

Conservation Measurement Tool

Conservation Performance Scoring

The Conservation Measurement Tool (CMT) will be utilized to evaluate CSP applications using a point based system for environmental benefits. The tool evaluates existing and proposed new activities. The tool will treat all applicants fairly, scoring their current and planned environmental performance and generating conservation performance points that will be used for ranking and payment purposes. Below is an explanation of the key CMT scoring principals:

- All scoring of the relative environmental impact of questions, enhancements and conservation practices is based on Conservation Practice Physical Effects scoring tables -5 to +5 scoring system.
- Each question, enhancement and practice is scored against 7 macro-resource concerns plus energy. Each of the macro-resource concerns is further broken down into micro-resource concerns for a total of 27 micro-resource concerns. (The 7 resource concerns plus energy along with the micro-resource concerns are a subset of the total number of resource concerns that NRCS considers when doing conservation planning.) These resource concerns were chosen as best representing the significant resource issues on working lands and as being readily quantifiable.
- The tool is size neutral. All operations despite the size of the operation have the potential to score a similar number of points.
- Each land use is evaluated separately. For applications with multiple land uses, scores have been normalized between land uses.
- The scoring process used in CMT involves scores for determining an annual payment, the supplemental payment, and the ranking score.

The following is an explanation of the scoring process used in CMT.

A. Annual Payment - Conservation Performance Payment Points

- Conservation performance payment points for each land use are determined by adding the total existing activity points and total additional activity points together.
- If an applicant has chosen to implement the Resource Conserving Crop Rotation, the points associated with this activity are subtracted from the performance payment points for cropland because this activity has a separate payment structure.
- After all applications are received for the first ranking period, a dollars per point value will be calculated based on available funding, the acres of applications in different land uses and statutory payment limits per acre for the program.

Below is an explanation on variables that impact the outcomes from CMT.

1. Existing Activity Points

- *Weighting*

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- Cropland and pastureland micro resource concern totals for each rotation or mixture are weighted based on the acreage that each rotation or mixture makes up of the total acreage for that land use.
- Rangeland is weighted just on the acreage of land use since it is not divided into rotations or mixtures.
- Forest land is treated separately and simply totaled up by micro-resource concern.
- Air quality and energy points are spread over each land use and then weighted by the acreage of each land use.
- Water points are spread over each land use that has water and then weighted by the acreage of each land use.
- *Size Neutral Normalization*
 - For applications that have multiple land uses, the macro-resource total points are multiplied by the percentage of that land use of the total number of acres.
 - Forest land is totaled up separately as it will be evaluated independently from any other land use.
- *Adjusted by the Potential Maximum Points*
 - Existing activity points are also adjusted by the potential maximum points that are available to an applicant. If an applicant answers “No” to the questions that are filtered, the points associated with these questions are removed from the potential maximum score for the relevant land use(s). The total existing activity points for each macro-resource concern is determined by dividing the existing activity points by the potential number of points then multiplying the result by 100.

The points earned are now totaled for each macro resource concern by each land use to determine if an applicant meets the minimum level of eligibility for the program. This is done by comparing each macro resource concern total points to threshold values that were established for each macro resource concern by land use. The stewardship thresholds were established by using the CMT on a number of sample farms that had been evaluated by professional conservationists for the level of conservation on the farm. The threshold values were matched to farms that were judged to be meeting but not exceeding a good level of conservation stewardship.

2. Additional Activity Points (enhancements, conservation practices, research and demonstrations, pilot projects and resource conserving crop rotations)

- *Normalization*
 - The points are normalized so that the maximum points for any additional activity is about 20.

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- Since it is impossible to predict exactly what on-farm research and demonstrations or pilots will be undertaken by applicants the average points from all enhancements was chosen to represent the points for these 2 activities.
- *Calculated by Years of Benefits Generated*
 - The points for each additional activity are determined by the number of years it is scheduled and the percentage of the total applicable amount that is scheduled. Applicants can schedule conservation practices during years 1 through 5 of their contract period. Applicants can schedule enhancements, research and demonstration, pilot projects, and resource conserving crop rotations starting in years 1 to 3 of their contract period. They can also schedule the amount of the additional activity they plan to install. The earlier in the contract period and the greater the amount of the additional activity they schedule, the greater the number of conservation performance points they accrue.
- *Adjusted by the Potential Maximum Points*
 - The potential number of points available from additional activities is based on the average of the points for all additional activities times a multiplier for each land use. The multipliers are used to account for the different number of activities available for each land use. The total additional activity points for each macro resource concern are calculated by dividing the additional activity points accrued by the potential points multiplied by 100.

B. Conservation Performance Ranking Score

The conservation performance ranking score is used to determine the priority of funding for an applicant. Applicants will be funded starting with the highest score and working down the list until acres are exhausted.

The performance ranking score is based on 4 factors:

1. The level of conservation treatment on priority resource concerns at the time of application.
2. The degree to which treatment on priority resource concerns increases conservation performance.
3. The number of priority resource concerns to be treated to meet or exceed thresholds by the end of the contract.
4. The extent to which other resource concerns will be addressed to meet or exceed stewardship thresholds by the end of the contract.

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Factor 1 is determined by the following process:

A = The sum of the existing activity points for all priority resource concerns for all land uses in the application.

B = The total number of priority resource concerns multiplied times 100.

$$\text{Factor 1 score} = (A/B) \times 1000$$

Factor 2 is determined by the following process:

C = The sum of all additional activity points for all priority resource concerns for all land uses in the application.

D = The sum of all potential additional activity points for all priority resource concerns for all land uses in the application.

$$\text{Factor 2 score} = (C/D) \times 1000$$

Factor 3 is determined by the following process:

E = The sum of the number of priority resource concerns that are met at the time of application and the number of priority resource concerns that the applicant agrees to meet during the contract period.

F = The sum of the number of priority resource concerns (3 to 5).

$$\text{Factor 3 score} = (E/F) \times 1000$$

Factor 4 is determined by the following process for each land use:

G = For non-priority resource concerns that are met at time of application or the applicant agrees to meet during the contract period, sum of all additional activity points.

H = For non-priority resource concerns that are met at time of application or the applicant agrees to meet during the contract period, sum of all potential additional activity points.

$$\text{Factor 4 score} = (G/H) \times 1000$$

Each ranking score factor is multiplied by a weighting factor. The weighting factors are currently set at 25% for each factor, and will likely be adjusted after evaluation of ranking period one results.

The final ranking score is the sum of the weighted factors for 1, 2, 3, and 4.

Attached is the conservation performance point matrix for existing activity questions and additional activities. The points are programmed in the CMT, along with all controls, filters, and calculations. A scientific validation is underway and future modifications to these points may be needed.