

Mid-Willamette Valley Broadband Consortium

Polk County Presentation

Broadband Survey and School Hotspot Analysis

Why we are doing this

Identify areas where students need better broadband service
Support grant applications for broadband projects
Ensure funding is prioritized to focus on areas of need

Constraints

Data Comes from Diverse Sources
Data was Collected for Varying Purposes
Some of the Data is Proprietary

Geographic Information System (GIS) Data & Tools

Inputs

- Past School Surveys/Hotspot Requests
- Other Local Surveys (i.e. Polk County)
- US 2020 Census Data (ESRI)
- Speed Tests?


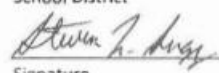
Tools

- Data Sharing (Google Drive)
- Geocoding Services (GIS-ESRI)
- Data Analysis (GIS-ESRI)
- Web Publishing Tools(GIS-ESRI)

Process Used

1. Created & Signed Data Sharing Agreements (Dallas SD & Dayton SD)
2. Shared Data using Google Drive
3. Standardized Data
4. Geocoded Addresses
5. Intersected Geocoded Addresses with Census Blocks
6. Built Census Block Statistics
7. Analyzed Data
8. Shared Results – Power Point

1. Created & Signed Data Sharing Agreements

Inter-Government Agreement Between Polk County ("Polk") and <u>Dayton SD #8</u> ("District")		Polk County Contract No. 22-117
<p>Whereas, Polk and District are member of the Mid-Willamette Valley Broadband Consortium (Consortium) and wish to share data and technical support. This agreement will be executed on <u>7-6-22</u>.</p>		
<p>Whereas, Polk desires to access District data for the purposes of furthering their work for supporting Mid Willamette Valley Broadband Consortium.</p>		
<p>Therefore, it is agreed as follows:</p>		
<ol style="list-style-type: none">1. The District will provide Polk school based internet access data via a private google drive folder.2. Polk recognizes that the data to which they are accessing is confidential under both state and federal law. Polk agrees to not permit any third party access to such data. Polk shall not disseminate or otherwise publish raw or site specific data.3. Polk agrees to implement safeguards internally to protect the data from unauthorized access. Such safeguards shall be those generally accepted in the industry.4. In the event that data from District is somehow breached, accessed or otherwise disseminated in contravention with this agreement, Polk shall notify District as soon as practicable but no longer than 48 hours from the detection of the breach/dissemination.5. Polk agrees to defend, indemnify and hold harmless District, its agent and officials from any and all liabilities related to Polk's possession and use of District data. Such indemnity shall survive the length of this agreement.6. The District agrees the Polk may publish data aggregated to US Census Geographic Units after review and approval by the District. Approvals will be given via email.7. When the data is longer needed to support Consortium objects or when this agreement is terminated, it shall be destroyed and Polk shall provide evidence of such destruction to the satisfaction of Polk.8. Either party to this agreement may terminate this agreement upon 30 days written notice of termination. In the event of breach of this agreement, it either party may terminate the agreement immediately.		
<p>Dated this:</p>		
<p>Polk County</p> <div style="text-align: center;"> Signature</div> <div style="text-align: center;"><u>GREGOR HANSEN</u> Name (print)</div> <div style="text-align: center;"><u>ADMIN. OFFICER</u> Title</div>	<p>School District</p> <div style="text-align: center;"> Signature</div> <div style="text-align: center;"><u>Steven L. Sugg</u> Name (print)</div> <div style="text-align: center;"><u>Superintendent</u> Title</div>	

2. Collected Data from Participants

(Share spreadsheets on Google Drive)

Dayton School District Hotspots

Address	City	Notes
4205 Dayton Oakland	Dayton	
16000 SE Kessler Rd	Dayton	
20450 SE Grand Island Loop	Dayton	

Dallas School District Hotspots

If needing a hotspot: Physical Address
255 NW [redacted] Rd NW SALEM, OR
16000 SE Kessler Rd DALLAS, OR 97338
20450 SE Grand Island Loop DALLAS, OR 97338

3. Standardized Data

(Match Columns & Standardize Addresses)

Polk County Survey

SurveyID	Use	Speed	Reliable	Barriers
349408	(PersonalFrieds, Perso...	Light	BLANK	Cost25
289265	(Commercial, Employ...	Broadband+	3	(NothingBetter, Cost50)
276115	(Employment, Educati...	Light	1	NothingBetter
213859	(Employment, Entertai...	Moderate	5	None

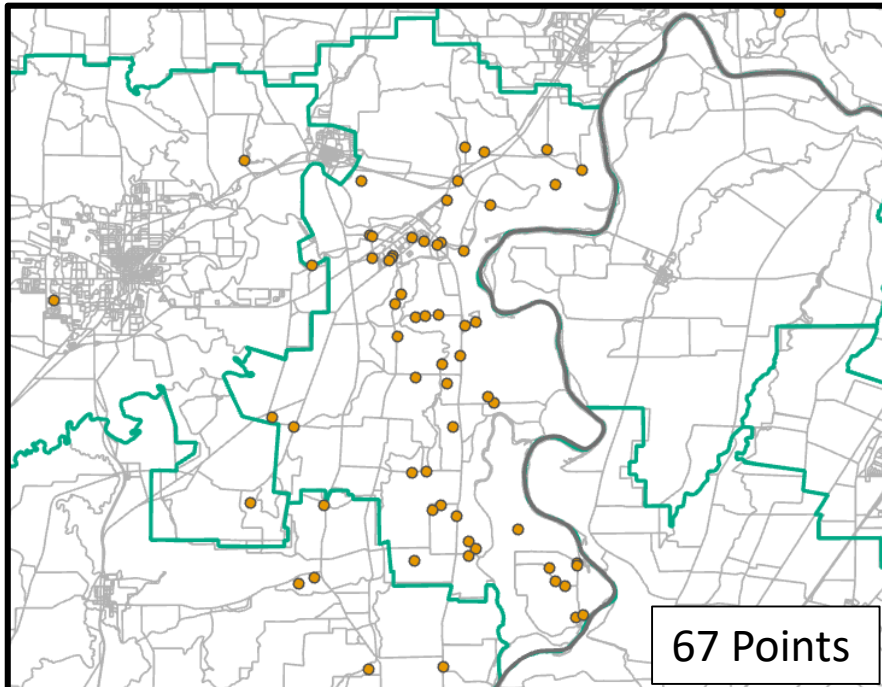
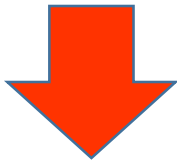
Street	City
255 NW [redacted] Rd NW	Salem
16000 SE Kessler Rd	Dallas
20450 SE Grand Island Loop	Dallas
4205 Dayton Oakland	Dayton
16000 SE Kessler Rd	Dayton
20450 SE Grand Island Loop	Dayton
171030 [redacted] Rd	Dallas
171030 [redacted] Rd	Dallas
20777 27th Ave NW	Salem

4. “Geocoded” Addresses

(Match addresses to streets with address ranges to create points)

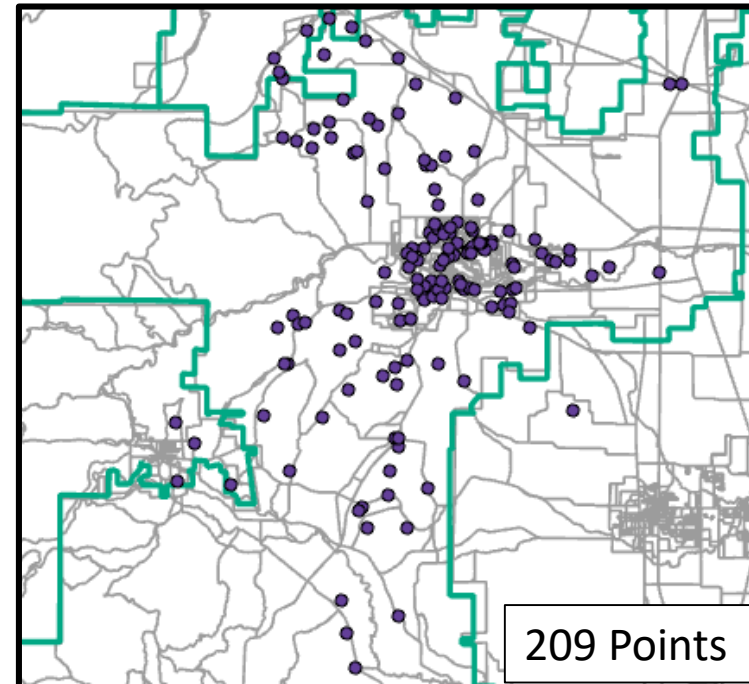
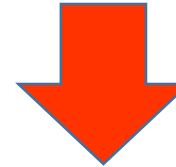
Dayton SD

Address	City
4285 Dayton Blvd	Dayton
16000 SE Kessler Rd	Dayton
20450 SE Grand Island Loop	Dayton

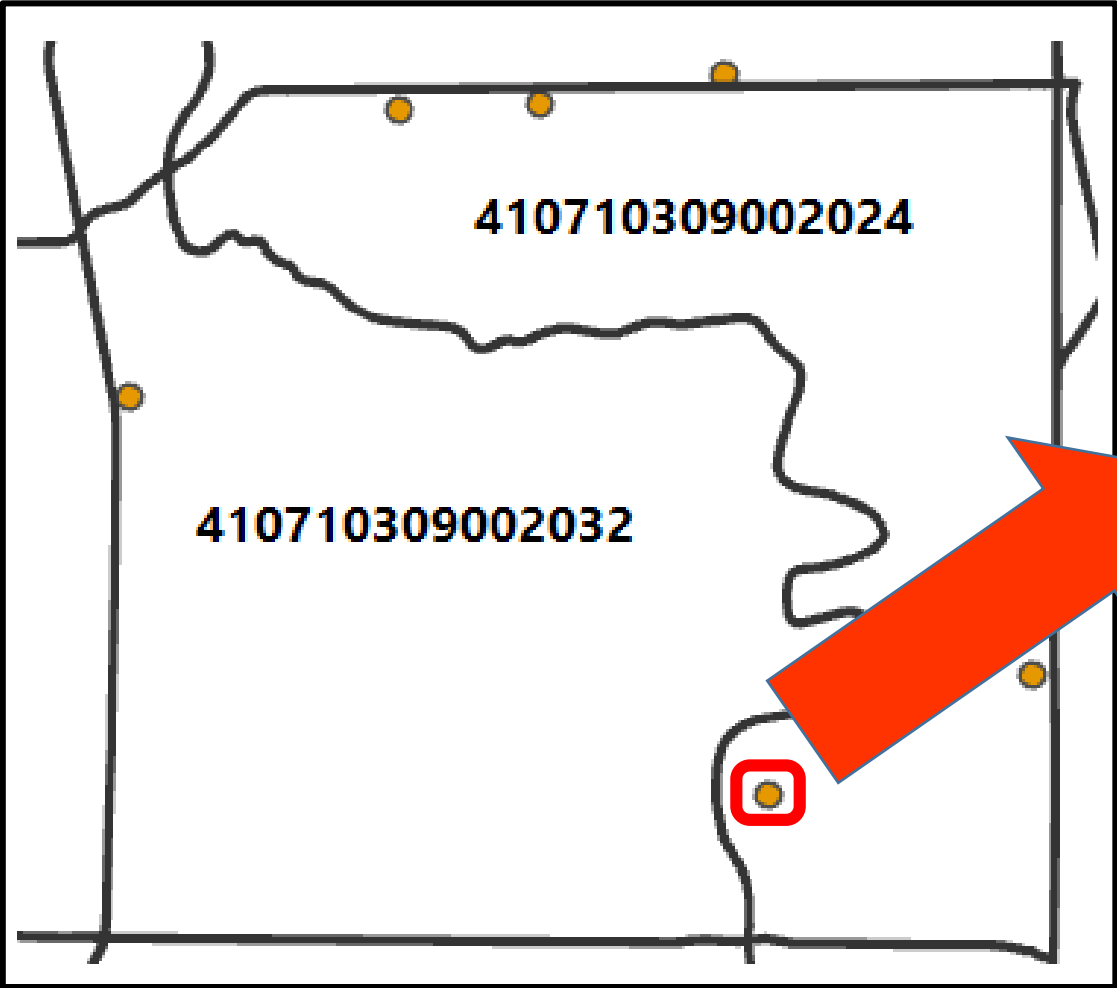


Dallas SD

Street	City
200 N. [redacted] rd NW	Salem
[redacted] HOWE RD	Dallas
210 [redacted] LN	Dallas



5. Intersected Geocoded Addresses with Census Blocks



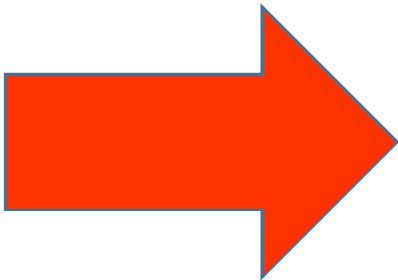
Match_addr	GEOID20
10133 SE Palmer Creek Rd, Dayton, Oregon, 97114	410710309002024
10050 SE Walker Rd, Dayton, Oregon, 97114	410710309002024
5211 SE Webster Rd, Dayton, Oregon, 97114	410710309002032
15730 SE Spring Town Rd, Dayton, Oregon, 97114	410710309002024
16010 SE Spring Town Rd, Dayton, Oregon, 97114	410710309002024
16510 SE Spring Town Rd, Dayton, Oregon, 97114	410710309002025

Census
Block
Identifier

6. Built Census Block Statistics

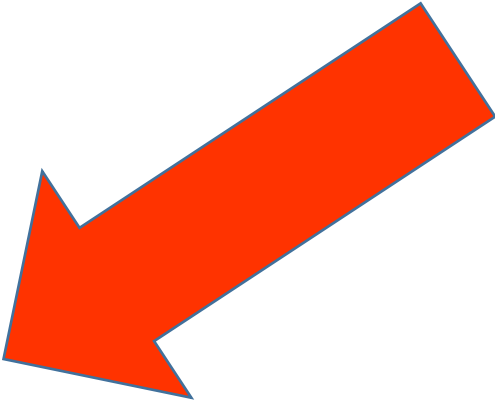
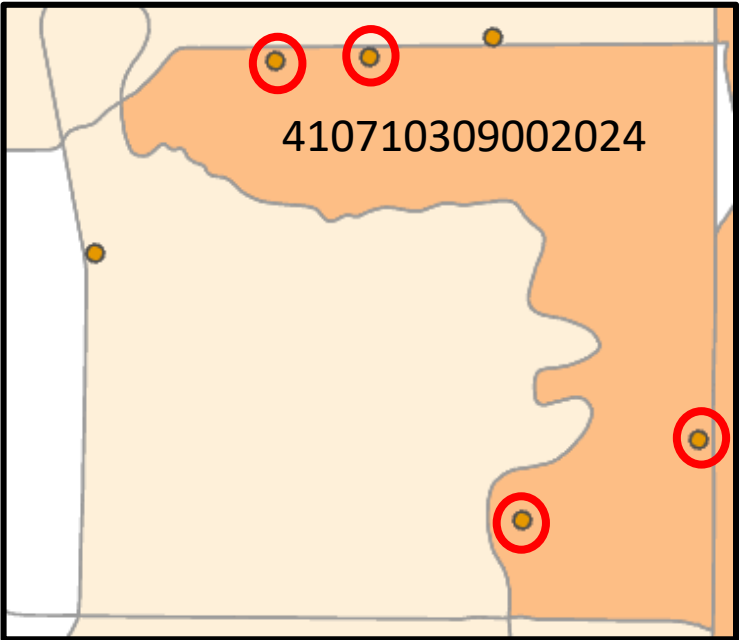
(Frequency Count of Hotspots Per Census Block)

Match_addr	GEOID20
10133 SE Palmer Creek Rd, Dayton, Oregon, 97114	410710309002024
10050 SE Walker Rd, Dayton, Oregon, 97114	410710309002024
5211 SE Webster Rd, Dayton, Oregon, 97114	410710309002032
15730 SE Spring Town Rd, Dayton, Oregon, 97114	410710309002024
16010 SE Spring Town Rd, Dayton, Oregon, 97114	410710309002024
16510 SE Spring Town Rd, Dayton, Oregon, 97114	410710309002025

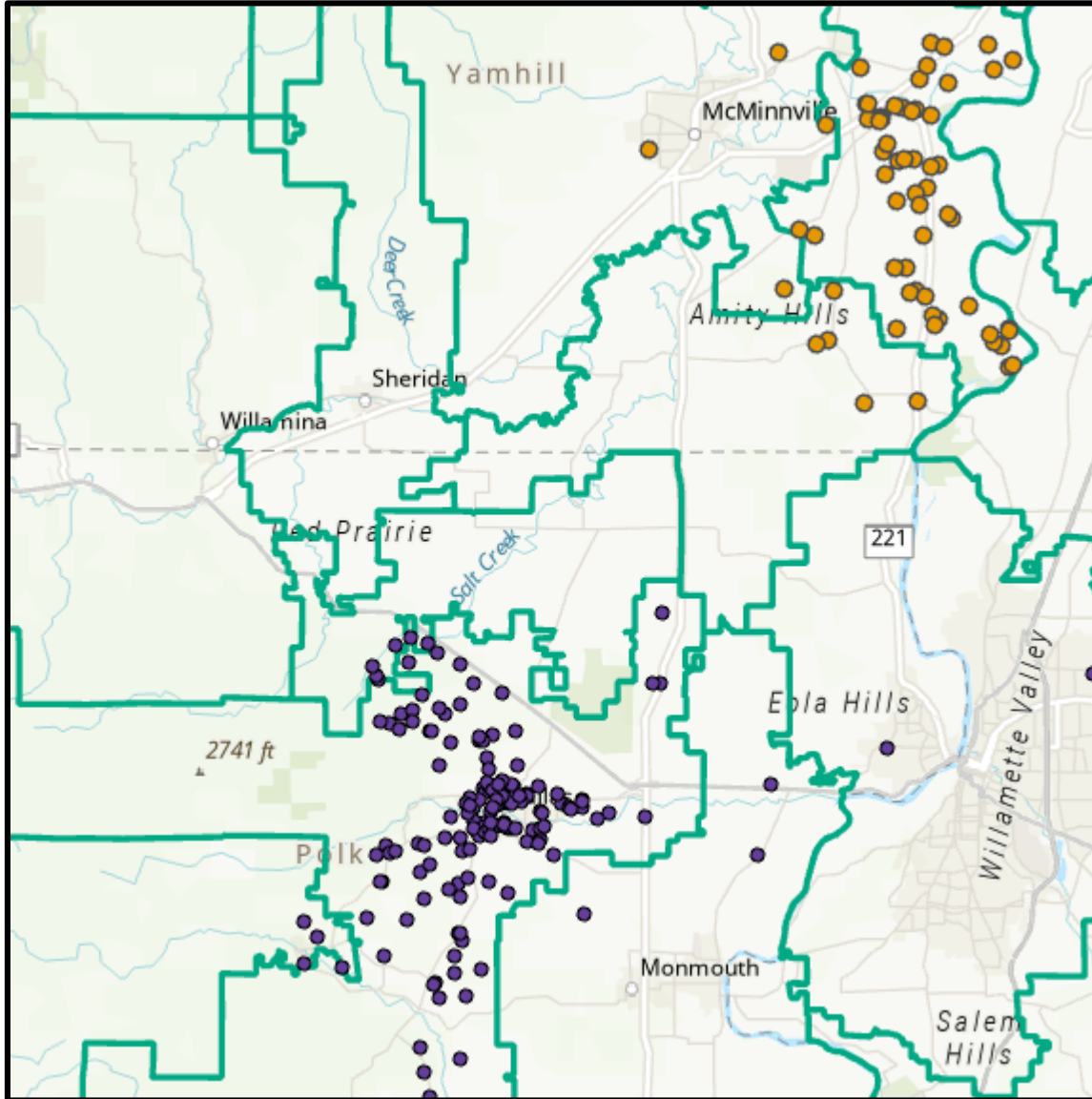


GEOID20	Hotspot
410710309002024	4
410710309002025	1
410710309002032	1

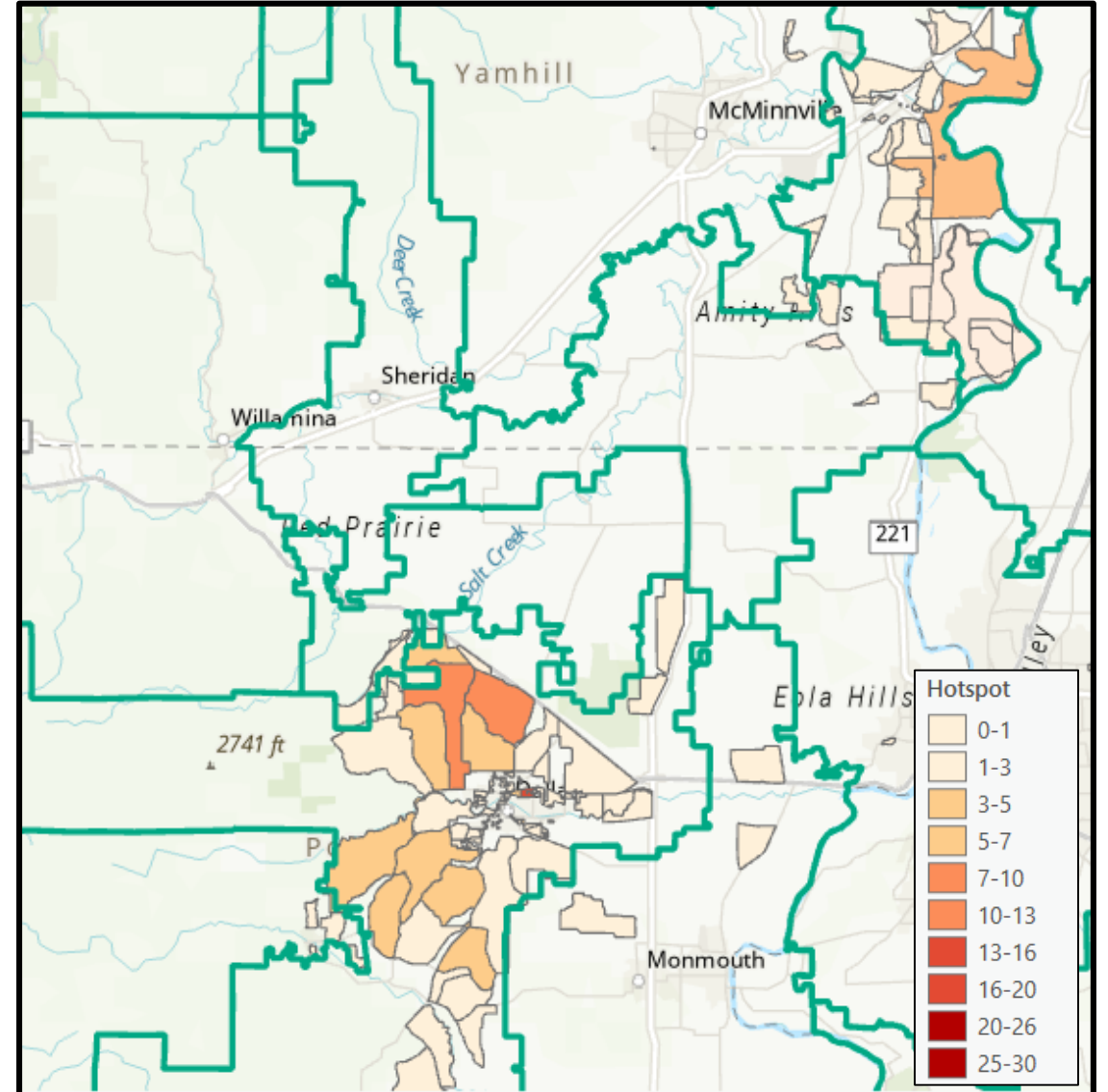
Number of
Hotspots
Requested Per
Census Block



Geocoded Points & Census Block Statistics



Geocoded Points (Dallas SD, Dayton SD)

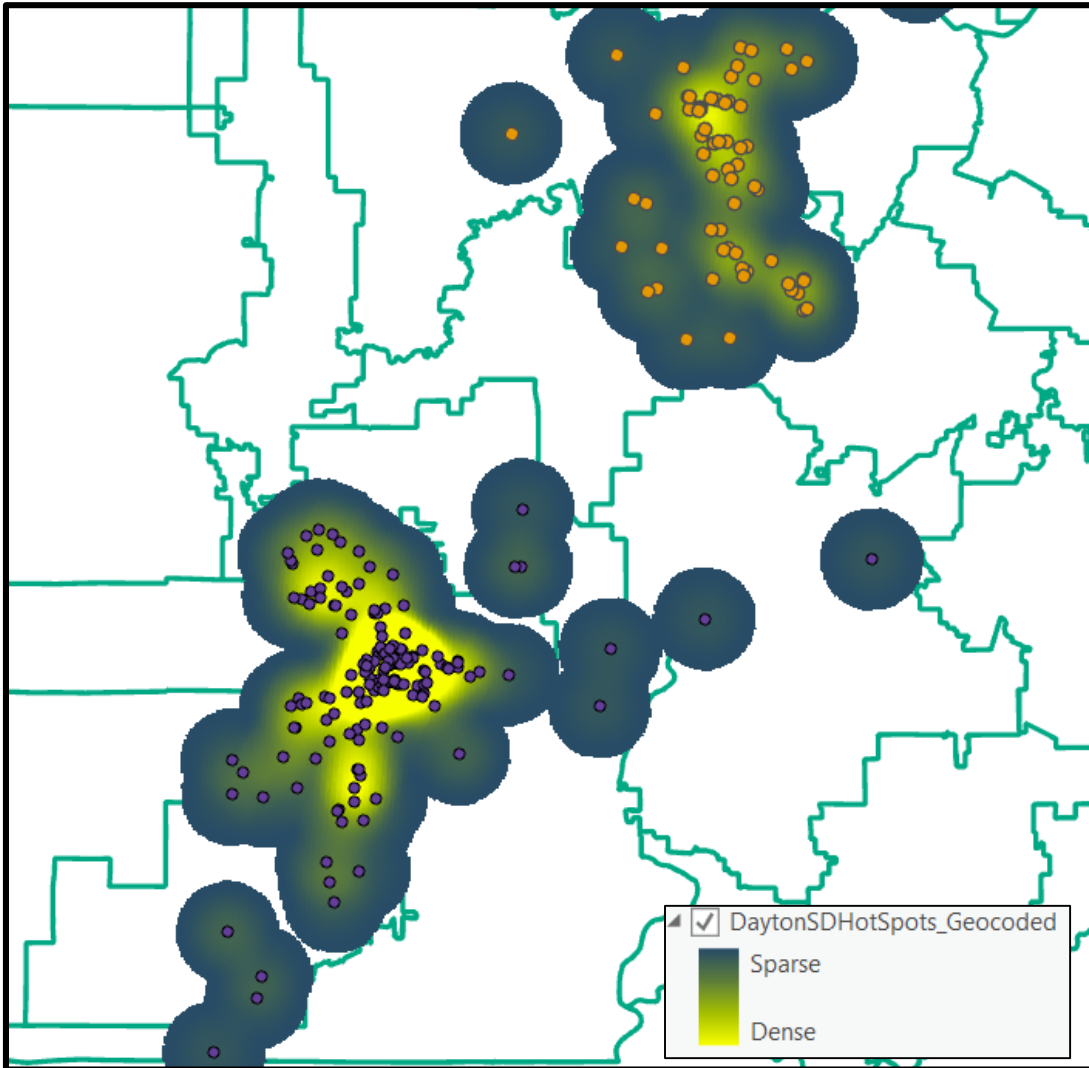


Number Hotspots per Census Block

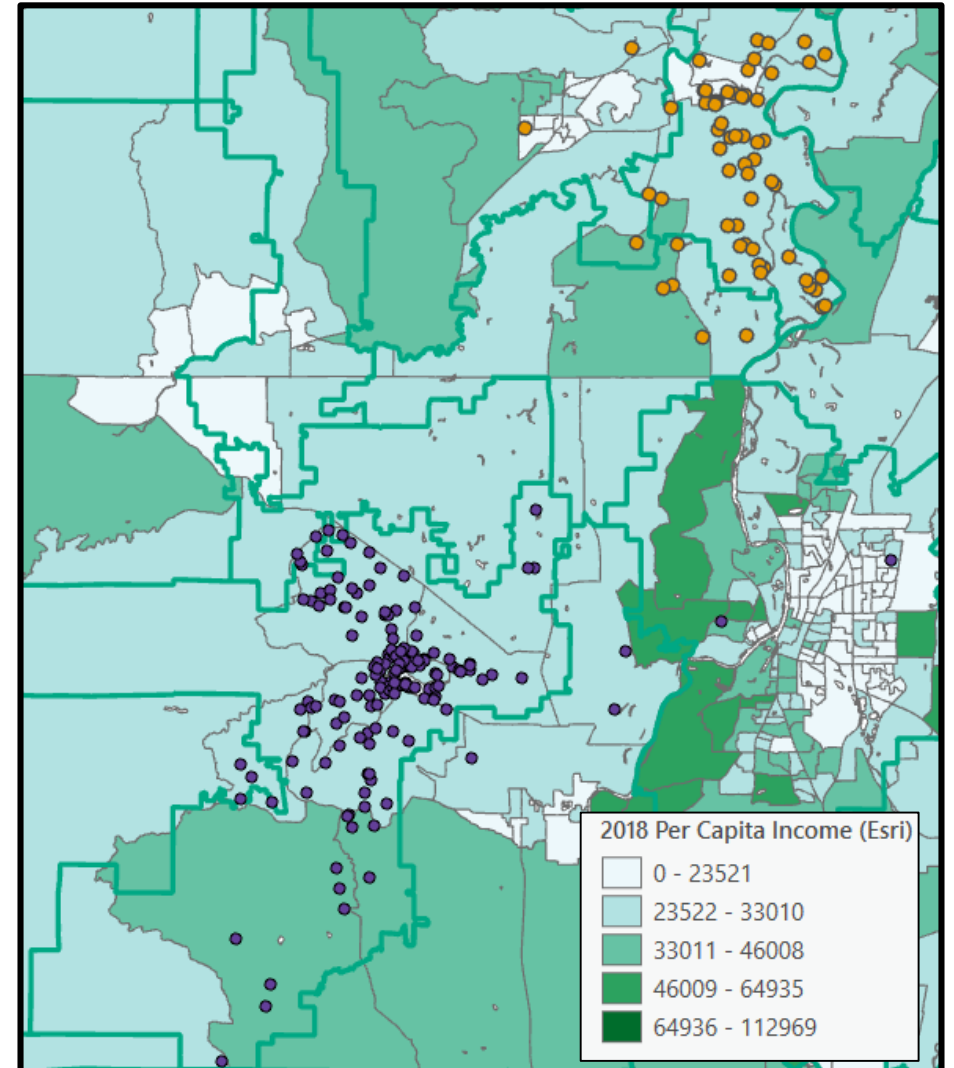
7. Analyzed Data

(Spatial Analysis & Integration with Demographic Data)

Hotspot Analysis



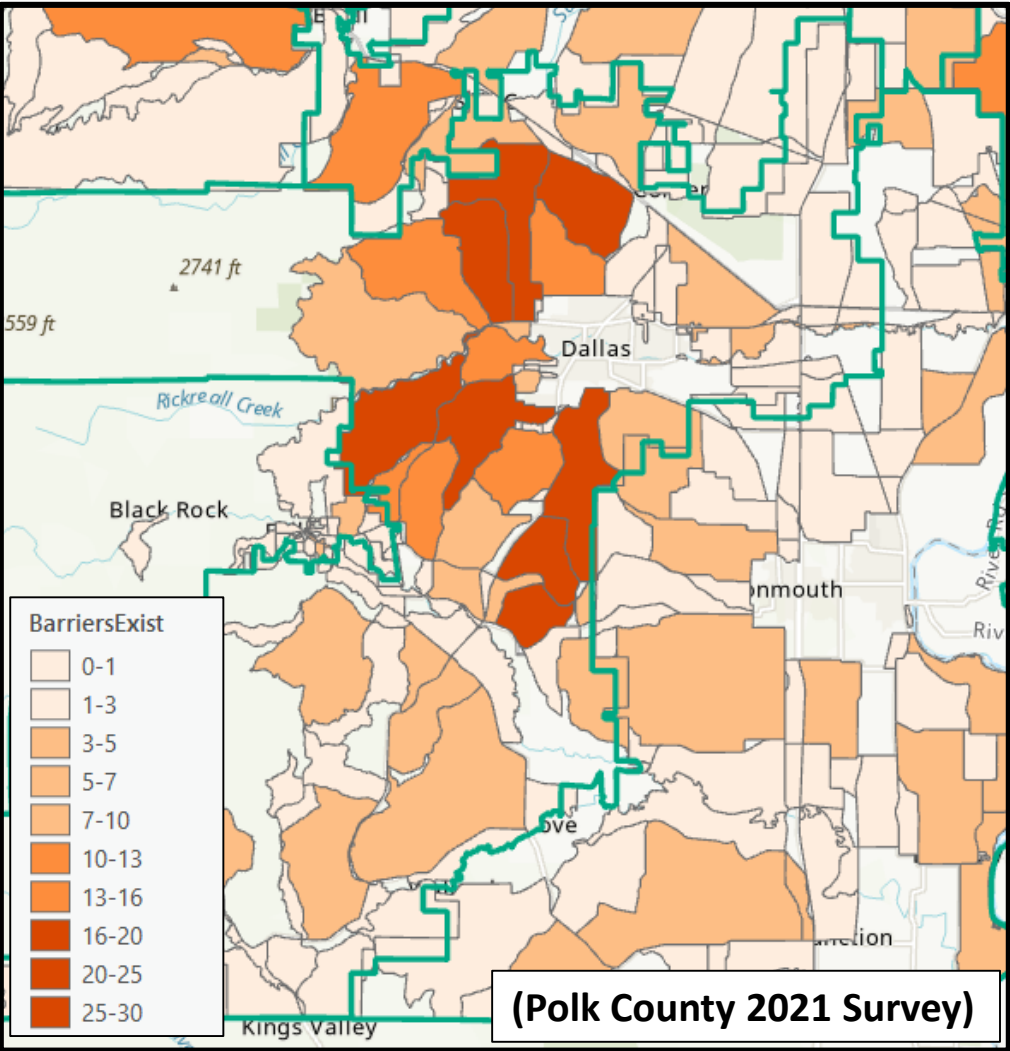
Per Capita Income



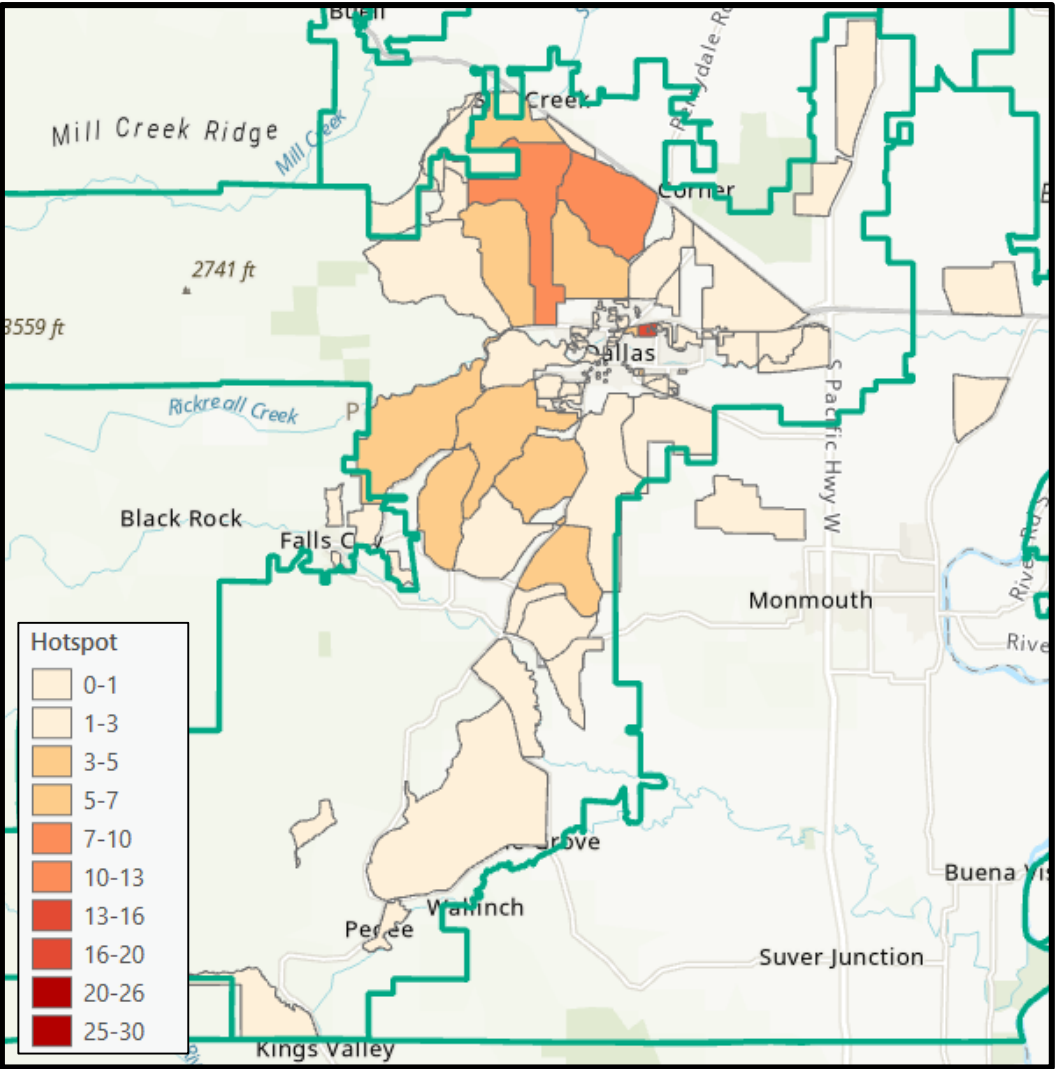
7. Analyzed Data

(Compare Counts per Census Block with Other Survey Data)

Barriers to Better Service Exist



Hotspots Requested (Dallas SD)



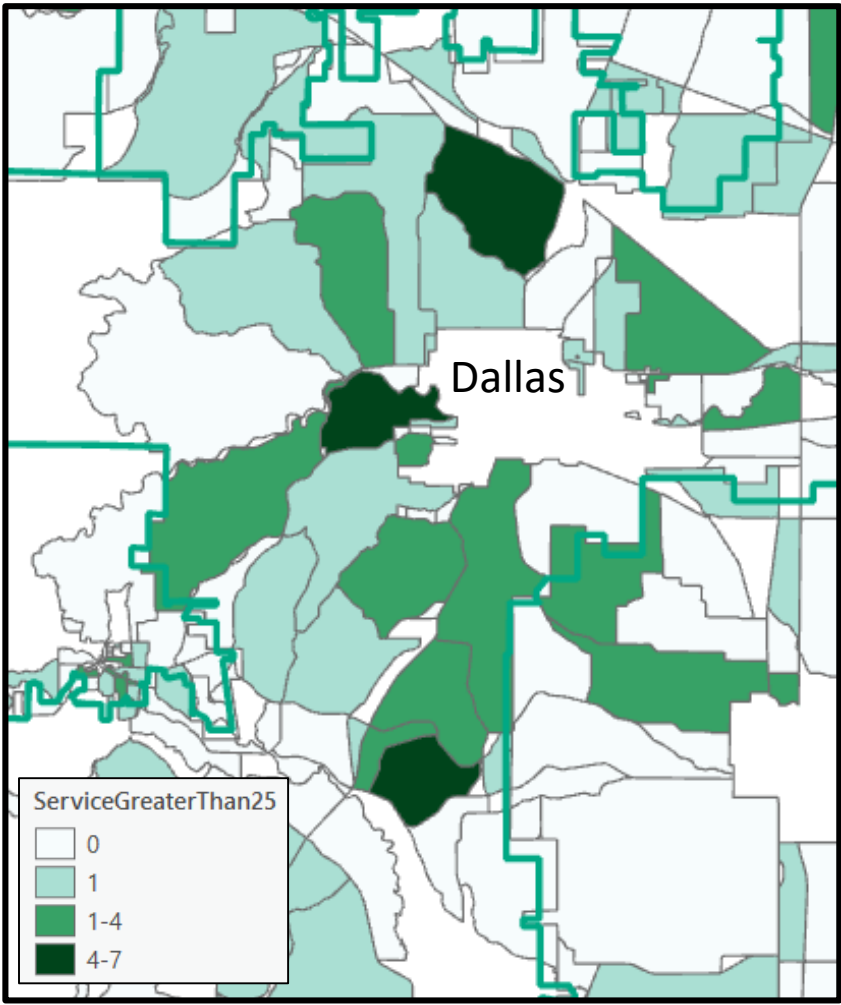
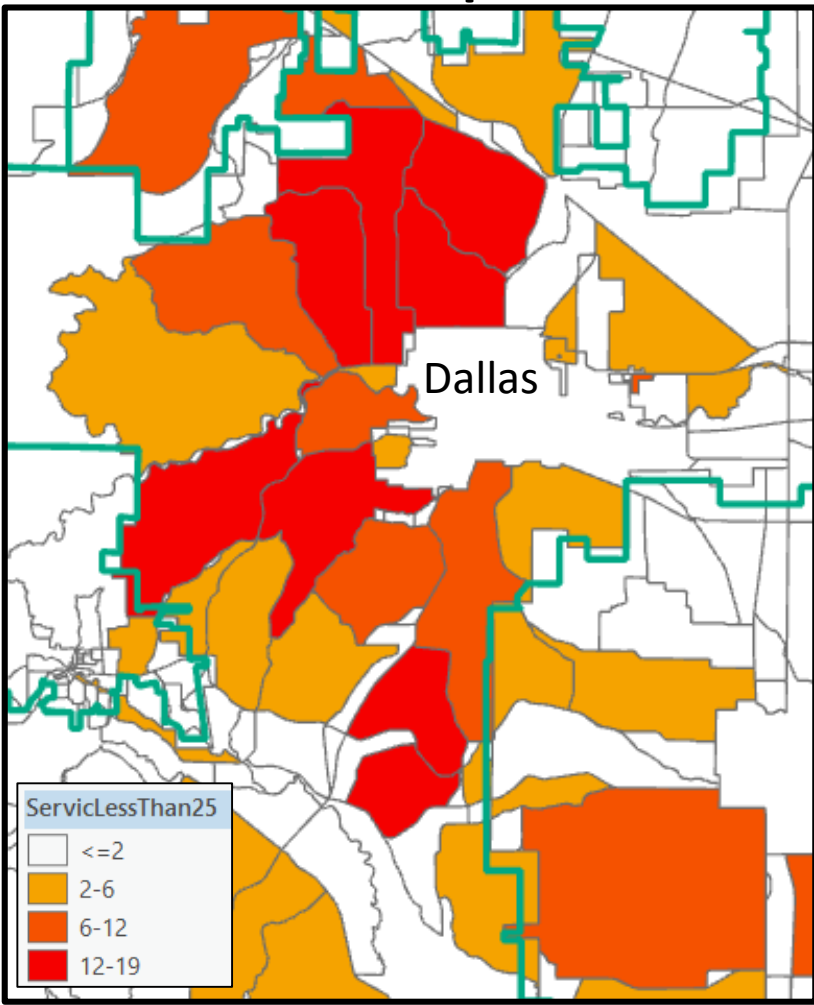
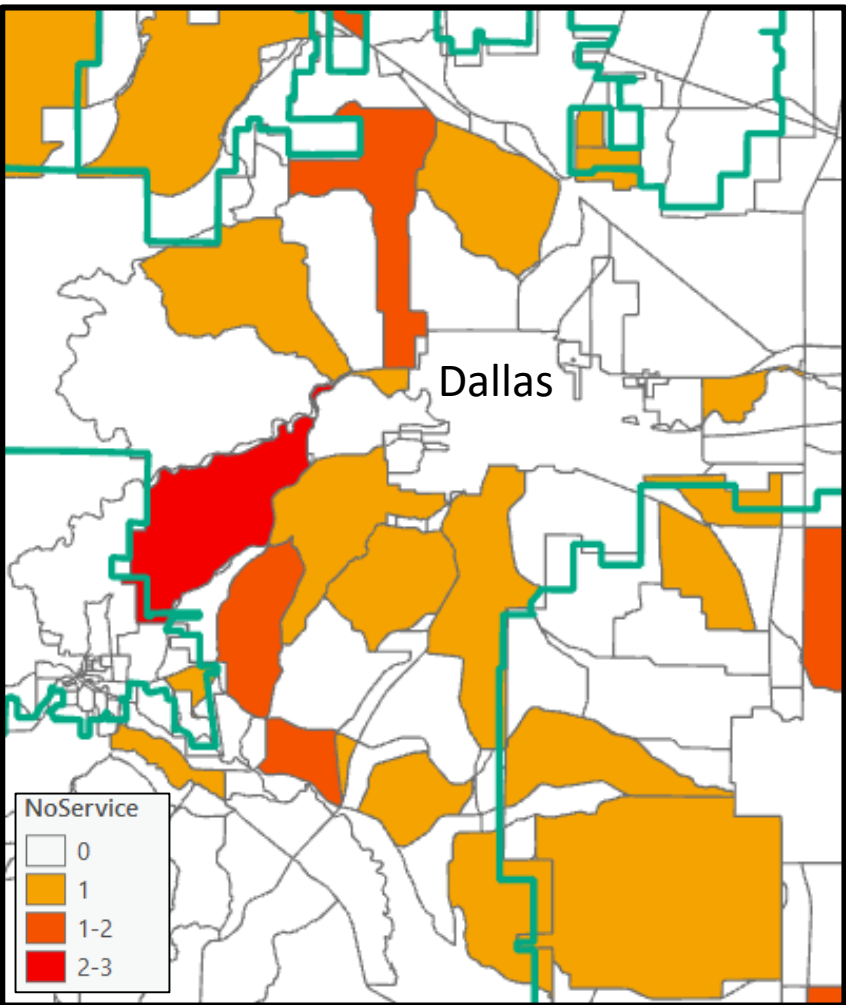
7. Analyzed Polk County Data

(Compare Counts per Census Block of Respondents Regarding Speed)

No Service

< 25Mbps

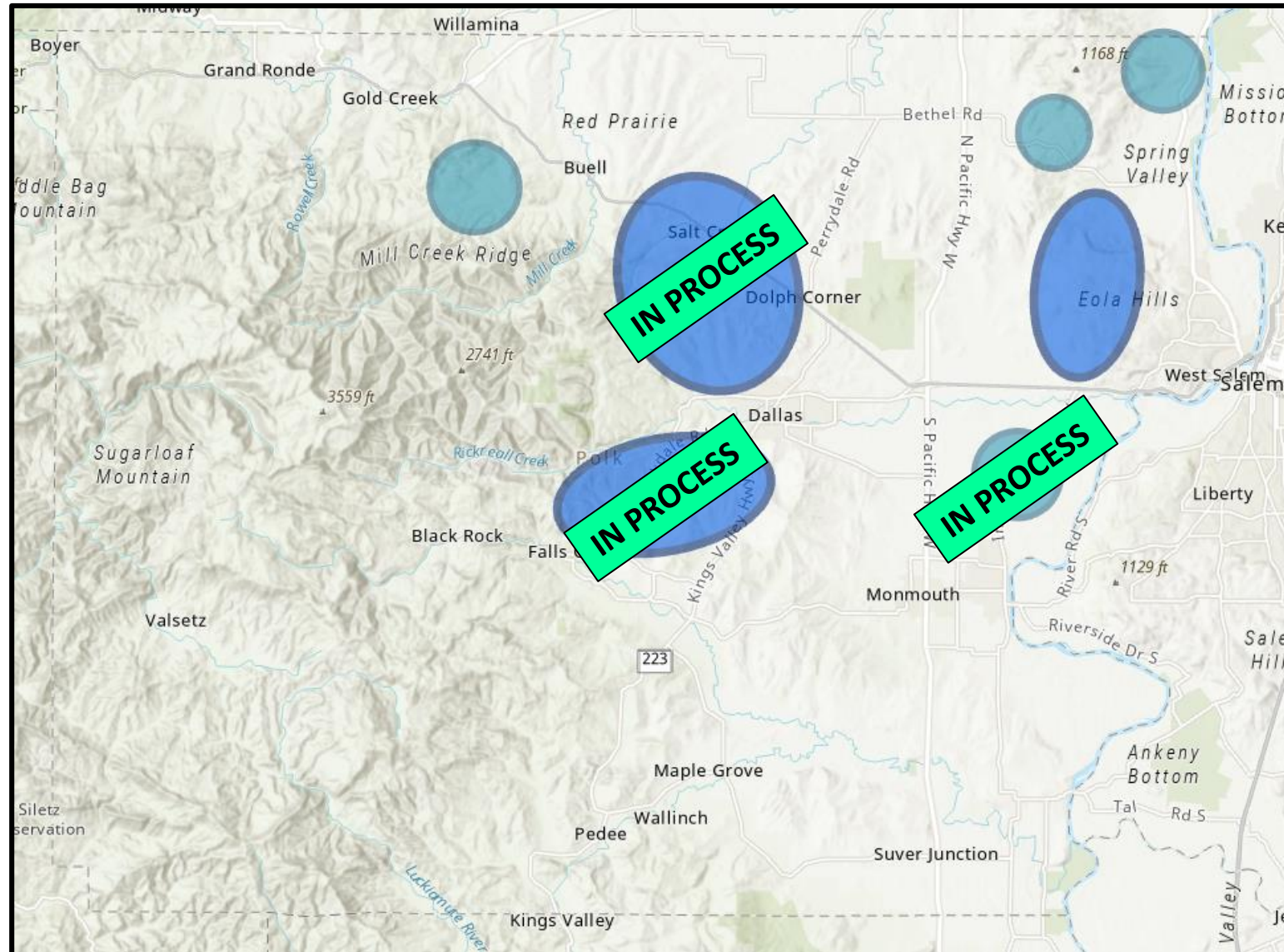
> 25Mbps



Level Of Services (Polk Co 2021 Survey)

7. Analyzed 2021 Polk County Survey Data to Identify Priority Areas

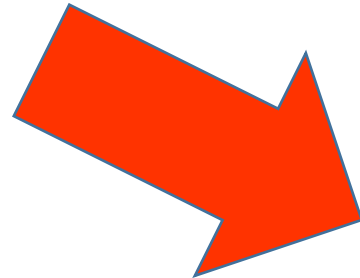
Polk County Priority Areas and Broadband Projects



Process Review

Current Process

1. Created and Signed Data Sharing Agreement
2. Shared Data using Google Drive
3. Standardized Data
4. Geocoded Addresses
5. Intersected Geocoded Addresses with Census Blocks
6. Built Census Block Statistics
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Future Process

1. Standardize Survey / Collection Process (*easier to do it first*)
2. Collect Data
3. Get Data Sharing Agreements in Place
4. Share Data
5. Geocode Addresses
6. Intersect Geocoded Addresses with Census Blocks
7. Build Census Block Statistics
8. Analyze Data To Identify Priority Areas
9. Share Results – Web Based Page