Washington Master Address Services (WAMAS)
Geocoder Web Service

Version 5.00   9/18/2018

Introduction

The geocoding service accepts a street address and returns location information. Addresses are matched against various sources including the Master Address File (MAF), County parcels and street centerlines. This service geocodes to zip code, post office, city and zip+4 if a street level match isn't possible. The latitude, longitude, accuracy and source values are also returned. This service uses the ArcGIS Server software from Environmental Systems Research Institute to perform the geocoding.

Inputs	Example	Description
Address	101 Israel Rd SE	Address to geocode with house number and all components. (optional)
Zip	98501	5 Digit Zip Code (optional)
City	Tumwater	City Name (optional)
Zip4	5570	Zip Plus 4 (optional)
Consumer	DOH	Unique key for each consumer (required)
Outputs		
Status	M	Matched (M) or Unmatched (U)
Score	100	Numeric score returned from ESRI's address locators
Source	MAF	Source data used for geocoding
Locator		URL for the REST endpoint of the address locator
Accuracy	Close	Close, Approximate or Very Approximate
Longitude	-122.96426	WGS84 in decimal degrees
Latitude	47.14131	WGS84 in decimal degrees
Av_date	N	Date and time geocoding was attempted
Error_status	Invalid Input	Any application messages
Matched_address	101 Israel Rd SE, 98501	Matched address returned from the ESRI address locator used
Candidate1 – Candidate5	101 Israel Rd SW, 98501	1 – 5 candidates if found

Consumption Example

This assumes you're using Visual Studio and VB.NET is the language.

Add a web reference to https://state-wamas-app.des.wa.gov/geocoder/service.asmx?WSDL and name it "Geocoder".

Dim geo_obj As New Geocoder.Geocoder
Dim geo As New Geocoder.Geocode
geo_obj.Url = "https://fortress..." (Contact DOH for URL)
geo = geo_obj.FindAddress("101 Israel Rd SE", "98501", "Tumwater","","DOH")
The geo object will have the input and output values as properties.

Locators used in this order:

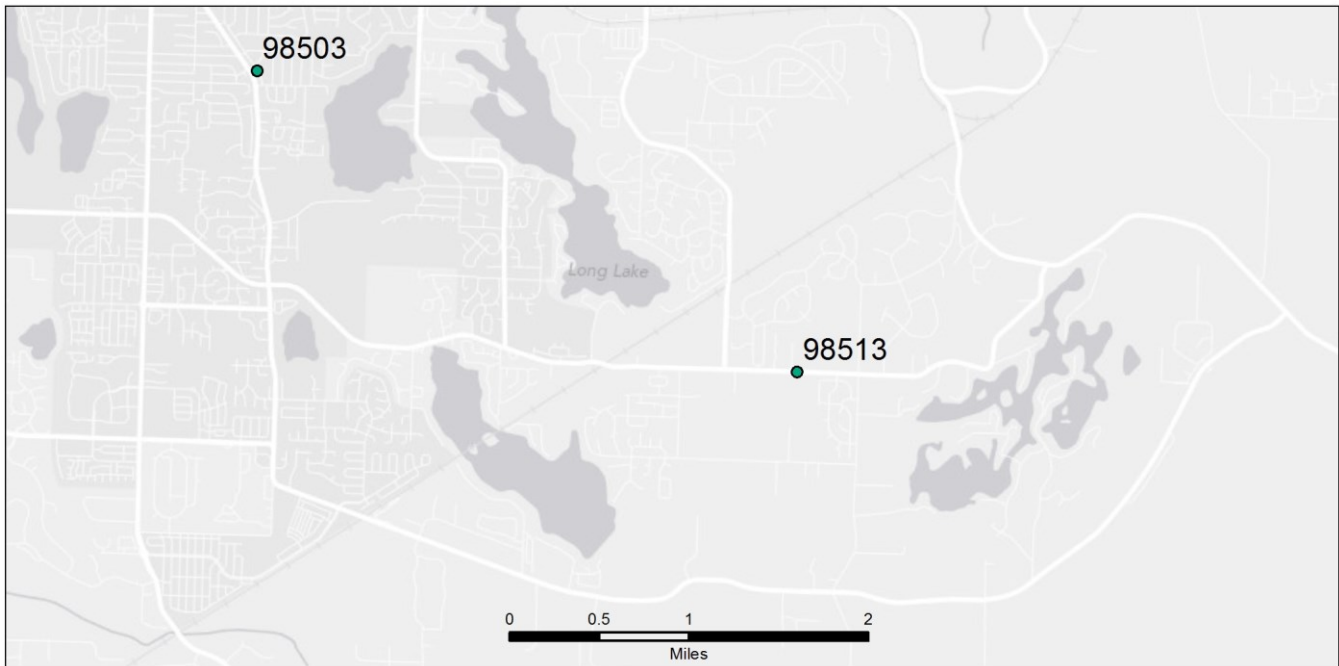| Reference Data	Status	Score	Accuracy	~Horizontal Accuracy
MAF Address Points	M	100 - 80	High	+- 100 ft.
County Parcel Points	M	100 - 80	High	+- 100 ft.
County Address Points	M	100 - 80	High	+- 100 ft.
County Roads	M	100 - 80	High	+- 100 ft.
ESRI StreetMap Points	M	100 - 80	High	+- 100 ft.
ESRI StreetMap Streets	M	100 - 80	Medium	+- 300 ft.
TIGER 2010 Streets	M	100 - 80	Medium	+- 300 ft.
TIGER 2016 Streets	M	100 - 80	Medium	+- 300 ft.
TIGER 2006 Streets	M	100 - 80	Medium	+- 300 ft.
Zip4 Points	M	60	Low	+- 1000 ft.
NavTeq Street Points	M	50	Low	+- 1000 ft.
GNIS Points	U	40	Low	+- 5 Miles
Zip 5 Points	U	30	Low	+- 5 miles
Post Office Points	U	30	Low	+- 10 Miles

Horizontal Accuracy
The horizontal accuracy values in the table above represent a general guideline. Horizontal accuracy is generally higher in urban areas and less accurate in rural areas. Based on the reference data used, the position of a geocode can range from exact to miles from the correct position. The accuracy is also relative to the target location of an address (e.g. mailbox, condo, driveway, rooftop of structure). For geocodes using parcel points (centroids) the size and shape of the parcel has a direct impact on the accuracy.

Locator Examples
Matching continues until a suitable match is found (score above 80 for point or street matches).
Post Offices

Master Address File (MAF)

ESRI StreetMap Address Points and County Parcel Points
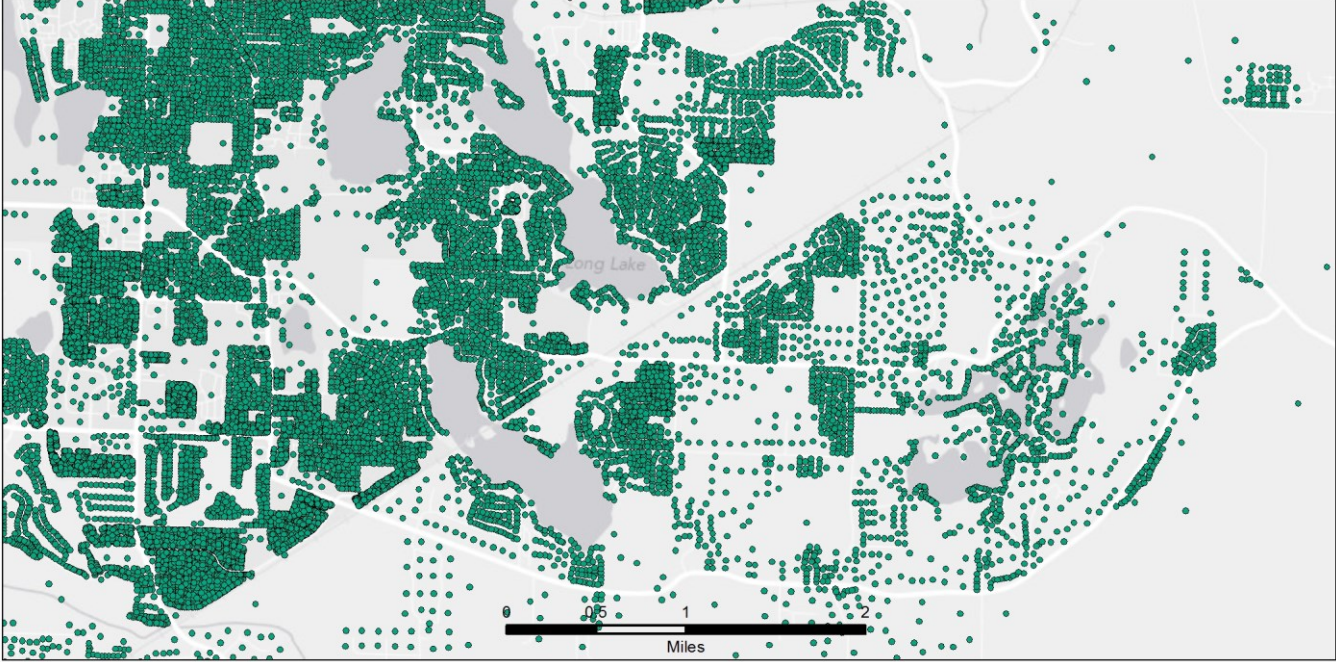
Streets

Zip +4 Centroids

ESRI StreetMap Segment Points
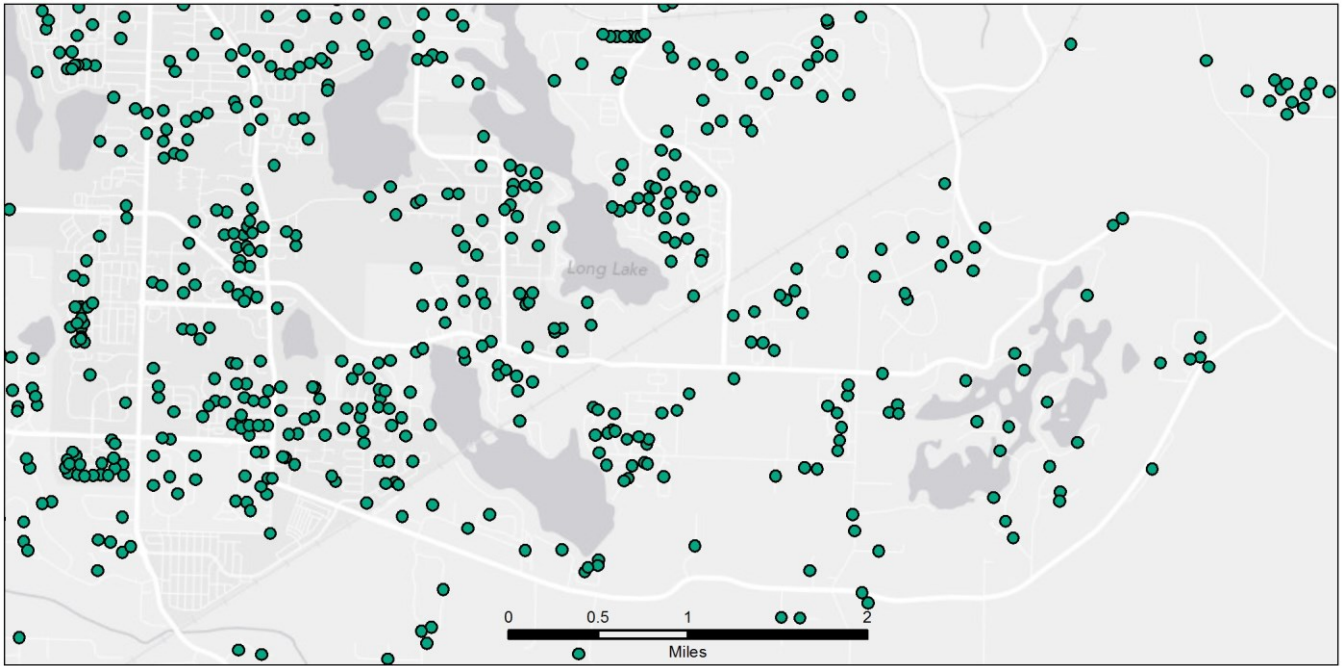
City Points
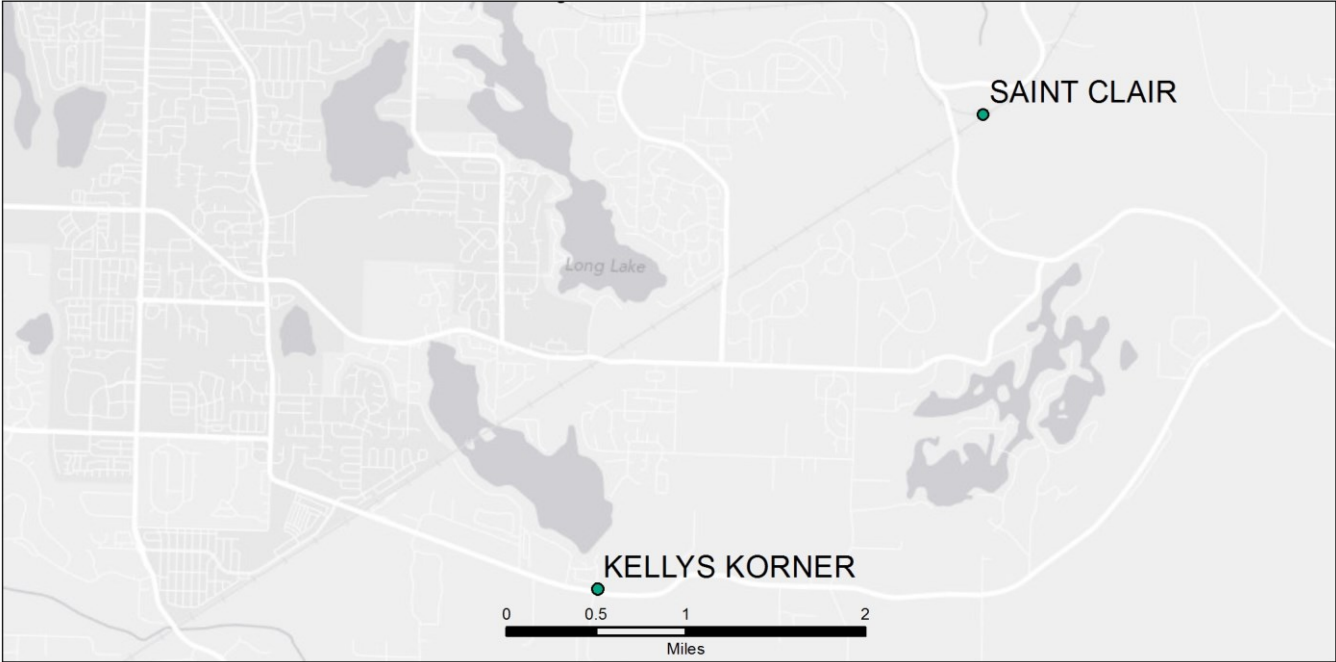
5 Digit Zip Code Points
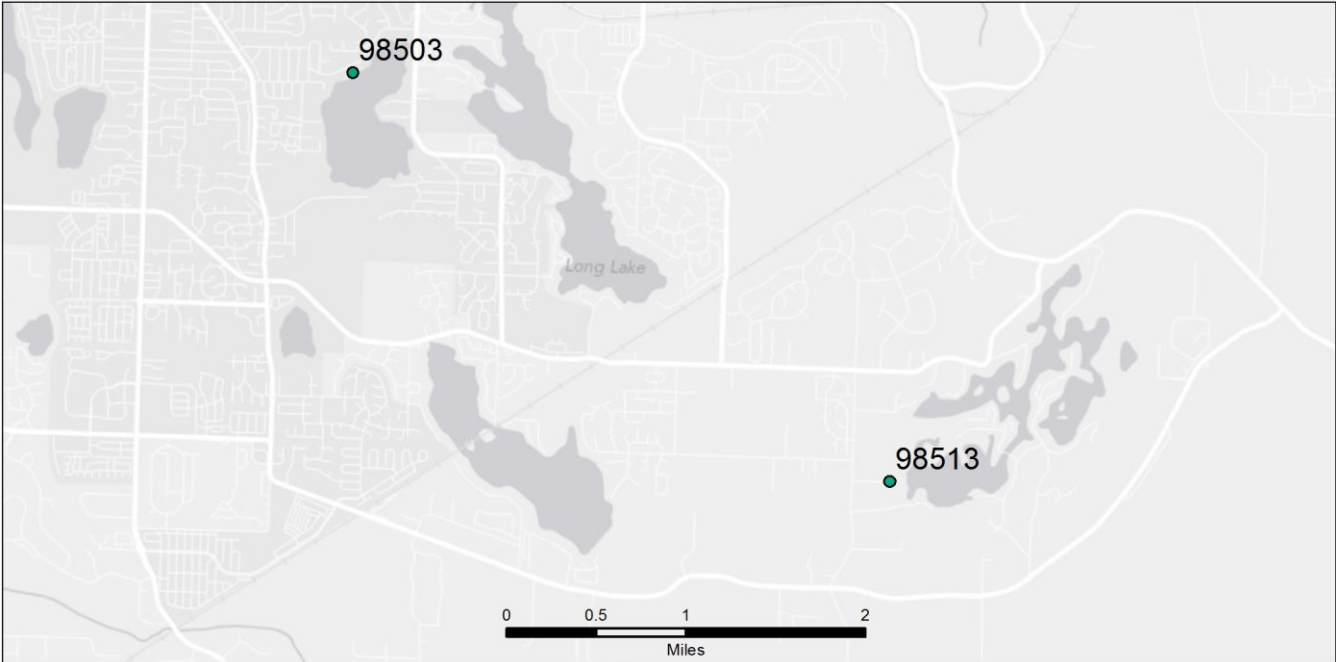
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Test form to view XML output: https://state-wamas-app.des.wa.gov/geocoder/service.asmx?op=FindAddress

ASP.NET Test Page
Enter an address into this page and it calls three WAMAS Web services and one mapping application.
https://state-wamas-app.des.wa.gov/testwebservices/default.aspx

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Revisions
9/17/2018
Modified the security protocol to use TLS 1.2.
Upgraded to .NET Framework 4.5