

Alaska INDUSTRY FORECAST

2012 to 2022

Health care and mining will lead growth

By **PAUL MARTZ**

Alaska is projected to gain 36,113 jobs between 2012 and 2022 for a growth rate of 10.8 percent. The health care and social assistance sector will grow the most at a projected 25 percent, followed closely by mining — minus oil and gas — at 24.8 percent.

Two other notable categories — oil and gas extraction and professional and business services — are likely to grow at a faster rate than the economy overall. On the other end of the spectrum, we expect construction and information to grow slower than overall employment.

Government is the only sector projected to lose jobs. We expect the federal job count to drop 9 percent, and project little to no growth for state and local government.

Health care continues to lead

Alaska's population is expected to grow by 10 percent between 2012 and 2022. During the same period, Alaskans aged 65 and older will increase by a whopping 79 percent, which will substantially increase demand for health care workers.

Hospital employment will grow by an estimated 20.1 percent. This is partly due to the overall population increase, but senior citizens use a disproportionate amount of hospital services. The same is true for ambulatory health care — physician's offices, outpatient care centers, and home health care services — which we expect to grow by 28.5 percent. High demand by seniors will especially boost the home health care services industry, which provides patient care in the home

rather than a clinic or hospital.

Increases in social assistance will be due to growth in nursing care facilities and retirement communities, which we project will grow by 33.1 percent over the 10-year period.

Together, health care and social assistance will be responsible for 31 percent of total job growth, and its share of employment in the state will increase from 13.4 percent to 15.2 percent. This sector is undoubtedly a driving force in Alaska, but growth has slowed from its 24-year average of 4 percent per year.

Mining a close second

Nonoil mining employment is projected to grow by 24.8 percent from 2012 to 2022. This increase, nearly equal to that of health care, will be due to a combination of higher-than-average mineral commodity prices and the expansion of existing mines.

Metal ore mining jobs — the largest mining subcategory — more than doubled from 2001 to 2013. We expect that upward trend to continue with growth in existing mines and the continuation of work toward prospective mines. Specifics include:

- Kinross Fort Knox Mine has submitted a request to the Bureau of Land Management to expand its gold mine onto surrounding federal lands.
- Coeur Mining's Kensington gold mine, which began operating in 2010, will undergo additional surface exploration in 2014.
- Due to promising recent exploration around the Pogo gold mine, Sumitomo is expected to continue operating the mine past the end of its originally

1

Alaska Employment Forecast by Industry

2012 TO 2022

Industry ¹	2012 estimated jobs ²	2022 projected jobs	Change from 2012 to 2022	Total % change ³
Total Employment, All Jobs ⁴	333,953	370,066	36,113	10.8%
Goods-Producing	48,501	54,132	5,631	11.6%
Natural Resources and Mining	18,062	21,494	3,432	19.0%
Agriculture, Forestry, Fishing and Hunting	1,033	1,091	58	5.6%
Mining	17,029	20,403	3,374	19.8%
Oil and Gas Extraction	3,889	4,484	595	15.3%
Mining (except Oil and Gas)	2,758	3,441	683	24.8%
Support Activities for Mining	10,382	12,478	2,096	20.2%
Construction	16,545	17,632	1,087	6.6%
Construction of Buildings	4,909	5,630	721	14.7%
Heavy and Civil Engineering Construction	3,269	3,374	105	3.2%
Specialty Trade Contractors	8,367	8,628	261	3.1%
Manufacturing	13,894	15,006	1,112	8.0%
Food Manufacturing	10,616	11,319	703	6.6%
Seafood Product Preparation and Packaging	10,166	10,844	678	6.7%
Manufacturing, All Other	3,278	3,687	409	12.5%
Services-Providing	285,150	315,799	30,649	10.7%
Trade, Transportation, and Utilities	65,573	71,939	6,366	9.7%
Wholesale Trade	6,373	7,317	944	14.8%
Retail Trade	35,308	38,823	3,515	10.0%
Transportation and Warehousing ⁵	21,717	23,464	1,747	8.0%
Air Transportation	5,903	6,288	385	6.5%
Water Transportation	924	1,106	182	19.7%
Truck Transportation	3,220	3,764	544	16.9%
Transportation and Warehousing, All Other	11,670	12,306	636	5.4%
Utilities	2,175	2,335	160	7.4%
Information	6,189	6,370	181	2.9%
Financial Activities	12,885	14,168	1,283	10.0%
Finance and Insurance	7,023	7,604	581	8.3%
Real Estate and Rental and Leasing	5,862	6,564	702	12.0%
Professional and Business Services	29,337	33,895	4,558	15.5%
Professional, Scientific, and Technical Services	15,120	17,578	2,458	16.3%
Management of Companies and Enterprises	2,559	3,069	510	19.9%
Administrative and Support and Waste Management and Remediation Services	11,658	13,248	1,590	13.6%
Education and Health Services	76,123	90,154	14,031	18.4%
Educational Services, Public and Private ⁶	31,219	34,003	2,784	8.9%
Elementary and Secondary Schools, Public and Private	21,813	23,987	2,174	10.0%
Educational Services, Public and Private, All Other	9,406	10,016	610	6.5%

Table continues on next page

projected 2019 life span.

- Usibelli Coal Mine plans to open the Jumbo Dome mine in 2014, having completed the permit process in 2012.
- Teck Resources expects to continue Red Dog Mine production from the current deposits until 2031.
- Barrick Gold and NovaGolds' Donlin Creek project has continued to progress. As of summer 2014, the project was in the draft environmental impact statement stage of permitting, and the companies involved had signed an agreement with The Kuskokwim Corporation to use the surface lands at the proposed mine site.
- International Tower Hills is still exploring the Livengood Gold Mine, but its economic viability is uncertain because recent gold prices aren't high enough for the mine to begin operations.
- Exploration of Ucore Rare Earth Inc.'s Bokan-Dotson Ridge and Heatherdale Resources' Niblack project have continued, and both have been authorized to receive financial assistance from the Alaska Industrial Development and Export Authority.
- NovaCopper Inc. is still exploring the Arctic and Bornite deposits, although the prospects of that mine may hinge on construction of a road into the Ambler Mining District.

1

Alaska Employment Forecast by Industry, continued

2012 to 2022

Industry ¹	2012 estimated jobs ²	2022 projected jobs	Change from 2012 to 2022	Total % change ³
Health Care and Social Assistance, Public and Private ⁷	44,904	56,151	11,247	25.0%
Ambulatory Health Care Services	17,310	22,236	4,926	28.5%
Hospitals	13,225	15,877	2,652	20.1%
Health Care and Social Assistance, All Other	14,369	18,038	3,669	25.5%
Leisure and Hospitality	33,524	37,360	3,836	11.4%
Arts, Entertainment, and Recreation	4,703	5,259	556	11.8%
Accommodation and Food Services	28,821	32,101	3,280	11.4%
Accommodation	7,911	9,044	1,133	14.3%
Food Services and Drinking Places	20,910	23,057	2,147	10.3%
Other Services (Except Government)	12,196	12,904	708	5.8%
Total Government	49,323	49,009	-314	-0.6%
Total Federal Government ⁸	14,368	13,071	-1,297	-9.0%
Total State Government ⁹	17,832	18,774	942	5.3%
Total Local Government ¹⁰	17,123	17,164	41	0.2%
Unreported	302	135	-	-

Notes:

¹Several industry categories are not consistent with others we publish as detailed in the footnotes below.

²Industry sector numbers may not sum to total employment because of rounding.

³Percent change may be inconsistent with employment change due to rounding of the employment numbers.

⁴Excludes self-employed workers, fishermen, domestic workers, unpaid family workers, and nonprofit volunteers.

⁵Includes U.S. Postal Service employment.

⁶Includes local and state government educational service employment.

⁷Includes public sector hospital employment.

⁸Excludes uniformed military, postal, and hospital employment.

⁹Excludes university, railroad, and hospital employment.

¹⁰Excludes public school and hospital employment.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

Many other mining plans, proposals, and concepts are circulating throughout the state. Because these projects have such a volatile relationship with their respective commodity prices, financing, global economic fluctuations, and environmental regulations, it's impossible to predict which projects will proceed. The outlook for the industry is positive, but a significant decline in mineral prices would change that picture.

Range of possibilities for oil and gas

Oil and gas extraction employment is projected to increase by 15.3 percent over the period, but few industries have such a wide range of possible long-term outcomes. The last decade has been a wild ride for the industry with a combination of big price swings, declining production, and relatively strong overall job growth.

The impact of a major change to the state's oil and gas tax structure in 2014, and the new investment oil companies announced in response, will take a number of years to assess. Oil prices, both current and projected, will continue to drive investment decisions, but technological developments, national policies and politics, and stability in the world's oil-producing regions will all play a role.

Oil and gas extraction jobs represent about a third of

all oil and gas industry employment — the others are classified in oil and gas drilling or support activities, which are part of the support activities for mining category.

A mixed bag for construction

We project somewhat slow growth for construction, at 6.6 percent, due to the winding down of a large project in the power and communication line and related structures industry. (See the sidebar on page 9 for more information.) If we factored out this temporary blip, the projected growth rate would be 9.5 percent.

Residential and nonresidential building construction industries are expected to increase by 14.9 percent and 14.5 percent respectively. Residential construction's gains will come mostly from population increases and replacement of Alaska's aging housing stock. Nonresidential construction's increase will be the result of more demand for goods and services as Alaska's economy and population grow, and to a lesser extent, the aging of commercial and institutional buildings.

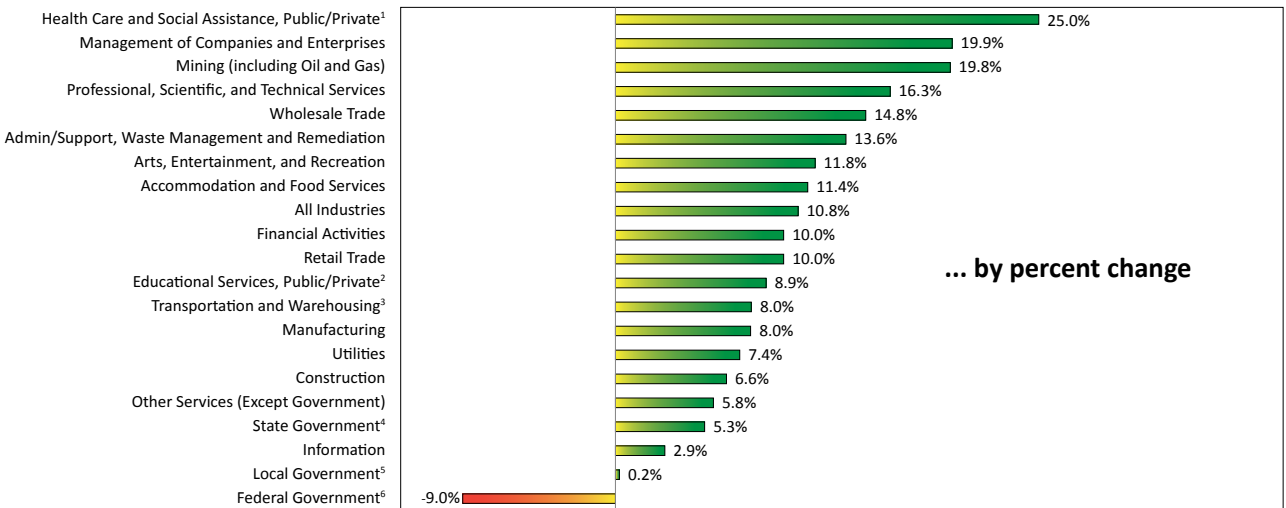
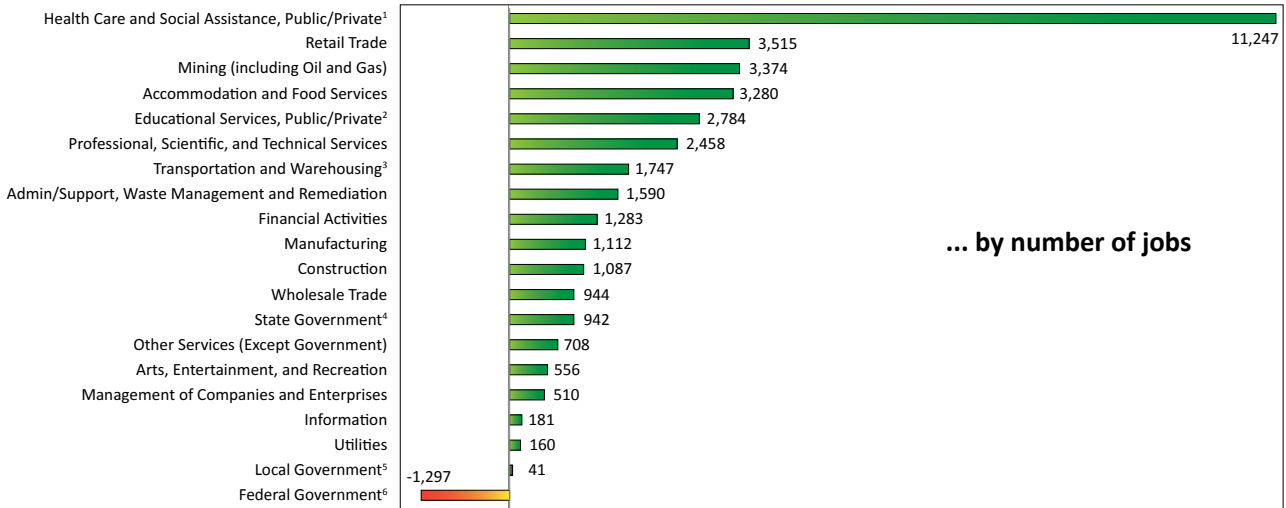
Some growth for parts of retail

Retail trade is likely to grow slightly slower than the

2

Health Care Will Grow the Most Again

ALASKA INDUSTRIES' PROJECTED GROWTH, 2012 TO 2022



Notes:

¹Includes public sector hospital employment.

²Includes local and state government educational service employment.

³Excludes university, railroad, and hospital employment.

⁴Excludes public school and hospital employment.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

How the Department of Labor creates these projections

The Department of Labor and Workforce Development creates 10-year industry and occupational forecasts for Alaska every other year. These projections are the product of four steps:

Step 1: Project industry employment

We use data from the Quarterly Census of Employment and Wages to determine the number of jobs for each industry during the first year, or “base year,” of the projection period.¹ Certain types of public-sector employment — such as education, hospitals, rail transportation, and U.S. Postal Service — are combined with employment in private-sector industries.

We create projections for each industry based on historical trends and expected economic changes, Alaska and U.S. population projections, and other industry-specific variables. The projections also take into account any knowledge of specific projects and observations of the current economic climate.

Step 2: Determine the occupational makeup, or “staffing pattern,” of each industry

To estimate base year employment for each occupation, we determine the occupational “staffing pattern” of each industry. Most industries have a variety of occupations. The staffing pattern is the breakdown of each occupation’s share of the industry’s total employment, referred to as “staffing ratios.”

Employers in Alaska report their workers’ occupations when they submit unemployment insurance quarterly contribution reports, which form the basis of Alaska’s Occupational Database. We use an analysis of the three most recent years of ODB data to calculate occupational staffing ratios for the majority of industries.

Step 3: Calculate base year and projected occupational employment

For each occupation, we multiply each industry’s estimated base year employment by the staffing ratio, then sum the results to get the base year estimate.

For the projections, adjustments to staffing ratios within an industry are called “change factors.” Change factors are multipliers that increase or decrease an occupation’s estimated share of industry employment based on factors other than an industry’s projected employment change. Some examples are changes in consumer demand, technology, or business practices.

We then multiply each industry’s projected employment by the adjusted staffing ratio for each occupation, with the results summed by each occupation to get the projections.

Step 4: Estimate job openings

Job openings for an occupation result from both job growth and replacements of workers who leave. An occupation’s growth openings are equal to its positive change over the projection period. Estimates of replacement openings use a combination of Bureau of Labor Statistics formulas and formulas derived from an analysis of historical ODB data.

¹Estimates and projections do not include self-employed workers, private household workers, most agricultural workers and fishermen, and others who are not covered by the state’s unemployment insurance program.

overall economy, at 10 percent over the 10-year period. Changing consumer behavior suggests sales will lag at electronics and appliance stores as well as book, periodical, and music stores. Clothing and clothing accessory stores are also likely to weigh down job growth, as they haven’t rebounded since losing approximately 200 jobs in 2009.

On the growth side, we expect health and personal care stores to add 374 jobs due to an aging population and more demand for over-the-counter health care supplies and medications.

This industry has already begun to expand in Alaska with Walgreen’s opening stores in the Anchorage/Matanuska-Susitna area in 2009. Two more stores are scheduled to open in Fairbanks in 2014. And as we’ve seen in other industries, once a national chain opens in Alaska, its competition soon follows.

Growth in motor vehicle and parts dealers, along with department stores, will likely top 16 percent. The recession hit automotive industries hard, but job growth has accelerated as consumers regain confidence. Department store employment has been relatively flat

Plant construction brought major shifts for the industry

From 2011 to 2013, Chugach Electric and Municipal Light and Power built a 183 megawatt gas-fired power plant, dubbed the Southcentral Power Project. That project added more than 400 jobs between 2011 and 2012, of which nearly 200 disappeared as the project neared completion in 2013.

Now that the construction phase is winding down, employment on the project is expected to decline to near zero, returning the industry's overall employment to levels more consistent with long-term trends.

In addition to the newly finished plant, Anchorage Municipal Light and Power will begin work on the George M. Sullivan Plant 2 Generation Replacement Project, which it expects to complete in 2016. This will produce an additional employment spike for the industry.

since 2006, but population increase and higher household spending is projected to boost employment by 16.9 percent.

The leisure and hospitality sector is projected to add jobs at a rate of 11.4 percent, likely because of overall population growth and more tourists visiting the state. We expect travel accommodations and RV parks to grow by over 14 percent combined, and restaurants by 12.4 percent.

The only projected decline in the retail sector is for bars, which we expect to drop by 9.2 percent. Jobs at bars have been on a downward trend since the late 1990s, as consumers appear to favor restaurants serving food as well as alcohol.

Water, truck transportation gains

The transportation and warehousing sector will also benefit from more tourists in the coming years, resulting in a projected employment gain of 8 percent.

Scenic and sightseeing land transportation has been slowly recovering from the effects of the national recession. However, some of that sluggishness appears to be the result of sales and purchases of land tour operations within interior Alaska. We expect that once the industry becomes more stable, employment will increase to 1,300 jobs, which would be near its pre-recession level.

Water transportation employment, which includes cruise ships and freight transportation, is expected to increase by almost 20 percent. For the truck transportation industry, we project growth at 16.9 percent because of increased investment on the North Slope,

overall population growth, and the potential for a fleet of trucks moving liquefied natural gas off the North Slope.

The most significant strains on transportation will be the U.S. Postal Service and the rail transportation industry. Because of continued nationwide losses in revenue, postal employment is projected to fall by 20.6 percent in Alaska from 2012 to 2022. We don't expect the rail transportation industry to fare much better, with an anticipated job loss of 17.1 percent.

The decline in rail transportation began in 2008 and continued into 2013 with a total loss of around 200 jobs. The closure of the Flint Hills refinery in North Pole, which was a major source of revenue for the railroad, is expected to spur additional job cuts. The number of jobs necessary to maintain railroad operations is unclear.

More students, more jobs in elementary, secondary schools

Public and private education will add jobs at a projected rate of 8.9 percent over the 10-year period, with elementary and secondary schools responsible for 78 percent of that growth. The population of 5-to-18-year-olds will increase by about 11.5 percent during that time, but the number of teachers and staff aren't likely to increase at the same pace.

The remaining growth will be in education services, which consist of the University of Alaska, Alaska Pacific University, trade schools, training organizations, and private sports and recreational instructors. The University of Alaska's enrollment remained high during the national recession and recovery. However, its enrollment seems to have peaked, and reduced state spending will also affect the university system in the future.

Net losses in government

The federal government has been eliminating jobs in Alaska since 2011, with a decline of 588 in 2012 and an additional decrease of 833 in 2013. These reductions were mostly due to federal budget problems and spending cuts from the budget sequestration. Attrition and continued federal spending cutbacks in Alaska will lead to further losses.

Growth in state government jobs is projected to be less than half of overall job growth at 5.3 percent, and local government employment will remain essentially flat.

Some of the sluggishness in state and local government will be due to reduced federal funding. This

downward pressure will be compounded by budget pressure at the state and local levels.

Traditional media will continue to decline

The information sector is expected to grow by about 3 percent, but employment in traditional media will shrink. Newspaper, periodical, book, and directory publishers will cut jobs by 9.8 percent over the 10-year period. Broadcasting, excluding Internet, will also continue to decline, with projected losses near 12 percent.

Though we've seen some telecommunications losses in the past few years, Verizon's arrival in the state will likely prop up employment numbers for a projected growth rate of 3.4 percent. We expect the largest increase in data processing and hosting employment, which will nearly double.

Professional, scientific, and technical services

The projected growth rate for the professional, scientific, and technical services sector is 16.3 percent, with above-average growth in 10 of its 17 sectors. Only legal services is likely to decline, at a projected job loss of 11.8 percent.

We project the largest total job growth for the engineering and drafting services industry, at 740 jobs. In terms of the largest percentage, the research and development industry will gain a projected 80 jobs, a growth rate of 51.5 percent.

Most of the industries in this sector grew considerably over the previous decade, which will continue with an anticipated increase in expenditures on the North Slope as well as additional expenditures toward development of an in-state natural gas pipeline.