<table>
<tr>
<td rowspan="2">Resource Concern Cause

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. The “Cause” is the specific reason or threat to the resource that results in the resource concern.</td>
<td rowspan="2">Description of Concern</td>
<td rowspan="2">Land Use
* Required Assessment</td>
<td rowspan="2">Resource Concern Component

For planning purposes, some resource concerns are divided into components where there is a clear distinction in the causal factors, the mitigating actions, and the anticipated environmental effect.</td>
<td colspan="2">Planning Criteria

A planning criterion is a quantitative or qualitative method to assess the existing condition of the natural resources on a site to determine whether additional treatment is needed to address a specific potential resource concern.

Planning Consideration

A planning consideration is a description of potential actions or activities that should be considered to help address an identified resource concern and/or to address unintended consequences of an action. Planning considerations are identified for resource concerns when it is not appropriate or technologically feasible to identify specific criteria or a</td>
<td rowspan="2">Measurement & Assessment Tools

Description of the technology or process for determining if assessment criteria are met.</td>
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<tr>
<td>Screening Level

Screening level criteria are defined, when appropriate, to identify sites with conditions that have little or no probability of needing additional treatment to address the specific resource concern. If the site meets the screening level criteria, then no other assessment is needed to document that planning criteria are met on this site.
States can delete or edit nationally identified</td>
<td>Basic Assessment Level

Basic assessment level criteria are used when a site does not meet screening level criteria, or when no screening level criteria are defined. Assessment levels are also used when formulating and evaluating alternatives.
National criteria establish the minimum for all sites.
States may add state-specific criteria to address local conditions.</td>
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Resource Concern Cause	Description of Concern	Land Use * Required Assessment	Resource Concern Component	Planning Criteria		Measurement & Assessment Tools
				Screening Level	Basic Assessment Level	
SOIL						
1 - SOIL EROSION - Sheet and Rill, Wind, Irrigation Induced	Detachment and transportation of soil particles caused by rainfall, irrigation runoff or wind, that degrades soil quality	- Crop* - Developed Land* - Farmsteads* - Associated Ag Land* - Designated Protected Area* - Other Rural Land*	Sheet and Rill	Permanent ground cover > 90%, and slope < 10%	Water erosion rate ≤ T	RUSLE2 - Revised Universal Soil Loss Equation
			Wind		Wind erosion rate ≤ T	WEPS - Wind Erosion Prediction System
			Irrigation -induced		Irrigation-induced erosion rate ≤ T	SISL - Surface Irrigation Soil Loss OR Soil loss volume x bulk density calculation
		- Pasture*	Sheet and Rill		Water erosion rate ≤ T, OR PCS - Mean erosion element score ≥ 4	RUSLE2 - Revised Universal Soil Loss Equation OR PCS - Pasture Condition Score
		- Pasture*	Wind		Wind erosion rate ≤ T, OR PCS - Mean erosion element score ≥ 4	WEPS - Wind Erosion Prediction System OR PCS - Pasture Condition Score
		- Pasture*	Irrigation -induced		Irrigation-induced erosion rate ≤ T, OR PCS - Mean erosion element score ≥ 4	(SISL - Surface Irrigation Soil Loss OR Soil loss volume x bulk density calculation) OR PCS - Pasture Condition Score
		- Forest*	Sheet and Rill, Wind	Soil surface organic residue cover > 80%	Site is stable and without visible signs of erosion	Visual Inspection
		- Range*	Sheet and Rill, Wind	State established criteria.	RHA - soil site stability - slight to moderate or less	RHA - Rangeland Health Assessment
2 - SOIL EROSION – Concentrated flow	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 or snowmelt	- Crop*	Ephemeral gullies	Ephemeral gullies are not occurring	Conservation practices and managements are in place to prevent or control ephemeral gullies	In-Field measurement/observation
			Classic gullies	Classic gullies are not present	Classic gully management is adequate to stop the progression of head cutting and widening and offsite impacts are minimized by vegetation and/or structures	
		- Forest* - Farmsteads* - Pasture* - Range* - Developed Land* - Associated Ag Land* - Designated Protected Area* - Other Rural Land*	Classic gullies	Classic gullies are not present	Classic gully management is adequate to stop the progression of head cutting and widening and are offsite impacts are minimized by vegetation and/or structures	

Resource Concern Cause	Description of Concern	Land Use * Required Assessment	Resource Concern Component	Planning Criteria		Measurement & Assessment Tools
				Screening Level	Basic Assessment Level	
3 - 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	- Crop* - Forest* - Range* - Developed Land* - Associated Ag Land* - Designated Protected Area* - Water* - Other Rural Land* - Farmsteads*		Streams, shoreline or channels are not adjacent to site	For shorelines and water conveyance channels; banks are stable or commensurate with normal geomorphological processes AND If bank erosion is present, it is beyond the client's control or commensurate with normal geomorphological processes AND For streambanks; SVAP2 bank condition element score ≥ 5 OR PFC functional rating = Proper Functioning	SVAP2 - Stream Visual Assessment Protocol OR PFC - Proper Functioning Condition
		- Pasture*			PCS - streambank / shoreline erosion element score ≥ 4 AND For shorelines and water conveyance channels; Banks are stable or commensurate with normal geomorphological processes AND If bank erosion is present, it is beyond the client's control or commensurate with normal geomorphological processes OR PFC functional rating = Proper Functioning	(SVAP2 - Stream Visual Assessment Protocol AND PCS - Pasture Condition Score) OR PFC - Proper Functioning Condition
4 - 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. This excludes karst / sinkholes issues or depressions caused by underground activities.	- Crop - Forest - Associated Ag Land - Designated Protected Area - Pasture		Histisol soils are not present OR Histisol soils are not exhibiting subsidence	Subsidence is adequately managed to meet client's objectives	Client input / planner observation

Resource Concern Cause	Description of Concern	Land Use * Required Assessment	Resource Concern Component	Planning Criteria		Measurement & Assessment Tools
				Screening Level	Basic Assessment Level	
5 - SOIL QUALITY DEGRADATION - Compaction	Management induced soil compaction resulting in decreased rooting depth that reduces plant growth, animal habitat and soil biological activity	- Crop - Forest - Associated Ag Land - Designated Protected Area - Other Rural Land		Soil compaction is not a problem AND Activities do not cause soil compaction problems	Compaction is managed to meet Client's production and management objectives	Client input / planner observation AND Observation of soil and/or plant condition
		- Pasture			PCS – compaction element score ≥ 4	PCS - Pasture Condition Score
		- Range			RHA - soil site stability - slight to moderate or less OR Compaction is managed to meet Client's production and management objectives	RHA - Rangeland Health Assessment OR Observation of soil and/or plant condition
6 - 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	- Crop*		Permanent ground cover > 80%	SCI - Soil Conditioning Index > 0	RUSLE2 - Revised Universal Soil Loss Equation OR WEPS - Wind Erosion Prediction System
		- Pasture			SCI - Soil Conditioning Index > 0 OR PCS - plant cover element score ≥ 4 AND PCS - plant residue element score ≥ 4	RUSLE2 - Revised Universal Soil Loss Equation OR PCS - Pasture Condition Score
		- Range		Soil organic matter depletion is not a problem AND Activities do not cause soil organic matter depletion	RHA - soil site stability - slight to moderate or less AND RHA – biotic integrity attribute rating - slight to moderate departure or less	RHA - Rangeland Health Assessment
		- Forest			Ground cover meets state criteria specific to ecological site OR Soil organic matter is managed to meet Client objectives	Client input / planner observation
7 - SOIL QUALITY DEGRADATION - Concentration of salts or other chemicals	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	- Crop - Pasture - Range - Associated Ag Land - Farmsteads		Activities do not cause salinity/sodicity problems	Conservation practices and managements are in place to mitigate on-site effects	Soil diagnostic evaluations

Resource Concern Cause	Description of Concern	Land Use * Required Assessment	Resource Concern Component	Planning Criteria		Measurement & Assessment Tools
				Screening Level	Basic Assessment Level	
WATER						
8 - 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.	- Crop - Forest - Farmsteads - Pasture - Range - Developed Land - Associated Ag Land - Designated Protected Area - Other Rural Land	Ponding and Flooding	Ponding or flooding is not a problem AND Activities do not cause ponding and flooding problems	Excess water is managed to meet Client's objectives	Client input / planner observation
			Seasonal High Water Table	Seasonal high water table does not cause a problem		
			Seeps	Excess water from seeps does not cause a problem		
			Drifted Snow	Drifted snow does not cause a problem		
9 - INSUFFICIENT WATER - Inefficient moisture management	Natural precipitation is not optimally managed to support desired land use goals or ecological processes	- Crop - Developed Land - Forest - Associated Ag Land - Designated Protected Area		Moisture Management is not a problem AND Activities do not cause inefficient moisture management problems	Runoff and evapotranspiration levels are minimized to meet Client's management objectives	Client input / planner observation
		- Range*			RHA - hydrologic function attributes slight to moderate or less	RHA - Rangeland Health Assessment
		- Pasture			PCS - compaction element score ≥ 4 AND PCS - plant cover element score ≥ 4	PCS - Pasture Condition Score
10 - INSUFFICIENT WATER - Inefficient use of irrigation water	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	- All*		PLU is not irrigated	FIRI - The Colorado Modified Farm Irrigation Rating for the planned irrigation system is a minimum of 75 percent of the total potential index for that irrigation system	FIRI - Colorado Modified Farm Irrigation Rating Index (CO IWM 449, Job Sheet 2)

Resource Concern Cause	Description of Concern	Land Use * Required Assessment	Resource Concern Component	Planning Criteria		Measurement & Assessment Tools
				Screening Level	Basic Assessment Level	
11 - WATER QUALITY DEGRADATION - Excess nutrients in surface and groundwaters	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	- Crop*	Excess nutrients in surface water	Organic or inorganic nutrients are not applied AND PLU is not grazed	Nutrient and amendment applications are based on soil or tissue tests and nutrient budgets for realistic yields AND Conservation practices and managements are in place to minimize surface water impacts	Client input / planner observation AND Nutrient budget AND Colorado Phosphorus Index
			Excess nutrients in groundwater		Nutrient and amendment applications are based on soil or tissue tests and nutrient budgets for realistic yields AND Conservation practices and managements are in place to minimize groundwater impacts	Client input / planner observation AND Nutrient budget AND Colorado Nitrogen Leaching Index
		- Pasture*	Excess nutrients in surface and or groundwater		PCS - streambank / shoreline erosion element score ≥ 4 AND PCS - livestock concentration areas element score ≥ 4 AND Nutrient applications are based on a current soil test, CSU fertility recommendations, and nutrient budget based on realistic yield goals	PCS – Pasture Condition Score AND Nutrient budget
		- Developed Land		Organic or inorganic nutrients are not applied	Nutrients if applied, are based on a soil test, tissue tests or nutrient budget AND Conservation practices and managements are in place to minimize surface and or groundwater impacts	Client input / planner observation AND Nutrient budget
		- Other Rural Land - Associated Ag Land - Designated Protected Area - Water - Forest - Range - Farmsteads*		Organic or inorganic nutrients are not applied AND PLU is not grazed AND There are no confined livestock areas		
12 - WATER QUALITY DEGRADATION - Pesticides transported to surface and groundwaters	Pest control chemicals are transported to receiving waters in quantities that degrade water quality and limit use for intended purposes	- All*	Pesticides transported to surface and or groundwater	Pest control chemicals are not applied	Pesticides are stored, handled, disposed and managed to prevent runoff, spills, leaks and leaching AND Conservation practices and managements are in place to minimize surface and or groundwater impacts	Client input / planner observation AND WIN-PST / Colorado Pesticide Mitigation Worksheet (CO-PMW)

Resource Concern Cause	Description of Concern	Land Use * Required Assessment	Resource Concern Component	Planning Criteria		Measurement & Assessment Tools
				Screening Level	Basic Assessment Level	
13 - WATER QUALITY DEGRADATION - Excess pathogens and chemicals from manure, bio-solids or compost applications	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.	- Crop* - Pasture*	Pathogens and chemicals from manure, biosolids and or compost applications transported to surface and or groundwater	Potential sources of pathogens or pharmaceuticals are not applied on the land	Organic materials are applied, stored, and/or handled to mitigate negative impacts to surface and or groundwater resources	Colorado Nitrogen Leaching Index AND Colorado Phosphorus Runoff Index
		- Farmsteads* - Forest - Developed Land - Associated Ag Land - Other Rural Land - Designated Protected Area - Water - Range				Client input / planner observation
14 - WATER QUALITY DEGRADATION - Excessive salts in surface and groundwater	Irrigation or rainfall runoff transports salts to receiving water in quantities that degrade water quality and limit use for intended purposes	- All	Excessive salts in surface and or groundwater	Excess salt is not a problem AND Activities do not contribute to excess salt problem	Salt concentrations are managed to mitigate off-site transport to surface and or groundwater	Client input / planner observation
15 - WATER QUALITY DEGRADATION - Petroleum, heavy metals and other pollutants transported to receiving waters	Heavy metals, petroleum and other pollutants are transported to receiving water sources in quantities that degrade water quality and limit use for intended purposes	· All	Petroleum, heavy metals, and other pollutants transported to surface and or groundwater	Activities do not present the potential for contamination by petroleum, heavy metals and other pollutants	Petroleum, heavy metals or other potential pollutants are stored and handled to avoid runoff to surface water or leaching to groundwater	Client input / planner observation

Resource Concern Cause	Description of Concern	Land Use * Required Assessment	Resource Concern Component	Planning Criteria		Measurement & Assessment Tools
				Screening Level	Basic Assessment Level	
16 - WATER QUALITY DEGRADATION – Excessive sediment in surface waters	Off-site transport of sediment from sheet and rill, gully, wind and irrigation-induced erosion into surface water threatens to degrade surface water quality and limit use for intended purposes	- Crop*		Permanent ground cover > 90% and slope < 10% AND Classic gullies are not present AND Streams or shoreline are not on or adjacent to site	Sheet and rill erosion rate ≤ T AND Wind erosion rate ≤ T AND Irrigation-induced erosion is ≤ T	RUSLE2 - Revised Universal Soil Loss Equation AND WEPS - Wind Erosion Prediction System AND (SISL - Surface Irrigation Soil Loss OR Soil loss volume x bulk density calculation)
		- Developed Land* - Farmsteads* - Other Rural Land - Associated Ag Land - Designated Protected Area - Water - Pasture*			Upslope treatment and buffer practices address concentrated flows to water bodies AND SVAP2 - bank condition ≥ 5 AND Livestock and vehicle water crossings are stable OR PFC functional rating = Proper Functioning	(Client input / planner observation AND SVAP2 - Stream Visual Assessment Protocol) OR PFC - Proper Functioning Condition
		- Forest*		There are no untreated sources of erosion AND Streams or shoreline are not on or adjacent to site	(Upslope treatment and buffer practices address concentrated flows to water bodies AND Heavy use areas are stable AND SVAP2 - bank condition ≥ 5) OR PFC functional rating = Proper Functioning	(Client input / planner observation AND SVAP2 - Stream Visual Assessment Protocol) OR PFC - Proper Functioning Condition
		- Range*			(RHA - hydrologic function attribute - slight to moderate or less AND SVAP2 - bank condition ≥ 5) OR PFC functional rating = Proper Functioning	(RHA - Rangeland Health Assessment AND SVAP2 - Stream Visual Assessment Protocol) OR PFC - Proper Functioning Condition
17 - WATER QUALITY DEGRADATION - Elevated water temperature	Surface water temperatures exceed State/Federal standards and/or limit use for intended purposes	- All		Water courses on or adjacent to the site are not designated by a State Agency as a temperature impairment OR Water course temperature is not a client concern	(SVAP2 - riparian area quality element score ≥ 5 AND SVAP2 - canopy cover element score ≥ 6) OR PFC functional rating = Proper Functioning OR Existing conservation practices are in place to address water temperature	(SVAP2 - Stream Visual Assessment Protocol OR PFC - Proper Functioning Condition) OR Client input / planner observation

Resource Concern Cause	Description of Concern	Land Use * Required Assessment	Resource Concern Component	Planning Criteria		Measurement & Assessment Tools
				Screening Level	Basic Assessment Level	
PLANT						
18 - DEGRADED PLANT CONDITION - Undesirable plant productivity and health	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.	- Crop - Farmsteads - Developed Land - Designated Protected Area - Associated Ag Land - Other Rural Land		Plant production and health is not a client concern	Plants are adapted to the site, meet production goals and do not negatively impact other resources AND Plant damage from wind erosion is below Crop Damage Tolerance levels	Client input / planner observation AND National Agronomy Manual, Crop Tolerance to Blowing Soils, Table 502-1
		- Range*			Vegetation meet similarity index of 60 or greater for desired plant community OR RHA – biotic integrity attribute rating - slight to moderate departure or less	Similarity Index Worksheet OR RHA - Rangeland Health Assessment
		- Pasture*			PCS ≥ 30 Plants are adapted to the site, meet production goals and do not negatively impact other resources	PCS - Pasture Condition Score
		- Forest*			Forest species are adapted to site AND Composition and stand density meets the Client's objectives and production goals	Inventory plots and transect analyses
19 - DEGRADED PLANT CONDITION - Inadequate structure and composition	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.	- Forest* - Designated Protected Area - Associated Ag Land - Water		Plant communities support the intended land use and desired ecological functions	Plant communities contain adequate diversity, composition and structure to support desired ecological functions	Ecological Site / Range Site Descriptions AND Inventory plots and transect analyses
		- Pasture			Plant communities contain adequate diversity, composition and structure to support desired ecological functions. PCS ≥ 4	PCS - Pasture Condition Score
		- Range*			Plant communities contain adequate diversity, composition and structure to support desired ecological functions OR RHA – biotic integrity attribute rating slight to moderate departure or less OR Vegetation meet similarity index of 60 or greater for desired plant community	Ecological Site / Range Site Descriptions With (Rangeland Health Assessment (RHA) OR Similarity Index Worksheet)

Resource Concern Cause	Description of Concern	Land Use * Required Assessment	Resource Concern Component	Planning Criteria		Measurement & Assessment Tools
				Screening Level	Basic Assessment Level	
20 - DEGRADED PLANT CONDITION - Excessive plant pest pressure	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.	- Crop - Farmsteads - Developed Land - Associated Ag Land - Designated Protected Area - Water - Other Rural Land		Plant productivity is not limited from pest pressure	Pest damage to plants are below economic or environmental thresholds or client-identified criteria AND Plant pests, including noxious and invasive species are managed to meet client objectives	Client input / planner observation
		- Forest*				Client input / planner observation AND Inventory plots and transect analyses
		- Range*				Client input / planner observation AND Inventory plots and transect analysis AND Rangeland Health Assessment (RHA)
		- Pasture*			PCS - insect and disease pressure element score ≥ 4 AND PCS - site adaptation element score ≥ 4	Client input/planner observation And PCS - Pasture Condition Score
21 - DEGRADED PLANT CONDITION - Wildfire hazard, excessive biomass accumulation	The kinds and amounts of fuel loadings - plant biomass - create wildfire hazards that pose risks to human safety, structures, plants, animals, and air resources	- All*			Hazardous fuels are managed and reduced to meet minimum specifications for defensible space irrespective of forest type, or reduce the probability of uncharacteristic fire in forest types that have unprecedented accumulation of fuels	Client input / planner observation AND Inventory plots and transect analyses

Resource Concern Cause	Description of Concern	Land Use * Required Assessment	Resource Concern Component	Planning Criteria		Measurement & Assessment Tools
				Screening Level	Basic Assessment Level	
ANIMAL						
22 - INADEQUATE HABITAT FOR FISH AND WILDLIFE - Habitat degradation	Quantity, quality or connectivity of food, cover, space, shelter and/or water is inadequate to meet requirements of identified fish, wildlife or invertebrate species	- All with "wildlife" modifier (Required when Land Use has a wildlife modifier) - Range*			Species-specific or guild targeted assessment, or habitat assessment rating ≥ 0.5 AND (when surface stream present) SVAP2 score ≥ 7 OR PFC rating is "Proper Functioning" Species-specific or guild targeted assessment OR It is demonstrated that the quality, quantity and connectivity of all life requirements (food, water, cover, space, shelter) are met to support stable populations of the species of interest or guild of interest.	Habitat assessment tools (AREM, HEP, HGM, HSI, WHEG, WSM, etc.) AND SVAP2 - Stream Visual Assessment Protocol OR Proper Functioning Condition (PFC)
23 - LIVESTOCK PRODUCTION LIMITATION - Inadequate feed and forage	Feed and forage quality or quantity is inadequate for nutritional needs and production goals of the kinds and classes of livestock	- All with "grazed" modifier (Applicable when Land Use is grazed)			Livestock forage, roughage and supplemental nutritional requirements are addressed	Client input / planner observation Livestock Forage-Animal Balance Worksheet
24 - LIVESTOCK PRODUCTION LIMITATION - Inadequate livestock shelter	Livestock lack adequate shelter from climatic conditions to maintain health or production goals.	- All with "grazed" modifier (Applicable when Land Use is grazed)			Artificial or natural shelters meets animal health needs and client objectives	Client input / planner observation
25 - LIVESTOCK PRODUCTION LIMITATION - Inadequate livestock water	Quantity, quality and/or distribution of drinking water are insufficient to maintain health or production goals for the kinds and classes of livestock	- All with "grazed" modifier (Applicable when Land Use is grazed)			Water of acceptable quality and quantity is adequately distributed to meet animal needs	Client input / planner observation Water Availability Resource Inventory Worksheet Water Quality Sampling and Analysis

Resource Concern Cause	Description of Concern	Land Use * Required Assessment	Resource Concern Component	Planning Criteria		Measurement & Assessment Tools
				Screening Level	Basic Assessment Level	
ENERGY						
26 - INEFFICIENT ENERGY USE – Equipment and facilities	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.	- All		Client is not interested in improving equipment and facilities energy efficiency	A USDA approved energy audit been implemented that address equipment and facilities to meet client objectives OR On-farm renewable energy and/or energy conserving practices have been implemented to meet client objectives	Client input / planner observation USDA approved Energy Audit NRCS Energy Estimator
27 - INEFFICIENT ENERGY USE – Farming/ranching practices and field operations	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.	- All		Client is not interested in improving energy use in farm and ranch field operations	A USDA approved energy audit been implemented that address field operations to meet client objectives OR On-farm renewable energy and/or energy conserving practices have been implemented to meet client objectives	Client input / planner observation USDA approved Energy Audit NRCS Energy Estimator
AIR						
28 - AIR QUALITY IMPACTS - Emissions of Particulate Matter - PM - and PM Precursors	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: - 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	- Crop - Pasture - Range - Forest - Other Rural Land - Associated Ag Land - Designated Protected Areas - Developed Land - Farmsteads		Activities are not present that contribute to agricultural source PM or PM precursor emissions. PM Producing Activities: • Prescribed Burn is conducted • Travel ways are unpaved or untreated with binding agents • Engines (combustion source) • Tillage • Pesticides are applied • Fertilization (manure/commercial) • CAFO/manure management) AND Episodes or complaints of emissions of PM (dust, smoke, exhaust, etc.), or chemical drift have not occurred	PM and PM Precursor emissions are managed to meet client objectives	Client input / planner observation

Resource Concern Cause	Description of Concern	Land Use * Required Assessment	Resource Concern Component	Planning Criteria		Measurement & Assessment Tools
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29 - AIR QUALITY IMPACTS - Emissions of Greenhouse Gases - GHGs -	Emissions increase atmospheric concentrations of greenhouse gases.	- All		Activities are not present that produce GHGs emissions GHG Producing Activities: • Fertilization (manure/commercial) • CAFO/manure management • Engines (combustion source) • Tillage AND GHGs are not regulated in this planning area	Greenhouse gas emissions are managed to meet client objectives	Client input / planner observation
30 - AIR QUALITY IMPACTS - Emissions of Ozone Precursors	Emissions of ozone precursors - NOx and VOCs - resulting in formation of ground- level ozone that cause negative impacts to plants and animals.	- All		Operations are not present that produce ozone or precursor emissions Ozone Producing Activities: • Engines (combustion source) • Pesticide application • Burning • CAFO/manure management • Fertilization (manure/commercial)	Ozone precursor emissions are managed to meet client objectives	Client input / planner observation
31 - AIR QUALITY IMPACTS - Objectionable odors	Emissions of odorous compounds - VOCs, ammonia and odorous sulfur compounds - cause nuisance conditions	- Crop - Pasture - Farmsteads - Other Rural Land		Activities are not present that contribute to nuisance air quality conditions Nuisance Producing Activities: • Pesticide application • CAFO / manure management • Composting is conducted AND Odor sources are not regulated in this planning area AND Episodes or complaints of emissions of PM (dust, smoke, exhaust, etc.), or chemical drift have not occurred	Odors are managed to meet client objectives	Client input / planner observation