Alaska

To experience the benefits of digital learning, students need access to sufficient bandwidth, scalable broadband infrastructure, and robust Wi-Fi.

Since 2015, an additional 62,449 students can access the Internet at speeds of 100 kbps/student. But there is still work to be done. 55,902 students still need more bandwidth for digital learning.

In three years, median bandwidth speeds have increased by 3x across Alaska - from 78 kbps to 234 kbps.

How faster bandwidth makes a difference:

2015 78 kbps
2018 234 kbps

100 kbps/student technology is available to be used for teaching and learning in classrooms
500 kbps/student technology is regularly used for teaching and learning in classrooms
1 Mbps/student technology is prevalent and fully integrated into teaching and learning throughout the school

In the last year, the cost of broadband in Alaska has decreased by 37%. This compares to a 34% decrease nationally during this period.

Schools in Alaska have utilized $7.3 M in federal Wi-Fi funding, but $5.8 M remains unused. $1.8 M must be accessed by 16 school districts as these funds are set to expire this year.
TOTAL STUDENTS AND SCHOOL DISTRICTS MEETING GOAL OF 100 Kbps/STUDENT

This metric is based on an extrapolation of the percent of students or school districts in the sample that are meeting the minimum connectivity goal to the entire population of students or school districts in the state. Student populations are based on overlaying 2015-16 National Center for Education Statistics (NCES) data with 2018 Universal Services Administrative Company (USAC) data and input from school districts.

ADDITIONAL STUDENTS AND SCHOOL DISTRICTS CONNECTED

This metric shows the increase in students since 2015 that meet the Federal Communications Commission (FCC) minimum connectivity goal of 100 kbps per student.

To account for the entire population of the state, we extrapolate the percentage of students in the sample that are meeting goals to the entire population of students or districts in the state.

Student populations are based on overlaying 2015-16 NCES data with 2018 USAC data and updated based on input from school districts.

STUDENTS THAT NEED TO BE CONNECTED

This metric shows the total number of students that do not meet the FCC minimum connectivity goal. We take the total number of students in the state and subtract the extrapolated total students who are already connected.

BANDWIDTH DIFFERENCE AND MEDIAN SPEEDS

Median bandwidth is calculated at a student level across the state. Each student’s bandwidth is based on their district’s bandwidth. The multiple factor is generated by dividing the median bandwidth per student in 2018 by the median bandwidth per student in 2015.

FIBER INFRASTRUCTURE

This metric reports on the availability of scalable infrastructure based on the FCC-recommended goal that every school’s broadband infrastructure be scalable to 10 Gbps (which currently requires fiber). There are some cases in which a 10 Gbps connection is not required because of school population. In these cases, we made an assumption that these schools already have sufficient infrastructure. For schools where the connection type was unknown, we applied a set of rules to determine the connection type based upon extensive research.

The number of schools with fiber infrastructure is determined by taking the percentage of schools that have a fiber connection type within the sample and extrapolating it to the total number of schools in the state.

COST PER MBPS

This metric reflects the median cost per Mbps within the state within the sample data.

STATE MATCHING FUNDS (IF APPLICABLE)

This is the amount of funding the state has made available to school districts so they can leverage additional federal E-rate dollars for special fiber construction through 2018.


dbms=1.00

FOOTNOTES

n=1, 032, 610 of 1,032, 655 students

Source: USAC Form 471 2018 E-rate application

STATE CONNECTIVITY SNAPSHOT 2018 (AUGUST)

BY THE NUMBERS

- From 2015 to 2018, the cost of broadband in the United States increased by 8%. This compares to a 1% decrease nationally.

- Of the 2% of school districts that have not accessed federal Wi-Fi funding, but $86 M in Federal E-rate Category 2 budget remains unused.

- $32 M will be forfeited if 22 school districts do not receive Wi-Fi funds in Funding Year 2019.

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"Wi-Fi funds" are E-rate Category 2 funds for schools to upgrade their internal connections. For Funding Years 2015 - 2019, the FCC provided every school with a Category 2 budget (adjusted yearly for inflation) of $150 per student or a minimum of $9,200 per school. Currently, the adjusted budgets are $156.23 per student, or a budget floor of $9,582.23.

We pull Category 2 budgets directly from the USAC Category 2 Budget Tool. When a budget is not readily available on the USAC site, we utilize a per student calculation using the aforementioned Category 2 budgets. To calculate the E-rate contribution, we apply the school district E-rate discount rates when available; otherwise, we apply the average state E-rate discount rate. (Schools must pay for the non-discount portion of their Category 2 budget.) We aggregate the school budgets within a state to determine the year’s annual Category 2 budget. When applicable, adjustments related to hurricane relief are reflected and applied to reported figures.

We calculated the total Category 2 budget utilizing by summing the funds received by districts (assuming ‘pending’ requests will be approved) for Funding Years 2015 - 2018. The total Category 2 budget remaining for Funding Year 2019 was calculated by subtracting funds received by districts in Funding Years 2015 - 2018 from the full five-year budget.

A critical amount of funds are set to expire after this year. A district that has not used any funds to date will lose 100% of its Category 2 funds if the funds are left unused in Funding Year 2019. A district that first accessed their Category 2 budget in Funding Year 2015 will lose any funds not used in Funding Year 2019. There are a variety of reasons why districts may not have used their funding. Our calculation for funds that are set to expire is the sum of the remaining funds in districts that fall into two groups: 1) districts that have 100% of their funds remaining and 2) districts that started accessing funds in Funding Year 2015 and have 50% or more of their funds remaining.