

Checklist of Resource Concerns

PASTURE

July 2014

CLIENT		LOCATION			
PLANNER		MODIFIERS	Irrigated		
LAND UNITS		FARM No.		Wildlife	
DATE		TRACT No.		Grazed	

This check sheet is designed to assist planners and clients in identifying resource concerns during the planning process. The planning criteria in Section III of the eFOTG sets the minimum level of treatment needed. If a screening question is NO, this indicates no resource concern exists and no assessment is required. If a screening question is YES, the assessment must be completed to evaluate if there is a resource concern. If the Assessment is YES, Planning Criteria is met. If the Assessment is NO, the Planning Criteria is not met and a Resource Concern exists.

Pasture - Lands composed of introduced or domesticated native forage species that is used primarily for the production of livestock. They receive periodic renovation and/or cultural treatments, such as tillage, fertilization, mowing, weed control, and may be irrigated. They are not in rotation with crops.

Resource Concern	Screening Questions	YES or NO or NA (Not Applicable)	Assessment Tools (check all that were used)	Assessment Level Required to Meet Planning Criteria	YES or NO or NA (Not Applicable)
	No = Met Screening (Not a Resource Concern) YES = Needs to be Assessed NA = Not Applicable <i>Suggested soils reports are italicized</i>			YES = Meets Planning Criteria NO = Resource Concern	

SOILS RESOURCES

1. SOIL EROSION: Sheet, rill and wind T = Tolerable Soil Loss	Is soil surface organic residue cover less than 80%? <i>Physical Properties, Hazard of Erosion On & / Off Road / Trail</i>		<input type="checkbox"/> Revised Universal Soil Loss Equation Version 2 (RUSLE2) <input type="checkbox"/> Wind Erosion Prediction System (WEPS) <input type="checkbox"/> Visual Inspection	Water erosion rate less than or equal to T? Wind erosion rate less than or equal to T?	
2. SOIL EROSION: Concentrated flow erosion	Do ephemeral gullies occur? AND / OR Are classic gullies present? <i>Physical Properties, MUD, Hazard of Erosion On & / Off Road / Trail</i>		<input type="checkbox"/> Field measurements <input type="checkbox"/> Visual Inspection	Are conservation practices and management in place to prevent or control ephemeral gullies? AND Is classic gully management adequate to stop the progression of head cutting and widening and are offsite impacts minimized by vegetation and/or structures?	

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3. SOIL EROSION: Excessive bank erosion from streams, shorelines or water conveyance channels	<p>Are streams or shoreline on or adjacent to site?</p> <p>OR</p> <p>Is bank erosion from streams, shorelines or conveyance channels present?</p> <p><i>Map Unit Descriptions (MUD)</i></p>	<p>Yellow</p> <p>Blue</p> <p>Yellow</p> <p>Blue</p>	<p><input type="checkbox"/> Stream Visual Assessment Protocol Version 2 (SVAP 2)</p> <p><input type="checkbox"/> PCS - Pasture Condition Score</p>	<p>Is Pasture Condition Score (PCS) - stream bank / shoreline erosion element score greater than or equal to 7?</p> <p>AND</p> <p>For shorelines and water conveyance channels: Are banks stable or commensurate with normal geomorphological processes?</p> <p>OR</p> <p>If present, is bank erosion caused by upstream land use and beyond the client's control?</p>	<p>Yellow</p> <p>Red</p> <p>Yellow</p> <p>Red</p>
4. SOIL QUALITY DEGRADATION: Subsidence	<p>Are there Histisol soils present exhibiting subsidence?</p> <p><i>Hydric Soils, Soil Features</i></p>	<p>Yellow</p> <p>Blue</p>	<p><input type="checkbox"/> Visual Inspection</p>	<p>Is subsidence adequately managed to meet the client's objectives?</p>	<p>Yellow</p> <p>Red</p>
5. SOIL QUALITY DEGRADATION: Compaction	<p>Is soil compaction a problem?</p> <p>OR</p> <p>Do activities cause soil compaction problems?</p> <p><i>Compaction Resistance</i></p>	<p>Yellow</p> <p>Blue</p>	<p><input type="checkbox"/> PCS-Pasture Condition Score</p> <p><input type="checkbox"/> Soil Compaction Tester</p> <p><input type="checkbox"/> Observation of Soil and Plant Condition</p>	<p>Is PCS – compaction element score greater than or equal to 4?</p>	<p>Yellow</p> <p>Red</p>
6. SOIL QUALITY DEGRADATION: Organic matter depletion	<p>Is permanent ground cover less than 80%?</p> <p><i>Physical Properties</i></p>	<p>Yellow</p> <p>Blue</p>	<p><input type="checkbox"/> PCS - Pasture Condition Score</p> <p><input type="checkbox"/> Revised Universal Soil Loss Equation Version 2 (RUSLE2)</p> <p><input type="checkbox"/> Soil Test</p>	<p>Is Soil Condition Index (SCI) greater than 0?</p> <p>OR</p> <p>Is PCS – plant cover element score greater than or equal to 4?</p> <p>AND</p> <p>Is PCS – plant residue element score greater than or equal to 4?</p>	<p>Yellow</p> <p>Red</p> <p>Yellow</p> <p>Red</p>

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7. SOIL QUALITY DEGRADATION: Concentration of salts or other chemicals	Do activities cause salinity/sodicity problems? <i>Chemical Properties</i>		<input type="checkbox"/> Soil Test <input type="checkbox"/> Visual Inspection	Are conservation practices and managements in place to mitigate on-site effects?	
WATER RESOURCES					
8. EXCESS WATER: Ponding, flooding, seasonal high water table, seeps and drifted snow	Is excess water a problem? OR Do activities cause ponding/flooding problems? <i>Map Unit Descriptions (MUD), Water Features</i>		<input type="checkbox"/> Visual Observation <input type="checkbox"/> Web Soil Survey (flooding, frequency, class)	Is excess water managed to meet Client's objectives?	
9. INSUFFICIENT WATER: Inefficient moisture management	Is Moisture Management a problem? OR Do activities cause inefficient moisture management?		<input type="checkbox"/> PCS - Pasture Condition Score	Is PCS – compaction element score greater than or equal to 4? AND Is PCS – plant cover element score greater than or equal to 4?	
10. INSUFFICIENT WATER: Inefficient use of irrigation water	Is the Planned Land Unit (PLU) irrigated? AND Is there a stream present ?		<input type="checkbox"/> Farm Irrigation Rating Index (FIRI) WA 2014 <input type="checkbox"/> Stream Visual Assessment Protocol Version 2 (SVAP 2)	Is the Irrigation System efficiency greater than or equal to 85%? OR Less than 10% water savings meets Planning Criteria and is not a resource concern. AND Are SVAP2 hydrologic alteration element and barriers to fish movement element scores greater than or equal to 7?	

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11. WATER QUALITY DEGRADATION: Excess nutrients in surface and groundwater	<p>Is the Planned Land Unit (PLU) grazed and/or do cattle have access to the stream, shoreline or conveyance channel and/or is effluent spread on the field?</p> <p>OR</p> <p>Is there a water course on or adjacent to the site with State Agency identified nutrient impairment? (Washington Department of Ecology 303d listed for nutrients)</p>		<input type="checkbox"/> 303d Listing or Maps <input type="checkbox"/> Nutrient Budget <input type="checkbox"/> PCS - Pasture Condition Score <input type="checkbox"/> Washington Water Quality Technical Note 1 <input type="checkbox"/> Washington Water Quality Technical Note 2 <input type="checkbox"/> Washington Water Quality Technical Note 3 <input type="checkbox"/> Soil Test <input type="checkbox"/> Stream Visual Assessment Protocol Version 2 (SVAP 2)	<p>Is Pasture Condition Score (PCS) - stream bank / shoreline erosion element score greater than or equal to 4?</p> <p>AND</p> <p>Is Pasture Condition Score (PCS) - livestock concentration areas element score greater than or equal to 4?</p> <p>AND</p> <p>Are nutrients applied, based on a soil test, tissue tests or nutrient budget?</p> <p>AND</p> <p>Is SVAP2 nutrient enrichment element score greater than or equal to 7?</p>	
12. WATER QUALITY DEGRADATION: Pesticides transported to surface and groundwater's	<p>Are pest control chemicals applied?</p> <p>OR</p> <p>Is there a water course on or adjacent to the site with State Agency identified pesticides impairment? (Washington Department of Ecology 303d listed for pesticides)</p>		<input type="checkbox"/> Windows Pesticide Screening Tool (WinPST) <input type="checkbox"/> 303d Listing or Maps <input type="checkbox"/> Stream Visual Assessment Protocol Version 2 (SVAP 2) <input type="checkbox"/> Washington Water Quality Technical Note 1	<p>Are pesticides stored, handled, disposed and managed to prevent runoff, spills, leaks and leaching?</p> <p>AND</p> <p>Are conservation practices and management in place to minimize offsite impacts?</p> <p>AND</p> <p>Is SVAP2 water appearance element score greater than or equal to 7?</p>	
13. WATER QUALITY DEGRADATION: Excess pathogens and chemicals from manure, bio solids or compost applications	<p>Is manure, biosolids or compost applied on the land (potential sources of pathogens or pharmaceuticals)</p> <p>OR</p> <p>Is there a water course on or adjacent to the site with State Agency identified fecal coliform impairment? (Washington Department of Ecology 303d listed for fecal coliform)</p>		<input type="checkbox"/> 303d Listing or Maps <input type="checkbox"/> Stream Visual Assessment Protocol Version 2 (SVAP 2) <input type="checkbox"/> Washington Water Quality Technical Note 1 <input type="checkbox"/> Revised Universal Soil Loss Equation Version 2 (RUSLE2)	<p>Are organic materials applied, stored, and/or handled to mitigate negative impacts to water sources?</p> <p>AND</p> <p>Are SVAP2 water appearance element and manure or human waste element scores greater than or equal to 7?</p>	

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<p>14. WATER QUALITY DEGRADATION: Excessive salts in surface and groundwater</p>	<p>Is salt concentration a limiting factor?</p> <p>OR</p> <p>Is there a water course on or adjacent to the site with State Agency identified pH impairment? (Washington Department of Ecology 303d listed for pH)</p> <p><i>Chemical Properties</i></p>		<p><input type="checkbox"/> 303d Listing or Maps</p> <p><input type="checkbox"/> Stream Visual Assessment Protocol Version 2 (SVAP 2)</p> <p><input type="checkbox"/> Washington Water Quality Technical Note 1</p>	<p>Are salt concentrations managed to mitigate off-site transport to surface or ground waters?</p> <p>AND</p> <p>Is SVAP2 salinity element score greater than or equal to 6?</p>	
<p>15. WATER QUALITY DEGRADATION: Petroleum, heavy metals and other pollutants transported to receiving waters</p>	<p>Do activities present the potential for contamination?</p> <p>OR</p> <p>Is there a water course on or adjacent to the site with State Agency identified heavy metals impairment? (Washington Department of Ecology 303d listed for heavy metals)</p>		<p><input type="checkbox"/> 303d Listing or Maps</p> <p><input type="checkbox"/> Stream Visual Assessment Protocol Version 2 (SVAP 2)</p> <p><input type="checkbox"/> Washington Water Quality Technical Note 1</p>	<p>Are petroleum, heavy metals or other potential pollutants stored and handled to avoid runoff or leaching?</p> <p>AND</p> <p>Is SVAP2 water appearance element score greater than or equal to 7?</p>	
<p>16. WATER QUALITY DEGRADATION: Excessive sediment in surface waters</p> <p>T = Tolerable Soil Loss</p>	<p>Is perennial ground cover less than 90%, and slope greater than 10%.</p> <p>OR</p> <p>Are classic gullies present?</p> <p>OR</p> <p>Are streams or shoreline on or adjacent to site?</p> <p>OR</p> <p>Is there a water course on or adjacent to the site with State Agency identified sediment impairment? (Washington Department of Ecology 303d listed for sediment)</p>		<p><input type="checkbox"/> 303d Listing or Maps</p> <p><input type="checkbox"/> Stream Visual Assessment Protocol Version 2 (SVAP 2)</p> <p><input type="checkbox"/> Revised Universal Soil Loss Equation Version 2 (RUSLE2)</p> <p><input type="checkbox"/> Wind Erosion Prediction System (WEPS)</p> <p><input type="checkbox"/> Washington Water Quality Technical Note 1</p>	<p>Do upslope treatment and buffer practices address concentrated flows to water bodies?</p> <p>AND</p> <p>Are livestock and vehicle water crossings stable?</p> <p>AND</p> <p>SVAP2 - bank condition greater than or equal to 7?</p> <p>AND</p> <p>Is water erosion rate less than or equal to T?</p> <p>AND</p> <p>Is wind erosion rate less than or equal to T?</p>	

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<p>17. WATER QUALITY DEGRADATION: Elevated water temperature</p>	<p>Is there a water course on or adjacent to the site with State Agency identified temperature impairment? (Department of Ecology 303d listed for temperature)</p>		<p><input type="checkbox"/> 303d Listing or Maps</p> <p><input type="checkbox"/> Stream Visual Assessment Protocol Version 2 (SVAP 2)</p>	<p>Is SVAP2 - riparian area quality element score greater than or equal to 7? AND Is SVAP2 - riparian area quantity element score greater than or equal to 7? AND Is SVAP2 - canopy cover element score greater than or equal to 7? OR Are existing practices in place to address water temperature?</p>	
PLANT RESOURCES					
<p>18. DEGRADED PLANT CONDITION: Undesirable plant productivity and health</p>	<p>Are plant production and health a client concern?</p> <p><i>Forest Productivity, Forest Vegetation Classification, Plant Composition</i></p>		<p><input type="checkbox"/> PCS-Pasture Condition Score</p> <p><input type="checkbox"/> Visual Inspection</p>	<p>Is PCS – desirable plants element score greater than or equal to 3? AND Is PCS – plant cover element score greater than or equal to 4? AND Is PCS – plant vigor element score greater than or equal to 4? AND Are plants adapted to the site, meet production goals and do not negatively impact other resources?</p>	
<p>19. DEGRADED PLANT CONDITION: Inadequate structure and composition</p>	<p>Will changes to the plant community structure or composition better support the desired ecological functions and intended land use?</p> <p>OR Are there invasive, non-native, or noxious plant species present or could they become established if the plant community is disturbed?</p>		<p><input type="checkbox"/> Forage Suitability Groups</p> <p><input type="checkbox"/> Forage Suitability Groups</p> <p><input type="checkbox"/> County Noxious Weed Lists</p>	<p>Do plant communities contain adequate diversity, composition and structure to support desired ecological functions?</p> <p>OR Are invasive, non-native or noxious plant species managed to meet client objectives?</p>	

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20. DEGRADED PLANT CONDITION: Excessive plant pest pressure	Is plant productivity limited from pest pressure?		<input type="checkbox"/> PCS - Pasture Condition Score <input type="checkbox"/> County Noxious Weed Lists <input type="checkbox"/> Visual Inspection	Is PCS – insect and disease pressure element score greater than or equal to 4? AND Is PCS –site adaptation element score greater than or equal to 4?	
21. DEGRADED PLANT CONDITION: Wildfire hazard, excessive biomass accumulation	Is wildfire hazard a concern?		<input type="checkbox"/> Visual Inspection	Are fuel loads and fuel ladders managed to provide defensible space and meet client objectives?	
23. LIVESTOCK PRODUCTION LIMITATION: Inadequate feed and forage	(Grazing Modifier) Is the Planning Land Unit (PLU) grazed? <i>Range Productivity, Range Vegetation Classification, Plant Composition</i>		<input type="checkbox"/> Pasture & Range Inventory & Assessments <input type="checkbox"/> Livestock Forge Balance Worksheet	Are livestock forage, roughage and supplemental nutritional requirements addressed?	
24. LIVESTOCK PRODUCTION LIMITATION: Inadequate livestock shelter	(Grazing Modifier) Is the Planning Land Unit (PLU) grazed?		<input type="checkbox"/> Visual Inspection	Do artificial or natural shelters meet animal health needs and client objectives?	
25. LIVESTOCK PRODUCTION LIMITATION: Inadequate livestock water	(Grazing Modifier) Is the Planning Land Unit (PLU) grazed?		<input type="checkbox"/> Washington Engineering Technical Note 19: Water Requirements- Beef Cattle <input type="checkbox"/> Washington Water Quality Technical Note 1	Is water of acceptable quality and quantity adequately distributed to meet animal needs?	
	AND Is there a stream present ?		<input type="checkbox"/> Stream Visual Assessment Protocol Version 2 (SVAP 2)	Are SVAP2 water appearance element and manure or human waste element scores greater than or equal to 8?	

Notes: