

Tree Data Exercise

Explore the data in the table. Look for interesting

- ▶ Facts
- ▶ Comparisons
- ▶ Interactions (correlations)
- ▶ Changes over time

...or other significant patterns. Draw on the map, if you like. What stories might this data tell?

Tree Data Exercise II

- ▶ What **people** would be interested in this data? What interests **make** them care about the data stories you found?
- ▶ How might this data be **misused**?
- ▶ What **input** does the community have about data depicted here? How might community action change this data five years from now?
- ▶ Is there **other information** you wish you had?

Open Data for Everyone at the Library

A presentation for the OLA-WLA Conference

March 28, 2019



Presenters

- *Kathleen Sullivan, Open Data Literacy Consultant, WA State Library*
- *Will Saunders, Open Data Guy, WA Office of the Chief Information Officer*
- *Ben Tucker, Liaison Librarian, Collins Memorial Library, University of Puget Sound*
- *Mindy Van Wingen, Assistant Director, Everett (WA) Public Library*
- *Christopher Fadden, Network Systems Analyst, City of Everett*
- *Isaac Huffman, Director, Mount Vernon (WA) City Library*

What is Open Data?

Open data and content can be freely used, modified, and shared by anyone for any purpose.

Open Knowledge International

Examples of Open Data

Expenditures by Candidates and Political Committees Dataset

Politics

This dataset contains expenditures made by Washington State Candidates and Political Committees for the last 10 years as reported to the PDC on forms C3, C4, Schedule C and their... [More](#)

Updated March 11, 2019
Views 19,299

From the [WA open data portal](#)

Home > Our Government > Emergency Services

Statistics

Daily Statistics

- Arrests (XLS)
- Citations (XLS)
- Incidents (XLS)

From the [Bremerton, WA police department webpages](#)

Explore Census Data

The Census Bureau serves as the leading source of quality data about the nation's people and economy.

From [the U.S. Census' data exploration platform](#)

Douglas County's GIS Department services in addition to managing information.

- Interactive Web Mapping
- GIS data on our FTP site. ([Accessing our FTP Site](#))
- Publish Reference Maps
- Assign new addresses in unincorporated County
- Approve new road names and changes for roads in unincorporated areas

From [Douglas County, Washington's GIS webpage](#)

torture_law.tab Version 2.0

This file is part of "Replication data for: International Law and Public Attitudes Toward Torture: An Experimental Study".

Dataset Citation

Wallace, Geoffrey P.R., 2013, "Replication data for: International Law and Public Attitudes Toward Torture: An Experimental Study", <https://doi.org/10.7910/DVN/KNSMOC>, Harvard Dataverse, V2, UNF:5:ai9qNlejI9KsNI1Lx1E8mg== [fileUNF]

[Cite Dataset](#)

[Learn about Data Citation Standards.](#)

From the [Harvard Dataverse](#)

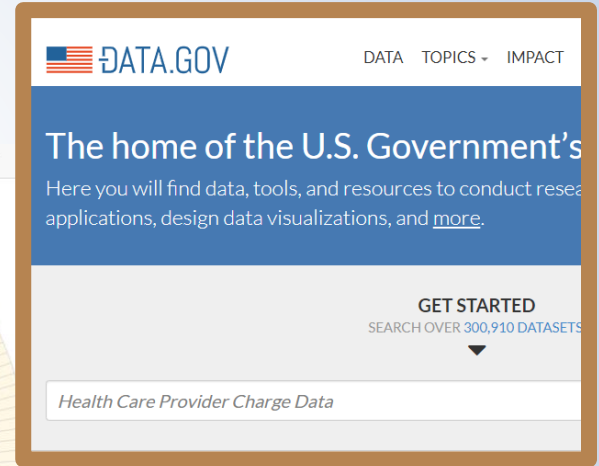
Where to Find Open Data Portals & Repositories



[City of Spokane's GIS portal](#)



Graphic browser of [r3data registry](#) of research data repositories



[U.S. federal government open data portal](#)

What Raw Open Data Looks Like

```
PARKS_Park_Boundaries.kml
<?xml version="1.0" encoding="utf-8" ?>
<kml xmlns="http://www.opengis.net/kml/2.2">
<Document id="root_doc">
<Schema name="OGRGeoJSON" id="OGRGeoJSON">
  <SimpleField name="OBJECTID" type="int"/></SimpleField>
  <SimpleField name="ParkName" type="string"/></SimpleField>
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  <SimpleField name="ParkCode" type="int"/></SimpleField>
  <SimpleField name="WebPage" type="string"/></SimpleField>
  <SimpleField name="Abbry" type="string"/></SimpleField>
  <SimpleField name="Imagelink" type="string"/></SimpleField>
  <SimpleField name="Acres" type="float"/></SimpleField>
  <SimpleField name="Lat_Entrance" type="float"/></SimpleField>
  <SimpleField name="Long_Entrance" type="float"/></SimpleField>
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  <Placemark>
    <description>Alta Lake State Park is a 174-acre camping park where the mountainous
    pine forests meet the desert.</description>
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    </SimpleData>
    <SimpleData name="Abbry">ALL</SimpleData>
    <SimpleData name="Imagelink">http://parks.state.wa.us/ImageRepository/Path?
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  </Placemark>
</Folder>
</Document>
</kml>
```

Park boundary data from the Washington Geospatial Open Data Portal

Service Layer ID	feature desc	PMAID
0	Adult Fitness Equipment	345
0	Adult Fitness Equipment	376
0	Adult Fitness Equipment	422
0	Adult Fitness Equipment	429
0	Adult Fitness Equipment	431
0	Adult Fitness Equipment	435
0	Adult Fitness Equipment	450
0	Adult Fitness Equipment	456
0	Adult Fitness Equipment	4242
0	Adult Fitness Equipment	4243
0	Adult Fitness Equipment	4263
0	Adult Fitness Equipment	4450
0	Adult Fitness Equipment	4456
34	Art in the Park	114
34	Art in the Park	200
34	Art in the Park	243
34	Art in the Park	244
34	Art in the Park	250
34	Art in the Park	253
34	Art in the Park	264

Park features from Seattle's open data portal

What Slightly Processed Open Data Looks Like



[Park boundary data from the Washington Geospatial Open Data Portal](#)

A screenshot of a Microsoft Excel spreadsheet. The spreadsheet has a standard ribbon interface with tabs for FILE, HOME, INSERT, PAGE LAYOUT, and FORMULAS. The active cell is A1, which contains the text 'Service Layer ID'. Below this, there is a table with 13 rows and 4 columns. The columns are labeled A, B, C, and D. The data in the table is as follows:

	A	B	C	D
1	Service Layer feature desc	PMAID		
2	0 Adult Fitness Equip		345	
3	0 Adult Fitness Equip		376	
4	0 Adult Fitness Equip		422	
5	0 Adult Fitness Equip		429	
6	0 Adult Fitness Equip		431	
7	0 Adult Fitness Equip		435	
8	0 Adult Fitness Equip		450	
9	0 Adult Fitness Equip		456	
10	0 Adult Fitness Equip		4242	
11	0 Adult Fitness Equip		4243	
12	0 Adult Fitness Equip		4263	
13	0 Adult Fitness Equip		4450	

[Park features from Seattle's open data portal](#)

What Open Data Makes Possible

Understanding Important Issues



Homelessness feature on Association of Washington Cities' open data portal

Washington State Library



What Open Data Makes Possible Better Services



[Chicago food inspection forecasting GitHub website](#)

*Enabling Open-source Data Networks in
Public Agricultural Research*
CAST Commentary QTA2019-1

The cover image for the CAST Commentary QTA2019-1. It is a horizontal banner divided into three sections. The left section shows laboratory glassware with a plant growing in one. The middle section shows a globe with a circular data path. The right section shows a green plant in a glass container. The text 'CAST Commentary QTA2019-1 March 2019' is overlaid on the left and middle sections.

Presented by
Sylvie Brouder, Ph.D.
Purdue University, Department of Agronomy
March 2019

[Presentation at the Council for Agricultural Science and Technology](#)

What Open Data Makes Possible

User-Friendly Apps and Tools

OneBusAway

The Open Source platform for
Real Time Transit Info

Try OneBusAway for [Puget Sound, Washington](#);
[Rogue Valley, Oregon](#); [San Diego, California](#); or
[Tampa Bay, Florida](#). Branded versions of
OneBusAway are also available in [New York
City](#); [Poznań, Sroda Wielkopolska, Poland](#); [Washington DC](#); and



From the [OneBusAway website](#)



DATA ANALYSIS TOOLS



Comparison Graphs and Data

Select up to 12 schools, districts and/or states and view and compare

Examples:

- * For 10 schools, a district and a state, compare the in-school suspension rates
- * Compare the multiple out-of-school suspension rates for LEP students
- * Additional assistance is available through this [tutorial](#)

From the [Civil Rights Data Collection website](#)

Washington State Library



Data's Role in Public Life is Exploding

Government, business and researchers are using data more and more to make decisions and deliver services.



From [Sidewalk Labs' homepage](#)

What Does That Have to Do with This?



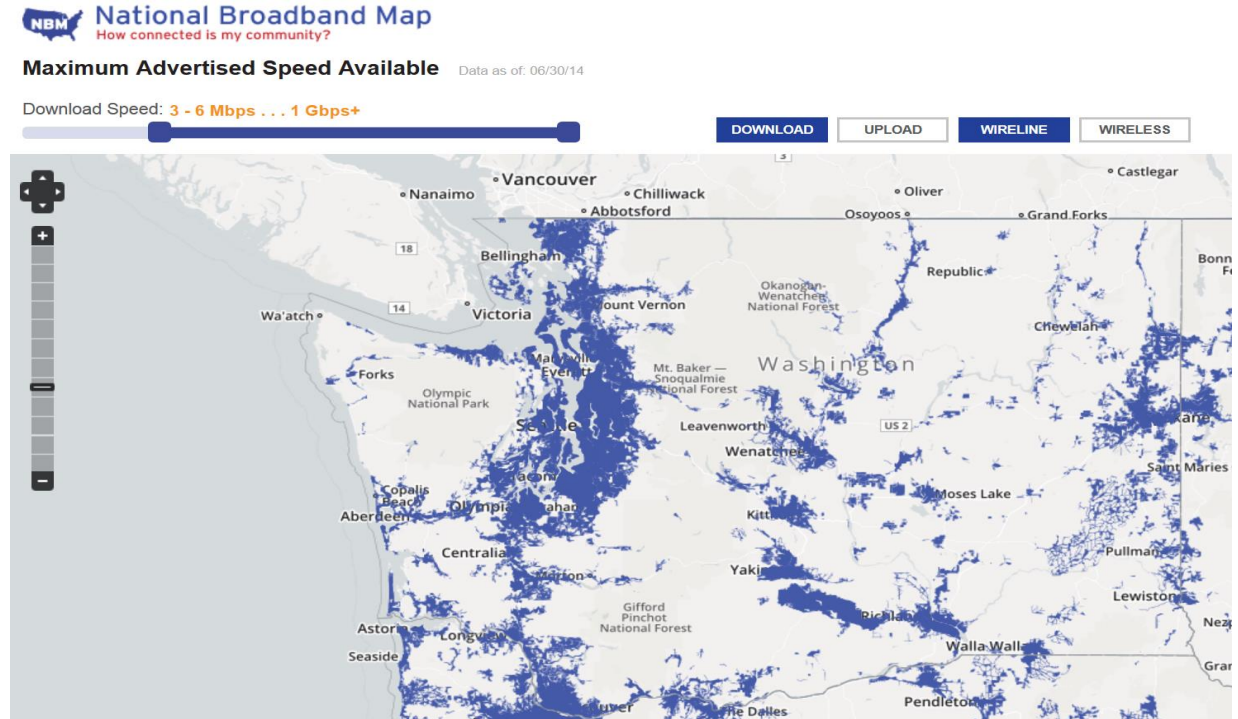
Open Data Gives Libraries the Chance to ...

- ▶ Catalyze growth of a valuable public resource
- ▶ Showcase the service that sets libraries apart
- ▶ Champion access, equity and privacy in public life
- ▶ Advance strategic goals and streamline operations
- ▶ Demonstrate value directly to funders and influencers

Open data success: Broadband maps

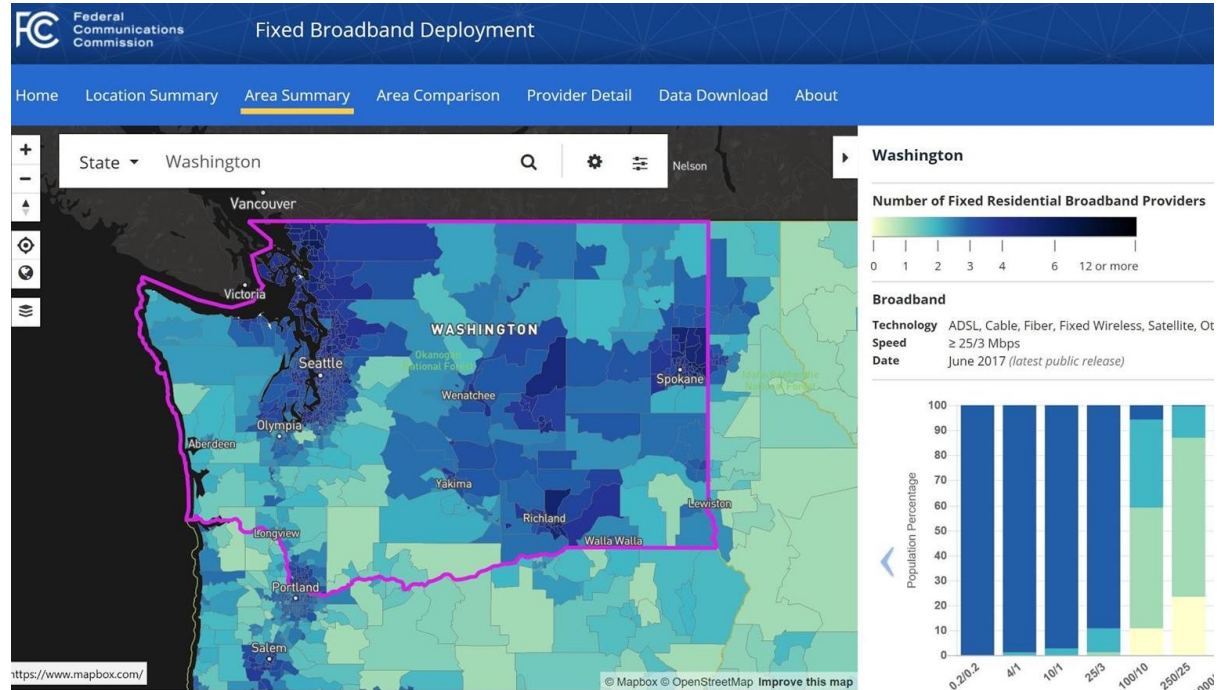
Broadband during the recession

- Jobs program
- Federal-state partnership
- Open Data for accountability
- Crowdsourced info on ground truth



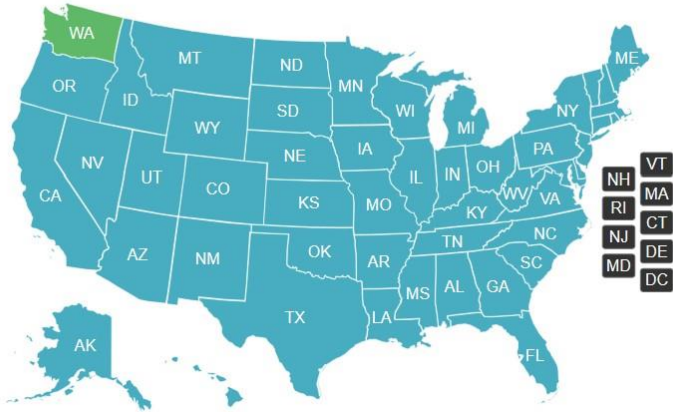
Current resources - FCC data

- Partnership with carriers
- No ground truth
- Credibility issues



Next Generation - Localized & Correctable

State Broadband Programs



NTIA Partners with 8 States on Improvements to Broadband Availability Map

Topics: [Broadband](#) [National Broadband Map](#)

 [Printer-friendly version](#)

FOR IMMEDIATE RELEASE:

February 12, 2019

News Media Contact:

NTIA, Office of Public Affairs, [\(202\) 482-7002](tel:(202)482-7002), press@ntia.doc.gov

Today, the National Telecommunications and Information Administration (NTIA) announced that it is collaborating with eight states to broaden and update the national broadband availability map. The eight states – California, Maine, Massachusetts, Minnesota, North Carolina, Tennessee, Utah, and West Virginia – will contribute data and other inputs to the map.



Connection to my work and to libraries:

- State broadband office
- Libraries as community anchor institutions
- eRate law 2018
- Broadband bill 2019

What it means

*Open data changes the
landscape for government*

Open Data Success: *Community Indicators Initiative*



Spokane Community Indicators About | Contact | Newsletter

WELCOME

Thank you for visiting the Community Indicators Initiative of Spokane, an online community resource offering a centralized location to learn more about Spokane County. Over 185 indicators are highlighted, all supported by trusted, reliable sources and continually updated.

These measures were chosen by residents of the County through a careful process and represent the preferences of what to measure from the available data. As you begin to examine the nine main categories, we hope you find the information relevant and useful in your daily work and decision-making.

- People
- Culture & Recreation
- Economic Vitality
- Education
- Environment
- Health
- Housing
- Public Safety
- Transportation
- Priority Spokane

<http://spokanetrends.org/>

Washington State Library



Community Indicators Initiative: Category page



People



Culture & Recreation



Economic Vitality



Education



Environment



Health



Housing



Public Safety



Transportation



Priority Spokane

OVERVIEW

RESOURCES

INDICATORS

COMMUTING & EXPENSES

PUBLIC TRANSIT

AIRPORT ACTIVITIES

TRANSPORTATION

Mobility is essential to the human experience, especially in places like Spokane, where basic needs and jobs are not always within walking distance. Transportation choices facing local residents are more numerous than in the past. Alternative modes of transportation are becoming more common and a vigorous debate over these alternatives to the single occupant auto has started in the County. This category explores some of the various transportation choices as well as some more general transportation statistics.

A full definition of each indicator, as well as its relevance to the two counties, can be found in the More Information section. The data themselves are available in a spreadsheet via the Download Data tab.

To reduce the richness of each graph, simply click on a measure in the legend that you would like to see absent. Click again to restore the measure.

Washington State Library



Community Indicators Initiative: Indicators menu

OVERVIEW

RESOURCES

INDICATORS

COMMUTING & EXPENSES

- 8.1.1 Total Commuters & Average Time of Commute
- 8.1.2 Average Daily Vehicle Miles Traveled
- 8.1.3 Average Annual Traveler Delay
- 8.1.4 Median Earnings by Commute Type
- 8.1.5 Housing and Transportation (H+T) Index
- 8.1.6 Local Govt. Expenditures on Roads

PUBLIC TRANSIT

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Washington State Library



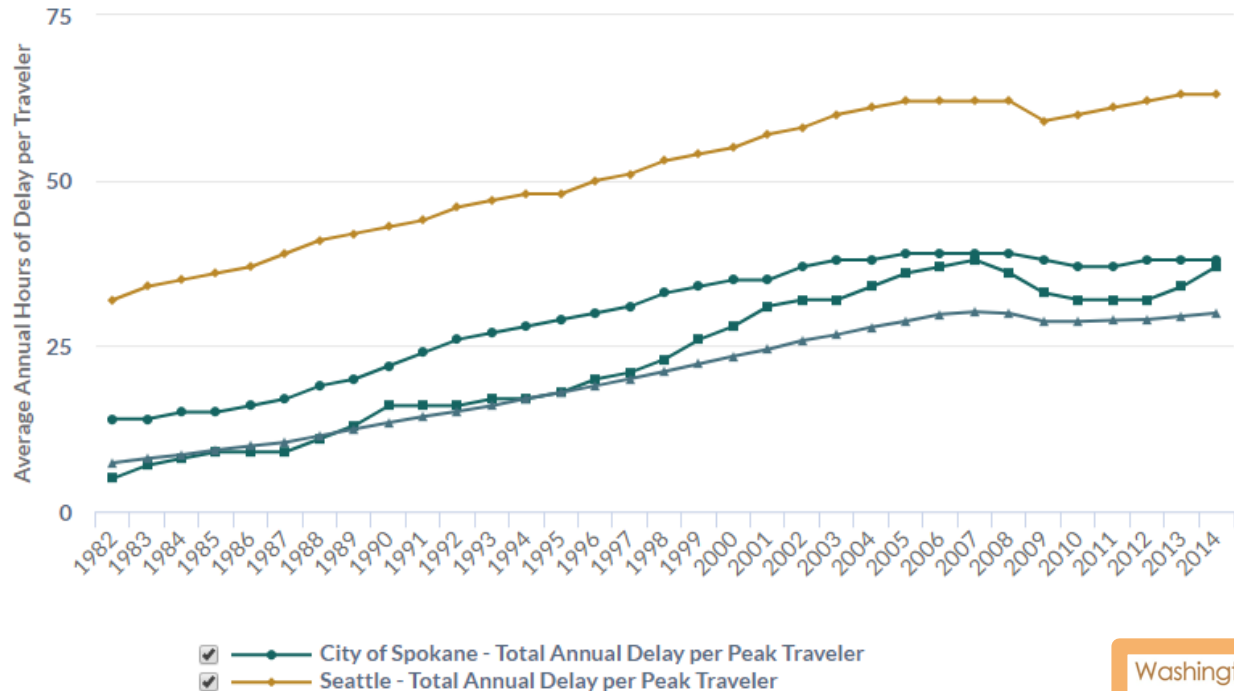
Community Indicators Initiative: Visualization

- 8.1.1 Total Commuters & Average Time of Commute
- 8.1.2 Average Daily Vehicle Miles Traveled
- 8.1.3 Average Annual Traveler Delay
- 8.1.4 Median Earnings by Commute Type
- 8.1.5 Housing and Transportation (H+T) Index
- 8.1.6 Local Govt. Expenditures on Roads

PUBLIC TRANSIT

AIRPORT ACTIVITIES

8.1.3 Average Annual Number of Hours of Auto Traveler Delay per Peak Traveler



Community Indicators Initiative: Summary, data

RESOURCES

INDICATORS

COMMUTING & EXPENSES

- 8.1.1 Total Commuters & Average Time of Commute
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PUBLIC TRANSIT

AIRPORT ACTIVITIES

[Chart](#)[More Information](#)[Download Data](#) City

8.1.3 Average Annual Number of Hours of Auto Traveler Delay per Peak Traveler

Why is this important?

Traffic congestion has an adverse impact on individuals, the local economy, and the overall community. For the individual, traffic congestion is associated with stress, automobile accidents, decreased fitness, and higher transportation costs due to the increased amount of time spent in the vehicle. For the local economy, which values speed, reliability, and efficiency, effective transportation is a critical link in the production process for many businesses. For the community, traffic congestion affects air quality, road maintenance, traffic control, and smart growth.

Annual hours of travel delay represents the number of hours per year that drivers are delayed in traffic because of recurring congestion and incidents.

This indicator measures the average annual number of hours of auto traveler delay per peak traveler in the City of Spokane, Seattle and the national average for small urban areas are offered as benchmarks.

Where are we?

During 2014, the total annual average number of hours of auto traveler delay per peak traveler in:

- The City of Spokane was 38, increasing from 14 in 1982.
- The City of Seattle was 63, increasing from 32 in 1982.
- The City of Boise was 37, increasing from 5 in 1982.
- The average small urban area in the U.S. was 30, increasing from 7 in 1982.

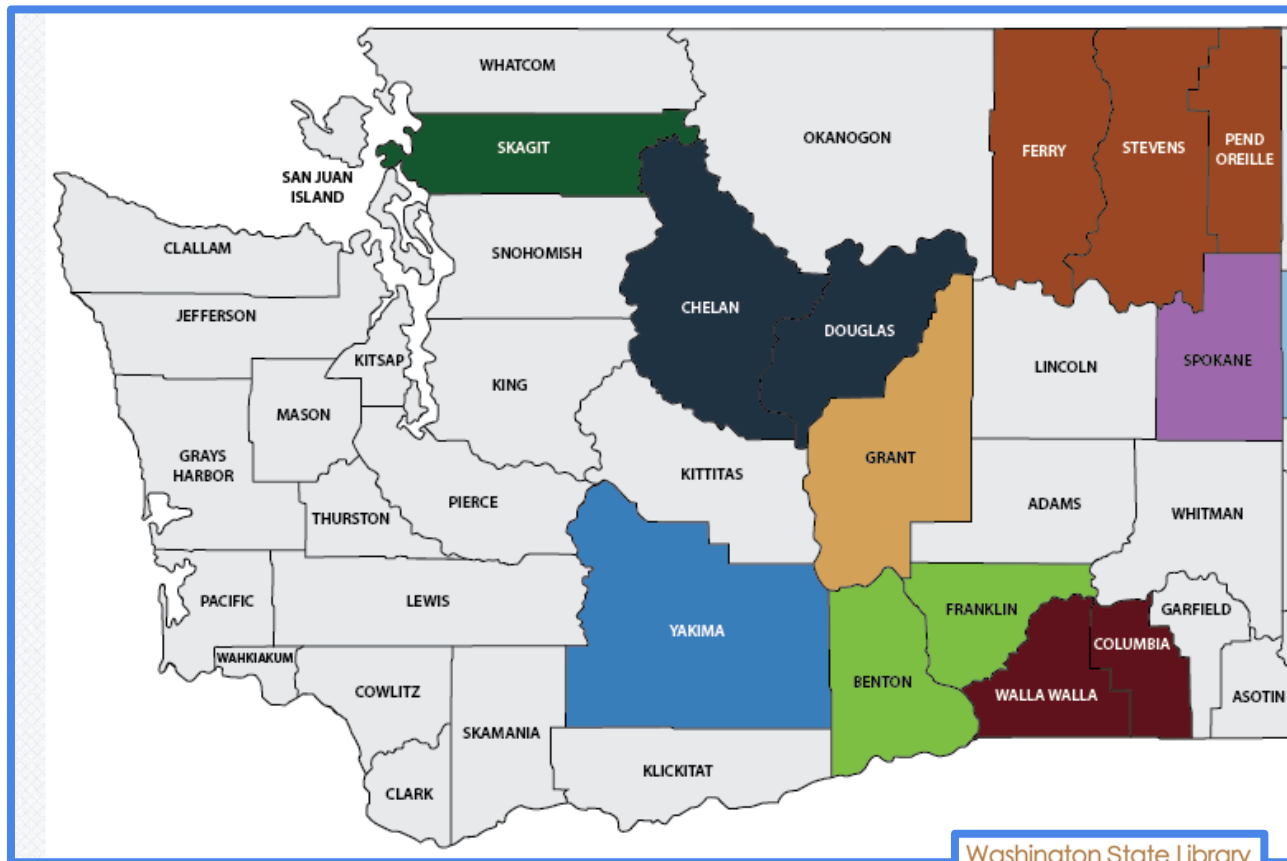
Data Sources

[Texas A&M Transportation Institute - Urban Mobility Information](#)

Washington State Library



Community Indicators: Mostly rural counties



http://spokanetrends.org/loc_map.cfm

Washington State Library



Community Indicators: What to Notice

- Open data can be a terrific collection item.
- Library patrons benefit when government opens its data.
- The right presentation nurtures data literacy.



IBISWorld

WHERE KNOWLEDGE IS POWER

Marketline



**Market
Research.com**

Knowledge. Identified & Delivered.

MINTEL

Information has value. Sometimes it's inflated.



Photo by flickr user Shankar S.



Photo by flickr user Dan DeLuca

Business Research
Other Research

vs.



Herding Cats

Statistics & Data Sources: Data Archives

Data and statistical resources

Home

Domestic

International

WA State & Local

Data Archives

Disciplinary Sources

Data Repository Directories

- [re3data](#)
A global registry of research data repositories from all academic disciplines.
- [SocioSite: Social Science Data Archives](#)
An inventory of statistics and data from around the world, available on the Internet.

Need Help?

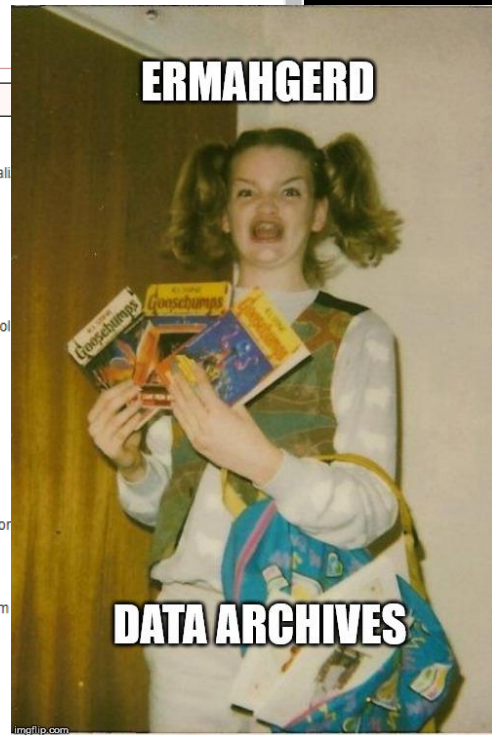
For immediate assistance instant message with a librarian:

[Ask a Librarian 24/7](#)



Data Repositories & Archives

- [ICPSR \(Inter-University Consortium for Political and Social Research\)](#)
Maintains and provides access to a vast data archive containing files of social science data. In addition, ICPSR hosts special education, aging, criminal justice, substance abuse, terrorism, and other fields.
- [General Social Survey \(GSS\)](#)
For the last third of a century the GSS has been monitoring social change and the growing complexity of American society.
- [American National Election Studies](#)
The ANES produces high quality data from its own surveys on voting, public opinion, and political participation. ANES is a collaboration of the University and the University of Michigan, with funding by the National Science Foundation.
- [Association of Religion Data Archives](#)
Includes American and international data collections about religion.
- [Cultural Policy & the Arts National Data Archive \(CPANDA\)](#)
Digital archive of policy-relevant data on the arts and cultural policy in the United States.
- [Diversity Data Project \(Harvard, School of Public Health\)](#)
Identifies metropolitan area indicators of diversity, opportunity, quality of life and health for various racial and ethnic populations. Describes, profiles and ranks U.S. metros in terms of quality of life.
- [IQSS Dataverse Network](#)
The Dataverse Network at the Institute for Quantitative Social Science at Harvard hosts data on social science research from various disciplines. Dataverse Network is an open source application to publish, share, reference, extract and analyze research data.
- [National Bureau of Economic Research \(NBER\)](#)
National Bureau of Economic Research (NBER)
Selected data and publications available freely online.
- [National Congregations Study](#)
The National Congregations Study surveys a representative sample of America's churches, synagogues, mosques and other local places of worship.
- [Pew Research Center](#)
Studies and surveys on demography, domestic policy, economics, energy and environment, global attitudes, immigration, internet and technology, public





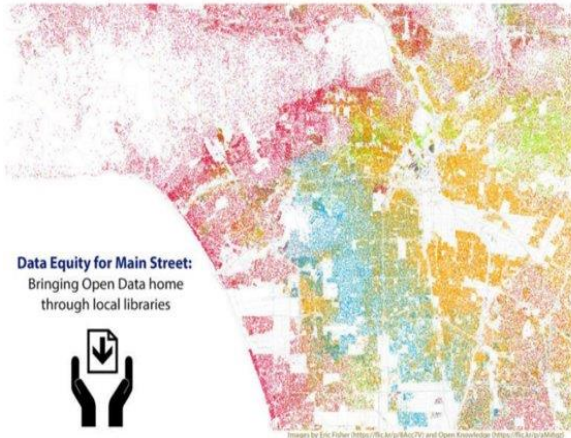
Librarian assistance is crucial



If I can Open Data, you can too

Why Now?

- Envision Everett 2037
- Mayoral Directive 2018-03



- Open by default
- Inclusive
- Accessible & interoperable
- Timely & comprehensive

- Governance
- Citizen Engagement
- Knowledge
Management
- Technical



Everett Public Library's open data partnership with the City of Everett



- Commitment to open, equitable access to information
- Meet digital literacy and data literacy needs
- Promote other library databases and resources
- Opportunity for public programming and classes



Everett Public Library's open data partnership with the City of Everett



- Advocacy opportunity to new city administration
- Assert library as integral city department
- Leadership opportunity in planning and policy with insights from community needs
- Promote image of library that's more than just books

Summer Reading Celebration with Mayor Cassie Franklin

Mount Vernon City Library

- In 2018 the State of Washington legislature passed ESSB 6002 which applies to Cities, Counties, School districts, Fire districts, Ports, Public utility districts.
- The Washington State Legislature is trying to address any structure or practice of an election system that dilutes the votes or limits the rights of a protected class, resulting in an unequal opportunity to elect candidates of their choice.
- The law defines polarized voting as, “voting in which there is a difference [...] in the choice of candidates or other electoral choices that are preferred by voters in a protected class, and in the choice of candidates and electoral choices that are preferred by voters in the rest of the electorate”
- Fairer vote.

Data Alone Not Enough

In the case of Mount
Vernon Latinx are young

34% overall

54% of the School age
population

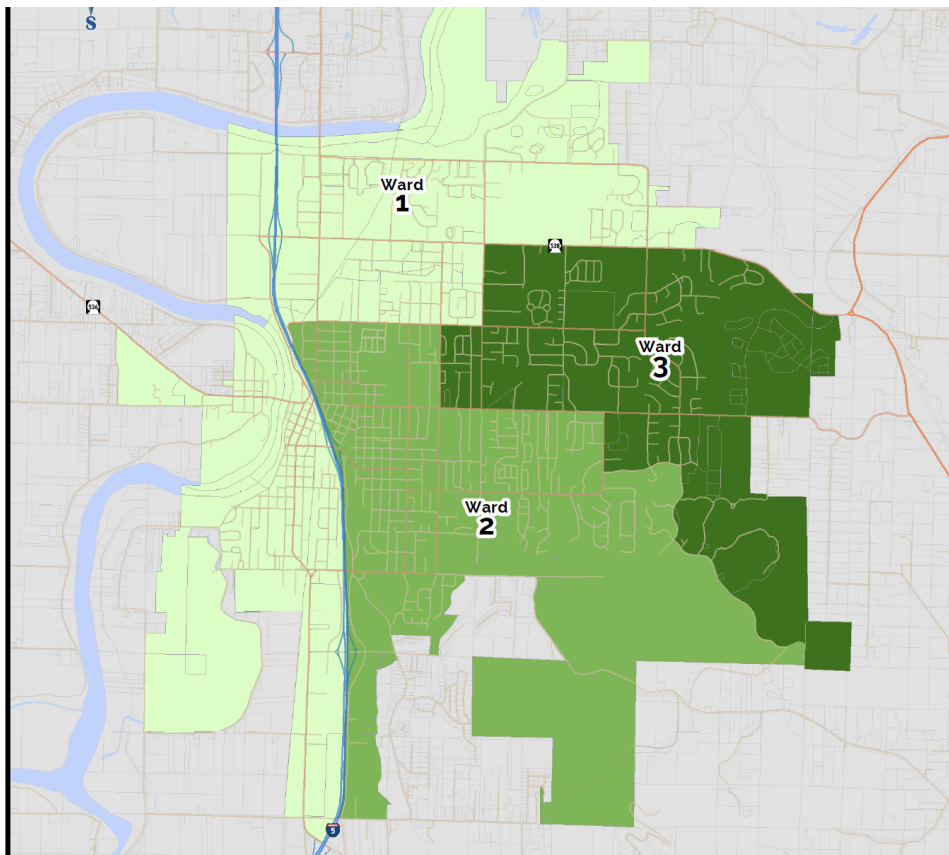
Only 17% of the voting
age population

Goal = 17% to 33%
representation

PEOPLE	
Population	
Population estimates, July 1, 2018, (V2018)	NA
Population estimates, July 1, 2017, (V2017)	35,051
Population estimates base, April 1, 2010, (V2018)	NA
Population estimates base, April 1, 2010, (V2017)	31,722
Population, percent change - April 1, 2010 (estimates base) to July 1, 2018, (V2018)	NA
Population, percent change - April 1, 2010 (estimates base) to July 1, 2017, (V2017)	10.5%
Population, Census, April 1, 2010	31,743
Age and Sex	
Persons under 5 years, percent	△ 7.9%
Persons under 18 years, percent	△ 26.9%
Persons 65 years and over, percent	△ 15.2%
Female persons, percent	△ 50.6%
Race and Hispanic Origin	
White alone, percent	△ 71.5%
Black or African American alone, percent (a)	△ 1.4%
American Indian and Alaska Native alone, percent (a)	△ 1.6%
Asian alone, percent (a)	△ 2.9%
Native Hawaiian and Other Pacific Islander alone, percent (a)	△ 0.2%
Two or More Races, percent	△ 3.6%
Hispanic or Latino, percent (b)	△ 34.3%
White alone, not Hispanic or Latino, percent	△ 57.3%
Population Characteristics	

Voting Districts

The districts as they were outlined



City Council Ward	Total Population (2010)	Deviation from Ideal	Citizen Voting-Age Population (2012-16)		
			Total (all groups)	Hispanic	% Hispanic
1	10,725	0.94%	6,837	1,121	16.4%
2	10,568	-0.54%	7,014	1,165	16.6%
3	10,583	-0.40%	6,217	1,208	19.4%
Citywide	31,876		20,069	3,494	17.4%
Ideal (1/3)	10,625	Total deviation from ideal = 1.48%			

Sources : U.S. Census Bureau, 2010 Census PL94-171; DOJ Special Tabulation of American Community Survey 2016 5-year file.

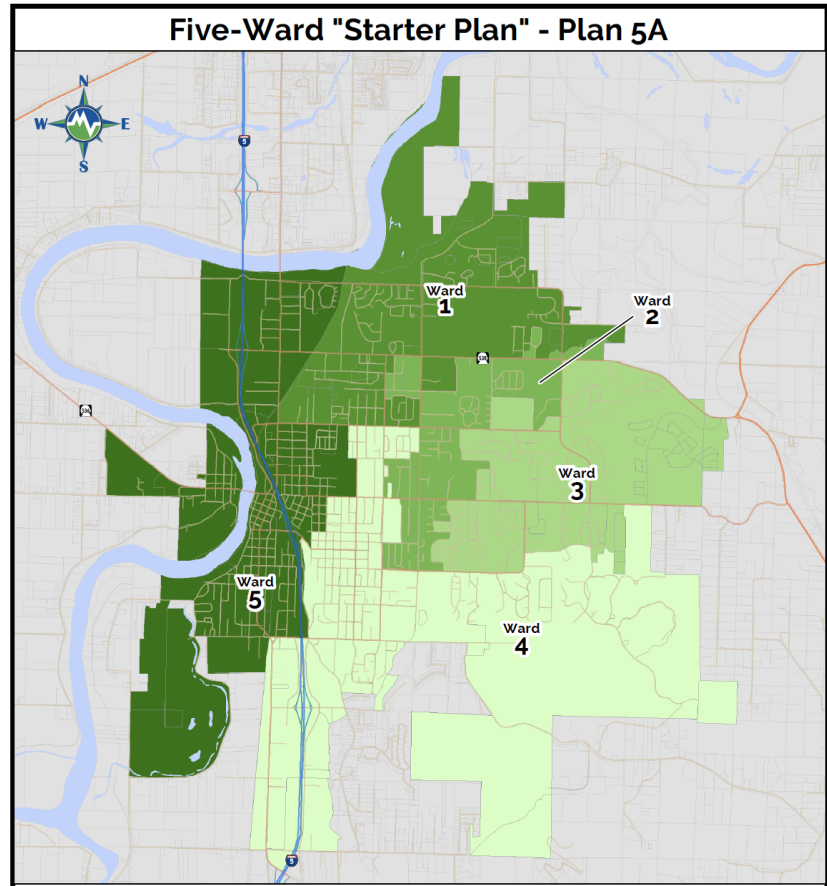


Updated 10/16/2018
Scale = 1:45,000

Five-Ward "Starter Plan" - Plan 5A

Open Data's Story

5 districts



City Council Ward	Total Population (2010)	Deviation from Ideal	Citizen Voting-Age Population (2012-16)		
			Total (all groups)	Hispanic	% Hispanic
1	6,495	188%	3,983	632	15.9%
2	6,434	0.92%	3,022	1,293	42.8%
3	6,138	-3.72%	4,382	412	9.4%
4	6,435	0.94%	4,702	586	12.5%
5	6,374	-0.02%	3,980	571	14.3%
Citywide	31,876		20,069	3,494	17.4%
Ideal (1/5)	6,375	Total deviation from ideal = 5.6%			

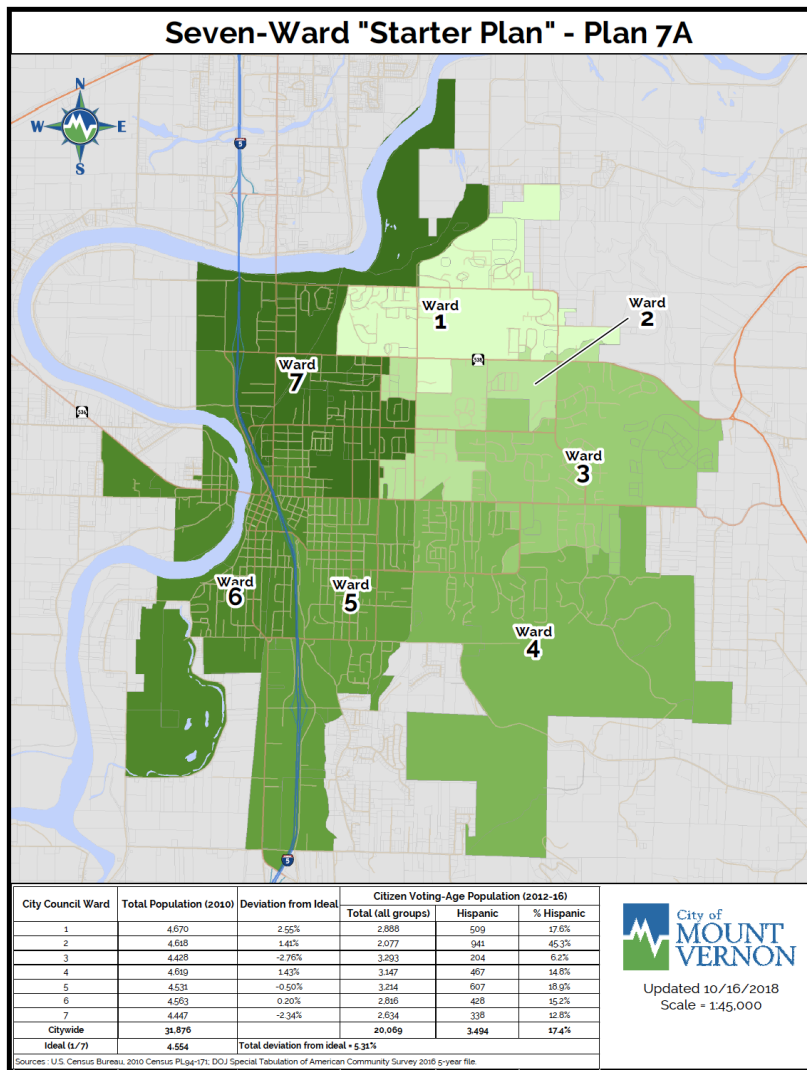


Updated 10/16/2018
Scale = 145,000

Sources : U.S. Census Bureau, 2010 Census PL94-171; DOJ Special Tabulation of American Community Survey 2016 5-year file.

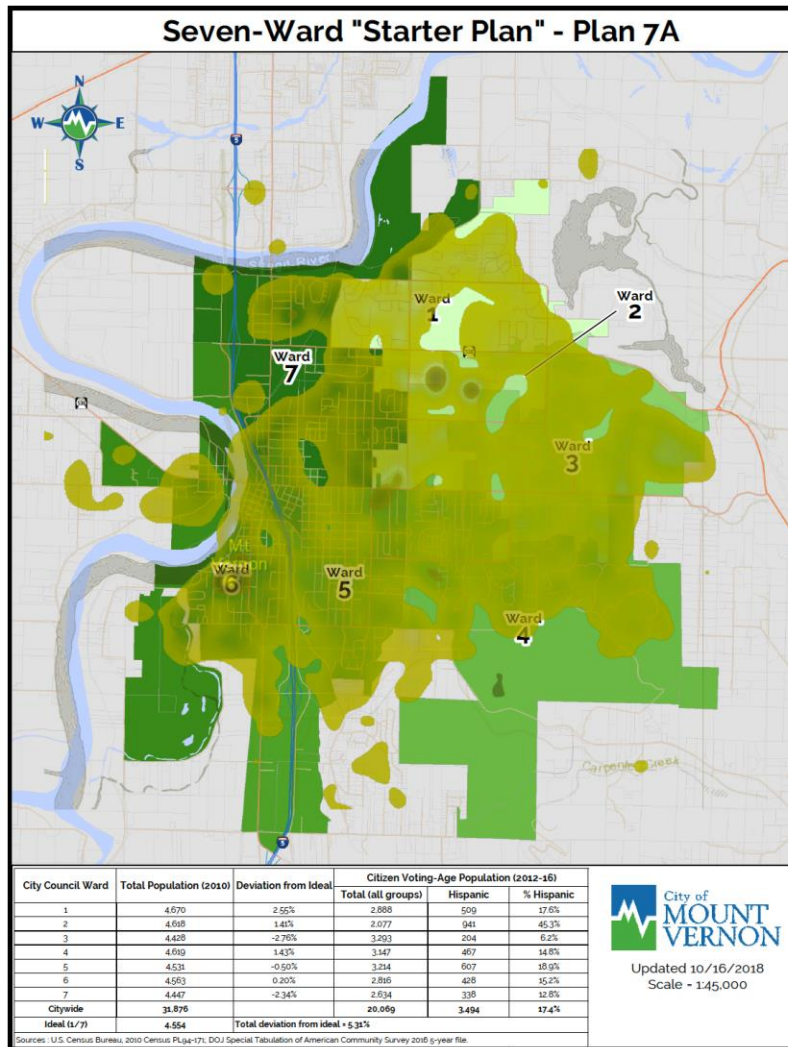
Open Data's Story

7 districts



Open Data + card holder data

Overlay = heat map of
card holders



Questions?

Explore more open data resources at the Washington State Library:

<https://www.sos.wa.gov/library/libraries/projects/opendata/>

Contact: kathleen.sullivan@sos.wa.gov





Saylor St

Bucky Blvd

Mae Way

Library Ln

Eleanor Ave

Five Way

Maple St

Doctor Ln

1

2

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18

19

Tree Data Exercise

Explore the data below. Note any interesting,

FACTS COMPARISONS CORRELATIONS CHANGES OVER TIME

...or other significant patterns. Draw on the map, if you like. What stories might this data tell?

Tree map location	Species	Condition	Year Planted
1	Maple	Good	1987
2	Oak	Fair	1966
3	Ash	Dead	1990
4	Sycamore	Fair	1993
5	Maple	Fair	1944
6	Maple	Good	2009
7	Ash	Poor	1977
8	Oak	Good	2001
9	Ash	Poor	1971
10	Maple	Fair	1999
11	Maple	Poor	1955
12	Maple	Good	1955
13	Ash	Fair	1967
14	Sycamore	Good	1990
15	Maple	Fair	1939
16	Oak	Good	2013
17	Oak	Fair	1949
18	Sycamore	Fair	1929
19	Ash	Dead	1993
20	Maple	Good	2004

From "Finding Stories in Data" activities in the Data 101 toolkit, developed by the Western Pennsylvania Regional Data Center and the Carnegie Library of Pittsburgh
<http://www.wprdc.org/news/data-101-toolkit/>