How to Find an Address in Census Geocoder and TIGERweb

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About the Geocoder

An address lookup tool that converts your address to an approximate coordinate and returns information about the address range in relation to other geographies

Input:

Single address or batch submit up to 1,000 addresses at a time.

Output:

- Location: latitude and longitude, using the "Find Locations Using..." option.
- **Geographic entities**: for an address using the "Find Geographies Using..." option. Tool returns the state, county, census tract, and block for each address. Additional geographies are available.

About TIGERweb

TIGERweb

- Provides a simple way to view our TIGER (Topologically Integrated Geographic Encoding and Referencing) data without Geographic Information System (GIS) software and without downloading data
- Boundaries and Roads data

Address Ranges

- Both tools find an address by comparing it to our Address Ranges.
- Each line segment has a range "From House Number" "To House Number"
 - Ex: 1-99 (May only have 3 houses on the block)
- The majority of the address ranges we have are for residential areas – there are limited address ranges available in commercial

areas.



Census Geocoder: Getting into the Nitty Gritty

- Formatting an address for batch processes
- What do the results mean?

How to Format Your Addresses for Batch Processing

- Addresses should be formatted in a single line with comma delimiters. The address should consist of:
- Unique ID, House Number and Street Name, City, State, ZIP Code
- City and State, or ZIP Code may be left blank, but there must be the appropriate number of commas to represent the blank data, for example:
 - 1, 1600 Pennsylvania Ave NW, Washington, DC,
 - 2, 1600 Pennsylvania Ave NW, , , 20502
- The following are not valid:
 - 3, 1600 Pennsylvania Ave NW, Washington, DC
 - 4, 1600 Pennsylvania Ave NW, 20502
- The batch geocoder can process up to 1,000 addresses at a time. It may take several minutes to process this many addresses.

Results

- An interpolated latitude/longitude coordinate is returned along with the address range the Census Bureau has on that stretch of road.
 That coordinate is then used to determine the geography that the address is within.
- The results can be:
 - Match/Exact
 - Match/Non-Exact
 - Tie
 - No Match
- If a Tie is encountered, there are multiple possible results for that address. The address can be input for single address geocoding to view the multiple results.

Results for Find Locations Using

- Estimated latitude/longitude coordinate
- TIGER identifier of the street
- Full address range on the road segment

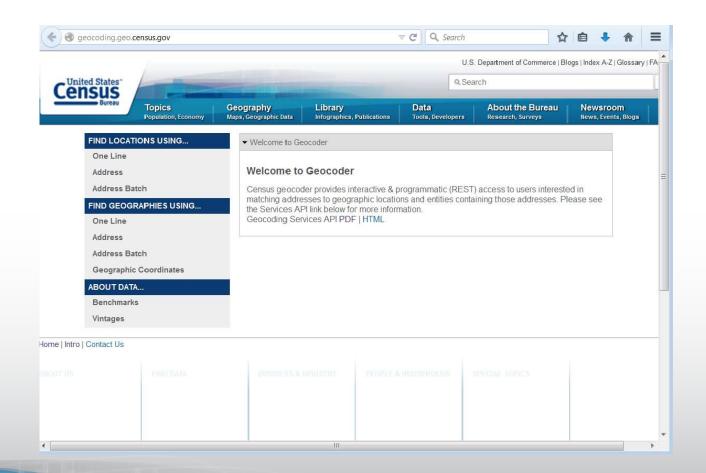


Results for Find Geographies Using

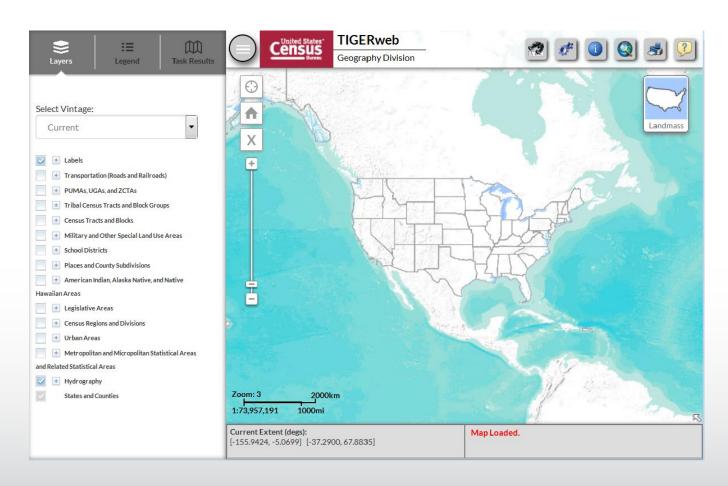
- Latitude/Longitude
- State
- County
- Census Tract
- Block
- For more geographies in the return, add: "&layers=all" at the end of the URL



Geocoder - Demo



TIGERweb Demo



Questions?

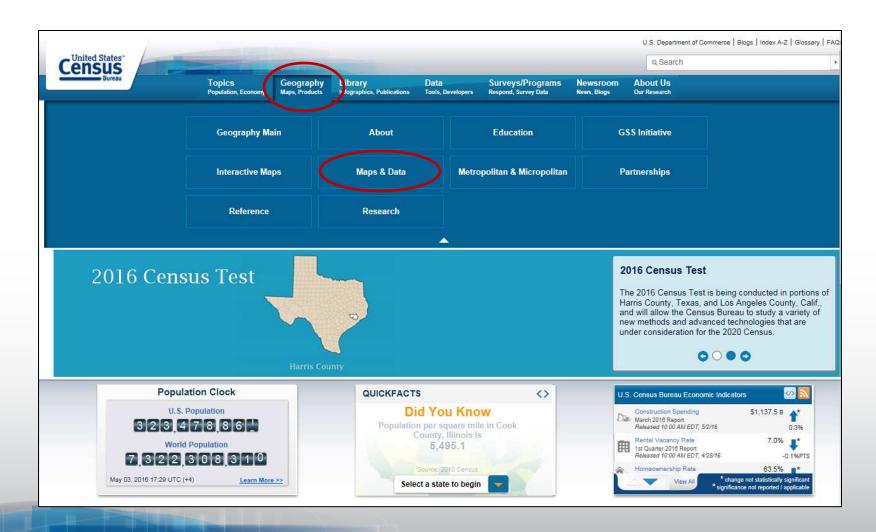
 General geography questions: geo.geography@census.gov



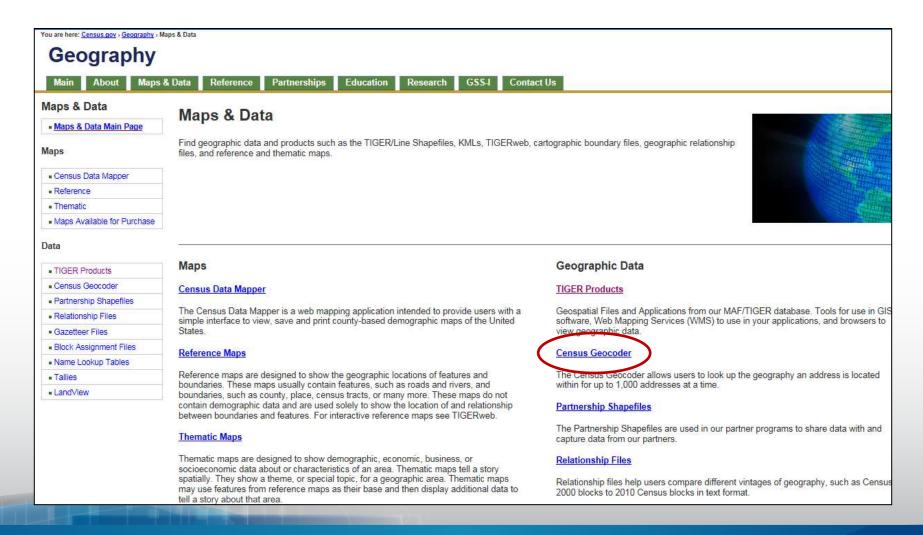
- Census Geocoder questions: geo.geocoding.services@census.gov
- TIGERWeb questions: <u>geo.tigerweb@census.gov</u>

The following slides depict the information similar to the live demo

Census.gov: Maps and Data



Maps and Data: Geocoder



Geocoder Information Page



Geography

Main About Maps & Data Reference Partnerships Education Research GSS-I Contact Us

Maps & Data

Maps & Data Main Page

Maps

- Census Data Mapper
- Reference
- Thematic
- Maps Available for Purchase

Data

- TIGER Products
- Census Geocoder
- Partnership Shapefiles
- Relationship Files
- Gazetteer Files
- Block Assignment Files
- Name Lookup Tables
- Tallies
- LandView

Census Geocoder

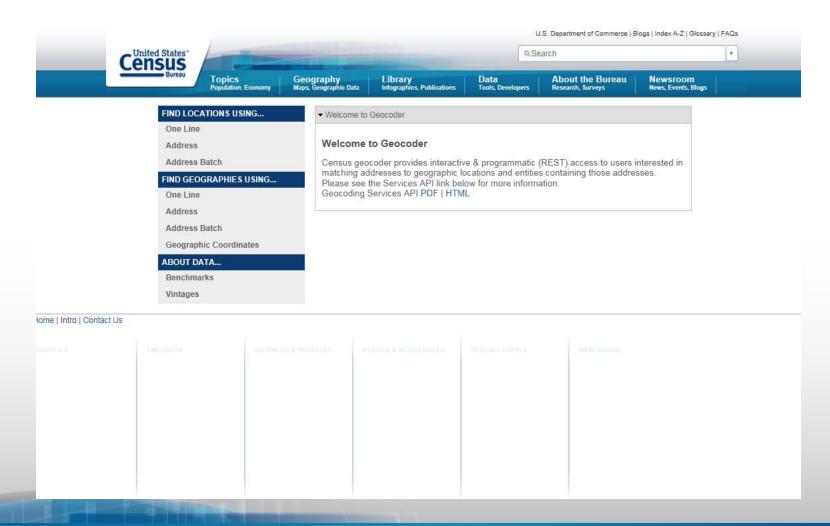
The Census Geocoder is an address look-up tool that converts your address to an approximate coordinate (latitude/longitude) and returns information about the address range that includes the address and the census geography the address is within. The geocoder is available as a web interface and as an API (Representational State Transfer - REST - web-based service).

The tool allows you to look-up a single address or batch submit up to 1,000 addresses at a time. In addition, you can find the location of an address, the latitude and longitude, using the "Find Locations Using..." option. You can also find the census geographic entities for an address using the "Find Geographies Using..." option. The "Find Geographies Using..." option returns the state, county, census tract, and block for each address. Additional geographies are available using the instructions under Documentation below.

When geocoding your address, you need to select a benchmark (time period) and select a vintage of geography. The benchmark is the time period when we created a snapshot of our data (generally done twice a year). For example, Public_AR_Census2010 is the snapshot we took of the database in 2010. Public_AR_Current is the most recent snapshot we took of our dataset. The vintage of geography is the census or survey that the data relates to. For example, Census2010_Census2010 are the address ranges from the 2010 Census at the time of the 2010 Census. You can also obtain the 2010 Census address ranges as of our 2013 benchmark. The vintages you see available depends on the benchmark you selected.

- + Data in the Census Geocoder
- + Batch Geocoding Process
- + Single Address Look-up
- + Documentation
- + FAQs
- + Contact Information

Geocoder Tool



Geocoder Demo Backup – Return - Geographies

Geographies Return for single address:

Input:

Address: 1600 Pennsylvania Ave NW,

Washington, DC, 20502

Benchmark: Public_AR_Current (4)
Vintage: Current_Current (4)

Matched Address: 1600 PENNSYLVANIA AVE NW,

WASHINGTON, DC, 20502

Coordinates:X: -77.03535 Y: 38.898754

Tiger Line Id: 76225813 Side: L Address Components:

From Address: 1600 To Address: 1698 PreQualifier: PreDirection: PreType:

Street Name: PENNSYLVANIA

SuffixType: AVE SuffixDirection: NW SuffixQualifier: City: WASHINGTON

State: DC Zip: 20502 Geographies: Counties: OID: 27590331264532 STATE: 11 FUNCSTAT: F AREAWATER: 18633403 NAME: District of Columbia LSADC: 00 CENTLON: -077.0162745 BASENAME: District of Columbia INTPTLAT: +38.9041031 COUNTYCC: H6 MTFCC: G4020 COUNTY: 001 GEOID: 11001 CENTLAT: +38.9047579 INTPTLON: -077.0172290 AREALAND: 158364990 COUNTYNS: 01702382 **OBJECTID: 632**

Census Tracts: OID: 20790331304119 STATE: 11 **FUNCSTAT: S** NAME: Census Tract 62.02 AREAWATER: 4970897 LSADC: CT CENTLON: -077.0352173 BASENAME: 62.02 INTPTLAT: +38.8809933 MTFCC: G5020 COUNTY: 001 GEOID: 11001006202 CENTLAT: +38.8801546 INTPTLON: -077.0363219 AREALAND: 6539773 OBJECTID: 63929 TRACT: 006202

2010 Census Blocks: BLKGRP: 1 OID: 210403964788146 **FUNCSTAT: S** STATE: 11 AREAWATER: 0 NAME: Block 1031 SUFFIX: LSADC: BK CENTLON: -077.0365336 LWBLKTYP: L BASENAME: 1031 BLOCK: 1031 INTPTLAT: +38.8971157 MTFCC: G5040 COUNTY: 001 GEOID: 110010062021031 CENTLAT: +38.8971157 INTPTLON: -077.0365336 AREALAND: 91475 OBJECTID: 11078234 TRACT: 006202

States: OID: 27490331294090 STATE: 11 **FUNCSTAT: A** NAME: District of Columbia AREAWATER: 18633403 LSADC: 00 CENTLON: -077.0162745 STUSAB: DC BASENAME: District of Columbia INTPTLAT: +38.9041031 **DIVISION: 5** MTFCC: G4000 STATENS: 01702382 GEOID: 11 CENTLAT: +38.9047579 INTPTLON: -077.0172290 **REGION: 3** AREALAND: 158364990 **OBJECTID: 50**

Geocoder Demo Backup -**Return Locations**

- Locations return for single address:
- Input:

Street: 1600 Pennsylvania Ave NW City: Washington State: DC Zip: 20502

Benchmark: Public AR Current (4)
Matched Address: 1600 PENNSYLVANIA AVE NW, WASHINGTON, DC, 20502
Coordinates:X: -77.03535 Y: 38.898754

Tiger Line Id: 76225813 Side: L Address Components:

From Address: 1600 To Address: 1698

PreQualifier: PreDirection: PreType:

Street Name: PENNSYLVANIA

SuffixType: AVE SuffixDirection: NW SuffixQualifier:

City: WASHINGTON

State: DC Zip: 20502



Geocoder Demo Backup – Additional Geographies

Additional geographies return

114th Congressional Districts: OID: 211904692355590 MTFCC: G5200 **FUNCSTAT: N** STATE: 11 **AREAWATER: 18633403** NAME: Delegate District (at Large) CDSESSN: 114 LSADC: C4 CENTLON: -077.0162745 **GEOID: 1198** CENTLAT: +38.9047579 CD114: 98 INTPTLON: -077.0172290 AREALAND: 158364990 BASENAME: Delegate District (at Large) INTPTLAT: +38.9041031 **OBJECTID: 254**

2010 Census Urbanized Areas: UA: 92242 OID: 27040158105937 MTFCC: G3500 **FUNCSTAT: S** AREAWATER: 69381737 NAME: Washington, DC--VA--MD Urbanized Area LSADC: 75 CENTLON: -077.1895767 GEOID: 92242 CENTLAT: +38.8969112 INTPTLON: -077.1897402 AREALAND: 3423955122 BASENAME: Washington, DC--VA--MD INTPTLAT: +38.8973945 **OBJECTID: 3036**

Combined Statistical Areas: OID: 261904755925754

FUNCSTAT: S

NAME: Washington-Baltimore-Arlington, DC-MD-VA-WV-PA CSA

AREAWATER: 5210162412

LSADC: M0

CENTLON: -077.1890968

BASENAME: Washington-Baltimore-Arlington, DC-MD-VA-WV-PA

INTPTLAT: +38.9943635

MTFCC: G3100 CSA: 548 GEOID: 548

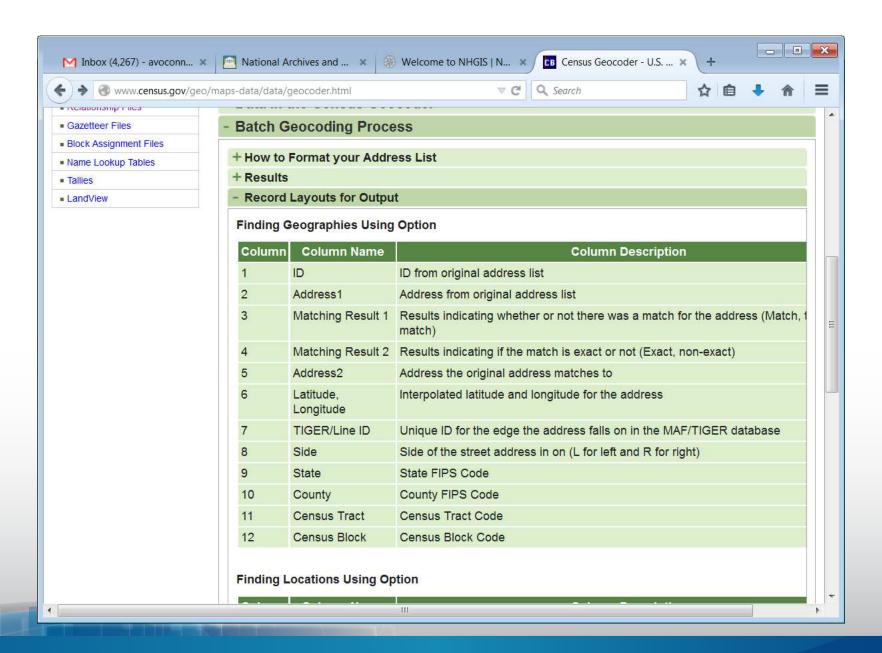
CENTLAT: +38.9930109 INTPTLON: -077.1890457 AREALAND: 32708677617

OBJECTID: 165

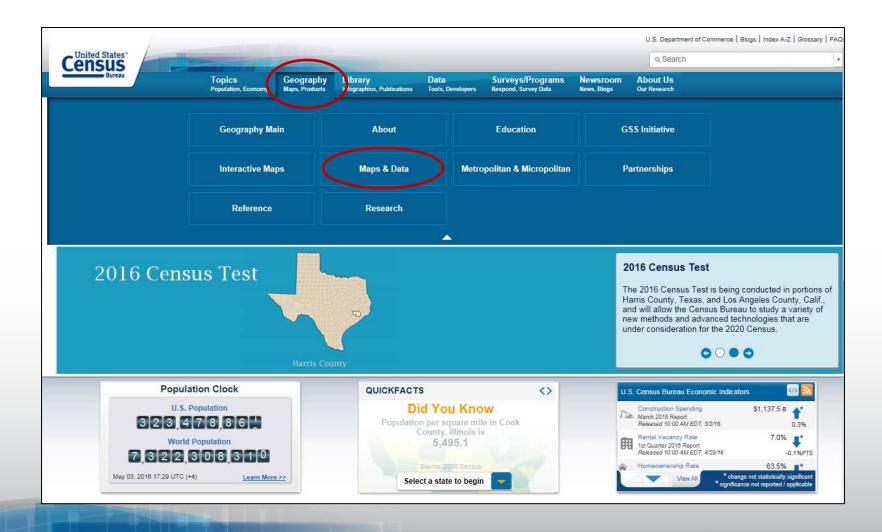


Geocoder Demo Backup – Return Batch Geographies

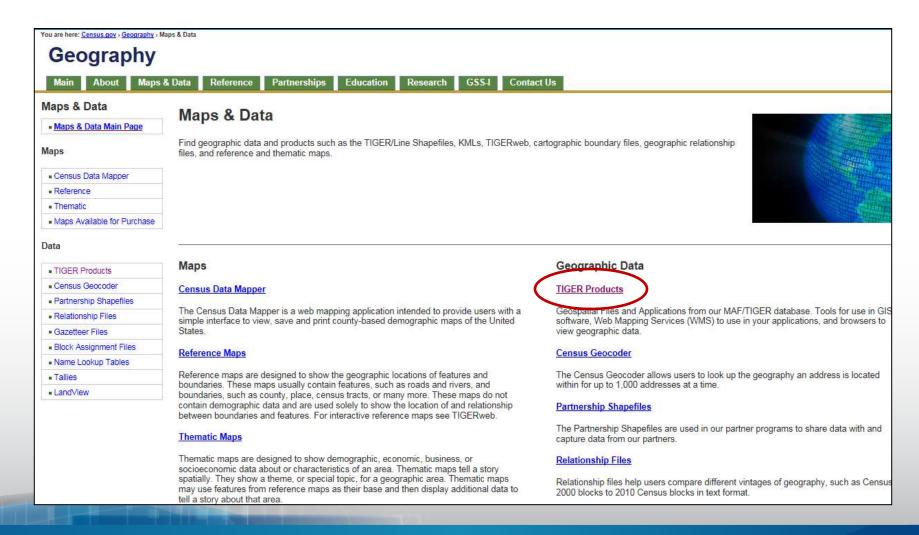
"3","411 Legislative Ave, Dover, DE, 19901","Match","Exact","411 LEGISLATIVE AVE, DOVER, DE, 19901","-75.52056,39.157505","68088430","R","10","001","041300","1038""2" ","1000 Bank Street, Richmond, VA, 23219","Match","Exact,","1000 BANK ST, RICHMOND, VA, 23219","-77.43536,37.538456","201540589","L","51","760","030500","1011""1 ","100 State Circle, Annapolis, MD, 21401","Match","Exact","100 STATE CIR, ANNAPOLIS, MD, 21401","-76.49149,38.9787","636149611","R","24","003","706101","2033""5"," 24 Beacon Street, Boston, MA, 02136", "Match", "Exact", "24 BEACON ST, BOSTON, MA, 02136","-71.11696,42.253136","85705384","L","25","025","140202","3005""4". "125 W State Street, Trenton, NJ, 08618", "Match", "Exact", "125 W STATE ST, TRENTON, NJ, 08618","-74.76922,40.22079","60224877","L","34","021","001101","1022"



Census.gov: Maps and Data



Maps and Data: TIGER Products



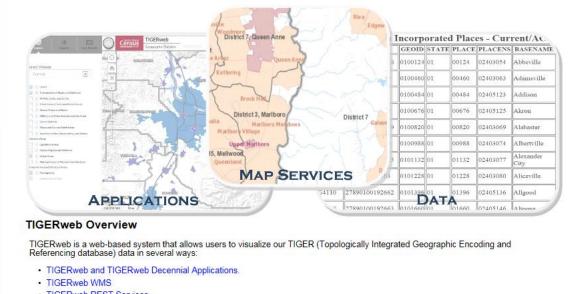
TIGER Products: TIGERweb

Product	Best For	File Format	Type of Data	Level of Detail	Descriptive Attributes	Vintages Available
TIGER/Line Shapefiles	Most mapping projectsthis is our <i>most</i> comprehensive dataset. Designed for use with GIS (geographic information systems).	Shapefiles (.shp) and database files (.dbf)	Boundaries, roads, address information, water features, and more	Full detail (not generalized)	Extensive	2006 - 2015, CD 113
TIGER Geodatabases	Useful for users needing national datasets or all major boundaries for by state. Designed for use in ArcGIS. Files are extremely large.	Geodatabase (.gdb)	Boundaries, roads, address information, water features, and more	Full detail (not generalized)	Limited	2013-2014
TIGER/Line with Selected Demographic and Economic Data	Data from selected attributes from the 2010 Census, 2006-2010 ACS 5- year estimates, 2007-2011 ACS 5-year estimates, 2008-2012 ACS 5-year estimates and County Business Patterns (CBP) for selected geographies. Designed for use with GIS.	Shapefiles (.shp) and Geodatabases	Boundaries, Population Counts, Housing Unit Counts, 2010 Census Demographic Profile 1 attributes, 2006-2010 ACS 5-year estimates data profiles, 2007-2011 ACS 5-year estimates data profiles, CBP data.	Full detail (not generalized)	Limited	2012 CBP, 2010, 2006- 2010 ACS, 2007-2011 ACS, 2008- 2012 ACS
Cartographic Boundary Shapefiles	Small scale (limited detail) mapping projects clipped to shoreline. Designed for thematic mapping using GIS.	Shapefiles (.shp)	Selected boundaries	Less detail (generalized)	Limited	2014, 2013, 2010, 2000, 1990
KML - Cartographic Boundary Files	Viewing data or creating maps using Google Earth, Google Maps, or other platforms that use KML.	KML (.kml)	Selected boundaries	Less detail (generalized)	Limited	2014, 2013
TIGERweb	Viewing spatial data online or streaming to your mapping application.	Interactive viewer, HTML data files, plus REST and WMS map services	Boundaries, roads, address information, water features, and more	Detailed	Extensive	2012, 2010, 2012 ACS and 2011 ACS

TIGERweb Applications



Contact Us Email us at: geo.tigerweb@census.gov Click here to sign up for updates on TIGERweb and other Census Bureau Topics. TIGERweb Brochure



TIGERweb REST Services

The applications allow users to select features and view their attributes, to search for features by name or geocode, and to identify features

TIGERWeb or TIGERweb Decennial



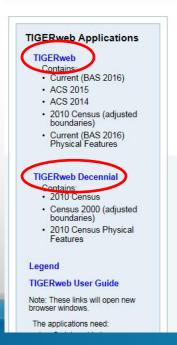
You are here: tigerweb.geo.census.gov > TIGERweb Applications

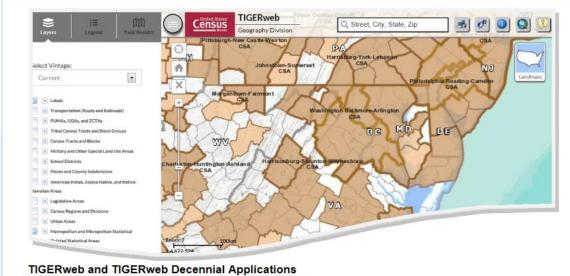
TIGERweb

TIGERweb Applications

REST Services Data Files

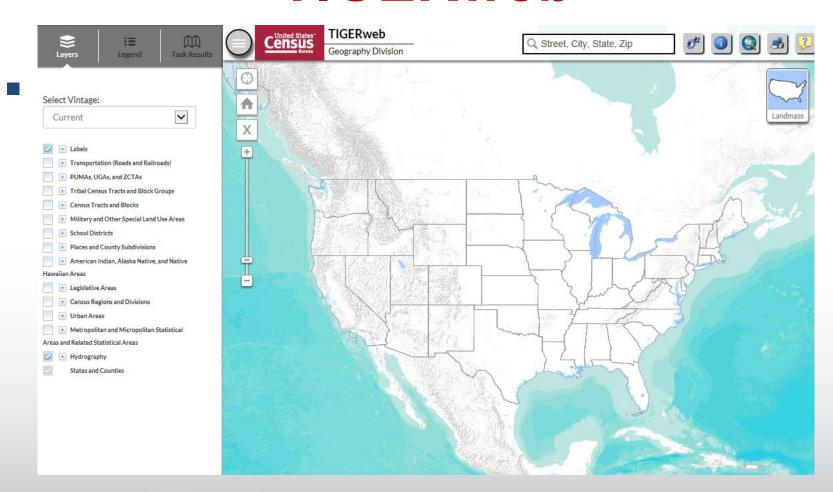
TIGERweb Geography



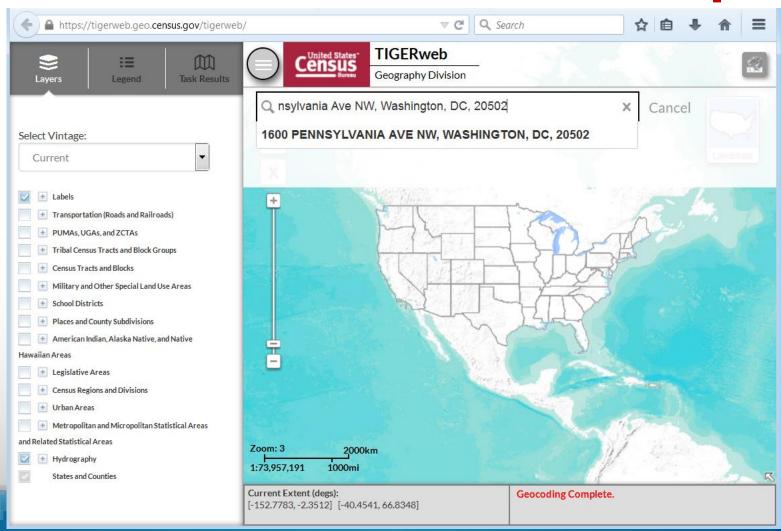


The TIGERweb and TIGERweb Decennial web-based applications allow the users to visualize our TIGER(Topologically Integrated Geographic Encoding and Referencing database) data. The applications allow users to select features and view their attributes, to search for features by name or geocode, and to identify features by selecting them from a map. The TIGERweb and TIGERweb Decennial

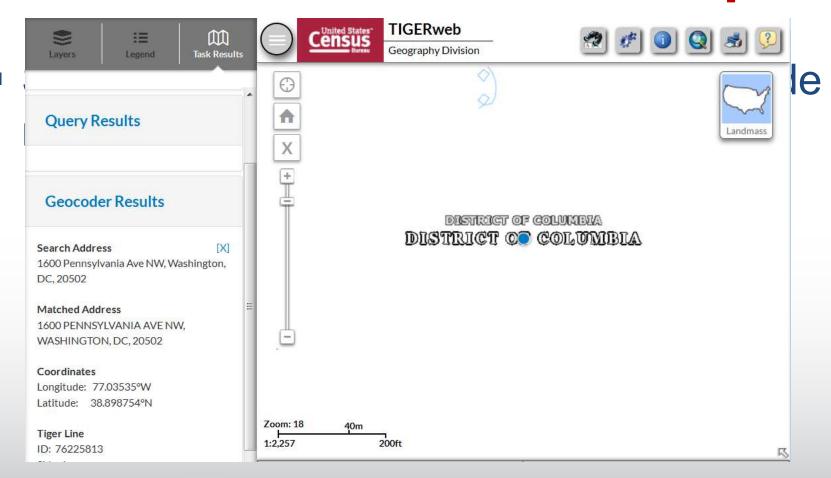
TIGERweb



TIGERweb Demo Backup



TIGERweb Demo Backup



TIGERweb Demo Backup

