# Comparison of OCRC, Sykes, and Wise district plans

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Cincinnati, OH

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# Background

- Article XI of the Ohio Constitution substantially reforms the 2021 process for drawing Ohio Statehouse boundaries
  - The process is charged to an Ohio Redistricting Commission (ORC) comprised of 7 state leaders, with the intent of bipartisan collaboration that does not favor or disfavor a party
  - Multiple constraints were added to minimize slicing of counties, large municipalities, and communities of color
  - Delay in receipt of US Census data has compressed the time to finalize maps
- The ORC has not produced a map by the 9/1/21 deadline
  - The 8/31/21 public meeting of the ORC failed to even set a timetable for meeting the second-round 9/15 deadline

- Several maps were submitted via the ORC's public input portal by 9/1
  - Of particular note were two maps from:
    - ORC co-chair Vernon Sykes (Democrat)
    - the **O**hio **C**itizens' **R**edistricting **C**ommission, a left-leaning public advocacy group associated with the constitutional reform advocates
  - These maps were guided by Article XI principles, but have some drawbacks

# Why another map?

- The dynamics of the 8/31/21 ORC meeting suggest we are far from a collaborative bipartisan process to meet the mandated deadline
  - As of 9/5/21, there have been no plans proposed from the Republican members of the ORC
- I have analyzed the Sykes and OCRC maps and determined that they have emphasized proportionality over district competitiveness.
  - They also appear unclear on Senate incumbency
- I am therefore proposing a more competitive map that also strikes a more natural balance between GOP and Dem interests.
- To correct weaknesses in my pre-9/1/21 submission, I have redrawn several districts to increase minority empowerment and minimize big-city splits, and specified Senate incumbency

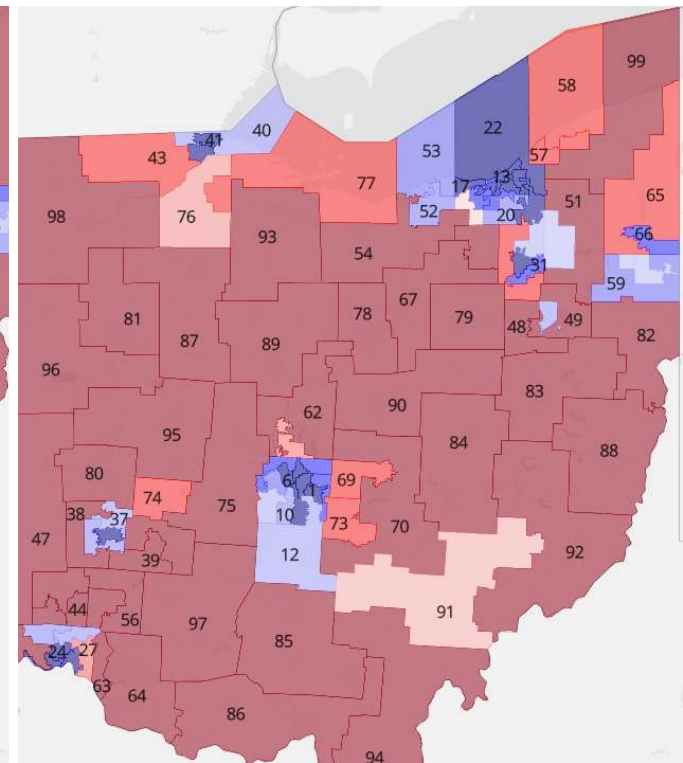*A comparison of my plan to OCRC and Sykes is presented in this document*
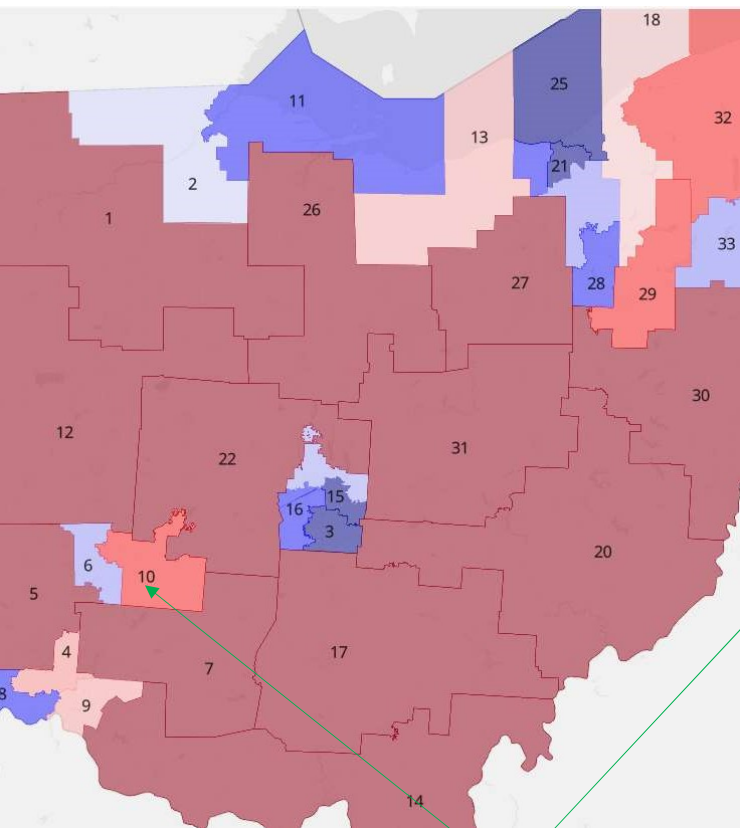
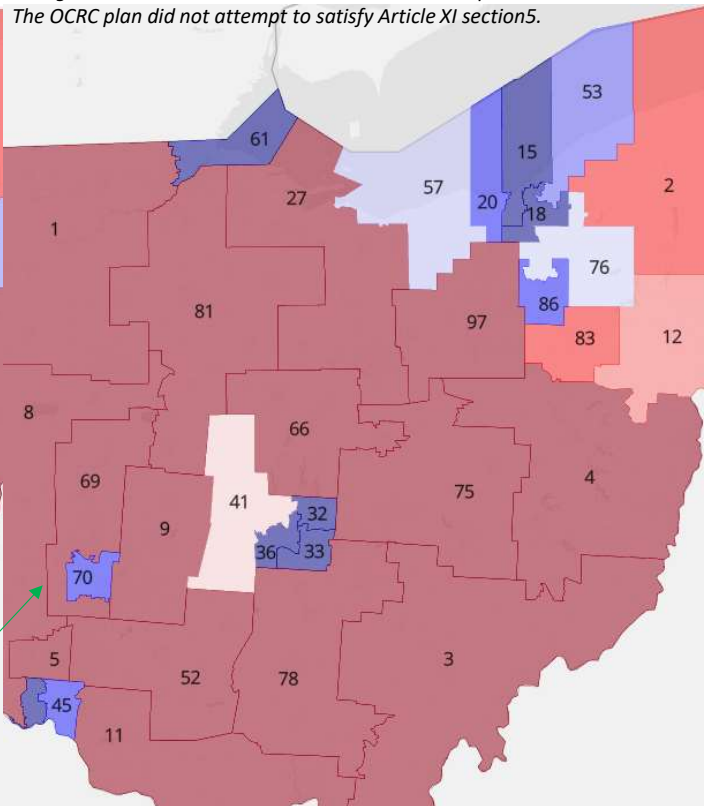# Visual comparison - Statehouse
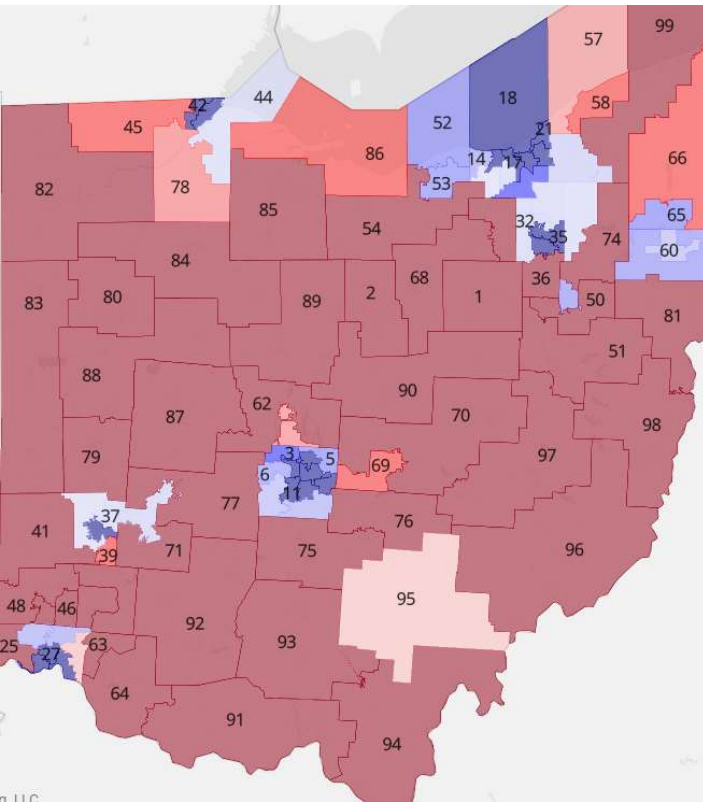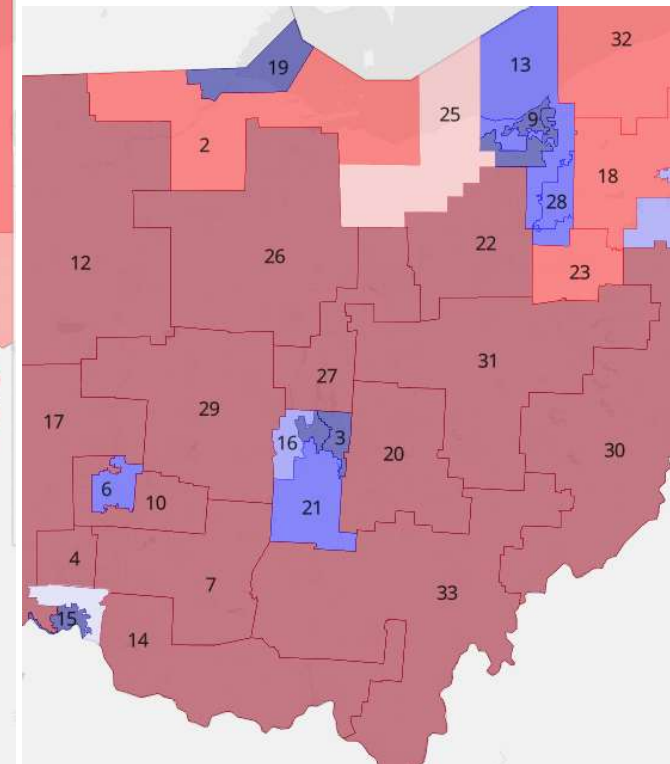


Wise
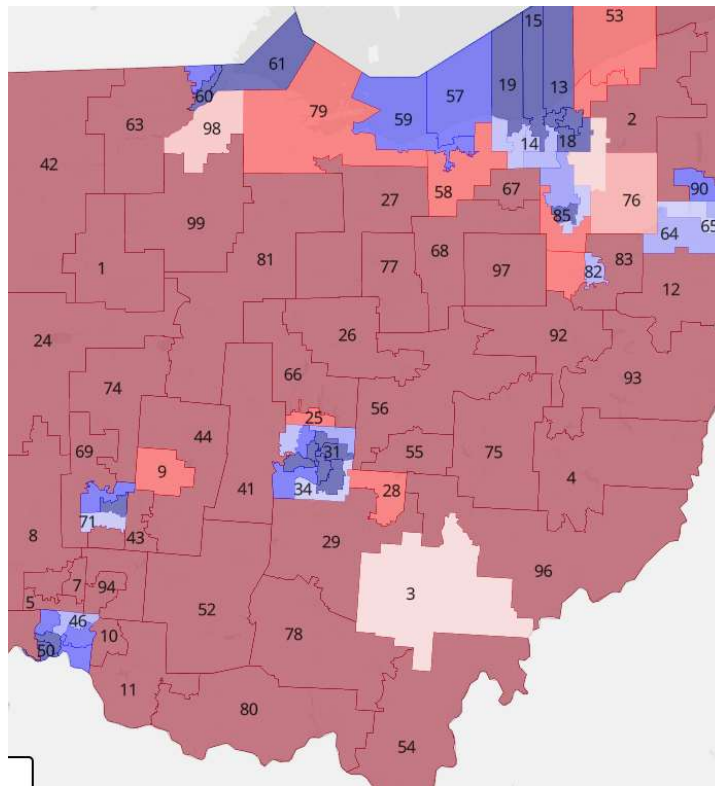
OCRC

Sykes

# Visual comparison – State senate



I assigned the OCRC Senate district numbers to line up with House numbers. The OCRC plan did not attempt to satisfy Article XI section5.
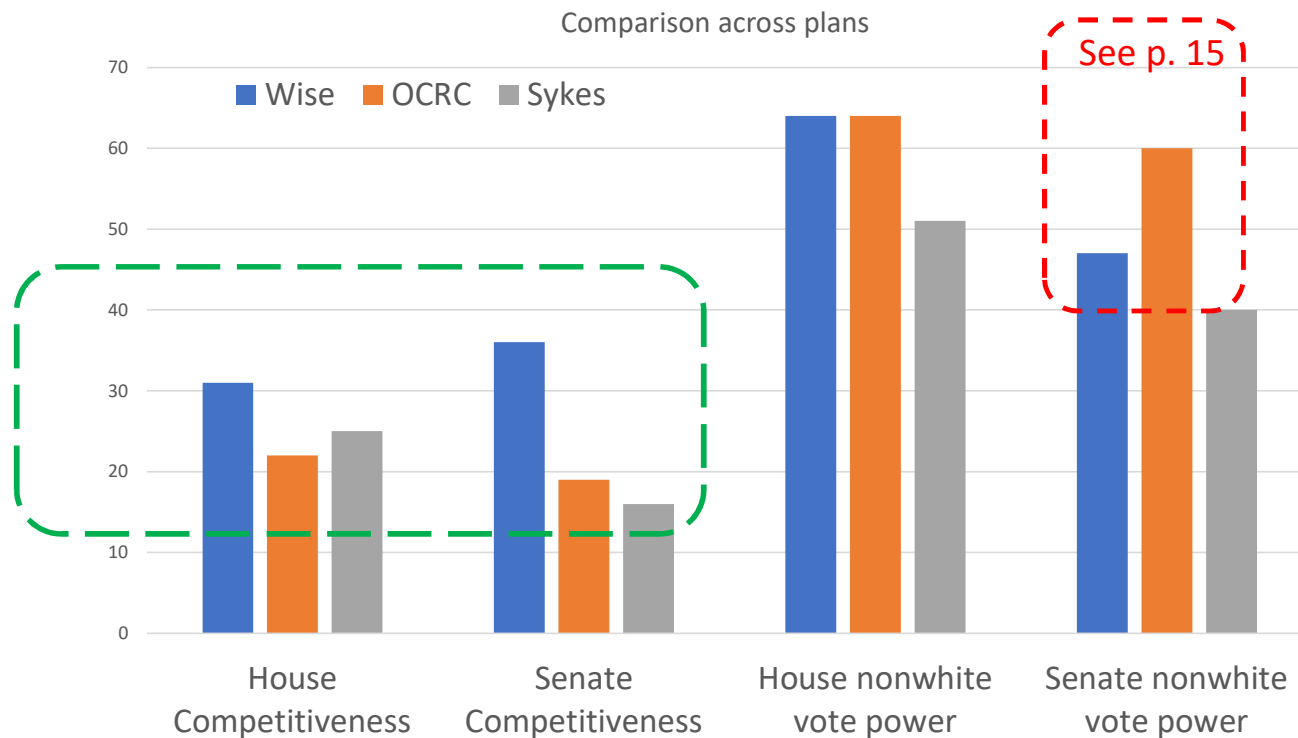
See p. 15 for Dayton discussion

Wise         OCRC         Sykes

# Quantitative analysis methodology

- My maps, tweaked from my 8/31 submission to improve minority representation, were generated in Dave's Redistricting Analysis (DRA), a common platform for re-districting efforts

- To compare key metrics of map quality, the Sykes and OCRC maps were loaded into DRA from the .csv / .txt files posted to redistricting.ohio.gov/public-input

- According to DavesRedistricting.org, DRA uses the 2020 Census for precinct shape and demographics.  The anticipated GOP/Dem two-party vote splits are a composite of the 2016 and 2020 presidential elections, the 2016 and 2018 U.S. Senate elections, and the 2018 Governor + Attorney General election.

- I have a personal contact at DRA who would be happy to walk the ORC through any questions on the analysis algorithms.

# Analysis: competitiveness, minority power



Comparison across plans

Wise    OCRC    Sykes

See p. 15

House Competitiveness    Senate Competitiveness    House nonwhite vote power    Senate nonwhite vote power

We can significantly increase the number of competitive districts

# Detail: Competitive districts

## Ohio House

|  | Wise | OCRC | Sykes |
|---|---|---|---|
| >55% Dem | 22 | 28 | 26 |
| 50-55% Dem | 23 | 14 | 17 |
| *Likely DEM* | *22 - 50* | *28 - 46* | *26 - 48* |
| **45 − 55%** | **28** | 18 | 22 |
| 50-55% GOP | 5 | 4 | 5 |
| >55% GOP | 49 | 53 | 51 |
| *Likely GOP* | *49 − 77* | *53 − 71* | *51 - 73* |

## Ohio Senate

|  | Wise | OCRC | Sykes |
|---|---|---|---|
| >55% Dem | 9 | 11 | 11 |
| 50-55% Dem | 5 | 3 | 3 |
| *Likely DEM* | *5 - 18* | *11 - 16* | *11 - 15* |
| **45 − 55%** | **9** | 5 | 4 |
| 50-55% GOP | 4 | 2 | 1 |
| >55% GOP | 15 | 17 | 18 |
| *Likely GOP* | *15 − 24* | *17 − 21* | *18 - 22* |

**More seats in play** = stronger campaigns & candidates = better government.

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# Analysis – District shape

| Know It When You See It scores | Wise | OCRC | Sykes |
|---|---|---|---|
| House KIWYSI compactness | 56 | 56 | 52 |
| Senate KIWYSI compactness | 53 | 62 | 48 |

For the Senate, I get dinged for:
19: capturing city of Delaware with a N. Columbus district
4: bundling SE Butler w/ N. Hamilton
14: Keeping S. Ohio river area together
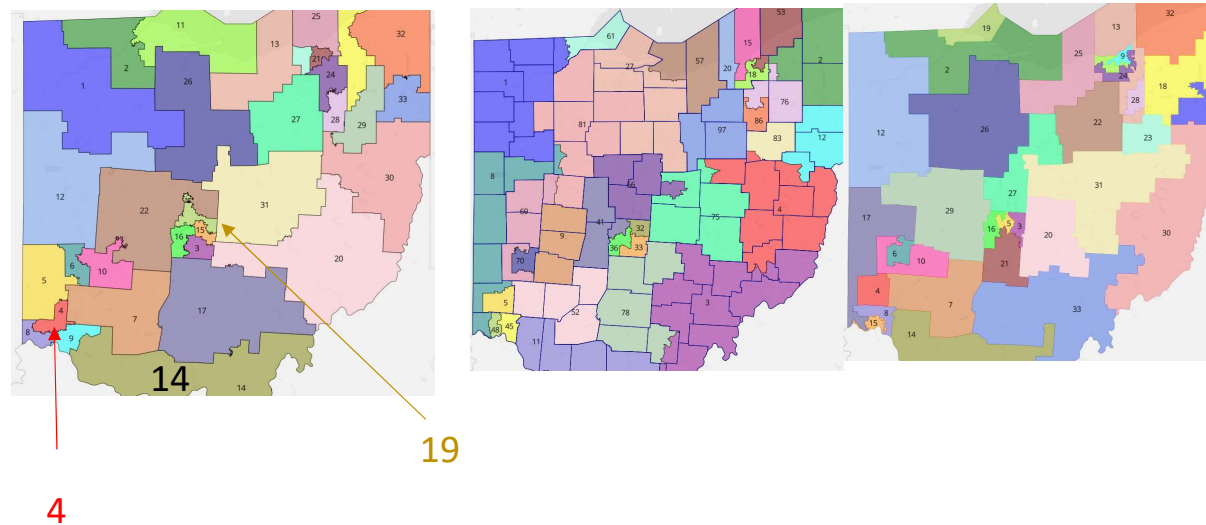


| # of Big City splits | Wise | OCRC | Sykes |
|---|---|---|---|
| Columbus | 10 | 10 | 11 |
| Cleveland | 3 | 7 | 3 |
| Cincinnati | 3** | 4 | 2 |
| Toledo | 2 | 2 | 2 |
| Akron | 1 | 3 | 1 |
| Dayton | 1 | 2 | 1 |
| Parma | 0 | 0 | 0 |
| Canton | 0 | 0 | 0 |
| Youngstown | 0 | 0 | 0 |
| Lorain | 0 | 0 | 0 |
| Hamilton | 0 | 0 | 0 |

** A tiny piece of Cincinnati was used to foster a competitive GOP district in eastern Hamilton County.

| Rural county splits* | Wise | OCRC | Sykes |
|---|---|---|---|
| House | 15 | 21 | 12 |
| Senate | 7 | 9 | 6 |

*Splits are inevitable in urban and suburban counties
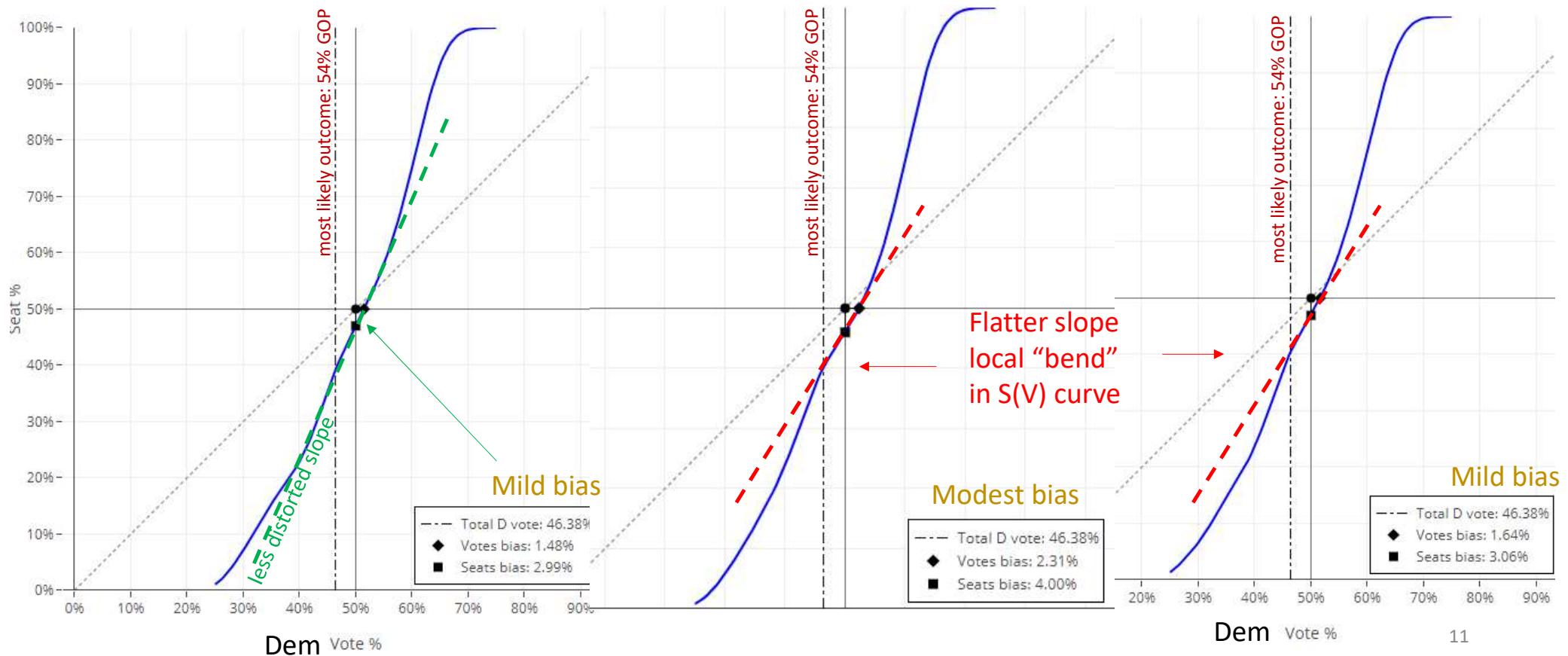
# Analysis: partisan bias

- **The main focus of map-making is how votes will translate into seats**
  - Often illustrated as a x-y plot of votes → seats (see next 2 pages)
  - Precincts can be "horse-traded" to manipulate this within the politically relevant range
    - To achieve a biased "gerrymandered" result
    - To enforce legal requirements
    - To correct for random fluctuations
  - Making districts more competitive will make the seats more responsive (stronger than proportional) to vote swings
  - Mandating proportionality will
    - Force a "bend" in the votes-seats curve
    - Make it harder for GOP- or Dem-leaning (unbalanced) states to achieve 50% seats at 50% votes
- All three plans have reasonable predicted votes → seats in the politically relevant range
  - Refer back to slide 9 for expected seats table
  - See next two pages for seats-vote curve comparisons

# Analysis: Partisan bias via seats(votes) curves



Seats-Votes Curve: Wise House

Seats-Votes Curve: OCRC's 9/1/21 House "unity" map

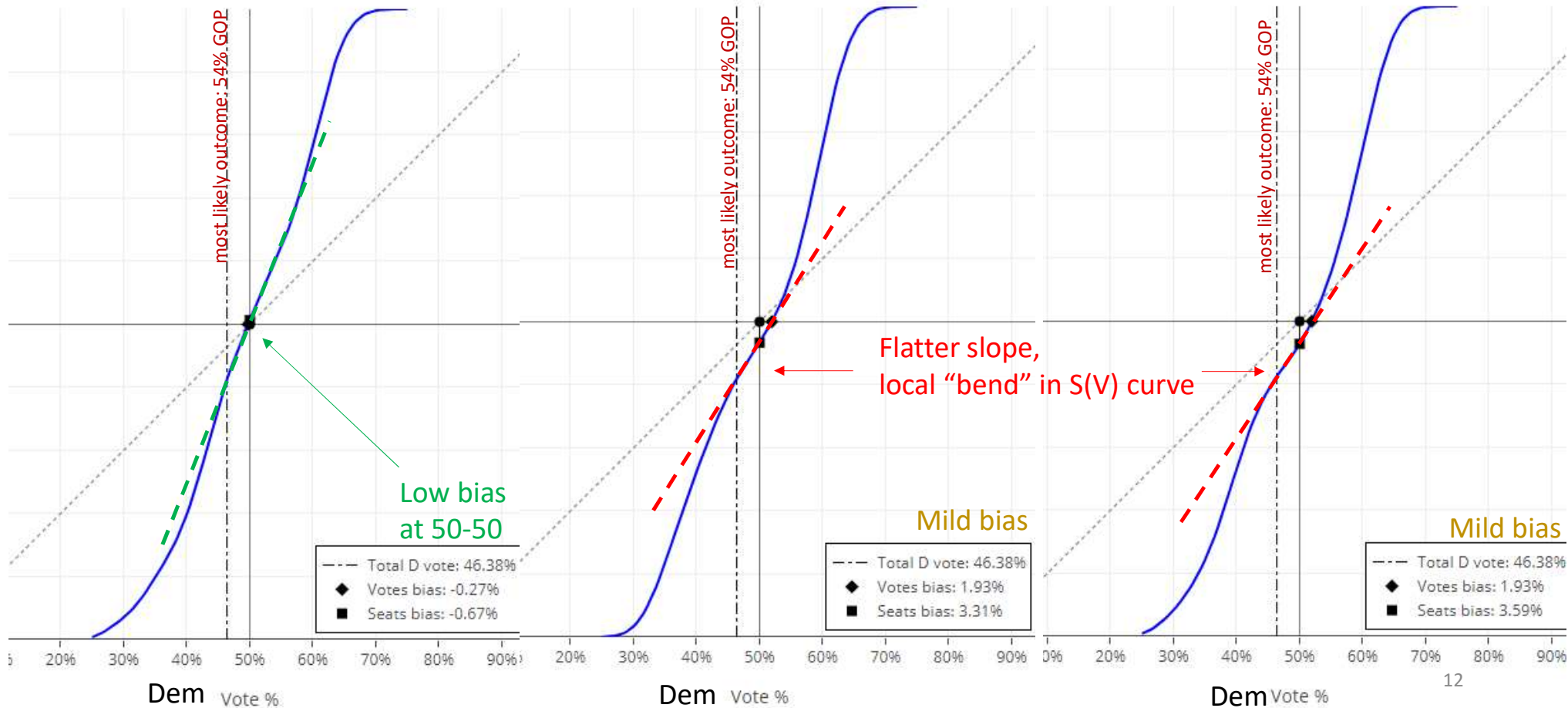Seats-Votes Curve: Sykes_House31Aug21

# Analysis: Partisan bias via seats(votes) curves

Seats-Votes Curve:  Wise Senate

Seats-Votes Curve: Senate-OCRC

Seats-Votes Curve: Sykes Senate Update Sept 2

most likely outcome: 54% GOP

most likely outcome: 54% GOP

most likely outcome: 54% GOP

Low bias
at 50-50

Flatter slope,
local "bend" in S(V) curve

Mild bias

Mild bias

| | | |
|---|---|---|
| ---·- | Total D vote: 46.38% | |
| ◆ | Votes bias: -0.27% | |
| ■ | Seats bias: -0.67% | |

| | | |
|---|---|---|
| ---·- | Total D vote: 46.38% | |
| ◆ | Votes bias: 1.93% | |
| ■ | Seats bias: 3.31% | |

| | | |
|---|---|---|
| ---·- | Total D vote: 46.38% | |
| ◆ | Votes bias: 1.93% | |
| ■ | Seats bias: 3.59% | |

Dem   Vote %

Dem   Vote %

Dem   Vote %

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# Comments on design choices

- District-drawing creates tradeoffs among representation, district shape, partisan bias and competitiveness

- Adhering to municipal non-splitting will drive down compactness and the flexibility to tradeoff other considerations

- Increasing the number of competitive seats naturally makes the seats more responsive to votes (greater than proportional)

- Given the "creative" shapes of 2011 districts and the above constraints, it is unrealistic to also solve perfectly for Senate incumbency

# Why OCRC scores better on Senate representation for nonwhites: Dayton option
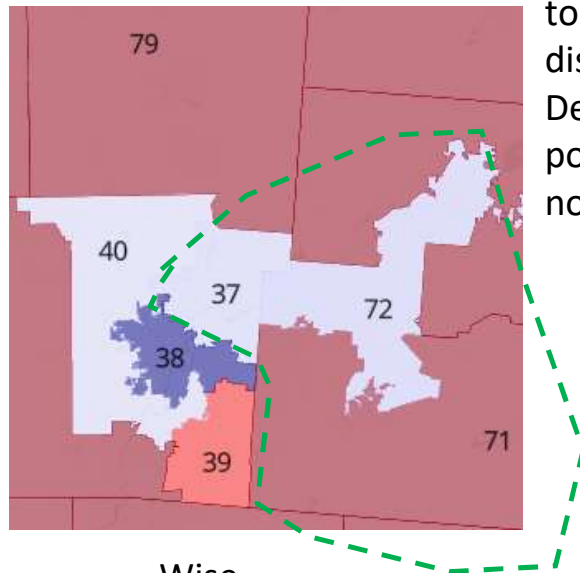
My map pulls district 37 in with 71 & 72 to form a GOP-leaning competitive district. 38+39+40 form a competitive Dem-leaning district with a 32.4% Black population, which is strong but does not qualify as a minority district.



Wise
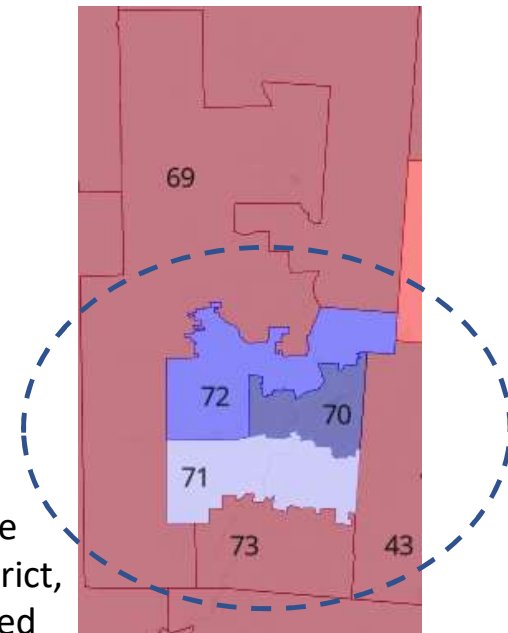
OCRC's map combines 70, 71, 72 Dayton-area House districts into one 37.5% Black Dem-heavy Senate district, surrounded by an irregular, elongated GOP-dominated district (69 + 73 + 74)



OCRC

I decided to split Dayton's 2 Statehouse districts into separate Senate districts to increase competition and compactness. The ORC is welcome to reverse the Senate assignments of 37 and 39 if keeping communities together is higher priority. OCRC's excessive partitioning of Cleveland and Akron may have also been done to boost minority vote power.

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# Assigning Senate "incumbency" (Article XI, Section 5)

"At any time the boundaries of senate districts are changed in any general assembly district plan made pursuant to any provision of this article, a senator whose term will not expire within two years of the time the plan becomes effective shall represent, for the remainder of the term for which the senator was elected, the senate district that contains the largest portion of the population of the district from which the senator was elected, and the district shall be given the number of the district from which the senator was elected. If more than one senator whose term will not so expire would represent the same district by following the provisions of this section, the plan shall designate which senator shall represent the district and shall designate which district the other senator or senators shall represent for the balance of their term or terms."

The extreme 2011 Senate district shapes create problems for assigning old districts to new ones.
For 11 districts in my plan, the mapping appears straightforward; see next page.
For most other districts, it is less clear-cut but there appears to be a lead choice.

The unavoidable problem is in Cuyahoga County. The 2011 map packed Dems (with addition of a western Lake County House district) into three deep blue Senate districts to create a snaky, near-tossup district 24, making it difficult to map onto compact shapes..

See next page for details and a possible solution.
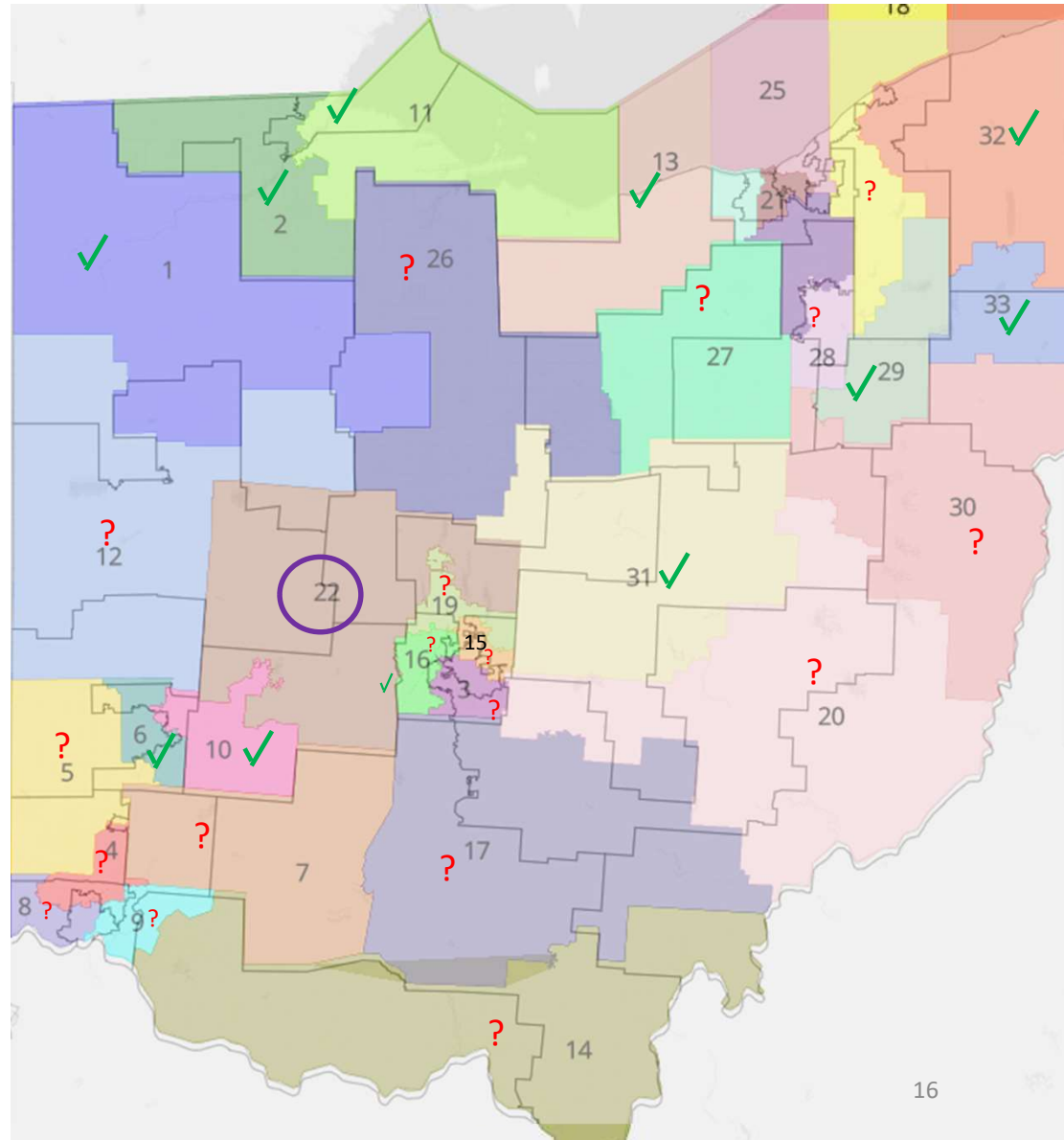
15

# Putting OH Senators in their places

Colored = Wise plan
Black district lines: 2011 map

✓ = reasonable 1:1 match

? = imperfect.  ? placed in area that seems best overlap

◯ = "orphan" seat

Hamilton, Franklin, Lucas, and Montgomery counties can be mapped reasonably well.

See next page for addressing Cuyahoga County and the "orphan" seat.

# Fixing incumbency problems from 2011 gerrymandering

- Unfortunately, both Senate districts 22 and 26 are held by Senators whose terms continue into 2024, with hometowns in the new #26.
  - Reineke (22) in Tiffin
  - Romanchuk (26) in Ontario
- Ideally, one of these Senators (tentatively Reineke) could agree to represent new #22 through 2024.

- Additionally, Sen. Dolan (current snake#24) must find a new home among new #21,23,24,25.  The remaining 3 new seats will then open for 2023.

- Current Senators for districts 4, 8, 12, 14, 18, 20, 22, 26, 28, 30 have imperfect but less problematic new assignments
  - see previous page
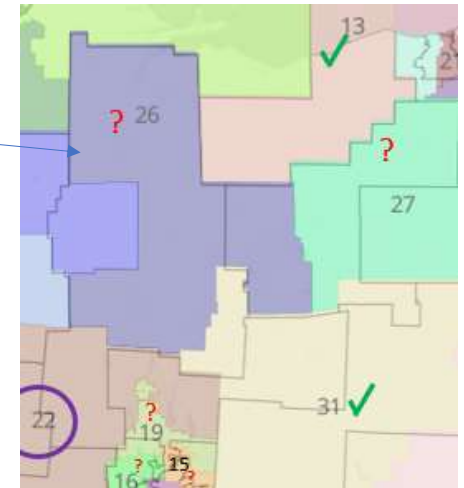


| Wise | 11 | 19 | 20 | 28 | 29 | 30 | 31 |
|------|----|----|----|----|----|----|----|
| 2011 | 26 | 22 | 27 | 23 | 21 | 25 | 24 |

Wise

Cuyahoga detail

2011
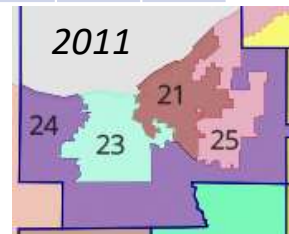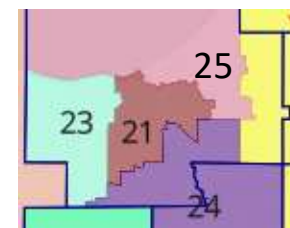
# Assessing political viability

- Publicly available technology has advanced to the point that an obviously biased map will be detected and rejected.

- Voters will reward a transparent process that is faithful to Article XI. The reverse of this statement is also true.

- Therefore, it is in the ORC's best interest to follow both the spirit and letter of Article XI
  - GOP members of the ORC may believe they will be punished for adopting a plan proposed by Democrats or left-leaning think tanks
  - The best chance for a 10-year map (accepted by both parties) is a GOP-led proposal that is demonstrably fair

# Files to accompany this submission

- .csv file of precincts → districts for both House and Senate
- Excel file with raw statistical data supporting this analysis

Links to Wise maps on Dave's Redistricting app:
Wise competitive House map:
https://davesredistricting.org/maps#viewmap::f8133db6-fa78-4c13-8ac6-b49cf9f3ad0d
Wise competitive Senate map:
https://davesredistricting.org/maps#viewmap::ee043422-043d-43af-8058-4d64e87847da

My imports of OCRC and Sykes maps into DRA can be found here:
OCRC House: https://davesredistricting.org/maps#viewmap::0daeda07-8e6f-4293-ad84-88bd9a833c0f
OCRC Senate: https://davesredistricting.org/maps#viewmap::cc92ad13-c129-4c8d-b7c0-9ce46c5d5e6f
*Sykes House: https://davesredistricting.org/maps#viewmap::049a4505-0c99-4850-ac35-42f3cb01218b
*Sykes Senate: https://davesredistricting.org/maps#viewmap::4eed93ec-eb58-493b-8388-d78a8f625132

*these are from Sykes version2, posted between 9/1 and 9/5/21, which appear similar to 8/31 version1

# Approximate time spent on this effort: 68 hours

| | Approximate Hours |
|---|---|
| Reading background material (Article XI, public literature on redistricting state-of-the-art) | 6 |
| Contacting my House/Senate reps and ORC members to offer my technical assistance – no positive response received | 4 |
| Capturing my technical assistance as public input to submit to the ORC | 8 |
| Preparing to speak and attending the 8/24 UC hearing | 8 |
| Learning to use Dave's Redistricting | 0.1 |
| Creating House map version 1 | 10 |
| Converting House v1 to Senate v1 | 1 |
| Optimizing House for competitiveness, minority splits, etc | 14 |
| Converting House v2 to Senate v2 | 0.5 |
| Addressing the "Senate incumbency" problem | 3 |
| Preparing this summary | 13 |

Pre-Census prep work.
26.1 hours
Started 8/13/21

Started 8/29

Census data required:
Started 8/25/21
41.5 hours

Completed 9/6/21

Respectfully submitted September 7, 2021.
I did not coordinate with any groups or persons in creating these maps or analyses. Any errors are my sole responsibility.

Geoff Wise

# Appendix

- Sykes v1 vs. Sykes v2
- Zoom-ins on urban areas
  - (See earlier for Dayton and Cleveland)
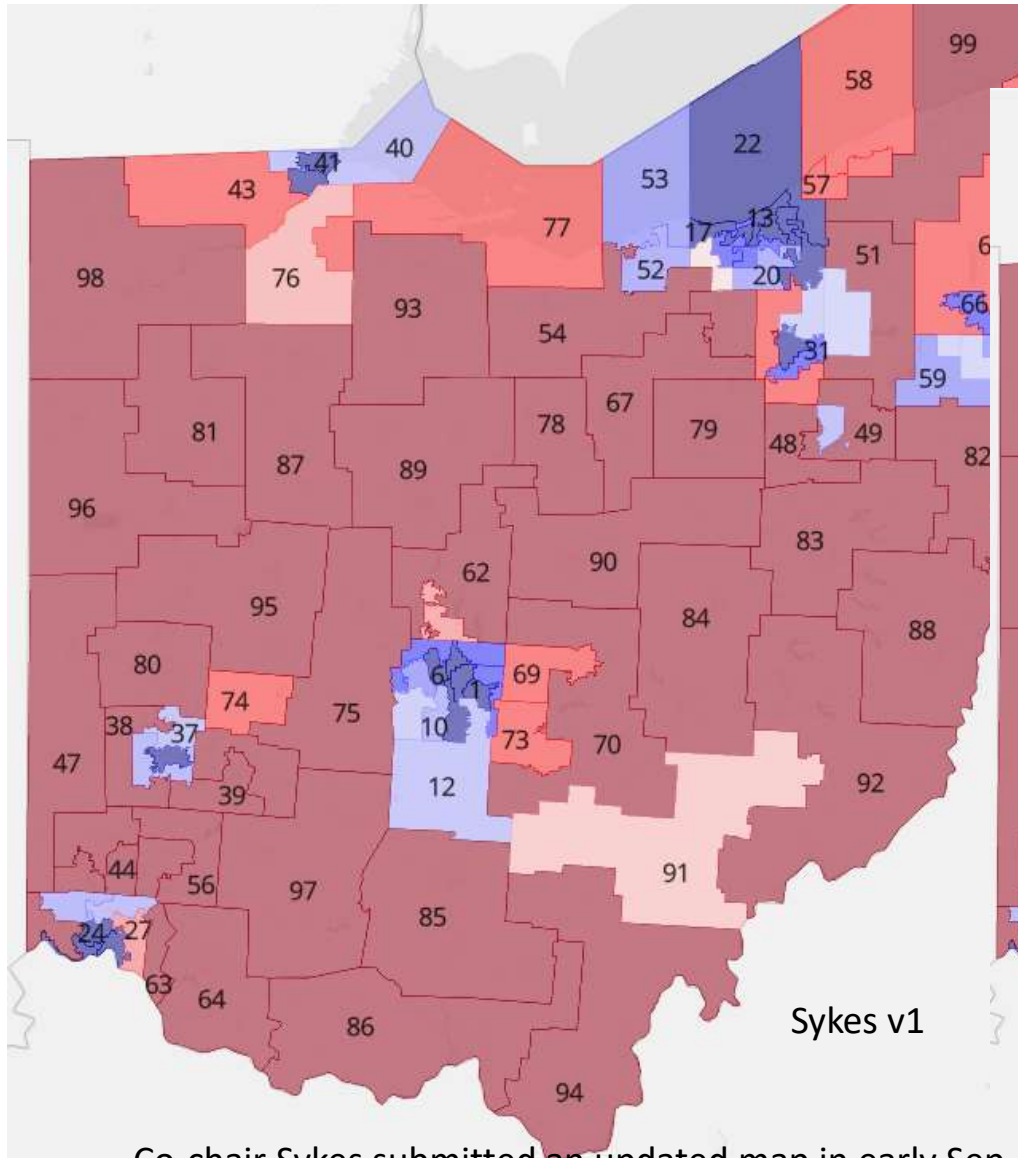
Sykes v1
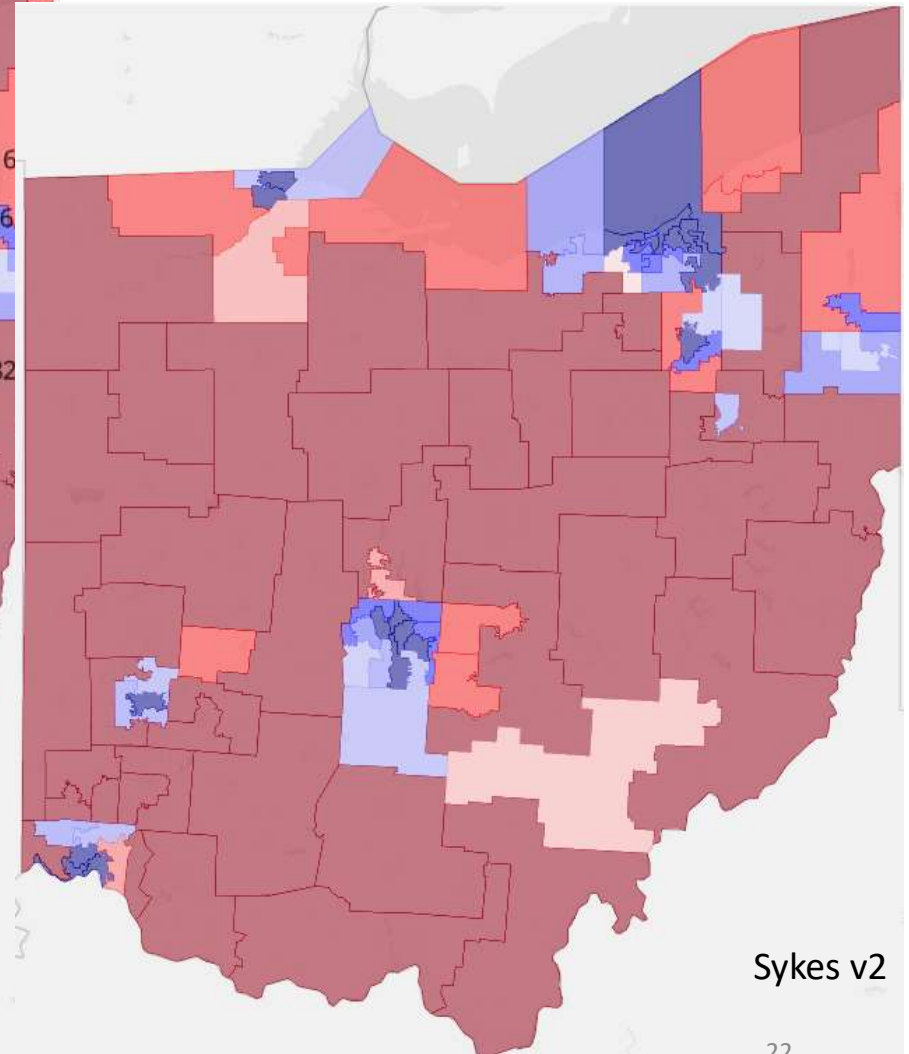
Sykes v2

Co-chair Sykes submitted an updated map in early Sep.  It appears similar to the 8/31/21 version.
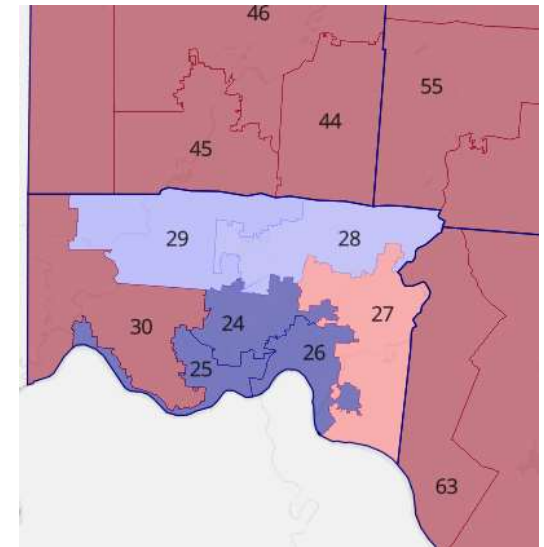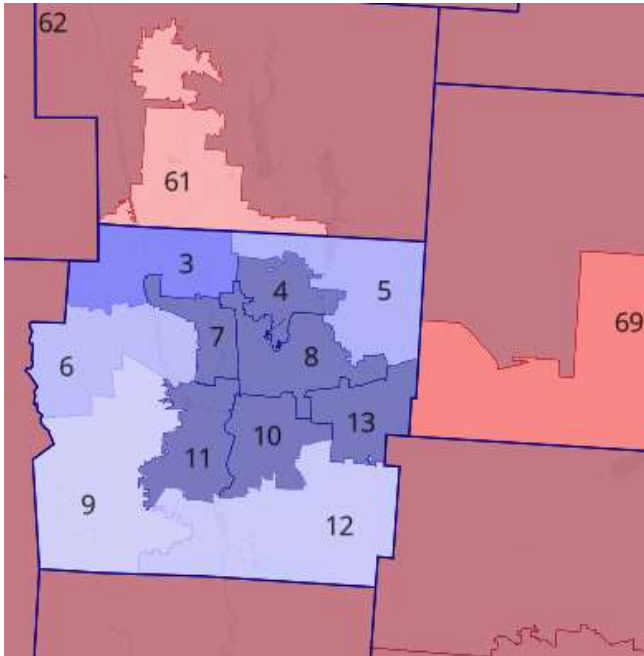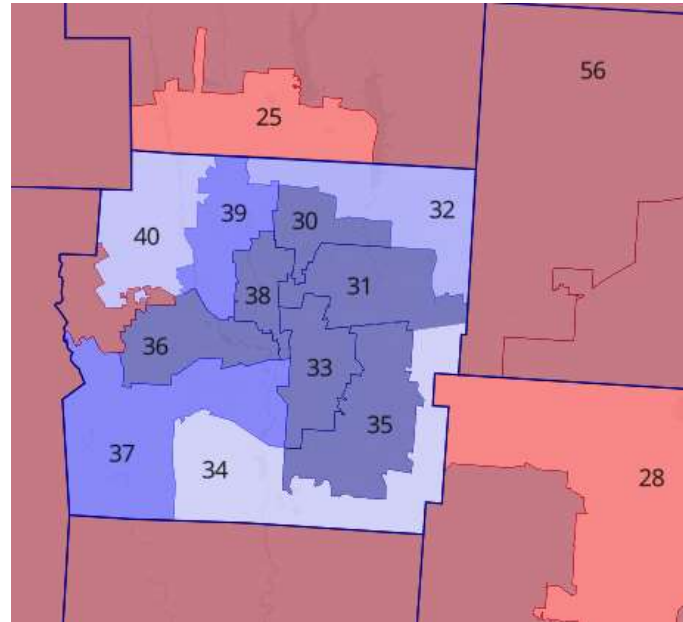
# Urban detail: Hamilton county

Wise
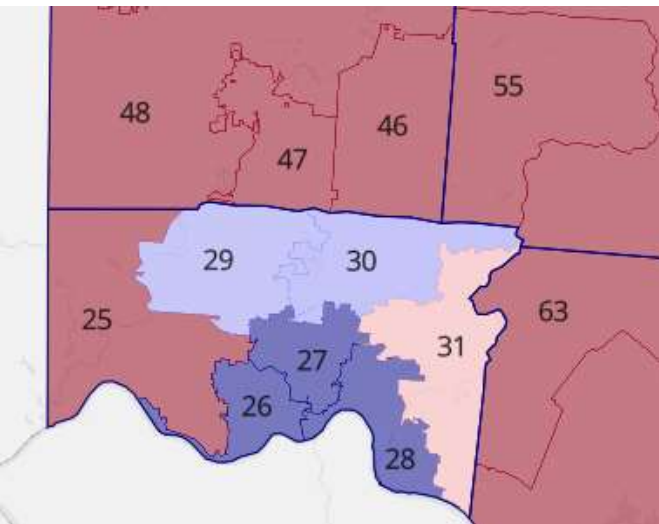
OCRC
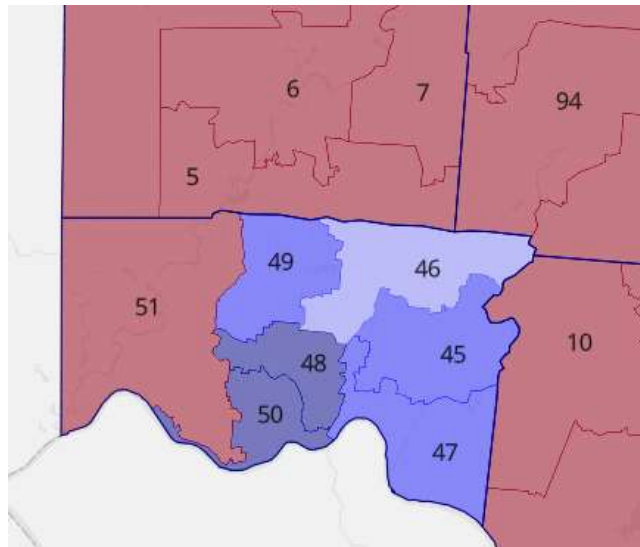
Sykes



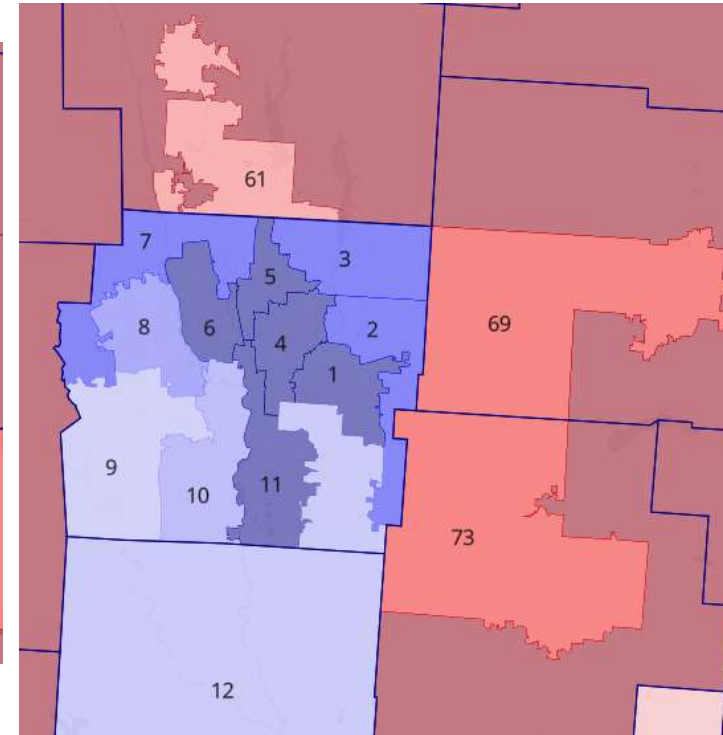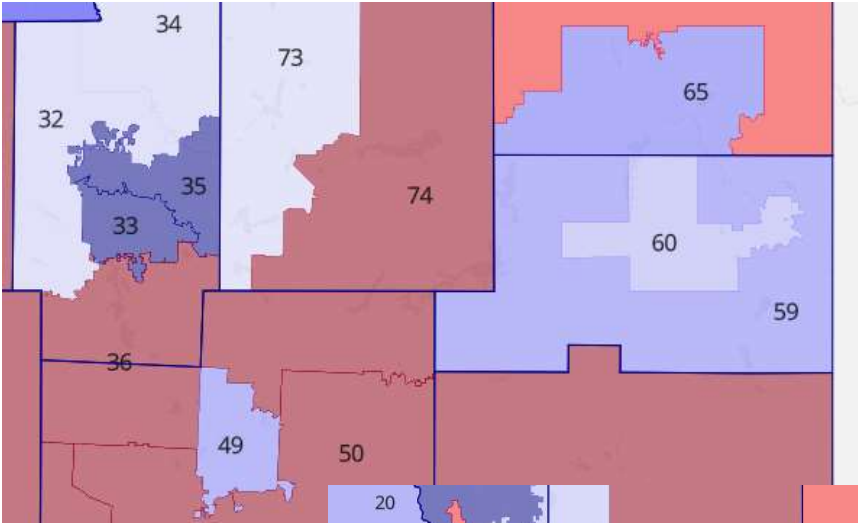Cuyahoga and Montgomery counties are compared on pp. 14 & 17
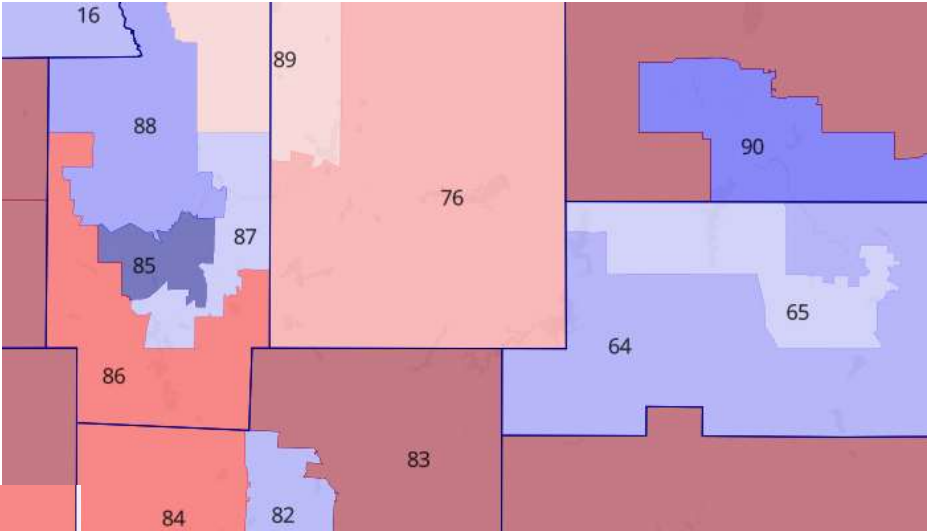
# Urban detail: Franklin county

Wise

OCRC
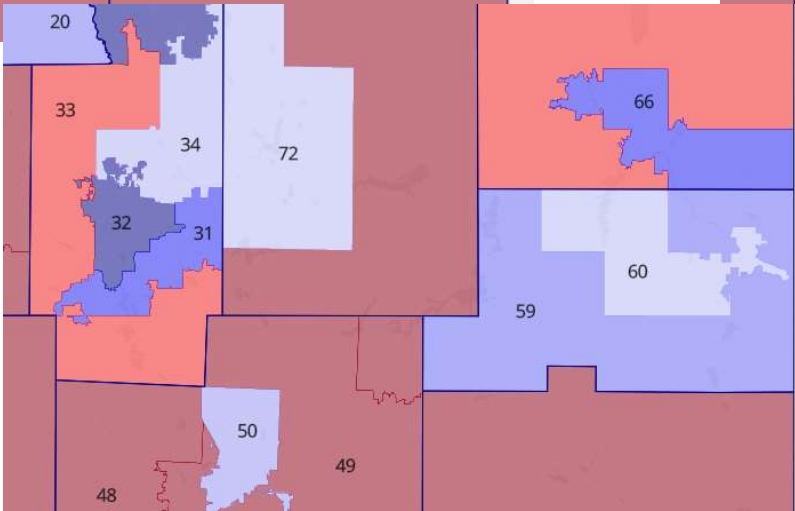
Sykes

# Urban detail: Akron-Youngstown

Wise

OCRC

Sykes

# Urban detail: Toledo area