2010 REDISTRICTING COMMISSION OF THE CITY OF SAN DIEGO
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Name/version of map: __SDGOP   Redistricting   Proposal__

Name of individual submitting map: __Barrett   Tetlow__ Date submitted: __5/11/11__

Council District of residence (or neighborhood/community) (*OPTIONAL):

_____

If submitting on behalf of organization or as part of an organized group, name of organization:
__Republican   Party   oF   San   Diego   County__

Title/affiliation with organization: __Executive   Director__

Contact phone number and email address (required to submit but not required to post online):
__858 - 450 - 4600__   __Chairman @ sandiegorepublicans.org__

Please indicate if you would like your contact information posted with map: ☒ YES ☐ NO

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Please initial that you understand the following disclaimer: I understand that submission of my map does not in any way imply endorsement or support by the Redistricting Commission. __BT__

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![The Republican Party of San Diego County]

City of San Diego Redistricting Proposal

June 9, 2011

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Shaw v Reno (1993)

1993 Racial Malcompactness Case

Justice O' Connor's description of the 12th Congressional District as "bizarre "

Also "we believe that reapportionment is one area in which appearances do matter"

"One need not use Justice Stewart's classic definition of obscenity I know it when I see it as an ultimate standard for judging the constitutionality of a gerrymander to recognize that dramatically irregular shapes may have sufficient probative force to call for an explanation"

- Compactness is the prime defense against gerrymandering
- Polsby, D. D., and R. D. Popper, 1991, The Third Criterion: Compactness as a Procedural Safeguard against Partisan Gerrymandering. *Yale Law and Policy Review*
- They argue that the establishment of *any* compactness standard is preferable to none.

POSSIBLE COURT USES:

- Evidence that validates that a specific district is far less compact than other districts in the jurisdiction

- Courts have never judicially adopted their own mathematical measure of compactness but it is a way of measuring what you see with your eyes.

➢ If it looks "bizarre" and it fails compactness tests it is probably gerrymandered

➢ Be careful of the compactness standards you adopt. They may come back to bite you on the rear in court.

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of San Diego County

- The academic literature describes more than thirty different ways to measure compactness.

- Four of the most commonly used compactness measures: Reock, Convex Hull, Polsby-Popper and Schwartzberg

- Other measures use simple length and width ratios, or sum the perimeters of all the districts included in a plan. More complicated shape-based compactness measures calculate the moment of inertia for a district shape (the variance of distances from all points in the districts to the district's areal center) or evaluate the number of interior angles in a district shape. Population measures are based on the distribution of the population within a district.

- The Roeck test is an area-based measure that compares each district to a circle, which is considered the most compact shape possible. For each district, the test computes the ratio of the area of the district to the area of the minimum enclosing circle for the district.

- The measure is always between zero and 1, with 1 being the most compact.

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- One of the most common test is called the CIRCUMSCRIBING CIRCLE (Reock Test)

- Ratio of Area of District to the Area of the SMALLEST Circle that can be drawn around the district

Minimum Circumscribing Circle
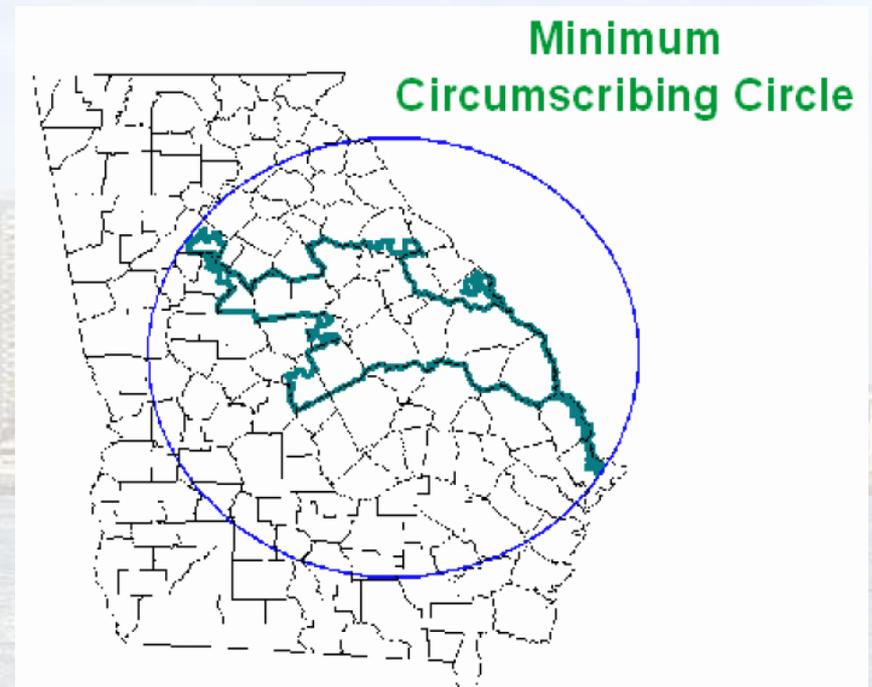
Reock Test 0-1 or 100%

CCD	SDCTA	SDGOP	Empower	NCI	APAC
1	25%	**37%**	26%	35%	**22%**
2	35%	**36%**	**30%**	34%	34%
3	**70%**	36%	**21%**	34%	30%
4	60%	55%	**63%**	**54%**	57%
5	**12%**	16%	21%	**22%**	19%
6	**27%**	**53%**	35%	37%	**53%**
7	46%	**48%**	**31%**	33%	35%
8	15%	15%	**13%**	**13%**	**17%**
9	40%	**53%**	**29%**	32%	37%
Mean	37.7%	**38.7%**	**29.9%**	32.6%	33.8%
Median	35%	**37%**	**29%**	34%	34%

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The Schwartzberg test is a perimeter-based measure that compares a simplified version of each district to a circle, which is considered to be the most compact shape possible. It measures distance from center of gravity (or areal center) to points in district boundary. Lowest score is the most compact.

➢ Schwartzberg, J. E., 1966, Reapportionment, Gerrymanders, and the Notion of Compactness, *Minnesota Law Review*

The Perimeter test computes the sum of the perimeters of all the districts. The test computes one number for the whole plan. When comparing several plans, the plan with the smallest total perimeter is the most compact.

➢ Young, H. P., 1988, Measuring the Compactness of Legislative Districts. *Legislative Studies Quarterly*

The Polsby-Popper test computes the ratio of the district area to the area of a circle with the same perimeter: 4pArea/(Perimeter2). The measure is always between 0 and 1, with 1 being the most compact.

➢ Polsby, D. D., and R. D. Popper, 1991, The Third Criterion: Compactness as a Procedural Safeguard against Partisan Gerrymandering. *Yale Law and Policy Review*

Compares length of longest axis to maximum width of district perpendicular to the axis. Lowest Score is the most compact.

✓ Advantage is Simplicity

➢ Too dependent on extreme points

➢ Gives high scores to unnatural figures such as a tightly coiled snake

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The Population Polygon test computes the ratio of the district population to the approximate population of the convex hull of the district (minimum convex polygon which completely contains the district). The measure is always between 0 and 1, with 1 being the most compact

➢ Hofeller, T., and B. Grofman, 1990, Comparing the Compactness of California Congressional Districts under Three Different Plans: 1980, 1982 and 1984. In B. Grofmann (Ed.), *Toward Fair and Effective Representation*

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District	Schwartberg (Lowest)	Perimeter (Lowest)	Polsby- Popper (0-1 or 100%)	Length-Width (Lowest)	Population Polygon (0-1)
1	**2.17**	51.81	**19%**	7.56	75%
2	2.45	73.88	15%	**0.04**	**44%**
3	1.94	26.88	25%	0.07	73%
4	**1.85**	28.97	25%	**1.06**	80%
5	**3.7**	**139.8**	**6%**	5.34	**39%**
6	1.85	34.82	28%	**0.9**	81%
7	**2.24**	47.2	**18%**	3.07	64%
8	2.66	63.28	11%	**1.1**	29%
9	1.93	52.91	23%	3.95	71%
Mean	2.29	57.72	18.89%	2.56	**61.78%**
Median	2.17	51.81	19%	1.1	71%

Empower Map

District	Schwartzberg (Lowest)	Perimeter (Lowest)	Polsby-Poopper (0-1 0or 100%)	Length- Width (Lowest)	Population Polygon (0-1)
1	1.7	43.38	30%	5.41	89%
2	2.25	69.57	16%	8.09	76%
3	2.7	57.41	10%	4.55	54%
4	1.78	27.06	28%	0.28	81%
5	3.13	122.47	8%	10.03	47%
6	1.72	48.52	32%	6.53	69%
7	2.14	40.62	19%	4.28	68%
8	2.27	53.69	15%	2.75	24%
9	2.48	29.31	16%	0.5	60%
Mean	2.24	54.67	19.33%	4.71	63.11%
Median	2.25	48.52	16%	4.55	68%

North City Land Map

District	Schwartzberg (Lowest)	Perimeter (Lowest)	Polsby-Popper (0-1 or 100%)	Length-Width (Lowest)	Population Polygon (0-1)
1	2.03	**55**	**19%**	4.43	82%
2	**2.46**	**76.78**	**12%**	0.094	55%
3	183	23.99	29%	2.46	75%
4	1.82	28.28	27%	0.4	74%
5	**2.94**	92.78	**9%**	**0.81**	**59%**
6	**2.5**	**50.28**	**14%**	2.11	**63%**
7	1.98	59.5	235	2.11	56%
8	**3.27**	**88.47**	**7%**	**4.8**	31%
9	2.17	**55.57**	19%	**5.43**	**60%**
Mean	2.33	**58.96**	17.67	2.61	61.78
Median	2.17	**55.57**	19%	2.11	**60%**

SDGOP Map

The Republican Party of San Diego County

District	Schwartberg (Lowest)	Perimeter (Lowest)	Polsby-Popper (0-1 or 100)	Length-Width (Lowest)	Population Polygon (0-1)
1	1.95	44.79	22%	**2.14**	71%
2	**1.91**	**38.12**	**23%**	0.62	74%
3	1.53	**19.41**	**41%**	1.98	81%
4	**1.73**	**25.78**	**30%**	1.05	77%
5	3.2	104.82	8%	7.45	55%
6	**1.49**	**28.5**	**43%**	2.05	**90%**
7	**1.48%**	**28.98**	**42%**	3.35	89%
8	2.69	62.95	12%	1.76	33%
9	**1.51**	52.71	**41%**	4.01	69%
Mean	**1.94**	**45.11**	**29.11%**	2.7	**71%**
Median	**1.73**	**38.12**	**30%**	2.05	**74%**

Taxpayer's Map

The Republican Party of San Diego County

District	Schwartzberg (Lowest)	Perimeter (Lowest)	Polsby-Popper (0-1 or 100%)	Length-Width (Lowest)	Population Polygon (0-1)
1	1.97	54.71	23%	2.51	59%
2	**1.91**	48.02	21%	5.05	68%
3	**1.41**	22.04	38%	**0.01**	**89%**
4	1.99	**31.2**	**22%**	**0.23**	**74%**
5	3.23	**88.51**	7%	1.1	53%
6	1.84	36.24	27%	6.35	86%
7	1.77	**64.81**	28%	**0.23**	**55%**
8	2.71	**62.91**	12%	1.78	**35%**
9	1.79	23.74	30%	**0.17**	**78%**
Mean	2.06	48.02	23.11%	**1.93**	66.3%
Median	1.91	48.02	23%	**1.1**	68%

Most Compact District 1

Schwartzberg   1.7   1st

Perimeter   43.38   1st

Polsby-Popper   30%   1st

Pop. Polygon   89% 1st

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Least Compact District 1

Reock	22%	5th
Schwartzberg	2.17	5th
Polsby-Popper	19%	5th
Length-Width	7.56	5th
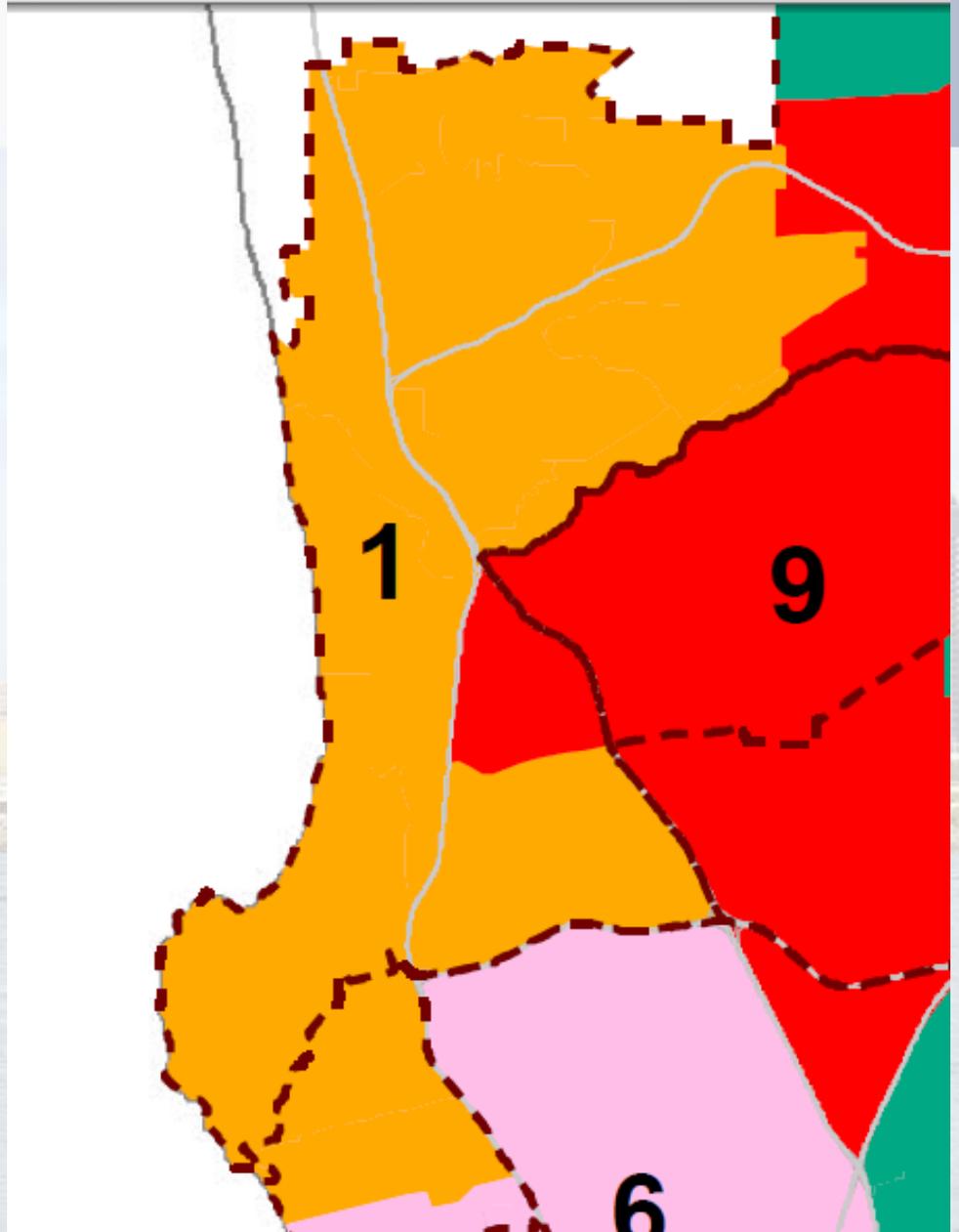
Most Compact
District 2

Reock   37% 1st

Schwartzberg   1.91 1st

Perimeter   38.12 1st

Polsby-Popper 23% 1st
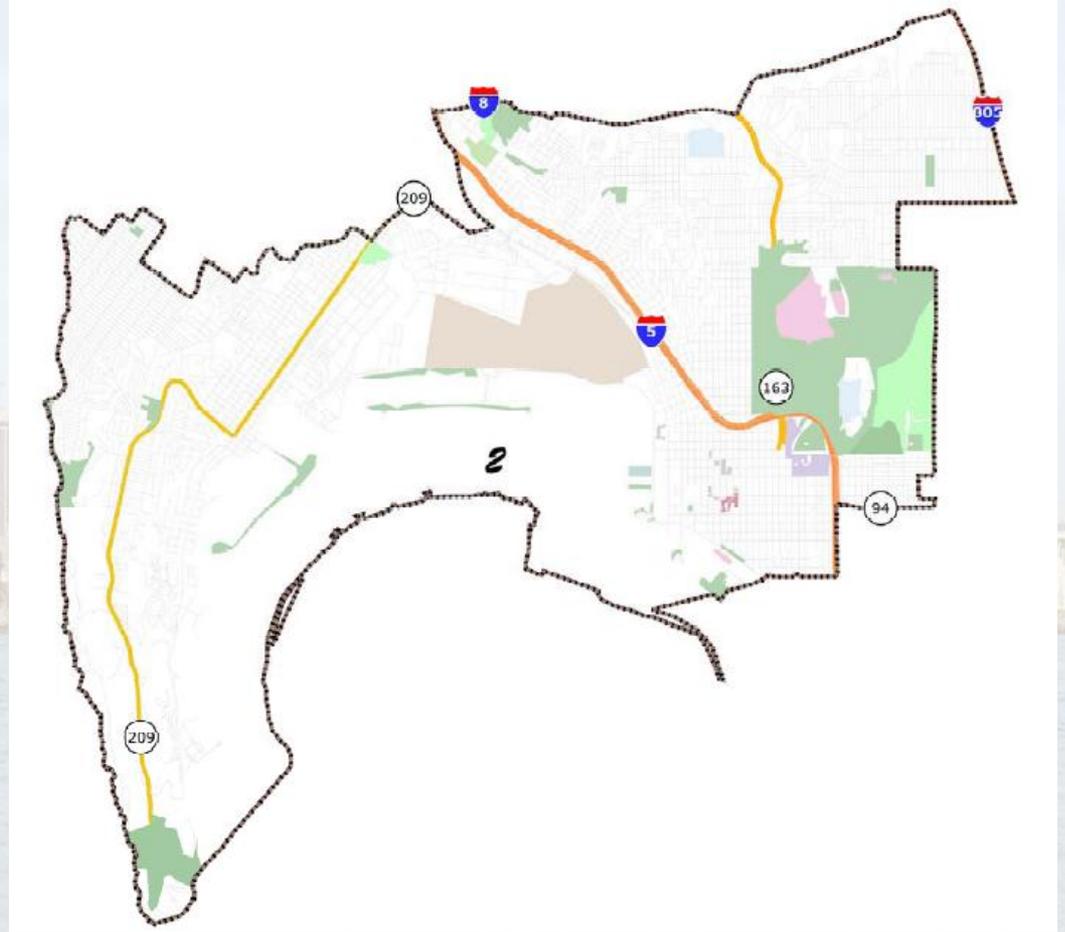
Least Compact District 2

Schwartzberg   2.46 5th

Perimeter   76.78   5th

Polsby-Popper   12%   5th
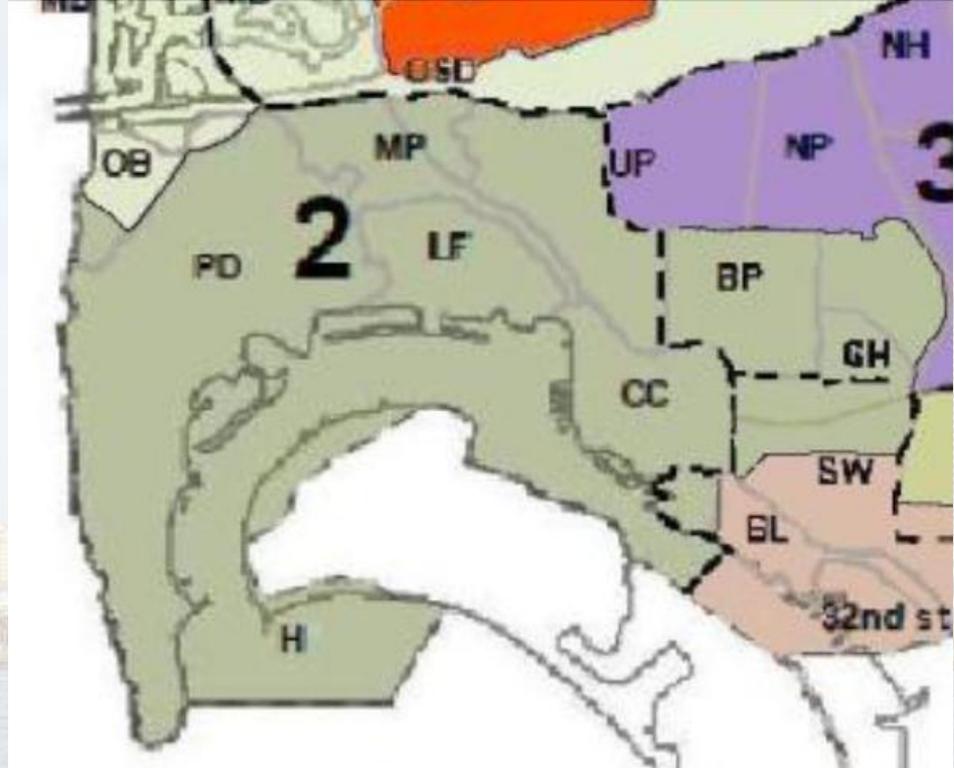
Most Compact District 3

Reock   70%   1st

Schwartzberg   1.91   1st

Length- Width   0.01   1st

Pop. Polygon   89%   1st
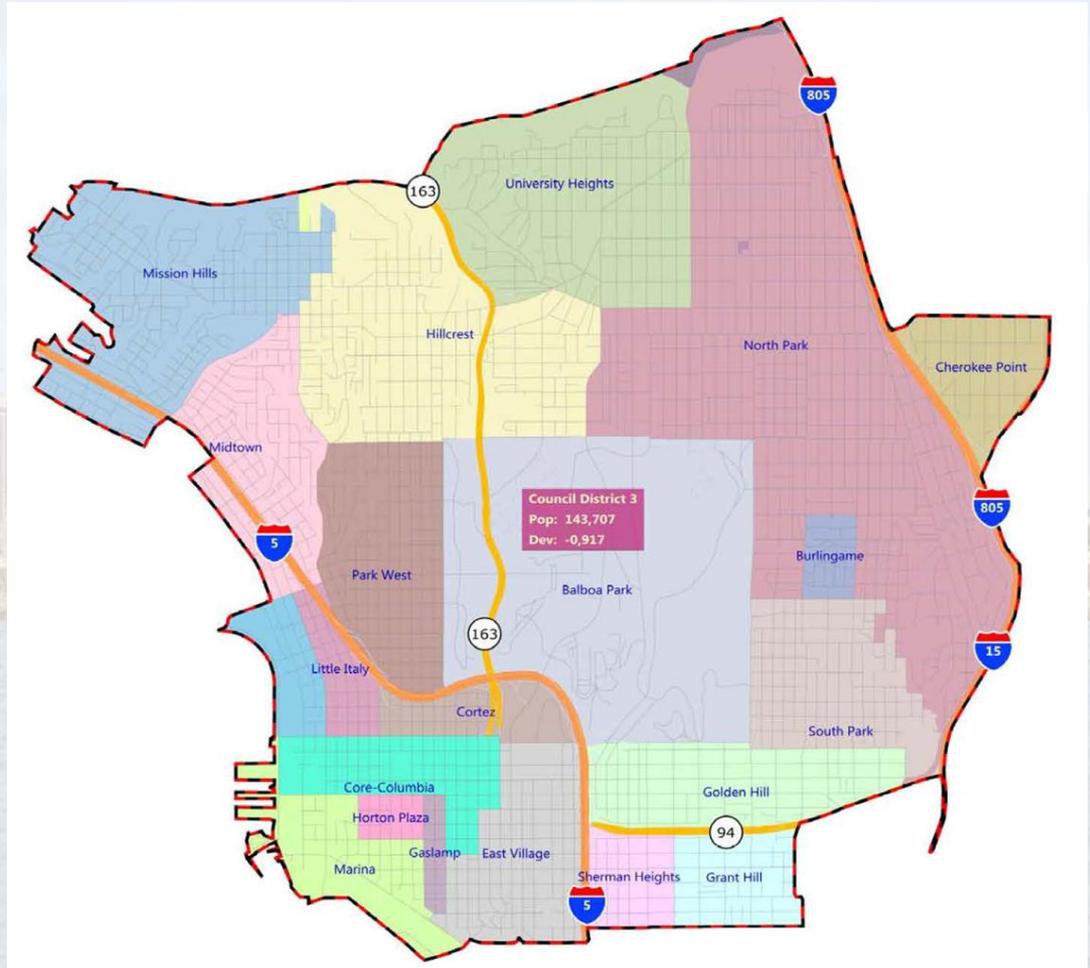
Least Compact District 3

Reock   30%   5th

Schwartzberg   2.7   5th

Polsby-Popper 10%   5th

Length- Width   4.55 5th

Pop. Polygon   54%   5th
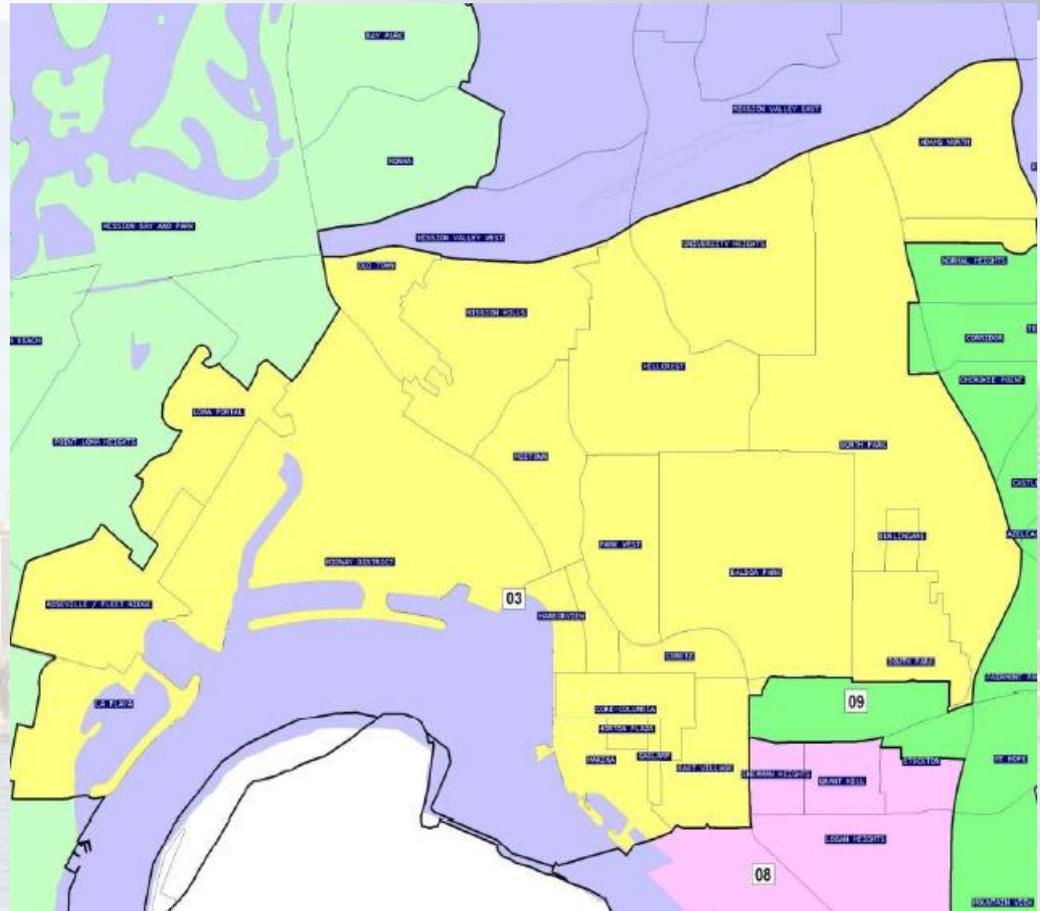
Most Compact
District 4

Schwartzberg 1.73 1st

Perimeter   25.78 1st

Polsby-Popper 30% 1st
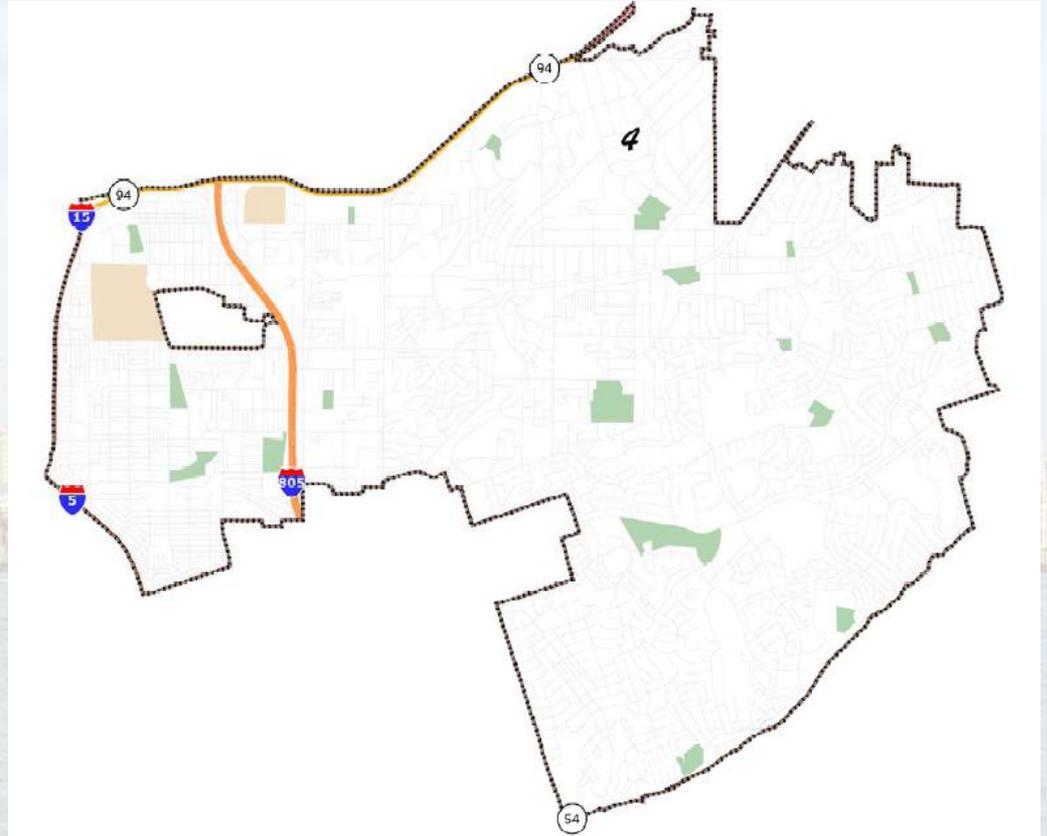
Least Compact District 4

Schwartzberg 1.85   5th

Length- Width   1.06 5th
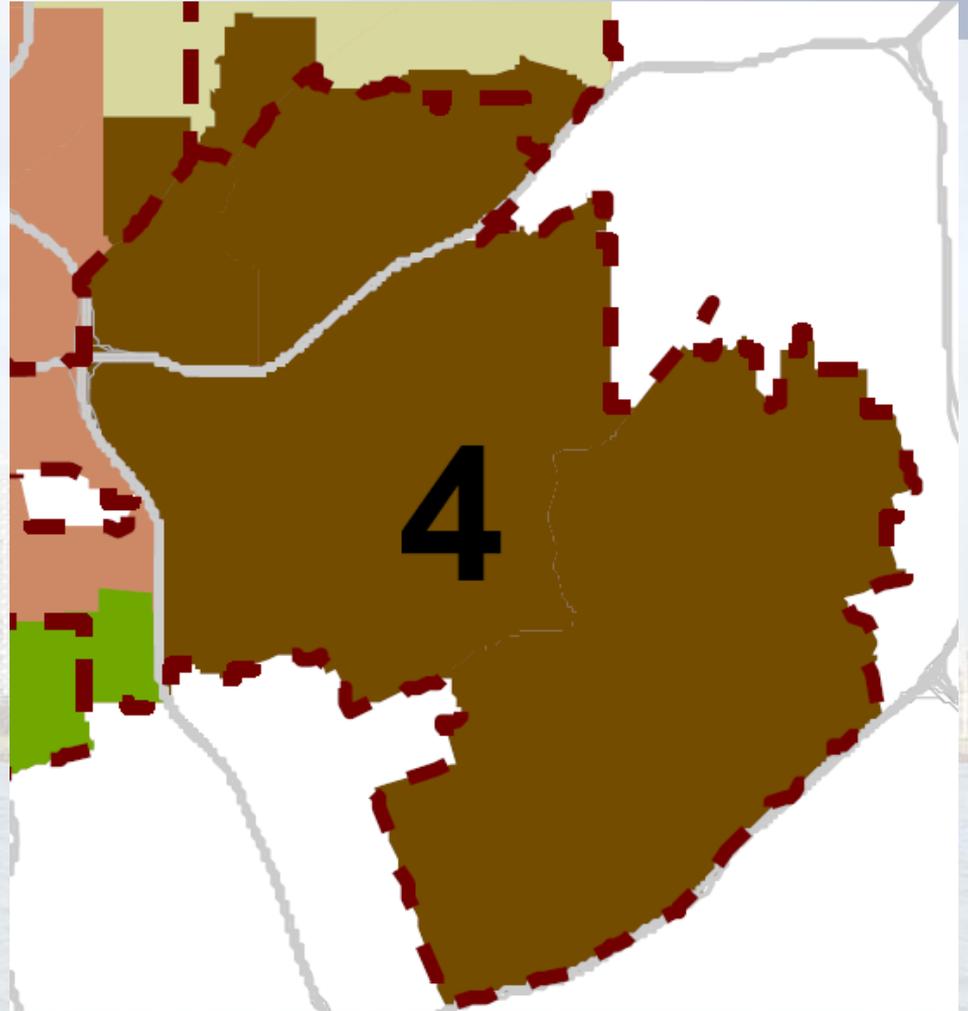
Most Compact District 5

Reock   22% 1st

Schwartzberg   2.94 1st

Polsby-Popper   9% 1st

Length- Width 0.81 1st

Pop. Polygon   59% 1st
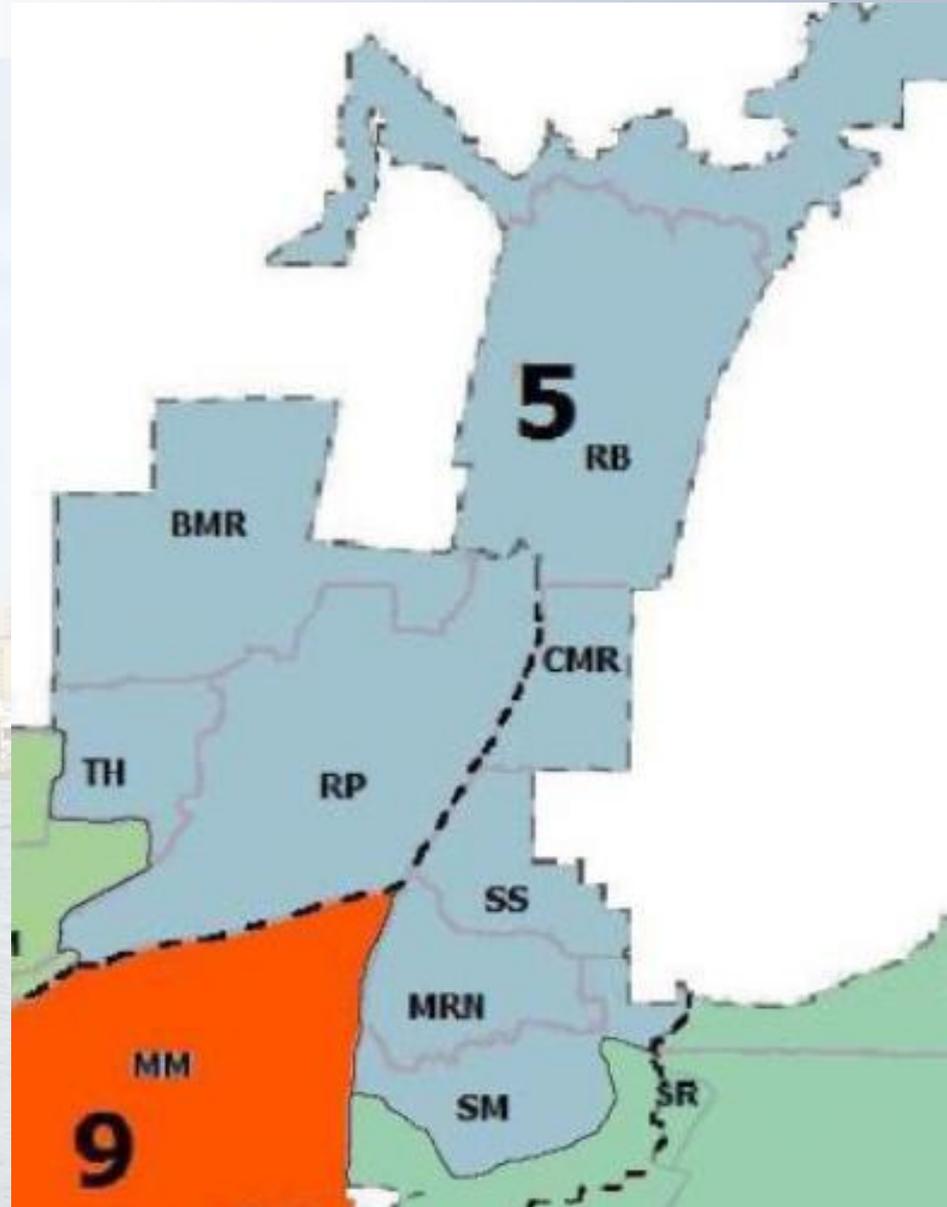
Least Compact District 5

Schwartzberg 3.7 5th

Perimeter 139.8 5th

Polsby-Popper 6% 5th

Pop. Polygon 39% 5th

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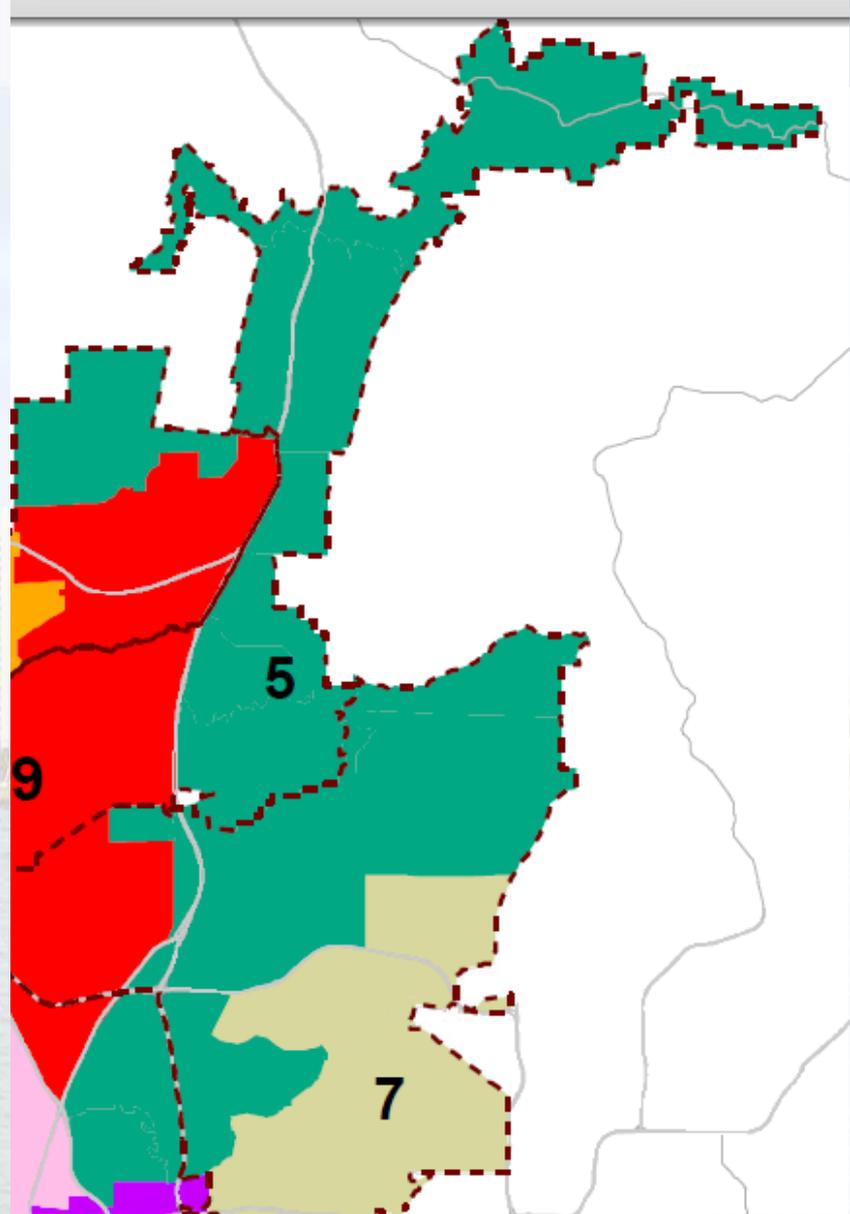
Most Compact District 6

Schwartzberg   **1.49**   **5th**

Perimeter   28.5   1st

Polsby-Popper   43%   1st

Pop. Polygon   90% 1st
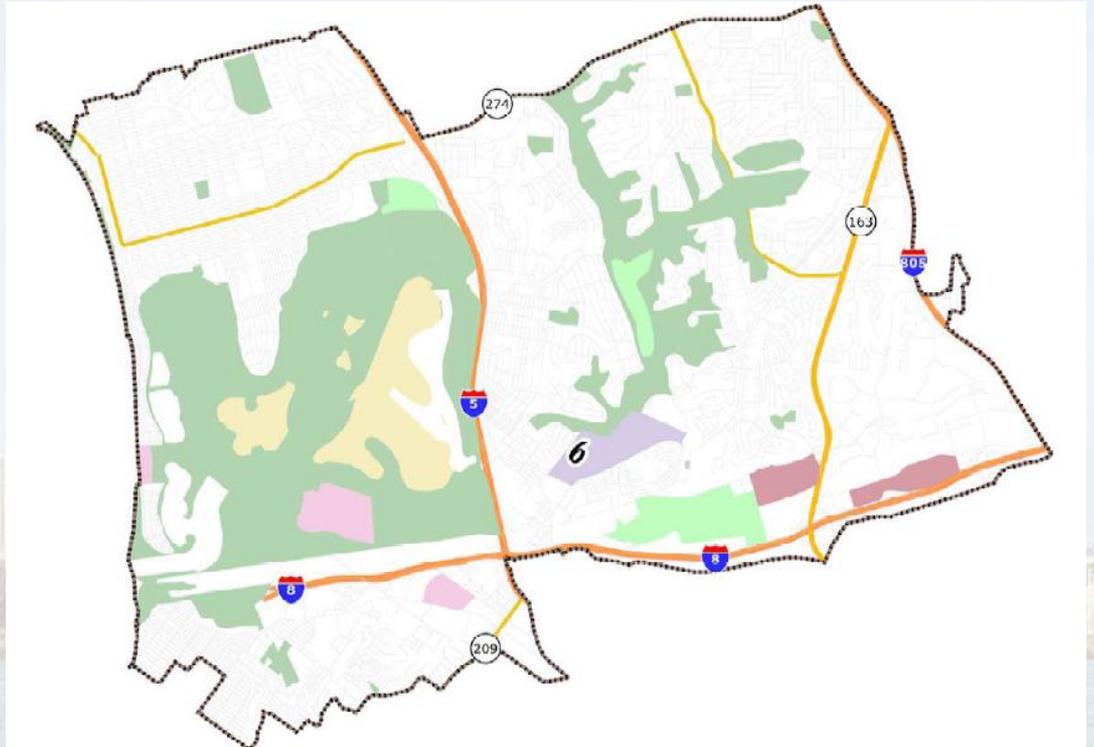
Least Compact District 6

Schwartzberg   2.5   5th

Perimeter   50.28 5th

Polsby- Popper 14% 5th

Pop. Polygon   63% 5th
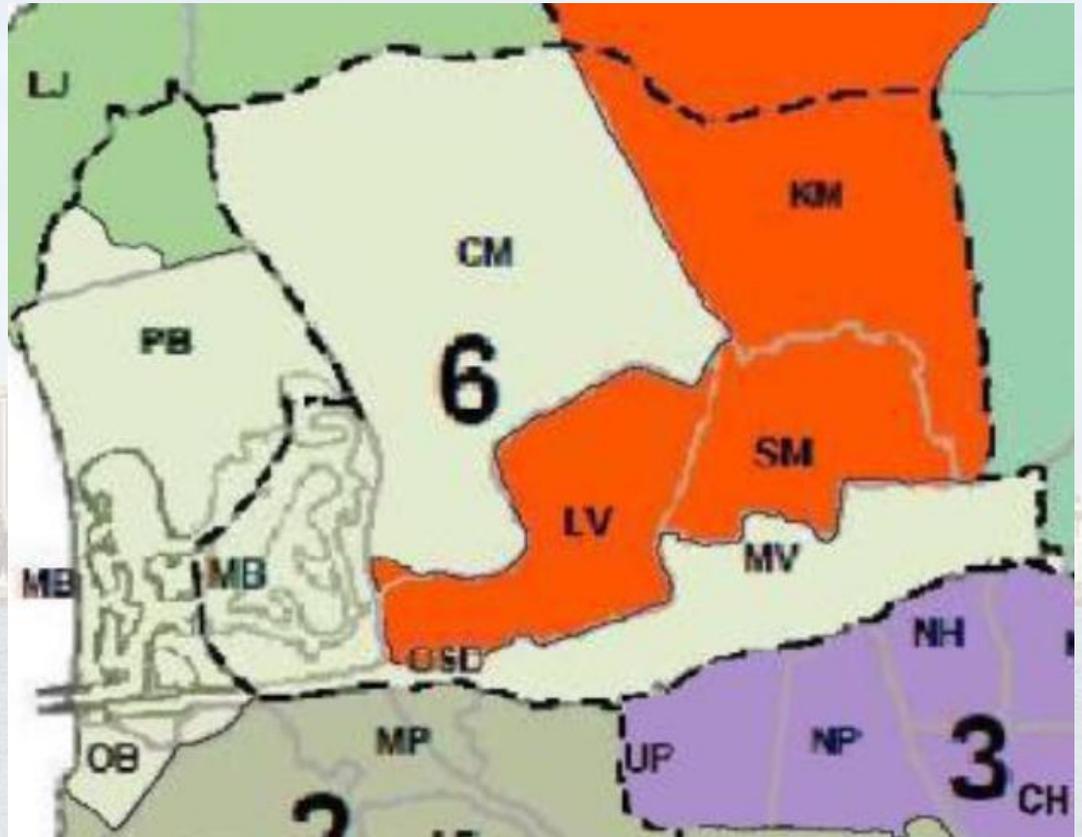
Most Compact District 7

Reock   48%   1st

Schwartzberg   1.48 1st

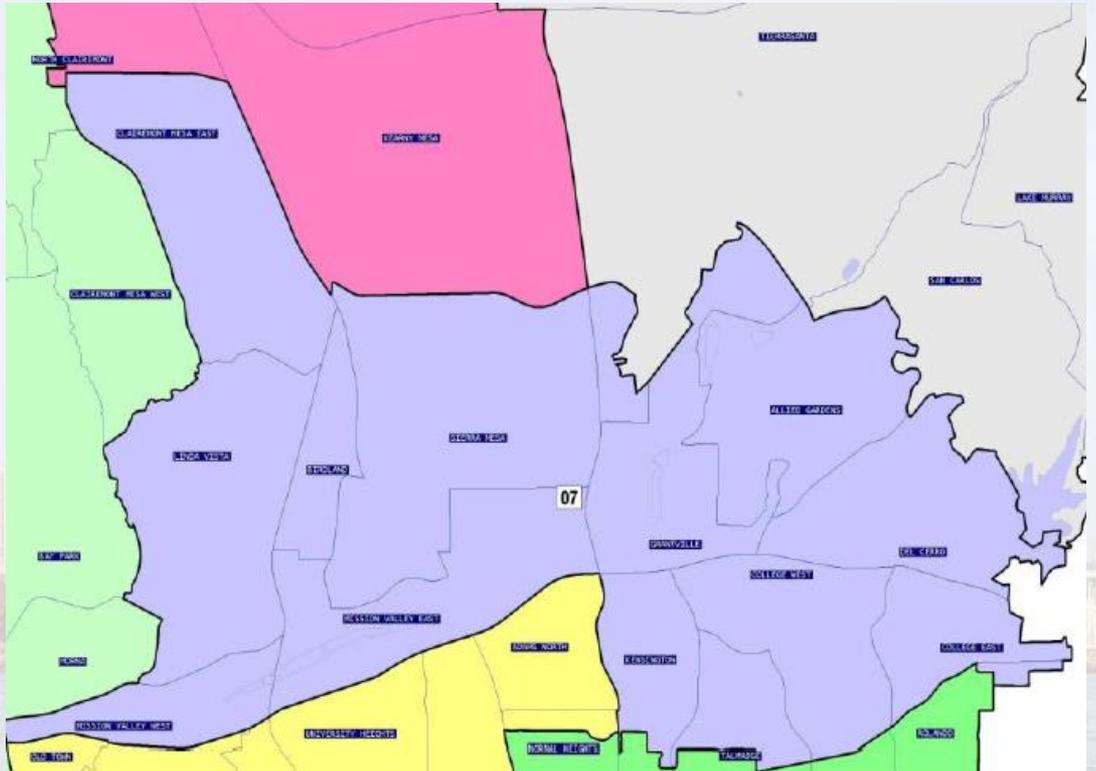Perimeter   28.98 1st

Polsby-Popper   42%   1st

Pop. Polygon   89%   1st
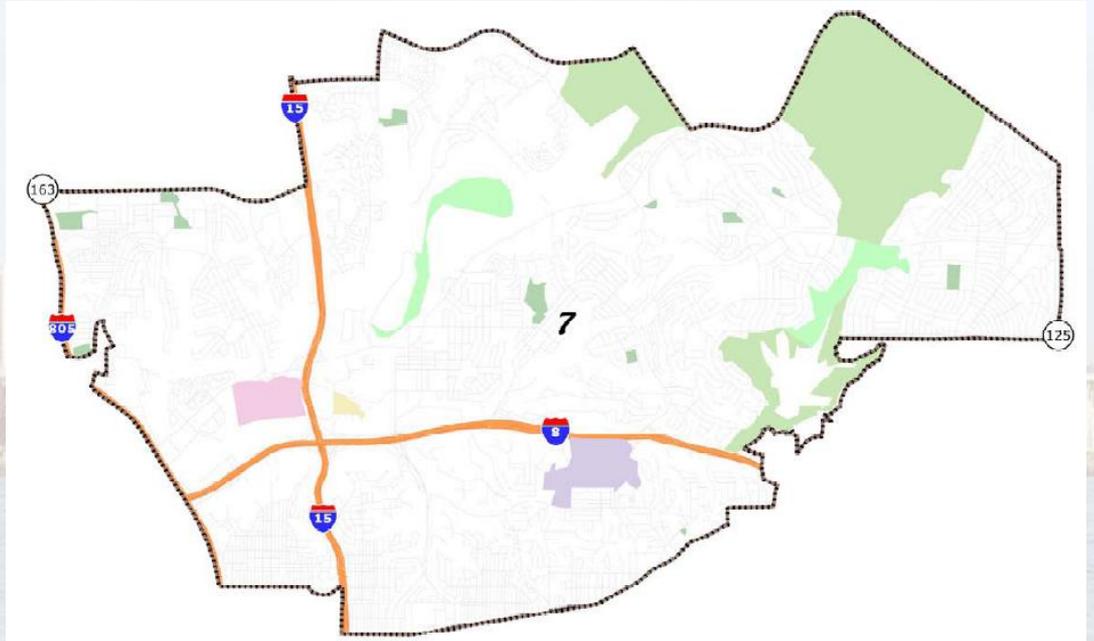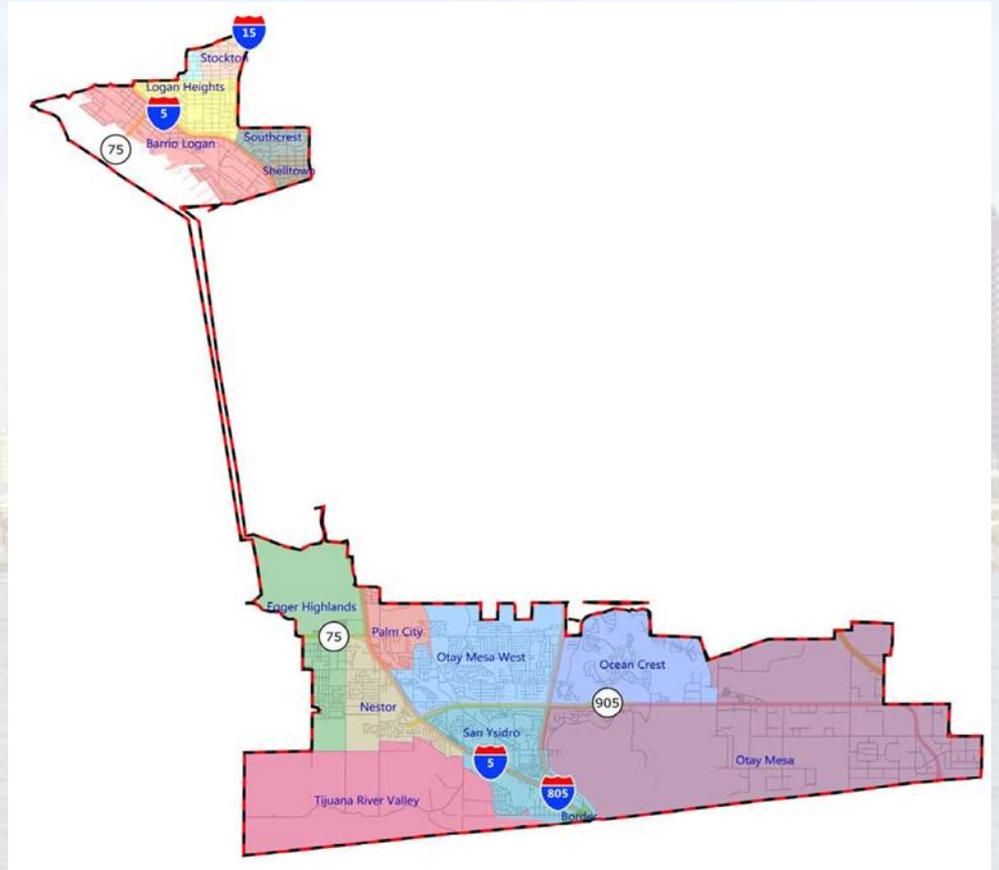
Least Compact District 7

Reock   31%   5th

Length- Width   4.28 5th

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Most Compact District 8

Perimeter 62.91 1st

Pop. Polygon 35% 1st

Least Compact
District 9
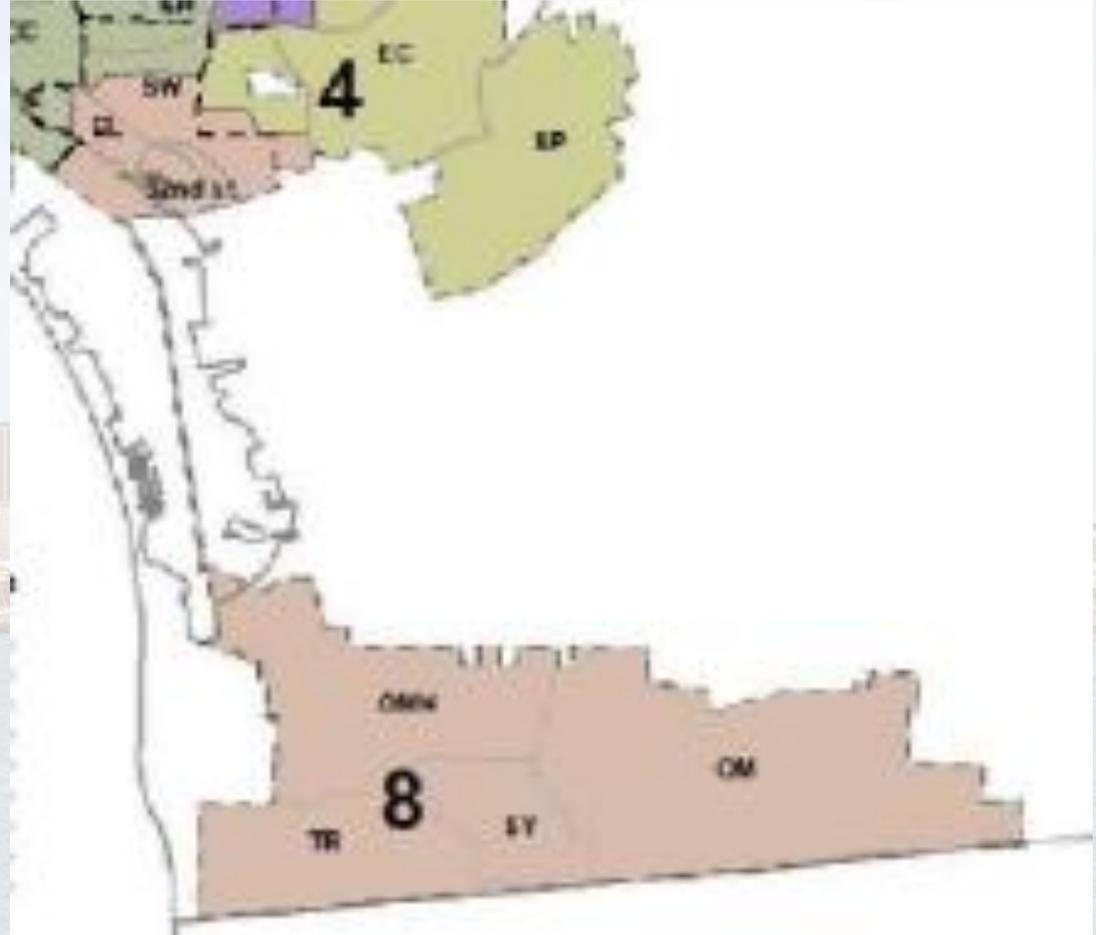
Reock   12%   5th

Schwartzberg   3.27% 5th

Perimeter   88.47 5th
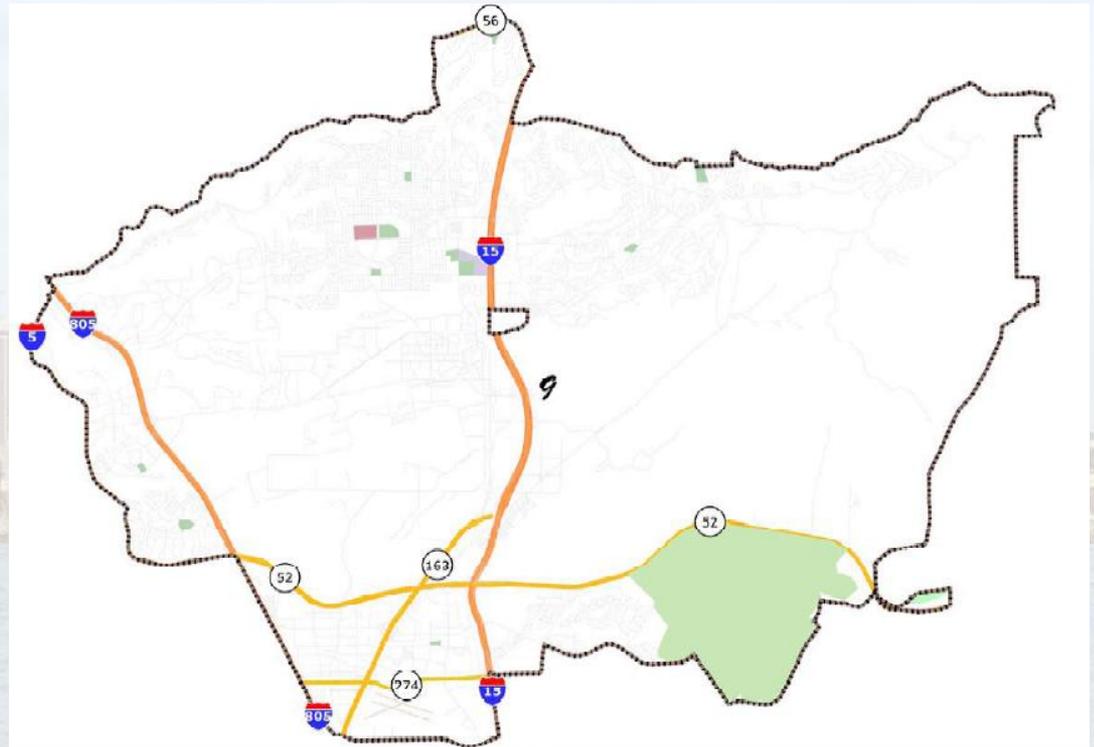
Polsby-Popper   7% 5th

Length- Width   4.8   5th

Most Compact District 9

Reock   53% 1st

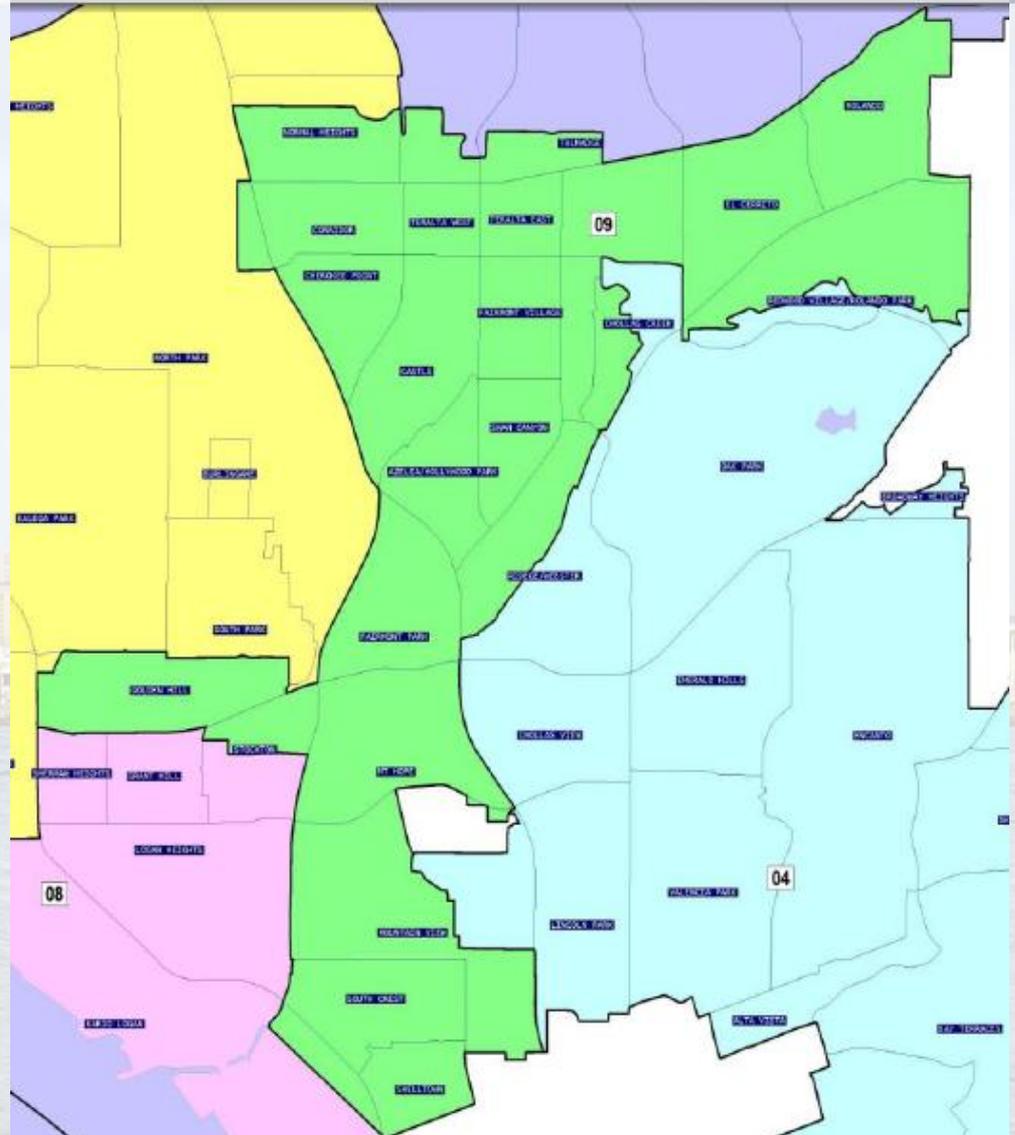Schwartzberg   1.51 1st

Polsby-Popper   41% 1st

![The Republican Party of San Diego County]

Least Compact District 9

Reock 29% 5th

Schwartzberg 2.48 5th

Perimeter 29.31 5th

Polsby-Popper 16% 5th

Pop. Polygon 60% 5th

The Republican Party
of San Diego County

- Redistricting is both an art and a science.
- Compactness tests are your prime defense against gerrymandering
- This is what the courts will use to judge your legal document
- Recommend you adopt a single compactness test or procedures for using these tests before you start drawing maps