K-12 Connectivity in Montana

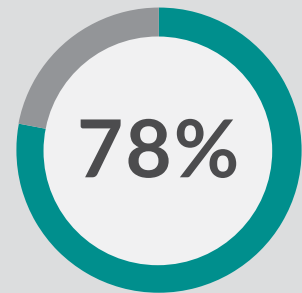## Gov. Bullock is taking action to upgrade schools

"In order to reach their full potential and enjoy equal opportunity in today's digital age, all K-12 students in Montana need access to high-speed Internet. We are committed to making sure each school - rural or urban, big or small - has equal access to the promise of digital learning.

☑ Set statewide K-12 connectivity goals

☑ Appointed a leader to drive K-12 broadband initiatives

☑ Launched an initiative to connect all schools to fiber

K-12 connectivity status

78% of school districts in Montana are ready for digital learning today. To meet 2018 demand, the typical school district in Montana will need to **grow bandwidth at least threefold**.
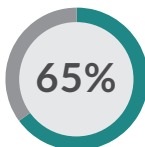
78%

Minimum Goal
100 kbps
per student

Opportunities for action

Montana can connect all students if they close the fiber gap, put Wi-Fi in every classroom, and make broadband affordable.
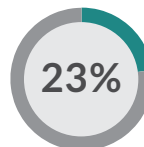
Fiber — 65%

Status:

At least **65%** of schools have the fiber connections needed to meet bandwidth targets

Opportunity:

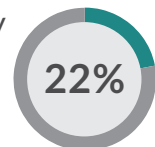**98%** of new fiber connections will be for rural and small town schools

Wi-Fi — 23%

Status:

23% of school districts accessed their E-rate budgets for Wi-Fi networks

Opportunity:

$11M in E-rate funds are available to support Wi-Fi networks in Montana

Affordability — 22%

Status:

22% of school districts are meeting the $3/Mbps Internet access affordability target

Opportunity:

59,000 more students will have enough bandwidth for digital learning if affordability target is met

Source: USAC Form 471 2015/2016 E-rate applications, n=170 of 309 school districts, n=545 of 822 schools, n=111,376 of 141,558 students

Why high speeds matter

The Montana Digital Professional Learning Network provides online professional development courses to over 10,000 K-12 educators throughout the state. Teachers can choose their own courses and receive personalized support targeting areas of growth for their individual classrooms, rather than attend traditional standardized development sessions.

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About the metrics

The metrics in this snapshot are based on verified E-rate data from over 6,781 school districts representing nearly 51% of school districts in the U.S., 52% of schools, and 53% of students in America's K-12 public schools.

K-12 connectivity status

This metric shows the percentage of school districts in the state meeting the Federal Communications Commission's (FCC) Internet access goal.

- The **Minimum Goal** metric measures the percent of school districts meeting the FCC's 100 kbps/student goal (we have not included staff in our analysis). This metric should be viewed as a minimum Internet access threshold that all school districts must achieve in order to implement digital learning.

Fiber

These metrics assess the availability of scalable infrastructure in the state and the opportunity presented for rural and small town schools. The FCC's goal is for every school to have a broadband connection capable of scaling to 10 Gbps. Today, only fiber optic connections are capable of meeting that goal. When fiber optic connections are too costly, other technologies such as fixed wireless can be used as an interim substitute for smaller schools.

- **Status:** We estimated the percent of schools that have a fiber optic connection (or other suitable technology) capable of scaling to meet the school's projected broadband need in 2018.

- **Opportunity:** The FCC provided states with an opportunity to build fiber to meet the broadband needs of rural and small town schools. The opportunity metric estimates the percent of new fiber connections that would connect schools in rural and small town locales if the state connects all of their schools to fiber.

Wi-Fi

The FCC provided every school district with a $150 per student total "Category 2" budget from 2015-2019 to put Wi-Fi in its classrooms. These metrics profile the extent to which a state has taken advantage of these new resources.

- **Status:** We calculated the percent of school districts in the state that requested any of their $150 per student budget in 2015. There are many valid reasons a school district may not have applied for Category 2 E-rate funds in 2015, so this metric should be used to determine if the state may need to inform school districts that these resources are available.

- **Opportunity:** We calculated the total Category 2 budget remaining for 2016-19 in the state after subtracting funds requested in 2015 and subsequently applied the aggregate state discount rate of school districts requesting Category 2 services.

Affordability

The affordability of broadband is one of the major roadblocks preventing school districts from meeting the FCC's Internet access goals. $3/Mbps represents a price at which the E-rate program can support all school districts meeting the FCC's 2018 goal of 1 Mbps/student and is a price already being achieved by over 32% of school districts purchasing 1 Gbps or more of Internet access.

- **Status:** We calculated the percent of school districts in the state that are paying less than $3/Mbps for Internet access. Internet access includes both ISP costs and the cost of transport between the school district and the ISP.

- **Opportunity:** We calculated the additional number of students in the state who would meet the 100 kbps/student goal if school districts that are not meeting the $3/Mbps target price today and not meeting the 100 kbps/student goal were to use their existing budget to purchase Internet access at $3/Mbps.

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