

**Colorado Conservation Measures for the Gunnison Sage-Grouse Biological Opinion**  
*for Natural Resources Conservation Services (NRCS) USDA Farm Bill programs*  
 September 29, 2015

In the Gunnison Sage-Grouse Biological Opinion (Opinion), the U.S. Fish and Wildlife Service and NRCS identified ten potential adverse effects to the species that may result from implementation of NRCS conservation practices. To address these potential adverse effects, the Service, in cooperation with NRCS, developed specific conservation measures to minimize, avoid, or eliminate those effects. In addition, NRCS agreed to coordinate with the affected State Wildlife Agencies to establish state-specific guidance to the conservation measures, where more expansive protective measures are appropriate or where further clarification was necessary. This document establishes Colorado’s statewide coordination with Colorado Parks and Wildlife (CPW), as identified in *blue italic* font.

Collectively, the conservation measures and the state-specific guidance will be implemented where the Opinion applies (refer to the [Decision Flowchart](#), Appendix 6, for guidance on when the Opinion applies).

**Potential Adverse Effects and Associated Conservation Measures for Colorado**

Potential Adverse Effects (AE)		Planning Conservation Measure (incorporated into the NRCS planning process)	Implementation Conservation Measure (incorporated into the implementation requirements/job sheet and plan map)	NRCS Conservation Practices
<b>AE 1:</b> Physical disturbance (including noise) of birds	<b>CM 1</b>	NRCS shall coordinate with Colorado Parks and Wildlife (CPW) to identify appropriate restrictions on the: placement, extent, configuration, timing of conservation practice standards, and the area where these practice restrictions would apply so as to avoid or minimize physical disturbance to GuSG where they may occur. <i>State-level coordination identified no additional restrictions; use the CM’s as identified in the Opinion → Site-specific areas where these restrictions apply, will be identified in the planning process by NRCS and in coordination with local CPW experts when appropriate.</i>	<b>Timing restrictions:</b> <u>Mar 1<sup>st</sup> to May 31<sup>st</sup></u> no activities around active or inactive leks <sup>1</sup> from two hours before sunrise to two hours after sunrise. <u>Apr 1<sup>st</sup> to Jul 15<sup>th</sup></u> general restrictions on disturbance in nesting and brood rearing habitat. <u>Nov 15<sup>th</sup> to Feb 28<sup>th</sup></u> general restrictions on disturbance in winter habitat. <i>When these restriction apply to site-specific areas, those areas will be identified on the plan map. All restrictions will be clearly relayed in the implementation requirements/job sheets.</i>	Applies to all: 645, 528, 644, 643, 472, 511, 314, 327, 328, 340, 342, 394, 512, 315, 550, 390, 384, 382, 649, 410, 516, 500, 533, 654, 574, 642, 614, 560, 362, 548, 561, 388, 441, 442 <sup>2</sup> , 443, 430, 378, 338, 578, 587, 612, 638, 380, 449
<b>AE 2:</b> Temporary soil and vegetation disturbances, and  <b>AE 3:</b> Increased potential for invasive plants	<b>CM 2 &amp; CM3</b>	a) Evaluate the site’s potential for soil erosion and invasion by undesirable plants during practice planning and design. Following the evaluation of local site conditions, site-specific Ecological Site Descriptions and the specific needs of the GuSG will be used to inform the reclamation strategy.  b) Tree species should not be planted. <i>Unless native willows are necessary to create and stabilize wet meadow and riparian communities.</i>	e) Minimize soil and vegetative disturbances during installation of the conservation practices. <i>Use existing roads and disturbed areas for staging where feasible.</i>  f) During installation, utilize soil erosion protection measures if potential for off-site soil erosion exists.  g) All seed mixes <i>will</i> be State-certified weed free.	Applies to: 314, 327, 342, 394, 512, 550, 390, 384, 382, 410, 516, 500, 654, 574, 642, 614, 560, 362, 548, 561, 388, 430, 378, 338, 578, 587, 638

	<p>c) Native species will be used whenever possible to meet practice objectives with preference to shrubs, forbs, grasses and grass-like plants preferred by sage-grouse as well as those plants that reflect the potential of the specific ecological site to optimize sage-grouse habitat. <i>Refer to the RCP <a href="#">Appendix K</a>, site-specific ESD, and CPW recommendations.</i></p> <p><i>If planting within breeding or summer/fall habitat (including pastures, meadows, and floodplains) consider including favorable, native sage-grouse forbs. Refer to the RCP <a href="#">Appendix K</a>, site-specific ESD, and CPW recommendations.</i></p> <p>When non-native species are necessary to stabilize disturbed areas, avoid the use of plants identified as either invasive or aggressive. <i>Refer to <a href="#">CO's Noxious Weed Species</a> list.</i></p> <p><i>When it is necessary to use non-native species, they should provide the same community function that the native species would have filled. Refer to the rangewide plan for a listing of Recommended Plant Species for Sage Grouse.</i></p> <p>d) Timing of planting and post-establishment vegetation management will be designed as per local site conditions to meet NRCS practice specifications and NRCS biologist or CPW recommendations.</p> <p><i>For 394: Firebreaks should be situated along existing roads when possible and will not exceed 100 feet in width where practicable.</i></p>	<p>h) Machinery associated with the practice should be clean and free of vegetative debris prior to use to prevent the spread of invasive plant species.</p> <p>i) Newly seeded/planted sites will be rested from livestock grazing for an appropriate period as determined by NRCS to ensure stand establishment.</p> <p>j) Newly seeded/planted sites should be rested from livestock grazing for an appropriate period as determined by NRCS to ensure stand establishment.</p> <p><i>As a general rule, treated and seeded sites should not be grazed until at least the end of the second growing season following seeding. If NRCS determines rest is not necessary, then document the justification in the case file.</i></p>	
<p><b>AE 4:</b> Removing sagebrush and understory vegetation during implementation of the conservation practice standard</p>	<p><b>CM 4</b></p> <p>a) Design conservation practices to minimize or avoid loss of sagebrush during practice installation.</p> <p>b) Where removal of sagebrush and associated understory vegetation is the objective; NRCS shall coordinate with CPW to determine overall practice applicability, location, extent, configuration, and timing. <i>Note: This requires coordination with CPW. CPW or NRCS may determine it is not an action to implement due to the potential adverse effects.</i></p>	<p>CPS 394, 314: Minimize or avoid loss of sagebrush during practice installation.</p> <p>c) For linear practices, limit removal of sagebrush to one side of disturbance and to only the width of removal vehicle.</p> <p>d) If access for operation and maintenance (O&amp;M) is required, limit access to one side of disturbance and a limit access to one vehicle width.</p>	<p>Applies to: 394, 314, 382, 410, 516, 614, 560, 548, 561, 388, 430, 378, 638</p>

<p><b>AE 5:</b> Increased fire hazard</p>	<p><b>CM 5</b></p>	<p>a) Woody slash shall be treated if significant buildup of fuels occurs (typically in phase II and III juniper treatments).</p> <ul style="list-style-type: none"> <li>▪ Refer to the <a href="#">Biology, Ecology, and Mgmt. of Western Juniper (Miller et al. 2005)</a>.</li> <li>▪ Phase II &amp; II, trees are dominant to codominant with shrubs and herbs.</li> </ul>	<p>b) Slash piles shall be burned when wildfire risk is low (usually when soils are frozen or saturated). Follow state forestry laws, when applicable, for treating slash to minimize wildfire risk.</p>	<p>Applies to: 472, 314, 384</p>
<p><b>AE 6:</b> Accidental mortality to individual sage-grouse</p>	<p><b>CM 6</b></p>	<p>a) Plan and design placement of new fences at least 0.6 miles away from active and inactive leks<sup>1</sup>. If this is not possible, it is required that those fences be adequately marked to increase visibility. <i>Using <a href="#">CO Range Technical Note No. 39</a>.</i></p> <p>b) Identify existing fences that are within 0.6 miles from an active or inactive lek<sup>1</sup> and consider removing or relocating the fence to a site further from the lek. <i>If not, see item c).</i></p> <p>c) NRCS will require, at a minimum, marking all existing fences <u>within 0.6 mile</u> from an active or inactive leks<sup>1</sup> or in areas where collisions are known to occur. <i>Using <a href="#">CO Range Technical Note No. 39 (FOTG)</a>.</i> <i>Use professional judgement when an area within this buffer is <b>obviously</b> not a collision risk; i.e. do not mark a fence line through a farmyard, corral, rock bluff, or forested area..</i> <i>For a) – c): The NRCS planner will identify areas to be marked clearly for the client on a plan map, IR/job sheet, or others as appropriate.</i></p> <p>d) Ensure escape ramps are in all new and existing water facilities within the Action Area<sup>3</sup>. <i>Using <a href="#">CO Biology Technical Note No. 43 (FOTG)</a>.</i></p>	<p>e) CPS 511, 328, 340: For haying operations, employ techniques to avoid or minimize mortality, such as flush bars, slower speeds and harvesting patterns that herd wildlife out of the hayland (e.g., from field center to the outside edge).</p> <p>f) CPS 382: Install visual marker on new and existing fences occurring within 0.6 miles of an active, inactive or historic lek.</p> <p>g) Ensure wildlife escape ramps are in all new and existing water facilities <i>that occur within the Action Area</i>.</p>	<p>Applies to: 511, 328, 340, 382</p>
<p><b>AE 7:</b> Increased potential for West Nile virus</p>	<p><b>CM 7</b></p>	<p>a) Where a conservation practice involves the creation of an open water source, excluding livestock watering tanks, follow CPW’s recommendations to minimize or eliminate the threat of West Nile virus to the species; <i>as provided below:</i></p> <ul style="list-style-type: none"> <li>▪ Avoid placement within high use areas or in areas currently not susceptible to the virus because there are no open water sources.</li> <li>▪ At sites below 7,000 feet in elevation (where <i>Culex</i> mosquitos can occur): evaluate the feasibility of mosquito</li> </ul>	<p>Follow the site-specific implementation requirements.</p>	<p>Applies to: 449, 614, 388, 441, 442<sup>2</sup>, 443, 430, 378, 587, 638</p>

		<p><i>control within water sources that can provide breeding habitat for mosquitoes. Mitigation may include: changing irrigation techniques and controlling water overflow. If habitat mitigation cannot be achieved, use of insecticides must be closely evaluated as it could have detrimental effect on sage-grouse (CPW, 2014). NRCS may not provide insecticide recommendations, but may refer participants to CPW for assistance.</i></p>		
<p><b>AE 8:</b> Increased potential for predation</p>	<p><b>CM 8</b></p>	<p>a) Powerlines should be buried whenever possible or use solar systems to supply required power needs. <i>Design solar panel mounting poles as close to the ground as possible or apply cones or other devises to prevent avian predators from perching.</i></p> <p>b) Consider the possibility of (any try to avoid) increased habitat suitability for ravens and other predators resulting from water developments. <i>For example, avoid placement within sensitive areas like nesting and brood rearing or in areas currently free from predator attractants.</i></p> <p>c) Wildlife watering facilities should not be installed for sage grouse; <i>if they are being considered, it must be approved by the NRCS area biologist.</i></p> <p>d) Tree species should not be planted. <i>Unless to plant willows, if necessary to create and stabilize wet meadow and riparian communities. Use native and locally appropriate species.</i></p>	<p>e) Minimize to the extent possible the removal of existing vegetation when installing the practice. <i>Use existing roads and disturbed areas for staging whenever feasible.</i> <i>For linear practices, limit removal of sagebrush to one side of disturbance and to only the width of removal vehicle.</i></p> <p>f) Avoid leaving trash or brush piles that could provide cover for mammalian predator species. <i>Scatter or remove brush piles resulting from practice installation (such as vegetation removal to install a fence or pipeline).</i></p> <p>g) Whenever possible, install fence using T-posts to reduce perching opportunities for avian predators. Otherwise use simple cones or nails placed on the tops of the wooden posts to discourage avian predator perching. <i>Consider placing cones or nails on existing wood posts.</i></p> 	<p>Applies to: 382, 560, 338, 612, 380</p>
<p><b>AE 9:</b> Practice is considered to be of “limited use” for GuSG</p>	<p><b>CM 9</b></p>	<p><b>CPW Coordination Required.</b> Where a “limited use” conservation practice is planned, the NRCS planner shall coordinate with CPW to develop and implement <u>site-specific</u> guidelines to determine practice:</p> <ol style="list-style-type: none"> <li>i. applicability,</li> <li>ii. location,</li> <li>iii. extent,</li> <li>iv. configuration, and</li> </ol>	<p>Follow the site-specific implementation requirements.</p>	<p>560, 314 (for non-conifer removal), 362, 548, 561, 388, 441, 442*, 443, 430, 378, 338, 578, 587,</p>

		<p>v. timing to reduce risk to GuSG/habitats.</p> <p><i>Incorporate the site-specific guidelines or requirements established during the CPW coordination into the practice's implementation requirements/job sheet, and plan map.</i></p>		<p>612, 638, 380</p> <p>*center pivots and wheel lines are <u>not</u> covered under this BO.</p>
<p><b>AE 10:</b> Practice implementation in isolation without concurrent management prescribed to address GUSG habitat needs can result in a reduction of GUSG habitat quality.</p>	<p><b>CM 10</b></p>	<p><b>Core Practice 645 is Required for WLFW/SGL.</b></p> <p>The umbrella practice (or core practice) Upland Wildlife Habitat Management (code 645) shall be used to design, implement and install the other practice; to ensure that GuSG habitat is maintained or improved following application.</p> <p><i>Utilize the <a href="#">Gunnison Sage-grouse Rangewide Conservation Plan (RCP)</a> (CPW, 2005) as the basis for Gunnison sage-grouse habitat management planning and recommendations, <u>and</u> Utilize population-specific habitat data or guidelines when they are available or as they become available (i.e. <b>use the most recent, relevant information available</b>) (CPW, 2014).</i></p> <p><i>For 528: Refer to the Gunnison Sage-grouse Rangewide Conservation Plan (<a href="#">pg 114-119, 211-212 and Appendix H</a>) for grazing management recommendations and options. Monitoring should include the guidelines provided by the plan's addendum "<a href="#">Minimum Structural Vegetation Collection Guidelines for GUSG</a>" (CPW, 2005).</i></p> <p><b>Note:</b> CM 10 only applies to WLFW/SGL. CPS 645 must be included in the Conservation Plan (it does not have to be a contracted item).</p>	<p>Follow the implementation requirements of the CPS 645 Implementation Requirements/Job Sheet.</p>	<p>528, 644, 643, 472, 327, 342, 512, 550, 390, 382, 410, 516, 533, 574, 614, 560, 314 (for non-conifer removal), 362, 548, 561, 388, 441, 442<sup>21</sup>, 443, 430, 378, 338, 578</p>

<sup>11</sup> **Lek Definitions:**

**Active Lek.** For the purpose of this plan (i.e. GUSG Rangewide Plan), we primarily adopt the Connelly et al. 2000 definition of an active lek as an open area that has been attended by > 2 male sage-grouse in > 2 of the previous 5 years. However, this definition is derived mainly from observations of leks in large, stable populations and may not be appropriate for small populations with reduced numbers of males attending leks in fragmented sagebrush communities. Therefore, for the smaller GUSG populations outside of the Gunnison Basin, an active lek is defined as an open area where one or more sage-grouse have been observed on more than one occasion, engaging in courtship or breeding behavior. An area used by displaying males in the last 5 years is considered an active lek.

**Inactive Lek.** To be considered inactive for a given season, a lek must have zero males in attendance for at least two count periods. For the official status of a lek to be considered Inactive, a lek needs to be seasonally Inactive for five consecutive years (CPW 2004).

**Historic Lek.** A formerly active lek that has not been utilized for display or breeding within the last 10 years (CPW 2004).

<sup>21</sup><sup>31</sup> **Action Area.** Defined as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action." (50 CFR 402.02). The Action Area encompasses the area identified by the Service as critical habitat ([79 FR 69312GSRSC, 2005](#)). ) and other GUSG habitats identified in the Gunnison Sage-grouse Rangewide Conservation Plan (Additionally, the Action Area will extend beyond this boundary where GUSG occupancy has been documented).