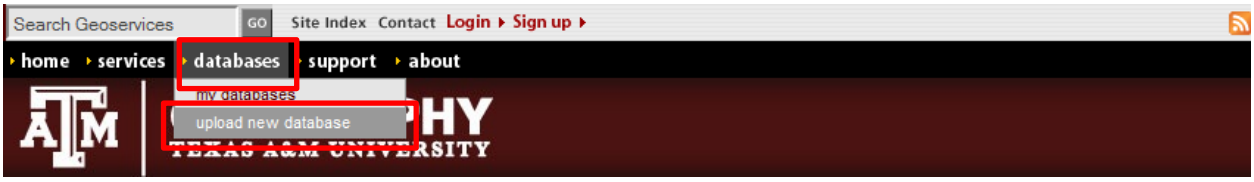
How to Add Census Information to Point Locations in WebGIS

1. Log in to http://geoservices.tamu.edu/

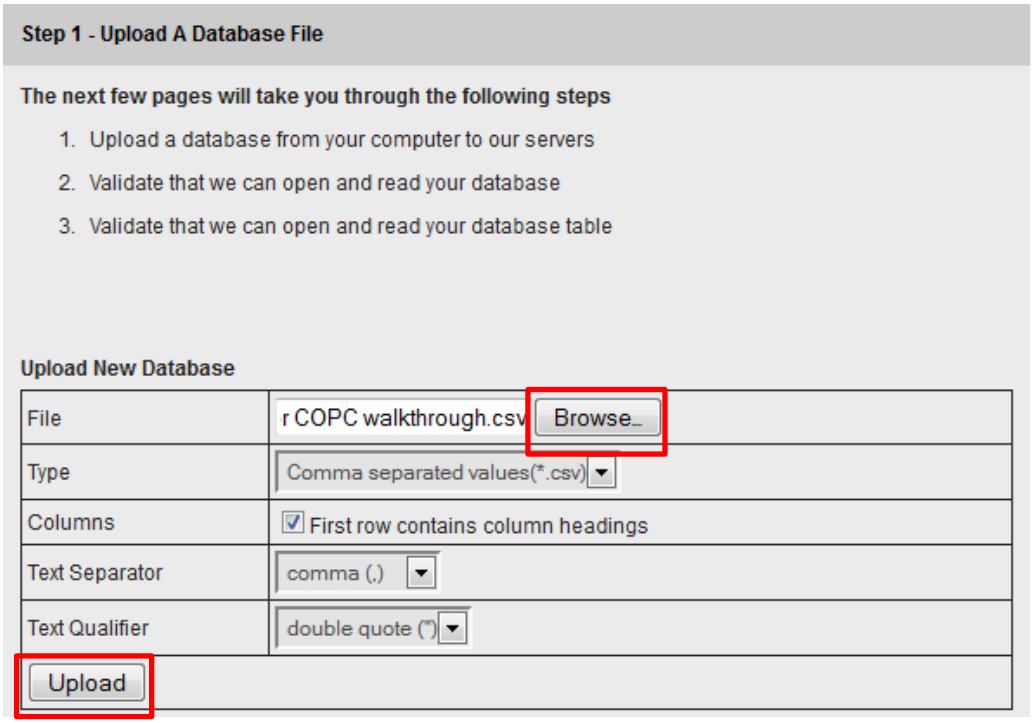
2. Click on Databases

3. Click on "upload new database"

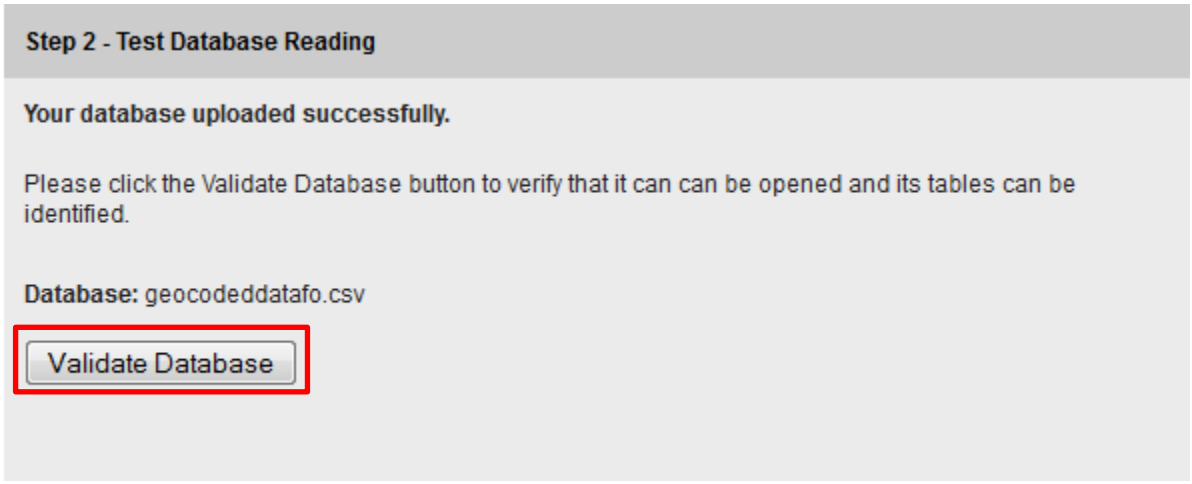


   a. Click on Browse and select your .csv file containing addresses, either the file you downloaded from HealthLandscape after geocoding or **How To - Geocoded Data for COPC Walkthrough.csv** (download from www.graham-center.org/COPC)

4. Click "Upload"
   a. In the uploading process, any spaces in your file name will be removed and the file name shortened to 14 characters

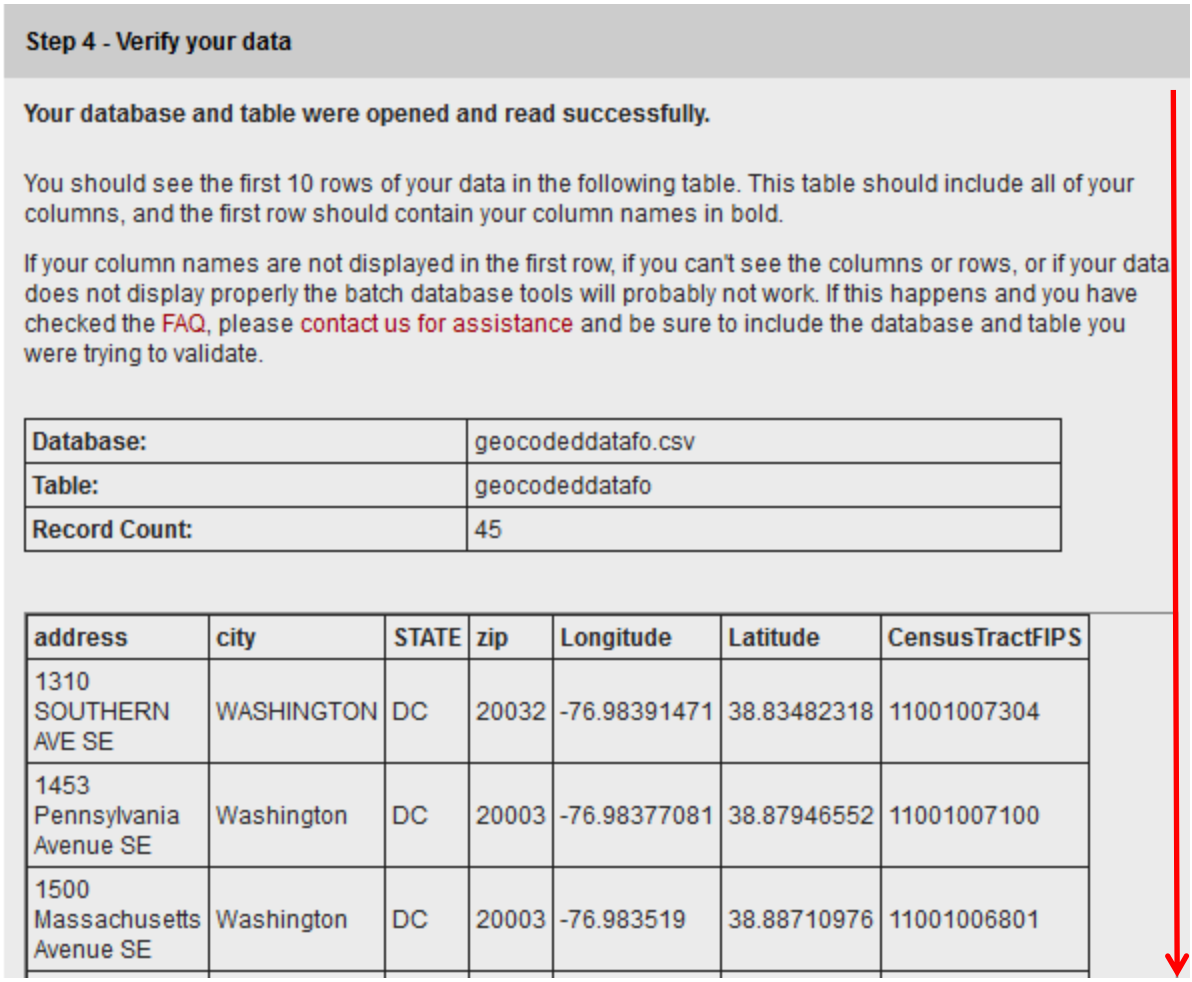


5. Click “Validate Database”



6. Click “Validate Table”

7. Scroll down to the bottom of the Step 4 page



Step 4 - Verify your data

Your database and table were opened and read successfully.

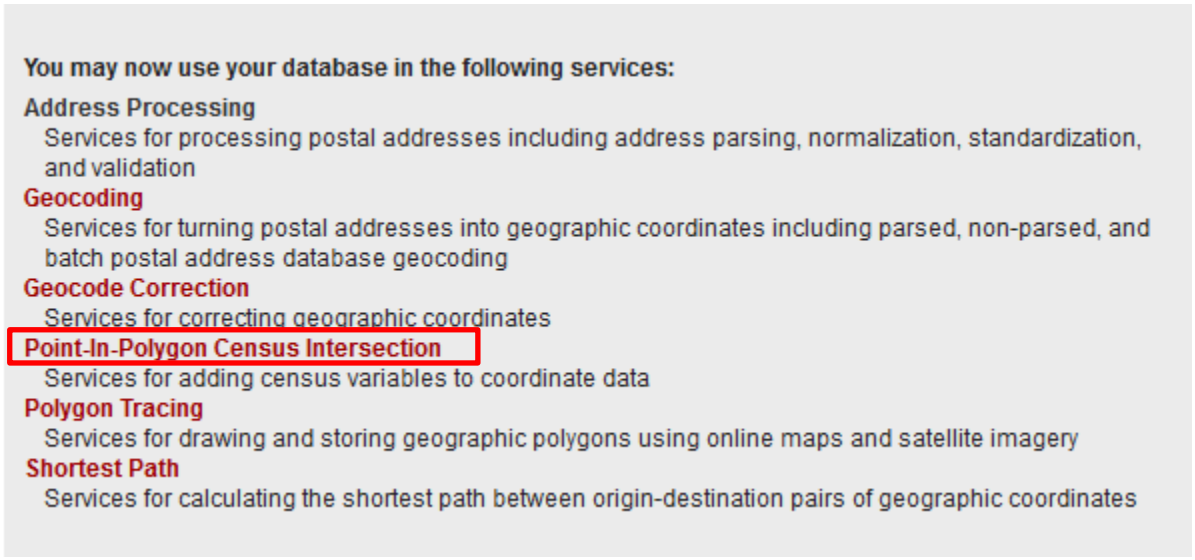
You should see the first 10 rows of your data in the following table. This table should include all of your columns, and the first row should contain your column names in bold.

If your column names are not displayed in the first row, if you can't see the columns or rows, or if your data does not display properly the batch database tools will probably not work. If this happens and you have checked the FAQ, please contact us for assistance and be sure to include the database and table you were trying to validate.

Database:	geocodeddatafo.csv
Table:	geocodeddatafo
Record Count:	45

address	city	STATE	zip	Longitude	Latitude	CensusTractFIPS
1310 SOUTHERN AVE SE	WASHINGTON	DC	20032	-76.98391471	38.83482318	11001007304
1453 Pennsylvania Avenue SE	Washington	DC	20003	-76.98377081	38.87946552	11001007100
1500 Massachusetts Avenue SE	Washington	DC	20003	-76.983519	38.88710976	11001006801

8. Click on “Point-In-Polygon Census Interaction”



You may now use your database in the following services:

Address Processing
Services for processing postal addresses including address parsing, normalization, standardization, and validation

Geocoding
Services for turning postal addresses into geographic coordinates including parsed, non-parsed, and batch postal address database geocoding

Geocode Correction
Services for correcting geographic coordinates

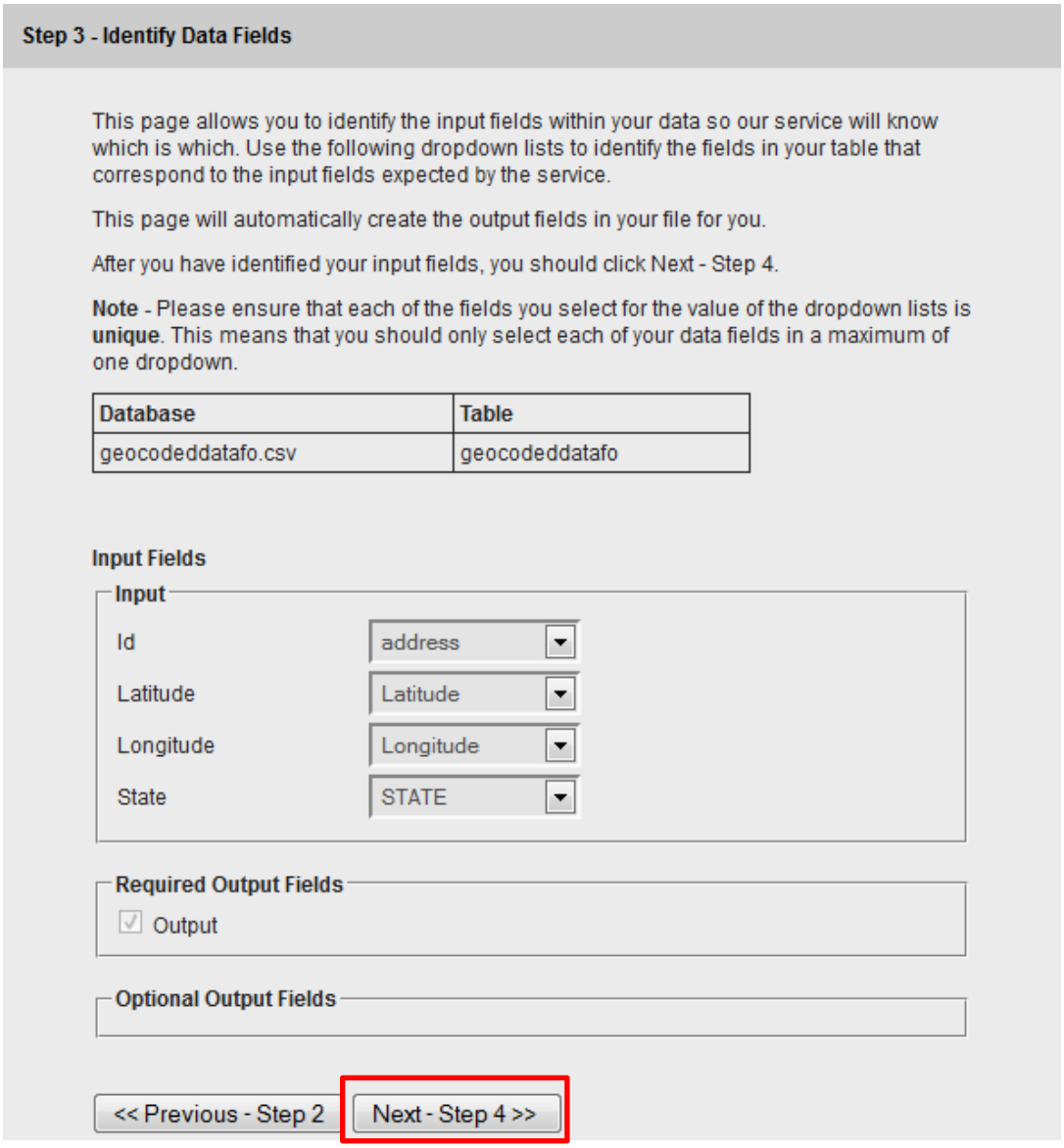
Point-In-Polygon Census Intersection
Services for adding census variables to coordinate data

Polygon Tracing
Services for drawing and storing geographic polygons using online maps and satellite imagery

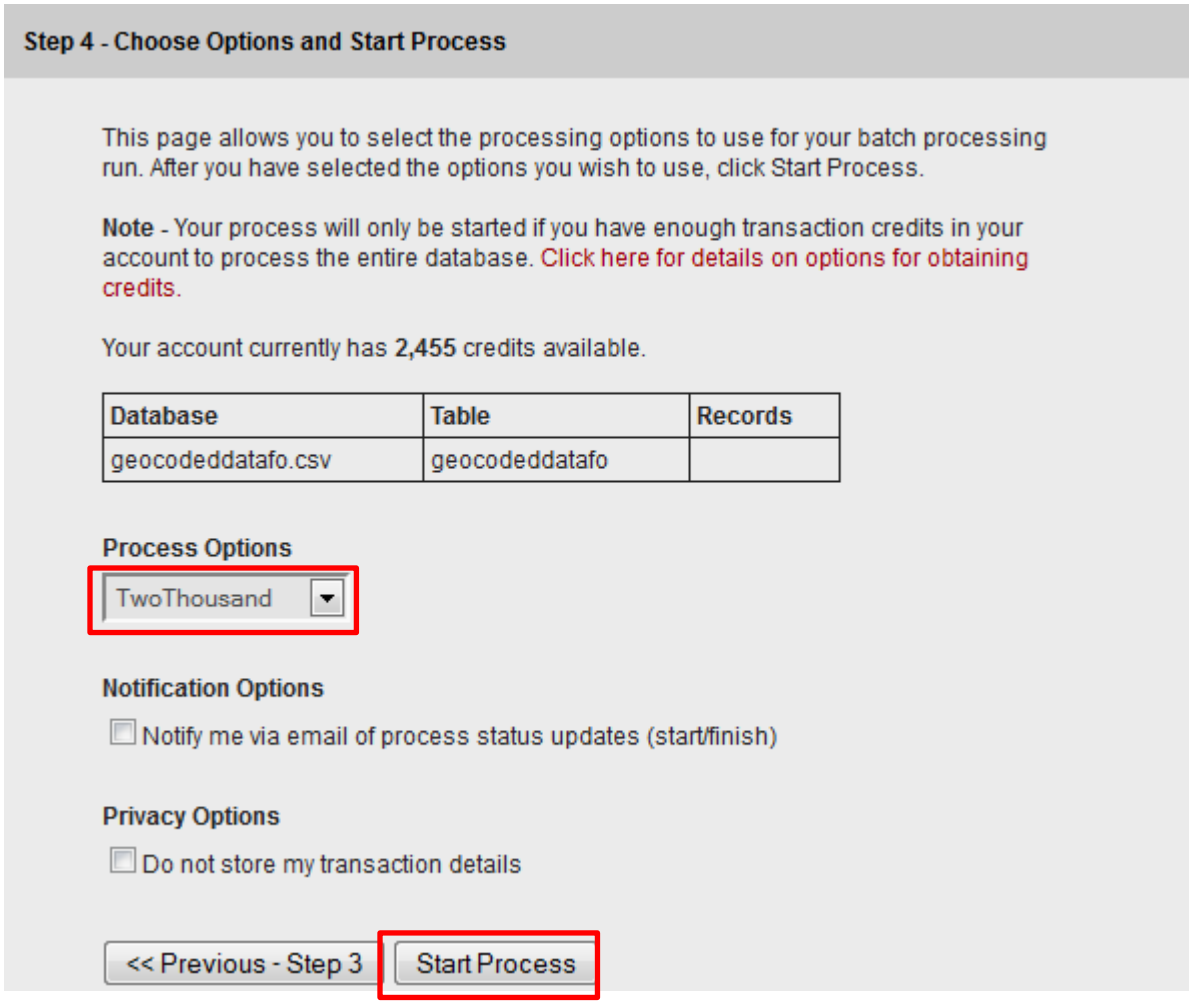
Shortest Path
Services for calculating the shortest path between origin-destination pairs of geographic coordinates

9. Click “Next- Step 3”

10. Click “Next-Step 4”

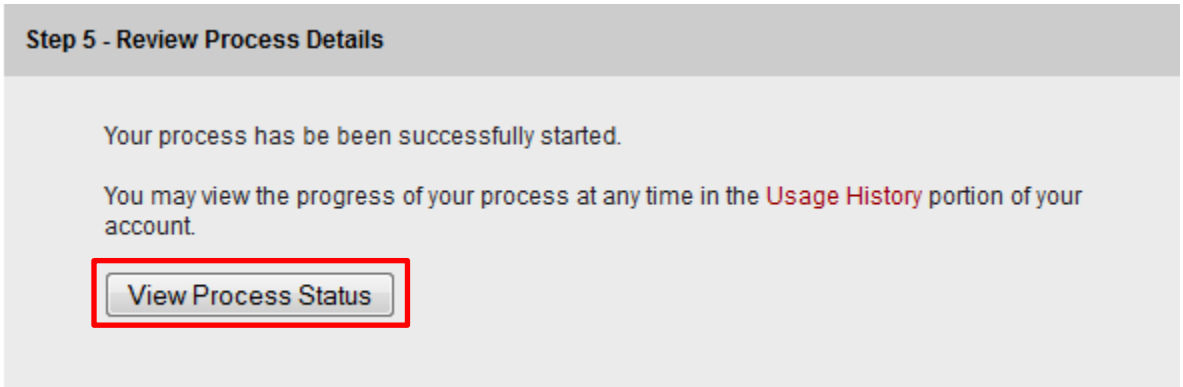


11. In Process Options, select “TwoThousand”
    a. Although HealthLandscape had both the Census 2000 and Census 2012 Census Tracts we will use Census 2000 throughout this walkthrough
    b. If you have another program or would rather use another geography, please keep that in mind throughout this walkthrough and the next one, **How To - How to Map Thematic Data in HealthLandscape**



12. Click “Start Process”

13. Click “View Process Status”



14. Click on the magnifying glass to view the results

My Processes

This page shows you the history of processes you have started.

Note
- Click on the date of the process to view its details.
- Click on the magnifying class icon to view the records within the file that have been processed.

50 Results per page

Start	Service	Database	completed / total	status
8/31/2012 6:45:03 AM	CensusInte...	geocodeddatafo.... | geocodeddatafo	45 / 45	Completed

auto refresh 10 seconds

Showing page 1 of 1 for 1 records
<<first <previous next> last>>

15. View results to see that Census information has been added to each point

My Census Intersection Transactions

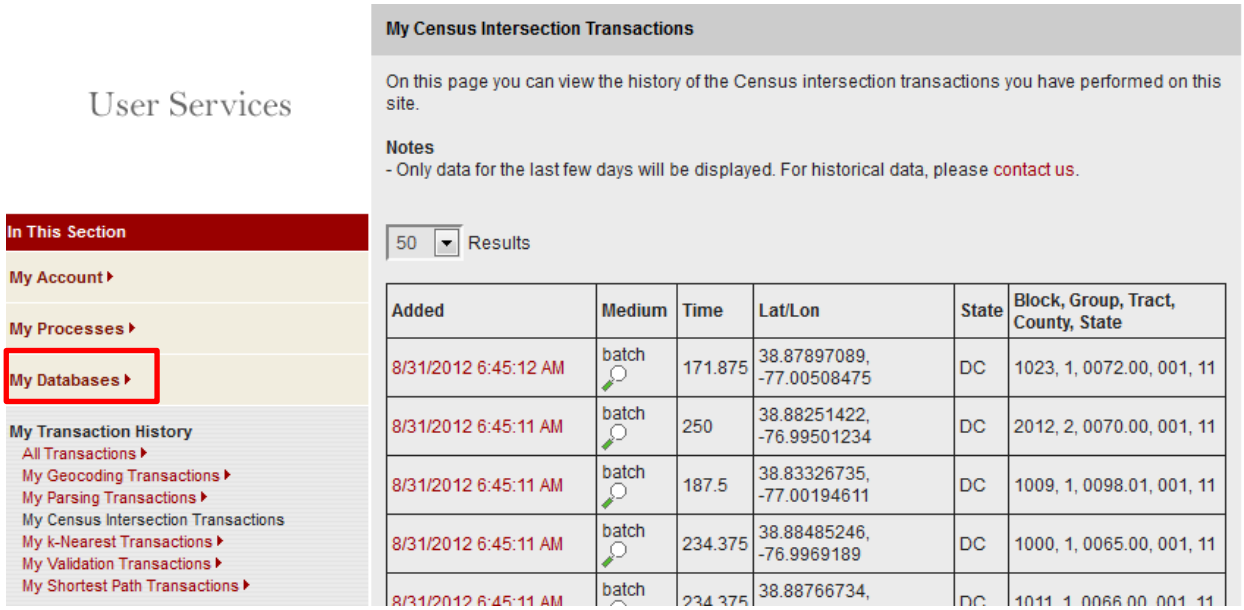
On this page you can view the history of the Census intersection transactions you have performed on this site.

Notes
- Only data for the last few days will be displayed. For historical data, please contact us.

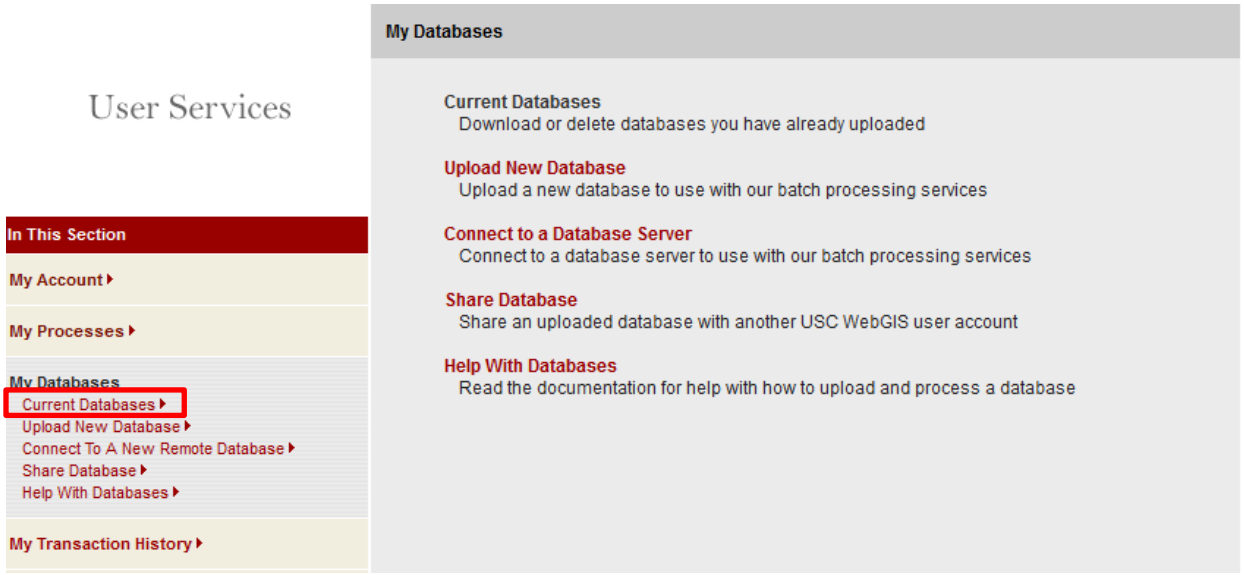
50 Results

Added	Medium	Time	Lat/Lon	State	Block, Group, Tract, County, State
8/31/2012 6:45:12 AM	batch	171.875	38.87897089, -77.00508475	DC	1023, 1, 0072.00, 001, 11
8/31/2012 6:45:11 AM	batch	250	38.88251422, -76.99501234	DC	2012, 2, 0070.00, 001, 11
8/31/2012 6:45:11 AM	batch	187.5	38.83326735, -77.00194611	DC	1009, 1, 0098.01, 001, 11

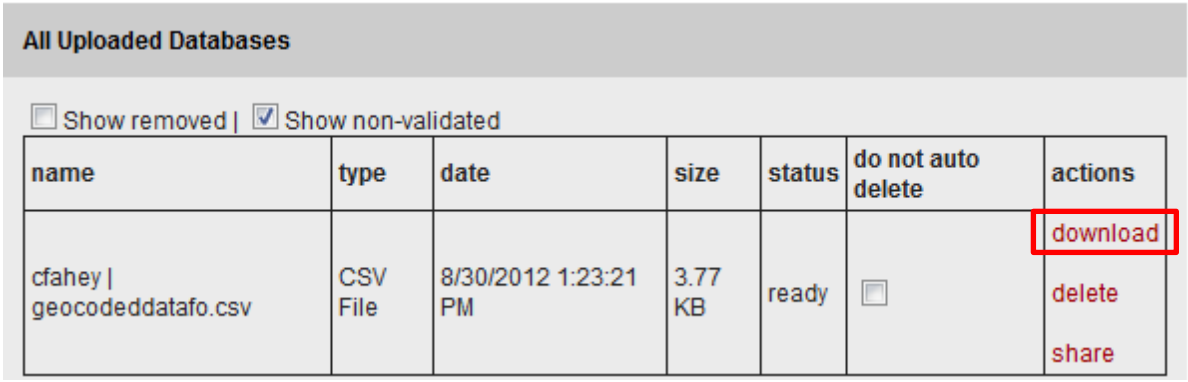
16. Click on “My Databases”



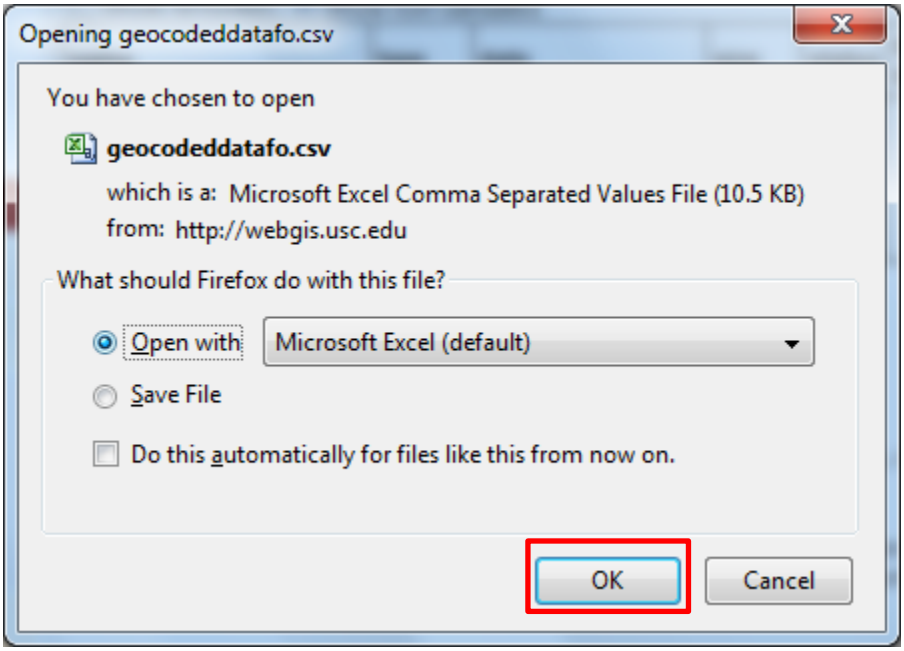
17. Click on “Current Databases”



18. Click on “download” and save file with added Census data to your computer; note, your file name may be different than what appears in the image, so please make note of your file name and where you save the file



19. Open your downloaded file in Microsoft Excel
    a. If you are more comfortable using a different statistical or spreadsheet software package, please follow these steps as a guide



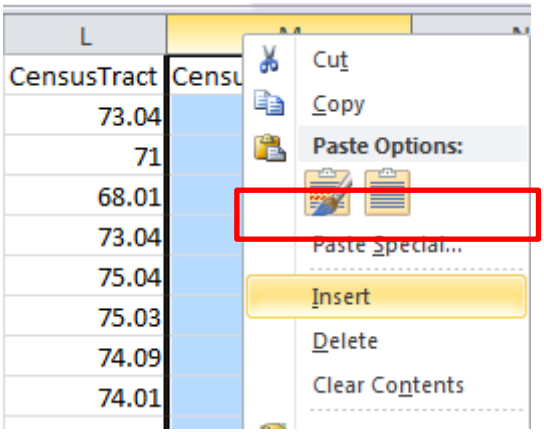
20. Save your file as an Microsoft Excel Spreadsheet (.xls or .xlsx); note, your file name may be different than what appears in the image, so please make note of your file name and where you save the file

21. Next, you will CONCATENATE the Census Code information that was added to your file as separate pieces (if using a program other than Microsoft Excel, please find out how to CONCATENATE your data)

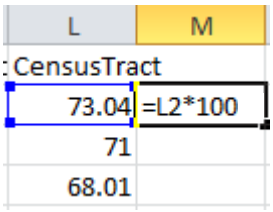
22. In your dataset, identify which column indicates the State Census Code, which column indicates the County Census Code and which column indicates the Census Tract Census Code

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	address	city	STATE	zip	Longitude	Latitude	CensusTra	UpdatedC	CensusYEar	CensusBlock	CensusBlockGroup	CensusTract	CensusCountyFips	CensusStateFips
2	1310 SOUT	WASHING	DC	20032	-76.9839	38.83482	1.1E+10	1	TwoThousand	1000	1	73.04	1	11
3	1453 Penn	Washingt	DC	20003	-76.9838	38.87947	1.1E+10	1	TwoThousand	2001	2	71	1	11
4	1500 Mass	Washingt	DC	20003	-76.9835	38.88711	1.1E+10	1	TwoThousand	2005	2	68.01	1	11

23. Make sure each component code has the correct number of digits (Census Tract: 6 digits; County: 3 digits; State: 2 digits). Note: Adding leading zeroes will be covered in Step 25. You may see some Census Tracts reported with decimal numbers. To change them, follow these steps:



a. Right click on the letter of the column to the right of the Census Tract column and click on **Insert** to insert a new column



b. In the first cell, type in the formula:
=[text1]*[100]
(in this example, text1 is "L2", the text that appears when you click on the first cell in the Census Tract column L).

c. Press **Enter**

d. **Double Click** on the lower right corner of the cell to automatically fill in the same formula for the whole column

L	M
CensusTract	CensusTractNEW
73.04	7304
71	7100
68.01	6801

24. **Insert** another empty column to the right of your Census, County, and State columns.

25. Click on the first cell of this column and type the formula:

=CONCATENATE([text1], [text2], [text3])

- [text1] → click on cell in that row in Census Tract column
- [text2] → click on cell in that row in County column
- [text3] → click on cell in that row in State column

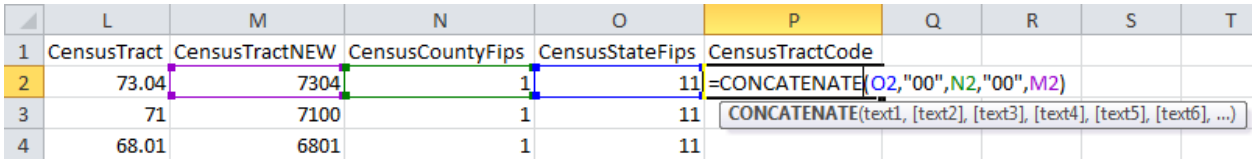
text1 will be the text that appears first in your final result, **text2** will be the piece that appears next in your result and so on. Each piece of text can be pulled from cells in your spreadsheet or can be text that you include in the formula itself. For example, if you want to include text that can be found in cell A2 of your spreadsheet, you would place A2 in that position of your formula. For text that is internal to your formula, you will put a double quote around the text.

It may be necessary to add leading zeros for the component Census Codes that do not have enough digits. These should be written in the formula within double quotes as "0" or "00" depending on how many zeros must be added.

In the sample dataset shown here, the formula will be

=CONCATENATE(O2,"00",N2,"00",M2)

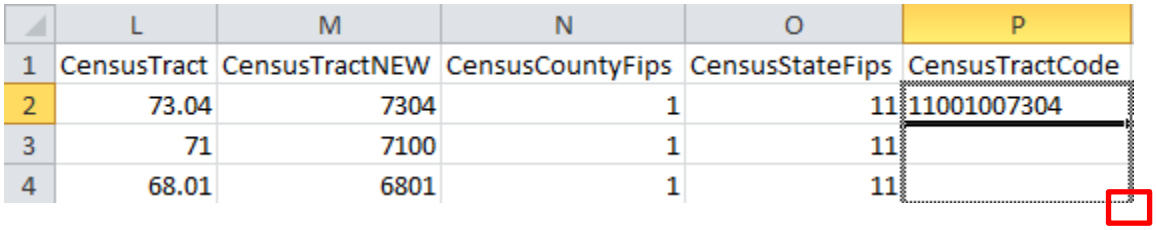
Note: County code was only one digit, so two zeros needed to be added in front of N2, the County column and the Census Tract Code was only four digits so two zeros needed to be added in front of M2



	L	M	N	O	P	Q	R	S	T
1	CensusTract	CensusTractNEW	CensusCountyFips	CensusStateFips	CensusTractCode				
2	73.04	7304	1	11	=CONCATENATE(O2,"00",N2,"00",M2)				
3	71	7100	1	11					
4	68.01	6801	1	11					

CONCATENATE(text1, [text2], [text3], [text4], [text5], [text6], ...)

26. Press **Enter** and check to make sure your result has 11 digits, and that the digits are in the correct order



	L	M	N	O	P
1	CensusTract	CensusTractNEW	CensusCountyFips	CensusStateFips	CensusTractCode
2	73.04	7304	1	11	11001007304
3	71	7100	1	11	
4	68.01	6801	1	11	

27. If every Census Code Component within its type (state, county, census tract) has the same number of digits, and therefore would need to have the same number of leading zeros added to it as the one you just concatenated, you can drag your formula down (click on the lower right corner of the cell and drag down to fill in the CONCATENATE formula for the rest of the rows that will use the same formula).

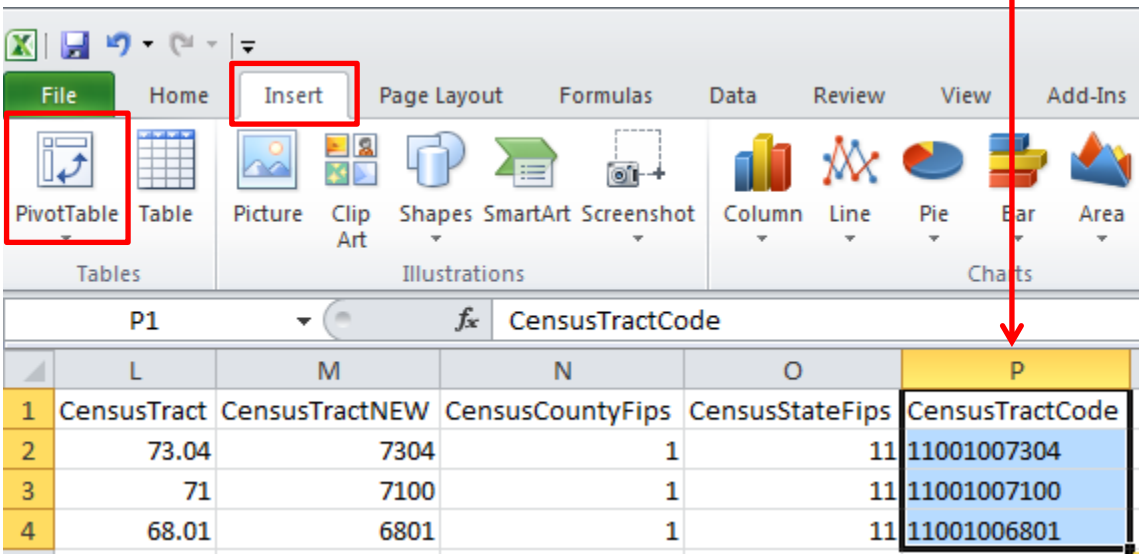
    e. If they do not all have the same number of digits, sort your data so that those that need the same numbers of leading zeros are grouped together and then write out formulas and drag them as appropriate.

28. Your completed dataset should have a new column with an appropriate header that contains a complete, 11-digit Census Tract Code for each row of data.

    f. Note: An "appropriate header" will have no spaces in it. Use dashes, underscores or capitalization to indicate different words (CensusTractCode, Census_Tract_Code, etc.)

29. Now we will generate a list of all the unique Census Tracts listed and how many times each occurs. Highlight the entire column with the 11-digit codes that you just created, including the heading.

30. Click the Insert tab and click on the Pivot Table button



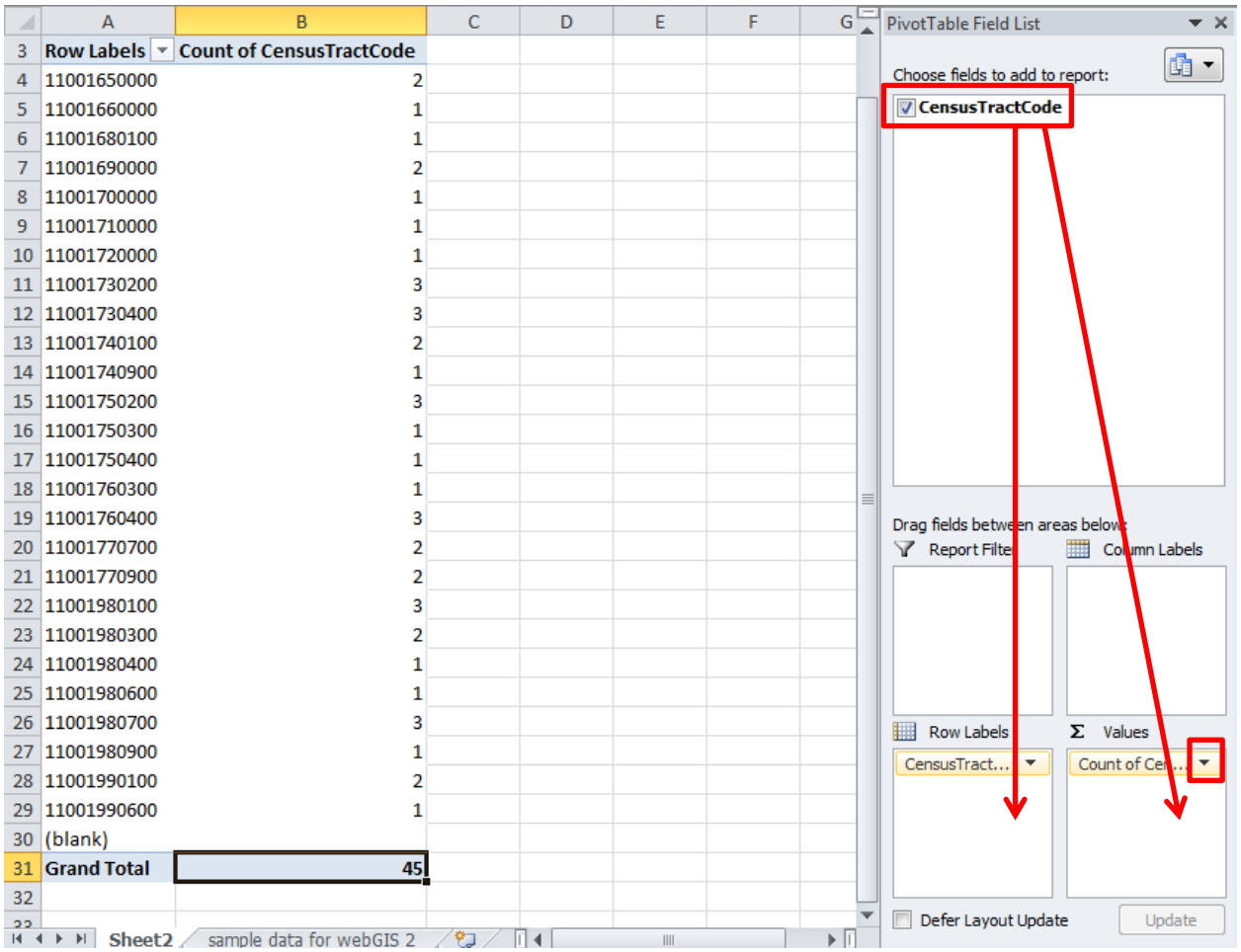
	L	M	N	O	P
1	CensusTract	CensusTractNEW	CensusCountyFips	CensusStateFips	CensusTractCode
2	73.04	7304	1	11	11001007304
3	71	7100	1	11	11001007100
4	68.01	6801	1	11	11001006801

31. Check that your column is highlighted and that **New Worksheet** is checked. Press OK.

32. Click on the field label in the **Choose fields to add to report:** box and drag it into the box labeled **Row Labels**.

33. Click on the same field label in the first box again, and this time drag it into the box labeled **Values**. You should now see the same field label in both Row Labels and Values.

34. Click on the drop-down arrow in the label you dragged to the Values. Click on **Value Field Settings**. In the pop-up window change the selection to **Count**.



Row Labels	Count of CensusTractCode
11001650000	2
11001660000	1
11001680100	1
11001690000	2
11001700000	1
11001710000	1
11001720000	1
11001730200	3
11001730400	3
11001740100	2
11001740900	1
11001750200	3
11001750300	1
11001750400	1
11001760300	1
11001760400	3
11001770700	2
11001770900	2
11001980100	3
11001980300	2
11001980400	1
11001980600	1
11001980700	3
11001980900	1
11001990100	2
11001990600	1
(blank)	
Grand Total	45

35. Save your file as **How To - Grouped Data for COPC Walkthough.xlsx**

36. Give yourself a pat on the back!