Centers for Disease and Control and Prevention's Community Assessment for Public Health Emergency Response (CASPER) — Extreme Weather Response Tool?

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Community Assessment for Public Health Emergency Response (CASPER)

- Epidemiologic survey technique that provide quick and at low cost, household-based information about an community's needs in a simple format to decision-makers.

- Goals of CASPER
  - Rapidly survey and identify needs of a particular community
  - Produce accurate population- based estimates of needs
  - Assess new or changing needs during the recovery period

Community Assessment for Public Health Emergency Response (CASPER) - Phases

- Prepare for the CASPER
  - Determine objectives
  - **Determine assessment area**
  - Develop 1-page questionnaire
  - **Select first stage sample (30 clusters)**
- Conduct the CASPER in the field
  - **Select second stage sample (7 households)**
  - Organize and train assessment teams
  - Conduct household interviews
- Analyze the data
  - Determine sampling weight
  - Calculate weighted frequencies and percentages
- Write the report and share results

Determine the Assessment Area(s)

- Define the assessment area (sampling frame) in the impact area (storm track)
  - Most affected,
  - Least available knowledge,
  - Area without local health services,
  - Political/jurisdictional layout or state (resource distribution).
- Geographic size
  - County (or groups of counties)
  - City (or groups of cities) or Zip Code
  - Between key landmarks (highways or waterways as boundaries for hardest hit areas, more vulnerable populations, etc)

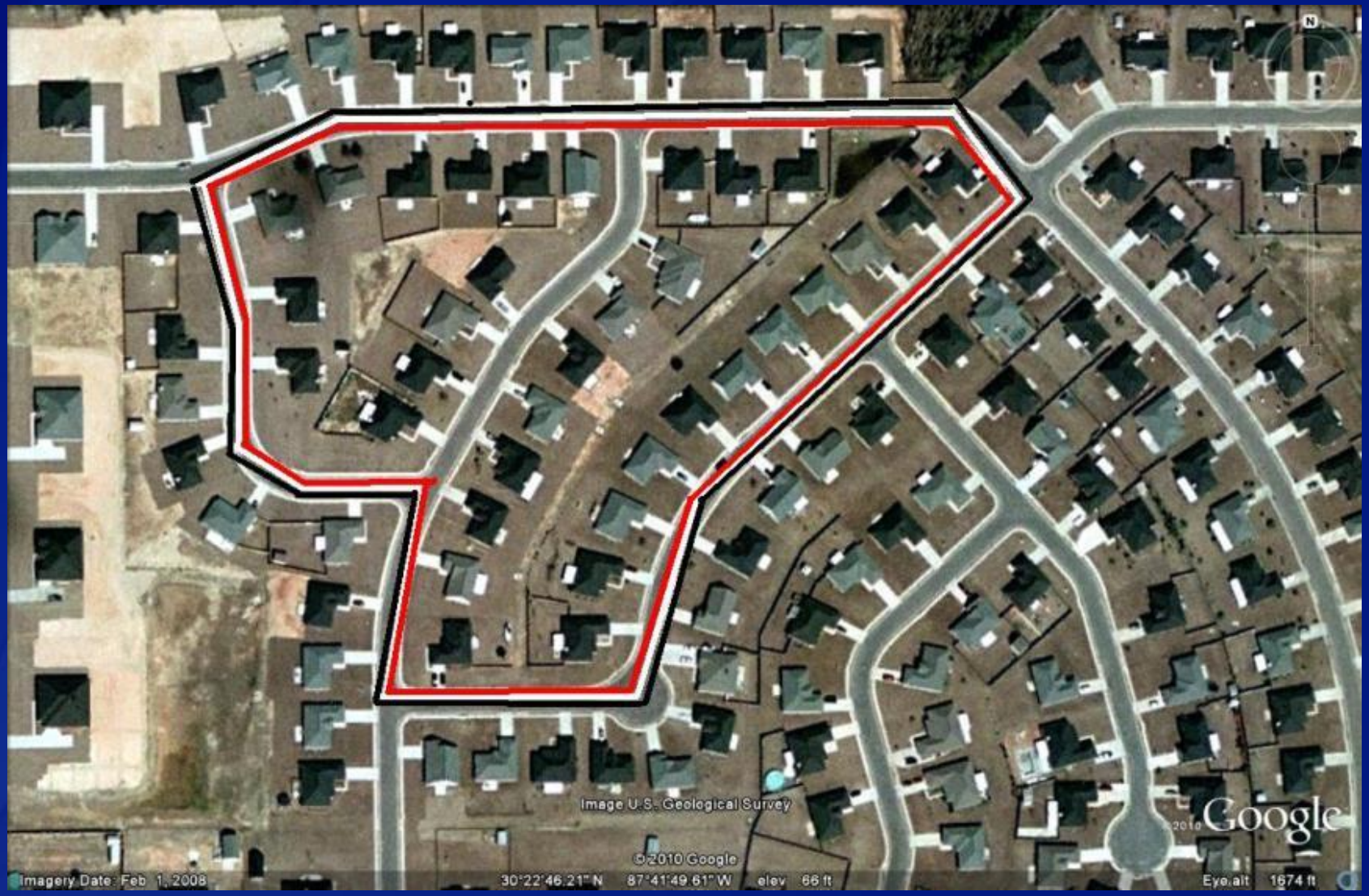
CASPER Methodology Overview

- Sampling Frame: All households within the selected assessment area
- Two stage probability sampling
  - First Stage : 30 clusters
  - Second Stage : 7 households
- Household-interview = 210 households (30 x 7)
- Data weighting to adjust for non-random sampling and obtain population estimates

First Stage: Selecting Clusters

- What is a cluster?
  - Mutually exclusive
  - Known number of housing units
- Census blocks are ideal clusters
- Select with probability proportional to size
  - This ensures that clusters with more housing units have a higher chance of being selected
  - Corrected during data analyses by weighting

Create a Map for Each 30 Clusters Selected



Conducting the CASPER in the field

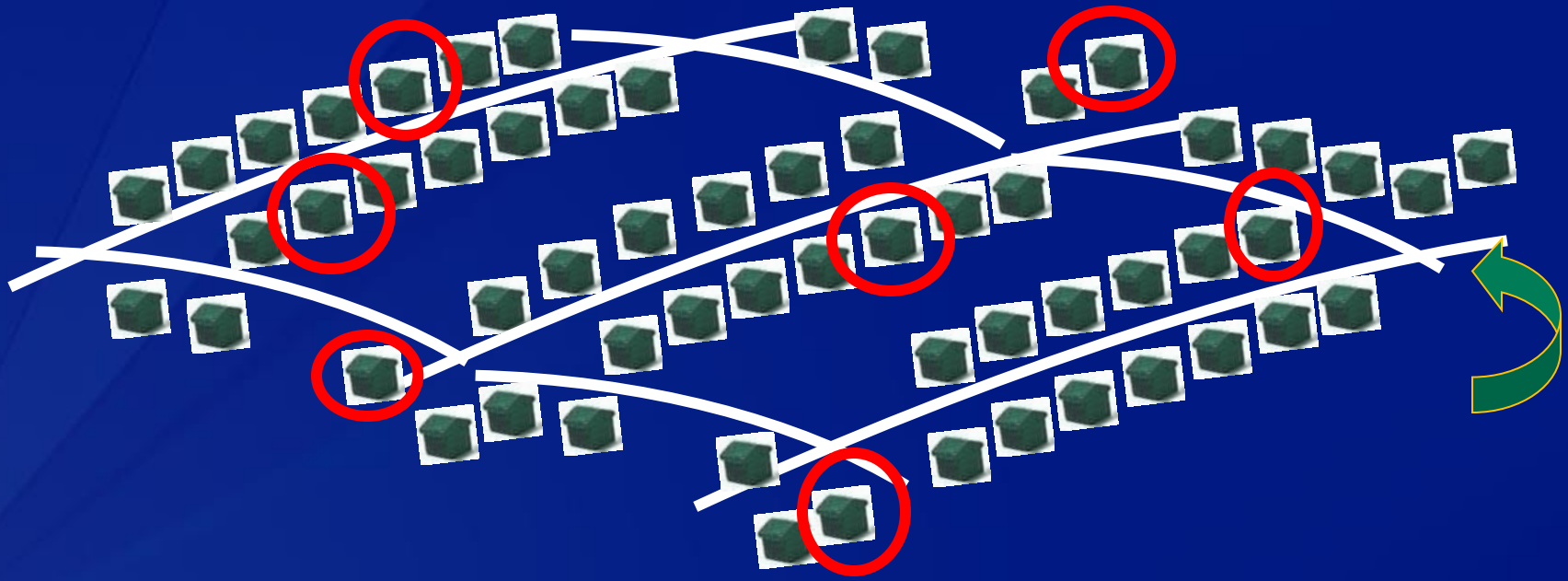
- Develop 1-page questionnaire based on objectives
- Identify 10 interview 2-person teams (20 volunteers)
- Determine dates to conduct the CASPER, need 2-3 days
- First day of CASPER
  - Conduct "Just in Time " training of field interview teams
  - Assign the selected clusters to teams
  - Explain 2nd stage sampling or assessment methodology – show how to select 7 households to interview using the cluster maps
  - Identify data entry and analysis staff

Second Stage : Systematic Selection of Houses Using Cluster Maps

- **Interview Teams**
  - Randomly select starting point
  - Count every nth house
  - Continue until 7 interviews are complete

Second Stage: Systematic Selection of 7 Houses in Each of the 30 Clusters

- Randomly select starting point
- Count every nth house
- Continue until 7 interviews are complete



CDC-NWS Extreme Cold CASPER in North Dakota

Question:

Main source of severe winter weather information

Main Information source	Frequency (n=188)	% of HH	Projected HH	Weighted %	95% CI
TV	149	79.3	27,839	81.0	73.8 – 88.1
Internet	11	5.9	2,036	5.9	1.8 –10.1
NOAA weather radio	9	4.8	1,717	5.0	0.6 – 9.4
Commercial radio station*	15	8.0	1,627	4.7*	1.4 – 8.0
Neighbor/ friend/ family/ word of mouth	2	1.1	593	1.7	0 – 4.2
Other	2	1.1	559	1.6	0 – 4.0

*Rural (23.5%, 95% CI = 13.8 – 33.3) more likely than urban (3.9%, 95% CI = 0.5 – 7.3)

Impact of Past CASPERs

- **Resources**
  - Allocate scarce resources
  - Data cited to support requests/needs
  - Target specific needs (e.g., oxygen, medication)
- **Communications**
  - Provide valid information to governors, news media, etc.
  - Target communication messages
  - Assess the public's methods to receive messaging
- **Future planning**
  - Prompted modification of emergency management plans
  - Identify education needs in the community

Conclusion

- CASPER can be a used as a weather response survey tool
  - Generalizable data (provides population estimates)
  - Timely
  - Relatively low cost
  - Simple reporting format
  - Flexible

CASPER Resources

- Website with toolkit: http://www.cdc.gov/nceh/hsb/disaster/casper.htm
- CDC's Disaster Epidemiology Community of Practice: partner.cdc.gov/DECoP

Thank You

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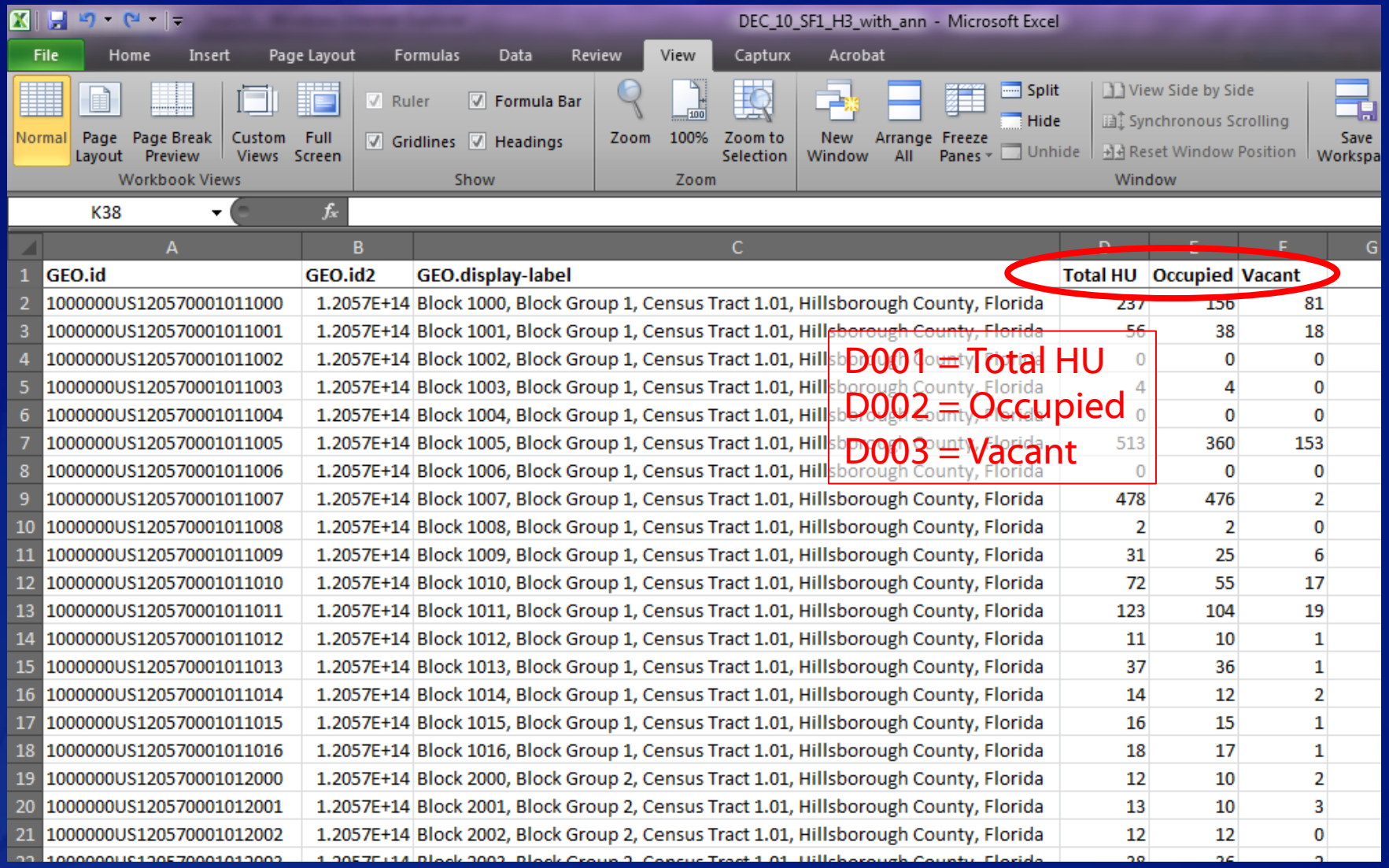
For more information please contact Centers for Disease Control and Prevention

1600 Clifton Road NE, Atlanta, GA 30333
Telephone, 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348
E-mail: cdcinfo@cdc.gov Web: www.cdc.gov

Census FactFinder2 Website: County Level

http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml

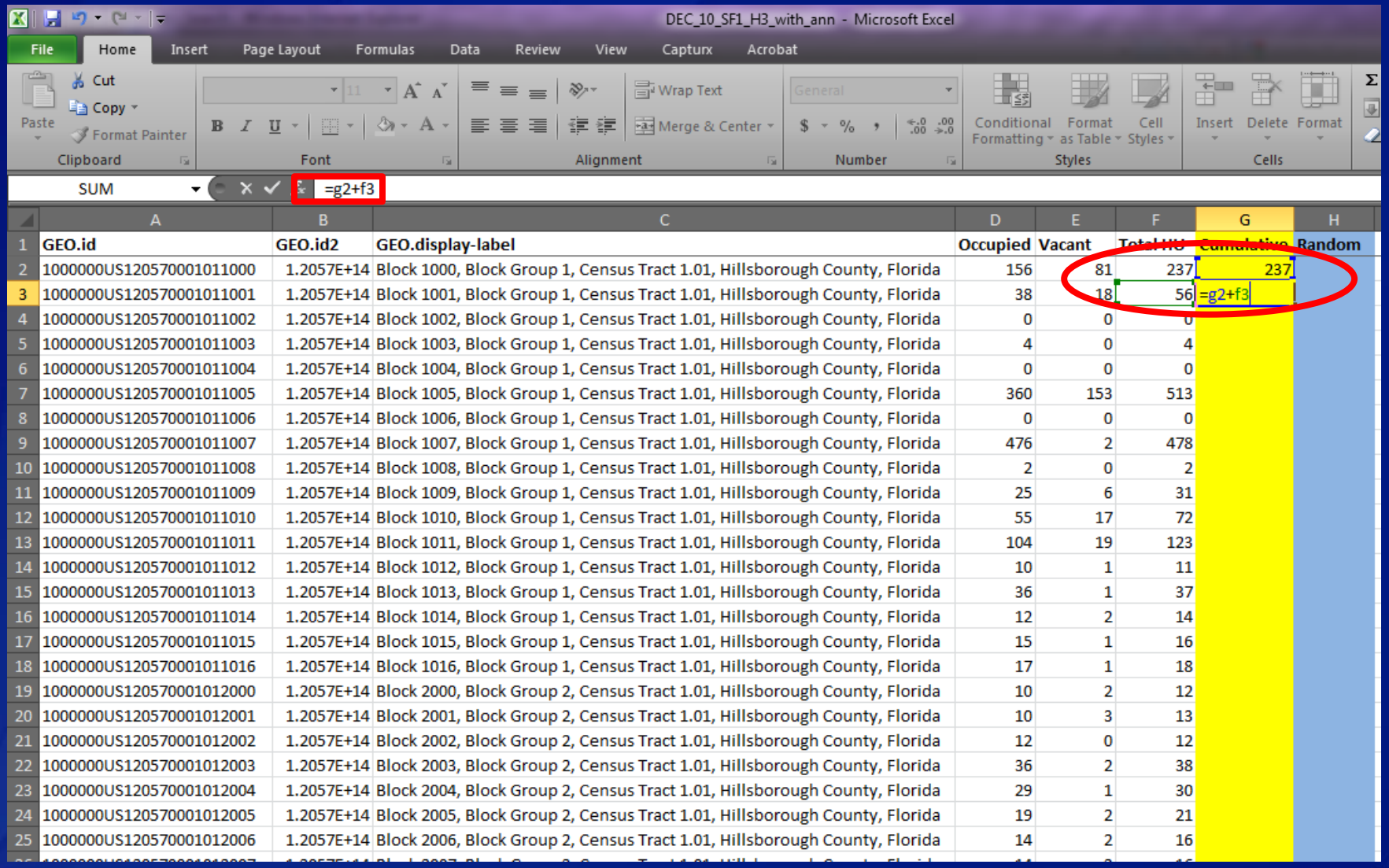
Download All Blocks within County



	A	B	C	D	E	F	G
1	GEO.id	GEO.id2	GEO.display-label	Total HU	Occupied	Vacant	
2	1000000US120570001011000	1.2057E+14	Block 1000, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	237	156	81	
3	1000000US120570001011001	1.2057E+14	Block 1001, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	56	38	18	
4	1000000US120570001011002	1.2057E+14	Block 1002, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	0	0	0	
5	1000000US120570001011003	1.2057E+14	Block 1003, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	4	4	0	
6	1000000US120570001011004	1.2057E+14	Block 1004, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	0	0	0	
7	1000000US120570001011005	1.2057E+14	Block 1005, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	513	360	153	
8	1000000US120570001011006	1.2057E+14	Block 1006, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	0	0	0	
9	1000000US120570001011007	1.2057E+14	Block 1007, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	478	476	2	
10	1000000US120570001011008	1.2057E+14	Block 1008, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	2	2	0	
11	1000000US120570001011009	1.2057E+14	Block 1009, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	31	25	6	
12	1000000US120570001011010	1.2057E+14	Block 1010, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	72	55	17	
13	1000000US120570001011011	1.2057E+14	Block 1011, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	123	104	19	
14	1000000US120570001011012	1.2057E+14	Block 1012, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	11	10	1	
15	1000000US120570001011013	1.2057E+14	Block 1013, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	37	36	1	
16	1000000US120570001011014	1.2057E+14	Block 1014, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	14	12	2	
17	1000000US120570001011015	1.2057E+14	Block 1015, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	16	15	1	
18	1000000US120570001011016	1.2057E+14	Block 1016, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	18	17	1	
19	1000000US120570001012000	1.2057E+14	Block 2000, Block Group 2, Census Tract 1.01, Hillsborough County, Florida	12	10	2	
20	1000000US120570001012001	1.2057E+14	Block 2001, Block Group 2, Census Tract 1.01, Hillsborough County, Florida	13	10	3	
21	1000000US120570001012002	1.2057E+14	Block 2002, Block Group 2, Census Tract 1.01, Hillsborough County, Florida	12	12	0	

D001 = Total HU
D002 = Occupied
D003 = Vacant

Assign all HUs a Number: =H2+G3



	A	B	C	D	E	F	G	H
1	GEO.id	GEO.id2	GEO.display-label	Occupied	Vacant	Total HU	Cumulative	Random
2	1000000US120570001011000	1.2057E+14	Block 1000, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	156	81	237	237	
3	1000000US120570001011001	1.2057E+14	Block 1001, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	38	18	56	=g2+f3	
4	1000000US120570001011002	1.2057E+14	Block 1002, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	0	0	0		
5	1000000US120570001011003	1.2057E+14	Block 1003, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	4	0	4		
6	1000000US120570001011004	1.2057E+14	Block 1004, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	0	0	0		
7	1000000US120570001011005	1.2057E+14	Block 1005, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	360	153	513		
8	1000000US120570001011006	1.2057E+14	Block 1006, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	0	0	0		
9	1000000US120570001011007	1.2057E+14	Block 1007, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	476	2	478		
10	1000000US120570001011008	1.2057E+14	Block 1008, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	2	0	2		
11	1000000US120570001011009	1.2057E+14	Block 1009, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	25	6	31		
12	1000000US120570001011010	1.2057E+14	Block 1010, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	55	17	72		
13	1000000US120570001011011	1.2057E+14	Block 1011, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	104	19	123		
14	1000000US120570001011012	1.2057E+14	Block 1012, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	10	1	11		
15	1000000US120570001011013	1.2057E+14	Block 1013, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	36	1	37		
16	1000000US120570001011014	1.2057E+14	Block 1014, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	12	2	14		
17	1000000US120570001011015	1.2057E+14	Block 1015, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	15	1	16		
18	1000000US120570001011016	1.2057E+14	Block 1016, Block Group 1, Census Tract 1.01, Hillsborough County, Florida	17	1	18		
19	1000000US120570001012000	1.2057E+14	Block 2000, Block Group 2, Census Tract 1.01, Hillsborough County, Florida	10	2	12		
20	1000000US120570001012001	1.2057E+14	Block 2001, Block Group 2, Census Tract 1.01, Hillsborough County, Florida	10	3	13		
21	1000000US120570001012002	1.2057E+14	Block 2002, Block Group 2, Census Tract 1.01, Hillsborough County, Florida	12	0	12		
22	1000000US120570001012003	1.2057E+14	Block 2003, Block Group 2, Census Tract 1.01, Hillsborough County, Florida	36	2	38		
23	1000000US120570001012004	1.2057E+14	Block 2004, Block Group 2, Census Tract 1.01, Hillsborough County, Florida	29	1	30		
24	1000000US120570001012005	1.2057E+14	Block 2005, Block Group 2, Census Tract 1.01, Hillsborough County, Florida	19	2	21		
25	1000000US120570001012006	1.2057E+14	Block 2006, Block Group 2, Census Tract 1.01, Hillsborough County, Florida	14	2	16		

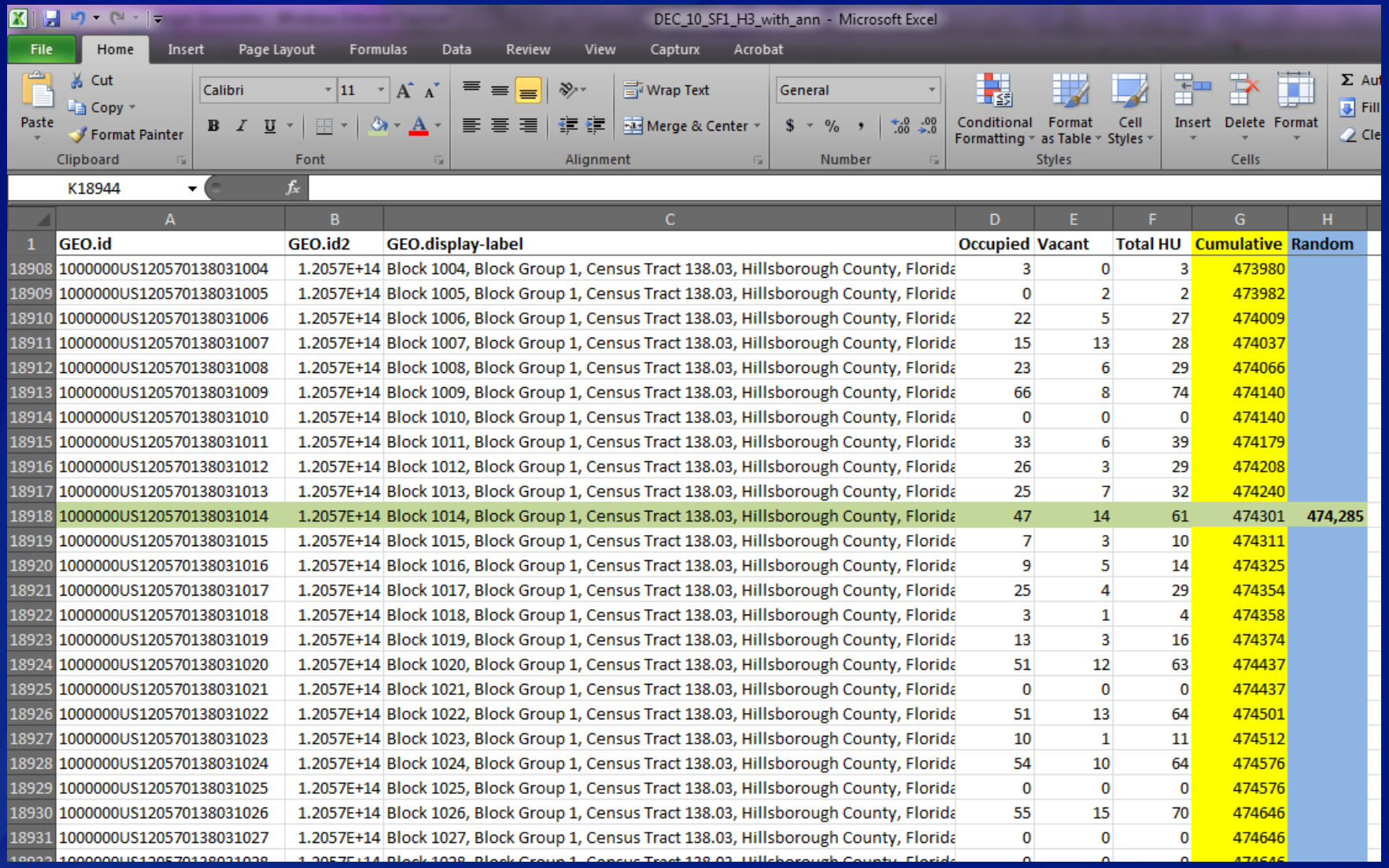
Choose the 30 Clusters

- Navigate to www.random.org
- Have system generate 30 random numbers from 1 to the total number of housing units
  - For this example, the total number of housing units is 536,092
- Determine which block each random number occurs
  - Refer to the following screenshots for guidance

The 30 Random Numbers

474,285	193,806	497,227	294,351	84,836	194,031
159,456	140,396	451,390	535,788	129,027	485,536
199,901	95,549	318,072	393,090	3,313	469,269
82,826	400,936	451,778	303,647	128,113	290,842
487,849	219,663	468,844	31,562	10,547	98,099

Match Random Number to Corresponding Cluster



	A	B	C	D	E	F	G	H
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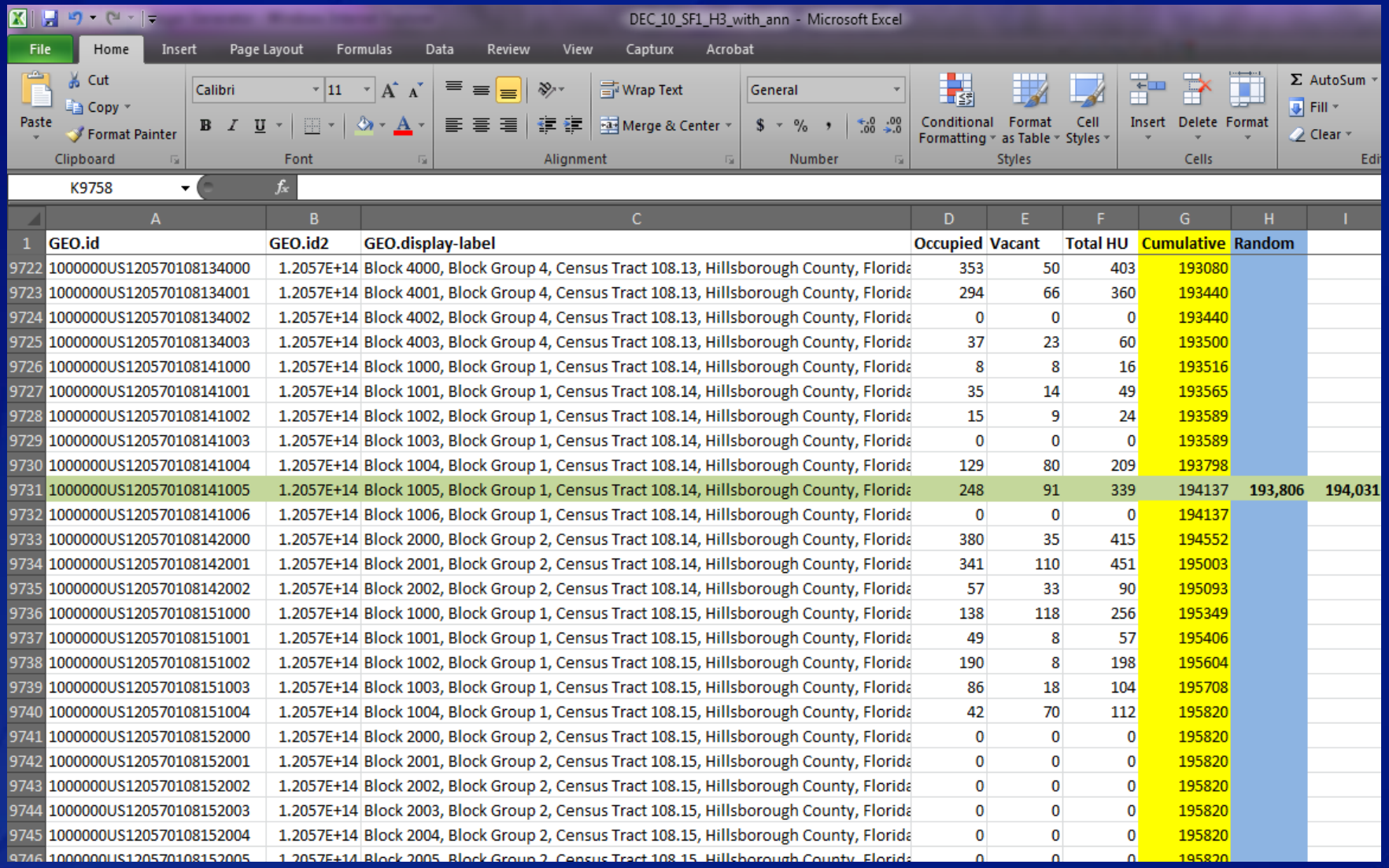
18908	1000000US120570138031004	1.2057E+14	Block 1004, Block Group 1, Census Tract 138.03, Hillsborough County, Florida	3	0	3	473980	
18909	1000000US120570138031005	1.2057E+14	Block 1005, Block Group 1, Census Tract 138.03, Hillsborough County, Florida	0	2	2	473982	
18910	1000000US120570138031006	1.2057E+14	Block 1006, Block Group 1, Census Tract 138.03, Hillsborough County, Florida	22	5	27	474009	
18911	1000000US120570138031007	1.2057E+14	Block 1007, Block Group 1, Census Tract 138.03, Hillsborough County, Florida	15	13	28	474037	
18912	1000000US120570138031008	1.2057E+14	Block 1008, Block Group 1, Census Tract 138.03, Hillsborough County, Florida	23	6	29	474066	
18913	1000000US120570138031009	1.2057E+14	Block 1009, Block Group 1, Census Tract 138.03, Hillsborough County, Florida	66	8	74	474140	
18914	1000000US120570138031010	1.2057E+14	Block 1010, Block Group 1, Census Tract 138.03, Hillsborough County, Florida	0	0	0	474140	
18915	1000000US120570138031011	1.2057E+14	Block 1011, Block Group 1, Census Tract 138.03, Hillsborough County, Florida	33	6	39	474179	
18916	1000000US120570138031012	1.2057E+14	Block 1012, Block Group 1, Census Tract 138.03, Hillsborough County, Florida	26	3	29	474208	
18917	1000000US120570138031013	1.2057E+14	Block 1013, Block Group 1, Census Tract 138.03, Hillsborough County, Florida	25	7	32	474240	
18918	1000000US120570138031014	1.2057E+14	Block 1014, Block Group 1, Census Tract 138.03, Hillsborough County, Florida	47	14	61	474301	474,285
18919	1000000US120570138031015	1.2057E+14	Block 1015, Block Group 1, Census Tract 138.03, Hillsborough County, Florida	7	3	10	474311	
18920	1000000US120570138031016	1.2057E+14	Block 1016, Block Group 1, Census Tract 138.03, Hillsborough County, Florida	9	5	14	474325	
18921	1000000US120570138031017	1.2057E+14	Block 1017, Block Group 1, Census Tract 138.03, Hillsborough County, Florida	25	4	29	474354	
18922	1000000US120570138031018	1.2057E+14	Block 1018, Block Group 1, Census Tract 138.03, Hillsborough County, Florida	3	1	4	474358	
18923	1000000US120570138031019	1.2057E+14	Block 1019, Block Group 1, Census Tract 138.03, Hillsborough County, Florida	13	3	16	474374	
18924	1000000US120570138031020	1.2057E+14	Block 1020, Block Group 1, Census Tract 138.03, Hillsborough County, Florida	51	12	63	474437	
18925	1000000US120570138031021	1.2057E+14	Block 1021, Block Group 1, Census Tract 138.03, Hillsborough County, Florida	0	0	0	474437	
18926	1000000US120570138031022	1.2057E+14	Block 1022, Block Group 1, Census Tract 138.03, Hillsborough County, Florida	51	13	64	474501	
18927	1000000US120570138031023	1.2057E+14	Block 1023, Block Group 1, Census Tract 138.03, Hillsborough County, Florida	10	1	11	474512	
18928	1000000US120570138031024	1.2057E+14	Block 1024, Block Group 1, Census Tract 138.03, Hillsborough County, Florida	54	10	64	474576	
18929	1000000US120570138031025	1.2057E+14	Block 1025, Block Group 1, Census Tract 138.03, Hillsborough County, Florida	0	0	0	474576	
18930	1000000US120570138031026	1.2057E+14	Block 1026, Block Group 1, Census Tract 138.03, Hillsborough County, Florida	55	15	70	474646	
18931	1000000US120570138031027	1.2057E+14	Block 1027, Block Group 1, Census Tract 138.03, Hillsborough County, Florida	0	0	0	474646	

NOTE: Clusters Can be Selected Twice (or more!)



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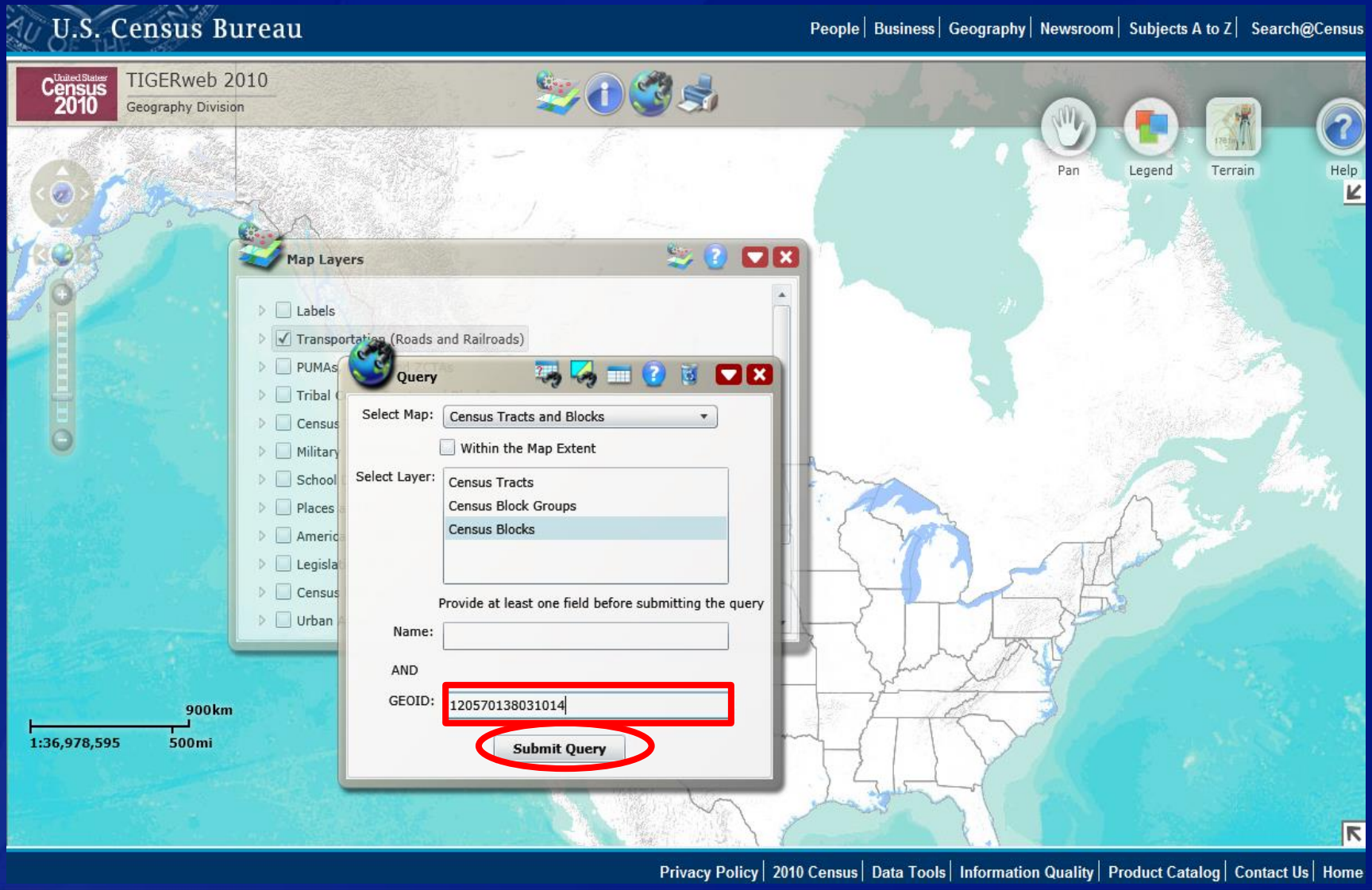
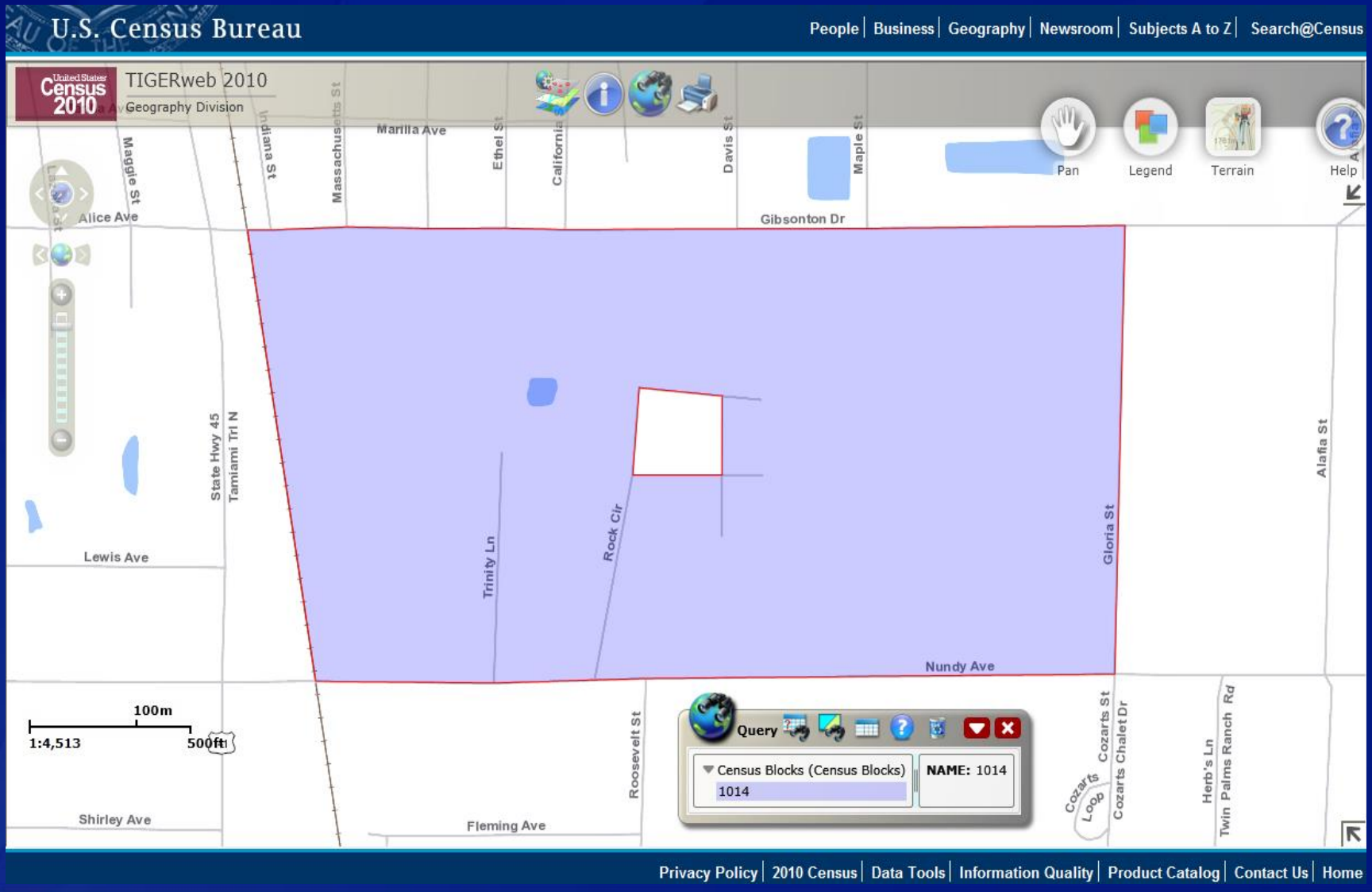
9722	1000000US120570108134000	1.2057E+14	Block 4000, Block Group 4, Census Tract 108.13, Hillsborough County, Florida	353	50	403	193080		
9723	1000000US120570108134001	1.2057E+14	Block 4001, Block Group 4, Census Tract 108.13, Hillsborough County, Florida	294	66	360	193440		
9724	1000000US120570108134002	1.2057E+14	Block 4002, Block Group 4, Census Tract 108.13, Hillsborough County, Florida	0	0	0	193440		
9725	1000000US120570108134003	1.2057E+14	Block 4003, Block Group 4, Census Tract 108.13, Hillsborough County, Florida	37	23	60	193500		
9726	1000000US120570108141000	1.2057E+14	Block 1000, Block Group 1, Census Tract 108.14, Hillsborough County, Florida	8	8	16	193516		
9727	1000000US120570108141001	1.2057E+14	Block 1001, Block Group 1, Census Tract 108.14, Hillsborough County, Florida	35	14	49	193565		
9728	1000000US120570108141002	1.2057E+14	Block 1002, Block Group 1, Census Tract 108.14, Hillsborough County, Florida	15	9	24	193589		
9729	1000000US120570108141003	1.2057E+14	Block 1003, Block Group 1, Census Tract 108.14, Hillsborough County, Florida	0	0	0	193589		
9730	1000000US120570108141004	1.2057E+14	Block 1004, Block Group 1, Census Tract 108.14, Hillsborough County, Florida	129	80	209	193798		
9731	1000000US120570108141005	1.2057E+14	Block 1005, Block Group 1, Census Tract 108.14, Hillsborough County, Florida	248	91	339	194137	193,806	194,031
9732	1000000US120570108141006	1.2057E+14	Block 1006, Block Group 1, Census Tract 108.14, Hillsborough County, Florida	0	0	0	194137		
9733	1000000US120570108142000	1.2057E+14	Block 2000, Block Group 2, Census Tract 108.14, Hillsborough County, Florida	380	35	415	194552		
9734	1000000US120570108142001	1.2057E+14	Block 2001, Block Group 2, Census Tract 108.14, Hillsborough County, Florida	341	110	451	195003		
9735	1000000US120570108142002	1.2057E+14	Block 2002, Block Group 2, Census Tract 108.14, Hillsborough County, Florida	57	33	90	195093		
9736	1000000US120570108151000	1.2057E+14	Block 1000, Block Group 1, Census Tract 108.15, Hillsborough County, Florida	138	118	256	195349		
9737	1000000US120570108151001	1.2057E+14	Block 1001, Block Group 1, Census Tract 108.15, Hillsborough County, Florida	49	8	57	195406		
9738	1000000US120570108151002	1.2057E+14	Block 1002, Block Group 1, Census Tract 108.15, Hillsborough County, Florida	190	8	198	195604		
9739	1000000US120570108151003	1.2057E+14	Block 1003, Block Group 1, Census Tract 108.15, Hillsborough County, Florida	86	18	104	195708		
9740	1000000US120570108151004	1.2057E+14	Block 1004, Block Group 1, Census Tract 108.15, Hillsborough County, Florida	42	70	112	195820		
9741	1000000US120570108152000	1.2057E+14	Block 2000, Block Group 2, Census Tract 108.15, Hillsborough County, Florida	0	0	0	195820		
9742	1000000US120570108152001	1.2057E+14	Block 2001, Block Group 2, Census Tract 108.15, Hillsborough County, Florida	0	0	0	195820		
9743	1000000US120570108152002	1.2057E+14	Block 2002, Block Group 2, Census Tract 108.15, Hillsborough County, Florida	0	0	0	195820		
9744	1000000US120570108152003	1.2057E+14	Block 2003, Block Group 2, Census Tract 108.15, Hillsborough County, Florida	0	0	0	195820		
9745	1000000US120570108152004	1.2057E+14	Block 2004, Block Group 2, Census Tract 108.15, Hillsborough County, Florida	0	0	0	195820		
9746	1000000US120570108152005	1.2057E+14	Block 2005, Block Group 2, Census Tract 108.15, Hillsborough County, Florida	0	0	0	195820		

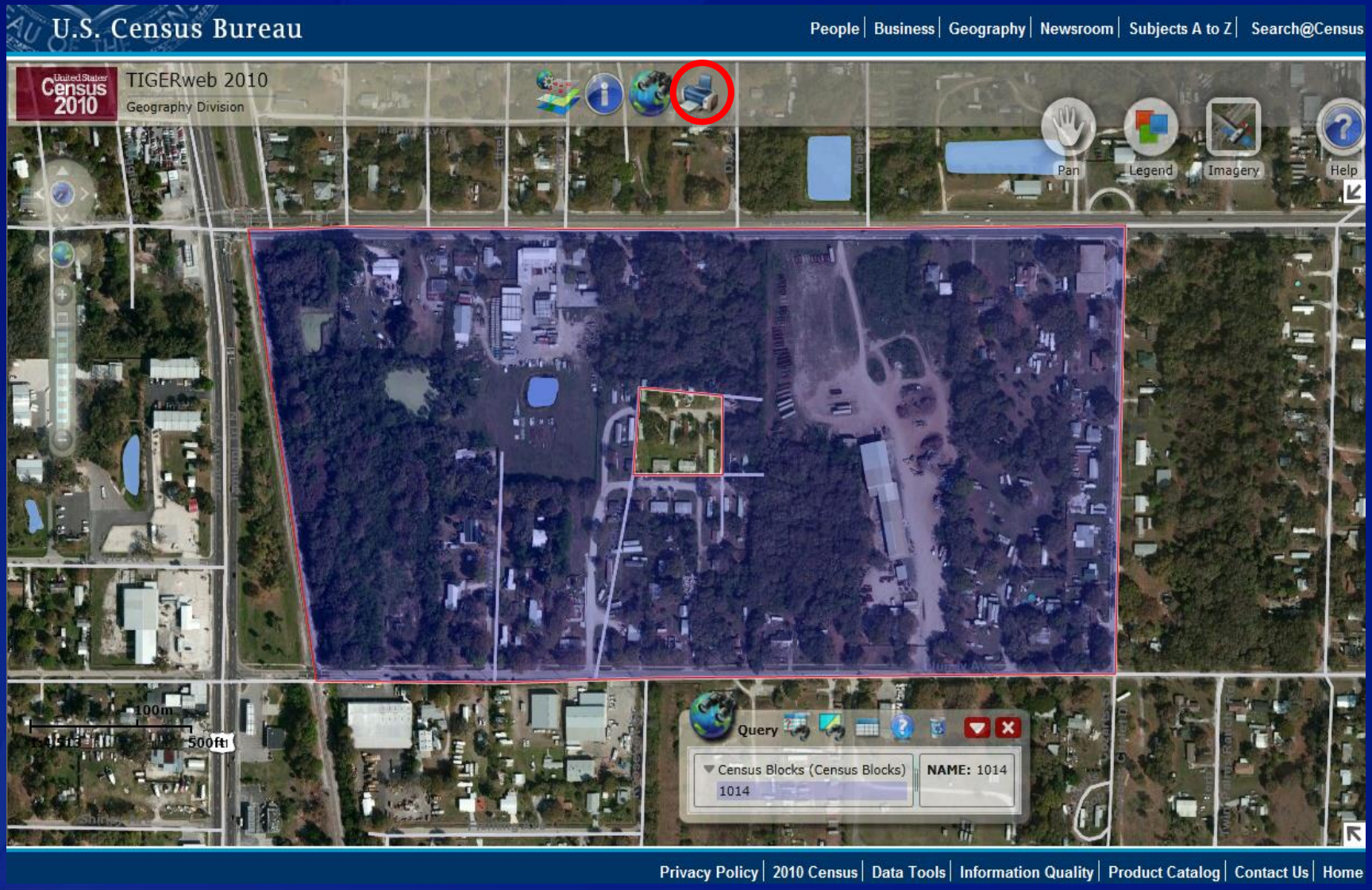
Create Maps in TigerWeb2010



Cluster 1 (2006)



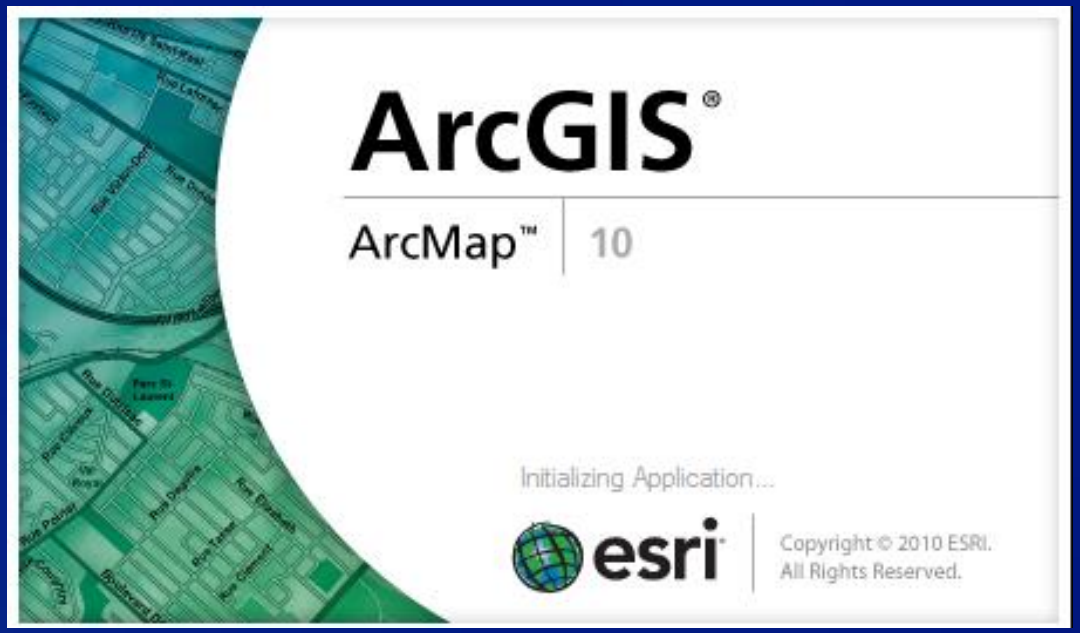
Imagery of Cluster 1 (Block 2006)



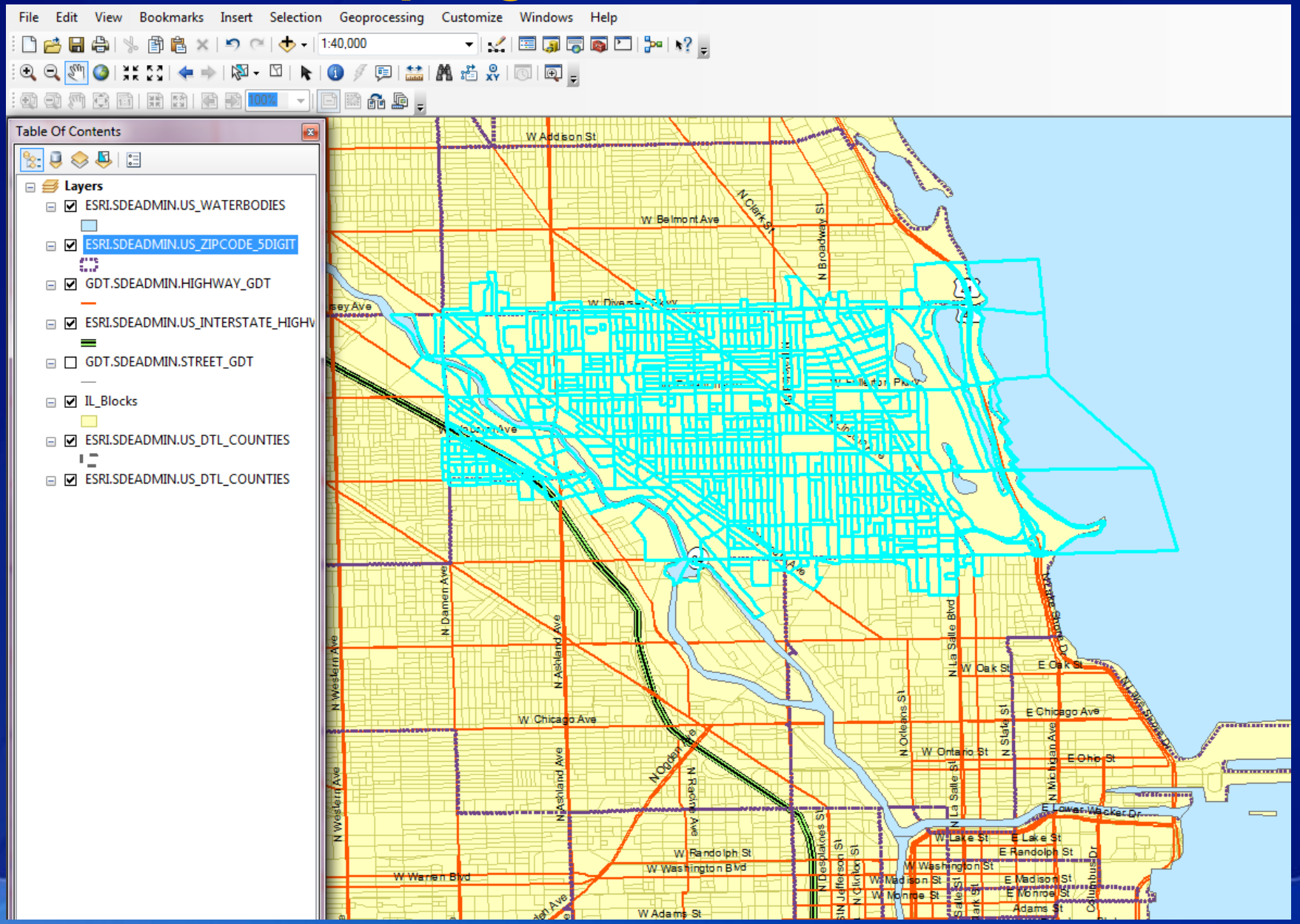
Repeat the procedure until all 30 selected cluster (block) maps are saved or printed

ArcGIS 10 CASPER Toolkit

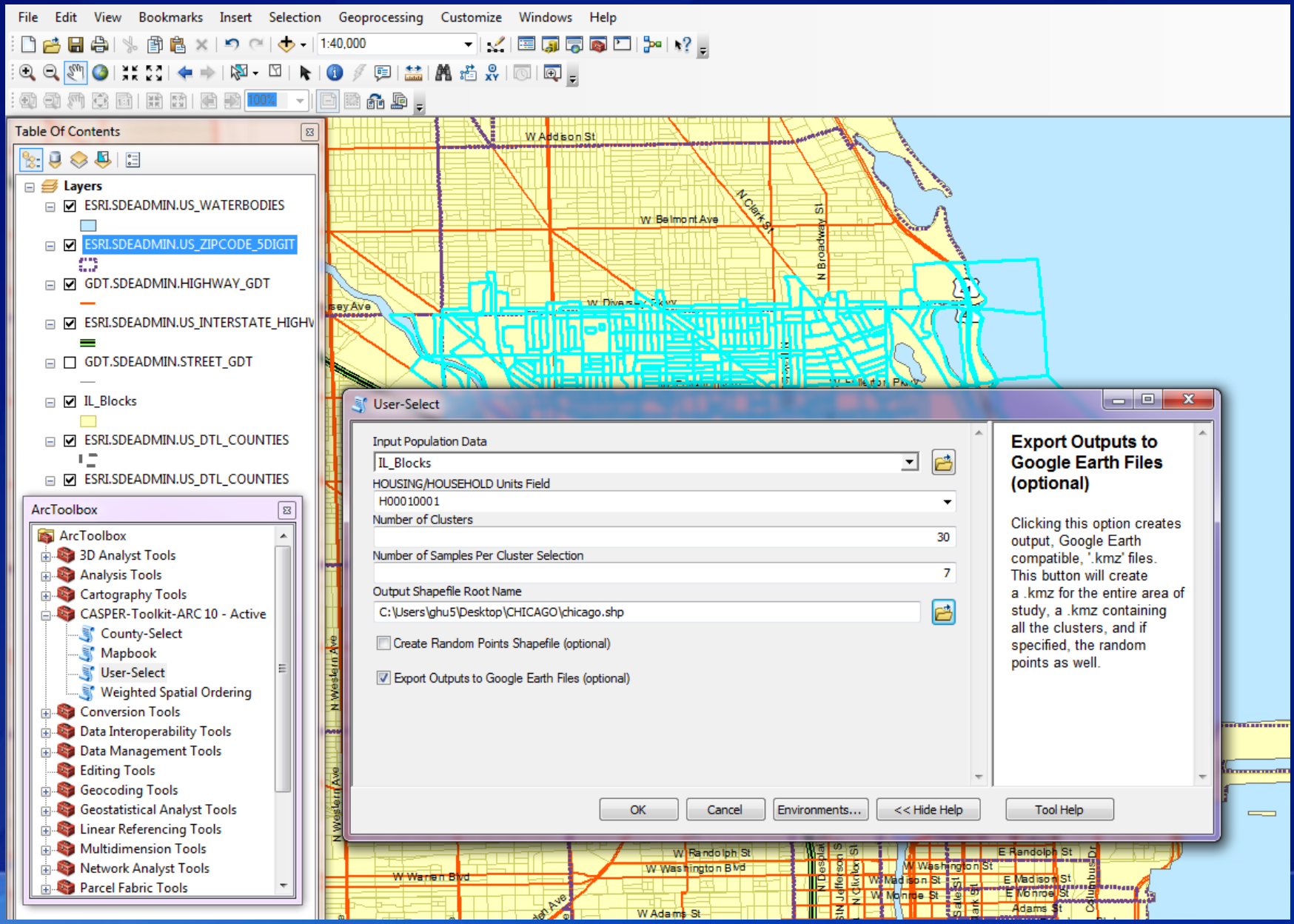
- **Any sampling frame**
  - not just county or groups of counties
  - Zip codes, landmarks, disaster track, etc.
- **Faster, less time-consuming**



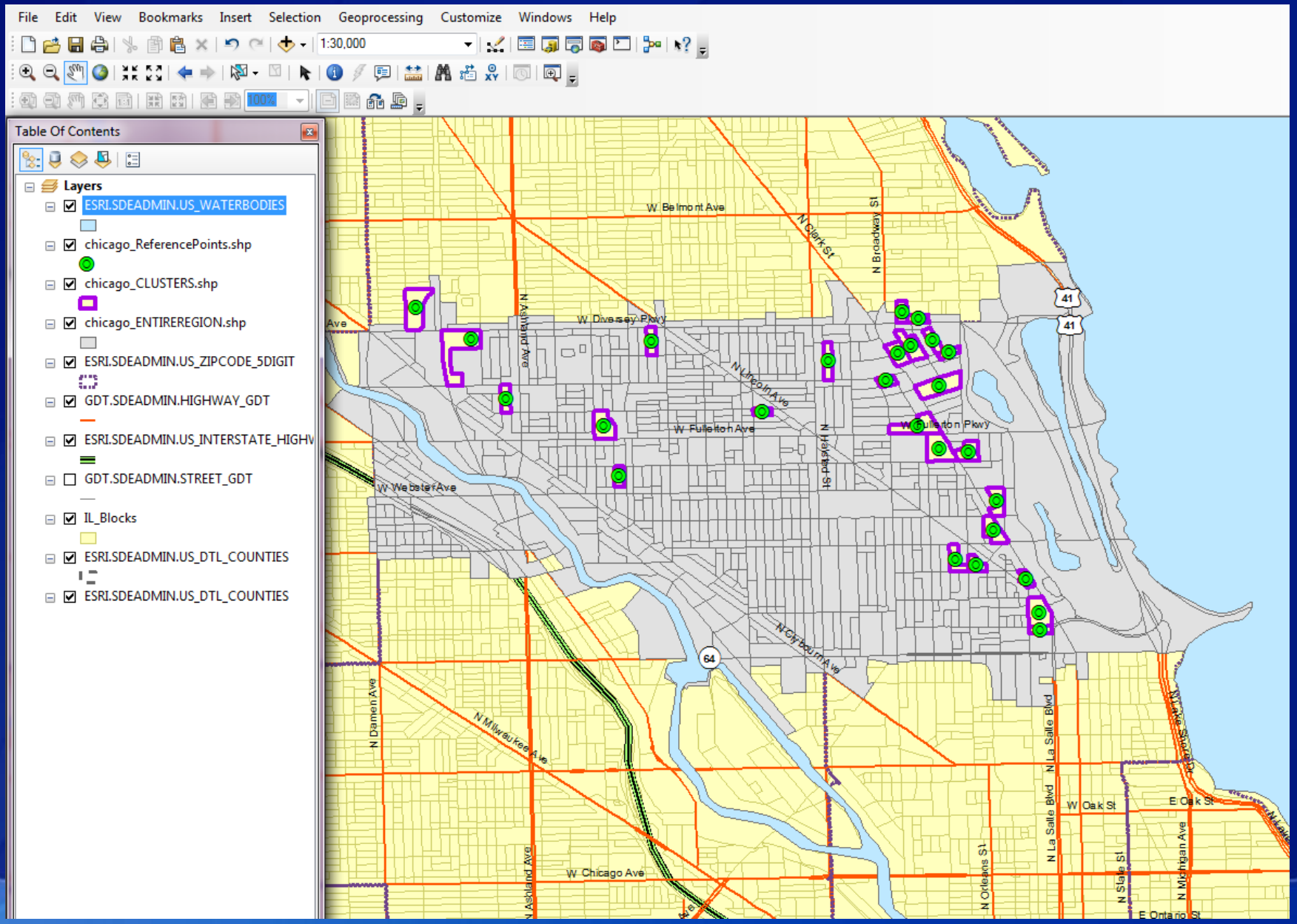
Selected Sampling Frame: Lincoln Park (60614)



Run CASPER Toolkit



Clusters Selected



Analyzing CASPER Data & Interpreting Results

Health Studies Branch, National Center for Environmental Health
Division of Environmental Hazards and Health Effects

Analysis Considerations

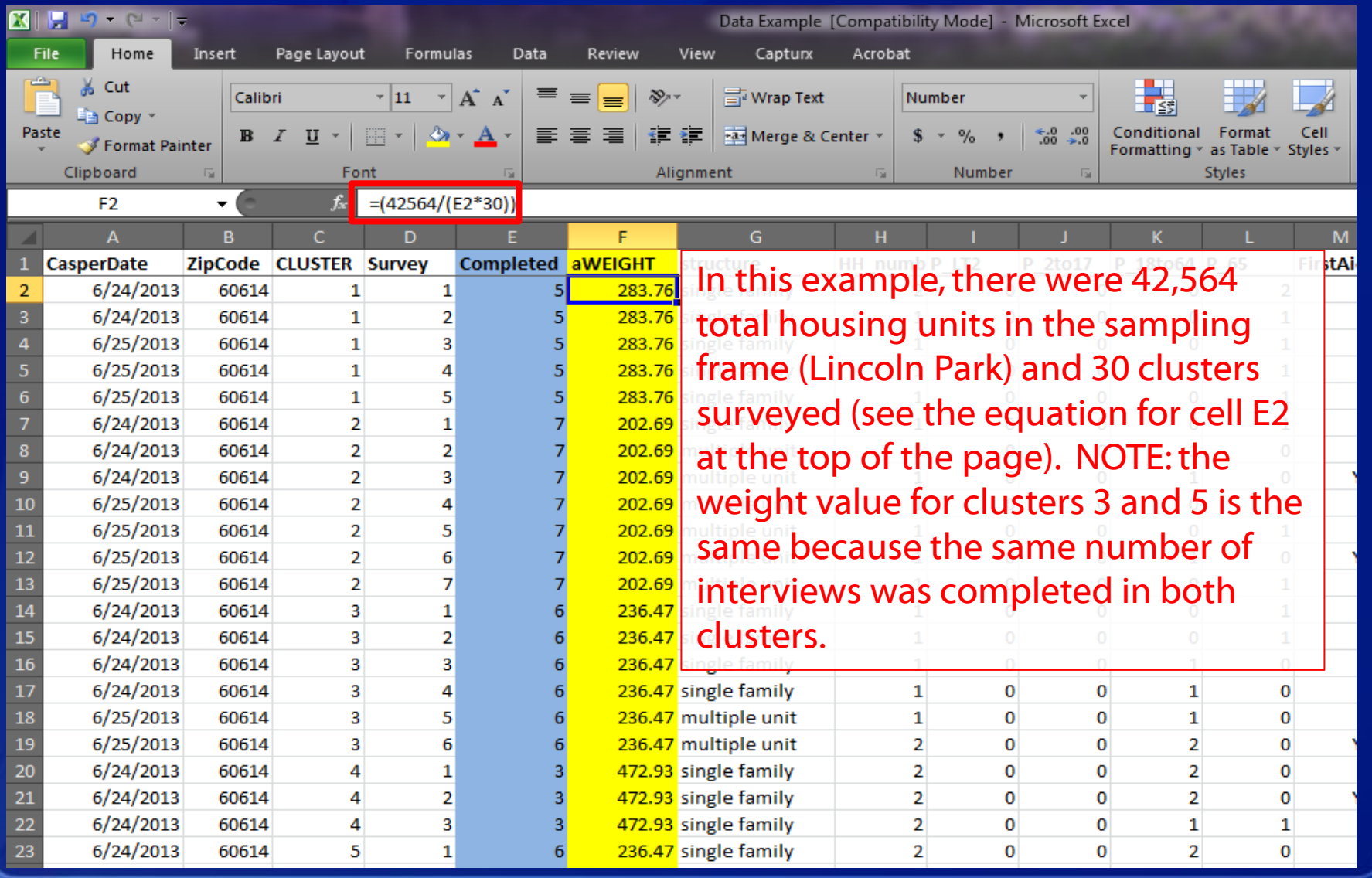
- **How will the electronic format and the data entry be handled?**
- **Have you prepared table shells?**
- **How will data analysis be conducted?**
  - All variables
  - Selected variables
  - 95% confidence intervals
- **How will analyses be adjusted to reflect the complex sampling design?**
  - Weighted frequencies

Analyzing Data: Sampling Weight

$$= \frac{\text{(Total number of housing units in sampling frame)}}{\text{(number of housing units interviewed within cluster)}\ \text{(number of clusters surveyed)}}$$

- **Numerator will be the same for every housing unit (HU) within the assessment area**
- **Denominator will differ (potentially) between clusters**
  - Ideally 210 (i.e. 7 [HUs] x 30 [clusters])
  - Obtain from tracking form

Sample Weight Value



	A	B	C	D	E	F	G	H	I	J	K	L
1	CasperDate	ZipCode	CLUSTER	Survey	Completed	aWEIGHT						
2	6/24/2013	60614	1	1	5	283.76						
3	6/24/2013	60614	1	2	5	283.76						
4	6/25/2013	60614	1	3	5	283.76						
5	6/25/2013	60614	1	4	5	283.76						
6	6/25/2013	60614	1	5	5	283.76						
7	6/24/2013	60614	2	1	7	202.69						
8	6/24/2013	60614	2	2	7	202.69						
9	6/24/2013	60614	2	3	7	202.69						
10	6/25/2013	60614	2	4	7	202.69						
11	6/25/2013	60614	2	5	7	202.69						
12	6/25/2013	60614	2	6	7	202.69						
13	6/25/2013	60614	2	7	7	202.69						
14	6/24/2013	60614	3	1	6	236.47						
15	6/24/2013	60614	3	2	6	236.47						
16	6/24/2013	60614	3	3	6	236.47						
17	6/24/2013	60614	3	4	6	236.47	single family	1	0	0	1	0
18	6/25/2013	60614	3	5	6	236.47	multiple unit	1	0	0	1	0
19	6/25/2013	60614	3	6	6	236.47	multiple unit	2	0	0	2	0
20	6/24/2013	60614	4	1	3	472.93	single family	2	0	0	2	0
21	6/24/2013	60614	4	2	3	472.93	single family	2	0	0	2	0
22	6/24/2013	60614	4	3	3	472.93	single family	2	0	0	1	1
23	6/24/2013	60614	5	1	6	236.47	single family	2	0	0	2	0

In this example, there were 42,564 total housing units in the sampling frame (Lincoln Park) and 30 clusters surveyed (see the equation for cell E2 at the top of the page). NOTE: the weight value for clusters 3 and 5 is the same because the same number of interviews was completed in both clusters.

Example Table

Supplies	Frequency (n=192)	% of HH	Projected HH	Weighted %	95% CI
Not enough water (3 days)	69	35.9	15,147	35.6	28.1-43.1
No way to cook food	46	24.0	10,101	23.7	16.1-31.3
Not enough non-perishable food (3 days)	29	15.1	6,262	14.7	9.2-20.3
No 7-day supply of medications	17	8.8	3,810	9.0	5.0-12.9
*No 7-day supply if taking daily meds**	*3*	*2.5*	*608*	*2.3*	*0.0-4.9*
Not enough food/water for pets (3 days)	11	5.8	2,331	5.5	1.1-9.9
*Of pet owners***	*11*	*12.5*	*2,331*	*12.2*	*2.6-21.8*

*Of households requiring daily medication , n=120

** Of households with pets, n=88

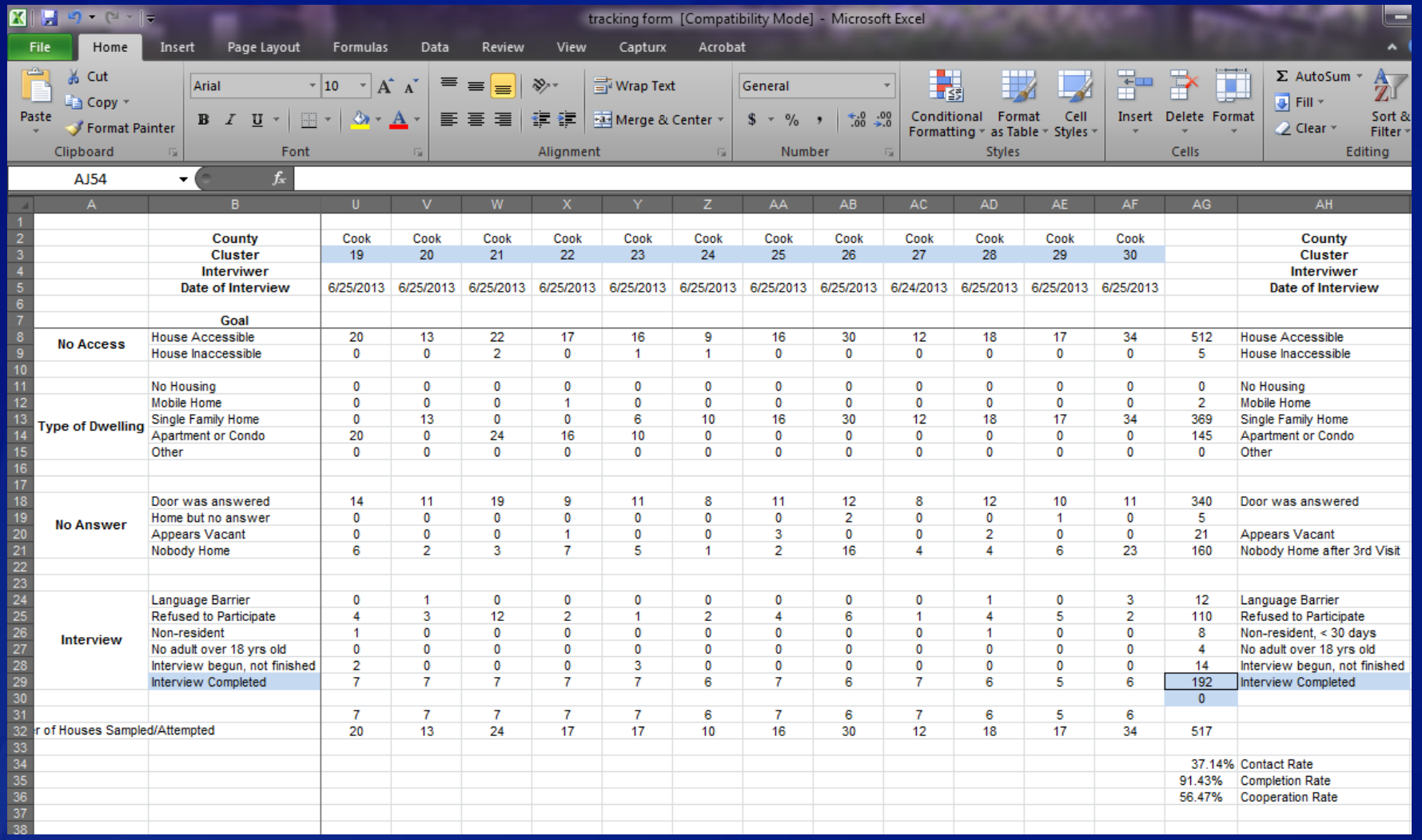
Analyzing Data: Tracking form

- **Calculation of these response rates provides an indication of the representativeness of the sample to the population**
  - Contact Rates
  - Cooperation Rates
  - Completion Rates

Analyzing Data: Tracking form

- **Enter tracking form data into Excel**
- **Calculate totals for each row on tracking form for each cluster**
  - If discrepancies will arise, use best judgment to rectify
- **Calculate totals across clusters**

Tabulate tracking form data in excel



	A	B	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH
1																
2		**County**	Cook	Cook	Cook	Cook	Cook	Cook	Cook	Cook	Cook	Cook	Cook	Cook		**County**
3		**Cluster**	19	20	21	22	23	24	25	26	27	28	29	30		**Cluster**
4		**Interviwer**														**Interviwer**
5		**Date of Interview**	6/25/2013	6/25/2013	6/25/2013	6/25/2013	6/25/2013	6/25/2013	6/25/2013	6/25/2013	6/24/2013	6/25/2013	6/25/2013	6/25/2013		**Date of Interview**
6																
7		**Goal**														
8	**No Access**	House Accessible	20	13	22	17	16	9	16	30	12	18	17	34	512	House Accessible
9		House Inaccessible	0	0	2	0	1	1	0	0	0	0	0	0	5	House Inaccessible
10																
11		No Housing	0	0	0	0	0	0	0	0	0	0	0	0	0	No Housing
12		Mobile Home	0	0	0	1	0	0	0	0	0	0	0	0	2	Mobile Home
13	**Type of Dwelling**	Single Family Home	0	13	0	0	6	10	16	30	12	18	17	34	369	Single Family Home
14		Apartment or Condo	20	0	24	16	10	0	0	0	0	0	0	0	145	Apartment or Condo
15		Other	0	0	0	0	0	0	0	0	0	0	0	0	0	Other
16																
17																
18		Door was answered	14	11	19	9	11	8	11	12	8	12	10	11	340	Door was answered
19	**No Answer**	Home but no answer	0	0	0	0	0	0	0	2	0	0	1	0	5	
20		Appears Vacant	0	0	0	1	0	0	3	0	0	2	0	0	21	Appears Vacant
21		Nobody Home	6	2	3	7	5	1	2	16	4	4	6	23	160	Nobody Home after 3rd Visit
22																
23																
24		Language Barrier	0	1	0	0	0	0	0	0	0	1	0	3	12	Language Barrier
25		Refused to Participate	4	3	12	2	1	2	4	6	1	4	5	2	110	Refused to Participate
26	**Interview**	Non-resident	1	0	0	0	0	0	0	0	0	1	0	0	8	Non-resident, < 30 days
27		No adult over 18 yrs old	0	0	0	0	0	0	0	0	0	0	0	0	4	No adult over 18 yrs old
28		Interview begun, not finished	2	0	0	0	3	0	0	0	0	0	0	0	14	Interview begun, not finished
29		Interview Completed	7	7	7	7	7	6	7	6	7	6	5	6	192	Interview Completed
30															0	
31			7	7	7	7	7	6	7	6	7	6	5	6		
32	r of Houses Sampled/Attempted		20	13	24	17	17	10	16	30	12	18	17	34	517	
33																
34															37.14%	Contact Rate
35															91.43%	Completion Rate
36															56.47%	Cooperation Rate
37																
38																

Contact Rate

- **The percentage of households that complete a survey after contact is attempted**

$$= \frac{\text{Number of completed interviews}}{\text{All HUs where contact was } \textit{attempted}}$$

Cooperation Rate

- **The percentage of households that complete a survey after contact has been made**

$$= \frac{\text{Number of completed interviews}}{\text{All HUs where contact was } \textit{made}}$$

Completion Rate

- **Number of completed interviews compared to the ideal number of completed interviews**
- **Denominator usually = 210**

$$= \frac{\text{Number of completed interviews}}{\text{Number of interviews intended to complete}}$$

Example Response Rates

Questionnaire response (n=192)	Percent	Rate	Description
Completion	91.4%	192/210	Total completed/ 210
Cooperation	56.5%	192/340	Total completed/ total contact made
Contact	37.1%	192/517	Total completed/ total selected

CASPER Phases

- **Prepare for the CASPER**
  - Determine objectives
  - Determine assessment area
  - Develop forms and questionnaire
  - Select first stage of sample
- **Conduct the CASPER in the field**
  - Select second stage sample
  - Organize and train assessment teams
  - Conduct household interviews
- **Analyze the data**
  - Determine sampling weight
  - Calculate weighted frequencies and percentages
- **Write the report and share results**

Report Writing

- **Preliminary Report/Exit Interview**
  - Start EARLY
  - Conducted within 36 hours of data collection
  - Includes tables, summary points, recommendation discussion
  - Key stakeholders
- **Final Report**
  - Full report structure
  - Additional content (qualitative and/or open-ended data)
  - More accurate and detailed information
  - Widely distributed

Considerations

- How will you report the data?
- Who will draft the written report?
- To whom should the results be submitted?
- What action will be taken based upon the results?
- Who should implement the recommendations?

Sharing Results

- **Who is your audience?**
  - Emergency managers
  - Epidemiologists
  - Politicians
  - Media
- **Timing – when are your deadlines?**
  - Within 36 hours of completion of data collection for initial results
- **Data presentation**
  - Simple
  - Easy-to-read format
  - Tables or graphically (pie charts, line graphs)
- **Link to original objectives**

Things to Remember

- **Get started EARLY!**
  - Most of the report can be drafted prior to data collection
- **Write clear objectives**
- **Tailor to your audience**
- **Explain what your results say**
  - HOUSEHOLD-level data
  - Know your limitations
- **Work with your partners when writing recommendations**
  - Are they tangible?
  - How will you implement them?