Idaho Broadband Advisory Board Inaugural Meeting

June 2, 2021

Agenda:

- Introductions
- House Bill 127 and Board Governance
- Background on Broadband and Current Mapping
- Action Items to be Voted On:
 - Updated Idaho Broadband Plan
 - Proposed Household Grant
 - Proposed 2021 Grant Funding: Minimum \$15 million for completion in 2021, but up to \$45 million currently available for awards.
 - o Timetable for 2021 Grants.
 - Proposed Budget for Operating Expenses.
- Next Meeting(s)
- Other Business
- Adjournment

Introductions

Idaho Senate Appointees

Senator Carl Crabtree Senator David Nelson Senator Doug Ricks

Idaho House of Representatives Appointees

Representative Megan Blanksma Representative Barbara Ehardt Representative John Vander Woude

Governor Appointees

Andy Emerson Mitch Watkins Margie Watson

Idaho Commerce

Tom Kealey | Director
Jake Reynolds | Administrator
Eric Forsch | Broadband Development Manager
Ewa Szewczyk | Grant and Contracts Manager
Andrea Vlassis-Zahn | Broadband Development Coordinator
Holly Stevenson | Grants and Contract Analyst

Summary of Idaho House Bill 127

Idaho Broadband Advisory Board and Idaho Broadband Fund

Idaho Broadband Advisory Board

- Board is within the Idaho Department of Commerce
 - Nine members represent the Board | House (3), Senate (3), and Governor (3)
- Responsible for Idaho Broadband Plan
 - o To identify areas "most in need"
- Authority to set, approve, and administer plan
- Solicit participation from state agencies with expertise
- Governance: Majority vote for an approved plan and other state agencies may petition. Board has 90 days to make revisions, if any, in writing
- File and publicize the Idaho Broadband Plan per H127

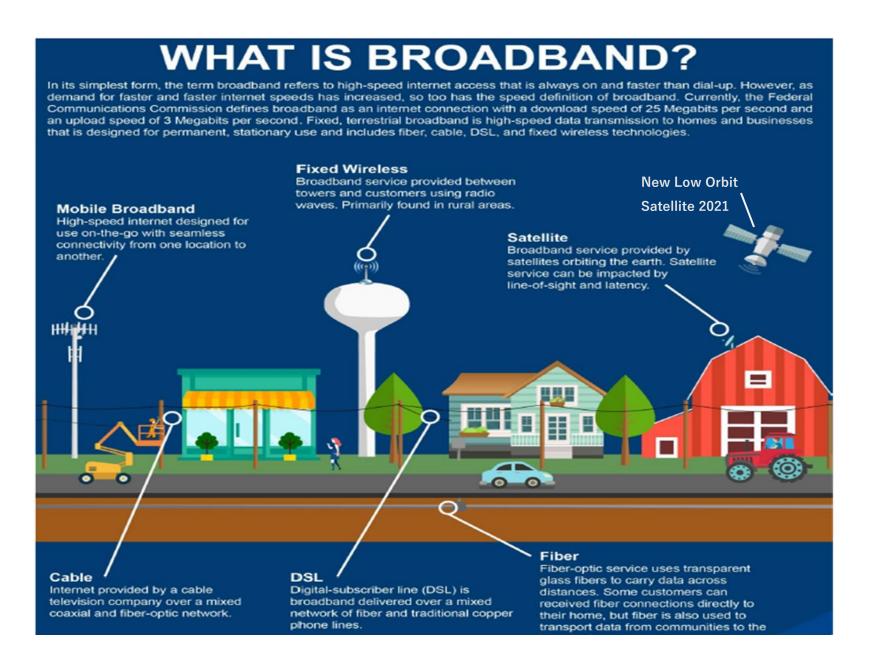
Idaho Broadband Fund

- Idaho funds in Idaho Treasury with spending authority given to Commerce
- Use of funds for Broadband infrastructure
- Idaho Broadband Plan will prioritize expenditure of legislature appropriated funds
- Purpose:
 - Promote equal access to broadband connectivity in economic development, public safety, telehealth, and education
- Authorization:
 - o Idaho Broadband Advisory Board approves use of funds based on the approved Idaho Broadband Plan

Governance | Idaho Broadband Advisory Board

Potentially use Economic Advisory Committee "EAC" Guidelines:

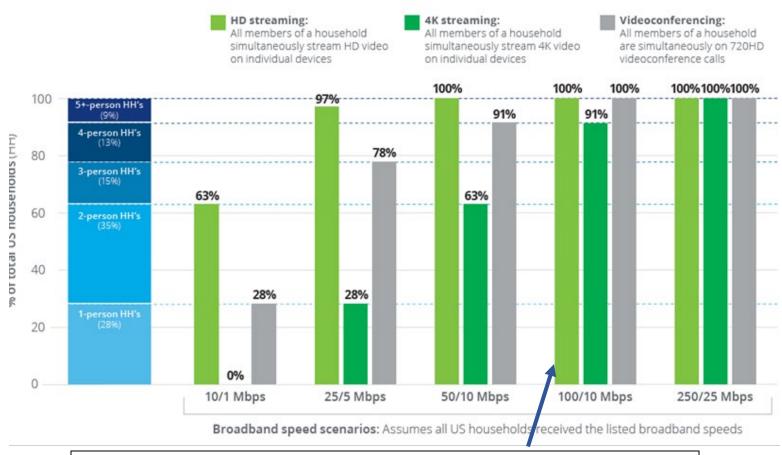
- Meetings
- Open Meetings Law Compliance
- Agendas and Materials
- Regular Meetings
- Special and Emergency Meetings
- Minutes
- Public and Staff Participation
- Internal and External Communication Policies
- Advisory Board Communication with Idaho Department of Commerce Staff
- Media Requests
- News Releases
- Ethics and Conduct Policies
- Conflicts of Interest
- Ethical Standards
- Public Records



IDAHO BROADBAND LANDSCAPE

MARKET SEGMENTS	TECHNOLOGIES AND EQUIPMENT	<u>INVESTMENTS</u>
Major Markets	Fiber; Cable; DSL; Cellular; Microwave	Significant investment; Large Private Sector funding; Government Contracts
Smaller Markets	Fiber; Cable; DSL; Cellular; Fixed- Wireless Towers	Cell towers/fixed wireless require small investment/use existing buildings. Portable towers are an emerging technology
Rural Communities	Middle Mile to Central Town; Satellite/Low Orbit Satellite; Fixed Wireless; CBRS; Fiber.	Investment by public and private entities; Entrepreneurs funding new technology and service options.
Remote Locations	Satellite/Low Orbit Satellite; Fixed Wireless Line of Sight; CBRS; New Technologies	Investment in challenging; singular projects can be costly; Low ROI; Aerial infrastructure is half the cost of digging.

Deloitte: Size of Household vs Access to Broadband Speeds



Goal: 100/10 Mbps. NTIA Grants and ARPA Funds will require 100/100 or 100/20 Mbps speeds.

Idaho Broadband Office Responsibilities

- Make recommendations to the Governor and Legislature regarding policies and initiatives that promote the development of broadband-related infrastructure in Idaho.
- Support and coordinate efforts of Idaho Broadband Advisory Board and Idaho Broadband Fund.
- Promote private sector, public sector, and cooperative broadband solutions including engaging with stakeholders representing a wide variety of interests, including but not limited to local, state, federal, and tribal government officials, business, and other community leaders, to facilitate communications deployment and collaboration.
- Encourage expedited policies for communications infrastructure construction, right of way and permitting that
 establishes clear and timely processes, reasonable and consistent fees, and assistance for providers in deploying
 communications infrastructure.
- Assist stakeholders with funding regardless of source i.e., Federal (ARPA, EDA, NTIA), state, local, etc.
- Support local and regional broadband planning including both intra-state and interstate projects.
- Provide publicly accessible resources on communication technologies available within the state.
- To serve at the State's subject matter expert on communications technologies.
- Generate public awareness and educational materials on the value of broadband technologies and applications.
- Research community broadband adoption barriers, including identifying communities where broadband adoption is undesirable.
- Serve as the state repository for broadband mapping information.
- Support and coordinate efforts of the Idaho Broadband Taskforce or successive Committees i.e. Idaho Broadband Advisory Board, etc.
- Produce an annual report and present findings to the legislature, Governor, and stakeholders about the state of broadband in Idaho and the annual accomplishments of the Broadband Office to meet its responsibilities.

Background on Broadband and Mapping

"Most in Need"

- Focus on Last Mile (Most in Need)
 - Conservative Estimates by the FCC estimates more than 90,000 Idaho households lack 25/3
 Mbps and Ookla Speed tests estimate that number around 136,000 Idaho households.
 - Rural Communities and remote areas lack reliable broadband service. Most lack access to 25/3 Mbps. Small cities in rural counties may have broadband speeds or even fiber, but statewide coverage in rural Idaho will require significant investment.
 - Most metro areas (MSAs) and micropolitan areas have reliable access to broadband speeds of 25/3 throughout the city limits and multiple anchor institutions including major employers, government offices, schools, etc.
- Middle Mile (Limited Need) and but potentially an area for future investment.
 - Enterprise and Internet Resellers
 - Look for federal funding sources to help with middle mile.
 - Look for segments that can be built for a lower cost.
 - Best option for support is "Dig Once" and "Hang Once" policies and possible federal infrastructure grants.
- Long Haul & Backbone "Currently has adequate coverage."
 - Large providers and requires significant investment.
 - o Data Centers in Idaho need these providers but are willing to pay to bring service.
 - No further efforts are necessary in the near term.

Idaho Broadband Office Conclusions and Major Assumptions:

Market

- o Households are the "most in need" market segment, which is conservatively estimated at 138,000 without access to broadband speeds (25/3 Mbps). Number without access to 100/10 Mbps is much higher.
- Large companies in rural communities generally have access to broadband at their facilities but not ranchers, farmers, or small businesses in rural Idaho. All major urban cities in Idaho (populations above 25,000) have multiple providers offering broadband service within the city limits.
- Most universities, public schools, and libraries have sufficient broadband service. Some schools and libraries may require infrastructure upgrades and have E-rate and other funding sources to help. However, rural households in those communities may lack connectivity for remote learning. Example: USDA DLT Grant award to Uofl and ISU, or the lack of broadband in rural Latah County.
- o A high percentage of local governments and state facilities have broadband connectivity across Idaho.
- o Tribal communities will have additional sources of funding thanks to competitive NTIA \$1 billion in grants to tribes, but award amount dependent upon grant application.
- No Idaho regulatory body governs broadband service including the PUC.

New Broadband connectivity for households represent the best opportunity for funding the "most in need."

- For households to have sufficient bandwidth for future need, it is recommended that new broadband service delivered be higher than 25/3 Mbps to handle the capacity for growth in usage in the future. Federal agencies and other states are requiring higher speeds for their broadband infrastructure grants (including Treasury guidance for ARPA and guidance for NTIA broadband infrastructure grants).
- Funding for underserved and unserved rural household broadband cannot attract private capital without support from state and federal funding.
- Some municipalities have chosen "judicial confirmation" to raise capital by borrowing since private sector investment is unwilling to invest in some areas where ROI does not meet company policy.
- The CARES Act Funding of \$10 million must be used for projects that are operational by 12/30/2021. Projects must
 meet CARES Act requirements of addressing remote working, learning, or telehealth. Infrastructure is not limited to
 technology as long as it delivers broadband speeds of 25/3 Mbps.
- Idaho appropriated funds of \$35M. Some portion could be awarded with Cares Act grants to ensure at least \$10 million of projects are completed before 12/31/21.

Idaho Broadband Office Conclusions and Major Assumptions:

Internet Service Providers "ISPs"

- Idaho has approximately 140 ISPs
- Idaho's broadband market is somewhat segmented geographically and divided by different ISP territories and service offerings.
- Hundreds of millions of dollars have been invested in Idaho broadband over the past five years. Investment has generally
 flowed into areas of high growth (including rural areas), which is why we see the better connectivity in high growth areas.
- New ISPs have entered Idaho over the past 2 years including large and small due to Idaho's market potential, bankruptcy (Frontier), underinvestment, and demand in smaller communities.
- Idaho's rural 19 telephone companies and co-ops offer excellent high-speed low-cost broadband services and receive Universal Service Funds for expansion and upgrades.
- Due to technology advancements more ISPs are offering higher speeds. DSL is being replaced by fiber and fixed wireless technology can deploy speeds greater than 100 Mbps. Encouraging this growth will increase competition, reduce monthly subscription costs, and improve efficiencies.
- Fiber is the best technology because it can deliver 1Gbps symmetrical service. However, the infrastructure costs are the most expensive because of trenching and construction.
- Fixed Wireless has a low cost per household compared to fiber. The technology has speed limitations but can deliver speeds of 100/20 Mbps or more depending on the number of households in the service area. Fixed wireless projects may use existing buildings to reduce infrastructure buildout.
- ISPs would like to coordinate trenching projects with ITD and highway districts to add broadband infrastructure (middle mile) at a lower cost.
- All ISPs need "middle mile" infrastructure to provide "last mile" broadband service to households and businesses. Middle mile "ISPs" may partner with other ISPs to offer "last mile broadband" for "last mile customers" i.e. households, businesses, and local governments. This fiber infrastructure mainly requires trenching. "Dig once" and "hang once" policies can lower the installation cost for fiber, cable, fixed wireless, and cellular deployment.
- Low Orbit Satellite service did not exist prior to fall 2020 and now exists across all of Idaho. The technology requires smaller concentrations of customers. Low Orbit Satellite cost of \$500 initial fee and \$100 monthly can be more affordable than traditional satellite with higher speeds.
- o Monthly cost for 25/3 Mbps broadband service that exceeds \$100/month may be a factor in widespread adoption.
- Cares Act Broadband Grants awarded \$28M to connect 30,329 Households or nearly \$1,000 per household. However,
 areas further away from infrastructure and with homes far away from each other, the higher the cost for infrastructure.

Idaho Broadband Office Public Infrastructure Investment to Date

- Recommendations and Initiatives
 - Cares Act Funding 2020
 - \$50 million Cares Act. Grants to Households, local governments, telehealth which addressed COVID-19 Pandemic.
 - 30,000 Households, 20 local government facilities, 47 libraries, and 1 telehealth facility.
 - Cares Act Funding (Non-Commerce)
 - \$30 million in Digital Divide Grants to State Dept of Education for devices.
 - \$50 million to Strong Families, Strong Students.
 - \$5.1 million to Idaho Department of Corrections for broadband infrastructure improvements, notably in Pocatello and Cottonwood.
- Leveraged Federal Resources
 - USDA Reconnect
 - \$43 million awarded to Direct Communications, MTE Communications, and Oregon Idaho Utilities for broadband projects which will improve broadband access to 2,300 people living in unserved census blocks across 10 Idaho counties.
 - o RDOF
 - Awarded \$112 million from FCC Rural Digital Opportunity Fund to connect 40,706 households in unserved census blocks in Idaho.
 - Distance Learning and Telemedicine Grants
 - \$700,000 awarded to University of Idaho and Idaho State University to support remote learning.

Idaho Broadband Office Examples of Planning, Projects, and Outreach to Date

- Broadband Outreach
 - Idaho: Updated Commerce Broadband Website, ISP Stakeholder Meetings, State Agency Meetings, economic developers, community leaders, Idaho Association of Counties, and Idaho Association of Cities to strengthen connections and generate leads.
 - Federal: National Governors Association, engaging with congressional delegation, State Broadband Leaders Network through NTIA.
 - Promoted Broadband Grant opportunities including federal grants, state grants, and other broadband planning resources for communities.
- Assisted Local/Regional Broadband Projects
 - Working on broadband planning efforts related to DIGB2 North Central Idaho fiber loop, McCall, Gooding, Fish Haven, Elmore County, Bellevue, Dietrich, the Shoshone Bannock Tribe, and the Shoshone Paiute Tribe.
 - Assisted ISPs infrastructure builds including Ziply, TDS, Airbridge, Sparklight, Safelink, Direct Communications, and more. Strengthened ISP/community partnerships, removed obstacles to deployment of infrastructure, alerted ISPs to opportunities in Idaho for broadband planning, infrastructure development, and grant opportunities.
- Idaho's Subject Matter Expert on Broadband and Coordinating Efforts
 - Served on Idaho Telehealth Taskforce and participated on North Idaho's Moving the Needle on Broadband webinars and currently serve on the Digital Divide Taskforce and the State Broadband Leaders Network.
 - Presented to Inland Northwest Partners, Treasure Valley Partnership, Blue Cross of Idaho Foundation, ITD.
 Presentations to IEDC, Idaho Association of Cities Annual Summit and more planned for FY21.
 - Hold monthly State Agency Meetings (ITD, Dept of ED, SBOE, ITS, ICfL), quarterly ISP Calls, and a future roundtable with ITD.
- Assembled Broadband Resources
 - o Gathered resources and tools for broadband planning, grants, and other assistance for communities.
- State Repository for Mapping
 - Broadband mapping resources on the Idaho Commerce broadband website include FCC 477 Map,
 BroadbandNow Map, ITD Dig Once Map, and the LHTAC Map. Worked with NTIA on their National Broadband Availability Map (NBAM) map which provides mapping data to other state agencies.
 - Ookla Subscription and services provide current Speedtest mapping data for the state of Idaho.

Idaho Broadband Office Funding Sources for Broadband Projects

State of Idaho

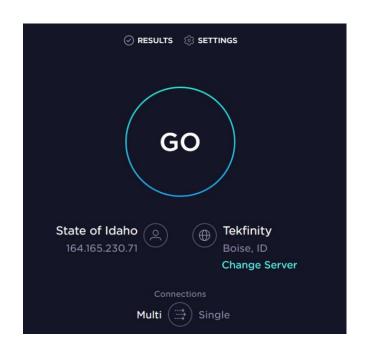
- \$10 million (or more) Rollover CARES Act. Specific requirement for Household Grants.
 Deployment/Project Completion deadline 12/30/2021. Available Now
- \$35 million (or balance of funds not initially allocated) New funds. Subject to Idaho Broadband Advisory
 Board and Idaho Broadband Fund. Recommended deadline for completion is 12/31/2022.

Federal

- USDA CAFII
 - \$1.4M awarded to ISPs in Idaho to connect 10,921 locations
- FCC RDOF
 - \$112M from the FCC Rural Digital Opportunity Fund to provide broadband infrastructure to unserved census blocks (less than 10/1Mbps). Will build to 40,706 locations in Idaho.
- USDA Reconnect
 - \$43M awarded to Direct Communications, MTE, and Oregon Idaho Utilities to connect <u>2,300</u> people across 10 Idaho counites.
- USDA Distance Learning and Telemedicine Grants
 - \$727,000 to University of Idaho and Idaho State University to connect rural students across the 27 counties in University of Idaho's territory and 16 counties in ISUs territory.
- USDA Community Connect Grants (Potential)
 - Pending Community Connect Award for community in the Magic Valley.
- o EDA (Potential)
 - \$5.3 million potential funding to build a middle mile fiber cable from Grangeville to Moscow.
- ARPA (Potential)
 - \$125 million in Idaho State Treasury, but subject to federal rules/guidelines and Idaho Legislature allocation.
- NTIA (Potential)
 - \$1 billion competitive grant for tribes, \$300 million infrastructure bill.
- US Government Infrastructure Bill(s) (Potential)
 - Potential for \$65 trillion for broadband nationwide.

Idaho Broadband Office Current Mapping

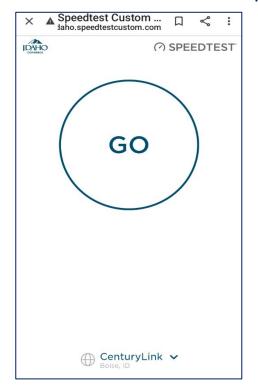
Ookla® Speedtest® | https://www.speedtest.net/

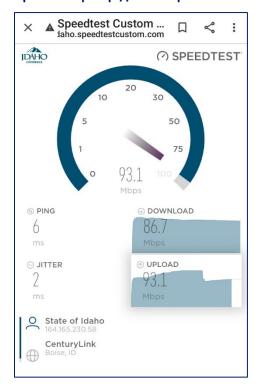






Idaho Custom Speedtest | http://idaho.speedtestcustom.com/

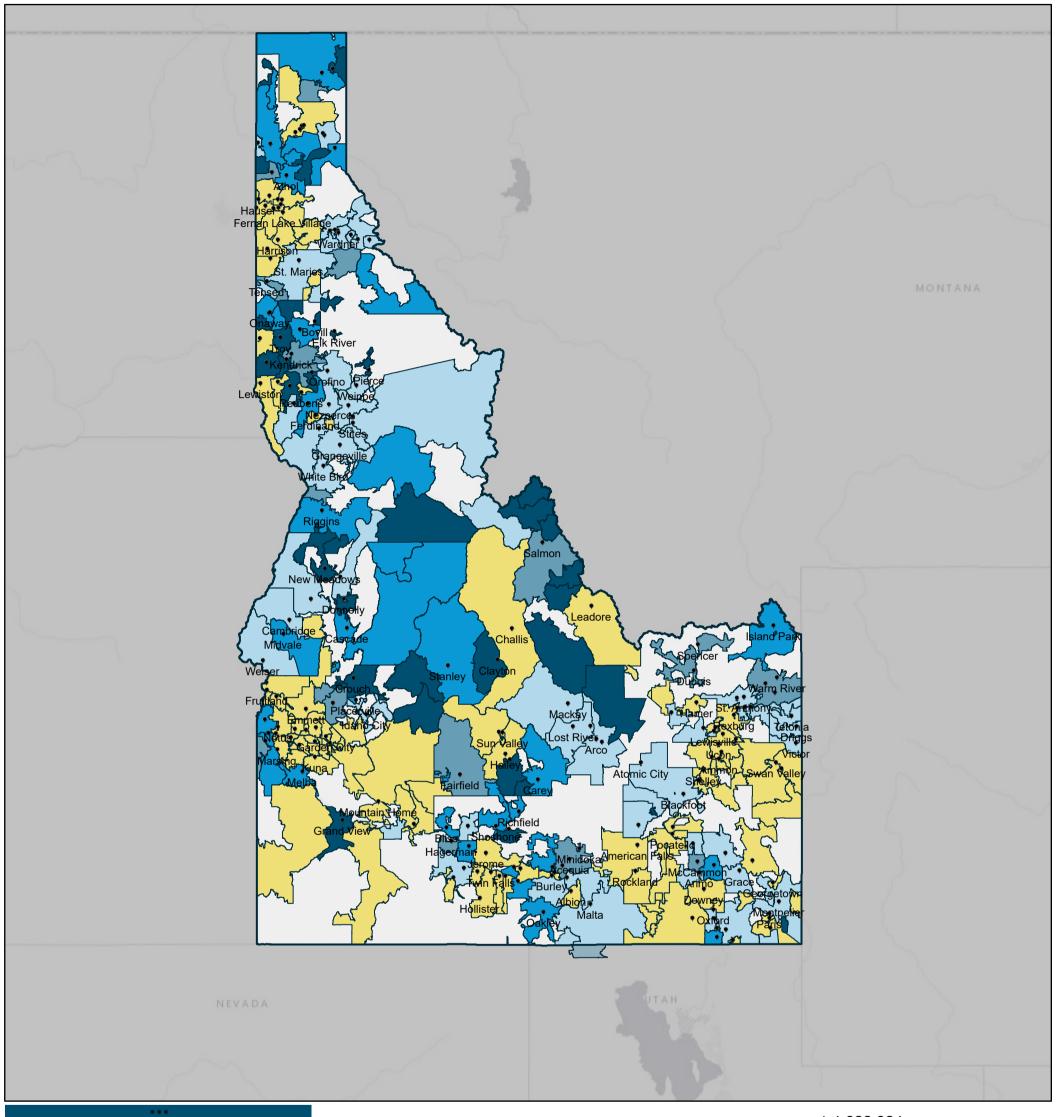






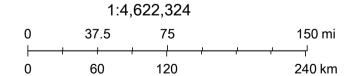
Idaho Broadband Map - Median Download Speeds < 25 Mbps by Zip Code Areas

Idaho Department of Commerce analysis of Ookla® Speedtest Intelligence® data 2020 through April 2021



Map Legend

Idaho Cities



Ookla® Quarter Avg. MEDIAN Download Speeds

Average Median Download Speed: All quarters weighted equally



> 13 - 15



> 10 - 13



> 1 - 10

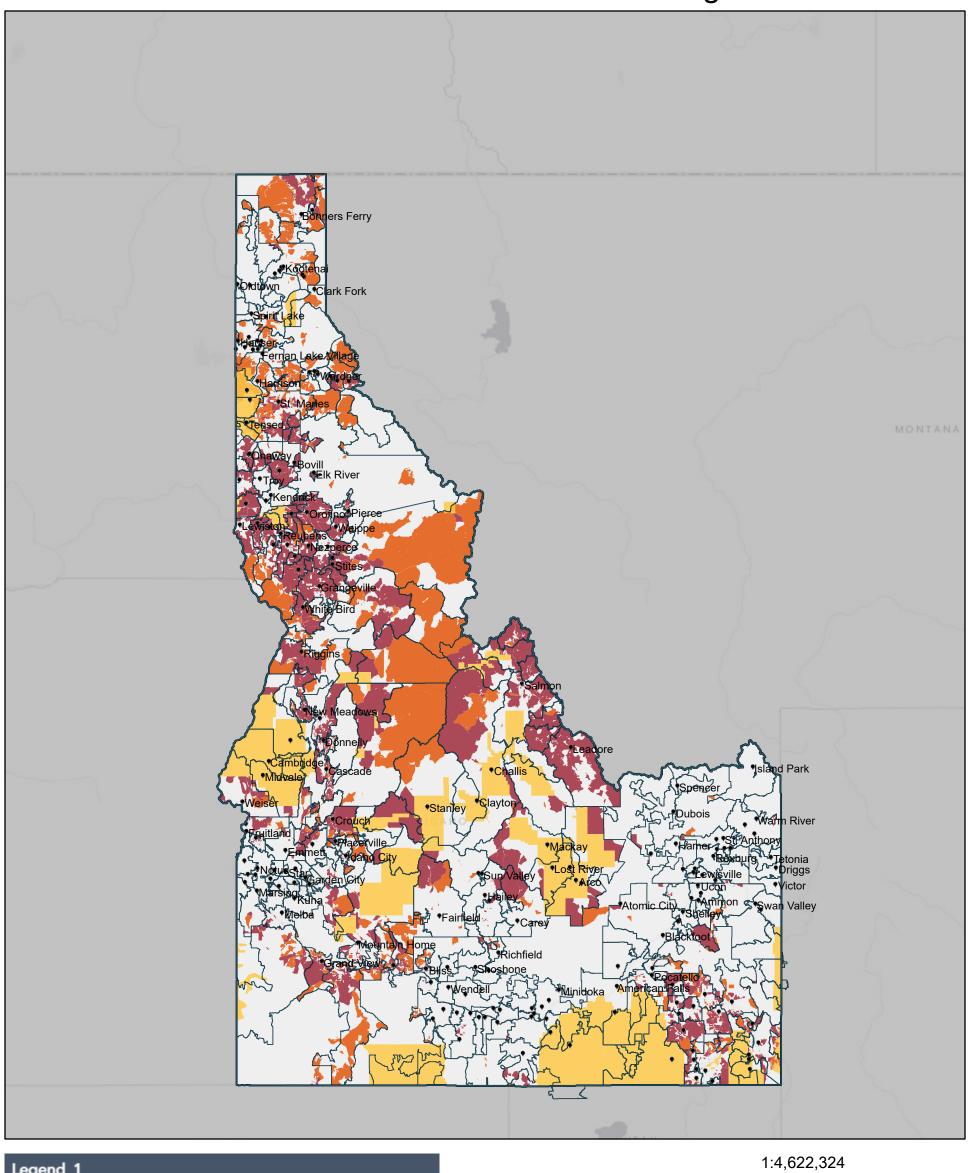
No Tests

6/1/2021

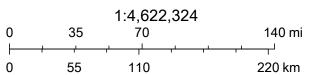
Esri, HERE, NPS, Esri, HERE, Garmin, USGS, EPA, NPS

ArcGIS Web AppBuilder Esri, HERE, Garmin, USGS, EPA, NPS | Esri, HERE, NPS |

Idaho Federal Broadband Grant Coverage Areas



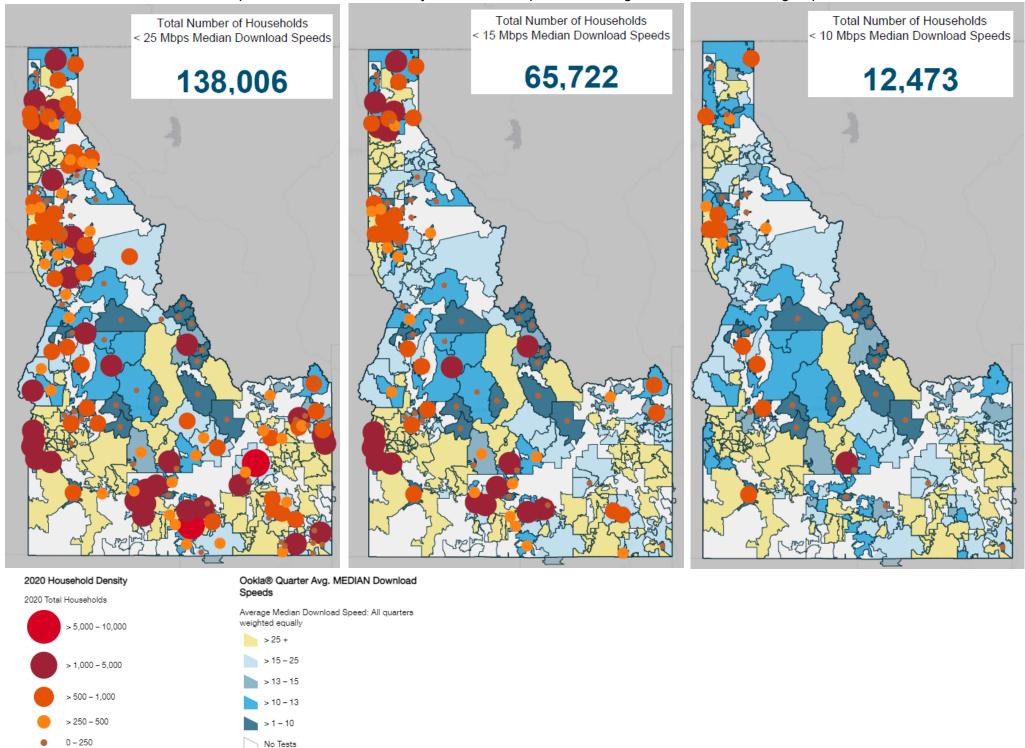




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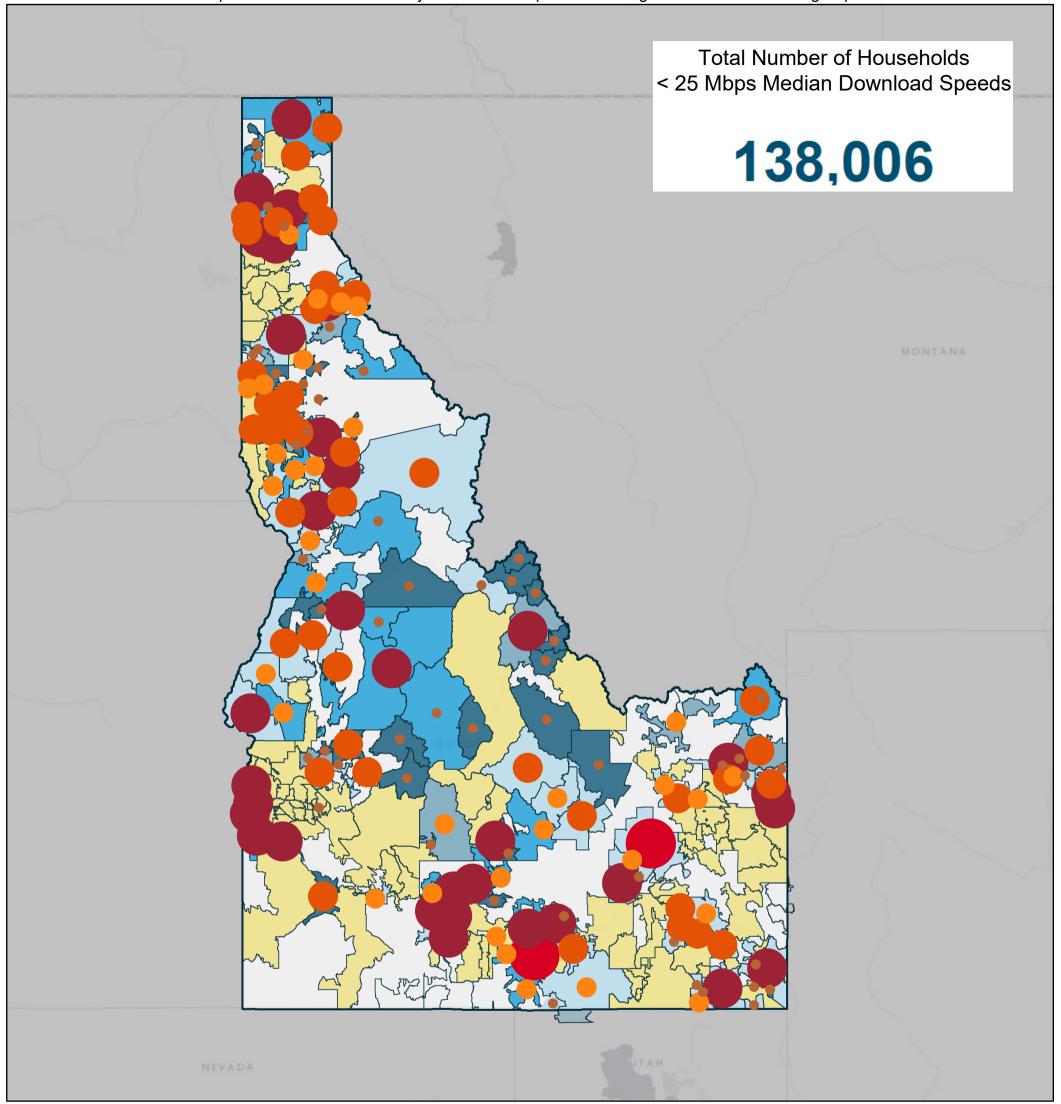
Idaho Broadband Maps - Household Density by Median Download Speeds Groups

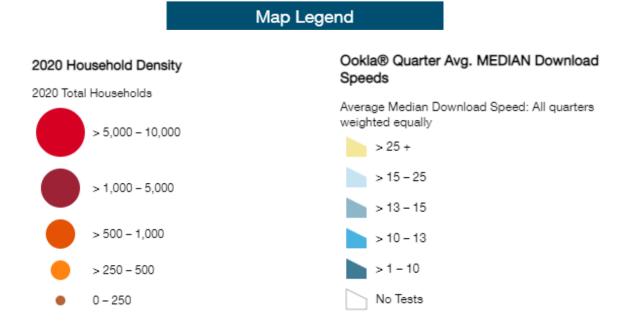
Idaho Department of Commerce analysis of Ookla® Speedtest Intelligence® data 2020 through April 2021

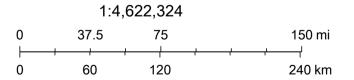


Idaho Broadband Map - Household Density in Areas with < 25 Mbps Median Download Speeds

Idaho Department of Commerce analysis of Ookla® Speedtest Intelligence® data 2020 through April 2021



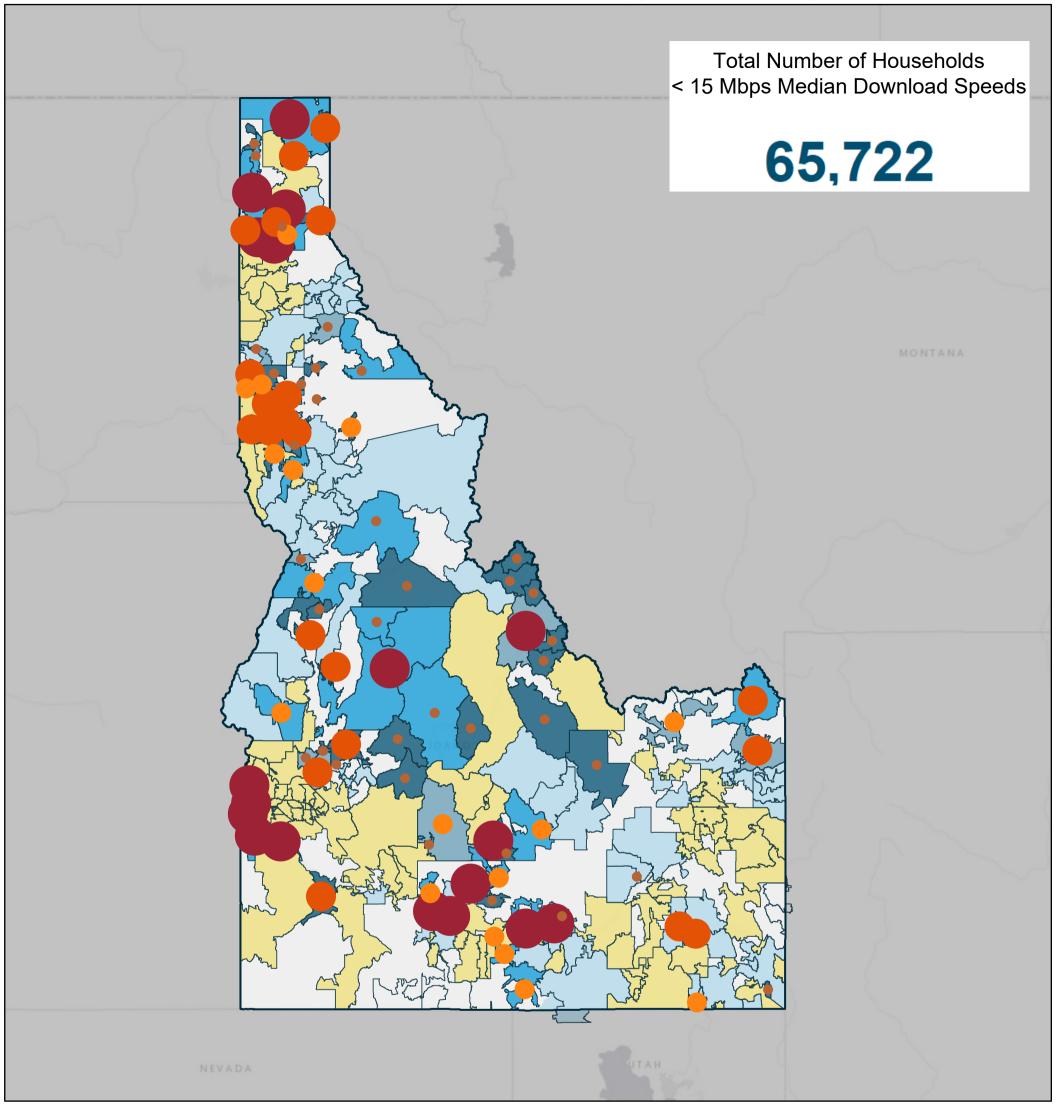




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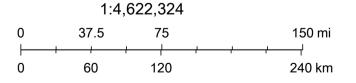
Idaho Broadband Map - Households Density in Areas with < 15 Mbps Median Download Speeds

Idaho Department of Commerce analysis of Ookla® Speedtest Intelligence® data 2020 through April 2021





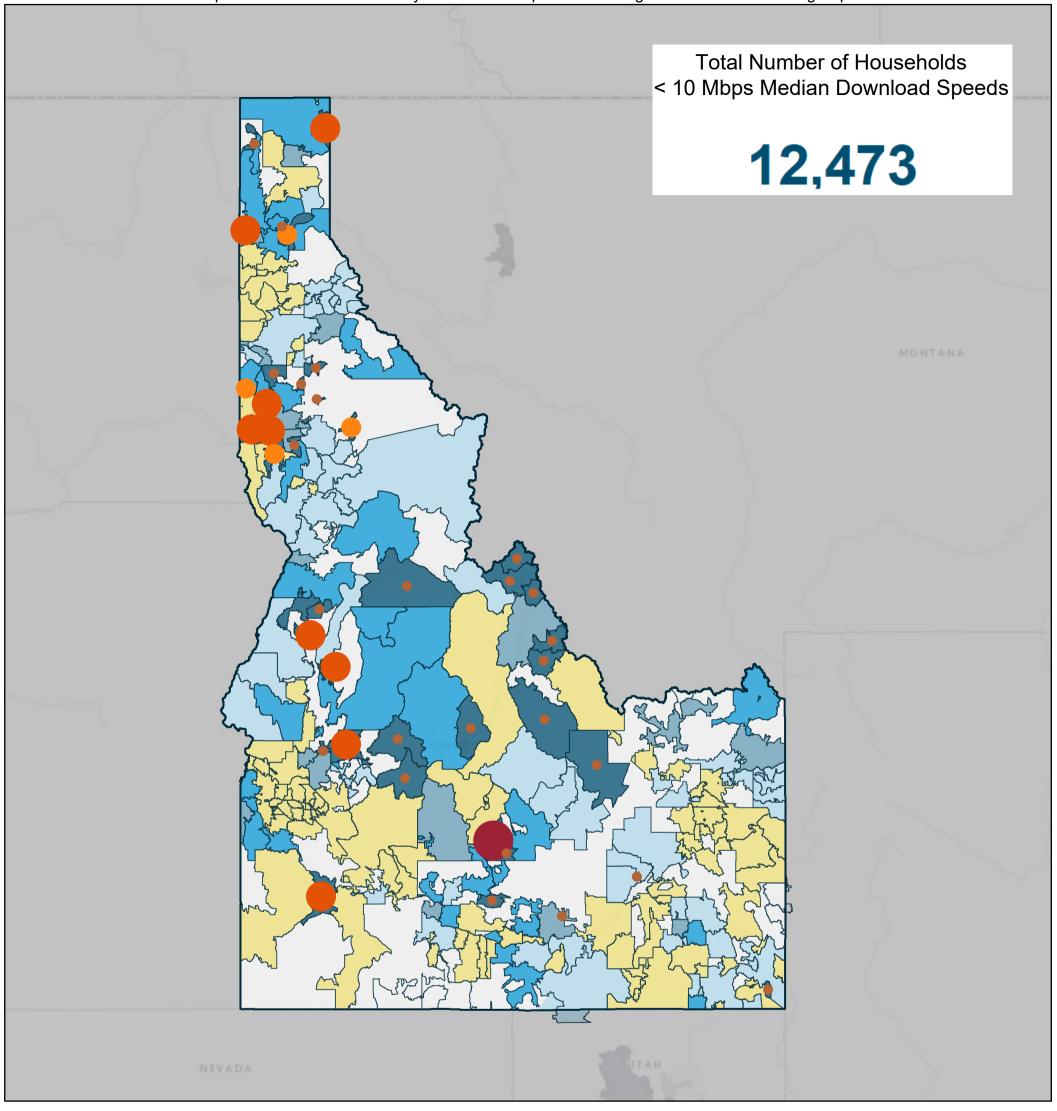
Ookla® Quarter Avg. MEDIAN Download 2020 Household Density Speeds 2020 Total Households Average Median Download Speed: All quarters weighted equally > 5,000 - 10,000 > 25 + > 15 - 25 > 1,000 - 5,000 > 13 - 15 > 500 - 1,000 > 10 - 13 > 250 - 500 > 1 - 10 0 - 250No Tests

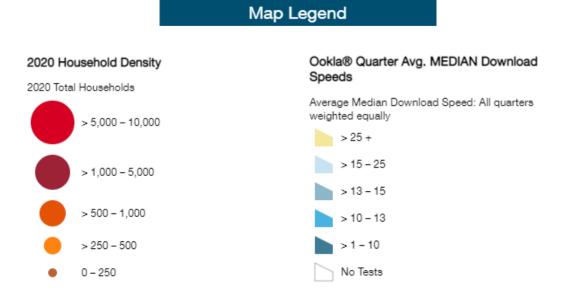


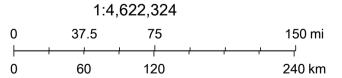
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Idaho Broadband Map - Households Density with < 10 Mbps Download Speeds

Idaho Department of Commerce analysis of Ookla® Speedtest Intelligence® data 2020 through April 2021





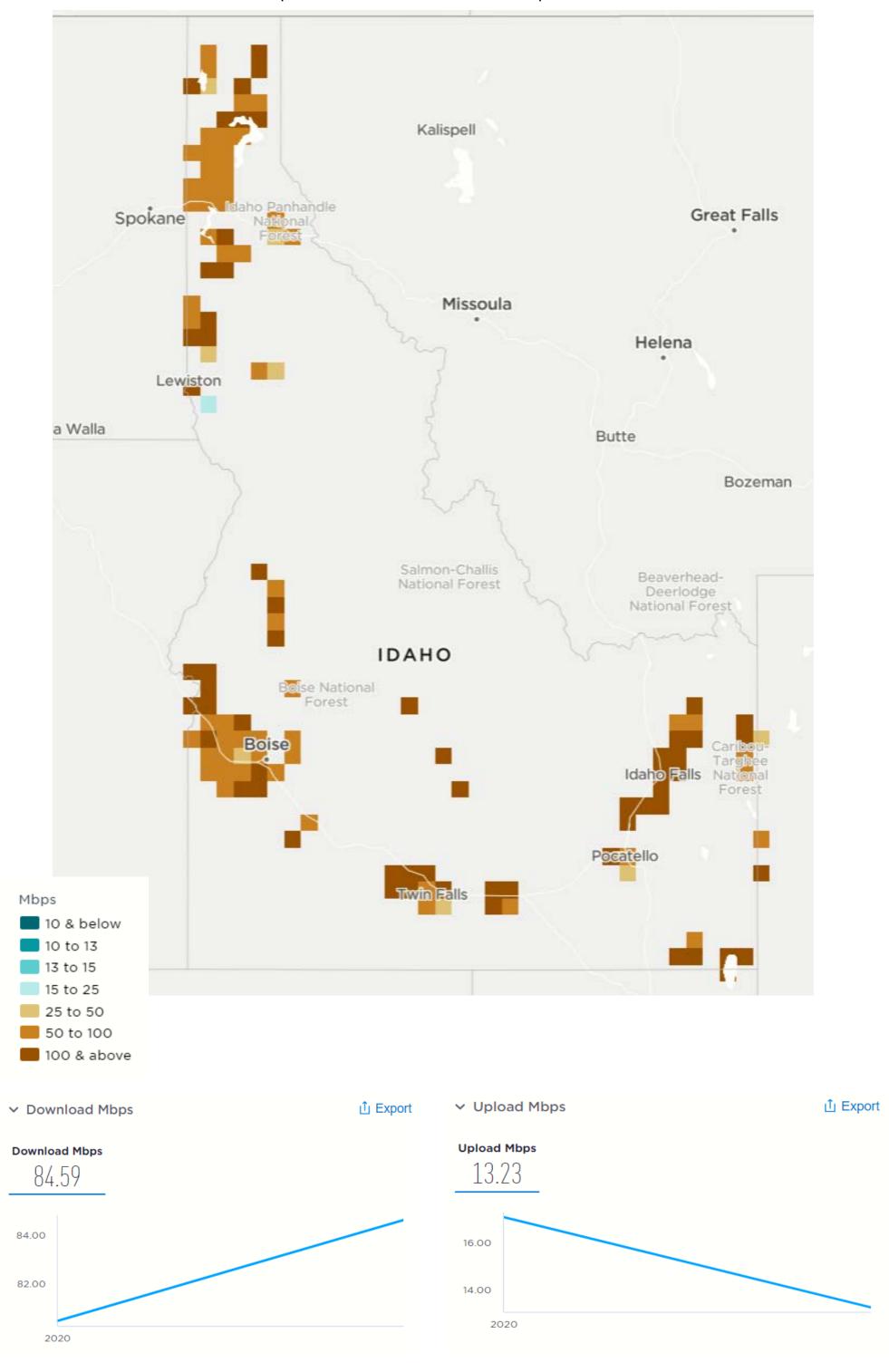


5/26/2021

 ${\sf Esri, HERE, NPS, Esri, HERE, Garmin, USGS, EPA, NPS}$

Idaho Low Orbit Satellite Ookla® Speedtest®

Ookla® Speedtest® Dashboard – Median Speed 2021 YTD



Updated Broadband Plan

Vision of Plan

- Because we live in a data driven society and Broadband connectivity is key for a thriving economy, both rural and urban Idaho need connectivity to attract business and create maximum success for our communities.
- A Broadband roadmap is needed for a plan roadmap to close the digital divide in Idaho in order to
 provide equal access to economic development, public safety, telehealth, and education opportunities
 through investments in broadband infrastructure.
- Ensure all Idahoans have access to broadband speeds of "25/3 Mbps" at a minimum in the short term, but with a goal that all Idahoans have access to "100/10 Mbps" by 2025.

Overall Plan

- The areas "most in need," are Idaho households in unserved and underserved areas, mostly in rural communities.
- Prioritize infrastructure investments in areas without access to 15/1 Mbps.
- Invest primarily in last mile infrastructure investments for connectivity for Idaho households.
- Adopt a "technology neutral" approach and invest in rural projects that deliver a minimum of 100/10 Mbps.
- Utilize low-cost technologies when available for leveraging funds. And include Low-Orbit Satellite to connect remote Idaho communities (note low-orbit currently has limited capacity on subscribers until more satellites are launched).
- For the near-term Idaho Broadband Fund Grantees should be communities including cities, tribes, counties, and local governments. For long term, consider private sector as grant recipients.
- For-profit companies or membership owned cooperative corporations would be eligible for grants for broadband infrastructure.

- Grant awardees must utilize their standard procurement process with private sector ISPs to install and operate new broadband service.
- Due to deadlines on certain funds, Commerce proposes \$10 million to 15 million of the \$45 million to be granted as soon as possible because of Cares Act deadline which requires funds to be spent by December 31st, 2021.
- Utilize grant awards to "seed" broadband infrastructure in counties (\$2 million max) and cities (\$1 million) so many communities across Idaho may participate and attract additional capital for service expansion beyond state grants.
- Proposed operating budget of \$200,000 for out-of-pocket costs and various potential expenses.
- Idaho Broadband Advisory Board will advise Idaho Commerce and Idaho Broadband Office on updates to the Idaho Broadband Plan, related Idaho appropriated funding priorities, grant applications, and policy recommendations.
- Leverage all major funding opportunities including State and Federal funds from Federal Communication Commission, United States Department of Agriculture, National Telecommunications and Information Association, and new sources from Cares Act, ARPA, etc.
- Whenever possible add federal funds to the Idaho Broadband Fund to increase infrastructure investment.
- Fulfill Objectives of Office of Broadband (see Appendix)

As Proposed Household Grants:

- Narrative: Consistent with Broadband Plan Priorities
- Grant Terms: Reference to Appendix, Same Framework as Cares Act Households Grants in 2020.
- Use of Funds: First \$10 million to \$15 million are Cares Act Funds

Grant Highlights

- Project areas (census blocks) where less than 50% of households have access to broadband speeds of 25/3 Mbps (Current FCC minimum)
- Projects will build infrastructure that delivers speeds of 100/10.
- Minimum Grant award is \$500,000. Maximum grant award per year is \$2 million per county and \$1 million per incorporated city. Counties apply on behalf of unincorporated areas.
- Priority given to projects in "Most in Need" areas that are unserved (less than 10/1 Mbps) and areas (less than 15/1 Mbps), building fiber, providing affordable monthly service plans, located in rural areas, and receive a match from the ISP.
- Bonus Points for 15/1 Mbps, in rural communities, and partner match.

Proposed Timing

- Public Comments 6/7/21-6/11/21 *(May need a meeting depending on public comments)
- Grant Portal Open for Applications: 6/14/21 6/25/21
- Recommendations to Idaho Broadband Advisory Board: 7/7/21
- Challenge Period: 7/6/21-7/9/21Anticipated Award Date: 7/25/21
- Closing Date: 12/15/21

Scenario A: What is the investment for the "Most in Need" communities that have speed tests less than 10Mbps down.

- HH 12,473 and population: 30,222
- 48 cities *3 areas noted as "unincorporated"
- Assume cost is \$3,000 per household.
- Fixed Terrestrial Broadband Connectivity: estimated total is \$36 million.

Scenario B: What is the investment for the "Most in Need" communities that have speed tests below 13 Mbps down?

- HH 45,851 and population: 117,741
- 87 cities *3 areas noted as "unincorporated"
- Assume cost is \$3,000 per household.
- Fixed Terrestrial Broadband Connectivity: estimated total is \$135 million.