## Expected Outcome RCV Test Sets Multi-Winner

The tabs in the spreadsheet define the Test Conditions and Expected Outcomes for
Accuracy Testing or Acceptance Testing for each named Ranked Choice Voting Tabulation Variant.

URCVT v.1.2.0 140-NY Expected Outcome RCV Test Sets Multi-Winner v.1.0.0 document is solely for use in the State of New York. This document can be expanded or updated as is necessary or required. Any recommendations listed in this document should not supersede user jurisdiction procedures or other controlling governance entities.

| Tabulation of multseat test datat using whole 4 thressold |
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| Multi-winner with fractional surplus | This test set uses a version of the Weighted Inclusive Gregory Method (WIGM) in which the threshold is calculated on a fractional basis to four (4) decimal places. ((Total ball round 1 /Number of seats +1 ) +.0001 ) Surplus fractions are rounded down at the fourth decimal and truncated. |
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| Descripion Round 0 |  |
| Descripion Round 1 | Employing the rule allowing a maximum of one skipped vote, ballot 9 is counted for C and ballot 10 is "exhausted" and counted as per manently "inactive." A new count |
| Descripion Round 2 |  w count is then determined. Candidate C, having 8 votes is elected with a surplus of .7499 |
|  | C's surplus is divided by the number of votes for C to calculate the "surplus fraction" (SF) to be distributed to each next continuing candidate on C's ballots. This yields a SF value of .0937 which is redistributed to these candidates and a new count is determined. No new candidates are elected so candidate $F$, having the fewest votes, will be eliminated. |
| Descripion Round 4 | for B with a transfer value of .0937 . Ballot 6 is counted for $A$ with a transfer value of 1 . The round does not produce a winner and candidate $E$, with the fewest votes, will be |
| Descripioion Runds 5 |  |
| Descripion Round 6 | This round is optional. Jurisdictions wishing to show all winning candidates as receiving the threshold, so that none appear to have more votes than others, may do so by exercising this option. The surppuses for \& \& are calculated by subtracting the threshold from their respective votet totals and the surplus fraction is calculated by dividing the surpluses by the vote totals for each candidate. The surplus fraction is then multiplied by the transfer value of the vote on each respective ballot and transferred to the next continuing the vote totals for each candidate. The surplus fraction is then multiplied by the transfer value of the vote on each respective ballot and transferred candidate. In this case, there are no remaining continuing candidates thus, all surplus transfers are exhausted ballots and are counted as inactive. |






|  | ${ }^{\text {1st ctioce }}$ only | Round 1-Elim D |  | Round 2-Elect C |  | Round 3-Redist Surplus fromC C Elim |  |  |  |  |  |  | Round4-Elime |  |  |  | Round 5-Elect A \& ${ }^{\text {B }}$ |  |  |  | Round 6 .Redistribute $A$ \& Surpluses |  |  |  |  |  |  |
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| Candidate |  | $\xrightarrow[\substack{\text { Vote } \\ \text { Total }}]{\text { ate }}$ |  | ${ }_{\substack{\text { Vote } \\ \text { Total }}}^{\text {ate }}$ |  | Surplus | Surpus | Fration | Round 3 | Change |  |  |  |  | Change |  |  | $\begin{array}{\|c\|} \hline \text { Adjusted } \\ \text { Vote } \\ \text { Total } \\ \hline \end{array}$ | Change |  | Surfus | Surfus fration | Tranfer Value | vote Total |  | Change |  |
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## Document Revision History

| Date | Version | Description | Author |
| :---: | :--- | :--- | :---: |
| $04 / 27 / 2021$ | 1.0 .0 | Expected Outcomes RCV Test Sets Multi-Winner | Chris Hughes |

