INTO THE THICKET: A REDISTRICTING STARTER KIT FOR LEGISLATIVE STAFF

Introduction

Redistricting (also sometimes called districting, line-drawing or mapmaking) is the process of dividing a jurisdiction into electoral districts. Former Supreme Court Justice Felix Frankfurter even called it a “political thicket” in 1946, suggesting courts ought not enter there.

For our purposes, redistricting means dividing up states into districts for both chambers of the legislature and seats for the U.S. House of Representatives. Like it or not, legislators must enter this thicket because, in most states, they are responsible for designing new maps. Staff must go right along with them, preparing data, developing draft maps, providing options, managing public hearings or websites, archiving records and sometimes guiding inexperienced elected officials through the process.

If you are a legislative staffer who will be undertaking this work, this webpage is for you.

NCSL has been supporting the work of legislators and legislative staff for 45 years, and no part of our work is more critical to our mission than providing research and resources on redistricting. For this reason, we’ve gathered the wisdom from many experienced staffers to share with you as you begin this exciting work, what many regard as the most political activity in America.

As you read, please keep one caveat in mind: NCSL does not provide legal advice to legislatures, legislators or legislative staff. Everything in this booklet is intended for informational purposes and it is not intended as a legal reference.

For any legal questions, please consult your legislative attorneys. They will be able to advise based on the laws and precedents in your state.

With that, best wishes as you embark on what may be the most sensitive work you do in a decade!

NCSL Staff
Let’s Get Started

In addition to reading this starter kit, we recommend that you:

- Learn all you can about the last cycle and other recent cycles in your state. Find out about previous or pending legal challenges in your state. Understand what the alleged problem was and what the proposed solution/remedy was. What were the debates about? What work was required of staff then? Talk to legislators, staff, activists and attorneys who were involved in past rounds and learn from them.

- Get to know your state’s demographics—especially if you are not a native of the state. Where is the population growing or shrinking relative to the statewide average? Are there regions of cultural affinity or rivalry? If so, why do those exist?

- Learn from your peers in other states, especially if you don’t have a senior staffer who went through this process last cycle. NCSL’s informal Redistricting Staff Network (found here). connects you to your peers. If you aren’t yet on this network distribution list, just ask.

- Join NCSL’s redistricting listserv. By reading what’s posted, you’ll learn about the legal issues, and to some extent the practical issues as well. Again, just ask.

- Ask NCSL staff for assistance. We can come to your state to provide a 50-state review of redistricting processes, offer contacts for consultants, connect you with your peers doing similar work in other states or answer your procedural questions.

- Get a copy of NCSL’s Redistricting Law 2020 when it is published; it will be the fifth edition of this book. For now, here is Redistricting Law 2010.

- Take a look at NCSL’s redistricting dictionary. Terms may vary from state to state, of course.

- Come to one of five planned Getting Ready to Redistrict: Seminars for Practitioners and Others (Providence, June 20-23, 2019; Columbus, Ohio, Oct. 24-27, 2019; Las Vegas, May 6-10, 2020; Portland, Ore., Sept. 24-27, 2020; and Washington, D.C., January 2021). These seminars are designed with legislators and legislative staff in mind. While some parts of these will be the same, each will also have a different spin on this complicated topic.
What Is Redistricting?

“I wish I had known that redistricting in Montana involves so much more than clicking buttons in a mapping program. Montanans have a hunger to understand and influence the creation of districts. We spent a lot of time answering questions, giving presentations and developing tools that would help the public participate effectively in the redistricting process.”

— Rachel Weiss, research analyst, Legislative Services Division, Montana Legislature

Redistricting (also sometimes called districting, line-drawing or mapmaking) is the process of carving up a jurisdiction into districts for elected officials. For our purposes, this means dividing states into districts for both chambers of the legislature and seats for the U.S. House of Representatives. A few state legislatures undertake redistricting for other statewide bodies as well. For instance, California’s commission does so for the State Board of Equalization, and Utah does so for its State Board of Education. (We’ll touch in passing on the need to redistrict at smaller units of government as well. City councils, county commissions, state boards, and even the judiciary may elect representatives from geographic regions and, if that’s the case, they need to be redrawn from time to time as well. Sometimes states, such as Virginia, provide redistricting assistance to local jurisdictions.)

Redistricting is done to ensure the principle of “one person, one vote”: that voting power and representation in our legislative chambers is distributed equally, based on population. Before a series of court cases in the 1960s, legislative districts weren’t required to be redrawn based on population, and in many states, districts had remained unchanged for decades. That led to legislators or Congressmembers representing widely varying numbers of people. It wasn’t fair, said the courts, to have districts of widely divergent population size—some with 10 times as many residents as others—all represented by a single legislator. Since then it is settled law that every 10 years, after the census data is released, states are required to redraw the lines. (That doesn’t preclude redistricting more frequently depending on your state’s laws, but that is less common.)

Generally, the task of redistricting falls on state legislatures. Even in states where a commission has been handed the responsibility for redistricting, the process generally still includes some role for the legislature in most states, often (but not always) the right to appoint members. The process remains much the same, whether it is conducted by the legislature or by a commission. Commissions need similar technical and financial support, even before their members are appointed.

This project will help legislative staff get started. It includes:

What’s in a Name
The phrases “reapportionment” and “redistricting” are often interchanged, but their meanings are distinct: “apportionment” or “reapportionment” refers to the allocation of seats among units, such as the allocation of congressional seats among the states. “Redistricting” concerns redrawing boundaries of election districts. (13 U.S.C.41 § 141 (a) and (b).)
• Section I on practicalities, with information about timing, Census data, other data, software, staff, budget and resources, the role of legislators v. staff, public input, publishing maps and transmitting maps and data to local election officials.

• Section II on federal and state requirements that govern redistricting.

• Section III on when your state’s maps are challenged in court.

• Section IV on what happens if your legislature does not draw maps.

• Section V on what your legislators and leadership may have on their minds.

• A checklist of data to gather well before you begin
When Does Redistricting Happen?

In general, states redistrict early in every decade, after Census data is released. Most states complete their maps prior to the candidate filing deadline for the 2021 or 2022 elections (before the next election following the census), which means maps usually must be complete by early spring in 2022. Earlier is usually better from a candidate’s point of view (what district are they eligible to run in?)—and from an election administrator’s point of view (what races are on which ballots?). Keep in mind your state's primary filing deadlines for the 2022 elections.

Your state could be different, depending on when your legislative elections are held next. For instance, in states with legislative elections in odd-numbered years, redistricting can be done as early as the spring of 2021, just as soon as census data is released. Montana is an outlier; its commission doesn’t need to complete its work until 2023. (Montana has always had just one congressional seat, and therefore has not done congressional redistricting. It may get a second seat after the 2020 census, pending reapportionment. If that is the case, Montana would need to create congressional districts before the 2022 general election.)

How long does it take to redistrict? That depends on many things—including the prep work done before the census data is released. It can easily take over a year from receiving the census data to completion. A sample timeline of post-census tasks from Montana is provided below. Note there are many pre-census activities that states are engaged in relating to verifying census blocks and precincts.

### Sample Redistricting Timeline

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 1, 2020</td>
<td>Official Date of the U.S. Census</td>
</tr>
<tr>
<td>Dec. 31, 2020</td>
<td>Initial statewide population results are released by the Census Bureau. With release of the initial 2020 results, ideal populations for congressional and legislative districts can be calculated and compared with current district populations, which are still based on the 2010 census results.</td>
</tr>
<tr>
<td>2021 Legislative Session</td>
<td>Upon convening of new legislature, appropriate committees on redistricting established to begin work drawing new maps.</td>
</tr>
<tr>
<td>April 1, 2021</td>
<td>Comprehensive block-level census totals are released to the state. These are the data that contain the level of detail necessary for new districts and maps to be created.</td>
</tr>
<tr>
<td>Late 2021 Legislative Session, early 2022 session</td>
<td>Legislature draws and debates new district maps. Maps are approved and enacted into law.</td>
</tr>
<tr>
<td>Date</td>
<td>Event Description</td>
</tr>
<tr>
<td>----------------</td>
<td>-----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Feb. 15, 2022</td>
<td>Deadline for enactment of new congressional and legislative districts (Note: this deadline is an aspirational “policy” of the legislature. See Minn. State. § 204B. 14, subd. 1a)</td>
</tr>
<tr>
<td>Spring 2022</td>
<td>Local governments complete redistricting for local districts, as necessary</td>
</tr>
<tr>
<td>Aug. 9, 2022</td>
<td>State Primary and state General Elections. Candidates are elected based on the newly-drawn districts.</td>
</tr>
<tr>
<td>Nov. 8, 2022</td>
<td></td>
</tr>
</tbody>
</table>

The Non-Apportionment of 1920

Every 10 years, between 1790 when the federal government conducted the first national decennial census and the present, Congress reapportioned the number of representatives each state received in the United States House—except in 1920. After the 1920 census, Congress refused to accept the figures. That decennial enumeration revealed that a majority of Americans lived in urban areas, and a reapportionment would have drastically altered the influence of the largely rural members of the House. With each reapportionment until 1920, in fact, Congress had added seats (rising from 105 members after the 1790 count until reaching 435 after 1910). But given the 1920 count, at least 50 seats would have been needed to maintain rural America’s balance of power over rising cities. So, when a bill to increase the size of the House from 435 to 483 failed, Congress did not reapportion seats for the first—and only—time. This led to the passage of the 1929 Permanent Apportionment Act, which not only capped the number of representatives at 435 but also requires the Secretary of Commerce to reapportion the House after every decennial Enumeration. The act removed the “danger of failing to re-apportion after each decennial census as contemplated by the Constitution,” according to Representative John Q. Tilson of Connecticut at the time.
“My committee chair would often ask for very specific, obscure pieces of data in the course of a redistricting discussion. I learned to always carry a one-page cheat sheet with as much data as I could fit on the page, so I wasn’t left pouring through lengthy reports and spreadsheets to find answers during a meeting or committee.”

—Matt Gehring, staff coordinator, research department, Minnesota House of Representatives

While states hold responsibility for elections with local assistance and a federal framework, the same is not true of who pays for elections. All three levels can and have played a role. Traditionally, elections have been administered and paid for at the local level—and that is still the most common process.

In most jurisdictions in the country elections are administered by counties, though in some states elections are run at the city or township level. It is these local jurisdictions that are primarily responsible for the cost of elections.

However, funding could, and to some extent does, come from multiple levels of government: federal, state, local, or a combination of all of these. Often additional subdivisions, such as municipal utility districts, school districts or municipalities, will pitch in as well. None is flush with cash.

State Funding

While there are some states that pay for virtually everything, it is much more common for the state to take responsibility for some elements of election management, and not others. Here are some examples of ways that states help out:

- **Pay for all elections.** Alaska and Delaware have centralized election administration. The state department of elections is responsible for conducting elections, and bears the cost of election administration almost completely.

- **Pay for a portion of all elections.** In Kentucky and Rhode Island, the state bears a portion of the costs of all elections. In Kentucky, the state reimburses counties for the cost of elections at a set rate of $225 per precinct annually, and in Rhode Island the state pays for everything other than poll workers and polling sites, which are the responsibility of municipalities.

- **Pay for state candidates or issues.** In Alabama, Colorado, Hawaii and Louisiana, the state will pay all expenses of the election if there are only statewide candidates or issues on the ballots, or a portion of the expenses if there are other local issues on the ballot as well.

- **Pay for statewide special or primary elections.** Many states choose to pay for special statewide elections that don’t coincide with regularly scheduled elections, or for statewide primary and presidential primary elections. Some states pay a portion of costs for any
statewide candidates or issues that appear on the ballot, regardless of the election type. This is usually, though not always, done as a reimbursement. Counties pay for the election initially and later submit a reimbursement request to the state.

<table>
<thead>
<tr>
<th>State pays all expenses for federal or state elections</th>
<th>State bears a portion of election costs</th>
<th>State pays for statewide special elections or statewide elections that don’t coincide with regularly scheduled elections</th>
<th>State pays for primary elections (statewide, presidential, or both)</th>
</tr>
</thead>
</table>

Subdivisions Within a County
Local jurisdictions often run elections that include municipal, school and special district races, or ballot questions. Those same ballots are likely to include state and federal races and questions, too. In some states, the cost of running elections is shared by all the entities that have races or questions on the ballot. States can require this type of cost-sharing arrangement and dictate how costs are allocated. Here are a few examples of how states currently operate:

- **Shared costs based on formulas.** In Arkansas, for school elections that are combined with other county elections, the school district pays for expenses incurred for poll workers at individual polling places. The share of the total is determined by the number of votes cast in the school election as a proportion of the total number of votes cast in the election. In Louisiana, if there are both state races and ballot questions as well as local candidates or questions on the ballot, the state

**State Policy Choices**
- Provide funding when introducing new legislation and avoid unfunded mandates to locals.
- Provide state funding for a portion of elections based on ballot “real estate” or a formula per registered voter.
- Require political subdivisions to reimburse counties for a portion of election costs.
- Petition Congress for additional funding.
- Apply for federal grants if they come open.
pays for half of the election expenses. The other half is shared pro rata by the local entities by “real estate” on the ballot. The share that local entities pay is determined by dividing the entity’s number of offices, propositions or questions on the ballot by the total number of all offices, propositions or questions on the ballot. In Missouri, when more than one political subdivision has candidates or issues on the ballot, they share costs based on the number of registered voters in that subdivision as a percentage of the total number of registered voters eligible for the election.

- **Shared costs at discretion of county.** In Colorado, counties conduct a coordinated election if more than one political subdivision—state, county, municipality, school district or special district—holds an election on the same day in November. In these cases, there is a “reasonable sharing of the actual cost,” which does not include the cost of maintaining the county election office. It is left to the discretion of counties to determine exactly how to divide the costs. If there is a statewide ballot measure, the state pays its typical rate, which is 90 cents per active registered voter for counties with 100,000 or fewer active registered voters or 80 cents per voter for counties with more than 100,000 voters. Montana political subdivisions bear a proportional share of the costs as determined by the county governing body.

- **Fees for using voting equipment.** In Delaware, cities or towns may use county voting machines if they pay all costs and expenses associated with their use. New Jersey counties may charge up to $5 per voting machine for municipalities that rent them for elections. Wyoming counties may charge subdivisions a fixed fee per day to use voting machines, which then goes back into the county fund used to acquire and maintain voting machines.

- **Reimbursement of personnel expenses.** In Indiana, most expenses for municipal elections are the responsibility of the county, but the county may charge a municipality for the wages of extra people employed to provide additional assistance related to the election. In Oklahoma municipalities, school boards or other entities that authorize an election to be conducted by the county must pay the county upfront for compensation and employer’s share of benefits for poll workers involved in the election. The county may request reimbursement later for other expenses incurred during the election.

**Federal Funding**

What about HAVA, which injected $3 billion in federal dollars into the states to upgrade elections? Doesn’t that give the feds a key role? It was intended as a one-time fix, not an indicator of federal fiduciary responsibility. Pundits have been saying for years that “there is no sign of more federal money on the horizon.” That is still true, although, with security for elections a major concern, bills to provide more funding have been introduced in Congress in 2017 (U.S. HR 794, HR 1398).

**Additional Information**

NCSL’s webpage on [Election Costs: What States Pay](#)
Redistricting Software

“I would expect that new staff who are hired will join an office that already has a redistricting software program in use. For them, learning that program would be necessary to do their job. Some companies offer training on their products, but for us, knowledge of the software comes from on the job training with other staff.”

—Gina Wright, executive director, Legislative & Congressional Reapportionment Office, Georgia General Assembly

Data sets are only useful if they can be manipulated and thus turned into useful information. Until the 1980s, maps were drawn with pencil marks and eraser smudges. Now, software does the job. Staff hired at this point will learn how to use the software that has been selected, whether it runs on a stand-alone machine, on a server, or through a cloud-based service. Some vendors offer training, but in many states, it is on-the-job training.

Most states buy or lease a program from one of a small handful of vendors in this marketplace. It is important to review each vendor’s products for functionality and how it will work with your state’s specific principles and criteria. Thinking through the vendor’s ability to support their products throughout the process is important, too. The service may come pre-loaded with GIS data on income and more, or that data can be added.

A few states develop their own software in-house, including Texas. The first iteration of RedAppl (Redistricting Application) was completed in 1990 and has been rewritten twice and enhanced many times over the years. At every stage of development, IT staff and programmers have collaborated closely with legal advisors, GIS users and redistricting specialists to identify system requirements and desired functionality. Today’s RedAppl enables privacy and security for map drawers, is integrated with other systems to publish plans and produce text for bill or amendment drafts, is capable of handling expansive geographic, population, and election databases, and is customizable to respond to changes in the redistricting landscape.

For the coming decade a few efforts are underway to make map drawing software available throughout the nation to anyone who cares to try. Some states will allow, or even encourage, private citizens to draw and submit maps. It is too early to tell how sophisticated these programs will be, or what data they will have imbedded in them. As a staffer, it is useful to know that you are likely to have constituents who are drawing their own maps, and therefore second-guessing the maps produced for and by the legislature.
Role for Legislative Staff

“As you know, sometimes the perspectives of legislative staff aren’t the same as the perspectives of the legislators. Understanding that there can and probably should be differences makes it easier to support the work of the legislature. I couldn’t stress enough: be sure to know the goals of your legislators or commissioners or bosses.”

—Rachel Weiss, research analyst, Legislative Services Division,
Montana Legislature

Each legislature must train some staff in the basics of redistricting, depending on the role the legislature plays. In Iowa, staff must know all about it, because it is Iowa’s legislative staff that is entirely responsible for drawing the maps. In states where a commission is responsible, legislative staff at a minimum will need to answer questions from members on how redistricting works in their own state specifically, and in all states more generally. And in most states, staff will work alongside consultants to provide maps for legislators to consider and vote on, requiring a high level of expertise on the procedural and the legal sides.

Even staff who may not play a direct role in redistricting might appreciate, or benefit from, a workshop on how redistricting works.

In states where the legislature is responsible for redistricting, staff will include people with technical, legal and administrative expertise. For all three, the key skill is communication, which includes knowing when not to communicate, to preserve privacy and confidentiality.

The technical staff, who manage data, software and maps, need to understand the legal landscape. It is likely that one or two people will be trained to run the software, and all requests will filter through those few hands-on people.

The legal staff, which helps policymakers understand federal and state requirements and guiding principles, needs to understand the technical side too, and be prepared to interface with members but are not likely to work on the mapping software itself.

Administrators are responsible for keeping all the balls in the air and tracking the action—and need to know a little of everything. They are likely to log the editions of maps as they are made, manage the public input process, keep a timeline of action and other duties as required. For a sample timeline, see Montana’s Work Plan For 2009-2013 Districting And Apportionment Commission.

Technical staff can be assigned to the IT program, or work under the same auspices as the legal and administrative staff. Each state will find its own model for how to organize the staff. In many states, nonpartisan central staff will have the responsibility. In other states, staff for the majority and minority caucuses in both chambers will all play a role. In fact, it is likely that each caucus will want to either have in-house staff or hire experts.
In any case, staff—nonpartisan or otherwise—will need specialized training. NCSL’s Getting Ready to Redistrict seminars are designed for them, and will provide a good overview, plus nuts and bolts on how the process works in many states. Detailed training on using the software is usually part of the purchase/lease agreement with the vendor. Hiring staff with experience in GIS may prove useful. Learning from GIS professionals in other parts of state government may prove helpful as well.

Alternatively, legislatures can hire outside consultants, who come with expertise from previous decades. Generally, specific consultants are favored by one party or the other. It would not be unusual for both parties to hire consultants, who work closely with legislators as negotiations proceed.
“Anyone new to the process must be prepared to work late and take problems home. Even if your files stay at the office, what is in your head presumable goes home with you. You will think, and rethink matters over and over. Will an ever so slight change in the population of district make a potential plaintiff’s argument of racial gerrymandering stronger? At what level of population must district X have to provide minorities an opportunity to elect a candidate of their choice? These and similar matters will try your endurance, particularly if you have other unrelated duties to attend. Expect to feel drained at some point. Drained or not, you must persevere.”

—James “Ted” Booth, General Counsel, PEER Committee, Mississippi

In addition to potentially needing to hire new staff, legislative staff will need to justify other budget requirements.

For instance, budgets are likely to cover:

- Purchasing new, dedicated, computers with substantial processing power.
- Hiring counsel to represent the state should a lawsuit be filed as well as expert witnesses.
- Purchasing printers that can produce large-scale maps; software licenses for mapping software.
- Supplies.
- Training for staff by attendance at NCSL seminars or other opportunities.
- Dedicated electronic storage.
- The costs associated with public hearings or legislative work sessions and more.

These costs will begin in 2019 or 2020, and end in 2022 in most states.

Sometimes staff can be “borrowed” from other departments to provide resources without increasing costs.

Know whose budget pays for which items. Are all costs covered in an appropriation to the central staff agency? Or broken out to the various caucuses?

In some states with nonpartisan and partisan staff, nonpartisan staff may serve a purely administrative role, providing objective data and analysis to legislators and staff from both political parties. Many states use partisan staff who serve only the members of their caucus. In some states, special funding is provided for majority and minority party staff and consultants (including counsel).
Legislators will be thinking about the impacts of changes to district lines: Which districts will be home to incumbents or can be designed to be competitive depending on their state’s priorities? How constituents’ needs are accommodated and similar political choices. Staff will be thinking about procedures, with the intent of making the process as smooth as possible.

The line between questions legislative leaders will address and questions staff are likely to answer is by no means clear, and yet there are differences. For instance:

<table>
<thead>
<tr>
<th>QUESTIONS FOR LEADERS AND STAFF</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LEGISLATIVE LEADERS</strong></td>
</tr>
<tr>
<td>Who will provide support for redistricting? Staff, consultants or a mix?</td>
</tr>
<tr>
<td>How much funding will be allocated for redistricting?</td>
</tr>
<tr>
<td>Will redistricting be the responsibility of a standing committee, or will a special committee need to be created?</td>
</tr>
<tr>
<td>What training will be useful for members?</td>
</tr>
<tr>
<td>Who has authority to ask for changes or new iterations?</td>
</tr>
<tr>
<td>What’s the deadline for passing a redistricting bill?</td>
</tr>
<tr>
<td>Who will be consulted, such as individual members, party people, constituents, the public?</td>
</tr>
<tr>
<td>What opportunities will the public have to provide input, either general ideas or to submit maps? Will the committee conduct a statewide tour? (See the next section.)</td>
</tr>
<tr>
<td>Will all draft maps be published, or just the adopted maps?</td>
</tr>
<tr>
<td>When to call a special session, if needed?</td>
</tr>
<tr>
<td>Others?</td>
</tr>
</tbody>
</table>

If legislative leaders and staff can answer these questions early, that’s great. When the data arrives, there will be plenty to do without making “how to” decisions on the fly.
In the 1970s, 1980s and 1990s, the public played little role in redistricting. In the 2000 cycle a few states provided an opportunity for the public to play a bigger role, up to and including creating maps for the legislature to consider. In the 2010 cycle, the role of the public became more prominent. In 2020, it is likely that many states will have formal or informal opportunities for public participation. In fact, since 2010, legislation aimed at “transparency” and “public input” has been common. With or without a change to the constitution or statute, states are likely to find individuals and constituent groups clamoring for an opportunity to have a say—even if the final decision is made by the legislature.

Public input can begin even before the census data has arrived. Some states will carry out public hearings on what general concerns and values matter to which groups of people. Many states conduct hearings after they receive data from the Census Bureau to let residents comment on how district populations have changed based over the previous decade. In general, states hold hearings both before and after draft plans are released and before plans are finally approved.

Input on what are “communities of interest” may be helpful. The principle, “preservation of communities of interest” is in use in 44 states, and yet rarely defined. A community of interest can be a racial group, but it can also be a group tied together by common economic interests, such as rice farmers, religious communities, or a connection as simple as a major road or highway that encourages shared commerce between two communities. In states that seek to preserve communities of interest, the first step is to identify them.

A second opportunity to gather public input can come through “listening tours” around the state that take place after a first draft of maps has been created and before maps are finalized. It is likely that any committee hearings on redistricting will also have a public comment period as well, managed according to standard committee protocol. Staff can be prepared with suggestions on the number of meetings to hold and where to hold them. Of course, they’ll staff the meetings as well.

Many states create specific redistricting portals or email addresses such as “RedistrictingComments@State.Gov” to receive input from those who cannot appear in person. Staff will be assigned to monitor these channels and condense or collate responses to share with legislative decisionmakers.

The biggest question about public input is whether the public will be able to submit plans, and if so, how. In the 2010 cycle, Utah set up terminals in many locations around the state for the public to draw and submit maps. Maps that met Utah’s principles, or criteria, were accepted for consideration, and a public-submitted map for the State Board of Education was adopted by the legislature.
Leadership, with advice from staff, will probably decide whether citizen access to mapdrawing will be available and if so, whether access is available in one terminal at the state capitol, a handful of terminals around the state, or perhaps a system in the "cloud" that anyone can use from any computer. No matter what the decision is, it is possible that during the 2020 cycle, public software may be available from nonprofit organizations to encourage “citizen participation” (which often comes from advocacy groups or minority political parties such as Libertarians or Greens) in redistricting. Staff will need to be prepared to deal with these submissions, even if there is no formal channel.
“A reporter was in our building during the last redistricting cycle and snapped a photo of the commission’s (yet to be released) congressional map. At the very least, if draft maps are draft legislation, you need a secure, locked facility where your plotter resides.”

—Michelle Davis, senior policy analyst, Maryland General Assembly

First, until a redistricting bill, regardless of its format as will be discussed below, is dropped in the hopper, the same privacy restrictions likely apply as to any other bill. This is important, especially when large draft maps may be available for viewing by members—but must be secured. At the very least, draft maps must be developed in a locked facility where your plotter is secure.

Redistricting plans begin as maps. Each map, and all its content, is typically translated into a bill. The legislature then votes on the bill. How the map is created, what data is used, and the language used in the bill can be quite different based on the type of approach used to represent the real world. In most cases, states use one of the following: “metes and bounds” information, geographic information system files called shapefiles or block equivalency files.

Traditionally, “metes and bounds” have been used to describe the physical world. Metes and bounds is a system to describe a piece of land, or in the case of redistricting, a district. With the metes and bounds approach, specific real-world geographic features, and occasionally jurisdictional boundaries, are used to identify the boundary of a district. This system is still common.

The bill to enact a redistricting plan includes a street file. Street files often look like this:

<table>
<thead>
<tr>
<th>300-500 Main Street, even numbers</th>
<th>Senate District A</th>
<th>House District 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>301-501 Main Street, odd numbers</td>
<td>Senate District A</td>
<td>House District 12</td>
</tr>
<tr>
<td>502-750 Main Street, even numbers</td>
<td>Senate District B</td>
<td>House District 11</td>
</tr>
</tbody>
</table>

As you can see from the example above, street files are tabular in nature, with additions being added as a spreadsheet of some kind is edited. Additions are made over a decade, between redistricting years. The maintenance of this list can be particularly challenging since additions cannot be viewed spatially. Also, if there is an error in translating geography into a list, it will likely not be identified. The list is what is signed into law.

Another approach used to represent the physical world is the shapefile. A shapefile is a data format used in geographic information systems (GIS) software. A shapefile is a combination of several files and data sets. One file (.shp) defines geography, such as legislative districts, congressional districts, and Census geographic units (block, block groups, tracts, etc.). Another file (.dbf) contains attributes...
for each geographic unit, such as the total number of persons, the voting age population, and the racial composition of the population in each geographic unit (as per the Census data). Other files included in a shapefile are necessary for the proper use of the shapefile, such as shape index (.shx) and projection (.prj) files.

Geographic features in a shapefile can be represented by points, lines, or polygons (areas). Because shapefiles maintain the correct spatial, or topological, relation among the different geographic units, they are ideal for redistricting purposes. For example, shapefiles allow for the addition or subtraction of geographic units into districts to achieve population equality, compactness, contiguity and other redistricting principles.

A shapefile is a combination of two or more data sets: one that defines geography (per the census), one that defines population (also per the census) and perhaps others. By dividing all territory into unique shapes, no terrain is missed, and new developments will fit within a pre-defined shape.

A redistricting bill can refer to, and include, a shapefile. It is important to note that shapefiles are a good way to represent physical geography; however, they must be updated and managed appropriately. Election data scale needs to be at a particular level to place voters in the right district. This scale needs to be determined by a GIS professional—hence the importance of election and GIS professionals working together.

A third option is the block equivalency file. A block equivalency file is a table that provides a one-to-one correspondence between census blocks and districts. Because all geography is captured in a census block, by accounting for all census blocks, all geography is included in a district. By going this route, it is less likely that any voters will be assigned to the wrong precinct. ("According to Election Data Services, every time they perform a voter verification process in a jurisdiction, between 10 and 12 percent of voters are currently in the wrong precinct, although many fewer are in the wrong electoral districts.)

<table>
<thead>
<tr>
<th>Census block</th>
<th>House District</th>
<th>Senate District</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>14</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>15</td>
<td>3</td>
</tr>
</tbody>
</table>

The decision about how to define the maps in legislation is likely to be made by leadership, but staff may be called on to explain the options and make recommendations. In a few states, statute will call for one option or another, and legislation would be needed to change to a new system.

Did You Know?

Regardless of the method of creating a map and enacting it, mistakes can and do happen. A few states have statutory provisions that address what the legal map is in the case it being found to have a defect in it – such as a discontinuous block. Find out if your state is among them.
Transmitting Redistricting Plans to Local Election Officials

Once redistricting bills are enacted, the legislature’s work is done—but the work for local jurisdictions is just beginning. Local election officials need to define precincts and prepare voter lists based on who is in which district, from U.S. House, through state districts, and down to special districts. The hand-off of data to the local jurisdictions can make their work easier or harder. And, with the next election likely just a few months away (and filing deadlines even sooner) they don’t have a lot of time for this task.

It is likely local election officials have a street address file that corresponds to all known addresses in the county or other jurisdiction that might look something like this:

<table>
<thead>
<tr>
<th>Address</th>
<th>District</th>
<th>Precinct</th>
</tr>
</thead>
<tbody>
<tr>
<td>300-600 Main St (even addresses)</td>
<td>District 13</td>
<td>Precinct 13A</td>
</tr>
<tr>
<td>301-601 Main St (odd addresses)</td>
<td>District 13</td>
<td>Precinct 13B</td>
</tr>
<tr>
<td>1-12000 East First Place</td>
<td>District 14</td>
<td>Precinct 14A</td>
</tr>
<tr>
<td>1-12000 East Second Place</td>
<td>District 14</td>
<td>Precinct 14B</td>
</tr>
</tbody>
</table>

In the past, common practice has been to update that file, rather than start from scratch. That may be changing this decade, as interest in using GIS in the general field of election administration increases.

In states where metes and bounds are used for legislation, the translation to a street address file is difficult.

In states that use shape files from their GIS systems that depict the geometry and data associated with districts, election administrators need to be able to work with GIS as well.

If possible, transferring the districts to administrators through a block equivalency file—where every census block is detailed—is preferred. With thousands of census blocks, it’s still hard. It might be helpful to discuss the transfer process with your state’s local election officials well in advance.

Detailed maps of new district boundaries and reports of the existing precincts included in, or split by, new district lines may also be helpful to provide to local election officials.

In addition, local jurisdictions may be preparing to do their own redistricting for county, municipal, school board or other electoral bodies. While they have their own processes and criteria, they will want to start with the state’s map.
Legal Requirements

“Make sure you do your research because the legal requirements for redistricting are constantly changing. During the past decade, many of the standards that used to apply have changed. And it is likely that others will too during the next couple years. So, read up before picking up your pens and pencils!”

—Frank M. Strigari, chief legal counsel, Ohio Senate

While legislators are held accountable for ensuring maps pass court muster, staff must be fully familiar with legal requirements as well. For one thing, software will probably be programmed specifically for your state’s principles and criteria.

Maps must, of course, meet federal standards. And they must meet their own state’s standards. And yet that guidance alone can lead to the creation of hundreds or thousands of “legal” maps. For examples, see the Atlas of Redistricting, which gives examples of maps drawn to favor one party or the other, maximize the number of majority-minority districts, maximize competitiveness, make districts as compact as possible, or meet other competing goals.

So, legislators will be making judgment calls, with staff advising.

NCSL has detailed information on federal and state-specific guidelines in Redistricting Criteria and Districting Principles for 2010 and Beyond.

Federal requirements in brief:

All states, of course, must comply with federal laws. The most important federal principle is one person, one vote. Over time, court rulings have established that the equal protection clause of the U.S. Constitution applies to redistricting, giving rise to the one-person, one-vote rule that underpins modern redistricting. In the case of U.S. House districts, one person, one vote has been interpreted to mean the population as reported by the census must be divided equally between a state’s congressional districts, down to a person. In the case of legislative districts, the court’s interpretation has a bit of flexibility.

States can establish an acceptable level of “deviation” from exact population equality for districts. Many do not do so, in which case the goal is to draw districts as close to the same population as possible, with the amount of variance determined by legislative leadership. See NCSL’S Redistricting Law 2010 book for details. (The 2020 version will be published in May 2019.)
The 14th Amendment and the Voting Rights Act, taken together, lead to the second federal principle: plans may not discriminate based on race, color or language minority. Again, see NCSL’s web pages for details.

As of this writing in November 2018, there is no federal court guidance on partisanship; while there may be a level that is determined to be unconstitutional in the future, so far none has been established.

**State-specific criteria in brief:**

Maps are drawn in adherence to state-specific rules as well. These are generally spelled out in constitutions, although some few criteria may be statutory, or may be included in committee guidelines that are adopted at the start of each cycle. NCSL provides complete information on these in two places. First, [Redistricting Criteria](#) defines all the options throughout the nation, and sets forth which principles, or criteria, are in use in each state for congressional and for legislative redistricting. Second, [Districting Principles for 2010 and Beyond](#), provides a summary table of states with which principles, along with links to the citations. Both documents will be useful.

These principles can and often do conflict with one another. When that happens, legislators are likely to determine which are valued most highly, and informally or formally prioritize one over another. Balancing these complex and competing desires is also what leads to most court challenges. Whatever the priorities, staff may be asked to document the rationale for the decisions, documentation that could become part of the record when plans are challenged.

State-specific criteria can be broken into two broad categories:

<table>
<thead>
<tr>
<th>Traditional Principles</th>
<th>Emerging Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compactness – can be managed mathematically but usually isn’t, at least not in statute. Makes sense from the perspective of the visual appearance of the map but adhering to just this may mean breaking up communities of interest, or not adhering to physical geography.</td>
<td>Prohibition on favoring or disfavoring an incumbent, candidate or party.</td>
</tr>
<tr>
<td>Preserving communities of interest.</td>
<td>Prohibition on using political data.</td>
</tr>
<tr>
<td>Preserving counties and other political subdivisions (which can be measured by the number of counties or cities that are split between two more Districts – the fewer splits the better.)</td>
<td>Competitiveness (generally, competitiveness has been listed as a subordinate criterion).</td>
</tr>
<tr>
<td>Preservation of cores of prior districts.</td>
<td>Proportionality (in relation to previous election results).</td>
</tr>
<tr>
<td>Avoiding paring incumbents in electoral races</td>
<td></td>
</tr>
</tbody>
</table>
In a few states, the criteria are ranked by priority. In effect, priority rankings can mean that lower priorities may not be considered.

Some advocates may offer to write algorithms that will account for priorities and automatically create districts. These automated processes have not been adopted by states, in large measure because they cannot replicate human judgment—at least not yet.
Challenges to Your Maps

As staffers, it may seem that the goal is to develop maps that won’t be challenged. Well, most states have at least some challenges, and many states have major challenges that can last a full decade. So, expect challenges. The staff should be mindful that when your work product is challenged, you must be in the best position possible to assist in offering a defense to your plans. Challenges to maps can come at any time, even towards the end of the decade.

If your state's maps do go to court, all kinds of data will be subpoenaed during discovery. So, all through the process, save what you have in an organized fashion. Use a reasonable and not joke-y naming convention for maps and all related documents. Remember that your records and files could become part of the record in a court proceeding, so show proper care when writing emails, notes and other communications regarding the development of plans.

While legislative privilege has been used in the past to protect legislator/staff communications, interpretations of privilege are in flux. It is still likely true that communicating with legislators is protected, but that may not extend to outside contractors or others. Peter Wattson, formerly nonpartisan legislative staff in Minnesota, prepared a description of recent court action on legislative privilege for NCSL. In instances where attorneys have given advice to the committees involved in redistricting, the attorney-client privilege also has applicability.

Discovery extends to written materials, emails and phone records, including texts.

Note, that staff could be called to testify as well.

How successful are challenges? See NCSL’s Action on Redistricting Plans for a table that shows success by legislatures and by commissions.

How to be successful? See How to Draw Plans That Will Stand Up in Courts, created by Peter S. Wattson, former nonpartisan staff in Minnesota.
Each decade, a few legislatures fail to enact redistricting plans into law. A failed process is often due to political difficulty in agreeing on maps. Divided party control of government is a key risk factor, but there are others. In some states, the expectation of a failed process has become so entrenched that advance preparations are made for judicially-drawn maps in anticipation of that result.

When the legislative process fails, courts are forced to start redistricting from scratch. Sometimes this fallback is directed by the state's constitution, and other times it's triggered by a lawsuit. In any case, one or more judges will likely acquire software, hear input from litigants and other interested parties (including, potentially, legislators), order principles to be used, and draw maps all with an order and decorum that looks far more judicial than it does legislative.

Legislative staff working in states at risk of deadlock should be particularly attentive to these procedures, which could occur simultaneously with, or even before, the legislature's attempt at drawing maps begins. For instance, in Minnesota, the first complaint anticipating a failed process for the 2010 cycle was filed in January of 2011—a whole two months before the state even received its complete set of redistricting data from the census.

A court “takeover” of redistricting will officially wait until the last minute, to allow the legislature maximum time to enact maps. But an eye toward early preparations for judicial action will help staffers keep up-to-date on the court's expectations and process and will help identify opportunities for the legislature—or for interested legislators—to provide input into that process whenever possible.
Checklist and Questions to Ask

Staff may want to gather information in advance so that during redistricting itself, no time is spent on any data that can be gathered in advance. For instance, try to have on hand:

- Your state’s constitutional provisions, statutes and guidelines that relate to redistricting.
- A chart or spreadsheet summarizing important data (the ideal population of a district, where is population growth or loss happening, etc.)
- Court precedents under state and federal law for your state, including legislative privilege.
- A history of your state’s procedures for and action for at least the last two decades.
- A planning timeline starting perhaps with the release of census data (no later than April 30, 2021) and continuing through the first election in which the new districts will be used.
- The status of any legislative or congressional redistricting commissions in your state, and what the legislature’s role is in terms of appointments to the commissions or review of their work.
- Information on whether your state reallocates prisoners from their prison address to their last known address and, if so, any guidelines for the prisoner reallocation process, which probably need to be developed in conjunction with state prison officials.
- Guidelines for how to treat college students and military personnel if your state has special rules for these transient populations.
- Contact information for those who can provide legal guidance, authorize or approve portions of maps, talk to the media, etc.
NCSL Resources

In-Person Training Opportunities

- Getting Ready to Redistrict: Seminars for Practitioners and Others
- June 20-23, 2019 | Providence, R.I. | Providence Marriott Downtown
- Oct. 24-27, 2019 | Columbus, Ohio | Sheraton Columbus Hotel at Capitol Square
- May 6-10, 2020 | Las Vegas | Renaissance Las Vegas Hotel
- January 2021 | Washington, D.C. | Hotel and exact date TBD

NCSL Yearly Meetings with a Redistricting Track

- NCSL’s 2019 Legislative Summit (Nashville, Aug. 5 - 8)
- NCSL’s 2019 Capitol Forum (Phoenix, Dec. 10 – 13)
- NCSL’s 2020 Legislative Summit (Indianapolis, Aug. 10 – 13)
- NCSL’s 2020 Capitol Forum (Washington, D.C., Dec. 8 – 12)

Redistricting Law

- Redistricting Law 2010 (Note: a 2020 edition is due in May 2019)
- Redistricting Legislation Database: 2018 Onward
- Redistricting Glossary

Redistricting Commissions

- Redistricting Commissions: State Legislative Plans
- Redistricting Commissions: Congressional Plans
- Creation of Redistricting Commissions

Redistricting Criteria and Principles

- Redistricting Criteria
- Districting Principles for 2010 and Beyond

Court Action on Redistricting

- Redistricting and the Supreme Court: The Most Significant Cases
- Action on Redistricting Plans
- Redistricting Case Summaries: 2010 - Present

Census

- 2020 Census Resources and Legislation
• What You Need to Know About the 2020 Census (LegisBrief)
• 2020 Census: How State Legislators Can Make a Difference (LegisBrief)

Additional Resources
• Redistricting Resources
• 2010 Redistricting Deviation Table
• Election Dates for Legislators and Governors Who Will Do Redistricting
• The “Iowa Model” for Redistricting
• NCSL’s Redistricting and Elections Standing Committee Members
• NCSL’s Redistricting Staff
Acknowledgements

This project’s genesis was the answer to a new legislative staffer’s request, “Where can I begin on redistricting?” NCSL did not have a good answer, so we set out to write this webpage, Into the Thicket: A Starter Kit. The real magic for this project came through the assistance of true redistricting experts--experienced legislative staff (and a very few others).

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Clark Bensen, principal consultant, POLIDATA

Ben Williams, J.D., legal analyst and project coordinator, Princeton Gerrymandering Project

James Whitehorne, chief, Census Redistricting & Voting Rights Data Office, U.S. Census Bureau

Jamie Chesser, geospatial programs manager, National State Geographic Information Council

With best wishes for success as we enter the 2020 redistricting cycle,

Wendy Underhill, director, Elections & Redistricting