

## CONSERVATION PRACTICE PHYSICAL EFFECTS WORKSHEET

STATE	Pennsylvania	FIELD OFFICE	Any	DATE	
<b>PRACTICE: Recreation Area Improvement 562</b>		Baseline Setting:			
		Appropriate Land Use(s): Recreation			
<b>RESOURCES, CONSIDERATIONS AND CONCERNS</b>	<b>PHYSICAL EFFECTS</b>		<b>RATIONALE</b>		
<b>SOIL - EROSION</b>					
Sheet and Rill	Moderate to Substantial Improvement		Improvement in vegetative cover will reduce erosion from water.		
Wind	Moderate to Substantial Improvement		Improvement in vegetative cover will reduce erosion from wind.		
Ephemeral Gully	Moderate to Substantial Improvement		Improvement in vegetative cover will reduce erosion from water.		
Classic Gully	Slight Improvement		Improved vegetative cover will reduce runoff causing erosion.		
Streambank	Slight Improvement		Improved vegetative cover will reduce runoff causing erosion.		
Shoreline	Slight Improvement		Improved vegetative cover will reduce runoff causing erosion.		
Irrigation Induced	Not Applicable		Not applicable.		
Mass Movement	Not Applicable		Not applicable.		
Road, Roadsides, and Construction Sites	Not Applicable		Not applicable.		
<b>SOIL – CONDITION</b>					
Organic Matter Depletion	Moderate Improvement		Soil organic matter concerns will decrease when improved vegetative cover is provided and traffic is controlled		
Rangeland Site Stability	Not Applicable		Not applicable.		
Compaction	Slight to Moderate Improvement		The soil compaction concern will decrease as vegetative cover improves and traffic is controlled		
Subsidence	Not Applicable		Not applicable.		
Contaminants:					
• Salts and other Chemicals	Slight to Moderate Improvement		Establishment of salt tolerant species will reduce the salinity concern		
• Animal Waste and other Organics - N	Not Applicable		Not applicable.		
• Animal Waste and other Organics - P	Not Applicable		Not applicable.		
• Animal Waste and other Organics - K	Not Applicable		Not applicable.		
• 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	Slight to Substantial Improvement		Erosion control provided by improved vegetative cover will reduce damage from deposition		

<b>WATER – QUANTITY</b>		
Rangeland Hydrologic Cycle	Not Applicable	Not applicable.
Excessive Seepage	Not Applicable	Not applicable.
Excessive Runoff, Flooding, or Ponding	Slight to Moderate Improvement	Improved vegetative cover will reduce runoff, flooding, or ponding on the recreation area.
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	Not Applicable	Not applicable.
Reduced Capacity of Conveyances by Sediment Deposition	Substantial Improvement	Improved vegetative cover will decrease sedimentation concerns.
Reduced Storage of Water Bodies by Sediment Accumulation	Slight to Moderate Improvement	Improved vegetative cover will decrease sedimentation concerns.
Aquifer Overdraft	Not Applicable	Not applicable.
Insufficient Flows in Water Courses	Not Applicable	Not applicable.
<b>WATER – QUALITY</b>		
In Groundwater:		
• Harmful Levels of Pesticides	Slight to Moderate Improvement	The action increases soil organic matter and biological activity.
• 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	Slight to Moderate Improvement	The action decreases runoff and erosion.
• Excessive Nutrients and Organics	Not Applicable	Not applicable.
• Excessive Suspended Sediment and Turbidity	Moderate to Substantial Improvement	Reduced runoff and erosion will reduce the concern about sediment and turbidity in surface water
• Excessive Salinity	Not Applicable	Not applicable.
• Harmful Levels of Heavy Metals	Not Applicable	Not applicable.
• Harmful Temperatures	Neutral	Shade provided by trees and shrubs may moderate stream temperatures.
• Harmful Levels of Pathogens	Neutral	Pathogen-creating actions are mitigated during practice design.
• Harmful Levels of Petroleum	Neutral	Not applicable.
<b>AIR – QUALITY</b>		
Particulate Matter less than 10 Micrometers in Diameter (PM 10)	Slight Improvement	Enhanced ground cover will reduce particulate generation.
Particulate Matter less than 2.5 Micrometers in Diameter (PM 2.5)	Slight Improvement	Increased ground cover will reduce particulate matter generation.
Excessive Ozone	Neutral	There is a minimal reduction of

		ozone precursors through reduced surface temperatures offered by shade or ground cover, and minimal biofiltering of ozone concentrations due to interception by vegetation.
Excessive Greenhouse Gas:		
• CO <sub>2</sub> (Carbon Dioxide)	Slight to Moderate Improvement	Enhanced ground cover will improve carbon storage in soils and in biomass, however, the removal of trees will reduce carbon storage in biomass.
• N <sub>2</sub> O (Nitrous Oxide)	Not Applicable	Not applicable.
• CH <sub>4</sub> (Methane)	Not Applicable	Not applicable.
Ammonia (NH <sub>3</sub> )	Not Applicable	Not applicable.
Chemical Drift	Not Applicable	Not applicable.
Objectionable Odors	Not Applicable	Not applicable.
Reduced Visibility	Slight Improvement	Enhanced ground cover will reduce generation and trap particulates, improving visibility.
Undesirable Air Movement	Not Applicable	Not applicable.
Adverse Air Temperature	Moderate to Substantial Improvement	Tall vegetation provides shade and moderates temperatures.
<b>PLANTS – SUITABILITY</b>		
Plants not Adapted or Suited	Substantial Improvement	There will be a selection of well-adapted and compatible species, varieties, and/or cultivars for each site.
<b>PLANTS - CONDITION</b>		
Productivity, Health, and Vigor	Substantial Improvement	Plants are selected and managed to maintain optimal productivity and health.
Threatened or Endangered Plant Species:		
• Plant Species Listed or Proposed for Listing Under the Endangered Species Act	Neutral	When threatened or endangered plants are present, protection and recovery are addressed in the planning process.
• Declining Species, Species of Concern	Neutral	When threatened or endangered plants are present, protection and recovery are addressed in the planning process.
Noxious and Invasive Plants	Moderate to Substantial Improvement	Vegetation is installed and managed to control undesired species.
Forage Quality and Palatability	Not Applicable	Not applicable.
Wildfire Hazard	Moderate Improvement	Activities reduce and isolate fuel loads.
<b>ANIMALS - FISH AND WILDLIFE</b>		
Inadequate Food	Slight to Moderate Improvement	Plant species are selected that are well-adapted and compatible to the site and provide food for wildlife.

Inadequate Cover/Shelter	Slight to Moderate Improvement	Plant species are selected that are well-adapted and compatible to the site and provide cover for wildlife.
Inadequate Water	Slight to Moderate Improvement	Improvement activities can include the creation of a wildlife watering source.
Inadequate Space	Slight to Moderate Worsening	Increased recreation use and disturbance reduces habitat availability.
Habitat Fragmentation	Slight Worsening	Recreational use generally increases disturbance and fragmentation to plant communities.
Imbalance Among and Within Populations	Not Applicable	Not applicable.
Threatened and Endangered Fish and Wildlife Species:		
<ul style="list-style-type: none"> <li>Fish and Wildlife Species Listed or Proposed for Listing Under the Endangered Species Act</li> </ul>	Neutral	Activities are designed, installed, and mitigated to an extent to maintain or enhance species of concern.
<ul style="list-style-type: none"> <li>Declining Species, Species of Concern</li> </ul>	Neutral	Activities are designed, installed, and mitigated to an extent to maintain or enhance species of concern.
<b>ANIMALS – DOMESTIC</b>		
Inadequate Quantities and Quality of Feed and Forage	Not Applicable	Not applicable.
Inadequate Shelter	Not Applicable	Not applicable.
Inadequate Stock Water	Not Applicable	Not applicable.
Stress and Mortality	Not Applicable	Not applicable.
<b>HUMAN – ECONOMICS</b>		
Land - Change in Land Use	Slight to Substantial	N/A, if currently recreation use, substantial if converted from cropland.
Land – Land in Production	Substantial decrease	N/A, if currently recreation. substantial decrease if land taken out of production.
Capital – Change in Equipment	Slight Increase.	
Capital - Total Investment Cost	Moderate.	Moderate.
Capital – Annual Cost	Slight increase.	
Capital – Credit and Farm Program Eligibility	Situational.	
Labor - Labor	Negligible	
Labor – Change in Management Level	Negligible	
Risk - Yield	Not applicable.	Not applicable.
Risk - Flexibility	Not applicable.	Not applicable.
Risk - Timing	Not applicable.	Not applicable.
Risk – Cash Flow	Slight to Moderate Increase	Slight to moderate increase due to construction costs.
Profitability – Change in Profitability	Situational	Slight decrease to moderate increase.

<b>HUMAN - CULTURAL</b>		
Cultural Resources and/or Historic Properties Present or Suspected to be PRESENT	Slight to Substantial Increase	Increased access and impacts by people.
<b>HUMAN – ENERGY</b>		
Depletion of Fossil Fuel Resources	Not Applicable	Not Applicable
Underutilization of Non-Fossil Energy Resources	Not Applicable	Not Applicable

## Human Considerations Explanation

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