

CONSERVATION PRACTICE PHYSICAL EFFECTS WORKSHEET

STATE	Nebraska	FIELD OFFICE	Any	DATE	12/27/2011
PRACTICE: Animal Trails and Walkways 575		Baseline Setting: Appropriate Land Use(s): Crop, Forest, Grazed Forest, Grazed Range, Hay, Headquarters, Native or Naturalized Pasture, Natural Area, Pasture, Recreation, Water, Watershed Protection, Wildlife			
RESOURCES, CONSIDERATIONS AND CONCERNS		PHYSICAL EFFECTS		RATIONALE	
SOIL - EROSION					
Sheet and Rill		Neutral		Concentration of animal movement facilitates management and conservation of vegetation and soil resources in the entire management unit. Erosion may increase on the trail itself. Effect will vary depending on slope, soil texture, and amount of traffic.	
Wind		Neutral		Concentration of animal movement facilitates management and conservation of vegetation and soil resources in the entire management unit. Erosion may increase on the trail itself. Effect will vary depending on slope, soil texture, and amount of traffic.	
Ephemeral Gully		Neutral		Concentration of animal movement facilitates management and conservation of vegetation and soil resources in the entire management unit. Erosion may increase on the trail itself. Effect will vary depending on slope, soil texture, and amount of traffic.	
Classic Gully		Neutral		Animal traffic is diverted away from problem area and can facilitate healing of gully.	
Streambank		Neutral		Animal traffic is diverted away from problem area and can facilitate healing.	
Shoreline		Neutral		Animal traffic is diverted away from problem area and can facilitate healing.	
Irrigation Induced		Not Applicable		Not applicable.	
Mass Movement		Neutral		Directing animals away from sensitive area will promote vegetative cover. Effect will vary depending on slope, soil texture, and amount of traffic.	
Road, Roadsides, and Construction Sites		Neutral		Directing animals away from sensitive area will promote vegetative cover. Effect will	

		vary depending on slope, soil texture, and amount of traffic.
SOIL – CONDITION		
Organic Matter Depletion	Neutral	Improved animal distribution contributes to more even utilization of vegetation.
Rangeland Site Stability	Neutral	Improved animal distribution contributes to more efficient and uniform utilization of vegetation.
Compaction	Moderate Improvement	Concentration of animal traffic reduces potential for soil compaction to a more restricted area.
Subsidence	Not Applicable	Not applicable.
Contaminants:		
• Salts and other Chemicals	Not Applicable	Not applicable.
• Animal Waste and other Organics - N	Neutral	Improved animal distribution contributes to more even manure distribution.
• Animal Waste and other Organics - P	Neutral	Improved animal distribution contributes to more even manure distribution.
• Animal Waste and other Organics - K	Neutral	Improved animal distribution contributes to more even manure distribution.
• Commercial Fertilizer - N	Not Applicable	Not applicable.
• Commercial Fertilizer – P	Not Applicable	Not applicable.
• Commercial Fertilizer – K	Not Applicable	Not applicable.
• Residual Pesticides	Not Applicable	Not applicable.
Damage from Sediment Deposition	Not Applicable	Not applicable.
WATER – QUANTITY		
Rangeland Hydrologic Cycle	Neutral	Improved animal distribution contributes to more efficient and uniform utilization of vegetation.
Excessive Seepage	Not Applicable	Not applicable.
Excessive Runoff, Flooding, or Ponding	Neutral	Managed animal movement will increase vegetative cover by facilitating management of vegetation in the entire management unit.
Excessive Subsurface Water	Not Applicable	Not applicable.
Drifted Snow	Not Applicable	Not applicable.
Inadequate Outlets	Not Applicable	Not applicable.
Inefficient Water use on Irrigated Land	Not Applicable	Not applicable.
Inefficient Water use on Non-Irrigated Land	Neutral	Managed animal movement will increase vegetative cover by facilitating management of vegetation in the entire management unit.
Reduced Capacity of Conveyances by Sediment Deposition	Neutral	Managed animal movement will increase vegetative cover and improve erosion control by facilitating management of vegetation and soil resources in

		the entire management unit.
Reduced Storage of Water Bodies by Sediment Accumulation	Neutral	Managed animal movement will increase vegetative cover, improve erosion control, and reduce sedimentation by facilitating management of vegetation and soil resources in the entire management unit.
Aquifer Overdraft	Not Applicable	Not applicable.
Insufficient Flows in Water Courses	Not Applicable	Not applicable.
WATER – QUALITY		
In Groundwater:		
• Harmful Levels of Pesticides	Not Applicable	Not applicable.
• Excessive Nutrients and Organics	Not Applicable	Not applicable.
• Excessive Salinity	Not Applicable	Not applicable.
• Harmful Levels of Heavy Metals	Not Applicable	Not applicable.
• Harmful Levels of Pathogens	Not Applicable	Not applicable.
• Harmful Levels of Petroleum	Not Applicable	Not applicable.
In Surface Water:		
• Harmful Levels of Pesticides	Not Applicable	Not applicable.
• Excessive Nutrients and Organics	Neutral	Potential for increased runoff exists if animal traffic is too intense, too frequent, or unmanaged. Effect will vary depending on proximity to water.
• Excessive Suspended Sediment and Turbidity	Neutral	Traffic will be managed/controlled, contributing to increased vegetation over all and erosion control. Effect will vary depending on proximity to water.
• Excessive Salinity	Not Applicable	Not applicable.
• Harmful Levels of Heavy Metals	Not Applicable	Not applicable.
• Harmful Temperatures	Not Applicable	Not applicable.
• Harmful Levels of Pathogens	Neutral	An increase is possible if used for intense concentrated traffic. Effect will vary depending on proximity to water.
• Harmful Levels of Petroleum	Not Applicable	Not applicable.
AIR – QUALITY		
Particulate Matter less than 10 Micrometers in Diameter (PM 10)	Not Applicable	Not applicable.
Particulate Matter less than 2.5 Micrometers in Diameter (PM 2.5)	Not Applicable	Not applicable.
Excessive Ozone	Not Applicable	Not applicable.
Excessive Greenhouse Gas:		
• CO ₂ (Carbon Dioxide)	Not Applicable	Not applicable.
• N ₂ O (Nitrous Oxide)	Not Applicable	Not applicable.
• CH ₄ (Methane)	Not Applicable	Not applicable.
Ammonia (NH ₃)	Not Applicable	Not applicable.
Chemical Drift	Not Applicable	Not applicable.
Objectionable Odors	Neutral	Proper management reduces

		particulate generation.
Reduced Visibility	Neutral	Reduce fugitive dust emissions
Undesirable Air Movement	Not Applicable	Not applicable.
Adverse Air Temperature	Not Applicable	Not applicable.
PLANTS – SUITABILITY		
Plants not Adapted or Suited	Neutral	Adapted and suited species are selected for this practice by reference to Critical Area Planting, 342.
PLANTS - CONDITION		
Productivity, Health, and Vigor	Neutral	Managing/controlling traffic improves plant vigor, health, and productivity.
Threatened or Endangered Plant Species:		
<ul style="list-style-type: none"> Plant Species Listed or Proposed for Listing Under the Endangered Species Act 	Neutral	Controlled access may reduce harmful impacts to threatened and endangered plants if present.
<ul style="list-style-type: none"> Declining Species, Species of Concern 	Neutral	Controlled access may reduce harmful impacts to threatened and endangered plants if present.
Noxious and Invasive Plants	Slight Worsening	Trails may provide an environment for weeds.
Forage Quality and Palatability	Neutral	Managing/controlling traffic improves plant vigor, health, and productivity.
Wildfire Hazard	Neutral	Trails provide firebreaks and access to sites for fuel reduction activities.
ANIMALS - FISH AND WILDLIFE		
Inadequate Food	Not Applicable	Not applicable.
Inadequate Cover/Shelter	Not Applicable	Not applicable.
Inadequate Water	Not Applicable	Not applicable.
Inadequate Space	Slight Worsening	Trails reduce and fragment space.
Habitat Fragmentation	Slight Worsening	Trails fragment plant communities to some degree.
Imbalance Among and Within Populations	Not Applicable	Not applicable.
Threatened and Endangered Fish and Wildlife Species:		
<ul style="list-style-type: none"> Fish and Wildlife Species Listed or Proposed for Listing Under the Endangered Species Act 	Neutral	Activities are designed, installed, and mitigated to an extent to maintain or enhance species of concern.
<ul style="list-style-type: none"> Declining Species, Species of Concern 	Neutral	Activities are designed, installed, and mitigated to an extent to maintain or enhance species of concern.
ANIMALS – DOMESTIC		
Inadequate Quantities and Quality of Feed and Forage	Neutral	Improved distribution of animals makes forage more readily available to livestock.
Inadequate Shelter	Not Applicable	Not applicable.

Inadequate Stock Water	Neutral	Access to water is facilitated.
Stress and Mortality	Slight Improvement	Ease of movement will reduce stress
HUMAN – ECONOMICS		
Land - Change in Land Use	Not applicable.	Not applicable.
Land – Land in Production	Slight decrease.	
Capital – Change in Equipment	Moderate increase.	
Capital - Total Investment Cost	Moderate.	
Capital – Annual Cost	Slight increase.	
Capital – Credit and Farm Program Eligibility	Situational.	
Labor - Labor	Slight to moderate decrease	Slight to moderate decrease, less time herding livestock.
Labor – Change in Management Level	Slight increase.	
Risk - Yield	Slight Decrease	Slight decrease due to improved grazing efficiency and distribution.
Risk - Flexibility	Slight Decrease	Slight decrease due to improved access to forage, water and shelter.
Risk - Timing	Not applicable.	Not applicable.
Risk – Cash Flow	Slight Increase	Negligible to slight increase due to construction needs.
Profitability – Change in Profitability	Negligible to slight increase.	
HUMAN - CULTURAL		
Cultural Resources and/or Historic Properties Present or Suspected to be PRESENT	Slight to Substantial Increase	Impacts due to concentration of animal traffic.
HUMAN – ENERGY		
Depletion of Fossil Fuel Resources	Not Applicable	Not applicable.
Underutilization of Non-Fossil Energy Resources	Not Applicable	Not applicable.

Human Considerations Explanation

Considerations	Physical effects indicate:
Land - Change in Land Use	The degree to which implementing the conservation practice is expected to cause a change from one land use to another.
Land - Land in Production	The degree to which implementing the conservation practice is expected to cause an increase or decrease in the amount of land in production.
Capital - Change in Equipment	The degree to which implementing the conservation practice is expected to cause an increase or decrease in the amount of capital equipment required for farm or ranch operations.
Capital - Total Investment Cost	A qualitative measure of the increase in total investment dollars required in order to implement the conservation practice.
Capital - Annual Cost	A qualitative measure of the expected change in annual capital costs required in order to operate and maintain the conservation practice.
Capital - Credit & Farm Program Eligibility	Included to make conservation planners aware of the potential availability of funding for implementing conservation practices.
Labor – Labor	The degree to which implementing the conservation practice is likely to cause an increase or decrease in the total amount of overall farm or ranch labor required for operations.
Labor - Change in Management Level	The degree to which implementing the conservation practice is likely to cause an increase or decrease in the total amount of required active management on a farm or ranch.
Risk – Yield	The degree to which risk, as related to crop or livestock yields, is expected to increase or decrease as a result of implementing the conservation practice.
Risk – Flexibility	The degree to which risk, as related to the flexibility of farm or ranch operations, is expected to increase or decrease as a result of implementing the conservation practice. For example, converting from flood irrigation to a sprinkler system gives a farmer an increase in flexibility of irrigation, which results in a decrease in the level of risk associated with inflexibility of operations.
Risk – Timing	The degree to which risk, as related to the timing of farm or ranch operations, is expected to increase or decrease as a result of implementing the conservation practice.
Risk - Cash Flow	The degree to which risk, as related to cash flow in farm or ranch operations, is expected to increase or decrease as a result of implementing the conservation practice.
Profitability - Change in Profitability	The degree to which farm or ranch profitability is expected to increase or decrease as a result of implementing the conservation practice.
Cultural Resources and/or Historic Properties Present or Suspected to be Present	The degree to which implementation of the conservation practice is expected to increase or decrease the risk of cultural resource disturbance, degradation, or loss.
Depletion of Fossil Fuel Resources	Inefficient use of fossil-originated energy sources (diesel, gasoline, propane, natural gas, coal), lubricants, and other materials.
Underutilization of Non-Fossil Energy Sources	Available and cost-effective alternative energy sources (solar, wind, biofuel, hydroelectric, geothermal) are not being used or are being used inefficiently.