially as it relates to testing and the development of a vaccine deployment plan.

*Table 22: Top 5 Professional Services Industries by Employees Added in 2020*

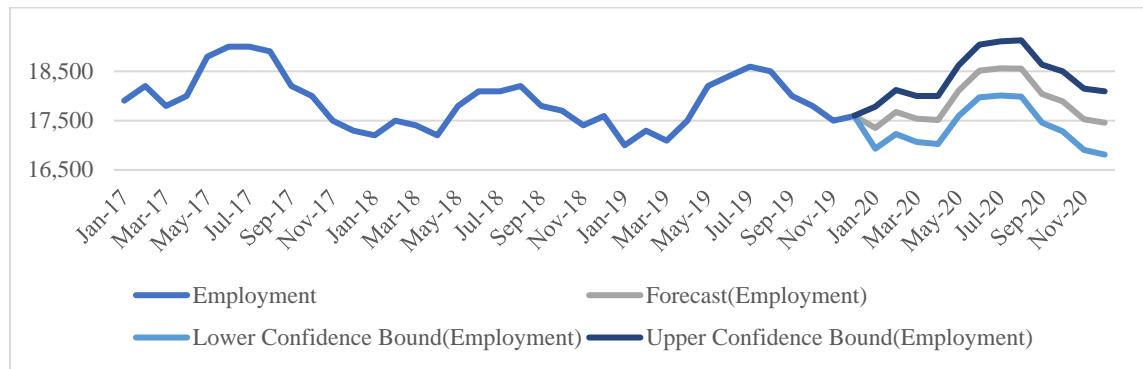
<b>Industry</b>	<b>1-Year Employment Change</b>	<b>1-Year Percentage Change</b>	<b>1-Year Projected Growth</b>	<b>Projected Annual % Growth</b>
Other Scientific and Technical Consulting Services	58	9.5%	7	1.0%
Computer Systems Design Services	32	12.5%	3	1.2%
Human Resources Consulting Services	19	80.7%	0	0.3%
Surveying and Mapping (except Geophysical) Services	17	12.0%	-2	-1.0%
Veterinary Services	14	3.1%	5	1.1%

Source: JobsEQ, data as of 2020Q3

Based on data from the State of Alaska Department of Labor and Workforce Development, the annual average employment for 2020 was about 16,900 workers compared to 17,800 in 2019, a 5.1% decrease in annual average employment. According to the state, 71.9% of jobs in the sector were held by Anchorage residents in 2019.<sup>22</sup> Assuming that trend would have held in 2020 without the pandemic, roughly 650 of the 900 jobs lost between 2020 and 2019 would have belonged to Anchorage residents, with the other 250 jobs split between non-residents and Alaskans who reside outside of the municipality.

<sup>22</sup> Robinson and Kreiger, “2019 Nonresidents Working in Alaska.”

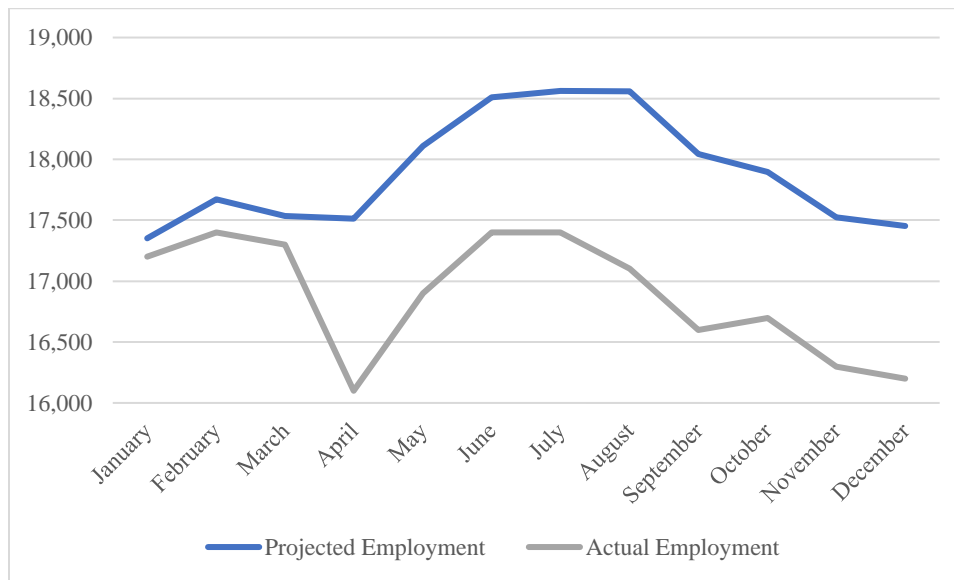
Figure 16: Projected Professional Services Employment for 2020



Source: State of Alaska DOLWD, AEDC calculations

Considering the past three years and assuming that, absent the pandemic, 2020 employment numbers would have followed preexisting trends, a baseline projection had 2020 annual average employment growing to 17,900 from 17,800 in 2020. Thus, the actual average employment of 16,900 was 1,000 workers below expectation, or 5.6% lower than expectation.

Figure 17: 2020 Professional Services Employment - Baseline vs. Expected



Source: State of Alaska DOLWD, AEDC calculations

## Looking Forward

*Table 23: Top 10 Professional Services Industries by Projected 1-Year Percentage Growth*

<b>Industry</b>	<b>Projected 1-Year % Growth</b>	<b>Current Avg. Annual Wages</b>
Other Services Related to Advertising	2.2%	24,780
Advertising Agencies	2.1%	61,933
Public Relations Agencies	1.9%	64,614
Direct Mail Advertising	1.8%	26,479
Media Representatives	1.8%	59,464
Advertising Material Distribution Services	1.6%	56,701
Other Computer Related Services	1.4%	54,040
Computer Facilities Management Services	1.4%	70,241
Custom Computer Programming Services	1.3%	80,862
Computer Systems Design Services	1.2%	78,891

Source: JobsEQ, data as of 2020Q3

The long-term health and vitality of this sector is largely dependent on the recovery of the rest of the economy. Some of the gains that have been made in technical subsectors may be due to temporary demand created by the pandemic, while some of the gains may persist, such as the demand for computing services, should the switch to remote work and telecommuting be long-term. That will depend on consumer preferences and is beyond the scope of this report, and should be studied further in the months and years following the pandemic.

A key strength of this sector is that it is filled with skilled workers and that most of its subindustries command high wages. There will thus be a consistent willingness among workers to fill those jobs and work in the sector, and the qualification of workers will be the only long-term deterrent. Moreover, the sector seems generally well-positioned to handle long-term shifts towards more technical fields and to remote work, if that ends up happening. However, there is also the alternative possibility that, if remote work is adopted in some of these sub-industries, that these services could be outsourced to non-Anchorage based companies and/or entities, resulting in less local employment in these fields.

*Table 24: Top 10 Professional Services Industries by Projected 5-Year Percentage Growth*

<b>Industry</b>	<b>Projected 5-Year Avg. Annual % Growth</b>	<b>Current Avg. Annual Wages</b>
Other Computer Related Services	1.4%	54,040
Computer Facilities Management Services	1.4%	70,241
Custom Computer Programming Services	1.3%	80,862
Computer Systems Design Services	1.2%	78,891
Environmental Consulting Services	1.1%	84,073
Other Scientific and Technical Consulting Services	1.0%	126,324
Process, Physical Distribution, and Logistics Consulting Services	0.9%	85,266
Other Management Consulting Services	0.8%	91,670
Veterinary Services	0.7%	46,993
Administrative Management and General Management Consulting Services	0.5%	82,022

Source: JobsEQ, data as of 2020Q3



## Educational Services

### Sector Snapshot

Industry	Current Employment	Current Avg. Annual Wages	1-Year Projected Growth	Projected 1-Year % Growth
Elementary and Secondary Schools	6,129	58,597	34	0.6%
Colleges, Universities, and Professional Schools	2158	63,889	-41	-1.9%
Educational Support Services	189	46,232	5	2.8%
Sports and Recreation Instruction	161	23,261	-1	-0.5%
All Other Miscellaneous Schools and Instruction	131	21,480	0	0.0%
Fine Arts Schools	104	19,962	-1	-0.7%
Flight Training	103	89,784	-1	-1.3%
Exam Preparation and Tutoring	66	21,443	0	-0.5%
Professional and Management Development Training	60	36,708	0	-0.6%
Apprenticeship Training	52	70,843	-1	-1.3%

Source: JobsEQ, data as of 2020Q3

The transition to remote learning significantly impacted the educational services sector and the students it serves. While some reduction in employment is attributable to this shift and potentially unaccounted-for seasonality in education employment since the available data is from the third quarter, other reductions are likely to be lasting. In particular, as budgets have become tighter in the state university system,<sup>23</sup> employment reductions may become unfortunately commonplace.

*Table 25: Top 5 Educational Services Industries by Employees Lost in 2020*

Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected Annual % Growth
Colleges, Universities, and Professional Schools	-211	-8.9%	-41	-1.9%
Elementary and Secondary Schools	-204	-3.2%	34	0.6%
Junior Colleges	-41	-85.1%	0	-6.3%
Sports and Recreation Instruction	-27	-14.3%	-1	-0.5%
All Other Miscellaneous Schools and Instruction	-21	-13.7%	0	0.0%

Source: JobsEQ, data as of 2020Q3

<sup>23</sup> Michelle Theriault Boots, "Budget Crisis Pierces 'Hope and Denial' at UAA as Administration Recommends Elimination of Programs," *Anchorage Daily News*, February 27, 2020, <https://www.adn.com/alaska-news/education/2020/02/25/university-of-alaska-anchorage-announces-initial-recommendations-for-program-cuts-amid-budget-crisis/>.

Table 26: Top 5 Educational Services Industries by Employees Added/Least Lost in 2020

Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected 1- Year % Growth
Flight Training	30	41.3%	-1	-1.3%
Professional and Management Development Training	24	69.7%	0	-0.6%
Computer Training	15	128.3%	0	-0.3%
Automobile Driving Schools	1	3.5%	0	-0.5%
Other Technical and Trade Schools	-2	-5.6%	0	-1.5%

Source: JobsEQ, data as of 2020Q3

Some industries, largely concentrated on specialized skills, added employees or minimized employment losses relative to the rest of the sector in 2020. Notably, the shift to digital learning and working likely necessitated additional hiring of computer training experts.

### Looking Forward

Table 27: Top 10 Educational Services Industries by Projected 1-Year Percentage Growth

Industry	Projected 1- Year % Growth	Current Avg. Annual Wages
Educational Support Services	2.8%	46,232
Elementary and Secondary Schools	0.6%	58,597
All Other Miscellaneous Schools and Instruction	0.0%	21,480
Computer Training	-0.3%	52,484
Language Schools	-0.5%	23,322
Automobile Driving Schools	-0.5%	31,645
Exam Preparation and Tutoring	-0.5%	21,443
Sports and Recreation Instruction	-0.5%	23,261
Professional and Management Development Training	-0.6%	36,708
Fine Arts Schools	-0.7%	19,962

Source: JobsEQ, data as of 2020Q3

In the coming year, a modest rebound is expected for local schoolteachers as students begin to return to classrooms pending inoculation. The rest of the sector is expected to decline slightly in 2021, even services offering instruction in specialized fields like languages or technology, although these industries are expected to pace the sector in growth over a 5-year span. The outlook is bleak for local colleges and universities in both the short and long-term, which is concerning given the numerous economic benefits provided by these institutions to the community.

*Table 28: Top 10 Educational Services Industries by Projected 5-Year Percentage Growth*

<b>Industry</b>	<b>Projected 5-Year Avg. Annual % Growth</b>	<b>Current Avg. Annual Wages</b>
All Other Miscellaneous Schools and Instruction	2.8%	21,480
Sports and Recreation Instruction	2.3%	23,261
Exam Preparation and Tutoring	2.3%	21,443
Automobile Driving Schools	2.3%	31,645
Language Schools	2.2%	23,322
Fine Arts Schools	2.1%	19,962
Educational Support Services	1.6%	46,232
Flight Training	0.7%	89,784
Apprenticeship Training	0.7%	70,843
Cosmetology and Barber Schools	0.6%	49,515

Source: JobsEQ, data as of 2020Q3

## Construction Sector Snapshot

Industry	Current Employment	Current Avg. Annual Wages	1-Year Projected Growth	Projected 1-Year % Growth
Commercial and Institutional Building Construction	1,518	97,229	20	1.3%
Highway, Street, and Bridge Construction	744	105,811	-4	-0.5%
Nonresidential Electrical Contractors and Other Wiring Installation Contractors	619	88,750	1	0.2%
Nonresidential Plumbing, Heating, and Air-Conditioning Contractors	540	80,456	0	0.0%
Residential Remodelers	391	44,576	1	0.4%
Residential Plumbing, Heating, and Air-Conditioning Contractors	347	60,396	0	0.0%
Oil and Gas Pipeline and Related Structures Construction	334	111,866	-4	-1.3%
Residential Finish Carpentry Contractors	262	46,186	1	0.2%
Nonresidential Site Preparation Contractors	242	81,107	3	1.3%
New Single-Family Housing Construction (except For-Sale Builders)	226	64,355	1	0.4%

Source: JobsEQ, data as of 2020Q3

Construction, in a normal, non-pandemic year, is relatively cyclical on an annual basis. Given the difficulties posed by Alaska's weather during the winter, it makes sense that the industry sees the highest monthly employment totals during the summer, when most projects take place. In 2020, the cyclical nature continued, but at levels below what was projected for 2020 based on the past three years of monthly employment data.

*Table 29: Top 5 Construction Industries by Employees Lost in 2020*

Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected Annual % Growth
Highway, Street, and Bridge Construction	-121	-14.0%	-4	-0.5%
Commercial and Institutional Building Construction	-92	-5.7%	20	1.3%
Oil and Gas Pipeline and Related Structures Construction	-88	-20.8%	-4	-1.3%
New Housing For-Sale Builders	-67	-56.0%	0	0.4%
Nonresidential Plumbing, Heating, and Air-Conditioning Contractors	-65	-10.7%	0	0.0%

Source: JobsEQ, data as of 2020Q3

Non-residential construction generally slowed down in 2020 compared to 2019, likely due to commercial uncertainty in the face of the pandemic. Notably, the reduction in construction employment related to oil and gas would have likely occurred even without the pandemic, as oil companies delayed projects before Ballot Measure 1 was defeated in November 2020. So while

most of the losses can reasonably be attributed to the pandemic, others may have occurred regardless of the public health crisis.

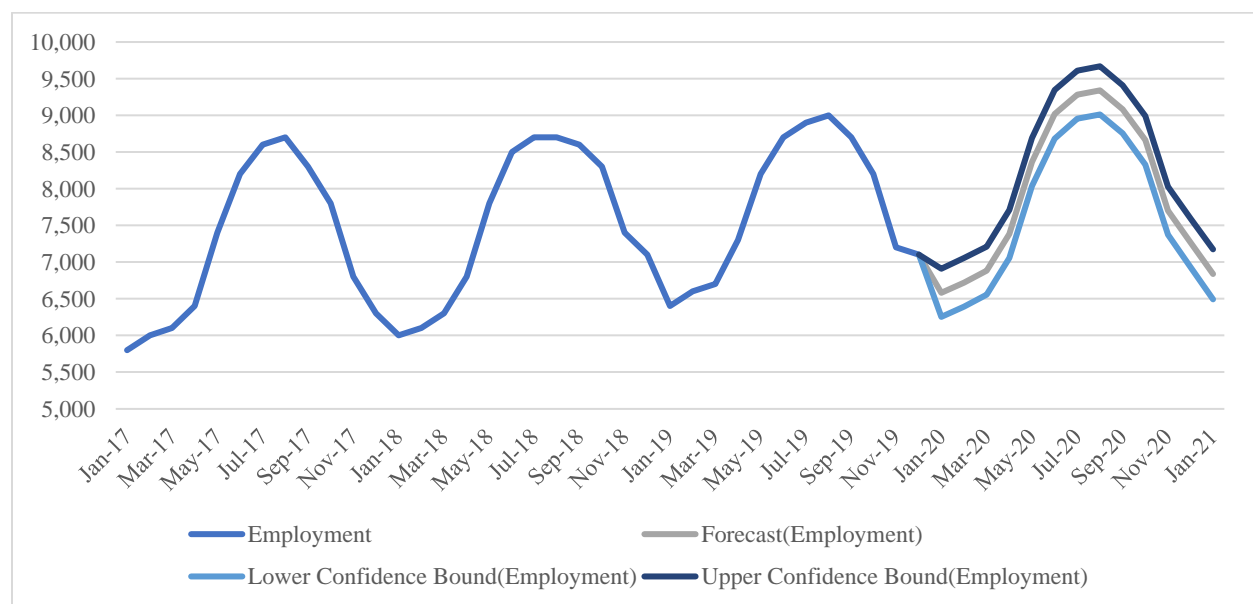
*Table 30: Top 5 Construction Industries by Employees Added in 2020*

Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected 1-Year % Growth
Residential Remodelers	20	5.5%	1	0.4%
Residential Site Preparation Contractors	15	11.3%	2	1.0%
Nonresidential Flooring Contractors	5	12.1%	0	0.3%
Residential Plumbing, Heating, and Air-Conditioning Contractors	4	1.2%	0	0.0%
Residential Framing Contractors	4	9.7%	0	0.3%

Source: JobsEQ, data as of 2020Q3

Residential construction industries saw modest employment gains in 2020 compared to 2019. This follows the trend seen in retail of home improvement being prioritized by citizens during the pandemic, possibly because the time spent hunkering down alerted homeowners and landlords to potential areas of improvement. Nonetheless, the gains made in these industries were not enough to offset the losses in other industries, and construction saw a net loss in employment in 2020.

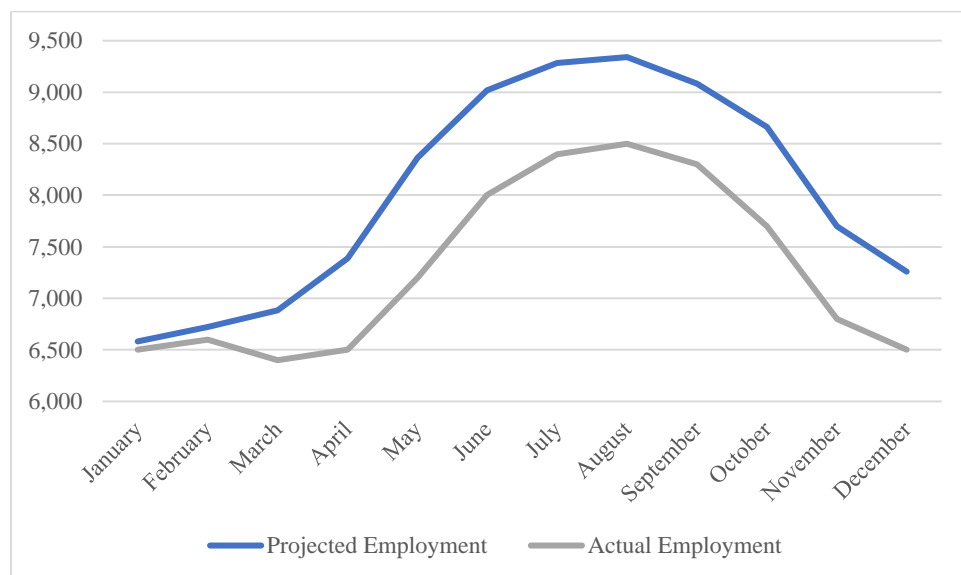
*Figure 18: Baseline Projection of Construction Employment in 2020*



Source: State of Alaska DOLWD, AEDC calculations

In 2020, average monthly employment was about 7,300 workers, down 500 average monthly workers from 2019, and about down about 700 workers from the 2020 baseline projections, which accounted for employment in the sector trending up over the last several years. Monthly averages in 2020 were on pace with baseline projections until March, when the pandemic began to affect Alaska, causing business closures and project delays. According to the State of Alaska Department of Labor and Workforce Development, only 61.8% of construction workers were local to Anchorage in 2019.<sup>24</sup> Assuming that this trend would have held in 2020, approximately 320 lost jobs would have been held by Anchorage residents.

*Figure 19: 2020 Construction Employment - Baseline vs. Actual*



Source: State of Alaska DOLWD, AEDC calculations

<sup>24</sup> Robinson and Kreiger, “2019 Nonresidents Working in Alaska.”

## Looking Forward

*Table 31: Top 10 Construction Industries by Projected 1-Year Percentage Growth*

<b>Industry</b>	<b>Projected 1-Year % Growth</b>	<b>Current Avg. Annual Wages</b>
Commercial and Institutional Building Construction	1.3%	97,229
Nonresidential Site Preparation Contractors	1.3%	81,107
Industrial Building Construction	1.3%	87,310
All Other Nonresidential Specialty Trade Contractors	1.2%	56,965
Residential Site Preparation Contractors	1.0%	47,570
All Other Residential Specialty Trade Contractors	0.9%	39,959
Residential Remodelers	0.4%	44,576
New Single-Family Housing Construction (except For-Sale Builders)	0.4%	64,355
New Housing For-Sale Builders	0.4%	66,945
Nonresidential Glass and Glazing Contractors	0.4%	68,764

Source: JobsEQ, data as of 2020Q3

In 2021, some growth in non-residential construction is predicted, though it is relatively insignificant in comparison to some of the rebounds expected in other sectors. Residential construction is expected to continue to grow moderately, and, on the whole, the sector should be expected to remain as seasonal as in past years. Specifically, a spike in construction employment should be expected during the summer months, with employment declining during the fall and through the winter, when the climate makes building activities more difficult.

*Table 32: Top 10 Construction Industries by Projected 5-Year Percentage Growth*

<b>Industry</b>	<b>Projected 5-Year Avg. Annual % Growth</b>	<b>Current Avg. Annual Wages</b>
Commercial and Institutional Building Construction	0.2%	97,229
Industrial Building Construction	0.2%	87,310
Land Subdivision	0.2%	65,604
Oil and Gas Pipeline and Related Structures Construction	0.1%	111,866
Power and Communication Line and Related Structures Construction	0.1%	78,414
Water and Sewer Line and Related Structures Construction	0.1%	77,153
Nonresidential Electrical Contractors and Other Wiring Installation Contractors	0.0%	88,750
Other Nonresidential Building Equipment Contractors	0.0%	90,884
Nonresidential Plumbing, Heating, and Air-Conditioning Contractors	-0.1%	80,456
Nonresidential Site Preparation Contractors	-0.1%	81,107

Source: JobsEQ, data as of 2020Q3



## Administrative and Support and Waste Management and Remediation Services

### Sector Snapshot

Industry	Current Employment	Current Avg. Annual Wages	1-Year Projected Growth	Projected 1-Year % Growth
Janitorial Services	1,409	23,468	34	2%
Security Guards and Patrol Services	783	34,697	23	3%
Landscaping Services	774	36,676	20	3%
Office Administrative Services	610	77,256	6	1%
Temporary Help Services	517	54,021	17	3%
Facilities Support Services	423	46,499	8	2%
Remediation Services	368	72,480	5	1%
Security Systems Services (except Locksmiths)	286	67,183	11	4%
All Other Business Support Services	274	82,082	5	2%
Solid Waste Collection	167	54,229	1	1%

Source: JobsEQ, data as of 2020Q3

This sector contains a wide variety of industries, most of which are strongly linked to other sectors, such as the professional services sector or the healthcare and social assistance sector. As a result, this sector saw significant employment losses in 2020 as the industries that create employment opportunities for administrative services entities contracted.

*Table 33: Top 5 Administrative Services Industries by Employees Lost in 2020*

Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected 1-Year % Growth
Tour Operators	-166	-59%	7	6%
Facilities Support Services	-109	-21%	8	2%
Janitorial Services	-90	-6%	34	2%
All Other Travel Arrangement and Reservation Services	-40	-52%	2	6%
All Other Support Services	-38	-23%	6	5%

Source: JobsEQ, data as of 2020Q3

Unsurprisingly, the industries most strongly linked to sectors that contracted in 2020 saw the greatest employment losses. For example, the significant reduction in air passenger travel and overall tourist activity probably caused the large reduction in employment for tour operators. Similarly, the cancellation of cruises and tourist plans likely led to the drop in employment for businesses specializing in travel arrangements.

With many offices and businesses closed due to hunker down orders and a shift to telecommuting, the need for janitorial services was likely reduced, leading to the decrease in employment in that industry. Whether the contraction in employment persists will depend on the speed at which workers return to office and other work spaces after vaccination.

*Table 34: Top 5 Administrative Services Industries by Employees Added in 2020*

<b>Industry</b>	<b>1-Year Employment Change</b>	<b>1-Year Percentage Change</b>	<b>1-Year Projected Growth</b>	<b>Projected 1- Year % Growth</b>
Landscaping Services	29	4%	20	3%
Temporary Help Services	21	4%	17	3%
Security Guards and Patrol Services	15	2%	23	3%
Office Administrative Services	7	1%	6	1%
All Other Miscellaneous Waste Management Services	5	11%	1	1%

Source: JobsEQ, data as of 2020Q3

A few industries added a small number of employees in 2020 compared to 2019. Landscaping needs may have increased due to citizens trying to spend more time outside in 2020 due to social distancing requirements. Security guards could have been hired to ensure that buildings that otherwise would have been occupied remained secure while work-from-home directives were in place.

### Looking Forward

*Table 35: Top 10 Administrative Services Industries by Projected 1-Year Percentage Growth*

<b>Industry</b>	<b>Projected 1- Year % Growth</b>	<b>Current Avg. Annual Wages</b>
Travel Agencies	5.8%	49,917
All Other Travel Arrangement and Reservation Services	5.8%	47,944
Tour Operators	5.7%	49,314
Convention and Visitors Bureaus	5.7%	46,918
All Other Support Services	4.5%	36,537
Convention and Trade Show Organizers	4.1%	31,273
Security Systems Services (except Locksmiths)	3.8%	67,183
Locksmiths	3.4%	54,172
Temporary Help Services	3.3%	54,021
Security Guards and Patrol Services	3.0%	34,697

Source: JobsEQ, data as of 2020Q3

As tourism returns to Anchorage and the state as a whole, support industries are expected to hire back workers, accounting for most of the increased employment projected for 2021 in the sector. In the long term, after the tourism industry has recovered from the shocks caused by the pandemic, other industries are expected to grow slowly, though these industries are moderately-sized and cannot be expected to generate large numbers of new jobs.

*Table 36: Top 10 Administrative Services Industries by Projected 5-Year Percentage Growth*

<b>Industry</b>	<b>Projected 5-Year Avg. Annual % Growth</b>	<b>Current Avg. Annual Wages</b>
Temporary Help Services	1.2%	54,021
Collection Agencies	1.2%	51,679
Private Mail Centers	1.1%	29,614
Other Business Service Centers (including Copy Shops)	1.1%	40,134
Credit Bureaus	1.1%	195,291
Security Systems Services (except Locksmiths)	1.0%	67,183
All Other Business Support Services	1.0%	82,082
Professional Employer Organizations	1.0%	31,290
Telephone Answering Services	1.0%	53,051
All Other Support Services	0.8%	36,537

Source: JobsEQ, data as of 2020Q3

## Other Services (except Public Administration)

### Sector Snapshot

Industry	Current Employment	Current Avg. Annual Wages	1-Year Projected Growth	Projected 1-Year % Growth
Religious Organizations	1,174	26,272	-2	0%
Civic and Social Organizations	556	35,306	55	10%
Beauty Salons	409	31,654	40	10%
General Automotive Repair	352	44,663	10	3%
Automotive Body, Paint, and Interior Repair and Maintenance	286	53,093	9	3%
Environment, Conservation and Wildlife Organizations	213	48,688	4	2%
Labor Unions and Similar Labor Organizations	206	75,149	0	0%
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	198	67,559	5	3%
Pet Care (except Veterinary) Services	191	20,135	19	10%
All Other Personal Services	188	22,885	16	8%

Source: JobsEQ, data as of 2020Q3

The other services sector, as its name implies, provides services to the community that don't neatly fit under any other category. The variety of services is broad, spanning religious organizations to political organizations, and from beauty salons to automobile maintenance centers. As a result, the pandemic's impact on this sector was predictably varied, although, on the whole, the sector saw reduced employment as in-person services were limited due to public safety ordinances.

*Table 37: Top 5 Other Services Industries by Employees Lost in 2020*

Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected 1-Year % Growth
Beauty Salons	-91	-18%	40	10%
Civic and Social Organizations	-89	-14%	55	10%
Environment, Conservation and Wildlife Organizations	-57	-21%	4	2%
Business Associations	-48	-34%	2	2%
Other Personal Care Services	-40	-23%	14	10%

Source: JobsEQ, data as of 2020Q3

Table 38: Top 5 Other Services Industries by Employees Added in 2020

Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected 1-Year % Growth
Nail Salons	33	23%	17	10%
Car Washes	17	14%	5	3%
Computer and Office Machine Repair and Maintenance	17	82%	1	2%
Political Organizations	10	43%	1	2%
Other Automotive Mechanical and Electrical Repair and Maintenance	9	33%	1	3%

Source: JobsEQ, data as of 2020Q3

Political organizations likely saw increased employment in the lead up to the 2020 elections. Computer and office machine repair was probably needed as a result of the shift to telecommuting and digital learning. The growth in employment of nail salons is puzzling, especially given that other service-oriented businesses, like beauty salons saw decreased employment during the pandemic. This is an area that ought to be further explored.

#### Looking Forward

Table 39: Top 10 Other Services Industries by Projected 1-Year Percentage Growth

Industry	Projected 1- Year % Growth	Current Avg. Annual Wages
Linen Supply	12.4%	38,625
Drycleaning and Laundry Services (except Coin-Operated)	12.4%	27,405
Coin-Operated Laundries and Drycleaners	12.2%	25,326
Private Households	11.2%	31,263
Nail Salons	9.9%	34,087
Diet and Weight Reducing Centers	9.9%	11,348
Barber Shops	9.9%	28,163
Other Personal Care Services	9.9%	26,553
Beauty Salons	9.9%	31,654
Parking Lots and Garages	9.8%	34,564

Source: JobsEQ, data as of 2020Q3

Predictably, as stay-at-home orders are lifted and the public becomes more comfortable venturing out in public, industries that typically provide in-person service are predicted to recover the most in 2021. Linen suppliers, in particular, will likely benefit from additional patronage at hotels and other accommodations once tourism begins to rebound in the state. In the next five years, slow growth is expected across most industries in this sector, in line with the

overall economy. Since most of these industries cater towards the public or operate in support of larger industries, such as the hospitality industry, their future will be intertwined and deeply connected to the success of the economy as a whole and the success of the industries that act as clientele for these service providers.

*Table 40: Top 10 Other Services Industries by Projected 5-Year Percentage Growth*

<b>Industry</b>	<b>Projected 5-Year Avg. Annual % Growth</b>	<b>Current Avg. Annual Wages</b>
Civic and Social Organizations	4.4%	35,306
Parking Lots and Garages	3.2%	34,564
Pet Care (except Veterinary) Services	3.1%	20,135
Photofinishing Laboratories (except One-Hour)	2.3%	18,254
Beauty Salons	1.9%	31,654
Nail Salons	1.9%	34,087
Other Personal Care Services	1.9%	26,553
Private Households	1.9%	31,263
Barber Shops	1.9%	28,163
Diet and Weight Reducing Centers	1.9%	11,348

Source: JobsEQ, data as of 2020Q3

## Wholesale Trade

### Sector Snapshot

Industry	Current Employment	Current Avg. Annual Wages	1-Year Projected Growth	Projected Annual % Growth
Other Grocery and Related Products Merchant Wholesalers	681	46,900	-1	-0.2%
General Line Grocery Merchant Wholesalers	646	52,377	-1	-0.1%
Industrial Machinery and Equipment Merchant Wholesalers	301	76,333	-2	-0.7%
Construction and Mining (except Oil Well) Machinery and Equipment Merchant Wholesalers	264	79,456	-2	-0.7%
Petroleum Bulk Stations and Terminals	229	58,777	-3	-1.2%
Wine and Distilled Alcoholic Beverage Merchant Wholesalers	203	69,339	0	-0.2%
Wholesale Trade Agents and Brokers	192	77,426	2	1.3%
Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers	191	102,469	-4	-2.1%
Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers	146	62,722	-1	-0.6%
Drugs and Druggists' Sundries Merchant Wholesalers	130	65,208	-1	-1.0%

Source: JobsEQ, data as of 2020Q3

Most of the losses from food product wholesalers are likely due to reduced demand from the food and beverage industry due to local closures in these establishments. The reduction in medical dental and hospital equipment wholesalers might seem counterintuitive given the pandemic increasing demands on the local economy, however, there were significant reductions in private hospitals and other medical industries specializing in elective and nonessential procedures, which these wholesalers would conceivably cater to.

Table 41: Top 5 Wholesale Trade Industries by Employees Lost in 2020

Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected Annual % Growth
Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers	-31	-14.0%	-4	-2.1%
Other Grocery and Related Products Merchant Wholesalers	-25	-3.6%	-1	-0.2%
Dairy Product (except Dried or Canned) Merchant Wholesalers	-19	-46.7%	0	-0.2%
Other Electronic Parts and Equipment Merchant Wholesalers	-15	-29.3%	0	-0.1%
General Line Grocery Merchant Wholesalers	-13	-2.0%	-1	-0.1%

Source: JobsEQ, data as of 2020Q3

Conversely, chemical and petroleum merchants saw increased employment during 2020. These wholesalers likely saw increased demand due to increased cargo thoroughfare at the airport. For petroleum wholesalers, specifically, the increased demand for jet fuel would explain their need for additional employees. As for chemical wholesalers, the demand could have arisen for increased need for de-icing and other maintenance items to serve the increased cargo demand.

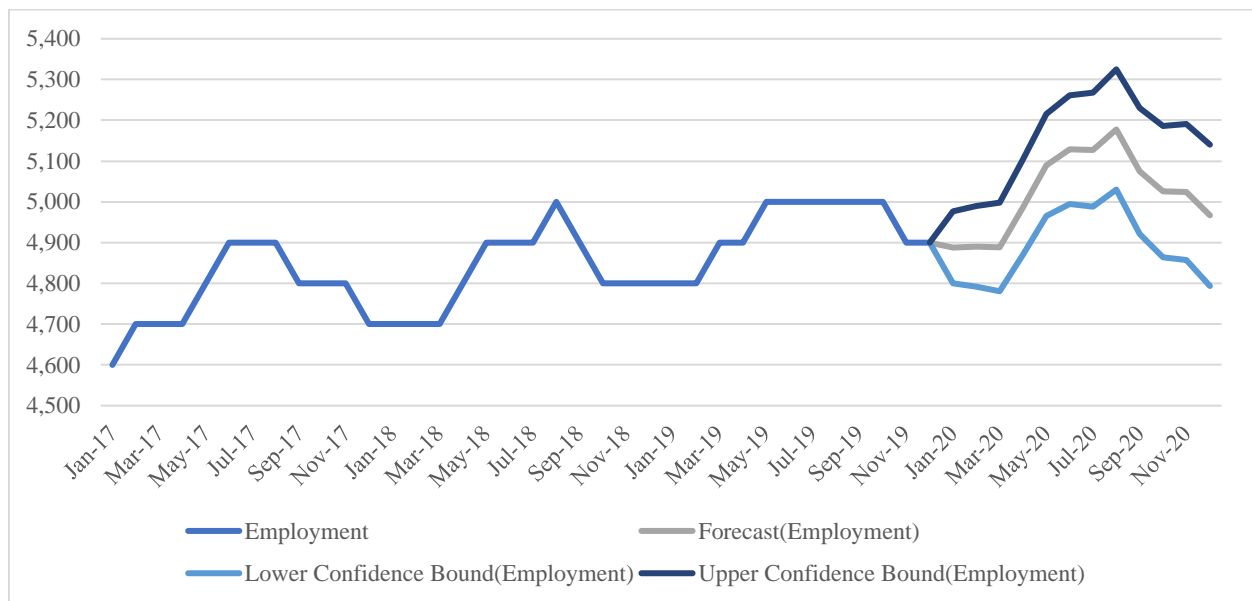
Table 42: Top 5 Wholesale Trade Industries by Employees Added in 2020

Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected Annual % Growth
Other Chemical and Allied Products Merchant Wholesalers	37	71.9%	1	0.8%
Petroleum Bulk Stations and Terminals	24	12.0%	-3	-1.2%
Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)	17	24.3%	-1	-1.2%
Women's, Children's, and Infants' Clothing and Accessories Merchant Wholesalers	7	171.5%	0	2.0%
Farm Supplies Merchant Wholesalers	6	9.3%	1	1.1%

Source: JobsEQ, data as of 2020Q3



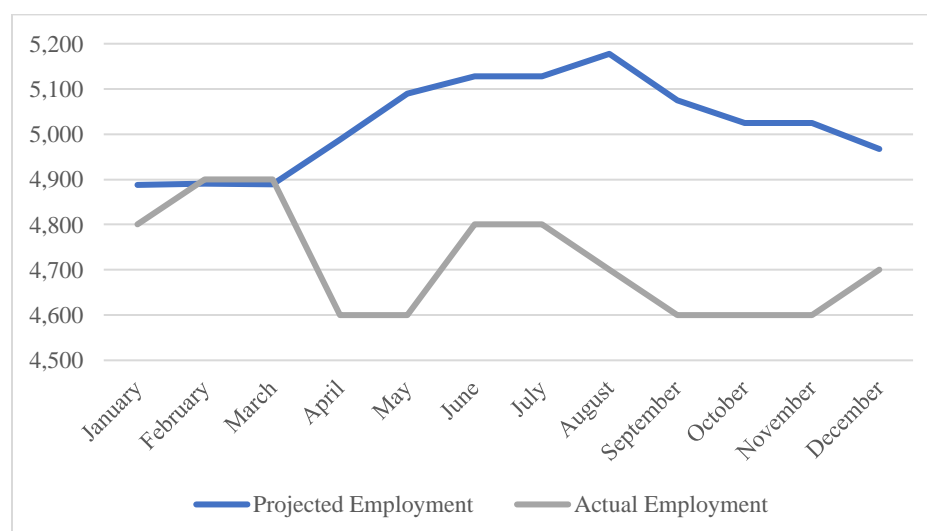
Figure 20: Baseline Prediction for Wholesale Trade Employment in 2020



Source: State of Alaska DOLWD, AEDC calculations

According to the State of Alaska Department of Labor and Workforce Development, the average monthly employment for the wholesale trade sector in 2019 was 4,900 workers. Based on the monthly data from 2020, the average annual employment for the sector in 2020 was around 4,700 employees, a reduction of 200 workers. A baseline projection for 2020 predicted average annual sector employment growing to 5,000, so the reduction to 4,700 workers was 6% below the baseline prediction.

Figure 21: 2020 Wholesale Trade Employment - Baseline vs. Actual



Source: State of Alaska DOLWD, AEDC calculations

The state estimated that 78.8% of workers in the sector were local to Anchorage in 2019.<sup>25</sup> Assuming this would have held in 2020, approximately 160 of the 200 workers lost in the sector from 2019 to 2020 would have been local to Anchorage, with the rest being from outside of the state or Alaskans residing outside of Anchorage.

### Looking Forward

The wholesale trade industry is largely dependent on demand both locally and nationally for different services. To that end, it is reasonable to expect that the demand for wholesale foodstuffs should increase as restaurants and other food service industries recover post-pandemic. Alternatively, as passenger airline traffic ramps back up, it is possible that the demand for jet fuel will decrease since cargo may be transported in the bellies of passenger flights rather than on dedicated cargo planes which require fuel at the airport.

*Table 43: Top 10 Wholesale Trade Industries by Projected 1-Year Percentage Growth*

Industry	Projected 1-Year % Growth	Current Avg. Annual Wages
Industrial and Personal Service Paper Merchant Wholesalers	2.0%	77,688
Stationery and Office Supplies Merchant Wholesalers	2.0%	30,611
Women's, Children's, and Infants' Clothing and Accessories Merchant Wholesalers	2.0%	42,098
Wholesale Trade Agents and Brokers	1.3%	77,426
Farm Supplies Merchant Wholesalers	1.1%	43,977
Other Miscellaneous Nondurable Goods Merchant Wholesalers	1.0%	32,462
Flower, Nursery Stock, and Florists' Supplies Merchant Wholesalers	0.9%	41,559
Paint, Varnish, and Supplies Merchant Wholesalers	0.9%	45,608
Other Chemical and Allied Products Merchant Wholesalers	0.8%	101,460
Book, Periodical, and Newspaper Merchant Wholesalers	0.8%	30,237

Source: JobsEQ, data as of 2020Q3

<sup>25</sup> Robinson and Kreiger.

Thus, the strength and the weakness of this industry is its adaptability – if employees are able to move fluidly between sub-industries as demands change, grow, or wane for certain goods employment may not change that dramatically except in cases like 2020 where a major shock, like a pandemic, disrupts the economy as a whole. Overall, it is likely that this industry will be relatively stable in the future assuming that the state economy recovers slowly and steadily from both the 2020 pandemic related recession and the longer-term fiscal recession, the industry should likely grow slowly and steadily as well.

*Table 44: Top 10 Wholesale Trade Industries by Projected 5-Year Percentage Growth*

<b>Industry</b>	<b>Projected 5-Year Avg. Annual % Growth</b>	<b>Current Avg. Annual Wages</b>
Wholesale Trade Agents and Brokers	0.4%	77,426
Women's, Children's, and Infants' Clothing and Accessories Merchant Wholesalers	0.2%	42,098
Metal Service Centers and Other Metal Merchant Wholesalers	-0.1%	77,198
Home Furnishing Merchant Wholesalers	-0.1%	58,473
Recyclable Material Merchant Wholesalers	-0.1%	36,966
Toy and Hobby Goods and Supplies Merchant Wholesalers	-0.1%	27,602
Other Grocery and Related Products Merchant Wholesalers	-0.2%	46,900
General Line Grocery Merchant Wholesalers	-0.2%	52,377
Meat and Meat Product Merchant Wholesalers	-0.2%	44,209
Fish and Seafood Merchant Wholesalers	-0.3%	46,427

Source: JobsEQ, data as of 2020Q3

## Finance and Insurance

### Sector Snapshot

Industry	Current Employment	Current Avg. Annual Wages	1-Year Projected Growth	Projected Annual % Growth
Credit Unions	1,587	67,471	-19	-1.2%
Commercial Banking	970	72,021	-12	-1.2%
Insurance Agencies and Brokerages	591	77,531	-3	-0.6%
Direct Property and Casualty Insurance Carriers	263	78,473	-4	-1.5%
Real Estate Credit	180	130,134	1	0.4%
Portfolio Management	156	71,532	-3	-1.8%
Investment Advice	147	97,384	-2	-1.4%
Securities Brokerage	138	179,466	1	0.5%
Third Party Administration of Insurance and Pension Funds	105	56,295	-1	-0.7%
All Other Nondepository Credit Intermediation	73	57,941	0	0.3%

Source: JobsEQ, data as of 2020Q3

Industries that normally conduct in-person transactions were, unsurprisingly, most impacted by the pandemic. For example, with consumers able to conduct banking operations online, the need for employees at commercial banks may have been reduced. Whether or not the jobs rebound depends on whether consumer preferences have shifted permanently, or if this is merely a temporary effect of the pandemic.

*Table 45: Top 5 Finance Industries by Employees Lost in 2020*

Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected Annual % Growth
Credit Unions	-93	-5.5%	-19	-1.2%
Commercial Banking	-72	-6.9%	-12	-1.2%
Securities Brokerage	-22	-14.0%	1	0.5%
Portfolio Management	-12	-7.0%	-3	-1.8%
Third Party Administration of Insurance and Pension Funds	-11	-9.2%	-1	-0.7%

Source: JobsEQ, data as of 2020Q3

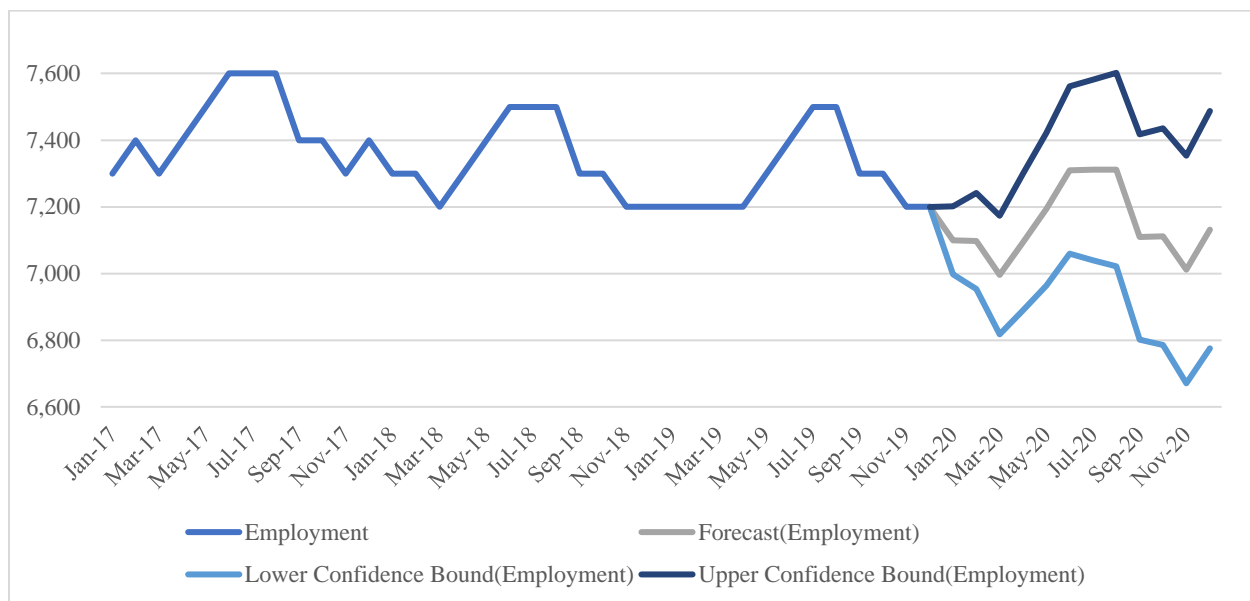
A few sub-industries added employees in 2020, though usually by less than a dozen new workers. Most of these industries were concentrated around insurance, which is unsurprising given the focus on public health implications of the coronavirus pandemic.

Table 46: Top 5 Finance Industries by Employees Added in 2020

Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected Annual % Growth
Direct Life Insurance Carriers	16	39.5%	-1	-1.1%
Investment Advice	12	9.0%	-2	-1.4%
Direct Health and Medical Insurance Carriers	2	3.2%	0	0.0%
Insurance Agencies and Brokerages	2	0.4%	-3	-0.6%
Other Insurance Funds	2	119.7%	0	1.0%

Source: JobsEQ, data as of 2020Q3

Figure 22: Baseline Projection for Finance & Insurance Employment in 2020

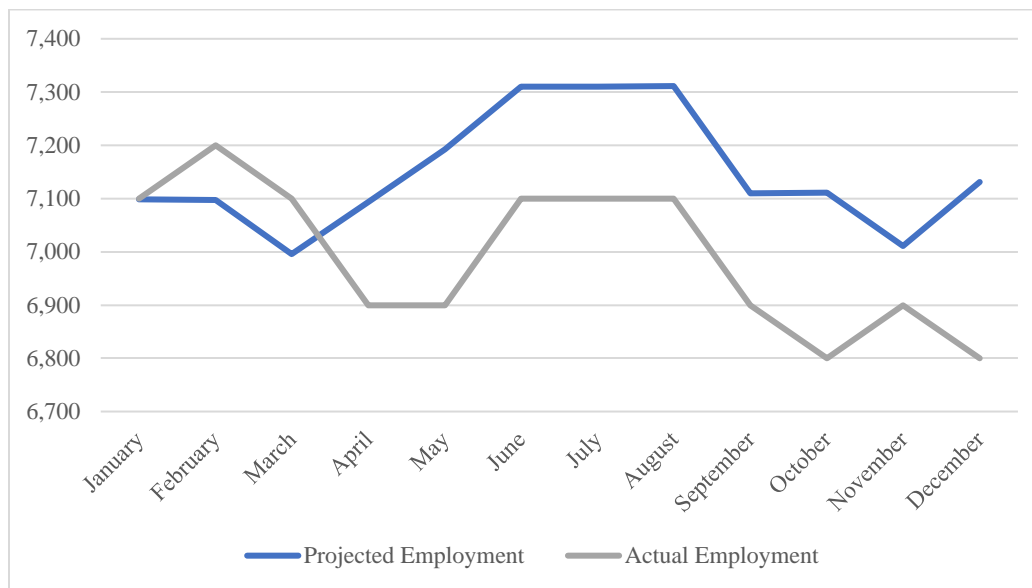


Source: State of Alaska DOLWD, AEDC calculations

The finance and insurance sector lost approximately 4.1% of its jobs compared to 2019, which, though it is slightly better compared to overall employment losses, represents significant damage done to the sector. In 2019, 84% of jobs in this sector were estimated to be held by local residents,<sup>26</sup> which, assuming the trend would have held in 2020, means that approximately 250 local jobs were lost from 2019. The sector was relatively stable in the years prior to the pandemic, so the pandemic job losses, which outpaced predicted trends by 2.1%, illustrate that the pandemic was a major disruption to an otherwise stable sector.

<sup>26</sup> Robinson and Kreiger.

Figure 23: 2020 Finance & Insurance Employment - Baseline vs. Actual



Source: State of Alaska DOLWD, AEDC calculations

### Looking Forward

Table 47: Top 10 Finance Industries by Projected 1-Year Percentage Growth

Industry	Projected 1-Year % Growth	Current Avg. Annual Wages
Health and Welfare Funds	1.0%	64,711
Other Insurance Funds	1.0%	75,356
Pension Funds	1.0%	63,137
Securities Brokerage	0.5%	179,466
Real Estate Credit	0.4%	130,134
Investment Banking and Securities Dealing	0.4%	179,949
All Other Nondepository Credit Intermediation	0.3%	57,941
Consumer Lending	0.1%	69,021
Direct Health and Medical Insurance Carriers	0.0%	83,324
Sales Financing	-0.2%	63,241

Source: JobsEQ, data as of 2020Q3

The long-term health and growth of this sector will largely depend on consumer behaviors and preferences. For businesses operating in the personal banking space, the shift to online banking may ensure long-term financial success, but at the cost of employment growth as occupations like tellers are supplanted by automated or digital replacements. While banks may maintain their current level of operation or even grow, it seems unlikely that this sub-sector will

grow significantly in 2021 or beyond given both demographic factors, like a declining population, and preference factors, like a shift to online banking.

*Table 48: Top 10 Finance Industries by Projected 5-Year Percentage Growth*

<b>Industry</b>	<b>Projected 5-Year Avg. Annual % Growth</b>	<b>Current Avg. Annual Wages</b>
Health and Welfare Funds	1.0%	64,711
Other Insurance Funds	1.0%	75,356
Pension Funds	1.0%	63,137
Real Estate Credit	0.4%	130,134
All Other Nondepository Credit Intermediation	0.3%	57,941
Consumer Lending	0.1%	69,021
Direct Health and Medical Insurance Carriers	0.0%	83,324
Sales Financing	-0.2%	63,241
Insurance Agencies and Brokerages	-0.5%	77,531
Securities Brokerage	-0.5%	179,466

Source: JobsEQ, data as of 2020Q3

For businesses operating in the insurance space, public risk appetites will determine their willingness to purchase insurance and at what threshold – whether or not the pandemic has significantly impacted the risk profile of the populace remains to be seen. Moreover, it can be assumed that once a certain level of satiety is reached, i.e. most of the public acquires insurance to abate their risk aversion, that the industry will not need to hire additional individuals to assess risk. Indeed, it is possible that the sub-sector grew in 2020 due to the need to assess risk changes related to the pandemic, and that this growth, which occurred due to the pandemic, will decrease as the pandemic abates.

Similarly, industries that are dependent on the stock market or other financial commodities will be impacted by consumer preferences, in addition to the usual macroeconomic factors affecting the markets. As always, the volatility of the markets and the susceptibility to a wide-variety of shocks or changes in consumer sentiment make it difficult to project the market as whole. However, we can expect that investment advisors and portfolio managers will still be in demand due to this phenomenon, even if growth in those industries will be sluggish.

## Information Sector Snapshot

Industry	Current Employment	Current Avg. Annual Wages	1-Year Projected Growth	Projected 1-Year % Growth
Wired Telecommunications Carriers	1,926	83,912	-14	-0.7%
Television Broadcasting	256	59,134	0	-0.1%
All Other Telecommunications	172	111,136	-5	-2.9%
Wireless Telecommunications Carriers (except Satellite)	132	70,517	-1	-0.7%
Radio Stations	97	60,362	-1	-1.0%
Newspaper Publishers	90	47,121	-2	-1.7%
Motion Picture Theaters (except Drive-Ins)	75	17,196	2	3.3%
Telecommunications Resellers	68	82,293	-2	-2.9%
Data Processing, Hosting, and Related Services	61	51,716	0	-0.2%
Motion Picture and Video Production	56	45,016	2	3.9%

Source: JobsEQ, data as of 2020Q3

Even as the working world transitioned to telecommuting, the Information sector still saw a reduction in overall employment. Broadcasters, operating in both television and radio, cut staff, which could have occurred as a result of stay-at-home ordinances limiting the usual operating capacity of these entities, or because the general economic hardship impacted available advertising dollars. The reduction in employment at movie theaters is very likely due to the multiple shutdown orders restricting business, as well as consumer wariness preventing business even as restrictions lifted.

*Table 49: Top 5 Information Industries by Employees Lost in 2020*

Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected 1-Year % Growth
Telecommunications Resellers	-117	-63.1%	-2	-2.9%
Motion Picture Theaters (except Drive-Ins)	-89	-54.2%	2	3.3%
Television Broadcasting	-20	-7.1%	0	-0.1%
Wireless Telecommunications Carriers (except Satellite)	-18	-11.8%	-1	-0.7%
Radio Stations	-17	-14.8%	-1	-1.0%

Source: JobsEQ, data as of 2020Q3

Of course, not all sub-industries posted losses in 2020. Some telecommunications industries added employees, likely due to the increased communications demands caused by the



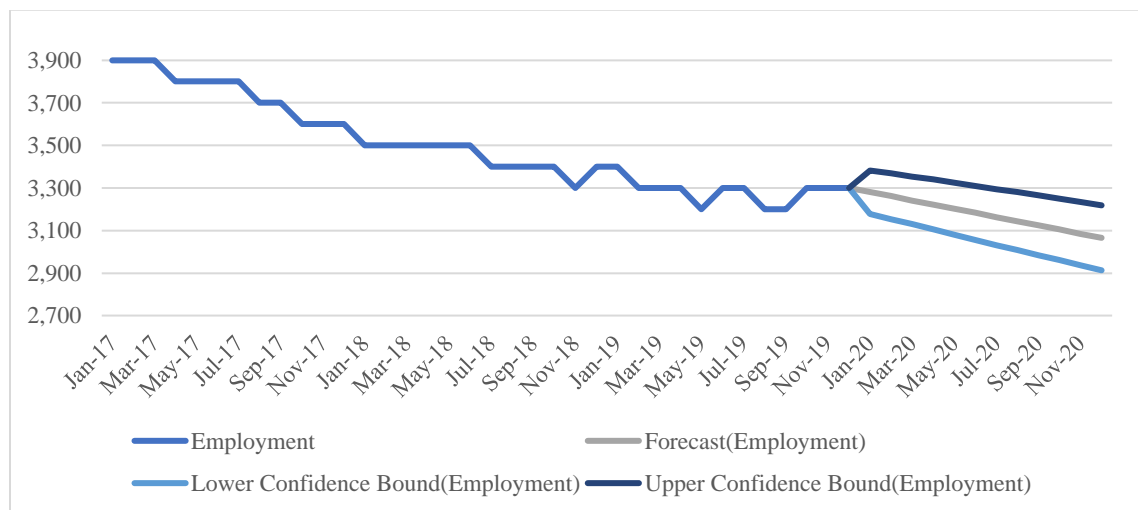
shift to remote working and online schooling. Motion picture and video production businesses also added a few new employees in 2020, perhaps to meet entertainment demands.

*Table 50: Top 5 Information Industries by Employees Added in 2020*

Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected 1- Year % Growth
All Other Telecommunications	18	11.5%	-5	-2.9%
Motion Picture and Video Production	9	18.1%	2	3.9%
Wired Telecommunications Carriers	2	0.1%	-14	-0.7%
News Syndicates	1	31.6%	0	-0.1%
Teleproduction and Other Postproduction Services	0	-2.8%	0	3.8%

Source: JobsEQ, data as of 2020Q3

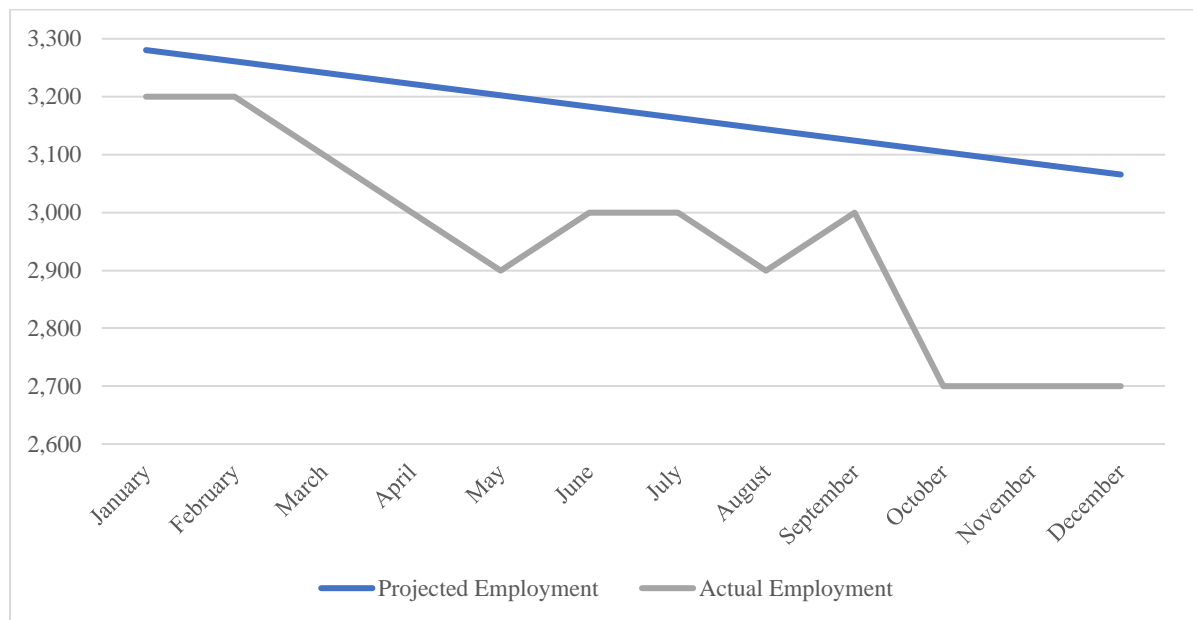
*Figure 24: Baseline Projection for Information Employment in 2020*



Source: State of Alaska DOLWD, AEDC calculations

Prior to 2020, the information sector was in decline. Examining the last three years to isolate recent trends and reduce statistical noise, the sector was consistently shedding jobs, though things had seemingly stabilized in 2019. The pandemic exacerbated the existing reductions in employment, beyond baseline expectations. Based on the prior three years, the sector was expected to support an average monthly employment of about 3,200 people in 2020, approximately a 3% reduction over 2019 average monthly employment. In actuality, the average monthly employment in 2020 was about 2,950 people, about 250 fewer employed than the baseline projection for 2020, a 7.9% decline beyond baseline.

Figure 25: 2020 Information Employment - Baseline vs. Actual



Source: State of Alaska DOLWD, AEDC calculations

According to the State Department of Labor and Workforce development, approximately 75.8% of employees in the information sector were residents in 2019,<sup>27</sup> meaning that of the roughly 250 jobs lost in 2020 about 190 belonged to locals. The remaining jobs would have been held by a combination of non-Alaskans and Alaska residents that live outside of the municipality.

From the outset of the year, actual employment was lower than projected on a monthly basis. However, as is apparent in the graph above, the onset of the pandemic in March widened the gap between the baseline projection for employment and the actual employment figures.

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<sup>27</sup> Robinson and Kreiger.

## Looking Forward

*Table 51: Top 10 Information Industries by Projected 1-Year Percentage Growth*

<b>Industry</b>	<b>Projected 1-Year % Growth</b>	<b>Current Avg. Annual Wages</b>
Motion Picture and Video Production	3.9%	45,016
Teleproduction and Other Postproduction Services	3.8%	52,138
Motion Picture Theaters (except Drive-Ins)	3.3%	17,196
All Other Publishers	3.1%	20,122
Book Publishers	1.5%	22,035
Directory and Mailing List Publishers	0.8%	40,697
Periodical Publishers	0.2%	44,904
Television Broadcasting	-0.1%	59,134
News Syndicates	-0.1%	119,134
Data Processing, Hosting, and Related Services	-0.2%	51,716

Source: JobsEQ, data as of 2020Q3

In 2021 and beyond, the sector is expected to continue to decline. Although some sub-industries, including telecommunications, should remain robust in the future, it is unclear whether industrial sustainability will directly translate into employment stability given technological improvements. Indeed, the greatest threat to continued stability or future growth in most information-related industries seems to be technological change. For newspaper publishers, for example, the shift towards online publications may threaten future paper distribution or may result in a shift of employees towards those in web development professions instead of traditional publication jobs. Although growth is forecast in some industries over a five-year horizon, the industries expected to grow are not particularly large and thus should not be expected to generate, for example, hundreds of new jobs in Anchorage.

*Table 52: Top 10 Information Industries by Projected 5-Year Percentage Growth*

<b>Industry</b>	<b>Projected 5-Year Avg. Annual % Growth</b>	<b>Current Avg. Annual Wages</b>
Motion Picture and Video Production	4.8%	45,016
Teleproduction and Other Postproduction Services	4.8%	52,138
Motion Picture Theaters (except Drive-Ins)	4.2%	17,196
Music Publishers	0.5%	25,408
Record Production and Distribution	0.5%	25,408
Other Sound Recording Industries	0.5%	25,408
Television Broadcasting	0.4%	59,134
Sound Recording Studios	0.2%	36,900
News Syndicates	-0.1%	119,134
Data Processing, Hosting, and Related Services	-0.2%	51,716

Source: JobsEQ, data as of 2020Q3

## Real Estate and Rental and Leasing

### Sector Snapshot

Industry	Current Employment	Current Avg. Annual Wages	1-Year Projected Growth	Projected Annual % Growth
Lessors of Residential Buildings and Dwellings	540	50,640	0	0.0%
Offices of Real Estate Agents and Brokers	487	55,386	-2	-0.4%
Passenger Car Rental	347	37,415	6	1.8%
Nonresidential Property Managers	244	62,704	-1	-0.6%
Residential Property Managers	227	40,221	-1	-0.7%
Truck, Utility Trailer, and RV (Recreational Vehicle) Rental and Leasing	214	51,272	4	1.8%
Lessors of Nonresidential Buildings (except Miniwarehouses)	149	50,171	0	0.0%
Other Activities Related to Real Estate	106	65,426	-1	-0.9%
Home Health Equipment Rental	97	48,340	7	7.1%
Lessors of Miniwarehouses and Self-Storage Units	95	35,641	0	0.0%

Source: JobsEQ, data as of 2020Q3

Compared to 2019, employment in the real estate and rental and leasing sector was down 2.1%, with 59 jobs lost. Most of the job losses occurred in rental-focused industries driven by tourism, which was significantly impacted by travel restrictions implemented to combat the pandemic. Modest recovery is anticipated in 2021, with the overall sector expected to add 17 jobs, a 0.6% increase over 2020 employment levels.

*Table 53: Top 5 Real Estate & Rental Industries by Employees Lost in 2020*

Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected Annual % Growth
Passenger Car Rental	-58	-14.4%	6	1.8%
Residential Property Managers	-23	-9.2%	-1	-0.7%
Truck, Utility Trailer, and RV (Recreational Vehicle) Rental and Leasing	-14	-6.1%	4	1.8%
Commercial Air, Rail, and Water Transportation Equipment Rental and Leasing	-9	-57.5%	0	3.1%
Offices of Real Estate Agents and Brokers	-8	-1.7%	-2	-0.4%

Source: JobsEQ, data as of 2020Q3

The real estate sub-industries did not post significant job losses in 2020, and other, non-employment metrics indicated a robust residential housing market. The average listing price in Anchorage climbed steadily throughout 2020, while the average time a house spent on the

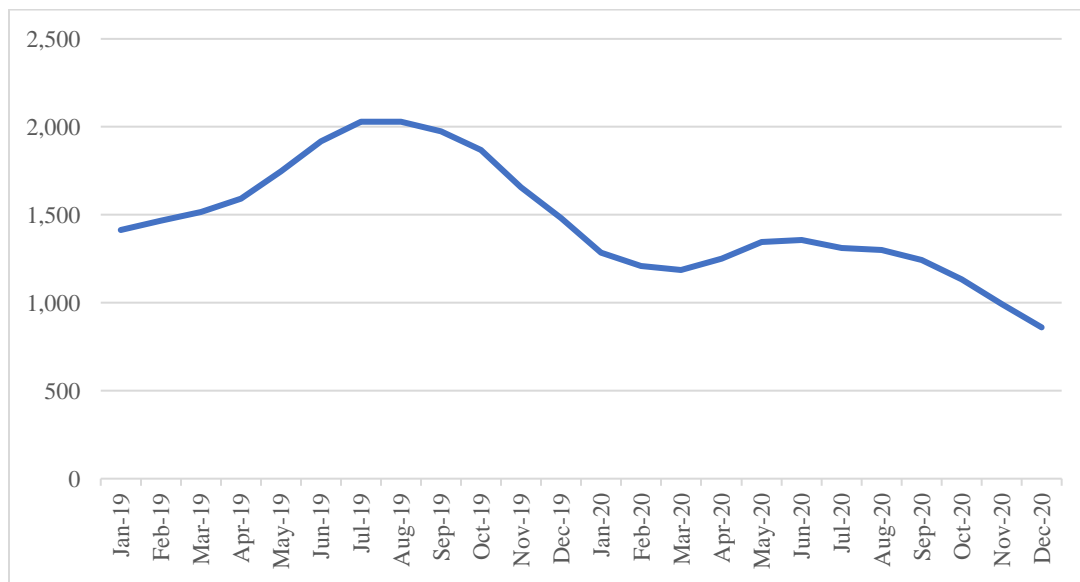
market declined, indicating consumer interest in purchasing homes. Listing numbers declined over the same period, which may be partially responsible for driving the increase in prices, as the supply of available homes dropped significantly over the course of 2020. The decrease in listings was likely driven by people choosing not to relocate or downsize during the pandemic due to logistical concerns, while the increase in buying behavior could indicate a desire for more space. Nationally, suburban listings attracted lots of interest while urban listings were less popular.<sup>28</sup>

*Table 54: Top 5 Real Estate & Rental Industries by Employees Added in 2020*

Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected 1-Year % Growth
Lessors of Residential Buildings and Dwellings	37	7.3%	0	0.0%
Home Health Equipment Rental	20	26.1%	7	7.1%
Lessors of Nonresidential Buildings (except Miniwarehouses)	11	8.3%	0	0.0%
Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	6	761.0%	0	1.0%
Lessors of Miniwarehouses and Self-Storage Units	6	7.2%	0	0.0%

Source: JobsEQ, data as of 2020Q3

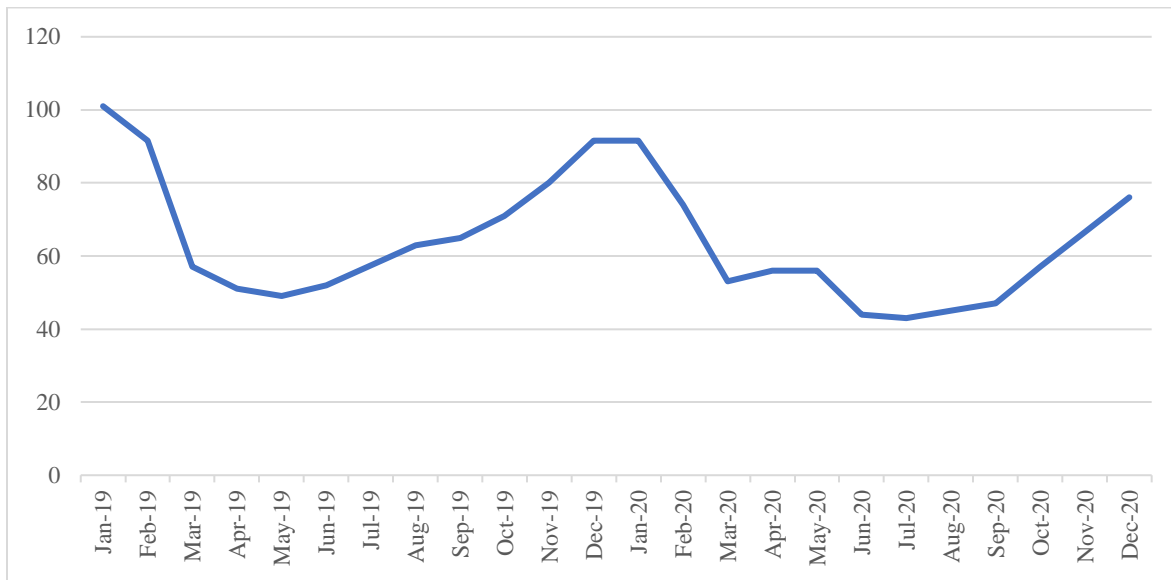
*Figure 26: Anchorage Active Listing Count*



Source: Realtor.com, Housing Inventory: Active Listing Count in Anchorage, AK (CBSA) [ACTLISCOU11260], retrieved from FRED, Federal Reserve Bank of St. Louis

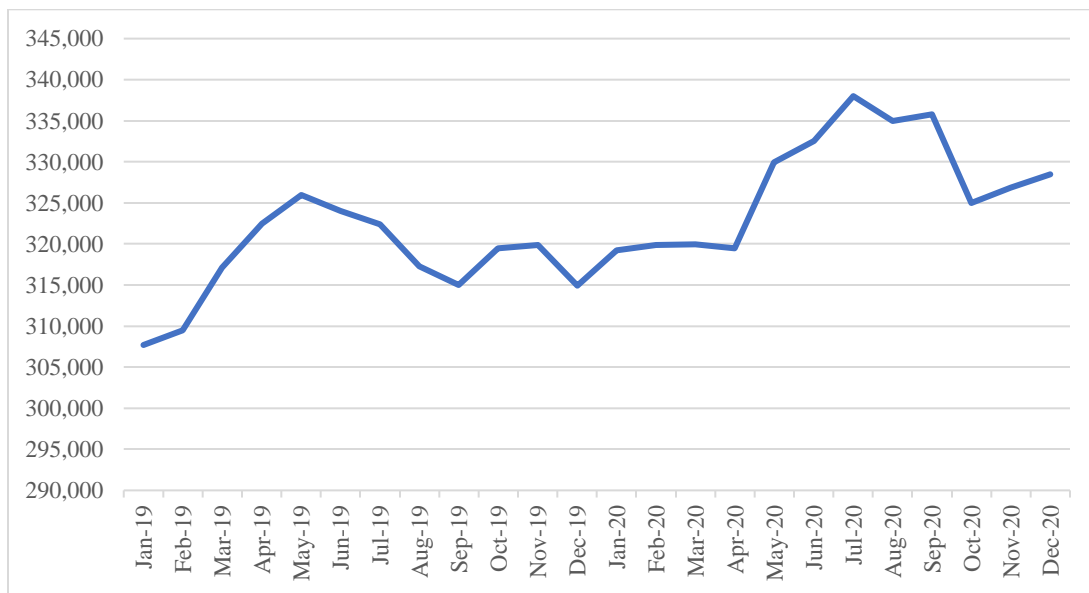
<sup>28</sup> Devon Thorsby, "What to Expect From the Housing Market in 2021," December 22, 2020, <https://realestate.usnews.com/real-estate/articles/what-to-expect-from-the-housing-market-in-2021>.

Figure 27: Median Days on the Market



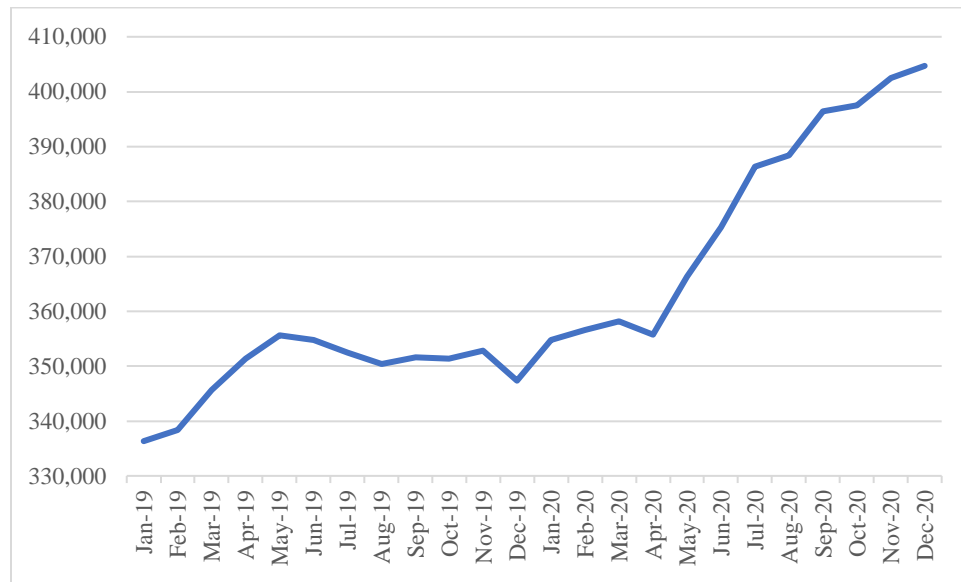
Source: Realtor.com, Housing Inventory: Median Days on Market in Anchorage, AK (CBSA) [MEDDAYONMAR11260], retrieved from FRED, Federal Reserve Bank of St. Louis

Figure 28: Median Listing Price



Source: Realtor.com, Housing Inventory: Median Listing Price in Anchorage, AK (CBSA) [MEDLISPRI11260], retrieved from FRED, Federal Reserve Bank of St. Louis

Figure 29: Average Listing Price



Source: Realtor.com, Housing Inventory: Average Listing Price in Anchorage, AK (CBSA) [AVELISPR11260], retrieved from FRED, Federal Reserve Bank of St. Louis

### Looking Forward

As mentioned above, any resurgence in the tourism sector should rejuvenate industries that provide rental services, such as a passenger vehicles, that cater to visitors. The housing industry is expected to remain robust through 2021, with pricing and listing trends expected to continue. Of course, the housing market is subject to the whims of consumer sentiment, but major changes in the market, absent another unforeseen global event, seem unlikely.

Table 55: Top 10 Real Estate & Rental Industries by Projected 1-Year Percentage Growth

Industry	Projected 1-Year % Growth	Current Avg. Annual Wages
Home Health Equipment Rental	7.1%	48,340
All Other Consumer Goods Rental	7.1%	33,806
Video Tape and Disc Rental	7.1%	37,288
Recreational Goods Rental	7.0%	26,586
General Rental Centers	3.7%	51,440
Construction, Mining, and Forestry Machinery and Equipment Rental and Leasing	3.3%	98,377
Other Commercial and Industrial Machinery and Equipment Rental and Leasing	3.2%	54,296
Commercial Air, Rail, and Water Transportation Equipment Rental and Leasing	3.1%	122,361
Office Machinery and Equipment Rental and Leasing	3.1%	90,986
Passenger Car Rental	1.8%	37,415

Source: JobsEQ, data as of 2020Q3



Table 56: Top 10 Real Estate & Rental Industries by Projected 5-Year Percentage Growth

Industry	Projected 5-Year Avg. Annual % Growth	Current Avg. Annual Wages
Passenger Car Rental	1.4%	37,415
Truck, Utility Trailer, and RV (Recreational Vehicle) Rental and Leasing	1.4%	51,272
Home Health Equipment Rental	1.3%	48,340
All Other Consumer Goods Rental	1.3%	33,806
Video Tape and Disc Rental	1.3%	37,288
Recreational Goods Rental	1.2%	26,586
General Rental Centers	-0.1%	51,440
Construction, Mining, and Forestry Machinery and Equipment Rental and Leasing	-0.2%	98,377
Other Commercial and Industrial Machinery and Equipment Rental and Leasing	-0.2%	54,296
Commercial Air, Rail, and Water Transportation Equipment Rental and Leasing	-0.2%	122,361

Source: JobsEQ, data as of 2020Q3

## Arts, Entertainment, and Recreation

### Sector Snapshot

Industry	Current Employment	Current Avg. Annual Wages	1-Year Projected Growth	Projected Annual % Growth
Fitness and Recreational Sports Centers	953	17,904	60	6.3%
Independent Artists, Writers, and Performers	253	22,381	4	1.7%
All Other Amusement and Recreation Industries	207	34,040	13	6.1%
Nature Parks and Other Similar Institutions	200	89,215	13	6.7%
Other Gambling Industries	150	42,776	13	8.8%
Sports Teams and Clubs	117	23,651	5	4.0%
Museums	95	57,754	6	6.7%
Golf Courses and Country Clubs	92	34,651	6	6.0%
Skiing Facilities	87	12,732	5	6.0%
Other Spectator Sports	68	18,964	3	4.4%

Source: JobsEQ, data as of 2020Q3

The arts, entertainment, and recreation sector typically relies on in-person patronage from locals and from tourists during the summer. Thus, unsurprisingly, there were significant job losses in sub-industries of the sector that provide services in a communal or nonessential environment. The losses were magnified by local stay-at-home ordinances preventing residential patronage in addition to travel restrictions decimating the tourist season.

*Table 57: Top 5 Arts & Recreation Industries by Employees Lost in 2020*

Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected Annual % Growth
All Other Amusement and Recreation Industries	-165	-44.3%	13	6.1%
Fitness and Recreational Sports Centers	-77	-7.5%	60	6.3%
Museums	-45	-31.9%	6	6.7%
Sports Teams and Clubs	-38	-24.6%	5	4.0%
Other Gambling Industries	-36	-19.4%	13	8.8%

Source: JobsEQ, data as of 2020Q3

Only one sub-industry saw any employment growth this year, making the sector, when viewed from an industrial-level, one of the most severely impacted by the coronavirus pandemic and associated economic effects. As citizens begin to travel again and consumers begin to spend their disposable income on recreation, most of these industries should rebound. The main concern should be, however, whether or not many businesses closed permanently during the

pandemic. There is not information available to quantify that at this time, however, it should definitely be an area of study in the future.

*Table 58: Top 5 Arts & Recreation Industries by Employees Added in 2020*

Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected 1-Year % Growth
Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures	3	27.0%	-1	-6.8%
Historical Sites	0	1.8%	0	6.3%
Marinas	0	-2.8%	0	6.6%
Racetracks	0	-2.8%	0	4.5%

Source: JobsEQ, data as of 2020Q3

### Looking Forward

*Table 59: Top 10 Arts & Recreation Industries by Projected 1-Year Percentage Growth*

Industry	Projected 1-Year % Growth	Current Avg. Annual Wages
Amusement and Theme Parks	28.6%	28,315
Amusement Arcades	28.6%	21,401
Other Gambling Industries	8.8%	42,776
Nature Parks and Other Similar Institutions	6.7%	89,215
Museums	6.7%	57,754
Zoos and Botanical Gardens	6.7%	43,157
Promoters of Performing Arts, Sports, and Similar Events with Facilities	6.6%	27,661
Marinas	6.6%	39,683
Promoters of Performing Arts, Sports, and Similar Events without Facilities	6.5%	31,281
Fitness and Recreational Sports Centers	6.3%	17,904

Source: JobsEQ, data as of 2020Q3

As mentioned above, the sector is expected to rebound in 2021 as tourists begin to return to Anchorage, and as locals feel comfortable going to recreation facilities. The timeframe of the recovery, in that respect, is uncertain because it relies on consumer sentiment. How the pandemic has affected consumer spending behavior will likely be studied in the future, and that spending behavior will ultimately be a major determinant of the success of certain industries in the sector moving forward.

*Table 60: Top 10 Arts & Recreation Industries by Projected 1-Year Percentage Growth*

<b>Industry</b>	<b>Projected 5-Year Avg. Annual % Growth</b>	<b>Current Avg. Annual Wages</b>
Amusement Arcades	8.0%	21,401
Amusement and Theme Parks	7.8%	28,315
Promoters of Performing Arts, Sports, and Similar Events with Facilities	6.0%	27,661
Promoters of Performing Arts, Sports, and Similar Events without Facilities	5.9%	31,281
Marinas	4.6%	39,683
Fitness and Recreational Sports Centers	4.4%	17,904
Racetracks	4.2%	16,763
All Other Amusement and Recreation Industries	4.1%	34,040
Golf Courses and Country Clubs	4.1%	34,651
Skiing Facilities	4.1%	12,732

Source: JobsEQ, data as of 2020Q3

## Mining, Quarrying, and Oil and Gas Extraction

### Sector Snapshot

Industry	Current Employment	Current Avg. Annual Wages	1-Year Projected Growth	Projected Annual % Growth
Crude Petroleum Extraction	1,223	278,674	20	1.7%
Support Activities for Oil and Gas Operations	727	136,972	35	4.9%
Natural Gas Extraction	294	212,620	5	1.7%
Gold Ore Mining	59	118,727	0	0.5%
Drilling Oil and Gas Wells	34	109,139	2	4.8%
Construction Sand and Gravel Mining	26	78,857	0	0.6%
Support Activities for Metal Mining	20	191,634	1	4.9%
Support Activities for Nonmetallic Minerals (except Fuels)				
Mining	10	95,874	0	4.9%
Crushed and Broken Limestone Mining and Quarrying	6	84,875	0	0.5%

Source: JobsEQ, data as of 2020Q3

The mining and logging sector, which, in Anchorage, is primarily made up of oil & gas support industries saw major losses in key industries over the course of 2020. While some of this can be attributed to pandemic-related slowdowns in production, some losses may have happened absent the pandemic. For example, the BP sale to Hilcorp<sup>29</sup> likely led to operations and support employment reduction as operations were streamlined, and the uncertainty over Ballot Measure 1 could have led to production delays absent the pandemic as well.

*Table 61: Top 5 Mining & Logging Industries by Employees Lost in 2020*

Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected 1-Year % Growth
Support Activities for Oil and Gas Operations	-158	-17.8%	35	4.9%
Drilling Oil and Gas Wells	-51	-60.0%	2	4.8%
Natural Gas Extraction	-44	-12.9%	5	1.7%
Support Activities for Nonmetallic Minerals (except Fuels)				
Mining	-22	-68.7%	0	4.9%
Construction Sand and Gravel Mining	-9	-24.4%	0	0.6%

Source: JobsEQ, data as of 2020Q3

Petroleum extraction activities, even if they were stymied somewhat by the pandemic and political uncertainty, did contribute to some employment growth in the sector in 2020.

<sup>29</sup> Hurst, “BP to Close Hilcorp Alaska Deal With Revised Payment Terms.”

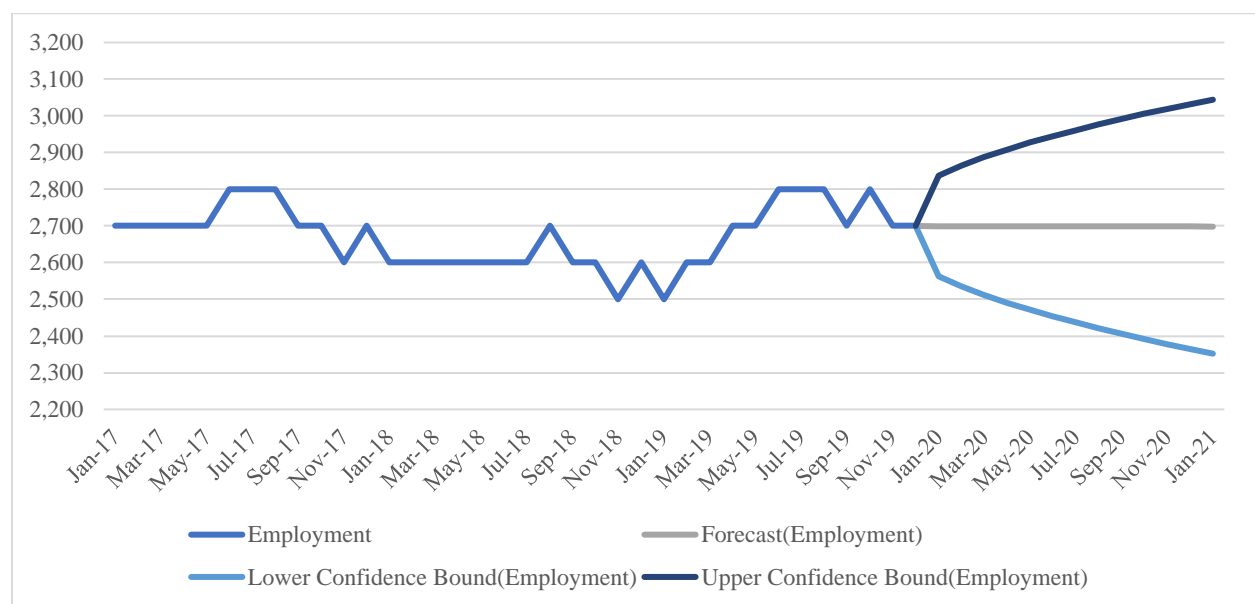
Otherwise, job gains were minimal and the only other successes were in industries where losses were relatively lower than in the rest of the sector.

*Table 62: Top 5 Mining & Logging Industries by Employees Added in 2020*

Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected 1- Year % Growth
Crude Petroleum Extraction	47	4.0%	20	1.7%
Crushed and Broken Limestone Mining and Quarrying	2	54.2%	0	0.5%
Support Activities for Metal Mining	-1	-5.7%	1	4.9%
Gold Ore Mining	-3	-4.3%	0	0.5%
Construction Sand and Gravel Mining	-9	-24.4%	0	0.6%

Source: JobsEQ, data as of 2020Q3

*Figure 30: Baseline Projection for Mining and Logging Employment in 2020*

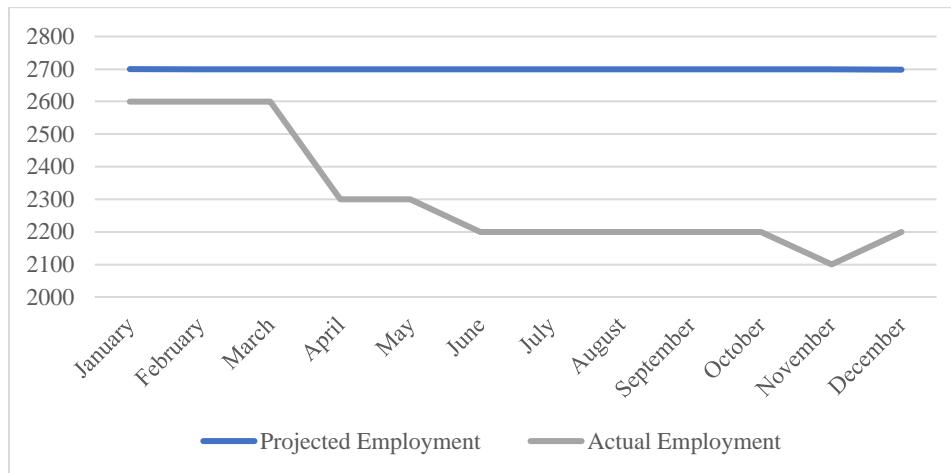


Source: State of Alaska DOLWD, AEDC calculations

Assuming that previous trends would have been sustained during 2020, the sector lost about 400 jobs beyond baseline expectations, a 14.5% decrease from what was previously projected. However, this assumption does overestimate what employment would have looked like in a non-pandemic world because it does not account for events that likely would have happened regardless of the pandemic, some of which were outlined previously in the chapter.

Regardless, the average monthly job totals were substantially lower in 2020 than in 2019, and this can be attributed, in part, to the pandemic.

*Figure 31: 2020 Mining & Logging Employment - Baseline vs. Expectation*



Source: State of Alaska DOLWD, AEDC calculations

According to the Alaska Department of Labor and Workforce development, approximately 65.3% of workers in the mining and logging sector were local in 2019.<sup>30</sup> Presuming that this trend would have held in 2020, approximately 260 of the average monthly jobs lost during 2020 belonged to Anchorage residents. These job losses, as mentioned above, were concentrated in industries specializing in oil and gas extraction. In particular, support industries saw significant declines in 2020Q3 compared to 2019Q3, which can be attributed to office closures. Industries focused on direct extraction likely contracted due to delays in production due to pandemic precautions, as well as regulatory uncertainty due to Ballot Measure 1, which was defeated in November 2020. Most of these sub-industries are expected to rebound modestly in 2021, though not nearly enough to offset the major losses in 2020.

### Looking Forward

Long-term the sector will likely go the way of its oil and gas sub-industries. These industries, which have struggled since oil prices crashed in 2014, were originally expected to rebound somewhat in 2020, although that clearly did not occur. While there is always the potential to expand production in some areas and to continue to search for new reservoirs or extraction opportunities, the desirability of Alaska, and thus Anchorage as a support hub, as an

<sup>30</sup> Robinson and Kreiger, “2019 Nonresidents Working in Alaska.”

extraction locale will depend heavily on commodity prices and financial competitiveness which are influenced far beyond the municipal level.

*Table 63: Top 10 Mining & Logging Industries by Projected 1-Year Percentage Growth*

<b>Industry</b>	<b>Projected 1-Year % Growth</b>	<b>Current Avg. Annual Wages</b>
Support Activities for Oil and Gas Operations	4.9%	136,972
Support Activities for Metal Mining	4.9%	191,634
Support Activities for Nonmetallic Minerals (except Fuels)		
Mining	4.9%	95,874
Drilling Oil and Gas Wells	4.8%	109,139
Crude Petroleum Extraction	1.7%	278,674
Natural Gas Extraction	1.7%	212,620
Construction Sand and Gravel Mining	0.6%	78,857
Gold Ore Mining	0.5%	118,727
Crushed and Broken Limestone Mining and Quarrying	0.5%	84,875

Source: JobsEQ, data as of 2020Q3

First, oil and gas extraction in Alaska is not cheap. Compared to other extraction locales, both domestically and internationally,<sup>31</sup> drilling and extracting oil can be difficult given the harsh weather conditions and the remoteness of most reservoirs. Though the infrastructure currently exists to support enhanced production, it is not being fully utilized, and oil companies, particularly those with a global footprint, have elected to prioritize other sites outside of the state.

Second, regulatory uncertainty makes the cost-benefit analysis necessary to green-light new and expanded projects difficult, particularly where it might make it additionally costly to operate in the state.<sup>32</sup> Alaska has changed and amended its severance tax laws multiple times in the past decade, with another proposed change shot down this past fall. The introduction of

<sup>31</sup> Andrew Hecht, "Breakeven Crude Oil Production Costs Around The World," *Yahoo Finance*, April 27, 2020, [https://finance.yahoo.com/news/breakeven-crude-oil-production-costs-085329648.html?guccounter=1&guce\\_referrer=aHR0cHM6Ly93d3cuZWNVc2lhLm9yZy8&guce\\_referrer\\_sig=AQAAAHBVKRyR2r9ZE7T6U3NZHP1U1-VxH9sUT7EdsLtsEw3FGDupXEpkgcd\\_9Liao3HIWtIvEC00S1ye1YDm7rS38AIMQeyLE\\_uRrc5744nCh3Tlr9BguOFFqYIMVvoqp7Fu8F3ECw1nRURnU7km-TQaSYIQRouf0yTTYiLdTcRn5vup](https://finance.yahoo.com/news/breakeven-crude-oil-production-costs-085329648.html?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZWNVc2lhLm9yZy8&guce_referrer_sig=AQAAAHBVKRyR2r9ZE7T6U3NZHP1U1-VxH9sUT7EdsLtsEw3FGDupXEpkgcd_9Liao3HIWtIvEC00S1ye1YDm7rS38AIMQeyLE_uRrc5744nCh3Tlr9BguOFFqYIMVvoqp7Fu8F3ECw1nRURnU7km-TQaSYIQRouf0yTTYiLdTcRn5vup); Mark Young, "Analysis: Lowest Cost Oil Producers in North America," April 16, 2020, <https://www.jwnenergy.com/article/2020/4/16/lowest-cost-oil-producers-north-america/>.

<sup>32</sup> Mario Mansour and Carole Nakhle, "Fiscal Stabilization in Oil and Gas Contracts: Evidence and Implications" (The Oxford Institute for Energy Studies, January 2016).



Ballot Measure 1 threatened production and exploration activities during 2020,<sup>33</sup> and there’s no reason to think that future proposals that would measurably impact the financial costs of operating in the state wouldn’t result in similar reticence to invest in Alaska.

Finally, industries that produce a globally demanded and globally supplied commodity are subject to international trends, which can lead to both increased opportunities and increased threats to employment and production locally. Of course, the local regulatory and financial environment still plays a role – if anything, it can enhance or exacerbate global trends. If the global demand for oil goes up meaningfully in the future, production in Alaska, provided a favorable cost and regulatory environment, may also go up. However, if, for example, there is a global shift to electric or hybrid vehicles that leads to lower demand for oil products, expect producers to react accordingly and prioritize production in low-cost, stable regulatory environments.

Thus, even if there are expanded opportunities for oil and gas exploration in the state, the obstacles of taxation, cost of production, and regulatory uncertainty could prevent those areas from being developed regardless. The oil and gas sector has long been a stalwart for not just the state of Alaska, but in Anchorage as well, but the recovery from 2020 and the earlier, years-long recession could take a long-time and producers may end up moving on to other locations.

*Table 64: Top 10 Mining & Logging Industries by Projected 5-Year Percentage Growth*

<b>Industry</b>	<b>Projected 5-Year Avg. Annual % Growth</b>	<b>Current Avg. Annual Wages</b>
Support Activities for Oil and Gas Operations	5.3%	136,972
Drilling Oil and Gas Wells	5.3%	109,139
Support Activities for Metal Mining	5.3%	191,634
Support Activities for Nonmetallic Minerals (except Fuels) Mining	5.3%	95,874
Gold Ore Mining	0.3%	118,727
Construction Sand and Gravel Mining	-0.3%	78,857
Crushed and Broken Limestone Mining and Quarrying	-0.4%	84,875
Crude Petroleum Extraction	-1.8%	278,674
Natural Gas Extraction	-1.8%	212,620

Source: JobsEQ, data as of 2020Q3

<sup>33</sup> Tegan Hanlon, “Conflicting Claims, Big Money at Heart of Debate on Alaska’s Oil Taxes,” October 9, 2020, <https://www.alaskapublic.org/2020/10/09/conflicting-claims-big-money-at-heart-of-debate-on-alaskas-oil-taxes/>.

## Manufacturing Sector Snapshot

Industry	Current Employment	Current Avg. Annual Wages	1-Year Projected Growth	Projected 1-Year % Growth
Seafood Product Preparation and Packaging	257	47,596	8	3.0%
Commercial Bakeries	167	44,202	1	0.7%
Commercial Printing (except Screen and Books)	156	43,212	1	0.6%
Breweries	99	30,623	1	1.0%
Other Aircraft Parts and Auxiliary Equipment Manufacturing	91	46,418	-1	-1.6%
Sign Manufacturing	85	34,702	2	1.9%
Fabricated Structural Metal Manufacturing	72	56,203	0	0.2%
Prefabricated Wood Building Manufacturing	69	63,460	-1	-1.0%
Retail Bakeries	60	21,994	1	1.2%
Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables	51	60,157	0	-0.8%

Source: JobsEQ, data as of 2020Q3

The local manufacturing industry is quite small, comprised of around 2,000 workers. As with many other sectors highlighted in this report, the health of this industry is subject to local demand and local economic trends, and as a result, faced contraction in 2020. In fact, the sector-wide employment contraction of 5.5% is almost equal to the economy-wide employment contraction of 5.7%.

*Table 65: Top 5 Manufacturing Industries by Employees Lost in 2020*

Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected 1-Year % Growth
Seafood Product Preparation and Packaging	-52	-16.9%	8	3.0%
Commercial Printing (except Screen and Books)	-23	-12.6%	1	0.6%
Commercial Bakeries	-19	-10.2%	1	0.7%
Plate Work Manufacturing	-13	-71.8%	0	0.1%
Automatic Environmental Control Manufacturing for Residential, Commercial, and Appliance Use	-11	-25.8%	0	-0.8%

Source: JobsEQ, data as of 2020Q3

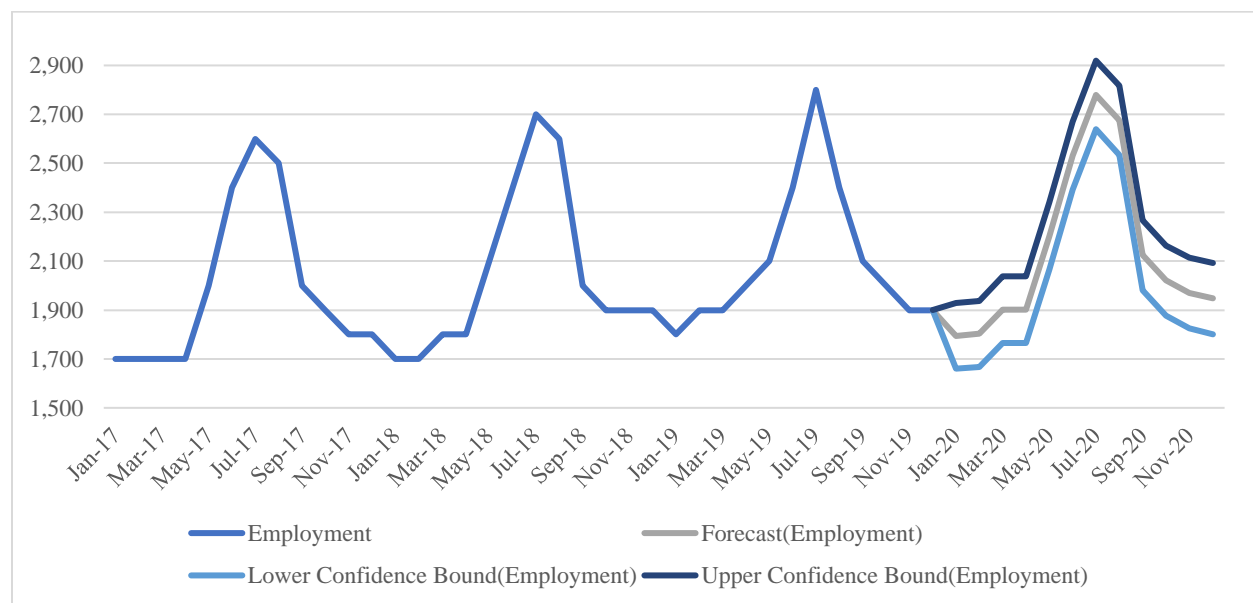
A few sub-industries added employees in 2020, though none of the industries are large enough to significantly impact the overall sector or the overall economy.

Table 66: Top 5 Manufacturing Industries by Employees Added in 2020

Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected 1- Year % Growth
Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables	18	53.1%	0	-0.8%
Other Concrete Product Manufacturing	12	50.9%	-1	-3.0%
Animal (except Poultry) Slaughtering	12	80.5%	0	-0.9%
Fabricated Structural Metal Manufacturing	11	18.1%	0	0.2%
Metal Tank (Heavy Gauge) Manufacturing	9	28.0%	2	3.9%

Source: JobsEQ, data as of 2020Q3

Figure 32: Baseline Projection of Manufacturing Employment for 2020



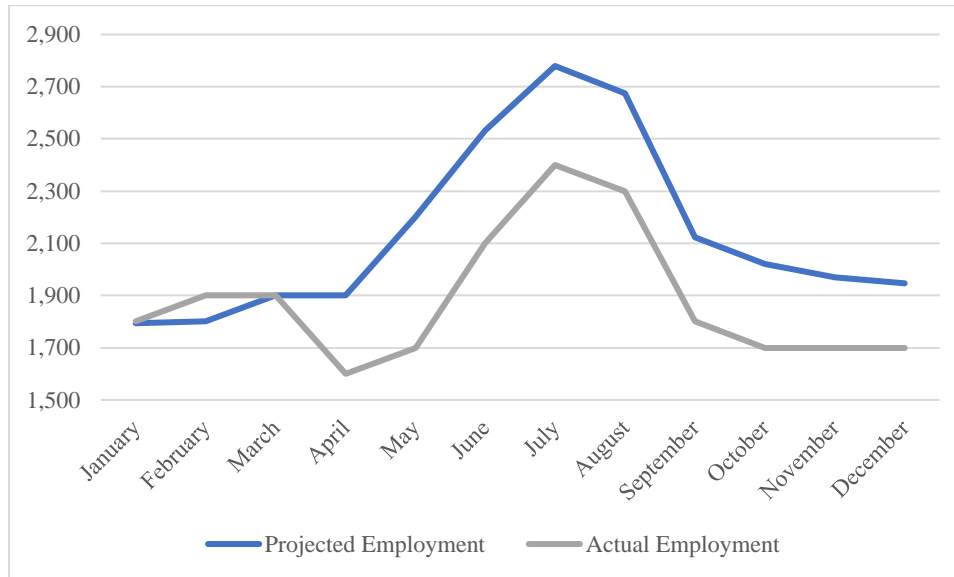
Source: State of Alaska DOLWD, AEDC calculations

According to data from the State of Alaska Department of Labor and Workforce Development, average monthly employment in the sector declined to approximately 1,900 in 2020 from a monthly average of 2,100 in 2019, a loss of 200 workers. Given the last three years of trends, the baseline projection for average monthly employment in 2020 was approximately 2,100 workers, indicating that the sector was expected to remain stable in 2020, pre-pandemic. Per the state, approximately 77.9% of manufacturing workers in Anchorage were local in 2019.<sup>34</sup> Assuming that trend would have held in 2019, about 160 of the 200 jobs lost in 2020 would have

<sup>34</sup> Robinson and Kreiger, "2019 Nonresidents Working in Alaska."

belonged to Anchorage residents, with the rest split between out-of-state workers and Alaskans who reside outside of Anchorage.

*Figure 33: 2020 Manufacturing Employment - Baseline vs. Expected*



Source: State of Alaska DOLWD, AEDC calculations

### Looking Forward

*Table 67: Top 10 Manufacturing Industries by Projected 1-Year Percentage Growth*

Industry	Projected 1-Year % Growth	Current Avg. Annual Wages
Footwear Manufacturing	12.5%	31,672
Cut and Sew Apparel Contractors	9.0%	8,742
Men's and Boys' Cut and Sew Apparel Manufacturing	8.9%	8,742
Other Cut and Sew Apparel Manufacturing	8.9%	8,742
Women's, Girls', and Infants' Cut and Sew Apparel Manufacturing	8.0%	14,889
Pottery, Ceramics, and Plumbing Fixture Manufacturing	6.6%	9,584
Curtain and Linen Mills	6.6%	2,655
Clay Building Material and Refractories Manufacturing	6.5%	9,584
Apparel Accessories and Other Apparel Manufacturing	5.9%	18,856
Other Pressed and Blown Glass and Glassware Manufacturing	4.9%	5,045

Source: JobsEQ, data as of 2020Q3

All of the manufacturing industries expected to grow the most in 2020 have fewer than 20 employees. Thus, even though, by growth percentage their recovery looks impressive, in actuality it doesn't move the needle much for the sector, or more broadly, the economy as a

whole. The industries expected to grow the most over a five-year horizon are similarly small, and while it is positive that these, often artisanal, industries flourish, manufacturing is unlikely to become a major sector in the Anchorage economy in the future.

*Table 68: Top 10 Manufacturing Industries by Projected 5-Year Percentage Growth*

<b>Industry</b>	<b>Projected 5-Year Avg. Annual % Growth</b>	<b>Current Avg. Annual Wages</b>
Cut and Sew Apparel Contractors	2.6%	8,742
Men's and Boys' Cut and Sew Apparel Manufacturing	2.6%	8,742
Other Cut and Sew Apparel Manufacturing	2.6%	8,742
Footwear Manufacturing	1.9%	31,672
Pottery, Ceramics, and Plumbing Fixture Manufacturing	1.8%	9,584
Other Pressed and Blown Glass and Glassware Manufacturing	1.8%	5,045
Clay Building Material and Refractories Manufacturing	1.8%	9,584
Women's, Girls', and Infants' Cut and Sew Apparel Manufacturing	1.7%	14,889
Cut Stone and Stone Product Manufacturing	1.2%	16,779
Machine Shops	1.0%	79,564

Source: JobsEQ, data as of 2020Q3

## Other Sectors

### Sector Snapshots

The Management of companies and enterprises, agriculture, forestry, fishing, and hunting, and utilities sectors all employ fewer than 2,000 employees in the municipality and have weathered the pandemic relatively well, though management industries fared worse than the others. The state does not publish data for each of these sectors individually, but JobsEQ data is available breaking down sector performance, though it should be noted that federal data, which JobsEQ utilizes, would not include the local marijuana industry. Though each sector may not employ a particularly large percentage of the local population, they nonetheless provide important services and goods, and have experienced some effects due to the pandemic. A few tables illustrating the impacts of the pandemic on these sectors, as well as their prospects for the future are presented below.

*Table 69: Management of Companies and Enterprises*

Industry	Current Employment	Current Avg. Annual Wages	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected 1-Year % Growth
Corporate, Subsidiary, and Regional Managing Offices	1,298	95,874	-90	-6.5%	7	0.6%
Offices of Other Holding Companies	252	130,418	2	0.7%	1	0.6%

Source: JobsEQ, data as of 2020Q3

*Table 70: Agriculture, Forestry, Fishing, and Hunting*

Industry	Current Employment	Current Avg. Annual Wages	1-Year Projected Growth	Projected 1-Year % Growth
Shellfish Fishing	206	32,181	1	0.7%
Finfish Fishing	206	34,002	1	0.6%
Other Food Crops Grown Under Cover	159	28,652	1	0.7%
Nursery and Tree Production	49	32,135	0	0.7%
Hunting and Trapping	21	26,465	0	0.1%
Other Marine Fishing	16	31,407	0	0.7%
Support Activities for Animal Production	11	24,593	0	0.0%
Other Vegetable (except Potato) and Melon Farming	8	32,927	0	-0.2%
Support Activities for Forestry	8	48,450	0	-0.4%
Logging	5	7,004	0	-2.8%

Source: JobsEQ, data as of 2020Q3

Table 71: Agriculture Industries by Employees Lost in 2020

Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected 1- Year % Growth
Shellfish Fishing	-8	-3.9%	1	0.7%
Other Vegetable (except Potato) and Melon Farming	-4	-36%	0	0%
Hunting and Trapping	-1	-2.8%	0	0%

Source: JobsEQ, data as of 2020Q3

Table 72: Agriculture Industries by Employees Added in 2020

Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected 1- Year % Growth
Other Food Crops Grown Under Cover	7	5%	1	1%
Nursery and Tree Production	1	3%	0	1%

Source: JobsEQ, data as of 2020Q3

Table 73: Utilities

Industry	Current Employment	Current Avg. Annual Wages	1-Year Projected Growth	Projected 1- Year % Growth
Electric Power Distribution	209	108,988	-4	-1.8%
Natural Gas Distribution	209	112,370	-5	-2.2%
Electric Bulk Power Transmission and Control	121	123,700	-2	-1.8%
Fossil Fuel Electric Power Generation	46	102,012	-2	-4.5%
Hydroelectric Power Generation	37	117,984	-1	-1.8%
Water Supply and Irrigation Systems	27	62,902	0	-0.5%
Wind Electric Power Generation	8	99,184	0	2.2%
Solar Electric Power Generation	1	88,382	0	2.7%

Source: JobsEQ, data as of 2020Q3

Table 74: Utilities Industries by Employment Change in 2020

Industry	1-Year Employment Change	1-Year Percentage Change	1-Year Projected Growth	Projected 1- Year % Growth
Fossil Fuel Electric Power Generation	-33	-42.1%	-2	-4.5%
Electric Power Distribution	-14	-6.2%	-4	-1.8%
Natural Gas Distribution	-8	-3.8%	-5	-2.2%
Solar Electric Power Generation	1	n/a	0	2.7%
Wind Electric Power Generation	2	23.3%	0	2.2%
Electric Bulk Power Transmission and Control	5	4.7%	-2	-1.8%
Water Supply and Irrigation Systems	9	50.2%	0	-0.5%
Hydroelectric Power Generation	26	234.9%	-1	-1.8%

Source: JobsEQ, data as of 2020Q3

### Looking Forward

Table 75: Management Industries by Projected 5-Year Percentage Growth

Industry	Projected 5- Year Avg. Annual % Growth
Corporate, Subsidiary, and Regional Managing Offices	0.0%
Offices of Other Holding Companies	0.0%

Source: JobsEQ, data as of 2020Q3

Table 76: Top 10 Agriculture Industries by Projected 1-Year Percentage Growth

Industry	Projected 1- Year % Growth	Current Avg. Annual Wages
Soil Preparation, Planting, and Cultivating	1.7%	14,057
Farm Management Services	1.7%	14,057
Crop Harvesting, Primarily by Machine	1.6%	14,057
Postharvest Crop Activities (except Cotton Ginning)	1.6%	14,057
Farm Labor Contractors and Crew Leaders	1.6%	14,057
Shellfish Fishing	0.7%	32,181
Other Food Crops Grown Under Cover	0.7%	28,652
Nursery and Tree Production	0.7%	32,135
Other Marine Fishing	0.7%	31,407
Finfish Fishing	0.6%	34,002

Source: JobsEQ, data as of 2020Q3



*Table 77: Top 10 Agriculture Industries by Projected 5-Year Percentage Growth*

<b>Industry</b>	<b>Projected 5-Year Avg. Annual % Growth</b>	<b>Current Avg. Annual Wages</b>
Support Activities for Animal Production	0.1%	24,593
Other Food Crops Grown Under Cover	0.0%	28,652
Nursery and Tree Production	0.0%	32,135
Other Vegetable (except Potato) and Melon Farming	-0.2%	32,927
Support Activities for Forestry	-0.4%	48,450
Soil Preparation, Planting, and Cultivating	-0.5%	14,057
Farm Management Services	-0.5%	14,057
Crop Harvesting, Primarily by Machine	-0.6%	14,057
Postharvest Crop Activities (except Cotton Ginning)	-0.6%	14,057
Farm Labor Contractors and Crew Leaders	-0.6%	14,057

Source: JobsEQ, data as of 2020Q3

*Table 78: Utilities Industries by Projected 5-Year Percentage Growth*

<b>Industry</b>	<b>Projected 5-Year Avg. Annual % Growth</b>	<b>Current Avg. Annual Wages</b>
Solar Electric Power Generation	2.7%	88,382
Wind Electric Power Generation	2.0%	99,184
Water Supply and Irrigation Systems	-0.5%	62,902
Electric Power Distribution	-2.0%	108,988
Electric Bulk Power Transmission and Control	-2.0%	123,700
Hydroelectric Power Generation	-2.0%	117,984
Natural Gas Distribution	-2.2%	112,370
Fossil Fuel Electric Power Generation	-4.6%	102,012

Source: JobsEQ, data as of 2020Q3

## Data Notes

Occupation and employment data from JobsEQ is based on data from the Bureau of Labor Statistics and estimates from Chmura Economics updated through 2020Q3. The employment change metric in many tables is the change in the four-quarter average in employment through 2020Q3.

Forecast data from JobsEQ accounts for COVID-related economic recovery, subject to assumptions about vaccine rollout in 2021. The exact methodology of the forecast is proprietary. One-year forecasts are for the period from 2020Q3 to 2021Q3. All percentage growth projections cited use the COVID-related forecast parameters, and, for five-year projections, are presented in terms of average annual percentage growth, which may be inflated due to the initial economic recovery from the pandemic.

All 2020 baseline projections for various sectors are calculated by AEDC, based on monthly employment data for the Municipality of Anchorage published by the State of Alaska Department of Labor, with data from 2017 through 2019 forming the basis of the projection. The projection accounts for seasonality and was generated using an exponential smoothing algorithm. The two years prior to 2019 were included in generating the forecast to account for potential trends in each sector prior to the pandemic. The data provided by the state used in these forecasts was as of February 2021, and may be subject to significant revision in the future. Moreover, as this data does not necessarily align exactly with NAICS sector codes, the State's language for the data used is cited where appropriate and the most applicable data was used at AEDC's discretion.

In general, the data presented in this report is subject to future revision and often involves preliminary estimates. The figures are most useful for evaluating the relative impacts of the pandemic on different sectors, rather than for quantifying, in an exact sense, what losses were sustained and how many new jobs will be created moving forward. Above all, we hope that these numbers and this data, considered with nuance and in their appropriate context, can open a discussion about the pandemic's effect on Anchorage.

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