

Resource Concerns and Definitions

SOIL
SOIL EROSION - Sheet, rill, & wind erosion
SOIL EROSION – Concentrated flow erosion
SOIL EROSION– Excessive bank erosion from streams shorelines or water conveyance channels
SOIL QUALITY DEGRADATION - Subsidence
SOIL QUALITY DEGRADATION – Compaction
SOIL QUALITY DEGRADATION – Organic matter depletion
SOIL QUALITY DEGRADATION – Concentration of salts or other chemicals
WATER
EXCESS WATER – Ponding, flooding, seasonal high water table, seeps, and drifted snow
INSUFFICIENT WATER – Inefficient moisture management
INSUFFICIENT WATER – Inefficient use of irrigation water
WATER QUALITY DEGRADATION – Excess nutrients in surface and ground waters
WATER QUALITY DEGRADATION – Pesticides transported to surface and ground waters
WATER QUALITY DEGRADATION – Excess pathogens and chemicals from manure, bio-solids or compost applications
WATER QUALITY DEGRADATION – Excessive salts in surface and ground waters
WATER QUALITY DEGRADATION – Petroleum, heavy metals and other pollutants transported to receiving waters
WATER QUALITY DEGRADATION – Excessive sediment in surface waters
WATER QUALITY DEGRADATION – Elevated water temperature
PLANT
DEGRADED PLANT CONDITION – Undesirable plant productivity and health
DEGRADED PLANT CONDITION – Inadequate structure and composition

DEGRADED PLANT CONDITION – Excessive plant pest pressure
DEGRADED PLANT CONDITION– Wildfire hazard, excessive biomass accumulation
ANIMAL
INADEQUATE HABITAT FOR FISH AND WILDLIFE – Habitat degradation
LIVESTOCK PRODUCTION LIMITATION – Inadequate feed and forage
LIVESTOCK PRODUCTION LIMITATION – Inadequate livestock shelter
LIVESTOCK PRODUCTION LIMITATION – Inadequate livestock water
ENERGY
INEFFICIENT ENERGY USE – Equipment and facilities
INEFFICIENT ENERGY USE – Farming/ranching practices and field operations
AIR
AIR QUALITY IMPACTS - Emissions of Particulate Matter - PM - and PM Precursors
AIR QUALITY IMPACTS - Emissions of Greenhouse Gases - GHGs -
AIR QUALITY IMPACTS - Emissions of Ozone Precursors
AIR QUALITY IMPACTS - Objectionable odors
Human
Cultural Resources and/or Historic Properties Present or Suspected to be Present (Effect)
Land - Change in Land Use
Land - Land in Production
Capital - Change in Equipment
Capital - Total Investment Cost
Capital - Annual Cost
Capital - Credit & Farm Program Eligibility
Labor - Labor
Labor - Change in Management Level

Risk - Yield
Risk - Flexibility
Risk - Cash Flow
Profitability - Change in Profitability
Operations & Maintenance Factor
Practice Life
Estimated Average Installation Cost
Estimated Average Annual Cost

Detachment and transportation of soil particles caused by rainfall runoff/splash, irrigation runoff or wind that degrades soil quality
Untreated classic gullies may enlarge progressively by head cutting and/or lateral widening. Ephemeral gullies occur in the same flow area and are obscured by tillage. This includes concentrated flow erosion caused by runoff from rainfall, snowmelt or irrigation water.
Sediment from banks or shorelines threatens to degrade water quality and limit use for intended purposes
Loss of volume and depth of organic soils due to oxidation caused by above normal microbial activity resulting from excessive water drainage, soil disturbance, or extended drought. This excludes karst / sinkholes issues or depressions caused by underground activities.
Management induced soil compaction resulting in decreased rooting depth that reduces plant growth, animal habitat and soil biological activity
Soil organic matter is not adequate to provide a suitable medium for plant growth, animal habitat, and soil biological activity
Concentration of salts leading to salinity and/or sodicity reducing productivity or limiting desired use Concentrations of other chemicals impacting productivity or limiting desired use
Surface water or poor subsurface drainage restricts land use and management goals. Wind-blown snow accumulates around and over surface structures, restricting access to humans and animals.
Natural precipitation is not optimally managed to support desired land use goals or ecological processes
Irrigation water is not stored, delivered, scheduled and/or applied efficiently Aquifer or surface water withdrawals threaten sustained availability of ground or surface water Available irrigation water supplies have been reduced due to aquifer depletion, competition, regulation and/or drought
Nutrients - organic and inorganic - are transported to receiving waters through surface runoff and/or leaching into shallow ground waters in quantities that degrade water quality and limit use for intended purposes
Pest control chemicals are transported to receiving waters in quantities that degrade water quality and limit use for intended purposes
Pathogens, pharmaceuticals, and other chemicals carried by land applied soil amendments are transported to receiving waters in quantities that degrade water quality and limit use for intended purposes. This resource concern also includes the off-site transport of leachate and runoff from compost or other organic materials of animal origin.
Irrigation or rainfall runoff transports salts to receiving water in quantities that degrade water quality and limit use for intended purposes
Heavy metals, petroleum and other pollutants are transported to receiving water sources in quantities that degrade water quality and limit use for intended purposes
Off-site transport of sediment from sheet, rill, gully, and wind erosion into surface water that threatens to degrade surface water quality and limit use for intended purposes
Surface water temperatures exceed State/Federal standards and/or limit use for intended purposes
Plant productivity, vigor and/or quality negatively impacts other resources or does not meet yield potential due to improper fertility, management or plants not adapted to site This includes addressing pollinators and beneficial insects.
Plant communities have insufficient composition and structure to achieve ecological functions and management objectives This includes degradation of wetland habitat, targeted ecosystems, or unique plant communities.

Excessive pest damage to plants including that from undesired plants, diseases, animals, soil borne pathogens, and nematodes This concern addresses invasive plant, animal and insect species
The kinds and amounts of fuel loadings - plant biomass - create wildfire hazards that pose risks to human safety, structures, plants, animals, and air resources
Quantity, quality or connectivity of food, cover, space, shelter and/or water is inadequate to meet requirements of identified fish, wildlife or invertebrate species
Feed and forage quality or quantity is inadequate for nutritional needs and production goals of the kinds and classes of livestock
Livestock lack adequate shelter from climatic conditions to maintain health or production goals
Quantity, quality and/or distribution of drinking water are insufficient to maintain health or production goals for the kinds and classes of livestock
Inefficient use of energy in the Farm Operation increases dependence on non-renewable energy sources that can be addressed through improved energy efficiency and the use of on-farm renewable energy sources. As an example, this concern addresses inefficient energy use in pumping plants, on-farm processing, drying and storage.
Inefficient use of energy in field operations increases dependence on non-renewable energy sources that can be addressed through improved efficiency and the use of on-farm renewable energy sources.
Direct emissions of particulate matter - dust and smoke -, as well as the formation of fine particulate matter in the atmosphere from other agricultural emissions - ammonia, NOx, and VOCs - cause multiple environmental impacts, such as: 1) The unintended movement of particulate matter - typically dust or smoke - results in safety or nuisance visibility restriction, 2) The unintended movement of particulate matter and/or chemical droplets results in unwanted deposits on surfaces, 3) Increased atmospheric concentrations of particulate matter can impact human and animal health and degrade regional visibility.
Emissions increase atmospheric concentrations of greenhouse gases.
Emissions of ozone precursors - NOx and VOCs - resulting in formation of ground- level ozone that cause negative impacts to plants and animals.
Emissions of odorous compounds - VOCs, ammonia and odorous sulfur compounds - cause nuisance conditions
The degree to which implementation of the conservation practice is expected to increase or decrease the risk of cultural resource disturbance, degradation, or loss.
The degree to which implementing the conservation practice is expected to cause a change from one land use to another.
The degree to which implementing the conservation practice is expected to cause an increase or decrease in the amount of land in production.
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.
A qualitative measure of the increase in total investment dollars required in order to implement the conservation practice.
A qualitative measure of the expected change in annual capital costs required in order to operate and maintain the conservation practice.
Included to make conservation planners aware of the potential availability of funding for implementing conservation practices.
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.
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.

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.

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.

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.

The degree to which farm or ranch profitability is expected to increase or decrease as a result of implementing the conservation practice.

The percentage of initial installation cost that a producer is expected to need to spend on an annual basis in order to perform the operations and maintenance (O&M) necessary to meeting the requirements of NRCS practice standards. To calculate expected annual O&M costs, multiply the installation cost by the O&M factor.

The period of time, measured in years, during which the conservation practice must remain fully functional--through design, construction, implementation, and/or O&M--in order to meet the requirements of NRCS practice standards.

An estimate, based on national data, of the average total cost of installing a typical or representative case of the conservation practice. This figure includes only "cost-shareable" expenses and is intended to give conservation planners a rough or "ballpark" idea as to the relative costs of implementing different conservation practices. It is not intended for use as the basis for calculating actual cost estimates for specific conservation systems or practices on individual land units.

Calculated by amortizing the estimated average annual installation cost over the practice standard life of the practice and then adding expected annual O&M costs in order to estimate the average annual cost of implementing the practice.

Change in Land Use - The original farm enterprise will no longer be maintained.

Land Available for Production - Land available for the original farm enterprise.

Change in Equipment - New or additional equipment is required to implement the practice.

Total Investment Cost - Costs associated with implementing or beginning the practice.

Annual Cost - Costs that are expected to be incurred on an annual basis (operation & maintenance).

Labor - The number of farm workers or hours of work needed to perform farm operations.

Yield - The projected affect of practice implementation on crop/livestock yield.

Flexibility - The adaptability of the practice to the overall farm/ranch operation.

Cash Flow - Change in net revenue over time

Profitability - The dollar benefits exceeding the dollar costs.

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