

Effects of NRCS Conservation Practices - National

Cover Crop

Code: 340
Units: ac.

<u>Resource Concern</u>	<u>Effect</u>	<u>Rationale</u>
Sheet and Rill Erosion	4	Increased cover during erosive periods will reduce soil detachment by water.
Wind Erosion	4	Increased cover during erosive periods will reduce soil detachment by wind.
Ephemeral Gully Erosion	3	Increased cover during erosive periods will reduce concentrated flow and associated soil detachment.
Classic Gully Erosion	0	Not Applicable
Bank Erosion from Streams, Shorelines or Water Conveyance Channels	0	Not Applicable
Subsidence	0	If it affects drainage the practice can have an impact on subsidence. A cover crop is not going to consume water in the amounts that drain an organic soil causing subsidence.
Compaction	2	Increased biomass and roots improve aggregation, which gives better resistance to compaction.
Organic Matter Depletion	2	More biomass produced will increase organic matter.
Concentration of Salts or other Chemicals	0	Not Applicable
Soil Organism Habitat Loss or Degradation	2	Live plant roots and diversity of roots improves quality of food, shelter, and cover.
Aggregate Instability	2	Live plant roots increase aggregation physically and through exudates.
Ponding and Flooding	1	Growing plants will increase infiltration and may reduce ponding/flooding.
Seasonal High Water Table	1	Growing plants may take up excess water if plants are selected that tolerate wet feet. However, infiltration will increase, which may offset some of the benefits depending on the depth to the groundwater or perched
Seeps	1	Growing plants may take up excess water. However, infiltration will increase, which may offset some of the benefits. Depends on the subsurface saturated flows and if infiltration can contribute quantity to cause a
Drifted Snow	1	Vegetation may trap wind-blown snow and accumulate water.
Naturally Available Moisture Use	2	Improves infiltration, soil structure, and winter water use that may otherwise be lost. For dry climates (<20 inches/year); cover crops will compete for main crop's moisture.
Surface Water Depletion	0	Not Applicable
Groundwater Depletion	0	Not Applicable
Inefficient Irrigation Water Use	1	Improves infiltration
Nutrients Transported to Surface Water	2	The action reduces erosion and runoff and transport of nutrients. Cover crops can uptake excess nutrients temporarily removing from a loss pathway.
Nutrients Transported to Groundwater	1	The action utilizes excess nutrients and temporarily holds against leaching, and increases organic matter. The additional organic matter will increase cation exchange capacity which will hold some nutrients.
Pathogens and Chemicals from Manure, Bio-solids or Compost Applications Transported to Surface Water	1	Less erosion and runoff reduces delivery of pathogens.
Pathogens and Chemicals from Manure, Bio-solids or Compost Applications Transported to Groundwater	1	The action increases organic matter promoting microbial activity which competes with pathogens.
Sediment Transported to Surface Water	2	Vegetation will reduce erosion and transport of sediment.
Pesticides Transported to Surface Water	2	The action reduces runoff and erosion.
Pesticides Transported to Groundwater	1	The action increases/ builds soil organic matter, biological activity, and pesticide uptake.
Petroleum, Heavy Metals and Other Pollutants Transported to Surface Water	0	Not Applicable
Petroleum, Heavy Metals and Other Pollutants Transported to Groundwater	0	Not Applicable
Salts Transported to Surface Water	0	Not Applicable
Salts Transported to Groundwater	0	Not Applicable
Elevated water temperature	0	Not Applicable
Emissions of Particulate Matter (PM) and PM Precursors	3	Ground cover helps reduce wind erosion (covered under Wind) and generation of fugitive dust.
Emissions of Greenhouse Gasses - GHGs	2	Vegetation removes CO2 from the air and may build soil organic carbon stored in the soil.
Emissions of Ozone Precursors	0	Not Applicable
Objectionable Odor	0	Not Applicable
Emissions of Airborne Reactive Nitrogen	1	Improved nitrogen cycling may reduce use of ammonium fertilizers.
Plant Pest Pressure	4	Vegetation is installed and managed to control undesired species.
Plant Productivity and Health	2	Cover crops may add nutrients or recycle nutrients to be available for the cash crop.
Plant Structure and Composition	1	Intersceded or relay cover crops may improve ecological functions.
Wildfire Hazard from Biomass Accumulation	0	Not Applicable
Feed and Forage Imbalance	1	Cover crops will add supplemental forage. NOT A PURPOSE OF 340. However, cover crops may be grazed.
Inadequate Livestock Shelter	0	Not Applicable
Inadequate Livestock Water Quantity, Quality and Distribution	0	Not Applicable
Terrestrial Habitat for Wildlife and Invertebrates	1	Cover crops provide food and shelter between commercial crop years.
Aquatic Habitat for Fish and other Organisms	0	Not Applicable
Energy Efficiency of Equipment and Facilities	0	Not Applicable
Energy Efficiency of Farming/Ranching Practices and Field Operations	2	Cover crops can reduce nitrogen inputs.

CPPE Practice Effects:

5 Substantial Improvement
4 Moderate to Substantial Improvement
3 Moderate Improvement
2 Slight to Moderate Improvement
1 Slight Improvement

0 No Effect

-1 Slight Worsening
-2 Slight to Moderate Worsening
-3 Moderate Worsening
-4 Moderate to Substantial Worsening
-5 Substantial Worsening