

## A small but MIGHTY force for Rural Broadband.

In 2015, the Carpenter Road fire destroyed 63,972 acres in Stevens County and on the Spokane Indian Tribe of Indians Reservation. The fire camp serving that wild fire was without any access to the internet for two weeks and had to drive GIS maps on a zip drive from the county office.

To respond to these challenges, the Broadband Action Team (BAT) was formed in 2016. Members and partners meet monthly to address broadband needs in the area. Economic development, public safety preparedness and response, access to healthcare and education rely on a strong broadband internet connection for rural communities across the US. Increasing quality of, and access to, broadband is a widespread community goal for Stevens County and the Spokane Tribe of Indians.

### Our BAT Goals

1. **Create a shared language** to describe broadband access, develop a website to help others understand the issues.
2. **Decide on metrics** for measuring increased broadband access.
3. **Respond to policy issues (state, federal and local)** that affect our ability to increase access and use.
4. **Pre-positioned Fire Camps.** Determine two potential sites, seek funding, develop "field guide" for replication.
5. **Boots on the Ground.** Encourage local champions to help us find gaps and possible solutions.
6. **Map existing broadband infrastructure and levels of service with Stevens County and Spokane Tribe GIS.** This may involve use of publicly available data (FCC, etc.), interviews with service providers, data gathering from residents and businesses.
7. **Compile best practices in rural broadband solutions,** i.e., infrastructure types, investment models, business models and financing tools to record progress and share with broadband stakeholders, and other communities.

### Contact Information

#### Debra Hansen, Director

WSU Stevens County Extension  
(509) 684-2588  
[debra.hansen@wsu.edu](mailto:debra.hansen@wsu.edu)

#### Bert Klimas, Coordinator

Broadband Action Team  
(509) 738-6876  
[bert@klimasonline.com](mailto:bert@klimasonline.com)

Website: [extension.wsu.edu/stevens/broadband-action-team](http://extension.wsu.edu/stevens/broadband-action-team)  
WSU Extension programs and employment are available to all without discrimination.



### BAT Members and Partners

*WSU Extension:* Debra Hansen, Stevens County Director, Monica Babine, Digital Initiatives Senior Associate and Bert Klimas, BAT Coordinator

*City of Chewelah:* Dorothy Knauss, Mayor

*Colville School District:* Pete Lewis, Superintendent

*Department of Natural Resources:* Steve Harris, NE Wildfire & Forest Practices Assistant Manager

*Employment Security Department:* Bryan Raines, Customer First Manager and Barney Brockwell, WorkSource Specialist

*Libraries of Stevens County:* Amanda Six, Director, Jessica Varang, IT Manager, and Bryan Tidwell, Chewelah Manager

*NE WA Health Programs:* Desiree Sweeney, Chief Executive Officer and Clint Hagen, IT

*Rural Resources Community Action:* Kelly Charlton, Director of Employment and Training

*Providence Health Care:* Ron Rehn, Chief Administrative Officer

*Spokane Tribe of Indians:* Frank Metlow, Planning & Economic Development Director and Randy Bowen, IT Director

*Stevens County Emergency Management:* Jim Caruso, Director and Adenea Thompson, WSU Extension, Communications Coordinator

*Stevens County Information Services:* Mark Curtis, Director and Trevor Sellars, Communications Specialist

*Stevens County Fire District #9:* Jeff Plitts

*Stevens County Fire District #12:* Dave Klimas and Jason Edwards

*Tri County Economic Development District (TEDD):* Barry Lamont, Director and Silas Rappe, Interim Regional Planner

### Over 14 Internet Service Providers!

#### Stevens County Commissioners:

Wes McCart, Don Dashiell and Steve Parker

#### US Congressional Staff:

Senator Cantwell: Alex Scott

Senator Murray: John Culton & Ben Merkel

Congresswoman McMorris Rodgers: Andrew Engell

#### WA Legislators

Senator Shelly Short

Representative Jacquelin Maycumber

## BAT Accomplishments:

- Chosen as one of the first fifteen Drive-In Wifi Hotspots. In response to the impacts of COVID-19, these provide free temporary, emergency internet access for Washingtonians who do not have broadband service to their homes.
- Chosen to launch the first county-wide speed test in Washington using the GEO Partners technology – which is statistically valid and more robust than other options.
- Received a \$10,000 grant to solve internet access for high school seniors, the Colville School District purchased Mifi hotspots and paid for two months of service for graduating seniors.
- *"The BAT's success has led it to emerge as a nationally-recognized model for community collaboration and as a key influencer of federal broadband policy. It has directly influenced major legislation recently introduced by Senator Murray—the Digital Equity Act of 2019—that would look to provide over \$1 billion in grants over five years to stand-up and support BAT-like organizations across the country."* Benjamin Merkel, Senator Patty Murray's Legislative Director.
- Chosen as a co-designer and beta tester of the US Commerce NTIA BroadbandUSA Connectivity Assessment Tool, which resulted in two invitations to present national webinars.
- Introduced broadband as an emerging issue to the annual statewide Infrastructure Assistance Coordinating Council Conference and prepared the first two broadband Technical Teams.
- One of ten state leaders invited to the 2017 Senate Democratic Rural Summit in Washington, D.C.
- Created the Pre-positioned Fire Camp concept; received a \$24,900 grant from Partnership for Rural Washington.
- Governor Inslee chose to meet our BAT on his 2018 statewide broadband tour. This visit, additional communications with his staff, and input received from other communities during the tour led to the passage of legislation during 2019, resulting in a new broadband office and \$21 million in broadband infrastructure funding. Language included in the Washington State Broadband Plan: "WSUE BAT efforts are being recognized and replicated across Washington and other states."
- The BAT model was highlighted in the Association of Public and Land-Grant Universities report: *e-Connectivity in Rural America: Public Research Universities Advancing Digital Inclusion*.

## More BAT Accomplishments:

### Advocacy and Education:

- Wrote a letter of support for Fire District #5 to demonstrate the public safety aspect of increased broadband.
- Wrote a letter of support for US House Broadband Data Improvement Act of 2019 (McMorris Rogers)
- WSU Extension team shared our lessons learned and best practices of the BAT for the North Olympic Broadband Symposium.
- 3 BAT members participated as panelists at US Congresswoman Cathy McMorris Rogers and WA Representative Jacqueline Maycumber's Rural Broadband Symposium.
- 7 BAT members participated in the USDA Broadband Workshop in Davenport, WA
- 5 BAT members participated in the Public Works Board Broadband Workshop in Spokane, WA
- Held our third Tech Expo, a techie trade show to showcase any business that touches the internet, with 178 attendees and 17 vendors it was helpful to see the internet service providers, to understand options and where they are serving. The Kettle Falls Robotics, Colville Tech Teams and Stevens County Library Virtual Reality booth were also crowd favorites.



### Visit the BAT website:

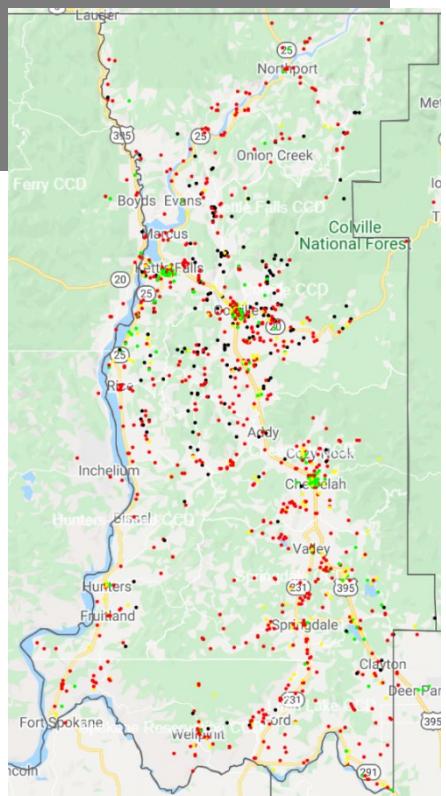
[extension.wsu.edu/stevens/broadband-action-team](http://extension.wsu.edu/stevens/broadband-action-team)

- **Stevens County / Spokane Tribe BAT Brochure:** lists our current members and goals
- **SC/ST BAT Work to Date:** since 2016
- **Mapping: a broadband issue:** Shared with many elected officials, associations and agencies to make our case for more accurate mapping.
- **A unique solution:** Pre-positioned Fire Camps
  - Little Pend Oreille Lakes – our flagship project
  - Two Rivers Resort on the Spokane Tribe Reservation
- **Broadband Impact:** Kettle Falls Robotics Club, Firefighters and EMS, Libraries
- **General BAT Concept:** to promote this idea to other communities across the state (and nation)

# A tale of three speed test maps: Broadband in Stevens County, WA



Barriers to ubiquitous broadband availability in Stevens County include areas with small, dispersed populations, rugged terrain, inclement weather, distance from cities, high poverty and unemployment. The COVID pandemic highlighted the need and disparity for rural residents to have high-speed broadband – those without internet access at home suffer demonstrable educational and economic harms. **The Stevens County and Spokane Tribe Broadband Action Team (BAT) supports the declaration of broadband as a critical infrastructure.** Reliable data ensures that areas with the greatest need are not left behind.



## It's about action – shown on Map 1

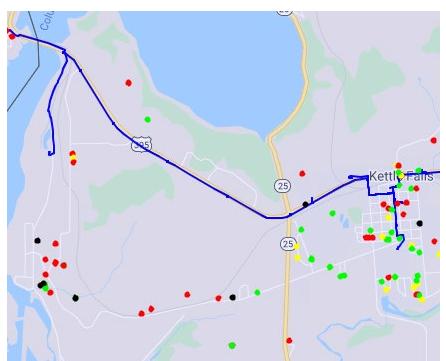
Our BAT has a national reputation for being action-oriented and engaging community members in broadband efforts. Building on previous projects, the BAT was selected to pilot the use of the GeoPartners crowdsourcing data gathering tool. The first map provides the results of speed tests taken across the county in one month's time.

## It's about availability – shown on Map 2

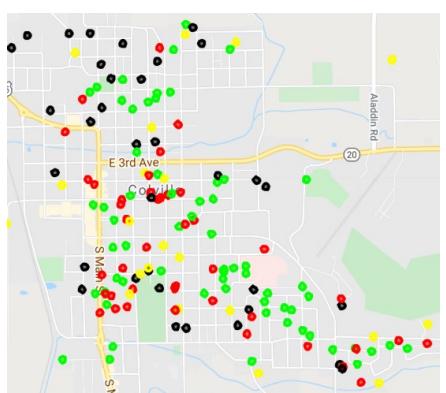
Accurate broadband mapping is critically important to residents, businesses, and communities where robust broadband is unavailable. The current national broadband map is telling the wrong story, it does not match Stevens County broadband availability. According to the FCC data available at this time Stevens County is considered 100% covered AND at speeds that our research indicates are only available in limited areas. Further investigation led to these discoveries:

- Based on current reporting requirements, providers indicate service areas by census block, advertised speed and the technology.
- Provider advertised speeds are reported at the census block level but may not be available anywhere in the block. Some of the indicated service does not meet the FCC's broadband definition of 25/3 Mbps.
- Inaccuracies in current federal broadband data sources can negatively impact the ability to apply for funds. Grant-protected areas are ineligible for further buildout regardless if the provider completes the project.

**1,453 speed tests in Stevens County**  
Black indicates no service  
Red indicates service < 10 mbps  
Yellow indicates service < 25 mbps  
Green indicates service > 25 mbps



Map 2: Community West of Kettle Falls



Map 3: City of Colville

## It's about affordability – on Map 3

We had 150+ speed tests in Colville, our most populated city. You can see by the green and yellow dots, there is good, high-speed broadband available – so we hypothesize that the black dots (no service) indicate an affordability issue. This matches the demographic data; Colville shows a pre-COVID poverty level of 15.35%, greater than the state average of 8%; and the Colville School District provides free and reduced lunches to 50% of their students in the district. In surveying families during COVID, they determined that 30% of their students do not have access to the internet.

## Our recommendations:

1. Bolster the accuracy of the national broadband map and data collection.
2. Data and information to be available and more easily usable by a wider audience.
3. Offer Federal funding to unserved and underserved areas based on accurate maps.
4. Establish a challenge process with verified, granular data.

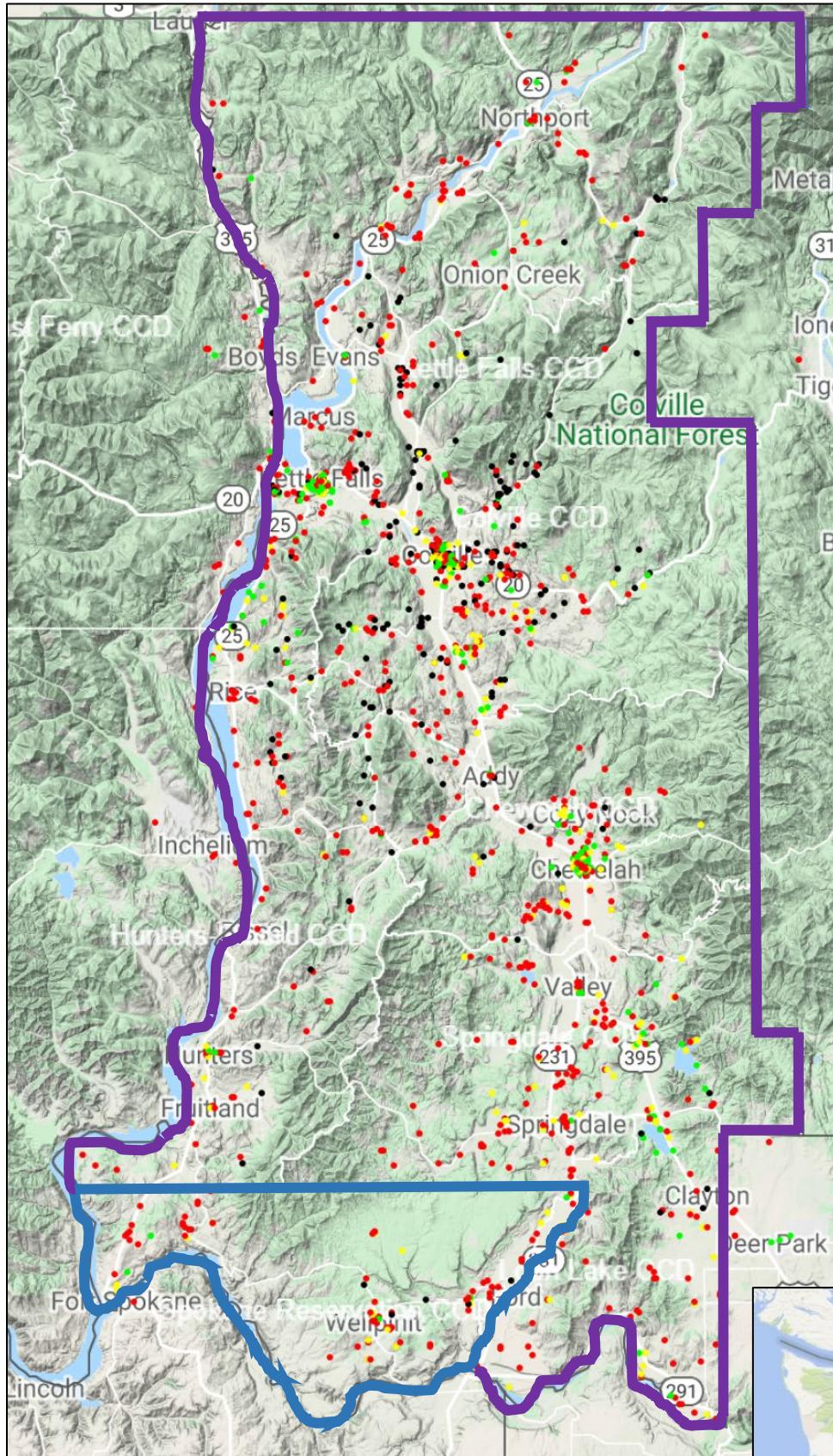
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# Stevens County / Spokane Tribe Speed Test Map



This data was gathered between 5/10 and 6/9/20 using the GeoPartners crowdsourcing speed test tool. The SC/ST BAT was selected by the WSBO for this pilot because of their longtime rural and tribal broadband leadership. The pilot provides a Proof of Concept for use of this cost-efficient tool that ground tests current mapping efforts and provides more granular (household level) data about actual broadband availability.

## Stevens County, WA

Square miles: 2,477  
Population: 45,723  
Households: 21,156  
Persons per square mile: 17.6

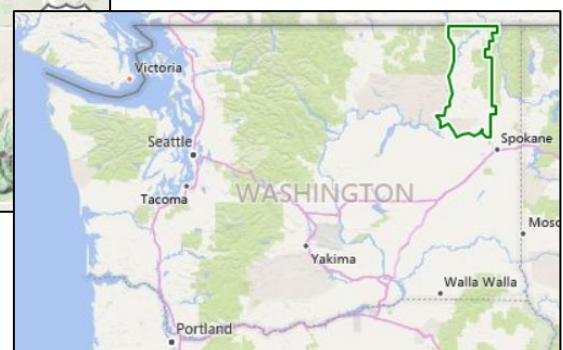
## Spokane Tribe of Indians Reservation (in blue outline)

Square miles: 237  
Population: 2,708

## Speed tests: 1,456

While the speed test is still under way, early results across the county showed that 70 percent of responders had download speeds below 25 Mbps per second, the minimum number to be considered broadband. Sixteen percent had no service, and only 13 percent had speeds above 25 Mbps.

Black indicates no service  
Red indicates service < 10 mbps  
Yellow indicates service < 25 mbps  
Green indicates service > 25 mbps



## County Group Data

Total Tests in View: 1,825. 1,456 unique locations.

County: **Stevens County**

Households: **21,156**

<b>company</b>	<b>year</b>	<b>count</b>	<b>down</b>	<b>up</b>	<b>delta</b>	<b>C.I.</b>
AIR-PIPE	2020	3	9.58	4.18	9.3	
Allstream Business US	2020	1	51.58	11.24	0.0	
AT&T Mobility	2020	101	13.28	3.35	3.3	
Avista	2020	2	1.02	7.10	0.5	
Cellco Partnership DBA Verizon Wireless	2020	149	13.64	2.77	3.0	
CenturyLink	2020	298	11.63	3.16	5.5	
Charter Communications	2020	144	112.16	11.51	14.4	
Comcast Cable Communications	2020	7	41.72	9.47	22.3	
Desert Winds Wireless	2020	38	9.34	3.90	4.9	
Dogear/Packet Partners	2020	2	9.37	0.96	9.6	
Eonix	2020	1	0.12	1.07	0.0	
Frontier Communications	2020	2	2.72	0.71	3.5	
Google	2020	2	1.07	2.51	1.0	
HERN Labs AB	2020	1	1.44	4.57	0.0	
Hughes Network Systems	2020	224	4.55	2.87	0.9	
Hurricane Electric	2020	1	25.23	11.39	0.0	
Indian Health Service	2020	2	3.09	2.04	2.4	
Inland Cellular	2020	3	38.54	4.94	11.3	
Level 3 Parent	2020	1	53.75	8.48	0.0	
Midcontinent Communications	2020	1	14.23	0.18	0.0	
NCI Data.com	2020	4	7.70	8.07	2.3	
no service	2020	236	0.00	0.00	0.0	
Northwest Open Access Network	2020	19	32.67	8.99	10.4	
Paul Bunyan Communications	2020	1	10.29	4.34	0.0	
Providence Health & Services	2020	2	2.58	5.96	2.0	
Ptera	2020	12	9.13	3.36	2.6	
SECUREWEBS INC	2020	12	4.59	1.97	1.5	
SoftLayer Technologies	2020	1	18.72	0.40	0.0	
STARTOUCH INC	2020	2	46.10	24.46	61.9	
State of Minnesota	2020	1	9.06	0.61	0.0	
State of Washington	2020	15	5.34	1.67	3.4	
T-Mobile USA	2020	4	31.35	3.85	22.6	
Total Server Solutions	2020	1	7.41	1.21	0.0	
USDA	2020	14	6.10	2.17	3.3	
ViaSat	2020	34	9.89	1.76	1.9	

## GEO Partners

### Speed Test

#### Data

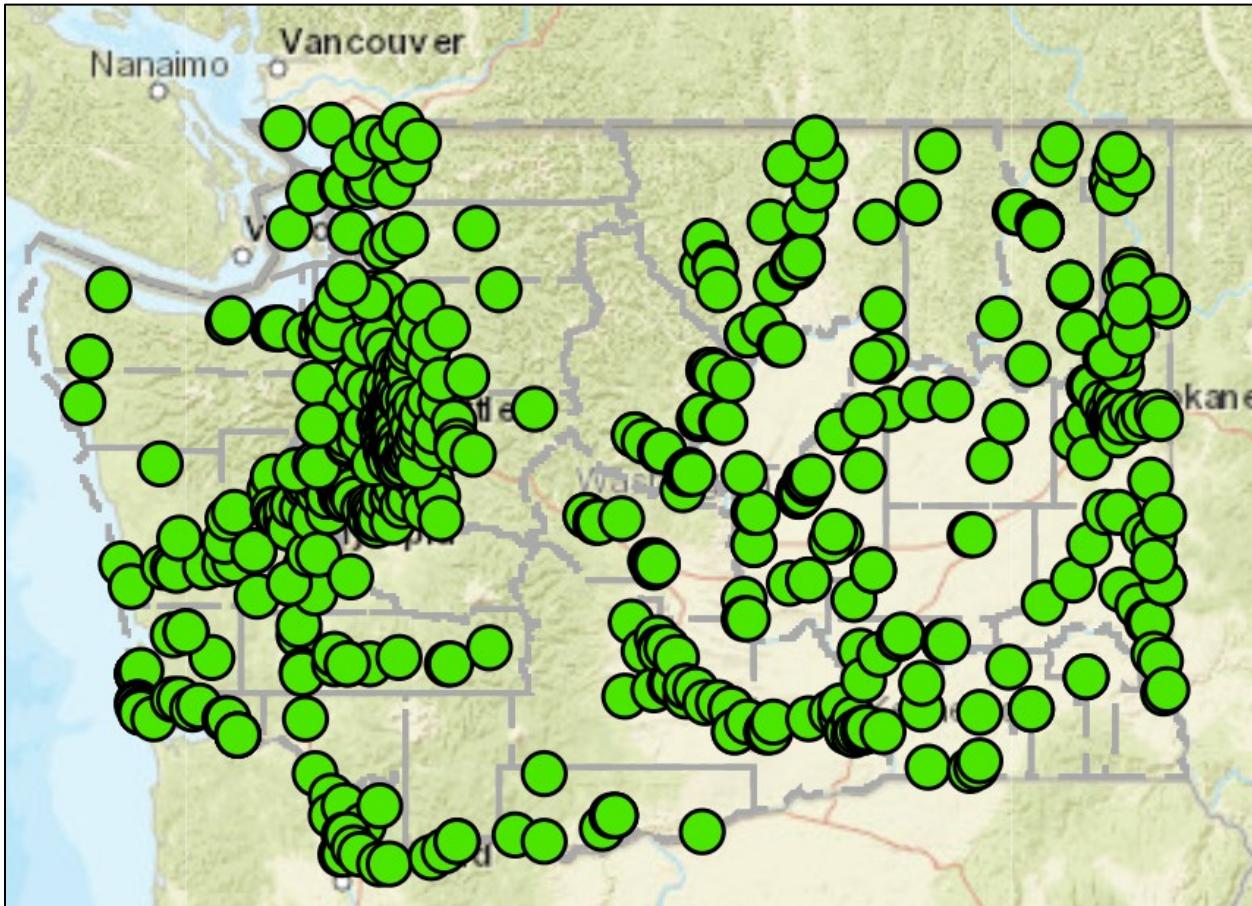
Residents from Stevens County and the Spokane Tribe took speed tests using the GeoPartners tool and the results include identification of:

33 active internet service providers (ISP) in the test region

Number of client tests per ISP  
Average download and upload speeds for test takers for each ISP.

**Note that 236 people indicate no service, yet took the time to report this to us.**

# Washington Drive-In WiFi Hotspots Project



This project was launched in collaboration with Washington State University Extension, the Washington State Library, a division of the Secretary of State, and the Washington State Broadband Office.

It has grown in support and now Washington has almost 600 hotspot locations supported by more than a dozen public, private, and non-profit partners. Visited the state hotspot location finder map to see details: [www.driveinwifi.wa.gov](http://www.driveinwifi.wa.gov).

This project is a public, private, and nonprofit partnership with the following participants:

- Washington State University Extension
- Washington State Broadband Office, Department of Commerce
- Washington State Library, a division of the Washington Secretary of State and local libraries
- Washington Technology Solutions (WaTech)
- NoaNet
- Information Technology Disaster Resource Center
- Washington Independent Telephone Association
- Internet Service Providers
- Washington Public Utility Districts
- Washington Ports
- Washington Office of Public Instruction and school districts across the state
- Washington Community and Technical Colleges
- Washington Emergency Support Function #2 (ESF2)
- Private retail and service businesses
- Microsoft (funder)
- Avista Foundation (funder)
- Washington State Office of the Governor (funder)