

Getting Started with the Redistricting Software

Software Version 2.36 with 2010 Census Data

Document Version 1.5: September 2021

Contents

Introduction	
What is Redistricting?	4
What Criteria Must Redistricting Plans Meet?	5
What is GIS?	6
Who is ESRI?	6
Create an Account and Log In	
Open a Plan	11
Opening a Saved Plan Instead	12
Changing Your Profile and Log-in Information	14
Saving the Plan	15
Navigating the Interface	17
Moving Around the Map	17
Data (District Window)	20
Ribbons and Tools	21
Panels	25
Beginning Work on Your Plan	25
Basemaps	26
Understanding Zoom and Selection Levels	27
Building Your Plan: Map Selection Tools	28
Choosing which district to edit	28
Selecting individual locations	29
Selecting by rectangle	30
Selecting by custom polygon	31
Selecting by line	32
What if I make a mistake?	32
Building Your Plan: Other Useful Tools	35
Changing district colors	35
Locking	34
Hiding districts	36
IMPORTANT NOTE ABOUT SENATE DISTRICTS	37
Understanding the Data	38

What's in the District Window?	38
Themes	41
Reviewing Your Plan	43
Charts	43
Comparing Plans	49
Adding Notes	52
Drawing on the map	52
Writing on the map	54
Clearing your notes	55
Integrity Tests	56
Sharing Your Plan	59
Attaching Files and Documentation	59
Groups	62
Sharing Plans	70
Exporting Plans	72
Importing Plans	73
Importing a Text File	73
Importing a Shapefile	76
Converting 2010 Plans to 2020 Plans	79
Printing Plans	79
Submitting Your Plan	81
Important Notes About Submitting Plans	81
Submitting Your Plan	82
Document Updates	86
Changes for Document 1.5 (September 2021)	86
Changes for Document 1.4 (August 2021)	86
Changes for Document 1.3 (June 2021)	86
Changes for Document 1.2 (May 2021)	86
Chadita	97

Introduction

Thank you for your interest in Oregon redistricting! In this document, you will learn what redistricting is, how to create your redistricting account, and get started on your first plan!

You can submit your plans to the redistricting committees for consideration. Your plans must be submitted by September 8th, 2021 at 5 PM Pacific time in order to be considered by the committees. You can submit a Congressional plan and/or a House plan.

In Oregon, every Senate seat must contain two House seats.

Therefore, if you submit a House plan, upload a document telling us which House seats you would combine to create a Senate plan.

This document was prepared by the redistricting team at Oregon's Legislative Policy and Research Office (LPRO). For questions, comments, or suggestions, please e-mail us at Oregon.Redistricting@oregonlegislature.gov.

You can also visit Oregon's official redistricting website at https://www.oregonlegislature.gov/redistricting. The website includes information about Oregon's redistricting process, the redistricting committees, and also has training videos which cover the same topics as this document.

The above website also includes a supplemental document going over software functions not covered in this document.

What is Redistricting?

The United States Constitution requires a census every ten years to determine the number of people residing in each state. Once the population of each state has been determined, the 435 seats in the U.S.

House of Representatives are redistributed based on population losses or gains in each state. This process is known as reapportionment.

Redistricting is the process of redrawing the district boundaries of state House, Senate, and Congressional districts. States take a variety of approaches to accomplish redistricting. Redistricting can be performed by the legislative, judicial, or executive branches, or by an independent commission. In Oregon, the state Constitution directs the Legislative Assembly to draw the district boundaries.

What Criteria Must Redistricting Plans Meet?

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

The law also specifies that no district is to be drawn to favor any political party, incumbent legislator, or other person. Additionally, districts may not dilute the voting strength of any language or ethnic minority group.

"Communities of common interest" is a broad term that can mean any subpopulation that expresses an interest in occupying the same district and is not limited to ethnic or racial minority blocs.

Each Oregon Senate district must also completely contain 2 House districts.

Oregon has 6 Congressional districts, 30 state Senate districts, and 60 state House districts.

For more information about redistricting in Oregon, click this link: https://www.oregonlegislature.gov/lpro/Publications/Redistricting%20-%20Background%20Brief.pdf

What is GIS?

GIS stands for geographic information system. A GIS is a computer system for gathering, storing, analyzing, and displaying spatial data. This data can include roads, water features, buildings, land ownership – essentially anything that can be mapped can be included in a GIS.

Additional information can be found here:

https://www.nationalgeographic.org/encyclopedia/geographic-information-system-gis/

Who is ESRI?

ESRI stands for Environmental Systems Research Institute. They are the software company who produce the ArcGIS software suite, one of the most widely used and recognized GIS products on the market and the primary GIS used by numerous state agencies and universities. The redistricting software the Oregon legislature is using to redistrict the state comes from ESRI.

Examples of how state agencies use ArcGIS can be found here: https://olis.oregonlegislature.gov/liz/2021R1/Downloads/CommitteeMeetingDocument/230417

The Oregon Geospatial Enterprise Office's website can be found here: https://www.oregon.gov/GEO/Pages/index.aspx

Create an Account and Log In

The redistricting application is available here:

https://oregon-redistricting.esriemcs.com/redistricting/

If you already have a redistricting account, click on "Sign in to Portal for ArcGIS" and enter your credentials.

If you do *not* have an account, click "Create an account."



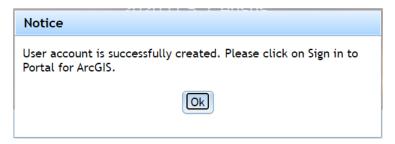
The "Create Account" window will appear. Fill in the requested information.

Note that ESRI's password requirements can be difficult to meet. If your password is not being accepted, try one or more of the following:

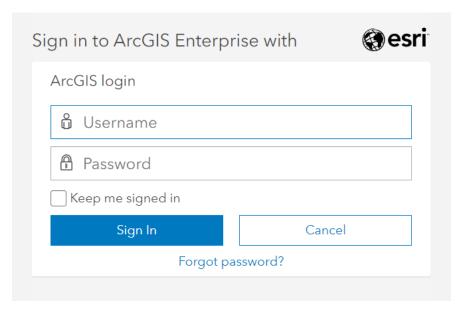
- Use both lower- and upper-case letters
- Include at least one number
- Include at least one symbol (!#\$%^&, etc.)
- Ensure the password is at least 8 characters long



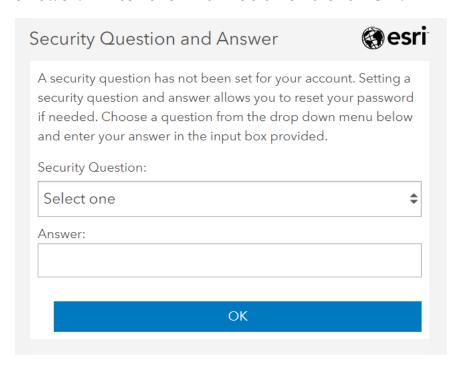
After filling out the information and clicking the Create button, the Notice window appears:



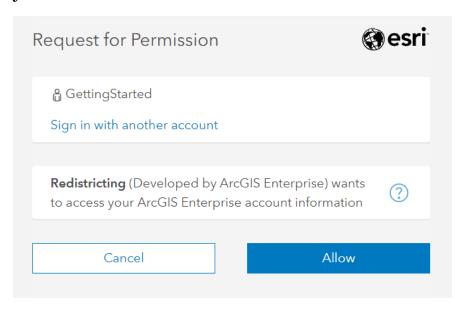
Click OK. The first page reappears. Click on "Sign in to Portal for ArcGIS" and enter the credentials you used in creating the account:



You will be prompted to select a security question and create a custom answer. Enter the information and click OK:



ESRI will ask your permission to let the redistricting application access your account. Click Allow:



The licensing agreement will appear. Click Agree when you finish reviewing it:

Licensing Agreement

LICENSE AND SERVICES AGREEMENT

IMPORTANT-READ CAREFULLY

Unless superseded by a signed license agreement between you and Esri, Esri is willing to provide Esri Offerings to you only if you accept all terms and conditions contained in this Agreement. Please read the terms and conditions carefully. You may not use the Esri Offerings until you have agreed to the terms and conditions of the Agreement. If you do not agree to the terms and conditions as stated, click "I do not accept the agreement" below; you may then request a refund of applicable fees paid.

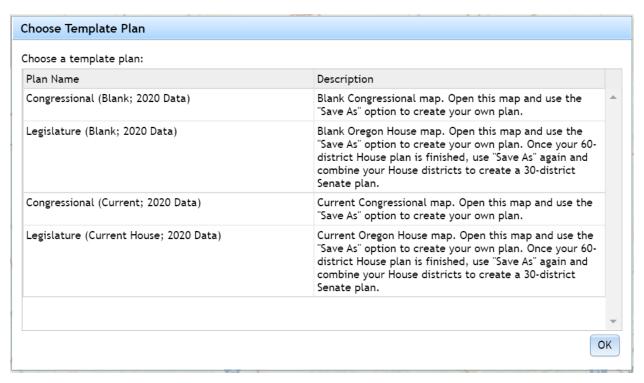
This Agreement is between you ("Customer") and Environmental Systems Research Institute, Inc. ("Esri"), a California corporation with a place of business at 380 New York Street, Redlands, California 92373-8100 USA.

- 1.0 GENERAL GRANT OF RIGHTS AND RESTRICTIONS
- 1.1 Attachment A contains definitions of capitalized terms used throughout this Agreement. Each section of this Agreement may include additional definitions that are used exclusively within that section.
- 1.2 Grant of Rights. In consideration of Customer's payment of all applicable

Agree Disagree

Open a Plan

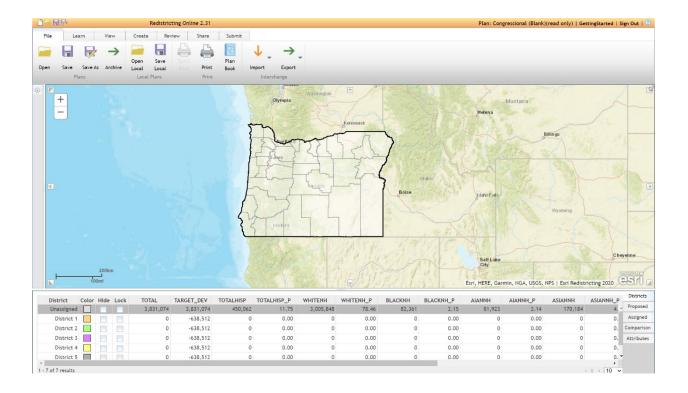
When you log in, the Choose Template Plan window appears:



These are the template plans available to you. The plan name is in the left column, while a short description of the plan appears on the right.

You can choose template plans for the Congressional or Legislative districts. Each has two versions – one is blank, and the second has the current districts (the Legislative version has the House districts as its starting point).

For now, click on Congressional (Blank) and then click OK. This opens a blank map for Congressional districts. When it finishes opening, it should look something like this:

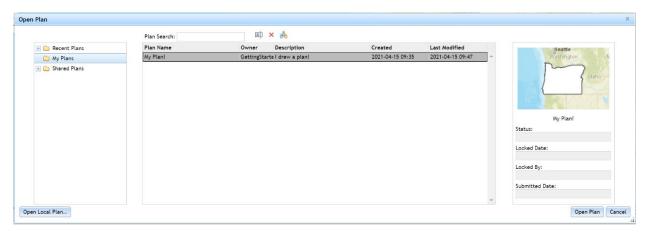


Opening a Saved Plan Instead

In the current software version, the template plan menu comes up when you log in. If you already have a plan saved that you want to open or work on, open any of the template plans first. Once the template plan finishes opening, click the Open button in the File ribbon:



The Open Plan window pops up:



The left-hand section has three folders you can click on:

- Recent Plans shows plans you have recently opened or worked on
- My Plans shows all plans belonging to you.
- **Shared Plans** shows plans that have been shared. If you are a member of any groups (you should always have access to the *Everyone* group), you can click on the group name to see plans shared to that group.

Some plans are available to *Everyone*:

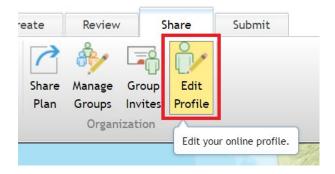
- Congressional blank
- Congressional with current districts
- Legislature blank
- Legislature with current House districts
- Any plans other software users have decided to share with the public

When you click on a plan in the middle box, a small preview of the plan shows up in the right-hand box.

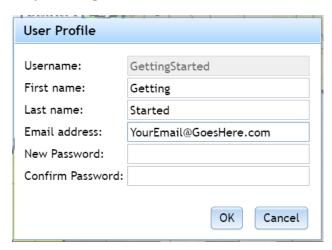
To open a plan, click on the plan you want in the middle box, and then at the bottom-right of the window, click the Open Plan button.

Changing Your Profile and Log-in Information

Once you are logged in to the software and have a plan opened, you can change your profile and log-in credentials if you wish. In the Share ribbon, click on the Edit Profile button.



The User Profile window appears where you can change your credentials. Click OK to confirm your changes, or click Cancel to cancel any changes:

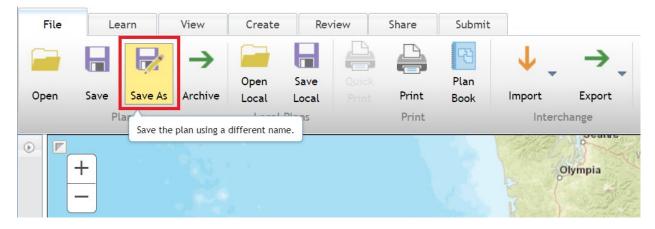


The User Profile window also appears if you click on your username in the top right corner of the application.

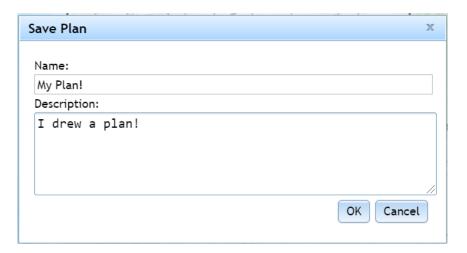


Saving the Plan

Before getting started, use the Save As function to save your own version of the template plan we opened earlier. Click on the Save As button:



The Save Plan window appears. Fill in your name and description for the plan, and then click OK:

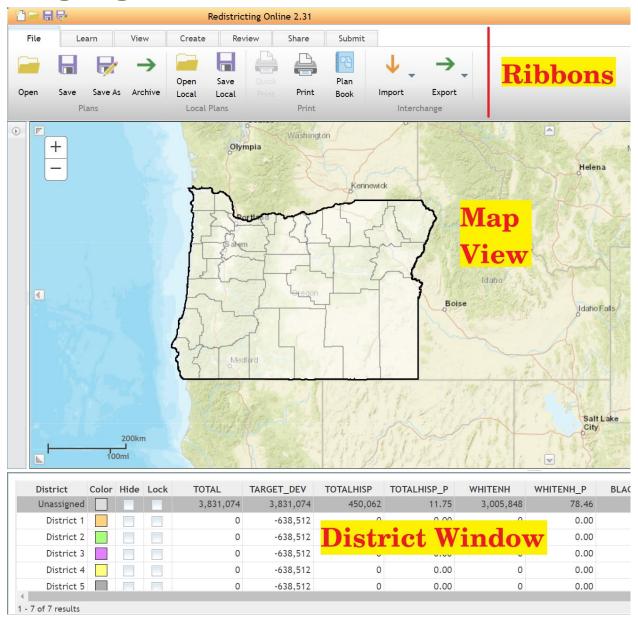


At this point, you can use the regular Save buttons whenever you want. The Save button in the orange bar will be there no matter which tools you're using. The bigger Save button is in the File ribbon.

You should save often – technology can be finicky!



Navigating the Interface



Moving Around the Map

The center of the screen is your map view. To move around the map, click on the Create ribbon and select the Pan tool:



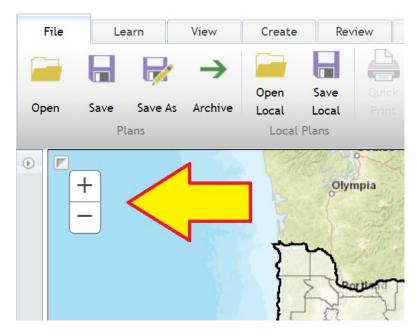
You can then click on the map, hold down the left mouse button, and then move your mouse to move around the map.

Other options also exist to move around the map:

- Press the arrow keys on your computer keyboard to pan the map in the direction of the arrow(s) you press.
- If your mouse has a center scroll wheel, hold that down and move your mouse. This will pan around the map.

You have a few ways to zoom in or out of the map.

Click on the + (zoom in) and – (zoom out) buttons at the top-left corner of the map to zoom in and out:

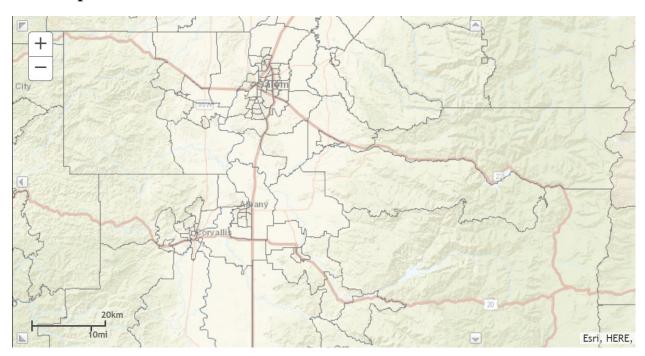


In the Create ribbon, click on the Zoom In icon (the icon to its right is the Zoom Out button):



Click on the map, hold the left mouse button down, and move the mouse to draw a rectangle:





The map zooms in to that area:

The zoom out tool functions the same way.

A third option is to scroll up or down on your mouse wheel with your mouse pointer on the map. Scrolling up will zoom the map in to where your mouse pointer is. Scrolling down will zoom out from the area your mouse pointer is.

Data (District Window)

The bottom of the screen is the district window and shows your districts' population:

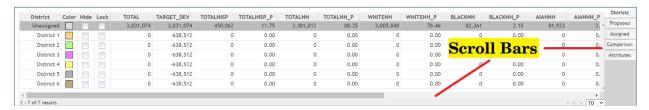
District	Color	Hide	Lock	TOTAL	TARGET_DEV	TOTALHISP	TOTALHISP_P	TOTALNH	TOTALNH_P	WHITENH	WHITENH_P	BLACKNH	BLACKNH_P	HANAIA	AIANNH_P	Districts
Unassigned				3,831,074	3,831,074	450,062	11.75	3,381,012	88.25	3,005,848	78.46	82,361	2.15	81,923	2.	Proposed
District 1				0	-638,512	0	0.00	0	0.00	0	0.00	0	0.00	0	0.	Assigned
District 2				0	-638,512	0	0.00	0	0.00	0	0.00	0	0.00	0	0.	Compariso
District 3				0	-638,512	0	0.00	0	0.00	0	0.00	0	0.00	0	0.	Attribute
District 4				0	-638,512	0	0.00	0	0.00	0	0.00	0	0.00	0	0.	
District 5				0	-638,512	0	0.00	0	0.00	0	0.00	0	0.00	0	0.	
District 6				0	-638,512	0	0.00	0	0.00	0	0.00	0	0.00	0	0.	

These numbers automatically change as you adjust your district lines. The numbers use Census 2020 data and include total population and race/ethnicity numbers.

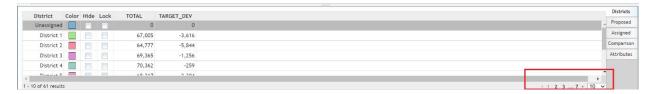
With your mouse pointer on the data table, scroll up or down on your mouse wheel. This allows you to scroll through the data table to see numbers for other districts.

There is also a scroll bar on the right-hand side of the table that you can click on to scroll up or down instead.

The scroll bar at the bottom of the table can be moved to the left or right so you can see other data variables.



If there are more than ten districts in your plan, your districts will be on separate 'pages' in the District window. In the bottom-right corner of the window you can click on the page numbers to scroll through them, or you can click on the drop-down list to change the number of districts that appear on each page:

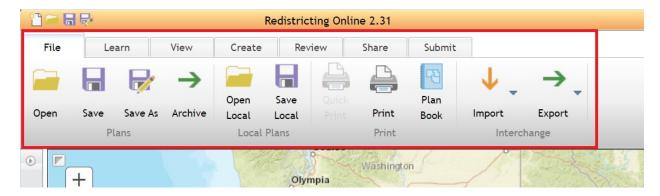


For more information about how the Census defines race and ethnicity, click this link:

https://www.census.gov/topics/population/race/about.html

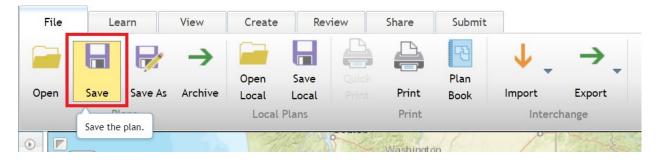
Ribbons and Tools

The ribbon at the top of the screen includes your redistricting tools.



Click through the ribbons (File; Learn; View; Create; Review; Share; Submit). Each of these ribbons contain different types of tools, while the Learn ribbon has information from ESRI about the program.

If you're ever unsure what a button does, hover your mouse pointer over the button. A small description of its function will appear:

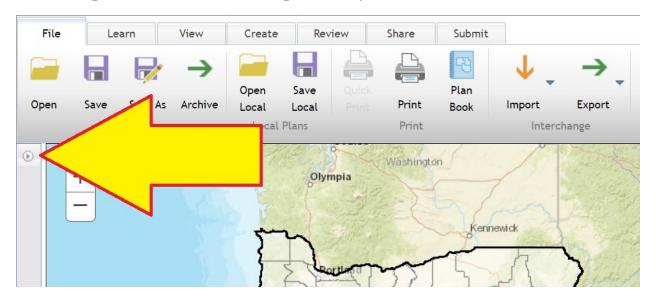


For ESRI's full online documentation, click this link:

 $\frac{https://doc.arcgis.com/en/redistricting/get-started/what-is-esri-redistricting-online.htm}{$

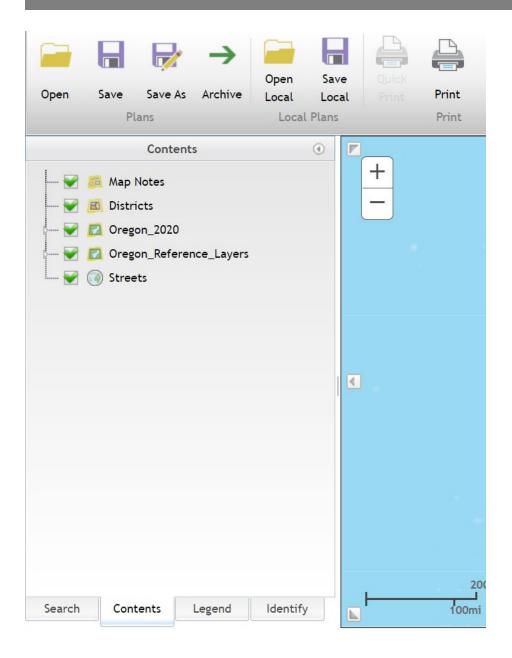
Panels

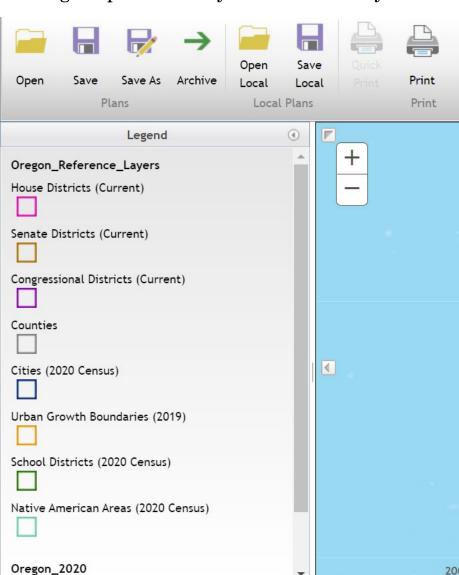
At the top-left corner of the map is a tiny arrow button:



When you click on this, a gray box with 4 tabs at the bottom (Search; Contents; Legend; Identify) appears with more options.

The Contents panel allows you to turn map layers on or off by clicking on the check boxes. Try turning some layers on or off to see how they change the map.





The Legend panel shows you what active layers look like:

The Search and Identify panels include more advanced functions to be covered in other training materials.

Identify

Beginning Work on Your Plan

Legend

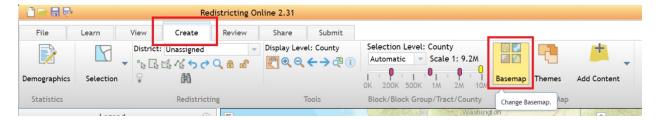
Search

Contents

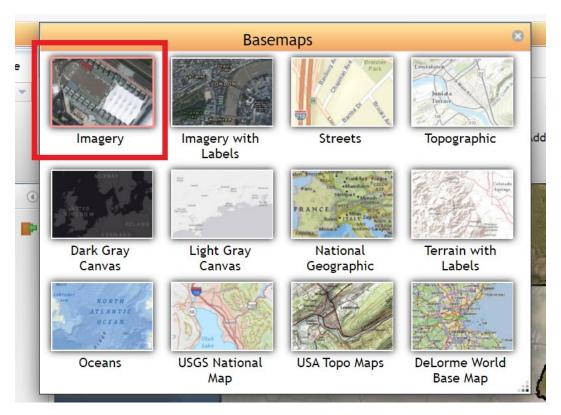
In this section, you'll start working on your plan and learn some of the basic functions of the software.

Basemaps

Click on the *Create* ribbon. Most of your work will be done on this ribbon. Towards the right hand side of the ribbon is the Basemap button.



In the Basemaps window, click on Imagery.



This changes the underlying reference map to satellite imagery. Depending on your needs, you may want to change the basemap.

For this exercise, go back to the Basemaps window and click on Streets. This changes the basemap back to the default street map.

Understanding Zoom and Selection Levels

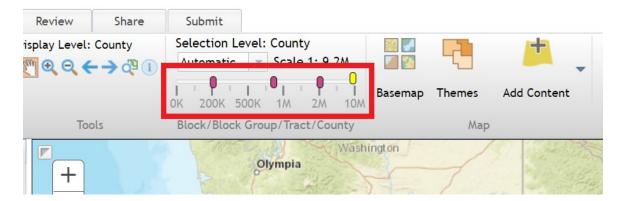
In the *Create* ribbon, zoom level information is to the left of the Basemap button:



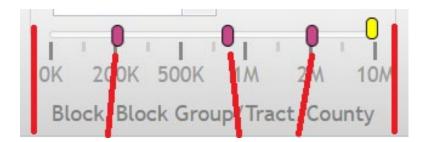
Display Level tells you what geography is currently displayed. By default, the geography is County. Try zooming in on the map. You should see the display level change. Zoom levels include County, Tract, Block Group, and Block. At the closest zoom levels, the display level will be Block. Now zoom back out to the County level.

The scale bar under Selection Level shows the divisions where different geographies show up. These can be adjusted.

The yellow oval above the line shows your current zoom level. As you zoom in or out, the yellow oval moves along the scale bar:

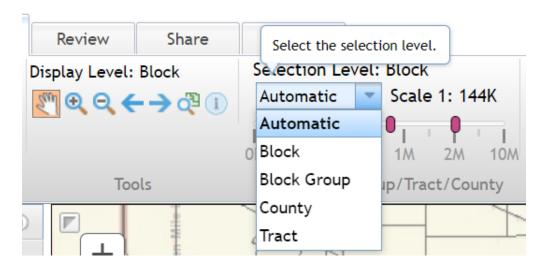


The red ovals on the line show where the 'breaks' between geography levels are.



If you want to adjust when the geography changes from county to tract or another geographic level, click and drag the red oval along the scale bar to move its break point.

The selection level shows which geography you can select on the map. By default this is set to Automatic. In Automatic, whichever geography is visible will be selectable. You can set it to county, tract, block group, block, or leave it in automatic mode.

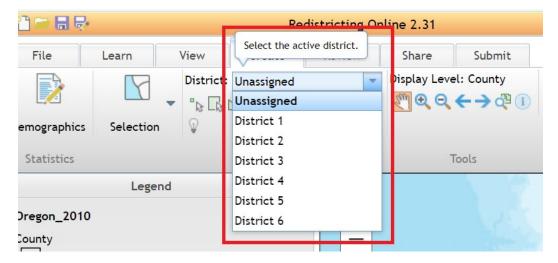


Building Your Plan: Map Selection Tools

To build your plan, you need to select geographies on the map. There are a few different ways to do this, depending on your needs.

Choosing which district to edit

Staying in the Create ribbon, click on the District drop down menu and select District 1 (any district can be chosen in the district drop-down menu at any time).

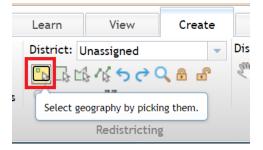


Instead of using the drop-down menu to choose a district, you can also click on a district line in the District Window at the bottom of the screen:



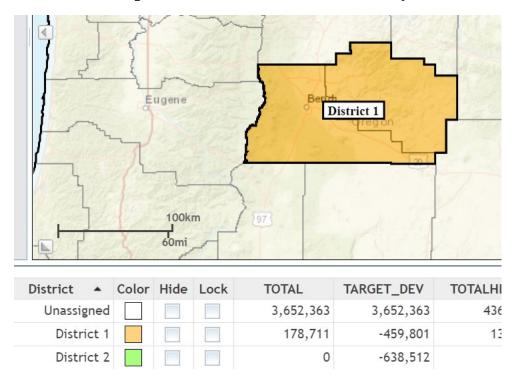
Selecting individual locations

Underneath the district drop down menu are your selection tools. Start by clicking on the first tool.



Click on a county on your map. This adds that county to District 1. The county changes color on the map, and it changes the numbers in District window. Click on a second county. The second county should

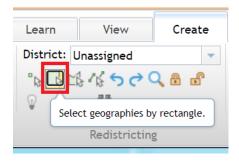
also be in District 1 now, and the numbers in the District window should have updated to add the second county numbers to the district:



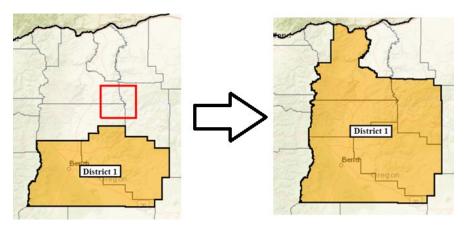
Note: No examples in any of these training documents are intended as any official district proposals, intentions for such proposals, or as suggestions. They are intended exclusively as visual guides for you to help learn the software.

Selecting by rectangle

Now let's try the next selection tool, which looks like a square with a tiny arrow on it.

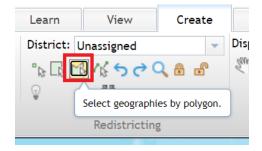


Click on the map, but don't let go of the mouse button. Drag the mouse around the map to draw a rectangle. Any geography your rectangle touches will be added to your district.

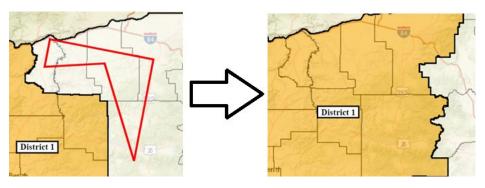


Selecting by custom polygon

The third selection tool allows you to draw a custom polygon to select geographies. Choose the third selection option.

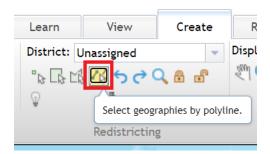


Click on the map. Move the mouse to another part of the map and click again. Do this again and click a third time. Now, move the mouse to another part of the map and double click. This 'closes' the polygon and adds the geographies it touches to District 1.

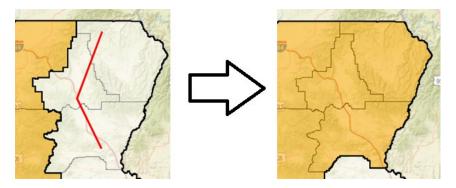


Selecting by line

But wait, there's more! Click the next selection tool, the line tool.



Click on the map. Now move to another part of the map and click again. Move to a third point on the map and double click. Any geographies along the line you drew will be added to District 1.



What if I make a mistake?

It's OK! There are undo and redo buttons under the district drop-down menu.

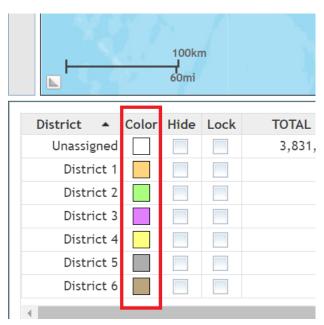


In the district drop-down menu, you can also choose Unassigned. Use the selection tools we explored above to 'assign' geographies to the Unassigned category (or any other district you wish). For now, select the Unassigned category and select the entire state of Oregon to put everything back into this category.

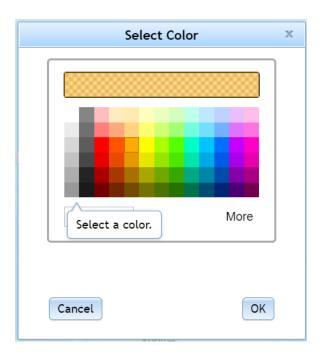
Building Your Plan: Other Useful Tools

Changing district colors

In the District window, you can change the colors each district will be on your map. In the "Color" column, click on one of the colored boxes.



In the Select Color window that opens, choose the color you want to use, then press OK. That district will now show up on your map in the color you chose. Clicking Cancel will cancel your change and keep the color as is.



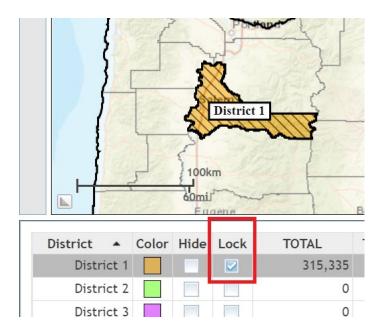
Locking

Once you start filling up your map with districts, or if you have a map with an unusual shape, locking districts or geographies will be quite helpful.

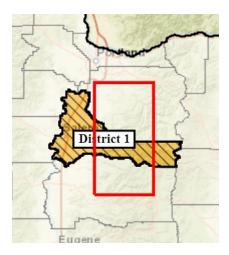
As an example, add Marion County (home to Salem) to District 1:



In the District window, click District 1's lock button. This locks District 1 and puts a cross-hatch pattern over it on the map:



In the District drop-down menu, choose District 2 so you can add geographies to it. Now use the rectangle selection tool to select an area that includes Marion County and at least one other county:



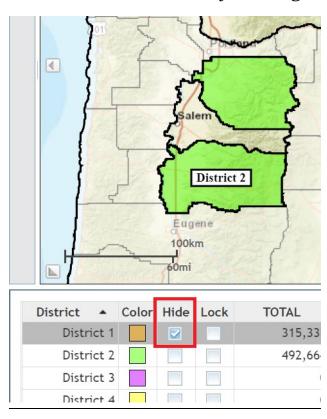
Because District 1 is locked, Marion County doesn't get added to District 2:



Districts can be locked and unlocked any time in the District window. This ability helps if you are satisfied with a district assignment in one area but still need to adjust adjacent areas.

Hiding districts

Districts can be hidden from view. In the District window, click the District 1 hide button. District 1 turns off on the map. Any district can be hidden or unhidden by clicking its hide box in the District window.



IMPORTANT NOTE ABOUT SENATE DISTRICTS

Each of Oregon's 30 Senate seats must completely contain two adjacent Oregon House seats. When you submit a House plan, upload an attachment that tells us which House seats you would combine to create Senate seats (see *Attaching Files and Documentation* later in this document for instructions).

Your upload can be in any format the program allows (PDF, Text, Word, etc.). Below are just a few examples of what written documentation could look like:

House District 1 + House District 2 = Senate District 1

HD1 + HD2 = SD1

House / Senate

1,2/1

3,7/4

9,10/5

This document does not have to be written text – you could also print your House map, draw on it, and upload a picture or scan of it. As long as the documentation is clear and understandable, the format is up to you.

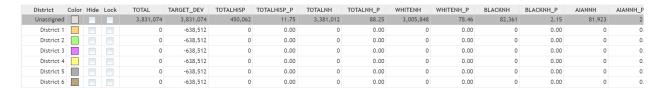
If you want a map of your Senate districts, save your House plan as a new plan, and use the Join Districts tool in the View ribbon to combine your House districts together. Then use the Swap Districts tool to renumber your Senate districts from 1 through 30, and change the Number of Districts in the View ribbon to 30. The Join and Swap Districts tools are covered in detail in the *Supplemental Guide to the Redistricting Software* document available at

https://www.oregonlegislature.gov/redistricting/. This process is also covered in a training video available on the website.

Understanding the Data

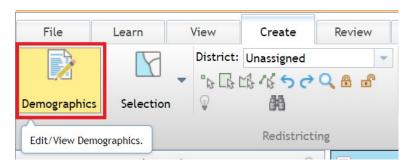
What's in the District Window?

The District window at the bottom of your screen shows you the Census data for your plan, with the numbers automatically updating as you draw your districts. Each district has its own line in this table.

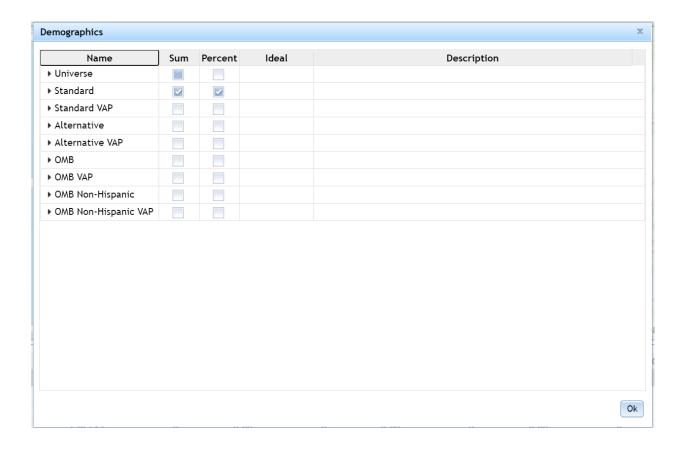


Each column in the table is called a field. At the top of the column is the field name. In the current version of the software, these names are not very intuitive.

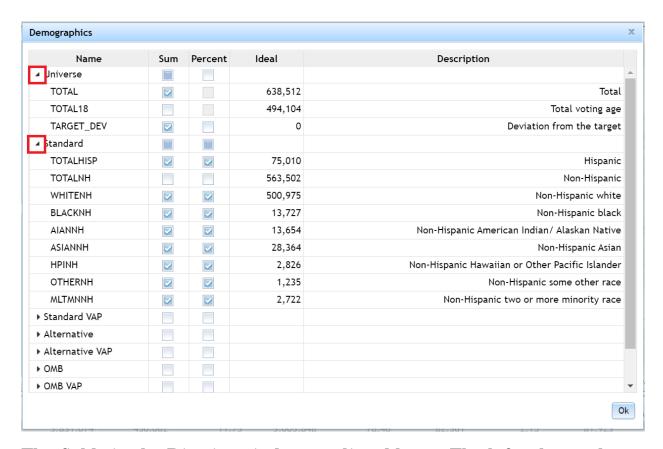
In the Create ribbon, click the Demographics button:



The Demographics window appears:



Click on the arrows next to the Universe and Standard lines:



The fields in the District window are listed here. The left column shows the field names.

The check boxes signify if the fields are visible in the District window. For example, consider the TOTALHISP field, which refers to the Hispanic population. If its "Sum" box is checked, the District window will keep track of how many Hispanic individuals are in the districts you've drawn. If its "Percent" box is checked, the District window will track what percentage of your districts' populations are Hispanic.

The Ideal column shows the "ideal" number each district should have (this is just the total statewide count divided by the number of districts).

The right column shows the description, telling you what the field is.

Any of these fields can be turned off or on at any time you choose.

ESRI's documentation includes more information about these data points here:

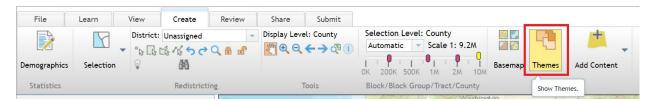
https://doc.arcgis.com/en/redistricting/analyze/understanding-demographic-variables.htm

The Census Bureau includes a brief overview of how it defines race here:

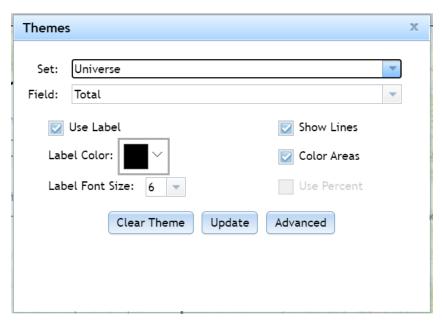
https://www.census.gov/topics/population/race/about.html

Themes

You may wish to see data on the map as you're working. In the Create ribbon, click on the Themes button:



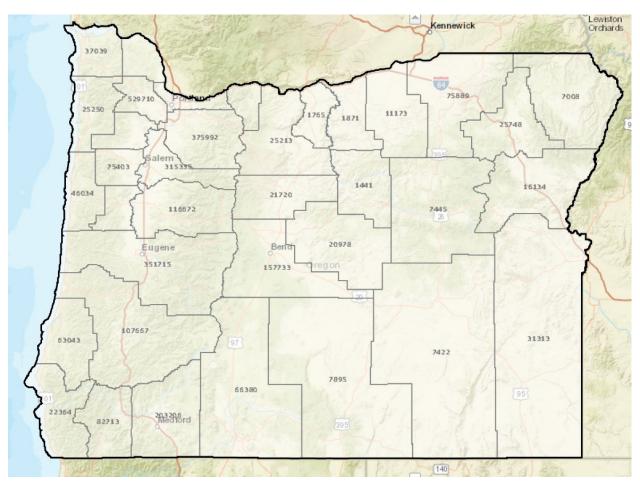
The Themes window appears:



The Set and Field drop-down menus allow you to choose a data variable from the Demographics window (discussed in the previous section).

The options on the left-hand side change how the label appears on your map. The Use Label check-box turns the labels off or on. Underneath that, you can choose the label color and size. The options on the right-hand side change how underlying data looks on your map.

For now, *uncheck* Show Lines and Color Areas. Then click the Update button, then click the X in the top-right hand corner of the Themes window. Your map should look something like the image below, with the total population numbers for each county showing up on your map:



As you zoom in, the numbers will automatically adjust for Census tracts, block groups, and blocks, depending on which zoom level you're at.

To turn this off, return to the Themes window, click Clear Theme, and click the X in the top-right of the window. You can also return to the

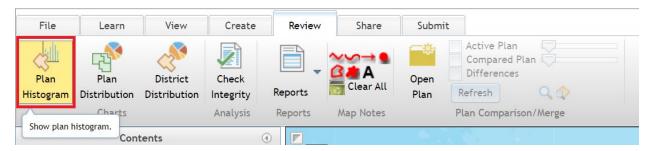
Themes window at any time to change which data shows on your map, to add color symbology to your map, or change other options in the Advanced options (covered in another training document).

Reviewing Your Plan

The redistricting software includes tools that let you summarize your plans and verify they meet some of the redistricting criteria.

Charts

In the Review ribbon, click on the Plan Histogram button:



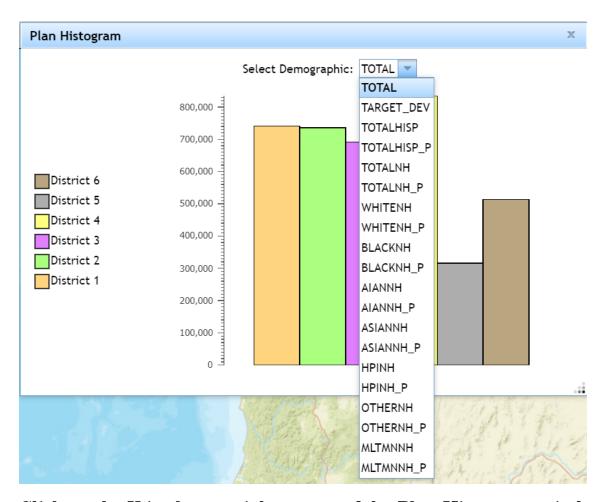
The Plan Histogram window appears. This window compares your districts to each other, using the data your plan is using:



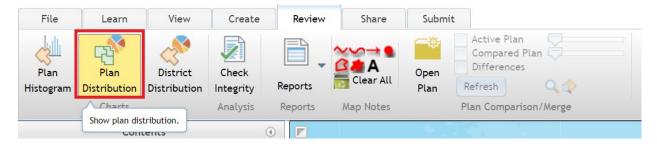
If you hover your mouse over one of the colored bars, it will show you the value for your district. In this example, District 5 has a total population of 316,216:



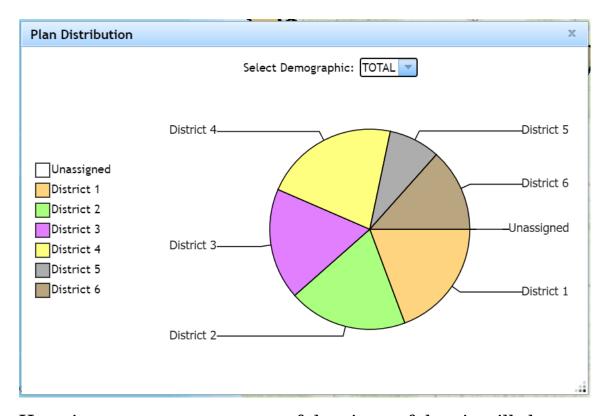
If you want to look at a different variable, click the drop-down menu next to "Select Demographic." The list of variables in your plan will appear, and you can click on one to make it appear in your chart.



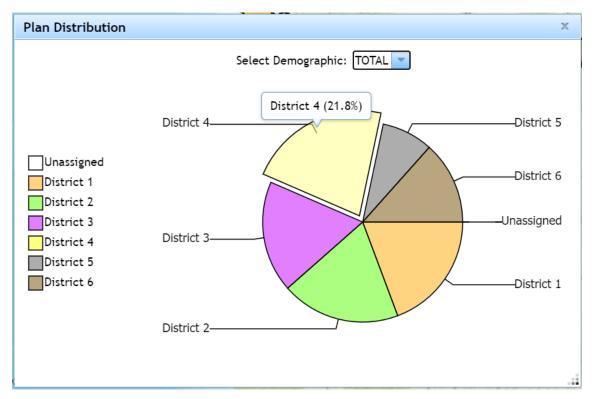
Click on the X in the top-right corner of the Plan Histogram window to close it. Now go back to the Review ribbon and click on the Plan Distribution button:



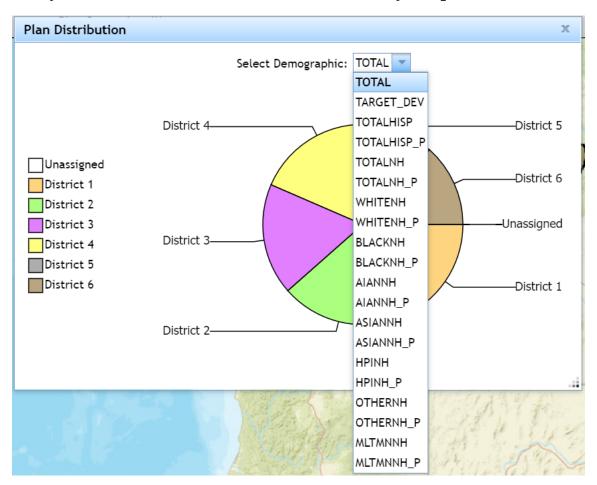
The Plan Distribution window appears. It is just like the Plan Histogram window, except instead of a bar chart, it uses pie charts:



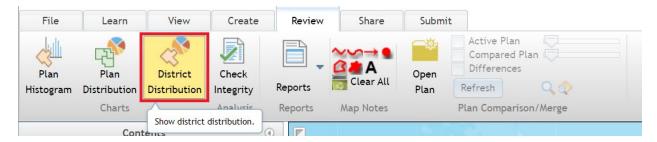
Hovering your mouse over one of the pieces of the pie will show you the value for a district. In this example, District 4 has 21.8% of the total state population:



If you want to look at a different variable, click on the drop-down menu next to "Select Demographic." The variables in your plan will appear, and you can click on one to have it shown in your pie chart:



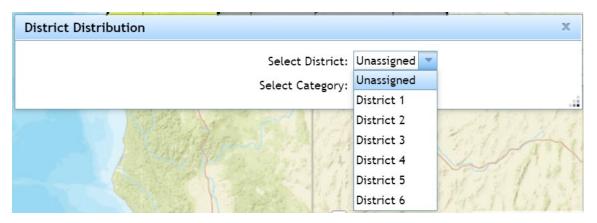
Click the X in the top-right corner of the Plan Distribution window. Now return to the Review ribbon and click on the District Distribution window:



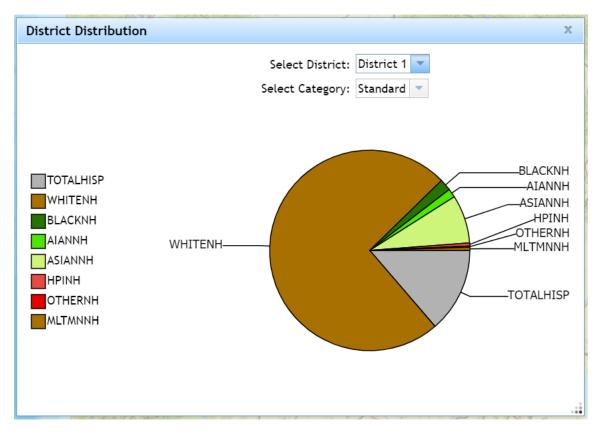
The District Distribution window appears:

District Distribution	• • • • • • • • • • • • • • • • • • • •	Х
	Select District: Unassigned	
	Select Category: Standard	

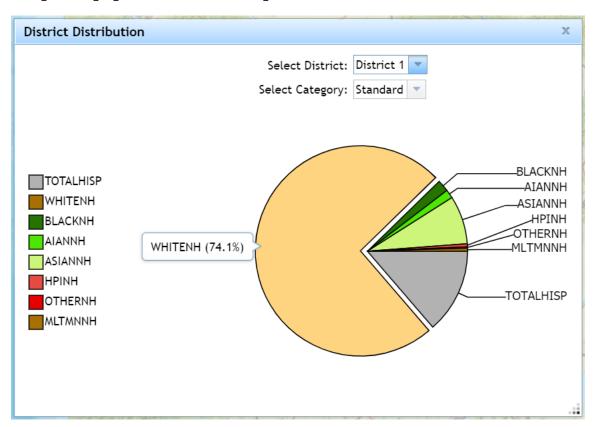
Click on the drop-down menu next to "Select District." Click on one of your districts:



Instead of comparing districts to each other, this window shows you a pie chart for a single district:



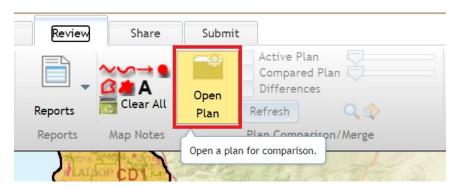
Hovering your mouse over one of the pieces of the pie shows the value for that variable. In this example, the chart says District 1's total non-Hispanic population makes up 74.1% of the district.



Click on the X in the top right corner of the window to close the screen.

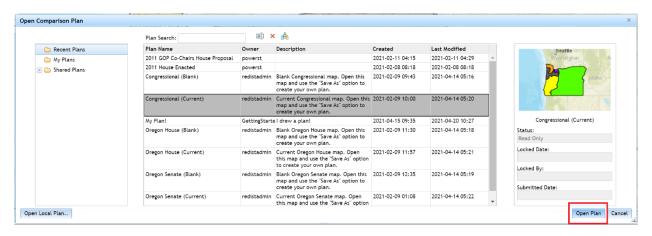
Comparing Plans

You can use the software to compare your plan to another one. In the Review ribbon, click on the Open Plan button:

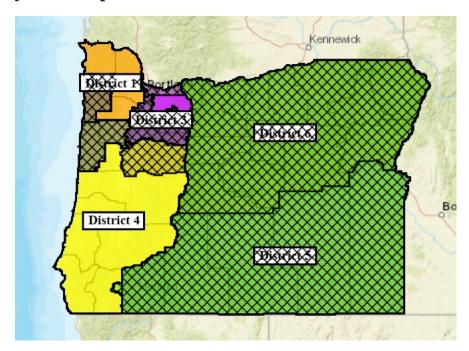


The Open Comparison Plan window opens. This is the same as the Open Plan window discussed earlier; plans you have access to will show up in the middle section. You can click through the folders in the box on the left-hand side of the screen to see other plans you may have access to.

For this example, find the Congressional (Current) plan. Click on it, then click the Open Plan button in the bottom right corner of the window:

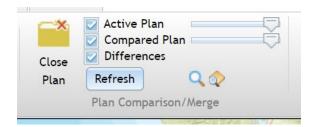


The current Congressional districts will appear on your map alongside your own plan:

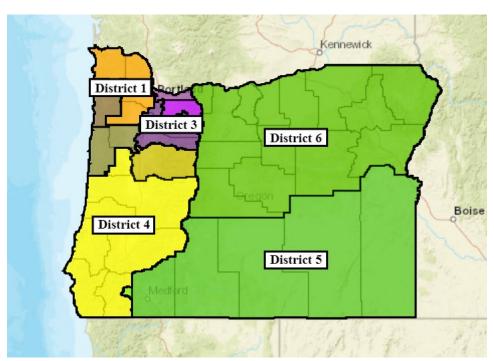


You may notice this makes the map a little hard to read. Thankfully, there are some tools to help with this.

In the Review ribbon, we have a few options:



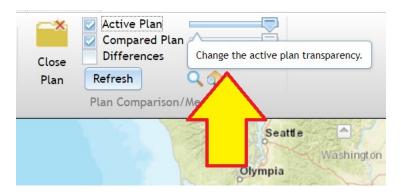
Click on the check box next to Differences. Differences between your plan and the plan you're comparing to are shown with a cross-hatch pattern on your map. Turning off the check box turns off the pattern:



Active Plan refers to your plan. Clicking the check box next to it turns your plan on and off.

Compared Plan refers to the plan you're comparing to. Clicking the check box next to it turns the comparison plan on and off.

The sliders on the right can be adjusted to change the transparency of the active and compared plans to make one or the other easier to see:



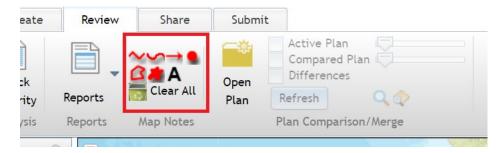
The transparency, along with the differences layer, can be adjusted as desired to make comparing the plans on your map easier.

To stop comparing your plan, click on the Close Plan button. This removes the comparison plan from your map.

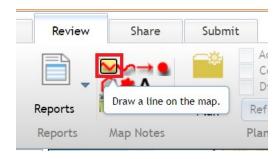
Adding Notes

Drawing on the map

You can add notes to your plans. Your options are in the Map Notes section of the Review ribbon:



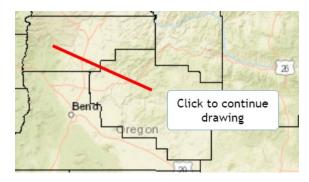
Click on the first tool, which you can use to draw a line on your map:



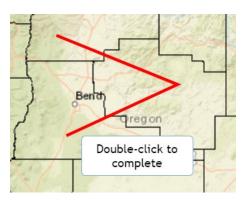
When you hover your mouse over the map, an instruction bubble appears:



Click somewhere on the map, and then move the mouse. The instruction bubble updates:



Click on a second part of the map, and move the mouse some more. You have added a point on your line, and the instruction bubble updates:



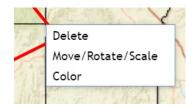
Double-clicking on another part of the map finishes the line:



If you only want one straight line, double-click on your second point instead of the third point. If you want more points on your line, single-click on points until you get to the end of where you want your line, and double-click on the end point.

If you start drawing by accident, hit the Escape key on your keyboard to cancel your drawing.

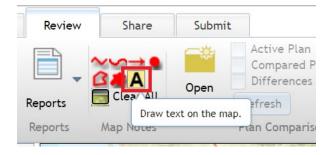
If you want to edit your drawings, right-click on it to bring up your options. It may take some practice to learn where the software wants you to right-click, though.



The other drawing tools work the same way; click on another tool and follow the on-screen instruction bubbles to use it.

Writing on the map

Click on the "A" in the Map Notes section:



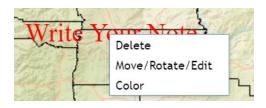
Hover the mouse over the map. The instruction bubble appears, just like with the drawing tools:



Click on the map, and start typing your note. You may need to backspace to remove the default text. Hit enter when you're done, and the text appears on your map:



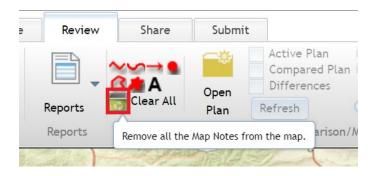
If you want to edit your note, right-click on it. You can delete the note, make some adjustments, or change the color. If you want to change what the text says, double click on the text after choosing the "Move/Rotate/Edit" option.



Clearing your notes

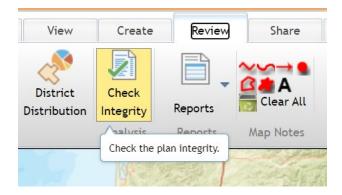
To remove an individual drawing or note, right-click on it and then select Delete.

To remove *all* of your drawings *and* notes all at once, click on the Clear All button. This will remove all of them:

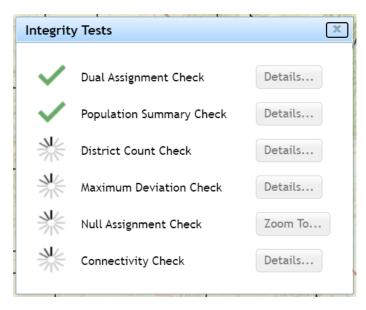


Integrity Tests

A major tool to help ensure your plan meets redistricting criteria is the Check Integrity tool, found in the Review tab. Click on that now:



The Integrity Tests window appears and begins running checks on your plan. It may take a moment for the software to complete the process:



Six tests are performed.

Dual Assignment Check ensures geographies, such as a county, are not assigned to multiple districts at once.

Population Summary Check ensures the population of your districts correctly add up to the state total.

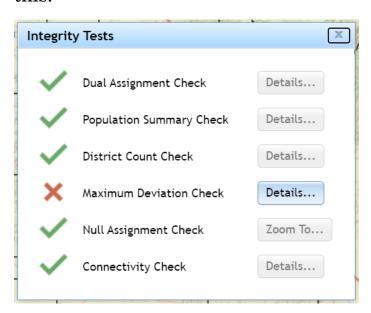
District Count Check ensures all districts have at least one geography assigned to them.

Maximum Deviation Check ensures all districts' populations are balanced.

Null Assignment Check ensures all geographies, such as counties, are assigned to a district.

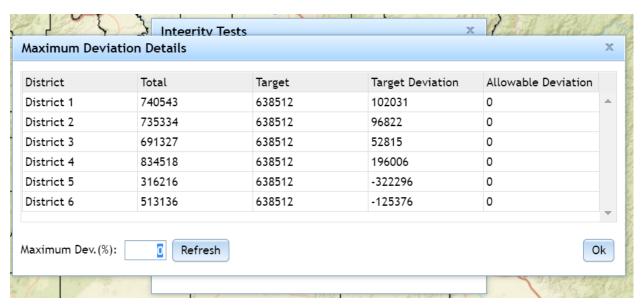
Connectivity Check ensures all parts of a district are connected to all other parts of the district.

When the tests are complete, the window should look something like this:



Tests that pass will have a green check mark next to them. Failed tests will have a red X. If a test fails, you have the option to correct the

errors. In this example, the Maximum Deviation Check failed. Clicking on the Details button brings up this window:



The deviation refers to the difference between the population of a district and the population it is supposed to have. Congressional districts must have as close to zero deviance as possible, and in this example the districts have very large deviances, causing the deviation test to fail. Adjusting the district lines so they have equal populations will correct this.

NOTES:

- All integrity tests <u>must</u> pass if you want to submit your plan as an option for the committees to consider.
- Also keep in mind that if you submit a House plan, you must <u>also</u> submit a Senate plan in order for either to be considered.
- Some of Oregon's redistricting criteria, such as ensuring each district has transportation links connecting all parts of the district to each other, do <u>not</u> get checked by this software. You will need to keep this in mind as you draw your districts.

Sharing Your Plan

NOTE:

Sharing your plan and submitting your plan are different things.

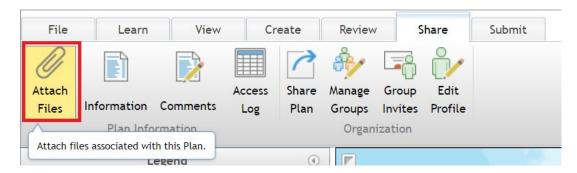
Sharing a plan, described in this section, allows other software users to look at it, and to edit it if you give them permission to edit it.

Submitting a plan, a separate process described in the next section, officially submits the plan to the committees for consideration.

Attaching Files and Documentation

Remember that every Oregon Senate district must completely contain two adjacent Oregon House districts. Therefore, before submitting a House plan, use this tool to upload a document telling us which House seats you would combine to create Senate seats.

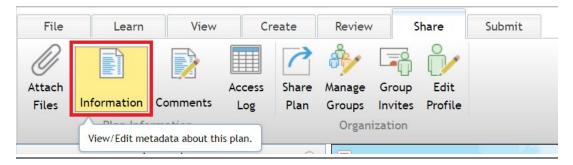
If you want to include any written documentation or other files with your plan, you can! In the Share ribbon, click on the Attach Files button:



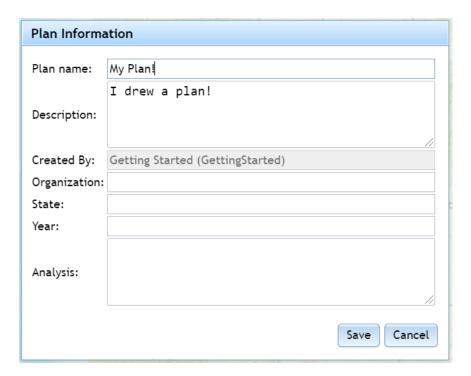
The Attachments window appears. To add files such as maps, images, PDFs, Word documents, or other information you would like to include, click on the Upload File button and follow the prompts.



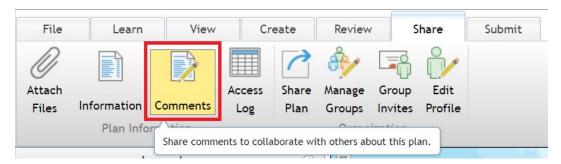
You can also add or update information about your plan. In the Share ribbon, click on the Information button:



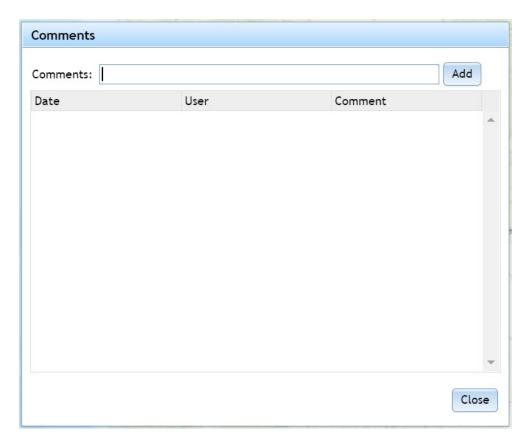
The Plan Information window appears. In this window you can change things like your plan's name and description, along with some other details you may wish to include.



If you want add comments but don't want them to appear on the map, you can use the Comments button in the Share ribbon:



In the Comments window, you can type a note, click the Add button, and then it will appear in a list of comments you can return to at any time.

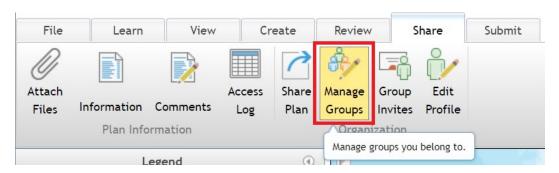


Note, however, that comments are *not* included with map submissions, so if you want the committees to see any comments or notes, you must upload a document with them instead.

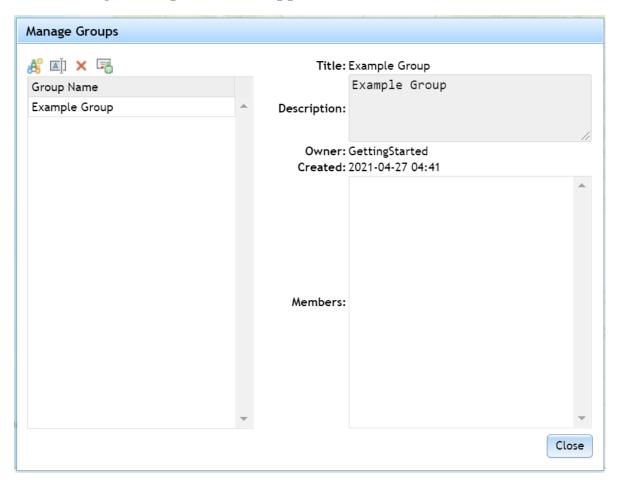
Groups

Groups are a way to share your plans.

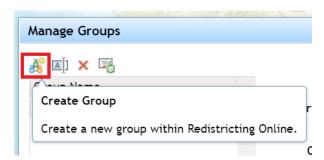
If you want to create your own groups, or manage groups you have already created, click on the Manage Groups button in the Share ribbon:



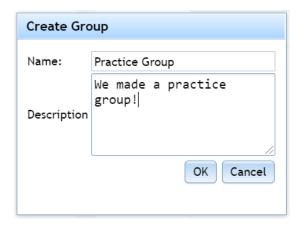
The Manage Groups window appears:



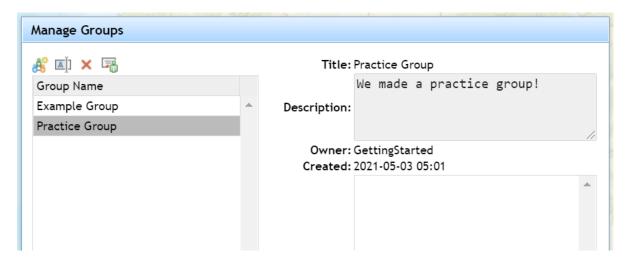
To create a new group, click on the Create Group icon:



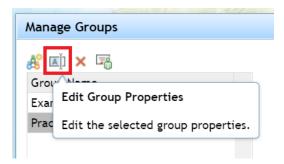
The Create Group window appears, and you can name your group and create a short description of it. Click the OK button when you're done:



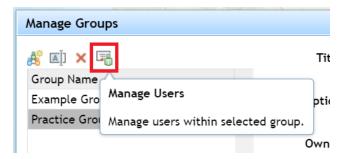
Once the group is created, it will appear in your list of groups. You can click on the name, and details will appear on the right side of the window:



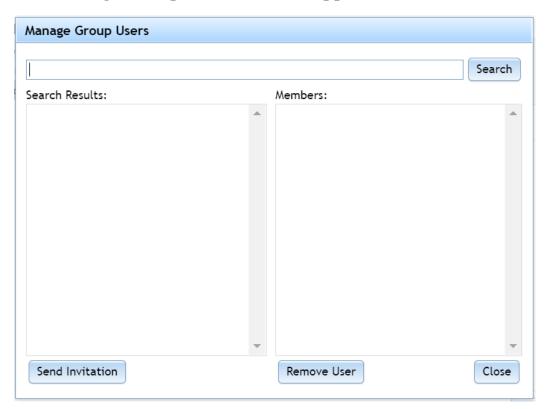
If you want to make changes to the group name and description, click the Edit Group Properties icon. The Update Group window appears, which will be same as the Create Group window discussed above.



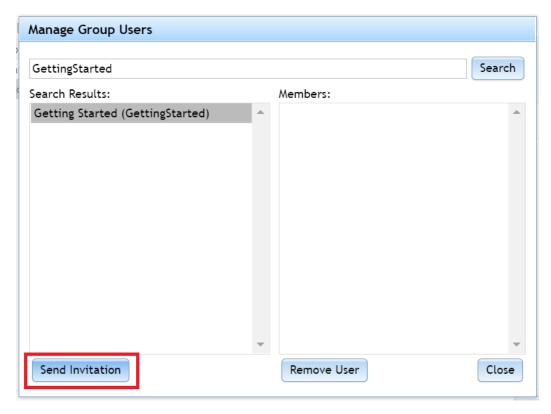
To manage users in your group, including to invite users to it, click the Manage Users icon:



The Manage Group Users window appears:

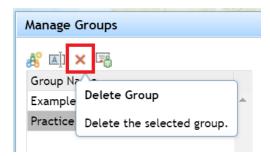


In this screen, you can search for other users of the redistricting software. Type in a user name in the Search bar, then click Search. Users matching your criteria will appear in the Search Results box. You can click on their user name, then click the Send Invitation button to send them an invite to your group.

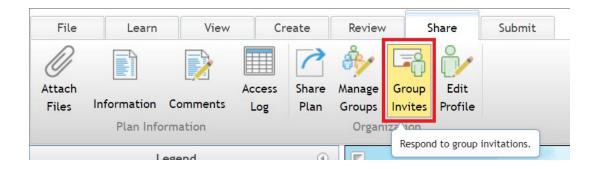


If your group has any users, they will appear in the Members box. You can remove any members you wish by clicking on their name, then clicking on the Remove User button.

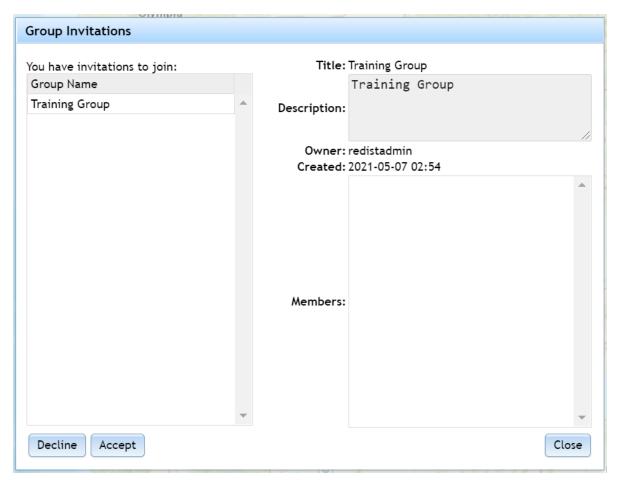
You can delete your group at any time by clicking the Delete Group icon:



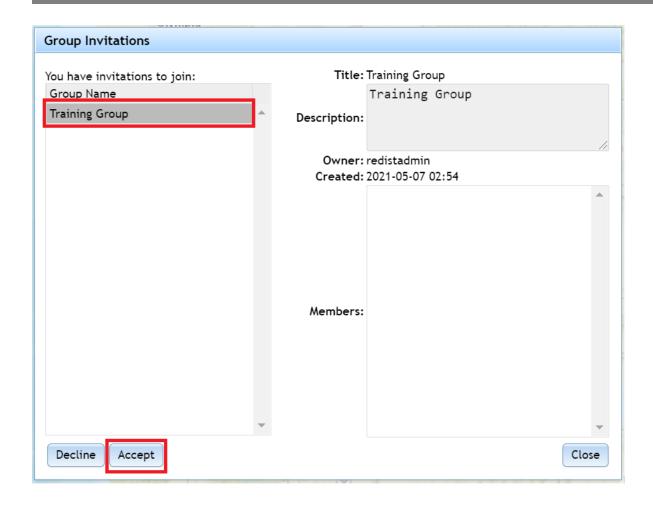
You can manage any group invites you've received by clicking on the Group Invites button in the Share ribbon:



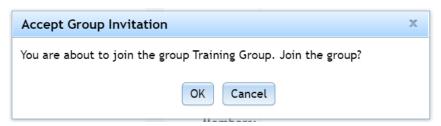
The Group Invitations window appears. If you have been invited to a group, those invitations will appear on the left-hand side of the box.



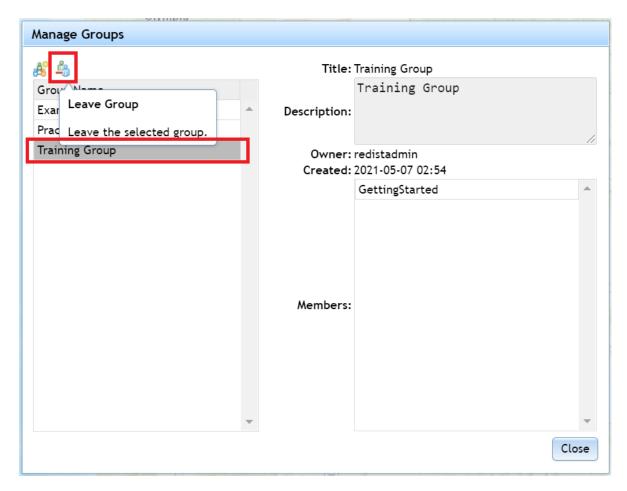
To join the group, click on its name in the left box, and then click the Accept button (or click Decline if you don't want to join):



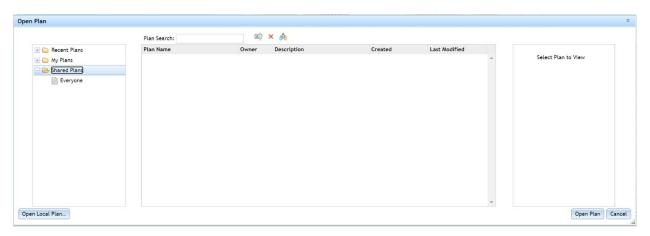
After clicking Accept, the Accept Group Invitation window appears. Click OK to confirm you wish to join the group:



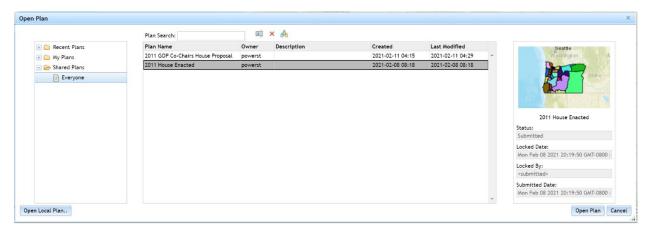
If you want to leave a group, return to the Manage Groups window. Click on the group you wish to leave, and then click the Leave Group icon:



Group members can share plans to groups they are in. Those plans will appear in the Open Plan window and will also be options in the Open Comparison Plan window. To see what plans have been shared to groups you're in, open one of those windows (File ribbon -> Open button; or Review ribbon -> Open Plan button).

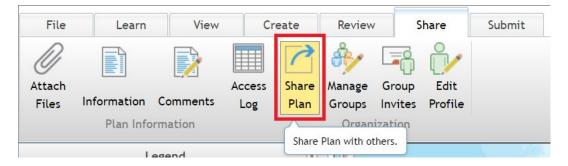


On the left-hand side of the window, click on the "Shared Plans" folder. If you or a group member has shared a plan to a group you're in, the group will appear in that folder. When you click on the group name (in this example, the Everyone group is the only one available), the plans shared to that group will appear in the middle box of the window. You can then click on one of the plans to see a preview on the right-side of the box and open the plan if you wish.



Sharing Plans

If you want to share your plan, go to the Share ribbon and click on the Share Plan button:



The Share Plan window appears. Remember that sharing a plan to other software users is <u>not</u> the same as submitting a plan to the redistricting committees.

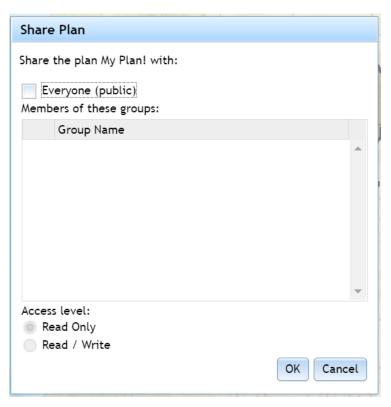
Each group you are in will appear at the top of the window. If you want to share your plan to a group, click on the check box next to the group name.

Note that if you choose the Everyone (public) group, then everyone who uses this redistricting application will have access to the plan.

Towards the bottom of the window are two options under Access Level. Read Only is selected by default. If this option is chosen, then other people who open your plan cannot edit it – they can only view it. If you choose the Read / Write option, then users who open your plan can edit it and make changes.

When you have chosen which groups to share to, and when you have chosen whether you want other users to be able to make changes to your plan or not, click the OK button at the bottom right of the window.

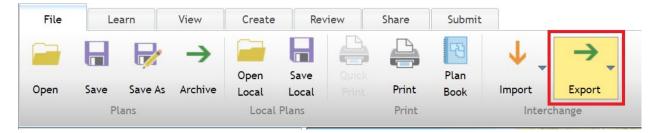
If you go back to the Open Plan window, your plan should now appear in the folders for whichever groups you shared the plan to.



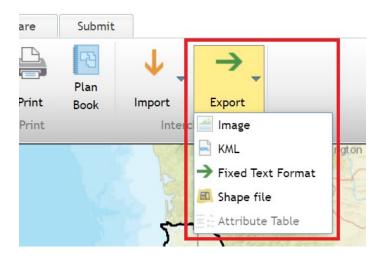
If you want to stop sharing your plan, open your plan, return to the Share Plan window, uncheck the boxes next to the group names, and then click OK. The plan will no longer be shared to those groups.

Exporting Plans

You have the option of exporting your plan so people not using the software can see it. In the File ribbon, click on the Export button:



A menu of export options appears:



If you click Image, you can export an image file of your plan.

KML refers to a Google file format that will let you open your plan in programs like Google Earth or GIS programs that open KML files.

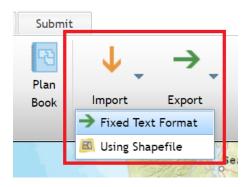
Fixed Text Format creates a block assignment file in text format that lists Census blocks and which district you assigned them to.

Shape file creates a zip file containing GIS shapefiles that can be opened in GIS software.

Importing Plans

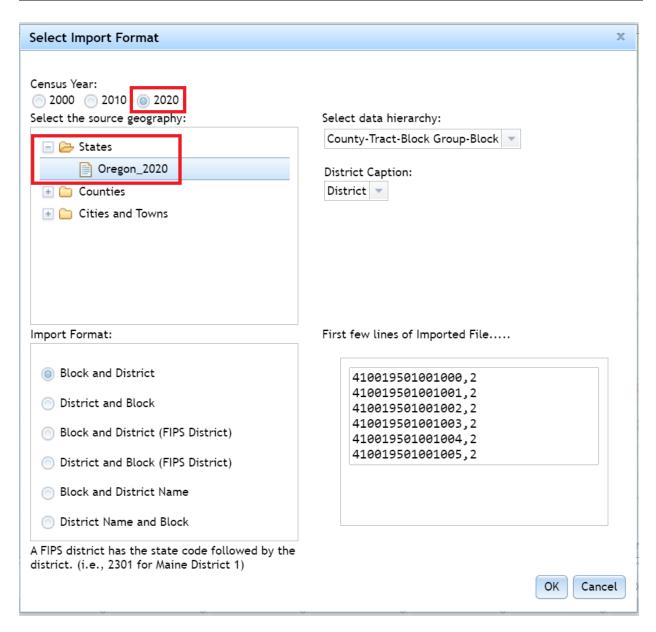
Importing a Text File

In the File ribbon, click on the Import button. The drop-down menu includes options to import a Fixed Text Format file or a Shape file. Select "Fixed Text Format":



A standard open file dialog box opens. Choose the text file you wish to use and click Open (.csv and .txt formats should work).

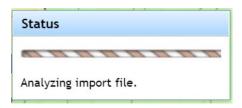
The Select Import Format window appears. Select 2020 as the Census Year, and select Oregon_2020 under the States folder:



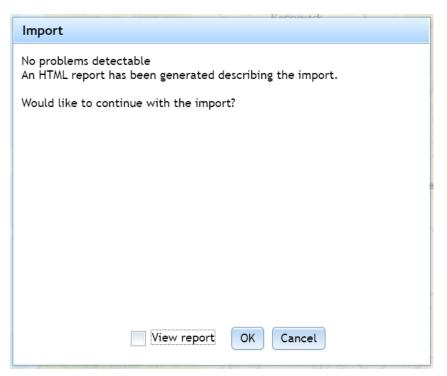
Importing a text file requires one field with Census geography IDs, and a second field with the district they are assigned to. In the above example (the bottom-right corner of the window shows a preview of your text file), block IDs are on the left, and after a comma is the district number those IDs are assigned to.

The two fields do not have to be in a specific order; in the bottom-left portion of the window you can select which order your text file is formatted in.

Click the OK button when you're done. The application will analyze your file:



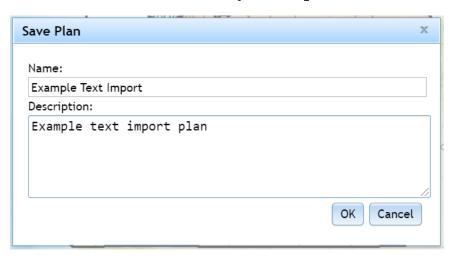
Once complete, the analysis results will be available. If no problems are found, it will look like the example below. If there are issues, you can view the report which should provide assistance in fixing them. Click OK to proceed with your import.



A status window will appear to track import progress:

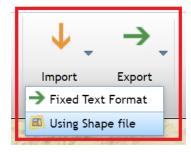
Status
Importing (102 of 6246)

When the process is complete, the Save Plan window appears. Name your plan, enter a description of it, and click OK to save your plan. You can now work on it like any other plan.



Importing a Shapefile

In the File ribbon, click on the Import button. The drop-down menu includes options to import a Fixed Text Format file or a Shape file. Select "Using Shape file":



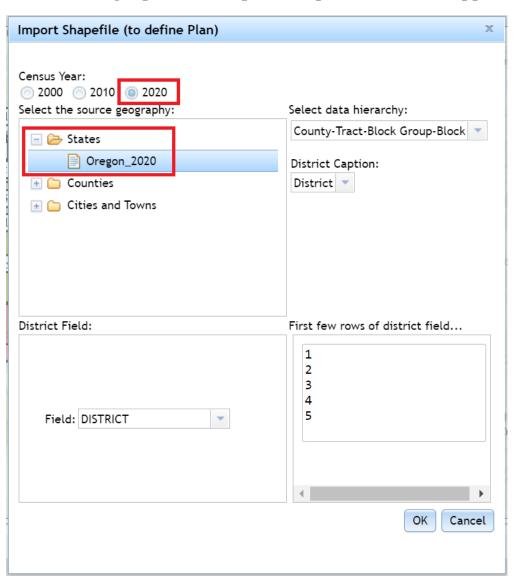
A standard open file dialog box opens. Choose the file(s) that make up your shapefile. The example below has two options.

A single "shapefile" actually consists of multiple files. The first option is to select each of piece of the shapefile. The top four files in the example below are pieces of the shapefile. Select all four to import them.

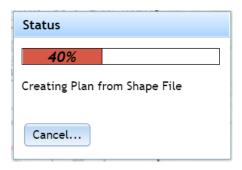
The second option is to select a zipped folder containing your shapefile. In the example below, the bottom file is this zipped folder. Select it to import it.



After clicking Open, the Import Shape File window appears:

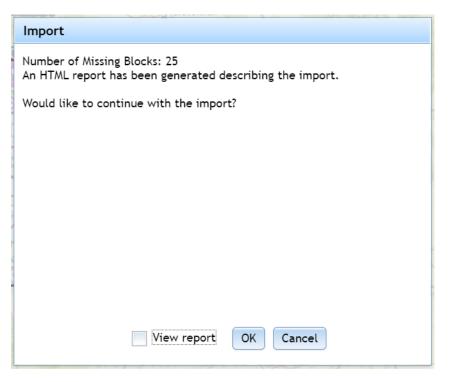


To import the plan, choose the 2020 Census year (only submissions using 2020 data will be accepted). In the left-hand box, click on the States folder, then click on Oregon_2020. Then click OK. The status window appears and the import process begins:

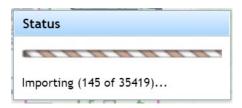


The process can take awhile depending on the complexity of the plan you're importing.

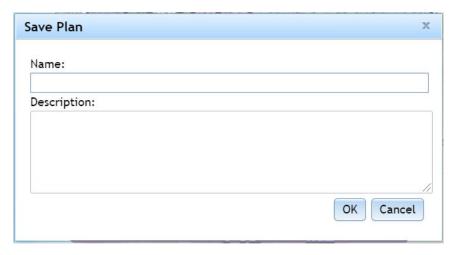
Once the process completes, you might see a notice like the one below. If there are "missing blocks," this should not be an issue. Census blocks change from one Census to the next, so importing a plan that uses data from a different Census, or importing a plan made using a different application, could result in this error. Click OK.



After clicking OK, the conversion process begins. This can take awhile for more complex plans.



Once the process is complete, the Save Plan window appears. Name your plan and write a description, then click OK.



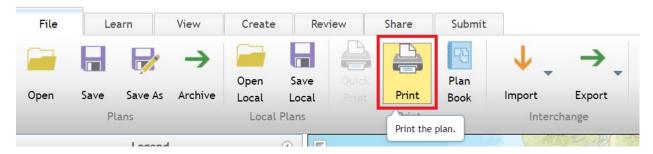
Your plan should now appear on the map and you can save your plan.

Converting 2010 Plans to 2020 Plans

If you already drew plans using 2010 data in a previous version of this software, you can convert them to plans using 2020 data by exporting them and then re-importing them into the software (exporting and importing are both described above).

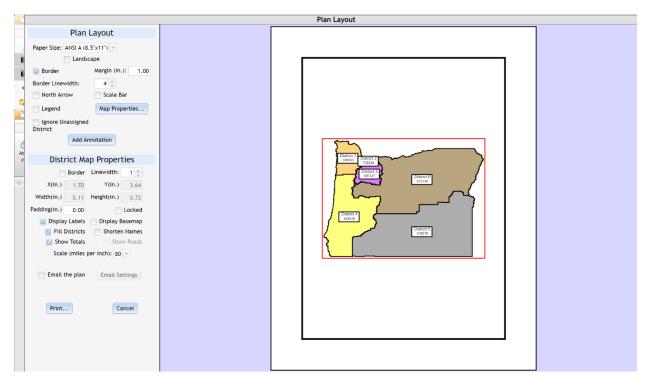
Printing Plans

If you want to print your plan, go to the File ribbon and click on the Print button:

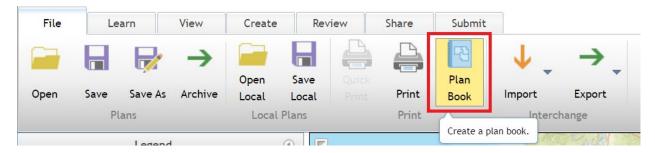


The Plan Layout window appears. Options appear on the left, while the preview appears on the right.

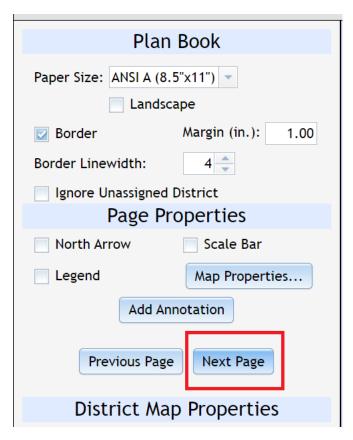
Click through the options on the left to see how they affect your map's appearance. When you're ready, you can click on the Print button in the bottom left portion of the screen, or click Cancel if you don't want to print.



If you click on Plan Book (next to the Print button), the application will print a separate page for every district in addition to the statewide view:



Clicking on the Previous Page and Next Page buttons brings up the pages for the individual districts:



Submitting Your Plan

Important Notes About Submitting Plans

You can submit your plans to the redistricting committees for consideration. Your plans must be submitted by September 8th, 2021 at 5 PM Pacific time in order to be considered by the

committees. You can submit a Congressional plan and/or a House plan.

In Oregon, every Senate seat must contain two House seats. Because of this, if you submit a House plan, upload documentation with it telling us which of your House seats you would combine to create Senate seats.

We <u>strongly</u> recommend you use the attachments function to include an explanation of your plan and any supporting documents with your submissions (described in the *Attaching Files and Documentation* part of the *Sharing Your Plan* section of this document).

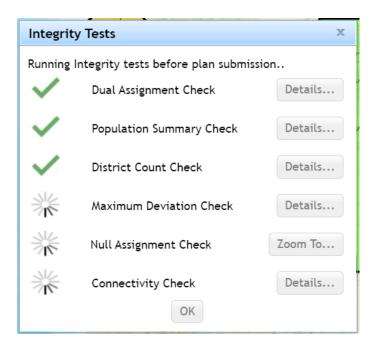
Submitting Your Plan

Once you have completed your plan and included any notes or attachments you wish to add to your plan, you can submit it for consideration by the redistricting committees.

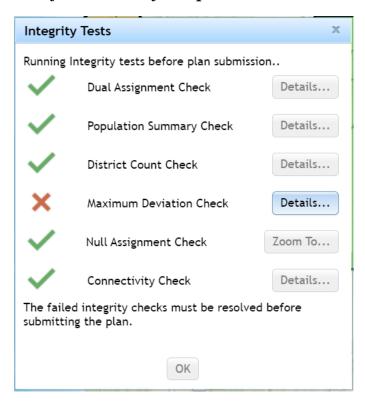
Click on the Submit ribbon. The only option here is the Submit Plan button:



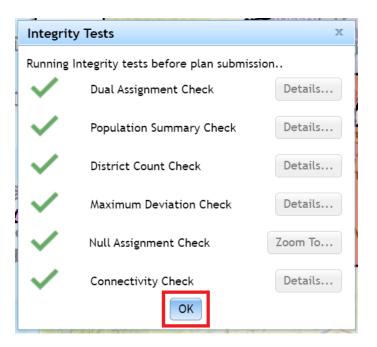
The integrity tests will run automatically:



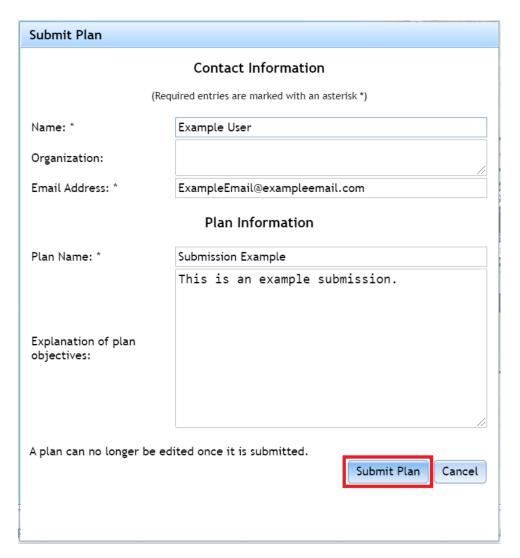
If any tests fail, you will need to correct the issue before the application lets you submit your plan:



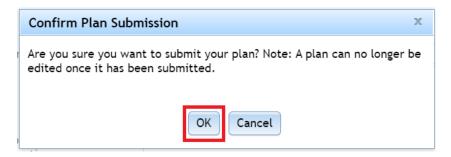
If necessary, close the window and correct any issues. Once you have completed your corrections, click the Submit Plan button again. The integrity tests will re-run. If they all pass, click the OK button:



The Submit Plan window appears. Fill in the required information, and then click the Submit Plan button:



The Confirm Plan Submission window appears. If you are ready to submit your plan, click the OK button:



The Notice window appears to let you know the plan was submitted (an e-mail will also be sent to the e-mail address you provided in the Submit Plan window):



Note that submitted plans become part of the public record.

Your plan will be reviewed to determine whether it meets the redistricting criteria set in <u>ORS 188.010</u>.

Document Updates

Changes for Document 1.5 (September 2021)

• Submission deadline moved to September 8th at 5 PM Pacific time; document updated to reflect the change

Changes for Document 1.4 (August 2021)

- References to 2010 data updated to 2020 data
- Some screenshots updated to reflect data updates
- Notes about Senate districts added
- Converting 2010 Plans to 2020 Plans added
- Importing a Plan added
- Submitting Your Plan updated
- Clarified sharing vs. submitting plans
- Added submission deadline

Changes for Document 1.3 (June 2021)

• Submitting Your Plan section updated

Changes for Document 1.2 (May 2021)

- Link to state redistricting website added
- District selection method updated
- Map navigation methods updated

- Charts section updated
- Various screenshots updated
- Added instructions for Plan Book function
- Added instructions for Groups
- Added Credits section
- Topic rearrangement (moved Comparing Plans section to a more logical part of the workflow)

Credits

The LPRO redistricting team includes:

- Kevin Rancik; GIS Analyst; training document author
- Allison Daniel; GIS Analyst
- Patrick Brennan; Analyst
- Michael Lantz; Counsel
- Sean Murphy; Committee Assistant

For questions, comments, or suggestions, please e-mail us at Oregon.Redistricting@oregonlegislature.gov.