

RESOURCE CONCERNS
Conservation Delivery Streamlining Initiative
September 28, 2010

Resource Concern

A resource concern (RC) is an expected degradation of the soil, water, air, plant, or animal resource base to an extent that the sustainability or intended use of the resource is impaired. Because NRCS quantifies or describes resource concerns as part of a comprehensive conservation planning process that includes client objectives, human and energy resources are considered components of the resource base.

Major Resource Concerns	Natural Resource Concerns (31)	Description of Concern
1. SOIL EROSION	SOIL EROSION – Sheet, rill, and wind erosion	Detachment and transportation of soil particles caused by rainfall runoff or splash, irrigation runoff, or wind that degrades soil quality.
	SOIL EROSION – Concentrated flow erosion	Untreated classic gullies may enlarge progressively by head cutting, lateral widening, or both. 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.
	SOIL EROSION – Excessive bank erosion from streams, shorelines, or water conveyance channels	Sediment from banks or shorelines threatens to degrade water quality and limit use for intended purposes.
2. SOIL QUALITY DEGRADATION	SOIL QUALITY DEGRADATION – Subsidence	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.
	SOIL QUALITY DEGRADATION – Compaction	Management-induced soil compaction resulting in decreased rooting depth that reduces plant growth, animal habitat, and soil biological activity.
	SOIL QUALITY DEGRADATION – Organic matter depletion	Soil organic matter is not adequate to provide a suitable medium for plant growth, animal habitat, and soil biological activity.
	SOIL QUALITY DEGRADATION – Concentration of salts or other chemicals	Concentration of salts leading to salinity, sodicity, or both, reducing productivity or limiting desired use. Concentrations of other chemicals impacting productivity or limiting desired use.

Attachment A

3. EXCESS / INSUFFICIENT WATER	EXCESS WATER – Ponding, flooding, seasonal high water table, seeps, and drifted snow	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.
	INSUFFICIENT WATER – Inefficient moisture management	Natural precipitation is not optimally managed to support desired land use goals or ecological processes.
	INSUFFICIENT WATER – Inefficient use of irrigation water	<p>Irrigation water is not stored, delivered, scheduled, or applied efficiently.</p> <p>Aquifer or surface water withdrawals threaten sustained availability of ground or surface water.</p> <p>Available irrigation water supplies have been reduced due to aquifer depletion, competition, regulation, drought, or some combination of these.</p>
4. WATER QUALITY DEGRADATION	WATER QUALITY DEGRADATION – Excess nutrients in surface and ground waters	Nutrients (organics and inorganics) are transported to receiving waters through surface runoff, leaching into shallow ground waters, or both in quantities that degrade water quality and limit use for intended purposes.
	WATER QUALITY DEGRADATION – Pesticides transported to surface and ground waters	Pesticides are transported to receiving waters in quantities that degrade water quality and limit use for intended purposes.
	WATER QUALITY DEGRADATION – Excess pathogens and chemicals from manure, biosolids or compost applications	Pathogens, pharmaceuticals, and other chemicals are transported to receiving waters in quantities that degrade water quality and limit use for intended purposes. This resource concern also includes the offsite transport of leachate and runoff from silage, compost, or other organic materials.
	WATER QUALITY DEGRADATION – Excessive salts in surface and ground waters	Irrigation or rainfall runoff transports salts to receiving water in quantities that degrade water quality and limit use for intended purposes.
	WATER QUALITY DEGRADATION – Petroleum, heavy metals, and other pollutants transported to receiving water sources	Heavy metals, petroleum, and other pollutants are transported to receiving water sources in quantities that degrade water quality and limit use for intended purposes.
	WATER QUALITY DEGRADATION – Excessive sediment in surface waters	Offsite 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.
	WATER QUALITY DEGRADATION – Elevated water temperature	Surface water temperatures exceed State or Federal standards, limit use for intended purposes, or both.

5. DEGRADED PLANT CONDITION	DEGRADED PLANT CONDITION – Undesirable plant productivity and health	<p>Plant productivity, vigor, and/or quality do not negatively impact other resources or meet yield potential due to improper fertility, management, or plants not adapted to site.</p> <p>As an example this concern addresses pollinators, beneficial insects, wind erosion, and excess soil deposition that influence plant condition.</p>
	DEGRADED PLANT CONDITION – Inadequate structure and composition	<p>Plant communities have insufficient composition and structure to achieve ecological functions and management objectives.</p> <p>As an example, this concern addresses loss or degradation of wetland habitat, targeted ecosystems, or unique plant communities.</p>
	DEGRADED PLANT CONDITION – Excessive plant pest pressure	<p>Excessive pest damage to plants including that from undesired plants, diseases, animals, soil borne pathogens, and nematodes.</p> <p>As an example, this concern addresses invasive plant, animal, and insect species.</p>
	DEGRADED PLANT CONDITION – Wildfire hazard, excessive biomass accumulation	<p>The kinds and amounts of fuel loadings (plant biomass) create wildfire hazards that pose risks to human safety, structures, plants, animals, and air resources.</p>
6. INADEQUATE HABITAT FOR FISH AND WILDLIFE	INADEQUATE HABITAT FOR FISH AND WILDLIFE – Habitat degradation	<p>Quantity, quality, or connectivity of food, cover, space, shelter, and/or water is inadequate to meet requirements of identified fish, wildlife, and invertebrate species.</p>
7. LIVESTOCK PRODUCTION LIMITATION	LIVESTOCK PRODUCTION LIMITATION – Inadequate feed and forage	<p>Feed and forage quality or quantity is inadequate for nutritional needs and production goals of the kinds and classes of livestock.</p>
	LIVESTOCK PRODUCTION LIMITATION – Inadequate livestock shelter	<p>Livestock lack adequate shelter from climatic conditions to maintain health or production goals.</p>
	LIVESTOCK PRODUCTION LIMITATION – Inadequate livestock water	<p>Quantity, quality, and/or distribution of drinking water are insufficient to maintain health or production goals for the kinds and classes of livestock.</p>

Attachment A

8. INEFFICIENT ENERGY USE	INEFFICIENT ENERGY USE – Equipment and facilities	<p>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.</p> <p>As an example, this concern addresses inefficient energy use in pumping plants, on-farm processing, drying, and storage.</p>
	INEFFICIENT ENERGY USE – Farming/ranching practices and field operations	<p>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.</p>
9. AIR QUALITY IMPACTS	AIR QUALITY IMPACTS – Emissions of Particulate Matter (PM) and PM Precursors	<p>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, NO_x, and VOCs) cause multiple environmental impacts, such as:</p> <ul style="list-style-type: none"> - The unintended movement of particulate matter (typically dust or smoke) results in safety or nuisance visibility restriction. - The unintended movement of particulate matter and/or chemical droplets results in unwanted deposits on surfaces. - Increased atmospheric concentrations of particulate matter can impact human and animal health and degrade regional visibility.
	AIR QUALITY IMPACTS – Emissions of Greenhouse Gases (GHGs)	<p>Emissions increase atmospheric concentrations of greenhouse gases.</p>
	AIR QUALITY IMPACTS – Emissions of Ozone Precursors	<p>Emissions of ozone precursors (NO_x and VOCs) resulting in formation of ground-level ozone that cause negative impacts to plants and animals.</p>
	AIR QUALITY IMPACTS – Objectionable odors	<p>Emissions of odorous compounds (VOCs, ammonia, and odorous sulfur compounds) cause nuisance conditions.</p>