

Introduction to Broadband Needs and Mapping

Equitable access to internet connectivity is essential to leveling the playing field for Idaho's students and providing them with the resources necessary for a uniform education. Broadband access is especially important right now due to Covid-19 and the need to provide for remote learning.

Understanding the existing broadband connectivity available to your students and staff is critical to determining the equity gaps and developing strategies and solutions to reduce these gaps. The collection and following analysis of quality data is imperative to determine your needs and clearly identify broadband gaps. The first step to identifying these gaps is determining what data you will need in order to perform a comprehensive needs assessment. An example spreadsheet is included with this document to provide a starting point for what data might assist you in this assessment. You may choose to use this template as is, or modify it to meet your local needs in the event that you wish to adjust the information gathered for your gap analysis.

Using mapping technologies to provide a visual representation of your connectivity gaps will not only help you with your analysis, but it also provides a tool that can be used to inform internet service providers (ISPs) of community internet needs. While some of your gaps in home internet connectivity may be due to income disparities, many communities experience gaps in various locations due to the unavailability of adequate service from providers. By building a map demonstrating locations of no or limited broadband access, subsequent followup with ISPs can be more productive. Providers can utilize this data to determine service gaps in their infrastructure, identify solutions or expansions, and in many cases, can identify what assistance they may be given in providing adequate internet connectivity to these areas, either by improving infrastructure, or offering reduced cost solutions to better meet the needs of low-income families.

Performing this assessment and analyzing the data will allow you to advocate for your students and staff when talking to providers. Below are some resources to assist in identifying potential providers. Additionally, the broadband team at the State Department of Education is available to assist in identifying gaps, connecting with local providers, and helping to communicate needs. If you would like assistance in advocating for broadband when speaking with providers, please contact broadband@sde.idaho.gov for additional resources, guidance and support..

Resources:

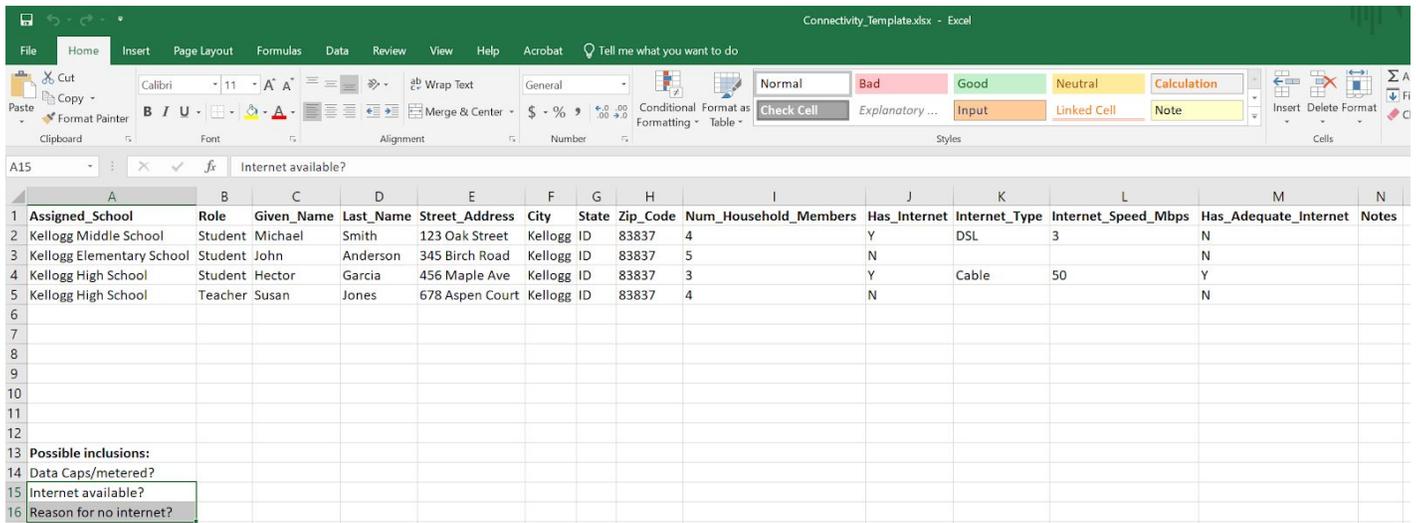
- DigitalBridgeK-12 (includes steps, guides, and tools to find providers):
<https://digitalbridgek12.org/toolkit/research-options/connect-your-students-to-internet/>
- FCC Broadband Provider Map <https://broadbandmap.fcc.gov/#/>
- State Department of Education <https://www.sde.idaho.gov> [need to put in appropriate link]

The following pages provide a guide to creating basic map visualizations using a freely available tool for those who do not have experience in this area.

Mapping your Internet/Broadband data results

Once data has been collected for Student/Teacher/Staff , this information can be used to create a visual map. The purpose of this map is to provide an illustration for internet providers, areas of need, with the goal of providing adequate connectivity. There are a variety of reasons for lack of broadband internet, however, oftentimes, the solution can merely be a matter of helping providers identify these needs.

Depending on your district's needs and goals, you may use as many data elements from the spreadsheet template as you wish for your mapping process, or even add additional items to map. Remember, the primary goal of this tool is to help potential providers know where areas of need are, including areas of limited or insufficient bandwidth.

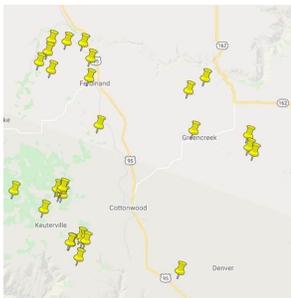


Assigned_School	Role	Given_Name	Last_Name	Street_Address	City	State	Zip_Code	Num_Household_Members	Has_Internet	Internet_Type	Internet_Speed_Mbps	Has_Adequate_Internet	Notes
Kellogg Middle School	Student	Michael	Smith	123 Oak Street	Kellogg	ID	83837	4	Y	DSL	3	N	
Kellogg Elementary School	Student	John	Anderson	345 Birch Road	Kellogg	ID	83837	5	N			N	
Kellogg High School	Student	Hector	Garcia	456 Maple Ave	Kellogg	ID	83837	3	Y	Cable	50	Y	
Kellogg High School	Teacher	Susan	Jones	678 Aspen Court	Kellogg	ID	83837	4	N			N	

Possible inclusions:

- Data Caps/metered?
- Internet available?
- Reason for no internet?

From your spreadsheet of choice (Excel, GSheets, Numbers) save the data as a .csv (comma separated values) file. This file will be used to import into a mapping tool.



For the mapping process, there are many tools. In this example, we will show Google MyMaps, which is free and simple to use. You may utilize another solution, depending on your experience and access.

Go to <https://mymaps.google.com> (from either GSuite or Gmail account)

Click "CREATE A NEW MAP"

Google My Maps

+ CREATE A NEW MAP

Click on the title of the map to rename. You may also click on the “Untitled layer” to be more specific. (optional)

Untitled map

All changes saved in Drive

Add layer Share Preview

Untitled layer

Import

Add places to this layer by drawing or importing data. [Learn more](#)

Base map

Click on the “Import” link to initiate your data point upload. Navigate and locate your .csv file.

Sample SD Internet Needs

All changes saved in Drive

Add layer Share Preview

Untitled layer

Import

Add places to this layer by drawing or importing data. [Learn more](#)

Base map

From the import dialog, select data points to be placed on the map. This is for the actual position on the map. Addresses are required, but you may include other data, depending on your district’s preference and/or restrictions.

On the next screen, choose the column(s) to represent the title of your placed markers. Address may be adequate for this step.

Choose columns to position your placemarks

Select the columns from your file that tell us where to put placemarks on the map, such as addresses or latitude-longitude pairs. All columns will be imported.

<input type="checkbox"/>	Assigned_School
<input type="checkbox"/>	Role
<input type="checkbox"/>	Given_Name
<input type="checkbox"/>	Last_Name
<input type="checkbox"/>	Street_Address
<input type="checkbox"/>	City
<input type="checkbox"/>	State
<input type="checkbox"/>	Zip_Code

Continue

Back

Cancel

Once imported, you can adjust the zoom, as well as the map type by clicking the “Base Map” dropdown.

Base map

When finished you should have a custom map with markers showing areas of need for broadband internet of your Students/Teachers/Staff. This can be shared with local providers.***



*** **NOTE:** Please be aware of Family Educational Rights and Privacy Act (FERPA) as well as State and District requirements regarding sharing student information. Ensure that you are only sharing appropriate information. Share only directory information in accordance with your own policies, or more detailed information if there is a FERPA exception. FERPA Directory information <https://www2.ed.gov/policy/gen/guid/fpco/ferpa/mndirectoryinfo.html>

Community Broadband Hotspots

Although the ultimate goal is to provide equitable and adequate broadband access to each household, this will not be possible in all situations. In order to address this gap, it is imperative that open and available wireless public hotspot locations are made available within communities that contain students and staff without home internet access. These locations could be at schools, libraries, community centers, local businesses, or even buses that are parked in various locations in the community.

If public locations are able to remain open with appropriate physical distancing, WiFi can be made available in indoor locations. Ideally, outdoor public WiFi locations would also be made available within communities in the event that indoor facilities are not open. While not ideal, this allows students the ability to physically distance in good weather or utilize the WiFi from within a parked car if needed.

The State Department of Education has built a map of public WiFi hotspots available for educational use. This map is located at [\[insert permanent link here --- link added to connectivity section of reopening website?\]](#). This map is regularly updated. If you have a public hotspot that you would like to add to the map, please contact broadband@sde.idaho.gov.

