

# Geography Matters CFS Workshop Breakout Session

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The Tioga Group

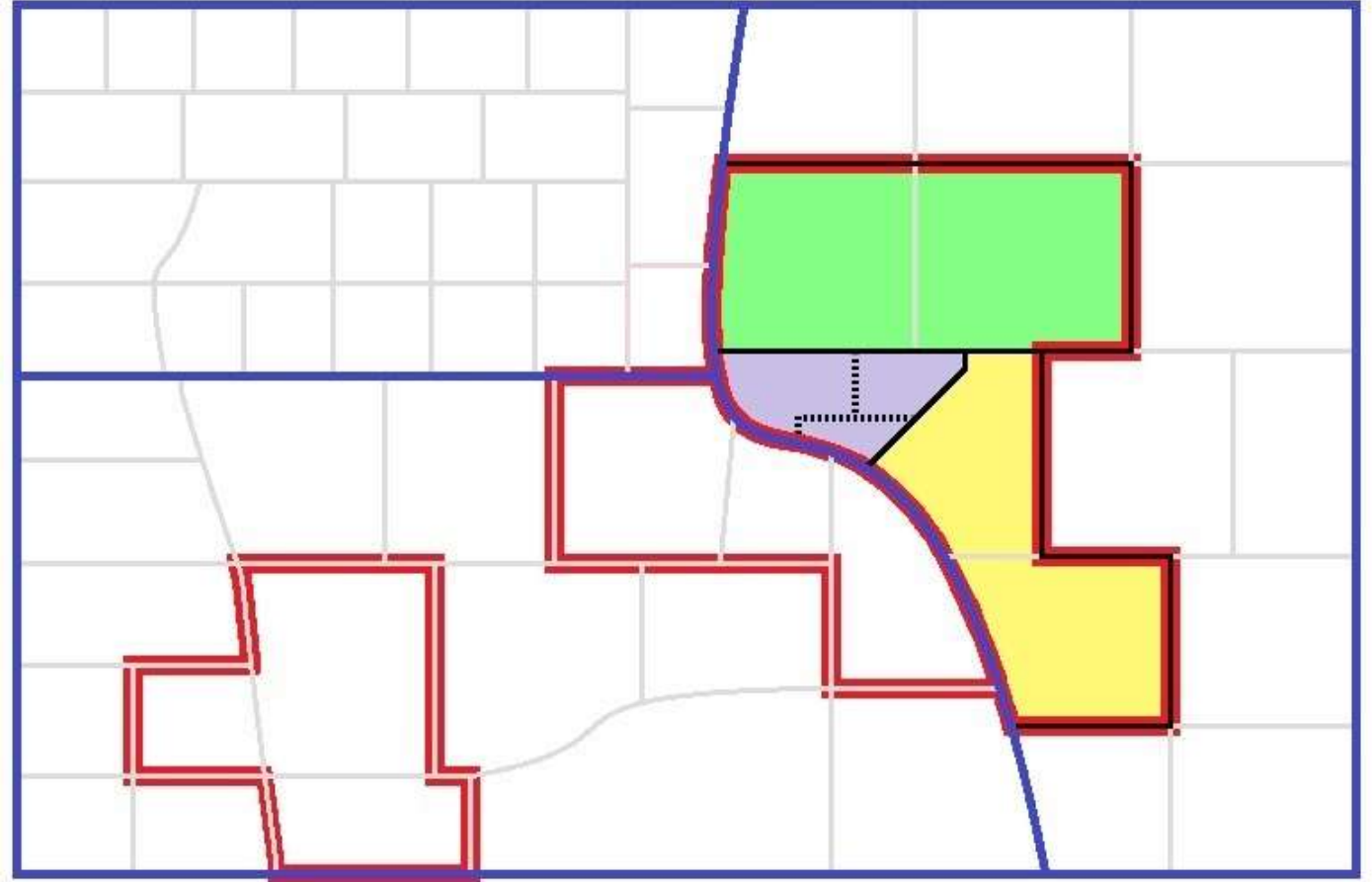
CFS Workshop  
September, 2020

## Zoom Workshop Reminders

- This breakout session is being recorded by NAS, and a NAS staff member will act as Co-host.
- Everyone will be muted at entry - please stay muted except when speaking.
- In the Chat option, please choose carefully between a private message to an individual and a message for Everyone to avoid excess cross-chat. Chat messages to "Everyone" will be saved.
- If your name/org is wrong, please send a Chat message to the Co-host to correct it.
- For technical issues please use Chat to contact the Co-host.
- Open the Participants window to raise your hand, or respond yes/no to questions.

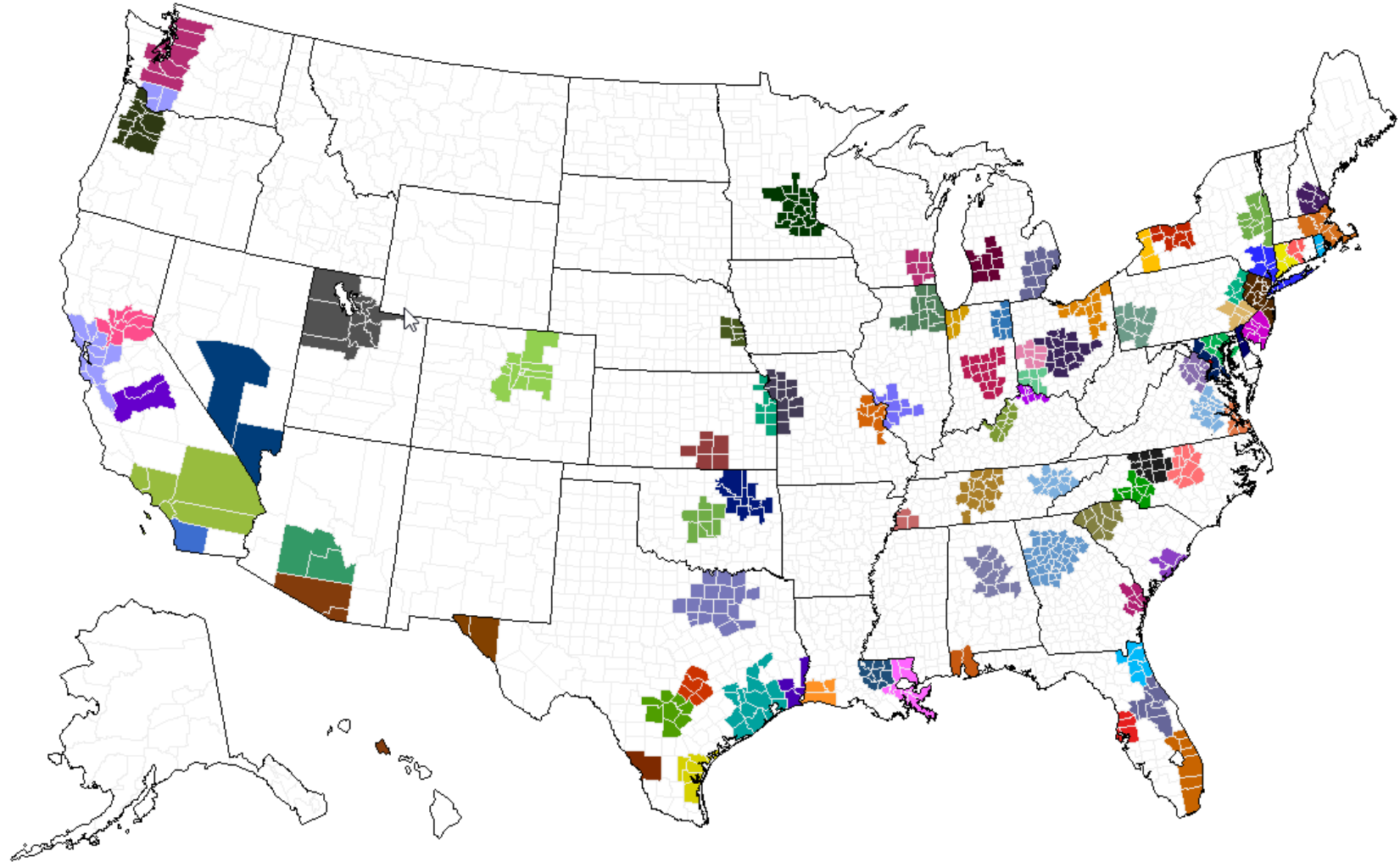


- CFS source data have ZIP code origin and destination.
- Counties are the current building blocks.
- Freight areas are a hybrid of states and metro areas
- Some metros already have enough underlying information to create further estimates.
- Some individual counties have enough underlying information to create further estimates.



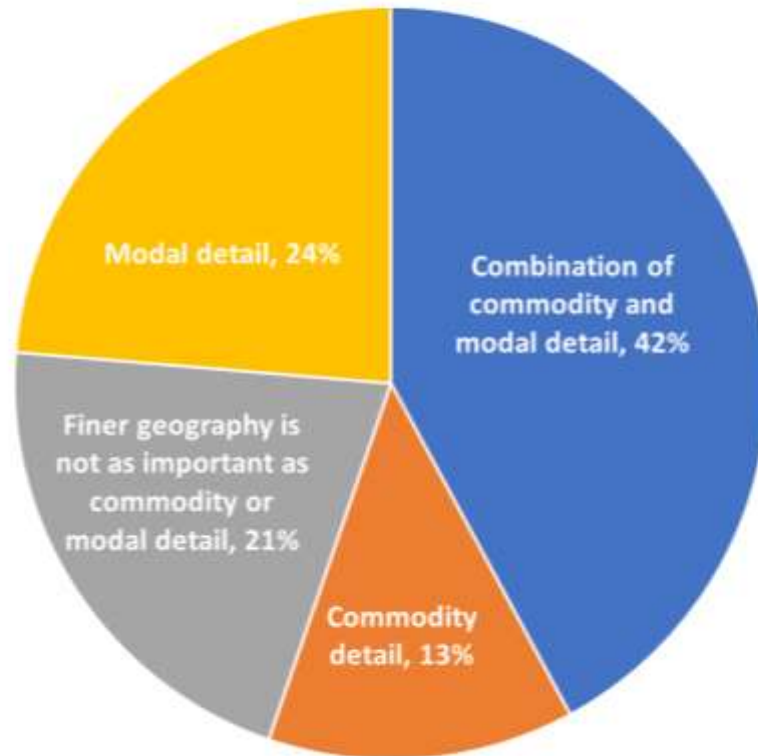


- Data currently available for 83 CFS areas or "Remainder of State"
- The "rule of three" limits ability to make detail available when sample size is small.
- As sample size drops at the county or ZIP code level, reliability declines.

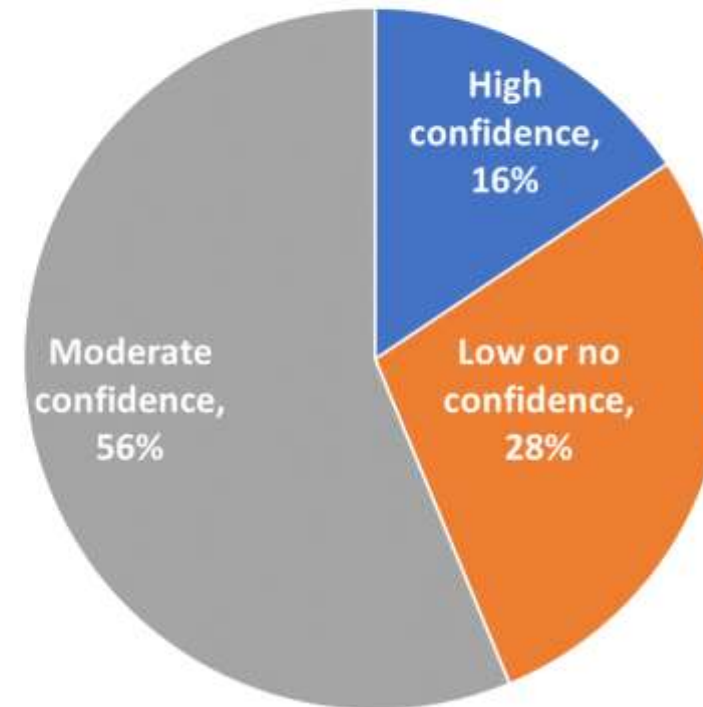




Q21 If given the opportunity for finer geographic detail, which estimates would you prioritize?



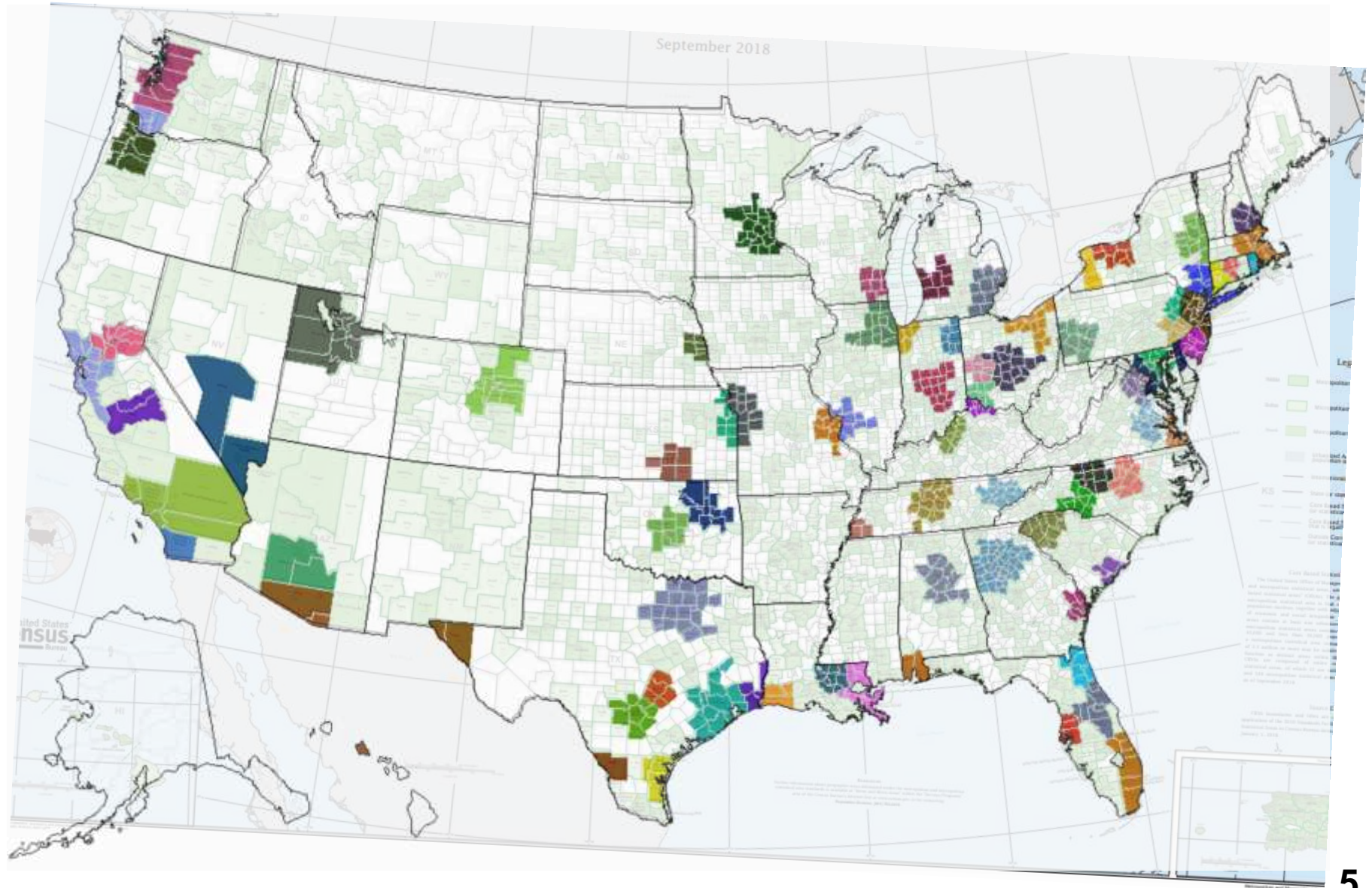
Q22 What is your comfort level using synthetic county-level estimates of CFS data if greater detail were not directly supported by the source data?





# CFS vs. MSAs and Micro MSAs

- 83 CFS Areas
- 388 Metropolitan Statistical Areas (MSAs)
- 541 Micropolitan Statistical Areas (μSAs)
- All county-based

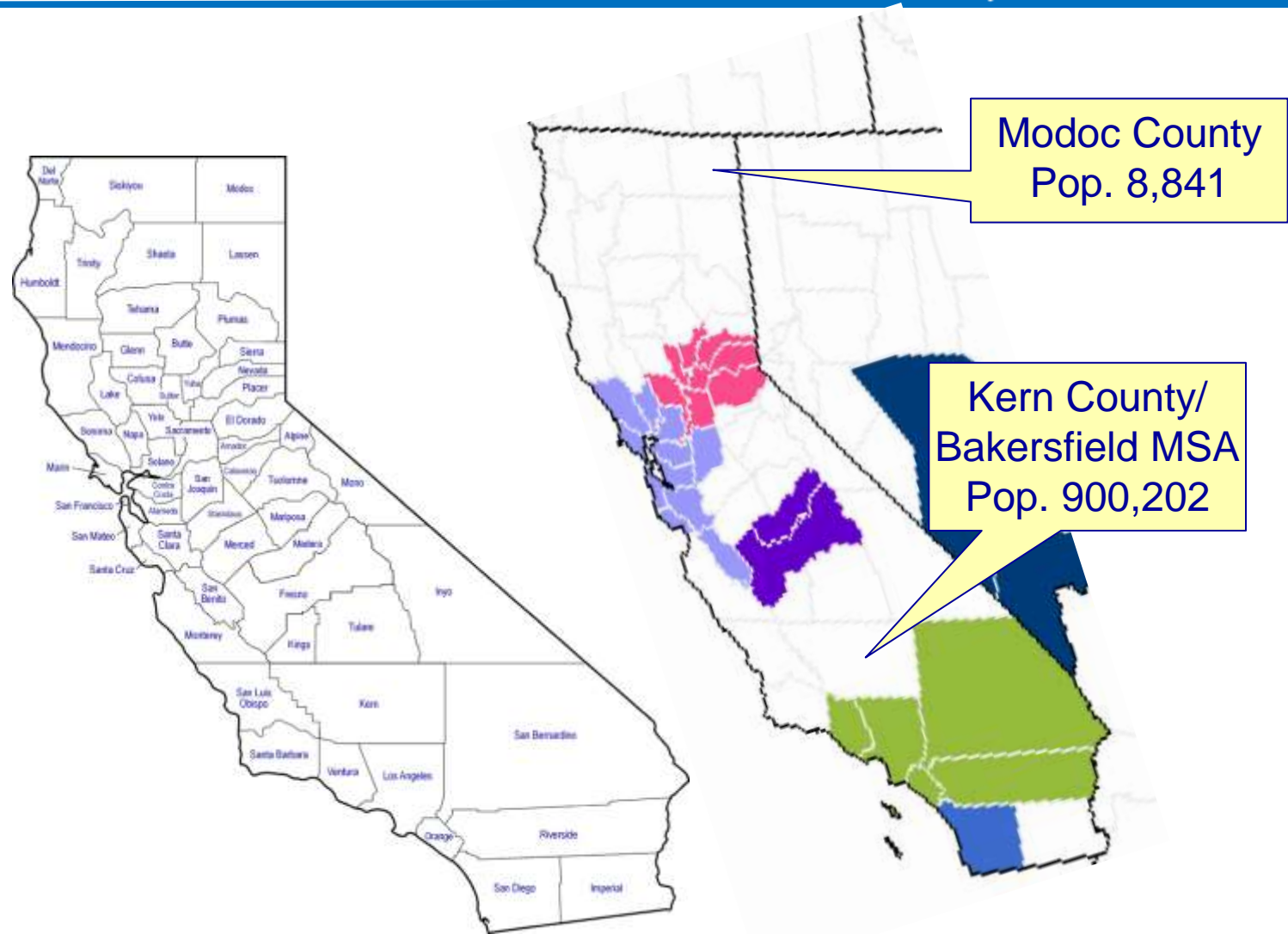




# California Counties vs. CFS Areas

Current CFS choices and populations are:

- Los Angeles-Long Beach CFS Area: 18,711,436
- San Jose-San Francisco-Oakland CFS Area: 8,837,547
- Fresno-Madera CFS Area: 1,156,428
- Sacramento-Roseville CFS Area: 2,639,124
- San Diego-Carlsbad-San Marcos, CA CFS Area: 3,338,330
- Remainder of California: 4,829,358





- CFS Areas do not match California county-based planning areas
- Mismatch is particularly bad in San Francisco-Oakland-San Jose area
- “Rest of California” is both large, scattered, and diverse
- No CFS data on intra-area flows

Los Angeles-Long Beach CFS Area	SCAG Counties
<b>18,711,436</b>	<b>18,892,651</b>
Los Angeles	Los Angeles
Orange	Orange
Riverside	Riverside
San Bernardino	San Bernardino
Ventura	Ventura
	Imperial

Sacramento-Roseville CFS Area	SACOG Counties
<b>2,639,124</b>	<b>2,539,369</b>
El Dorado	El Dorado
Placer	Placer
Sacramento	Sacramento
Sutter	Sutter
Yolo	Yolo
Yuba	Yuba
Nevada (Nevada CTC)	

San Jose-San Francisco-Oakland CFS Area	MTC Counties	SJCOG Counties	AMBAG Counties
<b>8,837,547</b>	<b>7,739,378</b>	<b>762,148</b>	<b>770,082</b>
Alameda	Alameda		
Contra Costa	Contra Costa		
Marin	Marin		
Napa	Napa		
San Francisco	San Francisco		
San Mateo	San Mateo		
Santa Clara	Santa Clara		
Solano	Solano		
Sonoma	Sonoma		
San Joaquin		San Joaquin	
Santa Cruz			Santa Cruz
San Benito			San Benito
			Monterey



# Trade-Offs in Practice: CFS Experimental Sub-Areas

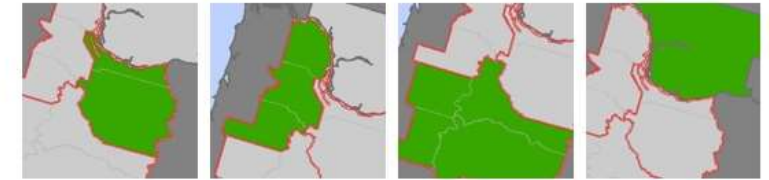


- Start with 132 geographies.
- Condense commodities into four groupings
- Combine truck and ground parcel modes
- Get 329 geographies, but tabulated from the perspective of a particular area (no longer symmetric  $n \times n$  matrix).

Value of Freight  
Movements within  
Portland, OR-WA  
Metro Area

Destination

Origin



W411A

W411B

W411C

W532Z

Multnomah and  
Clackamas Counties OR



W411A

11,617

3,562

2,260

2,258

Greater Portland  
Northwest OR



W411B

5,618

1,646

755

410

Greater Portland  
South OR



W411C

1,305

726

2,190

326

Portland WA



W532Z

1,316

428

261

2,277



# Do we need origin and destination detail?

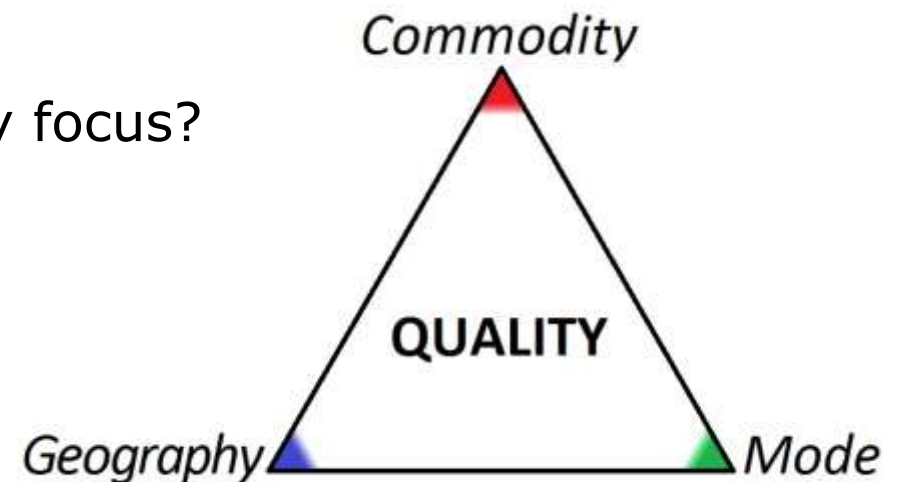
Four major categories:

- Flows inbound to the study area
- Flows internal to the study area
- Flows outbound from the study area
- Flows through the study area





- How is geographic coding (states, 83 MSAs) limiting CFS/FAF use and usefulness?
- What geographic coding would make CFS/FAF more useful?
- What kinds of analysis would more geographic detail allow?
- What would we be willing to accept to gain more detailed geography:
  - Less geographic detail on areas outside the study focus?
  - Less commodity detail?
  - Less modal detail?
  - Cautions regarding sample size and validity?





# CFS Areas



Birmingham-Hoover-Talladega, AL CFS Area	Cincinnati-Wilmington-Maysville, OH-KY-IN CFS Area (KY Part)	Cincinnati-Wilmington-Maysville, OH-KY-IN CFS Area (OH Part)
Mobile-Daphne-Fairhope, AL CFS Area	Louisville/Jefferson County-Elizabethtown-Madison, KY-IN CFS Area (KY Part)	Cleveland-Akron-Canton, OH CFS Area
Tucson-Nogales, AZ CFS Area	New Orleans-Metairie-Hammond, LA-MS CFS Area (LA Part)	Columbus-Marion-Zanesville, OH CFS Area
Phoenix-Mesa-Glendale, AZ CFS Area	Baton Rouge, LA CFS Area	Dayton-Springfield-Sidney, OH CFS Area
Fresno-Madera, CA CFS Area	Lake Charles, LA CFS Area	Oklahoma City-Shawnee, OK CFS Area
Los Angeles-Long Beach, CA CFS Area	Baltimore-Columbia-Towson, MD CFS Area	Tulsa-Muskogee-Bartlesville, OK CFS Area
Sacramento-Roseville, CA CFS Area	Washington-Arlington-Alexandria, DC-VA-MD-WV CFS Area (MD Part)	Portland-Vancouver-Salem, OR-WA CFS Area (OR Part)
San Jose-San Francisco-Oakland, CA CFS Area	Boston-Worcester-Providence, MA-RI-NH-CT CFS Area (MA Part)	New York-Newark, NY-NJ-CT-PA CFS Area (PA Part)
San Diego-Carlsbad-San Marcos, CA CFS Area	Detroit-Warren-Ann Arbor, MI CFS Area	Philadelphia-Reading-Camden, PA-NJ-DE-MD CFS Area (PA Part)
Denver-Aurora, CO CFS Area	Grand Rapids-Wyoming-Muskegon, MI CFS Area	Pittsburgh-New Castle-Weirton, PA-OH-WV CFS Area (PA Part)
New York-Newark, NY-NJ-CT-PA CFS Area (CT Part)	Minneapolis-St. Paul, MN-WI CFS Area (MN Part)	Boston-Worcester-Providence, MA-RI-NH-CT CFS Area (RI Part)
Hartford-West Hartford-East Hartford, CT CFS Area	Kansas City-Overland Park-Kansas City, MO-KS CFS Area (MO Part)	Greenville-Spartanburg-Anderson, SC CFS Area
Philadelphia-Reading-Camden, PA-NJ-DE-MD CFS Area (DE Part)	St. Louis-St. Charles-Farmington, MO-IL CFS Area (MO Part)	Charleston-North Charleston-Summerville, SC CFS Area
Washington-Arlington-Alexandria, DC-VA-MD-WV CFS Area (DC Part)	Omaha-Council Bluffs-Fremont, NE-IA CFS Area (NE Part)	Knoxville-Morristown-Sevierville, TN CFS Area
Jacksonville-St. Marys-Palatka, FL-GA CFS Area (FL Part)	Las Vegas-Henderson, NV-AZ CFS Area (NV Part)	Memphis, TN-MS-AR CFS Area (TN Part)
Miami-Fort Lauderdale-Port St. Lucie, FL CFS Area	Boston-Worcester-Providence, MA-RI-NH-CT CFS Area (NH Part)	Nashville-Davidson--Murfreesboro, TN CFS Area
Orlando-Deltona-Daytona Beach, FL CFS Area	New York-Newark, NY-NJ-CT-PA CFS Area (NJ Part)	Corpus Christi-Kingsville-Alice, TX CFS Area
Tampa-St. Petersburg-Clearwater, FL CFS Area	Philadelphia-Reading-Camden, PA-NJ-DE-MD CFS Area (NJ Part)	Dallas-Fort Worth, TX-OK CFS Area (TX Part)
Atlanta-Athens-Clarke County-Sandy Springs, GA CFS Area	Buffalo-Cheektowaga, NY CFS Area	El Paso-Las Cruces, TX-NM CFS Area (TX Part)
Savannah-Hinesville-Statesboro, GA CFS Area	New York-Newark, NY-NJ-CT-PA CFS Area (NY Part)	Houston-The Woodlands, TX CFS Area
Urban Honolulu, HI CFS Area	Rochester-Batavia-Seneca Falls, NY CFS Area	Austin-Round Rock, TX CFS Area
Chicago-Naperville, IL-IN-WI CFS Area (IL Part)	Charlotte-Concord, NC-SC CFS Area (NC Part)	Beaumont-Port Arthur, TX CFS Area
St. Louis-St. Charles-Farmington, MO-IL CFS Area (IL Part)	Greensboro--Winston-Salem--High Point, NC CFS Area	Laredo, TX CFS Area
Chicago-Naperville, IL-IN-WI CFS Area (IN Part)	Raleigh-Durham-Chapel Hill, NC CFS Area	San Antonio-New Braunfels, TX CFS Area
Fort Wayne-Huntington-Auburn, IN CFS Area		Salt Lake City-Provo-Orem, UT CFS Area
Indianapolis-Carmel-Muncie, IN CFS Area		Virginia Beach-Norfolk, VA-NC CFS Area (VA Part)
Kansas City-Overland Park-Kansas City, MO-KS CFS Area (KS Part)		Richmond, VA CFS Area
Wichita-Arkansas City-Winfield, KS CFS Area		Washington-Arlington-Alexandria, DC-VA-MD-WV CFS Area (VA Part)
		Portland-Vancouver-Salem, OR-WA CFS Area (WA Part)
		Seattle-Tacoma, WA CFS Area
		Milwaukee-Racine-Waukesha, WI CFS Area