



**Kansas Legislative Research Department**

*Providing nonpartisan, objective research and fiscal analysis for the Kansas Legislature since 1934*

68-West-Statehouse | 300 SW 10th Ave. | Topeka, Kansas 66612-1504  
(785) 296-3181

kslegres@klrd.ks.gov

kslegislature.org/klrd

April 5, 2019

**To:** General

**From:** Katelin Punelli, Research Analyst

**Re:** Ranked Choice Voting

## **RANKED CHOICE VOTING**

Interest in ranked choice voting (RCV) has increased over the past few years after Maine became the first state in the United States to authorize RCV in 2016 for certain races. Since then, several other states have considered similar measures.

While RCV seems like a new voting method, it has actually been used for more than a century. RCV was developed in the late 1800s and has been implemented by many countries to elect their national representatives and heads of state, and is still currently used by several countries, such as Australia, Papua New Guinea, and the Republic of Ireland

### **What is Ranked Choice Voting?**

RCV, sometimes called “instant run-off voting,” allows voters to choose candidates in order of preference by marking candidates as their first, second, third, and subsequent choices. The votes are tabulated in rounds, with the lowest-ranked candidates eliminated in each round until one candidate attains a majority (50 percent or more) of the votes. It is different from the standard method of voting, in which voters choose only one candidate for each office and the winner is determined by whomever gets the most votes, regardless of whether any candidate receives more than 50 percent of votes cast.

### **How Does Ranked Choice Voting Work?**

Under RCV, voters rank their choice of candidates in order of preference. A winner is not declared until one candidate receives more than 50 percent of the votes. If a candidate wins a majority of votes, there is no need to move to additional rounds. However, if no candidate receives a majority of first-preference votes, the candidate with the fewest votes is eliminated. The first-preference votes for the failed candidate are eliminated, and the second-preference candidates on those ballots are then tallied. If no candidate receives a majority of votes in that round, the process continues until a candidate does achieve a majority. This eliminates the need for a runoff election.

## Where is Ranked Choice Voting Implemented?

Several U.S. cities adopted RCV throughout the 1920s and 1930s, according to the Ranked Choice Voting Resource Center. The method fell out of favor in the 1950s until the last two decades, which saw a number of cities adopt RCV. Currently, 14 cities in 7 different states allow for RCV<sup>1</sup>; 6 cities and 2 counties in 7 different states either have future implementation dates or have approved use of RCV but laws are not yet in place<sup>2</sup>; and 1 city and 5 states allow RCV for military and overseas voting<sup>3</sup>.

## Arguments for Ranked Choice Voting

The Fair Vote and the Ranked Choice Voting Resource Center provide the following arguments in favor of RCV.

In a traditional election with several candidates, the winner may receive less than a majority of the votes, and therefore may not have the full support of the community or area the candidate is to represent. One example was the 2018 Kansas Governor race, which was divided among five candidates, none of whom attained a majority of the votes. The winner received 48.01 percent of the votes, while the next closest candidate received 42.98 percent of the vote. Supporters of RCV argue candidates should receive at least 50.0 percent of the vote to win, proving a broad base of support from their constituents.

Another argument in favor of RCV is this method limits the “spoiler” effect of independent or minor-party candidates. The spoiler effect is the effect of splitting votes between candidates or ballot questions that often have similar ideologies. One spoiler candidate's presence in an election could draw votes from a major candidate with similar politics, thereby causing a strong opponent of both or several to win. The minor candidate causing this effect is referred to as a “spoiler.” With RCV, voters can select their first choice from a third party, (any non-Democrat or non-Republican party), and a candidate from one of the two major parties as their second choice. If no candidate receives 50.0 percent of the first-choice selections, the voter's second choice, a Democrat or a Republican, would get the vote.

RCV could also bolster access for military and overseas voters when a primary race necessitates a runoff election. States must adhere to federal law mandating that ballots be sent 45 days ahead of time to overseas voters, which can make it hard to reach military and overseas voters in time. Five states—Alabama, Arkansas, Louisiana, Mississippi, and South Carolina—use RCV for military and overseas voters. This ensures those voters still have a vote in the runoff: their first choice if that candidate is still in the race or their second choice if the first choice has been eliminated.

---

<sup>1</sup>Basalt, Colorado (only for mayor and not yet necessary in race); Berkley, California; Cambridge, Massachusetts; Carbondale, Colorado (only for mayor and not yet necessary in race); Las Cruces, New Mexico (beginning in 2019); Minneapolis, Minnesota; Oakland, California; Portland, Maine; Saint Louis Park, Minnesota (beginning in 2019); San Francisco, California; San Leandro, California; Santa Fe, New Mexico; St. Paul, Minnesota; Takoma Park, Maryland; and Telluride, Colorado.

<sup>2</sup>Amherst, Massachusetts (passed in 2018, beginning in 2021); Benton County, Oregon (passed in 2016, beginning in 2020); Davis, California (advisory vote in 2006, no law yet); Ferndale, Michigan (passed in 2004, pending implementation); Memphis, Tennessee (passed in 2008, pending implementation); Santa Clara County, California (advisory vote in 1998, no law in place yet); Sarasota, Florida (passed in 2007, pending implementation); and Vancouver, Washington (advisory vote in 1999, no law yet).

<sup>3</sup>Arkansas, Alabama, Louisiana, Mississippi, South Carolina, and Springfield, Illinois.

Conducting a runoff election can be financially burdensome and time-consuming for local election authorities. RCV would allow an instant runoff with a much lower cost impact on time and finances.

Increased turnout in some cities with RCV has also been noted by supporters.

Supporters also state RCV could provide more choices for voters and increase the number and presence of third parties.

Some supporters argue RCV encourages candidates to appeal to a wider range of voters so candidates can be the voters' second choice and discourages negative campaigning.

### **Arguments against Ranked Choice Voting**

The League of Women Voters of Vermont and the Democracy Journal provide the following arguments against RCV.

Many opponents state, currently, the majority of state level races do not have more than two candidates due to primaries that eliminate other candidates, so RCV would not be needed in the majority of state elections.

One argument against RCV is ballot exhaustion. This occurs when a voter decides to only vote for one candidate and not rank the others (sometimes called "bullet" voting) and the counting goes to a second level. The voter's ballot would be "exhausted" and may not count at all, thus nullifying that person's vote.

Voter confusion is a major concern among opponents of RCV. Opponents state voters may not understand the new ballot formats and could end up spoiling their ballots with incorrect markings. Opponents also worry about the cost of educating the public and the costs associated with initiating RCV. Election officials using paper ballots would need to update the ballot printing software or possibly change the location where they have their ballots printed and those using electronic voting devices would need to update software or possibly purchase new equipment all together. Currently, no voting system certified by the U.S. Election Assistance Commission has RCV capability. Training of election staff on how to count the new ballots could also increase costs and time.

Another argument against RCV is there is still the potential a candidate does not receive 50.0 percent of the vote, so the winning candidate could still not have support from the majority of the individuals they will be representing.

While supporters argue that RCV encourages candidates to appeal for second-place votes, opponents say that due to today's polarized political environment, voters likely won't vote for a candidate outside their selected party or one that holds different positions on topics important to the voter.

Also, other than the one state level general election in Maine in 2018, almost all other data on RCV in the United States comes from nonpartisan municipal races, which may not be good indicators of what would happen in partisan statewide elections.

## **2019 State Ranked Choice Voting Legislation**

To date in 2019, 25 bills have been introduced in 14 states to use ranked-choice voting in elections at various levels. The National Conference of State Legislators (NCSL) is tracking these bills and any other legislation that relates to other alternative forms of voting.

As of March 2019, there have been 45 bills and one resolution introduced by 20 states in 2019; however, none have passed as of April, 2, 2019.

### ***California***

Two bills have been introduced in the 2019 California Legislative Session. SB 212 would authorize a city, county, or local educational agency to conduct an election using RCV. SB 641 would authorize the Governor to require a special election to fill a vacancy in a congressional or legislative office use RCV, if the affected jurisdiction is capable of using this voting method and the Secretary of State has approved the specific RCV method to be used. SB 212 is currently in a committee in the chamber of origin and SB 641 is awaiting referral to a committee.

### ***Connecticut***

Four bills have been introduced in the 2019 Connecticut Legislative Session. HB 5036 would establish RCV in primaries for nomination to single-member state, district, and municipal offices. HB 5820 would establish a task force to study RCV. HB 6881 would allow ranked-choice voting in municipal elections. SB 1050 would establish a working group to examine the feasibility of implementing RCV. All bills are currently in a committee in the chamber of origin.

### ***Georgia***

One bill has been introduced in the 2019 Georgia Legislative Session. SB 98 would authorize the use of RCV for runoffs by overseas citizens and military personnel. The bill is currently in a committee in the chamber of origin.

### ***Hawaii***

Seven bills have been introduced in the 2019 Hawaii Legislative Session. HB 210 would authorize RCV for all partisan primary elections, special elections, and nonpartisan general elections. The bill was amended by a House Committee to have an effective date of January 2081. The bill is currently in a committee in the chamber of origin. SB 450 was introduced as a mirror bill to HB 210, but is currently in a Senate committee and the effective date of SB 450 is January 2020. HB 718 would require RCV be used for special federal elections and special elections of vacant county council seats. The bill is currently in a committee in the chamber of origin. HB 1580 would require the use of the RCV method for elections for all elective offices. The bill is currently in a committee in the chamber of origin. SB 427, which was introduced as the companion of HB 718, would require the use of RCV in any federal election not held on the date of a regularly scheduled primary or general election and any special election for a vacant seat on a county council. The bill was amended by the Senate Committee and is currently in a House committee. SB 680 and SB 956 would both require RCV for all partisan primary elections, special elections, and nonpartisan general elections held on or after January 2020. Both bills are in a committee in the chamber of origin.

## **Indiana**

One bill has been introduced in the 2019 Indiana Legislative Session. SB 306 would allow municipalities and counties to implement RCV for all municipal and county elected offices. The bill is currently in a committee in the chamber of origin.

## **Maine**

Four bills have been introduced in the 2019 Maine Legislative Session. HP 96 would require the use of RCV for open primary elections, which include the offices of U.S. Senator, U.S. Representative, Governor, and state legislators. HP 877 would repeal RCV in Maine. SP 371 would propose a constitutional amendment to the *Maine Constitution* to implement RCV. SP 315 would implement RCV for presidential primary and general elections. All bills are currently in a committee in the chamber of origin.

## **Maryland**

Two bills so far have been introduced in the 2019 Maryland Legislative Session. HB 26 would authorize the Mayor and City Council of Baltimore City to adopt, by law, RCV or an open primary system for elections for county executive, members of the county council, judge of the circuit court, State's Attorney, clerk of the circuit court, register of wills, judge of the orphans' court, sheriff, and members of the board of education. HB 624 would authorize the Montgomery County Council to adopt, by law, RCV or approval voting method for elections for certain local offices. Both bills are currently in a committee in the chamber of origin.

## **Massachusetts**

Five bills so far have been introduced in the 2019 Massachusetts Legislative Session. S 406 would permit cities and towns to use RCV in city or town elections, with the exception of preliminary elections. Cities and towns would be allowed to either hold an election on the use of RCV or enact RCV *via* initiative ordinance or charter amendment. S 414 would require the use of RCV for the primary and general election of senators in congress, governor and lieutenant governor, attorney general, secretary of state, treasurer and receiver general, auditor, congressman, councillor, and state legislators. However, presidential electors and nominations and elections in caucuses must still be determined by a direct plurality vote. S 420 would allow cities and towns to choose to implement RCV in city and town elections *via* an election, ordinance, by-law, or charter amendment. H 719 would require the use of RCV for the primary and general election of senators in congress, governor and lieutenant governor, attorney general, secretary of state, treasurer and receiver general, auditor, congressman, councillor, and state legislators. However, presidential electors and nominations and elections in caucuses must still be determined by a direct plurality vote. H 635 would give cities and towns the option of using RCV in municipal elections. All bills are currently in a joint House and Senate committee.

## **Minnesota**

Three bills have been introduced in the 2019 Minnesota Legislative Session as of March 2019. HF 983, HF 1603, and SF 2424 would all allow home rule charter or statutory cities, counties, townships, and school boards to adopt RCV *via* adoption of an ordinance or resolution or an election, among other provisions. The bills are currently in a committee in their chamber of origin.

## **Missouri**

Two bills have been introduced in the 2019 Missouri Legislative Session. HB 27 would require the use of RCV for all primary and general elections. HB 28 would require the use of RCV in all primary and general elections for locally elected offices. Both bills are in a committee in the chamber of origin.

## **Montana**

One resolution has been introduced in the 2019 Montana Legislative Session. HJ 11, a joint resolution from both the House and Senate, would establish an interim committee to study alternative electoral systems, including RCV. The resolution is in a committee in the chamber of origin.

## **New Hampshire**

The New Hampshire Legislature has introduced one bill in the 2019 New Hampshire Legislative Session. HB 728 would establish RCV for federal and state offices. The bill is currently in a committee in the chamber of origin.

## **New Jersey**

One bill was introduced in the 2019 New Jersey Legislative Session as of March 2019. A1801 would allow the use of RCV for municipal elections if a municipality authorizes its use *via* ordinance or resolution. The bill is currently in a committee in the chamber of origin.

## **New York**

Six bills have been introduced by the New York State Assembly as of March 2019. A1420, S796, and A5261 would establish RCV in primary elections for mayor, public advocate, and comptroller in the City of New York. S1447 would establish RCV in any municipal election in the City of New York. S2517 would create a pilot program to provide for RCV to be used in up to ten local governments, selected by the New York State Board of Elections, in 2022 and 2023. S2717 would establish RCV for certain local elections. All bills are in a committee in their chamber of origin.

## **Oregon**

One bill has been introduced in the 2019 Oregon Legislative Session as of March 2019. HB 2984 would allow military and overseas voters to use RCV for presidential primary elections after January 2024. The bill is in a committee in the chamber of origin.

## **Utah**

One bill has been introduced in the 2019 Utah Legislative Session. HB 277 would make changes to the RCV law passed in 2018. The bill would change the date by which a municipality may opt in to participate in the pilot project and establish a procedure for a municipality to withdraw participation in the pilot project, among other provisions. The bill is currently in the Senate Committee of the Whole. (*Note:* The Utah Legislature passed HB 35 in 2018, which created the pilot project that allows municipalities to use RCV in nonpartisan races. Municipalities are not required to use RCV but may opt in. Currently, five<sup>4</sup> cities have opted to implement RCV in 2021.)

## **Vermont**

One bill was introduced in the 2019 Vermont Legislative Session. H 444 would require the use of RCV in all primary elections except for the President and in general elections for the offices of U.S. Senator and U.S. Representative. The bill is in a committee in the chamber of origin.

## **Virginia**

Two bills have been introduced by the Virginia General Assembly as of March 2019. HB 2097 would allow elections for local and constitutional offices to be conducted by RCV; the provisions of the bill would expire on July 1, 2024. HB 2751 would allow elections of members of a county board of supervisors or a city council to be conducted by RCV; the bill would take effect on July 1, 2020. Both bills are currently in a committee in the chamber of origin.

## **Washington**

Two bills have been introduced in the 2019 Washington Legislative Session. HB 1722 and SB 5708 would allow local governments and voters to eliminate their primary race and allow RCV in the November general election or maintain the primary but use a “top five” primary instead of a “top two.” In the “top five” primary, voters would be allowed to rank as many candidates as they wished, and the five most popular candidates would advance to the general election. RCV would then be used in the general election. Both bills are currently in a committee in the chamber of origin.

## **Wyoming**

One bill was introduced in the 2019 Wyoming Legislative Session as of March 2019. SF 65 requires RCV in primary and general elections with more than two candidates for a single office, among other provisions. The bill was not passed by the Senate Committee of the Whole.

---

<sup>4</sup> Cottonwood Heights; Lehi City; Payson City; Vineyard City; and West Jordan City.

## Ranked Choice Voting in Maine

As Maine was the first state to implement RCV at the state level, the following section provides information on the history of RCV in Maine, a summary of how RCV works, Maine's RCV statutes and rules and regulations, the elections in which Maine uses RCV, costs associated with RCV, issues on RCV ballots, and election security related to RCV.

### *History*

The first bill (LD 1714) related to RCV in Maine was proposed in 2001. The bill died in committee. In 2003, The Joint Standing Committee on Legal and Veterans' Affairs directed the Department of the Secretary of State (Department) to conduct a feasibility study of instant runoff voting in Maine. The report from that study was issued January 2005. Between 2005 and 2013, several bills concerning RCV were proposed and rejected by the Maine Legislature.

A citizens' initiative petition to enact RCV was approved to begin the process of gathering signatures in 2014. In November 2016, Maine voters approved the RCV ballot question with a vote count of 388,273 in favor to 356,621 against. The law took effect on January 7, 2017, but would not affect elections until after January 1, 2018.

In February 2017, the Maine Senate requested an opinion from the Maine Supreme Court on the constitutionality of RCV as applied to general elections for state representative, state senator, and governor. The Maine Supreme Court issued a unanimous advisory opinion in May 2017 finding that parts of the RCV law concerning general elections for state representatives, state senators, and governor were unconstitutional. The Legislature made two attempts to fully repeal the RCV law, which would have required a two-thirds vote of both chambers and the approval of Maine voters in a statewide election. Both attempts failed.

In October 2017, the Legislature passed legislation (Public law 2017, Chapter 316) delaying the implementation of RCV to December 2021, unless voters ratified an amendment to the *Maine Constitution* prior to that date; if there was no constitutional amendment, RCV would be delayed indefinitely. A people's veto petition to overturn this law was approved in November 2017. The veto petition was approved and was put to a statewide vote in June 2018.

In March 2018, the Committee for Ranked Choice Voting filed a motion for a temporary restraining order with the Kennebec County Superior Court, stating the conflicting statute is repealed by implication and, therefore, the RCV law applies. The order sought to require the Department to implement RCV for the June 2018 primary. The temporary order was granted in April 2018; however, on the same day, the Maine Senate filed a lawsuit against the Department seeking a declaratory judgment and injunctive relief. The Superior Court reported the Senate's case to the Maine Law Court, which issued a decision in April 2018 finding RCV would be in effect for the June 2018 primary election. Also in April 2018, a joint order (S.P. 730), which would have specifically authorized implementation and funding language for RCV and addressed the Senate's concerns, failed in committee.

In the June 12, 2018, primary, as all other races had a majority winner on election night, only the Democratic gubernatorial and Democratic U.S. Congressional District 2 races moved into rounds. The final results of the rounds were announced on June 20, 2018. In the same election, voters also approved the people's veto referendum question, requiring RCV to continue to be used in primary elections and for the offices of U.S. Senate and U.S. Representative in the general election, beginning November 2018.

In the November 2018 general election, the U.S. Congressional District 1 race and the U.S. Senate race were decided with a majority winner on election day; however, the U.S. Congressional District 2 race had to move into rounds. U.S. Representative Bruce Poliquin, a candidate in the U.S. Congressional District 2 race, filed a federal lawsuit in November 2018 challenging the constitutionality of RCV, along with a request for an emergency order to stop the tabulation of RCV votes in the U.S. Congressional District 2 race. Representative Poliquin also asked the U.S. District Judge either to declare him the winner or order another election for the 2<sup>nd</sup> U.S. Congressional District. On November 15, 2018, the U.S. District Judge denied the request for immediate relief and to stop the tabulation. The initial tabulation results were announced later that same day showing Jared Golden as the winner of the U.S. Congressional District 2 race. Representative Poliquin appealed the ruling to the First Circuit Court of Appeals in December 2018 and requested an emergency injunction to stop the certification of the election results. The case was dismissed in December 2018.

### ***Summary of the Ranked Choice Voting Process***

According to the Bureau, all local elections are under the jurisdiction of the local government so the following information is only concerning primary elections of U.S. Senator and Representative, Governor, and State Senator and Representative and in general elections for U.S. Senator and Representative.

At the end of election day, municipalities tally the votes and if no candidate wins 50.0 percent or more of the votes on election night in a race that has three or more candidates, the ballots and memory devices from each municipality are securely transported to a central tabulation site in Augusta, Maine, where the Department tabulates the votes. The winner is determined *via* rounds.

In each round, the number of votes for each continuing candidate must be counted. Each continuing ballot counts as one vote for its highest-ranked continuing candidate for that round. Exhausted ballots<sup>5</sup> are not counted for any continuing candidate. The round then ends with one of the following two potential outcomes:

- If there are two or fewer continuing candidates, the candidate with the most votes is declared the winner of the election; or
- If there are more than two continuing candidates, the last-place candidate is defeated, and a new round begins.

Two or more candidates may be defeated simultaneously by batch elimination<sup>6</sup> in any round of tabulation.

A tie between candidates for the most votes in the final round or a tie between last-place candidates in any round must be decided by lot, and the candidate chosen by lot is defeated.

### ***Statutes and Rules and Regulations***

Statutes concerning RVC are included throughout Maine's election statutes. RVC is defined in 21-A M.R.S.A. §1(35-A) as the method of casting and tabulating votes in which voters rank candidates in order of preference, tabulation proceeds in sequential rounds in which last-place candidates are defeated, and the candidate with the most votes in the final round is

<sup>5</sup> A ballot that does not rank any continuing candidate, contains an overvote at the highest continuing ranking, or contains two or more sequential skipped rankings before its highest continuing ranking. (21-AMRSA §723-A(1)(D))

<sup>6</sup> The simultaneous defeat of multiple candidates for whom it is mathematically impossible to be elected.

elected. Also, 21-A M.R.S.A. §601(2)(J) governs ballot preparation, requiring an RCV ballot be simple and easy to understand and allow a voter to rank candidates for an office in order of preference.<sup>7</sup> A voter may include no more than one write-in candidate among that voter's ranked choices for each office. Further, 21-A M.R.S.A. §723-A concerns how an election winner is determined in an RCV election.

The Bureau of Corporations, Elections and Commissions (Bureau) within the Department, is responsible for the rules and regulations related to RCV. The rules and regulations can be found at 29-250 CMR Ch. 535, §1 *et seq.* Under 29-250 CMR Ch. 535, §3, the Department has the sole authority to determine the design of RCV ballots. The ballot must be designed in a manner that allows voters to rank as many candidates as they wish, including all listed candidates and one declared write-in candidate. If there is no declared write-in candidate, the Department may remove the write-in space on the ballot.

### ***Races Using Ranked Choice Voting***

Maine is currently using RCV for primary elections of U.S. Senator and Representative, Governor, and State Senator and Representative and in general elections for U.S. Senator and Representative.<sup>8</sup> The RCV rounds are used only in races in which there are more than two candidates.

The Maine Supreme Judicial Court issued an advisory opinion in 2017, concluding that the parts of the RCV law that apply to general elections for State Representative, State Senator, and Governor were unconstitutional under the *Maine Constitution* because the *Maine Constitution* requires the winners of those offices in a general election to be decided by a plurality. Therefore, races for State Representative, State Senator, and Governor cannot be determined *via* RCV. Primary elections in Maine and elections for federal offices are governed by statute and not by the *Maine Constitution*. Current statutes also allow a voter to rank one write-in candidate per eligible office.

### ***Cost***

The Department stated \$761,000 would be required in 2017-2018 and \$641,000 in 2018-2019 for additional ballot pages and updated voting equipment. Additionally, the Maine Department of Public Safety would require \$149,000 over that same period for the cost of transporting and securing ballots for central counting in Augusta, rather than in local jurisdictions.

According to the Department, for 2018, including startup costs and both the primary and general elections, RCV cost an additional \$441,804 above the regular election costs. The Department breakdown of those costs are as follows:

- Startup costs:
  - Purchase of hardware for local area network—\$29,231;
- June 12, 2018, primary election costs:
  - Lease of RCV software—\$22,400;

---

<sup>7</sup> The Department has provided examples of marked RCV ballots at the following link: <https://www.maine.gov/sos/cec/elec/upcoming/MarkedBallotExamplesFORWEB081518.pdf>

<sup>8</sup> 21-A M.R.S.A. §1(27-C)

- High-speed tabulator lease—\$18,925; and
- Courier services (ballot retrieval)—\$30,875; and
- November 6, 2018, general election costs:
  - Lease of RCV software—\$22,400;
  - High-speed tabulator lease—\$18,925;
  - Courier services (ballot retrieval)—\$30,875; and
  - Printing and delivery for separate referendum ballot—\$268,173.

According to the the Maine Deputy Secretary of State (Deputy), the Bureau has not requested funding for RCV for fiscal years 2019 and 2020 due to the recent lawsuit. The Deputy also stated the total estimate would be approximately the same; however, as some voting equipment leases will be expiring in 2019, this could increase costs.

### ***Ranking Issues on Ballots***

Maine statute (29-250 CMR Ch. 535, §4) determines how an RCV ballot would be handled in the event of overvotes, skipped rankings, duplicate rankings, and no rankings. An overvote occurs when a voter marks more than one candidate for the same ranking; the overvoted ranking and all subsequent rankings are invalidated. A skipped ranking would not invalidate an RCV ballot. In the event of a skipped ranking, the skipped ranking is ignored and the subsequent ranking is counted in the current round, as long as that candidate is still in the round. For example, if the voter did not mark any candidate for the first ranking, but marked a continuing candidate for the second ranking, then the second ranked choice is counted in the first round of the RCV count. If two or more consecutive rankings are skipped or left blank, the ballot would be considered exhausted and no further rankings on that ballot would be counted. A duplicate ranking occurs when a voter marks more than one ranking column for the same candidate. If a voter marks a duplicate ranking for one candidate and ranks no other candidates, then the ballot will be counted for the highest ranking of that candidate. If the candidate with the duplicate ranking is defeated, the ballot is deemed exhausted for that contest and no subsequent candidate rankings marked on that ballot are counted. If a voter marks a duplicate ranking for one candidate but also ranks other candidates, and if the candidate with the duplicate ranking is defeated, then the vote for the next continuing candidate ranked by that voter will be counted in the next round. In any round, if a voter has not ranked any continuing candidate, the ballot is deemed exhausted for that contest, and no subsequent candidate rankings marked on that ballot are counted.

### ***Spoiled Ballots***

The Deputy indicated that prior to RCV, data on spoiled ballots was not recorded. The Bureau began recording this information during the 2018 primary and general elections. The spoiled ballot totals are only those ballots that were spoiled concerning RCV and for no other reason. In the June 2018 primary election, there were 4,917 spoiled ballots out of a total of 281,300 ballots cast. In the November 2018 general election, there were 7,814 spoiled ballots out of 642,839 ballots cast.

## ***Election Security***

The implementation of RCV did not change the way in which Maine secures elections. According to the Department, RCV tabulation is not online in any way and at any point in the process. All computers related to ballot layout and tabulation are also closed systems (not connected to any sort of network or Internet). Ballots and memory sticks from tabulation machines are locked, sealed, and transported with strict procedures establishing the chain of custody. Those procedures have been retained with RCV. The software to tabulate the results is operated on hardwired computers that are on a closed system. None of the tabulator machines currently in use statewide have connectivity capability, and Maine uses paper ballots for all elections, which are fully auditable. The only aspect of Maine's voting system connected to the Internet is the Central Voter Registration system, which allows municipal clerks to update voter information. However, it is password protected and monitored by in-house Information Services staff for any attempts at unauthorized use.