An Evaluation of the Ranked Choice Voting Pilot in Utah

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Executive Summary

- This report presents a statistical analysis of the results of two recent surveys performed by Y2 Analytics gauging Utah voters' reaction to Utah's ongoing ranked choice voting (RCV) pilot. The surveys were conducted in 2021 and 2023 from likely and confirmed voters, with a non-exclusive focus on those that participated in RCV.
- We conclude from the survey that
  - ◊ About the same number of Utah voters prefer single-vote plurality as those that prefer RCV. It is statistically unlikely that either group includes a majority of voters.
  - ◊ A majority of Utah voters enjoyed using RCV.
  - ◊ More than 75% of Utah voters found RCV easy to use.
  - ◊ A majority of Utah voters were more likely to vote for their preferred candidate using RCV.
  - ◊ A majority of Utah voters want RCV to continue in Utah in at least local elections.
- We also conclude from the survey that over 80% of Utah voters are confident that their votes are counted accurately and that their local elections produce fair outcomes.
- There are some notable limitations to the survey.
  - ◊ The survey employs weights to get its sample as close to a representative random sample as possible, but more data and research are needed to verify these results.
  - ◊ The surveys indicate that there were notable differences between voter opinion in 2021 and voter opinion in 2023. Two or three election cycles are not enough time for voters and candidates to optimize their behavior and opinions about a voting method. Thus, the opinions of voters may continue to shift over time. These surveys nor the current opinion of the public may be a perfectly accurate representation of where the public's views will eventually settle about the use of RCV.
- More surveys need to be done, more data collected, and more analyses performed to understand the effect of RCV in Utah and the public's reaction to it.

Introduction

In any democratic system of government desiring to enact the will of the people, whether that be through electing individuals who act as representatives of the people or by ballot initiatives directly enacting courses of action selected by the people, how to accurately identify the will of the people is of paramount concern. For most of the history of the United States and the state of Utah, this has mostly been done via elections utilizing the plurality method of voting, particularly when the election is designed to elect a single individual to a position. In an election for a single individual representative, the method of plurality voting collects each voter's first choice among a pool of candidates and then tallies how many votes each candidate receives. The candidate with the largest number of votes, whether that is a majority of the voting population or not, is elected to the position.

Recently in the United States, the method of plurality has come under increased scrutiny, particularly for its frequent lack of selecting a winner with majority support and its susceptibility to spoiler candidates. See, for example, the presidential elections of 1992 and 1996, where no candidate received a majority of the popular vote and Ross Perot potentially acted as a spoiler candidate for Republicans George H.W. Bush (1992) and Bob Dole (1996). Or more recently, the 2020 Utah Republican Gubernatorial Primary, where Spencer Cox won with only 36.15% of the vote, with his closest competitor, Jon Huntsman Jr., receiving 34.95% of the vote, a difference of only 1.2%. The remaining 28.9% was split between Greg Hughes (21.02%) and Thomas Wright (7.88%) (Office of the Lieutenant Governor, 2020). This latter election was so close that either Hughes or Wright could be considered a potential spoiler candidate.

These and other similar issues have led some in the United States and in Utah to look for and support alternative voting methods to plurality. One such method is called Instant Runoff Voting (IRV). In IRV, each voter ranks the candidates in the election from their most preferred to their least preferred. Filling out an incomplete ranking is allowed, but there is no mathematical advantage in doing so. The ballots are counted in rounds, where the first round tallies all the most preferred choices. If any candidate has a majority, that candidate is elected. If not, the candidate with the least first place votes is eliminated and removed from everyone's ballots. All ballots are now reconsidered and ballots whose first choice was eliminated now use the next most preferred candidate (i.e., their most preferred candidate of the candidates that remain). This process continues round by round, using the original ballot, until a candidate has a majority of the votes in a round. This is guaranteed to happen eventually since there will eventually only be two candidates left. Because IRV uses a ballot where voters rank the candidates, it is a form of Ranked Choice Voting (RCV). Other forms of RCV exist, such as ranked pairs or a Borda count, but the form of RCV that Utah is piloting is IRV. Because of this, the terms IRV and RCV are often conflated. Since the only form of RCV that we will discuss here is IRV, and since most of the sources referenced herein refer to IRV as RCV, in this report, we will use the term RCV to refer exclusively to IRV.

RCV is not a new concept. It was first implemented in the 1870s at Harvard College by Professor William Ware from MIT. RCV was later implemented at a national level in Denmark and Australia in the late 1800s. The first use of RCV in public elections in the United States was in 1915 with the Ashtabula, Ohio City Council election. RCV spread to several more cities in the US by the 1940s, but popularity here eventually waned. Other countries, in the meantime, such as Northern Ireland, New Zealand, and Scotland, began to adopt RCV (MIT Election Data and Science Lab, 2023). Eventually, RCV began to gain popularity

again in the US and now RCV is used in at least sixty jurisdictions covering twenty-four states (including two states, Maine and Alaska, that use it statewide) at several levels of elections, such as primaries, special elections, and general elections (FairVote, 2024).

In Utah, RCV was first proposed for use in the Republican state convention elections by activists in the 1990s, and the Utah Republican Party implemented it for party elections in 2002 (Sylvester & Erikson, 2022). The Municipal Alternate Voting Method Pilot Project (or Utah HB35 in 2018), which went into effect on May 8, 2018, saw the creation of a pilot project to allow individual municipalities to choose whether to use RCV. The pilot's duration is from January 1, 2019 to January 1, 2026 (Utah Code 20A-4-6, 2018).

To help understand the effect that this pilot has had on the public in Utah, the market research and data analytics group Y2 Analytics conducted surveys in 2021 and 2023 concerning Utah voters' perception of RCV in Utah (Y2 Analytics, 2021 & 2023). This report presents an analysis of these surveys' results. In the next section, we describe how Y2 Analytics conducted the survey. Then we discuss specific results from the survey and our statistical analysis of those results. We conclude with a summary discussion of the key takeaways from the survey.

Survey Methodology

In the surveys on RCV conducted by Y2 Analytics in 2021 and 2023 (Y2 Analytics, 2021 & 2023), samples were taken from likely and confirmed Utah voters as categorized in the state's publicly available file of registered voters. Samples were stratified by district to focus primarily on voters participating in RCV. Invitations were extended via email and text messages with responses collected online. Questions specific to RCV election participation were asked only to those who participated in RCV elections.

Prior to the survey subject selection, a model was fit to estimate municipal general election turnout using age, party registration, active status, length of registration, and election turnout in the 2019 municipal general election. This model aims to produce a sampling pool of registered voters which can be randomly sampled based on their probability of voting. A probability proportionate to size (PPS) was then drawn so voters with a higher probability of voting were more likely to be selected in the sample.

In an attempt to minimize measurement error from non-response, a sampling weight was calculated by Y2 Analytics based on the PPS scores for the subjects and corresponding collected sample. The calculated weights also accounted for age, county, registered party, congressional district, race, religious activity and affiliation, and modeled voter turnout. While it is impossible to remove all sources of sampling and measurement error, these efforts are likely to assist in finding unbiased estimates that can be applied to the full population of likely voters in Utah. These surveys were funded by Utah Ranked Choice Voting, a non-profit group supporting the research who had no influence, suggested or implied, over the collected data, analysis, or interpretations contained herein.

Confidence intervals were calculated using normal approximations and a 95% confidence level. P-values for differences in proportions in univariate analyses were conducted using z-tests with a nominal significance level of 0.05 to determine statistical significance.

Logistic regression was conducted for multivariable models to control for potential confounding variables including age, gender, race, the year of the study, political party affiliation, and participant support for five high-profile politicians. We limited race to whether the participant indicated their race as White due to small representation of other races. We also limited political affiliation to Republican, Democrat, or Independent, and modeled politician support from 1 to 4 for values of very unfavorable to very favorable, respectively.

We considered both weighted and unweighted (direct results from the samples), but we share primarily the weighted results here in an attempt to limit biased findings due to non-response. Whenever relevant to the discussion, we comment on results from the weighted and unweighted results that provide added points to consider. In general, we found that weighted estimates in 2021 were more supportive of RCV than the unweighted versions, and the trend was reversed in 2023 with weighted estimates being less supportive of RCV than the unweighted counterparts. We consider these trends and possible implications at the end of this report.

Survey Results

In this section, we detail the results of the survey conducted by Y2 Analytics (Y2 Analytics, 2021 & 2023) and provide statistical analysis of those results. We have broken this section into subsections about voter preference for RCV over plurality, voter enjoyment of RCV, voter perception of other aspects of using RCV, whether voters were more likely to vote for their favorite candidate when using RCV, and whether voters want RCV to continue in Utah, as well as a breakdown of notable differences in opinion via demographic or political leaning.

Do Voters Prefer RCV over Plurality?

In the 2023 survey, participants were asked the following question:

"Thinking about both your experience using Ranked Choice Voting this year and your past experience with traditional single-vote or winner-take-all elections, which of the following statements best describes your preferred voting method or ballot type for future

municipal and other local elections?"

Participants were able to respond with one of the following:
1. "I would prefer to use a Ranked Choice ballot in future municipal and local elections."
2. "I would prefer to use a traditional single-vote or winner-take-all ballot in future municipal and local elections."
3. "No preference."

In response to this question, 40.92% (95% confidence interval (CI): 36.64, 45.33) of the participants indicated that they prefer to use RCV in future elections, while 44.91% (95% CI: 40.56, 49.34) of the participants indicated that they prefer to use a single-vote (a.k.a. plurality) in future elections.

This indicates in 2023 that a plurality of individuals did not wish to use RCV in future elections, but as the confidence intervals are considerably overlapped, we cannot say that this difference is significant. Additionally, the confidence intervals suggest it is unlikely that either the group in favor of or the group against RCV contain a majority.

It is worth noting that using unweighted data, the estimates were 50.97% (95% CI: 46.96, 54.97) wanting RCV and 34.63% (95% CI: 30.90, 38.55) not wanting RCV.

Do Voters Enjoy RCV?

In both the 2021 and 2023 surveys, participants were asked the question

"How much did you like or dislike using a Ranked Choice ballot?"

Participants responded on a four-point scale:
1. "Disliked a great deal."
2. "Disliked somewhat."
3. "Liked somewhat."
4. "Like a great deal."

In 2021, 62.78% (95% CI: 59.84, 65.63) of participants indicated that either liked RCV somewhat or liked it a great deal. This is compared to the remaining 37.22% (95% CI: 34.37, 40.16) of participants that indicated some amount of dislike. From this, we conclude that in 2021, most Utah voters that used RCV enjoyed it.

This difference was less stark in 2023. In the 2023 survey, 58.22% (95% CI: 53.76, 62.56) of participants indicated that they liked RCV somewhat or liked it a great deal. This is compared to 41.78% (95% CI: 37.44, 46.24) of participants that indicated some amount of dislike toward RCV. While the difference is of a lower magnitude, we can again confidently conclude that in 2023, a majority of Utah voters that used RCV enjoyed using it.

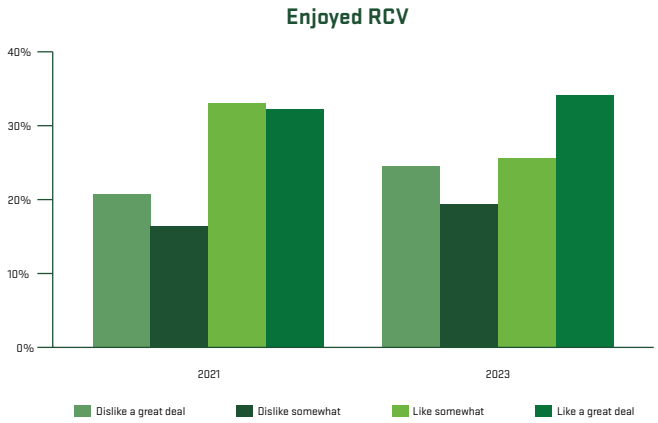

Figure 1: Weighted proportion of levels at which participants liked RCV.

While there was a decrease in the proportion of those that enjoyed RCV from 2021 to 2023 (and an associated increase in those that did not enjoy RCV), the difference approached but did not reach significance ($p = 0.0929$). While the observed values suggest a decrease in the proportion that enjoy RCV, we cannot confidently conclude that this observed difference is not due to chance. This would be an item to review again in future elections. This point is reinforced by the unweighted results, which indicated a significant increase in the proportion of those that enjoyed RCV from 2021 to 2023.

Participants were also asked about their satisfaction with their current voting method. In both the 2021 and 2023 surveys, participants were asked the question

"How satisfied are you with the method you used or will use to cast your ballot this year?"

Participants responded on a four-point scale:
1. "Not at all satisfied."
2. "Not too satisfied."
3. "Somewhat satisfied."
4. "Very satisfied."

We remark here that even though voters were selected primarily from precincts that included RCV, not all the elections this question referenced are necessarily RCV elections and, as such, care should be taken in interpreting these results as directly referencing RCV. However, certainly RCV was the primary type of election method that would have been included in these voters' response to this question since the survey was sent primarily to voters participating in RCV elections.

In 2021, 69.85% (95% CI: 67.54, 72.06) of participants indicated that they were very satisfied with the method they used to cast their ballot that year, and 88.55% (95% CI: 86.87, 90.04) of participants indicated some level of satisfaction, either very satisfied

or somewhat satisfied. By contrast, only 11.45% (95% CI: 9.96, 13.13) of participants indicated that they were either not all satisfied or not too satisfied with the method used. We can confidently conclude that a majority of Utah voters were very satisfied with the election method they used.

In 2023, even higher levels of satisfaction were observed. In this year, 73.01% (95% CI: 69.50, 76.26) of participants indicated that they were very satisfied with the election method used in their elections, and 93.51% (95% CI: 91.34, 95.18) of participants indicated some level of satisfaction. This left only 6.49% (95% CI: 4.82, 8.66) of participants that indicated that they were either not at all satisfied or not too satisfied. Thus, we can again conclude that the vast majority of Utah voters are very satisfied with the election method they used.

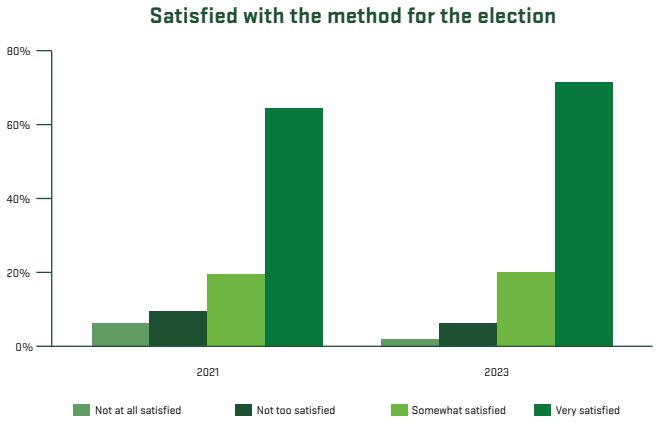

Figure 2: Weighted proportion of satisfaction levels regarding the method used for the election.

Moreover, in comparing the two years, we find that the number of participants who were very satisfied increased by 3.16% (95% CI: -0.94, 7.26) from 2021 to 2023, which was not statistically significant ($p = 0.1388$). However, the number of participants who indicated that they were at least somewhat satisfied increased by 4.97% (95% CI: 2.46, 7.47) from 2021 to 2023, which was statistically significant ($p = 0.0004$). We can claim with confidence then that the number of Utah voters who were satisfied with the election method they used increased from 2021 to 2023. While this did not control specifically for satisfaction with RCV, since the participants were primarily from precincts using RCV, this increased satisfaction was certainly impacted by their experience with RCV.

Here we wish to note that while the unweighted results showed a larger increase in satisfaction from 2021 to 2023, the trend of satisfaction was the same in both analyses.

Voter Perception about Various Aspects of Using RCV

In this section, we consider other aspects of using RCV. These include whether RCV is easy to use, whether the RCV instructions were clear, how using RCV affected the tone of campaigns, whether voters had confidence that their ballots would be counted accurately, and whether voters felt that RCV produced fair outcomes. Both the 2021 and 2023 surveys asked participants questions about each of these categories. We will consider them by category.

In both the 2021 and 2023 surveys, participants were asked the question

"How easy or difficult did you find Ranked Choice Voting easy [sic] to use?"

Participants responded on a four-point scale:

1. "Very difficult."
2. "Somewhat difficult."
3. "Somewhat easy."
4. "Very easy."

In 2021, 51.87% (95% CI: 48.89, 54.84) of participants found RCV very easy to use, while 81.02% (95% CI: 78.56, 83.25) of participants found RCV either somewhat easy or very easy to use. This is compared to the 18.98% (95% CI: 16.75, 21.44) of participants that found RCV either somewhat difficult or very difficult to use. We conclude confidently here that a majority of Utah voters found RCV either somewhat easy or very easy to use and that more Utah voters in 2021 found RCV very easy than those that found it difficult.

In 2023, the numbers indicate relatively little change. That year, 49.38% (95% CI: 44.98, 53.79) of participants indicated that they found RCV very easy, and 81.50% (95% CI: 77.81, 84.72) of participants indicated that they found RCV either somewhat easy or very easy. This time, 18.50% (95% CI: 15.28, 22.19) of participants indicated that RCV was either somewhat difficult or very difficult. Here, we again confidently conclude that a majority of Utah voters who used RCV found RCV very easy to use. The percentage of those that found RCV either somewhat easy or very easy to use is not significantly different in 2023 than in 2021, increasing by less than 1% of participants ($p = 0.8685$).

Again, we wish to comment on the unweighted analysis, which in this instance indicated a significant increase in the proportion of voters that indicated RCV was either very easy or somewhat easy between 2021 and 2023. If the unweighted analysis was accurate, then this trend would suggest that as voters get more accustomed to using RCV ballots, it becomes easier to use. If this is accurate, one would expect this trend to continue, though any increase from year to year would get smaller.

We see somewhat similar results in the responses to the question about the clarity of RCV instructions. In both 2021 and 2023, participants were asked the question

"How clear or unclear were the instructions you received about how to fill out your Ranked Choice ballot?"

As usual, participants responded on a four-point scale:
1. "Very unclear"
2. "Somewhat unclear"
3. "Somewhat clear"
4. "Very clear"

In 2021, 63.24% (95% CI: 60.30, 66.09) of participants indicated that the RCV instructions were very clear, and 89.75% (95% CI: 87.76, 91.45) of participants indicated that the instructions were either somewhat clear or very clear. This left only 10.25% (95% CI: 8.55, 12.24) of participants that found the RCV instructions either somewhat unclear or very unclear. We can conclude firmly that the RCV instructions were clear to a large majority of Utah voters. We can also conclude that far more Utah voters found the instructions clear compared to those that found it unclear.

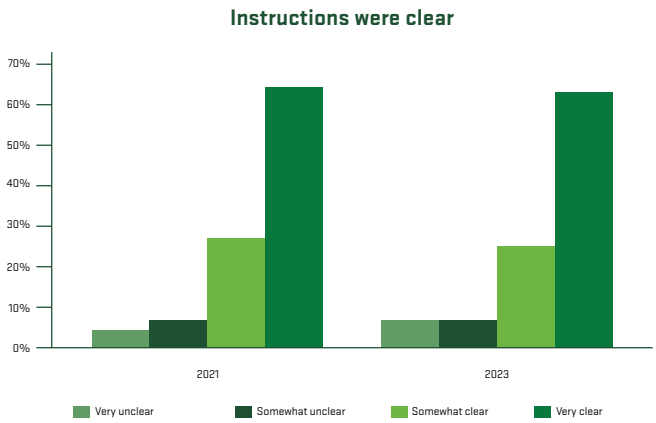

Figure 3: Weighted proportion of feeling on the clarity of instructions included with RCV ballots.

In 2023, those numbers slightly decreased towards less clarity. This time, 61.75% (95% CI: 57.35, 65.97) of participants indicated that the RCV instructions were very clear, and 86.36% (95% CI: 82.99, 89.17) of participants found the RCV instructions somewhat clear or very clear. The remaining 13.64% (95% CI: 10.83, 17.01) of participants found that the RCV instructions were unclear. We can conclude with confidence that over 55% of Utah voters who used RCV felt that RCV instructions were very clear and that at least 82% found them somewhat clear or very clear. We observed a 3.38% decrease in the number of participants from the 2021 to 2023 surveys that found the RCV instructions somewhat clear or very clear, and this decrease was almost statistically significant ($p = 0.057$). While we cannot conclude that a decrease actually happened among Utah voters using RCV, future observations may indicate if this observation was representative.

The unweighted analyses suggest the opposite trend with a stark increase in those reporting very clear or somewhat clear instructions on RCV in 2023 from 2021, which would be a more expected result if elections modified items that were unclear in 2021 for the 2023 elections.

In both surveys, participants were also asked about if they felt the tone of elections had changed since the implementation of RCV in their municipality. In 2021 and 2023, participants were asked the question

"Compared to previous elections in your city or town, did you feel the tone of this year's campaigns was more positive or negative?"

Participants could respond on a five-point scale:
1. "Much more negative."
2. "Somewhat more negative."
3. "Neither more positive nor more negative."
4. "Somewhat more positive."
5. "Much more positive."

In 2021, 26.87% (95% CI: 24.73, 29.12) of participants responded that they felt the tone of the campaigns that year were either somewhat more positive or much more positive. This is compared to 14.48% (95% CI: 0.12.81, 16.32) of participants that responded that they felt the tone was either somewhat more negative or much more negative. The remainder indicated that the campaigns were neither more positive nor more negative. This allows us to conclude that a majority of Utah voters in 2021 felt that there had been no real change to the tone of the campaigns. We also confidently conclude that a larger proportion of Utah voters felt that the campaigns were more positive than the proportion of voters that felt the campaigns were more negative.

In 2023, 32.41% (95% CI: 28.93, 36.09) of participants responded that they felt the tone of the campaigns that year was either somewhat more positive or much more positive. In contrast, 22.71% (95% CI: 19.65, 26.08) of participants responded that they felt the tone of the campaigns that year was either somewhat more negative or much more negative. From this, we can conclude confidently that in 2023 a larger proportion of Utah voters felt that the campaigns were more positive than the proportion of voters that felt the campaigns were more negative, but the difference between the two is smaller now. We cannot conclude in 2023 that a majority of Utah voters felt there was no real change to the tone of campaigns, nor can we conclude that a majority had an opinion one way or the other.

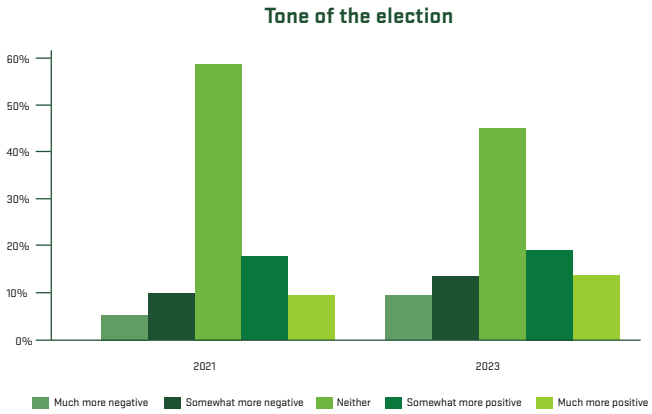

Figure 4: Weighted proportion of feelings toward the tone of the election.

Comparing the two years, the number of people who felt that the tone was either somewhat more positive or much more positive increased 5.54% (95% CI: 1.31, 9.77) from 2021 to 2023, which is a statistically significant difference (with a p-value of 0.0084). However, from 2021 to 2023, the number of people that claimed that the tone was either somewhat more negative or much more negative also increased 8.23% (95% CI: 4.54, 11.92), which is a statistically significant difference (with a p-value less than 0.0001). Thus, we can conclude that among Utah voters, the number of people who felt the tone of election campaigns was more positive increased from 2021 to 2023, but so did the number of people who felt the tone of election campaigns was more negative.

However, as this question does not control for where this change in tone might have come from, we cannot confidently claim that the above statistics about the tone of campaigns are due directly to the use of RCV or if other factors were involved.

The surveys also inquired about voter confidence. First, the surveys asked about confidence in votes being counted accurately, and second, about confidence in local elections producing fair outcomes. For the prior, in both 2021 and 2023, participants were asked the question

"How confident are you that your ballot will be counted accurately in this election?"

Participants responded on a four-point scale:

1. "Not at all confident."
2. "Not too confident."
3. "Somewhat confident."
4. "Very confident."

Very high levels of confidence were observed in both survey years. In 2021, 63.57% (95% CI: 61.17, 65.90) of participants indicated that they were very confident that their ballots would be counted accurately, and 87.53% (95% CI: 85.80, 89.07) of participants indicated that they were either very confident or somewhat confident. On the other hand, 36.43% (95% CI: 34.10, 38.83) of participants expressed a confidence level other than very confident, and 12.47% (95% CI: 10.93, 14.20) of participants indicated that they were either not too confident or not at all confident. We conclude from this that, in 2021, a large majority of Utah voters were confident that their ballots would be counted accurately.

In 2023, we see a similar pattern. In that year, 64.04% (95% CI: 60.30, 67.62) of participants indicated that they were very confident that their ballots would be counted accurately, and 90.26% (95% CI: 87.73, 92.33) of participants indicated that they were either very confident or somewhat confident. On the other hand, 35.96% (95% CI: 32.38, 39.70) of participants indicated a confidence level less than very confident, and 9.74% (95% CI: 7,67, 12.27) of participants indicated that they were either not too confident or not at all confident. Thus, we conclude that the vast majority of Utah voters are confident that their ballots are being counted accurately and only a small percentage has a lack of confidence.

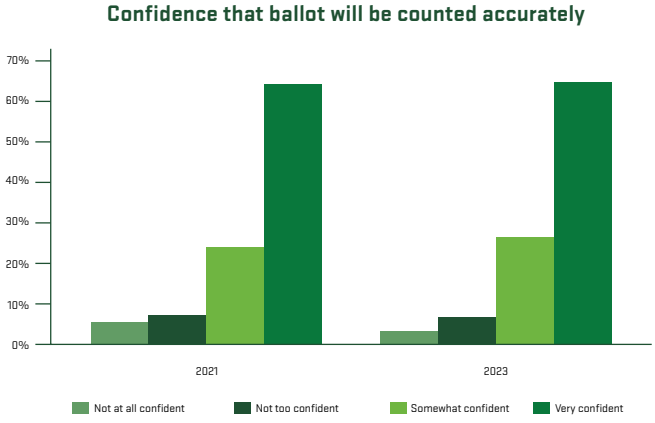

Figure 5: Weighted proportion of confidence levels that ballots would be counted accurately.

While the differences in the weighted analyses were nearly identical, there was a significant increase in the proportion of voters who felt very confident, as well as those that felt either very confident or somewhat confident in the unweighted analysis. The increases in the unweighted analyses were estimated as 12.06% and 6.30%, respectively.

Considering voter confidence that local elections provided fair outcomes, we find the following. Recall that participants were selected primarily from groups that participated in RCV. In both 2021 and 2023, participants were asked the question

"How confident are you that the current election process in your

city or town produces fair election outcomes?"
Participants responded on a four-point scale:

1. "Not at all confident."
2. "Not too confident."
3. "Somewhat confident."
4. "Very confident."

In 2021, 59.60% (95% CI: 57.16, 62.00) of participants expressed that they were very confident that their local elections produced fair outcomes, and 87.50% (95% CI: 85.77, 89.06) of participants indicated that they were either very confident or somewhat confident that their local elections produced fair outcomes. In contrast, only 40.40% (95% CI: 38.00, 42.84) of participants indicated a confidence level below very confident and only 12.50% (95% CI: 10.94, 14.23) of participants indicated that they were not too confident or not at all confident that their local elections produced fair outcomes. From this we can conclude that in 2021, a majority of Utah voters are very confident that their local elections produce fair outcomes.

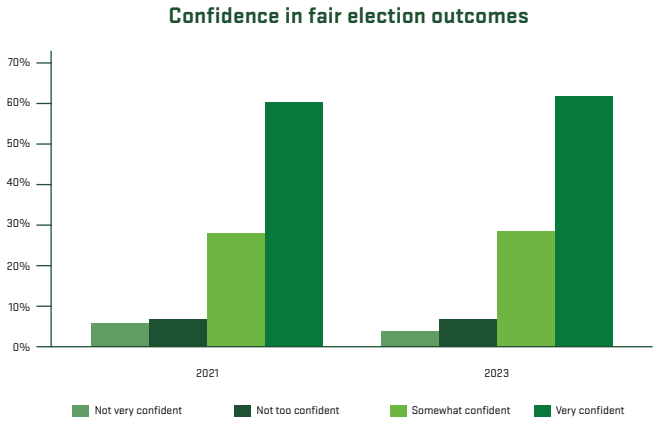

Figure 6: Weighted proportion of confidence levels that the election would result in a fair outcome.

A slight, albeit non-significant, increase in the confidence levels of voters was observed in 2023. In that year, 61.23% (95% CI: 57.47, 64.86) of participants indicated that they were very confident that their local elections produced fair outcomes, and 89.46% (95% CI: 86.86, 91.60) of participants indicated that they were either somewhat confident or very confident. In contrast, only 38.77% (95% CI: 35.14, 42.53) of participants expressed a confidence level below very confident, and only 10.54% (95% 8.40, 13.14) of participants indicated that they were either not too confident or not at all confident that their local elections produced fair outcomes. From this, we conclude that in 2023, a majority of Utah voters were very confident that their local elections produced fair outcomes and that only a small minority of Utah voters expressed a lack of confidence.

While the difference between 2021 and 2023 was again not significant in the weighted analysis, a significant difference was observed in the unweighted approach. Of note, the unweighted analysis estimated an increase of 11.44% (95% CI: 0.0733, 0.1556) participants that were very confident that a fair outcome would be produced.

Were Voters More Likely to Vote for Their Preferred Candidate Using RCV?

An important effect that proponents of RCV argue that RCV has is that it encourages voters to be more likely to vote for a candidate they prefer. It is common in plurality elections to vote for one of the top two candidates one dislikes the least since they are the only candidates with a chance of winning. Voting for the candidate that a voter truly wants is not always an attractive strategy if that candidate is not one of the top two. This often leads to the idea of voting for the "lesser of two evils." This is a form of strategic voting where a voter decides to not indicate their true preference. If enough voters do this, it can potentially produce a false picture of what the electorate actually wants. Proponents of RCV argue that because voters can indicate secondary options by ranking the candidates, it is safe for them to list their preferred candidate first. To determine if RCV had the desired effect on the electorate—that voters felt more comfortable indicating their true preferences—participants were asked the following question in both the 2021 and 2023 surveys:

"Some voters claim that in some elections they vote for a candidate that is not their favorite because their favorite candidate has little or no chance of winning their vote will be wasted [sic]. Were you more or less likely to vote for your favorite candidate in this election?"

Participants responded on a five-point scale:

1. "Much less likely."
2. "Somewhat less likely."
3. "Neither more nor less likely."
4. "Somewhat more likely."
5. "Much more likely."

In 2021, 42.62% (95% CI: 39.70, 45.60) of participants indicated that they were much more likely to vote for their favorite candidate in this election, and 59.82% (95% CI: 56.86, 62.71) of participants said they were much more likely or somewhat more likely to vote for their favorite candidate. In contrast, 40.18% (95% CI: 37.29, 43.14) of participants indicated that they were much less likely, somewhat less likely, or neither more nor less likely to vote for their favorite candidate. We conclude from this that in 2021, a majority of voters were more likely (to some degree) to vote for their favorite candidate.

In 2023, 48.01% (95% CI: 43.60, 52.44) of participants indicated that they were much more likely to vote for their favorite candidate in this election, and 67.19% (95% CI: 62.89, 71.22)

of participants indicated that they were either much more likely or somewhat more likely. When looking at the 2023 survey, only 32.81% (95% CI: 28.78, 37.11) of participants indicated that they were either much less likely, somewhat less likely, or neither more nor less likely to vote for their favorite candidate. We can conclude that nearly two-thirds of Utah voters are more likely to vote for their favorite candidate in precincts with primarily RCV elections.

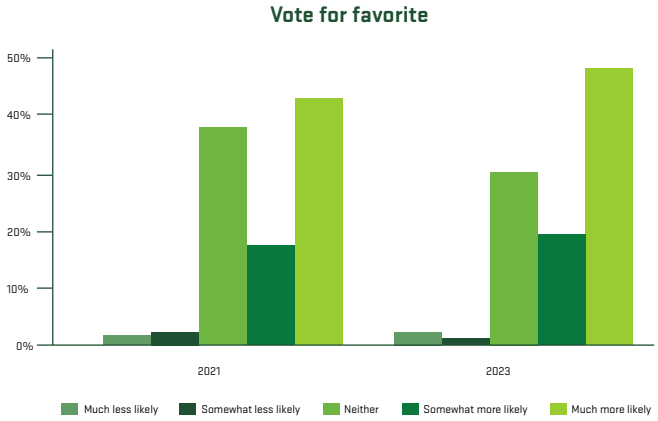

Figure 7: Weighted proportion of levels of likelihood of voting for a favorite candidate using RCV.

In comparing both years, we find that the number of participants who indicated that they were much more likely to vote for their favorite candidate increased by 5.38% (95% CI: 0.02, 10.75) from 2021 to 2023, which is a statistically significant difference ($p = 0.0488$). Similarly, the number of participants that indicated they were at least somewhat more likely to vote for their favorite candidate increased by 7.37% (95% CI: 2.23, 12.51) from 2021 to 2023, which is also statistically significant ($p = 0.0054$). Thus, we can conclude confidently that the number of Utah voters who are more likely to vote for their favorite candidate in primarily RCV elections increased from 2021 to 2023.

How Important Is It to Voters That a Candidate Receive a Majority of Votes?

One quality of RCV is that it produces a winner that receives a majority of votes in the round they are elected. Proponents of RCV argue that this is one of the qualities that makes it superior to plurality voting. To gauge the public's interest in a voting method that satisfies this property, both the 2021 and 2023 survey asked participants the following question:

"The vote counting system used to pick Utah's Governor and other state and county officials allows voters to select one candidate per race and requires that the candidate with the most votes wins, even if that means that a winning candidate gets less than a majority of votes but wins with a 'plurality' in a multi-candidate race.

Ranked Choice Voting requires that a candidate receive a majority (50 percent of the votes plus one) to win. If a candidate receives a majority of the first-choice votes cast for that race, that candidate will be elected. However, if no candidate receives a majority of the first-choice votes cast, an elimination process begins. The candidate who received the fewest first-choice votes is eliminated. Next, each vote cast for that candidate will be transferred to the voter's next-ranked choice among the remaining candidates. This elimination process will continue until one candidate receives a majority and is deemed the winner.

How important is it to you that a candidate wins a majority of the votes in an election?"

Participants responded on a four-point scale:

1. "Not at all important."
2. "Not too important."
3. "Somewhat important."
4. "Very important."

In 2021, 51.97% (95% CI: 49.39, 54.54) of participants indicated that a candidate winning a majority was very important to them, and 84.58% (95% CI: 82.62, 86.36) of participants indicated that winning a majority was either somewhat important or very important. On the other hand, 15.42% (95% CI: 13.64, 17.38) of participants indicated that winning a majority was either not too important or not at all important. We conclude from this that winning a majority of votes was either very important or somewhat important to the vast majority of Utah voters in 2021.

We see similar numbers for the 2023 survey. In that survey, 55.53% (95% CI: 51.59, 59.41) of participants indicated that a candidate winning a majority of votes was very important to them, and 87.20% (95% CI: 84.31, 89.64) of participants indicated that winning a majority was either somewhat important or very important.

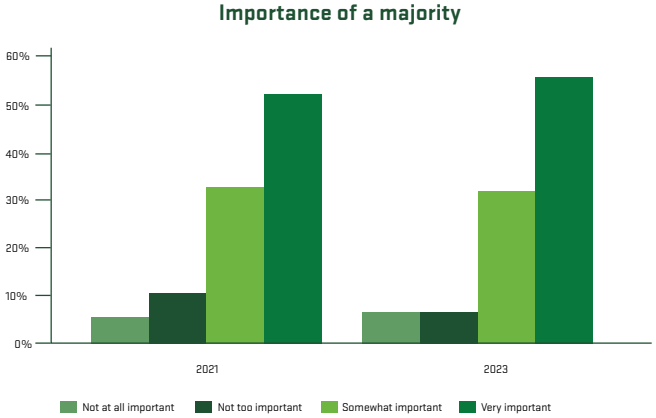

Figure 8: Weighted proportion of levels of importance they give to a candidate receiving a majority of votes.

In contrast, 12.80% (95% CI: 10.36, 15.69) of participants indicated that winning a majority was either not too important or

not at all important. We conclude that in 2023, similar to 2021, winning a majority of votes was very important to a majority of Utah voters.

It should be noted that there is not a significant change in the proportions between 2021 and 2023. Interestingly for this question, there was also no significant difference in the unweighted analyses, though the unweighted analyses resulted in p-values very close to our cutoff of 0.05, whereas the weighted analyses yielded p-values between 0.10 and 0.15.

Future Elections—Do Voters Want RCV to Continue in Utah?

Perhaps the most critical piece of information that these surveys provided was whether Utah voters want RCV to continue in Utah. Both surveys inquired about whether voters wanted RCV to continue in Utah. Specifically, both surveys asked the question

"Which statement comes closest to your opinion for how Utah's elected officials should be chosen in the future?"

Participants could select between the following options.

1. "Ranked Choice Voting should not be used for any Utah elections."
2. "Ranked Choice Voting should only be used for municipal or other local elections."
3. "Ranked Choice Voting should be used for more Utah elections, including statewide offices like Governor or Congress."

In 2021, 45.75% (95% CI: 43.15, 48.37) of participants indicated that they thought RCV should be used in more Utah elections including statewide offices; 18.99% (95% CI: 17.01, 21.14) of participants indicated they thought RCV should only be used in local elections, and 35.26% (95% CI: 32.80, 37.81) of participants indicated that they do not think that RCV should be used for any Utah elections. We can confidently conclude from this that, in 2021, a larger proportion of Utah voters thought RCV should be used in more Utah elections, including statewide elections, than the proportion of Utah voters that thought that RCV should not be used at all. In fact, in 2021, a majority of Utah voters wanted RCV to be used in some form.

In 2023, 39.43% (95% CI: 35.61, 43.38) of participants said they thought RCV should be used in more Utah elections including statewide; 20.74% (95% CI: 17.68, 24.16) of participants said that they thought RCV should only be used in local elections, and 39.83% (95% CI: 36.01, 43.78) of participants indicated that they do not want RCV used in any Utah elections. Thus in 2023, we observe that about the same number of Utah voters think RCV should be used in more Utah elections, including statewide elections, as the number of Utah voters that think that RCV should not be used at all. However, we can also confidently conclude that a majority of Utah voters would prefer RCV to continue in some form, either only in local elections or in more Utah elections.

The number of participants who supported expanding RCV to more Utah elections decreased 6.32% (95% CI: 1.60, 11.04), which is a statistically significant decrease ($p = 0.0089$). The number of participants who indicated that they thought RCV should no longer be used in elections at all increased 4.57% (95% CI: -0.10, 9.23), which was almost a statistically significant increase ($p = 0.0530$). The change in the proportion of participants that wanted RCV to only be used in local elections was not statistically significant. We can confidently conclude from this that the number of Utah voters that want RCV expanded to more Utah elections including statewide elections decreased at least 1.60% (the lower end of its confidence interval). This means that the data from these surveys indicate that a majority of Utah voters want to continue to use RCV in some form. But as time has gone on, the number of Utah voters desiring to expand RCV appears to be decreasing.

This question, perhaps more than any others, presents a striking difference between the results of the weighted and unweighted analysis. In the unweighted analysis, the proportion of individuals that wanted RCV to expand increased significantly, while the proportion wanting RCV to not be used at all decreased.

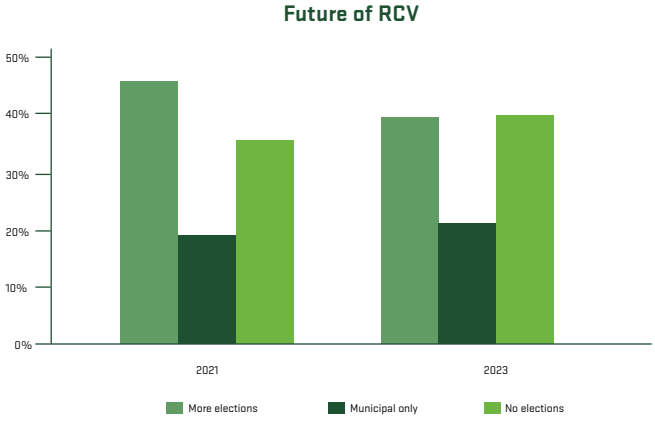

Figure 9: Weighted proportion of preferences for the future of RCV.

The two surveys also collected a considerable amount of data concerning demographics and political leanings. This allows us to use logistic regression to do a deeper analysis attempting to isolate the influences of these qualities adjusting for potential confounding variables. In the next section, we consider a few relevant findings from our adjustments.

RCV Opinion Differences Adjusting for Demographic/Political Leaning

In this section, we describe the results of a logistic regression analysis we performed on the data from the 2021 and 2023 surveys. We isolated the following characteristics of participants:

- Sex (Male/Female)
- Age
- Race (White or non-white)
- Survey year (2021 or 2023)
- Political affiliation (Democrat, Republican, or Independent)
- Favorability of view of
    - ◊ Donald Trump
    - ◊ Spencer Cox
    - ◊ Mike Lee
    - ◊ Mitt Romney
    - ◊ Joe Biden

For this last set of information, in both the 2021 and 2023 surveys, participants were asked the following question:

"Do you have a favorable or unfavorable opinion of the following individuals?

- Donald Trump
- Spencer Cox
- Mike Lee
- Mitt Romney
- Joe Biden"

For each politician, participants could indicate their favorability on a four-point scale:

1. "Very unfavorable."
2. "Somewhat unfavorable."
3. "Somewhat favorable."
4. "Very favorable."

We analyzed how these characteristics were associated with those participants' opinions on the various questions regarding RCV that were asked in the surveys. To be more concise, we focus our analyses on voters' feelings towards RCV, specifically their preference for RCV or not, their desires for RCV in the future, the ease of using RCV, and how important it was that a candidate receive a majority of votes. Also, as voters are likely to be influenced by the opinions of the included individuals who may have expressed opposition towards RCV, we primarily adjust for these characteristics and focus our discussion on the sex and age of the participants, as well as the year the study was taken (where applicable), with a few brief comments without reference to significance on the potential associations with support for the stated individuals.

RCV Preference

After adjusting for the other variables, we find in our logistic regression models that those that were older were less likely to prefer RCV ($p = 0.0034$). However, we did not see a significant change in the likelihood of preference between males and females. The results also suggest that those who were more supportive of Trump, Lee, or Biden were less likely to prefer RCV, while more support for Romney indicated an increased preference for RCV. No strong relationship was seen with support for Cox. Finally, as voters were only asked about their preference towards RCV in the 2023 election, we cannot consider the effect of the year of the study. It is also worth noting here that the unweighted model found similar results to the weighted model.

RCV Future

When considering voters' feelings on the future of RCV, two models were fitted. The first considers the likelihood that a voter wants RCV expanded, and the second considers the likelihood that a voter wants some sort of RCV in the future, either in the form of expansion or being held only in municipal elections. We find similar patterns in both models where increased age lowers the likelihood an individual wants RCV in the future ($p < 0.0001$ and $p< 0.0001$). Participants in 2023 also were less likely to want RCV in the future ($p = 0.0167$ and $p = 0.0131$), but males were more likely to want RCV ($p = 0.0015$ and $p = 0.0007$). Those expressing higher support for Biden or Romney were more likely to want to see RCV in both models, while more support for Trump or Lee suggested less likelihood of wanting RCV expanded but less association when also modeling keeping RCV for only municipal elections.

Here, the unweighted model suggests a noticeable difference between 2021 and 2023, where voters were more likely to want RCV in the 2023 analysis, after accounting for the additional covariates.

Ease of Using RCV

Here, we again fit two logistic regression models, both with similar results. The first model considers the likelihood of a voter indicating that RCV was very easy, while the second considers the likelihood RCV was either very easy or somewhat easy. In both models, the only significant association was with age, where those with increased age were less likely to consider RCV easy to use ($p < 0.0001$ and $p< 0.0001$). Higher support for Trump suggested a decreased ease in using RCV.

In comparing the unweighted and weighted analyses, there is a stark difference in the association between the likelihood of considering using RCV to be either very easy, or some level of easy and the year of the survey. In the unweighted models, those participating in 2023 were far more likely to consider RCV to be easy to use ($p < 0.0001$ and $p< 0.0001$), where the results in the weighted model estimated an increase, but that increase was not statistically significant ($p = 0.9642$ and $p = 0.1886$).

Importance of Winning a Majority

We once again consider two different models, the first where we model the likelihood of considering it very important that a candidate receive a majority, and the second where we also include "somewhat important." In both models we find that increased age is associated with an increased likelihood of considering winning a majority to be important ($p < 0.0001$ and $p = 0.0111$). While males were not significantly more likely to consider winning a majority important ($p = 0.7698$ and $p = 0.2263$), participants in 2023 were estimated to also give more importance to a majority, but these failed to reach significance ($p = 0.0547$ and $p = 0.2165$), although significance was nearly reached in the model for the likelihood of considering a majority very important. Those that expressed higher support for Trump or Biden had an increased chance of expressing a higher importance for a majority, while the support for the remaining individuals had weak associations, or associations that differed between the two models.

The results of the weighted and unweighted analyses were consistent in this scenario with the exception that the association with year (seeing an increase in importance in 2023) reached significance in the unweighted models ($p = 0.0137$ and $p= 0.0296$).

Discussion and Conclusion

We have considered herein the analysis of polling data seeking to understand the opinions of Utah voters with regards to RCV. In these analyses, opinions regarding the preference for and future of RCV, the ease and enjoyment of RCV, the clarity of the instructions, the tone of the election, confidence in the election regarding accurately counting votes and producing a fair outcome, and a voter's likelihood of voting for their preferred candidate are considered. In many analyses, we find results similar to findings by the Sutherland Institute showing that most voters have opinions that support RCV in some respect (Sutherland Institute, 2024). However, the more recent survey data suggests some trends towards lessening support. Finally, we find that there is a fairly even split in the most recent data regarding preference for and desired future use of RCV.

We wish to express caution in applying the findings of these studies overly broadly or too quickly. Due to the potential limitations of the surveys and the very short window of time during which information was gathered, these findings suggest conflicting results in some cases, suggesting that further information is necessary to make accurate conclusions.

No survey will be completely free of potential error. Error in sampling can occur due to random chance in cases where a sample, though selected truly randomly, happens to select a sample that is different enough from the population that any results are incredibly incorrect. While this is always a concern, it is also impossible to address after the sample has been collected. It is, however, a very rare occurrence when samples are collected well. The weighting procedure implemented by Y2 Analytics attempts to address this concern, so while there is assuredly some sampling error, we may consider its impact as largely negligible.

Other sources of error are often less easily overcome and can have large impacts on the conclusions that are drawn. One of the most prevalent of these is non-response, where a subject selected for the study does not participate. If the participants that do not respond share similar characteristics, then those characteristics will be underrepresented in the study. The subjects in these studies were assigned weights in order to try to overcome non-response error. However, the comparisons of the analyses using these calculated weights (weighted analyses) to analyses where each subject counted the same (unweighted analyses) show striking differences in some scenarios. Perhaps the most striking was the difference among voters' preference for RCV, where the weighted analysis showed a decrease in the proportion of those that preferred RCV from 2021 to 2023, and the unweighted analysis showed an increase.

Additionally, we compared both weighted and unweighted demographic results from the study to information published by the United States Census Bureau, the state of Utah, and Pew Research (United States Census Bureau, 2024; State of Utah, 2024; Pew Research Center, 2024). While weighting will never provide a perfect representation of individuals in a state, and these numbers are unlikely to perfectly represent the voting population, we see some differences between the unweighted observed values, the weighted observed values, and the values reported outside of this study. Perhaps the most striking is that both the 2021 and 2023 studies appear to underrepresent the proportion of Republicans in the state by 14–27% (reported proportion approximately 50%) depending on the method of calculation. However, the proportion of independents is more accurately estimated using both unweighted and weighted methods in both years. Some other major differences that were seen in the surveys from reported proportions include ethnicities (e.g., Latinos are underrepresented by 8–11%, Whites overrepresented by 18–24%), education (e.g., those completing graduate school are overrepresented by 3–10%), and religion (e.g., those reporting to be agnostic or atheist is overrepresented by 3–13%).

While it is impossible to fully determine the accuracy of the weights, the differences between our analysis population and reported demographics make it worthwhile to consider the calculation of the weights, and how they may not be optimal. While the method for determining the weights is likely well studied and developed, we take particular concern with the weight calculation including information from the 2019 election. It seems reasonable to question if the demographics of Utah have changed since 2019 as events since then seem likely to have impacted the composition of the likely voting population in Utah.

Ultimately, the primary conclusion that can be made is that while there appears to be generally positive feelings towards RCV, more information and time are needed to draw accurate results about RCV and Utah voters' feelings toward it. Two or three election cycles provide too short a time to draw firm conclusions regarding the future use of RCV. Mathematically, trends are very rarely accurately observed over two timepoints. Moreover, as with any new procedure, the effects on confidence in RCV, ease of use of RCV, how candidates strategically campaign, and how voters choose to vote would take longer than two or three election cycles to optimize. Additionally, future surveys should be able to utilize updated weighting procedures to take advantage of more up-to-date information, especially considering the impact of a global pandemic on the voting population within the state of Utah.

To determine whether voters prefer this method, future data and additional information are required so that accurate conclusions may be determined.

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