GIS models for the
Civil Legal Services Steering Committee
May 2017
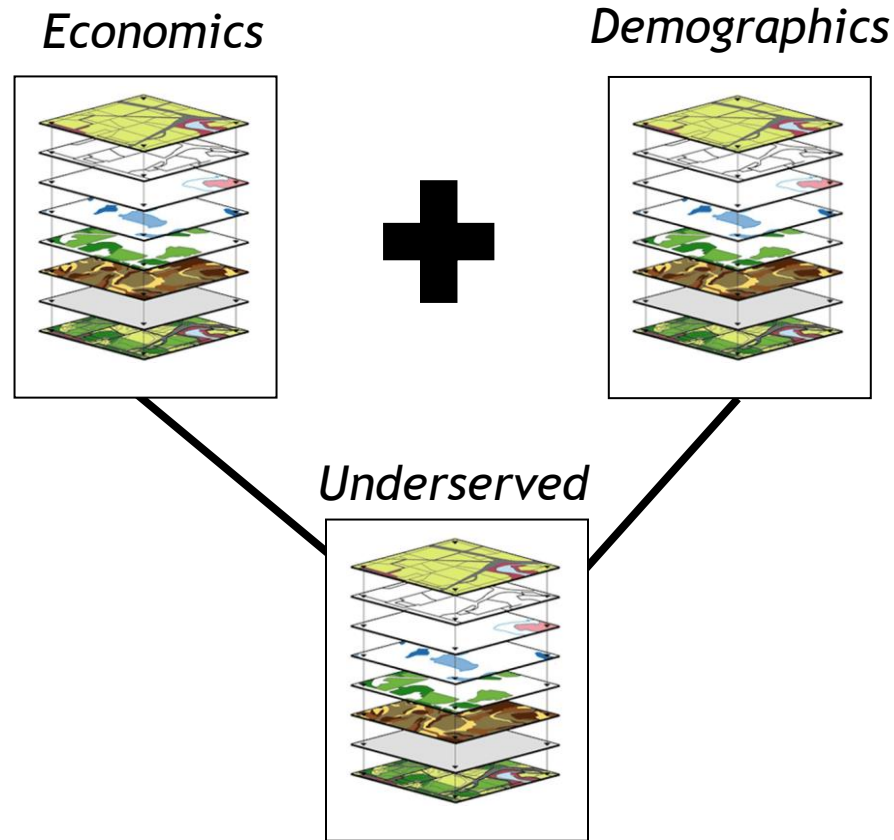
Economics + Demographics → Underserved

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Colorado Self Sufficiency Standard Index

This map shows an index value which represents the amount of money needed for self-sufficiency while living in Colorado, as compared to the Federal Poverty Level (FPL). The values for the self-sufficiency standard were calculated by the Colorado Center on Law and Policy for each county within Colorado for 2015. The federal poverty level is a single rate per person that applies to the entire country uniformly.

Method: The Colorado Self-Sufficiency Standard is calculated based on 1) an individual living alone 2) an adult with a preschooler 3) an adult with an infant and preschooler 4) two adults and two children. The values calculated for 1-4 people household was compared to the federal poverty levels for 1-4 persons household. The dollar value of the CSSS was divided by the FPL dollar value yielding index value above the FPL necessary to live self-sufficiently. For example, in Denver County an adult living alone needs 1.86 (or 186% of the FPL) to live independently. Meanwhile an adult living with a preschooler would need 3.01 (or 301% of the FPL) to live independently. These 4 different living conditions were averaged to yield a single index value for each county which is the value that appears on the map.

Colorado Self Sufficiency Standard Index

2.22 MOFFAT

3.18 ROUTT

2.21 JACKSON

2.59 LARIMER

2.34 WELD

1.82 LOGAN

SEDGWICK

PHILLIPS

2.44 GRAND

BOULDER

MORGAN 1.87

1.74 WASHINGTON

1.76 YUMA

2.16 RIO BLANCO

GILPIN

CLEAR CREEK

DENVER

2.81 ADAMS

2.7 GARFIELD

2.71 EAGLE

SUMMIT

JEFFERSON

ARAPAHOE 2.8

3.24

2.87

DOUGLAS

ELBERT 2.8

3.34 PITKIN

LAKE

3.27

1.66 KIT CARSON

2.11 MESA

3.08 PARK

2.08 DELTA

2.22 TELLER

2.36 EL PASO

LINCOLN 1.76

1.9 CHEYENNE

2.5 GUNNISON

CHAFFEE 2.15

1.98 FREMONT

2.18 MONTROSE

1.81 KIOWA

OURAY

1.89 SAGUACHE

CUSTER

2.06 PUEBLO

CROWLEY 1.71

2.77 SAN MIGUEL

DOLORES 1.87 SAN JUAN HINSDALE

2.48

OTERO 1.68

BENT 1.62

1.94 PROWERS

MINERAL 2.07

RIO GRANDE ALAMOSA

HUERFANO 1.82

1.97 MONTEZUMA

LA PLATA 2.46

2.13 ARCHULETA

1.69 CONEJOS

1.9

1.84 COSTILLA

1.99 LAS ANIMAS

1.66 BACA

0   100

Miles

Colorado Self Sufficiency/ Federal poverty Level

| 1.62 - 1.75 | 1.76 - 2.00 | 2.01 - 2.50 | 2.51 - 3.00 | 3.01 - 3.34 |

Index Calculation Example:

Adams County

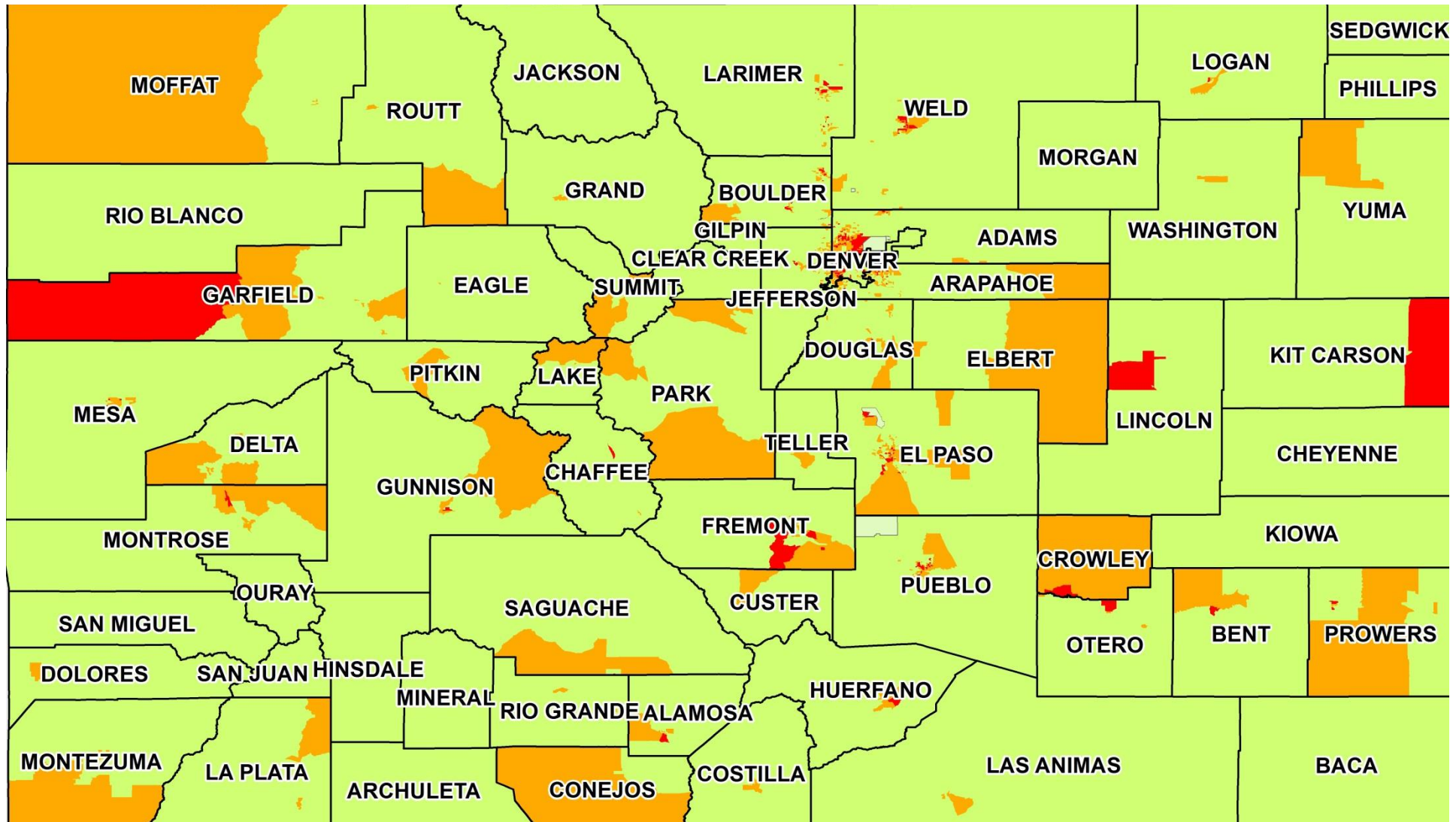|	CSSS	FPL	CSSS/FPL
	$25,831 1 Person	$11,770 1 Person	2.19
	$50,719 2 Person	$15,930 2 Person	3.18
	$60,937 3 Person	$20,090 3 Person	3.03
	$68,541 4 Person	$24,250 4 Person	2.83
		Average :	2.81

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Colorado Self Sufficiency Standard vs Per Capita income

This map shows a comparison of the amount of money needed for self-sufficiency while living in Colorado compared to per capita income values calculated by the American Community Survey. Areas mapped as green show localities where the average per capita income **EXCEEDS** the highest amount necessary for self-sufficiency. Areas in orange are localities where the average income per capita is **WITHIN THE RANGE** of the self-sufficiency standard. Thus, those areas at labeled as "At Poverty" because the fall near or within the CSSS range of values. The red areas are localities where the average per capita income is **BELOW** the range of the CSSS thus they are labeled as "Below Poverty".

Method: The Colorado Self-Sufficiency Standard is calculated based on 1) an individual living alone 2) an adult with a preschooler 3) an adult with an infant and preschooler 4) two adults and two children. The values calculated for 1-4 people household was compared to the Average Per Capita Income. The average per capita values for each block group were averaged for each county.

Colorado Self Sufficiency Standard vs Per Capita income

MOFFAT, SEDGWICK, LOGAN, JACKSON, LARIMER, PHILLIPS, ROUTT, WELD, MORGAN, GRAND, BOULDER, YUMA, RIO BLANCO, GILPIN, ADAMS, WASHINGTON, CLEAR CREEK, DENVER, EAGLE, SUMMIT, ARAPAHOE, GARFIELD, JEFFERSON, DOUGLAS, ELBERT, KIT CARSON, PITKIN, LAKE, LINCOLN, MESA, PARK, DELTA, TELLER, CHEYENNE, CHAFFEE, EL PASO, GUNNISON, MONTROSE, FREMONT, KIOWA, OURAY, CUSTER, PUEBLO, CROWLEY, SAGUACHE, SAN MIGUEL, OTERO, BENT, PROWERS, DOLORES, SAN JUAN HINSDALE, HUERFANO, MONTEZUMA, MINERAL, RIO GRANDE ALAMOSA, LA PLATA, ARCHULETA, CONEJOS, COSTILLA, LAS ANIMAS, BACA

0 ___ 100
Miles

Per Capita Income compared to CSSS

Below Poverty   At Poverty   Above Proverty

Data:
✦American Community Survey 2010-2014 5-year estimate by block group
✦Self-Sufficiency Standard for Colorado 2015 (Colorado Center on Law and Policy)

Social Vulnerability Models

The social vulnerability models combine population percentages of disabled persons, older persons, children, foreign born Latina and non-white.

These values are aggregated by assigning values 0-3 to each distribution of a variable. For example, in localities where more than 20% are foreign born, are assigned a value of 3 while areas with less than 5% are assigned a 0. The numbers are then all added together to provide a single value or 1 to 9. Areas with larger values are areas where higher percentages of target populations live.
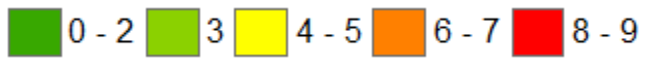
Social Vulnerability 1 (All variables equal)

Disabled + Older + Latino + Non-White + Foreign born

Disabled	Rank	Older Folks	Rank	Latino	Rank	Non White	Rank	Foreign Born	Rank
12% <	0	12% <	0	17% <	0	35% <	0	5% <	0
12- 20%	1	12- 20%	1	17-30%	1	35- 50%	1	5-10%	1
20% >	2	20% >	2	30% >	2	50% >	2	10-20% >	2
								20% >	3

Social Vulnerability Model 1
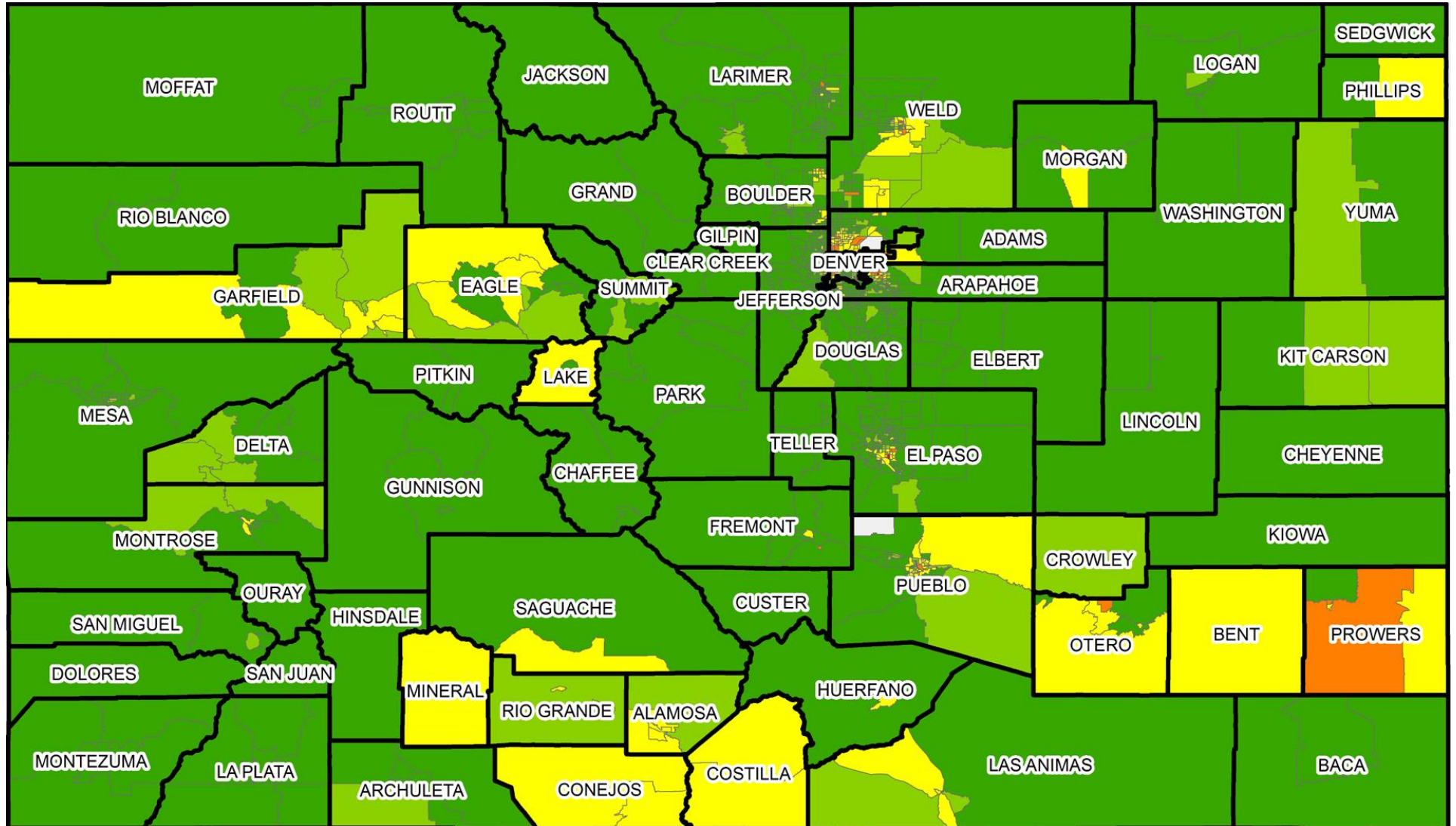
Legend:
- 0 - 2 (dark green)
- 3 (light green)
- 4 - 5 (yellow)
- 6 - 7 (orange)
- 8 - 9 (red)

Counties shown: SEDGWICK, LOGAN, PHILLIPS, MOFFAT, JACKSON, LARIMER, WELD, MORGAN, WASHINGTON, YUMA, ROUTT, RIO BLANCO, GRAND, BOULDER, GILPIN, CLEAR CREEK, DENVER, ADAMS, ARAPAHOE, KIT CARSON, GARFIELD, EAGLE, SUMMIT, JEFFERSON, DOUGLAS, ELBERT, LINCOLN, PITKIN, LAKE, PARK, MESA, DELTA, TELLER, EL PASO, CHEYENNE, GUNNISON, CHAFFEE, FREMONT, KIOWA, MONTROSE, CROWLEY, PUEBLO, OURAY, SAGUACHE, CUSTER, SAN MIGUEL, HINSDALE, OTERO, BENT, PROWERS, DOLORES, SAN JUAN, MINERAL, RIO GRANDE, ALAMOSA, HUERFANO, LAS ANIMAS, BACA, MONTEZUMA, LA PLATA, ARCHULETA, CONEJOS, COSTILLA

Social Vulnerability Models

The social vulnerability models combine population percentages of disabled persons, older persons, children, foreign born Latina and non-white.

These values are aggregated by assigning values 0-3 to each distribution of a variable. For example, in localities where more than 20% are foreign born, are assigned a value of 3 while areas with less than 5% are assigned a 0. The numbers are then all added together to provide a single value or 1 to 10. Areas with larger values are areas where higher percentages of target populations live.
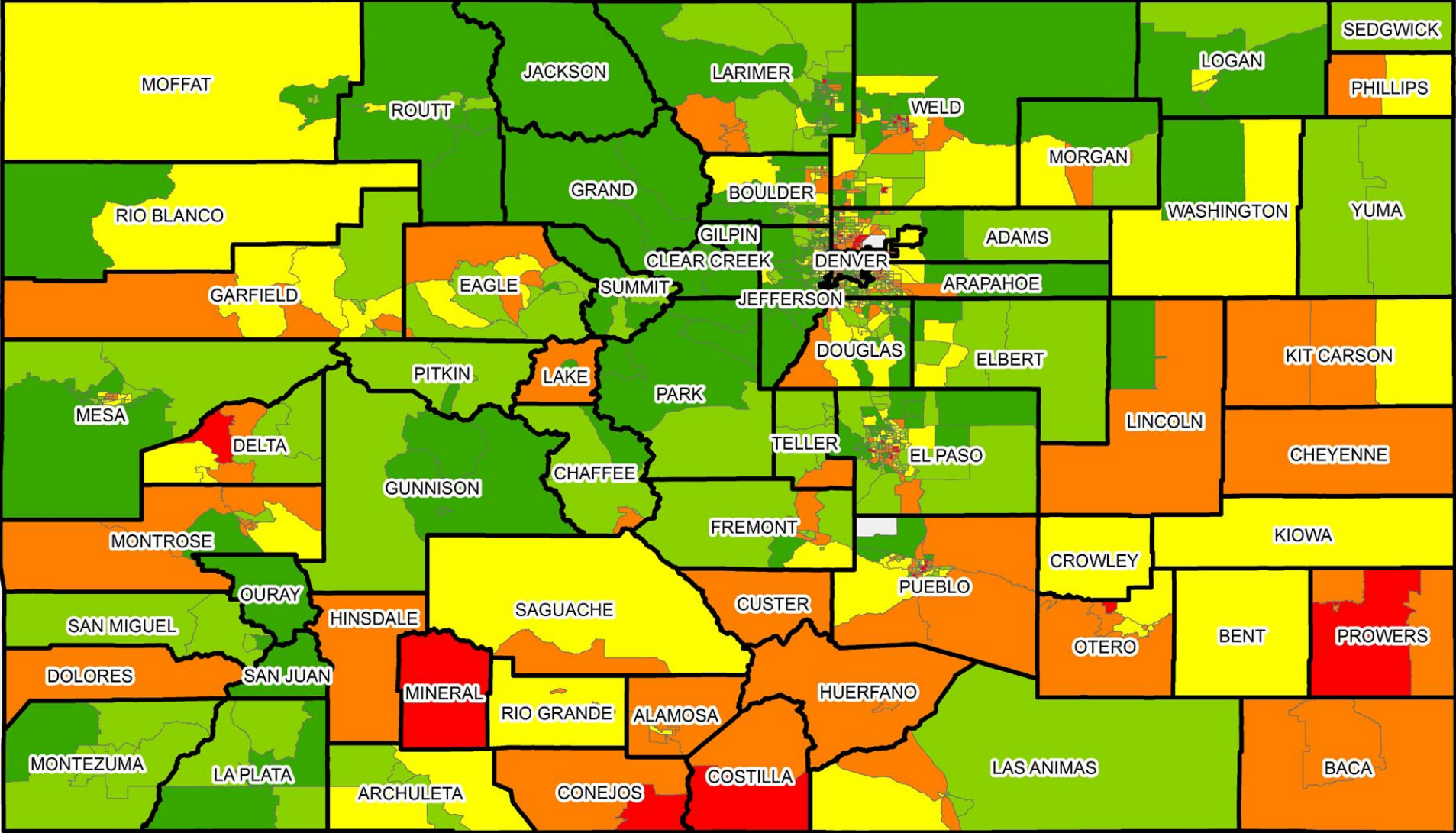
Social Vulnerability Model 2 is a weighted model where the weight of the percentage of disabled and the percentage of older adults are twice as much as the percentage of children or foreign born.

Social Vulnerability 2 (Weighted variables)

(Disabled * 2) + (Older*2) + Kids + Foreign born

Disabled	Rank	Older Folks	Rank	Children under 18	Rank	Foreign Born	Rank
12% <	0	12% <	0	24 %<	0	5% <	0
12- 20%	1	12- 20%	1	24- 30%	1	5-10%	1
20% >	2	20% >	2	30 % >	2	10-20% >	2
						20% >	3

Social Vulnerability Model 2

MOFFAT

ROUTT

JACKSON

LARIMER

SEDGWICK

LOGAN

PHILLIPS

GRAND

BOULDER

WELD

MORGAN

RIO BLANCO

WASHINGTON

YUMA

GILPIN

ADAMS

CLEAR CREEK

DENVER

GARFIELD

EAGLE

SUMMIT

JEFFERSON

ARAPAHOE

MESA

PITKIN

LAKE

PARK

DOUGLAS

ELBERT

KIT CARSON

DELTA

TELLER

LINCOLN

GUNNISON

CHAFFEE

EL PASO

CHEYENNE

MONTROSE

FREMONT

KIOWA

OURAY

CUSTER

CROWLEY

PUEBLO

SAN MIGUEL

HINSDALE

SAGUACHE

OTERO

BENT

PROWERS

DOLORES

SAN JUAN

MINERAL

RIO GRANDE

ALAMOSA

HUERFANO

LAS ANIMAS

BACA

MONTEZUMA

LA PLATA

ARCHULETA

CONEJOS

COSTILLA

Legend: 0 - 1   2   3   4 - 5   6 - 10

Economic Models

The economic models combine population percentages of those on SNAP (welfare), unemployed, and those living in poverty.
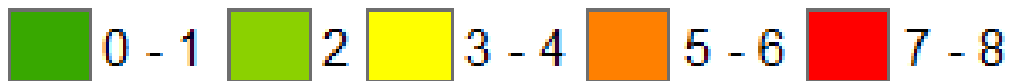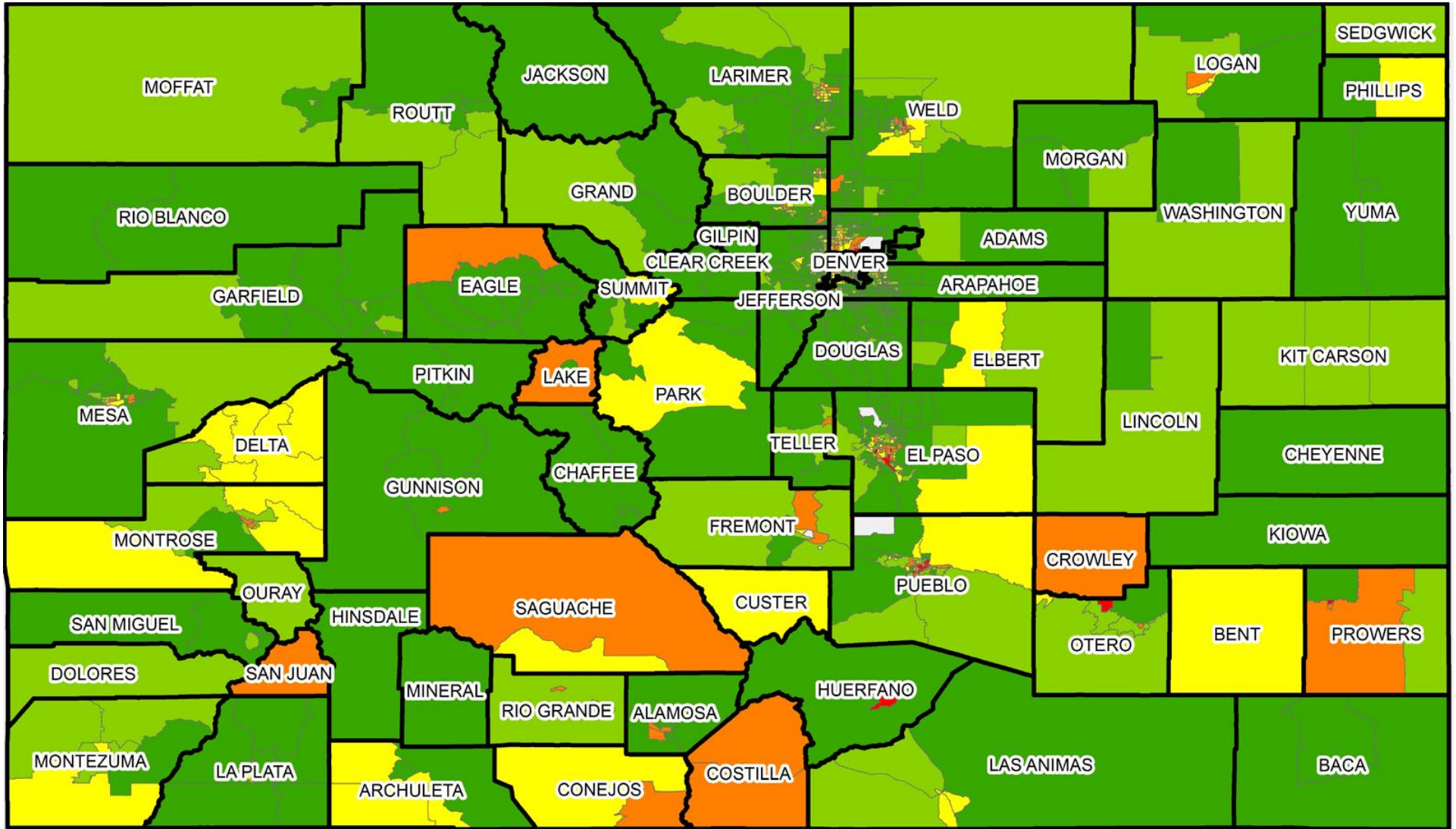
These values are aggregated by assigning values 0-3 to each distribution of a variable. For example, in localities where more than 35% are in poverty, are assigned a value of 3 while areas with less than 12% (national average) are assigned a 0. The numbers are then all added together to provide a single value or 1 to 8. Areas with larger values are areas where higher percentages of target populations live.

Economic Model 1 (All variables equal)

Welfare + Unemployment + Poverty

Welfare	Rank	Unemployment	Rank	Poverty	Rank
5% <	0	5% <	0	12% <	0
5- 10%	1	5-10%	1	12- 25%	1
10-18%	2	10-20%	2	20-35% >	2
		20%>	3	35% >	3

Economic Model 1

Legend: 0 – 1 (dark green), 2 (light green), 3 – 4 (yellow), 5 – 6 (orange), 7 – 8 (red)

County labels: MOFFAT, JACKSON, LARIMER, SEDGWICK, LOGAN, ROUTT, WELD, PHILLIPS, GRAND, MORGAN, BOULDER, WASHINGTON, YUMA, RIO BLANCO, GILPIN, ADAMS, CLEAR CREEK, DENVER, GARFIELD, EAGLE, SUMMIT, JEFFERSON, ARAPAHOE, DOUGLAS, KIT CARSON, ELBERT, LAKE, PARK, MESA, PITKIN, DELTA, TELLER, EL PASO, LINCOLN, CHAFFEE, CHEYENNE, GUNNISON, FREMONT, MONTROSE, KIOWA, OURAY, HINSDALE, CUSTER, PUEBLO, CROWLEY, SAN MIGUEL, SAGUACHE, OTERO, BENT, PROWERS, DOLORES, SAN JUAN, MINERAL, HUERFANO, RIO GRANDE, ALAMOSA, MONTEZUMA, LA PLATA, ARCHULETA, CONEJOS, COSTILLA, LAS ANIMAS, BACA

Economic Models

The economic models combine population percentages of those on SNAP (welfare), unemployed, and those living in poverty.

These values are aggregated by assigning values 0-3 to each distribution of a variable. For example, in localities where more than 35% are in poverty, are assigned a value of 3 while areas with less than 12% (national average) are assigned a 0. The numbers are then all added together to provide a single value or 1 to 3. Areas with larger values are areas where higher percentages of target populations live.

Economic model 2 is a weighted model where the percentage of receiving welfare are counted half the value of either Unemployment or Poverty.

Economic Model 2 (Weighted variables)

(Welfare*.2) + (Unemployment*.4) + (Poverty*.4)

Welfare	Rank	Unemployment	Rank	Poverty	Rank
5% <	0	5% <	0	12% <	0
5- 10%	1	5-10%	1	12- 25%	1
10-18%	2	10-20%	2	20-35% >	2
		20%>	3	35% >	3

Economic Model 2

0.00 – 0.40	0.41 – 1.00	1.01 – 1.59	1.60 – 1.99	2.00 – 2.80