

Missouri Public Library Systems

A summary of data and findings from 2022 IMLS data

By Brendan Reed

Section 1: Introduction

This project is an exploration of statistics for public libraries in Missouri.

[Tableau Public link](#)

Section 2: Data Description

Domain: Public libraries

Data file: csv downloaded from Tableau Public

Number of rows: 138,907

Number of columns: 32

Data source: Institute of Museum and Library Services (IMLS) data on Tableau Public

[Link to data source](#)

Section 3: Data Cleaning Strategies

Used Tableau Prep to filter Missouri libraries and filter only the year 2022.

Removed duplicated fields:

- Unduplicated Population
- Total Revenue
- Total Program Count
- Total Circulation

Removed fields that will not be used in analysis:

- Service Area Population in Thousand
- Zip_Mod
- Locale Add Code
- Locale

Section 4: Clean Dataset

The cleaned dataset now only has 149 rows and 24 columns, making it much smaller in size. Below is a snippet of the data from an exported csv file.

A	B	C	D
1	Address	City	FF Year Formatted Address
2	913 BALTIMORE AVE	KANSAS CITY	2022 913 BALTIMORE AVE, KANSAS CITY, MO 64105
3	1415 OLIVE ST	ST. LOUIS	2022 1415 OLIVE ST, ST. LOUIS, MO 63103
4	100 W BROADWAY	COLUMBIA	2022 100 W BROADWAY, COLUMBIA, MO 65203
5	4653 S CAMPBELL AVE	SPRINGFIELD	2022 4653 S CAMPBELL AVE, SPRINGFIELD, MO 65810
6	210 E LEWIS AVE	LILBOURN	2022 210 E LEWIS AVE, LILBOURN, MO 63862
7	736 MISSISSIPPI AVENUE	CRYSTAL CITY	2022 736 MISSISSIPPI AVENUE, CRYSTAL CITY, MO 63019

Section 5: Visualization Tools

Data Visualizations for this project are created in Tableau Desktop. Tableau Desktop can create customizable visualizations for selected data. Text can be added to tell a data story and explain insights. Dashboards allow users to see multiple data views at once. Storyboards tell a story through multiple data views and share findings.

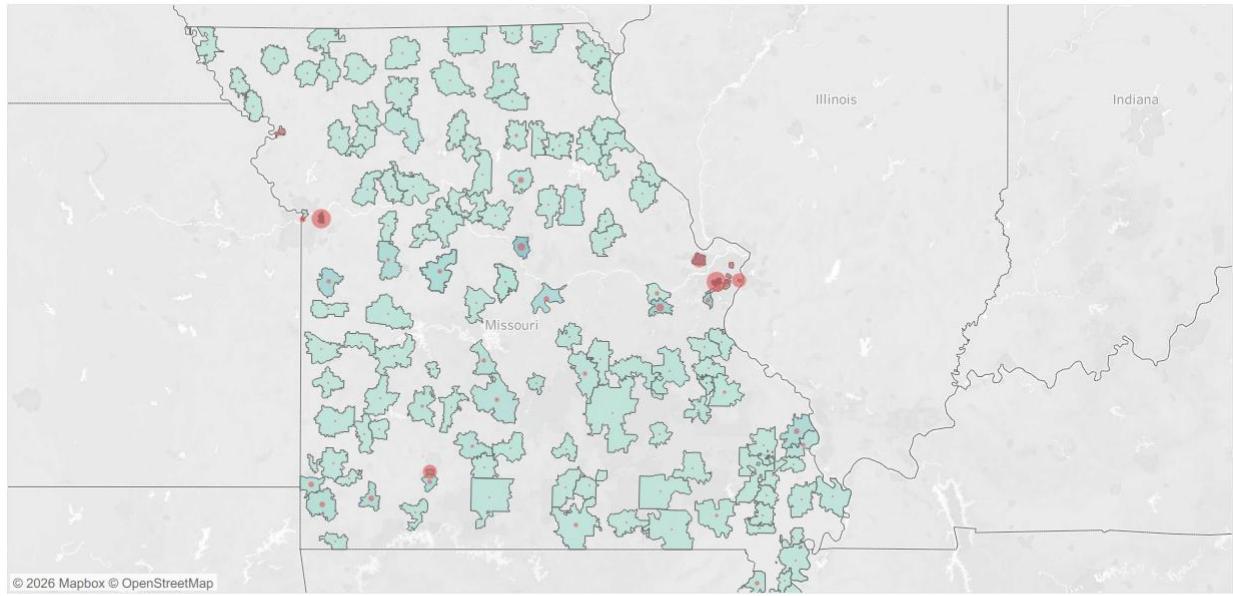
[Link to data as csv file on GitHub](#)

Section 6: Visualizations and Stories

Goal 1

Which library districts have the most visits by service area?

Library Visits and Service Population

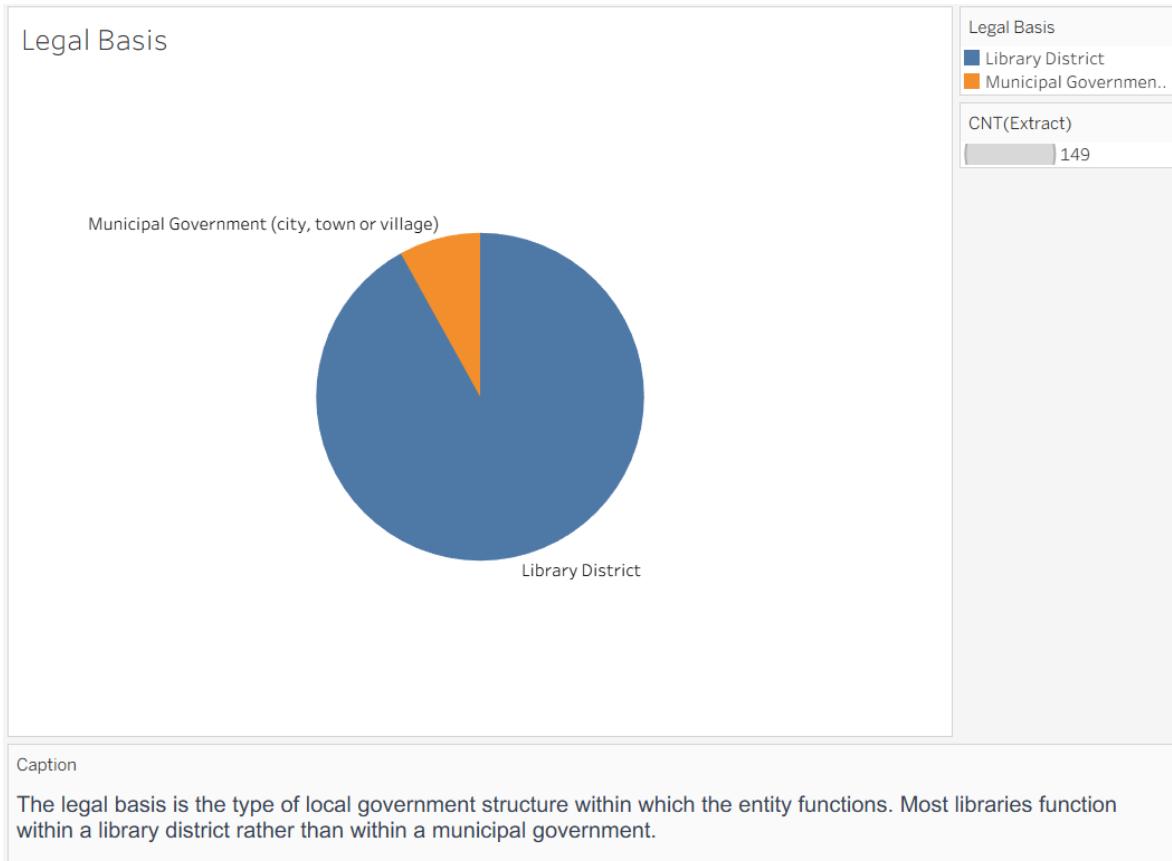


Caption

Libraries with a larger service population see more visits. Some of the highest service populations and visits can be seen in the St. Louis and Kansas City areas. Libraries in more rural areas see less visits and have less service population.

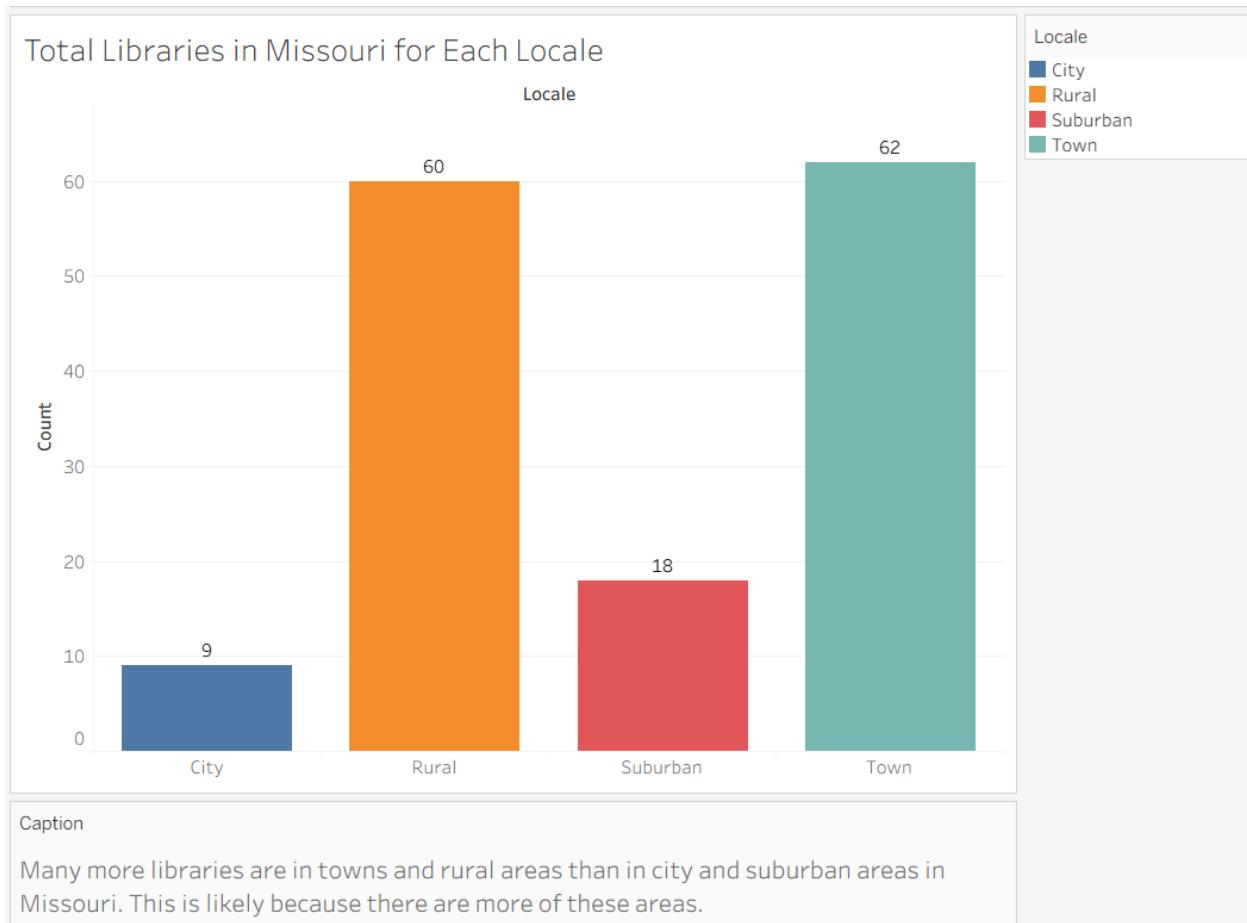
Goal 2

What is the proportion of libraries by legal basis (ex. county, non-profit)?



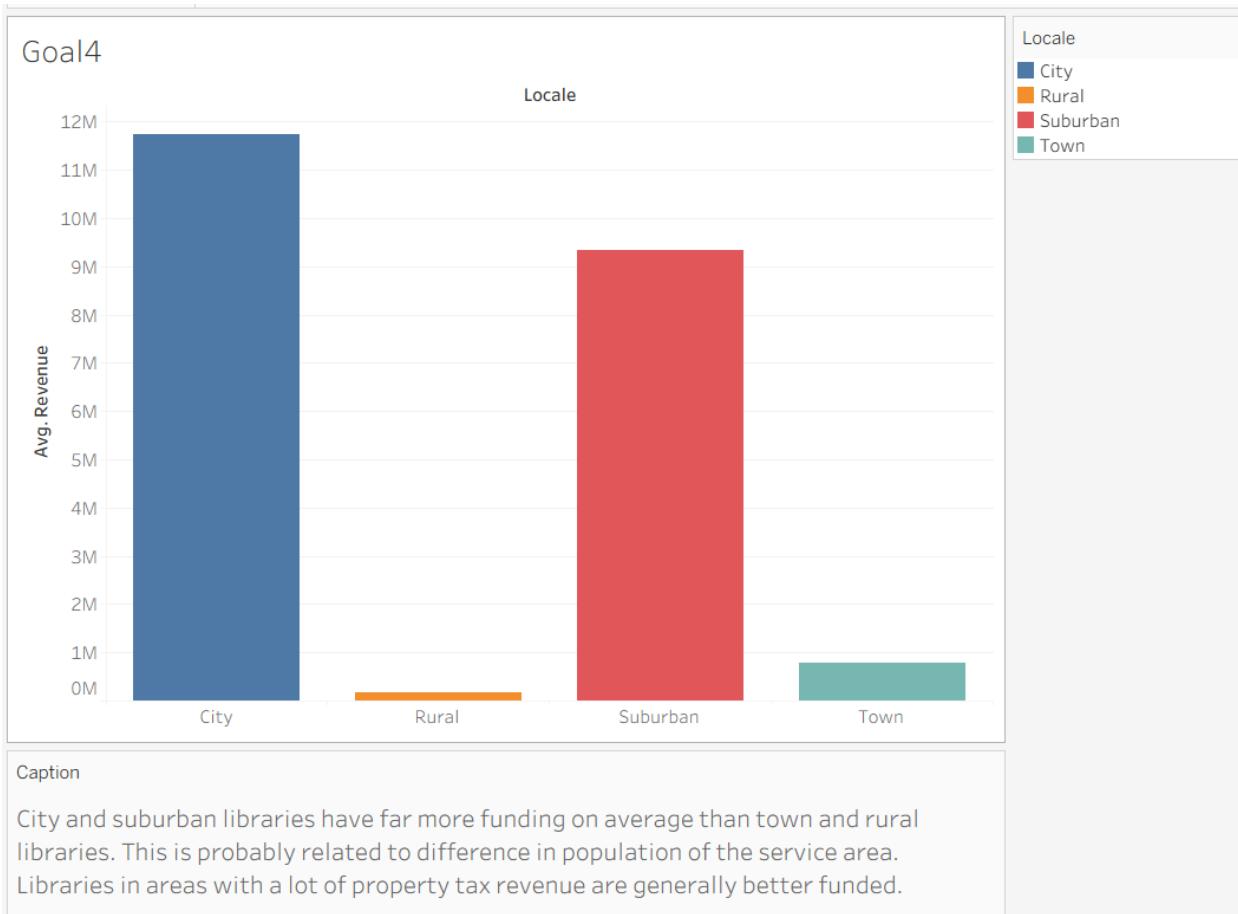
Goal 3

What is the total number of libraries in each locale (ex. city, rural)?



Goal 4

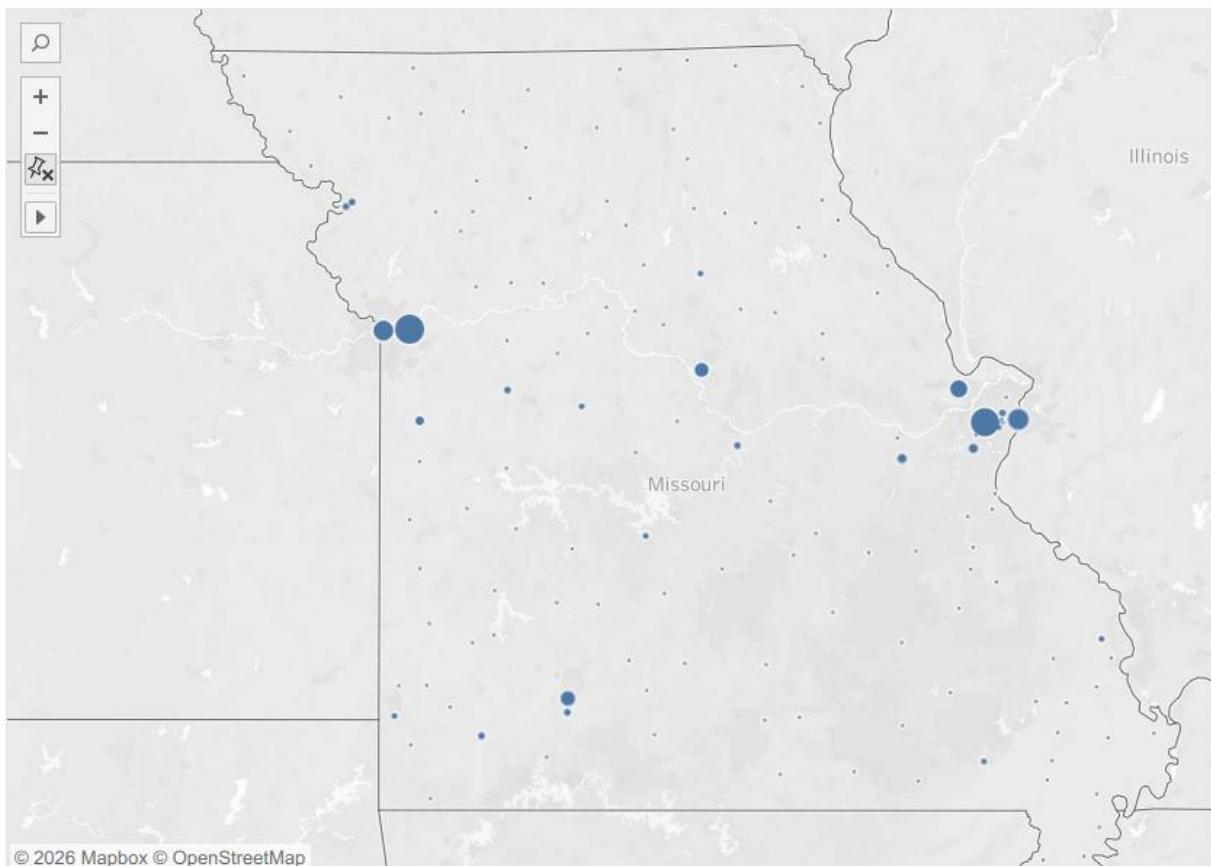
What is the average revenue by locale?



Goal 5

Which libraries have the most funding?

Revenue

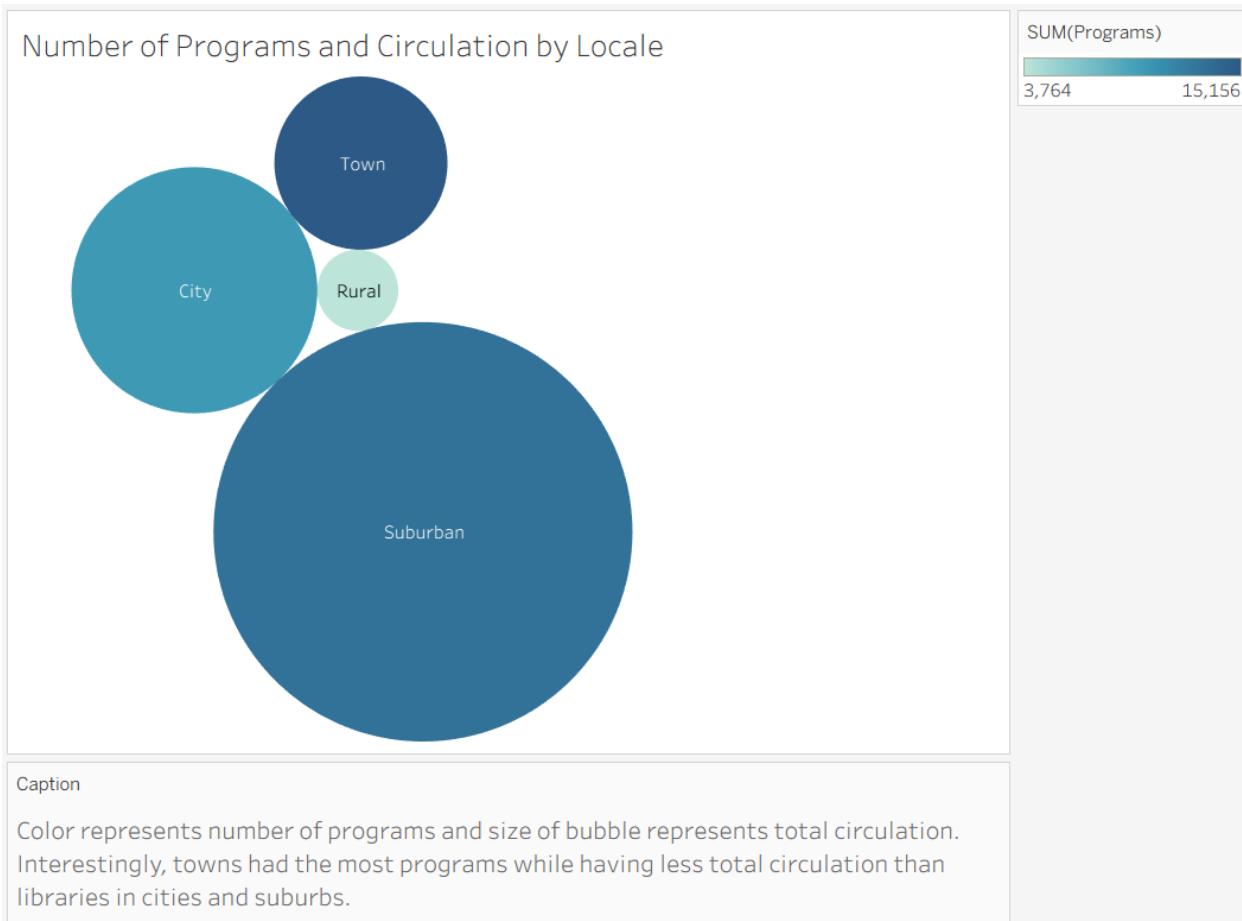


Caption

Higher revenue libraries are clustered in the St. Louis and Kansas City areas, with some outliers elsewhere in the state.

Goal 6

What is the number of circulation and programs for each locale?



Section 7: Conclusions

From the previous charts, I take away the following findings:

- Most libraries operate legally as a library district rather than being directly under a municipal government (Goal 2).
- Libraries with more service population see more visits, such as metro locations like the St. Louis and Kansas City areas (Goal 1).
- Most libraries are in towns or rural areas rather than in cities and suburbs. This reflects the makeup of Missouri, which comprises lots of towns and rural areas (Goal 3).
- City and suburban libraries receive dramatically more funding than libraries in rural areas and towns. This is likely due to more property tax revenue from their service population (Goal 4).
- Higher revenue libraries tend to cluster around metro areas such as St. Louis and Kansas City (Goal 5).
- Libraries in towns report the most programming, even though they have less circulation of library items than libraries in cities or suburbs (Goal 6).