

## Checklist of Resource Concerns

# Cropland

<b>CLIENT</b>		<b>LOCATION</b>	
<b>PLANNER</b>		<b>DATE</b>	
<b>LAND UNITS</b>		<b>TOOLS</b>	

This check sheet is designed to assist planners and clients in identifying resource concerns during the planning process. The planning criteria outlined in Section III of the FOTG sets the minimum level of treatment. 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. For screening questions with multiple conditions, circle those conditions that have been identified for the site.

Resource Concern  * required response	Screening Questions  NO = Met Screening (Not a RC)  YES = Go to Assessment	YES	NO	Assessment Tools	Assessment Level Required to Meet Planning Criteria  YES = Meets Planning Criteria NO = Identified Resource Concern	YES	NO
<b>SOILS RESOURCES</b>							
<b>1a. SOIL EROSION: Sheet and Rill erosion *</b>	If an annual crop, is residue after planting any crop in the rotation <30% <b>OR</b> If an annual crop, is slope > 2%			➤ RUSLE2	Water erosion rate <=T		
<b>1b. SOIL EROSION: Wind erosion *</b>	If permanent ground cover, is cover < 90% <b>OR</b> If permanent ground cover, is slope > 10%?			➤ WEPS	Wind erosion rate <=T		
<b>2a. SOIL EROSION: Ephemeral gully erosion *</b>	Do ephemeral gullies occur?			➤ Field measurements ➤ Planner observation	Are conservation practices and managements in place to prevent or control ephemeral gullies?		
<b>2b. SOIL EROSION: Classic gully erosion *</b>	Are classic gullies present?			➤ Field measurements ➤ Planner observation	Is classic gully management adequate to stop the progression of head cutting and widening <b>and</b> are offsite impacts minimized by vegetation and/or structures?		
<b>3. SOIL EROSION: Excessive bank erosion from streams, shorelines or water conveyance channels *</b>	Are streams or shoreline on or adjacent to site?			➤ SVAP2	For shorelines and water conveyance channels; are banks stable or commensurate with normal geomorphological processes? <b>AND</b> For stream banks:- SVAP2 bank condition ≥5		
					<b>OR</b> Bank erosion caused solely by upstream/upland landuse(s) and management decisions that are beyond the Client's control?		
<b>4. SOIL QUALITY DEGRADATION: Subsidence</b>	Are Histosol soils present?			➤ Client input ➤ Planner observation	Is subsidence adequately managed to meet Client's objectives?		
	<b>OR</b> Are there Histosols present that are exhibiting subsidence?						

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<b>5. SOIL QUALITY DEGRADATION: Compaction</b>	Is soil compaction a problem? <b>OR</b> Do activities cause soil compaction problems?			<ul style="list-style-type: none"> <li>➤ Observation of soil and plant condition</li> <li>➤ Client input/Planner observation</li> <li>➤ Penetrometer</li> </ul>	Is compaction managed to meet Client's production and management objectives?		
<b>6. SOIL QUALITY DEGRADATION: Organic matter depletion *</b>	Is site used for annual crop production? <b>OR</b> If permanent ground cover, is ground cover < 80%?			<ul style="list-style-type: none"> <li>➤ RUSLE2</li> <li>➤ WEPS</li> </ul>	SCI>0		
<b>7. SOIL QUALITY DEGRADATION: Concentration of Salts or other chemicals</b>	Do activities cause salinity/sodicity problems?			<ul style="list-style-type: none"> <li>➤ Soil diagnostic evaluations</li> </ul>	Are conservation practices and managements in place to mitigate on-site effects?		
<b>WATER RESOURCES</b>							
<b>8a. EXCESS WATER: Ponding and Flooding</b>	Is ponding or flooding a problem? <b>OR</b> Do activities cause ponding/flooding problems?			<ul style="list-style-type: none"> <li>➤ Client Input</li> <li>➤ Planner observation</li> </ul>	Is excess water managed to meet Client's objectives?		
<b>8b. EXCESS WATER: Seasonal high water table</b>	Does a seasonal high water table cause a problem?			<ul style="list-style-type: none"> <li>➤ Client Input</li> <li>➤ Planner observation</li> </ul>	Is excess water managed to meet Client's objectives?		
<b>8c. EXCESS WATER: Seeps</b>	Does excess water from seeps cause a problem?			<ul style="list-style-type: none"> <li>➤ Client Input</li> <li>➤ Planner observation</li> </ul>	Is excess water managed to meet Client's objectives?		
<b>8d. EXCESS WATER: Drifted snow</b>	Does drifted snow cause a problem?			<ul style="list-style-type: none"> <li>➤ Client Input</li> <li>➤ Planner observation</li> </ul>	Is excess water managed to meet Client's objectives?		
<b>9. INSUFFICIENT WATER: Inefficient moisture management</b>	Is Moisture Management a problem? <b>OR</b> Do activities cause inefficient moisture management?			<ul style="list-style-type: none"> <li>➤ Client Input</li> <li>➤ Planner observation</li> </ul>	Are runoff and evapotranspiration levels minimized to meet Client's management objectives?		
<b>10. INSUFFICIENT WATER: Inefficient use of irrigation water *</b>	Is the PLU irrigated?			<ul style="list-style-type: none"> <li>➤ FIRI (Farm Irrigation Rating Index) worksheet</li> </ul>	Is FIRI ≥ 85% of system potential		
<b>11a. WATER QUALITY: Excess nutrients in surface waters *</b>	Are organic or inorganic nutrients applied?			<ul style="list-style-type: none"> <li>➤ Client input</li> <li>➤ Planner observation</li> <li>➤ Nutrient budget</li> </ul>	Are nutrient and amendment applications based on soil or tissue tests and nutrient budgets for realistic yields? <b>AND</b> Are conservation practices and managements in place to minimize offsite impacts?		
<b>11b. WATER QUALITY: Excess nutrients in groundwater *</b>	Is the PLU grazed?			<ul style="list-style-type: none"> <li>➤ Client input</li> <li>➤ Planner observation</li> <li>➤ Nutrient budget</li> </ul>	Are nutrient and amendment applications based on soil or tissue tests and nutrient budgets for realistic yields? <b>AND</b> Are conservation practices and managements in place to minimize offsite impacts?		

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<p><b>12a. WATER QUALITY DEGRADATION: Pesticides transported to <u>surface waters</u></b></p>	<p>Are pest control chemicals applied?</p>			<ul style="list-style-type: none"> <li>➤ Client input</li> <li>➤ Planner observation</li> <li>➤ WinPST</li> </ul>	<p>Are pesticides stored, handled, disposed and managed to prevent runoff, spills, and leaks? <b>AND</b> Are conservation practices and managements in place to minimize offsite impacts?</p>		
<p><b>12b. WATER QUALITY DEGRADATION: Pesticides transported to <u>groundwater</u></b></p>	<p>Are pest control chemicals applied?</p>			<ul style="list-style-type: none"> <li>➤ Client input</li> <li>➤ Planner observation</li> <li>➤ WinPST</li> </ul>	<p>Are pesticides stored, handled, disposed and managed to prevent runoff, spills, leaks and leaching? <b>AND</b> Are conservation practices and managements in place to minimize offsite impacts?</p>		
<p><b>13a. WATER QUALITY DEGRADATION: Excess Pathogens, pharmaceuticals and Other Chemicals in <u>surface waters</u> *</b></p>	<p>Are potential sources of pathogens or pharmaceuticals applied on the land?</p>			<ul style="list-style-type: none"> <li>➤ Client input</li> <li>➤ Planner observation</li> </ul>	<p>Are organic materials applied, stored, and/or handled to mitigate negative impacts to water sources?</p>		
<p><b>13b. WATER QUALITY DEGRADATION: Excess Pathogens, pharmaceuticals and Other Chemicals in <u>groundwater</u> *</b></p>				<ul style="list-style-type: none"> <li>➤ Client input</li> <li>➤ Planner observation</li> </ul>	<p>Are organic materials applied, stored, and/or handled to mitigate negative impacts to water sources?</p>		
<p><b>14a. WATER QUALITY DEGRADATION: Excessive salts in <u>surface waters</u></b></p>	<p>Is excess salt a problem? <b>OR</b></p>			<ul style="list-style-type: none"> <li>➤ Client input</li> <li>➤ Planner observation</li> </ul>	<p>Are salt concentrations managed to mitigate off-site transport to surface waters?</p>		
<p><b>14b. WATER QUALITY DEGRADATION: Excessive salts in <u>groundwater</u></b></p>	<p>Do activities contribute to excess salt production?</p>			<ul style="list-style-type: none"> <li>➤ Client input</li> <li>➤ Planner observation</li> </ul>	<p>Are salt concentrations managed to mitigate off-site transport to groundwater?</p>		
<p><b>15a. WATER QUALITY DEGRADATION: Petroleum and heavy metals and other pollutants transported to <u>surface waters</u></b></p>	<p>Do activities present the potential for contamination?</p>			<ul style="list-style-type: none"> <li>➤ Client input</li> <li>➤ Planner observation</li> </ul>	<p>Are petroleum, heavy metals or other potential pollutants stored and handled to avoid runoff?</p>		
<p><b>15b. WATER QUALITY DEGRADATION: Petroleum and heavy metals and other pollutants transported to <u>groundwater</u></b></p>				<ul style="list-style-type: none"> <li>➤ Client input</li> <li>➤ Planner observation</li> </ul>	<p>Are petroleum, heavy metals or other potential pollutants stored and handled to avoid leaching?</p>		

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<p><b>16. WATER QUALITY DEGRADATION: Excessive sediment in surface waters *</b></p>	<p>If an annual crop, is residue after planting any crop in the rotation &lt; 30%?  <b>OR</b>                  If an annual crop, is slope &gt; 2%  <b>OR</b>                  If permanent ground cover, is cover &lt; 90%  <b>OR</b>                  If permanent ground cover, is slope &gt; 10%?  <b>OR</b>                  Are classic gullies present?  <b>OR</b>                  Are streams or shoreline on or adjacent to site?</p>			<ul style="list-style-type: none"> <li>➤ Client input</li> <li>➤ Planner observation</li> <li>➤ RUSLE2</li> <li>➤ SVAP2</li> <li>➤ WEPS</li> </ul>	<p>Do upslope treatment and buffer practices address concentrated flows to water bodies?  <b>AND</b>                  SVAP2 - bank condition ≥ 5.  <b>AND</b>                  Are livestock and vehicle water crossings stable?  <b>AND</b>                  Is water erosion rate ≤ T?  <b>AND</b>                  Is wind erosion rate ≤ T?</p>				
<p><b>17. WATER QUALITY DEGRADATION: Elevated water temperature</b></p>	<p>Is there a water course on or adjacent to the site with State Agency identified temperature impairment?  <b>OR</b>                  Is water course temperature a client concern?</p>			<ul style="list-style-type: none"> <li>➤ Client input</li> <li>➤ Planner observation</li> <li>➤ SVAP2</li> </ul>	<p>Is SVAP2 - riparian area quality element score ≥ 5?  <b>AND</b>                  Is SVAP2 - riparian area quantity element score ≥ 5?  <b>AND</b>                  Is SVAP2 - canopy cover element score ≥ 6?</p>				
<p><b>OR</b>                  Are existing practices in place to address water temperature?</p>									
<p><b>PLANT RESOURCES</b></p>									
<p><b>18. DEGRADED PLANT CONDITION: Undesirable plant productivity and health</b></p>	<p>Is plant production and/or plant health a client objective?  <b>OR</b>                  Is an RMS alternative being developed?</p>			<ul style="list-style-type: none"> <li>➤ Client input</li> <li>➤ Planner observation</li> <li>➤ Crop Tolerance Tables</li> </ul>	<p>Are plants adapted to the site, meet production goals and do not negatively impact other resources?  <b>AND</b>                  Is plant damage from wind erosion below Crop Damage Tolerance levels?</p>				
<p><b>OR</b>                  Is crop yield 75% or more of the high management yield potential for the soil planning unit?</p>									
<p><b>20. DEGRADED PLANT CONDITION: Excessive plant pest pressure</b></p>	<p>Is plant productivity limited from pest pressure?</p>			<ul style="list-style-type: none"> <li>➤ Client input</li> <li>➤ Planner observation</li> </ul>	<p>Is pest damage to plants below economic or environmental thresholds or client-identified criteria?  <b>AND</b>                  Are plant pests, including noxious and invasive species managed to meet client objectives?</p>				
<p><b>21. DEGRADED PLANT CONDITION: Wildfire hazard, excessive biomass accumulation</b></p>	<p>Is wildfire hazard a concern?</p>			<ul style="list-style-type: none"> <li>➤ Client input</li> <li>➤ Planner observation</li> </ul>	<p>Are fuel loads and fuel ladders managed to provide defensible space and meet client objectives?</p>				

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ANIMAL RESOURCES						
<p><b>22a. INADEQUATE HABITAT FOR FISH AND WILDLIFE:</b> <i>Quantity, quality of food is inadequate to meet requirements of identified fish, wildlife or invertebrate species</i></p>	<p>Is PLU managed for wildlife? (Wildlife Modifier)</p> <p><b>OR</b></p> <p>Is an RMS alternative being developed?</p>			<ul style="list-style-type: none"> <li>➤ Biology Tech Note 18</li> <li>➤ Species-specific wildlife habitat assessment tools</li> <li>➤ SVAP2</li> </ul>	<p>TN 18 rating <math>\geq 0.5</math></p> <p><b>AND</b> (when surface stream present and fish habitat is a concern)</p> <p>SVAP2 – fish habitat complexity element score <math>\geq 7</math></p> <p><b>AND</b></p> <p>SVAP2 – barriers to movement element <math>\geq 7</math></p>	
					<p><b>OR</b></p> <p>Are conservation practices and management are in place that meet or exceed species or guild-specific habitat model thresholds?</p>	
<p><b>22b. INADEQUATE HABITAT FOR FISH AND WILDLIFE:</b> <i>Quantity, quality of water is inadequate to meet requirements of identified fish, wildlife or invertebrate species</i></p>	<p>Is PLU managed for wildlife? (Wildlife Modifier)</p> <p><b>OR</b></p> <p>Is an RMS alternative being developed?</p>			<ul style="list-style-type: none"> <li>➤ Biology Tech Note 18</li> <li>➤ Species-specific wildlife habitat assessment tools</li> <li>➤ SVAP2</li> </ul>	<p>TN 18 rating <math>\geq 0.5</math></p> <p><b>AND</b> (when surface stream present and fish habitat is a concern)</p> <p>SVAP2 – fish habitat complexity element score <math>\geq 7</math></p> <p><b>AND</b></p> <p>SVAP2 – barriers to movement element <math>\geq 7</math></p>	
					<p><b>OR</b></p> <p>Are conservation practices and management are in place that meet or exceed species or guild-specific habitat model thresholds?</p>	
<p><b>22c. INADEQUATE HABITAT FOR FISH AND WILDLIFE:</b> <i>Quantity, quality or cover/shelter is inadequate to meet requirements of identified fish, wildlife or invertebrate species</i></p>	<p>Is PLU managed for wildlife? (Wildlife Modifier)</p> <p><b>OR</b></p> <p>Is an RMS alternative being developed?</p>			<ul style="list-style-type: none"> <li>➤ Biology Tech Note 18</li> <li>➤ Species-specific wildlife habitat assessment tools</li> <li>➤ SVAP2</li> </ul>	<p>TN 18 rating <math>\geq 0.5</math></p> <p><b>AND</b> (when surface stream present and fish habitat is a concern)</p> <p>SVAP2 – fish habitat complexity element score <math>\geq 7</math></p> <p><b>AND</b></p> <p>SVAP2 – barriers to movement element <math>\geq 7</math></p>	
					<p><b>OR</b></p> <p>Are conservation practices and management are in place that meet or exceed species or guild-specific habitat model thresholds?</p>	
<p><b>22d. INADEQUATE HABITAT FOR FISH AND WILDLIFE:</b> <i>Habitat continuity is inadequate to meet requirements of identified fish, wildlife or invertebrate species</i></p>	<p>Is PLU managed for wildlife? (Wildlife Modifier)</p> <p><b>OR</b></p> <p>Is an RMS alternative being developed?</p>			<ul style="list-style-type: none"> <li>➤ Biology Tech Note 18</li> <li>➤ Species-specific wildlife habitat assessment tools</li> <li>➤ SVAP2</li> </ul>	<p>TN 18 rating <math>\geq 0.5</math></p> <p><b>AND</b> (when surface stream present and fish habitat is a concern)</p> <p>SVAP2 – fish habitat complexity element score <math>\geq 7</math></p> <p><b>AND</b></p> <p>SVAP2 – barriers to movement element <math>\geq 7</math></p>	
					<p><b>OR</b></p> <p>Are conservation practices and management are in place that meet or exceed species or guild-specific habitat model thresholds?</p>	

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<p><b>23. LIVESTOCK PRODUCTION LIMITATION:</b> <i>Inadequate feed and forage</i></p>				<ul style="list-style-type: none"> <li>➤ Client input</li> <li>➤ Planner observation</li> <li>➤ Livestock Inventory Worksheet</li> <li>➤ Graze 4 Worksheet</li> </ul>	<p>Are livestock forage, roughage and supplemental nutritional requirements addressed?</p>		
<p><b>24. LIVESTOCK PRODUCTION LIMITATION:</b> <i>Inadequate livestock shelter</i></p>	<p>Is Client actively grazing animals? (Grazing Modifier)</p>			<ul style="list-style-type: none"> <li>➤ Client input</li> <li>➤ Planner observation</li> </ul>	<p>Do artificial or natural shelters meet animal health needs and client objectives?</p>		
<p><b>25. LIVESTOCK PRODUCTION LIMITATION:</b> <i>Inadequate livestock water</i></p>				<ul style="list-style-type: none"> <li>➤ Client input</li> <li>➤ Planner observation</li> </ul>	<p>Is water of acceptable quality and quantity adequately distributed to meet animal needs?</p>		
<b>ENERGY RESOURCES</b>							
<p><b>26. INEFFICIENT ENERGY USE:</b> <i>Equipment and facilities</i></p>	<p>Is the Client interested in improving equipment and facilities energy efficiency?</p> <p><b>OR</b></p> <p>Is an RMS alternative being developed?</p>			<ul style="list-style-type: none"> <li>➤ Client input</li> <li>➤ Planner observation</li> <li>➤ NRCS Energy Estimator</li> <li>➤ USDA approved Energy Audit</li> </ul>	<p>Has a USDA approved energy audit been implemented that address equipment and facilities to meet client objectives?</p> <p><b>OR</b></p> <p>Are on- farm renewable energy and/or energy conserving practices been implemented to meet client objectives?</p>		
<p><b>27. INEFFICIENT ENERGY USE:</b> <i>Farming and ranching practices and field operations</i></p>	<p>Is Client interested in improving energy use in farm and ranch field operations?</p> <p><b>OR</b></p> <p>Is an RMS alternative being developed?</p>			<ul style="list-style-type: none"> <li>➤ Client input</li> <li>➤ Planner observation</li> <li>➤ NRCS Energy Estimator</li> <li>➤ USDA approved Energy Audit</li> <li>➤ RUSLE2</li> </ul>	<p>Has a USDA approved energy audit been implemented that address field operations to meet client objectives?</p> <p><b>OR</b></p> <p>Are on- farm renewable energy and/or energy conserving practices been implemented to meet client objectives?</p>		

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AIR RESOURCES						
<p><b>28. AIR QUALITY IMPACTS:</b> <i>Emissions of Particulate Matter - PM - and PM Precursors</i></p>	<p>Have episodes or complaints of emissions of PM (dust, smoke, exhaust, etc.), or chemical drift occurred?</p> <p><b>OR</b></p> <p>Do activities contribute to agricultural source PM or PM precursor emissions?</p>			<ul style="list-style-type: none"> <li>➤ Client input</li> <li>➤ Planner observation</li> <li>➤ RUSLE2</li> </ul>	<p>Are PM and PM Precursor emissions managed to meet client objectives?</p>	
<p><b>29. AIR QUALITY IMPACTS:</b> <i>Emissions of Greenhouse Gases – (GHGs)</i></p>	<p>Are GHGs regulated in this planning area?</p> <p><b>OR</b></p> <p>Do activities produce GHGs emissions?</p>			<ul style="list-style-type: none"> <li>➤ Client input</li> <li>➤ Planner observation</li> <li>➤ RUSLE2</li> <li>➤ COMET – Farm</li> <li>➤ COMET 2.0</li> <li>➤ COMET – Quick Energy Tool</li> </ul>	<p>Are greenhouse gas emissions managed to meet client objectives?</p>	
<p><b>30. AIR QUALITY IMPACTS:</b> <i>Emissions of Ozone Precursors</i></p>	<p>Do operations produce ozone precursor emissions?</p>			<ul style="list-style-type: none"> <li>➤ Client input</li> <li>➤ Planner observation</li> <li>➤ RUSLE2</li> <li>➤ COMET – Quick Energy Tool</li> </ul>	<p>Are ozone precursor emissions are managed to meet client objectives?</p>	
<p><b>31. AIR QUALITY IMPACTS:</b> <i>Objectionable odors</i></p>	<p>Do activities contribute to odor nuisance air quality conditions?</p> <p><b>OR</b></p> <p>Are odor sources regulated in this planning area?</p> <p><b>OR</b></p> <p>Have odor episodes or complaints of odor nuisance occurred?</p>			<ul style="list-style-type: none"> <li>➤ Client input</li> <li>➤ Planner observation</li> </ul>	<p>Are odors managed to meet client objectives?</p>	

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<i>Checklist Notes</i>	