

Washington State Electric Vehicle Charging Program (WAEVCP) Publicly Available Mapping Tool User Guide



We strengthen communities

PREPARED BY THE TIMMONS GROUP, INC.
FOR THE WASHINGTON STATE DEPARTMENT OF COMMERCE
LOCAL GOVERNMENT DIVISION
AND THE ENERGY FACILITY SITE EVALUATION COUNCIL



TIMMONS GROUP
GEOSPATIAL SOLUTIONS

Cover image: <https://wacommerce.maps.arcgis.com/sharing/rest/content/items/03deb162d9c94d3fa8989f898e8e62f9/data>

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Introduction

Welcome to the Washington State Electric Vehicle Charging Program (WAEVCP) Publicly Available Mapping Tool User Guide. The purpose of the WAEVCP **Publicly Available Mapping Tool User Guide** is to provide written and visual guidance on how to use the web mapping application. It will explain basic and advanced tool functionality available in the tool and provide instructions about how to create a WAEVCP Site Consultation Report that applicants will use to fill out their application. It will also provide a list of map layers available in the tool, metadata about those map layers, and instructions about how to download those map layers.

Project partnership

The Timmons Group, a third-party contractor produced an Online Mapping Needs Assessment and developed an interactive map application for this project, on behalf of the Washington State Department of Commerce. All findings and recommendations related to the Online Mapping Needs Assessment are based on engagement by the contractor as part of the Washington State Electric Vehicle Charging Program (WAEVCP) and are subject to further review by Commerce.

The Washington State Electric Vehicle Charging Program (WAEVCP) is a broader joint effort led by the Washington State Department of Commerce in partnership by interagency agreement with the Utility and Transportation Commission and Washington State Energy Facility Site Evaluation Council.

This study was prepared under contract with the Washington State Department of Commerce.

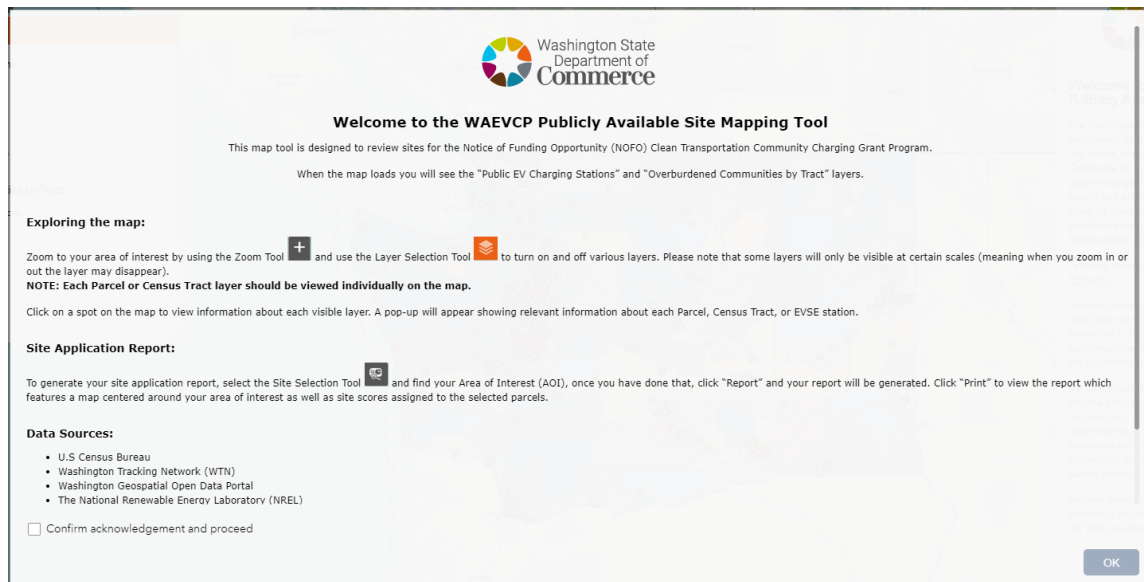
Section 1: Getting started

The state of Washington is committed to increasing the supply of renewable energy. We seek to support developers in identifying suitable sites for electric vehicle supply equipment (EVSE) that present the least conflict with other resource needs. Consultation early in a project is important for well-informed planning. **This map tool is designed to allow users to locate EV charging stations near them as well as provide information on scoring criteria needed by applicants to submit sites for the Notice of Funding Opportunity (NOFO) Clean Transportation Community Charging Grant Program.**

The WAEVCP Map Tool is a publicly available tool that can be accessed two ways:

1. Directly going to: <https://bit.ly/EV-Public-Grant-App>
2. Viewing the Hub page: <https://ev-station-grants-wacommerce.hub.arcgis.com/>

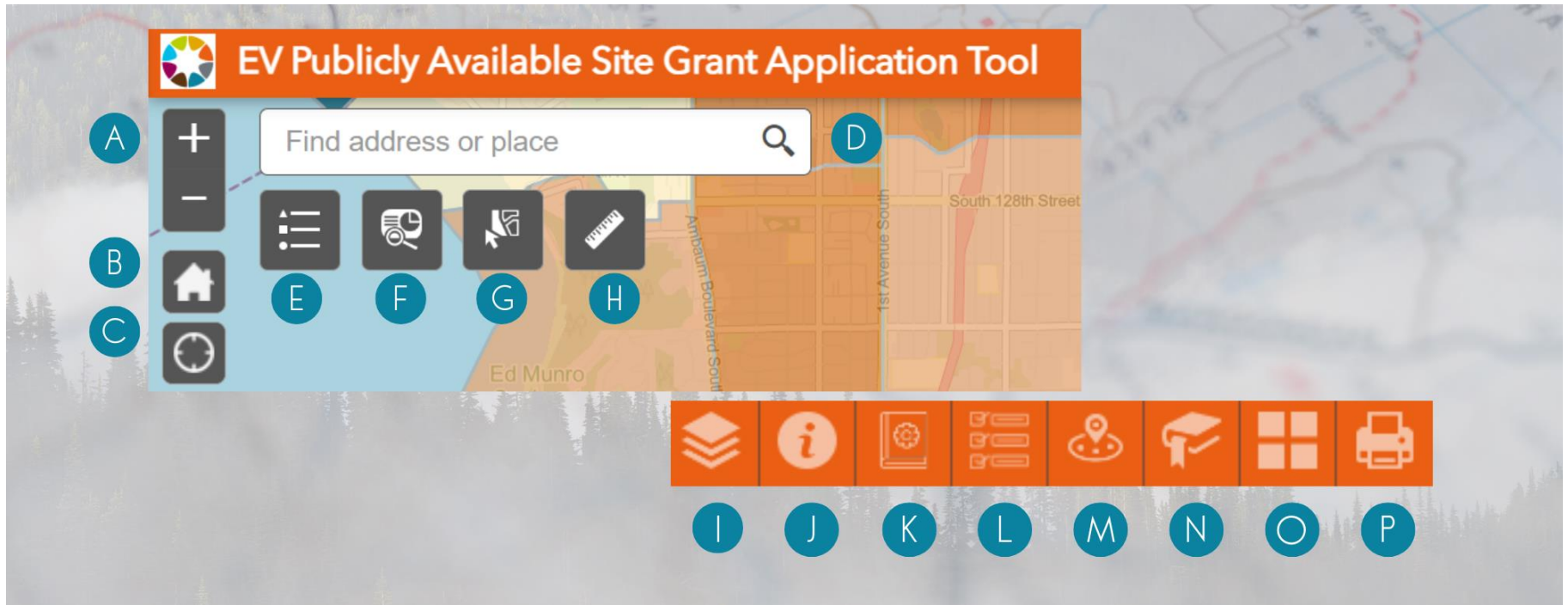
With option 1, you can directly access the map tool. With option 2, you can access a Hub page, which has more information, metadata, contacts, and a link to the WAEVCP Map Tool. Both options are available with any modern browser including (but not limited to): Google Chrome, Mozilla Firefox, Microsoft Edge, Apple Safari. **Google Chrome is the best browser to use for this tool.**



A required disclaimer statement and acknowledgment checkbox is your first view of the map tool. You must check the box to indicate that you have read and understand the instructions for exploring the map, generating your site application report, and the disclaimer in order to proceed to the map. Check the box to state *I confirm acknowledgement and proceed* and select *Ok*.

Section 2: Map tool basics and navigation

This section outlines important features of the mapping tool and provides a simple-to-use visual index of the map tool icons and the functionality that can be accessed from each icon.



Legend (see above for reference)

- A. **Zoom:** Zoom in and out of the map. You may also use the scroll wheel on your mouse (if applicable).
NOTE: To engage with and see the parcel data, you will need to zoom in within the map extent past the census blocks. The layers will remain grayed out until you are zoomed in far enough.
- B. **Home:** Zoom to the default/home extent.
- C. **My Location:** Navigate to your current location.
- D. **Search:** Search layers by predefined search criteria.
- E. **Legend:** Opens the legend to display symbology for layers toggled on in the map.
- F. **Screening Tool:** Opens the screening tool to generate the consultation report.
- G. **Select:** Opens the select tool to allow you to select features in the map for deeper analysis.
- H. **Measurement:** Opens the measurement tool and allows you to make linear and area measurements.
- I. **Layer List:** Opens the layer list to show all available layers to toggle on/off in the map.
- J. **About:** Opens the About window with information about the map tool and relevant hyperlinks.
- K. **App Usage Instructions:** Quick description of the tool ribbon in the top right of the map view.
- L. **Dwell Time and Trip Count explanation:** This provides an in-app summation of Dwell Time and Trip Counts.
- M. **Locate Nearest EVSE Station:** Search for EV charging stations within a buffer distance of a selected location.
- N. **Bookmarks:** Opens the bookmark gallery and allows you to choose from a selection of predefined bookmarks.
- O. **Base Map Gallery:** Opens the base map gallery and allows you to choose from a selection of available base maps.
- P. **Print:** Opens the print tool to allow you to print the current map view and any temporary drawings with measurements.

Section 3: Data layers in the map tool

This section outlines how data is organized within the tool and how to access specific data layers.

- The layer list shows the layer groups available in the tool. Scoring criteria layers are listed with the viewing level as either parcel or census tract, and a tip informing the user to zoom in or zoom out to view.

Scoring criteria layers in the WAEVCP Map Tool display relevant information that will be used in the site application process.

- Future Charging Events Potential
- Power level-to-park time fit (L2)
- Power level-to-park time fit (DCFC)
- Underserved Communities
- Geographic Gaps
- Overburdened Community

Reference layers in the WAEVCP Map Tool display additional datasets that may be helpful in the planning process.

- Public EV Charging Stations

Metadata about the layers and download options can be found on the Hub site at: <https://ev-station-grants-wacommerce.hub.arcgis.com/pages/explore-the-data>.

Section 4: Scoring Criteria for Dwell Time and Trip Count

Trip Count

Replica trip volume data, uses total modeled daily trips to points of interest within proposed site's parcel or closest parcel within 0.25 mile. Replica trip volume data is a tool that uses total modeled daily trips to points of interest within the proposed site's parcel or the closest parcel within 0.25 mile. This data can be used to estimate the potential traffic impact of a proposed development. The data is based on a variety of factors, including the location of the proposed development, the type of development, and the surrounding land use. The data can be used to help developers and planners make informed decisions about the location and design of new development.

The data is also used to help transportation planners develop and implement transportation plans and programs. The data can be used to identify areas where traffic congestion is a problem and to develop strategies to reduce congestion. The data can also be used to identify areas where new transportation infrastructure is needed.

<i>Daily Trip Count Range</i>	<i>Proposed Score</i>
100+	10
65 - 100	8
15 - 65	6
4 - 15	4
1 - 3	2
0	0

Average Dwell Time

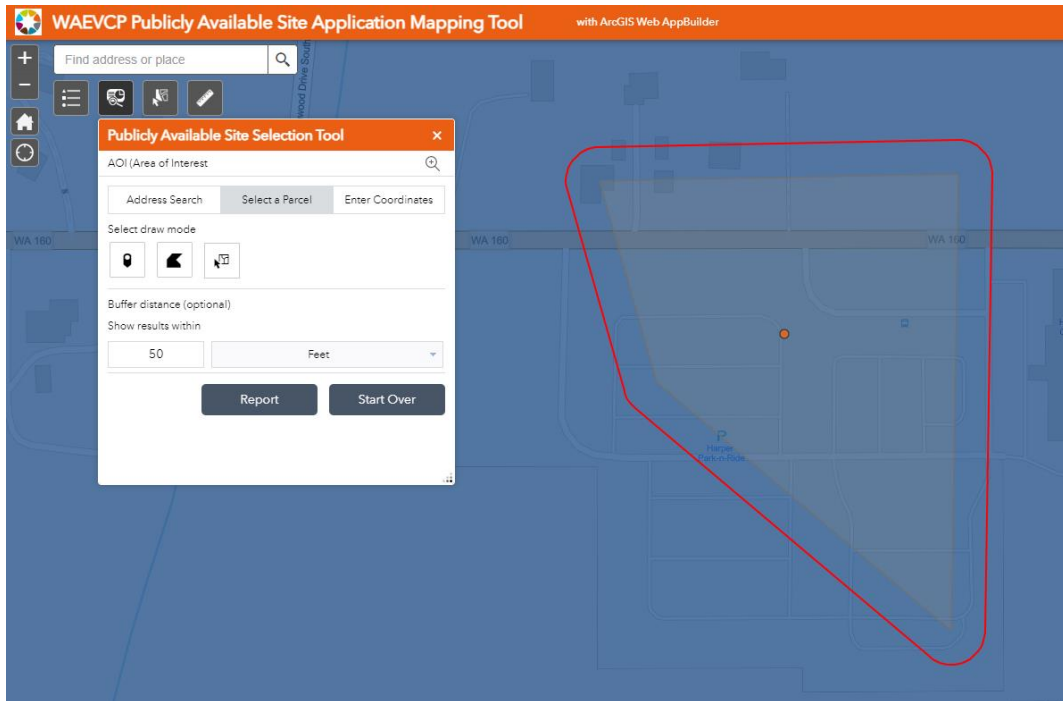
The site score is calculated by averaging the scores of each port, rounded to the nearest whole number. The score for each port is calculated by multiplying the number of ports by the average dwell time. For example, a site with 4 L2 ports and 2 DCFC ports with an average dwell time of 60 minutes would have a site score of 5.

Replica dwell time data, uses median dwell time of all modeled daily trips to points of interest within proposed site's parcel or closest parcel within 0.25 mile. Replica dwell time data is a measure of **how long people stay at a particular location**. It is calculated by taking the median of the dwell times of all modeled daily trips to points of interest within a given area. In this case, the area is the proposed site's parcel or the closest parcel within 0.25 mile. Replica dwell time data can be used to estimate how much traffic a particular location is likely to generate. It can also be used to compare the traffic potential of different locations.

Average Dwell Time			
Level 2 (L2)		Direct current fast chargers (DCFC)	
<i>Assumptions:</i> Use 80% of 300 - mile range, 25 miles per hour	<i>Score</i>	<i>Assumptions:</i> 30 minutes to charge up to 80%	<i>Score</i>
4-10 hours	10	Less than 45 minutes	10
2 - 4 hours	8	45 - 60 minutes	6
1-2 hours OR 10 - 12 hours	5	60 - 90 minutes	3
30 minutes < 1 hours OR 12-16 hours	2	More than 90 minutes	0
less than 30 min OR Greater than 16 hours	0		

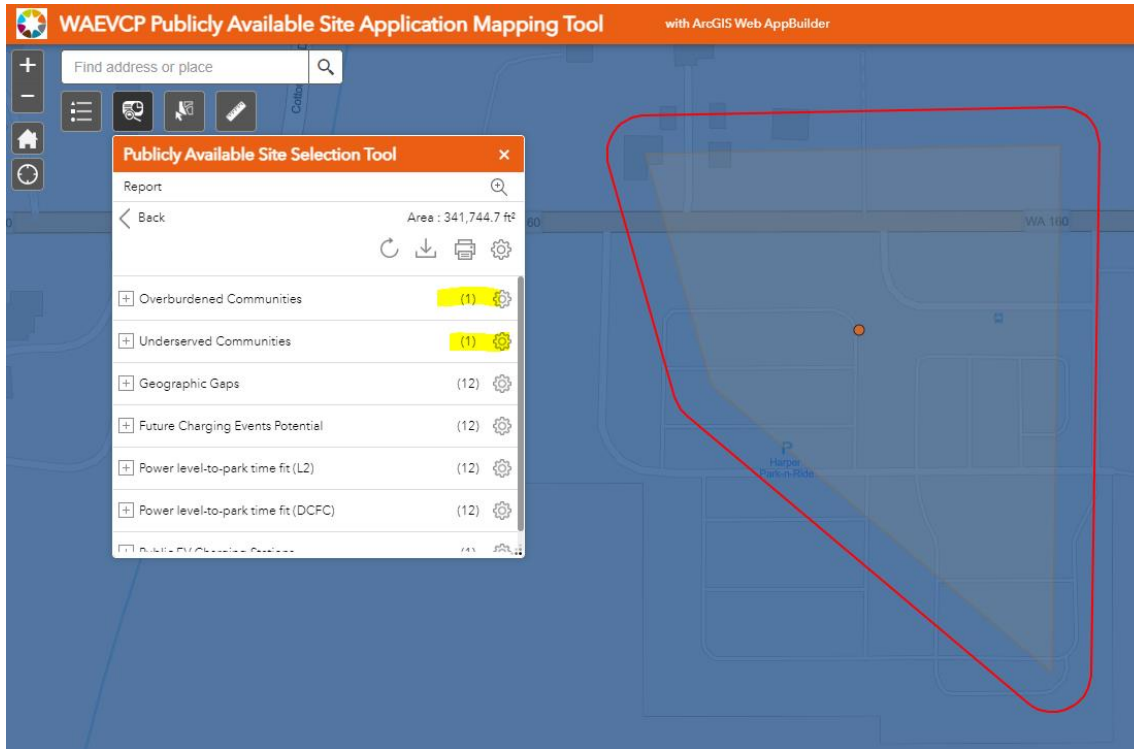
Section 5: Creating a site consultation report

This section provides an illustrated step-by-step tutorial for generating a WAEVCP Site Consultation Report.



A sample report is shown, and the content will be explained at a high level. The first step to generating a site consultation report is to open the tool and *select an area of interest*. There are three ways to select an area of interest: by searching for a place or address; selecting a parcel by point, polygon, or drawing a rectangle area on the map; or inputting coordinates. The example to the left shows a polygon drawn on the map. You may buffer your location or drawing by a measure and several different unit options.

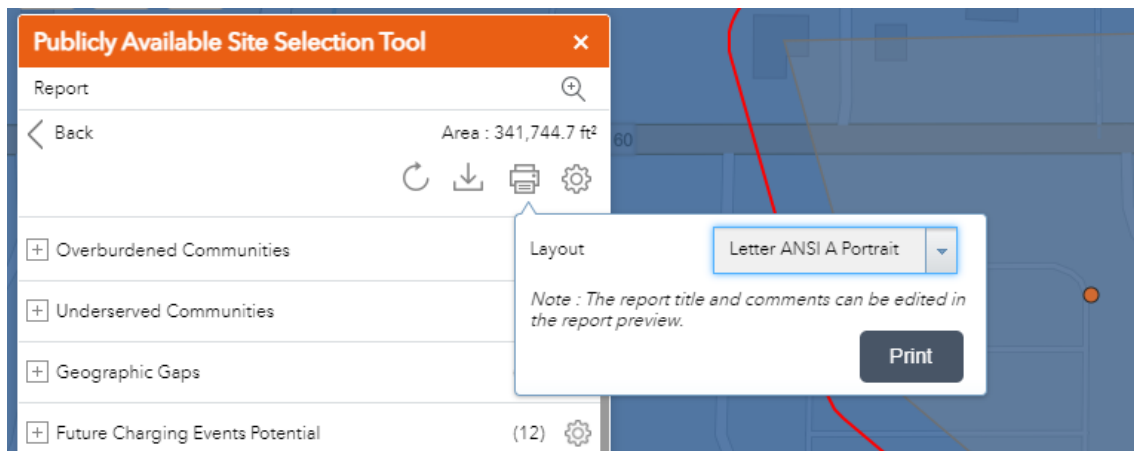
To begin the report generation, select report. Otherwise, to reset everything, select start over.



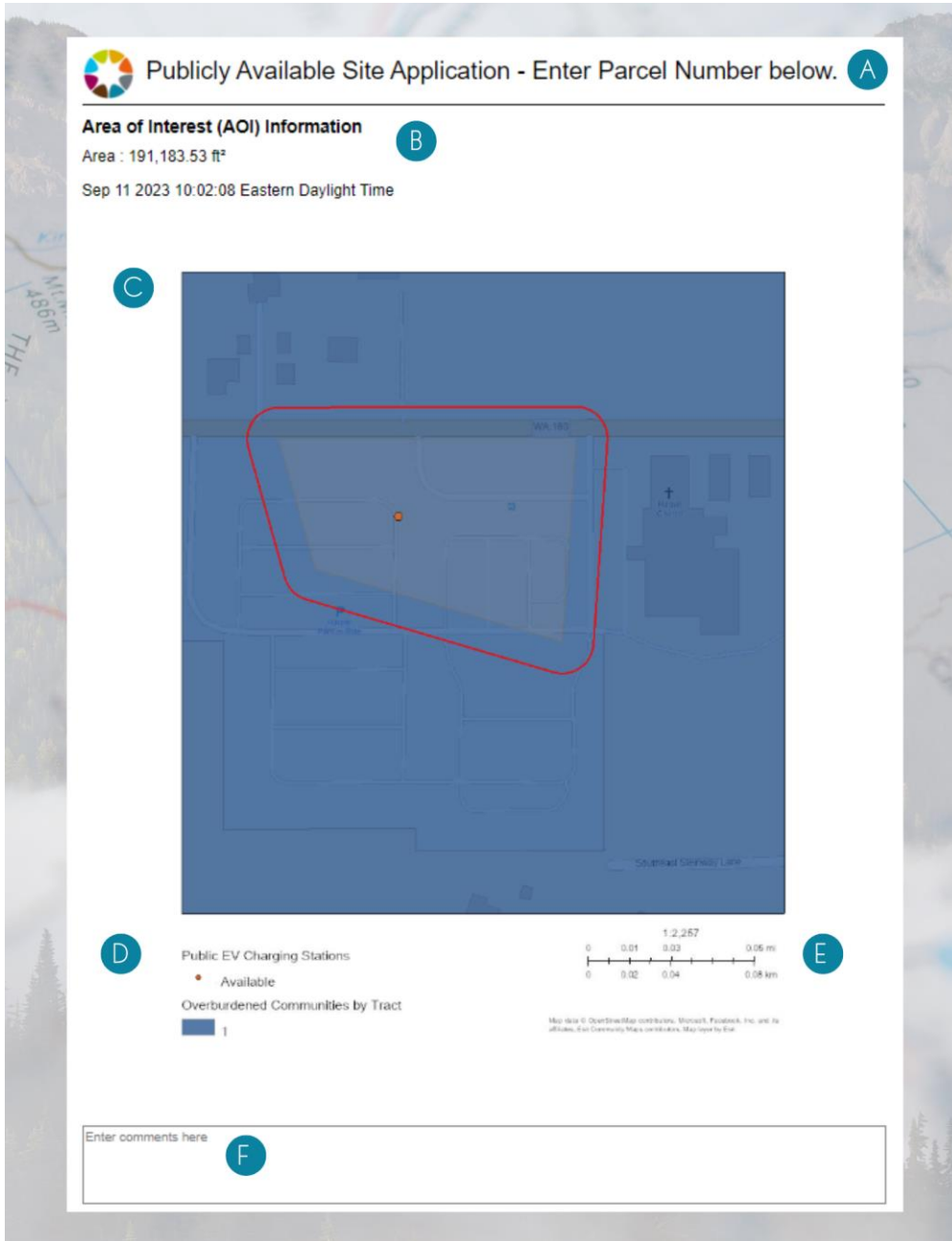
After selecting report, the map tool will process the area of interest and compare it against several priority layers in the map.

While the process is on-going, a loading symbol will appear for each layer in the tool. When the processing is finished, each layer will have a number next to it. These numbers are highlighted in yellow in the example to the left.

There are several options to explore the data layers that intersect the area of interest (AOI). The most important option is the print icon which will generate the **WAEVCP Site Consultation Report**.



Select the print icon and choose a layout. The default, and best option, is 'A3 Portrait.'



This map will be generated and may take a few moments when the print preview window opens.

The section below the map on the right shows the map scale, scale bar, and service credits related to some layers in the map. The map scale and scale bar will update as the map extent and zoom scale change per your selected area of interest.

A. The title of your map. This can be modified prior to printing to better describe the report.

B. This shows you the size of the area of interest (AOI) selected as well as the date and time when the report was generated.

C. The map extent centered on your selected AOI.

D. A legend shows the symbology of layers toggled on in the map. There is a limited area to display the layers so not all layers toggled on will show in the legend.

E. The map scale and scale bar will update as the map extent and zoom scale change per your selected area of interest.

F. You may enter additional comments in this section if additional context is needed to describe the information.

Summary

Name	Count	Area(ft²)	Length(ft)
Overburdened Communities	1	32,983.99	N/A
Underserved Communities	1	32,983.99	N/A
Geographic Gaps	1	32,983.99	N/A
Future Charging Events Potential	1	32,983.99	N/A
Power level-to-park time fit (L2)	1	32,983.99	N/A
Power level-to-park time fit (DCFC)	1	32,983.99	N/A
Public EV Charging Stations	0	N/A	N/A

Overburdened Communities

#	County Name	Census Tract	Overburdened Communities (EHD Score)	Area(ft²)
1	Kitsap	53035092704	1	32,983.99

Underserved Communities

#	County	Census Tract	People per port within Tract	People per port within County	Average number of People per port	Area(ft²)
1	Kitsap	53035092704	572	2,397	1,484	32,983.99

Geographic Gaps

#	Parcel ID	Census Tract	County	Miles from nearest EVSE site	Area(ft²)
1	112302-2-010-2008	53035092704	Kitsap	0.18	32,983.99

Future Charging Events Potential

#	Eligibility	Parcel ID	Census Tract	County	Trip Count	Assessor's Link	Area(ft²)
1	Not Eligible	112302-2-010-2008	53035092704	Kitsap	No Data	https://osearch.kitsapgov.com/pdetails/Details?parcel=112302-2-010-2008	32,983.99

Power level-to-park time fit (L2)

#	Eligibility	Parcel ID	Census Tract	County	Average Dwell Time (in Hours) *Rounded
1	Not Eligible	112302-2-010-2008	53035092704	Kitsap	No Data

#	Average Dwell Time (in Mins)	Assessor's Link	Area(ft²)
1	No Data	https://osearch.kitsapgov.com/pdetails/Details?parcel=112302-2-010-2008	32,983.99

Power level-to-park time fit (DCFC)

#	Eligibility	Parcel ID	Census Tract	County	Average Dwell Time (in Hours) *Rounded
1	Not Eligible	112302-2-010-2008	53035092704	Kitsap	No Data

#	Average Dwell Time (in Mins)	Assessor's Link	Area(ft²)
1	No Data	https://osearch.kitsapgov.com/pdetails/Details?parcel=112302-2-010-2008	32,983.99

Below the map extent, there are several tables with additional information about the public sites selected.

The Publicly Available Site Score is broken down by Overburdened Community and Underserved Community Scores, Geographic Gaps, Future Charging Events potential, and Power level-to-park time for both L2 and DCFC chargers.

Take note of the eligibility and parcel ID values that will also be needed on your site application document. Additionally, the land use code for the area of interest (AOI) is generated in the report as well as the assessor link and square footage of the parcel. NOTE: If you want more information about the site selected, select the Assessor's Link to see more.

Charger Types

There are two main types of electric vehicle chargers: Level 2 and DCFC. Level 2 chargers are slower but widely available for use at home, work, or public charging stations. They take 4-10 hours to charge a BEV to 80% from empty and 1-2 hours for a PHEV. On the other hand, DCFC chargers are faster but less common, usually found near highways or high-traffic areas. They can charge a BEV to 80% in just 20 minutes to 1 hour.

What does "Overburdened" mean?

"Overburdened" highlights the cumulative impact of multiple stressors on a community, which often amplifies the negative effects of each individual stressor. When these challenges intersect, they create a compounding effect that makes it exceedingly difficult for residents to break free from the cycle of disadvantage.

According to Washington State Legislature, [RCW 70A.02.010](#), "Overburdened community" means a geographic area where vulnerable populations face combined, multiple environmental harms and health impacts, and includes, but is not limited to, highly impacted communities as defined in [RCW 19.405.020](#)."

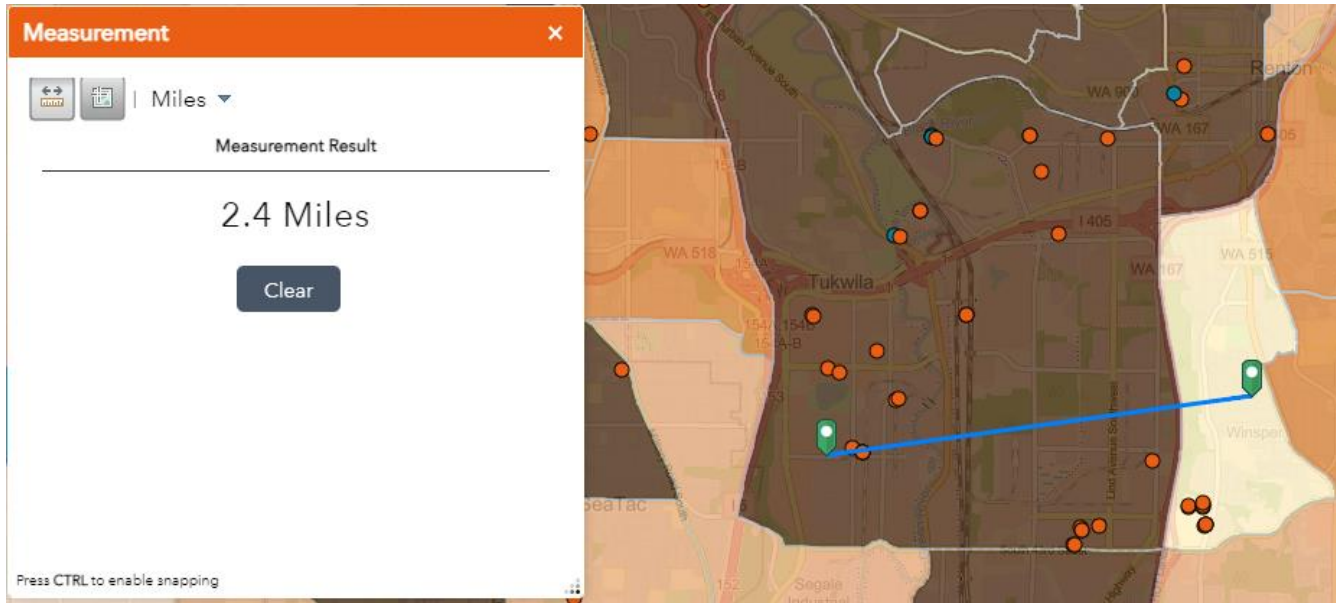
Section 6: Printing your Site Report

The screenshot displays a web application interface. On the left, a map shows a highlighted area of interest (AOI) in red. Above the map, text reads "Publicly Available Site Application - Enter Parcel Number below." and "Area of Interest (AOI) Information" with details: "Area : 191,183.53 ft²" and "Sep 11 2023 10:02:08 Eastern Daylight Time". A legend below the map identifies "Public EV Charging Stations" (Available) and "Overburdened Communities by Tract". A scale bar and a "1/5" page indicator are also visible. On the right, a dark print menu is open, showing "Print" with "5 pages" and options for "Destination" (Save as PDF), "Pages" (All), and "Layout" (Portrait). A "More settings" dropdown and "Save" and "Cancel" buttons are at the bottom.

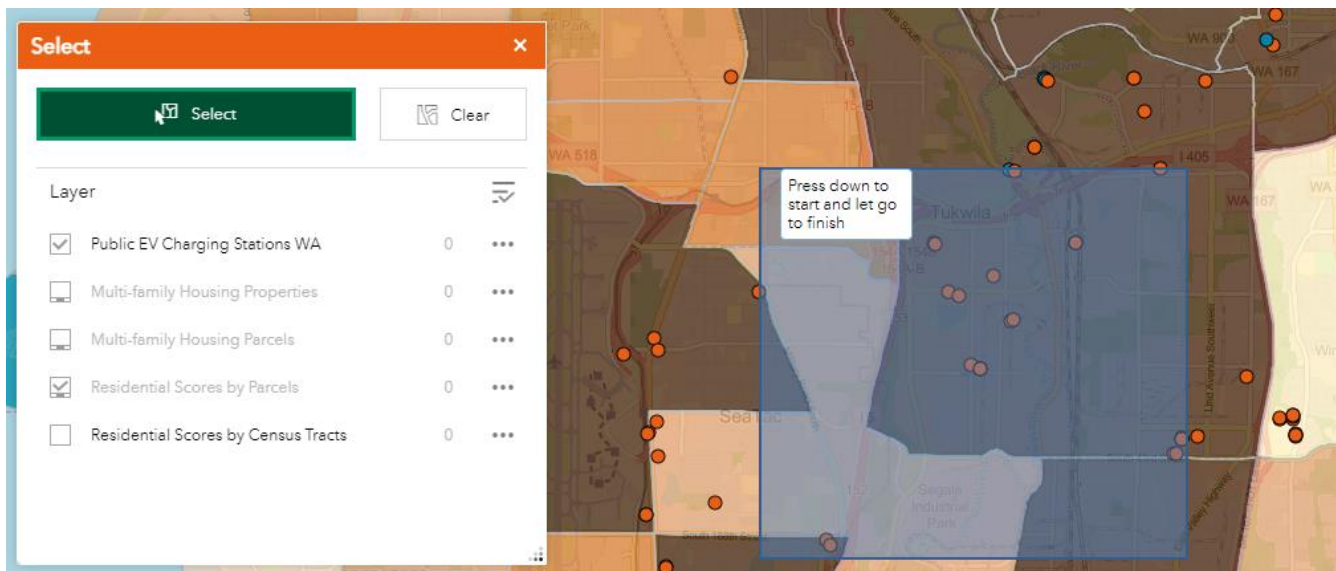
Select print in the top right of the print preview window to show the browser's print menu. At this point, the report has had the page breaks inserted and the final product is shown. You may choose a destination to save the PDF of your report, or you may choose to immediately print the consultation report.

Section 7: Advanced tool functionality

This section will provide more detail on several advanced map tool features: Measure Distance and Select



Measure Distance: Distance can be calculated using the measurement tool by selecting the start and end points. A line can have many points along and the measurement will be a total of the entire line length. Different units of measure are available and will update an existing measurement automatically. Only one line can be drawn at any given time. When using the tool, select which method of measuring you will be using in the top left of the tool window.



Select Tool: This tool allows you to make a large selection of points within your map extent. You will be able to see how many items show up in the layer list after you have completed your selection.

NOTE: You will need to zoom in to see the parcels layer as well as to select a parcel.