

Effects of NRCS Conservation Practices - National

Surface Drainage, Field Ditch

A graded ditch for collecting excess water in a field.

Code: 607
Units: ft.

Typical Landuse:

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

<u>Soil Erosion</u>	<u>Effect</u>	<u>Rationale</u>
Soil Erosion - Sheet and Rill Erosion	0	Not Applicable
Soil Erosion - Wind Erosion	-1	Improving drainage may increase surface soil drying.
Soil Erosion - Ephemeral Gully Erosion	2	Reducing soil profile saturation increases infiltration by improving drainage and therefore decreases water runoff.
Soil Erosion - Classic Gully Erosion	-1	Because of higher concentration and velocities from water collection.
Soil Erosion - Streambank, Shoreline, Water Conveyance C	0	Not Applicable
<u>Soil Quality Degradation</u>		
Organic Matter Depletion	-2	Drainage increases organic matter oxidation.
Compaction	1	Soils have less risk of compaction when they are dryer.
Subsidence	-1	Drainage increases organic matter oxidation.
Concentration of Salts or Other Chemicals	2	Soluble pollutants will decrease because of increased water removal.
<u>Excess Water</u>		
Excess Water - Seeps	0	Not Applicable
Excess Water - Runoff, Flooding, or Ponding	2	Because of improved drainage.
Excess Water - Seasonal High Water Table	2	Control of water table - subsurface water is collected and conveyed to a proper outlet.
Excess Water - Drifted Snow	0	Not Applicable
<u>Insufficient Water</u>		
Insufficient Water - Inefficient Use of Irrigation Water	2	Drains can collect water for beneficial use or reuse and improved soil, water air relationship.
Insufficient Water - Inefficient Moisture Management	2	Drains can collect water for beneficial use or reuse and improved soil, water air relationship.
<u>Water Quality Degradation</u>		
Pesticides in Surface Water	0	If the drain is designed to collect surface runoff, pesticides in surface water may be increased. If the purpose is to collect subsurface water, surface runoff will be decreased and aerobic degradation of pesticide residues will increase.
Pesticides in Groundwater	1	The action decreases deep percolation and promotes aerobic degradation of pesticide residues.
Nutrients in Surface water	-2	Increasing the rate of runoff from a field can increase the amount of soluble pollutants delivered to surface water.
Nutrients in Groundwater	1	The action facilitates the removal of surface runoff, thus reducing percolation of water and nutrients.
Salts in Surface Water	-2	The action removes both surface and subsurface flows and soluble contaminants from site.
Salts in Groundwater	1	The action removes surface flows before infiltration and intercepts subsurface flows.
Excess Pathogens and Chemicals from Manure, Bio-solic	-2	Where pathogens are transported by sediments
Excess Pathogens and Chemicals from Manure, Bio-solic	1	The action removes surface flows before infiltration and intercepts subsurface flows.

Excessive Sediment in Surface Water	-2	Increased drainage and runoff will carry sediments.														
Elevated Water Temperature	0	Surface water is conveyed relatively quickly, reducing the risk of warming.														
Petroleum, Heavy Metals and Other Pollutants Transport	-2	Heavy metals are carried with sediment to surface waters.														
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<u>Air Quality Impacts</u>																
Emissions of Particulate Matter (PM) and PM Precursors	0	Not Applicable														
Emissions of Ozone Precursors	0	Not Applicable														
Emissions of Greenhouse Gases (GHGs)	0	Not Applicable														
Objectionable Odors	0	Not Applicable														
<u>Degraded Plant Condition</u>																
Undesirable Plant Productivity and Health	2	Improved drainage enhances growing environment for non-hydrophytes. If hydrophytes are desired, drainage will increase the problem.														
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	Increase or decrease in food supply depends on plant species on the site and degree of drainage.														
Inadequate Habitat - Cover/Shelter	0	Increase or decrease in cover/shelter depends on plant species on the site due to soil moisture/plant relationships.														
Inadequate Habitat - Water	0	The action will increase available wet habitat for some species and decrease it for others.														
Inadequate Habitat - Habitat Continuity (Space)	0	Not Applicable														
<u>Livestock Production Limitation</u>																
Inadequate Feed and Forage	4	Quantity and quality of forage species will be improved if drainage is installed to enhance their production.														
Inadequate Shelter	0	Not Applicable														
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														
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