

The Brain Drain

by Jeff Hadland
Economist

About 38 percent of young Alaskans are leaving for college and jobs in the lower 48 and not coming back

Alaska has one of the highest migration rates in the nation. The general belief is that a disproportionately large percentage of Alaska's young adults leave Alaska after high school or after pursuing some postsecondary education in the state. Also, it is widely assumed that the percentage of Alaskans that continue their education beyond high school is among the lowest in the nation. This report presents data to quantify these phenomena, sometimes characterized as a "brain drain".

This report tracks a study group of 16,114 young Alaskans, age 15-16 in 1994 (1994 Youth). It follows them through their postsecondary education in Alaska and at out-of-state institutions. It examines these data to determine how many of the original study group are currently employed in Alaska.

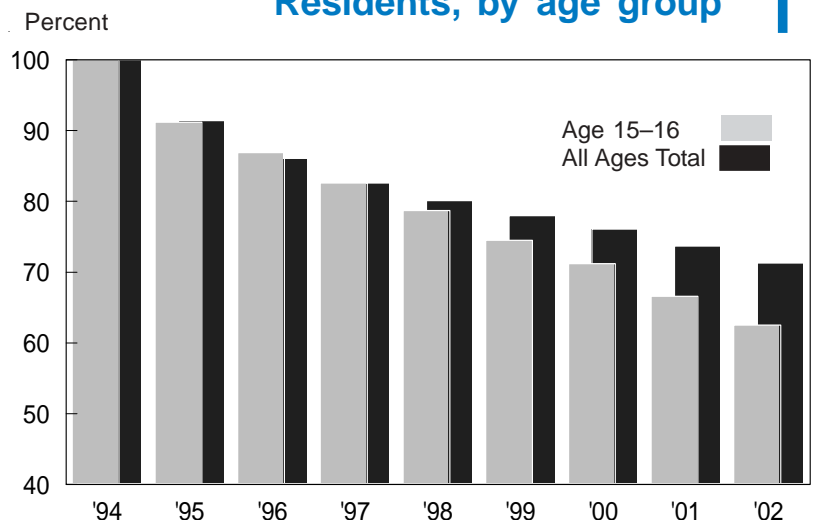
Summary of Findings

- Just over 62 percent of youth age 15-16 in 1994 were still Alaska residents in 2002, compared with 71.3% of the total Alaska population.
- A little more than 55 percent of the 1994 Youth group reported some postsecondary education, nearly identical to the postsecondary education rate of a group of 17-18 year old Alaska youth in 2000.
- Approximately 62 percent of the 1994 Youth that pursued postsecondary education did so exclusively in Alaska.
- More than 84 percent of the 1994 Youth that had received their postsecondary education exclusively in Alaska were still Alaska residents in 2002, while only 51 percent of those that had received postsecondary education exclusively outside the state were Alaska residents in 2002.

- Nearly 70 percent of the 1994 Youth with postsecondary education attended the University of Alaska at some time from 1996 through 2002.
- More than 12 percent of the total 1994 Youth group earned one or more degrees as of the end of 2002.
- Nearly 54 percent (8,659) of the 1994 Youth group were employed in Alaska in 2002 based upon a match with Alaska unemployment insurance (UI) wage records. Average 2002 earnings varied by educational attainment; youth who had earned a degree at the University of Alaska were the highest earners.

The number of young Alaskans entering the labor force each year is rapidly increasing. In 2002 there were nearly twice as many 16-year-old Alaskans (11,246) as there were new jobs created in Alaska from 2001 to 2002 (6,500). Nevertheless, a significant number of employment

1994 Population Still Alaska Residents, by age group



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

2 1994 Population Still Alaska Residents, percent by age group

Age Group	1994	1995	1996	1997	2002
14 and Under	100	91.5	86.9	83.9	74.8
15-16	100	91.2	86.9	82.6	62.3
17-19	100	88.9	82.3	77.2	61.2
20-29	100	87.8	80.6	76.0	65.9
30-39	100	92.1	86.8	83.5	74.1
40-49	100	93.4	89.2	86.5	76.2
50+	100	91.5	86.2	82.1	65.9
Total	100	91.4	86.1	82.6	71.3

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

opportunities are available to new entrants to the labor force. The number of new hires each quarter, already large, (see Exhibit 17) may soon increase, as a high percentage of Alaska's workforce approaches retirement age. However, numbers don't tell the whole story; the likelihood exists of a mismatch between the skills of new workers and job openings. Youth face an obvious disadvantage in competition with more experienced workers. The lure of the much larger job markets to the south cannot be ignored. Tracking the postsecondary education and employment patterns of young Alaskans can be helpful in determining priorities and programs in the coming years. Such findings can be used to enhance job opportunities for young Alaskans.

3 1994 Youth Place of Residence 1994 and 2002

1994 Youth group characteristics

The study group mentioned earlier had significantly more males (52.5%) than females

Residence in 1994

Residence in 2002

	Same Borough Census Area (C.A.)		Moved to Other Borough/C.A.		Outside Alaska		Total
	Number	Percent	Number	Percent	Number	Percent	
	Aleutians East	23	60.5	7	18.4	8	
Aleutians West	24	34.8	18	26.1	27	39.1	69
Anchorage	3,180	52.2	515	8.5	2,394	39.3	6,089
Bethel	316	71.3	59	13.3	68	15.3	443
Bristol Bay	8	27.6	10	34.5	11	37.9	29
Denali	21	39.6	15	28.3	17	32.1	53
Dillingham	87	66.9	28	21.5	15	11.5	130
Fairbanks	937	47.3	198	10	847	42.7	1,982
Haines	19	25.7	22	29.7	33	44.6	74
Juneau	288	31.9	186	20.6	430	47.6	904
Kenai	593	42.1	233	16.5	583	41.4	1,409
Ketchikan	162	37.9	54	12.6	212	49.5	428
Kodiak	141	39.3	70	19.5	148	41.2	359
Lake and Peninsula	26	50	18	34.6	8	15.4	52
Mat-Su	769	45.7	319	19	594	35.3	1,682
Nome	180	63.4	64	22.5	40	14.1	284
North Slope	117	62.9	34	18.3	35	18.8	186
Northwest Arctic	136	64.8	41	19.5	33	15.7	210
Prince of Wales-Outer Ketchikan	75	41	35	19.1	73	39.9	183
Sitka	95	39.4	42	17.4	104	43.2	241
Skagway-Hoonah-Angoon	33	30.8	32	29.9	42	39.3	107
Southeast Fairbanks	70	33.7	75	36.1	63	30.3	208
Valdez-Cordova	88	31.2	75	26.6	119	42.2	282
Wade Hampton	141	71.2	36	18.2	21	10.6	198
Wrangell-Petersburg	65	36.3	36	20.1	78	43.6	179
Yakutat	9	37.5	8	33.3	7	29.2	24
Yukon-Koyukuk	110	45.1	88	36.1	46	18.9	244
Unknown	0	0	6	22.2	21	77.8	27
Total	7,713	47.9	2,324	14.4	6,077	37.7	16,114

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

(47.5%). Males outnumbered females in all age groups in Alaska in 1994. Consistent with the overall population distribution in Alaska, 37.8% of the 1994 Youth population reported their residence in Anchorage, 12.3% in Fairbanks, 10.4% in Mat-Su and 8.7% in Kenai.

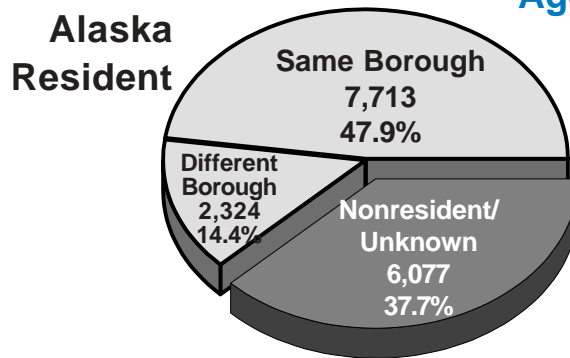
No information is currently available indicating whether the 1994 Youth were Alaska high school students in 1994 or graduated from an Alaska high school. In 1996 and 1997, the Alaska Department of Education and Early Development reports 12,209 high school graduates from Alaska school districts. This represents a large percentage of the total high school graduation age population for those years. (The statewide dropout rate for grades 7-12 ranged from 3.4% to 4.1% from 1996 to 1998.)

For purposes of comparison, a second group of Alaska youth age 17 to 18 in 2000 was selected and matched with administrative data. This group of recent high school graduation age youth was examined to determine employment and postsecondary education decisions shortly after their high school years.

Outmigration from Alaska—1994 to 2002

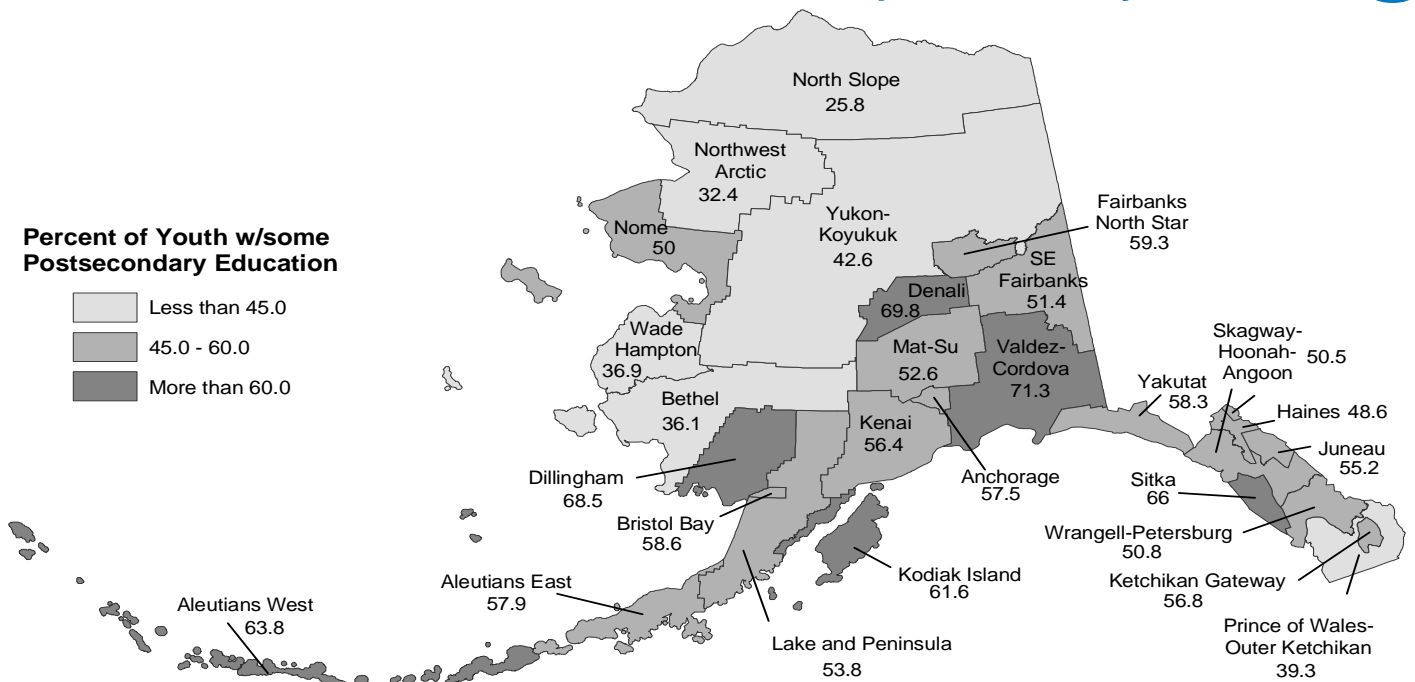
Older youth and young adults typically have the highest migration rates of any population group. This is typically the time when individuals are either continuing their education or considering a serious job or career. In order to achieve these goals, many consider moving to another location. Although the majority of Alaska's 1994 Youth

2002 Residence of 1994 Youth Age 15-16 4



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

Percent of 1994 Youth With some postsecondary education 5



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

6 Where 1994 Youth Did Their Postsecondary studies And employment status

study group chose to continue their work and/or education close to home, approximately 38 percent chose to leave Alaska to pursue their long-term goals.

Due primarily to outmigration, there was a significant decline in the number of Alaska 1994 Youth from 1994 though 1997, when most of the students would have been old enough to graduate from high school. In 1997, 82.6% of the 1994 Youth group were still Alaska residents based upon PFD application. By 2002, only 62.3% of this population were still Alaska residents. (See Exhibit 1.)

	Resident			Alaska Employed 2002	
	Total	Number	%	Number	%
No Postsecondary Reported	7,211	4,202	58.3	3,623	50.2
Alaska Only	5,537	4,679	84.5	4,207	76
Outside Alaska Only	1,190	607	51	428	36
Inside and Outside Alaska	2,176	549	25.2	400	18.4
Total	16,114	10,037	62.3	8,658	53.7

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

7 Education, Residency, and Employment of youth

	Youth Age 15-16 in 1994					Youth Age 17-18 in 2000				
	Youth	Post-secondary	Degree	Alaska Resident in 2002	Alaska Employed 2002	Youth	Post-secondary	Degree	Alaska Resident in 2002	Alaska Employed 2002
Aleutians East	38	22	4	30	24	54	27	0	48	38
Aleutians West	69	44	11	42	44	75	38	1	60	48
Anchorage	6,089	3,503	843	3,695	3,146	7,587	4,207	40	6,619	5,400
Bethel	443	160	17	375	356	552	221	3	517	442
Bristol Bay	29	17	4	18	15	39	28	0	33	28
Denali	53	37	10	36	30	60	38	2	55	38
Dillingham	130	86	9	115	100	153	99	1	145	109
Fairbanks	1,982	1,176	295	1,135	971	2,413	1,418	17	2,091	1,769
Haines	74	36	8	41	42	98	53	1	80	69
Juneau	904	499	118	474	434	1,213	643	11	1,015	856
Kenai	1,409	794	192	826	693	1,838	1,191	11	1,597	1,265
Ketchikan	428	243	48	216	201	439	231	2	361	284
Kodiak	359	219	41	211	175	393	262	7	329	256
Lake and Peninsula	52	28	2	44	38	73	42	0	61	56
Mat-Su	1,682	885	198	1,088	914	2,311	1,200	24	2,008	1,582
Nome	284	141	22	244	212	318	145	2	292	246
North Slope	186	47	3	151	133	257	84	0	227	205
Northwest Arctic	210	68	9	177	159	259	84	0	241	196
POW-Outer Ketchikan	183	72	10	110	90	208	91	0	172	126
Sitka	241	157	28	137	121	273	176	2	219	183
Skagway-Hoonah-Angoon	107	54	14	65	61	100	53	2	85	72
Southeast Fairbanks	208	107	21	145	123	238	122	5	203	149
Valdez-Cordova	282	197	39	163	142	338	270	7	293	237
Wade Hampton	198	73	3	177	164	270	77	1	255	215
Wrangell-Petersburg	179	90	20	101	81	212	127	0	171	125
Yakutat	24	14	0	17	15	21	9	0	20	18
Yukon-Koyukuk	244	103	14	198	169	269	136	0	246	201
Other/Unknown	27	14	6	6	5	352	182	3	123	87
Total	16,114	8,886	1,989	10,037	8,658	20,413	11,254	142	17,566	14,300

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

Outmigration rates for Alaska youth age 17-19 and age 15-16 in 1994 were the highest of any age group. Fully 37.7% of 15-16 year olds and 38.8% of 17-19 year olds no longer resided in Alaska in 2002, compared to 28.7% of all Alaska residents. (See Exhibit 2.) The migration rate for males and females was virtually the same within the 15-16 age group.

Differences in outmigration rates from Alaska by age group were significant, but they varied dramatically depending on the geographic region where the youth lived in 1994. (See Exhibit 3.) Boroughs in Southeast Alaska exhibited the largest outmigration rates for the 15-16 year old population. Only 50.5% of youth from Ketchikan, 52.5% of Juneau youth, and 57.1% of Sitka youth remained in Alaska in 2002.

Some of Alaska's rural boroughs and census areas had very low outmigration rates. Nearly 90 percent of the 1994 Youth in Wade Hampton, 88.5% of youth in Dillingham, 86.2% in Nome, and 84.9% in Bethel were still in the state through 2002.

More than 14 percent of 1994 Youth moved to another borough or census area in Alaska. (See Exhibit 3.) Rural resident youth were just as likely to move to another part of the state as to move outside Alaska. Seeking a wider variety of education or employment opportunities, most of those that moved from a rural area to other parts of Alaska moved to Anchorage or Fairbanks.

Alaska generally has one of the highest interstate migration rates of any state. Outmigration during the 1990s averaged 7.2% per year for the total population. Based upon analysis of IRS tax return data, 46.9% of gross migration (both immigration and outmigration) was with states in the western U.S. Washington and California were the two top states for interstate migration. Alaska youth attended postsecondary schools in these same "magnet" states.

Although some of the regions in Alaska with the highest migration rates had slow growing or declining economies, this was not the entire explanation for this pattern. Some of the rural

regions of Alaska with relatively low migration rates also exhibited slow growth prospects during the 1990s. Clearly, economic, cultural, and environmental factors play a part in the decision to leave Alaska for continuing education and economic opportunities.

There was very little flow from resident to nonresident status and back over the course of the nine years from 1994 through 2002. For those resident youth in 1994 that were still residents in 2002, more than 90 percent had been residents throughout the entire period. Once they left Alaska and became nonresidents, very few resumed residency in later years.

For the more recent study population of Alaska youth age 17-18 in 2000, 86.1% were still residents of Alaska in 2002, based upon Alaska PFD application.

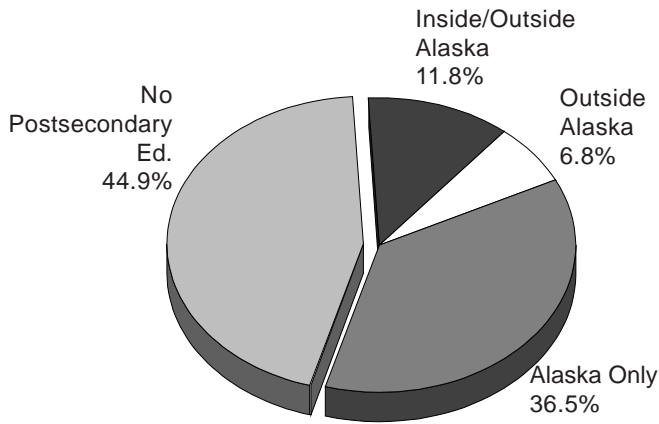
Postsecondary education rates

At least 55.3% (8,903) of the 1994 Alaska Youth population attended one or more postsecondary schools from 1996 through 2002. More than 34 percent (5,537) of these youth pursued their postsecondary education exclusively in Alaska, 7.4% (1,190) went to school exclusively outside Alaska, while 13.5% (2,176) attended postsecondary education institutions both inside and outside the state.

Nationwide, about 63 percent of high school graduates age 16 to 24, and about 43 percent of all 18 to 24-year-olds had enrolled in college in 1999.

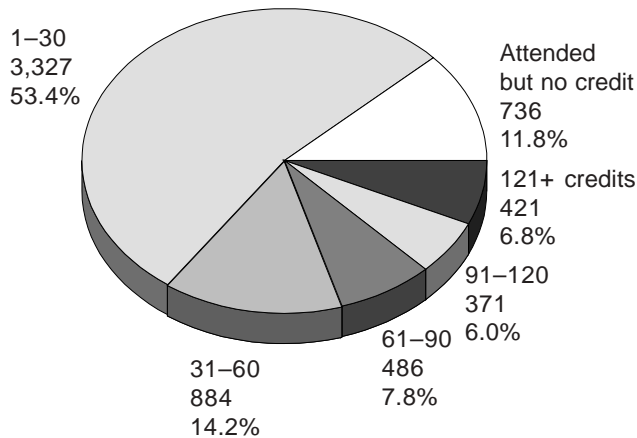
More than 6,200 of Alaska's 1994 Youth attended the University of Alaska at some time from 1996 through 2002. Credits were earned at the University of Alaska from 1996 through 2002 by 34.1% of the 1994 Youth group, with the remainder of those attending having withdrawn, received an incomplete or failed their course(s). Nearly 70 percent of the 1994 Youth that attended a postsecondary institution attended the University of Alaska.

8 Postsecondary Education Status thru 2002—Youth 17-18 in 2000



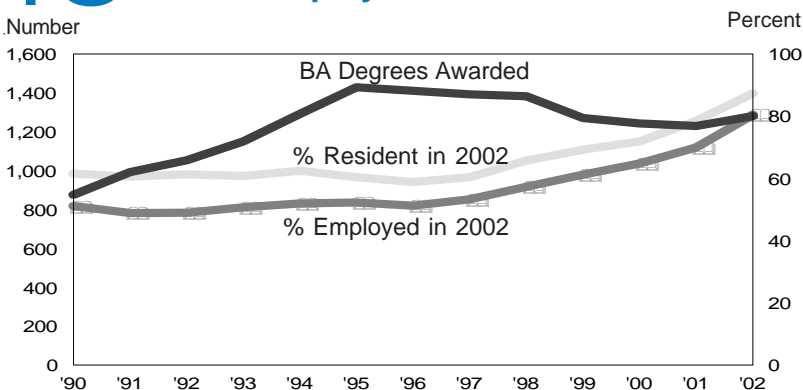
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

9 Attended University of Alaska By credits earned 1996-2002 – 1994 Youth



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

10 Bachelor Degrees from U of A Percent employed and Alaska resident 2002



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

More than 12 percent (1,989) of the 1994 Youth group had earned one or more degrees and/or certificates as of December 2002. From 1996 through 2002, 838 of the youth earned one or more degrees and certificates of all types from the University of Alaska.

Residency and current employment status varied significantly depending upon the location of reported postsecondary education activity. Those 1994 Youth that reported both in-state and out-of-state postsecondary education had the lowest current Alaska employment and residency; only 25 percent of those youth were residents of Alaska and 18 percent reported working in the state in 2002. (See Exhibit 6.)

The percent of the 1994 Youth that attended a postsecondary institution varied significantly by place of residence. (See Exhibit 7.) While the overall postsecondary participation rate was 55 percent, the participation rate by borough/census area varied from 25 percent to 70 percent. Surprisingly, rural areas were represented among both the lowest and highest postsecondary participation groups. Lowest postsecondary participation was reported in the North Slope Borough, Northwest Arctic Borough and Bethel Census Area, while the highest rates were reported in Valdez-Cordova Census Area, Denali Borough and Dillingham Census Area.

The 1994 Youth in the urban areas of Anchorage, Fairbanks and Mat-Su attained the largest number of postsecondary degrees or certificates, and urban areas generally had higher rates of attainment. However, Aleutians West Census Area and Denali Borough both had high rates of degree attainment, but with very small total numbers. In general, rural areas fared poorly in terms of degree attainment, with the North Slope Borough and Wade Hampton having less than two percent of their youth reported as receiving a degree or certificate as of 2002.

Postsecondary education for Alaska residents age 17-18 in year 2000

The 20,413 Alaska resident youth age 17-18 in 2000 were matched with University of Alaska and

National Student Clearinghouse (NSC) files to identify their participation in postsecondary education. (See Exhibits 3 and 4.) Overall participation in postsecondary education mirrored the 1994 Youth group, with a similar 55.1% attending one or more postsecondary institutions. Longer term tracking of the 2000 Youth group will probably result in higher postsecondary education participation rates than the 1994 group.

Although only the most ambitious 17-year-old would have had time to earn a bachelor's degree by the end of 2002, more than 140 youth in this group had earned certificates or associate degrees by that time.

For those youth that had received some postsecondary education as of 2002, two-thirds had received that education exclusively in Alaska. The remainder received some postsecondary education outside the state, with 12.4% continuing their education exclusively outside Alaska.

More females in postsecondary ed

More than 50 percent (4,279) of males and 60.2% (4,602) of females in the 1994 Youth group had some reported postsecondary education. A little less than 10 percent of the males and 15 percent of the females earned a degree. Nearly 59 percent of those with degrees were female. For those attending postsecondary institutions, females were more likely to attend exclusively in Alaska.

Alaska students stay in western U.S.

The 1994 Youth group attended colleges and universities in every state in the union from 2000 to 2002, but most of them attended institutions located in the west coast states. Washington had 530 students from Alaska, Oregon 423, and California 331. Colorado had 213. Utah, Montana, Nevada, and Texas each drew between 113 and 177 of the 1994 Youth.

University of Alaska student data

Nearly 39 percent of the 1994 Youth (6,264 students) attended one or more terms at the

University of Alaska from the fall of 1996 through the fall of 2002. However, a large percentage (46.7%) of them attended for three or fewer terms during the period. More than 62 percent of those youth that attended the University of Alaska at some time during the period began attending by the fall of 1997.

The 1994 Youth group attempted 276,866 credits and earned 207,528. The mean number of credits earned from 1996 through fall 2002 was 33, while the median credits earned was 14. More than 53 percent of the students attending the University of Alaska earned between 1 and 30 credits through the fall 2002, while an additional 11.8% of 1994 Youth attended, but earned no credits. (See Exhibit 9.)

More than 43 percent of the female 1994 Youth group and nearly 35 percent of the males attended the University of Alaska at some time from 1996-2002. Approximately 53 percent of the 1994 Youth group that attended the University of Alaska were female. The average number of credits earned by females was 35.2, while males earned on average 30.8 credits.

As of fall 2002, 838 of the youth cohort had received one or more degrees from the University of Alaska. Based upon the first reported degree awarded, 488 had earned a bachelor's degree, 308 an associate degree, and the remainder had earned advanced degrees or other certifications. Each year, the University of Alaska awards approximately 1,300 bachelor's degrees.

Exhibit 13 shows the number of students who earned degrees and the current resident and employment status for each year's degree recipients. As expected, the more recent University of Alaska graduates have the highest current Alaska residency and employment rates, but those students that earned degrees early in the decade have relatively high and stable current employment and residency rates as well. For the more recent youth cohort, those Alaskans age 17-18 in 2000, 38.6% attended the University of Alaska at some time from 1996 through 2002. Nearly 16 percent were still attending the University of Alaska as of fall 2002.

11 Average Alaska Earnings

By education, 1994 Youth–2002

Nonresident	\$10,644
No Postsecondary reported	\$15,631
No Degree	\$16,902
Attended U of A, No Credits	\$18,025
31–60 U of A Credits	\$18,656
1–30 U of A Credits	\$18,941
Degree, Alaska or Outside	\$19,754
61–90 U of A Credits	\$20,928
U of A Degree	\$21,236
All Youth Workers	\$17,238

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

U of A student employment and earnings

A little more than 4,200 current and former students of the University of Alaska from the 1994 Youth cohort were employed in Alaska in 2002. This group earned more than \$79 million, based upon administrative record matches with Alaska UI wage records. Students who received one or more degrees at the University of Alaska had the highest average total Alaska earnings in 2002. (See Exhibit 12.) Workers that reported earning between 61 and 90 University of Alaska credits had the second highest average earnings.

12 Employment, Earnings, Residency

1994 Youth, U of A students–2002

	1994 Youth*	Resident in 2002	Employed in AK	Total AK Earnings	Average Earnings	Quarters Worked
Total	16,114	10,037	8,659	\$149,262,715	\$17,238	27,434
Attended UA, No Credits Earned	736	533	468	8,435,591	18,025	1,518
1 to 30 Credits Earned	3,327	2,458	2,143	40,589,836	18,941	7,014
31 to 60 Credits Earned	884	701	609	11,361,407	18,656	2,014
61 to 90 Credits Earned	486	431	354	7,408,458	20,928	1,160
91 to 120 Credits Earned	371	344	307	5,256,249	17,121	1,020
121 + Credits Earned	421	391	346	6,088,189	17,596	1,113
Earned One or More Degrees	838	734	657	13,952,018	21,236	2,210
Attended University of Alaska	6,264	4,887	4,255	79,561,938	18,698	13,924
Did Not Attend U A	9,850	5,150	4,404	69,700,777	15,827	13,510

* Age 15–16 in 1994

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

No matter the level of educational attainment, males earned more than females in Alaska in 2002. Male University of Alaska degree recipients earned significantly more than females, although females received a much larger number of degrees and many more of them were employed in Alaska in 2002. (See Exhibit 13.) Females who earned a degree at the University of Alaska had wage and salary earnings approximately 50 percent greater than those females who did not attend the University of Alaska. In 2002, males that did not attend the University had average earnings that were 94% as much as the entire male youth cohort while women earned 83.9% as much as all women in the group.

13 Employment and Earnings

1994 Youth by U of A attendance, sex–2002

	Male			Female		
	1994 Youth*	Employed in AK	Avg. Total Earnings	1994 Youth*	Employed in AK	Avg. Total Earnings
Attended UA, No Credits Earned	424	272	20,064	312	196	15,194
1 to 30 Credits Earned	1,546	985	20,699	1,779	1,156	17,441
31 to 60 Credits Earned	403	284	20,473	481	325	17,068
61 to 90 Credits Earned	239	177	24,719	247	177	17,136
91 to 120 Credits Earned	152	126	18,153	219	181	16,403
121 + Credits Earned	161	123	18,065	260	223	17,337
Earned One or More Degrees	314	237	25,267	524	420	18,961
Did Not Attend University of Alaska	5,511	2,619	17,967	4,327	1,784	12,686
Total	8,458	4,605	19,098	7,642	4,051	15,123

* Age 15–16 in 1994. For some youth gender data was unavailable, causing totals to differ.

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

1994 Youth employment and earnings

Total wage and salary earnings in Alaska in 2002 for the 8,659 employed 1994 Youth were \$149.3 million. These workers, representing 53.7% of the total 1994 Youth study group, earned on average \$17,238 in 2002 compared with \$25,808 average annual earnings for all workers employed at some time during the year 2002 in Alaska. The largest number of workers and the largest total earnings were in the Trade, Transportation & Utilities industry. The highest average and median earnings were paid to workers in the Natural Resource & Mining industry. (See Exhibit 15.)

Nearly 53 percent of 1994 Youth employed at some time during 2002 were employed by a single employer. An additional 28.3% of workers were employed by two employers and 12.0% were employed by three. Youth workers were employed an average of 3.2 quarters per year.

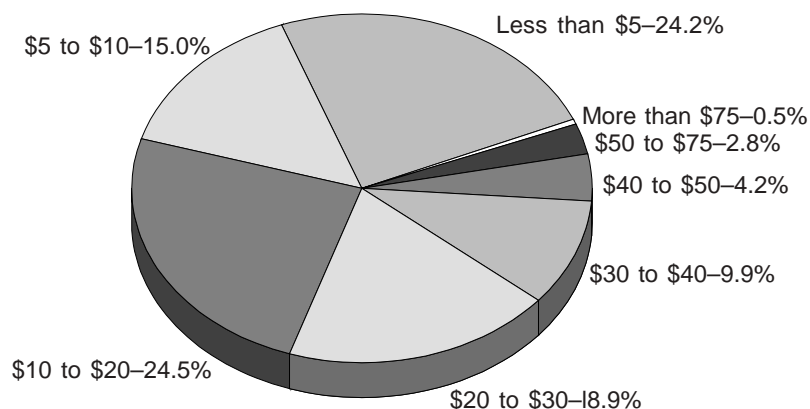
Migration and employment opportunities

The relatively high migration rate among youth from Alaska is the result of many factors. The estimated number of youth leaving the state is quite high, but the overall rate of outmigration has not increased in recent years. In fact, the percentage of 18-year-olds leaving the state in the late 1990s (about 9 percent annually) was lower than at any time during that decade.

Each year during this decade, at least 11,000 Alaska youth will enter the labor force. This increase will be more than matched by a growing number of job openings. Current projections call for an increase in Alaska employment of 16.7% over the 2000 to 2010 time period. This means employment is predicted to grow from 302,255 in 2000 to 352,693 in 2010, or an average annual increase of more than 12,000 jobs over the decade. These projected openings are the combined result of employment growth and net separations from the occupations and do not include jobs resulting from employee turnover.

Positions currently filled by nonresident workers represent potential opportunities for Alaska's workers, including new entrants to the labor force. The Alaska Department of Labor and Workforce Development estimates that there were nearly 68,000 nonresidents employed at some time in Alaska in 2001. Industries, occupations, and employers that have high nonresident hire rates signal an unmet training need and a placement opportunity for Alaska's training programs.

Total Average Earnings—2002 14 1994 Youth age 15-16 \$Thousands



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

Employment and Earnings 15 By industry, 1994 Youth—2002

	Total Workers	Total Earnings	Mean Earnings	Median Earnings
Local Government	932	\$12,563,184	\$13,480	\$9,462
State Government	422	8,104,181	19,204	18,743
Unknown	9	176,494	19,610	11,298
Construction	808	19,437,983	24,057	21,488
Educational and Health Svcs	945	16,555,507	17,519	16,451
Financial Activities	451	8,155,414	18,083	17,446
Information	199	4,741,951	23,829	21,686
Leisure and Hospitality	1,175	11,782,065	10,027	7,197
Manufacturing	216	3,114,855	14,421	9,997
Natural Resources and Mining	312	10,990,562	35,226	32,650
Other Services	365	5,623,264	15,406	13,337
Professional and Business Svcs	715	11,742,102	16,423	13,514
Trade, Transportation, Utilities	2,110	36,275,154	17,192	14,840
Total	8,659	149,262,715	17,238	13,905

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

Turnover in the workplace provides additional opportunities. In 2001, there were approximately 200,000 new hires, defined as a worker who had not worked for that employer at any time in the previous four calendar quarters. (See Exhibit 17.) New hires, along with other wage record transaction measures can help to identify employment opportunities for jobseekers and training needs for training providers.

Retirement is another avenue through which job openings occur. Alaska's population is aging rapidly. Assuming no significant change in the average retirement age, the quickly increasing average age of workers suggests that retirement (and death) will play an even larger role in the number of Alaska job openings during the next several years. In 2001, 16.6% of private sector workers in Alaska were age 50 and over, 8.5% age 55 and over. More than 20 percent of oil and health care industry workers are age 50 or older, and in state government, more than 28 percent of all workers are over age 50.

Summary

Alaska youth rates of attendance at postsecondary schools appear to be roughly comparable to those in the rest of the U.S. Among geographic areas in Alaska, the difference in participation rates is large. Overall migration from Alaska continues to be quite high, with the highest rates (about 38 percent) found in the older youth and young adult age groups. Just 62.3 percent of the study group of Alaska youth age 15-16 in 1994 retained their Alaska residency through 2002.

The 1990s was a period of slow economic growth, with a shift in predominant industries from resource extraction to services and retail. During the next ten years, overall employment is expected to exhibit growth, while underlying demographic shifts and turnover will provide an increasing number of job openings for the quickly growing young adult population in Alaska. Changes in the types of workers required and the number of youth seeking postsecondary education will continue to present opportunities and challenges to Alaska's educational institutions over the next ten years.

Methodology

More than 16,000 Alaskans age 15-16 in 1994 (1994 Youth) were identified based upon reported date of birth on their Alaska Permanent Fund Dividend application and matched with unemployment insurance wage records and a variety of administrative data. The group of high school age youth were tracked for the next eight years and their continuing education and employment outcomes were evaluated. No high school graduate database is available for Alaska, so this file was used as a proxy for that information. More than 12,200 high school graduates were reported in Alaska in 1996 and 1997. Another group of 20,413 17-18 year olds in 2000 was selected for tracking short-term postsecondary education choices.

The majority of the study group retained their Alaska residency during the evaluation period and had identifiable postsecondary education both within and outside Alaska. However, no information was found for some youth. No national data were used to identify those employed outside Alaska and no information is available for those that died or left the U.S. during this period. New youth arriving in Alaska after 1994 were also excluded from the group.

16 Employment and Earnings

By educational status 1994 Youth-2002

	1994 Youth	Resident in 2002	Employed in AK	Total Earnings	Avg. Total Earnings	Total Qtrs Worked
Total	16,114	10,037	8,659	\$149,262,715	\$17,238	27,434
Postsecondary Education Status						
No Postsecondary Reported	7,211	4,202	3,623	56,633,076	15,632	11,252
AK Postsecondary Only	5,537	4,679	4,207	80,989,972	19,251	14,055
Outside AK Postsecondary Only	1,190	607	429	6,027,828	14,051	1,117
Inside and Outside AK	2,176	549	400	5,611,840	14,030	1,010
Degree Status (AK and US)						
No Degree Earned	14,125	8,803	7,635	129,034,593	16,900	24,209
One or More Degrees Earned	1,989	1,234	1,024	20,228,122	19,754	3,225

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

Administrative Data

The Alaska Permanent Fund Dividend (PFD) is money paid to each Alaska resident from earnings from the Alaska Permanent Fund, an oil revenue funded endowment. In 2002, each Alaskan was paid \$1,542, a significant incentive to complete an application form that collects a few key demographic variables. Age, sex and place of residence information is collected from the file and used to identify the population, identify place of residence by year, determine continued residency and track in-state and estimate out-of-state migration.

Youth's continuing education was tracked using University of Alaska, other Alaska postsecondary education files and National Student Clearinghouse data showing education and degrees obtained in other Alaska schools and in other states. Although not all out-of-state schools and all years were available, the Clearinghouse data helped to fill a gap in information about the large number of Alaskans that pursue postsecondary education outside the state. Not all schools report, and information was not available for all years. The data provided was the best look yet at the postsecondary education activity and outcomes of Alaska youth.

Alaska UI Wage Records and the Occupational Database

In addition to industry and earnings information, Alaska's unemployment insurance (UI) wage record file contains occupation and place of work information for most wage and salary workers in the state. Employers are provided with special occupational coding manuals that assist them in coding each of their workers using the Standard Occupational Classification system. Besides being able to follow the progress of workers through a career ladder, it allows for direct comparison with other occupational information to matching an occupation with the typical education level for that occupation and looking at earnings by occupation. In addition, occupation data attached to each worker helped in determining if workers were employed in an occupation related to their education and training. This information is collectively known as Alaska's Occupational Database (ODB). The Wage Record Interchange System (WRIS) could not be used to track the employment outcomes of youth that were employed outside the state, since that file can be used only for evaluating the performance of certain federally funded training programs, primarily those associated with the Workforce Investment Act.

New Hires by Occupational Group, and quarter, 2001 17

Occupational Category	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
Management	1,338	1,351	1,243	1,041
Business and Financial Operations	671	545	504	513
Computer and Mathematical	376	207	210	210
Architecture and Engineering	542	935	464	289
Life, Physical, and Social Science	325	744	331	234
Community and Social Services	645	569	567	622
Legal	107	115	171	102
Education, Training, and Library	1,553	1,784	2,337	3,025
Arts/Design/Entertainment/Sports/Media	486	704	440	504
Healthcare Practitioners and Technical	2,378	1,170	1,135	961
Healthcare Support	1,280	769	690	929
Protective Service	639	716	690	728
Food Preparation and Serving Related	4,560	8,454	5,594	4,528
Building, Grounds Cleaning, Maint.	1,627	3,547	1,682	1,347
Personal Care and Service	1,517	3,818	1,856	2,041
Sales and Related	3,992	7,198	5,153	4,188
Office and Administrative Support	6,718	7,885	6,006	5,410
Farming, Fishing, and Forestry	571	1,254	550	156
Construction and Extraction	4,113	8,935	6,131	3,400
Installation, Maintenance, and Repair	1,988	2,611	1,805	1,441
Production	3,623	4,471	2,892	1,061

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