

CONSERVATION PRACTICE PHYSICAL EFFECTS

Introduction to use of CPPE

The conservation planner must recognize the effect of applying conservation practices so combinations of practices can be selected that solve the identified or predicted resource concerns without creating new concerns. Treatment of one resource problem could have a positive or negative impact on another resource. Conservation Practice Physical Effects (CPPE) is a tool which is used to assist in decision-making during the planning process.

The primary purpose of CPPE is to allow conservation planners to compare the anticipated physical effects of individual conservation practices on identified resource concerns and then assemble a system of practices that address the decisionmaker's needs and minimizes adverse effects of the treatment on other resources; CPPE helps to illustrate the interrelationship of the resources.

The effects concept is applicable to formulating Resource Management System (RMS) planning options for specific fields or land units (conservation management units -CMUs) or other planning areas. It can also be used to assist in explaining resource problems and potential solutions to the decisionmaker and others.

The CPPE matrix displays in subjective detail the physical effects that conservation practices have on natural resource problems or concerns based on experience and available technical information. A scale of +5 through -5 is utilized to provide a numerical evaluation of practice effects for each resource concern.

On-site effects of practices are generally greater than off-site effects. The further away a practice is from the problem or treatment, generally the less effect it will have.

The key question that should be asked by the planner when reviewing the CPPE is *"If this practice is applied, what effect will it have on the target resource concern/problem and all the other resource concerns that are associated with the planning conservation management unit(s)?"*. In addition, the planner should consider any possible (beneficial and detrimental) effects of practice implementation on 'non-target' resources and resource concerns in both the practice area and in the wider watershed.

CPPE Matrix Description

The CPPE tables found in Section IV of the Field Office Technical Guide identify the anticipated effects of a single conservation practice on resource concerns. An interdisciplinary team evaluated the practices and concerns and provided a score applicable to the average condition. The CPPE scores are modified periodically as new technical information and understanding of practice effects is obtained. The purpose of the CPPE tables is to help planners develop and maintain a strong awareness of the effects of conservation practices on all the natural resources and provide a working knowledge base to decision makers who seek to understand the environmental implications of potential actions. The CPPE scores may be interpreted as shown in Table 1.

A positive score (+1 through +5) is interpreted as increasingly improving the resource condition as the score increases. A negative score (-1 through -5) is interpreted as increasingly degrading the resource condition as the score increases. A score of zero indicates no anticipated effect.

Range of effects

The planner must remember that the effect of a single practice on a given resource problem may vary depending on the local conservation management unit, climate, topography, geology, soils, vegetation, and hydrologic conditions.

Table 1 – CPPE Scores and Interpretations

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Resource Improvement		Resource Degradation	
+5	Significant	-1	Slight
+4	Moderate to Significant	-2	Slight to moderate
+3	Moderate	-3	Moderate
+2	Slight to moderate	-4	Moderate to Significant
+1	Slight	-5	Significant
0 = No effect			

When using the CPPE, the planner must first determine that there is a current resource concern(s) within the CMU and the concern(s) can be addressed by the installation of a conservation practice(s)/system(s), and that the proposed conservation practice is applicable to the resource concern(s) and can be installed in the landscape or farmstead setting. With respect to the score, all conservation practices are assumed to be installed according to NRCS standards and specifications found in Section IV of the Field Office Technical Guide. The CPPE matrices address broad, general effects that may be expected from conservation practice application.