Effects of NRCS Conservation Practices - National

Range Planting

Establishment of adapted perennial or self-sustaining vegetation such as grasses, forbs, legumes, shrubs and trees.

Code: 550
Units: ac.

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

Soil Erosion	*Effect*	*Rationale*
Soil Erosion - Sheet and Rill Erosion	4	Establishment of adapted species increases vegetative cover and reduces erosion potential. During the establishment period, there may be a slight to moderate risk of erosion, depending on seedbed preparation, seeding method, and species planted.
Soil Erosion - Wind Erosion	4	Establishment of adapted species increases vegetative cover and reduces erosion potential. During the establishment period, there may be a slight to moderate risk of erosion, depending on seedbed preparation, seeding method, and species planted.
Soil Erosion - Ephemeral Gully Erosion	4	Establishment of adapted species increases vegetative cover and reduces erosion potential. During the establishment period, there may be a slight to moderate risk of erosion, depending on seedbed preparation, seeding method, and species planted.
Soil Erosion - Classic Gully Erosion	2	Establishment of adapted species increases vegetative cover and reduces erosion potential. During the establishment period, there may be a slight to moderate risk of erosion, depending on seedbed preparation, seeding method, and species planted.
Soil Erosion - Streambank, Shoreline, Water Conveyance C	2	Establishment of adapted species increases vegetative cover and reduces erosion potential. During the establishment period, there may be a slight to moderate risk of erosion, depending on seedbed preparation, seeding method, and species planted.
Soil Quality Degradation		
Organic Matter Depletion	4	There will be enhanced root development, litter accumulation, and increased biological activity.
Compaction	4	Enhanced root development, litter accumulation, increased biological activity, and/or reduced tillage may improve soil structure.
Subsidence	0	Not Applicable since subsidence is water table function.
Concentration of Salts or Other Chemicals	1	Site planted to adapted species could contribute to the reduction of saline seep areas. There would be a negligible decrease of selenium, boron, and heavy metals because of very limited uptake by range plants.
Excess Water		
Excess Water - Seeps	0	There will be an increase in plant uptake and transpiration in the long-term. There may be a slight to moderate increase in seepage because of increased infiltration depending on the species selected.
Excess Water - Runoff, Flooding, or Ponding	0	There will be an increase in cover and infiltration, reducing runoff and overland flow.
Excess Water - Seasonal High Water Table	0	There will be an increase in plant uptake and transpiration in the long-term. There may be a slight to moderate increase in seepage because of increased infiltration depending on the species selected.
Excess Water - Drifted Snow	1	Warm Season grasses have a more rigid structure than cool season grasses and can maintain structural height under the weight of snow.
Insufficient Water		
Insufficient Water - Inefficient Use of Irrigation Water	0	Not Applicable
Insufficient Water - Inefficient Moisture Management	2	The plant species selected will be adapted to meet the seasonal distribution of moisture.
Water Quality Degradation		
Pesticides in Surface Water	2	Mitigated by low application requirements.
Pesticides in Groundwater	2	Species selected from the Ecological Site Description generally resist or are adapted to pest thereby eliminating the need for harmful pesticides.
Nutrients in Surface water	1	Improving vegetative cover will reduce runoff and erosion, and reduce the delivery of organics and nutrients to surface water.
Nutrients in Groundwater	1	Permanent vegetation will uptake excess nutrients.
Salts in Surface Water	1	Dense vegetation will increase infiltration and reduce runoff. Planting of range species in recharge areas may reduce movement of salts to seep areas and surface waters.
Salts in Groundwater	1	There will be an increase in plant uptake when adapted plant species are used. There is the slight potential for leaching of salt into ground water because of increased infiltration.
Excess Pathogens and Chemicals from Manure, Bio-solic	1	The improved vegetative cover and increased soil microbiological activity will reduce movement of pathogens, however a land use change to pasture may increase potential pathogen levels.
Excess Pathogens and Chemicals from Manure, Bio-solic	1	Increased soil microbial activity will enhance competition with pathogens.

Excessive Sediment in Surface Water	**2**	**There will be improved vegetative cover with a reduction of runoff and sedimentation.**
Elevated Water Temperature	**1**	**The action improves infiltration, increases shade and provides for thermal regulation of gravitational water moving laterally to open water.**
Petroleum, Heavy Metals and Other Pollutants Transporte	**2**	**Live plant growth reduces runoff.**
Petroleum, Heavy Metals and Other Pollutants Transporte	**1**	**Certain plant species can take up heavy metals. Increased infiltration may increase the potential of heavy metal movement to groundwater.**
Air Quality Impacts		
Emissions of Particulate Matter (PM) and PM Precursors	**1**	**Establishing permanent vegetation reduces the potential for generation of particulates by wind erosion.**
Emissions of Ozone Precursors	**0**	**Not Applicable**
Emissions of Greenhouse Gases (GHGs)	**2**	**Vegetation removes CO2 from the air and stores it in the form of carbon in the plants and soil.**
Objectionable Odors	**0**	**Not Applicable**
Degraded Plant Condition		
Undesirable Plant Productivity and Health	**5**	**Plants are selected and managed to maintain optimal productivity, health and ecological function.**
Inadequate Structure and Composition	**5**	**Maladaptation will be avoided by a plant selection based on considerations of geographic region, precipitation, winter hardiness, soil type, genetic ploidy, field testing and Ecological Site Description information.**
Excessive Plant Pest Pressure	**4**	**Vegetation strategy is to control undesired species.**
Wildfire Hazard, Excessive Biomass Accumulation	**0**	**Not Applicable**
Fish and Wildlife - Inadequate Habitat		
Inadequate Habitat - Food	**2**	**Plant species are selected from the Ecological Site Description that are compatible for the site and provide wildlife food**
Inadequate Habitat - Cover/Shelter	**2**	**Plant species are selected from the Ecological Site Description that are compatible for the site and provide wildlife cover.**
Inadequate Habitat - Water	**4**	**Not Applicable**
Inadequate Habitat - Habitat Continuity (Space)	**4**	**Planting can restore desired habitats/space.**
Livestock Production Limitation		
Inadequate Feed and Forage	**5**	**Plant species will be selected that accommodate seasonal livestock production and nutritional needs.**
Inadequate Shelter	**0**	**Not Applicable**
Inadequate Water	**0**	**Not Applicable**
Inefficient Energy Use		
Equipment and Facilities	**0**	**Not Applicable**
Farming/Ranching Practices and Field Operations	**0**	**Not Applicable**

CPPE Practice Effects:	
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