

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
SOIL				
Soil Erosion - Sheet and Rill	Detachment and transport of soil particles caused by rainfall splash and runoff degrade soil quality.	Sheet and rill erosion does not exceed the Soil Loss Tolerance "T".	<p>Pasture: Pasture Condition Score for indicators of each type of erosion is 4 or higher within the pasture evaluated.</p> <p>Hayland: Hayland Condition Score of 4 or higher for sheet and rill erosion; "T" ≤ 1 Ton/Ac/Yr for the rotation cycle</p> <p>Rangeland: Rangeland Health Evaluation Worksheet Indicator Summary for area evaluated scores a rating between <i>None</i> to <i>Slight</i> and <i>Moderate</i> for Soil/Site Stability attribute; and, Indicators 3, 4, 5, & 9 have no more than a <i>Slight</i> to <i>moderate</i> departure.</p> <p>Forestland: Movement of soil from wind and water erosive forces will approximate the rate of soil loss under natural conditions.</p> <p>Cropland: Sheet and rill erosion does not exceed the Soil Loss Tolerance "T"; soil resource is sustained; crop residues adequate</p> <p>Urban: Soil resource is sustained, no rill or flow channel development</p>	<ul style="list-style-type: none"> • Visual assessment (pedestals, rills, sheet, absence of flow channels) • Client Interview • Erosion-bridge method; erosion meters • Rangeland Health Evaluation Worksheet • RUSLE2 • Nevada Pasture Condition Score Sheet • Nevada Hayland Condition Score Sheet • Forage Suitability Group Descriptions • NRCS National Range and Pasture Handbook • Ecological Site Descriptions for Rangeland and Forestland • Soil Survey • NV-ECS-01 Rangeland Health Evaluation Worksheet • NEH 3: Sedimentation • NFH Chapter 2 • TR-55 • Climatic Data <ul style="list-style-type: none"> • Aerial Photograph Interpretation

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
SOIL				
Soil Erosion - Wind	Detachment and transport of soil particles caused by wind degrade soil quality and/or damage plants.	Wind erosion does not exceed the Soil Loss Tolerance "T" or, for plant damage, does not exceed Crop Damage Tolerances.	<p>Pasture: Pasture Condition Score for indicators of each type of erosion is 4 or higher within the pasture evaluated.</p> <p>Hayland: Hayland Condition Score of 4 or higher for wind erosion; "T" ≤ 1 Ton/Ac/Yr for the rotation cycle</p> <p>Rangeland: Rangeland Health Evaluation Summary for area evaluated scores a rating between <i>None</i> to <i>Slight</i> and <i>Moderate</i> for Soil/Site Stability attribute; and, Indicators 3, 4, 5, & 9 have no more than a <i>Slight</i> to <i>moderate</i> departure.</p> <p>Forestland: Movement of soil from wind and water erosive forces will approximate the rate of soil loss under natural conditions.</p> <p>Cropland: Sheet and rill erosion does not exceed the Soil Loss Tolerance "T"; soil resource is sustained; crop residues adequate</p> <p>Urban: Soil resource is sustained, no rill or flow channel development</p>	<ul style="list-style-type: none"> • Visual assessment (pedestals, blow-out areas) • Client Interview • Rangeland Health Evaluation Worksheet • Erosion prediction tool, i.e., Wind Erosion Prediction System (WEPS) • Nevada Pasture Condition Score Sheet • Nevada Hayland Condition Score Sheet • Forage Suitability Group Descriptions • NEH 3: Sedimentation • NFH Chapter 2 • Climatic Data • Aerial Photograph Interpretation • NRCS National Range and Pasture Handbook • Ecological Site Descriptions for Rangeland and Forestland • Soil Survey • TR-55 • RUSLE2

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
SOIL				
Soil Erosion - Ephemeral Gully	Small channels caused by surface water runoff degrade soil quality and tend to increase in size. On cropland, they can be obscured by heavy tillage.	Surface water runoff is controlled sufficiently to stabilize the small channels and prevent reoccurrence of new channels.	<p>Pasture/Hayland: Absence of active concentrated flow channels; Potential concentrated flow channels do not require intensive tillage or special treatment; No recent till development; Old rills have blunted or muted features</p> <p>Rangeland: Indicators of Rangeland Health Attribute rating for Water Flow Patterns is <i>Slight</i> to <i>Moderate</i> or less.</p> <p>Forestland: Movement of soil from wind and water erosive forces will approximate the rate of soil loss under natural conditions</p> <p>Cropland: Absence of concentrated flow channels, no recent rill development</p> <p>Urban: Soil resource is sustained; absence of concentrated flow channels; no recent rill development</p>	<ul style="list-style-type: none"> • Visual assessment • Volume calculation • National Engineering Handbook Section 3: Sedimentation • Nevada Pasture Condition Score Sheet • Nevada Hayland Condition Score Sheet • Forage Suitability Group Descriptions • Rangeland Health Evaluation Worksheet • National Range and Pasture Handbook • Proper Functioning Condition Standard Checklist • Stream Visual Assessment Protocol (SVAP2)

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
SOIL				
Soil Erosion - Classic Gully	Deep, permanent channels caused by the convergence of surface runoff degrade soil quality. They enlarge progressively by headcutting and lateral widening.	Surface water runoff is controlled sufficiently to stop progression of headcutting and widening.	<p>Pasture: Pasture Condition Score for <i>Gully Erosion</i> indicator is 4 or higher within the pasture evaluated;</p> <p>Pasture/Hayland: Head-cutting is stopped, gully side slopes are stabilized, no active erosion occurs in the channel bottom</p> <p>Rangeland: Rangeland Health Evaluation Summary for area evaluated scores a rating between <i>None</i> to <i>Slight</i> and <i>Moderate</i> for Soil/Site Stability attribute; and, Indicators 3, 4, 5, & 9 have no more than a <i>Slight</i> to <i>moderate</i> departure.</p> <p>Forestland: Movement of soil from wind and water erosive forces will approximate the rate of soil loss under natural conditions.</p> <p>Cropland: Head-cutting is stopped, gully side slopes are stabilized, no active erosion occurs in the channel</p>	<ul style="list-style-type: none"> • Visual assessment • Volume calculation • Aerial photo trend analysis • Forage Suitability Group Descriptions • Nevada Pasture Condition Score Sheet • Nevada Hayland Condition Score Sheet • Rangeland Health Evaluation Worksheet • TR-55 • NRCS National Range and Pasture Handbook • Ecological Site Descriptions for Rangeland and Forestland • Soil Survey • NFH Chapter 2

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
SOIL				
Soil Erosion - Streambank	Accelerated loss of streambank soils restricts land and water use and management.	Accelerated streambank soil loss does not exceed a level commensurate with upstream land use and normal geomorphological processes on site.	Pasture: Pasture Condition Score for Streambank or Shoreline Erosion Indicator is 4 or higher Hayland/Rangeland/Forestland: Riparian area assessment show a Functional Rating of either Proper Functioning Condition or Functional-at-Risk with an Upward Trend Rangeland: score of 7 or better for channel condition and 4 or higher for bank stability	<ul style="list-style-type: none"> Stream Visual Assessment Protocol (SVAP2) Aerial photo trend analysis Engineering Field Handbook, Chapter 16 BLM TR 1737-9 (1993); Process for Assessing Proper Functioning Condition Ecological Site Descriptions for Rangeland and Forestland USGS Streamflow Data
Soil Erosion - Shoreline	Soil is eroded along shorelines by wind and wave action, causing physical damage to vegetation, limiting land use, or creating a safety hazard.	Shoreline erosion is stabilized to a level that does not restrict the use or management of adjacent land, water or structures.	Pasture: Pasture Condition Score for Streambank or Shoreline Erosion Indicator is 4 or better within the pasture evaluated	<ul style="list-style-type: none"> Visual assessment Aerial photo trend analysis Volume calculation Erosion transects/pins Nevada Pasture Condition Score Sheet
Soil Erosion – Irrigation-induced	Improper irrigation water application and equipment operation are causing soil erosion that degrades soil quality.	Irrigation-induced erosion does not exceed the Soil Loss Tolerance “T” and any runoff entering receiving waters is at or below state standards	Pasture/Hayland/Crop-land: No sediments in runoff water from irrigated fields; Condition Score of 4 or better. FIRS factors Md, S, I, M, and SCI ≥ 0.95 FIRS factors Wc and Sd (sprinkler systems) or factors Ce and L (surface systems) show a minimum increase of 0.5; PAM is applied at recommended amount	<ul style="list-style-type: none"> SRFR (Surface Irrigation Model) CPED (Center Pivot Evaluation and Design) NRCS National and State Irrigation Guides Nevada Pasture Condition Score Sheet Nevada Hayland Condition Score Sheet Farm Irrigation Rating System (FIRS) and Farm Irrigation Rating Index (FIRI) Visual assessment

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
SOIL				
Soil Erosion - Mass Movement	Soil slippage, landslides, or slope failure, normally on hillsides, result in large volumes of soil movement	Shallow slumps, slides, or slips are prevented or minimized so that the mass movement of soil material does not exceed naturally occurring rates.	All Land Uses: Toeslopes are not undercut and tops of slopes are not overloaded; shallow slumps, slides, or slips are prevented or minimized	<ul style="list-style-type: none"> • Visual assessment • Aerial photo trend analysis • Volume calculation • Geologic investigation
Soil Erosion – Road, road sides and Construction Sites	Soil loss occurs on areas left unprotected during or after road building and/or construction activities.	Sites are adequately protected from soil loss during and after road building and construction activities.	All Land Uses: Sites are adequately protected from soil loss during construction. Roadbanks and scoured areas are stable and not eroding. Sediment is not leaving the site in runoff water. Movement of soil from wind and water erosive forces will approximate the rate of soil loss under natural conditions.	<ul style="list-style-type: none"> • Visual assessment • Volume Calculation • Water and wind erosion prediction tools (RUSLE2 and WEPS) • Client interview • Aerial Photograph Interpretation • Current erosion prediction tools

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
SOIL				
Soil Condition - Organic Matter Depletion	Soil organic matter has or will diminish to a level that degrades soil quality.	Soil Conditioning Index is positive.	<p>Pasture: Pasture Condition Score for <i>Plant Residue, Plant Vigor</i> and <i>Soil Compaction</i> is 4 or higher</p> <p>Hayland: Hayland Condition Score for <i>Soil Organic Matter</i> is 4 or higher; Soil Conditioning Index is 0 or positive and soil crust is absent and there is an adequate percent of water stable aggregates.</p> <p>Rangeland: Indicators of Rangeland Health Attribute rating for Soil Surface Loss or Degradation is <i>Slight to Moderate</i> or less</p> <p>Cropland: Soil Conditioning Index is positive</p>	<ul style="list-style-type: none"> • Soil Conditioning Index • Soil Quality Kit • Soil testing and analysis • Nevada Pasture Condition Score Sheet • Nevada Hayland Condition Score Sheet • Rangeland Health Evaluation Worksheet
Soil Condition – Rangeland Site Stability	The capacity to limit redistribution and loss of soil resources (including nutrients and organic matter) by wind and water.	Indicators of Rangeland Health Attribute rating for Soil/Site Stability show <i>Slight to Moderate</i> or <i>less</i> departure from Ecological Reference Sheet (ESD).	Indicators of Rangeland Health Attribute rating for <i>Soil/Site Stability</i> is <i>Slight to Moderate</i> or less	<ul style="list-style-type: none"> • USDA/USDI Technical Reference 1734-6 Interpreting Indicators of Rangeland Health – Rangeland Health Evaluation Worksheet

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
SOIL				
Soil Condition - Compaction	Compressed soil particles and aggregates caused by mechanical compaction adversely affect plant-soil-moisture relationships.	Mechanically compacted soils are renovated sufficiently to restore plant root growth and/or water movement.	<p>Pasture/Hayland: Condition Score for <i>Soil Compaction</i> is 4 or higher;</p> <p>Hayland/Cropland: If present, compaction layers represent <20% of field and are <1-inch thick are only weakly restrictive to water movement and root penetration; Tillage and harvest operations present minimum number of equipment entries in field</p> <p>Rangeland: Rangeland Health Evaluation Worksheet Indicator Summary for area evaluated scores a rating between <i>None</i> to <i>Slight</i> and <i>Moderate</i> for Hydrologic Function attribute; and, Indicators 10, 11, & 15 have no more than a <i>Moderate</i> to <i>Slight</i> departure.</p> <p>Forestland: Soil bulk density is within natural range of variability for soil evaluated</p>	<ul style="list-style-type: none"> • Assessment of plant root systems • Bulk density test-Soil Quality Kit • Dial penetrometer • National Range and Pasture Handbook • Nevada Pasture Condition Score Sheet • Nevada Hayland Condition Score Sheet • Shovel • Ecological Site Descriptions for Rangeland • Rangeland Health Evaluation Worksheet
Soil Condition - Subsidence	Loss of volume and depth of organic soils due to oxidation caused by above normal microbial activity resulting from excessive drainage or extended drought.	The timing and regime of soil moisture is managed to attain acceptable subsidence rates.	Same as National	<ul style="list-style-type: none"> • Visual assessment • Inventory of volume and depth • Soil probes and witness poles

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
SOIL				
Soil Condition – Contaminants, Salts and Other Chemicals	Inorganic chemical elements and compounds such as salts, selenium, boron, and heavy metals restrict the desired use of the soil or exceed the soil buffering capacity	Salinity levels cause less than a 10% decrease in plant yield. Other contaminants do not exceed plant tolerances or are below toxic levels for plants or animals.	<p>Pasture: Soil EC and pH within range of tolerance for plants within the pasture evaluated; Pasture Condition Score for <i>Plant Vigor</i> is 4 or higher; No observable or recorded adverse impacts to animals harvesting pasture plants.</p> <p>Hayland: Soil EC is of solution extracted from saturated soil <4 and ≥2 or salts do not exceed desirable or seeded forage plant tolerances and are below toxic levels for plants and animals fed harvested forages; Hayland Condition Score for <i>Salt Accumulation</i> is 4 or higher</p> <p>Cropland: Soil EC and pH within range of tolerance for plants; No observable or recorded adverse impacts to animals consuming crop</p>	<ul style="list-style-type: none"> • Current soil test (pH) • Soil Quality Kit- EC meter • Farm*A*Syst assessment • Technical references on plant, soil salinity/chemical element tolerance and heavy metal tolerance and/or uptake ability • NEH-Part 623, Section 623.0205 • Nevada Pasture Condition Score Sheet • Nevada Hayland Condition Score Sheet • Health history/observation of pastured animals

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
SOIL				
Soil Condition - Contaminants - Animal Waste and Other Organics	Nutrient levels from applied animal waste and other organics restrict desired use of the land.	Nutrient application levels do not exceed soil storage/plant uptake capacities based on soil test recommendations and risk analysis results.	Pasture/Hayland/Cropland: Low Phosphorus Index rating; Animal wastes applied according to soil test and plant needs to meet production objectives; animal waste application according to Nutrient Management Practice Specifications	<ul style="list-style-type: none"> • Current soil test • Phosphorus Index • Plant tissue test • Livestock Confinement Area rating • Application records • Yield records/history • Forage Suitability Group Descriptions • Nevada Nutrient Management Conservation Practice Specification and Practice Documentation Worksheet
Soil Condition – Contaminants - Commercial Fertilizer	Over application of nutrients degrades plant health and vigor, or exceeds the soil capacity to retain nutrients.	Soil nutrient levels do not exceed crop needs based on realistic yield goals and appropriate pH levels are maintained.	<p>Pasture/Hayland: Low phosphorus index; fertilizer applied according to soil test and plant needs; Fertilizer application according to Nutrient Management Practice Specifications; Pasture Condition Score for <i>Plant Vigor</i> 4 or higher; Hayland Condition Score for <i>Plant Nutrients, Plant Vigor</i> and <i>Crop Yield</i> are 4 or higher</p> <p>Cropland: Fertilizer applied according to soil test and plant needs; Fertilizer application according to Nutrient Management Practice Specifications</p>	<ul style="list-style-type: none"> • Current soil test • Phosphorus Index • Soil Quality Kit-pH meter • NRCS National Range and Pasture Handbook • Nevada Nutrient Management Conservation Practice Specification and Practice Documentation Worksheet • Nutrient Storage Rating (Headquarters) • Nevada Pasture Condition Score Sheet • Nevada Hayland Condition Score Sheet

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
SOIL				
Soil Condition - Contaminants - Residual Pesticides	Residual pesticides in the soil have an adverse effect on non-target plants and animals.	Pesticides are applied, stored, handled, and disposed of so that residues in the soil do not adversely affect non-target plants and animals.	All Land Uses:: Risk assessment for use of pesticide(s) scores a Low or Very Low rating; Pesticides applied in accordance with approved Pest Management Plan	<ul style="list-style-type: none"> • Visual assessment • Windows Pesticide Screening Tool (WIN-PST) • Pesticide Screening Tool (NAPRA) • Current soil test • Plant and animal tissue test • Pesticide Handling Rating (Headquarters)

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
SOIL				
Soil Condition - Damage from Soil Deposition	Sediment deposition damages or restricts land use/management or adversely affects ecological processes.	Sediment deposition is sufficiently reduced to maintain desired land use/management and ecological processes.	<p>Pasture: Overall Pasture Condition Score is >40 and individual score for <i>Erosion</i>, <i>Plant Cover</i> and <i>Plant Vigor</i> is 4 or higher; No visual damage or impairment to pasture plants due to deposition is apparent.</p> <p>Hayland: Overall Hayland Condition Score is ≥ 60 and individual score for Percent <i>Desirable Plants</i>, <i>Plant Vigor</i> and <i>Crop Yield</i> is 4 or higher; No visual damage or impairment to plants in field due to deposition is apparent.</p> <p>Rangeland: Indicators of Rangeland Health Attribute rating for Wind-Scoured, Blowouts, and/or Deposition Areas is <i>Slight to Moderate</i> or <i>less</i>.</p> <p>Cropland: No visual damage or impairment to plants in field due to deposition is apparent.</p>	<ul style="list-style-type: none"> • Visual assessment • Volume calculation • Current water and wind erosion prediction tools (RUSLE2 and WEPS) coupled with sediment delivery ratios • Plant and animal community assessment • Nevada Pasture Condition Score Sheet • Nevada Hayland Condition Score Sheet • National Engineering Handbook, Section3 "Sedimentation" • National Range and Pasture Handbook • Rangeland Health Evaluation Worksheet

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
WATER				
Water Quantity – Rangeland Hydrologic Cycle	The capacity to capture, store, and safely release water from rainfall, run-on and snowmelt	Indicators of Rangeland Health Attribute rating for Hydrologic Cycle are Slight to Moderate or less.	Rangeland: Same as National	<ul style="list-style-type: none"> • USDA/USDI Technical Reference 1734-6 Interpreting Indicators of Rangeland Health – Rangeland Health Evaluation Worksheet
Water Quantity - Excessive Seepage	Subsurface water oozing to the surface restricts land use and management.	Subsurface water is managed to limit periods of saturation that are unfavorable to the present or intended land use. Management complies with wetland policies.	<p>Pasture: Seeps are controlled to the extent that there is no reduction in desired forage production, trafficability or slope stability; Pasture Condition Score for <i>Percent Desirable Plants, Plant Cover,</i> and <i>Plant Vigor</i> Indicators is 4 or higher</p> <p>Hayland: Seeps are controlled to the extent that there is no reduction in desired forage production, trafficability or slope stability; Hayland Condition Score for <i>Drainage, Percent Desirable Plants, Uniformity of Growth, Crop Yield,</i> and <i>Plant Vigor</i> Indicators is 4 or higher</p> <p>Cropland: Seeps are controlled to the extent that there is no reduction in desired forage production</p>	<ul style="list-style-type: none"> • Visual Assessment (physical presence of water, prevalence of hydrophytic vegetation, etc.) • Client interview • Area measurements • NRCS National Range and Pasture Handbook • Nevada Pasture Condition Score Sheet • Nevada Hayland Condition Score Sheet • Soil Survey • Irrigation Guide

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
WATER				
Water Quantity - Excessive Runoff, Flooding, or Ponding	The land becomes inundated restricting land use and management.	Excess water amounts and/or rates of flow are controlled consistent with desired present or intended land use goals and wetland policies.	<p>Pasture/HaylandCrop-land: No observable damage to land, crop/pasture productivity, or management unit infrastructure; For those instances where the management of excess surface water is restricted due to unlawful regulations such as those pertaining to wetlands and riparian areas, the quality criteria will be met if pertinent policy and laws are followed; Pasture Condition Score for <i>Percent Desirable Plants, Plant Cover,</i> and <i>Plant Vigor</i> Indicators is 4 or higher. Hayland Condition Score for <i>Drainage, Crop Yield, Percent Desirable Plants and Plant Vigor</i> is 4 or higher</p> <p>Rangeland: Rangeland Health Evaluation Worksheet Indicator Summary for area evaluated scores a rating between <i>None</i> to <i>Slight</i> and <i>Moderate</i> for Hydrologic Function and Soil/Site Stability attributes.</p> <p>Urban/Headquarters: No observable damage to land or infrastructure</p>	<ul style="list-style-type: none"> • Visual assessment • Client interview • Stream Visual Assessment Protocol (SVAP2) • National Engineering Handbook (EFH – chapter 2 and 3) • Hydrologic models, e.g. HECRAS, TR-20, TR-55 • NRCS National Range and Pasture Handbook • Nevada Pasture Condition Score Sheet • Nevada Hayland Condition Score Sheet • Floodplain maps • Soil Survey • Flood Hazard Study • NOAA Atlas Maps • Ecological Site Descriptions • Rangeland Health Evaluation Worksheet

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
WATER				
Water Quantity - Excessive Subsurface Water	Water saturates upper soil layers restricting land use and management.	Subsurface water is managed to limit periods of saturation compatible with the present or intended land use and wetland policies.	Pasture/HaylandCrop-land:: Water table depth in test wells is below crop root zone; FIRS factors Md, S, I, M, and SCI ≥ 0.95 ; FIRS factors Wc and Sd (sprinkler systems) show a minimum increase of 0.5; Crop and Pasture production comparable to expected yields for local area and field conditions; Pasture Condition Score for <i>Percent Desirable Plants, Plant Cover, and Plant Vigor</i> Indicators is 4 or higher; Hayland Condition Score for <i>Drainage, Percent Desirable Plants, Crop Yield, Uniformity of Growth and Plant Vigor</i> is 4 or higher	<ul style="list-style-type: none"> • Visual assessment of soil cores and coring holes • Plant quality and quantity measurements • National Engineering Handbook, Part 650 (EFH-Chapter 14) • Client interview • Forage Suitability Group Descriptions • NEH "Drainage" • NEH Part 652 irrigation Guide Chapter 7 section 652.0708 • Farm Irrigation Rating Index (FIRS) • DRAINMOD; SWRRB; SPAW; SRFR; BORDER • NRCS National Range and Pasture Handbook • Nevada Pasture Condition Score Sheet • Nevada Hayland Condition Score Sheet
Water Quantity - Drifted Snow	Wind-blown snow deposits and accumulates around and over surface structures restricting ingress, egress and conveyance of humans and animals.	Snowdrifts are reduced or prevented to allow ingress, egress, and conveyance of humans and animals.	All Land Uses: Same as National	<ul style="list-style-type: none"> • Visual assessment • Client interview • Snow depth and area measurements • FOTG-Section I – Climate records

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
WATER				
Water Quantity - Inadequate Outlets	Natural or constructed outlets too small to remove excess water in a timely manner.	Outlets are designed, installed, upgraded or maintained to adequately convey water for present or intended uses.	<p>Pasture/Hayland: Water discharges are safely managed through stable outlets of adequate capacity and do not cause erosion, incised channels, unacceptable deposition loads, or excess ponding of water; Pasture Condition Score for <i>Percent Desirable Plants, Plant Cover, and Plant Vigor</i> Indicators is 4 or higher. Hayland Condition Score for <i>Drainage, Percent Desirable Plants, Crop Yield, and Plant Vigor</i> is 4 or higher</p> <p>Cropland: Water discharges are safely managed through stable outlets of adequate capacity and do not cause erosion, incised channels, unacceptable deposition loads, or excess ponding of water</p> <p>Urban: Water discharges are safely managed through stable outlets of adequate capacity and do not cause erosion, incised channels, unacceptable deposition loads, or excess ponding of water</p>	<ul style="list-style-type: none"> • Visual assessment • Evaluation of conveyance capacity • Client interview • National Engineering Handbook, part 650 (EFH – Chapters 2,3,7) • Hydrologic models, e.g. HECRAS, TR-20, TR-55 • NRCS National Range and Pasture Handbook • Nevada Pasture Condition Score Sheet • Nevada Hayland Condition Score Sheet • NOAA Atlas Maps

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
WATER				
Water Quantity - Inefficient Water Use on Irrigated Land	Limited water supplies are not optimally utilized.	Land and water management is planned and coordinated to provide optimal use of natural and applied moisture.	<p>Pasture/Hayland: The amount and frequency of application of irrigation water is suited to the needs of the desired plants within the field; FIRS factors Md, S, I, M, and SCI ≥ 0.95; FIRS factors Wc and Sd (sprinkler system) show a minimum increase of 0.05; Pasture Condition Score for <i>Percent Desirable Plants</i>, <i>Plant Cover</i>, and <i>Plant Vigor</i> Indicators is 4. Hayland Condition Score for <i>Drainage</i>, <i>Irrigation</i>, <i>Percent Desirable Plants</i>, and <i>Plant Vigor</i> is 4 or higher and there is no numerical score for <i>Irrigation Induced Erosion</i></p> <p>Cropland: The amount and frequency of application of irrigation water is suited to the needs of the desired plants within the field; FIRS factors Md, S, I, M, and SCI ≥ 0.95; FIRS factors Wc and Sd (sprinkler system) show a minimum increase of 0.05</p>	<ul style="list-style-type: none"> • Visual assessment of runoff, large flows in drains • National Engineering Handbook, Part 652, Irrigation Guide • NEH Part 623 "Irrigation Water Requirements" • Crop quality and quantity measurements • Farm Irrigation Rating Method (FIRM), Farm Irrigation Rating System (FIRS) and Farm Irrigation Rating Index (FIRI) • NRCS National Range and Pasture Handbook • Nevada Pasture Condition Score Sheet • Nevada Hayland Condition Score Sheet • Client interview • Pumping records • Surface Irrigation Simulation Model (SRFR)

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
WATER				
Water Quantity - Inefficient Water Use on Non-irrigated Land	Natural moisture is not optimally utilized.	Management provides optimum use of natural moisture for the present or intended land use.	Rangeland: Rangeland Health Evaluation Worksheet Indicator Summary for management unit evaluated scores a rating between <i>None</i> to <i>Slight</i> and <i>Moderate</i> for Soil/Site Stability Hydrologic Function, and Biotic Integrity attributes; and Indicators 3, & 8-10 have no more than a <i>Moderate</i> to <i>Slight</i> departure. Forestland: Forest overstory stocking levels are within 25% of the D+X spacing guide (or equivalent measure) for the forest sites evaluated and tree stand composition;	<ul style="list-style-type: none"> • Visual assessment • Soil moisture measurements • Plant or animal quality and quantity measurements • NRCS National Range and Pasture Handbook • Ecological Site Descriptions • Rangeland Health Evaluation Worksheet • NRCS National Forestry Manual • Stocking rate of preferred tree species for site • Basal area measurement for tree stand
Water Quantity - Reduced Capacity of Conveyances by Sediment Deposition	Sediment deposits in ditches, canals, culverts, and other water conveyances reduce the desired flow capacity.	Conveyance structures are upgraded or maintained to adequately convey water for present or intended uses.	Pasture/Hayland/Crop-land: Onsite and offsite water conveyances provide for design flow capacity and management unit does not contribute to an offsite problem.	<ul style="list-style-type: none"> • Assessment of irrigation design flows and capacities • Client interview • National Engineering Handbook, Part 650 (EFH – Chapters 2,3,5,6,7 • Hydrologic models, e.g., HECRAS, TR-20, TR-55
Water Quantity - Reduced Storage of Water Bodies by Sediment Accumulation	Sediment deposits in water bodies reduce the desired volume capacity.	Water bodies and contributing source areas are treated to allow sufficient water storage for present and intended uses.	Pasture/Hayland/Crop-land: Loss of storage capacity does not exceed design or expected rates; Sediment sources are identified and treatment prescribed.	<ul style="list-style-type: none"> • Assessment of capacities and evaluation of loss of capacity • National Engineering Handbook, Part 650 (EFH – Chapters 2,3,7,11)

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
WATER				
Water Quantity - Aquifer Overdraft	Water withdrawals exceed recharge rates.	Land and water management are coordinated to conserve aquifer water levels.	All Land Uses: Same as National	<ul style="list-style-type: none"> • Ground water assessments - Water level measurements
Water Quantity – Insufficient Flows in Water Courses	Water flows are not consistently available in sufficient quantities to support ecological processes and land use and management.	Authorized uses and management of water are coordinated to minimize the impacts on water course flows.	All Land Uses: Same as National	<ul style="list-style-type: none"> • Visual assessment • Water flow records • Gauge Station data • Consumptive use/allocation water rights • Habitat Evaluation Guides • National Biology Handbook
Water Quality - Harmful Levels of Pesticides in Groundwater	Residues resulting from the use of pest control chemicals degrade groundwater quality.	Pesticides are applied, stored, handled, disposed of, and managed so that groundwater uses are not adversely affected	Pasture/Hayland/Rangeland/Forestland/Cropland: Risk assessment for use of pesticide(s) scores a <i>Low</i> or <i>Very Low</i> rating. Pesticides applied in accordance with approved Pest Management Plan Urban: Pesticides are stored and disposed of following instructions on chemical label and local, state, and federal regulations; Pesticides are stored, handled, and disposed of in a manner that will minimize risk of accidental spill or leakage; Pesticides applied in accordance with approved Pest Management Plan	<ul style="list-style-type: none"> • WIN-PST (Windows Pesticide Screening Tool – USDA/NRCS) • NAPRA (National Agricultural Pesticide Risk Analysis – USDA/NRCS) • Vadose zone and groundwater chemical sampling and assay • Soil Survey • Pesticide Handling Rating

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
WATER				
Water Quality - Excessive Nutrients and Organics in Groundwater	Pollution from natural or human induced nutrients such as N, P, and organics (including animal and other wastes) degrades groundwater quality.	Nutrients and organics are stored, handled, disposed of, and applied such that groundwater uses are not adversely affected.	<p>Pasture/Hayland: Low PI rating; Fertilizer applied according to soil test and plant needs to meet production objectives; Animal wastes stored, applied, and disposed of according to pertinent local, state, and federal regulations so that ground water standards are not violated; Animal waste applied according to soil test and plant needs to meet production objectives; Nutrients or animal wastes are applied at rates, forms, and times so that no leachate containing excessive nutrients occurs below the root zone; Pasture Condition Score for <i>Plant Vigor</i> Indicator is 4 or higher. Hayland Condition Score for <i>Plant Nutrients</i> is 4 or higher</p> <p>Headquarters: Livestock confinement areas and waste storage facilities are adequate to prevent significant loss from leaching and are appropriately sized to safely store waste through environmentally unsafe application periods.</p>	<ul style="list-style-type: none"> • National Engineering Handbook, Part 651, Ag. Waste Mgt. Field Handbook • Nitrate Leaching Index • Current soil texts • Expected pasture/Hayland production levels • Phosphorus Leaching Index • Farm*A*Syst • Vadose zone and groundwater chemical/particle sampling and assay • Kind, method of application, and amounts of commercial fertilizer applied • Client interview • NRCS National Range and Pasture Handbook • Forage Suitability Group Descriptions • Nevada Pasture Condition Score Sheet • Nevada Hayland Condition Score Sheet • Phosphorus Index (PI) • Nutrient Management conservation Practice (Code 590) Specification and Practice Documentation Worksheet • Agricultural Waste Management Field Handbook • Soil Survey • Assessment of fertilizer and soil amendment storage facilities (Nutrient Storage Rating) • Assessment of livestock confinement areas (Livestock Confinement Area Rating) • Assessment of livestock water storage facilities

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
WATER				
Water Quality - Excessive Salinity in Groundwater	Pollution from salts such as Ca, Mg, Na, K, HCO ₃ , CO ₃ , Cl, and SO ₄ degrades groundwater quality.	Salts are stored, handled, disposed of, applied, and managed such that groundwater uses are not adversely affected.	Pasture/Hayland/Crop-land :: Soil and irrigation water electrical conductivity within range of tolerance for desired forage plants in the pasture evaluated; A leaching volume is calculated for the soil, crop, and water quality, and this volume is applied; Ec for potable water is 0.7dS/M; Salts reaching the ground water aquifers or surface water bodies do not exceed local, state, or federal standards; Pasture Condition Score for <i>Plant Vigor</i> Indicator is 4 or higher within the pasture evaluated. Hayland Condition Score for <i>Salt Accumulation</i> indicator is 4 or higher	<ul style="list-style-type: none"> • Vadose zone and groundwater salinity sampling (total dissolved solids [TDS] or electrical conductivity) and assay • National Engineering Handbook, Part 652, Irrigation Guide • Soil salinity sampling and assay • Evaluation of crop salinity tolerance • Client interview • Technical references on pasture plant soil salinity/ chemical element tolerance and uptake ability • Forage Suitability Group Descriptions • Nevada Pasture Condition Score Sheet • Nevada Hayland Condition Score Sheet • NEH Part 623, Chapter 2 subpart 623.0205-"Leaching Requirements for Salinity Control"
Water Quality - Harmful Levels of Heavy Metals in Groundwater	Natural or human induced metal pollutants present in toxic amounts degrade groundwater quality.	Materials containing heavy metals are stored, handled, disposed of, applied, and managed such that groundwater uses are not adversely affected.	Pasture/HaylandCrop-land/Urban : Heavy Metals reaching ground water aquifers do not exceed allowable federal, state, or local standards.	<ul style="list-style-type: none"> • Vadose zone and groundwater chemical sampling and assay • Biosolids or domestic sewage sludge application management plan • Required permits for biosolids application • Soil Survey • Agricultural Waste Management Field Handbook • FIRS

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
WATER				
Water Quality - Harmful Levels of Pathogens in Groundwater	Kinds and numbers of viruses, protozoa, and bacteria are present at a level that degrades groundwater quality.	Materials that harbor pathogens are stored, handled, disposed of, applied, and managed such that groundwater uses are not adversely affected.	Pasture/Hayland/Crop-land: Pathogens reaching ground water aquifers do not exceed allowable federal, state, or local standards. Headquarters: Animal wastes are managed so there is no significant delivery of pathogens to groundwater; Pathogens reaching groundwater aquifers do not exceed allowable federal, state, or local standards	<ul style="list-style-type: none"> • Vadose zone and groundwater chemical sampling and assay • Nutrient Management Conservation Practice (Code 590) Specification and documentation worksheet • Agricultural Waste Management Field Handbook • Soil Survey • Assessment of kinds, amounts, and timing of application of animal wastes to fields
Water Quality - Harmful Levels of Petroleum in Groundwater	Fuel, oil, gasoline and other hydrocarbons present in toxic amounts degrade groundwater quality.	Petroleum products are used, stored, handled, disposed of, and managed such that groundwater uses are not adversely affected.	Urban/Headquarters: Same as National	<ul style="list-style-type: none"> • Vadose zone and groundwater chemical sampling and assay • Assessment of fuel and petroleum product storage and handling facilities
Water Quality - Harmful Levels of Pesticides in Surface Water	Pest control chemicals present in toxic amounts degrade surface water quality.	Pesticides are applied, stored, handled, disposed of, and managed such that surface water uses are not adversely affected	Pasture/Hayland/Crop-land Risk assessment for use of pesticide(s) scores a <i>Low</i> and <i>Very Low</i> rating. Pesticides applied in accordance with approved Pest Management Plan Rangeland/Forestland: Risk assessment for use of pesticide(s) scores a <i>Low</i> and <i>Very Low</i> rating. Headquarters: Pesticides are stored and disposed of following instructions on label and local, state, and federal regulations	<ul style="list-style-type: none"> • WIN-PST (Windows Pesticide Screening Tool – USDA/NRCS) • NAPRA (National Agricultural Pesticide Risk Analysis – USDA/NRCS) • Surface water chemical sampling assay • Soil Survey • Assessment of pesticide storage, handling, and disposal methods

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
WATER				
Water Quality - Excessive Nutrients and Organics in Surface Water	Pollution from natural or human induced nutrients such as N, P, and organics (Including animal and other wastes) degrades surface water quality.	Nutrients and organics are stored, handled, disposed of, and managed such that surface water uses are not adversely affected.	<p>Pasture/Hayland: Nutrients or animal wastes are applied at rates, forms, and times so that no runoff containing excessive nutrients or pathogens occurs beyond field boundaries; Low PI rating; Fertilizer and animal waste are applied according to soil test and plant needs to meet production objectives; Pasture Condition Score for <i>Plant Vigor, Sheet and Rill Erosion</i>, and <i>Compaction</i> Indicators is 4 or higher within the pasture evaluated.</p> <p>Hayland/Cropland: IWM Practice Documentation Worksheet is completed with YES or N/A responses recorded for all items; FIRS factors Md, S, I, M, and SCI ≥ 0.95 FIRS factors Wc and Sd (sprinkler systems) show a minimum increase of 0.5; Hayland Condition Score for <i>Plant Nutrients and Irrigation</i> is 4 or better</p> <p>Headquarters: Fertilizer and soil amendment storage sites have adequate set-back distances from surface waters</p>	<ul style="list-style-type: none"> • Stream Visual Assessment Protocol (SVAP2) • Phosphorus index • National Engineering Handbook, Part 651, Ag. Waste Mgt. Field Handbook • Surface water chemical/particle sampling and assay • Farm Irrigation Rating Index (FIRS) • Visual observation • Client interview • NRCS National Range and Pasture Handbook • Forage suitability group descriptions • Nevada Pasture Condition Score Sheet • Nevada Hayland Condition Score Sheet • Nutrient Management Practice Specification and Practice Documentation Worksheet • USDA/NRCS (1989) Water Quality Indicators Guide: Surface Waters SCS-TP-161 • NEH Part 652 Chapter 7 "Chemigation" and Chapter 14 "Environmental Concerns"

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
WATER				
Water Quality - Excessive Suspended Sediment and Turbidity in Surface Water	Pollution from mineral or organic particles degrades surface water quality.	Movement of mineral and organic particles is managed such that surface water uses are not adversely affected.	<p>Pasture/Hayland/Crop-land: No sediments in runoff water from irrigated fields are observed to be entering receiving water. PAM is applied at recommended rates; overall Pasture Condition Score is ≥ 40 and individual score for <i>Sheet and Rill Erosion</i> and <i>Soil Compaction</i> is 4 or higher. Hayland Condition Score for <i>Irrigation</i> and <i>Crop Yield</i> is 4 or higher</p> <p>Rangeland: Rangeland Health Evaluation Worksheet Indicator Summary for area evaluated scores a rating between <i>None</i> to <i>Slight</i> and <i>Moderate</i> for Hydrologic Function and Soil/Site Stability attributes.</p> <p>Forestland: Amounts of sediments (if any) that originate from forest sites is within range of natural variability for soils and landscape of sites evaluated.</p>	<ul style="list-style-type: none"> • Visual assessment • Client interview • Stream Visual Assessment Protocol (SVAP2) • Water Quality Indicators Guide – Surface Waters, Field Sheets IA and 1B (Terrene Institute ©1996) • Surface water chemical/particle sampling and assay • Polyacrylamide (PAM) Erosion Control Practice Specification and Practice Documentation Worksheet • Farm Irrigation Rating Index (FIRS) • FUSED; RUSLE; SPFR • NRCS National Range and Pasture Handbook • Forage suitability group descriptions • Nevada Pasture Condition Score Sheet • Nevada Hayland Condition Score Sheet • Soil Survey • NRCS National Forestry Manual • USDA/NRCS (1989) Water Quality Indicators Guide: Surface Waters. SCS-TP-161

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
WATER				
Water Quality - Excessive Salinity in Surface Water	Pollution from salts such as Ca, Mg, Na, K, HCO ₃ , HCO ₃ , CO ₃ , Cl, and SO ₄ degrades surface water quality.	Salts are stored, handled, disposed of, applied, and managed such that surface water uses are not adversely affected.	Pasture/Hayland/Crop-land: Soil and irrigation water electrical conductivity within range of tolerance for crop plants in the field evaluated; A leaching volume is calculated for the soil, crop, and water quality, and this volume is applied; Ec for potable water is 0.7 dS/M; Salts reaching surface water bodies do not exceed local, state, or federal standards; Pasture and Hayland Condition Score for <i>Irrigation, Plant Vigor</i> and <i>Salt Accumulation</i> is 4 or higher	<ul style="list-style-type: none"> Stream Visual Assessment Protocol (SVAP2) – Salinity Visual observation Client Interview NRCS National Range and Pasture Handbook Forage Suitability Group Descriptions Nevada Pasture Condition Score Sheet Nevada Hayland Condition Score Sheet Technical References on crop plant soil salinity/ chemical element tolerance USDA/NRCS (1989) Water Quality Indicators Guide: Surface waters. SCS-TP-161
Water Quality - Harmful Levels of Heavy Metals in Surface Water	Natural or human induced metal pollutants are present in toxic amounts that degrade surface water quality.	Materials containing heavy metals are stored, handled, disposed of, applied, and managed such that surface water uses are not adversely affected.	Pasture/Hayland/Crop-land: Heavy metals reaching surface water bodies do not exceed allowable federal, state, or local standards.	<ul style="list-style-type: none"> Surface water chemical sampling and assay Biosolids or domestic sewage sludge application management plan Required permits for biosolids application Soil Survey Agricultural Waste Management Field Handbook

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
WATER				
Water Quality - Harmful Temperatures of Surface Water	Undesired thermal conditions degrade surface water quality.	Use and management of land and water are coordinated to minimize impacts on surface water temperatures.	/Pasture/Rangeland/Hayland/Cropland/Forestland: Water Temperatures are suitable for intended use(s) and meet or exceed established Nevada State Standards. Stream shading is >50% where trees are the dominant potential streamside vegetation.	<ul style="list-style-type: none"> Stream Visual Assessment Protocol (SVAP2) – canopy cover HSI model for target species (Habitat Suitability Index – USF&WS) Surface water temperature sampling and assay Nevada State Water Standards for water body Shade/Canopy Cover assessment
Water Quality - Harmful Levels of Pathogens in Surface Water	Kinds and numbers of viruses, protozoa, and bacteria are present at a level that degrades surface water quality.	Materials that harbor pathogens are stored, handled, disposed of, applied, and managed such that surface water uses are not adversely affected.	Pasture/Hayland/Cropland: Pathogens reaching surface water bodies do not exceed allowable federal, state, or local standards.	<ul style="list-style-type: none"> Surface water pathogen sampling and assay Nutrient Management Conservation Practice Specification and Documentation Worksheet Soil Survey Pathogen Test Results USDA/NRCS (1989) Water Quality Indicators Guide: Surface Waters. SCS-TP-161
Water Quality - Harmful Levels of Petroleum in Surface Water	Fuel, oil, gasoline and other hydrocarbons present in toxic amounts degrade surface water quality.	Petroleum products are used, stored, handled, and disposed of such that groundwater uses are not adversely affected.	Urban/Headquarters: Fuels and other petroleum product storage sites have adequate set-back distances from surface waters	<ul style="list-style-type: none"> Surface water chemical sampling and assay

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
AIR				
Air Quality - Particulate matter less than 10 micrometers in diameter (PM 10)	Particulate matter less than 10 micrometers in diameter are suspended in the air causing potential health hazards to humans and animals.	Land use and management operations comply with PM 10 requirements of the State or Federal Implementation Plan and all applicable Federal, Tribal, State, and Local regulations	Pasture/Hayland/Cropland: Cropland and fields evaluated do not contribute to safety or health problems onsite or offsite. No numerical rating for <i>Wind Erosion</i> on Pasture or Hayland Condition Score Sheet Rangeland: Rangeland Health Indicator Summary scores a rating between <i>Moderate or less</i> for Soil/Site Stability and Indicators 6, 8, & 9 have no more than <i>None</i> to <i>Slight</i>	<ul style="list-style-type: none"> • Specific guidelines contained in State or Federal Implementation Plan; or other approved NRCS tool. • Air quality analysis • Visual Observation • Client Interview • Climatic Data • Nevada Hayland Condition Score Sheet • Nevada Pasture Condition Score Sheet • Rangeland Health Evaluation Worksheet
Air Quality - Particulate matter less than 2.5 micrometers in diameter (PM 2.5)	Particulate matter less than 2.5 micrometers in diameter are suspended in the air causing potential health hazards to humans and animals.	Land use and management operations comply with PM 2.5 requirements of the State or Federal Implementation Plan and all applicable Federal, Tribal, State, and Local regulations.	Pasture/Hayland/Cropland: Cropland and fields evaluated do not contribute to safety or health problems onsite or offsite. No numerical rating for <i>Wind Erosion</i> on Pasture or Hayland Condition Score Sheet Rangeland: Rangeland Health Indicator Summary scores a rating between <i>Moderate or less</i> for Soil/Site Stability and Indicators 6, 8, & 9 have no more than <i>None</i> to <i>Slight</i>	<ul style="list-style-type: none"> • Specific guidelines contained in State or Federal Implementation Plan; or other approved NRCS tools • Nevada Hayland Condition Score Sheet • Nevada Pasture Condition Score Sheet • Rangeland Health Evaluation Worksheet

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
AIR				
Air Quality - Excessive Ozone	High concentrations of ozone (O ₃) are adversely affecting human health, reducing plant yields, and leading to the creation of smog.	Land use and management operations comply with requirements of the State or Federal Implementation Plan and all applicable Federal, Tribal, State, and Local regulations.	All Land Uses: Same as National	<ul style="list-style-type: none"> • Specific guidelines contained in State or Federal Implementation Plan; or other approved NRCS tools • Air quality analysis
Air Quality - Excessive Greenhouse Gas – CO₂ (carbon dioxide)	Increased CO ₂ concentrations are adversely affecting ecosystem processes.	Land use and management operations comply with requirements of the State or Federal Implementation Plan and all applicable Federal, Tribal, State, and Local regulations.	All Land Uses: Same as National	<ul style="list-style-type: none"> • Model simulations (Century, EPIC, CQUESTER); sampling for soil carbon or International Panel on Climate Change methodology; or other NRCS approved tools
Air Quality - Excessive Greenhouse Gas – N₂O (nitrous oxide)	Increased N ₂ O concentrations are adversely affecting ecosystem processes.	Land use and management operations comply with requirements of the State or Federal Implementation Plan and all applicable Federal, Tribal, State, and Local regulations.	All Land Uses: Same as National	<ul style="list-style-type: none"> • Model simulations (NLEAP or DayCENT), or IPCC methodology; or other NRCS approved tools
Air Quality - Excessive Greenhouse Gas – CH₄ (methane)	Increased CH ₄ concentrations are adversely affecting ecosystem processes. .	Land use and management operations comply with requirements of the State or Federal Implementation Plan and all applicable Federal, Tribal, State, and Local regulations.	All Land Uses: Same as National	<ul style="list-style-type: none"> • IPCC methodology; or other NRCS approved tools
Air Quality - Ammonia (NH₃)	Animal waste and inorganic commercial fertilizers emit ammonia that contributes to odor, is a PM _{2.5} precursor, and contributes to acid rain.	Land use and management operations comply with requirements of all applicable Federal, Tribal, State, and Local regulations.	All Land Uses: Same as National	<ul style="list-style-type: none"> • Approved NRCS technical guidance and tools

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
AIR				
Air Quality - Chemical Drift	Materials applied for pest control drift downwind and contaminate/injure non-targeted fields, crops, soils, water, animals and humans.	Land use and management operations comply with all applicable Federal, Tribal, State, and Local regulations, and applicable label directions.	All Land Uses: Product labeling and state regulations relating to the application of agricultural chemicals are followed. Airborne drift of agricultural chemicals will be minimal outside the target area; No damage to humans, wildlife, livestock, or non-targeted vegetation (or other pests) will occur.	<ul style="list-style-type: none"> • Approved NRCS technical guidance and tools • Visual assessments onsite and offsite • FOTG Section IV- Pest Management Practice Standard/Specifications (for chemical control) and Practice Documentation Worksheet • Daily weather data • Climatic Data
Air Quality - Objectionable Odors	Land use and management operations produce offensive smells.	Odor-producing facilities and activities are planned and sited to mitigate potential nuisance impacts and meets all applicable Tribal, State, and Local regulations.	<p>Pasture/Hayland/Crop-land: Treated area does not adversely affect client relations with neighbors or community; No prolonged emissions of objectionable odors from treatment area.</p> <p>Urban & Headquarters: Odors from sites evaluated do not adversely affect client relations with neighbors or community/ No prolonged emissions of objectionable odors from sites producing potentially objectionable odors. Sites meet state and local air quality standards</p>	<ul style="list-style-type: none"> • Olfactory assessment • Agricultural Waste Management Field Handbook (AWMFH) • NRCS approved tools • Personal Observation • Client Interview • Adjacent Landowner interviews • State and/or local ordinances relating to agricultural odors and air quality • Climatic data

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
AIR				
Air Quality - Reduced Visibility	Sight distance is impaired due to airborne particles causing unsafe conditions and impeded viewing of natural vistas especially in Class I viewing areas (primarily national parks and monuments).	Land use and management operations comply with all applicable Federal, Tribal, State, and Local regulations including state and local smoke and/or burn management plans.	All Land Uses: Same as National	<ul style="list-style-type: none"> • Visual assessment • Regional air partnership recommendations and/or state guidance for smoke management
Air Quality - Undesirable Air Movement	Wind velocities (too little or too much) reduce animal or plant productivity, impact human comfort and increase energy consumption.	Devices and practices are sited and planned to mitigate excess or deficient air movement.	<p>Pasture/Cropland/Headquarters/Urban: Impacts are minimized by installing wind breaks, wind strips, or other ameliorating practices.</p> <p>Hayland: Should adverse impacts to air temperature for plants or animals be identified with installation of a conservation practice(s), impacts are minimized by installing wind breaks, wind strips, or other ameliorating practices.</p>	<ul style="list-style-type: none"> • Visual assessment • Anemometers • Approved NRCS technical guidance and tools • Climatic data • Client interview

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
AIR				
Air Quality - Adverse Air Temperature	Air temperatures (too cold or too hot) reduce animal or plant productivity, impact human comfort and increase energy consumption.	Devices and practices are planned and sited to mitigate temperature extremes.	<p>Pasture/Headquarters: Impacts are minimized by installing wind breaks, wind strips, or other ameliorating practices.</p> <p>Hayland: Should adverse impacts to air temperature for plants or animals be identified with installation of a conservation practice(s), impacts are minimized by installing wind breaks, wind strips, or other ameliorating practices.</p> <p>Cropland: Impacts are minimized by installing wind breaks, wind strips, or other ameliorating practices such as a sprinkler system for frost protection</p>	<ul style="list-style-type: none"> • Chill factor indices; heat indices • Air temperature assessment • Visual assessment • Client interview

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
PLANTS				

<p>Plants not adapted or suited</p>	<p>Plants are not adapted and/or suited to site conditions or client objectives.</p>	<p>Selected plants are adapted to the soil and climatic conditions or the site is modified to make it suitable for the desired plants. Plants are sustainable, do not negatively impact other resources, and meet client objectives. For specific land uses, additional criteria apply: Cropland: A healthy stand with vigorous growth. Yields 75% of client expectations. Rangeland: Plants on or planned for the site are listed in applicable Ecological Site Descriptions Pastureland: Plants on or planned for the site have a site adaptation score greater than 3 using Pasture Condition Scoring and are listed in applicable Forage Suitability Groups reports. Hayland: Plants on or planned for the site are listed in applicable Forage Suitability Groups reports. Forestland/Agroforest: Plants on or planned for the site are listed in Ecological Site Descriptions</p>	<p>Pasture: Overall Pasture Condition is >40 and Individual Score for <i>Percent Desirable Plants, Plant Cover,</i> and <i>Plant Vigor</i> Indicators is 4 or higher within the pasture evaluated. Seeded plants suited to intended use(s) as listed in Nevada CES/NRCS publications BE-91-01, BE-91-02, and BE-91-03. Hayland: Plants selected for planting are suited to site conditions according to BE-91-01, BE-91-02, and BE-91-03 technical publications. Hay productions comparable to yields listed in Forage Suitability Group Descriptions for site. Rangeland: Seeded plants suited to intended use(s) as listed in Nevada CES/NRCS Publication BE-91-01. Rangeland Health Evaluation Worksheet Indicator Summary for area evaluated scores a rating between <i>None</i> to <i>Slight</i> and <i>Moderate</i> for Biotic Integrity attribute, Soil/Site Stability, and Hydrologic Function Attributes; and Indicators 12, 15, & 17 have no more than <i>Slight</i> to <i>Moderate</i> departure.</p>	<ul style="list-style-type: none"> • On-site investigation and records • Forage Suitability Groups • Nevada Pasture Condition Score Sheet • Client interview • PLANTS database • Seeding and Planting Guide • Plant hardiness zone map • Soil pH, drainage class, sodium adsorption ratio and electrical conductivity suitability ranges. • Soil interpretations – Section IV • Local agronomy guides • University Extension Service information • Soil survey manuscripts • Ecological Site Descriptions • Conservation Tree and Shrub Groups • Silvics of North America Trees • NRCS Discipline Manuals/handbooks • NV CES/NRCS publication BE-91-01 Conservation Plantings for Natural Resources Management • Rangeland Health Evaluation Worksheet
--	--	---	--	--

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
PLANTS				

<p>Plant Condition – Productivity (Kinds, Amounts, and Distribution)</p>	<p>Plants do not produce the yields, quality, and soil cover to meet client objectives.</p>	<p>Selected plants on or planned for the site are sufficiently productive to meet or exceed client needs. For specific land uses, additional criteria apply: Cropland: A healthy stand with vigorous growth produces at least 75% of site potential. Rangeland: The plant community has a similarity index of at least 60% or an upward trend for similarity indices less than 60%. Pastureland: Forage yields are at least 75% of high management estimates cited in FSG reports. Hayland: Forage yields at least 75% of high mgt. estimates cited in Forage Suitability Groups reports Forestland/Agroforest: Forests consist of healthy stands with vigorous growth having a stand density within 25% of optimum stocking on a stems/acre basis. Plants chosen for agroforest applications are consistent with Conservation Tree and Shrub Groups (CTSG) listings and height performance.</p>	<p>Pasture: Overall Pasture Condition Score is >40 and Individual Score for <i>Percent Desirable Plants, Plant Cover, Plant Residue, and Plant Vigor</i> Indicators is 4 or higher within the pasture evaluated. Hayland: Hay production comparable to yields listed in Forage Suitability Group Descriptions for site; Performance of animals consuming harvested roughages meets management objectives. Hayland Condition Score for <i>Crop Yield</i> is 4 or higher Rangeland: Trend is <i>Not Apparent</i> or <i>Improving</i> when the Similarity Index is greater than 60 for the Ecological Site(s) evaluated; Rangeland Trend is <i>Not Apparent</i> or <i>Improving</i> and plant residues are adequate for soil protection during critical erosion periods when the Ecological Site(s) evaluated exhibit retrogression below an ecological threshold that will prevent recovery to a Similarity Index of 60 or higher OR when recovery will be unusually slow regardless of planned treatments;</p>	<ul style="list-style-type: none"> • Local agronomy guides • Client interview • Plant tissue and harvest analysis • Crop scouting • NRCS discipline manuals/handbooks • National Range and Pasture Handbook • Ecological Site Descriptions • Rangeland Similarity Index Worksheet • Rising plate meter • Forage Suitability Groups • Electronic probe calibrated for the forage mixture, or a clip and weigh sampling procedure. • Plot sampling of understory vegetation • Soil survey reports • Soil Testing • Crop/soil yield comparison in the vicinity • Nevada Pasture Condition Score Sheet • Nevada Hayland Condition Score Sheet • Keys for disease and insect symptoms • Keys for nutrient deficiencies, toxicities, and other conditions • Rangeland Health Evaluation Worksheet • Stocking rate of desired species • Plot sampling of understory vegetation • Stocking measurement for the tree stands • Conservation Tree and Shrub Groups
---	---	--	---	---

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
PLANTS				

<p>Plant Condition – Productivity (cont.)</p>	<p>Plants do not produce the yields, quality, and soil cover to meet client objectives.</p>	<p>Selected plants on or planned for the site are sufficiently productive to meet or exceed client needs. For specific land uses, additional criteria apply: Cropland: A healthy stand with vigorous growth produces at least 75% of site potential. Rangeland: The plant community has a similarity index of at least 60% or an upward trend for similarity indices less than 60%. Pastureland: Forage yields are at least 75% of high management estimates cited in FSG reports. Hayland: Forage yields at least 75% of high mgt. estimates cited in Forage Suitability Groups reports Forestland/Agroforest: Forests consist of healthy stands with vigorous growth having a stand density within 25% of optimum stocking on a stems/acre basis. Plants chosen for agroforest applications are consistent with Conservation Tree and Shrub Groups listings and height performance.</p>	<p>Rangeland (cont.): Rangeland Health Evaluation Worksheet Indicator Summary for area evaluated scores a rating between <i>None</i> to <i>Slight</i> and <i>Moderate</i> for Biotic Integrity attribute. Forestland: Forest overstory stocking levels are within 25% of the D+X spacing guide (or equivalent measure) for the forest sites evaluated and tree stand composition; Uniform distribution of desired tree species within stands evaluated; Forest understory community is composed of 50% or more, by weight, of the species expected for the site at a given level of overstory canopy cover</p>	<ul style="list-style-type: none"> • Same as above
--	---	---	---	---

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
PLANTS				

<p>Plant Condition-Health and Vigor</p>	<p>Plants do not produce the yields, quality, and soil cover to meet client objectives.</p>	<p>Selected plants on or planned for the site are sufficiently productive to meet or exceed client needs. For specific land uses, additional criteria apply: Cropland: A healthy stand with vigorous growth produces at least 75% of site potential. Rangeland: The plant community has a similarity index of at least 60% or an upward trend for similarity indices less than 60%. Pastureland: Forage yields are at least 75% of high management estimates cited in Forage Suitability Groups (FSG) reports. Hayland: Forage yields at least 75% of high mgt. estimates cited in Forage Suitability Groups reports Forestland/Agroforest: Forests consist of healthy stands with vigorous growth having a stand density within 25% of optimum stocking on a stems/acre basis. Plants chosen for agroforest applications are consistent with Conservation Tree and Shrub Groups listings and height performance.</p>	<p>Pasture: Overall Pasture Condition Score is >40 and Individual Score for <i>Percent Desirable Plants, Plant Cover, Plant Residue, and Plant Vigor</i> Indicators is 4 or higher within the pasture evaluated. Cropland: Crop growth is not impaired due to weeds, disease or insects. Production comparable to yields expected for local area and field conditions Hayland: Hay production comparable to yields listed in FSG Descriptions for site; Plant growth is not impaired due to weeds, disease or insects. Hayland Condition Score overall ≥ 60 and individual scores for <i>Plant Vigor, Crop Yield, Insects/Diseases and Weeds</i> is 4 or higher Rangeland: Harvest level and timing of use for key plants is according to Prescribed Grazing Specification; Trend is <i>Not Apparent or Improving</i> for the Ecological Site(s) evaluated; Rangeland Health Indicator Summary scores a rating between <i>None</i> to <i>Slight</i> and <i>Moderate</i> for Biotic integrity attribute; and , Indicators 12, 13, 15, & 17 have no more than a <i>Slight</i> to <i>Moderate</i> departure</p>	<ul style="list-style-type: none"> • Visual Observation • Interview with Client • Forage Suitability Group Descriptions • NRCS National Range and Pasture Handbook • Nevada Pasture Condition Score Sheet • Nevada Hayland Condition Score Sheet • Ecological Site Descriptions for Rangeland and Forestland • NV-ECS-01 (pp 1&2) Range Inventory Worksheet and Rangeland Health Evaluation Worksheet • FOTG Section IV; Prescribed Grazing Standards and Specifications • Form NRCS-RANGE-414 • NRCS National Forestry Manual • Stocking rate of preferred tree species for site • Basal area measurement for tree stand
--	---	---	--	--

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
PLANTS				
Plant Condition-Health and Vigor (cont.)	Plants do not produce the yields, quality, and soil cover to meet client objectives.	Same as above.	Forestland: Forest overstory stocking levels are within 25% of the D+X spacing guide (or equivalent measure) for the forest sites evaluated and tree stand composition; Uniform distribution of desired tree species within stands evaluated	<ul style="list-style-type: none"> • Same as above
Plant Condition – Threatened or Endangered Plant Species	Plant populations and /or habitat quantity and quality have reached a level that one or more plant species are in danger of or threatened with extinction.	Threatened and endangered plant species and/or habitats they occupy are managed to avoid actions that would reduce their current population, health, or sustainability.	Rangeland/Forestland: All land treatment and management activities will conform to the Endangered Species Act , state and local laws, and established policy; Should planned treatments or management actions be expected to adversely impact T&E species, discussion of alternatives that will avoid impacts are made with landowner. if adverse impacts cannot be avoided, landowner is consulted and then USF&WS and NDOW are contacted before RMS or associated practices are installed	<ul style="list-style-type: none"> • Client interviews • Inventory site • General Manual, 190, Part 410 • US Fish and Wildlife Service county endangered species lists • Federal and state endangered species rules and regulations • Consultation with appropriate federal, state, and local agencies/groups • PLANTS Website • NRCS National Biology Manual and Handbook

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
PLANTS				
Plant Condition – Noxious and Invasive Plants	The site has noxious or invasive plants present.	The site is managed to control noxious and invasive plants and to minimize their spread.	<p>Pasture/Hayland/Crop-land: Undesirable plant species and other pests are managed at levels below management threshold established for fields evaluated. Noxious weeds are not present in management unit. Pasture Condition Score for <i>Percent Desirable Plants</i> is 4 or better. Hayland Condition Score for <i>Weeds</i> is 4 or better.</p> <p>Rangeland: Noxious weeds are not present in management unit; Rangeland Health Evaluation Worksheet Summary for area evaluated scores a rating between <i>None</i> to <i>Slight</i> and <i>Moderate</i> for Biotic Integrity attribute; and Indicators 12, 13, &16 have no more than a <i>Slight</i> to <i>Moderate</i></p> <p>Headquarters: Noxious weeds are not present in management unit</p>	<ul style="list-style-type: none"> • Client interviews • Inventory site • Consult weed management associations • Consultation with appropriate federal, state, and local agencies/groups • State or local noxious weed list • PLANTS Website • FOTG Section IV- Rest Management Conservation Practice Specification and Practice Documentation Worksheet • Nevada Pasture Condition Score Sheet • Nevada Hayland Condition Score Sheet • Rangeland Health Evaluation Worksheet
Plant Condition – Forage Quality and Palatability	Plants do not have adequate nutritive value or palatability for the intended use	Forage plants are managed to produce the desired nutritive value and palatability for the intended use.	<p>All Grazing Lands: Same as National</p>	<ul style="list-style-type: none"> • NIRS Forage Quality Analysis (NUTBAL) • Plant tissue analysis
Plant Condition – Wildfire Hazard	The kinds and amounts of fuel loadings (plant biomass) pose risks to human safety, structures, and resources should wildfire occur.	Fuel loadings are reduced and/or isolated to meet client needs in minimizing the risk and incidence of wildfire.	<p>Rangeland/Forestland/Wildlife/Recreation: Same as National</p>	<ul style="list-style-type: none"> • Visual assessment protocols • Site and flammable biomass inventories • Aerial photo analysis

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
ANIMALS				
Fish and Wildlife – Inadequate Food	Quantity and quality of food is unavailable to meet the life history requirements of the species or guild of species of concern	Food availability meets the life history requirements of the species or guild of species of concern.	<p>Pasture/Hayland: For pasture/hayland, where improving fish and wildlife habitats is not primary management objective, a Habitat Suitability Rating of 0.50 or above.</p> <p>Rangeland: For rangelands, where improving fish and wildlife habitats is not the <i>primary</i> management objective, a Habitat Suitability Rating of 0.50 or above; The minimum Habitat Suitability Rating for lands where providing fish and wildlife habitat is the <i>primary</i> management objective is a rating of 0.7 or above;</p> <p>Forestland: For forests, where improving fish and wildlife habitats is not the <i>primary</i> management objective, a Habitat Suitability Rating of 0.50 or above; The minimum Habitat Suitability Rating for lands where providing fish and wildlife habitat is the <i>primary</i> management objective is a rating of 0.7 or above;</p>	<ul style="list-style-type: none"> • Visual assessment • Inventory of food species • Aerial photo analysis • State Adapted Wildlife Habitat Evaluation Guide • National Biology Handbook • Wildlife Habitat Evaluation Guides- Nevada NRCS Technical notes TN-BIOLOGY-41 • National Range and Pasture Handbook • FOTG Section IV- Pond, Water Harvesting Catchment, Wildlife Watering Facility, Spring Development, and Pipeline Conservation Practice Specifications

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
ANIMALS				
Fish and Wildlife – Inadequate Cover/Shelter	Cover/shelter for the species of concern is unavailable or inadequate. For aquatic species, this includes lack of hiding, thermal, and/or refuge cover	The ecosystem or habitat types support the necessary plant species in the kinds, amounts, and physical structure; and the connectivity of fish and wildlife cover is adequate to support, over time, the species of concern.	<p>Pasture/Hayland: For pasture/hayland, where improving fish and wildlife habitats is not primary management objective, a Habitat Suitability Rating of 0.50 or above.</p> <p>Rangeland: For rangelands, where improving fish and wildlife habitats is not the <i>primary</i> management objective, a Habitat Suitability Rating of 0.50 or above; The minimum Habitat Suitability Rating for lands where providing fish and wildlife habitat is the <i>primary</i> management objective is a rating of 0.7 or above;</p> <p>Forestland: For forests, where improving fish and wildlife habitats is not the <i>primary</i> management objective, a Habitat Suitability Rating of 0.50 or above; The minimum Habitat Suitability Rating for lands where providing fish and wildlife habitat is the <i>primary</i> management objective is a rating of 0.7 or above;</p>	<ul style="list-style-type: none"> • Visual assessment • Inventory of cover/shelter • Aerial photo analysis • State Adapted Wildlife Habitat Evaluation Guide • National Biology Handbook • National Biology Handbook • Wildlife habitat Evaluation Guides- Nevada NRCS Technical notes TN-BIOLOGY-41 • National Range and Pasture Handbook • FOTG Section IV- Pond, Water Harvesting Catchment, Wildlife Watering Facility, Spring Development, and Pipeline Conservation Practice Specifications

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
ANIMALS				
Fish and Wildlife – Inadequate Water	The quantity and quality of water is unacceptable for the species of concern	The quantity and quality of water meets the life history requirements of the species of concern.	<p>Pasture/Hayland: For pasture/hayland, where improving fish and wildlife habitats is not primary management objective, a Habitat Suitability Rating of 0.50 or above.</p> <p>Rangeland: For rangelands, where improving fish and wildlife habitats is not the <i>primary</i> management objective, a Habitat Suitability Rating of 0.50 or above; The minimum Habitat Suitability Rating for lands where providing fish and wildlife habitat is the <i>primary</i> management objective is a rating of 0.7 or above</p> <p>Forestland: For forests, where improving fish and wildlife habitats is not the <i>primary</i> management objective, a Habitat Suitability Rating of 0.50 or above; The minimum Habitat Suitability Rating for lands where providing fish and wildlife habitat is the <i>primary</i> management objective is a rating of 0.7 or above</p>	<ul style="list-style-type: none"> • Surface water dissolved oxygen sampling and assay • Stream Visual Assessment Protocol • Habitat Suitability Index – model for target species • Inventory of water supplies • Aerial photo analysis • State Adapted Wildlife Habitat Evaluation Guide • National Biology Handbook

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
ANIMALS				
Fish and Wildlife – Inadequate Space	Lack of area and fragmentation of areas disrupt life history requirements of the species of concern	Adequate area and connectivity of areas meet life history requirements of the species of concern. (Examples: staging areas for rest and feeding, leks for breeding, migratory movement corridors)	All Appropriate Land Uses: Adequate area and connectivity of areas meet life history requirements of the species of concern. (Example: staging areas of rest and feeding, leks for breeding, and migratory movement corridors.	<ul style="list-style-type: none"> • Visual assessment • Stream Visual Assessment Protocol (SVAP2) • Inventory of space/areas • Aerial photo analysis • State Adapted Wildlife Habitat Evaluation Guide • National Biology Handbook
Fish and Wildlife – Plant Community Fragmentation	Natural plant communities have insufficient structure, extent, and connectivity to provide ecological functions and/or achieve management objectives.	Fish and wildlife habitat functions of connected plant communities are maintained sufficiently to support the species or guild of species of concern	All Appropriate Land Uses: Planning area creates and/or maintains fish and wildlife habitat functions of plant communities such that, when connected to other such areas, they are sufficient to support the species or guild of species of concern.	<ul style="list-style-type: none"> • Stream Visual Assessment Protocol (SVAP2) • Aquatic and terrestrial habitat evaluation procedures • Wildlife Habitat Evaluation Guide
Fish and Wildlife - Imbalance Among and Within Populations	Populations are not in proportion to available quantities and qualities of food (plants, predator/prey), cover/shelter, water, and space and other life history requirements.	Land and water use and management are consistent with direct population management activities conducted by fish and wildlife agencies.	All Appropriate Land Uses: No readily discernable imbalance apparent, as indicated by over use of the habitat or by adversely impacted wildlife species.	<ul style="list-style-type: none"> • Fish and wildlife agency guidance and protocols • National Range and Pasture Handbooks, Chapter 8 • Form NV-ECS-416- Browse Condition and Utilization Evaluation

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
ANIMALS				
Fish and Wildlife – Threatened and Endangered Species	Fish and wildlife populations and/or habitat quantity and quality have reached a level that one or more species are in danger of or threatened with extinction.	Threatened and endangered fish and wildlife species and/or habitats they occupy are managed to avoid actions that would reduce their current population, health, or sustainability.	All Appropriate Land Uses: All land treatment and management activities will conform to the Endangered Species Act, state and local laws, and established policy; Should planned treatments or management actions be expected to adversely impact T&E species, discussion of alternatives that will avoid impacts are made with landowner. When adverse impacts due to planned treatments or management actions cannot be avoided, landowner is consulted and then USF&WS and NDOW are contacted before RMS or associated practices are installed	<ul style="list-style-type: none"> • Client interviews • Inventory of presence/absence of T&E species • General Manual, 190, Part 410 • US Fish and Wildlife Service county endangered species lists • Fish and wildlife recovery plans • Federal and state endangered species rules and regulations • Consultation with appropriate federal, state, and local agencies/groups • Fish and wildlife agency web sites • Nevada NRCS Technical Notes TN-BIOLOGY-42,43,44 • NRCS National Biology Manual and Handbook • Nevada Partners in Flight Conservation Plan
Domestic Animals – Inadequate Quantities and Quality of Feed and Forage	Total feed and forage is insufficient to meet the nutritional and production needs of the kinds and classes of livestock	Feed and forage including supplemental nutritional requirements are provided to meet production goals for the kinds and classes of livestock. Native grazers are factored into the total feed and forage balance computations.	Pasture/Hayland/Rangeland/Forestland: Completed NV-ECS-003 shows no shortage of feed and /or forage for planned livestock feed/grazing requirement; BCS for cattle \geq 4; BCS for sheep \geq 3; If used, NUTBAL model shows nutritional quality of livestock feed/forage is adequate to meet management objectives.	<ul style="list-style-type: none"> • Measured inventory • National Range and Pasture Handbook • Grazing Lands Application (GLA) software • NIRS/Nutritional Balance Profile Program (NUTBAL Pro) • Forage quality laboratory analysis • Other State adapted forage/livestock management software and job sheets • NV-ECS-01,03,04 • Interview with Client • Visual Observations of animals

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
ANIMALS				
Domestic Animals – Inadequate Shelter	Livestock are not protected sufficiently to meet the production goals for the kinds and classes of livestock	Artificial and/or natural shelter is provided to meet production goals for the kinds and classes of livestock.	<p>Pasture/Rangeland/Forestland: Available cover/shelter is adequate to protect animal from inclement weather; Mortality of adult and young animals is minimal during severe weather events. Animal performance objectives are being met; BCS for cattle ≥ 4; BCS for sheep ≥ 3.</p> <p>Hayland/Cropland: Protective cover during periods of severe weather is available to animals grazing hay crop aftermath; Animal performance objectives are being met; BCS for cattle ≥ 4; BCS for sheep ≥ 3.</p> <p>Headquarters: Protective cover during periods of severe weather is available to animals. Animal performance objectives are being met.</p>	<ul style="list-style-type: none"> • Visual assessment • Inventory of facilities and their capacities • Aerial photo analysis • National Range and Pasture Handbook • Client Interview • NRCS, CES and other technical references relating to shelter/cover requirements for livestock

National and State Resource Concerns and Quality Criteria				
Natural Resource Concern	Description of Concern	National Quality Criteria	Nevada State Quality Criteria	Assessment Tools for Quality Criteria Evaluation
ANIMALS				
Domestic Animals – Inadequate Stock Water	The quantity, quality and distribution of drinking water is insufficient to meet the production goals for the kinds and classes of livestock	Sufficient water of acceptable quality is provided and adequately distributed to meet production goals for the kinds and classes of livestock. To reduce potential for water contamination, watering facilities are constructed or modified to minimize mortality to indigenous wildlife.	All Appropriate Land Uses: Drinking water for livestock is well-distributed and grazing use is not severe at watering points while significant portions of the management unit are either under-grazed or not utilized. Watering facility size and fill rate meet expected daily demand of kind/class and number of animals within each management unit. Water quality for kind/class of animals in each management unit meet <i>Salinity Threshold</i> guidelines in NRPH; Animal performance objectives are being met; Overall Pasture Condition Score is >40 and Individual Score for <i>Uniformity of Use</i> , and <i>Livestock Concentration Areas</i> Indicators is 4 or higher within the pasture evaluated.	<ul style="list-style-type: none"> • Visual assessment • Inventory of distribution needs • Aerial photo analysis • National Range and Pasture Handbook • Client interview • NRCS, CES and other technical references relating to water quantity/quality requirements for livestock • NRCS, CES and other technical references relating to water spacing requirements for livestock given differing landscapes • Forage Suitability Group Descriptions • Nevada Pasture Condition Score Sheet
Domestic Animals – Stress and Mortality	Animals exhibit illness or death from disease, parasites, insects, poisonous plants, or other factors	Land and water use and management are consistent with activities conducted to alleviate stress and mortality factors.	All Appropriate Land Uses: Body condition score of ≥4 for cattle; Body condition score of ≥3 for sheep. Aggressive animal health program is a component of livestock management.	<ul style="list-style-type: none"> • Animal health/mortality alerts • State and local biosecurity protocols • State and local standards for animal disposal