Equitable Public Access to the Tualatin River

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Final Project

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Introduction

The Tualatin River Watershed overlaps closely with Washington County

There are developed, informal, and proposed public access points for the Tualatin River.

Significant natural resources in Washington County surround the river.
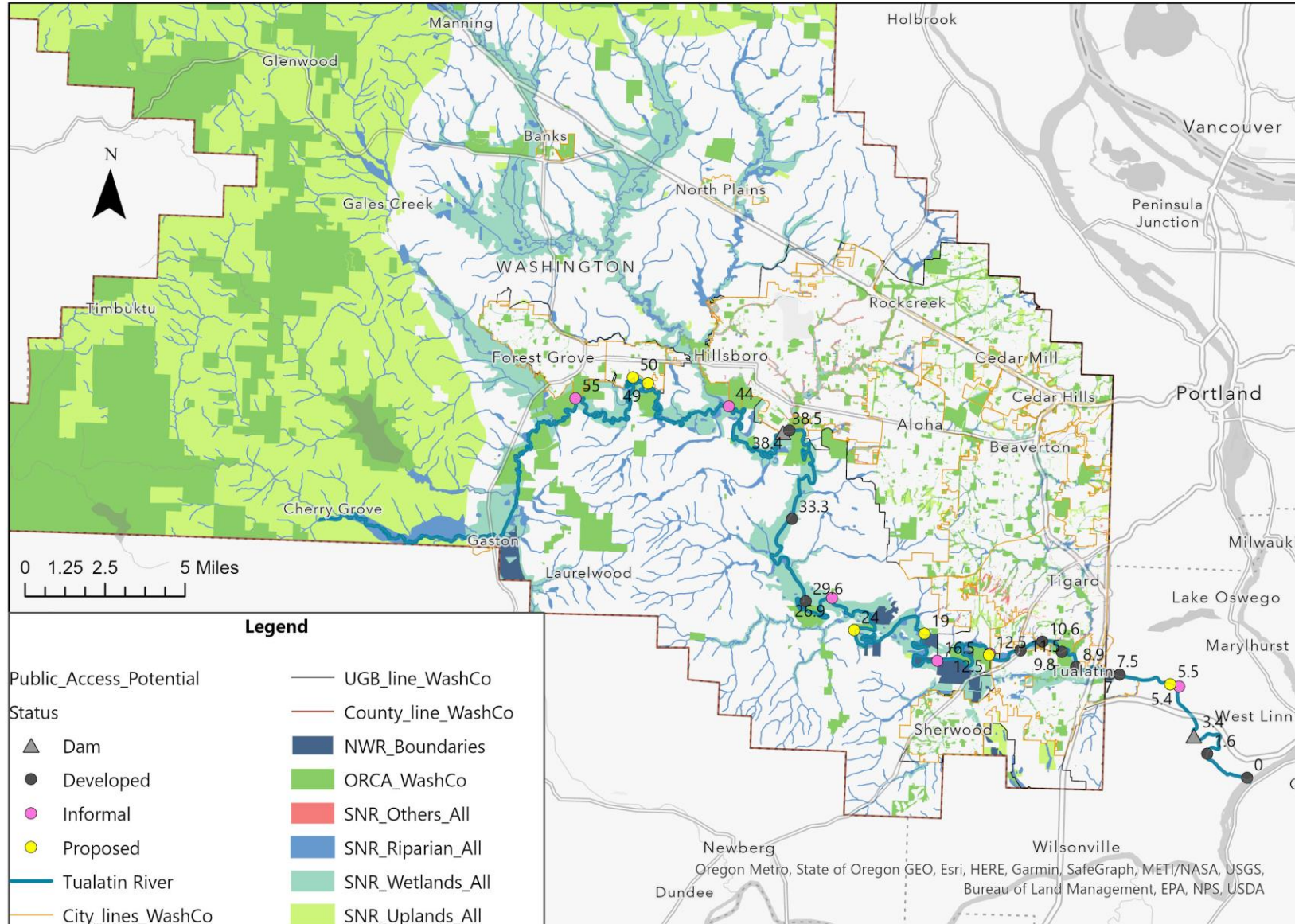
Map showing Significant Natural Resources (SNR) identified for Washington County. Source: AGOL

Tualatin River: Designated a NPS National Water Trail in 2020

OREGON

Tualatin River Water Trail

The Tualatin River Water Trail currently has public facilities serving 39 miles of river from Hillsboro Oregon to its confluence with the Willamette River in West Linn Oregon. Future development of public park property will someday extend public access upstream to Cornelius.

https://www.nps.gov/subjects/nationaltrailssystem/national-water-trails-system.htm

Objective

Where should Tualatin Riverkeepers work to improve public access to the river?

How do people in the community want to access the river?

TRK and others rent canoes, kayaks, and SUPs at Cook Park, Brown's Ferry Park, and occasionally at Rood Bridge Park

Being on, in, or near water during our hot summers is a great way to cool down and connect with family, community, and nature.


http://tualatinriverkeepers.org/river-experiences/water-trail

Developed Public River Access:
Parking, bathrooms, picnic areas, boat ramp or dock

Proposed River Access: Publicly owned land adjacent to river

Data Collection and Preparation

- USGS National Hydrography Data: vector data with river segments, river miles, watershed boundaries

- US Census Bureau: 2020 Census tracts and data tables for Washington, Yamhill, and Clackamas Counties

- Living Atlas: Significant Natural Resources for Washington County

- USGS Landsat Data: Surface temperature raster data for rectangle around Washington County for August 10, 2021

- National Land Cover Data from Living Atlas: Tree canopy cover raster data for 2019

- Used TRK info to create table with locations and status of public river access → Geolocated these points
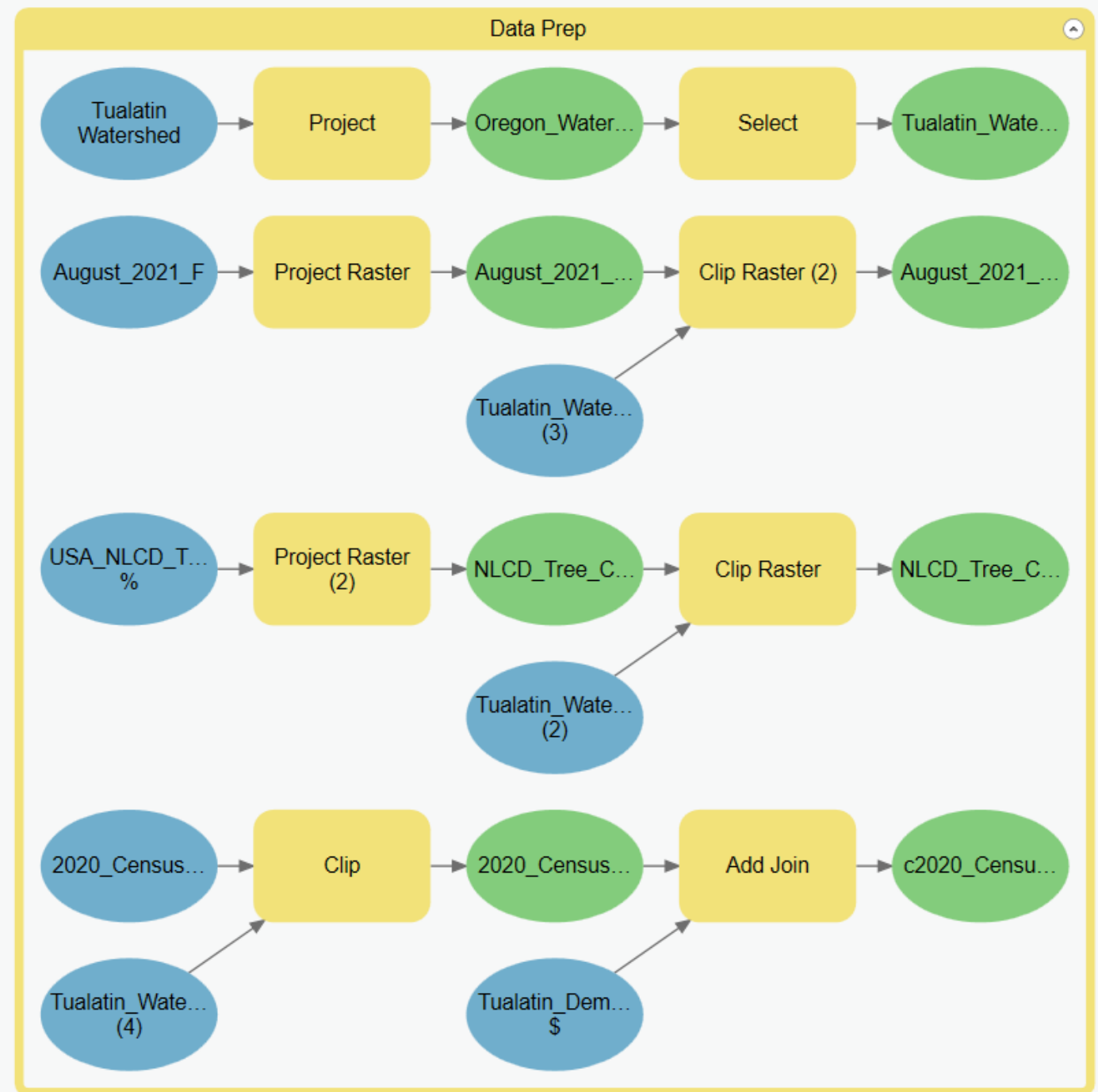
Methods and Model Builder
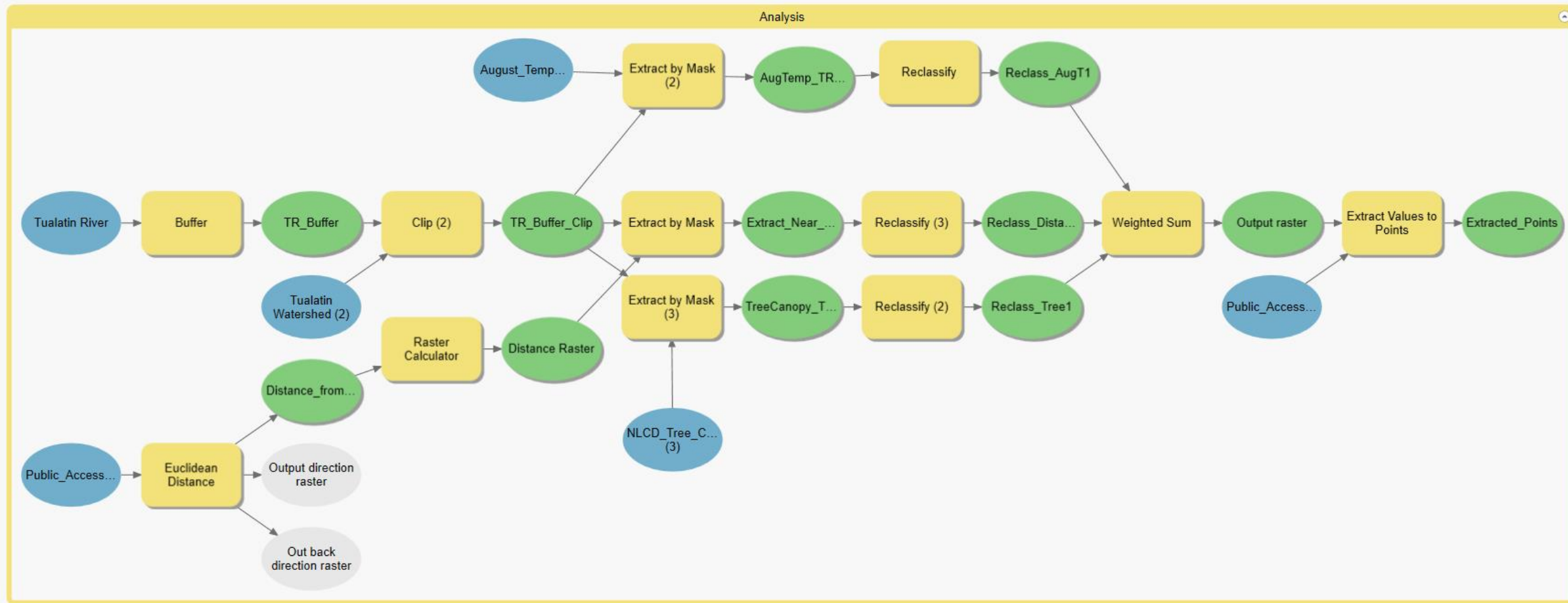
- Narrowed analysis to areas within 3 miles of the Tualatin River (buffer) to reduce range of values and include potential sites. Reclassified values (from temperature, percent cover, and miles to scale from 1 – 5 (Jenk's Natural Breaks)
- Analysis using Weighted Sums to combine three raster layers: August surface temperatures (hotter locations, higher values), Tree canopy (lower cover, higher values), and Distance from developed access site (farther site, higher values).
- Extract values to points and identified high, medium, and low priority sites based on score.

Methods: Landsat Surface Temperature Raster Data →
Extract by mask → Reclassify
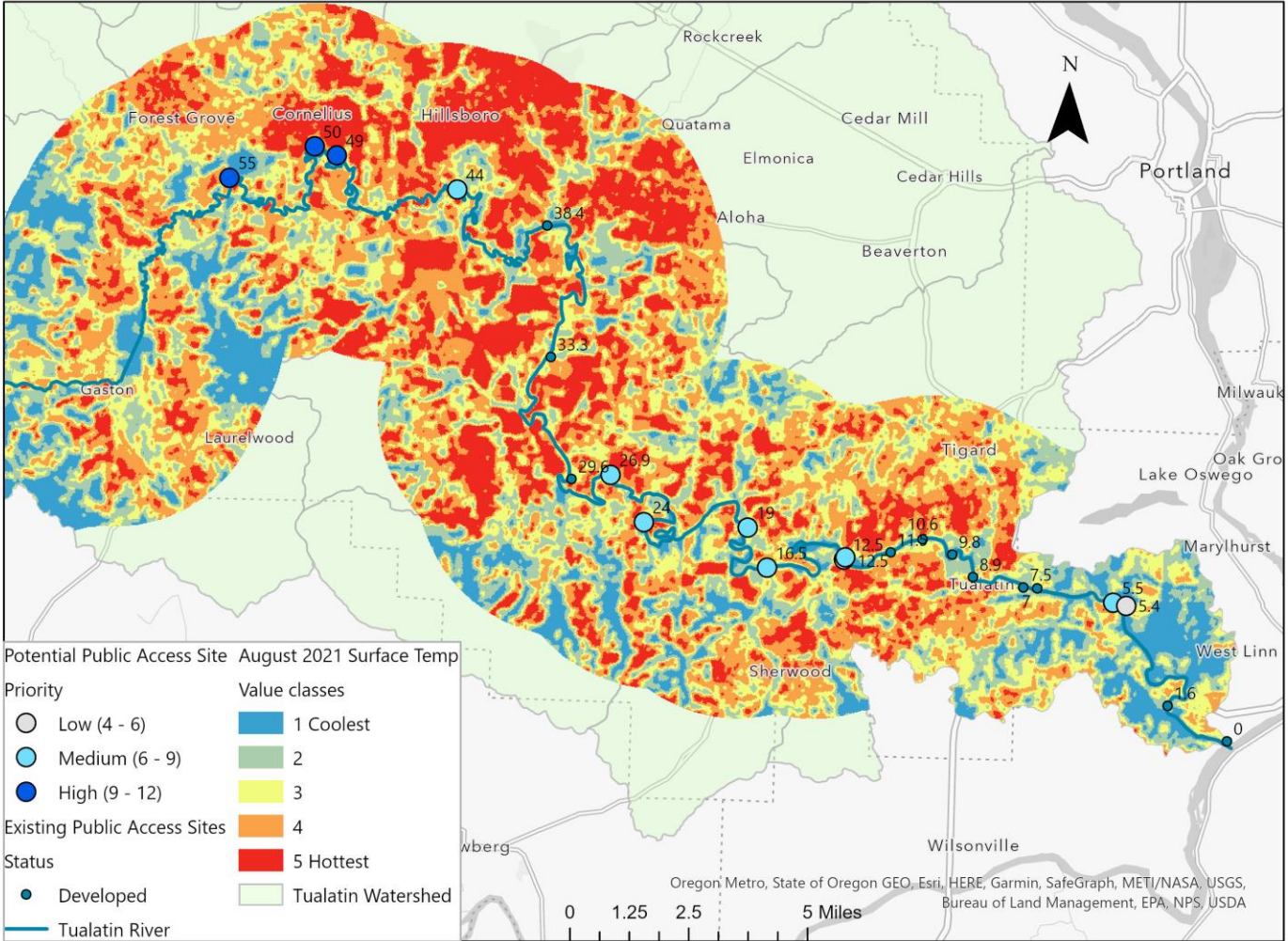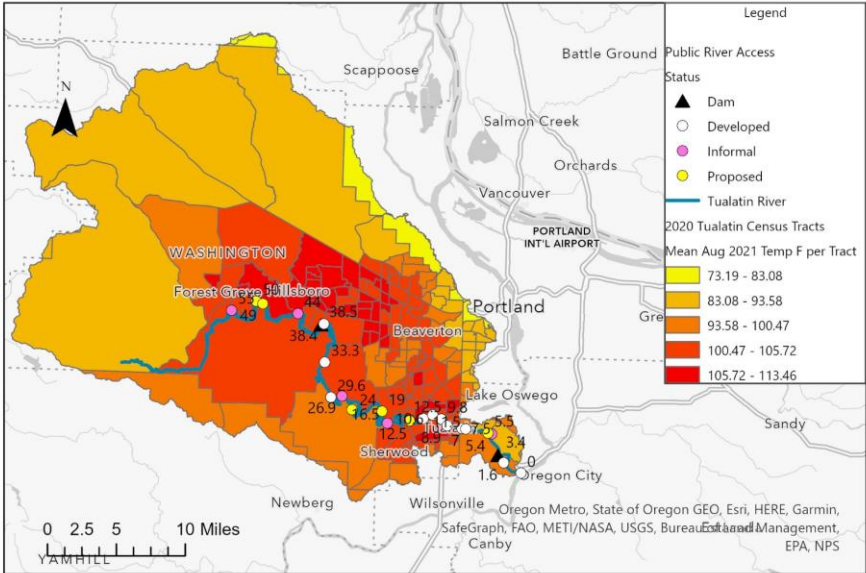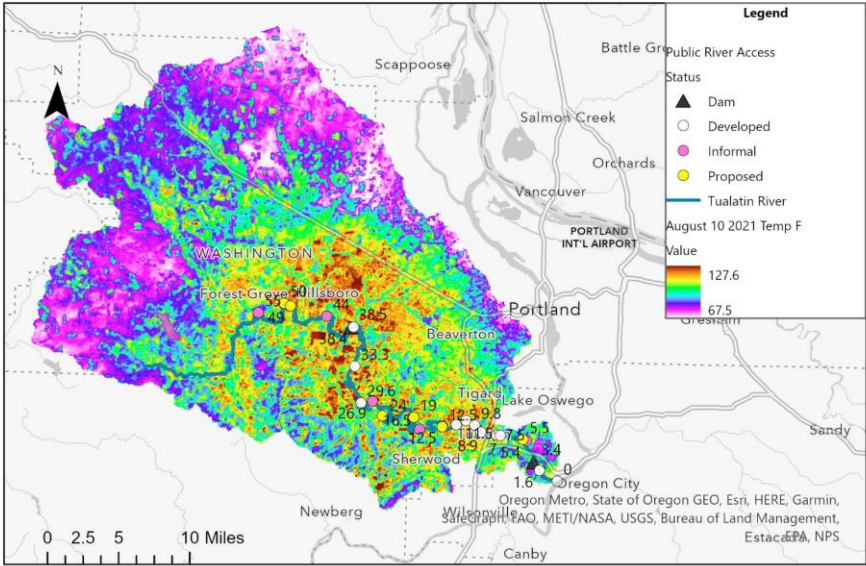
Maps show the relationship between temperature on August 10, 2021 and Tualatin River access points (numbers indicate river miles). Top map shows surface temperature (F) as raster data while bottom map shows mean temperature for each census tract in the Tualatin watershed. LandSat Data from USGS.

Methods: NLCD Tree Canopy Cover Raster Data → Extract by mask → Reclassify
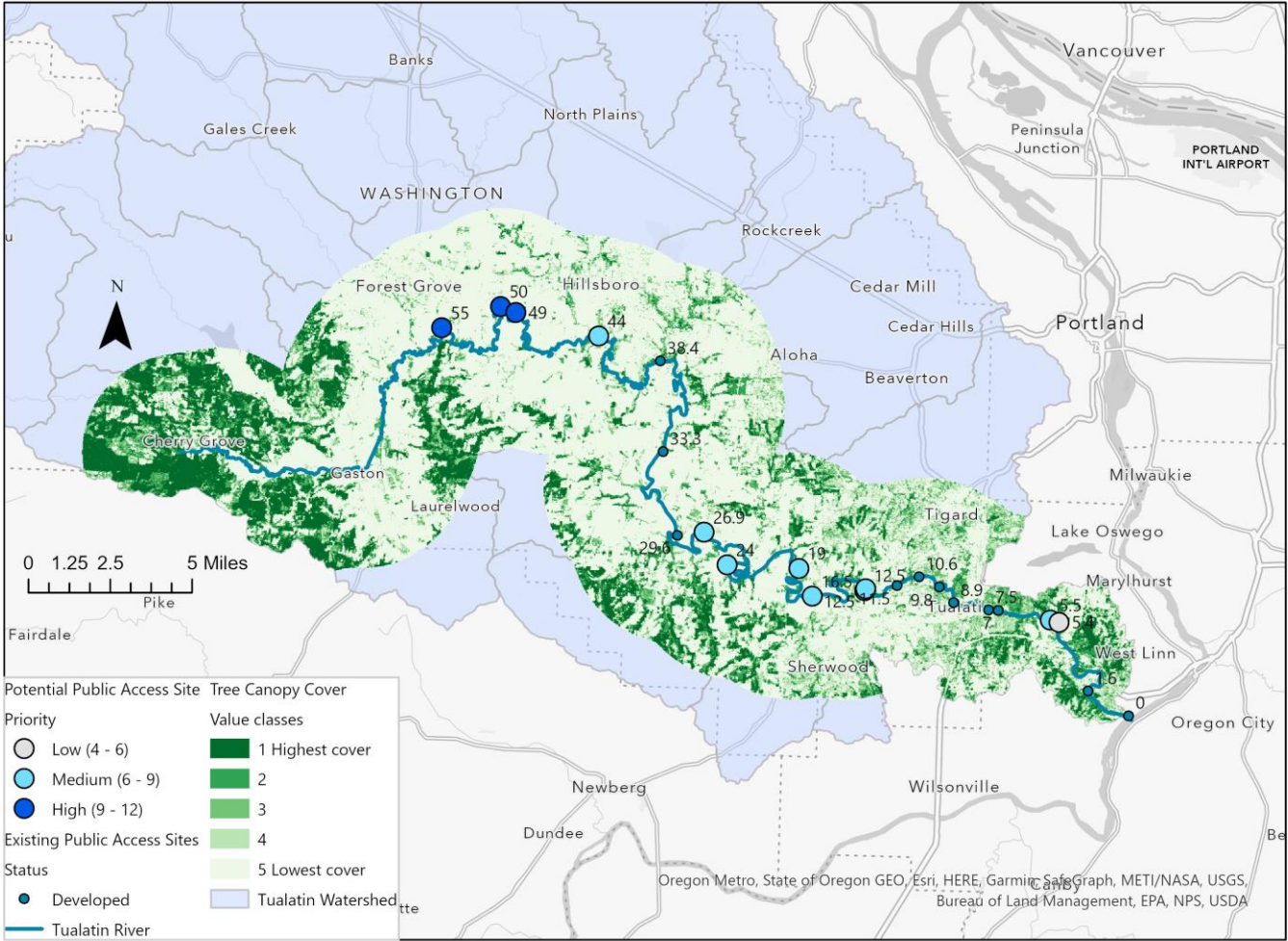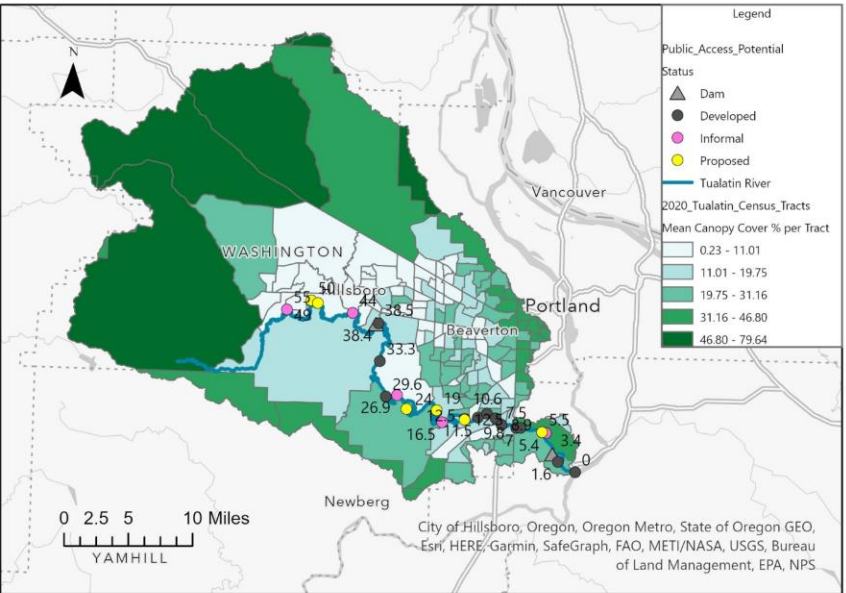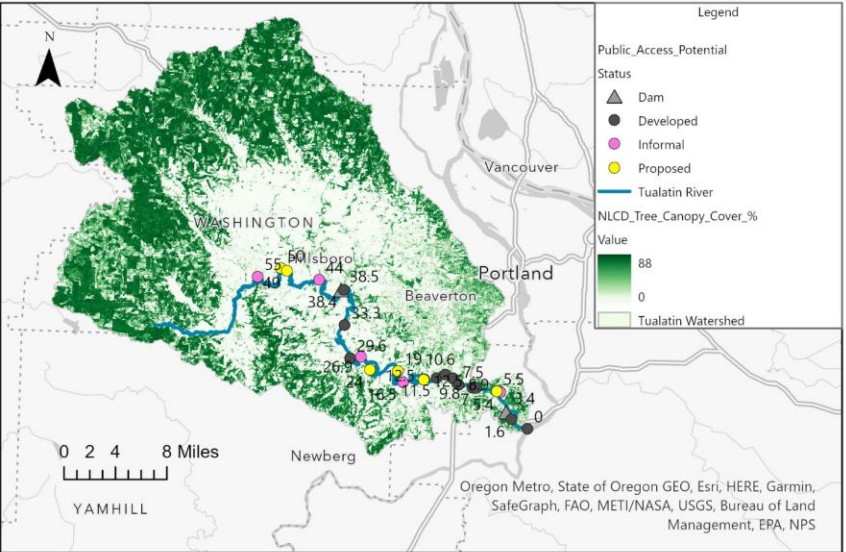
Maps show the relationship between tree cover and Tualatin River access points (numbers indicate river miles). Top map shows percent canopy cover as raster data while bottom map shows mean canopy cover for each census tract in the Tualatin watershed. Tree cover data comes from 2019 National Land Cover

Methods

**Created table with locations of existing and proposed public access → Geolocated points
Created raster to show distance from developed public access → Reclassify**
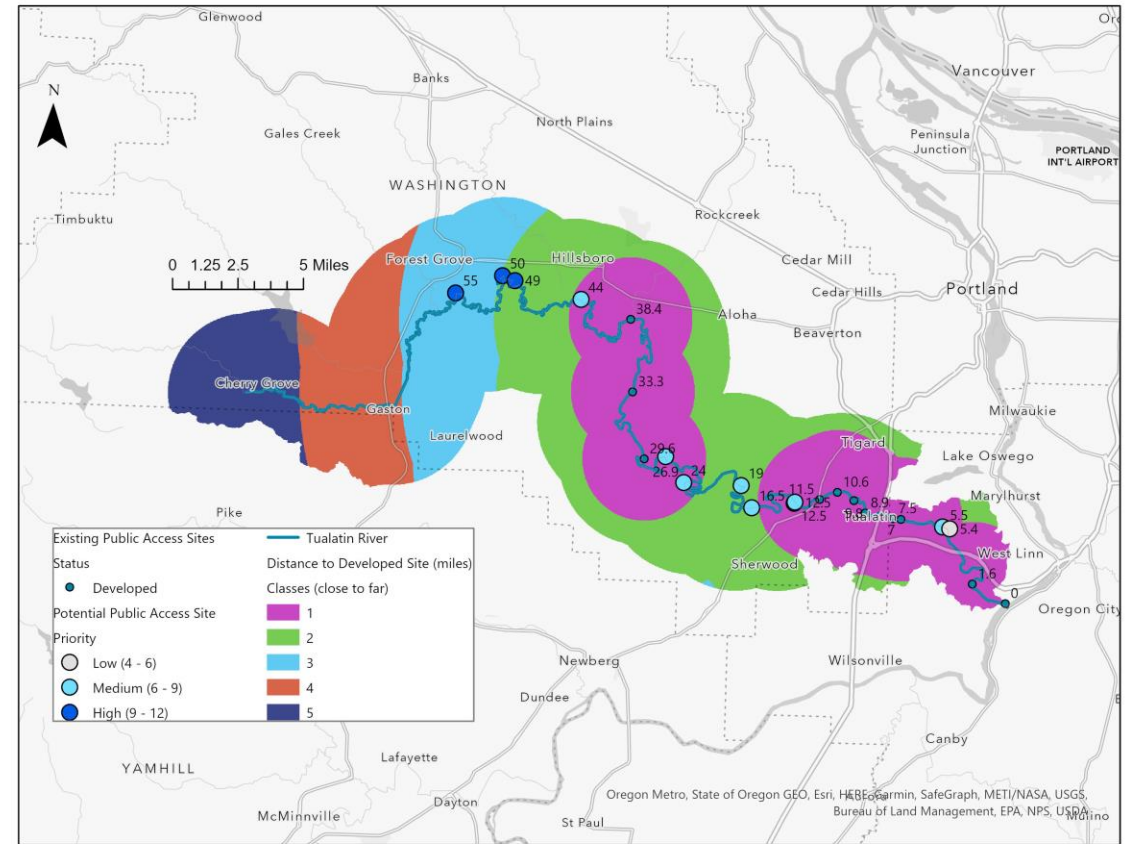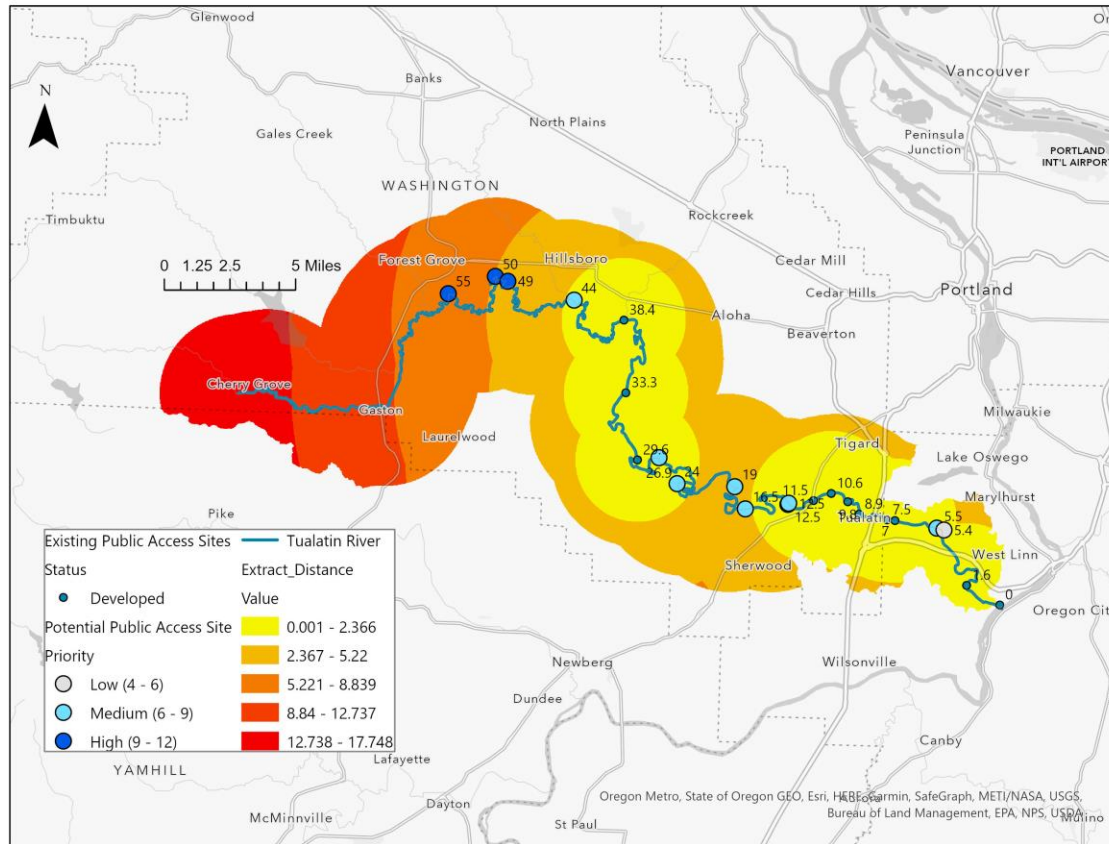
Results
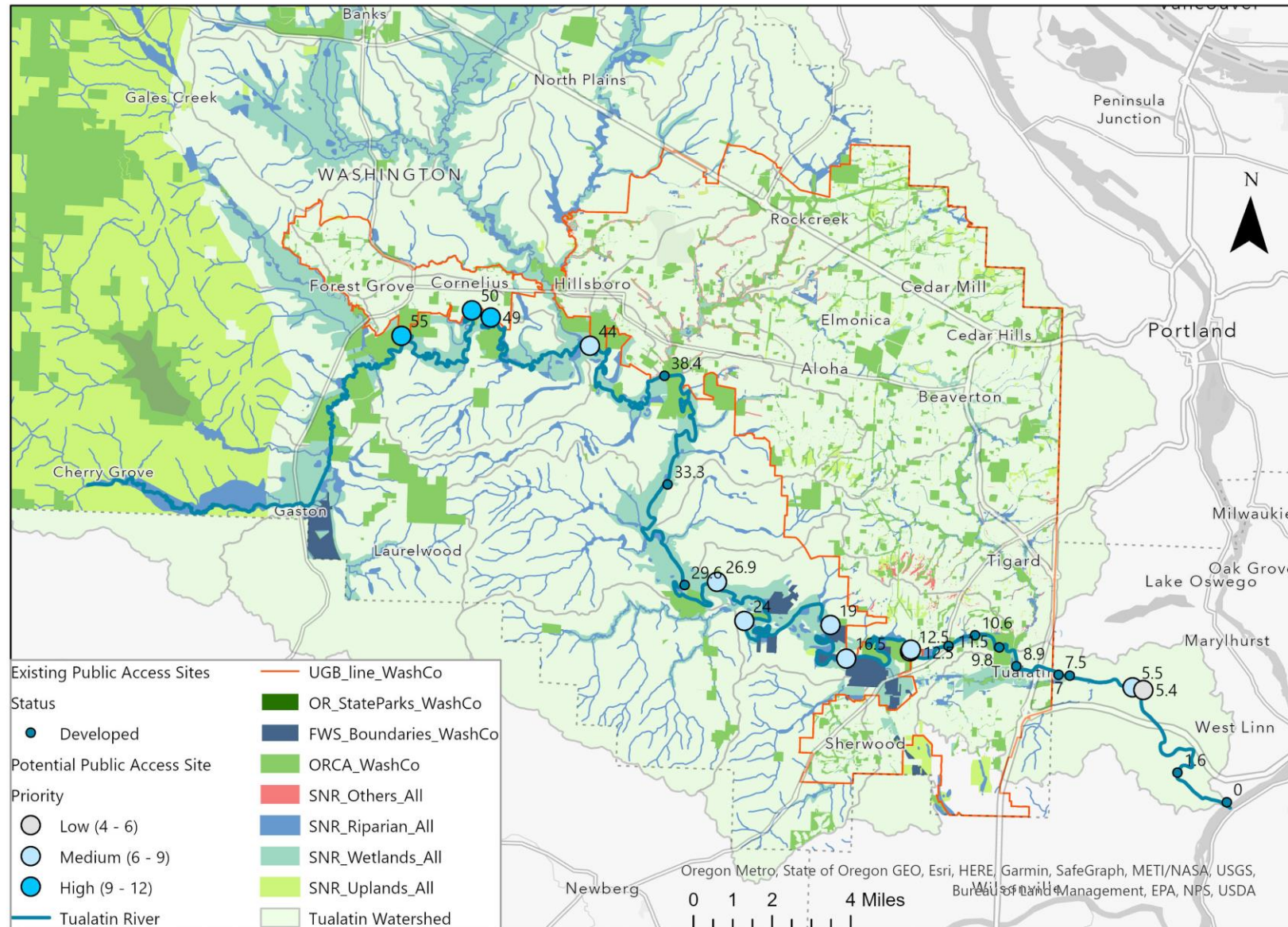
Map showing prioritized potential public access sites based on distance to developed access points, summer heat, and lack of canopy cover. The three highest priority sites are located at Fernhill Wetlands (CWS), Steamboat Park (City of Cornelius), and the Laurel Woods development (City of Cornelius). The only low priority site is Shipley Bridge (Clackamas County) as it is close to developed sites and has higher canopy cover and lower temperatures. Rood Bridge (RM 38.4) is already developed and would be a good place to expand paddle rentals during the summer.
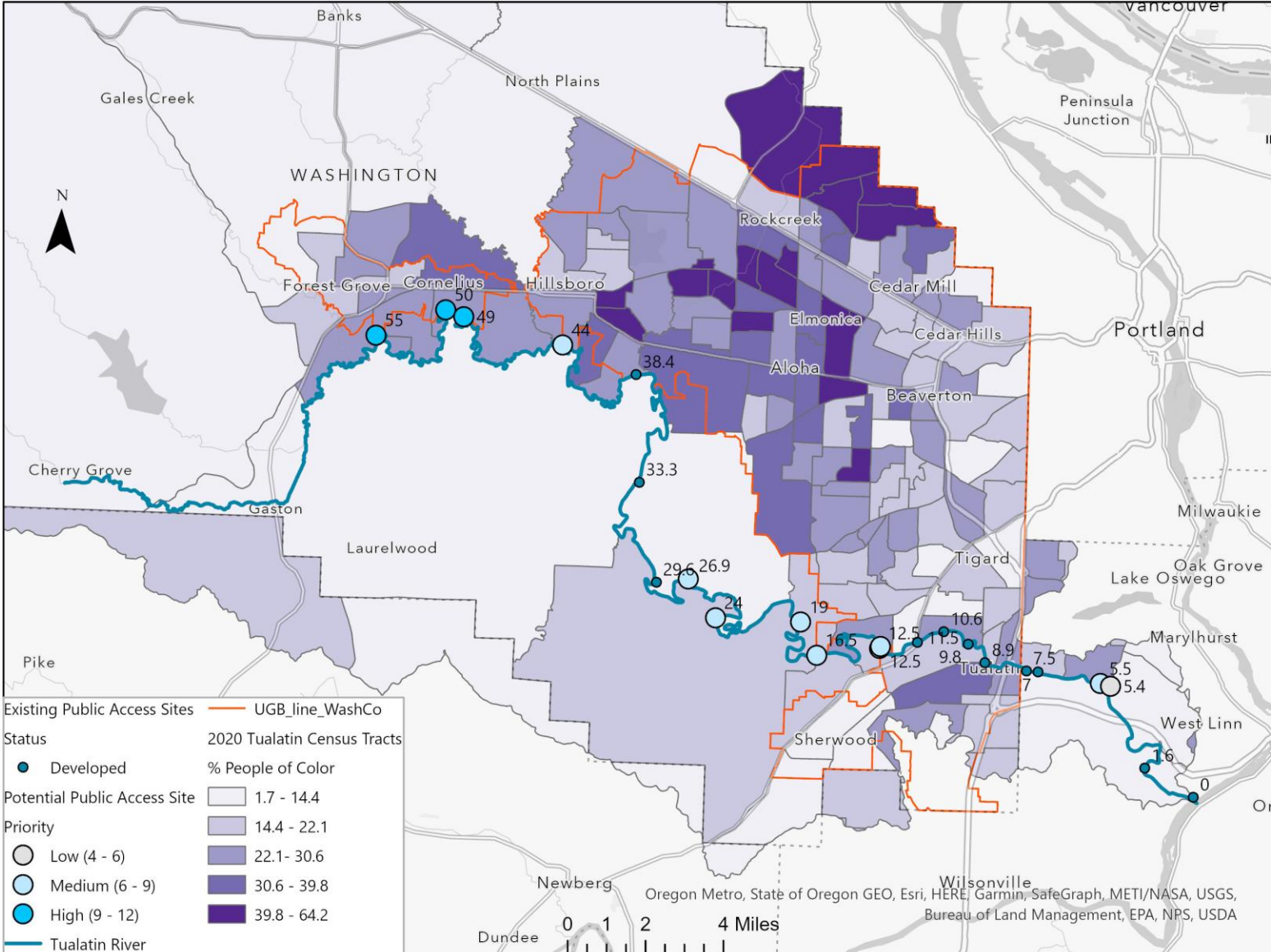
Discussion
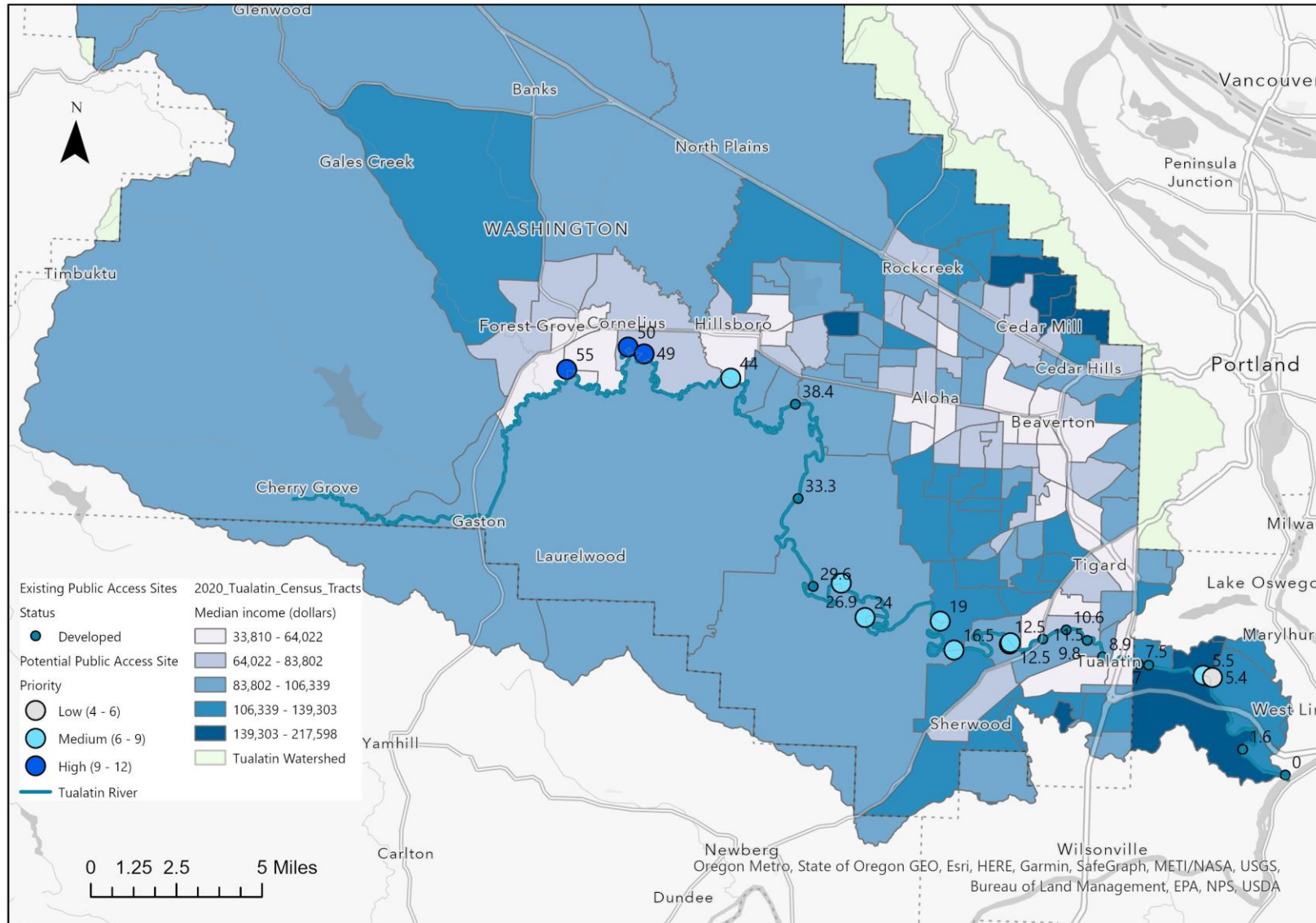
Public Access Sites:
Median Income
2020 Census

Discussion
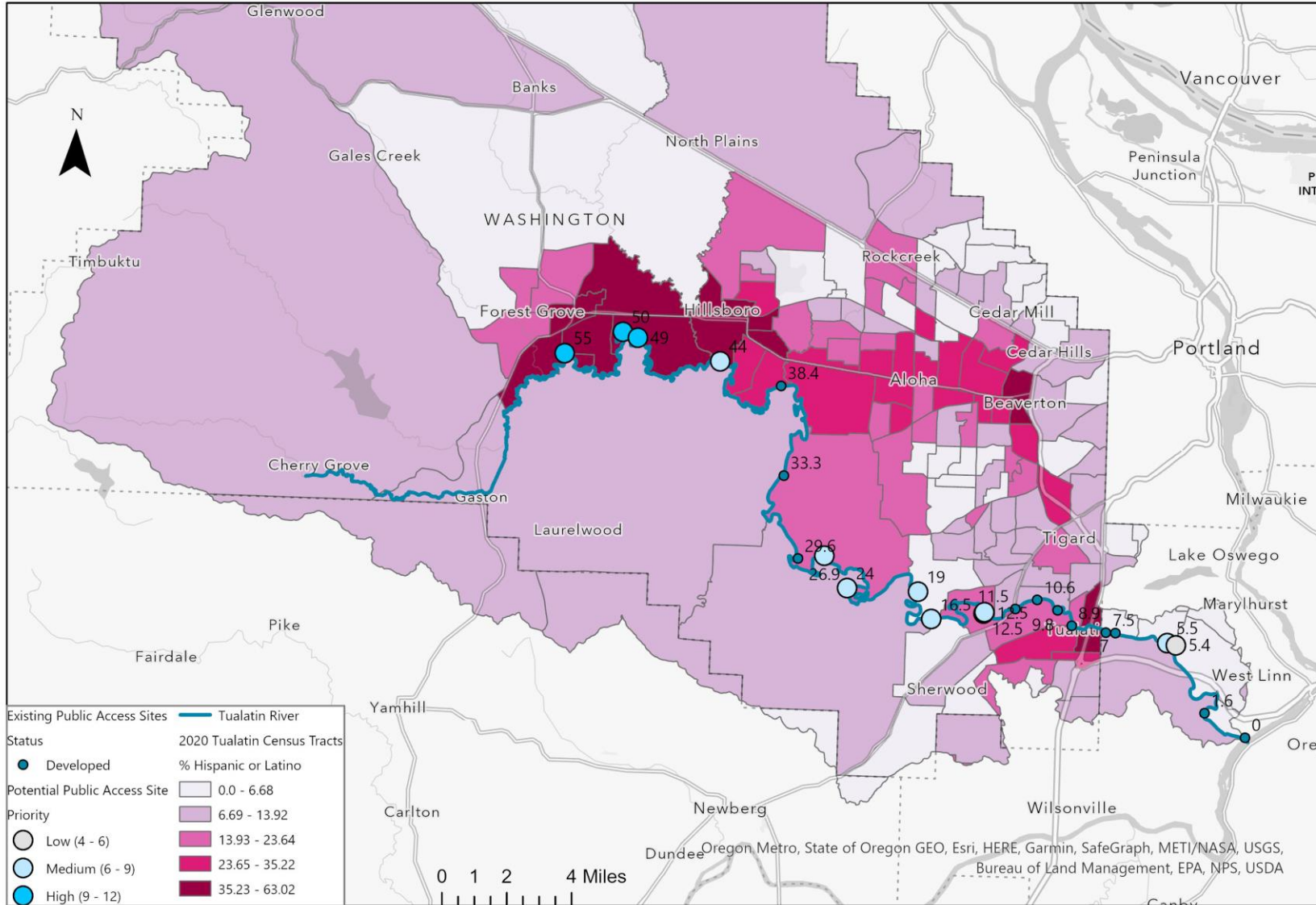
Public Access Sites:
Hispanic or Latino
Population
2020 Census

Discussion

Public Access Sites:
People of Color
2020 Census

Conclusion and Next Steps

Maps and spatial analysis provide a useful starting point

Next steps for the analysis could include additional data on river conditions at these proposed locations, such as water quality issues and barriers or hazards.

Next steps for TRK include outreach and discussion with community members, cultural organizations, cities, and agency partners.

In the short-term, more pop-up paddle rentals at Rood Bridge Park in Hillsboro would increase access to the river for people living in the upper watershed.

https://www.ci.cornelius.or.us/

https://www.centrocultural.org/

https://www.cleanwaterservices.org/

WELCOME TO THE TUALATIN RIVER

Tualatin Riverkeepers is a community-based organization that protects and restores the Tualatin River watershed. We build watershed stewardship through engagement, advocacy, restoration, access, and education.

http://www.tualatinriverkeepers.org/river-experiences/river-rentals/cook-park

Data Sources

- ESRI Living Atlas. 2019. National Land Cover Dataset Tree Canopy Cover.

- ESRI Living Atlas. 2022. Significant Natural Resources for Washington County.

- Tualatin Riverkeepers. 2022. Draft: Tualatin River Water Trail Equitable Access Project.

- US Census Bureau. 2021. TIGER line/Shapefiles. Available from: https://www.census.gov/geographies/mapping-files/time-series/geo/tiger-line-file.html

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- US Geological Survey. 2022. National Hydrography Dataset. Available from: https://www.usgs.gov/national-hydrography/national-hydrography-dataset

- US Geological Survey. 2020. Landsat Collection 2 U.S. Analysis Ready Data. Available from: https://www.usgs.gov/landsat-missions/landsat-collection-2-us-analysis-ready-data