IDAHO COMMERCE

BROADBAND ACCESS IS IMPERATIVE FOR IDAHO

RECOMMENDATIONS TO IMPROVE IDAHO'S BROADBAND PLAN

For: Governor Brad Little

By: Idaho Broadband Task Force

Presented: October 31, 2019

Approved: November 22, 2019

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CHAIRMAN'S PREFACE

In May of 2019, Governor Brad Little signed an Executive Order establishing a broadband task force to develop a plan to improve broadband speed, measured as 25 mbps down and 3 mbps up, connectivity, and infrastructure throughout Idaho. Over the past seven months, the task force has worked to develop recommendations to ensure both rural and urban Idaho are connected and well positioned for maximum future success for our communities, our businesses, and our citizens.

Comprised of internet providers, satellite providers, cellular providers, and other industry experts along with university, tribal, legislative, state, county and municipal representatives, the task force came together to share their expertise, experience, and perspectives on improving broadband accessibility and reliability for all Idaho citizens.

This report was developed through four task force meetings where members convened to learn about the present state of broadband in Idaho, discuss what is working well and where improvement is needed. For the final two meetings, the task force divided into seven topical subcommittees that met between task force meetings to bring forth specific recommendations for the Governor.

In this report, you will find recommendations from the task force aimed at improving broadband access across Idaho. The first section of the report highlights the background of the Idaho broadband plan, plan initiatives, and a summary of recommendations, including five calls to action.

In the appendixes of this report, you will find the complete, unedited recommendations from each of the seven subcommittees. While not all subcommittee recommendations were presented as task force calls to actions, all subcommittee recommendations were thoughtfully prepared, provide important perspective and expertise, and will be considered in future discussions.

As we conclude the work of the formal Broadband Task Force and begin the effort to execute the recommended next steps, I want to personally thank all task force members, stakeholders, and staff for all their hard work in developing this broadband report for Idaho, as well as Governor Little for his leadership on this important issue.

Sincerely,

Tom Kealey

Tom Kealey
Director, Idaho Commerce
Chairman, Idaho Broadband Task Force

BACKGROUND OF IDAHO BROADBAND PLAN

Like water, electricity and highways, Idaho citizens, communities and businesses, in both urban and rural areas, must have access to secure reliable, affordable broadband internet speeds in order to grow, thrive and connect to the world.

Whether you're a wheat farmer on the rolling Palouse hills, a hotelier at the foot the Tetons, or a student near the Sawtooths, reliable broadband access is essential to send and receive information vital to crop health, to take visitor reservations, process payments, and access the global network of information and learning tools to do your homework.

Access to the broadband and high-speed internet services is an urgent priority for Idahoans in all corners of the state. A robust, comprehensive and dynamic broadband plan for Idaho is imperative in order to identify priorities and secure funding. This report contains recommendations from the Governor's Broadband Task Force aimed at providing reliable broadband access to all residents and businesses in Idaho.

"To ensure Idaho can adapt to the rapidly evolving digital world, we must actively work to improve Idaho's broadband access, pursing all options to increase broadband connectivity."

-Governor Brad Little
State of the State, January 2019

IDAHO BROADBAND TASK FORCE

Governor Brad Little proclaimed during the 2019 State of the State his priority and intention for an updated broadband plan to increase broadband connectivity for all Idaho communities.

In May 2019, Governor Little issued an executive order to form a task force to make recommendations to the Governor on policies and actions the state should consider to dramatically improve the state in connectivity and service levels.

Governor Little named the Director of the Idaho Department of Commerce, Tom Kealey, to chair the task force and develop a strong, expert team of varied backgrounds, regions and technologies to focus on a statewide approach to ensure all of Idaho is represented, evaluated and all solutions are analyzed.

Director Kealey appointed the task force, containing experts from a variety of industries ranging from hospitality to agriculture, ISPs, carriers and utilities, members of the Idaho Legislature, tribal organizations, and the public sector.

The task force met four times throughout the state to take full inventory of the status of broadband across Idaho. In addition, task force members held committee meetings throughout the process to examine specific topics and make recommendations.

RURAL A COMMITTEE

Greg Lowe, President & CEO, Syringa**
Danae Wilson, Dept. of IT, Nez Perce Tribe*
Sen. Carl Crabtree, Senator, Idaho Legislature
Curtis Fryer, CIO, Idaho Forest Group
Jim Blundell, Government Affairs, T-Mobile
Mike Fitzgerald, Commissioner, Shoshone County

RURAL B COMMITTEE

Mike Kennedy, President, Intermax**
Sen. David Nelson, Idaho Legislature*
Dana Basset, Global IT Services Delivery, Glanbia
Dan Greig, Gen. Manager, Farmers Mutual Tel.
Steve Ehle, Director Infastr, Simplot
Paul Desaulniers, Manager Reg. Ops, CenturyLink
Rep. Megan Blanksma, Idaho Legislature

URBAN COMMITTEE

Kevin England, Mayor, City of Chubbuck**
Michael Mattmiller, Gov. Affairs, Microsoft*
Rep. Mat Erpelding, Idaho Legislature
Doug Burnett, Res. Manager, Coeur d'Alene Resort
Jacob Larsen, CEO, Safelink Internet
Nancy Cyr, Engineering Lead, Idaho Power
Pat Felzien, Director, IT Engineering, Micron

BROADBAND OFFICE COMMITTEE

Tara Thue, President Gov. Affiars, AT&T**
Jessica Epley, Manager Gov. Affairs, Frontier*
Cheryl Goettsche, General Manager, Sparklight
Will Hart, Exec. Director, Consumer Owned Utilities
Marian Jackson, State Director Gov. Affairs, Charter

REPORT COMMITTEE

Jaap Vos, Bioregional Planning, U of I**
Gordon Jones, Innovation/Design, BSU*
Chanel Tewalt, ISDA
Milt Doumit, Gov. Affairs, Verizon

INL/UNIVERSITIES COMMITTEE

Jerry Gwynn, Infrastr, Operations, INL**
Randy Gaines, CIO, ISU*
Kenneth Smith, Technologist, HP
Robert Hampton, CIO, Jackson's

MAPPING COMMITTEE

Guy Cherp, Vice President, Cox Comm.**
Brad Richy, Director, Office of Emergency Mgt.*
Jeff Weak, Administrator, ITS- Office of Gov.
Jaynie Bentz, Asst. Port Manager, Port of Lewiston
Kari Saccomanno, City Manager, Ting

Tom Kealey, Director, Idaho Commerce***

*** Task Force Chair
** Committee Chair
* Committee Co-Chair

IDAHO BROADBAND PLAN GOALS

Link Rural Idaho to a Global Marketplace

Broadband access is essential to modern industry, including agriculture, food production, farming and ranching.

Give Students and Families the Tools to Succeed

Broadband access is critical for students, parents, and educators to facilitate communication, reach vast sources of research and information, and utilize the most advanced learning tools.

Help All Communities Increase Speeds

Many areas of Idaho, particularly the most rural locations, still lack reliable broadband-level speeds at an affordable price.

Connect Health Care and First Responders

Broadband is an important tool for health care providers to access electronic health records, utilized telemedicine advancements and exchange urgent information.

Identify Funding and Partnership Models

State efforts to fund infrastructure and encourage investment to improve broadband access can take a variety of forms.

Convene Partners

Improving broadband planning requires partnership from a variety of stakeholders including ISPs, carriers, entrepreneurs, utilities, and the public sector, including state agencies.

APPROACH TO ANALYSIS AND RECOMMENDATIONS

Governor Objectives

- Affirm State Broadband Plan for Idaho ensures both urban and rural Idaho are well connected and well positioned to attract business and create maximum success for our communities.
- Develop adequate mapping of broadband and high-speed internet infrastructure to progress connectivity throughout the state.
- Analyze existing resource gaps to help advance the state in connectivity, speeds and capacity.

Task Force Formed

At the State of the State, January 2019, Governor Little announced improving broadband access would be a key economic development initiative in his administration. In May of 2019, a task force of diverse statewide technology experts ranging from ISPs, carriers, utilities, business leaders, tribal organizations, stakeholder associations and state, county and municipal government agencies was formed to fulfill the Governor's directive to focus on a statewide approach, ensuring all of Idaho is properly represented and all options evaluated and analyzed.

Meetings Held

- Initial meetings focused on introducing task force members, establishing goals and desired outcomes, reviewing of technology capabilities and options, funding mechanisms and solutions currently in place.
- Between the second and third meetings, the task force broke into committees to focus on specific issues of communities across Idaho.
- The final two meetings focused on preliminary recommendations from committees, distilling and refining recommendations and crafting final recommendations in preparation to report to the Governor.

Committee Assessments

Seven committees were established to evaluate different market segments, users, technologies, and topics:

- Rural (A), Rural (B), Urban, INL/Universities, Mapping, State Broadband Office, Final Report.
- Each committee was tasked to develop ideas and recommendations to put forth to the task force.
- The Final Report committee was tasked with distilling the committee recommendations into final recommendations for improving Idaho's Broadband Plan.

Broadband Plan

- Addressing solutions for the unserved areas in rural Idaho is the highest priority.
- Importance of maintaining local authority and technology agnostic recommendations.
- Funding remains uncertain; accurate mapping and data remains a challenge.
- Strong support for a state broadband office.
- Affirm Governor support for Broadband Plan and notify federal partners to maximize Idaho funding.
- Urban areas, universities and INL are currently well served but will need to consistently improve.

CURRENT ASSESSMENT

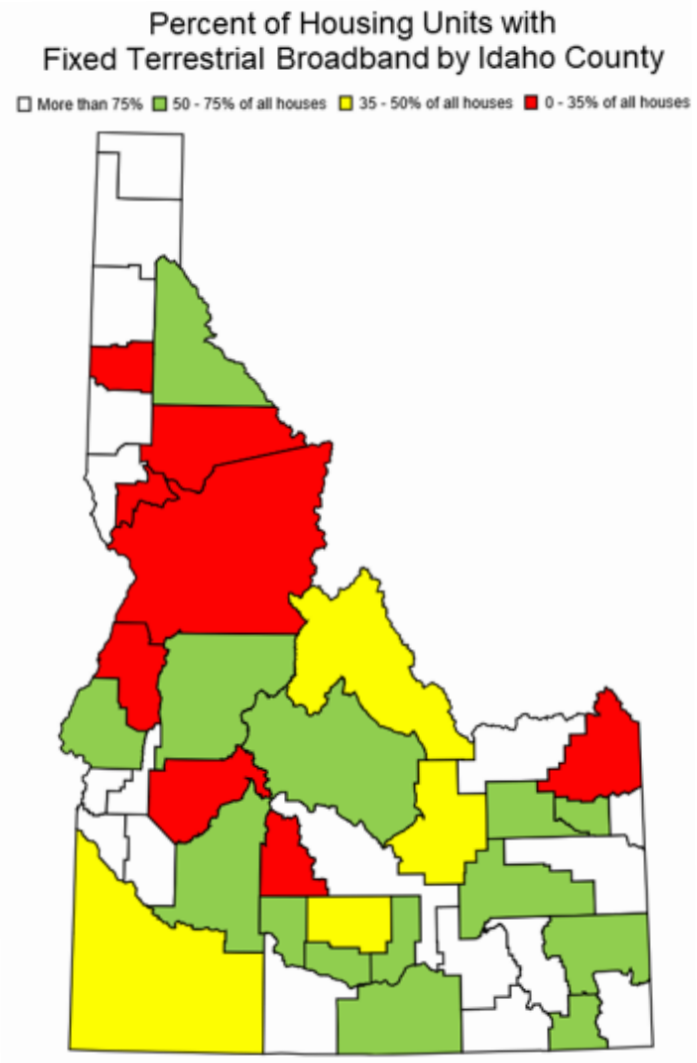
Broadband access is central to many activities in our day to day lives. Fast, reliable, affordable connectivity is essential for business, education, health care and public safety, and is required for many new services and entertainment options in modern life.

The Idaho Broadband Task Force defines unserved communities as areas that do not have the minimum federal guidelines of broadband service measured as 25 mbps down and 3 mbps up. Idaho has been reported to be below average for broadband connectivity, however, maps containing broadband speed and service are often inadequate and out-of-date. The Federal Government requires reporting by ISP's but the data on maps is limited. More accurate private ISP mapping may be available 2020-Q1. Public sector infrastructure asset maps are unavailable or not aggregated.

ISPs and government programs have invested hundreds of millions of dollars for broadband infrastructure over the past several years. Idaho projects and assistance applications have not scored high by federal agencies that provided funding for rural and unserved communities. Idaho's federal assistance awards have been low, partly due to the lack of a recognized State Broadband Plan. More investment is needed to unserved areas, particularly in rural communities, where poor broadband speed and service poses a significant threat to health and safety, education, and quality of life, and limits economic prosperity in times of economic strength.

In addition to challenges understanding exactly where speed and service gaps exist, Idaho is challenged addressing unserved areas due to the state's geography, terrain, and lack of population density in many areas. In order to overcome these challenges, public-private partnerships are necessary to better coordinate broadband project communication, funding, and efficiencies to expand broadband connectivity.

Available maps and data depict North Central Idaho as the largest unserved area in the state. Other areas of the state may experience inconsistent speeds and service levels depending on capacity, technology, equipment, and usage. However, public safety agencies, educational institutions, libraries, and hospitals have some level of broadband service across Idaho utilizing proprietary networks created and funded for the respective, sole purpose needs; not developed for the broader community. These beneficiaries received service at varying times since there has not been a "dig once" or "hang once" policy to utilize which may have provided less expensive and more expansive coverage.



Idaho's Broadband Plan addresses unserved areas across the state, however, the plan requires coordination and funding. There are potentially large federal funding sources, but the federal program rules are currently being altered and qualifications are uncertain at this time.

IDAHO BROADBAND LANDSCAPE

The task force found that it is important to recognize that different market segments require different solutions. Larger and many smaller markets are presently well-served due to significant investments in technology and infrastructure. Solutions that limit regulation, increase efficiency, enable healthy competition and consider new technology options will help speed and service in most areas grow and improve.

Rural communities and remote locales face a different set of challenges. Geography, terrain, and lack of population density require different technology solutions, investment levels, and greater public-private collaboration. Better state coordination and federal scoring for Idaho rural projects may incent providers and entrepreneurs to deploy innovative technology solutions at attractive ROI's for the private sector. Federal funding programs are available to public entities to enable greater efficiencies for rural solutions.

MARKET SEGMENTS	TECHNOLOGIES AND EQUIPMENT	INVESTMENTS
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 require smaller investment; Portable towers emerging as new technology option
Rural Communities	Middle Mile to Central Town; Satellite; Fixed-wireless; CBRS; New, lower-cost technologies	Investment by public and private entities; Entrepreneurs funding new technology and service options
Remote Locales	Satellite; Line of Sight; Fixed-wireless; CBRS; New technologies	Investment is challenging, singular projects can be costly; Low ROI; Aerial infrastructure is half the cost of digging

RECOMMENDATIONS AND OUTCOMES

The task force agrees with the Governor that broadband and high-speed internet should be a strategic and economic priority for Idaho. Most importantly, developing solutions to better serve and assist rural Idaho should be the highest priority and thus the focus of most recommendations.

Recommended solutions should remain "technology neutral." Due to the continuous technological advances in delivery of broadband services and Idaho's geography challenges and communities' unique circumstances, all technology options should be considered as solutions to improve connectivity across the state.

Idaho's urban areas are well served given customer density, access to capital, and existing infrastructure. Idaho's universities and the Idaho National Laboratory have adequate broadband but should maintain their leading edge with existing resources and could serve as a catalyst for improvements to broadband technologies.

With continued healthy competition among providers, reduced regulation, more awareness of options, and the benefit of policy recommendations noted below, Idaho's broadband connectivity should improve and thrive.

Call For Action #1: Update Broadband Plan

Affirmation of the Idaho Broadband Plan by the Governor, along with the appropriate notifications to Federal and State agencies will support maximum funding opportunities and coordination to expand broadband service across Idaho. Letters of affirmation allow for maximum scoring for internet service providers and therefore higher probability of securing millions of dollars for reaching unserved communities. When combining the potential for more federal funding and state agency coordination efforts, the investment for ISP's may be reduced such that their minimum ROI's may be achieved to consider a successful public-private investment partnership.

RECOMMENDATIONS AND OUTCOMES

Call For Action #2: Establish a State Broadband Office

As part of its broadband plan, Idaho should create a State Broadband Office within the Department of Commerce, initially recommending one full time staff position. Idaho is not unique in the need for broadband. By establishing a State Broadband Office, Idaho will be better positioned to coordinate efforts across Idaho and to avoid costly errors by learning from what other states have successfully accomplished.

The State Broadband Office could be a resource for a state broadband strategy including consumer education, facilitating opportunities and funding sources, and coordinate where Idaho can leverage existing infrastructure, such as roadways and utility assets, to reach unserved communities in the state.

The task force evaluated many different data sources and mapping options to understand what best illustrates Idaho's available services, speed and infrastructure. The task force identified where gaps exist, and recommends the Idaho Broadband Office should be the repository for all publicly available maps and data sources to create a clear understanding of Idaho's opportunity. As new maps and data sources become publicly available, the State Broadband Office should include this information to enhance Idaho's broadband availability.

Idaho must resolve the gap in funding that is creating a barrier, for needed broadband deployment. The State Broadband Office could assist the state and communities throughout Idaho by leveraging federal funding sources including, but not limited to U.S. Department of Agriculture, Federal Communications Commission and U.S. Department of Commerce programs. The State Broadband Office would also leverage State assets.

While awaiting the establishment of a State Broadband Office, members of the task force should continue to meet periodically and work together with the Department of Commerce as an "interim" state broadband office on the identified projects within Idaho.

RECOMMENDATIONS AND OUTCOMES

Call For Action #3: Consider State Funding Options

Beyond the available federal programs, funding will continue to be a challenge. Moreover, the State could make a large contribution toward lowering project investment with the coordination of a “dig once” policy and a proactive coordination of potential large installation. The investment could be substantially smaller if several projects were completed with “one dig” or “one hang.” State funding solutions through grants and loans that complement existing programs and projects and reforming the existing State Universal Service Fund to include broadband subscribers should be considered to close the funding gap and deploy broadband infrastructure and service.

Call For Action #4: Improve Deployment Efficiency by Formalizing Dig Once and Hang Once Policies

Establish a state construction registry maintained by the State of Idaho for all upcoming transportation infrastructure projects and of existing available conduit in the public right of way and promote joint projects. Idaho’s most precious asset regarding broadband deployment is its Right of Way along its highways. A significant cost of broadband deployment is in the construction costs for installation in the Right of Way.

With uncertain funding, better communication between agencies and utilities when ground is broken in a public right of way is smart policy to immediately improve deployment efficiency. Broadband deployment incurs many costs and can be a burden to our state if not coordinated properly from the outset of a project.

Proactive and simultaneous broadband infrastructure planning with utility maintenance/expansion, Idaho Department of Transportation, County Highway District highway projects, or municipal road maintenance projects could dramatically change and improve the way our ISP’s view broadband preparation and development.

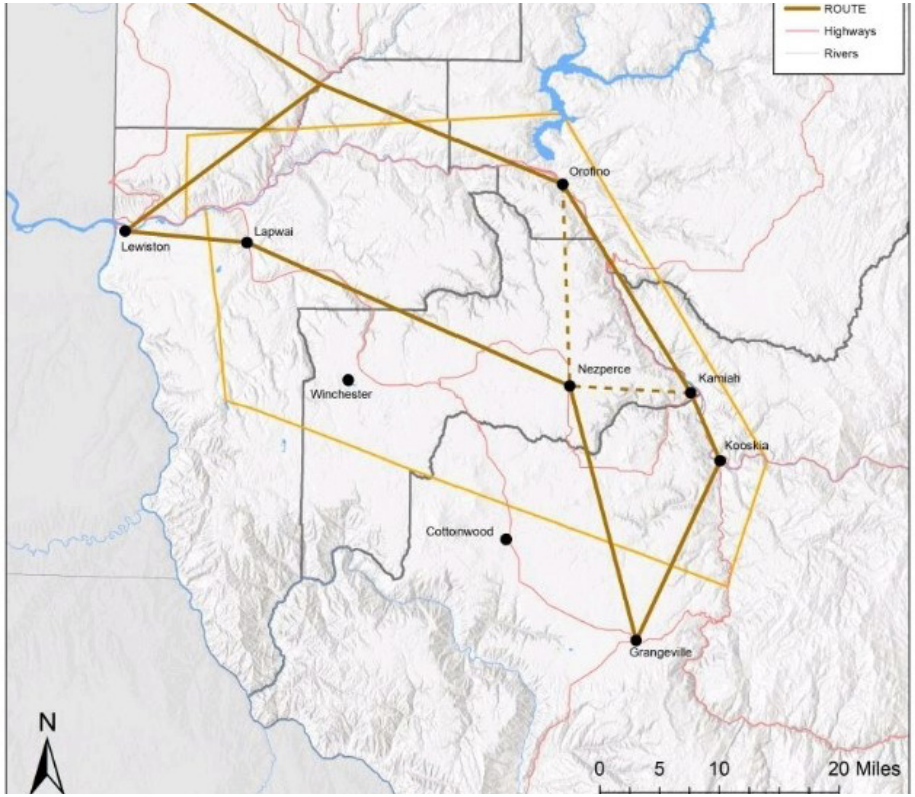
Encourage local communities to work with all applicable public entities and private partners to determine the most effective solutions for deploying broadband. All approaches and policies should support the efficient construction of cost-competitive, reliable broadband services while remaining technology neutral in its delivery.

RECOMMENDATIONS AND OUTCOMES

Call For Action #5: Engage on Near Term Projects

The task force recognized that there are current, unfunded projects in unserved areas which are very important for Idaho. These near term projects could have an immediate impact on unserved areas:

- North Central Idaho “open access” fiber network across five counties for the unserved region based on the District 2 Interoperability Governance Board (DIGB2) consulting study.*
- North-South pathway between Grangeville and Riggins
- I-90 corridor between Cataldo, Idaho and Montana border
- Melba



* DIGB2 consulting study map

NEXT STEPS

- Idaho Commerce to continue to lead the Idaho Broadband Plan ongoing effort with an interim broadband office to work on identified near term projects.
    - Engage Idaho legislators.
    - Establish smaller, regional working groups.
    - Focus on “high scoring” for federal grants and loans.
    - Focus on a comprehensive “beta” project in underserved North Central Idaho.

APPENDIXES

A. Governor's Executive Order

B. Idaho Broadband Taskforce Members

C. Rural A Committee Recommendations

D. Rural B Committee Recommendations

E. Urban Committee Recommendations

F. Universities and INL Recommendations

G. Mapping Committee Recommendations

H. State Broadband Office Recommendations

I. BBTF Meeting #1 Agenda

J. BBTF Meeting #2 Agenda

K. BBTF Meeting #3 Agenda

L. BBTF Meeting #4 Agenda

M. Broadband Federal Funding Alternatives

N. Letter from Governor Little to Affirm Idaho's Broadband Plan and USDA Evaluation Criteria

Executive Department
State of Idaho

State Capitol
Boise

EXECUTIVE DEPARTMENT
STATE OF IDAHO
BOISE

EXECUTIVE ORDER NO. 2019-07

IDAHO BROADBAND TASK FORCE

WHEREAS, we live in a data-driven society and connectivity is key for a thriving economy; and

WHEREAS, we must ensure both urban and rural Idaho are connected and well-positioned to attract business and create maximum success for our communities; and

WHEREAS, adequate mapping of broadband and high-speed internet infrastructure is vital in progressing connectivity throughout the state; and

WHEREAS, properly analyzing existing resources and gaps will help advance the state in internet connectivity, high speeds, expansion plans, and adequate capacity;

NOW, THEREFORE I, BRAD LITTLE, Governor of the State of Idaho, hereby establish the Idaho Broadband Task Force and the following:

1. *The Idaho Broadband Task Force will make recommendations to the Governor on policies and actions the state should take to dramatically improve the state in connectivity and service levels.*

2. *The duties of the Idaho Broadband Task Force are advisory.*

3. *The Idaho Broadband Task Force will focus on a statewide approach, ensuring Idaho is properly represented, evaluated, and alternatives analyzed.*

4. *The Idaho Broadband Task Force will be chaired by the Director of the Idaho Department of Commerce.*

5. *Idaho Department of Commerce will staff the Idaho Broadband Task Force.*

6. *Members of the Idaho Broadband Task Force are appointed by and serve at the pleasure of the Governor. Members include, but are not limited to:*

    a. *Director of the Idaho Department of Commerce;*
    b. *Director of the Idaho State Department of Agriculture or their designee;*
    c. *Director of the Office of Emergency Management or their designee;*
    d. *Director of the Office of Information Technology Services or their designee;*
    e. *Two members of the Idaho State Senate;*
    f. *Two members of the Idaho House of Representatives;*
    g. *One member representing the Association of Idaho Cities;*
    h. *One member representing the Idaho Association of Counties;*
    i. *One member representing Idaho Tribes;*
    j. *Members representing internet service providers;*
    k. *Members representing satellite providers;*
    l. *Members representing cellular providers;*
    m. *Members representing various industries across the State of Idaho;*

n. One member representing the Idaho National Laboratory;
o. One member representing the Idaho electricity providers

IN WITNESS WHEREOF, I have hereunto set my hand and caused to be affixed the Great Seal of the State of Idaho in Boise on this 23rd day of May, in the year of our Lord two thousand and nineteen and of the Independence of the United States of America the two hundred forty-third and of the Statehood of Idaho the one hundred twenty-ninth.

BRAD LITTLE
GOVERNOR

LAWERENCE DENNEY
SECRETARY OF STATE

A

TASK FORCE MEMBERS		
Name	**Organization**	**Title**
Kevin England	Association of Cities	Mayor - Chubbuck
Tara Thue	AT&T	President - Gov Aff
Gordon Jones	Boise State University	Dean - Innovation/Design
Cheryl Goettsche	Cable one	General Manager
Paul Desaulniers	Century Link	Manager Reg. Ops
Marian Jackson	Charter	Senior Director, Gov. Affairs
Doug Burnett	Coeur d'Alene Resort	Resident Manager
Will Hart	Consumer Owned Utilties	Executive Director
Guy Cherp	Cox Communications	Vice President
Dan Greig	Farmers Mutual Telephone	General manager
Jessica Epley	Frontier Communications	Manager - Govt Affairs
Dana Bassett	Glanbia	Global IT Service Delivery
Kenneth Smith	HP	Technologist
Tom Kealey	Idaho Commerce	Director
Curtis Fryer	Idaho Forest Group	Director of IT
Rep. Matt Erpelding	Idaho Legislature	Represenative
Rep. Megan Blanksma	Idaho Legislature	Representative
Sen. Carl Crabtree	Idaho Legislature	Senator
Sen. David Nelson	Idaho Legislature	Senator
Jerry Gwynn	Idaho National Laboratory	Infrast. Operations
Nancy Cyr	Idaho Power	Engineering Lead
Randy Gaines	Idaho State University	Chief Information Officer
Mike Kennedy	Intermax	President
Chanel Tewalt	ISDA	COO
Jeff Weak	ITS - Office of Gov	Administrator
Robert Hampton	Jackson's	CIO
Pat Felzien	Micron	Director, IT Engineering
Michael Mattmiller	Microsoft	Gov Affairs
Danae Wilson	Nez Perce Tribe	Department of IT
Brad Richy	Office of Emergency Mgt.	Director
Jaynie Bentz	Port of Lewiston	Assistant Port Manager
Jacob Larsen	Safelink Internet	CEO
Mike Fitzgerald	Association of Counties	Commissioner-Shoshone County
Steve Ehle	Simplot	Director Infastr.
Greg Lowe	Syringa	President & CEO
Kari Saccomanno	Ting	City Manager
Jim Blundell	T-Mobile	Government Affairs
Jaap Vos	University of Idaho	Bioregional Planning
Milt Doumit	Verizon	Gov Affairs

Rural Idaho A

1 Executive Summary

The Rural Idaho A sub-committee has converged on a set of goals and recommendations that it is pleased to present to the Task Force leadership. The sub-committee focused on communities and areas of Idaho with greater than 3,000 residents, but less than 25,000 residents, and less than 25% coverage per Broadbandnow.com data. This paper will outline the three top priorities for broadband relief, provide suggested guidance for the Broadband Office once established, and offer three case studies that demonstrate the difficulties and expense of obtaining broadband connectivity. All of this information combined begins to establish near and long-term objectives to push broadband access further into the Rural Idaho A territory.

2 Top Three Recommendations from The Rural Idaho A Group:

2.1 Move forward with shovel ready projects that require 2019/2020 funding

The Rural A group has identified three projects that would provide near term advancements in middle-mile infrastructure for the state. The lack of middle-mile infrastructure is recognized by many as the #1 priority for improving broadband deployment in Idaho.

- Fund ITD (est. $ 5 million) to complete conduit on I 90 from Cataldo to the Montana border. This will allow Syringa Networks to proceed with its executed deal with ITD and populate that conduit with fiber. ITD will have a 48 count of fiber for its own use or to swap with other carriers for fiber in other markets.

- In North Central Idaho, the District Two Interoperability Governance Board (DIGB2) developed a strategic analysis and plan to develop a fiber optic network to meet the needs of public safety across the five (5) Counties. Deployment of an open access fiber network would incentivize telecommunications providers to enter this underserved market. The cost of this project is unknown at this time.

- Whitebird Hill represents a LATA divide, historically a dividing line of telecommunication provider territories. The pathway from Grangeville to Riggins currently does not have any connection. Construction of a fiber optic pathway (aerial or underground) would enable all forms of communication to flow between north and south Idaho. Establishing this route will realize costs savings to all communications users as interstate exchange fees would be no longer assessed. Additionally, deployment will provide north central Idaho with a redundant path for communications which is currently unavailable. The estimated cost of this project is $30M.

2.2 Implementing best practices for broadband deployment cost reduction.

Idaho is not unique in its need for broadband. Given that it lags other states in addressing this issue, means that Idaho is positioned to avoid costly errors by learning what others have

successfully done. Priority two is to install best practices learned to reduce the cost of broadband deployment. Examples include:

- In Utah, the Department of Transportation actively facilitates fiber conduit deployment, maintains a conduit build out registry and partners with telecommunication providers. In Utah this program has facilitated expanded fiber routes and enhanced connectivity. In Washington, legislation gave port authorities the opportunity to develop open-access broadband infrastructure for lease to interested providers. This authorization has facilitated build out of a number of open access fiber optic network connecting urban and rural Washington communities.

- Create a state conduit and fiber exchange website. Facilitating knowledge of available conduit that is available for telecommunication company use and available fiber strands that are available for use could be a game changer for rural Idaho. In addition to providers, the exchange would catalogue the conduits placed along rights-of-way by local and state transportation departments. Facilitating shared conduits and fibers in effect removes the high costs barrier for providers to enter a new market. In addition, the exchange would facilitate conversations between providers as users would also be able to post markets, they were interested in reaching. These conversations could facilitate joint ventures that result in rural connectivity.

- Dig once policy; Utilities have for decades utilized transportation corridors to deliver infrastructure. Broadband is a utility in today's world. Rights-of-way are conduits for infrastructure (power, phone, cable, water, wastewater) and need to be promoted for deployment of fiber pathways. Installation at the time of a right-of-way construction, improvement or reconstruction is a perfect time to consider including in design contracts placement of fiber optic conduits/troughs to facilitate more rapid and cost-effective deployment by telecommunication providers conduit. Create a policy within the Idaho Standard Specification for Highway Construction that requires engineering and design to include placement of dedicated fiber optic conduit/troughs. Evaluate where standardization and regulatory environment/oversight arm to simplify provider deployment process. The construction process is regulated by local, state and federal entities. Often rights-of-ways are secured for single purpose use when easements are negotiated. Across rural Idaho communities take varying approaches to how telecommunications providers area licensed, regulated and even how construction contracts area permitted, inspected and finalized. We must recognize that each layer adds to the portion of deployment costs. Standardized and streamlined permitting, licensing and regulation will result in clarity and should have an impact on costs associated with construction for providers in rural areas.

2.3 Idaho legislated consumer protection and investment act

Today, there is significant confusion around what consumers believe they are buying and what is delivered regarding broadband service. For sure, many consumers are frustrated by this

commercial transaction. When an expensive service fails to deliver, other high priority demands for household income receive the redirected cash. In this section, we suggest two actions that will both facilitate immediate investment into broadband and force the broadband providers to fully provide the service they are selling.

- Allow Idahoan's to deduct their broadband fees from their state income taxes. Affordability is a driving force for many in rural Idaho, where poverty levels range from 12-25%. By addressing affordability through a tax incentive, Idaho leadership could enable the low-income resident to access broadband capacities enough to participate in online learning that could result in a certification or degree that catapults the person from poverty into a living wage career pathway. This efficiently and immediately pushes investment to the end user.

- Legislate over subscription limits. Over subscription results from providers selling more bandwidth capacity than what is available to meet all users demands at all times of the day. Policy development aimed at regulating a cap on oversubscription will provide a metric for insuring that money spent on broadband will result in receiving the service. This will relieve the lack of reliable connectivity in all communities.

3 Focus areas for the Broadband Office to facilitate rural deployment

In addition to the above listed top priorities for Rural Idaho A, the group also wanted to extend suggested areas for further research once the Broadband Office is established. These are high impact areas that require more thought and coordination than what can be presented in a paper.

- Develop an education and information program to enhance end user understanding of what broadband is and how to evaluate what service levels best meet their needs. The NTIA Broadband group has over the past decade developed a variety of tools and resources to help citizens understand how to interpret the jargon used in telecommunications. The newly created Idaho broadband Office could rapidly deploy an educational and informational campaign to increase the availability of basic information and decision-making tools to facilitate a deeper understanding of what broadband service levels would meet their connectivity needs. An informed society will be engaged in grassroots efforts to facilitate local solutions. Low cost and local examples of educational & informational tools are available both from NTIA as well as in Idaho (i.e. https://www.clearwatercounty.org/departments/economic_development/broadband_test.php) Using tools and resources develop an Idaho road show to inform and educate rural Idaho citizenry the ins/outs of broadband; capture survey data to identify what user needs are in relation to what their providers are offering. Collection of data will empower the Idaho Broadband Office staff with data to facilitate partnerships with providers to build and meet the needs of rural Idahoans.

- Leverage resources available to maximize investment by providers. E-Rate fiber deployment to connect rural businesses & residents: Across Rural Idaho schools and

libraries have been connected to the internet for broadband access. The infrastructure in place may have the capacity to provide enhanced services in rural community commercial, residential and government facilities. The E-Rate program funding covers a varying percentage of build and ongoing service costs to each school/library. Identifying whether the infrastructure in place is capable of serving additional internet subscribers would provide the Broadband Office with on the ground knowledge of where there was sufficient capacity to expand services. Follow up actions would include: Aggregating demand in the surrounding community to identify where bandwidth was needed and how much was desired. Collaborating with providers to evaluate where infrastructure capacity exists to meet the demand and/or to build out capacity based on demand.

- Explore the cost and resource requirements for broadband as an essential service. Historically, the Universal Service Fee has provided subsidized access to telephone communication connectivity in rural high-costs areas of the country. In today's world, we should be considering access to broadband telecommunications an essential service. The Federal Communications Commission reviews and sets the fee rate throughout the year. Much of Idaho's frontier meets the objective of high-cost delivery; however, in many cases the high-cost threshold is more than incumbent providers are interested in bearing even with USF subsidy. In these areas and with communities able and willing, consider enabling local municipalities to deploy connectivity technologies. Recognizing that entities must build or have in place processes and mechanisms to support and maintain these facilities much as they do today with streets, water, wastewater systems. This could manifest in everything from municipal or county grant writers working with incumbent providers to secure funding for expanded infrastructure/service, to the statewide creation of a platform for local broadband middle and last mile infrastructure, owned and run by local governments. Every jurisdiction faces unique challenges, and should be allowed to explore all options, including publicly owned solutions.

4 Case Studies

4.1 Idaho Forest Group - Chilco

We have been requesting highspeed internet access since 2003 when we acquired the facility from Louisiana-Pacific. We have been paying for a T1 of internet service and have been looking at alternatives with a specific focus on the delivery of fiber to our business.

We have been told for years that there was no pathway to our facility for Frontier to bring in fiber. Most recently we were told that it would cost us $18,200 to build out the pathway. Additionally, we had to build out the pathway from the exchange at the south end of our property ~2200 feet to the north end of the property. This was an estimated cost of nearly $50,000 and we were shocked.

On 9/4/2019 after some further investigation and a physical walk through we discovered that conduit is in place and available all the way from the fiber splice point on the east side of

highway 95 to our main building and it has been available since the ITD widened the highway about 10 years ago.

4.2 N&N Machine, Orofino

In 2016 Frontier Communications built out a fiber optic pathway to service an adjacent business but Frontier staff did not reach out to neighboring manufacturers. N&N had for over a decade paid for DSL service, only to obtain a maximum of 1.5 Mbps download. The ack of connectivity limited N&N Machines ability to compete for machining contracts that required large plan sets to be sent electronically. When N&N Machine witnessed the bid out, they contacted Frontier local sales group only to be told expansion of the fiber, less than 1,500 linear ft would cost in the range of $ 56,354. With help from the local economic development team, N&N solicited bids to build its own fiber optic pathway across private ground, to connect to the Frontier connection for $ 7,250.

N&N was ready to build when ITD came back unwilling to permit a private individual to place fiber optic conduit in their right of way.

One year later, the solution N&N and the local economic development team facilitated was a partnership with the local cellular company, who had secured a 3.65 Ghz license and deployed a dedicated point to point service to meet N&N Machine needs.

4.3 Valley County

There are significant economic and life safety consequences for not having reliable broadband and fiber in our region. Throughout the course of peak tourism season (mid-summer) the West Central Mountains region (McCall, Donnelly, Cascade and the Meadows Valley) experiences an economic swell from visitors. 2019 was uniquely busy, resulting in a situation where multiple small businesses couldn't run a credit card for much of the summer. Phone calls were regularly dropped or couldn't be made for most of a 5-week peak period, which resulted in frustration for both residents and visitors alike.

The lack of adequate communications infrastructure presented various challenges for life safety, when calls for help were not routed through or inhibited access to vital services.

5 Conclusion

The group wants to thank Director Kealey and his team for organizing the Broadband Taskforce and allowing our group to have input on how the State might proceed with improving access.

We believe ae have offered a mix of near, and long, term objectives that engage all stakeholders in this effort. We stand ready for further discussion.

2019 Idaho Broadband Task Force

Rural B Subcommittee Draft Report

Rural B focuses on communities lower than 3,000 population

Why is it important to energize the provision of broadband to communities with populations under 3,000 citizens?

There are three areas of clear need in this section: Educational needs; Consumer need (closing the digital divide); and Economic development needs. Case studies on education and consumer need exist throughout the task force recommendations, but economic development in small communities remains in great need with large effects on the community overall.

An Economic Development Example

> An overall problem remains that in the rural communities of Idaho broadband improvement for connection quality and speed are inadequate, not readily available or the costs for service providers or private companies is not feasible to bring forward. In small communities it is unique to see a global manufacturer.
>
> However, some of our small communities do support major manufacturers. A good example is in Glanbia facility in Richfield Idaho, Lincoln County. Glanbia is a key employer and economic partner for the city and county. Currently, there is insufficient broadband services available in Richfield and it hinders the ability for Glanbia to bring in new technologies thus having an impact to the growth of that plant and the community.
>
> When you have a manufacturing site in a small-town, other services (ex. wireless, copper, satellite) are insufficient to build our base foundation for connection to the outside world. Therefore, if we do not address the needs of these communities to have the ability to have secured, dependable service (especially those communities with manufacturing companies present) their growth will continue to be hindered.

Recommendations in order:

1. State Broadband Office with Dedicated Staff to Support
2. Dig Once
3. State Construction Registry
4. Technology Agnostic Delivery Mechanism

1. State Broadband Office with Dedicated Staff to Support

This recommendation will come through from multiple committees based on initial consideration. We view this as especially important for communities with populations less than 3,000 citizens. Often the communication, organizational, and bureaucratic barriers that are perceived from residents and small entrepreneurial companies seem too difficult to surmount. Yet in most cases the smaller companies that could provide services would benefit the most from the simplest outreach and communication from an organized state broadband office.

There are three tangible items that we think could be clearly and positively affected via a state broadband office, and some discussion of each is included.

a) ***Easing Requirements and Bureaucracy to use State Lands for Towers and Fiber Backhaul*.** For fixed wireless and cellular providers, often there is a rather laborious process for getting access to existing or potential tower sites to expand their facilities. To the extent that a state broadband office could be a clearing house of information and communication to find the right people and assets, this could be a very good one-stop shop for smaller entities remote from Boise.
b) ***Supporting local providers in obtaining Federal and State grants and loans*.** There are programs and options that exist for serving the most rural communities. But often the procedures and application processes seem daunting. Additionally, there are other requirements for involvement that local providers might have more options than they realize. A state broadband office could assist in educating and supporting potential local providers on this option.
c) ***Sharing Information*.** Often there are large projects that are funded by, impacted by, or otherwise involved with state or local governments. Buildings, state or local road projects, school constructions, and public medical facility expansions are all examples of times where ground is going to be broken and infrastructure could be in play.

2. Dig Once

Broadband deployment incurs many costs and can be a burden to our state if not coordinated properly from the outset of a project. Simultaneous broadband infrastructure deployment with utility or road maintenance can dramatically change the way our citizens views broadband preparation and development. Some report costs of installing fiber can be significantly cut if done concurrently with an already open trench. Idaho should study the work of the existing states that have dig once policies (https://broadbandnow.com/report/dig-once-digital-divide/) to craft policies that will work well in our rural state.

- Shared Leasing – Reduce obstacles to shared access of existing poles, ducts, and conduits.
- Utilities – Whenever there are sewer and water projects, conduit or fiber can be installed at the same time to increase cost savings.
- Roads – Coordinate with ITD and local road management teams, coordinated through LHTAC (Local Highway Technical Assistance Council, http://lhtac.org/) , to implement dig-once policies for conduit and/or fiber installation. Specifically, we ask that
- ITD and local road management should be mandated to consider allowing private and public providers to include broadband resources (ducts, fiber,…) from private providers in most construction projects
- ITD and local road management should be mandated to include fiber conduit as part of the project with appropriate shared costs to future providers in high value (for broadband) projects.
- As caveats, the State Broadband Office should very carefully coordinate the usage request to make sure somehow the conduits are not gobbled up by someone who may never use them. And even though we say "Dig Once", we don't want to have language that precludes the possibility of ever going back through there again.

3. State Construction Registry

Private and public internet providers require enough foreknowledge of an upcoming road or utility project to plan for a project of their own to utilize an open trench from the project to bury their own fiber or conduit. Providers need time to see if the public project fits into their long-term needs and if the economics of participation are viable. ITD and local highway jurisdictions need time to design and bid the coordinated trench work.

It’s also important that providers can easily determine where there are already existing conduit or fiber resources on the public right of way. If ITD is paving 3 miles of road, a provider will need to know If there is already conduit or fiber in the adjoining segments to understand if the can stitch the resources together.

In Idaho we have two significant public entities that manage roads that we desire participate in a registry of their upcoming projects.

- ITD (Idaho Transportation Department). 5,000 miles of roads in Idaho
- Local Highway Jurisdictions. Cities, some counties and local county highway districts all manage road networks in Idaho. 33,358 miles of roads are maintained by these jurisdictions. LHTAC (the local highway technical advisory council) provides key technical and coordination efforts for these jurisdictions statewide.

We recommend that the state of Idaho maintain an online registry of all upcoming transportation infrastructure projects and of existing broadband resources in the public right of way. Specifically:

- The online registry should be managed by an appropriate state agency. This might be ITD, LHTAC or a state broadband office. It should be a single agency so providers can search one registry for projects of interest.
- Criteria should be developed with the ITD and the local jurisdictions on what projects should be included.
- Projects should be included early in the planning stages. At a minimum they need to be listed at least one year before construction.
- The registry should contain an inventory of all locations where existing dark fiber or conduit available for provider use in the state.

4. Technology Agonistic Delivery Mechanism

Idaho's digital divide is mirrored across the country. The problem of urban citizens having more options and rural citizens having few or no options isn't only in our state.

Smaller communities in Idaho and around the country have gotten additional options is by using newer wireless technologies which allow for increasing speeds without the full expense of wiring every residence or business. Sometimes those are cellular based options, in many cases they are fixed wireless (private microwave networks) provided by WISPs.

The Rural B Subcommittee agrees that the technology used for providing options beyond the urban areas should not be married to only wired options. The investments made in the urban areas for coaxial cable, and/or where the density of population can support fiber extensions, are valuable and important. But smaller companies are proving that fixed wireless can be a fast, responsive, and often profitable option to provide the last mile to the home.

Thus, we believe that any governmental, legislative, or recommendations should be applied equally to whatever options can legitimately meet the federal broadband standard speed of 25x3 with minimal latency.

Funding Source Discussion

A state broadband office, or alternatively the Idaho State Department of Commerce, should develop a menu of possible funding sources to assist in funding rural broadband. Our suggestions include working in the following areas where there has been demonstrated success already:

a. Federal Grants and Loans: FCC, USDA, Other departments that have or could in the future (Dept. of Commerce)
b. Idaho Broadband Tax Credit. Currently it does not provide enough incentives to motivate providers. It should be eliminated or significantly enhanced (20% for rural investments? 10% for urban investments?)
c. Fund the State Broadband Grant Fund
d. Modernize the Idaho Universal Service Fund (USF)
    i. Currently this just covers wired phone lines and is not relevant
    ii. It could be modernized in many ways to provide funding
    iii. State USF is a controversial concept and does not have unanimous support in the committee. Nevertheless, committee members report that it is an issue that can play a role in the expansion (or not) of rural broadband and have enclosed an attachment (a) describing the USF situation from the perspective of CenturyLink Committee Member Paul Desaulniers.

Attachment A
Idaho Broadband Universal Service Fund Proposal
Idaho Governor's Broadband Task Force
Rural B Subcommittee member, Paul Desaulniers

Background: Idaho currently has a Universal Service Fund (USF) for landline telephone. The FCC and many states have expanded the USF to include broadband services.

Problem statement: The rural areas of Idaho are significantly underserved by broadband services because it is cost prohibitive for carriers to serve these communities. It is estimated that more than 250K Idahoans are unserved or underserved by broadband.

Current funding sources: The federal government has several programs administered by the FCC and USDA to help carriers build broadband in high cost areas. Idaho currently has a broadband tax credit of 3% that most agree is insufficient to incentivize broadband investment. Idaho also has a state broadband grant fund that has not been funded.

History: With the evolution of the landline telephone our nation realized that helping all citizens gain access to a phone line was necessary and that government should assist private industry via a USF. Today, broadband access for all citizens is just as important as landline access was a century ago.

Opposition: Some in industry oppose the expansion of the current USF to include all broadband access lines. Rather than framing the issue as an overhaul of the antiquated USF that supports landline access, we should ask ourselves what funding mechanism has proven to be a fair and efficient method as an aid to industry in the past to achieve ubiquitous access to a service in a high cost environment. The answer is a USF that is applied uniformly and fairly to all methods of broadband access.

Scenarios: The following scenarios will illustrate why citizens living in Idaho who already have access to broadband should be willing to pay a small monthly amount for USF on their providers bill to help support the expansion of broadband to all citizens in Idaho.

Taxpayer: As a citizen that pays income tax to support my state, I am very concerned about the economic development in rural Idaho. When rural Idaho thrives and the tax base is expanded, we all benefit. I am willing to pay a USF to foster economic development in my state.

Grandparent: My grandkids live in rural Idaho without broadband access and it is difficult for them to do their homework. I am concerned that they will have a disadvantaged education, which is unacceptable to me. I am willing to pay a USF to make sure all children have equal access to education opportunities via the internet both at their school and at home.

Daughter: My parents live in rural Idaho and they love it, it has been their home for generations. They want to stay in their home, but they do not have access to telemedicine in their community.

I am worried, my parents live on a fixed income and cannot afford to move to a large metro, but they need access to quality healthcare to stay in their rural home. I am willing to pay a USF, so that my folks can stay in their home and gain access to the healthcare they need.

Benefits: As illustrated above a broadband USF is right for Idaho and should have a broad base of support. When all citizens have access to broadband services in their communities every citizen of Idaho will benefit in countless ways from that universal broadband access.

Proposal: A state broadband office is being recommended by the Governor's Broadband Taskforce. Furthermore, it has been demonstrated that the current broadband tax credit and grant programs are not working in Idaho. A state broadband Universal Service Fund (USF) should be instituted and applicable to all methods of broadband access in the state. The Idaho Broadband USF would be the single source of public assistance to broadband providers for high cost builds administered by the state broadband office, thereby replacing the existing tax credit and grant programs with one simple program to administer for both the state and all providers.

The customers of all Idaho broadband providers would pay equally into the Idaho Broadband USF with a small monthly fee on their bill. All Idaho broadband providers would then be eligible to apply for funds from the USF to build out broadband infrastructure in high cost areas including, but not limited to the last mile, middle mile or backhaul from cell towers.

Goal 3 / Urban Broadband Committee Recommendations

- Maintain local authority for closing the broadband gap. Any state action should still allow for municipalities to build out retail or wholesale models. (e.g. Muni broadband like Ammon, or partnerships like Sandpoint-Ting). Should also maintain tech neutrality, so local governments have the flexibility to meet needs cost effectively, so long as a common benchmark is attained (e.g. FCC definition of broadband)

- Maintain access in multi-dwelling unit buildings. Reiterate a prohibition on exclusive MDU contracts and offer resources to increase competition and thus improve speeds.

- Small cell/5G attractiveness. Explore pre-emption and other measures that would make Idaho cities more attractive for 5G and enhanced LTE deployments.
    - Raise the “broadband speed” benchmark to 100/10mps to encourage high speed deployment that brings Idaho to the forefront of the country.
    - Idaho cities should be incentivized to build out local “low powered cellular radios” in preparation for 5G capacity, and should decrease barriers for companies interested in supporting that infrastructure

- Dig once. Require city coordination with ISPs and other utilities when there is an opportunity to deploy fiber. Also, require utilities to deploy city-owned fiber at cost during their construction projects.
    - Enact “dig once” legislation to ensure that any road construction also places infrastructure for future broadband infrastructure
    - The Idaho Transportation Department is currently working on a major reconfigurement project at US-95 & ID-53 interchange. This two-year project will significantly improve traffic flow and enhance safety. As it relates to broadband service improvements in rural Kootenai county, this ITD project has incorporated conduit placement throughout the project area for future fiber optic and broadband services to this community. Joey Sprague with the ITD region 1 office confirmed the “Dig Once” initiative is part of this project.

- To promote a dig once philosophy, Idaho Power is willing to work with cities to evaluate the feasibility of developing a process for notification on underground work. A team will need to be pulled together to develop a process and timeline as well as specific cities to be included. Work driven by customer construction may be better suited through correlation with individual City CUP processes. In either case the trench work is covered by either Idaho Power or a Developer;

the City would be responsible for the cost of the material and the material installation in the trench with the trench contractor.

- Fiber attachment is also allowed overhead through Joint Use.

- One-touch make ready/pole management. Set standards for pole attachment costs, time for completion of make ready work, responsibility for make ready.

- Equity. Define expectations for low-income broadband access costs and plans. Seek partners for low-cost device programs.
    - Close the Homework Gap. About 45% of Idaho's children are eligible for free or reduced lunches at school. From that population, any family earning less than 135% of the federal poverty level is eligible for the federal Lifeline program designed to increase access to the internet. Create a statewide educational/information program through public/private resources to educate families with school aged children how to access the federal Lifeline program.

- Create a tracking tool that actively tracks internet outages, the number of customers impacted, the cause, and the time needed to restore service. Encourage providers to have a detailed emergency action plan to deal with complex outages including having enough staff "on-call" for outages.

Funding Suggestions:

- Public-private partnership. Should the Director and Governor so choose, we could recommend the contours of public-private partnership to incent additional broadband investment. I would suggest an approach like SD Governor Noem's recent ConnectSD program, that encouraged builds in unserved and underserved areas with cost-effective deployments but were not otherwise did not impose an unreasonable amount of government regulation on approach, which would have slowed deployment and increased costs.

- Either repeal or rework the Idaho Universal Service Fund (IUSF) to protect urban communities. Urban communities should not be asked to fund outdated infrastructure but recognize their critical role in advancing the technological needs of the state. At a minimum, reverse procurement auctions should be implemented to ensure that IUSF allows for every potential provider to access funds. Consider a ten-year, sun setting plan that implements a broader service fee on any "telecommunication" service to raise $100 million a year for matching grant based "last-mile" and innovation-based infrastructure.

- Capitalize on the broadband infrastructure opportunities for “middle mile” and “community connections” located within the 2018 Farm Bill.

- Create an urban “One Fiber” that increases the local city municipalities access to “smart grids” and increases speed to residences and businesses. The state should not wait for the federal government to move forward, but rather should create “Model Digital Communities” matching grants that would bring local municipalities, private companies, and the state together to expand urban infrastructure.

Intermax and North Idaho Examples:

Intermax has expanded fiber to several hundred buildings in four North Idaho counties in the last few years. These fiber connections have improved broadband access in businesses and residential new construction in the counties noted.

Intermax was awarded financial support to build service towers in many of the more rural areas in North Idaho (by census block). A project of expansion and construction is anticipated to begin intensely in 2020. Note / see attachment: "Internet contract represents big win for all of North Idaho"

Intermax is currently building new access points (fixed wireless) in under-served areas of Kootenai County, including the Coeur d'Alene area. They are also co-locating on several municipal water towers so that more residences can identify the fixed wireless locations that are in proximity.

A new broadband service provider (TDS Metrocom) has entered the North Idaho / Coeur d'Alene market. TDS is marketing their goal of building fiber to the home in existing neighborhoods. Note / see attachment: "Company says it will bring gigabit speed, 200 jobs to Coeur d'Alene area"

Additional broadband service improvements in the Coeur d'Alene market are identified in a recent Idaho Business Review dated June 24, 2019. Note / see attachment: “Intermax helps bring broadband internet to rural North Idaho” (Subscription required)

Ammon and Idaho Falls Models:

This memo includes information from Bruce Patterson at the City of Ammon and Jace Yancey and Bear Prairie from Idaho Falls Power to address the municipal broadband models utilized in the cities of Ammon and Idaho Falls. While the cities’ systems are

not identical, they do share some common characteristics and a common desire to see both models of municipal broadband supported by the State of Idaho.

From, Ammon, a comprehensive study identified the following:

1. Traditional Return on Investment (ROI) models favor population scale and density putting communities like Ammon at a competitive disadvantage.

2. Infrastructure competition is not economically feasible or responsible in urban or rural settings; economic vitality will follow improvements in broadband access and costs.

3. Neither the State nor the Federal government are effectively addressing these challenges.

The following principles form the foundation of the 'Ammon Model' strategic solution:

1. Broadband services are essential, just like electric, water and wastewater services.

2. Broadband infrastructure is a natural monopoly, just like electric, water and wastewater infrastructure.

3. Modern Internet Protocol technologies have successfully separated services from infrastructure.

This is a profound and significant change that continues to disrupt broadband service models. Therefore, any sustainable economic framework MUST intrinsically support this by economically separating service costs from infrastructure costs.

In summary, the high cost of infrastructure investment combined with a lack of ROI certainty will continue to impede broadband improvements, keeping urban and rural areas behind the more metro areas of the country in the absence of any strategic inputs.

Utility models are most effective in addressing monopoly infrastructure investment challenges. Properties receiving utility service via the infrastructure pay the capital costs associated with construction. Utility investment models provide for infrastructure ROI certainty with longer recovery terms and lower rates. As property owners make the investment, the infrastructure is operated for their benefit and not for operator profit. This results in the lowest possible cost for the infrastructure.

The separation of services from infrastructure provides an opportunity to create a marketplace for services. Because little investment is required for established services to enter the market, true competition can easily be created on the monopoly infrastructure. Additionally, because new services are not required to construct a new parallel infrastructure, innovation is encouraged. As a direct consequence of creating this open marketplace Ammon has seen the cost of 1Gbps Internet service drop from $99 a month to $9.99 a month in just under 3 years. A free 15Mbps service is also available. Contracts and data caps have also disappeared from the marketplace as a direct result of competition.

Research organizations such as Harvard University and the Benton Foundation have furnished research reports detailing the benefits of the Ammon Model's open access marketplace to provide data to offset incumbent monopolistic lobbying:

https://tinyurl.com/y23q5r6k

Ammon Fiber Optic Utility Statistics:

- Started in 2011, some 30+ miles of backbone with access fiber to over 1,200 addresses by 2020.
- Local Improvement Districts are used to expand and pass approximately 500 properties per year.
- Ammon provides dark fiber leasing in support of national and regional wireless, academic and public safety connections.
- Over fifty 1Gbps contracted circuits are provided for $35 a month to eight separate providers in support of dedicated commercial services.
- Approximately 900 residential properties have access to the Ammon fiber optic utility today with some 600 properties receiving service.
- Ammon charges $16.50 on a resident's monthly utility bill in support of operations.
- Service providers offer various packages in the marketplace starting at $0 for 15Mbps up to $10 - $25 monthly for 1Gbps service depending on the provider selected. Service costs are set and billed directly by the provider.

Fiber has been an integral part of Idaho Falls Power for the last 20 years. Idaho Falls Power has an extensive Fiber network throughout its service territory which has allowed for the expansion into the residential neighborhoods in 2018.

In 1998 we started building dark fiber for city needs. Then in 2002 we greatly expanded this network into three rings throughout the city in which we overbuilt what was needed for city purposes with the intention to lease dark fiber to third-party

entities. We have over 550 customers currently connected to our dark fiber which is predominantly connected to businesses, hospitals, schools, universities and the Idaho National Lab. We have 8 internet providers that use our dark fiber to provide ISP services to the community.

We also use our fiber network to communicate with our electric meters and offer energy efficiency programs using our broadband network to customers. Idaho Falls Fiber (IFF), along with Idaho Falls Power (IFP), collaborated this past year with UTOPIA, a Utah-based telecommunication open infrastructure agency, on a new network that is a lit service to provide residential customers in Idaho Falls with high-speed fiber optic internet service with speeds up to one Gig.

Residents are not just able to benefit from state-of-the-art fiber infrastructure provided by Idaho Falls Fiber, but also from the public private partnership that was established between four local service providers. Because of these collaborations, residents can have a unique experience that gives them ownership of the fiber connection in a network that gives them choice of Internet Service Providers. Residents who sign up for service receive two bills, one bill from there Internet service provider, and an additional charge for the fiber infrastructure ($30 per month) on their city utility bill. Customers are not required to take service even if we pass by the home with the network; they only pay once they are using the service. All in monthly costs (includes the $30 infrastructure charge) start at $65 a month for residents with no installation or up-front costs to the customers.

Idaho Falls Fiber plans to give access to approximately 1500 predominantly residential homes by the end of October this year to demonstrate the feasibility of the lit network bringing fiber to all city homes and businesses.

Summary of Presentation to Broadband Task Force for Goal 4

Goal 4: INL Research and Universities

- ***• Maintain leading edge for super computing, big data, network expansion, etc.***
- ***• Prepare for much larger research projects***
- ***• Funding: Federal dollars? State dollars?***
- ***• Public & Private partnerships***

Participants:

- Jerry Gwynn (INL) Chair - Randy Gaines (ISU) Co-chair - Kenneth Smith (HP) - Robert Hampton (Jacksons) - Bear Prairie (Idaho Falls Power)	- Brent Stacy (IRON) - Ron Williams (ICBA) - Matt Borud (Dept. of Commerce) - Dan Ewart (U of I)

Committee thoughts:

1- The key Goal 4 points of "maintain leading edge for super computing, big data, network expansion, etc." and "prepare for much larger research projects" are currently being met for INL and Universities within the state through the Idaho Regional Optical Network (IRON). IRON connects six of the eight state institutions, as well as BYU Idaho, and IRON is working to connect the two remaining community colleges, College of Eastern Idaho and College of Western Idaho, which will allow them to join the other institutions in the ability to achieve 100 Gb connectivity in the future.

2- With the continued State support of $800,000 annually allocated in the 2018 legislative session, IRON's connectivity for this collaboration will cover most needs for INL and universities for 5 to 10 years. It is very difficult to look out farther than this since technology changes so rapidly.

3- One area that will need continued review is connecting the state's research enterprise to assets for high performance computing. Given Idaho's strong position in agriculture, forestry, energy and related fields, a significant portion of research is conducted in areas not currently served by broadband access. Given that much of today's research creates big data required for analysis and modeling, connecting where the data is created to where it is analyzed will be an important factor. Possibilities to improve this situation will exist to piggyback off potential initiatives in Goal 1 and Goal 2 efforts.

4- While the majority of INL and higher education needs are met for the foreseeable future, the committee feels that the main issue impacting collaboration was where broadband connectivity is not available for rural Idaho. This impacts students, employment opportunities, economic development and possibly firms, private or public, that may want to collaborate with the universities or INL. We share these issues below for consideration by the teams working on Goals 1 and 2.

Issues:

1- Cities and municipalities don't know what the legal rights they have for placing infrastructure onto existing power poles and providing these services to city residents. This needs to be clarified.
2- What about the most rural of areas where providers will find it difficult to have an ROI for their services?
3- Municipalities and Co OPs need to have statute clarity which would include easements, etc.

Suggestions/solutions:

1- Utilize a Co Op idea where providers or communities utilize an agreement to use IRON as their transport (mid mile) to extremely rural areas where there is no ROI opportunity.
2- Get statute clarity for municipalities from state to ensure their efforts are within their legal rights.
3- Ensure that we look at this from a procurement law perspective, so all entities receive fair treatment.
4- Define and initiate legislative clarity on statutes concerning city and municipality rights so these entities clearly understand their rights as they design and deploy transport capabilities within their communities.

Idaho Broadband Task Force: Broadband Mapping Committee Report

WHY IS IT IMPORTANT?

The Task Force was asked to produce a map that reflects an accurate snapshot of the current status of broadband throughout Idaho. This map would serve as a tool visually summarizing the extent of broadband coverage and accessibility to Idaho citizens. For the Governor, the map would serve as an important tool to consider next steps toward developing a statewide broadband plan in an effort to improve broadband access and service across Idaho.

Over the course of task force meetings, mapping was a topic of ongoing discussion. There were a variety of maps reviewed by the Task Force conveying various types of data (See presentations from Task Force meetings). Ancillary information was also gathered that referenced specific entity assets (See presentations and other material from Task Force meetings).

Fixed providers (e.g. wired, fixed wireless, and satellite), nationwide, are required to report both residential and commercial services offered, along with the maximum data rates offered for each broadband technology type deployed to the Federal Communications Commission (FCC) on a semi-annual basis. The FCC, overseen by Congress, regulates interstate and international communications by radio, television, wire, satellite and cable in all 50 states and is the primary authority for communications law, regulation and technological innovation. It was the consensus of the Task Force that the FCC 477 map is the best available information currently. According to the FCC 477 data, 85% of Idaho's population (84% of housing units) has access to fixed wireless and wireline technology of broadband. (see Idaho Fixed Broadband Report by CableLabs at https://www.cablelabs.com/informed-insights)

MAIN ISSUES

Opportunities --

1. The FCC is requiring new reporting standards utilizing polygon maps that will provide more accurate reporting in the near future.

   FCC: Digital Opportunity Data Collection – At the August 1, 2019, FCC Open Meeting, the Commission adopted a Report & Order and Second Further Notice of Proposed Rulemaking establishing the Digital Opportunity Data Collection. This is a result of broadband availability being overstated under current FCC Form 477 broadband deployment specifications.

   In the Report and Order, the FCC requires fixed providers to submit broadband coverage polygons:

   - Service available to end-user locations within 10 business days, include maximum download and upload speeds and technology.

- Directs USAC to develop a portal to accept coverage maps (polygons/shape files) from fixed providers, as well as public feedback on accuracy, (i.e. crowdsourcing).
- New data collection to take place upon USAC's Public Notice announcing the new platform and reporting deadlines; Form 477 fixed broadband deployment requirement stays in place for now.
- Mobile broadband changes include ending requirement to supply polygons for each spectrum band, addition of a 5G-NR technology code, elimination of outdated technology codes and collection of mobile retail availability.
- Clarification of existing rules and addition of 'broadband connection' definition.

In the 2nd FNPRM, the FCC seeks additional ways to improve broadband data:

- Technical standards, e.g. buffer around physical plant facilities, service addresses; latency.
- Crowdsourcing disputes and map corrections.
- Incorporation of "Broadband Serviceable Location Fabric."
- Improvements to mobile broadband and voice data and sunsetting 477 deployment requirement.

Utilizing the Digital Opportunity Data Collection by the FCC will help the Idaho Broadband effort by providing more granular data of broadband availability for Idaho communities. This improved information should:

- Provide coverage maps on a much more granular level than the current census-block-level methodology.
- Identify unserved or underserved areas by clarifying where service exists, and where it does not through maps showing providers' network boundaries, the maximum download/upload speeds offered within that network boundary and the technology for providing service.
- Provide consumers a feedback forum for verifying service offerings.

What Are Polygon Maps?

Providers maintain maps of plant facilities (coax, fiber, homes passed, etc.) in a GIS (Geospatial Information System) database. The map layers include node boundaries, which are drawn around physical plant facilities served by individual nodes encompassing the serviceable locations within each node. Combined, the node boundaries comprise what is considered the service footprint.

Each node is correlated to additional data sources to determine the technology of transmission available per node which can be used to determine available download/upload speeds by node.

A polygon map/shapefile, which can be read by GIS-enabled software, can show physical node boundaries. Polygon maps/shapefiles can be produced for the desired geographical location (e.g. cities, states, etc.) Polygon maps/shapefiles produced by service providers can be combined by an agency (e.g Idaho Broadband Office) to produce geographically accurate broadband availability maps.

An example of polygon maps from the State of Kansas can be viewed at the following link:

https://cngis.maps.arcgis.com/apps/webappviewer/index.html?id=72ab65f4ac2c4207abd1e575fa148cb4&extent=-11379818.9931%2C4398192.5707%2C-10557968.065%2C4910626.4083%2C102100

2. Utilization of existing infrastructure –Discussion was had by the Task Force to consider leveraging existing infrastructure such as roadways and utility assets to get to the remote parts of the state. The Committee identified the need to better coordinate activities and planning with such agencies and organizations.

Challenges –

Current FCC mapping concerns:

- FCC maps show an entire census block is served if only one location has access to service. Thus if only one location in a census block is able to receive broadband and the rest are not, it reports as 100% of the census block is served. This inaccuracy is common in Idaho due to census blocks comprised of large geographic areas.
- Fixed providers report to the FCC based on services offered (represented by census block), and not by what services are subscribed to (e.g. customers may subscribe to a data tier below the maximum speed of service offered).
- Some providers are just learning about the polygon map future requirements and will need time to create this process for their businesses. Some Idaho providers may contract out the creation of polygon maps.
- The Broadband Mapping Committee of the Task Force is exploring whether Idaho fixed providers are able to produce polygon maps one-time in advance of the implementation of the FCC Digital Opportunity Data Collection to serve as a baseline for the Task Force efforts. The fixed providers have expressed concern with the doubled time, effort, and cost to provide Idaho with polygon maps that could have different specifications than the FCC will require.

Additional mapping concerns:

- The task of collecting asset data of all non-ISP entities will also need to be incorporated into a layer of mapping for complete consideration of potential solutions to Idaho's challenges.
- Any map should take into consideration that two-thirds of the land area in Idaho is public land.

In all cases, there are several factors that affect broadband availability:

- Deployment data – broadband transmission technologies and the capabilities of these technologies available to a given geographic location; terrain challenges are also a factor.
- Subscription data – the number of subscribers to a given data tier in a given geographic location.

- Customer equipment – the access to service may be available but the end user is limiting the full capability of their service subscription (Ex: modem, device specifications and limitations, hardwire vs Wifi, browser selection, # of devices, firewall and malware configuration, etc.) within their premise, thus creating a slowdown in data throughput and creating dissatisfaction in service, even though the service is accessible. (see Exhibit A; also available from Task Force meeting material)
- Services offered vs Purchased – Services may be available to areas but at a rate that is not feasible for the user at the service level they desire. Thus, the end user may purchase the less expensive option for disappointing service.

RECOMMENDATIONS

1. Utilize the new FCC Digital Opportunity Data Collection when available for more accurate and detailed broadband availability mapping for all fixed broadband providers. The new data will provide the granularity and consumer input/validation that are key shortcomings today. Ensure the Idaho Broadband Office is ready to use the new information when it becomes available.
2. Until the new FCC mapping information is available – expected sometime mid-year 2020 – the FCC Form 477 is the best data source and provides directionally correct information.
3. Continue working with Idaho fixed providers to see if they are able to provide polygon maps according to the FCC requirements in a one-time effort in advance of USAC's Public Notice announcing the new platform and reporting deadlines.
4. Work to leverage existing infrastructure such as roadways and utility assets to get to unserved communities in the state, and develop policy and process to better coordinate activities and planning with such agencies and organizations.

Exhibit A

Speed Test Guide

Speed Tests can be influenced by a number of variables, but a few key steps will ensure you get the best results

Device Specs/Limitations
Smart phones, tablets and even some new laptops don't meet the minimum specs for Gig. Max speeds for some common, new devices are summarized at the bottom of this page.

Hardwire vs. Wifi Connection
Hardwire for the best results; note that only new Cat5e/Cat6 cables will deliver Gig, and 1G ethernet is limited to ~940 Mbps due to overhead.

Desktop App or Browser Selection
Results vary significantly by browser, based on how each browser handles encryption and creates throughput. *Firefox often performs best.* Or, remove browser dependencies altogether by using the SpeedTest.Net desktop app.

Antivirus & Viruses
Firewalls and anti-virus software are critical, but also create bottlenecks which slow down high-speed tests.

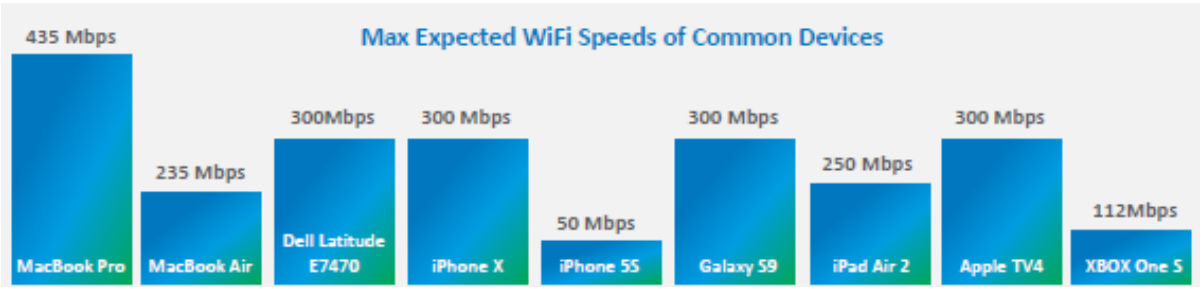
of Connected Devices and Open Apps
An increase in the number of devices/Apps sharing the bandwidth (Wifi or wired) will decrease the speed for each individual device.

Server Location
Make sure you pick a speed test server in your market; servers in your market will more consistently test your ISPs network, as they don't travel across other networks.

Speed Test Best Practices:

- Make sure your computer meets minimum specifications for the speed you are testing; ensure you aren't using a phone/tablet
- Hardwire to a D3.1/ compatible modem or ONT using a new Ethernet cable (CAT5e or CAT6)
- Turn off the Wifi on your router to ensure other devices aren't using bandwidth
- Restart the PC and turn off any anti-virus. Make sure additional programs aren't open
- Run multiple speed tests on cox.com/speedtest using different browsers and/or the SpeedTest.Net App (download)
- Always pick a speed test server in your market

Today's fastest speed tiers provide all the speed you need for all your devices, but exceed the capabilities of most wireless devices available today.



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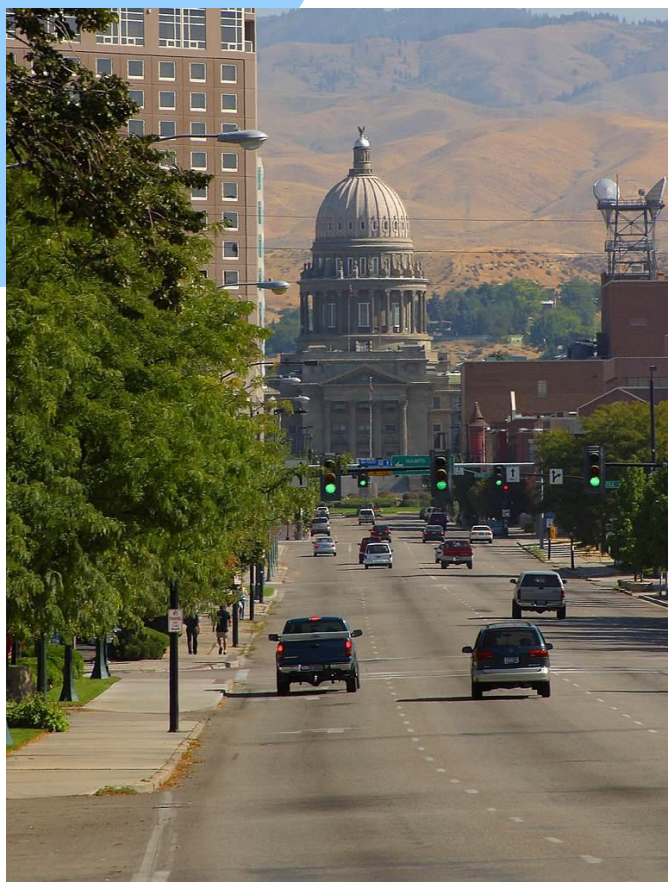
Idaho Broadband Task Force Committee Report

Goal 6: State Broadband Office



COMMITTEE MEMBERS:

CHAIR: Tara Thue, AT&T
VICE CHAIR: Jessica Epley, Frontier
Steve DelBianco, Net Choice
Cheryl Goettsche, Sparklight
Will Goodman, Idaho Education Technology Association
Will Hart, Idaho Coop Utility Association
Marian Jackson, Charter
STAFF: Jake Reynolds, Dept. of Commerce

EXECUTIVE SUMMARY

TOPLINE COMMITTEE RECOMMENDATION

Create the Idaho Broadband Office within the Idaho Department of Commerce, staffed by one full-time employee.

RECOMMENDED BROADBAND OFFICE RESPONSIBILITIES

1. Make recommendations to the governor and Legislature regarding policies and initiatives that promote the development of broadband-related infrastructure in the state
2. 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
3. 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
4. Support local and regional broadband planning including both intra-state and inter-state projects
5. Provide publicly accessible resources on communications technologies available within the state
6. To serve as the State's subject matter expert on communications technologies
7. Generate public awareness and educational materials of the value of broadband technologies and applications
8. Research community broadband adoption barriers, including identifying communities where broadband adoption is undesirable
9. Serve as state repository for broadband mapping information
10. Support and coordinate efforts of the Idaho Broadband Taskforce or other successive committees as may be established
11. 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

The Idaho Broadband Task Force, established by Governor Brad Little by Executive Order No. 2019-07[i], has been charged with advising the Governor on "policies and actions the state should take to dramatically improve the state in connectivity and service levels". As part of the work of this Task Force, the Department of Commerce established six committees to take a deeper dive into and to formulate specific recommendations related to several pertinent issues related to broadband planning and deployment. Our committee was tasked with examining and making recommendations according to the following goal, identified by Task Force staff:

Goal 6: State Broadband Office – Importance and Criteria
- Maximize Federal funding "point system" and "compliant evaluation criteria"
- Reduce & expedite impediments for right of way, permitting, ITD "Dig Once," etc.
- Identify Idaho "critical communities and facilities" identified in goals above
- Inform and educate

DISCUSSION ON RECOMMENDATION

Our committee met several times over the approximately 45 days we were given to produce recommendations. The primary question facing our committee was whether or not the State of Idaho needed a state broadband office. There was quick agreement amongst participants that the State should move forward with creating an office to manage broadband-related issues. The discussion quickly turned to how to staff this office and where the office should be located. Below is a summary list of many of the questions discussed before we ultimately settled on our recommendation.

- What is the appropriate staffing level, considering our recommended responsibilities?
- Where does this office belong?
- Could this role be filled by an existing office or agency?
- Should this office be based in the Idaho Military Division's Office of Emergency Management, under the already established Idaho Public Safety Communications Committee's (IPSCC) Broadband Subcommittee?

- Could this work be handled by a non-government or non-profit entity?
- Could this work be handled by an outside contractor?
- Could this role be based in the Governor's Office of Information Technology?
- Could this role be based in the Idaho Department of Transportation?

ANALYSIS OF OTHER WESTERN STATES

Looking to other states who have similar positions established in the West and past Idaho efforts to create this position, our committee evaluated several roles and responsibilities that should be undertaken by this new office. Specifically, we focused our research and consideration on the following state legislation:

- Idaho legislation (2015—not passed) creating an office, but also dealing with other issues deemed by our committee to be outside of the scope of our recommendations:

  
  2015 H0315.pdf

- Utah Legislation (passed in 2015 and later repealed) codifying the Utah Broadband Outreach Center with coordination, outreach and mapping responsibilities:

  
  Utah HB0414.pdf

- Washington Legislation (passed in 2019) creating the Washington Broadband Office, setting broadband goals, and creating a grant program. There were many items for consideration here, including recommended roles and responsibilities, some of which were outside of the scope of our recommendations:

  
  WA 5511-S2.SL.pdf

- Oregon Legislation (passed in 2019) creating the Oregon Broadband Office, setting broadband goals, and creating a grant program. There were many items for consideration here, including

recommended roles and responsibilities, some of which were outside of the scope of our recommendations:

OR HB2173 Enrolled.pdf

WHAT HAPPENS IF WE FAIL TO CREATE A STATE BROADBAND OFFICE?

When applying for Federal funding, points are awarded if the state your project is in has a current broadband plan. Further, for some grant and loan programs, projects that are included in a statewide broadband plan could receive priority status. There is a potential for providers to lose points when applying for federal funding. Without the State maintaining and updating such a state plan, this could lead to Idaho proposals automatically being discounted against other states. For example, when reviewing evaluation criteria for the United States Department of Agriculture's ReConnect Loan and Grant Program[ii], the quoted section below specifically allocates points contingent on states having a current broadband plan in place:

> **State Broadband Activity (20 points)**. For projects that are in a State that has a broadband plan that has been updated within the previous five years of the date of publication of this Funding Opportunity Announcement (FOA), ten points will be awarded. An additional five points will be awarded for projects located in states that allow any utilities service provider to deliver broadband service. An additional five points will be awarded for projects located in states that commit to expediting right-of-way environmental permitting.
>
> Applicants will be required to submit evidence from the Governor's Office that a broadband plan has been implemented and updated, that there are no restrictions on utilities providing broadband service, and that procedures are in place for expediting right-of-way and environmental requirements. If service is proposed in multiple states, then evidence must be submitted from each state to receive the appropriate points.

Without a central repository for the latest broadband mapping or data on broadband services, misperceptions about Idaho's connectivity are perpetuated. There are several conflicting reports and sources for capturing broadband coverage, and often times Idaho unfairly suffers a poor result or

ranking. A State Broadband Office can assist in educating and communicating an accurate picture of broadband coverage in Idaho.

Without the existence of a Broadband Office, there are missed opportunities to leverage and/or economize construction by companies when state-initiated road projects have open trenches and/or conduit available. Through the economies of a "dig-once" best practice and provider notification, more providers could be made aware of these projects, and the cost to build into these unserved areas would be much more feasible. A state broadband office could assist with this communication.

If you live in an area with little to no broadband service, where do you call or where do you go for resources? Without a State Broadband Office, it is difficult for the rural Idaho resident to voice their concerns. By capturing these constituent concerns, the State Broadband Office could be able to advise stakeholders, Idaho state officials, legislators and/or communicate with providers that there is demand in certain areas of the state.

Current providers often run into roadblocks when dealing with the Idaho Department of Transportation, as well as local City and County officials in order to get timely permitting for projects. Establishing a centralized State Broadband Office will allow for better collaboration on individual projects, as well as improving policies and processes to become for efficient for all projects.

CONSIDERATIONS FOR FUTURE PLANNING

While the committee did not reach a consensus on the following as recommendations, we all agreed that these could be important future considerations if there were considerable resources allocated to expand the responsibilities of the Idaho Broadband Office in the future.

- The Office could consider creating a statewide database/website for a state construction registry that could incorporate planning resources from the Idaho Department of Transportation and local government to create notifications or publicly available data to assist in the deployment of communications infrastructure and conduit where there are open

trenches associated with road construction projects. This effort could also incorporate consumer feedback related to demands for broadband service in some way.

- The Office could consider creating a voluntary fiber and conduit exchange database/website.
- The Office could take a more direct role in assisting providers to ease requirements and bureaucracy hurdles to use State Lands for communications towers and fiber backhaul.
- The Office may consider hiring additional employees, as expanded responsibilities dictate the need for an increased staffing in the future.

COORDINATION WITH OTHER STATE ENTITIES

As mentioned earlier in this report, our committee discussed, at length, the possibility of this new broadband office being based within the Idaho Military Division. In meeting with the representatives of that office, we learned that many of the same stakeholders involved in the Broadband Task Force are also involved with the IPSCC. It was our committee's conclusion that while there may be some overlap in stakeholders and subject matter, basing this office within the IMD could skew the focus of the Broadband Office heavily toward public safety. Likewise, if the Office were based in Education, Health or Transportation, we felt that a similar skew in focus for the Office.

It is important, however, to recognize that this Office should work closely with other state entities that share stakeholders or subject matter. While recognizing distinct duties and responsibilities of other entities but identifying areas where resources could be shared and coordinated, the Office can ensure a more efficient and effective outcome for all stakeholders involved.

[i] **Executive Order 2019-07, "Idaho Broadband Task Force"** https://gov.idaho.gov/wp-content/uploads/sites/74/2019/05/eo-2019-07.pdf

[ii] ***See Item 9:*** https://www.usda.gov/reconnect/evaluation-criteria**. United States Department of Agriculture, "ReConnect Loan and Grant Program: Evaluation Criteria"**

Broadband Task Force Meeting
Wednesday, June 19th, 2019
Boise State University – Student Union Building
Jordan Ballroom - 1700 W University Dr, Boise, ID 83725

Video Conference:
https://boisestate.zoom.us/
Dial-In: 1 (712) 432-6110, ID 642033#
Web Meeting ID: 628 967 877

Time	Topic	Lead
9:00am – 9:15am	Goals and Objectives of the Task Force - Welcome and Housekeeping	Director Kealey
9:15am – 9:50am	Introductions	Group
9:50am – 10:00am	Break	
10:00am – 11:00am	Overview of Broadband Technologies Moderator: Dean Gordon Jones – Boise State University	Provider Discussion Panel
11:00am – 11:30am	Preliminary Service Maps and Resources at Idaho Commerce and Elsewhere	Jake Reynolds, Rylon Hofacer, Michael Mattmiller
11:30am – 12:00pm	Lunch	Group
12:00pm – 1:00pm	What have other States done for Broadband: e.g. Utah, Washington, Oregon, Pacific NW Moderator: Professor Jaap Vos – University of Idaho	State Experts on Taskforce
1:00pm – 2:00pm	What have other Cities, Counties, and Tribes done for Broadband Moderator: Professor Jaap Vos – University of Idaho	Experiences from Task Force Members
2:00pm – 2:45pm	Company, Consumer, and Legislative Perspectives Moderator: CIO - Randy Gaines – Idaho State University	Discussion with Company and Idaho Legislators on Task Force
2:45pm – 3:00pm	Review next Task Force Meeting Follow up and General Questions	Director Kealey & Group
3:00pm	Adjourn	

IDAHO COMMERCE

Brad Little, Governor
Tom Kealey, Director

Broadband Task Force Meeting

Meeting 2 – Twin Falls, Idaho
Red Lion Hotel – Forest Ballroom
1357 Blue Lakes Blvd N, Twin Falls, ID 83301
July 17, 2019

Call In Details: +1 (415) 930-5321 | Access Code: 148-542-390
Website: https://attendee.gotowebinar.com/register/1888190618959886849

Time	Topic	Lead
10:00am – 10:15am	Review of Goals and Objectives - Housekeeping	Director Kealey
10:15am – 11:30am	Idaho Cities Overview	Ammon, Sandpoint, Mountain Home, McCall, Idaho Falls, Emmett
11:30am – 12:00pm	Citizen Perspectives	Association of Cities Association of Counties Port of Lewiston
12:00pm – 12:45pm	Lunch – Demonstration of "Plum Case"	General Richy - OEM
12:45pm – 2:30pm	Idaho State Programs	IRON, Libraries, ITD, K-12, First Net/Emergency Management, Hospitals, Tribes, INL, IRP
2:30pm – 3:45pm	Transmission and Right of Way Options/Permitting	Consumer Owned Electricity, Rocky Mountain, Idaho Power, Avista, ITD, PUC
3:45pm – 4:15pm	Mapping Update/Outside Service Providers	Idaho Commerce & Cable One
4:15pm – 4:30pm	Discussion of Preliminary Recommendations Preview of Meeting #3 Agenda	Director Kealey
4:30pm	Adjourn	

Broadband Task Force Meeting 3

The Coeur d'Alene Resort
115 S 2nd St, Coeur d'Alene, ID 83814
August 28th, 2019

Call in Details:
(562) 247-8321
Access Code: 332-584-935

Time	Topic	Lead
9:30am-9:40am	Review of Goals and Objectives – Welcome and Housekeeping	Director Kealey
9:40am-10:00am	Goal 7: Broadband Report	Chair: Jaap Vos Co-chair: Gordon Jones
10:00am-10:20am	Goal1: Rural Idaho (A)	Chair: Greg Lowe Co-chair: Danae Wilson
10:20am-10:40am	Goal 2: Rural Idaho (B)	Chair: Mike Kennedy Co-chair: Sen. David Nelson
10:40am-11:00am	Goal 3: Urban Idaho	Chair: Kevin England Co-chair: Michael Mattmiller
11:00am-11:10am	Break	
11:10am-11:30am	Goal 4: INL Research and Universities	Chair: Jerry Gwynn Co-chair: Randy Gaines
11:30am-11:50am	Goal 5: Broadband Mapping	Chair: Guy Cherp Co-chair: Brad Richy
11:50am-12:10pm	Goal 6: State Broadband Office	Chair: Tara Thue Co-chair: Jessica Epley
12:10pm-1:15pm	Working Lunch: Breakout Session with Different Requests & Teams	Subcommittees meeting separately during lunch
1:15pm-1:45pm	USDA and Federal Funding Opportunities	Joe Bradley - USDA
1:45pm-2:00pm	USDA Q&A	Joe Bradley - USDA
2:00pm-2:15pm	Satellite Technology Overview – RS&I Inc	Brian DeRusha Tyson Walker
	Report Back Recommendations from Breakouts:	
2:15pm-2:25pm	Goal1: Rural Idaho (A)	Chair: Greg Lowe Co-chair: Danae Wilson
2:25pm-2:35pm	Goal 2: Rural Idaho (B)	Chair: Mike Kennedy Co-chair: Sen. David Nelson
2:35pm-2:45pm	Goal 3: Urban Idaho	Chair: Kevin England Co-chair: Michael Mattmiller
2:45pm-2:55pm	Goal 4: INL Research & Universities	Chair: Jerry Gwynn Co-chair: Randy Gaines
2:55pm-3:05pm	Goal 5: Broadband Mapping	Chair: Guy Cherp Co-chair: Brad Richy
3:05pm-3:15pm	Goal 6: State Broadband Office	Chair: Tara Thue Co-chair: Jessica Epley
3:15pm-3:30pm	Follow up Assignments/ Adjourn	Director Kealey

IDAHO COMMERCE

Brad Little, Governor
Tom Kealey, Director

Broadband Task Force Meeting 4

JR Williams Building
East Conference Room | First Floor
700 W. State St., Boise, ID 83702
September 25th, 2019

Call and web meeting details:

Dial: +1 (224) 501-3412
Access Code: 814-707-197
https://global.gotomeeting.com/join/814707197

Time	Topic	Lead
11:00 am – 12 noon	Welcome and Housekeeping Preliminary Discussion	Director Kealey
12 noon – 12:30 pm	Refreshments Served (Task Force Members Only)	Director Kealey
12:30 pm – 1:15 pm	Overview of Preliminary Recommendations	Director Kealey
1:15 pm – 2:00 pm	Questions, Discussion, and Next Steps	Director Kealey
2:00 pm	Adjourn	Director Kealey

United States Department of Agriculture

Rural Development

Presented by:
Joe D. Bradley
Telecommunications Field Representative for Idaho and Wyoming

Overview of USDA Telecommunications Programs

Idaho Broadband Task Force
Coeur d' Alene, ID
08/28/2019

Telecommunications Programs

- Telecommunications Infrastructure Loan Program
- Rural Broadband Access Loan Program
- ReConnect Program
- Community Connect Grant
- Distance Learning and/or Telemedicine Grant

*** Changes are occurring in all programs and appropriations have not been finalized nor are there application materials available.**

Telecommunications Programs – All State Investments

Since FY2010, RUS has invested approximately $6.4 Billion in projects serving rural residents in the United States:

Program	Projects Approved	Funds Awarded
Telecommunications Infrastructure Program	176	$2.9 Billion
Farm Bill Broadband Program	7	$225.6 Million
Distance Learning and Telemedicine Program	807	$249.7 Million
Community Connect Grant Program	91	$144.9 Million
Broadband Initiatives Program	258	$2.9 Billion
Grand Total	**1,339**	**$6.4 Billion**

Who Can Apply?

- States, local governments, or any agency, subdivision, instrumentality, or political subdivision thereof
- A territory or possession of the United States
- An Indian tribe (as defined in section 4 of the Indian Self Determination and Education Assistance Act)
- Non-profit entities
- For-profit corporations
- Limited liability companies
- Cooperative or mutual organizations

Telecommunications Infrastructure Program – ILEC's

Available Funding

FY2017

- **$690 million** available in FY2017

FY2018

- **$690 million** available in FY2018

FY2019

- **$690 million available in FY2019**
- Loans finance new & improved telecommunications infrastructure, primarily for the benefit of rural populations of 5,000 or less

Program Updates

FY2017

- **21** loans approved: **$427.4 million**

FY2018

- **13** loans approved: **$161.9 million**
- **States (x11):** NV, SD, VA, IA x 3, MN, WI, SD, MO, AZ, NM, KY

FY2019

- **8** loans approved: **$135.0 million**
  - **States (x7):** KY, IL x 2, TN, NM, SC, WI, IN
- **9** loans in process: **$119.8 million**
- Applications are accepted year round
- RD Apply online application system

Rural Broadband Access Loan Program – AKA "Farm Bill Loan Program"

Available Funding

FY2017

- **$27 million** appropriated in FY2017

FY2018

- **$29.9 million** available in FY2018

FY2019

- **$29.9 million** available in FY2019 *

* Additional Carry over funding is available from previous fiscal years

Program Updates

FY2017

- **2** loans approved: **$24.0 million**

FY2018

- **1** loan approved: **$19.9 million**

FY2019

- **1** loan approved: **$17.7 million**
- **4** loans in process: **$48.6** million
- **There will be program changes in FY2020, see next slides….. TBD**
- **No applications can be accepted until changes are complete there is an application guide and appropriations final.**

Farm Bill Highlights – TBD as to final appropriations and funding criteria.

- **Section 6201: Access to broadband service in rural areas** –
  Expands the funding authorities to include grants, loans, loan guarantees and payment assistance; modifies some of the program priority and eligibility requirements; and increases the potential funding level for the program
  - Adds Grant Funding and Payment Assistance
  - Requires Guarantee Program
  - Modifies Required "unserved" HH percentage from 15% to 50% for loans and 90% for grants
  - Establishes New Priorities
  - Increases Authorized Funding Level from $25 million to $350 million
  - Establishes new "broadband buildout" standards associated with the life of the loan
  - Requires additional communication and coordination with NTIA and FCC
- **Section 6202: Expansion of Middle Mile Infrastructure** – authorizes the agency to provide funding for stand alone middle mile projects

Farm Bill Highlights Continued

- **Section 6203: Innovative Broadband Advancement Program** – Authorizes the development of a new program to provide grants and loans to eligible entities demonstrating innovative broadband technologies or methods (Replaced the Gigabit Grant Program)
- **Section 6204: Community Connect Grant Program** – Codifies the Community Connect Program
- **Sections 6209 and 6211: Use of Loan Proceeds for Refinancing** – Removes the 40% cap that was in place on the amount of project funding that can be used for refinancing and expands the agency's authority for the types of loans which can be refinanced
- **Section 6214: Rural broadband integration working group** – Establishes a rural broadband working group across Federal agencies to identify, assess, and determine possible actions relating to barriers and opportunities for broadband deployment in rural areas

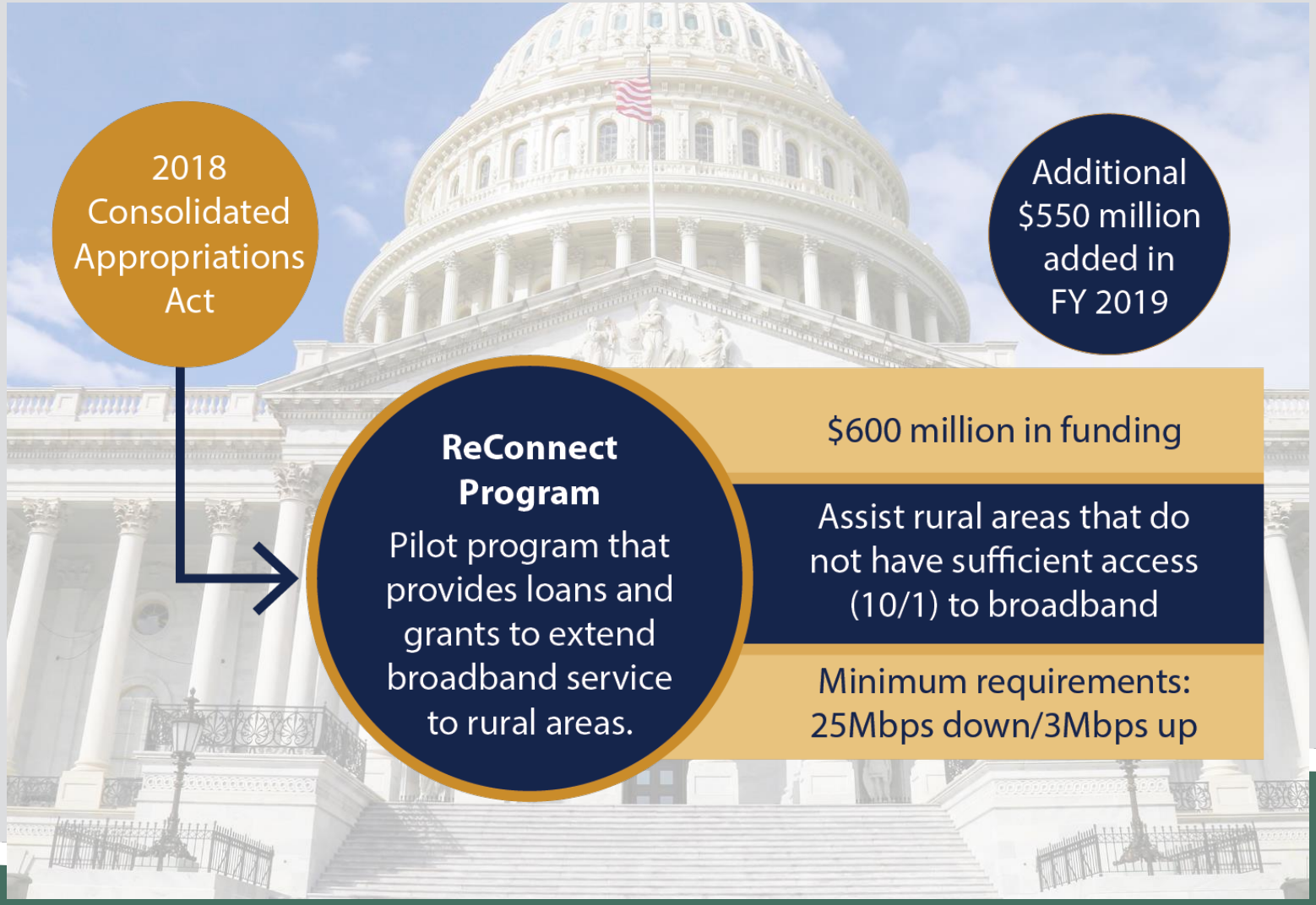
Farm Bill Highlight Continued

- **Section 6207: Public Notice, Assessments and Reporting Requirements**
  - Expands the Searchable Database and Public Notice Filing/Existing Service Provider Response Process for “Retail Broadband” projects provided assistance through a loan, grant or loan guarantee program administered by the USDA
    - For Telecom, this expands this process across the Community Connect and the Infrastructure Loan Program
    - Public Notice Filing – PNF and Public Notice Response - PNR not required when the project is within an area where the entity receives FCC federal universal support
  - Requires USDA to confer with NTIA and the FCC when determining the areas that are “unserved
  - Requires awardees of funding for “Retail Broadband” projects to submit an annual report for 3 years after completion of the project regarding the use of the assistance and progress towards fulfilling the objectives for which the funding was provided

SUTA - For All Telecommunications Loan Programs – Did You Know?

Modified Loan Terms for Serving a Substantially Underserved Trust Area (SUTA) include:

- At the discretion of Administrator, RUS can modify certain loan terms or application requirements, which may include:
  - Interest rates as low as 2%, extended amortization period, and/or priority processing
  - Loan interest rates as low as 2 percent;
  - Waiver of certain documentation requirements regarding non-duplication of service;
  - Waiver of matching funds or credit support requirements for loans;
  - Extension of the time period in which loans are repaid; and
  - Providing the highest priority for funding to eligible projects that will serve trust areas.
  - ***** Please see final and individual program regulations for details and specifics.**


2018 Consolidated Appropriations Act
Additional $550 million added in FY 2019
ReConnect Program
Pilot program that provides loans and grants to extend broadband service to rural areas.
$600 million in funding
Assist rural areas that do not have sufficient access (10/1) to broadband
Minimum requirements: 25Mbps down/3Mbps up

Application Intake System Available: April, 23, 2019

	LOAN	COMBO	GRANT
Buildout Speed	25/3 Mbps minimum	25/3 Mbps minimum, incentive for higher speeds	25/3 Mbps minimum, incentive for higher speeds
Terms	Max award: $50 million 2% Interest Rate	Max award: $50 million 50/50 Loan/Grant UST Rate	Max award: $25 million 25% match
Application Review	Open (non-competitive)	Competitive Scoring	Competitive Scoring
Round 1 Federal Funds	$200 million	$100 million grant + $100 million loan	$200 million
Application Deadlines	July 12, 2019	June 21, 2019	May 31, 2019

ReConnect Application FY-2018 – 600 Million

- All program applications for each funding type: Grant, Grant/Loans and Loans are currently being:
  - Evaluated for technical and financial requirements.
  - Competitively scored
  - Reviewed against other requirements as listed in the regulations
  - Field validation of service areas
  - **TBD as to final competitive determinations and any awards date.**

*** FY2019 funding (550 million) will have some changes as to application and qualifying criteria TBD.....**

ReConnect Application Eligibility Factors – FY-2018

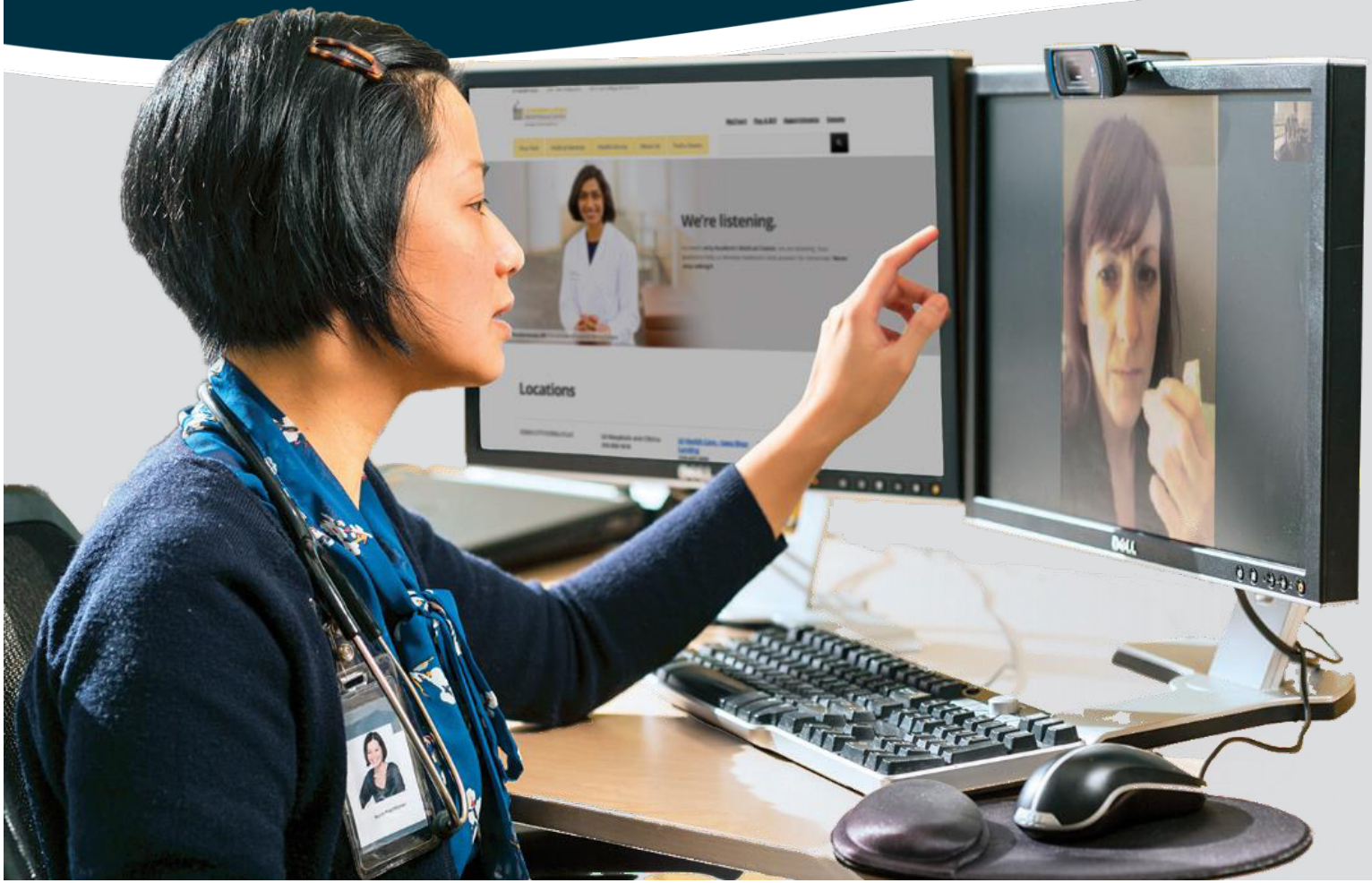
- Unqualified Audited Financial Statement
- Fully Complete Application
- Timely Buildout Completion
- Financial Feasibility and Sustainability
- Technical Feasibility
- Service Areas Identified
- Scoring Elements
- Fully Funded

*** FY2019 funds will have some changes TBD.....**

ReConnect Applications **FY-2018**

- Received 78 applications requesting more than **$522 million** in **grant only** funding (200 million available) in the first round, closed May 31st.
- Received 53 applications requesting **$635 million** in **loan-grant** combination funding (200 million available) in the first round, closed June 21.
- Received 15 applications requesting more than **$258 million** in **loan only** funding (200 million available) in the first round, closed July 12th.

Telecommunications Grant Programs



- Community Connect Grants
- Distance Learning & Telemedicine Grants

Community Connect Program

Available Funding

FY2017

- **$34.5 million** available in FY2017

FY2018

- **$30.0 million** available in FY2018

FY2019

- **$33.0 million available in FY2019**

* Carryover funding is sometimes available from previous fiscal years

General provisions as of the latest FOA:

- **Grant funds for Broadband Service deployment**
- **Population of 20,000 or less**
- **Amounts from $100,000 to $3 million**
- **Service Area must be entirely unserved**
- **Minimum Broadband Service is defined as 10 Mbps (download) and 1 Mbps (upload)**
- **Minimum Broadband Grant Speed is defined as 25 Mbps (download) and 3 Mbps (upload)**
- **15% Matching Requirement**
- **Opens for a short period of time, typically during the 1st calendar quarter for 45-60 days.**

Program Updates

FY2017

- **48** Applications processed: **$90.8 million**
- **16** grants approved**: $35.3 million**
- States (x11): AL, GA*, ID, ME, MN, NC, OK, TN, VA, WA, WY

FY2018

- **124** Applications processed: **$225.6 million**
- **14** grants approved**: $30.0 million**
- States (x9): KY*, MN, NC, ND, OK, NC, TN, VA*, UT

* HQ State, but grant benefited additional state(s)

FY2019

- **62 Applications in-process*: $100.1 million**

  * Applications received by April 15, 2019
- **TBD** grants approved**: $TBD million, still processing.**
- Program regulations will change in 2020, **TBD**

Distance Learning and Telemedicine (DLT) Program

Available Funding

FY2018

- **$29.0 million** available in FY2018
- **$20.0 million** additional available in FY2018 in rural areas to help address the opioid epidemic in rural America

FY2019

- **$37.9 million** available for Traditional DLT
- **$26.1 million** available for Opioid DLT FY2019 in rural areas to help address the opioid epidemic in rural America
- **Grants fund equipment needed to provide Distance Learning and Telemedicine services**
- **15% Matching Requirement**
- **Minimum Grant amount: $50,000**
- **Maximum Grant Amount: $500,000**
- **Only grants are available-no loans or combo loan/grants**
- **Broadband transmission facilities will be considered eligible for grant funding as they are an integral part of providing distance learning and telemedicine services. See guide for details.**

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Program Updates

FY2018

- **225** applications received for **$68.4 million**
- **132** applications approved for **$40.8 million**:

DL	TM	Overall
67 awards	65 Awards	132 awards
32 States	39 states	**45 states & Territories represented**
$22.7 million	$18.1 million	$40.8 million

STEM & Opioid Special Consideration Point Projects

63 Opioid	51 STEM	18 None	132 awards
$17.9 million	$18.6 million	$4.4 million	Tot: $40.8 million

FY2019

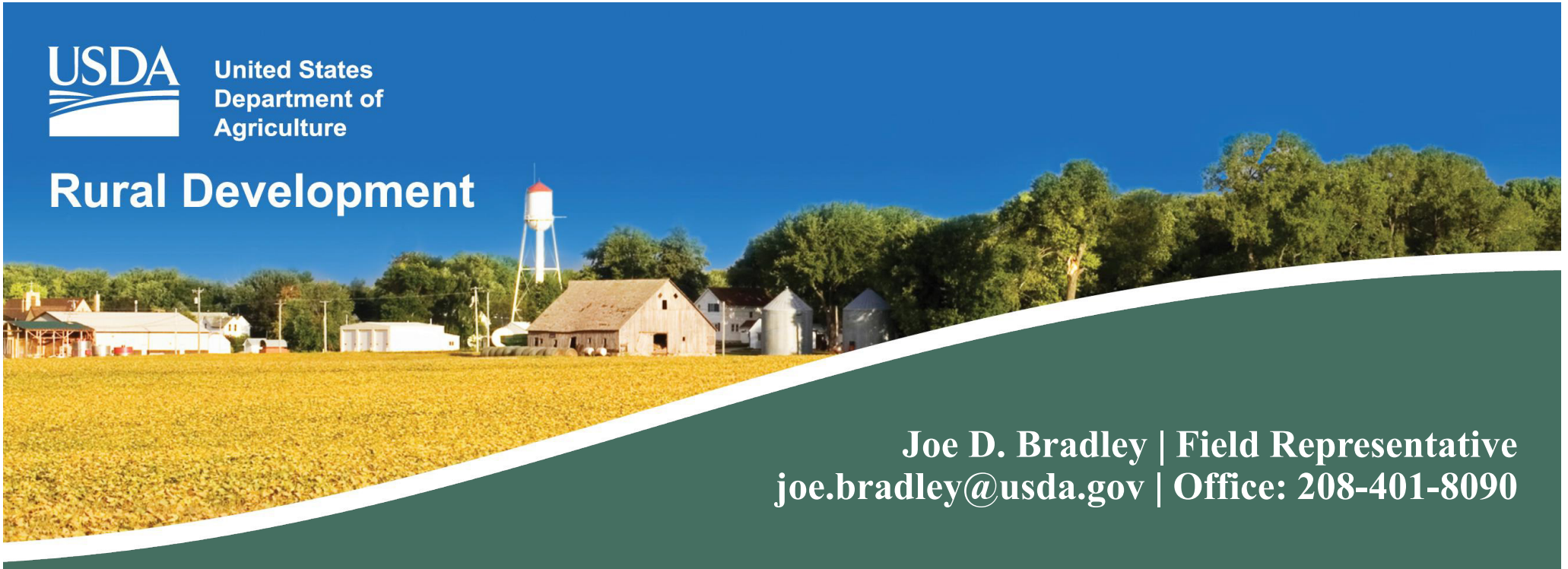
- **Opioid DLT FY2019** – 15 Submissions received - April 15, 2019
  - **12** grants approved for **$2.75 million**
  - States (x10): AL, CA, LA, MI x 2, MT, NV, OH x 2, PA, UT, VT
- **Traditional DLT FY2019** – Submissions received - May 15, 2019
  - **166 Applications received & being processed**
- **Opens for a short period of time, typically during the 1st calendar quarter for 45-60 days.**

Recommendations and Suggestions (as allowed per program):

- Review existing material knowing that there will be changes but, it will speed up your understanding of the new program when it is available.
- Identify possible consortium members and understand each others strengths, weaknesses and organizational goals to insure that all elements required in the application are addressed clearly and fully.
- Identify financial support and cost sharing early for; application development, construction, maintenance and any match required from parties such as from; State funds, foundations, internal general funds etc…..
- For any consortium, a clear and legal agreement of the rolls and responsibility's of all, that also designates a fiscal agent, which must be be defined and be unequivocal.

Recommendations and Suggestions (as allowed per program):

- Contact the Field Representative early and often. We can't review your specific **competitive** application but, you can ask clarifying questions on content and common mistakes to avoid.
- Loan applications can/should/must be reviewed by the Field Representative prior to submitting them to insure completeness as well as to include ancillary material.
- Develop an internal review team that double checks application material for completeness and that the application material is consistent across all sections.
- Sign up for notifications and program announcements at:
  - https://public.govdelivery.com/accounts/USDARD/subscriber/new



USDA United States Department of Agriculture

Rural Development

Joe D. Bradley | Field Representative
joe.bradley@usda.gov | Office: 208-401-8090

Rural Development | Telecommunications Program
Rural Utilities Service | U.S. Department of Agriculture

USDA is an equal opportunity provider, employer and lender.

Questions ?

CDA 08282019)

Governor Brad Little
State Capitol :: Boise, Idaho 83720
(208) 334-2100 :: gov.idaho.gov

December 2, 2019

Secretary Sonny Perdue
U.S. Department of Agriculture
1400 Independence Ave., S.W.
Washington, D.C. 20250

Dear Secretary Perdue,

The State of Idaho is committed to improving broadband connectivity and infrastructure in communities throughout Idaho that are unserved or underserved. Providing sufficient connectivity for all Idahoans is a priority for me, and it is necessary for the growth of our state and the benefit of our citizens.

In 2017, the Idaho Rural Partnership Committee was responsible for the state's "Broadband Model." After I took office as Idaho's Governor earlier this year, I issued an executive order directing the Idaho Department of Commerce to form a task force and update our state's Broadband Plan. Over the past six months, the Idaho Broadband Task Force has been evaluating new policy, financial, and legislative goals to improve broadband connectivity and speeds. I have reviewed the task force's recommendations and approved our plan, which can be viewed at commerce.idaho.gov/broadbandplan2019.

In accordance with the evaluation criteria for USDA Reconnect Funds, my office confirms the following;

- Idaho has adopted and updated our Broadband Plan as of November 22, 2019
- The State of Idaho does not restrict any utilities from providing broadband service
- All Idaho agencies under the purview of my office, specifically the Idaho Transportation Department, Idaho Department of Environmental Quality and State Historic Preservation Office, are committed to expediting right-of-way environmental permitting for broadband projects.

I respectfully ask that you please confirm that Idaho receives maximum points when the USDA evaluates broadband projects in our state, per the USDA evaluation criteria. If you have specific questions regarding broadband in Idaho, please reach out to the Idaho Department of Commerce Director Tom Kealey. He can be reached at 208-334-2470 and tom.kealey@commerce.idaho.gov.

Thank you for your consideration.

Sincerely,

Brad Little
Governor of Idaho

Cc: Layne Bangerter, State Director, USDA
Chad Rupe, Administrator, USDA
Chad Parker, Assistant Administrator, USDA
Tom Kealey, Director of Commerce, State of Idaho