

Effects of NRCS Conservation Practices - National

Tree/Shrub Establishment

Establishing woody plants by planting seedlings or cuttings, direct seeding, or natural regeneration.

Code: 612

Units: ac.

AL-Aso Land
 O-Other
 W-Water
 D-Developed
 FS-Farmstead
 Pr-Protected
 P-Pasture
 R-Range
 F-Forest
 C-Crop

Typical Landuse: C F R P Pr FS D O AL

<u>Soil Erosion</u>	<u>Effect</u>	<u>Rationale</u>
Soil Erosion - Sheet and Rill Erosion	5	Vegetation and surface litter reduces erosive water energy.
Soil Erosion - Wind Erosion	5	Tall vegetation creates a wind shadow, reduces erosive wind velocities and provides a stable area which stops saltating particles.
Soil Erosion - Ephemeral Gully Erosion	4	Vegetation, surface litter and roots reduce erosive energy of concentrated flows.
Soil Erosion - Classic Gully Erosion	2	Vegetation, surface litter and roots reduce erosive energy of concentrated flows.
Soil Erosion - Streambank, Shoreline, Water Conveyance C	2	Roots of vegetation binds the soil making it resistant to water flow erosion.
<u>Soil Quality Degradation</u>		
Organic Matter Depletion	4	Establishment of permanent woody vegetation can lead to increased root and shoot development. Decomposition increases soil organic matter.
Compaction	2	Root penetration and organic matter helps restore soil structure.
Subsidence	0	Not Applicable
Concentration of Salts or Other Chemicals	1	Woody vegetation takes up limited quantities of salts and other chemicals.
<u>Excess Water</u>		
Excess Water - Seeps	2	Deep rooted plants uptake excess water.
Excess Water - Runoff, Flooding, or Ponding	0	Trees or shrubs increase infiltration but may retard flood water movement from the site.
Excess Water - Seasonal High Water Table	2	Deep rooted plants uptake excess water.
Excess Water - Drifted Snow	1	Snow is captured and deposited down wind of planted trees and shrubs.
<u>Insufficient Water</u>		
Insufficient Water - Inefficient Use of Irrigation Water	0	Not Applicable
Insufficient Water - Inefficient Moisture Management	1	Adapted and managed vegetative production allows more efficient use of available water.
<u>Water Quality Degradation</u>		
Pesticides in Surface Water	1	The action reduces runoff and the need for pesticide use. Also, trees and shrubs take up pesticide residues.
Pesticides in Groundwater	1	The action reduces the need for pesticide use and trees and shrubs take up pesticide residues.
Nutrients in Surface water	1	Permanent vegetation will uptake excess nutrients.
Nutrients in Groundwater	1	Permanent vegetation will uptake excess nutrients.
Salts in Surface Water	1	The action promotes contaminant uptake by plants.
Salts in Groundwater	1	The action may promote contaminant uptake by plants.
Excess Pathogens and Chemicals from Manure, Bio-solic	1	Woody vegetation captures and delays pathogen movement and thereby increase their mortality.
Excess Pathogens and Chemicals from Manure, Bio-solic	1	Increased vegetative cover and soil microbial activity can enhance competition with pathogens.

Excessive Sediment in Surface Water	3	Vegetation provides cover, reduces wind velocities, and increases infiltration.														
Elevated Water Temperature	1	Near streams and other water bodies, trees and shrubs provide shade to moderate water temperature.														
Petroleum, Heavy Metals and Other Pollutants Transport	1	Some plants may take up heavy metals.														
Petroleum, Heavy Metals and Other Pollutants Transport	1	Establishing metal-accumulating trees and shrubs may remove heavy metals from the soil profile.														
<u>Air Quality Impacts</u>																
Emissions of Particulate Matter (PM) and PM Precursors	1	Permanent vegetative cover reduces wind erosion and fugitive dust generation.														
Emissions of Ozone Precursors	0	Not Applicable														
Emissions of Greenhouse Gases (GHGs)	4	Vegetation removes CO2 from the air and stores it in the form of carbon in the plants and soil.														
Objectionable Odors	2	Vegetation will reduce wind movement and can intercept odors.														
<u>Degraded Plant Condition</u>																
Undesirable Plant Productivity and Health	5	Plants are selected and managed to maintain optimal productivity and health.														
Inadequate Structure and Composition	5	Plants selected are adapted and suited.														
Excessive Plant Pest Pressure	5	Vegetation is installed and managed to control undesired species.														
Wildfire Hazard, Excessive Biomass Accumulation	0	Not Applicable														
<u>Fish and Wildlife - Inadequate Habitat</u>																
Inadequate Habitat - Food	1	Plants are chosen and managed to enhance food value for target species.														
Inadequate Habitat - Cover/Shelter	3	Plants are chosen and managed to enhance cover/shelter.														
Inadequate Habitat - Water	5	Not Applicable														
Inadequate Habitat - Habitat Continuity (Space)	3	Tall vegetation creates vertical habitat structure and enhanced space for wildlife.														
<u>Livestock Production Limitation</u>																
Inadequate Feed and Forage	0	These sites may be used as feed and forage by livestock if the desired trees and shrubs are not harmed.														
Inadequate Shelter	1	Tall vegetation provides shelter.														
Inadequate Water	0	Not Applicable														
<u>Inefficient Energy Use</u>																
Equipment and Facilities	0	Not Applicable														
Farming/Ranching Practices and Field Operations	0	Not Applicable														
		<table border="1"> <thead> <tr> <th colspan="2"><u>CPPE Practice Effects:</u></th> </tr> </thead> <tbody> <tr> <td>5 Substantial Improvement</td> <td>0 No Effect</td> </tr> <tr> <td>4 Moderate to Substantial Improvement</td> <td>-1 Slight Worsening</td> </tr> <tr> <td>3 Moderate Improvement</td> <td>-2 Slight to Moderate Worsening</td> </tr> <tr> <td>2 Slight to Moderate Improvement</td> <td>-3 Moderate Worsening</td> </tr> <tr> <td>1 Slight Improvement</td> <td>-4 Moderate to Substantial Worsening</td> </tr> <tr> <td></td> <td>-5 Substantial Worsening</td> </tr> </tbody> </table>	<u>CPPE Practice Effects:</u>		5 Substantial Improvement	0 No Effect	4 Moderate to Substantial Improvement	-1 Slight Worsening	3 Moderate Improvement	-2 Slight to Moderate Worsening	2 Slight to Moderate Improvement	-3 Moderate Worsening	1 Slight Improvement	-4 Moderate to Substantial Worsening		-5 Substantial Worsening
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