Effects of NRCS Conservation Practices - National

Forest Stand Improvement

Code: 666
Units: ac

The manipulation of species composition, stand structure, and stocking by cutting or killing selected trees and understory vegetation.

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

Soil Erosion	*Effect*	*Rationale*
Soil Erosion - Sheet and Rill Erosion	1	Trees and other vegetation are cut or killed but woody debris is left on site in contact with the ground surface.
Soil Erosion - Wind Erosion	0	Residual vegetation and debris maintain non-erosive conditions.
Soil Erosion - Ephemeral Gully Erosion	1	Trees and other vegetation are cut or killed but woody debris is left on site in contact with the ground surface.
Soil Erosion - Classic Gully Erosion	1	Trees and other vegetation are cut or killed but woody debris is left on site in contact with the ground surface.
Soil Erosion - Streambank, Shoreline, Water Conveyance C	0	Not Applicable
Soil Quality Degradation		
Organic Matter Depletion	1	Trees and other vegetation are cut or killed but woody debris is left on site in contact with the ground surface which can increase OM cycling.
Compaction	-2	Equipment used to harvest or remove forest products can compact forest soils that are prone to compaction.
Subsidence	0	Not Applicable
Concentration of Salts or Other Chemicals	0	Forest products that have assimilated salts/chemicals are removed or harvested from the site.
Excess Water		
Excess Water - Seeps	0	Fewer tall trees may result in less water consumed.
Excess Water - Runoff, Flooding, or Ponding	2	Removal of woody materials from flood or ponding-prone areas allows water to flow through or out of an area decreasing the duration of inundation.
Excess Water - Seasonal High Water Table	-1	Reduction of density of deep rooted vegetation may raise the water table.
Excess Water - Drifted Snow	0	Not Applicable
Insufficient Water		
Insufficient Water - Inefficient Use of Irrigation Water	0	Not Applicable
Insufficient Water - Inefficient Moisture Management	3	Excess trees and undesired vegetation are removed which reallocates water to remaining desired vegetation or provides additional water yield from the site.
Water Quality Degradation		
Pesticides in Surface Water	1	Managing for desirable plant health and vigor reduces the need for pesticide applications.
Pesticides in Groundwater	1	Managing for desirable plant health and vigor reduces the need for pesticide applications.
Nutrients in Surface water	1	Removal of overstory canopy increases amounts and vigor of ground cover that slows surface runoff and allows infiltration. Nutrients and organics are used by vegetation and soil biota.
Nutrients in Groundwater	1	Forest products that have assimilated nutrients/organics are removed or harvested from the site.
Salts in Surface Water	1	Removal of overstory canopy can increase the amount and vigor of ground cover, slowing runoff and increasing infiltration.
Salts in Groundwater	0	Forest products that are storing salts in their biomass may be removed or harvested from the site. Reduced stand density can increase infiltration and leaching of salts.
Excess Pathogens and Chemicals from Manure, Bio-solic	1	Removal of canopy/woody vegetation exposes the site and increases mortality of pathogens that would have otherwise entered surface water.
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Excessive Sediment in Surface Water	**0**	**Proper stocking rates of desired vegetation will provide minimal effect.**
Elevated Water Temperature	**0**	**Removal of overstory canopy adjacent to streams may remove shade that moderates stream temperature.**
Petroleum, Heavy Metals and Other Pollutants Transporte	**1**	**Removal of overstory canopy increases vigor of ground cover that can increase heavy metal uptake and reduces runoff.**
Petroleum, Heavy Metals and Other Pollutants Transporte	**1**	**Removal of overstory canopy increases vigor of ground cover that can increase heavy metal uptake and reduce the potential for leaching.**
Air Quality Impacts		
Emissions of Particulate Matter (PM) and PM Precursors	**1**	**There is a minimal reduction of particulate matter through reduced incidence of wildfire.**
Emissions of Ozone Precursors	**1**	**There is a minimal reduction of ozone precursors through reduced incidence of wildfire.**
Emissions of Greenhouse Gases (GHGs)	**4**	**Health and vigor of remaining plants have increased utilization of CO2, thus sequestering carbon. Carbon may be stored indefinitely in wood products removed from the site. Also, there is a decrease in CO2 emissions from reduced incidence of wildfires.**
Objectionable Odors	**0**	**Not Applicable**
Degraded Plant Condition		
Undesirable Plant Productivity and Health	**5**	**Most productive, healthy and vigorous plants are retained.**
Inadequate Structure and Composition	**5**	**Plants selected for retention are more adapted and suited.**
Excessive Plant Pest Pressure	**5**	**Noxious and invasive plants are removed.**
Wildfire Hazard, Excessive Biomass Accumulation	**5**	**Canopy and understory removal reduces fuel loadings, breaks up fuel continuity, removes "ladder" fuels.**
Fish and Wildlife - Inadequate Habitat		
Inadequate Habitat - Food	**3**	**Canopies and understories are managed to enhance wood production and value and will provide food for wildlife and improved watershed conditions.**
Inadequate Habitat - Cover/Shelter	**3**	**Trees are managed to enhance wood production and value and will provide cover/shelter for wildlife and improved water quantity and quality in watersheds for aquatic habitats.**
Inadequate Habitat - Water	**1**	**Not Applicable**
Inadequate Habitat - Habitat Continuity (Space)	**3**	**Canopies and understories are managed to enhance space requirements.**
Livestock Production Limitation		
Inadequate Feed and Forage	**3**	**Canopy is modified to improve understory forage quantity and quality.**
Inadequate Shelter	**0**	**Remaining canopy and understory continue to provide shelter.**
Inadequate Water	**0**	**Not Applicable**
Inefficient Energy Use		
Equipment and Facilities	**0**	**Not Applicable**
Farming/Ranching Practices and Field Operations	**1**	**Improved efficiency in harvest operations, potential biomass production**

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