

# Effects of NRCS Conservation Practices - National

## Vertical Drain

A well, pipe, pit, or bore in porous, underground strata into which drainage water can be discharged without contaminating groundwater resources.

Code: 630

Units: no.

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	0	Not Applicable
Soil Erosion - Ephemeral Gully Erosion	0	Not Applicable
Soil Erosion - Classic Gully Erosion	1	Runoff is captured and discharged subsurface reducing erosion potential.
Soil Erosion - Streambank, Shoreline, Water Conveyance C	0	Not Applicable
<u>Soil Quality Degradation</u>		
Organic Matter Depletion	0	Not Applicable
Compaction	0	Not Applicable
Subsidence	0	Surface water removal may result in increased oxidation of organic matter.
Concentration of Salts or Other Chemicals	0	Not Applicable
<u>Excess Water</u>		
Excess Water - Seeps	0	Surface water introduced to strata below the zones conducive to seepage.
Excess Water - Runoff, Flooding, or Ponding	4	Surface and subsurface drainage diverted to underground strata and not available to surface problems.
Excess Water - Seasonal High Water Table	-2	Diversion of surface water to subsurface will increase any existing problems.
Excess Water - Drifted Snow	0	Not Applicable
<u>Insufficient Water</u>		
Insufficient Water - Inefficient Use of Irrigation Water	0	Not Applicable
Insufficient Water - Inefficient Moisture Management	0	Not Applicable
<u>Water Quality Degradation</u>		
Pesticides in Surface Water	0	Not Applicable
Pesticides in Groundwater	-2	Water entering the drain may contain pesticide residues.
Nutrients in Surface water	1	Nutrients in the water diverted into a vertical drain is kept out of surface water.
Nutrients in Groundwater	-2	Water conveyed to subsurface strata may contain organics and nutrients.
Salts in Surface Water	1	Water containing salt could be diverted from a surface outlet to the subsurface.
Salts in Groundwater	-1	Water containing soluble salts is outlet below the soil surface where it may reach groundwater.
Excess Pathogens and Chemicals from Manure, Bio-solic	1	Water diverted subsurface reduces surface runoff.
Excess Pathogens and Chemicals from Manure, Bio-solic	-1	Water diverted to the subsurface may contain some pathogens.

Excessive Sediment in Surface Water	1	Water diverted subsurface will reduce surface water flows.														
Elevated Water Temperature	0	Diversion of drainage water subsurface removes water from surface flows.														
Petroleum, Heavy Metals and Other Pollutants Transport	1	Water diverted subsurface will reduce metal transport to surface waters.														
Petroleum, Heavy Metals and Other Pollutants Transport	-1	Water diverted to the subsurface may contain some heavy metals.														
<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	0	Not Applicable														
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	Not Applicable														
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														
		<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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