



★ VIRGINIA ★
DEPARTMENT *of* ELECTIONS

the Handbook

Chapter 20

Ranked Choice Voting

August 2025

1. RANKED CHOICE VOTING	3
20.1 CHAPTER ORGANIZATION	3
20.2 WHAT IS RCV?	3
20.3 ESTABLISHING AN RCV OFFICE	4
20.4 RCV ADMINISTRATION	5
20.4.1 <i>BALLOT STANDARDS</i>	5
20.4.2 <i>VOTING AN RCV BALLOT</i>	5
20.4.2.1 Ballot Scenarios and Treatment	6
20.5 RESULTS TABULATION	7
20.5.1 <i>UNDERSTANDING TYPES OF RCV AND DETERMINING WINNERS</i>	8
20.5.1.1 Instant Run-Off Voting (Single Winner)	8
20.5.1.2 Single Transferable Vote (Multi-Winner/Proportional RCV)	8
20.5.2 <i>TABULATION STEPS</i>	9
20.5.2.1 Use of a Cast Vote Record	10
20.5.2.2 RCTab	10
20.5.2.3 Hand Count and Hand Tabulation Procedures	12
20.6 RESULTS REPORTING	12
20.6.1 ELECTION NIGHT REPORTING- ENHANCED VOTING	12
20.6.2 POST ELECTION	14
20.7 VOTER OUTREACH	14
20.8 GLOSSARY	16



20. RANKED CHOICE VOTING (RCV)

REQUIRED FORMS RCTab Installation Request Form ELECT Form 633 Logic and Accuracy Certification	ADDITIONAL RESOURCES Ranked Choice Voting Resource Center RCTAB FormsWarehouse: Ranked Choice Voting Campaign Finance Laws and Policies
REFERENCE Code of Virginia §24.2-673.1 Charter Provisions SBE RCV Ballot Standards RCTab Software Approval 2023 RCV Study	REGULATIONS Va. Admin. Code Chapter 100

20.1 CHAPTER ORGANIZATION

This chapter outlines the adoption, administration, and reporting of Ranked Choice Voting (RCV) in Virginia. In this chapter, section 20.2 provides a general overview of RCV. Section 20.3 focuses on the adoption of RCV by the local governing body and the related requirements for notifying ELECT. Section 20.4 outlines the steps to administer an RCV race, including similarities and differences from other forms of voting. Section 20.5 discusses results tabulation both with RCTab and without RCTab. Section 20.6 discusses Election Night Reporting (ENR) in more detail while utilizing the Enhanced Voting software and the post-election process. Section 20.7 briefly discusses voter outreach on RCV. Section 20.8 provides a glossary of terms.

20.2 WHAT IS RCV?

In 2020, legislation was approved that provided RCV as an option for localities to elect their local boards of supervisors and city councils.¹ RCV is a method of casting and tabulating votes in which:

- (i) Voters rank candidates in order of preference;
- (ii) Tabulation proceeds in rounds where the last-place candidate is eliminated until a candidate(s) receives the necessary number of votes to be elected;
- (iii) When a candidate is eliminated, their voter's vote is transferred to the voter's next-ranked candidate; and
- (iv) Tabulation ends when the number of candidates elected equals the number of offices to be filled.

¹ See [§24.2-673.1](#).



RCV is used in Virginia in both single-winner races where only one seat is up for election ("instant runoff voting") and multi-winner races where multiple seats are up for election ("single transferable vote").² More details about these forms of RCV are detailed later in this chapter but, for purposes of simplicity, this chapter generally uses "RCV" as an umbrella term to describe all references to the subject and draws distinctions as necessary. Additional terminology developed for the implementation of R can be found in 1VAC20-100-10 and in the Glossary in section 20.8 of this chapter.³

**Note**

The RCV statute, §24.2-673.1, will expire on July 1, 2031, unless new legislation changes this statute.

20.3 ESTABLISHING AN RCV OFFICE

Establishing RCV as the method to be used for an eligible elected office requires passage of an ordinance by a majority vote of the county board of supervisors or city council. The decision to use RCV must be made in consultation with the local electoral board and general registrar.⁴ The following code requirements should be referenced in developing an ordinance for RCV:⁵

1. RCV shall only be valid for the election specified in the adopted ordinance.
2. The ordinance must be enacted no later than 90 days prior to the date of the specified election.
3. RCV may not be conducted for a primary with fewer than three candidates.⁶
4. Any locality that adopts an RCV ordinance must electronically transfer the signed ordinance to the Department of Elections. Localities should complete, scan, and submit the signed ordinance to the [RCTab Installation Request Survey](#) and alert their ERS Liaison.

Additional considerations when developing an ordinance include:



- Localities *will not* be splitting the cost to change VERIS or anything related to Election Night Reporting (ENR).
- Localities *will* be responsible for payment related to upgrading software. To utilize the tabulation software, your locality's voting machines **MUST** be able to produce a Cast Vote Record (CVR). Localities will be responsible for any upgrades to their voting machines to accommodate this requirement. ELECT encourages you to speak with your voting machine vendor about available options and potential costs.
- Both ELECT and localities are responsible for voter outreach initiatives and certain associated costs. Localities should plan to host educational events and develop materials in addition to those provided on the ELECT website to educate voters on the RCV process.⁷
- Localities should also consider costs related to ballot design. ELECT encourages you to speak with your vendor about potential costs.

² See [§24.2-673.1\(A\)](#). See Virginia Admin. Code [1VAC20-100-10](#), and [1VAC20-100-50](#).

³ See Virginia Admin. Code [1VAC20-100-10](#).

⁴ See [§24.2-673.1\(B\)](#).

⁵ See Virginia Admin. Code [1VAC20-100-30](#).

⁶ *Id.*

⁷ See ELECT, [Ranked Choice Voting](#). See also ELECT, [Ranked Choice Voting](#) on FormsWarehouse.



ELECT strongly encourages local election officials to be proactive in providing information to their localities in the administration of RCV.

20.4 RCV ADMINISTRATION

The administration of an election using RCV shares many similarities with traditional plurality voting. Most notably, RCV does not impact candidate filing or campaign finance. However, as previously mentioned, there are also key differences that are important to understand to properly administer. This section will detail aspects of election administration unique to RCV that will help ensure a successful RCV election.

20.4.1 Ballot Standards

All ballot forms for RCV must comply with SBE standards, which can be found under the RCV section of FormsWarehouse.⁸ While registrars should always review all aspects of the standards before working with a vendor to create their ballots, the following are some important considerations:

- Registrars should follow the order on ELECT's ballot standards.
- RCV races are printed on the same ballots as all other races; there is no need for separate pages for RCV races.
- Voter instructions are different for RCV. Therefore, RCV races must have instruction sections at the top of the ballot page on which the race is placed.⁹
- RCV races require unique office headers with instructions for voters.¹⁰
- The grid style layout must be used for RCV. If a locality has multiple RCV races, they must be listed down the ballot.¹¹
- The number of write-in lines must match the number of seats to be elected. For example, an RCV office with three seats available must have three lines for the voter to write in votes.¹²
- While write-ins are permitted for RCV elections¹³, keep in mind that they are not permitted for primaries.¹⁴ Additionally, no RCV may be conducted for a primary with fewer than three candidates.¹⁵

20.4.2 Voting an RCV Ballot

Aside from marking to rank the candidates on the ballot for RCV, the voting process does not change from traditional voting. RCV race(s) are printed on the same ballot as all other non-RCV races. After making their selections, voters place their ballots in the machines, and the machines record the voters' selections. RCV tabulation rounds are conducted after all ballots are received and counted.

⁸ *Id.* See ELECT [Ballot Standards for Ballots with Ranked Choice Voting \(RCV\) Races](#), June 2, 2022.

⁹ *Id.*, page 19.

¹⁰ *Id.*, page 27-31.

¹¹ *Id.*, page 21.

¹² *Id.*, page 40.

¹³ See Virginia Admin. Code [1VAC20-100-65](#).

¹⁴ See [§24.2-529](#).

¹⁵ See Virginia Admin. Code [1VAC20-100-30](#).



While RCV provides the option to rank each candidate, voters are not required to rank choices. Voters can rank as few or as many candidates as are allowed, including just one (See Section 20.5.2.1 for further discussion on ranking candidates).

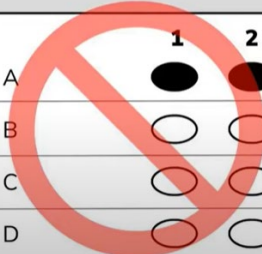
Limits on ranking candidates may vary depending on a locality's ballot scanning machine vendor. The SBE set the maximum number of rankings at 10.¹⁶ Therefore, if a ballot scanner machine allows up to five rankings, but there are seven candidates on the ballot, the voters may only rank five of those seven candidates. **It is important to note that the ranking limit does not impact the number of candidates allowed on the ballot. It only impacts how many of those candidates on the ballot a voter can rank.**

20.4.2.1 Ballot Scenarios and Treatment

The following are important ballot scenarios to understand regarding RCV:

1. **Ranked choice overvote:** a voter assigned more than one candidate the same ranking.¹⁷ For example, the voter ranked Candidate A and Candidate B both as their second choice.
 - a. In the case of a ranked choice overvote for a ranking on a ballot, the ranking shall not be counted in any round, and the next valid ranking shall be counted in all rounds except the first-choice ranking tabulation.¹⁸
2. **Duplicate ranking:** a voter has assigned one candidate multiple rankings.¹⁹ For example, the voter ranked Candidate A as their 2nd and 3rd choice.
 - a. A ballot with a duplicate ranking shall be counted unless the voter's choice was defeated in a previous round. The candidate may not be counted twice; only the highest ranking is counted.²⁰ Valid rankings for other candidates after a duplicate ranking shall be counted.

Rank up to 3 candidates. Vote for one candidate in each rank.			
	1	2	3
Candidate A	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Candidate B	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Candidate C	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Candidate D	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



3. **Skipped ranking:** a voter has left a ranking unassigned but ranks a candidate at a subsequent ranking.²¹ For example, the voter chose Candidate A as their 1st choice, skipped their 2nd choice, and put Candidate B as their 3rd choice.

¹⁶ See ELECT, [Ballot Standards for Ballots with Ranked Choice Voting \(RCV\) Races](#), page 30, June 2, 2022.

¹⁷ See Virginia Admin. Code [IVAC20-100-10](#).

¹⁸ See Virginia Admin. Code [IVAC20-100-40](#).

¹⁹ See Virginia Admin. Code [IVAC20-100-10](#).

²⁰ See Virginia Admin. Code [IVAC20-100-40](#).

²¹ See Virginia Admin. Code [IVAC20-100-10](#).

- a. If a ballot has a skipped ranking, the next valid ranking shall be counted, except in the first-choice ranking tabulation round.²²
- b. In the event the ballot reaches two consecutive skipped rankings, the ballot will be considered an inactive ballot and not be counted for further rounds.²³

Rank up to 3 candidates. Mark no more than 1 oval in each column.			
	1	2	3
Candidate A	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Candidate B	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Candidate C	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Candidate D	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. **Tie breaking:**
 - a. In the event two candidates have an equal number of votes for a seat after all RCV rounds, prior to a recount, the candidate elected shall be determined by lot.²⁴
 - b. In the event two or more candidates have an equal number of votes and the fewest number of votes in an RCV round, tabulation cannot be continued until one of them is defeated. The person to continue as an active candidate shall be determined by lot.²⁵
5. **Unreadable ballot:** In the event the general registrar receives a ballot that cannot be read by the ballot scanner machine, the general registrar or election official shall transpose the voter's intent to a machine readable ballot.²⁶ Ballot transcription is allowed in the administering of a RCV contest, due to the nature of tabulation. Ballot transcription guidance can be found on FormsWarehouse but may only be used for RCV ballots.

20.5 RESULTS TABULATION

After voting concludes and votes are ascertained by the officers of election, the first-round results will be available. However, since ballots in Virginia elections can be received up to noon on the third day after Election Day (provided they are postmarked by Election Day), there may be some outstanding ballots.²⁷ **Therefore, determinations about whether a candidate has reached the maximum possible threshold in first-choice tabulation or whether additional tabulation rounds are required shall not be made run until all ballots are received.**

²² See Virginia Admin. Code [IVAC20-100-40](#)

²³ *Id.* ("Inactive ballot" means a ballot that can no longer be counted due to the ballot having not active candidates in the round).

²⁴ See Virginia Admin. Code [IVAC20-100-40](#). See also [§24.2-674](#)

²⁵ *Id.*

²⁶ See Virginia Admin. Code [IVAC20-100-60](#). See ELECT, FormsWarehouse, [Ranked Choice Voting](#).

²⁷ See [§24.2-709](#)



20.5.1 Understanding Types of RCV and Determining Winners

As previously mentioned, there are two types of RCV, the use of which depends on whether there is one or are multiple seats to be filled. The following two subsections detail how RCV tabulation rounds are calculated in each case.

20.5.1.1 Instant Run-Off Voting (Single Winner)

For any RCV race for a single seat, the process is called Instant Runoff Voting.²⁸ If a candidate emerges from the first-choice ranking tabulation round with a vote total greater than or equal to the maximum possible threshold, that candidate is the winner and no additional tabulation rounds are required.²⁹ Whether a candidate has reached this threshold in the first-choice round cannot be determined until all post-election ballots have been counted.

- Maximum possible threshold = ((Total ballots cast for the office)/(Seats to be elected+1))+1, with any fraction disregarded.

If no candidate reaches the maximum possible threshold in the first-choice ranking tabulation, additional tabulation rounds are required. As this chapter has detailed, the rounds include eliminating the lowest vote receiving candidate per round and redistributing that eliminated candidate's votes to the other remaining active candidates. This is done in the additional rounds until a candidate reaches more than 50% of the votes, or until there are two candidates remaining.³⁰

20.5.1.2 Single Transferable Vote (Multi-Winner/Proportional RCV)

When there is more than one seat in the office being filled by the RCV election, the RCV type is called Single Transferable Vote.³¹ In this type of race, if the number of seats is greater than or equal to the number of candidates, then all candidates are elected.

If there are more candidates than seats, RCV tabulation rounds are required. This is similar to Instant Runoff Voting, where in each round the lowest vote receiving candidate is eliminated, with their votes transferring to the remaining active candidates. For a candidate to be declared a winner, they must reach either the maximum possible threshold in the first-choice ranking round or the election threshold in the additional rounds. While essentially a majority, the election threshold is calculated by the equation below:³²

- Election threshold=

$$\left(\frac{\text{Total votes cast}}{\text{Seats to be elected} + 1} \right) + 1$$

²⁸ See Virginia Admin. Code [IVAC20-100-10](#)

²⁹ See Virginia Admin. Code [IVAC20-100-50](#)

³⁰ *Id.* ("If two or fewer active candidates remain, the candidate with the greatest number of votes is elected and tabulation is complete.").

³¹ See Virginia Admin. Code [IVAC20-100-10](#)

³² *Id.*



For example, if there are 1,000 total votes cast for 3 seats, then the election threshold for a candidate is 251. If Candidate A reaches 251 votes after the first round they are declared elected. If no other candidate reaches that threshold, then the rounds continue. See the same equation with the examples numbers included below.

- 251 election threshold=

$$\left(\frac{1000}{3 \text{ seats} + 1} \right) + 1$$

Once one of the candidates reaches the election threshold, each vote for that candidate in subsequent rounds is declared a “surplus vote” and distributed to the remaining active candidates at a new “transfer value.” This means each vote above that threshold has a percentage allocated to their next available ranking. The transfer value is determined by multiplying the old transfer value to the surplus fraction. See below for how this surplus is calculated.³³

- Surplus Fraction=

$$\frac{(\text{Elected Candidate's Vote Total} - \text{Election Threshold})}{\text{Elected Candidate's Vote Total}}$$

Under the previous example, if Candidate A received 400 votes, the surplus fraction is 0.3725. Since each ballot begins by having a transfer value of 1, the new transfer value of each ballot that elected Candidate A is 0.3725. For that round, all ballots for Candidate A will transfer 37.25% of a vote to their second choices. This way, despite ranking the popular Candidate A first, those voters will still have their second rank count to some degree.

- 0.3725 Surplus Fraction=

$$\frac{(400 \text{ Votes for Candidate A} - 251 \text{ Election Threshold})}{400 \text{ Votes for Candidate A}}$$

20.5.2 Tabulation Steps

In RCV races, tabulation occurs in two phases:

³³ See Virginia Admin. Code [1VAC20-100-10](#) and [1VAC20-100-50](#); a transfer value is the proportion of a vote that ballot will contribute to its highest-ranked active candidate. Each ballot begins with a transfer value of one. If a ballot contributes to the election of a candidate under [1VAC20-100-50](#), it receives a new transfer value.



1. scanning of ballots, ascertainment of votes, and creation of the cast vote record (CVR) by the voting system at the polling locations;
2. transferring of votes and calculating in RCV rounds at a central tabulation location.

The first phase of tabulation determines whether a candidate has sufficient first-choice rankings to win the election. If a candidate does not reach the maximum possible threshold, additional tabulation rounds are required to select a winner.

This subsection goes further into detail on the components required to tabulate the RCV results, including the use of necessary software.

20.5.2.1 *Use of a Cast Vote Record*

A Cast Vote Record (CVR) is an electronic record of the selections made on each ballot. This is particularly important for RCV tabulation, as the CVR shows the ranking assigned to each candidate on each ballot and is used in the RCV tabulation rounds. To utilize the RCV Tabulation software (RCTab) that is described in the following section, a CVR for each voting machine is required to be produced. Localities are encouraged to speak with their vendors about the production of the CVR and should contact ELECT with concerns.

Note: The SBE revised the RCV regulations to require localities to preserve a record of votes cast in an RCV election for the purpose of public inspection.³⁴

20.5.2.2 *RCTab*

ELECT has procured the use of RCV tabulating software, RCTab, from the Ranked Choice Voting Resource Center (RCVRC). The use of software is required to tabulate RCV rounds in the most accurate, efficient manner. ELECT chose to procure a third-party tabulation software that was compatible with the CVR file formats produced. RCTab is the most comprehensive RCV round tabulation software to be federally tested under the Voluntary Voting System Guidelines (VVSG) and has been utilized across the country to conduct RCV elections held in New York and Michigan.³⁵ RCTab 1.2.0 is the current version certified and approved for use in the Commonwealth.

As an open source software, use of RCTab software for elections in Virginia requires specific computer configuration and security practices (hardening) to download, install, and use the software.

Localities are responsible for the operation of RCV/RCTab software and will complete all the procedures and processes for its use for each eligible election.



Best Practice

Though purchasing, installing, validating, and managing RCTab software can be completed by persons with basic technology skills. It is suggested that persons with a fairly good understanding of computer basics be employed to set-up and manage RCTab.

³⁴ *Id.*

³⁵ See [RCV Study](#), 2023.

Specifically, localities are responsible for:

- Purchasing and hardening of approved devices for RCTab software
- Downloading of secured RCTab software
- Installation of RCTab software
- Validation of the RCTab software through HASH validation
- Gathering the voting machine flash drives or CVR files
- Running and managing the RCTab software and components
- Formatting the CVR files in preparation for import into the RCTab software
- Running the RCV rounds in RCTab
- Uploading any files and final results into ELECT's Election Night Reporting system
- Completing post-election RCTab and RCV procedures
- Maintaining and securing all devices that are for RCV (i.e. devices that will run RCTab and secure flash drives). Keep in mind that devices for RCV can only be used for RCV tabulation.

Steps to request and use RCTab software:

**Note**

As of June 2024, localities who already use RCTab may continue with the same version and procedures already used to implement and manage RCTab. Any new locality must comply with the instructions and procedures as per this section. If RCTab is updated to its next version, ALL localities must follow the procedures in this section to download, install, and use RCTab software in their locality.

1. The first step is to complete the [RCTab Installation Request Survey](#), ideally after the local completion of the ordinance approving use of RCV. This survey lets ELECT know a locality will be using RCV for an upcoming election and gives ELECT a record of the ordinance that approved its use in your locality. This survey requires a locality to upload the ordinance approving RCV in its jurisdiction.

Once ELECT receives the fully completed survey (with attached locality ordinance), the requesting locality will receive access to a Box folder with the following information for the correct equipment that needs to be purchased for RCTab software:

- i. Accessing ELECT secure server for RCV/RCTab documents and instructions
 - ii. Systems purchasing, configuration, and hardening instructions and agreements
 - iii. USB Drive Requirements and Procedures
2. The second step is for the locality to purchase the appropriate equipment, harden it, and then submit a second survey, [RCTab Configuration and Security Hardening](#), along with the signed RCV -Ranked Choice Voting Installation, Storage, and Security Requirements Agreement.



Once the secondary survey is completed and submitted, ELECT will provide access to the secured RCTab software by sending instructions on downloading, installing, using, and managing RCTab software and equipment.

**Logic and Accuracy Testing of RCV Equipment**

All voting system equipment used in an RCV election will need to go through Logic and Accuracy (L&A) testing; localities will attest to the completion of L&A testing for RCV equipment as part of the L&A survey required before each election. See [ELECT Form 633 Logic and Accuracy Certification](#).

3. Once these steps are complete, the locality should reference the documents on usage and communicate with their vendor and ELECT on questions.

20.5.2.3 Hand-Count and Hand-Tabulation Procedures

In the context of RCV, hand-tabulation is different than hand-counting ballots. Hand-counting ballots is the process by which ballots are manually counted rather than read by the voting machine in the first-choice ranking round. For more information on hand-counting, [Virginia's Guide to Hand-Counting Ballots](#) should be utilized. Hand-tabulation is the process in RCV during which rounds are conducted without the use of tabulation software. ELECT has developed hand-tabulation step-by-steps and procedures for use, instead of RCTab, as required by any of the following scenarios:

- Scenario #1: The voting system is not working properly, requiring hand-counting of the ballots and hand-tabulation of the RCV rounds.
- Scenario #2: RCV tabulation software is unavailable or not working the days after the election, requiring hand-tabulation in the RCV rounds.
- Scenario #3: The Cast Vote Record (CVR) is not in the proper format for RCTab to read, requiring hand-tabulation in the RCV Rounds.
- Scenario #4: Both the voting machines and the RCV Tabulation software are not working properly, requiring hand-counting of the ballots and hand-tabulation in the RCV rounds.

20.6 RESULTS REPORTING AND POST-ELECTION

20.6.1 Election Night Reporting- Enhanced Voting

The results for elections conducted by ranked choice voting shall be reported along with other results reported on Election Night, except that such results shall clearly be identified as preliminary and based on the first rankings in a ranked choice voting election. On Election Night, localities will enter those preliminary first-round/initial results into Enhanced Results.

The following is an example of the display on the public site for the initial round totals:



Member County Board (Arlington County)

(Vote for not more than two)

Ranked Choice Contest

TEST DATA FOR DEMO ONLY

☆ Follow

Collapse ▾

Disclaimer: Round 1 Results

Below results display the first choice votes for the ranked choice contest. Final tabulation rounds and winner(s) will be displayed once all ballots have been received and counted, and may take up to 7 days.

Candidate	Round 1
Candidate A	17% 80,000 votes
Candidate B	17% 80,000 votes
Candidate C	17% 80,000 votes
Candidate D	17% 80,000 votes
Candidate E	17% 80,000 votes
Candidate F	17% 80,000 votes

Precincts reporting 5/55 as of 60 minutes ago
[View results by precinct](#)

Since ballots can be received until noon on the third day after Election Day, any RCV rounds cannot be tabulated until after all ballots are received. Therefore, unofficial winners cannot be declared on election night unless a candidate unofficially reaches the election threshold, or majority, in the initial totals. Once all tabulations for additional needed rounds are completed using RCTab, the results of the tabulation rounds will be entered in Enhanced Results.

See the following as an example of the display on the public site after RCV rounds are completed:

Member County Board (Arlington County)

(Vote for not more than two)

Ranked Choice Contest

TEST DATA FOR DEMO ONLY

☆ Follow

Collapse ▾

Candidate	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6	Round 7
Candidate A Winner	16% 10 votes	32% 20 votes +10	48% 30 votes +10				
Candidate B Winner	19% 12 votes	19% 12 votes	19% 12 votes	31% 18 votes +6	37% 18 votes	46% 18 votes	
Candidate C	16% 10 votes	16% 10 votes	16% 10 votes	17% 10 votes	20% 10 votes	×	Eliminated
Candidate D	16% 10 votes	16% 10 votes	16% 10 votes	17% 10 votes	×	Eliminated	
Candidate E	16% 10 votes	16% 10 votes	×	Eliminated			
Candidate F	16% 10 votes	×	Eliminated				

[Learn more about ranked choice voting](#) ⓘ

**Note:**

While all results on election night are unofficial until the Canvass and certification by the SBE, it is important to be prepared to explain the RCV tabulation timeline to voters and media who may inquire.

20.6.2 Post Election

Once the election is concluded, RCV rounds completed, results posted, and results certified, the post-election procedures of RCV largely are the same as traditional races. Please refer to the post-election advisory that ELECT provides before each election that describes storage of materials and considerations. For recount instructions, please refer to the Recount Step-by-Step Instructions.³⁶

20.7 VOTER OUTREACH

It is always important to educate the voters of your locality about upcoming elections. This becomes even more important when RCV is on the ballot, as many voters will be unfamiliar with the process, particularly as it relates to marking their ballots. While ELECT is required to post educational information about RCV on its website, localities must also be prepared to conduct outreach and education on RCV. ELECT recommends that you reach out to other localities that previously have conducted an RCV election if you are looking for additional assistance. ELECT has created forms relating to Ranked Choice Voting and has posted this information on FormsWarehouse under the Ranked Choice Voting section.³⁷

Per [1VAC20-100-80](#): Any county board of supervisors or city council that adopts an ordinance to conduct an election by ranked choice voting shall develop and distribute educational information about ranked choice voting no later than 60 days before the specified election.

“Educational information” is nonpartisan, plain language that includes information about the adoption of RCV for an election, an explanation of the RCV process, an unmarked official sample RCV ballot for review, and instructions on how to read and mark the ballot.³⁸ The education information must be:

- Published in the local newspaper, posted on the locality's website, or mailed to active and inactive voters eligible to vote in the specified election.
- Posted in the office of the general registrar no later than 60 days before the specific election and made available for distribution if requested by the public.
- Posted in each satellite office and polling place operating for the election.³⁹

Based upon the experience in Arlington County and the experience of other jurisdictions across the country, voter education is a critical component for RCV elections, particularly when newly introduced. As previously described, prior to the Arlington County primary election, both ELECT and Arlington County undertook significant efforts to educate voters, but many citizens and

³⁶ See ELECT, [Recount Step-by-Step Instructions](#) (rev. 8/23).

³⁷ See ELECT, FormsWarehouse, [Ranked Choice Voting](#).

³⁸ See Virginia Admin. Code [1VAC20-100-80](#).

³⁹ *Id.*







































community groups still contended that more was needed. Arlington County's Department of Voter Registration and Elections developed an outreach plan, conducted multiple educational presentations, and created numerous educational materials, including toolkits that could be used by community organizations to educate their constituencies.



20.8 GLOSSARY

Term	Synonym(s)	Definition																				
Active Ballot		Ballot that counts toward an active candidate in the current round of counting.																				
Active candidate		Candidate who has not been defeated during round-by-round vote counts. In a count that lasts multiple rounds, the number of active candidates will decrease with each round.																				
Duplicate ranking		<div>Voter has assigned one candidate multiple rankings.</div> <div><div><div>Rank up to 3 candidates. Vote for one candidate in each rank.</div><table><tr><td></td><td>1</td><td>2</td><td>3</td></tr><tr><td>Candidate A</td><td><input checked="" type="radio"/></td><td><input checked="" type="radio"/></td><td><input checked="" type="radio"/></td></tr><tr><td>Candidate B</td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td></tr><tr><td>Candidate C</td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td></tr><tr><td>Candidate D</td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td></tr></table></div></div>		1	2	3	Candidate A	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	Candidate B	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Candidate C	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Candidate D	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Election threshold	Quota	<div>The number of votes sufficient for a candidate to be elected in a multi-winner, single transferable vote contest, except in the first-choice ranking tabulation round.</div> <div>The election threshold equals the total votes counted for active candidates in the first round of tabulation, divided by the sum of one plus the number of offices to be filled, then adding one, disregarding any fractions. Election threshold = ((Total votes cast)/ (Seats to be elected+1)) +1, with any fraction disregarded.</div> <div><div><div><div>Number of ballots cast for office</div><div>Number of seats to be filled + 1</div></div><div>+ 1 = Threshold</div><div>(Round down to whole number)</div></div></div>																				
First-choice ranking tabulation round	<div>Initial RCV results</div> <div>First round results</div>	<div>The stage of tabulation of first-choice rankings completed at each precinct on the voting system.</div> <div>For all elections for an office conducted by ranked choice voting, only first-choice rankings shall be counted in the first-choice ranking tabulation round.</div>																				
Highest-ranked active candidate		Active candidate assigned to a higher ranking than any other active candidates.																				

Inactive ballot	Exhausted ballot	Ballot that can no longer be counted due to the ballot having no active candidates in the round.																				
Instant-runoff voting	Single-Winner	A single-winner, ranked-choice voting contest in which no more than one seat in the office must be filled by the election.																				
Last-place candidate	Lowest ranked candidate	The candidate with the fewest votes in a round of a ranked choice voting election.																				
Maximum possible threshold		<p>The number of first-choice rankings from active ballots received in the first-choice ranking tabulation round sufficient for a candidate to be elected.</p> <p>The maximum possible threshold equals the total ballots cast for the office, including valid first-choice rankings, undervotes, skipped rankings, or overvotes for the office, divided by the sum of one plus the number of offices to be filled, then adding one, disregarding any fractions.</p> <p>Maximum possible threshold = ((Total ballots cast for the office)/(Seats to be elected+1))+1, with any fraction disregarded.</p>																				
Ranked choice overvote		<p>A voter assigned more than one candidate the same ranking.</p> <div><p>Rank up to 3 candidates. Vote for one candidate in each rank.</p><table><thead><tr><th></th><th>1</th><th>2</th><th>3</th></tr></thead><tbody><tr><td>Candidate A</td><td><input checked="" type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td></tr><tr><td>Candidate B</td><td><input checked="" type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td></tr><tr><td>Candidate C</td><td><input checked="" type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td></tr><tr><td>Candidate D</td><td><input checked="" type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td></tr></tbody></table></div>		1	2	3	Candidate A	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Candidate B	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Candidate C	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Candidate D	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Ranked choice undervote		A voter has left a ranking unassigned. (Different than Skipped Vote as described below).																				
Ranked-choice voting election	Rank Choice Voting RCV	<p>A method of casting and tabulating votes in which:</p> <p>(i) voters rank candidates in order of preference</p> <p>(ii) tabulation proceeds in rounds such that in each round either an active candidate or candidates are elected or the last-place candidate is eliminated</p>																				

		<p>(iii) votes for voters' next-ranked candidates are transferred from elected or defeated candidates, and</p> <p>(iv) tabulation ends when the number of candidates elected equals the number of offices to be filled.</p>																				
Ranking		The ordinal number assigned on a ballot to a candidate to express the voter's preference for that candidate. Ranking number one is the highest ranking, ranking number two is the next-highest ranking, and so on, consecutively, up to the maximum allowed ranking.																				
Round	Tabulation Round	A stage of the vote tabulation in a ranked-choice voting election in which a person may be elected or the last- place candidate is defeated.																				
Single transferable vote	Multi-Winner Proportional RCV	More than one seat in the office must be filled by the election.																				
Skipped ranking		<p>A voter has left a ranking unassigned but ranks a candidate at a subsequent ranking.</p> <div><p>Rank up to 3 candidates. Mark no more than 1 oval in each column.</p><table><tr><td></td><td>1</td><td>2</td><td>3</td></tr><tr><td>Candidate A</td><td></td><td></td><td></td></tr><tr><td>Candidate B</td><td></td><td></td><td></td></tr><tr><td>Candidate C</td><td></td><td></td><td></td></tr><tr><td>Candidate D</td><td></td><td></td><td></td></tr></table></div>		1	2	3	Candidate A				Candidate B				Candidate C				Candidate D			
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Surplus fraction	Residual fraction	<p>A number equal to the quotient of the difference between an elected candidate's vote total and the election threshold, divided by the candidate's vote total, (or $(V-T)/V$, in which "V" is the elected candidate's vote total and "T" is the election threshold), truncated after four decimal places.</p> <p>This number is used in multi winner RCV races to determine what fraction of surplus votes should be distributed to the remaining, unelected active candidates.</p>																				

		$\frac{\text{Candidate's total \# of votes} - \text{Threshold}}{\text{Candidate's total \# of votes}} = \text{Surplus Fraction}$
Surplus vote		The number of votes a candidate receives beyond the election threshold set for a transferable vote race.
Tabulation Results	RCV results	<p>The final results after the tabulation rounds are conducted. Initial, first round results are entered into the tabulation software, which then runs the rounds and eliminates last place candidates until the highest ranked candidate(s) meet the election threshold.</p> <p>Note: if no candidate reaches the election threshold in the first return of votes, tabulation rounds are needed.</p>
Tabulator	Tabulation Software RCTab	The software that conducts the rounds for a ranked-choice election. This is separate from the voting machine where ballots are inserted.
Transfer value		The proportion of a vote that a ballot will contribute to its highest-ranked active candidate. Each ballot begins with a transfer value of one. If a ballot contributes to the election of a candidate under 1VAC20-100-50 B, it receives a new transfer value.

