Census Overview:

Basics, Decennial, ACS, and Estimates

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Terminology & Definitions

○ <u>Decennial Census</u>: "the Census"; headcount taken once every 10 years; mandated by Constitution for equal representation

○ <u>Short form</u>: basic decennial Census questionnaire sent to most households in 2000 and <u>all households in 2010</u>; records simple demographics like age, gender, race, housing tenure (own/rent)

○ <u>Long form</u>: detailed decennial Census questionnaire sent to a sample of households in the 2000 Census but <u>not used</u> in the 2010 Census (replaced by ACS); recorded socio-economic and detailed housing data

○ <u>American Community Survey (ACS)</u>: annual sample survey – provides current data; nearly identical to long form – allowed 2010 Census to be short form only (simply a headcount)

- 2012 ACS (and those in future years) continues monthly surveying even though 2010 Census is finished

Questionnaires & Concepts

○ <u>Householder</u>: simply the first person on the census form

- Is NOT necessarily the "head of the household" (that's old terminology)

- Supposed to be the person "in whose name the residence is owned or rented"; usually but not always the person who fills out the form

  ➢ Can be male or female; householder is somewhat <u>arbitrary</u> but makes a big difference for how families and by extension items like poverty are defined

○ <u>Relationship</u>: how other persons living in the household are related or connected to the householder

- Spouse, biological/adopted/step child, parent-in-law, roommate, unmarried partner, foster child, etc.

- A household with 2 or more related individuals is a "family" household

  ➢ One person households are not a family and thus excluded from variables like median family income (but are included in median household income)

  ➢ Unmarried partners are not a family by definition

    - If a child lives in the household of unmarried partners but is from a prior relationship, it is a function of who fills out the form (is the householder) for whether that is a "family" or not – IT GETS COMPLEX – impacts items like poverty

3

Householder Example:
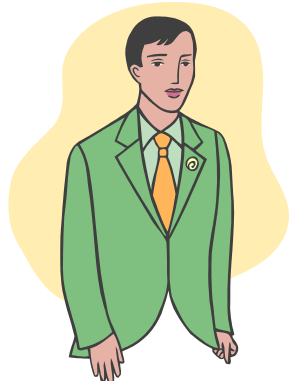Susan
and her child Casey
Live with Paul

Notes: Susan and Paul are dating but not married; Paul is not the father of Casey

If Susan is the householder...
Casey is related to Susan as biological child and this is a family household; Paul is unmarried partner

If Paul is the householder...
Casey is an "other nonrelative" and Susan is unmarried partner; this is NOT a family household

In both cases Paul's income is NOT included in Susan and Casey's poverty calculation; if they were married it would be.

Questionnaires & Concepts continued

○ <u>Residence</u>: For the Census, it is based on *usual residence* – where people are most of the year (their permanent residence). It is also based upon a April 1 reference date.

- Snowbirds spending 3 months in Texas and 9 months in Nebraska should be a resident of NE
- College students are almost always counted in their college city (that's where they are on April 1)
- Since the ACS forms are sent out and mailed back monthly, residence for the ACS is based upon who is living in the household for "the next 2 months"
  - ➢ Provides a more accurate picture of the populous: e.g. some snowbirds are counted in the South & college students in parent's house if home for summer

○ <u>Race/Ethnicity</u>: In the census world, each person has is either Hispanic/Latino or they are not, AND then they also have one or more races

- Hispanic/Latino question is asked first; then comes the racial question
  - ➢ White non-Hispanic is "majority population"; total pop – WnH = minority population

5

How does CPAR typically analyze race/ethnicity?

○ We usually list totals for Hispanic/Latino, and then all races ALONE as being non-Hispanic (NH) – White NH; Black NH; etc.

- This avoids double counting and the sum of all groups when combined with 2+ races NH will equal the total population (percents sum to 100%)

- Race ALONE means that only <u>one</u> race was stated on the form

- Many groups/agencies and grants ask for simply White, Black, etc. and Hispanic – by definition many Hispanics in this case would be represented twice (they often list their race as White or Other)

  ➢ You heard it here first – the 2020 census will likely use a combined race/ethnicity question! It will get similar results, "other" race category will be selected less frequently, & will have areas to write in ancestry/origin (so we'd get data on African and European countries/origins in addition to Asians, Native Amer., & Hispanic)

○ Also can evaluate race for those ALONE or IN COMBINATION

- This includes those who selected that race specifically (alone) as well as those who selected that race and another one (2 or more races)

  ➢ Double counts the people selecting 2+ races (doesn't sum to total pop. or 100%)

  ➢ Might use more often as lessens effect of multi-race births "always" being minority
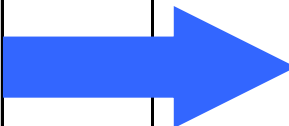
6

Census Datafiles

- <u>Summary File 1 (SF 1)</u>: Used for both 2000 and 2010 basic demographic data from the *short form*: age, gender, race/ethnicity, housing tenure (own vs. rent), etc.

- <u>Summary File 3 (SF 3)</u>: Not part of 2010 Census, replaced by ACS; has detailed socio-economic and housing data from the *long form* from 2000; also includes figures for SF 1 items but these are based on a "weighted" sample—not the official counts

BE CAREFUL – You must go to the right source to get correct data!

- <u>ACS Datasets</u>: contain data for ACS variables; are based upon the timeframe over which the data was collected

  - 1-year: 2010   3-year: 2008-2010   5-year: 2006-2010
  - Do NOT Compare ACS datasets to SF 1 from Census 2000
    - Compare SF 1 from 2000 to: ————————→ SF 1 from 2010
    - Compare SF 3 from 2000 to: ————————→ ACS datasets

7

ACS Data Release Schedule
(full implementation in 2005)

Type of Data	Population of Area	Previous Year's Data Released in the Fall of:					
		2006	2007	2008	2009	2010	2011
Annual Estimate	65,000+						➡
3-year aggregate	20,000+						➡
5-year aggregate	Under 20,000; Census Tracts, Zip Codes						➡

We had to wait for data for smaller areas, but now we will get annual data (rolling timeframe as new data is released: 2005-2009 then 2006-2010, etc.)

More data = be more careful! Cite sources accurately and with detail (include table #s)

Geography

○ Size continuum: large to small, or small to large

○ Legal/Administrative vs. Census/Statistical

- Nation—State—County—City—Township

- Block—Block Group—Census Tract—PUMA—Zip Code—Metro Area (MSA)—Division—Region

FactFinder Address Search Page & Results

Your Selections

'Your Selections' is empty

Search using the options below:

Topics
(age, income, year, dataset, ...)

Geographies
(states, counties, places, ...)

Race and Ethnic Groups
(race, ancestry, tribe)

Industry Codes
(NAICS industry, ...)

Search Results:

To search for tables and other files in American FactFinder:

Groups, or Industry Codes or

Select Geographies   CLOSE ✕

| List | Name | **Address** | Map |

Enter a street address, city and state, or a street address and ZIP code. Click 'Go'. ?

Note: address search will use the latest available address data beginning with **2010** and working backwards, based on the contents of Your Selections.

street address	city	state	zip	
6001 Dodge St	Omaha	Nebraska ▾		GO

Geographies containing 6001 Dodge St, OMAHA, NE, 68132:

Select geographies to add to Your Selections

Geography Results:

| Geography Name	Geography Type	Geography Code
PUMA5 00904, Nebraska	Public Use Microdata Area (PUMA)	795
Nebraska	State	040
Douglas County, Nebraska	County	050
Omaha city, Douglas County, Nebraska	County Subdivision	060
Block 2022, Block Group 2, Census Tract 47, Douglas County, Nebraska	Block	100
Census Tract 47, Douglas County, Nebraska	Census Tract	140
Block Group 2, Census Tract 47, Douglas County, Nebraska	Block Group within Census Tract	150
Omaha city, Nebraska	Place within State	160
Omaha-Council Bluffs, NE-IA Metro Area	Metro Statistical Area/Micro Statistical Area	310
Omaha, NE--IA MSA	MSA/CMSA	380
Omaha, NE--IA Urbanized Area	Urban Area	400
Congressional District 2 (111th Congress), Nebraska	Congressional District	500
State Senate District 9 (2010), Nebraska	State Legislative District (Upper)	610
No Lower Chamber Districts (2010), Nebraska	State Legislative District (Lower)	620
Precinct 3-12, Douglas County, Nebraska	Voting District/Remainder	700
ZCTA5 68132	5-Digit ZCTA	860
ZIP 68132 (Omaha, NE)	5-Digit ZIP Code	861
Omaha Public Schools, Nebraska	School District (Unified)/Remainder	970
Omaha city, Nebraska	Economic Place	E60

Block 2022 in Block Group 2, Census Tract 47 Douglas County, NE
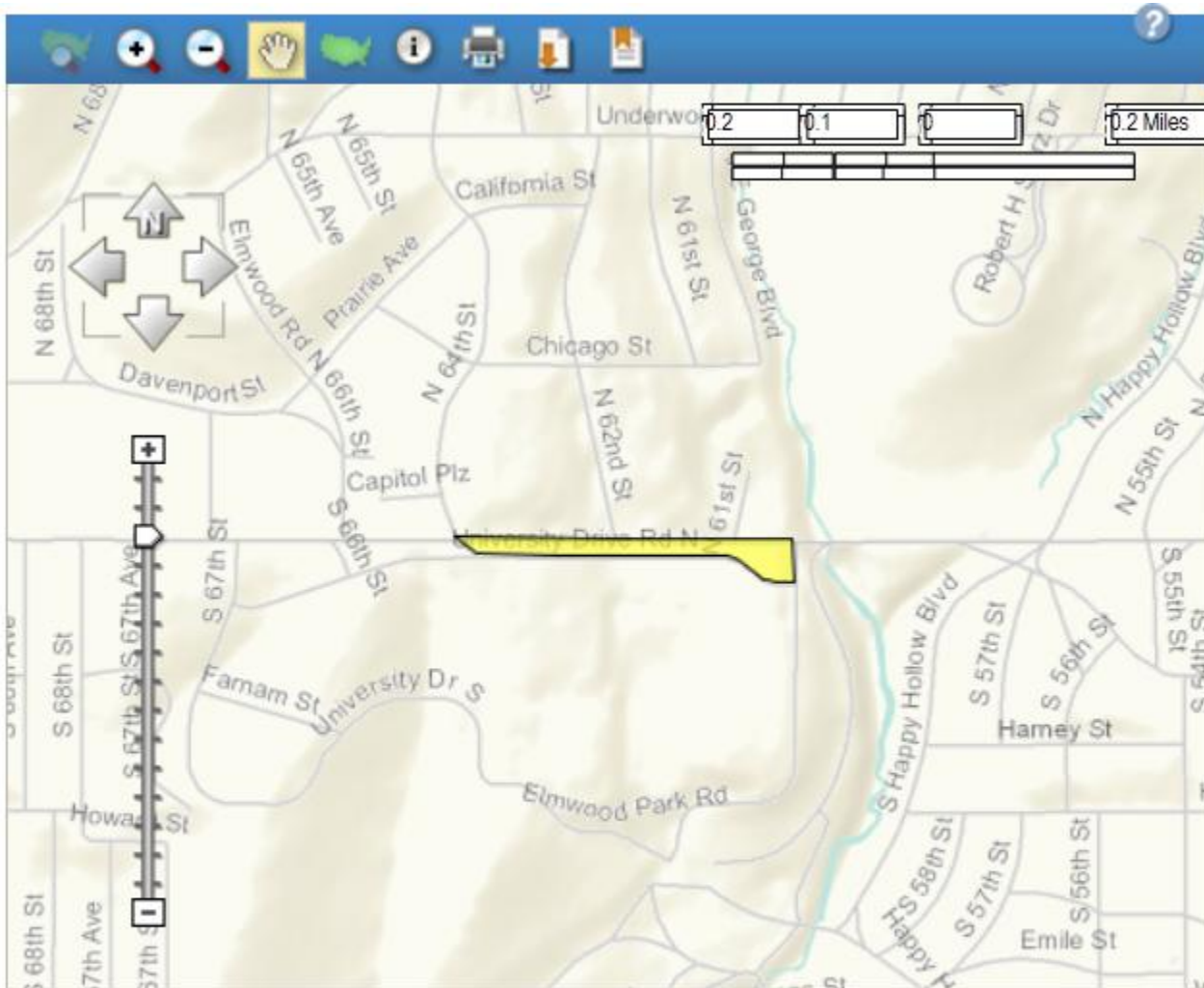
# Block 2022 in Block Group 2, Census Tract 47 Douglas County, NE
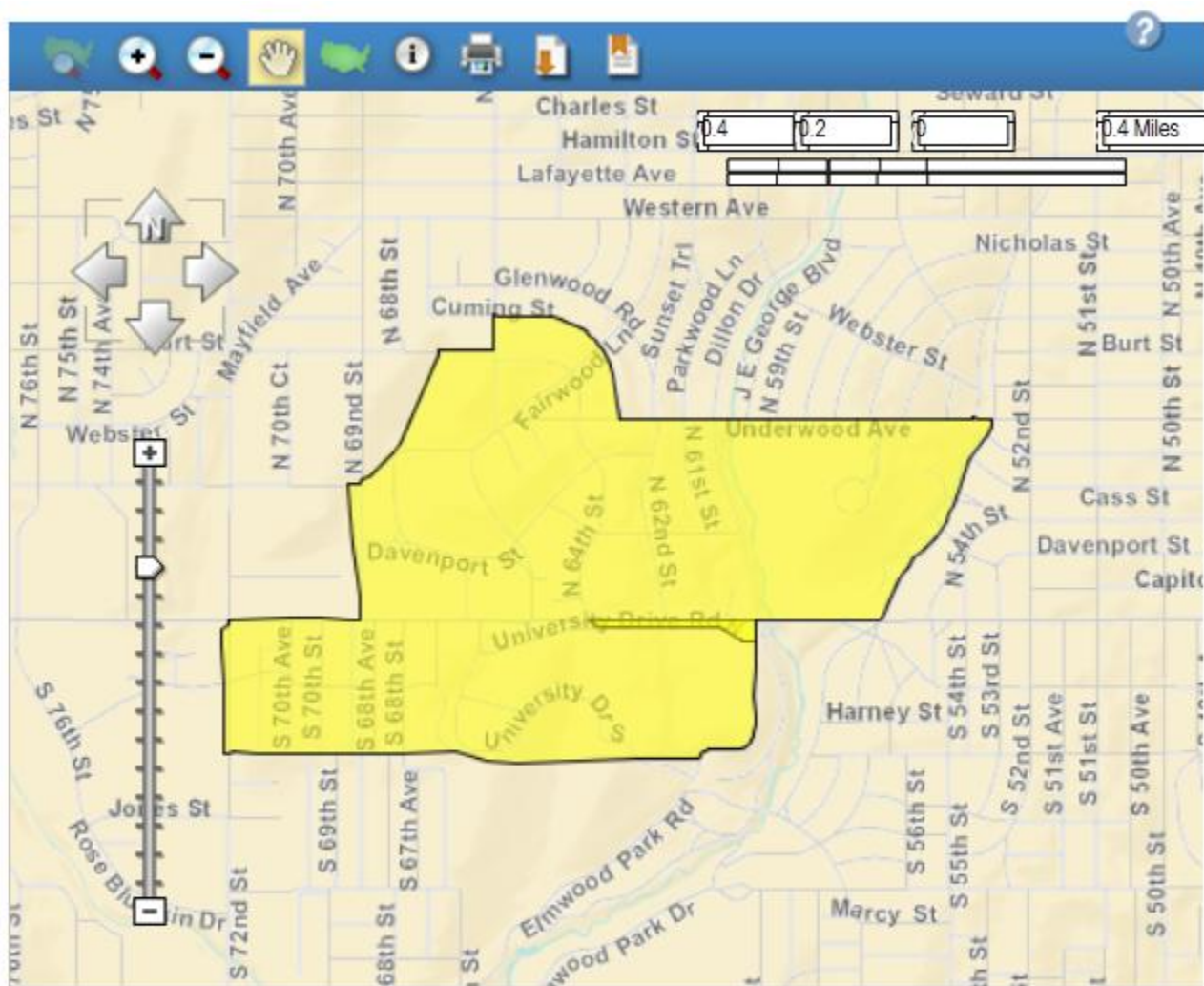
Block 2022 in Block Group 2, Census Tract 47 Douglas County, NE
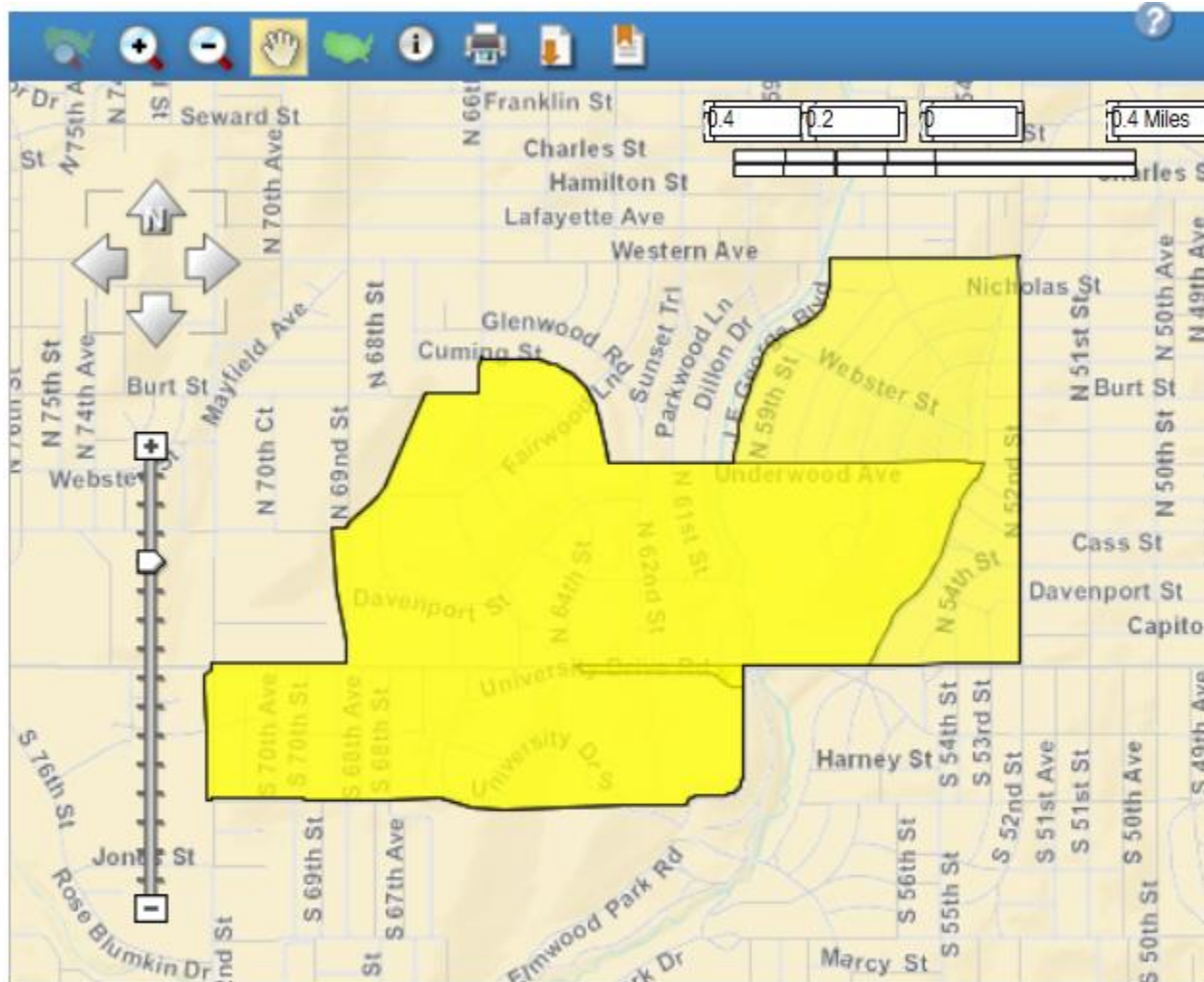
Geography VS. Data (A Duel)

○ There is usually a tradeoff between available information and the geography for which it is available

- Can be due to confidentiality restraints

- More specific information may require expanding to a larger geography (or a longer timeframe)

  ➢ Even if the data is provided, you must ask whether the data is "reliable" for that geography?

  ➢ Are the figures based on a small number of cases where the sampling error could be large?

    - Sampling error occurs if the figures would be different if different households/people were included in the sample. ACS data always lists the "margin of error".

14
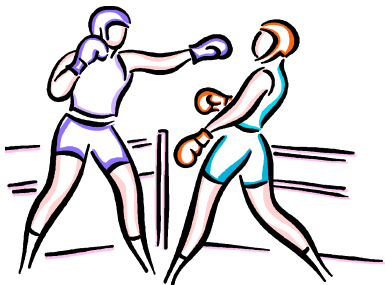
Relationship between Data/Datafiles and Geography

○ For blocks, you can only get Redistricting or SF 1 data

 ● Confidentiality reasons: you'd know certain incomes on your block (also sampling/error issues)

○ Block groups have most SF 3 data; only meant as building blocks for larger custom geographies in the ACS

 ● No ancestry or unmarried partner data

○ Census Tracts are a key geography as they are one of the smallest geographies to have most all data compiled

 ● Special PCT (for population items) and HCT (housing) tables

○ Public Use Microdata Areas (PUMAs) are combined census tracts that contain at least 100,000 people and are the smallest geography for the PUMS files; imp't in ACS!

PUMA geography

- Nebraska has 14 PUMA areas (4 in Douglas Co., 2 in Lancaster)

- ACS data are currently using the 2000 based PUMAs
  - 2010 based PUMAs are nearly identical – a couple tracts changed in Douglas and Lancaster counties; Sarpy Co. is now a full PUMA

- PUMA geography has more importance in the ACS
  - Data are released annually since PUMAs exceed the annual ACS population threshold of 65,000
    - Not many Nebraska geographies get annual data; PUMAs are the smallest annual geography for making statewide comparisons
  - Breaks core metro counties into smaller areas and gives proxies for smaller geographies that are similar to the larger PUMA area
    - Northeast NE puma proxy for Pierce Co; Southeast Douglas for S. Omaha

- State Maps for 2000-based PUMAs can be viewed on the internet

  - http://www.census.gov/geo/www/maps/puma5pct.htm

16

Geographic Boundaries of Nebraska Public Use Microdata Areas (PUMAs)

Each PUMA contained at least 100,000 persons in the 2000 Census. Boundaries may change after the 2010 Census, but these boundaries are used in current products like the American Community Survey (ACS). PUMAs are useful as they have annual ACS data and subdivide metro areas into smaller subsections that can be compared.
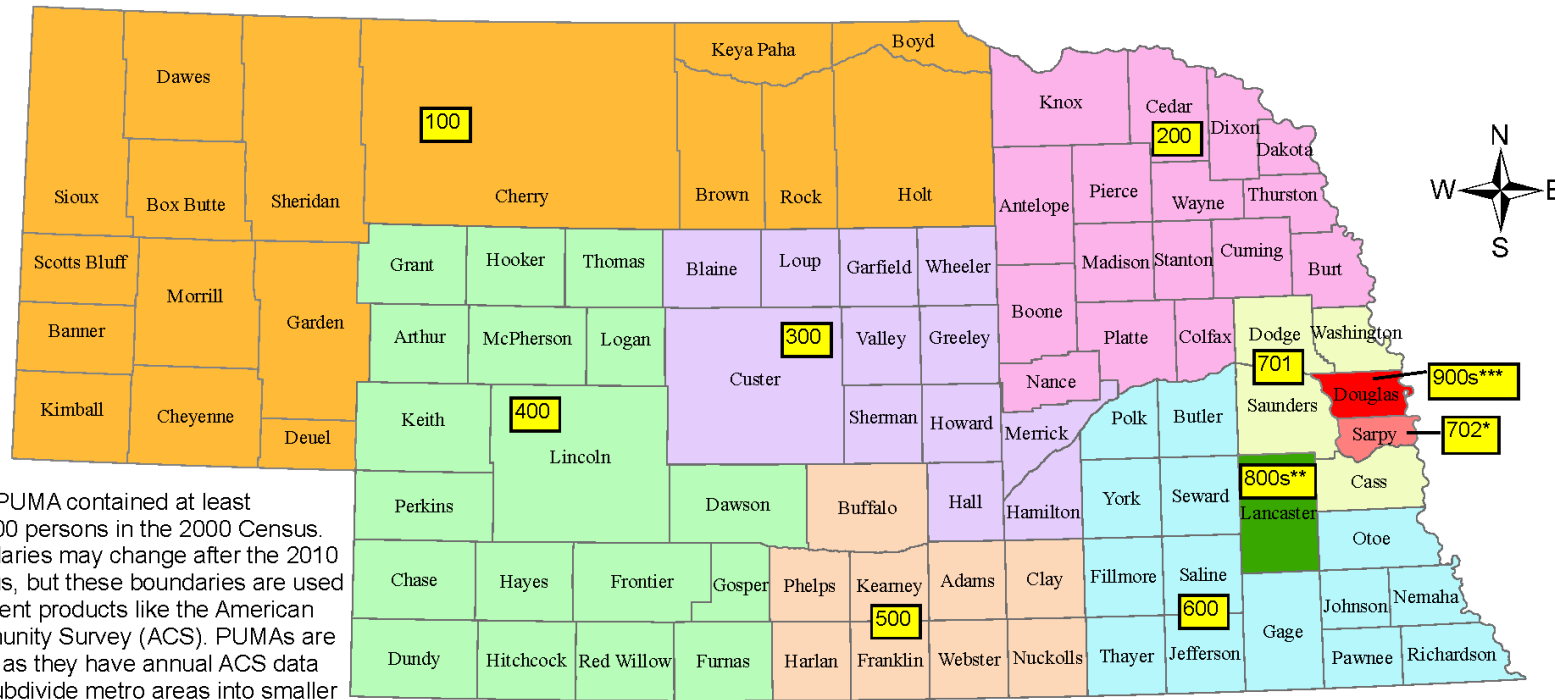
Nebraska PUMA areas (number, description, and number of counties)

- 100 - Northwest: Scottsbluff, Chadron, O'Neill (17)
- 200 - Northeast: Norfolk, Columbus, South Sioux City (16)
- 300 - Central: Grand Island, Aurora, Broken Bow (12)
- 400 - Southwest: North Platte, Lexington, McCook (18)
- 500 - South Central: Kearney, Hastings, Holdrege (9)
- 600 - Southeast: Beatrice, Nebraska City, Seward (14)
- 701 - Greater Omaha Area: Rural Sarpy County, Fremont, Blair, Plattsmouth (4)*
- 702 - Urban Sarpy County: Bellevue, Papillion, La Vista (1)*
- 800s - Lancaster County (subdivided): Lincoln (1)**
- 900s - Douglas County (subdivided): Omaha (1)***

* The rural southwest portion of Sarpy County is part of PUMA 701.
** Lancaster County is split in half roughly along 'O' Street into 801 (North) and 802 (South).
*** Douglas County is split into quadrants roughly at 72nd and Dodge Streets into 901 (Northwest), 902 (Southwest), 903 (Northeast), and 904 (Southeast).

Source: 2000 Census, Geography Program, U.S. Census Bureau (a detailed map can be viewed at http://ftp2.census.gov/geo/maps/puma/puma2k/ne_puma5.pdf)
Prepared by: David Drozd, Center for Public Affairs Research, University of Nebraska at Omaha - August 27, 2009

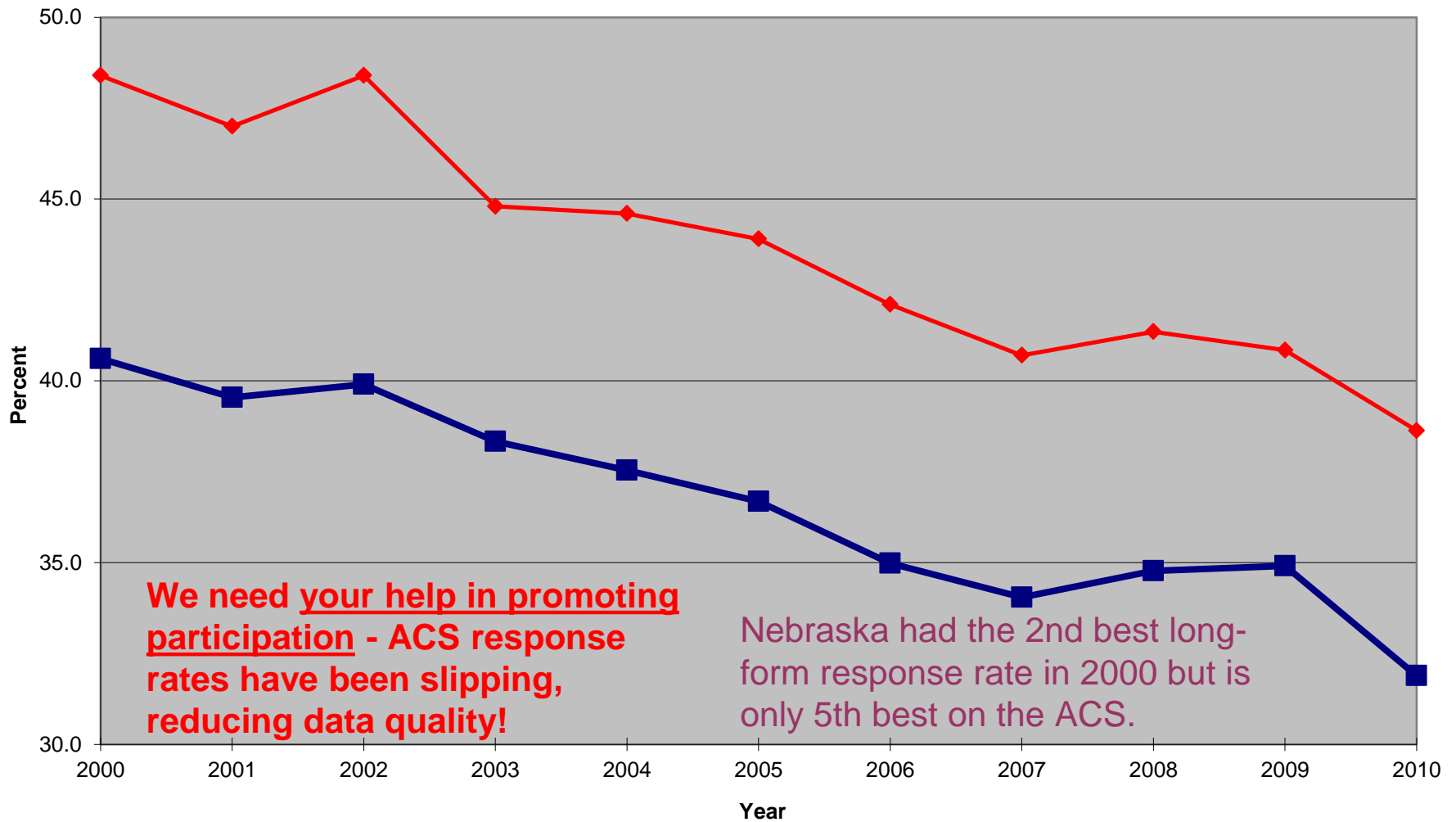# The American Community Survey: What is it?

- Nationwide written/mail survey conducted by the U.S. Census Bureau
  - Sent to a sample of households, not all households
- Similar to the sample portion of the decennial (10 year) census but is completed every year
  - Gives us more current information: <u>annual</u> data rather than 10 year intervals between releases
  - Provides data on the same Census topic areas
  - Replaced "long form" of decennial census; 2010 Census primarily a population count
  - The "future" of socio-economic Census data, IF funded into the future

18

ACS Methodology in Brief

○ Surveys mailed out & received back each month

- 3 million surveys annually nationwide

  ➢ Sample about 1 in 40 housing units (1 in 8 over five years of survey collection – Census 2000 long form was 1 in 6)

    - Census assigns both household and person weights. Summing these weights produces the estimates.

- Monthly surveys are combined to estimate figures for the calendar year as a whole.

- Nebraska response rate is in the top 5 (but has been slipping—help promote participation)

  ➢ 1 in 3 non-respondents are personally interviewed to get info. (very important—improves its data over others—but Census 2000 had full non-response follow up)

Initial ACS Mail Response Rates, U.S. and Nebraska: 2000 to 2010

We need your help in promoting participation - ACS response rates have been slipping, reducing data quality!

Nebraska had the 2nd best long-form response rate in 2000 but is only 5th best on the ACS.

Source: 2010 American Community Survey Variance Memorandum Series #ACS10-S-37 and prior

United States ◆ Nebraska

Compiled and Prepared by: David Drozd, UNO Center for Public Affairs Research, July 23, 2012

ACS Sample Size was Increased in 2011!!

- Higher sampling rate means more completed surveys and <u>more data items available with better accuracy</u>!!

- National sample expanded from 2.9 million to 3.54 million addresses per year (+ 22%)
    - Sample increase began for mailout in June 2011 so about a 12% increase in 2011 vs. 2010
        - We'll start to see the improvements in 2011 data released this fall
        - Full impact will be seen in 2012 data
        - This may prove to be the "golden time" for ACS data
            - Larger sample with solid weighting based on 2010 census

2011 ACS Data Release

- All the annual (one-year) data for 2011 will be released at one time (for areas with 65,000+ persons)
  - Thursday Sept 20, 2012 (media embargo on Tues. 9-18-12)
  - Will include ACS income and poverty tables (those used to be released early with data from the Current Population Survey: the CPS release of official national income/poverty will be 9-12-12)

- The 3-year aggregate estimates for 2009-11 will be released on October 25, 2012 (20,000+ person areas)
  - Will have two 3-year periods that don't overlap to compare (2006-08 vs. 2009-11; pre-recession vs. downturn/recovery)
  - First data on Field of Bachelor's Degrees for these areas

- New 5-year aggregate estimates for 2007-11 will be released on December 6, 2012 (all geographies)
  - Increased sampling rate is important, especially for small geos
  - ZIP Codes (aka ZCTAs) will have ACS data for the 1st time!!!

22

Multi-year Aggregate Estimates: Advantages

- The aggregates provide data for more geographies
  - Annual data for NE: 3 counties (Douglas, Lancaster, Sarpy)
  - 3-yr aggregate: 17 counties
  - 5-yr aggregate: all 93 counties
- For areas that get annual data, the aggregates based on more completed questionnaires will be more accurate and have smaller margins of error (MOE)
  - Especially important for sub-groups—data for specific age groups or racial/ethnic groups
  - Will help reduce variability in year-to-year figures
  - Some FactFinder tables are prepared but not released annually because of inaccuracy concerns—some of those tables will now have data released

MAIN   SEARCH   WHAT WE PROVIDE   USING FACTFINDER

Feedback FAQs Glossary Help

Results - Click Back to Search to select other tables or geographies

◀ BACK TO SEARCH   ◀ Result 2 of 2 ▶   VIEW ALL AS PDF

B22005C

RECEIPT OF FOOD STAMPS/SNAP IN THE PAST 12 MONTHS BY RACE OF HOUSEHOLDER (AMERICAN INDIAN AND ALASKA NATIVE ALONE)
Universe: Households with a householder who is American Indian and Alaska Native alone ⓘ
2010 American Community Survey 1-Year Estimates

Table View ▦

Actions: ⤳ Modify Table | 📄 Bookmark | 🖨 Print | 📄 Download | 🎥 Create a Map

📄 View Geography Notes | 📄 View Table Notes

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, for 2010, the 2010 Census provides the official counts of the population and housing units for the nation, states, counties, cities and towns.

The data you requested are not available.

Possible reasons include:

No data are available for the combination of geographic area(s) and other items in "Your Selections".

Selecting a table from a dataset that is currently being released on a flow basis, and the selected geographic area(s) have not yet been released.

Example of Standard Table
without Data Released

ACS New Subject Areas:

- Food stamp recipiency of households
- Fertility (women age 15-50 giving birth in the last year)
  - Note: These items were <u>not asked</u> on Census 2000 but have been asked since early-on in the ACS
- Health insurance coverage, changes in marital status, and veteran service connected disabilities added in 2008; field of Bachelor's Degree added in 2009
  - Disability question was revamped in 2008: see all forms here:
    - http://www.census.gov/acs/www/methodology/questionnaire_archive/
- New questions on country of birth for person's parents and computer/internet access likely in 2013

  KEY POINT: Remember that the goal of the ACS is <u>not</u> to make exact counts of the population or an item like the number of births (other sources for that), but to provide information on the characteristics of the population or those giving birth – information you can't find elsewhere!

25

The 2009 ACS Nebraska "Double Whammy"

- Two separate methods adjustments affected the 2009 ACS sample size and weighting approach
  - Implementation of city weighting controls
    - ACS had always controlled to county estimates, but in 2009 they also started controlling to city estimates
      - Omaha 2000 pop = 390,007; ACS pop 388,894 in '08; 454,714 in '09; (2010 Census: 408,958)
        - Different characteristics—more accurate but may have to consider it a 'break in series'
  - NE dissolution of elementary school districts affects ACS
    - Now are "unified" school districts – larger territory and population means a smaller sampling rate in the ACS
    - Distribution of sample changes: a "different Nebraska"
      - 500 less in micro counties; 70 less in Big 3; 85 less in Cherry Co
- Realize Omaha change impacts all NE data; <u>try not to utilize 2009 products much</u> – rely on 2010 and new 2011 data

26

Point Estimates, MOE and Confidence Intervals

- The ACS data provide point estimates for various characteristics. ACS data also include a margin of error (MOE) for finding a lower and upper bound.

  - Why?
    - The ACS is a sample and subject to sampling error.
    - Is the data representative of the entire population?
    - Census 2000 long form also a sample—1 in 6 sampling rate made sampling error small and MOE was not released.

- Adding and subtracting the MOE to/from the point estimate creates a range called a confidence interval.

  - ACS displays the MOE for a 90% confidence interval.
    - The bounds tell us that we are 90% confident that the figure for the entire population would be in this range if all households were surveyed.

27

Population Estimates Program: Basics

- The population estimates program provides the <u>official</u> head and housing unit counts as well as counts by age, sex, and race in non-census years
  - Shows how the population has changed since the Census

- As of July 1 of the specific year

- Staggered releases throughout the year
  - Large geographies first, most detailed data last

- The current release/vintage always supersedes prior
  - Can create confusion for why one 7-1-11 estimate will differ from another—cite the source and release date

- Estimates differ from projections
  - Estimates are the newest look at our current population
  - Projections predict the population structure in the future

Population Estimates Program: Census Methodology in Brief

- Start with the Census 2010 headcount (4-1-10)
- Adjust for headcount revisions, boundary changes (annexations) so that everything is consistent over time
  - This is called the Estimates Base (refers to 4-1-10)
- Add births, subtract deaths from vital records
- Make estimates of domestic and international migration
  - Partner with IRS to show changes in where people file returns
    - Limited to people/families who file their taxes, doesn't account for people leaving the U.S. very well
  - Use Medicare records to be more precise in 65+ population
- Various methods estimate changes in group quarters and military populations (deployment affects)
- Use building permit data and <u>recorded</u> demolitions
  - Tornados/Hurricanes don't file demolition permits!! (Hallam)
  - Permit allocation has some issues (Omaha ETJ vs. city limits)

29

Population Estimates Program: Its Importance

- The estimates give us our best look at how the population has changed since the Census
  - Is Nebraska growing more/less than neighboring states and the U.S.?
    - Will be the basis of predicting whether we'll keep all 3 Congressional seats in 2020!
  - What population components are changing
    - Births/Deaths; Foreign and Domestic net migration
  - How is the state's population distribution (more growth in metro counties) and age/race structure changing?
    - Migration of baby boomers and those age 20-34 is key
    - Will Nebraska's growth continue to be dominated by minority populations, especially Hispanic/Latino?

30

Estimates Program Data

- Our office has a lot of the data compiled and will start making an annual Nebraska Population Report

  - Is a good reference document as data changes year to year

  - If you need something specific, contact us to see if we have compiled what you're looking for

- Realize that you may just want to use 2010 data rather than the estimates—the estimates have more value as we move further away from 2010

- Pop. estimates website is: www.census.gov/popest/

- Next big release will be for July 1, 2012

  - Data for states in December 2012

  - Data for counties/metro areas in March 2013

31

Bottomline: Ask yourself these questions

○ What would I like to have ideally?

- Exact data items (variables)
- Geography
- Timeframe

○ What source is best to use for that – Decennial Census, ACS, Estimates Program, other source?

○ Is that data available? Is it accurate or have large error factors?

- If not, what are my best tradeoffs?
  - ➢ Is it more important to have that exact geography or can I use a larger one as a proxy? (Douglas County census tract 11 versus PUMA 903)
  - ➢ Do I want the most current data or can I extend to a longer timeframe (to increase accuracy or availability)? (2010 versus 2008-10)
    - Any item split by age or race should use 3-yr unless geography is sufficiently large (State level might not be large enough)

32

The End

Thanks for coming, and feel free to contact me any time for Census data or to answer questions

*contact info is on slide #1
*and "like" our facebook page!!