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- Lacey Fire District #3
- Puget Sound Regional Council
- The Evergreen State College
- Thurston Conservation District
- Thurston Economic Development Council
- Timberland Regional Library

MEMORANDUM

TO: Transportation Policy Board

FROM: Paul Brewster, Senior Planner

DATE: October 5, 2022

SUBJECT: 2022 Call for Projects Tie Breaking Process Options

PURPOSE

To review options, when a tie breaker is necessary, for selecting priority projects for federal transportation grant funding through Thurston Regional Planning Council's (TRPC) 2022 Call for Projects Process.

Summary:

- The implementation of the point-based evaluation criteria in TRPC's revised Call for Projects Process will compel applicants to develop proposals to maximize project review scores, possibly resulting in one or more tiers of equally ranked projects.
- Staff will brief the Transportation Policy Board (TPB) on the number of application submissions and present the initial summary of scores based on the applicants' self-scored proposals.
- On October 12, 2022, the TPB will deliberate on possible methods to prioritize projects for selection in the event a tie must be broken.
- The TPB will approve a tie breaking process to help select projects during the November 9 meeting.

REQUESTED ACTION

Approve one or more preferred tie-breaking processes to identify priority projects to include in a 2022 Call for Projects funding recommendation to the Council.

pb:bl



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BACKGROUND

TRPC's 2022 Call for Projects uses a point-based ranking process to help policy makers select priority projects for federal grant awards. Each of the four Regional Evaluation Criteria is worth two points: 1) Efficient Use of Federal Funds; 2) Equity; 3) Greenhouse Gas Emissions Reduction; and 4) Sustainable Thurston Urban Corridors and Centers. Urban Small and Rural projects can score up to six points (only the first three criteria apply) and will be evaluated separately. All four criteria apply to Urban Medium projects for a maximum of 8 points.

The implementation of the point-based evaluation criteria compels applicants to develop proposals to maximize the number of points. This will likely result in one or more tiers of equally ranked projects. In such instances, policy makers need a transparent and accountable process to differentiate the benefits of the competing proposals to make informed decisions on awards. A tie breaking process will help the TPB select projects as part of its overall funding recommendation to the Council.

On November 9, 2022, the TPB is scheduled to review eligible proposals and approve a prioritized funding recommendation to the Council. A list of proposals sorted from highest to lowest scores arguably provides a clear pathway for policy makers to make grant funding decisions. Higher scoring proposals should receive greater consideration. The TPB's funding recommendation will be influenced by:

- The amount of estimated federal grant funding available to award to projects by geographic area (Urban Medium, Urban Small, and Rural) and the applicants' funding requests.
- Project scores.
- The tie breaking process.

The TPB will take action on a recommendation for Urban Medium grant awards, Rural awards, and perhaps some combination of Urban Small and Rural awards. In addition, the TPB is expected to recommend a list of contingency proposals (a pre-approved non-funding secure project list) that could obligate federal grant funds should additional funds become available before the next call for projects process in 2024. As contingency proposals are not secure grant awards, they will not require a tie breaking process.

Tie Breaking Options

On October 12, 2022, the TPB will deliberate on one or more methods to prioritize projects for selection in the event a tie must be broken. Staff will brief the TPB on the number of application submissions and present the draft ranked results based on the applicants' self-scored proposals (number of projects sorted by their total scores). The final project scores could be different following the technical review process that is scheduled on October 20, 2022.

This report presents several tie breaking methods the TPB could use to support a funding recommendation to the Council. They include a simple majority vote, a pairwise comparison, or ranked-choice voting. No matter the tie breaking option the TPB approves, the process will take time, especially in an online meeting.

1. Simple Majority Vote

In past funding cycles, the TPB sometimes had to decide between two competing proposals. The Chair would facilitate a discussion among the representatives to share their views and collectively deliberate on the merits of each proposal. This led to a motion to approve a preferred project for funding. A simple majority vote determined project selection. This process can be effective when only two to three proposals are being considered, but this could prove more challenging if there are more proposals to choose from.

Example Simple Majority Vote

Projects A, B, and C each scored 7 points with the Regional Criteria.

Results of TPB vote: Project A receives 10 votes; B receives 4 votes; and C receives 6 votes.

Project A is the highest-ranking.

2. Pairwise Comparison

In the pairwise comparison method, each tied proposal goes through a head-to-head comparison against each of the other proposals. A comparison can be made on the overall impact of each proposal or focus on the impact of a single Regional Priorities Criterion. Executed through a matrix format, the winner of each round receives a point. The loser, zero points, and in ties, each proposal receives a half point. Points are tallied, and the proposal with the highest score becomes the higher priority project. This method is well suited for three or more proposals. This method may be time consuming to allow for both discussion and the pairwise comparison voting process. This process could also result in another tie between competing proposals – requiring a second round of pairwise comparisons on a different criterion to determine a winner.

Example Pairwise Comparison

Projects 1, 2, 3, 4, and 5 are all in the Urban Medium area and each scored the maximum 8 points. The TPB will rank this tier of top scoring projects using a pairwise comparison method.

- Step one: Compare each project head-to-head in a matrix where the pairing of two projects intersect. In this example, the list includes five projects, the top square (shaded) represents the pairing of projects 1 and 2.
 - For each pair of projects, the TPB will vote on which of the two projects is preferred over the other. The project with the highest votes is recorded in the square. If there is a tie, a half-point is recorded for both projects.
 - All projects are paired until the matrix is completed.
 - In the matrix below, projects 1 and 2 are compared and 2 emerges as the preferred project.

	1			
2	2	2		
3			3	
4				4
5				

- Next, projects 1 and 3 are compared and 1 emerges as the preferred project. Then projects 2 and 3 are compared and they tie. Each receives a half-point.

	1			
2	2	2		
3	1	0.5	3	
4				4
5				

- ... and finally, projects 4 and 5 are compared and they also tie. Each receives a half point.

	1			
2	2	2		
3	1	0.5	3	
4	1	2	0.5	4
5	5	5	5	0.5

- Step two: After all the comparisons are completed, the number of instances a project appears in the matrix is tallied. For tied projects, a half point is tallied for each.
 - The project with the highest count becomes the top ranked project (1st place). In this example, project 5 emerged as the highest-ranking project.

Pairwise Comparison Ranked Results

Project	1	2	3	4	5
Count	2	2.5	1	1	4
Ranking	3 rd	2 nd	4 th	4 th	1st

- Projects 3 and 4 tied for fourth place. It may not be necessary to break a fourth-place tie. Let's say projects 1 and 2 tied for second place. A tie breaker may be necessary. In this example, project 2 was preferred over project one, so it would be the 2nd highest priority project.

3. Ranked-Choice Voting

Single-winner ranked-choice voting may be used to select a preferred project from a pool of tied proposals. Each policy maker ranks all tied proposals in order of their preference – first choice, second choice, etc. To determine a single winner, a proposal must receive more than half of all votes counted. All first choices are counted. If a proposal obtains more than half the votes in the first round, it becomes the winner. If not, the proposal with the fewest votes is eliminated. In the second round, the voters who ranked the eliminated proposal as their 'number 1' will have their votes count for their next choice. This process continues until there's a majority proposal with more than half the votes.

Depending on the number project tiers that may need to be sorted, this method could be difficult to perform in real time during an online meeting. This option could be done prior to the meeting where TPB members would submit their preferred ranking to staff by email or through an online poll or survey tool. Staff would tally the results and present to the TPB for discussion and approval.

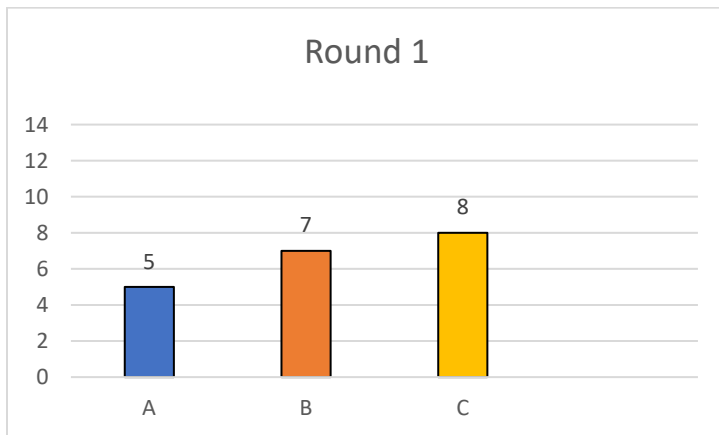
Example Ranked-Choice Voting

Projects A, B, and C are all in the Urban Small or Rural areas. Each project scored a maximum of 6 points. Each TPB member will vote to rank the four projects in order of their preference. A project must receive at least half the votes of the number of TPB members present (with a quorum) to become the top-ranked project. Assuming all 20 TPB members are present to vote, a project must receive at least 10 votes in a round to meet the threshold for the preferred project.

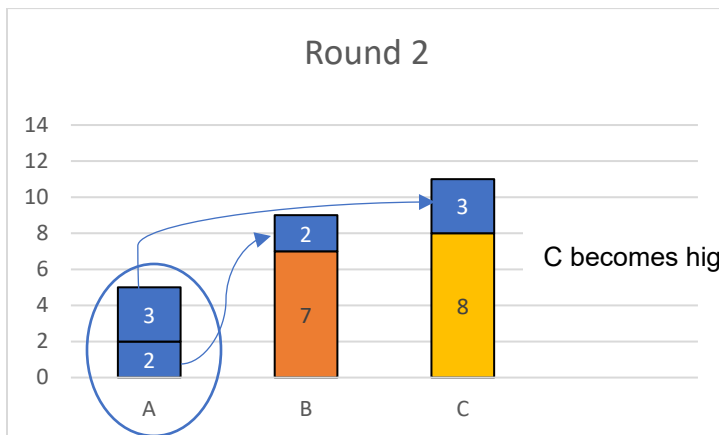
Sample Ranked Choice Ballot

	1 st Choice	2 nd Choice	3 rd Choice
Project A			<input checked="" type="checkbox"/>
Project B	<input checked="" type="checkbox"/>		
Project C		<input checked="" type="checkbox"/>	

- Round One: In the first tally, any project receiving 50% of first-choice votes will secure the top choice position. If no project receives 50%, the process advances to round two.
 - Results: No project reaches the 50% (10-vote) threshold. Project A has the fewest votes and is dropped in the next round.



- Round Two: At the beginning of round two, Project A's votes are reallocated to its supporters next ranked choice.
 - Results: Project A's votes are reallocated to Project B (2 votes) and Project C (3 votes). Project C clears the 50% threshold with 11 votes to become the highest ranked project.



DISCUSSION

TRPC has not used a point-based project evaluation and selection process for over 20 years. Applicants, the TPB, and the Council desire confidence in a process that is easy to understand, use, and will yield priority proposals that best satisfy regional transportation priorities. On October 12, 2022, staff will brief the TPB on the number of application submissions and the project scores. This information will inform what tie breaking methods may be most suitable for the TPB's consideration.

STAFF RECOMMENDATION

Staff requests the TPB approve a tie-breaking process to assist decision making in selecting the highest priority projects from tiers of proposals that are equally ranked with the Regional Evaluation Criteria. The TPB will employ this approved process on November 9, 2022.