ALASKA ECONOMIC TREND

MARCH 2016

ALASKA APPRENTICESHIPS

ALSO IN THIS ISSUE

Settlement of the Mat-Su

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ALASKA ECONOMIC TRENDS

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ON THE COVER: U.S. Air Force Airman 1st Class Robert Wulff troubleshoots a high voltage power supply on an electronic counter measure pod at Eielson Air Force Base. Department of Defense photo by Staff Sgt. Joshua Strang. On page 12, a moose crosses the road in Wasilla. Photo by Flickr user Kryptonic83.
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Apprenticeships key to Alaska Hire and economic growth

Heidi Drygas
Commissioner

Follow the Alaska Department of Labor and Workforce Development on Facebook (facebook.com/alaskalabor) and Twitter (twitter.com/alaskalabor) for the latest news about jobs, workplace safety, and workforce development.

Recently, there have been many news stories about declining oil prices and how Alaska Hire rates declined through 2014. Our state's economy is changing as the oil and construction sectors shrink relative to the health care and tourism sectors. Improving our Alaska Hire rate in these economic circumstances requires taking successful apprenticeship training models in the construction industry and applying them to growth industries like health care.

In addition, we need to remain vigilant to improve Alaska Hire in the construction and oil and gas industries. Though they are not projected to grow next year, these industries will continue to be a vital part of our economy and represent a significant number of our state's high-paying jobs. Fortunately, as this month's *Trends* illustrates, registered apprenticeship is growing in Alaska and that presents an important opportunity to achieve our Alaska Hire goals and strengthen our middle class.

Registered apprenticeship is an age-old training model that consists of on-the-job training coupled with related technical or classroom instruction. In the United States, apprenticeship has long been the foundation of training our construction workforce. However, this training model is not limited to construction. Other countries like Switzerland and Germany have approximately half the youth unemployment of the United States, largely because their robust apprenticeship programs offer a path to the middle class for youth in many fields.

Considering that three-quarters of Alaskans will not obtain a college degree, it is essential that we have training opportunities for all Alaskans. Gone are the days when vocational and career education are viewed as substandard forms of education; to the contrary, some of our highest-paying and most skilled occupations are the result of vocational education, including registered apprenticeship.

And due to recent policy innovations, it is increasingly common to complete a registered apprenticeship while earning credit toward a college degree. This model is extremely promising because it offers a path to college completion without a crushing debt load.

A wide variety of Alaska employers already use registered apprenticeships successfully. Construction firms such as Doyon Associated and Brice Construction help manage registered apprenticeship programs through Joint Apprenticeship Training Committees with the building trades. NANA's Red Dog mine operates a model registered apprenticeship program for millwrights and other workers. The Alaska Native Medical Center, Bristol Bay Housing Authority, and the Yukon Kuskokwim Health Corporation all manage registered apprenticeship programs. My department is working in partnership with the Alaska Native Tribal Health Consortium and Southcentral Foundation to expand registered apprenticeships for behavioral health and medical office occupations.

It is no coincidence that Alaska has some of the highest median wages, highest labor force participation rates, and lowest rates of income inequality of any state: Our apprenticeship programs are an integral part of a workforce development system focused on a strong middle class. But we can't rest on our laurels: Expansion of registered apprenticeship is necessary to achieve our Alaska Hire objectives.

As this month's *Trends* illustrates, the benefits of registered apprenticeship are clear — higher employment rates, higher wages, and higher rates of Alaska Hire. Registered apprenticeships are training workers in a variety of industries from health care to the construction trades that will build the gas pipeline. With sound public policies that support apprenticeship, we can sustain our middle class and improve Alaska Hire.

ALASKA APPRENTICESHIPS

Training option has grown in popularity in the last 10 years

By **ROB KREIGER**

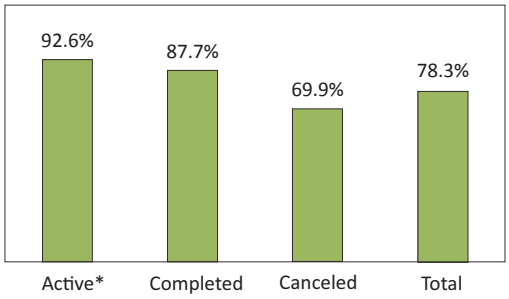
Registered apprenticeships have become an increasingly popular option for Alaskans who want to advance their education, especially after high school. Nearly 9,000 people participated in a registered apprenticeship program between 2004 and 2014, and new registrations were over 50 percent higher in 2014 than in 2004. (See Exhibit 1.)

A registered apprenticeship, recognized by the U.S. Department of Labor, usually consists of at least 2,000 hours of paid on-the-job training plus classroom technical instruction. As apprentices gain experience, their wages increase.

Those who completed their program earned about

2 Percent Working in Alaska

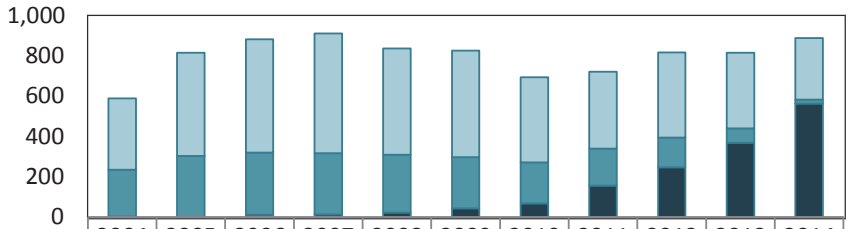
BY APPRENTICESHIP STATUS, 2014



*Active doesn't equal 100 percent because federal and self-employment are not included.
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

1 Jump in Apprenticeship Registrations

ALASKA, 2004 TO 2014



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Canceled	355	512	563	594	527	529	422	381	423	376	306
Completed	232	302	308	303	288	253	203	184	147	71	19
Active	3	2	12	14	22	44	69	156	248	369	564

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

three times more on average in 2014 than they had the year before registering.

Employment, earnings, and residency

Between 2004 and 2014, 8,801 people participated in a registered apprenticeship program in Alaska. Nearly 80 percent of those were working in Alaska in 2014. Those who were still active in an apprenticeship had the highest employment rate at nearly 93 percent. (See Exhibit 2.)

Most were Alaska residents at the time of registration (meaning they applied for a Permanent Fund Dividend). In 2014, 88 percent of registrants were Alaska residents. (See Exhibit 3.)

The most common jobs for apprenticeship participants were in construction, at 39.6 percent, and natural resources and mining, at 10.7 percent. (See Exhibit 4.)

For the 6,930 participants who were employed in 2014, the average wage was $52,818. Those who had completed their apprenticeship earned the most by far, at $72,990. (See Exhibit 5.)

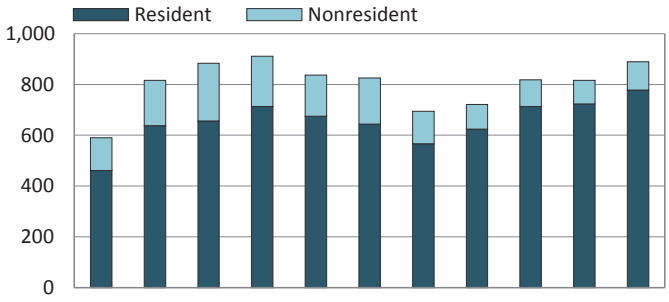
Still, regardless of the outcome, participating in an apprenticeship is linked to an increase in wages over time, provided the person stays in the labor force.

Apprenticeship participants who ended up working in construction earned the most, making 52 percent of all participant wages in 2014 for a total of $191.4 million. Among all Alaska construction workers in 2014, almost 13 percent had registered for an apprenticeship program at some point since 2004.

About 4 percent of all natural resources and mining workers had participated in an apprenticeship program. This industry had the highest average yearly wage at $77,252, mainly due to the higher pay for oil and gas jobs.

3 Most Are Alaska Residents

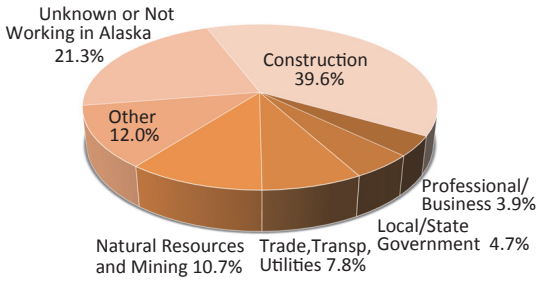
Residency at time of apprenticeship registration



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

4 Industries for Apprentices

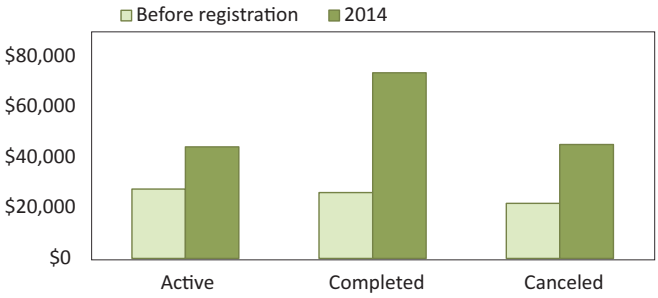
Employed in Alaska in 2014



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

5 Apprenticeships and Higher Wages

Alaska, based on apprenticeship status, 2014



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

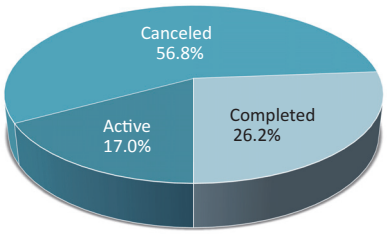
Completions and cancellations

Of those who participated in an apprenticeship program between 2004 and 2014, about 26 percent successfully completed their program and 17 percent were still active as of 2014. Fifty-seven percent canceled or failed to complete their apprenticeship. (See Exhibit 6.)

Participants who cancel their apprenticeship typically do so within the first 12 months. (See Exhibit 7.) For many apprenticeship programs, completion requires three to five years — so if the program isn't a good fit for the trainee, that's often apparent early.

6 Most Recent Status

Registered between 2004 and 2014



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

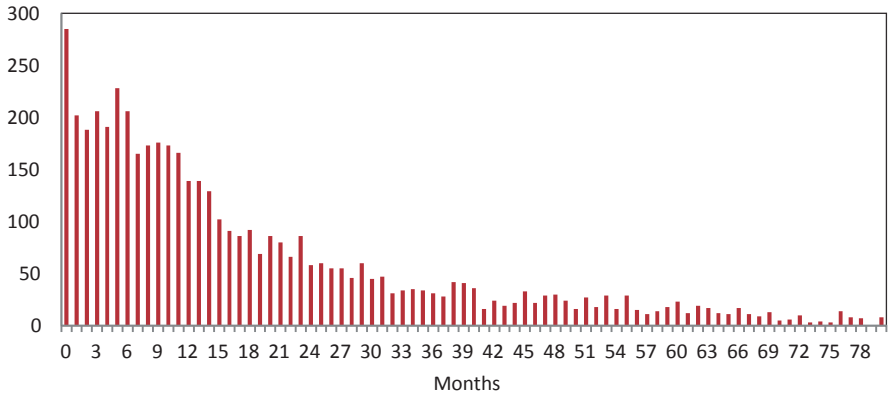
Among the apprenticeship programs by occupation with at least 100 participants over the 2004-2014 period, cancellation rates were highest for roofer programs at 95 percent, residential electrical wireman at 81 percent, and cement mason at 79 percent. Cancellation rates were lowest for line maintainer at 26 percent, maintenance mechanic at 35 percent, operating engineer at 37 percent, and pipe fitter at 38 percent. (See Exhibit 13.)

How apprentices stack up among all Alaska workers

Apprenticeship participants also tend to earn more than the average Alaska worker. In 2014, their average wage of $52,818 was nearly 35 percent more than the average for all workers ($38,995). (See Exhibit 8.)

7 Most Apprenticeship Cancellations Happen Early

Number of months into apprenticeship, 2014



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

8 How Apprentices Compare to Other Workers

Those who registered for Alaska apprenticeships between 2004 and 2014

Industry	Apprentices		All Workers		Percent Apprentices	Apprentice Wages as % of Total Wages
	Workers	Total Wages	Workers	Total Wages		
Construction	3,485	$191,443,889	27,763	$1,343,025,743	12.6%	14.3%
Natural Resources and Mining	945	$73,003,316	24,740	$2,417,728,937	3.8%	3.0%
Trade, Transportation, and Utilities	685	$32,001,914	84,241	$2,856,679,279	0.8%	1.1%
Local and State Government	412	$17,185,887	78,464	$3,165,838,552	0.5%	0.5%
Professional and Business Svcs	345	$16,833,698	39,040	$1,757,471,516	0.9%	1.0%
All Other	1,058	$35,560,339	168,268	$4,935,168,898	0.6%	0.7%
Total	6,930	$366,029,043	422,516	$16,475,912,924	1.6%	2.2%

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

9 How Apprentices Compare to Other Year-Round Workers

Employed in Alaska in 2014

	Total Workers	Average Wages of All Workers	Avg Wages of Yr-Rd Workers	Working Yr-Rd	Number of Apprentices	Apprentice Avg Wages	Avg Wages, Apprentices Working Yr-Rd	Avg Wages for Completers	Avg Wages, Completers Who Work Yr-Rd
Top Occupations									
Electricians	2,743	$63,905	$77,808	1,938	1,116	$56,289	$63,229	$69,515	$75,537
Plumbers, Pipefitters, and Steamfitters	2,078	$59,317	$72,996	1,411	676	$52,993	$60,074	$69,604	$73,301
Construction Laborers	7,340	$27,660	$45,567	2,944	498	$39,655	$47,898	$53,628	$60,504
Carpenters	4,064	$37,577	$56,786	2,058	355	$37,609	$46,371	$52,191	$60,186
Oper Engineers and Other Const Equip Operators	4,683	$55,360	$68,762	2,994	265	$53,499	$59,496	$64,800	$66,538
Helpers: Electricians	266	$44,778	$59,814	156	222	$38,572	$50,556	$71,879	$72,848
Electrical Power-Line Installers and Repairers	457	$88,397	$100,872	365	163	$78,879	$85,340	$98,831	$107,254
Laborers and Freight, Stock, and Material Movers, Hand	5,416	$20,058	$36,360	2,463	117	$37,177	$47,502	$47,620	$56,416
Heavy and Tractor-Trailer Truck Drivers	3,861	$48,078	$60,106	2,603	114	$48,922	$57,556	$58,743	$66,003
Sheet Metal Workers	439	$54,798	$65,619	333	106	$54,043	$58,300	$70,516	$72,474
Maintenance and Repair Workers, General	4,278	$35,812	$49,959	2,638	91	$37,716	$45,674	$41,965	$44,269
Welders, Cutters, Solderers, and Brazers	1,354	$47,975	$68,678	733	76	$39,385	$46,524	$46,819	$46,406
Based on Age in 2014									
16 to 24	63,154	$15,390	$25,575	29,665	1,280	$40,313	$48,683	$67,014	$70,263
25 to 34	78,913	$38,072	$48,016	56,779	3,814	$56,012	$66,080	$76,132	$82,690
35 to 44	61,513	$51,109	$60,910	48,173	1,250	$55,371	$67,333	$70,129	$79,212
45 to 54	65,093	$55,169	$64,480	52,288	471	$55,084	$68,032	$68,037	$77,551
55 to 64	50,096	$54,314	$64,509	38,869	109	$50,624	$66,920	$54,389	$67,783
64 to 74	11,375	$39,055	$51,534	7,454	6	$20,646	$23,942	$23,942	$23,942
Based on Gender									
Female	162,537	$33,411	$43,556	114,469	631	$38,304	$45,508	$49,133	$51,707
Male	172,068	$49,260	$64,494	119,667	6,299	$54,272	$64,980	$76,327	$83,990
Total	422,516	$38,995	$56,193	254,897	6,930	$52,818	$63,307	$72,990	$80,158

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

Among those employed during all four quarters of the year, apprenticeship participants earned about 13 percent more than average, and those who completed made 30 percent more. (See Exhibit 9.)

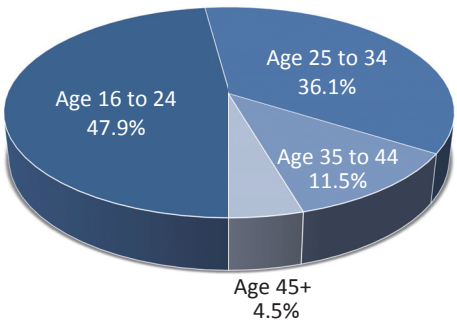
Who the participants are

As with most education and training programs, the majority of Alaska's registered apprentices are young — about 84 percent age 34 or younger. (See Exhibit 10.)

Completing the program resulted in markedly higher wages for younger workers, especially for those between 16 and 24. In that youngest age group, completers who worked year-round made an average of

10 Age at Registration

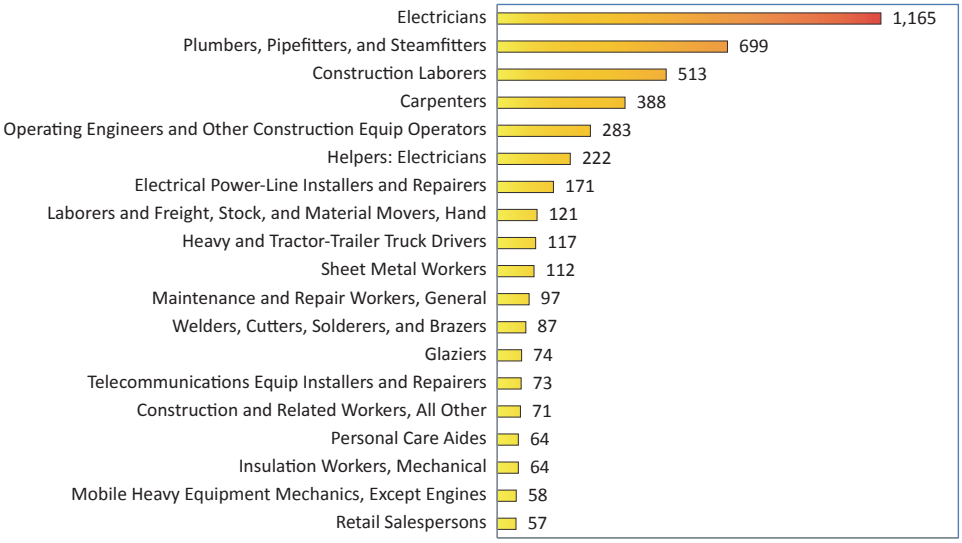
Alaska, 2004 to 2014



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

11 Top Occupations After Apprenticeships

Those who registered between 2004 and 2014



Note: These occupations are not necessarily the occupations for which participants registered as apprentices. See Exhibit 10 for the top occupations for apprenticeships.
Sources: Alaska Department of Labor and Workforce Development, Research and Analysis Section

$70,263: nearly 2.75 times more than the average for all year-round workers. Completers in all age groups out-earned the average, though, with the exception of those between 64 and 74. (See Exhibit 9.)

Besides being young, apprentices were mostly male, at 91 percent, and white, at about 66 percent. Nineteen percent were Alaska Native or American Indian. The high percentage of men is due to the high shares of men working in construction, a common focus of Alaska apprenticeship programs. (See Exhibit 13 at the end of the article.)

Factors affecting apprenticeship participant wages include choice of apprenticeship, completion, level of experience afterward, and attachment to the Alaska labor force. Overall, men earned more on average than women in 2014, whites earned more than other minority groups, and those between 25 and 34 earned more than other age groups.

What occupations they tend to hold after participating

The top occupations for apprenticeship programs between 2004 and 2014 were electrician, plumber, carpenter, construction craft laborer, pipefitter, line maintainer, building maintenance repairer, telephone maintenance mechanic, structural steel/iron worker, and sheet metal worker.

Many go on to work in the same occupation for which they apprenticed, but not all. More than half of the participants employed in 2014 were in just 12 occupations. (See Exhibit 11.) In eight of those 12, participants working year-round made more than the average Alaska worker in those occupations.

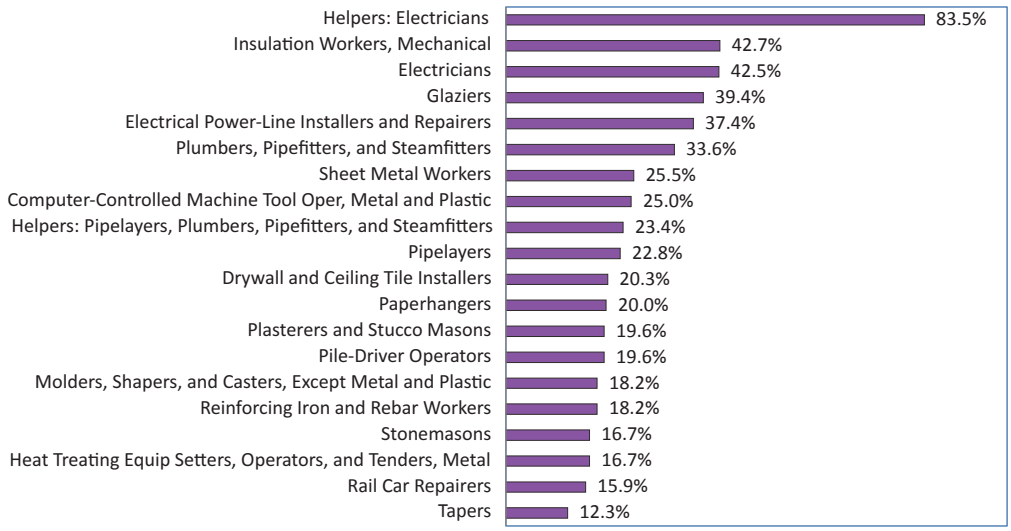
Among the top 12 occupations, the highest average wages for those who completed their apprenticeship were as electrical power-line installers and repairers; electricians; and plumbers, pipefitters, and steamfitters.

Among electrician helpers, 84 percent had participated in an apprenticeship. Mechanical insulation workers and electricians also had high shares of participants, each at about 43 percent. (See Exhibit 12.)

Rob Kreiger is an economist in Juneau. Reach him at (907) 465-6031 or rob.kreiger@alaska.gov.

12 Percent Who Held Apprenticeships, By Occupation

Those who registered between 2004 and 2014



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

13 Who the Apprentices Are

Demographics of those who registered between 2004 and 2014

	Total, Current and Former	Number Completed	Percent Completed	Number Canceled	Percent Canceled	Number Employed	Percent Employed	Total Wages	Average Wages	Residents	Work in Related Occ.
Total	8,801	2,310	26.2%	4,988	56.7%	6,930	78.7%	$366,029,043	$52,818	7,607	3,463
By Sex											
Female	813	288	35.4%	409	50.3%	631	77.6%	$24,169,781	$38,304	724	268
Male	7,988	2,022	25.3%	4,579	57.3%	6,299	78.9%	$341,859,263	$54,272	6,883	3,195
By Race or Ethnicity											
Asian/Islander	153	44	28.8%	82	53.6%	131	85.6%	$7,059,503	$53,889	139	70
Unknown	640	138	21.6%	315	49.2%	528	82.5%	$20,432,795	$38,698	557	288
Hispanic	142	32	22.5%	79	55.6%	95	66.9%	$4,136,577	$43,543	105	50
White	5,801	1,661	28.6%	3,181	54.8%	4,498	77.5%	$258,752,978	$57,526	4,939	2,355
Black	415	85	20.5%	267	64.3%	315	75.9%	$13,967,208	$44,340	347	136
AK Native	1,650	350	21.2%	1,064	64.5%	1,363	82.6%	$61,679,982	$45,253	1,520	564
By Age in 2014											
16 to 24	1,438	171	11.9%	699	48.6%	1,280	89.0%	$51,600,167	$40,313	1,341	724
25 to 34	4,805	1,378	28.7%	2,726	56.7%	3,814	79.4%	$213,628,049	$56,012	4,152	1,928
35 to 44	1,697	512	30.2%	1,023	60.3%	1,250	73.7%	$69,214,196	$55,371	1,417	588
45 to 54	678	193	28.5%	426	62.8%	471	69.5%	$25,944,751	$55,084	549	182
55 to 64	170	48	28.2%	109	64.1%	109	64.1%	$5,518,007	$50,624	138	37
64 to 74	13	8	61.5%	5	38.5%	6	46.2%	$123,874	$20,646	10	4
By Place of Registration											
Unknown	1,695	368	21.7%	1,056	62.3%	985	58.1%	$51,491,405	$52,276	1,086	483
Aleutians E	10	0	0	9	90.0%	8	80.0%	$284,283	$35,535	9	1
Aleutians W	14	1	7.1%	7	50.0%	12	85.7%	$835,636	$69,636	12	5
Anchorage	2,598	677	26.1%	1,465	56.4%	2,172	83.6%	$107,640,807	$49,558	2,375	1,038
Bethel	116	16	13.8%	85	73.3%	104	89.7%	$2,926,323	$28,138	112	28
Bristol Bay	2	0	0	2	100.0%	0	0	$0	$0	1	0
Denali	26	11	42.3%	11	42.3%	24	92.3%	$1,540,194	$64,175	24	11

Continued on the next page

13 Who the Apprentices Are, continued

Demographics of those who registered between 2004 and 2014

	Total, Current and Former	Number Completed	Percent Completed	Number Canceled	Percent Canceled	Number Employed	Percent Employed	Total Wages	Average Wages	Residents	Work in Related Occ.
By Place of Registration, continued											
Dillingham	34	5	14.7%	22	64.7%	29	85.3%	$1,365,983	$47,103	32	10
Fairbanks NS	1,501	473	31.5%	769	51.2%	1,260	83.9%	$70,681,690	$56,097	1,365	693
Haines	10	3	30.0%	3	30.0%	10	100.0%	$533,749	$53,375	10	7
Hoonah-Angoon	19	7	36.8%	9	47.4%	17	89.5%	$920,785	$54,164	19	6
Juneau	250	75	30.0%	129	51.6%	212	84.8%	$11,787,382	$55,601	229	115
Kenai Peninsula	568	179	31.5%	294	51.8%	463	81.5%	$27,145,139	$58,629	520	250
Ketchikan Gateway	97	33	34.0%	47	48.5%	84	86.6%	$4,189,312	$49,873	93	42
Kodiak Island	78	16	20.5%	44	56.4%	63	80.8%	$3,449,163	$54,749	73	31
Kusilvak	57	7	12.3%	47	82.5%	46	80.7%	$1,240,221	$26,961	52	17
Lake and Peninsula	15	3	20.0%	10	66.7%	13	86.7%	$626,659	$48,205	15	4
Mat-Su	1,168	270	23.1%	677	58.0%	959	82.1%	$52,956,011	$55,220	1,070	505
Nome	46	8	17.4%	30	65.2%	39	84.8%	$1,674,160	$42,927	41	11
North Slope	32	5	15.6%	22	68.8%	29	90.6%	$1,608,847	$55,477	30	10
Northwest Arctic	61	22	36.1%	29	47.5%	53	86.9%	$3,721,159	$70,211	60	26
Petersburg	16	6	37.5%	5	31.3%	16	100.0%	$807,514	$50,470	16	9
POW-Hyder	20	5	25.0%	13	65.0%	17	85.0%	$779,997	$45,882	18	10
Sitka	59	12	20.3%	37	62.7%	52	88.1%	$3,101,428	$59,643	55	30
Skagway	6	2	33.3%	3	50.0%	6	100.0%	$477,027	$79,505	6	3
SE Fairbanks	94	35	37.2%	45	47.9%	74	78.7%	$4,039,750	$54,591	84	41
Valdez-Cordova	121	47	38.8%	62	51.2%	106	87.6%	$6,050,981	$57,085	117	42
Wrangell	9	2	22.2%	5	55.6%	5	55.6%	$222,544	$44,509	6	2
Yakutat	2	1	50.0%	1	50.0%	1	50.0%	ND	ND	1	0
Yukon-Koyukuk	77	21	27.3%	50	64.9%	71	92.2%	$3,846,708	$54,179	76	33
By Industry											
Construction	3,485	1,225	35.2%	1,342	38.5%	3,485	100.0%	$191,443,889	$54,934	3,485	2,493
Educational and Health	336	136	40.5%	165	49.1%	336	100.0%	$11,908,108	$35,441	336	109
Financial Activities	13	2	15.4%	11	84.6%	13	100.0%	$324,020	$24,925	13	0
Information	77	24	31.2%	36	46.8%	77	100.0%	$4,540,995	$58,974	77	22
Leisure and Hospitality	217	18	8.3%	181	83.4%	217	100.0%	$3,983,773	$18,358	217	7
Local Gov	300	77	25.7%	193	64.3%	300	100.0%	$12,357,010	$41,190	300	69
Manufacturing	177	22	12.4%	120	67.8%	177	100.0%	$7,308,894	$41,293	177	18
Resources and Mining	945	284	30.1%	463	49.0%	945	100.0%	$73,003,316	$77,252	945	542
Other Svcs	113	15	13.3%	81	71.7%	113	100.0%	$3,562,185	$31,524	113	25
Professional and Bus	470	84	17.9%	326	69.4%	470	100.0%	$20,766,063	$44,183	470	69
State Gov	112	22	19.6%	86	76.8%	112	100.0%	$4,828,877	$43,115	112	14
Trade, Trans and Utilities	685	120	17.5%	513	74.9%	685	100.0%	$32,001,914	$46,718	685	95
Unknown/Not Working	1,871	281	15.0%	1,471	78.6%	0	0	$0	$0	677	0
By Employment Status											
In related job	3,463	1,410	40.7%	1,091	31.5%	3,463	100.0%	$204,649,618	$59,096	3,463	3,463
Not working	1,871	281	15.0%	1,471	78.6%	0	0	$0	$0	677	0
In unrelated job	3,467	619	17.9%	2,426	70.0%	3,467	100.0%	$161,379,425	$46,547	3,467	0
By Apprenticeship Occupation											
Electrician	2,517	522	20.7%	1,448	57.5%	2,008	79.8%	$117,938,020	$58,734	2,177	1,186
Plumber	977	154	15.8%	641	65.6%	772	79.0%	$39,071,657	$50,611	863	444

Continued on the next page

13 Who the Apprentices Are, continued

Demographics of those who registered between 2004 and 2014

	Total, Current and Former	Number Completed	Percent Completed	Number Canceled	Percent Canceled	Number Employed	Percent Employed	Total Wages	Average Wages	Residents	Work in Related Occ.
By Apprenticeship Occupation, continued											
Carpenter	733	178	24.3%	474	64.7%	559	76.3%	$24,479,824	$43,792	621	292
Construction Craft Laborer	633	267	42.2%	363	57.3%	511	80.7%	$25,109,116	$49,137	546	207
Pipe Fitter (Const)	310	118	38.1%	119	38.4%	269	86.8%	$17,705,544	$65,820	285	187
Line Maintainer	224	110	49.1%	58	25.9%	200	89.3%	$17,167,590	$85,838	207	124
Residential Elec Wireman	198	14	7.1%	160	80.8%	141	71.2%	$5,912,498	$41,933	167	78
Maintenance Mech (Tele)	192	74	38.5%	66	34.4%	173	90.1%	$10,022,436	$57,933	179	45
Sheet Metal Worker	188	54	28.7%	92	48.9%	144	76.6%	$7,597,754	$52,762	159	87
Structural Steel/ Iron Worker	188	59	31.4%	110	58.5%	146	77.7%	$7,415,890	$50,794	163	44
Maintenance Repair, Build	183	38	20.8%	110	60.1%	128	69.9%	$4,241,609	$33,138	156	13
Operating Engr (Hy)	163	44	27.0%	40	24.5%	154	94.5%	$7,994,581	$51,913	158	106
Operating Engineer	142	89	62.7%	52	36.6%	112	78.9%	$8,127,271	$72,565	123	77
Construction Driver	138	56	40.6%	75	54.3%	115	83.3%	$6,071,111	$52,792	124	49
Construction Craft Labr(Hy)	135	4	3.0%	75	55.6%	124	91.9%	$3,905,415	$31,495	129	70
Insulation Worker	128	19	14.8%	90	70.3%	94	73.4%	$4,013,434	$42,696	103	48
Painter (Const)	128	18	14.1%	106	82.8%	82	64.1%	$2,725,303	$33,235	92	26
Carpenter, Piledriver	127	45	35.4%	73	57.5%	93	73.2%	$6,028,489	$64,822	108	35
Glazier	110	27	24.5%	64	58.2%	80	72.7%	$3,701,227	$46,265	88	53
Maint Mech (Const,Petrol)	106	61	57.5%	42	39.6%	85	80.2%	$6,976,727	$82,079	94	5
Roofer	105	3	2.9%	100	95.2%	61	58.1%	$1,894,675	$31,060	74	10
Cement Mason	100	18	18.0%	79	79.0%	65	65.0%	$2,595,400	$39,929	74	12

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

About the data

The Research and Analysis Section identified people who participated in a registered apprenticeship program between 2004 and 2014 using data from the U.S. Department of Labor's Employment and Training Administration, Office of Apprenticeships, as well as our own administrative records. For this article, all references to apprentices refer to anyone who participated in an apprenticeship program during that decade.

For the 10-year period, we looked at participation status (complete, active, and canceled), wages before and after registration, employment status, industry representation, occupations, and demographic characteristics such as age, sex, and race.

During that period, 9,051 records were found in the USDOL apprenticeship data, which we narrowed to 8,801 after getting rid of incomplete records and duplicates and matching the remainder with administrative data.

SETTLEMENT OF THE MAT-SU

How Alaska's fastest-growing borough came to be

By **ERIC SANDBERG**

The Matanuska-Susitna Borough has been Alaska's fastest growing area for decades. In the last five years, while most other boroughs and census areas held steady or lost population, Mat-Su continued to grow at a rate of over 2 percent a year.

In 2015, Mat-Su passed the Fairbanks North Star Borough to become the second-largest in the state. Mat-Su also topped the 100,000 mark for population in the past year.

Officially formed in 1964, the borough encompasses a large region at the head of Cook Inlet where three large rivers (Matanuska, Susitna, and Knik) descend out of the mountains to meet the sea. A lowland plain between the rivers, scoured by glaciers, contains most of the population and settlement.

Beginning of the 20th century

At the turn of the 20th century, Mat-Su was not heavily populated, even by Alaska standards of the time. (See Exhibit 1.) About 300 people lived in the area, over 90 percent of whom were Dena'ina Athabascan.

The Dena'ina arrived between 1,500 and 2,000 years ago, according to archaeological evidence. Mat-Su lay at the northern end of their territory, which covered nearly all of Southcentral Alaska including both sides of Cook Inlet. Most Dena'ina lived in villages along the Matanuska or Susitna rivers or in the coastal village of Knik.

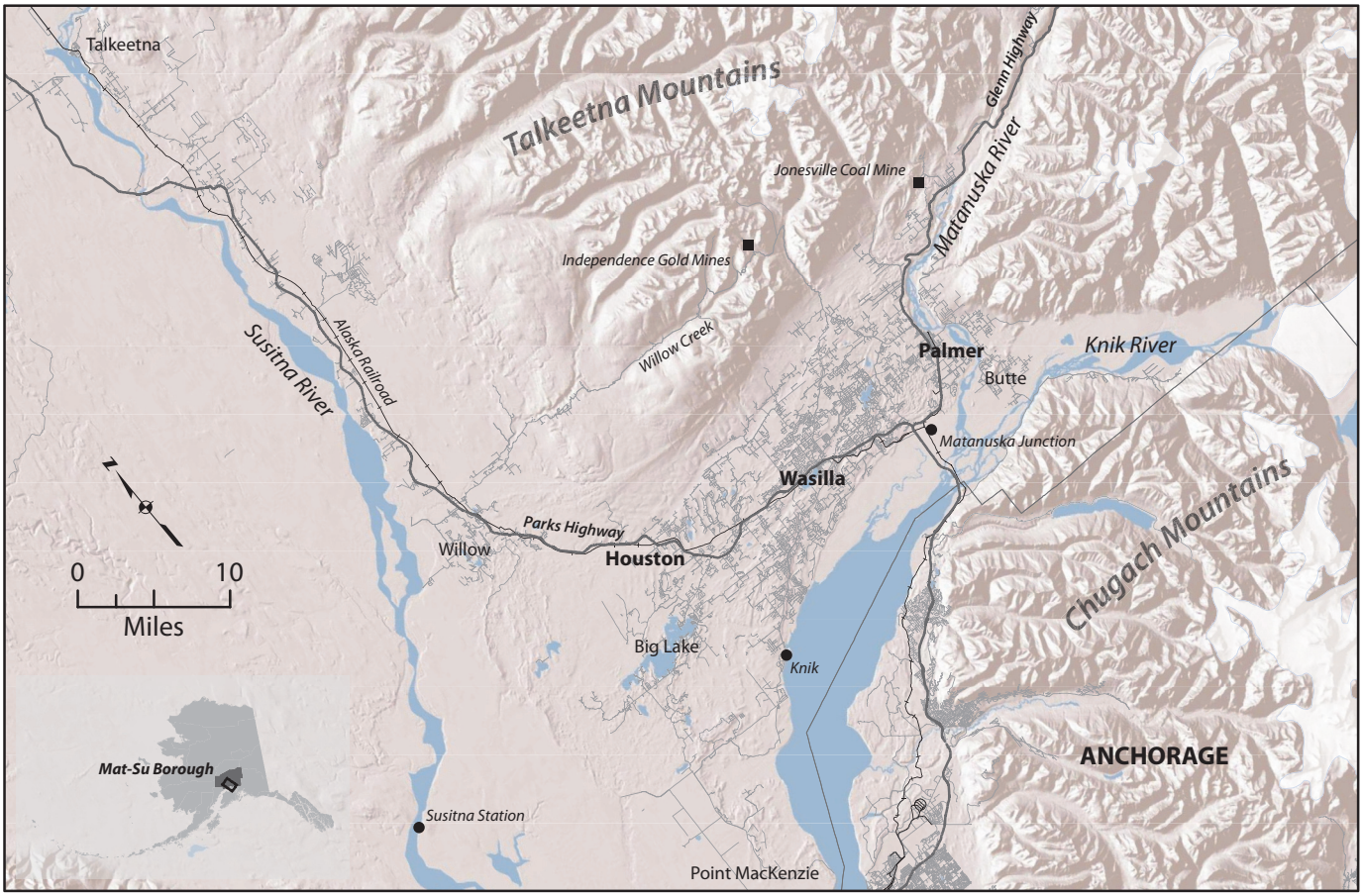
Alaska of the early 20th century was a rapidly changing place. Gold strikes in the Klondike and Seward Peninsula brought a rush of outsiders into the territory, where they fanned out in search of the next valuable deposit.

In Mat-Su, known gold fields in the Talkeetna Mountains brought in new settlers. The Willow Creek area became a mining district, with dozens of claims of placer miners staked within it.

By 1910, Mat-Su had greatly changed from just 10 years earlier. While the population remained under 500 people, it was now majority non-Alaska Native. A large number of homesteaders and miners lived in coastal or river towns such as Knik or Susitna Station. From there, trails led to both Mat-Su gold areas as well as regions of the Interior such as the gold town of Iditarod.

The Alaska Railroad

With the search for valuable minerals in Alaska ongoing, large coal deposits were discovered in the Matanuska Valley. In an era when large naval ships ran on coal, it was a strategic asset. Reaching the coal fields became one of several objectives that spurred the U.S. government to build a railroad.



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

The chosen route took the trains up from Seward through the future site of Anchorage and into Mat-Su. Near the modern-day Glenn-Parks Interchange at Matanuska Junction, the railroad split in different directions. One route went west into the Susitna Valley and continued up to Fairbanks, while the other route (now defunct) traveled up the Matanuska Valley toward the coal mines.

The coming of the railroad changed the layout of the Mat-Su population. Settlement began to shift from towns with easy access to the sea, such as Knik and Susitna Station, to points on the railroad. Several stops along the route grew into settlements, including Wasilla, Houston, and Talkeetna. Lots were sold off and homesteads developed in the surrounding areas.

By the 1920 Census, the population of Mat-Su had grown to more than 1,000, with 86 percent non-Native. For this brief period, a majority lived near the ends of the railroad. On one end, nearly 40 percent of the population lived in temporary railroad worker camps north of Talkeetna as they worked to extend the line north. Around 30 percent were at the other end, in the coal areas of the Matanuska Valley. This line, completed in 1917, was already in use sending Mat-Su coal down to market.

After President Warren Harding drove in the golden spike at Nenana in 1923, signaling the end of railroad construction, Mat-Su's growth began to sputter. Railroad workers who had populated many of the stops along the line moved on. By 1930, the population had fallen to 950.

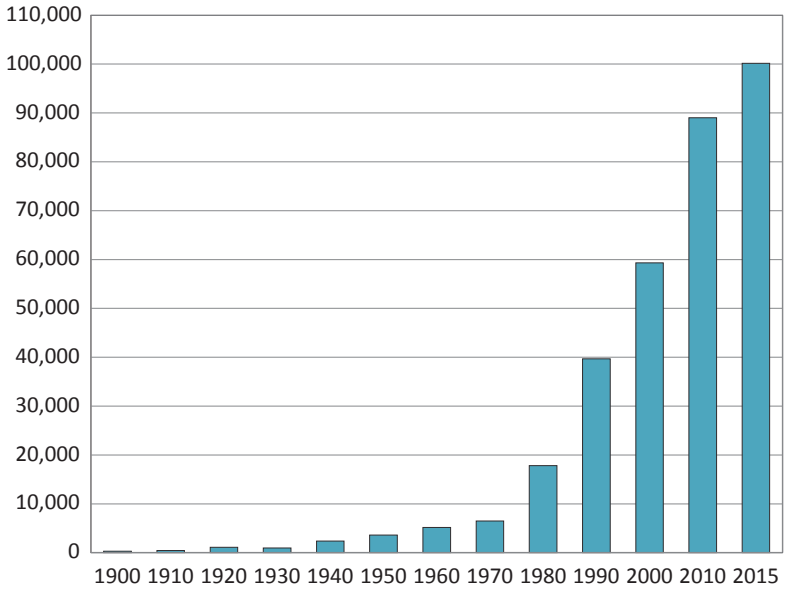
Mining was the main industry at the time, employing over 30 percent of the workforce. Besides the coal mines, several gold mines (collectively known as the Independence Mines) at the head of Willow Creek employed a large number of people. While some prospectors still worked placer claims, more capital-intensive hard rock mining came to dominate gold mining in the Mat-Su. Other residents made their living farming, trapping, or working for the railroad.

Matanuska Colony

Palmer, previously not much more than a railroad stop along the Matanuska Spur, quickly became the population center of Mat-Su during the 1930s. The impetus was the federal government establishing the Mata-

1 A Burgeoning Population

Matanuska-Susitna Borough, 1900 to 2015



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

nuska Colony. The colony was a New Deal program to move mostly destitute farmers from the Midwest to the fertile soil of the Mat-Su. Around 200 farm families from three upper Midwest states (Minnesota, Wisconsin, and Michigan) were relocated to the Palmer area.

The colonists arrived in the summer of 1935 to much national news and fanfare. After selecting 40-acre lots and waiting on final construction, the colonists moved into their new homes. Though many families ended up leaving within a few years, the federal government quickly replaced them.

The colony's presence began to modernize the Mat-Su. The population grew by 150 percent during the 1930s. New roads were built, including a highway (now known as the Old Glenn) that connected Mat-Su to Anchorage, making a commute possible. Within a few years, electricity became more widely available with the creation of the Matanuska Electric Co-op.

At the cusp of World War II, Mat-Su's population had climbed to more than 2,400 people. About 30 percent of workers were now in agriculture versus 12 percent in 1930. While the colony had brought that growth, the lack of a large market for crops made it a difficult existence for farmers.

World War II

World War II shifted the population geography of the entire territory. Before the war, Southeast Alaska was the most populous region, with around 35 percent of the total, and it included the most populous cities. Anchorage and Mat-Su combined represented about 9 percent. By the end of the war, Anchorage had become the largest city and Southcentral the most populated region.

The shift came with construction of the military base Fort Richardson in Anchorage to counter the Japanese threat in the Pacific. With the military's arrival, the construction industry boomed to create enough housing. Many Mat-Su farmers, sensing opportunity, left their families in charge of the farm and traveled to Anchorage for work.

Another lasting effect of the military buildup in the region was the resulting system of roads and its connection to the outside. At the outset of the war, Mat-Su had a small road system mostly within the Palmer-Wasilla corridor with one connection to Anchorage. When the Alaska Highway was completed in 1942 to connect the territory to the Lower 48, the Glenn Highway was extended through the Matanuska Valley to Glennallen.

The war also changed the economy of Mat-Su, effectively bringing the previous era to an end. The primacy of agriculture and mining in Mat-Su economic life diminished. Manpower and materials were needed elsewhere.

Federal control of the Matanuska Colony ended in 1942, leaving Mat-Su farm families to fend for themselves. A wartime order closing all gold mines shuttered the productive Independence Mines.

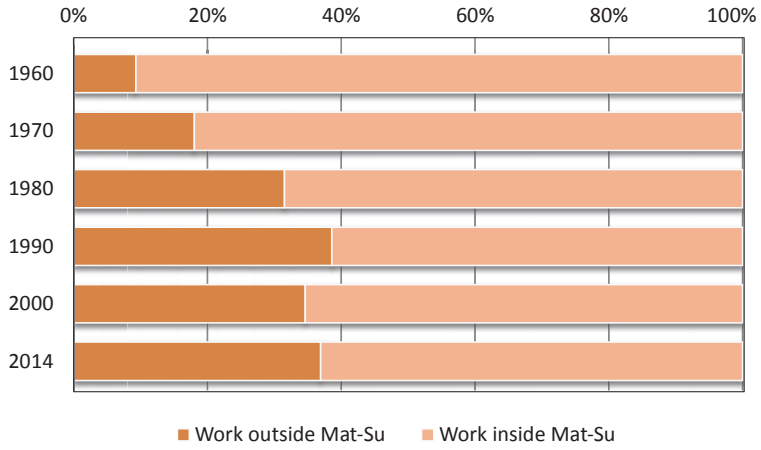
After the war

The changes brought by WWII made Southcentral Alaska the postwar epicenter of Alaska's economy and population. Mat-Su continued to grow, but at a much slower pace than Anchorage, its booming neighbor.

By 1950, Mat-Su had just over 3,500 people. The Palmer area held a majority of the population, and by the next year it was incorporated as the area's first city.

2 More Commuters Over Time

Workers living in Mat-Su Borough, 1960 to 2014



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

The military building boom in Southcentral Alaska continued with the onset of the Cold War with nearby USSR. With the creation of new military bases, the federal government invested large amounts of money into building homes in the Anchorage area, providing a growing industry for Southcentral workers.

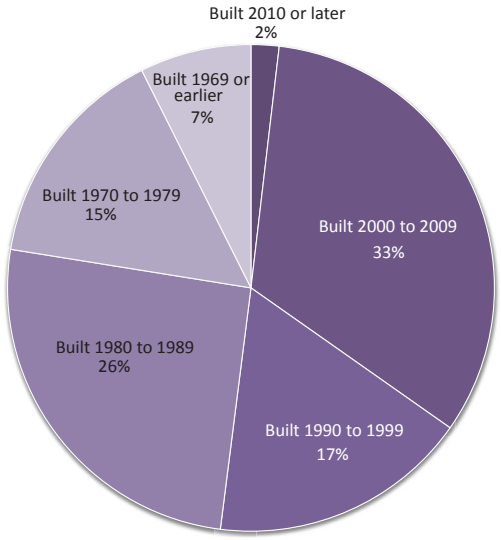
With more workers traveling to Anchorage (9 percent around the time of statehood), the roads in Mat-Su began to steadily improve and expand. By the early 1960s, a shorter route to Anchorage following the railroad across the Knik Flats had been built. Roads expanded out to the recreation area of Big Lake and up toward Talkeetna, which had been an off-road community.

By 1970, the percentage of workers commuting out of Mat-Su doubled to 18 percent. (See Exhibit 2.) The building of the Parks Highway in the early 1970s further improved access to the Wasilla area.

As the economy expanded after the war, Mat-Su's old industries continued to decline. Mining and agriculture, responsible for over 60 percent of employment before WWII, fell to around 20 percent by statehood in 1959. The Independence Gold Mines in the Talkeetna Mountains briefly reopened after the war before being abandoned in the early 1950s. The Jonesville coal mine, the largest in Mat-Su, stayed open longer to fill the electricity needs of Southcentral but also closed in the late 1960s as Cook Inlet natural gas became the region's primary source of electricity.

3 Most Homes Built Recently

Mat-Su Borough, 2014



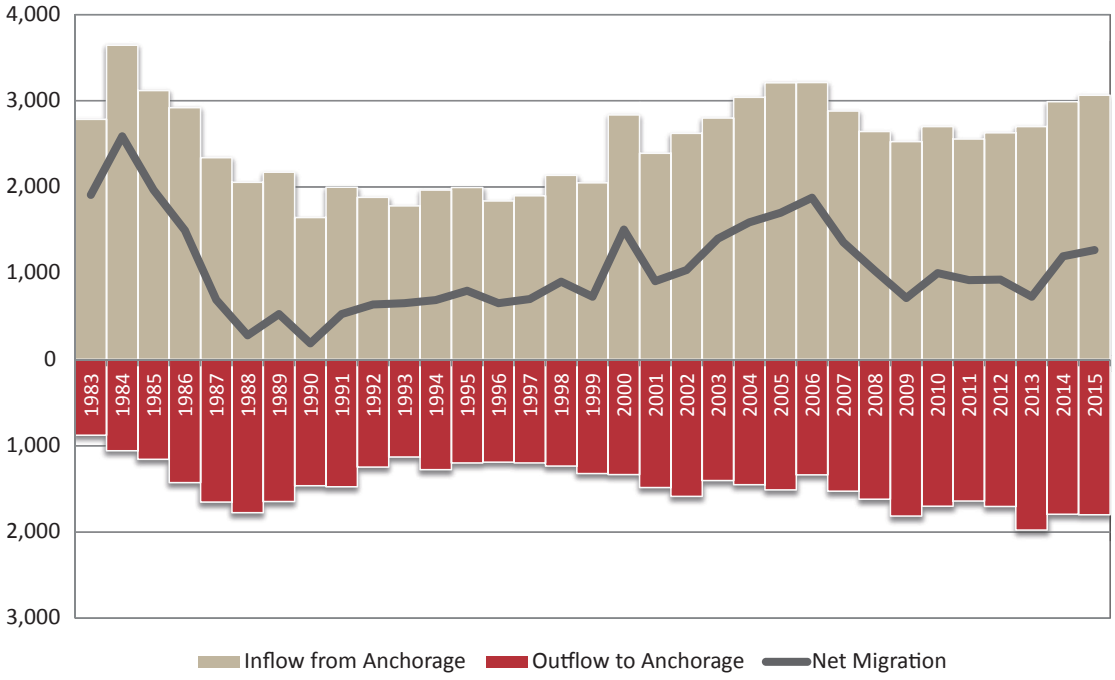
Source: U.S. Census Bureau, American Community Survey 2010 to 2014

Oil discovery at Prudhoe Bay brings major changes

During the 1960s, Mat-Su's population growth slowed from previous decades. A few places within the borough, such as Palmer, had even lost population. But Alaska transformed with the discovery of large oil reserves in Prudhoe Bay in 1968, and Mat-Su, while not on the Trans-Alaska Oil Pipeline route or home to any of the large companies, began to feel the changes. The 1970s marked the beginning of a sustained population boom. With money flowing in from oil development, a land rush began to take shape as buyers looked at

4 More Move From Anchorage than Move To Anchorage

Matanuska-Susitna Borough, 1983 to 2015



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

Mat-Su's vicinity to Anchorage and the cheap, open spaces available.

The population rose during the 1970s from around 6,500 to nearly 18,000. Palmer, the newly incorporated city of Wasilla, and the surrounding areas caught most of the new residents. However, places that hadn't had many full-time residents, such as Big Lake and Houston, soon numbered several hundred people each.

Mat-Su's oil boom years hit their peak in the first half of the 1980s. The borough's single-year population growth rates for both 1983 and 1984 were about 20 percent. In the drive to find new land, many of the old homesteads and farms were sold off and divided into subdivisions. Construction and retail trade became the largest industries in the borough.

In the second half of the decade, a hard statewide recession interrupted this progress. New land sales dried up and foreclosures rose. The borough's population during the decade peaked in 1986 at more than 40,000, which was followed by several years of decline. By 1989, the population had fallen by 6 percent. Still, the massive influx in the early part of the decade meant that by 1990, Mat-Su's population was more than double what it had been 10 years earlier.

Despite the speed bump at the end, the wild first two decades of the oil economy built the foundation for Mat-Su in the years to come. Its population center shifted from Palmer west toward the Wasilla area. While Palmer gained a modest number of residents in the '80s, Wasilla jumped from around 1,500 in 1980 to more than 4,000 by 1990 to become Mat-Su's largest city, which it remains today. Improved highway access to Anchorage and the number of jobs with higher salaries available in the city made commutes feasible, and by 1990, nearly 40 percent of Mat-Su workers were commuting outside the borough.

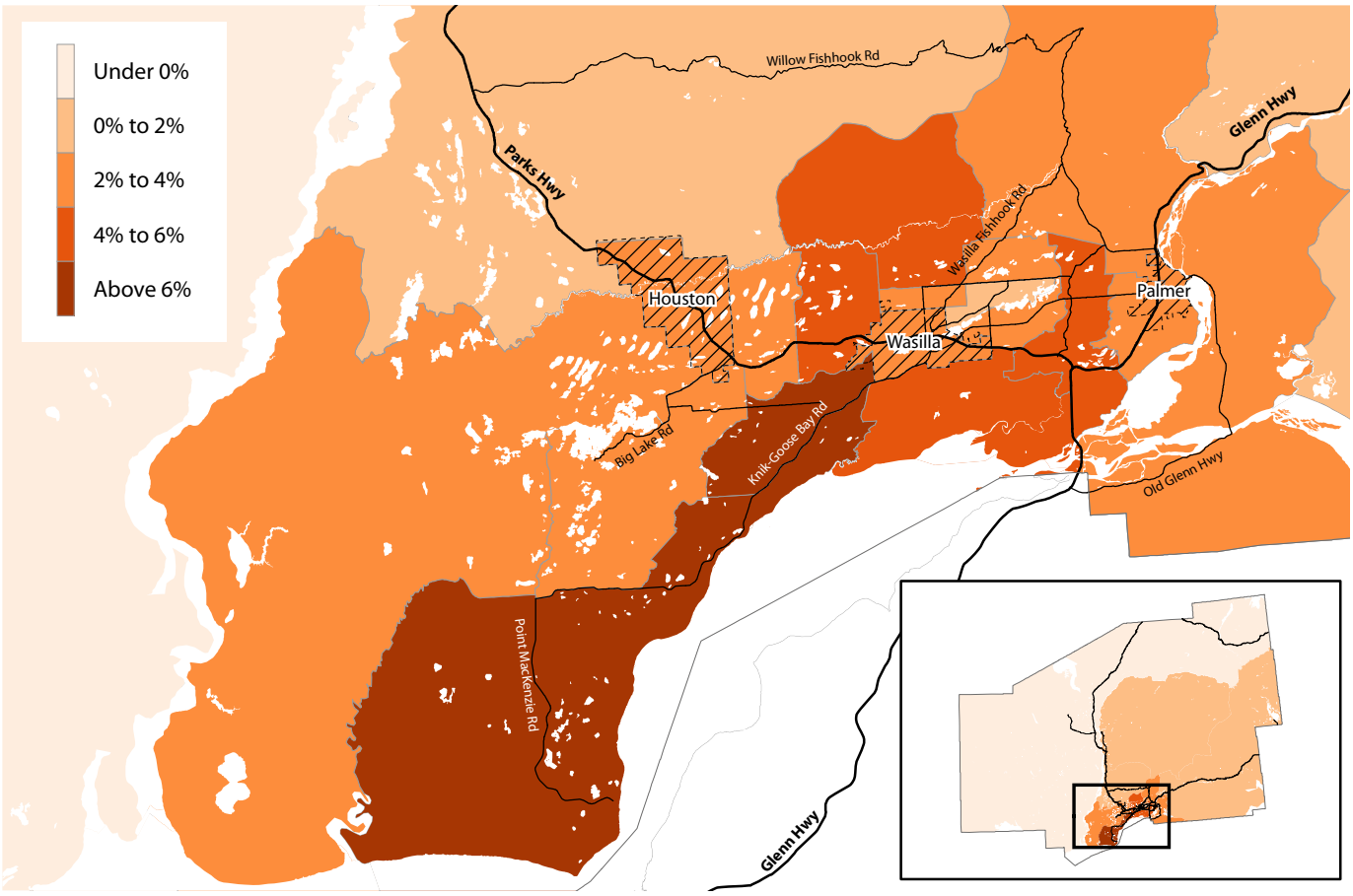
Still growing today

Since 1990, Mat-Su's population has resumed its upward trend, outpacing the rest of the state by a large margin. In the last quarter-century, Mat-Su has averaged 3.4 percent growth per year versus 1.2 percent for the state. The borough makes up 14 percent of the state's population today, up from 7 percent in 1990.

The 2000s brought another strong building boom, and a third of Mat-Su homes were built during that decade. (See Exhibit 3.) A large part of the increase has been former Anchorage residents. Exhibit 4 shows the migration flows between the two areas for the last 32 years based on Permanent Fund Dividend applications

5 Average Yearly Growth Rates Around the Borough

Matanuska-Susitna, 2000 to 2015



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

as well as the net migration difference between them. For the entire period, more people moved from Anchorage to Mat-Su than the reverse.

While the net population gains from Anchorage migration are not at the oil-boom levels of the early '80s, Mat-Su has gained more than 500 people per year from its neighbor since 1990. Through the 1990s and most of the 2000s, this inflow grew steadily as a more measured housing boom brought in more movers.

While the number of migrants from Anchorage has fallen from its 2006 peak, it has been on the rise again over the last two years. Everywhere except the remote areas of Western Mat-Su have grown, but the highest levels have been more concentrated. (See Exhibit 5.)

In the areas southwest of Wasilla along Knik-Goose Bay Road, average yearly growth has topped 6 percent. This area, home to around 4,500 people in 2000, has added more than 9,500 people in the last 15 years. Other areas have also topped the borough average, including south and northwest of Wasilla as well as areas near the Glenn-Parks Interchange, which have all grown by over 4 percent a year.

Eric Sandberg is a demographer in Juneau. Reach him at (907) 465-2437 or eric.sandberg@alaska.gov.

The Month in Numbers

Numbers delayed each February

Because of the annual benchmarking and revision process, the data the Department of Labor typically uses to generate the monthly unemployment rate and job numbers were not available before publication of this month's *Trends*. We will release two months' employment statistics and unemployment rates in March.

This month in Trends history

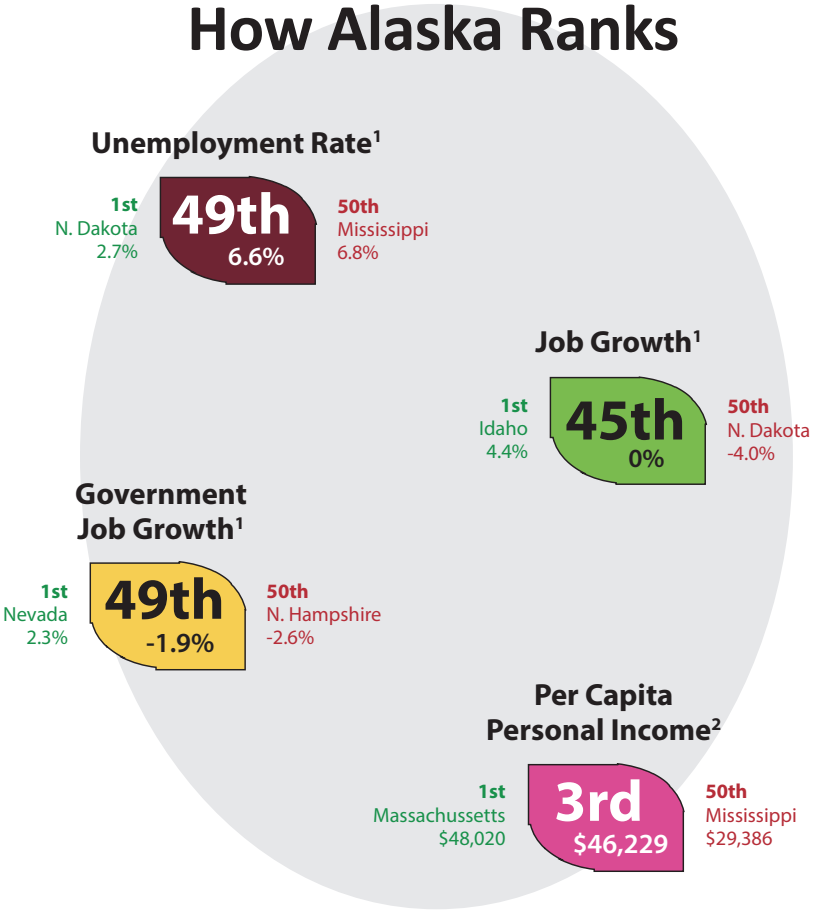
MARCH 1994

Alaska's statewide population increased by 3.5 percent, or 21,887 people, between April 1, 2000 and July 1, 2003. Alaska's growth rate was slightly faster than the 3.3 percent growth for the U.S. over the same period.

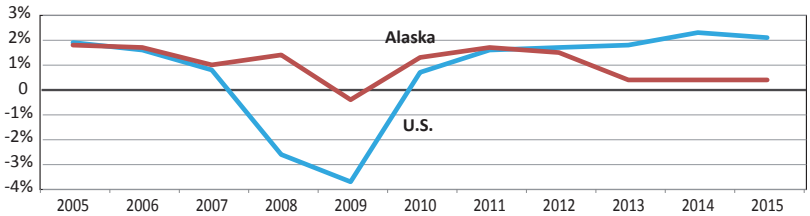
The number of people living in the state climbed from 626,931 at the 2000 Census to a provisional 2003 estimate of 648,818.

The Department of Labor and Workforce Development has published *Alaska Economic Trends* as far back as 1961, and other labor market summaries since the late 1940s. Historical *Trends* articles are available at labor.alaska.gov/trends as far back as 1978, and complete issues are available from 1994.

How Alaska Ranks



Job Growth in Alaska and the Nation[3]



All data sources are U.S. Bureau of Labor Statistics and Alaska Department of Labor and Workforce Development, Research and Analysis Section, unless otherwise noted.
[1]December 2015
[2]December 2015, over the year
[3]Annual average percent change

Employer Resources

March 8 webinar to address federal contractor compliance

Do you know the most common affirmative action and equal opportunity problem areas identified during compliance reviews? Are you required by your federal contract to set affirmative action goals? Find out during the upcoming federal contractor compliance assistance webinar.

The U.S. Department of Labor, Office of Federal Contractor Compliance Programs, in collaboration with the multi-agency Business Employment and Services Team, will present an interactive webinar to Alaska supply and service federal contractors to describe what to expect during an OFCCP compliance evaluation and to identify common problem areas.

OFCCP enforces, for the benefit of job seekers and wage earners, the contractual promise of affirmative action and equal employment opportunity requirements of those who do business with the federal government.

Event Name:	OFCCP Compliance Assistance Webinar: What to Expect During an OFCCP Compliance Evaluation and Common Problem Areas
Registration:	Submit via e-mail to anchorage.employers@alaska.gov
Date:	Tuesday, March 8, 2016
Time:	8:00 to noon, Alaska time
Location:	Webinar viewing location is the Anchorage Midtown Job Center, 3301 Eagle Street, Room 104, with distance delivery available to those outside of Anchorage. (Call the Anchorage Midtown Job Center for set-up.)
For More Information:	(907) 269-4777 Anchorage Midtown Job Center

Employment specialists in all 17 Alaska Job Centers are here to help Alaska federal contractors with all recruitment needs, including meeting their employment equal opportunity and affirmative action goals, especially for veterans and those with disabilities. Go to jobs.alaska.gov/employer.htm for more information.

Employer Resources is written by the Employment and Training Services Division of the Alaska Department of Labor and Workforce Development.