

Effects of NRCS Conservation Practices - National

Amendments for Treatment of Agricultural Waste

Treatment of manure, process wastewater, storm water runoff from lots or other high intensity areas, and other wastes, with chemical or biological additives

Code: 591
Units: ani un

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

Typical Landuse:

C F R P FS D O AL

<u>Soil Erosion</u>	<u>Effect</u>	<u>Rationale</u>
Soil Erosion - Sheet and Rill Erosion	0	Not Applicable
Soil Erosion - Wind Erosion	0	Not Applicable
Soil Erosion - Ephemeral Gully Erosion	0	Not Applicable
Soil Erosion - Classic Gully Erosion	0	Not Applicable
Soil Erosion - Streambank, Shoreline, Water Conveyance C	0	Not Applicable
<u>Soil Quality Degradation</u>		
Organic Matter Depletion	1	Using amendments could create high organic residues that when land applied could increase soil organic matter in excess of the application of untreated manure
Compaction	0	Not Applicable
Subsidence	0	Not Applicable
Concentration of Salts or Other Chemicals	0	Could be slight worsening to slight improvement depending on whether salts are concentrated or removed from the land applied waste stream
<u>Excess Water</u>		
Excess Water - Seeps	0	Not Applicable
Excess Water - Runoff, Flooding, or Ponding	0	Not Applicable
Excess Water - Seasonal High Water Table	0	Some amendments such as PAM could alter the intake rates of soils receiving an altered waste stream,
Excess Water - Drifted Snow	0	Not Applicable
<u>Insufficient Water</u>		
Insufficient Water - Inefficient Use of Irrigation Water	1	Altered waste stream with minimum solids will be compatible with irrigation needs
Insufficient Water - Inefficient Moisture Management	0	Not Applicable
<u>Water Quality Degradation</u>		
Pesticides in Surface Water	0	Not Applicable
Pesticides in Groundwater	0	Not Applicable
Nutrients in Surface water	2	Amendments are often used to remove nutrients and organics from the waste stream
Nutrients in Groundwater	2	Amendments are often used to remove nutrients and organics from the waste stream
Salts in Surface Water	2	Amendments can be used to alter the waste stream to remove salts, metals, and some pathogens.
Salts in Groundwater	2	Amendments can be used to alter the waste stream to remove salts, metals, and some pathogens.
Excess Pathogens and Chemicals from Manure, Bio-solic	2	Amendments can be used to alter the waste stream to remove salts, metals, and some pathogens.
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Excessive Sediment in Surface Water	0	Not Applicable
Elevated Water Temperature	0	Not Applicable
Petroleum, Heavy Metals and Other Pollutants Transport	2	Amendments can be used to alter the waste stream to remove salts, metals, and some pathogens.
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<u>Air Quality Impacts</u>		
Emissions of Particulate Matter (PM) and PM Precursors	3	Amendments can reduce ammonia emissions and inhibit dust.
Emissions of Ozone Precursors	1	Amendments that help retain nitrogen can reduce emissions of NOx, however, one would not normally use an amendment specifically for this purpose.
Emissions of Greenhouse Gases (GHGs)	1	Amendments that help retain nitrogen can reduce emissions of N2O, however, one would not normally use an amendment specifically for this purpose.
Objectionable Odors	4	A number of amendments are very successful in reducing odor emissions from manure
<u>Degraded Plant Condition</u>		
Undesirable Plant Productivity and Health	1	Amendments can alter the waste stream to better meet the needs of the plant
Inadequate Structure and Composition	0	Not Applicable
Excessive Plant Pest Pressure	0	Not Applicable
Wildfire Hazard, Excessive Biomass Accumulation	0	Not Applicable
<u>Fish and Wildlife - Inadequate Habitat</u>		
Inadequate Habitat - Food	0	Not Applicable
Inadequate Habitat - Cover/Shelter	0	Not Applicable
Inadequate Habitat - Water	0	Not Applicable
Inadequate Habitat - Habitat Continuity (Space)	0	Not Applicable
<u>Livestock Production Limitation</u>		
Inadequate Feed and Forage	0	Amendments could favorably alter the waste stream to better provide the needs of growing feed and forage, but this would be minor impact
Inadequate Shelter	0	Not Applicable
Inadequate Water	1	Some amendments are used to treat the waste stream to the point water can be reused by livestock
<u>Inefficient Energy Use</u>		
Equipment and Facilities	0	Not Applicable
Farming/Ranching Practices and Field Operations	0	Not Applicable

<u>CPPE Practice Effects:</u>	<i>0 No Effect</i>
<i>5 Substantial Improvement</i>	<i>-1 Slight Worsening</i>
<i>4 Moderate to Substantial Improvement</i>	<i>-2 Slight to Moderate Worsening</i>
<i>3 Moderate Improvement</i>	<i>-3 Moderate Worsening</i>
<i>2 Slight to Moderate Improvement</i>	<i>-4 Moderate to Substantial Worsening</i>
<i>1 Slight Improvement</i>	<i>-5 Substantial Worsening</i>