This information describes two types of interactive political district maps. **First**, you can use GISsurfer ([https://gissurfer.com](https://gissurfer.com)) to look at pre-made maps for any congressional or state legislature political district. GISsurfer is a general purpose browser map. These maps have multiple layers of political district data, including labels, that you can turn on/off and restack. **Second**, anyone with ordinary computer skill can make their own custom interactive Google map for any federal or state legislature political district. Step-by-step instructions show how to download GIS (Geographic Information System) data for a single district and then import that data into Google maps.

### GISsurfer Political District Maps

Boundary data for congressional and state legislature political districts is hosted on various federal and state GIS servers. GISsurfer can display that GIS data in three different ways.

1. **Display political district maps that are built-in to GISsurfer.**

   There are three political district maps that are hard-coded in GISsurfer. Each map covers the USA and is a separate overlay that can be turned on along with any other data that GISsurfer is displaying. To turn on any of these built-in maps:

   1. Start GISsurfer:
      

   2. Click the basement button (next to the “Menu” button) and look under the “Overlay” heading. Mobile users need to scroll down.
3. Click one of these selections:
   - State legislature lower districts
   - State legislature upper districts
   - Congressional districts

4. If you are turning on either state legislature map then you will need to be at zoom level 8 before the district lines appear. If the scale in the lower right corner says 20 miles or 30 miles then you are at zoom level 8. The zoom levels at which data appears on the map are defined by the GIS server administrator and cannot be changed by GISsurfer.

Be patient. It might take the GIS server that is hosting the data a few seconds - or longer - to reply.

Two of the key features of GISsurfer is that (1) you can display multiple overlays of data at the same time and (2) the **top layer is clickable**. How do you tell what layer is ‘on top’? Click the basemap button and look under the “Overlay” heading. Layers that are ‘on’ have a number in front. The highest numbered layer is ‘on top’. If you click something in the top layer then you will see a display with all the **attribute data** the GIS server has for the thing that you clicked. Some GIS layers have great attribute data and other GIS layers have attribute data that is not very useful.

If you turn on the “Congressional districts” map then you will see that the districts are shaded blue/red based on the party of the person holding the seat. This **color shading** is possible since the attribute data on the GIS server includes the party affiliation of the person holding the seat. Alas, the Census Bureau server that is hosting the data for all state legislature seats does not include party affiliation as part of its attribute data.

If you want more flexibility in how the district lines appear on the map and/or you would like the map to display **district labels**, then you will need to use one of the two other types of GISsurfer maps which are described below.

**2. Display political district maps that are specified in a text file and that cover the USA.**

The following link starts GISsurfer ([https://gissurfer.com](https://gissurfer.com)) and displays a map that has over 20 overlays that you can turn on/off/restack. When the map opens it displays congressional districts with a black boundary and **color shading** based on party affiliation of the person holding the seat. Be patient. It may take a short time for the GIS server to send you the data.


(Tech sidebar: The GIS layers that the map can display are specified in the txt file that you see at the end of the above map link. Sure, you can look at the contents of that text file but be forewarned that some of the syntax is a bit eye watering.)
After the map opens, click the basemap button and look under the “Overlay” heading. Notice the two layers that are ‘on’ and all the other layers. Also notice that various overlay layers can display the district boundary lines as black lines, yellow lines and/or red dots. There are separate layers that display labels.

If you turn on state legislature data, then you will need to be zoomed in to level 8 or higher before the data will display.

Experiment with turning different layers on at the same time. For example, start by turning all layers off and zoom in to at least zoom level 8. At zoom level 8 the scale in the lower right corner will say 20 miles or 30 miles. Now turn on the layer “USA house yellow line” and then turn on “State senate red dot” and “State senate label”. You can now see which state senate districts are fully or partially contained in each congressional district.

Want to make your own custom map link? Start by making the map look on your screen the way you want it to look when it opens. Pay attention to which layer is ‘on top’ and therefore clickable. Now click Menu ==> Link to this map. The link that you see will replicate the map on your screen.

If you need help using GISsurfer, there is a “Map tips” link in the upper left corner. And there is more information on the GISsurfer homepage at https://gissurfer.com (you will be redirected).

3. Display political district maps that are specified in a text file and that cover just one state.

If you are focused on the political districts for a single state, then these are the maps you will want to use. Also, for 17 states the legislative districts are color shaded based on party affiliation of the person holding the seat. This is possible since the district data is hosted on a state GIS server that includes party affiliation as part of the attribute data for each district.

Just like the prior section (maps that cover the USA), these state maps include different ways to show the boundary line for each district. This approach lets you display different types of areas at the same time and still see the boundary for each area.

Alabama semi-transparent colors

Alaska
Arizona  semi-transparent colors
In this state the house districts and senate districts are the same.

Arkansas  semi-transparent colors

California  semi-transparent colors

Colorado  semi-transparent colors

Connecticut
The state legislature data only displays at zoom level 8 or higher.

Delaware
The state legislature data only displays at zoom level 8 or higher.

Florida  semi-transparent colors

Georgia
Hawaii

Idaho
In this state the house districts and senate districts are the same.

Illinois
The state legislature data only displays at zoom level 8 or higher.

Indiana  semi-transparent colors

Iowa  semi-transparent colors

Kansas
The state legislature data only displays at zoom level 8 or higher.

Kentucky  semi-transparent colors

Louisiana
Maine

Maryland
The state legislature data only displays at zoom level 8 or higher.
https://mappingsupport.com/p2/gissurfer.php?center=38.853402,-77.534631&zoom=8&basemap=USA_basemap&overlay=MD_state_house_black_line&txtfile=https://mappingsupport.com/p2/political/maryland/maryland_legislature.txt

Massachusetts  semi-transparent colors
The state legislature labels only displays at zoom level 8 or higher.

Michigan  semi-transparent colors
The state legislature labels only displays at zoom level 8 or higher.

Minnesota  semi-transparent colors

Mississippi  semi-transparent colors

Missouri

Montana
The state legislature data only displays at zoom level 9 or higher.
In this state the house districts and senate districts are the same.
Nebraska
The legislature only has one chamber and it is non-partisan.

Nevada
The state legislature data only displays at zoom level 8 or higher.

New Hampshire

New Jersey  semi-transparent colors
In this state the house districts and senate districts are the same.

New Mexico
The state legislature data only displays at zoom level 8 or higher.

New York  semi-transparent colors
The state legislature labels only displays at zoom level 8 or higher.

North Carolina
The North Carolina legislative district lines were revised in 2019. This map displays the new district lines with the line style that is defined on the GIS server. These new districts will be used in the 2020 election.
North Dakota
In this state the house districts and senate districts are the same.

Ohio  semi-transparent colors
The state legislature labels only displays at zoom level 8 or higher.

Oklahoma

Oregon  semi-transparent colors
https://mappingsupport.com/p2/gissurfer.php?center=43.977144,-120.537377&zoom=7&basemap=USA_basemap&overlay=OR_state_house_fill,OR_state_house_black_line&txtfile=https://mappingsupport.com/p2/political/oregon/oregon_legislature.txt

Pennsylvania  semi-transparent colors

Rhode Island

South Carolina
The state legislature data only displays at zoom level 8 or higher.

South Dakota
In this state the house districts and senate districts are the same.
The state legislature data only displays at zoom level 8 or higher.
https://mappingsupport.com/p2/gissurfer.php?center=44.393151,-100.698890&zoom=8&basemap=USA_basemap&overlay=SD_legislature_black_line&txtfile=https://mappingsupport.com/p2/political/south_dakota/south_dakota_legislature.txt
Tennessee
https://mappingsupport.com/p2/gissurfer.php?center=35.532923,-86.217299&zoom=7&basemap=
USA_basemap&overlay=TN_state_house_black_line&txtfile=https://mappingsupport.com/p2/
political/tennessee/tennessee_legislature.txt

Texas
The state legislature data only displays at zoom level 8 or higher.
USA_basemap&overlay=TX_state_house_black_line&txtfile=https://mappingsupport.com/p2/
political/texas/texas_legislature.txt

Utah
The state legislature data only displays at zoom level 8 or higher.
https://mappingsupport.com/p2/gissurfer.php?center=40.145381,-111.763916&zoom=8&basemap=
USA_basemap&overlay=UT_state_house_black_line&txtfile=https://mappingsupport.com/p2/
political/utah/utah_legislature.txt

Vermont
https://mappingsupport.com/p2/gissurfer.php?center=43.778834,-72.478381&zoom=8&basemap=
USA_basemap&overlay=VT_state_house_black_line&txtfile=https://mappingsupport.com/p2/
political/vermont/vermont_legislature.txt

Virginia
https://mappingsupport.com/p2/gissurfer.php?center=37.736629,-79.481818&zoom=7&basemap=
USA_basemap&overlay=VA_state_house_black_line&txtfile=https://mappingsupport.com/p2/
political/virginia/virginia_legislature.txt

Washington
In this state the house districts and senate districts are the same.
https://mappingsupport.com/p2/gissurfer.php?center=47.159560,-121.032254&zoom=7&basemap=
USA_basemap&overlay=WA_legislature_black_line&txtfile=https://mappingsupport.com/p2/
political/washington/washington_legislature.txt

West Virginia
USA_basemap&overlay=WV_state_house_black
line&txtfile=https://mappingsupport.com/p2/political/west_virginia/west_virginia_legislature.txt

Wisconsin
The state legislature data only displays at zoom level 8 or higher.
https://mappingsupport.com/p2/gissurfer.php?center=43.969298,-89.585159&zoom=8&basemap=
USA_basemap&overlay=WI_state_house_black_line&txtfile=https://mappingsupport.com/p2/p
olitical/wisconsin/wisconsin_legislature.txt
Wyoming

4. Display political district maps that show the Swing Left target districts.

The political group Swing Left has identified a number of legislative districts in various states where they are focusing resources. https://swingleft.org/p/super-state-strategy The goal is either to flip the district from red to blue or to retain the democratic incumbent. My contribution to that effort is to use the power of GIS (Geographic Information System) technology to produce a series of interactive maps. Each map shows one of those states and the Swing Left target districts. A unique feature of these maps are GIS overlays that you can turn on/off/restack in order to change the appearance of the district boundary lines.

To get the most benefit from these maps, please read the “Map tips”. That link is in the upper left corner of each map

Arizona
https://mappingsupport.com/p2/gissurfer.php?center=34.460989,-112.049560&zoom=7&basemap=USA_basemap&overlay=AZ_state_boundary,AZ_senate_yellow_line,AZ_senate_black_line, AZ_house_red_dot,AZ_legislature_label&txtfile=https://mappingsupport.com/p2/political/arizona/arizona_swingleft.txt

Florida
https://mappingsupport.com/p2/gissurfer.php?center=27.469828,-81.837158&zoom=7&basemap=USA_basemap&overlay=FL_state_senate_yellow_line,FL_state_senate_black_line,FL_state_house_black_line,FL_state_house_red_dot&txtfile=https://mappingsupport.com/p2/political/Florida/florida_swingleft.txt

Georgia

Iowa
https://mappingsupport.com/p2/gissurfer.php?center=41.844955,-93.455203&zoom=7&basemap=USA_basemap&overlay=IA_state_boundary,IA_state_senate_yellow_line,IA_state_senate_black_line,IA_state_house_black_line,IA_state_house_red_dot,IA_state_house_label&txtfile=https://mappingsupport.com/p2/political/iowa/iowa_swingleft.txt
Custom Google Maps For Single Political Districts

Are you helping a candidate who is running for state or federal office? Are you working against gerrymandering and want to highlight districts with weird shapes? You can make a custom Google map that shows any single federal or state political district. Your map can include a popup that appears when someone clicks the district. That popup can include a picture, one or more links and text.
Here is an example map that was made by someone who is helping this candidate who is running for a seat in the North Carolina state senate. Go ahead an open this map and then click the district.


No, you do not need any special computer skills to make a custom Google map. All that is needed is ordinary computer skill and the ability to follow the step-by-step instructions shown below.

If you have a KMZ file with the boundary data for any political district, from the federal to the very local level, then you can make a Google map that displays that political district boundary. This report shows how to:

- Download a KMZ file with the district boundary for any U.S. Congressional district or state legislature district.
- Import your KMZ file into Google maps

Please note that while this report is non-partisan and these steps can be followed by anyone from any party, I am only offering to provide support to democratic candidates.

In part, I hope people will use this resource to make Google maps showing state legislature districts with particularly contorted shapes. A bizarrely shaped district is often a good indicator that gerrymandering was used to draw the district boundaries. Gerrymandering allows politicians to pick their voters and prevents voters from picking their politicians.

Special notice for North Carolina legislature districts. In 2019 a court held that the North Carolina legislative districts were drawn based on partisan gerrymandering that was unlawful under several provisions of the state constitution. The legislature then adopted new district boundaries. In order to make a Google map for any of these new districts, you need to follow the steps in this PDF file: https://mappingsupport.com/p2/political/north_carolina/north-carolina-district-map.pdf

Step 1. Download a KMZ file with the boundary data for one district

The U.S. Census Bureau operates a GIS (Geographic Information System) server that has district boundary data for the state legislature districts. Metadata on this GIS server states that these are the district boundaries as of January 1, 2018. Each district is uniquely identified with a GEOID code. The following link opens a web map I produced that you can use to get the GEOID code.
Open GISsurfer map:

You can either zoom/pan to your area of interest or click Menu ==> Search. If you are turning on a state legislature layer then you need to be at zoom level 8 or higher before the district lines appear. At zoom level 8 the 'scale' indicator will say “20 miles” or “30 miles”.

Then click the basemap button (next to the “Menu” button) and look under the “Overlay” heading. Mobile users need to scroll down. You will see several overlay names including:
- State legislature lower districts
- State legislature upper districts
- Congressional districts

Click one of the overlay names to turn that overlay on and click the name again to turn it off. It may take a few seconds for the overlay data to appear on the map and you might need to zoom in a bit.

If you would like to see just the district lines with no basemap at all, then click the basemap button and select “All white basemap”.

After the overlay has appeared on the map, you can **click the map inside any district** to see a popup with some data for that district. Look for the attribute named “GEOID” and note the value.

After you get the GEOID value for a district you are ready to download a KMZ file with the boundary data. Substitute the GEOID value into the correct download link shown below then paste that link (including the single quotes) into a browser address bar and download/save the KMZ file.

When you are saving the KMZ file, give it a descriptive name and use the underline character instead of any space.

**State house district download link**

**State senate district download link**

**U.S. House of Representatives district download link**
Step 2. Import the KMZ file into Google maps.

1. Start Google maps: https://maps.google.com
2. Click the 3-bar symbol (menu) in the upper left corner of your screen. A new sidebar appears.
3. Click “Your places”. A new sidebar appears.
4. Click “Maps” near the top of the sidebar.
5. Click “Create map”. Find this in the sidebar - maybe at the bottom.
6. Click “Import”.
7. Drag or browse to the KMZ file you saved. Browsing to the KMZ file and double clicking it works fine. The district boundary will appear on the map.

Step 3. Edit your Google map to add campaign information

Caution! Do not click-hold inside the district and drag your mouse. Doing so will move the district boundary.

At this point the dialog box on the left side of a desktop screen gives you some options to rename, change styles and change the basemap that displays when your map opens. Consider changing the basemap to the aerial view. Be sure enter a title and description here.

Important! Click inside the district. This is the information people will see in a popup when they look at your Google map and click on the district. Currently this is the attribute data that was on the GIS server for this district. However, that information is likely not very useful for a political campaign. Click the pencil at the bottom of the screen. You can now edit this information. You should see two areas where you can enter text.

In the upper area enter the name of the district. For example: NC Senate District 37

In the lower area enter a description. You can enter plain text and links. Google will make any link clickable. There is not anyway to change the font or make text bold or include HTML when making a Google map with this method. Type ctrl-enter to go to the next line. Do it twice to insert a blank line.

Notice the camera symbol which will let you include a link to a picture.

If you click the ‘paint can’ symbol then you can change the border color and width. Use a bright color so it is easy to see and consider increasing the border width a bit.
Step 4. Get a link from Google that will display your map.

8. Look at the insert in the upper left part of your screen and click "preview".

9. Click inside the district and see if the content that is displayed looks OK.

10. To go back to the edit screen, click “Dismiss” or “Edit”. Otherwise, click “Share”.

11. If you have not done so already, add a title and description, then click OK.

12. If the popup on the screen says “Private - Only you can access”, then click “Change”.

13. Set the access to “Public - on the web”. Save.

14. Look near the top of the popup where it says “Link to share”. Copy and save that link. This is the link that will open Google maps and display your map.

Tip: When anyone opens your map, Google will automatically adjust the map center and zoom so that all of the district is on the user’s screen.

There are three ways to include a Google map on a campaign website.

First, you could simply include the link you got from Google.

Second, you could include a screenshot that is linked to your Google map. When someone clicks the screenshot then your Google map would open.

Third, you could embed a ‘live’ Google map on your website using <iframe> tags. The advantage of this approach is that people can see and interact with your map without leaving your campaign website. If your web designer needs help embedding your Google map, then a quick internet search (iframe embed google map) will yield lots of examples.

Tip: If you embed a map on a website then a ‘best practice' is to include a link above or below the embedded map titled something like "Open map full screen". Obviously clicking that link would do exactly what it says.

Here is one final idea. Consider making a standalone webpage as follows.

- A memorable html <title>
- 1 or 2 lines about your campaign
- All the rest of the user's screen will be your embedded Google map

Now if someone saves the link to that webpage (which is mostly your Google district map) and they are looking through their browser's bookmarks, they will easily be able to find your map because of the memorable <title> you used in the html for this webpage.
Got questions? **I am volunteering to help any democratic campaign.** My contact link is at the top of this report.