Data Sources and Limitations



Kevin Rancik Legislative Policy and Research Office (LPRO) April 2021



ORS 188.010 describes the criteria used for creating legislative and Congressional districts in Oregon (ORS 188.010 can be found here: <u>https://www.oregonlaws.org/ors/188.010</u>).

As nearly as practicable, each district shall:

- be contiguous
- utilize existing geographic or political boundaries
- be of equal population
- not divide communities of common interest
- be connected by transportation links

- Decennial Census remains best official source of complete count data as of Census date
- Other sources have strengths and weaknesses
 - Demographic data often not the focus
 - Individual population counts also typically not the focus
- Combining other data helps identify trends and generate estimates, but individual population counts elusive
- Confidentiality, privacy issues, cost, and need for outside expertise create barriers

CENSUS AND AMERICAN COMMUNITY SURVEY

	+	_
Census 2010	 Full count of population at small geographies May still be helpful in locations which have not changed much 	 Out of date High inaccuracy in growth areas, of which Oregon has many
American Community Survey (ACS)	 Best readily available source of current demographic data Useful in identifying change over time 	 Estimates, not counts Margins of error grow substantially at smaller geographies and finer variables Census tract likely the smallest useful geography 5-year vs. 1-year data
	 Census 2010 vs. ACS 2010 5-year vs. ACS 2010 1-year Oregon total: 3,831,074 vs. 3,761,925 vs. 3,838,957 Crook County, Black alone: 35 vs. 35 (+/- 29) vs. Unavailable Multnomah County Tract 106, Hispanic: 251 vs. 296 (+/- 85) vs. Unavailable Note: 2019 ACS data is most current – released January 2021 	

Shapefiles:

Spatial data format for showing geography in GIS software; used in mapping



Tables:

Tables of Census data down to the block level; can be joined to shapefiles

RACE Survey/Program: Decennial Census TableID: P1	Product: 2010: DEC Redistricting Data (PL 94-171)				
Label		Baker County, Oregon	Benton County, Oregon	Clackamas County, Oregon	
✓ Total:		16,134	85,579	375,992 🔺	
✓ Population of one race:		15,753	82,519	364,127	
White alone		15,264	74,506	331,571	
Black or African American alone		57	759	3,082	
American Indian and Alaska Native alone		181	627	3,122	
Asian alone		78	4,429	13,729	
Native Hawaiian and Other Pacific Islander alone		9	213	867	
Some Other Race alone		164	1,985	11,756	
✓ Two or More Races:		381	3,060	11,865	
✓ Population of two races:		367	2,799	10,931	
White; Black or African American		28	355	1,638	
White; American Indian and Alaska Native		253	834	3,206	
White; Asian		40	1,033	3,403	
White; Native Hawaiian and Other Pacific Islander		13	127	384	
White; Some Other Race		20	256	1,543	
Black or African American; American Indian and Alaska Native		8	16	77	
Black or African American; Asian		0	20	70	
Black or African American; Native Hawaiian and Other Pacific Islander		0	4	26	
Black or African American; Some Other Race		1	17	59	
American Indian and Alaska Native; Asian		2	10	64	
American Indian and Alaska Native; Native Hawaiian and Other Pacific Isl	ander	0	1	17	
American Indian and Alaska Native; Some Other Race		1	16	76	
Asian; Native Hawaiian and Other Pacific Islander		1	81	226	
Asian; Some Other Race		0	25	100 -	
(•			

CENSUS AND AMERICAN COMMUNITY SURVEY



CENSUS TRACTS

- Relatively constant over time
- Usually between 1,200 8,000 people with ideal population of 4,000
- Nest within counties; counties with low populations may only have 1 tract covering the entire county



BLOCK GROUPS

- Divisions of Census tracts
- Cannot cross state, county, or tract boundaries but might cross others such as city limits
- Usually between 600 3,000 people

BLOCKS

- Bounded by visible features but sometimes by property lines, sight-lines at street ends, or municipal boundaries
- No set population; Oregon's largest in 2010 had 2,927 residents while 56% of blocks were unpopulated

POPULATION ESTIMATES (POPULATION RESEARCH CENTER)

	+	-	
Annual Population Estimates	 Closely tied to Census data Updated annually Local input factored in Age groups, sex included 	 Accuracy decreases as time from calibration date increases Accuracy decreases at smaller geographies Only available at statewide, county, and city levels July 1st compared to Census' April 1st date No race data 	
	 2010 Census versus initial PRC estimates: Oregon total: 3,831,074 vs. 3,844,195 Crook County: 20,978 vs. 27,280 (least accurate % performance) Klamath County: 66,380 vs. 66,475 (most accurate % performance) 		
Population Allocation Estimates	 Alternative to Census data; would use block-level geography Combines ACS data and other records 	 Estimate; not perfect count Accuracy decreases at smaller geographies 	

HOUSING UNITS/TAXLOTS

	+	_
Taxlot data	Updated regularlyFull coverage of state	 Inconsistent quality and data depth Counts housing, not population Proper data analysis very time-consuming
Local Update of Census Addresses Operation (LUCA)	 Used in preparation for Census 2020 Local input 	 Counts housing, not population Last updated January 2018

HOUSING UNITS/TAXLOTS



Spatial view of taxlot data in GIS on left

- Polygons for each taxlot/parcel
- Some counties include polygons for roads and non-taxlot features

Sample of taxlot data table below

- Each line is connected to a polygon on the map
- Some taxlots have multiple records

ACRES	LASTUPDATE	ZONECODE	ZONEAUTH	YEARBUILT	BLDGAREA	PROPCLASS	RMVLND	RMVIMP	RMVTOTAL	ASSDVAL
4.7	8/4/2017	EFU	MARION COUNTY	0	0	550	80090	0	80090	5750
9.12	8/4/2017	EFU; AR	MARION COUNTY	0	0	550	155400	0	155400	11160
0.8	8/4/2017	AR	MARION COUNTY	1977	2557	401	412650	549710	962360	581980
0.44	1/31/2015	AR	MARION COUNTY	2000	2675	401	357310	480510	837820	437890
0.17	1/31/2015	AR	MARION COUNTY	0	0	401	107600	20140	127740	39930
0.17	1/31/2015	AR	MARION COUNTY	0	0	401	107600	6150	113750	50300
0.33	1/31/2015	AR	MARION COUNTY	0	0	401	142990	19600	162590	130980
0.16	1/31/2015	AR	MARION COUNTY	1998	0	401	104900	16180	121080	48760
0.37	1/31/2015	AR	MARION COUNTY	1977	1452	401	350710	232970	583680	366730

ADMINISTRATIVE RECORDS AND SCHOOL ENROLLMENT

	+	_
DMV Records	 Relatively full coverage of adult population Mostly up to date address information Includes age, sex data 	 Missing race data May not capture movers or college students Does not include many under 18
School Enrollment	 Child-age population Geography more recognizable to general public May help identify communities of interest 	 Misses private school and home- school population Larger geographies less useful for redistricting Enrollment issues during COVID- 19 Not an exact location
Vital Statistics	 Exact location of mother Usually includes race data Newborns missed by Census likely included here 	 Privacy concerns/confidentiality Data about father inconsistent Only counts people at time of a birth or death

POLITICAL DATA

- Legal Issues
 - Prohibition on using political data in redistricting
 - Use caution. Partisan data can be removed from these sources, but questions and perceptions may remain.

	+	_
Voting Precincts	 Existing geography that subdivides counties Often based on municipal boundaries Keeps clerks happy/reduces workload for counties 	 Legal issues (election results) No demographic data attached Large size outside urban areas limits usefulness Do not match Census boundaries Not static
Voter Registration	Exact addressIncludes age, sexRelatively current	 Legal issues (partisan identity) How up to date/data vintage Privacy concerns No race category Misses unregistered and those under 18

OTHER DATA

	7	
	+	_
Utility data	 Helps identify new construction Usage data to approximate occupancy 	 Not exact count Assumes equal usage among persons Differentiate between residential and non-residential Numerous utility companies
Tax returns	 Comprehensive coverage Addresses and count of dependents 	 Privacy concerns How to obtain; what would data look like?
Private data sources	 Private companies obtain demographic data Some sources may have mostly comprehensive data 	 Privacy concerns Varying and/or unknown original sources, methodology, and quality