## ALASKA ECONOMIC TR-NDS <br> MARCH 2017



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ALASKA DEPARTMENT OF LABOR \& WORKFORCE DEVELOPMENT

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## ALASKA DEPARTMENT of LABOR and WORKFORCE DEVELOPMENT

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## Sara Whitney <br> Editor

## Bill Walker

 Governor
## Tough budget choices and how to keep getting Trends



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Commissioner
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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.

Valued readers, welcome to the last two full free print runs of Alaska Economic Trends. As part of our continued efforts to cut costs, we will no longer be distributing free copies of Trends as we have in the past. Instead, we will continue to distribute free copies electronically, and a new, full color print subscription option is now available through Assets, Inc.

Assets is an Anchorage nonprofit that has printed Trends for nearly 30 years and employs more than 280 people with developmental disabilities or mental illnesses. All proceeds from the $\$ 49.95$ yearly subscription will go to Assets. You can sign up now at subscribe-trends.com. To receive Trends electronically, go to labor.alaska.gov/trends and hit "subscribe" or send your email address to trends@ alaska.gov.

This decision did not come easily. For decades, policy makers and business leaders have relied on Trends to help make informed decisions about everything from hiring decisions to legislative policy. Providing apolitical, unbiased economic research has been good for our state's businesses and our economy as a whole. I made this decision reluctantly and with a heavy heart. Unfortunately, in this budgetary environment we can no longer maintain even the very small cost of free distribution of Trends.

This is neither the first nor last budget cut our department has absorbed. We have eliminated more than 37 percent of our unrestricted general fund budget compared to the day that Governor Walker took office. We've accomplished this by eliminating positions, merging divisions to reduce administrative costs, consolidating leased office space, and making the painful decisions to close multiple job centers. At a time when unemployment
and underemployment are growing, we have fewer resources to help Alaskans get retrained and back to work.

Compared to the challenges faced by an individual who's been laid off, changing Trends printing policy can seem like a minor issue. Yet I believe Trends content is important for the state, and for individual workers.

Consider the exhaustive research in this month's edition, which addresses the gender pay gap. We can’t possibly address and ultimately fix the gender pay gap without understanding what that gap is, how it differs across occupations and sectors, and how it has changed over time. Understanding these complex forces is important - when breadwinners are underpaid, families suffer from economic insecurity and in many cases cannot provide the opportunities their children deserve.

This is just one important issue Trends has addressed and will continue to illuminate in the future. We also rely on research published in Trends to inform our Alaska Hire, apprenticeship, and other training priorities. Robust data help us make efficient and productive investments in training programs, and contribute to Alaska's high median wages and low inequality. To be good stewards of public money, we must rely on sound research.

Thank you to everyone who reads and relies on Trends. I'm proud this publication can help spur statewide conversations about important issues, and inform sound public policies. Our Research and Analysis Section will continue producing high quality research for this magazine, which you can access for free online or in hard copy for a small subscription fee.

## THE GENDER <br> 

## Women earn an average of 68 percent of what men make in Alaska

## By KARINNE WIEBOLD

The average woman who worked in Alaska in 2015 earned $\$ 34,333$, and there was nearly a 50 percent chance she worked in health care or in state or local government. She also made 68 percent of what the average Alaska man earned.

Men earn more in nearly 80 percent of Alaska's occupations and at every age and educational level, even though men and women participate in the workforce

In 2015, nearly 167,000 women worked in Alaska and earned $\$ 5.7$ billion.
at nearly equal rates and work the same number of quarters per year. Forty-eight percent of the state's workers were women in 2015, but they made 38 percent of total wages. (See Exhibit 1.)

Women's workforce presence and share of total wages have both increased slightly since the late 1980s, when women were 47 percent of workers and earned 35 percent of wages. But over the past decade, both percentages have stayed about the same, with wages hovering around 38 percent and the percent of total workers varying by just


| Avg | Women | $\$ 14,962$ | $\$ 16,710$ | $\$ 18,256$ | $\$ 18,838$ | $\$ 18,578$ | $\$ 19,498$ | $\$ 20,582$ | $\$ 22,040$ | $\$ 23,439$ | $\$ 25,230$ | $\$ 27,265$ | $\$ 29,099$ | $\$ 30,843$ | $\$ 32,836$ | $\$ 34,333$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| wages | Men | $\$ 24,232$ | $\$ 26,867$ | $\$ 28,064$ | $\$ 28,707$ | $\$ 28,477$ | $\$ 29,909$ | $\$ 31,243$ | $\$ 32,545$ | $\$ 34,412$ | $\$ 37,616$ | $\$ 41,585$ | $\$ 43,088$ | $\$ 45,776$ | $\$ 48,894$ | $\$ 50,548$ |


| Earnings ratio* | $62 \%$ | $62 \%$ | $65 \%$ | $66 \%$ | $65 \%$ | $65 \%$ | $66 \%$ | $68 \%$ | $68 \%$ | $67 \%$ | $66 \%$ | $68 \%$ | $67 \%$ | $67 \%$ | $68 \%$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

[^0]
## How Alaska compares nationally

National data sources, such as the Bureau of Labor Statistics' Current Population Survey and the U.S. Census Bureau's American Community Survey, differ significantly from the rest of this article in that both are survey-based, use median wages instead of the average, and limit data to full-time workers.

While using different sources changes the size of the gap, they all tell the same story: that women earn significantly less than men and that Alaska ranks lower than the nation overall and lower than most states, even though Alaska has higher average wages for both men and women.

According to the ACS, Alaska ranks 33rd for wage parity, with women earning a median wage that's 78 percent of what men make: $\$ 43,455$ and $\$ 55,752$, respectively. New York and Delaware top the list with earnings ratios of 89 percent, and Wyoming comes in last at 64 percent. Nationwide, the earnings ratio is 80 percent, with $\$ 39,940$ in median earnings for women and \$49,938 for men.


[^1]half a percentage point.
The earnings ratio, or women's wages as a percent of men's, has grown somewhat over time. During the late 1980s, when Alaska was recovering from a significant recession, wage parity was at a low of 62 percent. That gap narrowed during the 1990s, to between 65 and 66 percent, and it continued to shrink into the 21st century.

It's important to note that this article's data can't measure the reasons for the gender wage gap. A variety of factors likely influence the disparity, including job experience, training, education, hours worked, choice of occupation or industry, and current and historical discrimination - but the degree to which those factors affect the gap is outside this article's scope. (See the sidebar on page 7.)

## Gap smallest in urban areas

While women are 48 percent of the workforce statewide, the percentage varies considerably by region.

The percentages in some of the most populated and urban areas Anchorage, Fairbanks, and the Gulf


Regional Workers and Wages by Gender
As PERCENT OF THE AREA'S TOTAL, ALASKA, 2015


[^2]
## 2 Where Women Work and How Their Pay Measures Up Alaska, 2015

|  | Female workers | Women's avg wage | Earnings ratio |
| :---: | :---: | :---: | :---: |
| Anchorage/Mat-Su Region |  |  |  |
| Anchorage | 49\% | \$38,856 | 72\% |
| Mat-Su | 45\% | \$19,356 | 74\% |
| Gulf Coast Region |  |  |  |
| Kenai Pen | 50\% | \$28,210 | 58\% |
| Kodiak Island | 48\% | \$28,791 | 72\% |
| Valdez-Cordova | 44\% | \$28,294 | 57\% |
| Interior Region |  |  |  |
| Denali | 40\% | \$22,947 | 45\% |
| Fairbanks N Star | 49\% | \$32,344 | 69\% |
| SE Fairbanks | 45\% | \$31,814 | 56\% |
| Yukon-Koyukuk | 45\% | \$20,016 | 77\% |
| Northern Region |  |  |  |
| Nome | 47\% | \$31,254 | 94\% |
| North Slope | 20\% | \$51,083 | 59\% |
| NW Arctic | 43\% | \$35,329 | 73\% |


| Southeast Region |  |  |  |
| :--- | :--- | :--- | :--- |
| Haines | $53 \%$ | $\$ 22,893$ | $80 \%$ |
| Hoonah-Angoon | $50 \%$ | $\$ 20,241$ | $91 \%$ |
| Juneau | $49 \%$ | $\$ 36,748$ | $81 \%$ |
| Ketchikan | $41 \%$ | $\$ 24,385$ | $75 \%$ |
| Petersburg | $56 \%$ | $\$ 27,485$ | $74 \%$ |
| P of Wales-Hyder | $47 \%$ | $\$ 24,850$ | $79 \%$ |
| Sitka | $52 \%$ | $\$ 31,421$ | $84 \%$ |
| Skagway | $47 \%$ | $\$ 26,021$ | $74 \%$ |
| Wrangell | $54 \%$ | $\$ 26,594$ | $84 \%$ |
| Yakutat | $45 \%$ | $\$ 26,066$ | $87 \%$ |


|  | Southwest Region |  |  |
| :--- | ---: | ---: | ---: |
| Aleutians E | $40 \%$ | $\$ 26,130$ | $71 \%$ |
| Aleutians W | $35 \%$ | $\$ 33,956$ | $67 \%$ |
| Bethel | $46 \%$ | $\$ 29,092$ | $94 \%$ |
| Bristol Bay | $55 \%$ | $\$ 26,519$ | $76 \%$ |
| Dillingham | $50 \%$ | $\$ 30,939$ | $100 \%$ |
| Kusilvak | $47 \%$ | $\$ 17,077$ | $85 \%$ |
| Lake and Pen | $50 \%$ | $\$ 30,979$ | $74 \%$ |

## Source: Alaska Department of Labor and

 Workforce Development, Research and Analysis SectionPercent Female Workers


Average Wage for Women


Coast - are around 49 percent.
Women earn a slightly higher percentage of wages than the statewide 38 percent in the two most urban areas: Anchorage (41 percent) and Fairbanks (40 percent). Those cities have a significant number of high-paying private occupations as well as state and local government jobs, which have a smaller wage gap. (See exhibits 2 and 3.)

The Gulf Coast Region's workforce is also 49 percent female, but women earn just 37 percent of total wages. The area is notable for its high-paying jobs in oil and gas, the industry in which women are least likely to work. (See the occupation and industry sections for more.)

Rural areas with remote work sites, such as the Northern and Rural Interior regions, have higher percentages of men. Mining, oil extraction, and oilfield services workers are predominantly men, and those jobs are also high-wage. For example, the North Slope Borough, where women earn 59 percent of what men make on average, has a workforce that's just 20 percent women. Note, however, that the women who work in the North Slope Borough have the highest average wages in the state. (See Exhibit 3.)

Other rural areas where local government is a larger slice of the economy tend to have a smaller gap because men and women in these jobs make similar wages.

AlASKA, 2015


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

The Matanuska-Susitna Borough has the workforce with the highest percentage of women, at 56 percent. Unless otherwise noted, all numbers in this article are for the place where people work rather than where they live,

Continued on page 10

## About the gender wage gap and limitations of the data

The difference between women's and men's wages is referred to as the gender wage gap, and it can be influenced by a number of factors, including experience, training, education, hours worked, job and industry choice, and discrimination. A wide variety of studies have attempted to measure and explain the reasons for the wage gap, but that type of analysis is outside the scope of this article.
For this article, we examined the total wages earned by each gender and the difference in their average annual wages. (Women's average wages divided by men's is also called the earnings ratio.)

We matched occupational data the Department of Labor and Workforce Development collects through the state's unemployment insurance program with demographic data from Permanent Fund Dividend applications. These two sources allow a range of comparisons, but they have some major limitations.
The biggest drawback is they don't allow us to differ-
entiate between full-time and part-time or seasonal workers, and including part-time and seasonal workers brings down the average for yearly wages.

Second, because we included only those who were eligible for unemployment insurance and applied for a dividend, this analysis doesn't cover nonresidents, who make up about 20 percent of the state's annual workforce. It also excludes those who didn't specify a gender, the self-employed, and federal civilian and military workers.

For a more useful analysis in the occupation-specific section, we considered only the occupation in which a worker made the most money, which understates total wages for people who held more than one job. For example, if Mary worked as a teacher but also held a summer retail job, her occupation would be "school teacher" and only those wages would be considered. However, in this article's broader analysis, such as for overall workers and wages, her retail wages would also be counted.

# Women's Shares of Total Jobs and Earnings by Industry 

ALASKA, 2015

Percent of Workers
Who are Women


Percent of Wages
Earned by Women


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

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Workers and Wages by Select Industry
ALASKA, 2015

|  | Total |  | Women |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Workers | Wages | Workers | Percent | Wages | Percent |
| Agriculture, Forestry, Fishing, and Hunting | 1,284 | \$31,119,344 | 390 | 30\% | \$5,812,316 | 19\% |
| Mining | 16,398 | \$1,870,475,695 | 2,195 | 13\% | \$220,192,462 | 12\% |
| Oil and Gas | 3,822 | \$784,619,460 | 806 | 21\% | \$121,727,859 | 16\% |
| Oilfield Services* | 9,676 | \$841,981,445 | 1,032 | 11\% | \$75,067,716 | 9\% |
| Utilities | 2,509 | \$196,854,707 | 711 | 28\% | \$39,603,145 | 20\% |
| Construction | 22,557 | \$1,189,904,844 | 2,963 | 13\% | \$112,722,760 | 10\% |
| Manufacturing | 11,567 | \$381,751,189 | 3,384 | 29\% | \$78,948,734 | 21\% |
| Seafood Processing | 6,976 | \$169,536,122 | 2,238 | 32\% | \$45,107,466 | 27\% |
| Wholesale Trade | 6,826 | \$342,556,261 | 1,739 | 26\% | \$65,123,026 | 19\% |
| Retail Trade | 43,065 | \$1,086,847,304 | 20,395 | 47\% | \$410,110,160 | 38\% |
| Transportation and Warehousing | 20,000 | \$997,058,522 | 5,856 | 29\% | \$202,916,720 | 20\% |
| Air Transportation | 6,010 | \$289,115,475 | 2,141 | 36\% | \$72,112,435 | 25\% |
| Information | 7,013 | \$401,529,052 | 2,863 | 41\% | \$139,388,820 | 35\% |
| Finance and Insurance | 7,616 | \$441,443,410 | 5,588 | 73\% | \$265,481,991 | 60\% |
| Real Estate and Rental and Leasing | 6,489 | \$208,711,890 | 2,646 | 41\% | \$74,110,038 | 36\% |
| Professional, Scientific, and Technical Services | 14,633 | \$844,739,264 | 6,784 | 46\% | \$300,943,076 | 36\% |
| Management of Companies and Enterprises | 2,323 | \$172,644,913 | 1,376 | 59\% | \$88,016,223 | 51\% |
| Admin Support/Waste Mgmt and Remediation | 14,206 | \$471,630,325 | 5,176 | 36\% | \$139,250,516 | 30\% |
| Educational Services | 2,327 | \$63,156,987 | 1,454 | 63\% | \$34,876,921 | 55\% |
| Health Care and Social Assistance | 46,747 | \$2,096,555,761 | 35,990 | 77\% | \$1,475,967,836 | 70\% |
| Arts, Entertainment, and Recreation | 5,279 | \$77,717,967 | 2,723 | 52\% | \$37,933,253 | 49\% |
| Accommodation and Food Services | 32,373 | \$559,552,993 | 16,876 | 52\% | \$262,236,786 | 47\% |
| Accommodation | 7,310 | \$150,614,843 | 4,169 | 57\% | \$74,464,719 | 49\% |
| Food Services and Drinking Places | 24,722 | \$405,530,757 | 12,484 | 51\% | \$185,725,232 | 46\% |
| Other Services | 11,560 | \$362,420,289 | 6,254 | 54\% | \$169,618,090 | 47\% |
| Other/Unknown | 432 | \$9,219,913 | 196 | 45\% | \$3,474,727 | 38\% |
| Local Government | 47,553 | \$1,824,088,150 | 27,581 | 58\% | \$991,165,468 | 54\% |
| State Government | 26,258 | \$1,310,514,020 | 13,463 | 51\% | \$602,106,563 | 46\% |
| Total | 349,015 | \$14,940,492,800 | 166,603 | 48\% | \$5,719,999,630 | 38\% |

*This industry category includes support activities for oil and gas drilling and related operations.
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

# How Women Fare in the State's Largest Occupations 

ALASKA, 2015

| Occupation | Total workers | Women | Men | Percent women | Women's avg wage | Men's avg wage | Earnings ratio* |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Retail Salespersons | 13,836 | 7,811 | 6,025 | 56\% | \$13,232 | \$19,817 | 67\% |
| Cashiers | 9,212 | 5,956 | 3,256 | 65\% | \$13,015 | \$16,248 | 80\% |
| Office and Administrative Support Workers, All Other | 7,079 | 5,433 | 1,646 | 77\% | \$30,042 | \$31,451 | 96\% |
| Construction Laborers | 6,293 | 619 | 5,674 | 10\% | \$21,646 | \$30,697 | 71\% |
| Personal Care Aides | 6,206 | 4,637 | 1,569 | 75\% | \$16,476 | \$16,221 | 102\% |
| Office Clerks, General | 5,981 | 4,650 | 1,331 | 78\% | \$26,092 | \$28,606 | 91\% |
| Janitors and Cleaners, Except Maids and Housekeeping Cleaners | 5,886 | 2,110 | 3,776 | 36\% | \$15,804 | \$19,366 | 82\% |
| Combined Food Preparation and Serving Workers, Including Fast Food | 5,389 | 3,133 | 2,256 | 58\% | \$10,007 | \$10,576 | 95\% |
| Registered Nurses | 5,304 | 4,713 | 591 | 89\% | \$61,530 | \$69,579 | 88\% |
| Laborers and Freight, Stock, and Material Movers, Hand | 5,018 | 745 | 4,273 | 15\% | \$12,869 | \$22,337 | 58\% |
| Bookkeeping, Accounting, and Auditing Clerks | 4,620 | 3,936 | 684 | 85\% | \$33,254 | \$35,837 | 93\% |
| Waiters and Waitresses | 4,596 | 3,273 | 1,323 | 71\% | \$15,241 | \$16,367 | 93\% |
| Food Preparation Workers | 4,324 | 2,135 | 2,189 | 49\% | \$11,262 | \$12,183 | 92\% |
| General and Operations Managers | 4,286 | 1,612 | 2,674 | 38\% | \$61,075 | \$95,014 | 64\% |
| Seafood Processing Workers, Except Surimi and Fish Roe | 4,087 | 1,408 | 2,679 | 34\% | \$16,594 | \$17,807 | 93\% |
| Operating Engineers and Other Construction Equipment Operators | 3,831 | 225 | 3,606 | 6\% | \$40,664 | \$60,098 | 68\% |
| Maids and Housekeeping Cleaners | 3,739 | 2,869 | 870 | 77\% | \$15,116 | \$18,136 | 83\% |
| Teacher Assistants | 3,647 | 2,904 | 743 | 80\% | \$15,970 | \$16,123 | 99\% |
| Maintenance and Repair Workers, General | 3,441 | 175 | 3,266 | 5\% | \$25,110 | \$42,569 | 59\% |
| Heavy and Tractor-Trailer Truck Drivers | 3,421 | 146 | 3,275 | 4\% | \$40,281 | \$51,075 | 79\% |
| Executive Secretaries and Executive Administrative Assistants | 3,372 | 2,958 | 414 | 88\% | \$38,628 | \$41,275 | 94\% |
| Secretaries and Admin Assistants, Except Legal, Medical, and Executive | 3,341 | 2,994 | 347 | 90\% | \$29,372 | \$28,628 | 103\% |
| Carpenters | 3,230 | 85 | 3,145 | 3\% | \$19,591 | \$41,224 | 48\% |
| Stock Clerks and Order Fillers | 3,120 | 794 | 2,326 | 25\% | \$15,292 | \$20,117 | 76\% |
| Receptionists and Information Clerks | 2,908 | 2,625 | 283 | 90\% | \$23,382 | \$19,291 | 121\% |
| Elementary School Teachers, Except Special Education | 2,699 | 2,142 | 557 | 79\% | \$53,561 | \$54,701 | 98\% |
| Customer Service Representatives | 2,638 | 1,885 | 753 | 71\% | \$28,042 | \$30,779 | 91\% |
| Managers, All Other | 2,571 | 1,150 | 1,421 | 45\% | \$63,268 | \$104,152 | 61\% |
| Sales and Related Workers, All Other | 2,557 | 1,127 | 1,430 | 44\% | \$21,805 | \$29,283 | 74\% |
| Cooks, Restaurant | 2,449 | 500 | 1,949 | 20\% | \$12,751 | \$16,750 | 76\% |
| Security Guards | 2,371 | 461 | 1,910 | 19\% | \$22,238 | \$32,028 | 69\% |
| First-Line Supervisors of Retail Sales Workers | 2,365 | 1,276 | 1,089 | 54\% | \$31,603 | \$41,966 | 75\% |
| Electricians | 2,199 | 70 | 2,129 | 3\% | \$48,942 | \$67,944 | 72\% |
| Grade 9-12 Teachers, Except Special and Career/Technical Education | 2,124 | 1,298 | 826 | 61\% | \$55,522 | \$60,239 | 92\% |
| Teachers and Instructors, All Other | 2,082 | 1,454 | 628 | 70\% | \$36,687 | \$45,162 | 81\% |
| Nursing Assistants | 2,074 | 1,820 | 254 | 88\% | \$28,509 | \$30,321 | 94\% |
| Child Care Workers | 2,041 | 1,809 | 232 | 89\% | \$11,316 | \$11,485 | 99\% |
| First-Line Supervisors of Office and Administrative Support Workers | 2,033 | 1,520 | 513 | 75\% | \$46,271 | \$55,237 | 84\% |
| Food Preparation and Serving Related Workers, All Other | 1,972 | 999 | 973 | 51\% | \$12,199 | \$15,189 | 80\% |
| Substitutes, Teachers and Instructors, Multilevel except postsecondary. | 1,941 | 1,467 | 474 | 76\% | \$7,273 | \$8,136 | 89\% |
| Counter Attendants, Cafeteria, Food Concession, and Coffee Shop | 1,890 | 1,505 | 385 | 80\% | \$8,776 | \$8,751 | 100\% |
| Accountants and Auditors | 1,824 | 1,314 | 510 | 72\% | \$59,509 | \$73,761 | 81\% |
| Automotive Service Technicians and Mechanics | 1,808 | 52 | 1,756 | 3\% | \$23,598 | \$40,101 | 59\% |
| Material Moving Workers, All Other | 1,706 | 139 | 1,567 | 8\% | \$26,657 | \$39,249 | 68\% |
| Plumbers, Pipefitters, and Steamfitters | 1,691 | 43 | 1,648 | 3\% | \$46,997 | \$64,791 | 73\% |
| Transportation Workers, All Other | 1,673 | 431 | 1,242 | 26\% | \$35,638 | \$62,307 | 57\% |
| Dishwashers | 1,659 | 277 | 1,382 | 17\% | \$7,865 | \$9,066 | 87\% |
| Business Operations Specialists, All Other | 1,652 | 1,031 | 621 | 62\% | \$55,445 | \$75,691 | 73\% |
| Special Education Teacher Assistants | 1,643 | 1,415 | 228 | 86\% | \$21,150 | \$20,795 | 102\% |
| Medical Assistants | 1,606 | 1,436 | 170 | 89\% | \$29,627 | \$29,924 | 99\% |

[^3]
# High-Paying Occupations With Large Numbers of Women 

## AlASKA, 2015

| Occupations | Women | Men | Percent <br> women | Women's <br> total wages | Men's <br> total wages | Percent <br> women's <br> wages | Average <br> women's <br> wages | Average <br> men's <br> wages |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Earnings |  |  |  |  |  |  |  |  |
| ratio* |  |  |  |  |  |  |  |  |$|$

*What women earned on average as a percent of what men earned in that occupation
Note: Includes select occupations where women earn an annual average of at least $\$ 70,000$, by the number of women. Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section
and many Mat-Su residents work outside the borough. Nearly 13,000 work in Anchorage, where average wages are higher, and 62 percent of those commuters are men. Of the 3,449 Mat-Su residents who commute to the North Slope, 90 percent are men, as are 70 percent of the nearly 500 who commute to Kenai.

## Concentrated in health care and local government

Women work in every industry but are concentrated in a few. Nearly one in four work in private educational and health services, which include health care workers but not public school teachers. (See Exhibit 4.) The secondlargest industry groups for women are local government, which includes teachers; and the trade, transportation, and utilities group, which includes retail workers.

Oil and construction, industries with high average wages, have the smallest shares of women. Just 3 percent of female workers are in those industries.

Women make up more than half of workers in education and health services, leisure and hospitality, and state and local government. (See Exhibit 5.) They are the minority in construction; oil; professional and business services; and trade, transportation, and utilities.

In all major industry groups, women earn proportion-
ally less than men do. (See Exhibit 6.) Although women make up 77 percent of health care and social assistance, for example, they bring home 70 percent of the wages.

## Gap smaller in occupations with more women

As with industries, women are much more likely to work in some occupations than in others. Women are the majority in 29 of the 50 largest occupations, ranging from a high of 90 percent in white-collar positions such as receptionists and information clerks, secretaries, and administrative assistants to a low of 3 percent in blue-collar occupations such as electricians, automotive service techs, mechanics, carpenters, plumbers, pipefitters, and steamfitters. (See Exhibit 7.)

Generally, the higher the percentage of women in an occupation, the smaller the wage gap. But while the wage gap is smaller in those occupations, the overall wages are lower, with registered nurses and school teachers being two exceptions.

## More men work in high-wage jobs

Fewer women work in high-wage occupations, and those who do earn less than men in those jobs.

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## High-Paying Occupations With Large Numbers of Men

## Alaska, 2015

| Occupations | Women | Men | Percent women | Women's total wages | Men's <br> total wages | Percent women's wages | Average women's wages | Average men's wages | Earnings ratio* |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| General and Operations Managers | 1,612 | 2,674 | 38\% | \$98,452,579 | \$254,068,166 | 28\% | \$61,075 | \$95,014 | 64\% |
| Managers, All Other | 1,150 | 1,421 | 45\% | \$72,757,803 | \$148,000,357 | 33\% | \$63,268 | \$104,152 | 61\% |
| Police and Sheriff's Patrol Officers | 166 | 1,201 | 12\% | \$8,811,900 | \$84,126,030 | 9\% | \$53,084 | \$70,047 | 76\% |
| Construction Managers | 110 | 1,114 | 9\% | \$8,984,823 | \$119,843,463 | 7\% | \$81,680 | \$107,579 | 76\% |
| Svc Unit Operators, Oil, Gas, and Mining | 69 | 1,090 | 6\% | \$5,536,721 | \$115,394,900 | 5\% | \$80,242 | \$105,867 | 76\% |
| Production Workers, All Other | 138 | 1,068 | 11\% | \$7,151,655 | \$107,492,555 | 6\% | \$51,824 | \$100,648 | 51\% |
| Airline Pilots, Copilots, and Flight Egrs | 84 | 1,034 | 8\% | \$8,769,593 | \$111,364,348 | 7\% | \$104,400 | \$107,702 | 97\% |
| Chief Executives | 639 | 947 | 40\% | \$67,623,366 | \$163,495,957 | 29\% | \$105,827 | \$172,646 | 61\% |
| Engineers, All Other | 212 | 903 | 19\% | \$22,133,655 | \$114,793,955 | 16\% | \$104,404 | \$127,125 | 82\% |
| Supervisors of Construction and Extraction Workers | 27 | 877 | 3\% | \$1,726,646 | \$93,305,370 | 2\% | \$63,950 | \$106,392 | 60\% |
| Mobile Heavy Equipment Mechanics, Except Engines | 7 | 753 | 1\% | \$331,161 | \$55,864,267 | 1\% | \$47,309 | \$74,189 | 64\% |
| Civil Engineers | 196 | 732 | 21\% | \$13,851,183 | \$64,603,072 | 18\% | \$70,669 | \$88,256 | 80\% |
| Telecommunications Equipment Installers and Repairers, Except Line Installers | 95 | 710 | 12\% | \$6,424,151 | \$50,713,650 | 11\% | \$67,623 | \$71,428 | 95\% |
| Business Operations Specialists, All Other | 1,031 | 621 | 62\% | \$57,164,246 | \$47,004,290 | 55\% | \$55,445 | \$75,691 | 73\% |
| First-Line Supervisors of Mechanics, Installers, and Repairers | 32 | 621 | 5\% | \$1,584,386 | \$46,231,962 | 3\% | \$49,512 | \$74,448 | 67\% |
| Sales Managers | 227 | 524 | 30\% | \$13,761,093 | \$44,623,001 | 24\% | \$60,622 | \$85,158 | 71\% |
| Accountants and Auditors | 1,314 | 510 | 72\% | \$78,194,785 | \$37,617,863 | 68\% | \$59,509 | \$73,761 | 81\% |
| Lawyers | 517 | 488 | 51\% | \$45,788,079 | \$53,727,775 | 46\% | \$88,565 | \$110,098 | 80\% |
| Petroleum Pump System Operators, Refinery Operators, and Gaugers | 16 | 449 | 3\% | \$1,714,939 | \$61,595,249 | 3\% | \$107,184 | \$137,183 | 78\% |
| First-Line Supervisors of Production | 44 | 421 | 9\% | \$2,934,118 | \$44,165,691 | 6\% | \$66,685 | \$104,907 | 64\% | and Operating Workers

*What women earned on average as a percent of what men earned in that occupation
Note: Includes select occupations where men earn an annual average of at least $\$ 70,000$, by the number of men.
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

Out of more than 700 occupations, 81 pay women an average of \$70,000 a year or more, while twice as many occupations pay men at least that much.

High-wage occupations for women employed 7,374 women in 2015. Men out-earned women in these jobs, making an average of $\$ 120,000$ versus $\$ 93,000$ for women. (See Exhibit 9.)

In the 168 occupations where men earned at least $\$ 70,000$, women made up just over a third of workers and earned an average of \$29,000 less.

Alaska women earn more than men in about 20 percent of 700 occupations, some of which include special education teachers and assistants, receptionists and information clerks, and personal care aides.


Men Earn More At All Education Levels Alaska, 2015


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

## Men earn more at every education level

Men earn more at every level of education required for employment, and the percentage gap is largest in jobs with minimal education requirements (see Exhibit 10).

About two-thirds of Alaska's workers hold jobs that require a high school diploma or less. At the other end of the spectrum, about 20 percent have jobs that require a bachelor's degree, and less than 5 percent are in jobs requiring a master's or doctorate.

Jobs with no formal education requirement pay men an average of $\$ 9,590$ more per year than women

11Men Earn More In All Age Groups



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

- an earnings ratio of 59 percent.

When a high school diploma or equivalent is required, women earn 60 percent of what men make, an average of nearly $\$ 20,000$ less.

Much of the discrepancy is due to the jobs they hold. Most men whose jobs require a diploma or less hold low-paying positions such as retail salespeople ( $\$ 20,000$ ), construction laborers $(\$ 31,000)$, hand laborers $(\$ 22,000)$, and janitors and cleaners $(\$ 19,000)$. However, a significant number earn high wages in oil field and construction occupations such as petroleum pump systems operators ( $\$ 137,000$ ), service unit operators in oil, gas, and mining ( $\$ 106,000$ ), production workers ( $\$ 101,000$ ), and first line supervisors of construction
trades and extraction workers $(\$ 106,000)$, which increases their average.

Women in jobs with minimal education requirements work almost entirely in the lower-paying occupations. The data show 3,956 men in jobs that require minimal education and average more than $\$ 100,000$, but only 26 women. The largest numbers of women were retail salespeople ( $\$ 13,000$ ), cashiers $(\$ 13,000)$, office and administrative support ( $\$ 30,000$ ), office clerks $(\$ 26,000)$, and personal care aides $(\$ 16,000)$.

At the upper end of the education spectrum, jobs requiring a doctoral or professional degree pay the highest wages to both men and women but there's an earnings ratio of 70 per-


## Wage Gap Narrowed For Most Ages

women's wages as percent of men's, 2005 and 2015


Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section
cent, which is a larger gap than for master's degrees but smaller than for bachelor's degrees.

The largest numbers of women with doctoral or professional degrees work as lawyers $(\$ 89,000)$, physical therapists $(\$ 62,000)$, family and general practitioners ( $\$ 120,000$ ), pharmacists $(\$ 95,000)$, and postsecondary teachers $(\$ 26,000)$.

The top occupations for highly educated men include lawyers ( $\$ 110,000$ ), physicians and surgeons ( $\$ 324,000$ ), postsecondary teachers ( $\$ 23,000$ ), postsecondary business

Continued on page 21

# How Educated Are Alaskans? 

## More high school graduates than U.S., fewer college graduates

## By ERIC SANDBERG

Educational attainment levels in Alaska and nationwide have been on a 75 -year climb, and while the broad patterns have been similar, gains have varied by time period and demographic group.

Overall, Alaskans age 25 and older are more likely than their national counterparts to have graduated from high school and attended college, but are slightly less likely to have a degree.

About 92 percent of Alaska's current population graduated from high school, 5 percentage points higher than the U.S. overall. (See Exhibit 1.) About 36 percent have at least an associate degree versus 38 percent nationwide, and for bachelor's degrees and above it's 28 percent and 30 percent, respectively. And while Alaskans are slightly less likely to have master's degrees, rates for doctorates and other professional degrees are in line with the rest of the country.

## Major education shifts in the early 20th century

For many years, younger and more educated generations replaced those who were older and less educated. Before the early 20th century, most Americans who completed primary school (grades 1 to 8) didn't continue their education, and typically only students from wealthier families attended secondary school (grades 9 to 12)


Source: U.S. Census Bureau, 2011 to 2015 American Community Survey

Although Alaska lost its No. 1 ranking for high school graduates in the early 2000s, it remains in the top five states.
as preparation for college.
That changed with what historians call the "high school movement," a large-scale effort to build secondary schools for the broader population, and the United States became a world leader in mass secondary education. In 1910, about 9 percent of 17 -year-olds in the U.S. graduated high school, and by 1940, that jumped to 49 percent.

Because few people continued beyond primary school,
Continued on page 16

## High School Diploma and College Degree Percentages by State*

Age 25 AND OLDER, 1940 to 2015, WITH STATE RANKING IN PARENTHESES

|  | 1940 |  | 1950 |  | 1960 |  | 1970 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \%HS+ | \%Bachelor's+ | \%HS+ | \%Bachelor's+ | \%HS+ | \%Bachelor's+ | \%HS+ | \%Bachelor's+ |
| UNITED STATES | 24.1\% (-) | 4.6\% (-) | 33.4\% (-) | 6.0\% (-) | 41.1\% (-) | 7.7\% (-) | 52.3\% (-) | 10.7\% (-) |
| West | 34.1\% (-) | 6.1\% (-) | 44.4\% (-) | 7.7\% (-) | 50.9\% (-) | 9.6\% (-) | 62.3\% (-) | 13.2\% (-) |
| ALASKA | 26.0\% (20) | 5.3\% (11) | 45.2\% (4) | 7.3\% (7) | 54.7\% (2) | 9.5\% (7) | 66.7\% (2) | 14.1\% (3) |
| Arizona | 29.0\% (12) | 6.2\% (4) | 37.7\% (15) | 7.4\% (5) | 45.7\% (17) | 9.1\% (11) | 58.1\% (16) | 12.6\% (12) |
| California | 36.9\% (2) | 6.7\% (2) | 46.1\% (3) | 8.1\% (3) | 51.5\% (6) | 9.8\% (5) | 62.6\% (7) | 13.4\% (8) |
| Colorado | 31.7\% (8) | 5.9\% (6) | 42.5\% (9) | 8.1\% (2) | 52.0\% (5) | 10.7\% (2) | 63.9\% (4) | 14.9\% (2) |
| Hawaii | 20.5\% (41) | 5.3\% (12) | 31.2\% (35) | 6.1\% (22) | 46.1\% (16) | 9.0\% (12) | 61.9\% (8) | 14.0\% (5) |
| Idaho | 30.1\% (10) | 4.4\% (26) | 42.9\% (8) | 5.5\% (31) | 48.6\% (8) | 7.2\% (28) | 59.5\% (11) | 10.0\% (29) |
| Montana | 29.1\% (11) | 4.8\% (18) | 39.8\% (12) | 6.1\% (21) | 47.8\% (11) | 7.5\% (24) | 59.2\% (13) | 11.0\% (22) |
| Nevada | 34.8\% (4) | 6.5\% (3) | 45.0\% (5) | 7.3\% (8) | 53.3\% (3) | 8.3\% (19) | 65.2\% (3) | 10.8\% (25) |
| New Mexico | 23.3\% (31) | 4.4\% (25) | 34.1\% (26) | 6.9\% (15) | 45.4\% (18) | 9.8\% (5) | 55.2\% (21) | 12.7\% (10) |
| Oregon | 32.7\% (6) | 5.4\% (10) | 42.1\% (10) | 6.6\% (17) | 48.4\% (9) | 8.5\% (16) | 60.0\% (9) | 11.8\% (18) |
| Utah | 36.6\% (3) | 6.1\% (5) | 49.0\% (1) | 7.6\% (4) | 55.8\% (1) | 10.2\% (3) | 67.3\% (1) | 14.0\% (4) |
| Washington | 33.3\% (5) | 5.5\% (7) | 43.7\% (6) | 7.2\% (10) | 51.5\% (6) | 9.3\% (9) | 63.5\% (5) | 12.7\% (11) |
| Wyoming | 32.7\% (7) | 5.1\% (14) | 43.2\% (7) | 7.1\% (12) | 52.1\% (4) | 8.7\% (15) | 62.9\% (6) | 11.8\% (17) |
|  |  |  |  |  |  |  |  |  |
| Midwest | 24.7\% (-) | 4.2\% (-) | 34.5\% (-) | 5.5\% (-) | 41.8\% (-) | 6.9\% (-) | 53.7\% (-) | 9.6\% (-) |
| Illinois | 24.1\% (29) | 4.5\% (23) | 34.1\% (27) | 5.9\% (26) | 40.4\% (33) | 7.3\% (26) | 52.6\% (31) | 10.3\% (26) |
| Indiana | 24.5\% (24) | 3.8\% (40) | 35.1\% (22) | 5.2\% (36) | 41.8\% (28) | 6.3\% (39) | 52.9\% (28) | 8.3\% (45) |
| lowa | 28.5\% (14) | 4.1\% (34) | 37.5\% (16) | 5.0\% (38) | 46.3\% (15) | 6.4\% (37) | 59.0\% (14) | 9.1\% (36) |
| Kansas | 28.2\% (16) | 4.6\% (22) | 39.2\% (13) | 6.0\% (25) | 48.2\% (10) | 8.2\% (20) | 59.9\% (10) | 11.4\% (20) |
| Michigan | 24.5\% (26) | 4.0\% (37) | 34.0\% (28) | 5.3\% (35) | 40.9\% (30) | 6.8\% (32) | 52.8\% (29) | 9.4\% (32) |
| Minnesota | 24.8\% (23) | 4.2\% (32) | 34.7\% (24) | 5.6\% (30) | 43.9\% (19) | 7.5\% (24) | 57.6\% (17) | 11.1\% (21) |
| Missouri | 22.0\% (36) | 3.9\% (38) | 29.8\% (40) | 5.0\% (40) | 36.6\% (40) | 6.2\% (41) | 48.8\% (38) | 9.0\% (38) |
| Nebraska | 28.7\% (13) | 4.3\% (31) | 38.4\% (14) | 5.1\% (37) | 47.7\% (13) | 6.8\% (32) | 59.3\% (12) | 9.6\% (31) |
| North Dakota | 22.3\% (34) | 3.5\% (42) | 30.2\% (38) | 4.5\% (44) | 38.9\% (36) | 5.6\% (45) | 50.3\% (36) | 8.4\% (43) |
| Ohio | 25.4\% (21) | 4.4\% (27) | 35.6\% (21) | 5.7\% (29) | 42.0\% (27) | 7.0\% (30) | 53.2\% (27) | 9.3\% (34) |
| South Dakota | 24.9\% (22) | 3.8\% (41) | 34.0\% (29) | 4.9\% (41) | 42.1\% (26) | 5.7\% (43) | 53.3\% (26) | 8.6\% (41) |
| Wisconsin | 22.1\% (35) | 3.9\% (39) | 33.0\% (32) | 5.4\% (34) | 41.6\% (29) | 6.7\% (34) | 54.5\% (25) | 9.8\% (30) |
|  |  |  |  |  |  |  |  |  |
| Northeast | 23.5\% (-) | 4.9\% (-) | 34.6\% (-) | 6.6\% (-) | 41.0\% (-) | 8.1\% (-) | 52.9\% (-) | 11.2\% (-) |
| Connecticut | 24.5\% (25) | 4.8\% (17) | 36.1\% (20) | 7.0\% (14) | 43.9\% (19) | 9.5\% (7) | 56.0\% (20) | 13.7\% (7) |
| Maine | 28.5\% (15) | 3.3\% (45) | 37.0\% (17) | 4.8\% (42) | 43.3\% (22) | 5.5\% (47) | 54.7\% (23) | 8.4\% (44) |
| Massachusetts | 30.4\% (9) | 5.4\% (9) | 41.5\% (11) | 7.2\% (11) | 47.0\% (14) | 8.8\% (14) | 58.5\% (15) | 12.6\% (13) |
| New Hampshire | 26.5\% (18) | 4.3\% (30) | 36.2\% (19) | 6.0\% (24) | 42.9\% (23) | 7.1\% (29) | 57.6\% (18) | 10.9\% (24) |
| New Jersey | 22.5\% (33) | 5.0\% (15) | 33.8\% (30) | 6.8\% (16) | 40.7\% (32) | 8.4\% (17) | 52.5\% (33) | 11.8\% (16) |
| New York | 22.9\% (32) | 5.5\% (8) | 34.7\% (25) | 7.4\% (6) | 40.8\% (31) | 8.9\% (13) | 52.7\% (30) | 11.9\% (15) |
| Pennsylvania | 20.9\% (38) | 4.2\% (33) | 31.2\% (34) | 5.4\% (32) | 38.1\% (37) | 6.4\% (37) | 50.2\% (37) | 8.7\% (40) |
| Rhode Island | 20.9\% (39) | 4.5\% (24) | 30.7\% (37) | 5.8\% (28) | 35.0\% (41) | 6.6\% (36) | 46.4\% (41) | 9.4\% (33) |
| Vermont | 27.6\% (17) | 4.1\% (35) | 36.6\% (18) | 5.9\% (27) | 42.8\% (24) | 7.3\% (26) | 57.1\% (19) | 11.5\% (19) |
|  |  |  |  |  |  |  |  |  |
| South | 20.0\% (-) | 4.0\% (-) | 26.0\% (-) | 5.3\% (-) | 35.3\% (-) | 7.1\% (-) | 45.1\% (-) | 9.8\% (-) |
| Alabama | 15.7\% (49) | 2.9\% (50) | 21.1\% (48) | 3.6\% (50) | 30.4\% (46) | 5.7\% (43) | 41.3\% (45) | 7.8\% (48) |
| Arkansas | 14.9\% (51) | 2.2\% (51) | 21.2\% (47) | 3.1\% (51) | 28.9\% (50) | 4.8\% (51) | 39.9\% (48) | 6.7\% (51) |
| Delaware | 23.4\% (30) | 5.2\% (13) | 33.8\% (31) | 7.3\% (9) | 43.4\% (21) | 10.1\% (4) | 54.6\% (24) | 13.1\% (9) |
| D.C. | 40.7\% (1) | 11.0\% (1) | 47.8\% (2) | 13.0\% (1) | 47.8\% (11) | 14.3\% (1) | 55.2\% (22) | 17.8\% (1) |
| Florida | 26.2\% (19) | 4.9\% (16) | 34.8\% (23) | 6.3\% (19) | 42.6\% (25) | 7.8\% (23) | 52.6\% (32) | 10.3\% (27) |
| Georgia | 17.2\% (47) | 3.3\% (46) | 20.4\% (50) | 4.5\% (45) | 31.9\% (44) | 6.2\% (41) | 40.6\% (47) | 9.2\% (35) |
| Kentucky | 15.5\% (50) | 2.9\% (49) | 21.9\% (44) | 3.8\% (49) | 27.6\% (51) | 4.9\% (50) | 38.5\% (49) | 7.2\% (49) |
| Louisiana | 17.5\% (46) | 3.5\% (43) | 21.6\% (45) | 4.7\% (43) | 32.3\% (42) | 6.7\% (34) | 42.2\% (42) | 9.0\% (37) |
| Maryland | 20.6\% (40) | 4.8\% (19) | 30.9\% (36) | 7.0\% (13) | 40.0\% (34) | 9.3\% (9) | 52.3\% (34) | 13.9\% (6) |
| Mississippi | 15.9\% (48) | 3.0\% (48) | 21.5\% (46) | 3.8\% (48) | 29.8\% (49) | 5.6\% (45) | 41.0\% (46) | 8.1\% (46) |
| North Carolina | 18.7\% (42) | 4.1\% (36) | 20.5\% (49) | 5.0\% (39) | 32.3\% (42) | 6.3\% (39) | 38.5\% (50) | 8.5\% (42) |
| Oklahoma | 24.2\% (28) | 4.7\% (20) | 33.0\% (33) | 6.2\% (20) | 37.5\% (39) | 7.9\% (22) | 51.6\% (35) | 10.0\% (28) |
| South Carolina | 18.2\% (43) | 4.7\% (21) | 18.6\% (51) | 5.4\% (33) | 30.4\% (47) | 6.9\% (31) | 37.8\% (51) | 9.0\% (39) |
| Tennessee | 17.9\% (44) | 3.1\% (47) | 24.3\% (43) | 4.1\% (47) | 30.4\% (47) | 5.5\% (47) | 41.8\% (43) | 7.9\% (47) |
| Texas | 24.5\% (27) | 4.4\% (29) | 29.9\% (39) | 6.0\% (23) | 39.6\% (35) | 8.0\% (21) | 47.4\% (40) | 10.9\% (23) |
| Virginia | 21.3\% (37) | 4.4\% (28) | 28.2\% (41) | 6.3\% (18) | 37.9\% (38) | 8.4\% (17) | 47.8\% (39) | 12.3\% (14) |
| West Virginia | 17.6\% (45) | 3.4\% (44) | 24.4\% (42) | 4.3\% (46) | 30.5\% (45) | 5.2\% (49) | 41.6\% (44) | 6.8\% (50) |

*For 1940 and 1950, Alaska and Hawaii territories are included in the ranking.

|  | 1980 |  | 1990 |  | 2000 |  | 2015 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \%HS+ | \%Bachelor's+ | \%HS+ | \%Bachelor's+ | \%HS+ | \%Bachelor's+ | \%HS+ | \%Bachelor's+ |
| UNITED STATES | 66.5\% (-) | 16.2\% (-) | 75.2\% (-) | 20.3\% (-) | 80.4\% (-) | 24.4\% (-) | 86.7\% (-) | 29.8\% (-) |
| West | 74.5\% (-) | 19.3\% (-) | 78.6\% (-) | 22.7\% (-) | 80.5\% (-) | 26.2\% (-) | 85.3\% (-) | 31.0\% (-) |
| ALASKA | 82.5\% (1) | 21.1\% (3) | 86.6\% (1) | 23.0\% (12) | 88.3\% (1) | 24.7\% (21) | 92.1\% (5) | 28.0\% (27) |
| Arizona | 72.4\% (15) | 17.4\% (20) | 78.7\% (20) | 20.3\% (23) | 81.0\% (32) | 23.5\% (25) | 86.0\% (36) | 27.5\% (31) |
| California | 73.5\% (11) | 19.6\% (9) | 76.2\% (28) | 23.4\% (10) | 76.8\% (42) | 26.6\% (13) | 81.8\% (51) | 31.4\% (15) |
| Colorado | 78.6\% (3) | 23.0\% (2) | 84.4\% (3) | 27.0\% (4) | 86.9\% (8) | 32.7\% (3) | 90.7\% (14) | 38.1\% (3) |
| Hawaii | 73.8\% (9) | 20.3\% (6) | 80.1\% (13) | 22.9\% (13) | 84.6\% (18) | 26.2\% (14) | 91.0\% (12) | 30.8\% (18) |
| Idaho | 73.7\% (10) | 15.8\% (26) | 79.7\% (16) | 17.7\% (35) | 84.7\% (17) | 21.7\% (36) | 89.5\% (22) | 25.9\% (39) |
| Montana | 74.4\% (8) | 17.5\% (18) | 81.0\% (11) | 19.8\% (25) | 87.2\% (6) | 24.4\% (22) | 92.8\% (1) | 29.5\% (21) |
| Nevada | 75.5\% (7) | 14.4\% (34) | 78.8\% (18) | 15.3\% (47) | 80.7\% (33) | 18.2\% (47) | 85.1\% (42) | 23.0\% (46) |
| New Mexico | 68.9\% (22) | 17.6\% (17) | 75.1\% (33) | 20.4\% (22) | 78.9\% (37) | 23.5\% (25) | 84.2\% (47) | 26.3\% (37) |
| Oregon | 75.6\% (6) | 17.9\% (15) | 81.5\% (9) | 20.6\% (21) | 85.1\% (14) | 25.1\% (19) | 89.8\% (19) | 30.8\% (19) |
| Utah | 80.0\% (2) | 19.9\% (8) | 85.1\% (2) | 22.3\% (15) | 87.7\% (4) | 26.1\% (15) | 91.2\% (10) | 31.1\% (16) |
| Washington | 77.6\% (5) | 19.0\% (11) | 83.8\% (4) | 22.9\% (13) | 87.1\% (7) | 27.7\% (10) | 90.4\% (16) | 32.9\% (12) |
| Wyoming | 77.9\% (4) | 17.2\% (22) | 83.0\% (5) | 18.8\% (28) | 87.9\% (2) | 21.9\% (34) | 92.3\% (4) | 25.7\% (41) |
| Midwest | 68.0\% (-) | 14.7\% (-) | 77.1\% (-) | 18.4\% (-) | 83.5\% (-) | 22.9\% (-) | 89.5\% (-) | 28.4\% (-) |
| Illinois | 66.5\% (32) | 16.2\% (25) | 76.2\% (28) | 21.0\% (20) | 81.4\% (30) | 26.1\% (15) | 87.9\% (31) | 32.3\% (13) |
| Indiana | 66.4\% (33) | 12.5\% (46) | 75.6\% (31) | 15.6\% (46) | 82.1\% (26) | 19.4\% (44) | 87.8\% (32) | 24.1\% (44) |
| lowa | 71.5\% (18) | 13.9\% (38) | 80.1\% (13) | 16.9\% (41) | 86.1\% (11) | 21.2\% (39) | 91.5\% (9) | 26.7\% (36) |
| Kansas | 73.3\% (13) | 17.0\% (23) | 81.3\% (10) | 21.1\% (19) | 86.0\% (12) | 25.8\% (17) | 90.2\% (17) | 31.0\% (17) |
| Michigan | 68.0\% (25) | 14.3\% (36) | 76.8\% (25) | 17.4\% (37) | 83.4\% (23) | 21.8\% (35) | 89.6\% (21) | 26.9\% (35) |
| Minnesota | 73.1\% (14) | 17.4\% (20) | 82.4\% (6) | 21.8\% (16) | 87.9\% (2) | 27.4\% (11) | 92.4\% (2) | 33.7\% (11) |
| Missouri | 63.5\% (38) | 13.9\% (38) | 73.9\% (38) | 17.8\% (33) | 81.3\% (31) | 21.6\% (37) | 88.4\% (28) | 27.1\% (33) |
| Nebraska | 73.4\% (12) | 15.5\% (27) | 81.8\% (8) | 18.9\% (27) | 86.6\% (9) | 23.7\% (24) | 90.7\% (15) | 29.3\% (22) |
| North Dakota | 66.4\% (33) | 14.8\% (31) | 76.7\% (26) | 18.1\% (31) | 83.9\% (21) | 22.0\% (33) | 91.7\% (7) | 27.7\% (29) |
| Ohio | 67.0\% (30) | 13.7\% (41) | 75.7\% (30) | 17.0\% (40) | 83.0\% (24) | 21.1\% (40) | 89.1\% (26) | 26.1\% (38) |
| South Dakota | 67.9\% (26) | 14.0\% (37) | 77.1\% (24) | 17.2\% (39) | 84.6\% (18) | 21.5\% (38) | 90.9\% (13) | 27.0\% (34) |
| Wisconsin | 69.6\% (21) | 14.8\% (31) | 78.6\% (21) | 17.7\% (35) | 85.1\% (14) | 22.4\% (30) | 91.0\% (11) | 27.8\% (28) |
| Northeast | 67.1\% (-) | 17.2\% (-) | 76.2\% (-) | 22.8\% (-) | 81.6\% (-) | 27.5\% (-) | 88.1\% (-) | 34.2\% (-) |
| Connecticut | 70.3\% (20) | 20.7\% (4) | 79.2\% (17) | 27.2\% (2) | 84.0\% (20) | 31.4\% (4) | 89.9\% (18) | 37.6\% (5) |
| Maine | 68.7\% (23) | 14.4\% (34) | 78.8\% (18) | 18.8\% (28) | 85.4\% (13) | 22.9\% (28) | 91.6\% (8) | 29.0\% (23) |
| Massachusetts | 72.2\% (17) | 20.0\% (7) | 80.0\% (15) | 27.2\% (2) | 84.8\% (16) | 33.2\% (2) | 89.8\% (20) | 40.5\% (2) |
| New Hampshire | 72.3\% (16) | 18.2\% (14) | 82.2\% (7) | 24.4\% (8) | 87.4\% (5) | 28.7\% (9) | 92.3\% (3) | 34.9\% (9) |
| New Jersey | 67.4\% (27) | 18.3\% (13) | 76.7\% (26) | 24.9\% (6) | 82.1\% (26) | 29.8\% (6) | 88.6\% (27) | 36.8\% (6) |
| New York | 66.3\% (35) | 17.9\% (15) | 74.8\% (34) | 23.1\% (11) | 79.1\% (36) | 27.4\% (11) | 85.6\% (38) | 34.2\% (10) |
| Pennsylvania | 64.7\% (37) | 13.6\% (42) | 74.7\% (35) | 17.9\% (32) | 81.9\% (28) | 22.4\% (30) | 89.2\% (25) | 28.6\% (25) |
| Rhode Island | 61.1\% (41) | 15.4\% (28) | 72.0\% (41) | 21.3\% (18) | 78.0\% (40) | 25.6\% (18) | 86.2\% (35) | 31.9\% (14) |
| Vermont | 71.0\% (19) | 19.0\% (11) | 80.8\% (12) | 24.3\% (9) | 86.4\% (10) | 29.4\% (8) | 91.8\% (6) | 36.0\% (8) |
| South | 60.2\% (-) | 15.0\% (-) | 71.3\% (-) | 18.7\% (-) | 77.7\% (-) | 22.5\% (-) | 85.2\% (-) | 27.7\% (-) |
| Alabama | 56.5\% (43) | 12.2\% (48) | 66.9\% (47) | 15.7\% (45) | 75.3\% (46) | 19.0\% (45) | 84.3\% (45) | 23.5\% (45) |
| Arkansas | 55.5\% (47) | 10.8\% (50) | 66.3\% (48) | 13.3\% (50) | 75.3\% (46) | 16.7\% (50) | 84.8\% (44) | 21.1\% (49) |
| Delaware | 68.6\% (24) | 17.5\% (18) | 77.5\% (23) | 21.4\% (17) | 82.6\% (25) | 25.0\% (20) | 88.4\% (29) | 30.0\% (20) |
| D.C. | 67.1\% (29) | 27.5\% (1) | 73.1\% (39) | 33.3\% (1) | 77.8\% (41) | 39.1\% (1) | 89.3\% (24) | 54.6\% (1) |
| Florida | 66.7\% (31) | 14.9\% (30) | 74.4\% (37) | 18.3\% (30) | 79.9\% (35) | 22.3\% (32) | 86.9\% (34) | 27.3\% (32) |
| Georgia | 56.4\% (44) | 14.6\% (33) | 70.9\% (42) | 19.3\% (26) | 78.6\% (38) | 24.3\% (23) | 85.4\% (41) | 28.8\% (24) |
| Kentucky | 53.1\% (51) | 11.1\% (49) | 64.6\% (50) | 13.6\% (49) | 74.1\% (50) | 17.1\% (48) | 84.2\% (46) | 22.3\% (48) |
| Louisiana | 57.7\% (42) | 13.9\% (38) | 68.3\% (44) | 16.1\% (43) | 74.8\% (49) | 18.7\% (46) | 83.4\% (48) | 22.5\% (47) |
| Maryland | 67.4\% (27) | 20.4\% (5) | 78.4\% (22) | 26.5\% (5) | 83.8\% (22) | 31.4\% (4) | 89.4\% (23) | 37.9\% (4) |
| Mississippi | 54.8\% (48) | 12.3\% (47) | 64.3\% (51) | 14.7\% (48) | 72.9\% (51) | 16.9\% (49) | 82.3\% (49) | 20.7\% (50) |
| North Carolina | 54.8\% (49) | 13.2\% (44) | 70.0\% (43) | 17.4\% (37) | 78.1\% (39) | 22.5\% (29) | 85.8\% (37) | 28.4\% (26) |
| Oklahoma | 66.0\% (36) | 15.1\% (29) | 74.6\% (36) | 17.8\% (33) | 80.6\% (34) | 20.3\% (42) | 86.9\% (33) | 24.1\% (43) |
| South Carolina | 53.7\% (50) | 13.4\% (43) | 68.3\% (44) | 16.6\% (42) | 76.3\% (43) | 20.4\% (41) | 85.6\% (39) | 25.8\% (40) |
| Tennessee | 56.2\% (45) | 12.6\% (45) | 67.1\% (46) | 16.0\% (44) | 75.9\% (44) | 19.6\% (43) | 85.5\% (40) | 24.9\% (42) |
| Texas | 62.6\% (39) | 16.9\% (24) | 72.1\% (40) | 20.3\% (23) | 75.7\% (45) | 23.2\% (27) | 81.9\% (50) | 27.6\% (30) |
| Virginia | 62.4\% (40) | 19.1\% (10) | 75.2\% (32) | 24.5\% (7) | 81.5\% (29) | 29.5\% (7) | 88.3\% (30) | 36.3\% (7) |
| West Virginia | 56.0\% (46) | 10.4\% (51) | 66.0\% (49) | 12.3\% (51) | 75.2\% (48) | 14.8\% (51) | 85.0\% (43) | 19.2\% (51) |

Source: U.S. Census Bureau Decennial Censuses, 2011 to 2015 American Community Survey

## 2 High School Diplomas and College Degrees by Age and Sex

Alaska and the United States, 1940 to 2015

|  | Year | High school diploma or above |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Alaska |  |  |  |  | United States |  |  |  |  |
|  |  | Total | 25-34 yrs | 35-44 yrs | 45-64 yrs | $65 \mathrm{yrs}+$ | Total | 25-34 yrs | 35-44 yrs | 45-64 yrs | $65 \mathrm{yrs}+$ |
| Total | 1940 | 26\% | - | - | - | - | 24\% | - | - | - | - |
|  | 1950 | 46\% | 59\% | 50\% | 31\% | 15\% | 34\% | 50\% | 38\% | 26\% | 18\% |
|  | 1960 | 55\% | 61\% | 61\% | 45\% | 19\% | 41\% | 58\% | 52\% | 33\% | 19\% |
|  | 1970 | 67\% | 77\% | 68\% | 59\% | 29\% | 52\% | 71\% | 62\% | 48\% | 27\% |
|  | 1980 | 83\% | 92\% | 85\% | 72\% | 49\% | 66\% | 84\% | 77\% | 62\% | 39\% |
|  | 1990 | 87\% | 90\% | 93\% | 81\% | 60\% | 75\% | 84\% | 86\% | 73\% | 53\% |
|  | 2000 | 88\% | 91\% | 91\% | 90\% | 67\% | 80\% | 84\% | 85\% | 83\% | 65\% |
|  | 2015 | 92\% | 93\% | 94\% | 93\% | 84\% | 87\% | 89\% | 88\% | 88\% | 81\% |
| Men | 1940 | 23\% | - | - | - | - | 22\% | - | - | - | - |
|  | 1950 | 43\% | 56\% | 46\% | 28\% | 15\% | 33\% | 49\% | 36\% | 24\% | 16\% |
|  | 1960 | 53\% | 60\% | 60\% | 43\% | 16\% | 39\% | 56\% | 50\% | 31\% | 17\% |
|  | 1970 | 66\% | 78\% | 69\% | 56\% | 26\% | 52\% | 72\% | 61\% | 46\% | 24\% |
|  | 1980 | 83\% | 92\% | 87\% | 71\% | 45\% | 67\% | 84\% | 77\% | 61\% | 37\% |
|  | 1990 | 87\% | 90\% | 93\% | 82\% | 59\% | 76\% | 83\% | 85\% | 73\% | 53\% |
|  | 2000 | 88\% | 90\% | 90\% | 90\% | 67\% | 80\% | 82\% | 83\% | 83\% | 66\% |
|  | 2015 | 92\% | 92\% | 94\% | 93\% | 86\% | 86\% | 87\% | 86\% | 87\% | 82\% |
| Women | 1940 | 31\% | - | - | - | - | 26\% | - | - | - | - |
|  | 1950 | 52\% | 64\% | 55\% | 36\% | 16\% | 36\% | 52\% | 40\% | 27\% | 19\% |
|  | 1960 | 57\% | 62\% | 64\% | 48\% | 24\% | 43\% | 60\% | 53\% | 35\% | 21\% |
|  | 1970 | 67\% | 75\% | 68\% | 63\% | 33\% | 53\% | 71\% | 63\% | 49\% | 29\% |
|  | 1980 | 82\% | 91\% | 84\% | 72\% | 52\% | 66\% | 84\% | 76\% | 62\% | 40\% |
|  | 1990 | 86\% | 90\% | 92\% | 80\% | 61\% | 75\% | 85\% | 86\% | 73\% | 53\% |
|  | 2000 | 88\% | 92\% | 91\% | 89\% | 68\% | 81\% | 86\% | 87\% | 83\% | 65\% |
|  | 2015 | 92\% | 94\% | 95\% | 94\% | 83\% | 87\% | 91\% | 89\% | 89\% | 80\% |
| Male degree holders per 100 female degree holders | 1940 | 138.5 | - | - | - | - | 86.3 | - | - | - | - |
|  | 1950 | 136.0 | 136.3 | 128.8 | 140.8 | 214.0 | 85.2 | 87.1 | 86.2 | 85.1 | 72.5 |
|  | 1960 | 124.8 | 129.4 | 121.1 | 123.2 | 110.9 | 86.5 | 90.7 | 89.5 | 84.5 | 67.1 |
|  | 1970 | 119.7 | 122.5 | 123.5 | 112.8 | 102.9 | 87.8 | 96.7 | 92.0 | 86.2 | 60.4 |
|  | 1980 | 116.8 | 114.3 | 126.1 | 116.1 | 88.3 | 90.7 | 98.8 | 97.2 | 89.0 | 62.8 |
|  | 1990 | 112.9 | 109.0 | 116.7 | 120.2 | 84.0 | 91.0 | 96.6 | 97.2 | 92.6 | 67.3 |
|  | 2000 | 106.2 | 106.0 | 102.9 | 113.6 | 86.3 | 90.9 | 96.5 | 95.0 | 94.0 | 71.4 |
|  | 2015 | 107.9 | 111.7 | 107.7 | 107.9 | 101.1 | 91.8 | 97.9 | 95.9 | 93.1 | 79.6 |

Sources: U.S. Census Bureau decennial censuses; and 2011 to 2015 American Community Survey
the U.S. Census Bureau didn't collect educational attainment data for the adult population in the early 20th century. The only educational statistic available was on literacy. With the growth of high schools in America, the Census Bureau began collecting educational attainment information in the 1940 Census. That year, 24 percent in the U.S. had diplomas and 5 percent had a college degree. ${ }^{1}$ (See Exhibit 2.)
The next few decades brought great change, including a G.I. bill to help returning World War II veterans pay

[^4]for college, the extension of higher education to more people, and a more robust economy to provide jobs for graduates. By 1970, the percent with a diploma or degree had doubled, and growth has continued at a steady clip since.

## Regional patterns and migration

Over time, regional variations have narrowed for high school diploma rates but widened for college degrees. In 1950, the West outpaced the rest of the country in high school education, with 44 percent high school graduates compared to 26 percent for the South. Now both regions are about even, and the national leader,

|  | Year | Bachelor's degree or above |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Alaska |  |  |  |  | United States |  |  |  |  |
|  |  | Total | 25-34 yrs | 35-44 yrs | 45-64 yrs | $65 \mathrm{yrs}+$ | Total | 25-34 yrs | 35-44 yrs | 45-64 yrs | 65 yrs + |
| Total | 1940 | 5\% | - | - | - | - | 5\% | - | - | - | - |
|  | 1950 | 8\% | 7\% | 10\% | 7\% | 3\% | 6\% | 8\% | 7\% | 5\% | 4\% |
|  | 1960 | 9\% | 10\% | 10\% | 10\% | 4\% | 8\% | 11\% | 9\% | 7\% | 4\% |
|  | 1970 | 14\% | 18\% | 14\% | 11\% | 5\% | 11\% | 15\% | 13\% | 9\% | 6\% |
|  | 1980 | 21\% | 23\% | 25\% | 16\% | 10\% | 16\% | 23\% | 20\% | 13\% | 8\% |
|  | 1990 | 23\% | 18\% | 29\% | 25\% | 13\% | 20\% | 23\% | 27\% | 19\% | 11\% |
|  | 2000 | 25\% | 21\% | 23\% | 30\% | 17\% | 24\% | 28\% | 26\% | 26\% | 15\% |
|  | 2015 | 28\% | 26\% | 30\% | 28\% | 28\% | 30\% | 33\% | 33\% | 29\% | 24\% |
| Men | 1940 | 5\% | - | - | - | - | 5\% | - | - | - | - |
|  | 1950 | 7\% | 7\% | 9\% | 7\% | 3\% | 7\% | 9\% | 8\% | 6\% | 4\% |
|  | 1960 | 10\% | 11\% | 11\% | 9\% | 3\% | 10\% | 15\% | 12\% | 8\% | 4\% |
|  | 1970 | 16\% | 20\% | 16\% | 12\% | 5\% | 14\% | 19\% | 17\% | 11\% | 6\% |
|  | 1980 | 23\% | 24\% | 28\% | 19\% | 10\% | 20\% | 26\% | 24\% | 17\% | 10\% |
|  | 1990 | 24\% | 17\% | 29\% | 28\% | 14\% | 23\% | 23\% | 30\% | 24\% | 14\% |
|  | 2000 | 24\% | 19\% | 21\% | 31\% | 19\% | 26\% | 26\% | 26\% | 29\% | 20\% |
|  | 2015 | 25\% | 21\% | 26\% | 26\% | 31\% | 30\% | 29\% | 31\% | 29\% | 30\% |
| Women | 1940 | 6\% | - | - | - | - | 4\% | - | - | - | - |
|  | 1950 | 8\% | 8\% | 10\% | 7\% | 3\% | 5\% | 6\% | 6\% | 5\% | 3\% |
|  | 1960 | 9\% | 8\% | 9\% | 10\% | 4\% | 6\% | 8\% | 6\% | 6\% | 3\% |
|  | 1970 | 12\% | 16\% | 11\% | 11\% | 6\% | 8\% | 12\% | 9\% | 7\% | 5\% |
|  | 1980 | 19\% | 22\% | 20\% | 13\% | 10\% | 13\% | 20\% | 15\% | 9\% | 7\% |
|  | 1990 | 22\% | 19\% | 29\% | 22\% | 12\% | 18\% | 23\% | 24\% | 15\% | 9\% |
|  | 2000 | 25\% | 24\% | 25\% | 30\% | 15\% | 23\% | 29\% | 26\% | 24\% | 12\% |
|  | 2015 | 31\% | 31\% | 35\% | 30\% | 26\% | 30\% | 37\% | 36\% | 29\% | 19\% |
| Male degree holders per 100 female degree holders | 1940 | 149.2 | - | - | - | - | 145.8 | - | - | - | - |
|  | 1950 | 144.3 | 129.4 | 135.0 | 186.1 | 207.3 | 134.1 | 146.3 | 128.2 | 129.4 | 125.8 |
|  | 1960 | 156.8 | 182.2 | 157.4 | 129.4 | 107.6 | 154.7 | 185.5 | 175.5 | 126.1 | 109.8 |
|  | 1970 | 151.3 | 148.4 | 173.7 | 138.5 | 112.0 | 148.8 | 151.3 | 186.1 | 141.7 | 93.0 |
|  | 1980 | 143.9 | 124.1 | 171.6 | 166.6 | 99.3 | 138.6 | 127.0 | 157.1 | 166.5 | 91.6 |
|  | 1990 | 120.4 | 98.9 | 119.3 | 151.1 | 104.3 | 119.0 | 101.0 | 119.4 | 146.7 | 110.3 |
|  | 2000 | 101.1 | 85.4 | 89.2 | 116.6 | 110.0 | 104.5 | 88.7 | 97.7 | 116.9 | 120.9 |
|  | 2015 | 88.8 | 74.5 | 80.9 | 93.7 | 114.4 | 92.9 | 79.7 | 84.8 | 95.2 | 120.0 |

the Midwest, is only 4 percentage points higher. At the same time, the Northeast outpaced the rest of the country for college degrees, with 34 percent of adults having degrees in 2015 and a larger gap on other regions compared to previous decades.

Alaska has generally been ahead of the rest of the nation, largely due to a younger population and successive in-migrations. A young cohort of soldiers and their spouses moved to Alaska with the Cold War military build-up, and that generation boosted Alaska into the top five states nationally for high school graduates. Statehood in 1959 ushered in professional workers, teachers, and other college graduates, and by 1970, Alaska ranked second among states for college graduates, after Colorado. (The District of Columbia has
always ranked higher than any state for college education.)

## Some gains hit a ceiling, and one age group lost ground until recently

In the 1970s, construction of the Trans-Alaska Oil Pipeline and a booming economy brought many collegeeducated baby boomers into the state. The percentage of Alaska adults with a college degree jumped by 7 points that decade, to 21 percent in 1980. The national percentage rose 5 points, to 16 percent.

After 1980, however, the 25-to-34-year-old group in Alaska lost ground with college degrees while the U.S.

## 4 Educational Attainment by Area <br> ALASKA, 2015



Sources: U.S. Census Bureau, 2011 to 2015 American Community Survey; and Alaska Department of Labor and Workforce Development, Research and Analysis Section
rate continued to grow. (See Exhibit 3.) Through 1980, Alaska was even with or slightly ahead of the national average, but after the educated boomers aged out of that group, the generations that followed didn't keep pace with national trends. Alaskans between 25 and 34 registered lower rates of college completion in the 1990 and 2000 censuses, and although their degree rate resumed growing by 2015, by then the U.S. rate had opened a 7 percentage point gap over Alaska.

As those who were 25 to 34 in 1980 aged, their lower degree rates rippled into the older cohorts. By 2000, the college degree rate for 35-to-44-year-olds in Alaska was below the national average, and more recently, the U.S. edged ahead for 45-to-64-year-olds. In 2015,

Alaska only topped the U.S. for college degrees among those 65 and older - many of whom are boomers.

The 25-to-34-year-old group also reached a peak for its high school graduation rate in 1980 and that hasn't changed much since. In 1950, 59 percent of Alaskans in that age range were high school graduates. The percentage jumped to 92 percent by 1980 and then varied by just one or two percentage points per decade.

These changes are largely why the educational gap between younger and older adults has narrowed over time. For high school diplomas, the gap between Alaskans 25 to 34 and those 65 and older fell from 44 percent in 1950 to 9 percent in 2015, similar to the

Educational Attainment by Race

Percentages, race alone, Age 25 and older, Alaska and the United States, 2015

$\square$ Less than high school $\quad$ High school diploma $\square$ Some college or associate degree $\square$ Bachelor's or above


Source: U.S. Census Bureau, 2011 to 2015 American Community Survey
national gap. But the generational gap has gone the opposite direction for college graduates, with Alaska's senior citizens now more likely to have college degrees than those under 35 , a break from both national and historical trends.

## Women earn a higher share of college degrees

The educational gaps between men and women have shifted back and forth over the years. Most recently, men closed the high school graduation gap while women began graduating from college at a higher rate.

In the 1940s and 1950s, women outpaced men for high school diplomas in Alaska and nationally. As the diploma became more common, rates for both men and women converged as they rose. In Alaska, significantly more women had a diploma in 1950 ( 52 percent for women and 43 percent for men), but the genders were about even by the 1970s and have remained there since. National trends are similar, although in the 25-to-34 age group, U.S. women have opened a 4 percentage point graduation gap over men.

For college degrees, rates in Alaska and nationwide both swung toward men initially and then toward women more recently. In the mid-20th century, college degrees were rare among adults, with both genders equally unlikely to have one. The G.I. Bill and post-war job market shifted attainment toward men, and by 1960, the state and the nation peaked at around 155 male college graduates for every 100 female graduates. Through the 1960s and 1970s, that gap narrowed as social changes
brought more women into college and the job market.
In 1990, the percentage of both genders under 35 with college degrees was about equal in the state and the nation. But a quarter-century later, the percentage of Alaska women with a degree in this age range has risen to 31 percent while men have lagged at 21 percent. The number of male college graduates under 35 is only 75 for every 100 who are female, a large shift from previous generations and a wider gap than nationally.

## Significant differences <br> across the state

Educational attainment varies widely across Alaska. (See Exhibit 4.) Urban areas, places along the road system, and Southeast have higher educational attainment rates, and remote parts of Western Alaska have the lowest rates.

Overall, Southeast Alaska has the highest high school graduation rates, with all parts of the region topping 90 percent. Skagway is highest at 97 percent, and Haines is second at over 95 percent. Road-connected parts of Alaska also have high numbers, led by Denali Borough at 95 percent.

Historical access to education explains much of the disparity. Before the 1976 settlement of the Molly Hootch case, which directed the state to build high schools in remote villages, rural students had to attend boarding schools or move to an urban area for high school. Migration also played a role, as areas with a large pool of jobs that require a degree tend to
pull in people from elsewhere.
While Western Alaska still trails the rest of the state, rates have grown considerably since settlement of the Hootch lawsuit. The gap between the highest and lowest boroughs and census areas shrunk from 57 percent in 1980 to 19 percent in 2015. Kusilvak Census Area has the lowest rate of high school graduation at 78 percent, but in 1970, it was under 10 percent.

Juneau, with a high number of state and federal employees, has the highest proportion of college graduates in the state, at 39 percent. The capital city has held the top spot since at least 1960, when numbers were first available, and likely longer. It also has the largest percentage of adults with a graduate or professional degree, at 14 percent.

Skagway, Sitka, Anchorage, Haines, Denali, and Fairbanks also have adult populations that are over 30 percent college graduates.

## Some convergence by race over time

Better access has narrowed Alaska's racial educational gaps over time, but the discrepancies are still large for college graduation. (See Exhibit
5.) Differences between men and women are also apparent within racial groups.

White Alaskans have the highest diploma and college degree percentages at 95 percent and 33 percent, respectively, which are higher than the national numbers. White women in Alaska have the highest college degree rate at 36 percent.

Alaska Natives, many of whom live in areas with less access, have increased their educational attainment levels in recent decades. About 82 percent of Native adults have graduated high school, nearly double the rate of 46 percent in 1980. College degree attainment has also doubled among Natives over the past 25 years, to 8 percent.

Asian Americans are the most educated demographic group in the United States, with over half of adults having a bachelor's degree or higher. Asian American men are highest at 54 percent. In Alaska, people of Asian descent are highest among minority groups, with 23 per-
cent having a bachelor's degree or higher.
For high school graduation, Pacific Islanders and black/African American Alaskans share the highest percentage among minority groups, at 89 percent. Pacific Islanders have increased their rate by 14 percentage points since 2000. Meanwhile, blacks have made the largest gains in college degree attainment among minorities, up by more than 7 percentage points.

## Income is higher with more education, but down for all levels

Educational attainment has a major effect on income. Tracking the median, or 50th percentile, gives a good picture of middle income and how it has changed. Exhibit 6 shows Alaska's median personal incomes for men and women 25 and older by educational attainment since 1959, adjusted to 2014 dollars. Most censuses asked for personal income in the previous year, which
means the year before the decennial census was listed.
Median personal incomes grew significantly for all educational levels for both genders between statehood and the new oil economy of the 1970s and 1980s. This was especially true for college-educated men, whose median incomes grew by more than $\$ 30,000$ between 1959 and 1989.

Although Alaska's personal income is still higher than the nation overall, inflation-adjusted income has dropped for all education levels since then. Declines began earlier for men with lower levels of education, and women's incomes have declined across the board more recently.

College-educated men and women have had the highest median personal incomes throughout the entire study period, but the gap among those with lower levels of education has widened recently because those without a degree have sustained larger drops in income. In 1969, median income for Alaska men with a diploma was around 85 percent of what men with
a college degree earned, which fell to about 56 percent by 2014. For men who didn't graduate from high school, median incomes fell from around 54 percent of college-educated men's income to 30 percent.

Women's incomes didn't grow as much during the oil boom, nor did they fall as much as men's in subsequent years, but the income-by-education gap among women has grown larger than among men. Women with high school diplomas make around 45 percent of what col-lege-educated women make, down from 63 percent in 1979.

The gender gap has closed some over time, but more recently it has been through income decline among men rather than growth for women. In recent decades, women with higher levels of education have still made less than less-educated men.

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## GENDER GAP

Continued from page 12
teachers $(\$ 42,000)$, and pharmacists $(\$ 101,000)$.

## Age matters for wage parity

Men also out-earn women at every age, and the wage gap increases by age group. (See Exhibit 11.) For teenagers between 16 and 18, the earnings ratio is 95 percent, although wages are low for both genders. At these ages, workers are mostly limited to low-paying summer jobs, largely in food preparation and serving or sales. It's also the only age group with more female workers than males. Among older workers, men are generally 52 to 53 percent of workers.

For older workers, the wage gap increases with shifts in their hours, education, and occupational choices. Women's earnings peak and then plateau between the ages of 40 and 50 , while men's peak between 50 and 60.

While the wage gap shrunk or held steady for most age groups over the past decade (see Exhibit 12 on page 12), it increased by 3 percentage points in the 60-to-69 group, where the gap is also largest. That age group is also the fastest growing. The number of older workers more than doubled between 2005 and 2015, from 14,887 to 30,812 .

Older men tend to work in construction and extraction ( $\$ 59,000$ ), management $(\$ 115,000)$, and transportation and material moving occupations $(\$ 50,000)$. Older women work largely in office and administrative support $(\$ 35,000)$ and educational instruction and library occupations $(\$ 33,000)$.

Older workers have maintained similar occupation concentrations as in the past, but for some of the occupations - such as those in construction and extraction, educational instruction and libraries, and office support - older men's average wages increased more than women's.

[^5]
## The Month in Numbers

## Numbers delayed every February

Because of the annual benchmarking and revision process, the data the Department of Labor typically use to generate the monthly unemployment rate and job nombens 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

## Unemployment Rate ${ }^{1}$




## Median Days Lost for Injury or Illness ${ }^{3}$



Change in State Government Employment ${ }^{4}$


## Job Growth in Alaska and the Nation



[^6]
## Employer Resources

## Registered apprenticeships expand into health care

Registered apprenticeship in health care occupations is a high-return-on-investment model that saves Alaska employers time and money. Apprenticeship combines related instruction with paid on-the-job learning that increases as the employee's skills increase.

Benefits for employers include decreased turnover, increased productivity, ease of knowledge transfer, increased employee loyalty, a safer workplace, and customized training that meets industry standards and the needs of your business. Health care employers that require a highly skilled workforce, from twoperson offices to the largest hospitals, can benefit from registered apprenticeships.

Alaska employers are already using registered apprenticeships in a variety of health care occupations to develop their current and future staff. Apprenticed health care occupations include surgical technologist, certified nursing assistant, medical assistant, and home health aide. The newest addition is chiropractic clinical assistant, which is the first of its kind in the nation.

The Alaska Health Care Apprenticeship Consortium,
composed of sponsoring health care providers, has already done much of the work in setting up registered apprenticeships. AHCAC provides a framework for health care employers to coordinate with other employers and labor unions in setting up and expanding their apprenticeships. The consortium and its partners, such as AVTEC and the University of Alaska, also provide related instruction.

Apprenticeship specialists in Alaska Job Centers serve as liaisons between employers and AHCAC, and will provide free technical assistance to develop and maintain your business's apprenticeships and ensure compliance with industry and company standards.

To develop a registered apprenticeship, contact an apprenticeship specialist at (877) 724-2539. To find out how to become a consortium member, contact the AHCAC apprenticeship coordinator at (907) 5610222.

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

## Safety Minute

## How to identify and deal with bullying in the workplace

Workplace bullying is persistent and often escalating mistreatment in the workplace that causes physical or emotional harm, and can include verbal, nonverbal, psychological, or physical abuse and humiliation. This type of aggression is difficult to deal with because, unlike the typical school bully, workplace bullies often know how to operate within the rules and policies of an organization.

Bullying at work means harassing, offending, or socially excluding someone or negatively affecting someone's tasks. For the term "bullying" to apply, interaction must be repeated and regular.

If you're the victim of a workplace bully:

1. Keep a record of all incidents, including places,
times, what was said, who was there, who was the bully, and where the incident occurred.
2. Consider talking to the bully. Explain that you feel you're being treated unfairly. He or she may not be aware their actions make you feel this way.
3. Focus on a resolution. Center your discussions around how you want to improve the working situation or how things can be handled differently.

It's also important to contact human resources or your boss as soon as possible if you feel you're a target or you know someone who's being bullied at work.

[^7]
[^0]:    *What women earned on average that year as a percent of what men earned
    Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

[^1]:    Source: U.S. Census Bureau, American Community Survey 2015

[^2]:    Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

[^3]:    *What women earned on average as a percent of what men earned in that occupation
    Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

[^4]:    ${ }^{1}$ Except where otherwise specified, "college degree" in this article "efers to a bachelor's or higher. Associate degrees are included in "some college," as are other nondegree awards and certifications.

[^5]:    Karinne Wiebold is an economist for the Department of Labor and Workforce Development in Juneau. Reach her at (907) 465-6039 or karinne.wiebold@alaska.gov.

[^6]:    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 seasonally adjusted unemployment rates; January rates not yet available due to normal annual revisions
    ${ }^{2}$ Illness and injury rate per 10,000 full-time workers (data not available for all 50 states)
    ${ }^{3}$ Data not available for all 50 states
    ${ }^{4}$ Current Employment Statistics, December 2015 to December 2016

[^7]:    Safety Minute is written by the Labor Standards and Safety Division of the Alaska Department of Labor and Workforce Development.

