

LESSER PRAIRIE-CHICKEN BIOLOGICAL OPINION, APPENDIX IV.  
**COLORADO CONSERVATION MEASURES (CM)**

NRCS Conservation Practice Standard	Conservation Measures (CM) including State-Specific Criteria
314-Brush Management <b>Limited Use Practice</b>	<p><b>Limited Use Practice:</b> Brush management (314) will be designed to support Upland Wildlife Habitat Management (645) to create desired LPC habitat conditions. Otherwise, ESA Section 7 consultation with the Service will be required. Also, this practice does not apply to removal of woody vegetation to facilitate a land use change.</p> <p><b>CM 1 (Develop Site Specific Criteria):</b> NRCS planners will coordinate with local biologists (NRCS, CPW, USFWS Partners, SWAT etc.) in establishing a local solution where needed.</p> <ul style="list-style-type: none"> <li>▪ Colorado Criteria requires that the 314 Job Sheets must be reviewed and approved (signed) by a NRCS, CPW, USFWS or Partner Biologist.</li> <li>▪ Colorado Criteria (per the 314 Practice Specification) requires that "all areas treated will be protected from grazing by domestic stock for a minimum of 15 months from the end of the treatment (longer deferment may be necessary if drought conditions exist). All subsequent grazing operations will be done according to a Prescribed Grazing (528) management plan."</li> </ul> <p><b>CM 1 (Non-disturbance Periods):</b> Defer implementation within 1/2 mile to known leks<sup>1)</sup> until all breeding and nesting activities are completed (<u>March 1 through July 15</u>).</p> <p><sup>1)</sup> Known leks, are leks that are occupied or have been recorded as active at least once within the previous five years. A GIS shapefile is provided at F:\geodata \wildlife.</p> <p><b>CM 2, 3 (Minimize Soil/Vegetation Disturbances):</b> During planning, evaluate the site's potential for soil erosion and invasion by undesirable plants. Avoid or minimize potential increase in soil erosion or establishment or spread of invasive plants that may result from implementation of the practice. At a minimum, these measures will include:</p> <ul style="list-style-type: none"> <li>▪ Minimize soil and vegetative disturbances during installation of conservation practices. Avoid disturbing the soil on sensitive areas with a high potential for soil erosion.</li> <li>▪ Use the conservation measures provided for Critical Area Planting (342) in areas where reseeding disturbed areas is needed. Use site specific reclamation strategies developed using ecological site descriptions (ESDs) with consideration to LPC habitat needs.</li> <li>▪ Regularly monitor the site after implementation to ensure erosion and weed issues are addressed quickly. Include this requirement in the participant's O&amp;M.</li> </ul> <p><b>CM 4 (Avoid/Minimize Permanent Habitat Loss):</b> Design the practice to avoid or minimize the permanent removal of habitat conditions that could be caused by the practice installation or where there is a reasonable expectation that, once implemented, will result in permanent degradation of habitat conditions.</p> <ul style="list-style-type: none"> <li>▪ The practice will be designed to minimize or avoid unintentional damage to non-target plants.</li> <li>▪ Avoid impacting special resources such as riparian areas, wetlands/playas, leks, or habitat of other at-risk species. These avoidance areas shall be clearly identify for the participant.</li> <li>▪ Large brush (&gt;5 ft.) will be felled unless other considerations necessitate leaving them standing. If left standing, document the justification and decision on the NRCS-CPA-52.</li> <li>▪ Woody slash shall be treated if significant buildup of fuels occurs. 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.</li> </ul>
315-Herbaceous Weed Control	<p><b>CM 1 (Develop Site Specific Criteria):</b> NRCS planners will coordinate with local biologists (NRCS, CPW, USFWS Partners, SWAT etc.) in establishing a local solution where needed.</p> <ul style="list-style-type: none"> <li>▪ No additional state-specific criteria is provided.</li> </ul> <p><b>CM 1 (Non-disturbance Periods):</b> Defer implementation within 1/2 mile to known leks<sup>1)</sup> until all breeding and nesting activities are completed (<u>March 1 through July 15</u>).</p> <p><sup>1)</sup> Known leks, are leks that are occupied or have been recorded as active at least once within the previous five years. A GIS shapefile is provided at F:\geodata \wildlife.</p> <p><b>CM 2, 3 (Minimize Soil/Vegetation Disturbances):</b> During planning, evaluate the site's potential for soil erosion and invasion by undesirable plants. Avoid or minimize potential increase in soil erosion or establishment or spread of invasive plants that may result from implementation of the practice. At a minimum, these measures will include:</p> <ul style="list-style-type: none"> <li>▪ Spot treatment should be utilized where practicable.</li> <li>▪ Use site specific reclamation strategies developed using ecological site descriptions (ESDs). Native species will be used whenever possible to meet practice objectives with preference to forbs, grasses and grass-like plants preferred by the LPC as well as those plants that reflect the potential of the specific ecological site to optimize LPC habitat needs. Seed mixes should be State-certified, meeting the appropriate State certification criteria as being free of state declared noxious and invasive vegetative material.</li> <li>▪ Monitor, evaluate and control State listed invasive and noxious plants during practice planning and design.</li> <li>▪ Machinery associated with the practice should be clean and free of vegetative debris prior to use to prevent the spread of invasive plant species.</li> <li>▪ Use the conservation measures provided for Critical Area Planting (342) in areas where reseeding disturbed areas is needed.</li> </ul> <p><b>CM 5 (Reduce Mortality/Injury Risk):</b> Practices will be designed to reduce potential mortality or injury to individual birds.</p> <ul style="list-style-type: none"> <li>▪ Operate machinery in a manner that allows wildlife to flush and escape by methods such as starting operations in the middle of field and working outward, and/or by modify equipment with flush bar attachments.</li> </ul>

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327-Conservation Cover	<p><b>CM 1 (Develop Site Specific Criteria):</b> NRCS planners will coordinate with local biologists (NRCS, CPW, USFWS Partners, SWAT etc.) in establishing a local solution where needed.</p> <ul style="list-style-type: none"> <li>▪ No additional state-specific criteria is provided.</li> </ul> <p><b>CM 1 (Non-disturbance Periods):</b> Defer implementation within 1/2 mile to known leks<sup>11</sup> until all breeding and nesting activities are completed (<u>March 1 through July 15</u>).</p> <p><sup>11</sup> Known leks, are leks that are occupied or have been recorded as active at least once within the previous five years. A GIS shapefile is provided at F:\geodata \wildlife.</p> <ul style="list-style-type: none"> <li>▪ When implementing this practice on cropland for the purpose of establishing perennial vegetation; a number of activities, primarily planting, may take place during the primary breeding and nesting season (March 1st-July 15th). In these situations an effort shall be taken to complete activities with as little disturbance as possible to adjacent and surrounding existing LPC habitat. Clearly document this on the Job Sheet and in the NRCS-CPA-52. Contact a biologist to assist with developing these measures, if needed.</li> <li>▪ When converting existing vegetation to an improved cover; a number of activities may need to take place during the primary breeding and nesting season (March 1st-July 15th). In these situations individual on-site determinations will be conducted with a biologist to plan the best course of action. Initial preparations such as mowing or burning may need to be completed prior to the leking season to reduce LPC activity in the area to be seeded. Clearly document this on the Job Sheet and in the NRCS-CPA-52. There may be situations where consultation with the Service will be necessary.</li> </ul> <p><b>CM 2, 3 (Minimize Soil/Vegetation Disturbances):</b> During planning, evaluate the site's potential for soil erosion and invasion by undesirable plants. Avoid or minimize potential increase in soil erosion or establishment or spread of invasive plants that may result from implementation of the practice. At a minimum, these measures will include:</p> <ul style="list-style-type: none"> <li>▪ Use site specific reclamation strategies developed using ecological site descriptions (ESDs). Native species will be used whenever possible to meet practice objectives with preference to forbs, grasses and grass-like plants preferred by the LPC as well as those plants that reflect the potential of the specific ecological site to optimize LPC habitat needs. Seed mixes should be State-certified, meeting the appropriate State certification criteria as being free of state declared noxious and invasive vegetative material.</li> <li>▪ Control livestock access as needed to allow for initial establishment of new vegetative plantings and control weeds through flash grazing.</li> <li>▪ Timing of planting and post-establishment vegetation management will be designed per local site conditions to meet NRCS practice specifications and biologist recommendations.</li> <li>▪ Monitor, evaluate and control State listed invasive and noxious plants during practice planning and design.</li> <li>▪ Machinery associated with the practice should be clean and free of vegetative debris prior to use to prevent the spread of invasive plant species.</li> </ul>
338-Prescribed Burning	<p><b>CM 1 (Develop Site Specific Criteria):</b> This practice standard will be designed to support other practices which will create the desired habitat conditions for the LPC as recommended by CPW or the USFWS Partners.</p> <p><b>CM 1 (Non-disturbance Periods):</b> Defer implementation within 1/2 mile to known leks<sup>11</sup> until all breeding and nesting activities are completed (<u>March 1 through July 15</u>).</p> <p><sup>11</sup> Known leks, are leks that are occupied or have been recorded as active at least once within the previous five years. A GIS shapefile is provided at F:\geodata \wildlife.</p>
340-Cover Crop	<p><b>CM 1 (Develop Site Specific Criteria):</b> NRCS planners will coordinate with local biologists (NRCS, CPW, USFWS Partners, SWAT etc.) in establishing a local solution where needed.</p> <ul style="list-style-type: none"> <li>▪ Where practicable use of more than one cover crop species will provide greater benefit to LPC.</li> <li>▪ No additional state-specific criteria is provided.</li> </ul> <p><b>CM 1 (Non-disturbance Periods):</b> Defer implementation within 1/2 mile to known leks<sup>11</sup> until all breeding and nesting activities are completed (<u>March 1 through July 15</u>).</p> <p><sup>11</sup> Known leks, are leks that are occupied or have been recorded as active at least once within the previous five years. A GIS shapefile is provided at F:\geodata \wildlife.</p> <ul style="list-style-type: none"> <li>▪ When implementing this practice on cropland for the purpose of establishing perennial vegetation; a number of activities, primarily planting, may take place during the primary breeding and nesting season (March 1<sup>st</sup>-July 15<sup>th</sup>). In these situations an effort shall be taken to complete activities with as little disturbance as possible to adjacent and surrounding existing LPC habitat. Clearly document this on the Job Sheet and in the NRCS-CPA-52. Contact a biologist to assist with developing these measures, if needed.</li> </ul> <p><b>CM 2, 3 (Minimize Soil/Vegetation Disturbances):</b> During planning, evaluate the site's potential for soil erosion and invasion by undesirable plants. Avoid or minimize potential increase in soil erosion or establishment or spread of invasive plants that may result from implementation of the practice. At a minimum, these measures will include:</p> <ul style="list-style-type: none"> <li>▪ Monitor, evaluate and control State listed invasive and noxious plants during practice planning and design.</li> <li>▪ Machinery associated with the practice should be clean and free of vegetative debris prior to use to prevent the spread of invasive plant species.</li> </ul>
342-Critical Area Planting	<p><b>CM 1 (Develop Site Specific Criteria):</b> NRCS planners will coordinate with local biologists (NRCS, CPW, USFWS Partners, SWAT etc.) in establishing a local solution where needed.</p> <ul style="list-style-type: none"> <li>▪ No additional state-specific criteria is provided.</li> </ul> <p><b>CM 1 (Non-disturbance Periods):</b> Defer implementation within 1/2 mile to known leks<sup>11</sup> until all breeding and nesting activities are completed (<u>March 1 through July 15</u>).</p> <p><sup>11</sup> Known leks, are leks that are occupied or have been recorded as active at least once within the previous five years. A GIS shapefile is provided at F:\geodata \wildlife.</p> <p><b>CM 2, 3 (Minimize Soil/Vegetation Disturbances):</b> During planning, evaluate the site's potential for soil erosion and invasion by undesirable plants. Avoid or minimize potential increase in soil erosion or establishment or spread of invasive plants that may result from implementation of the practice. At a minimum, these measures will include:</p>

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342-Critical Area Planting (Cont.)	<ul style="list-style-type: none"> <li>▪ Evaluate the site's potential for soil erosion. Minimize soil and vegetative disturbances during installation of conservation practices. During installation, utilize soil erosion protection measures if potential for off-site soil erosion exists.</li> <li>▪ Use site specific reclamation strategies developed using ecological site descriptions (ESDs). Native species will be used whenever possible to meet practice objectives with preference to forbs, grasses and grass-like plants preferred by the LPC as well as those plants that reflect the potential of the specific ecological site to optimize LPC habitat needs. Seed mixes should be State-certified, meeting the appropriate State certification criteria as being free of state declared noxious and invasive vegetative material.</li> <li>▪ Monitor, evaluate and control State listed invasive and noxious plants during practice planning and design.</li> <li>▪ Machinery associated with the practice should be clean and free of vegetative debris prior to use to prevent the spread of invasive plant species.</li> <li>▪ Timing of planting and post-establishment vegetation management will be designed as per local site conditions to meet NRCS practice specifications.</li> <li>▪ Regularly monitor the site after implementation to ensure erosion and weed issues are addressed quickly. Include this requirement in the participant's O&amp;M.</li> </ul>
351-Well Decommissioning	<p><b>CM 1 (Develop Site Specific Criteria):</b> NRCS planners will coordinate with local biologists (NRCS, CPW, USFWS Partners, SWAT etc.) in establishing a local solution where needed.</p> <ul style="list-style-type: none"> <li>▪ No additional state-specific criteria is provided.</li> </ul> <p><b>CM 1 (Non-disturbance Periods):</b> Defer implementation within 1/2 mile to known leks<sup>1)</sup> until all breeding and nesting activities are completed (<u>March 1 through July 15</u>).</p> <p><sup>1)</sup> Known leks, are leks that are occupied or have been recorded as active at least once within the previous five years. A GIS shapefile is provided at F:\geodata \wildlife.</p> <p><b>CM 2, 3 (Minimize Soil/Vegetation Disturbances):</b> During planning, evaluate the site's potential for soil erosion and invasion by undesirable plants. Avoid or minimize potential increase in soil erosion or establishment or spread of invasive plants that may result from implementation of the practice. At a minimum, these measures will include:</p> <ul style="list-style-type: none"> <li>▪ Use the conservation measures provided for Critical Area Planting (342) in areas where reseeding disturbed areas is needed.</li> </ul>
378-Pond Limited Use	<p><b>Limited Use Practice:</b> This practice will only be applied where needed to meet the daily water requirements of livestock and to facilitate prescribed livestock grazing distribution. Otherwise, ESA Section 7 consultation with the Service will be required.</p> <p><b>CM 1 (Develop Site Specific Criteria):</b> NRCS planners will coordinate with local biologists (NRCS, CPW, USFWS Partners, SWAT etc.) in establishing a local solution where needed.</p> <ul style="list-style-type: none"> <li>▪ No additional state-specific criteria is provided.</li> </ul> <p><b>CM 1 (Non-disturbance Periods):</b> Defer implementation within 1/2 mile to known leks<sup>1)</sup> until all breeding and nesting activities are completed (<u>March 1 through July 15</u>).</p> <p><sup>1)</sup> Known leks, are leks that are occupied or have been recorded as active at least once within the previous five years. A GIS shapefile is provided at F:\geodata \wildlife.</p> <p><b>CM 2, 3 (Minimize Soil/Vegetation Disturbances):</b> During planning, evaluate the site's potential for soil erosion and invasion by undesirable plants. Avoid or minimize potential increase in soil erosion or establishment or spread of invasive plants that may result from implementation of the practice. At a minimum, these measures will include:</p> <ul style="list-style-type: none"> <li>▪ Use site specific reclamation strategies developed using ecological site descriptions (ESDs). Native species will be used whenever possible to meet practice objectives with preference to forbs, grasses and grass-like plants preferred by the LPC as well as those plants that reflect the potential of the specific ecological site to optimize LPC habitat needs. Seed mixes should be State-certified, meeting the appropriate State certification criteria as being free of state declared noxious and invasive vegetative material.</li> <li>▪ Monitor, evaluate and control State listed invasive and noxious plants during practice planning and design.</li> <li>▪ Machinery associated with the practice should be clean and free of vegetative debris prior to use to prevent the spread of invasive plant species.</li> <li>▪ Use the conservation measures provided for Critical Area Planting (342) in areas where reseeding disturbed areas is needed.</li> </ul>
382-Fence	<p><b>CM 1 (Develop Site Specific Criteria):</b> NRCS planners will coordinate with local biologists (NRCS, CPW, USFWS Partners, SWAT etc.) in establishing a local solution where needed.</p> <ul style="list-style-type: none"> <li>▪ No additional state-specific criteria is provided.</li> </ul> <p><b>CM 1 (Non-disturbance Periods):</b> Defer implementation within 1/2 mile to known leks<sup>1)</sup> until all breeding and nesting activities are completed (<u>March 1 through July 15</u>).</p> <p><sup>1)</sup> Known leks, are leks that are occupied or have been recorded as active at least once within the previous five years. A GIS shapefile is provided at F:\geodata \wildlife.</p> <p><b>CM 2, 3 (Minimize Soil/Vegetation Disturbances):</b> During planning, evaluate the site's potential for soil erosion and invasion by undesirable plants. Avoid or minimize potential increase in soil erosion or establishment or spread of invasive plants that may result from implementation of the practice. At a minimum, these measures will include:</p> <ul style="list-style-type: none"> <li>▪ Machinery associated with the practice should be clean and free of vegetative debris prior to use to prevent the spread of invasive plant species.</li> <li>▪ Use the conservation measures provided for Critical Area Planting (342) in areas where reseeding disturbed areas is needed.</li> </ul> <p><b>CM 4 (Avoid/Minimize Permanent Habitat Loss):</b> Design the practice to avoid or minimize the permanent removal of habitat conditions that could be caused by the practice installation or where there is a reasonable expectation that, once implemented, will result in permanent degradation of habitat conditions.</p> <ul style="list-style-type: none"> <li>▪ Shrub removal will only occur in a &lt; 20 ft. wide swath where fences are being constructed.</li> </ul> <p><b>CM 5 (Reduce Mortality/Injury Risk):</b> Practices will be designed to reduce potential mortality or injury to individual birds.</p>

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382-Fence (Cont.)	<ul style="list-style-type: none"> <li>▪ Consideration will be made to location, design, density of fence and other site specific factors that may affect LPC fence strikes.</li> <li>▪ Permanent interior fence requires a maximum of 4 strands of wire ≤42 inches high (up to 44 inches is allowed in the Opinion, but this will require a waiver per the 382 standard). <i>Reminder:</i> permanent exterior fencing must meet local fence laws and insurance liability clauses.</li> </ul> <p><u>For new permanent fences:</u></p> <p>1<sup>st</sup>. Alternatives to fencing will be evaluated prior to new fence installation (e.g., temp. electric fence, water placement, placement of minerals, prescribed burning),</p> <p>2<sup>nd</sup>. if no alternatives are available, or the alternatives are determined not feasible (by NRCS), then NRCS will ensure that the new fence is at least a ½ mile from known leks<sup>1</sup>,</p> <p>3<sup>rd</sup>. if this is determined not feasible (by NRCS), then fence markers will be installed (at least) within ¼ of a known lek<sup>1</sup>. Use state approved technical guidance (FOTG).</p> <p><i>*Remember to document the justification and decisions make on the NRCS-CPA-52.</i></p> <p><u>For existing fences:</u></p> <p>1<sup>st</sup>. Identify existing fences that are within ½ mile of a known lek<sup>1</sup> and evaluate if removing or relocating the fence to a site further from the lek is feasible,</p> <p>2<sup>nd</sup>. if not feasible, then fence markers will be installed where the existing fence is within ¼ mile from an active lek<sup>1</sup> or where collisions are known to occur.</p>
384-Woody Residue Treatment	<p><b>CM 1 (Develop Site Specific Criteria):</b> NRCS planners will coordinate with local biologists (NRCS, CPW, USFWS Partners, SWAT etc.) in establishing a local solution where needed.</p> <ul style="list-style-type: none"> <li>▪ Consider air quality regulations, state and local burning regulations, and safety if utilizing prescribed burning as a treatment.</li> <li>▪ No additional state-specific criteria is provided.</li> </ul> <p><b>CM 1 (Non-disturbance Periods):</b> Defer implementation within 1/2 mile to known leks<sup>1</sup> until all breeding and nesting activities are completed (<u>March 1 through July 15</u>).</p> <p><sup>1</sup> Known leks, are leks that are occupied or have been recorded as active at least once within the previous five years. A GIS shapefile is provided at F:\geodata \wildlife.</p> <ul style="list-style-type: none"> <li>▪ Limit duration of construction period to the minimum practicable.</li> </ul> <p><b>CM 2, 3 (Minimize Soil/Vegetation Disturbances):</b> During planning, evaluate the site's potential for soil erosion and invasion by undesirable plants. Avoid or minimize potential increase in soil erosion or establishment or spread of invasive plants that may result from implementation of the practice. At a minimum, these measures will include:</p> <ul style="list-style-type: none"> <li>▪ Minimize soil and vegetative disturbances during installation of conservation practices. Utilize soil erosion protection measures, if potential for soil erosion exists (silt fences etc.).</li> <li>▪ Design conservation practice to minimize or avoid loss of shrubs during practice installation.</li> <li>▪ If access for operation and maintenance is required, limit access to one side of disturbance and limit access to one vehicle width.</li> <li>▪ Use site specific reclamation strategies developed using ecological site descriptions (ESDs). Native species will be used whenever possible to meet practice objectives with preference to forbs, grasses and grass-like plants preferred by the LPC as well as those plants that reflect the potential of the specific ecological site to optimize LPC habitat needs. Seed mixes should be State-certified, meeting the appropriate State certification criteria as being free of state declared noxious and invasive vegetative material.</li> <li>▪ Monitor, evaluate and control State listed invasive and noxious plants during practice planning and design.</li> <li>▪ Machinery associated with the practice should be clean and free of vegetative debris prior to use to prevent the spread of invasive plant species.</li> <li>▪ Timing of planting and post-establishment vegetation management will be designed as per local site conditions to meet NRCS practice specifications.</li> <li>▪ Regularly monitor the site after implementation to ensure erosion and weed issues are addressed quickly. Include this requirement in the participant's O&amp;M.</li> </ul>
394-Firebreak Limited Use Practice	<p><b>Limited Use Practice:</b> Firebreaks will be used to support grazing management (528) or a wildlife habitat plan (645). Otherwise, ESA Section 7 consultation with the Service will be required.</p> <p><b>CM 1 (Non-disturbance Periods):</b> Defer implementation within 1/2 mile to known leks<sup>1</sup> until all breeding and nesting activities are completed (<u>March 1 through July 15</u>).</p> <p><sup>1</sup> Known leks, are leks that are occupied or have been recorded as active at least once within the previous five years. A GIS shapefile is provided at F:\geodata \wildlife.</p> <p><b>CM 2, 3 (Minimize Soil/Vegetation Disturbances):</b> During planning, evaluate the site's potential for soil erosion and invasion by undesirable plants. Avoid or minimize potential increase in soil erosion or establishment or spread of invasive plants that may result from implementation of the practice. At a minimum, these measures will include:</p> <ul style="list-style-type: none"> <li>▪ State-listed noxious and invasive plants will be identified and controlled following firebreak installation.</li> </ul> <p><b>CM 4 (Avoid/Minimize Permanent Habitat Loss):</b> Design the practice to avoid or minimize the permanent removal of habitat conditions that could be caused by the practice installation or where there is a reasonable expectation that, once implemented, will result in permanent degradation of habitat conditions.</p> <ul style="list-style-type: none"> <li>▪ Disked firebreaks will be allowed to re-establish or be seeded to beneficial grasses, forbs and legumes to provide bugging or brood rearing habitat.</li> </ul> <p><b>CM 5 (Reduce Mortality/Injury Risk):</b> Practices will be designed to reduce potential mortality or injury to individual birds.</p> <ul style="list-style-type: none"> <li>▪ Operate machinery in a manner that allows wildlife to flush and escape by methods such as starting operations in the middle of field and working outward, and/or by modify equipment with flush bar attachments.</li> </ul>

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410- Grade Stabilization Structure	<p><b>CM 1 (Develop Site Specific Criteria):</b> NRCS planners will coordinate with local biologists (NRCS, CPW, USFWS Partners, SWAT etc.) in establishing a local solution where needed.</p> <ul style="list-style-type: none"> <li>▪ No additional state-specific criteria is provided.</li> </ul> <p><b>CM 1 (Non-disturbance Periods):</b> Defer implementation within 1/2 mile to known leks<sup>11</sup> until all breeding and nesting activities are completed (<u>March 1 through July 15</u>).</p> <p><sup>11</sup> Known leks, are leks that are occupied or have been recorded as active at least once within the previous five years. A GIS shapefile is provided at F:\geodata \wildlife.</p> <p><b>CM 2, 3 (Minimize Soil/Vegetation Disturbances):</b> During planning, evaluate the site's potential for soil erosion and invasion by undesirable plants. Avoid or minimize potential increase in soil erosion or establishment or spread of invasive plants that may result from implementation of the practice. At a minimum, these measures will include:</p> <ul style="list-style-type: none"> <li>▪ Use site specific reclamation strategies developed using ecological site descriptions (ESDs). Native species will be used whenever possible to meet practice objectives with preference to forbs, grasses and grass-like plants preferred by the LPC as well as those plants that reflect the potential of the specific ecological site to optimize LPC habitat needs. Seed mixes should be State-certified, meeting the appropriate State certification criteria as being free of state declared noxious and invasive vegetative material.</li> <li>▪ Monitor, evaluate and control State listed invasive and noxious plants during practice planning and design.</li> <li>▪ Machinery associated with the practice should be clean and free of vegetative debris prior to use to prevent the spread of invasive plant species.</li> <li>▪ Timing of planting and post-establishment vegetation management will be designed as per local site conditions to meet NRCS practice specifications.</li> <li>▪ Regularly monitor the site after implementation to ensure erosion and weed issues are addressed quickly. Include this requirement in the participant's O&amp;M.</li> <li>▪ Use the conservation measures provided for Critical Area Planting (342) in areas where reseeding disturbed areas is needed.</li> </ul> <p><b>CM 5 (Reduce Mortality/Injury Risk):</b> Practices will be designed to reduce potential mortality or injury to individual birds.</p> <ul style="list-style-type: none"> <li>▪ Ingress/egress routes will avoid nesting/brood-rearing/lek areas; as mortality by collision may occur.</li> </ul>
472-Access Control	<p><b>CM 1 (Develop Site Specific Criteria):</b> This practice standard will be designed to support other practices which will create the desired habitat conditions for the LPC as recommended by CPW or the USFWS Partners.</p> <ul style="list-style-type: none"> <li>▪ Routine follow-up will occur to monitor the effectiveness of the practice, at least annually.</li> <li>▪ If fence construction is needed to facilitate this practice, use Conservation Practice Standard 382 Fence for specific conservation measures.</li> </ul>
500-Obstruction Removal	<p><b>CM 1 (Non-disturbance Periods):</b> Defer implementation within 1/2 mile to known leks<sup>11</sup> until all breeding and nesting activities are completed (<u>March 1 through July 15</u>).</p> <p><sup>11</sup> Known leks, are leks that are occupied or have been recorded as active at least once within the previous five years. A GIS shapefile is provided at F:\geodata \wildlife.</p> <p><b>CM 2, 3 (Minimize Soil/Vegetation Disturbances):</b> During planning, evaluate the site's potential for soil erosion and invasion by undesirable plants. Avoid or minimize potential increase in soil erosion or establishment or spread of invasive plants that may result from implementation of the practice. At a minimum, these measures will include:</p> <ul style="list-style-type: none"> <li>▪ Use site specific reclamation strategies developed using ecological site descriptions (ESDs). Native species will be used whenever possible to meet practice objectives with preference to forbs, grasses and grass-like plants preferred by the LPC as well as those plants that reflect the potential of the specific ecological site to optimize LPC habitat needs. Seed mixes should be State-certified, meeting the appropriate State certification criteria as being free of state declared noxious and invasive vegetative material.</li> <li>▪ Monitor, evaluate and control State listed invasive and noxious plants during practice planning and design.</li> <li>▪ Machinery associated with the practice should be clean and free of vegetative debris prior to use to prevent the spread of invasive plant species.</li> <li>▪ Regularly monitor the site after implementation to ensure erosion and weed issues are addressed quickly. Include this requirement in the participant's O&amp;M.</li> <li>▪ Use the conservation measures provided for Critical Area Planting (342) in areas where reseeding disturbed areas is needed.</li> </ul> <p><b>CM 5 (Reduce Mortality/Injury Risk):</b> Practices will be designed to reduce potential mortality or injury to individual birds.</p> <ul style="list-style-type: none"> <li>▪ Ingress/egress routes will avoid nesting/brood-rearing/lek areas; as mortality by collision may occur.</li> </ul>
511-Forage Harvest Management	<p><i>Additional:</i> Leave corners, field borders, and odd areas un-harvested for supplemental cover and brood rearing habitat.</p> <p><b>CM 1 (Non-disturbance Periods):</b> Defer implementation within 1/2 mile to known leks<sup>11</sup> until all breeding and nesting activities are completed (<u>March 1 through July 15</u>).</p> <p><sup>11</sup> Known leks, are leks that are occupied or have been recorded as active at least once within the previous five years. A GIS shapefile is provided at F:\geodata \wildlife.</p> <p><b>CM 5 (Reduce Mortality/Injury Risk):</b> Practices will be designed to reduce potential mortality or injury to individual birds.</p> <ul style="list-style-type: none"> <li>▪ Operate machinery in a manner that allows wildlife to flush and escape by methods such as starting operations in the middle of field and working outward, and/or by modify equipment with flush bar attachments.</li> </ul>

NRCS Conservation Practice Standard	Conservation Measures (CM) including State-Specific Criteria
512- Forage & Biomass Planting	<p><b>CM 1 (Develop Site Specific Criteria):</b> NRCS planners will coordinate with local biologists (NRCS, CPW, USFWS Partners, SWAT etc.) in establishing a local solution where needed.</p> <ul style="list-style-type: none"> <li>▪ Control livestock access as needed to allow for initial establishment of new vegetative plantings and control weeds through flash grazing.</li> <li>▪ No additional state-specific criteria is provided.</li> </ul> <p><b>CM 1 (Non-disturbance Periods):</b> Defer implementation within 1/2 mile to known leks<sup>1)</sup> until all breeding and nesting activities are completed (<u>March 1 through July 15</u>).</p> <p><sup>1)</sup> Known leks, are leks that are occupied or have been recorded as active at least once within the previous five years. A GIS shapefile is provided at F:\geodata \wildlife.</p> <ul style="list-style-type: none"> <li>▪ When implementing this practice on cropland for the purpose of establishing perennial vegetation; a number of activities, primarily planting, may take place during the primary breeding and nesting season (March 1<sup>st</sup>-July 15<sup>th</sup>). In these situations an effort shall be taken to complete activities with as little disturbance as possible to adjacent and surrounding existing LPC habitat. Clearly document this on the Job Sheet and in the NRCS-CPA-52. Contact a biologist to assist with developing these measures, if needed.</li> </ul> <p><b>CM 2, 3 (Minimize Soil/Vegetation Disturbances):</b> During planning, evaluate the site's potential for soil erosion and invasion by undesirable plants. Avoid or minimize potential increase in soil erosion or establishment or spread of invasive plants that may result from implementation of the practice. At a minimum, these measures will include:</p> <ul style="list-style-type: none"> <li>▪ Use site specific reclamation strategies developed using ecological site descriptions (ESDs). Native species will be used whenever possible to meet practice objectives with preference to forbs, grasses and grass-like plants preferred by the LPC as well as those plants that reflect the potential of the specific ecological site to optimize LPC habitat needs. Seed mixes should be State-certified, meeting the appropriate State certification criteria as being free of state declared noxious and invasive vegetative material.</li> <li>▪ Timing of planting and post-establishment vegetation management will be designed per local site conditions to meet NRCS practice specifications and biologist recommendations.</li> <li>▪ Monitor, evaluate and control State listed invasive and noxious plants during practice planning and design.</li> <li>▪ Machinery associated with the practice should be clean and free of vegetative debris prior to use to prevent the spread of invasive plant species.</li> </ul> <p><b>CM 5 (Reduce Mortality/Injury Risk):</b> Practices will be designed to reduce potential mortality or injury to individual birds.</p> <ul style="list-style-type: none"> <li>▪ Operate machinery in a manner that allows wildlife to flush and escape by methods such as starting operations in the middle of field and working outward, and/or by modify equipment with flush bar attachments.</li> </ul>
516-Livestock Pipeline (8 inches or less) <b>Limited Use Practice</b>	<p><b>Limited Use Practice:</b> This evaluation is for pipeline 8 inches or less in diameter. Otherwise, ESA Section 7 consultation with the Service will be required.</p> <p><b>CM 1 (Develop Site Specific Criteria):</b> NRCS planners will coordinate with local biologists (NRCS, CPW, USFWS Partners, SWAT etc.) in establishing a local solution where needed.</p> <ul style="list-style-type: none"> <li>▪ No additional state-specific criteria is provided.</li> </ul> <p><b>CM 1 (Non-disturbance Periods):</b> Defer implementation within 1/2 mile to known leks<sup>1)</sup> until all breeding and nesting activities are completed (<u>March 1 through July 15</u>).</p> <p><sup>1)</sup> Known leks, are leks that are occupied or have been recorded as active at least once within the previous five years. A GIS shapefile is provided at F:\geodata \wildlife.</p> <p><b>CM 2, 3 (Minimize Soil/Vegetation Disturbances):</b> During planning, evaluate the site's potential for soil erosion and invasion by undesirable plants. Avoid or minimize potential increase in soil erosion or establishment or spread of invasive plants that may result from implementation of the practice. At a minimum, these measures will include:</p> <ul style="list-style-type: none"> <li>▪ Use site specific reclamation strategies developed using ecological site descriptions (ESDs). Native species will be used whenever possible to meet practice objectives with preference to forbs, grasses and grass-like plants preferred by the LPC as well as those plants that reflect the potential of the specific ecological site to optimize LPC habitat needs. Seed mixes should be State-certified, meeting the appropriate State certification criteria as being free of state declared noxious and invasive vegetative material.</li> <li>▪ Monitor, evaluate and control State listed invasive and noxious plants during practice planning and design.</li> <li>▪ Machinery associated with the practice should be clean and free of vegetative debris prior to use to prevent the spread of invasive plant species.</li> <li>▪ Timing of planting and post-establishment vegetation management will be designed as per local site conditions to meet NRCS practice specifications.</li> <li>▪ Regularly monitor the site after implementation to ensure erosion and weed issues are addressed quickly. Include this requirement in the participant's O&amp;M.</li> <li>▪ Use the conservation measures provided for Critical Area Planting (342) in areas where reseeding disturbed areas is needed.</li> </ul> <p><b>CM 4 (Avoid/Minimize Permanent Habitat Loss):</b> Design the practice to avoid or minimize the permanent removal of habitat conditions that could be caused by the practice installation or where there is a reasonable expectation that, once implemented, will result in permanent degradation of habitat conditions.</p> <ul style="list-style-type: none"> <li>▪ Design the pipeline route to minimize or avoid the loss of desirable shrubs during practice installation.</li> </ul>
528-Prescribed Grazing (LPCI Core Practice)	<p>For all assistance; implementation of grazing management plans, to the extent practicable*, will meet habitat conditions for each habitat type as recommended by Colorado Parks and Wildlife.</p> <p>*Document the justifications and decisions made in the NRCS-CPA-52 and/or the prescribed grazing plan.</p> <p><b>Frequency-</b> Grazing recurrence will occur at a rate necessary to create or maintain desired habitat structure. Grazing systems which prescribe high intensity or rapid forage removal will allow for adequate recovery time (non-grazed periods) to meet LPC habitat needs as recommended by Colorado Parks and Wildlife.</p> <p><b>Duration-</b> Grazing periods (days, weeks, or months) for scheduled grazing events will be designed to address limiting habitat factors as identified by the habitat assessments for the LPC.</p>

NRCS Conservation Practice Standard	Conservation Measures (CM) including State-Specific Criteria
528-Prescribed Grazing (LPCI Core Practice) (Cont)	<p>Scheduled grazing periods will also be used to manipulate or create desired or targeted habitat conditions as recommended by Colorado Parks and Wildlife.</p> <p><u>Timing-</u> Grazing events will be scheduled when possible to avoid potential disturbance to known breeding or lek sites.</p> <p><u>Intensity-</u> The amount of forage removed (or left) during any particular grazing cycle will be in keeping with the specific life cycle requirements (i.e. nesting, leking, brood rearing, etc.)</p> <p><b>For LPCI Only.</b> For practices implemented through the Lesser Prairie-chicken Initiative (LPCI), the core practices Upland Wildlife Habitat Management (645) and Prescribed Grazing (528), when livestock are present, shall be used in all LPCI conservation plans and contracts in order to determine which, if any, facilitating conservation practices are needed, as well as the extent, location, and timing of facilitating practices to ensure that LPC habitat is maintained or improved following application.</p>
533-Pumping Plant Limited Use Practice	<p><b>Limited Use Practice:</b> New windmills for pumping or power generation will not be used within the Action Area (unless individually approved by the Service).</p> <p><b>CM 1 (Develop Site Specific Criteria):</b> NRCS planners will coordinate with local biologists (NRCS, CPW, USFWS Partners, SWAT etc.) in establishing a local solution where needed.</p> <ul style="list-style-type: none"> <li>▪ No additional state-specific criteria is provided.</li> </ul> <p><b>CM 1 (Non-disturbance Periods):</b> Defer implementation within 1/2 mile to known leks<sup>1)</sup> until all breeding and nesting activities are completed (March 1 through July 15).  <sup>1)</sup> Known leks, are leks that are occupied or have been recorded as active at least once within the previous five years. A GIS shapefile is provided at F:\geodata \wildlife.</p> <p><b>CM 2, 3 (Minimize Soil/Vegetation Disturbances):</b> During planning, evaluate the site's potential for soil erosion and invasion by undesirable plants. Avoid or minimize potential increase in soil erosion or establishment or spread of invasive plants that may result from implementation of the practice. At a minimum, these measures will include:</p> <ul style="list-style-type: none"> <li>▪ Monitor, evaluate and control State listed invasive and noxious plants during practice planning and design.</li> <li>▪ Machinery associated with the practice should be clean and free of vegetative debris prior to use to prevent the spread of invasive plant species.</li> <li>▪ Limit construction and access footprint and future vehicle traffic access to one vehicle width.</li> </ul> <p><b>CM 4 (Avoid/Minimize Permanent Habitat Loss):</b> Design the practice to avoid or minimize the permanent removal of habitat conditions that could be caused by the practice installation or where there is a reasonable expectation that, once implemented, will result in permanent degradation of habitat conditions.</p> <ul style="list-style-type: none"> <li>▪ Minimize noise levels of fuel- powered plants to less than 40dbA.</li> </ul> <p><b>CM 6: (Reduce Predation Potential):</b> Design the practice to reduce the potential for predation to LPC; as direct or indirect consequences of implementing the practice.</p> <ul style="list-style-type: none"> <li>▪ Design solar panel mounting pole as short as possible to avoid creating a raptor/corvid perch.</li> </ul>
550-Range Planting	<p><b>CM 1 (Develop Site Specific Criteria):</b> NRCS planners will coordinate with local biologists (NRCS, CPW, USFWS Partners, SWAT etc.) in establishing a local solution where needed.</p> <ul style="list-style-type: none"> <li>▪ Control livestock access as needed to allow for initial establishment of new vegetative plantings and control weeds through flash grazing.</li> <li>▪ No additional state-specific criteria is provided.</li> </ul> <p><b>CM 1 (Non-disturbance Periods):</b> Defer implementation within 1/2 mile to known leks<sup>1)</sup> until all breeding and nesting activities are completed (March 1 through July 15).  <sup>1)</sup> Known leks, are leks that are occupied or have been recorded as active at least once within the previous five years. A GIS shapefile is provided at F:\geodata \wildlife.</p> <ul style="list-style-type: none"> <li>▪ When implementing this practice on cropland for the purpose of establishing perennial vegetation; a number of activities, primarily planting, may take place during the primary breeding and nesting season (March 1st-July 15th). In these situations an effort shall be taken to complete activities with as little disturbance as possible to adjacent and surrounding existing LPC habitat. Clearly document this on the Job Sheet and in the NRCS-CPA-52. Contact a biologist to assist with developing these measures, if needed.</li> <li>▪ When converting existing vegetation to an improved cover; a number of activities may need to take place during the primary breeding and nesting season (March 1st-July 15th). In these situations individual on-site determinations will be conducted with a biologist to plan the best course of action. Initial preparations such as mowing or burning may need to be completed prior to the leking season to reduce LPC activity in the area to be seeded. Clearly document this on the Job Sheet and in the NRCS-CPA-52. There may be situations where consultation with the Service will be necessary.</li> </ul> <p><b>CM 2, 3 (Minimize Soil/Vegetation Disturbances):</b> During planning, evaluate the site's potential for soil erosion and invasion by undesirable plants. Avoid or minimize potential increase in soil erosion or establishment or spread of invasive plants that may result from implementation of the practice. At a minimum, these measures will include:</p> <ul style="list-style-type: none"> <li>▪ Use site specific reclamation strategies developed using ecological site descriptions (ESDs). Native species will be used whenever possible to meet practice objectives with preference to forbs, grasses and grass-like plants preferred by the LPC as well as those plants that reflect the potential of the specific ecological site to optimize LPC habitat needs. Seed mixes should be State-certified, meeting the appropriate State certification criteria as being free of state declared noxious and invasive vegetative material.</li> <li>▪ Timing of planting and post-establishment vegetation management will be designed per local site conditions to meet NRCS practice specifications and biologist recommendations.</li> <li>▪ Monitor, evaluate and control State listed invasive and noxious plants during practice planning and design.</li> <li>▪ Machinery associated with the practice should be clean and free of vegetative debris prior to use to prevent the spread of invasive plant species.</li> </ul>

NRCS Conservation Practice Standard	Conservation Measures (CM) including State-Specific Criteria
561-Heavy Use Area Protection	<p><b>CM 1 (Develop Site Specific Criteria):</b> NRCS planners will coordinate with local biologists (NRCS, CPW, USFWS Partners, SWAT etc.) in establishing a local solution where needed.</p> <ul style="list-style-type: none"> <li>▪ No additional state-specific criteria is provided.</li> </ul> <p><b>CM 1 (Non-disturbance Periods):</b> Defer implementation within 1/2 mile to known leks<sup>11</sup> until all breeding and nesting activities are completed (<u>March 1 through July 15</u>).</p> <p><sup>11</sup> Known leks, are leks that are occupied or have been recorded as active at least once within the previous five years. A GIS shapefile is provided at F:\geodata \wildlife.</p> <ul style="list-style-type: none"> <li>▪ Limit duration of construction period to the minimum practicable.</li> </ul> <p><b>CM 2, 3 (Minimize Soil/Vegetation Disturbances):</b> During planning, evaluate the site's potential for soil erosion and invasion by undesirable plants. Avoid or minimize potential increase in soil erosion or establishment or spread of invasive plants that may result from implementation of the practice. At a minimum, these measures will include:</p> <ul style="list-style-type: none"> <li>▪ Reducing the area or extent of soil and vegetation disturbance and utilizing soil erosion protection measures (silt fence etc.) when needed.</li> <li>▪ Design conservation practice to minimize or avoid loss of (non-invasive) shrubs during practice installation.</li> <li>▪ If access for operation and maintenance is required, limit access to one side of disturbance and limit access to one vehicle width.</li> <li>▪ Use site specific reclamation strategies developed using ecological site descriptions (ESDs). Native species will be used whenever possible to meet practice objectives with preference to forbs, grasses and grass-like plants preferred by the LPC as well as those plants that reflect the potential of the specific ecological site to optimize LPC habitat needs. Seed mixes should be State-certified, meeting the appropriate State certification criteria as being free of state declared noxious and invasive vegetative material.</li> <li>▪ Monitor, evaluate and control State listed invasive and noxious plants during practice planning and design.</li> <li>▪ Machinery associated with the practice should be clean and free of vegetative debris prior to use to prevent the spread of invasive plant species.</li> <li>▪ Timing of planting and post-establishment vegetation management will be designed as per local site conditions to meet NRCS practice specifications.</li> <li>▪ Regularly monitor the site after implementation to ensure erosion and weed issues are addressed quickly. Include this requirement in the participant's O&amp;M.</li> </ul>
574-Spring Development	<p><b>CM 1 (Develop Site Specific Criteria):</b> NRCS planners will coordinate with local biologists (NRCS, CPW, USFWS Partners, SWAT etc.) in establishing a local solution where needed.</p> <ul style="list-style-type: none"> <li>▪ No additional state-specific criteria is provided.</li> </ul> <p><b>CM 1 (Non-disturbance Periods):</b> Defer implementation within 1/2 mile to known leks<sup>11</sup> until all breeding and nesting activities are completed (<u>March 1 through July 15</u>).</p> <p><sup>11</sup> Known leks, are leks that are occupied or have been recorded as active at least once within the previous five years. A GIS shapefile is provided at F:\geodata \wildlife.</p> <p><b>CM 2, 3 (Minimize Soil/Vegetation Disturbances):</b> During planning, evaluate the site's potential for soil erosion and invasion by undesirable plants. Avoid or minimize potential increase in soil erosion or establishment or spread of invasive plants that may result from implementation of the practice. At a minimum, these measures will include:</p> <ul style="list-style-type: none"> <li>▪ Use site specific reclamation strategies developed using ecological site descriptions (ESDs). Native species will be used whenever possible to meet practice objectives with preference to forbs, grasses and grass-like plants preferred by the LPC as well as those plants that reflect the potential of the specific ecological site to optimize LPC habitat needs. Seed mixes should be State-certified, meeting the appropriate State certification criteria as being free of state declared noxious and invasive vegetative material.</li> <li>▪ Monitor, evaluate and control State listed invasive and noxious plants during practice planning and design.</li> <li>▪ Machinery associated with the practice should be clean and free of vegetative debris prior to use to prevent the spread of invasive plant species.</li> <li>▪ Timing of planting and post-establishment vegetation management will be designed as per local site conditions to meet NRCS practice specifications.</li> <li>▪ Regularly monitor the site after implementation to ensure erosion and weed issues are addressed quickly. Include this requirement in the participant's O&amp;M.</li> </ul> <p><b>CM 5 (Reduce Mortality/Injury Risk):</b> Practices will be designed to reduce potential mortality or injury to individual birds.</p> <ul style="list-style-type: none"> <li>▪ Ingress/egress routes will avoid nesting/brood-rearing/lek areas; as mortality by collision may occur.</li> </ul>
612-Tree Shrub Establishment <b>Limited Use Practice</b>	<p><b>Limited Use Practice:</b> This practice will be designed to support practice 645 to create desired LPC habitat conditions. Otherwise, ESA Section 7 consultation with the Service will be required.</p> <p><b>CM 1 (Develop Site Specific Criteria):</b> NRCS planners will coordinate with local biologists (NRCS, CPW, USFWS Partners, SWAT etc.) in establishing a local solution where needed.</p> <ul style="list-style-type: none"> <li>▪ Within the LPC Action Area, all practice 612 shrub plantings shall be completed in coordination with the local biologist (Service, NRCS, Joint Farm Bill Biologists, or State Wildlife Agency) who will sign off on the planting as either providing LPC habitat (LPCI requirement) or not negatively impacting LPCs.</li> <li>▪ When livestock are present, plots must be deferred from livestock grazing for a period of time determined to be adequate based on recommendations in the 612 Standard and Specification. (See also the plot definition in Practice Application guidelines for participants in LPCI contracts.)</li> <li>▪ No additional state-specific criteria is provided.</li> </ul> <p><b>CM 1 (Non-disturbance Periods):</b> Defer implementation within 1/2 mile to known leks<sup>11</sup> until all breeding and nesting activities are completed (<u>March 1 through July 15</u>).</p> <p><sup>11</sup> Known leks, are leks that are occupied or have been recorded as active at least once within the previous five years. A GIS shapefile is provided at F:\geodata \wildlife.</p>

NRCS Conservation Practice Standard	Conservation Measures (CM) including State-Specific Criteria
<p>612-Tree Shrub Establishment  <b>Limited Use Practice</b>  <i>(Cont)</i></p>	<p><b>CM 2, 3 (Minimize Soil/Vegetation Disturbances):</b> During planning, evaluate the site's potential for soil erosion and invasion by undesirable plants. Avoid or minimize potential increase in soil erosion or establishment or spread of invasive plants that may result from implementation of the practice. At a minimum, these measures will include:</p> <ul style="list-style-type: none"> <li>▪ Regularly monitor the site after implementation to ensure erosion and undesirable plant issues are addressed quickly. Include this requirement in the participant's O&amp;M.</li> <li>▪ Machinery associated with the practice should be clean and free of vegetative debris prior to use to prevent the spread of invasive plant species.</li> <li>▪ Species planted must be ecologically appropriate, arranged to minimize predator impacts, and beneficial to LPC. For LPCI, plot locations should not be in close proximity to permanent vertical structures when possible. There may be circumstances when locating plots next to certain vertical structures will provide LPC habitat benefits which offset the negative effects associated with the vertical structure.</li> </ul> <p><b>CM 4 (Avoid/Minimize Permanent Habitat Loss):</b> Design the practice to avoid or minimize the permanent removal of habitat conditions that could be caused by the practice installation or where there is a reasonable expectation that, once implemented, will result in permanent degradation of habitat conditions.</p> <ul style="list-style-type: none"> <li>▪ Avoid impacting special resources such as riparian areas, wetlands/playas, leks, or habitat of other at-risk species. These avoidance areas shall be <i>clearly identify</i> for the participant.</li> </ul> <p><b>For LPCI Only.</b> Only native shrub plantings beneficial to the LPC are authorized under a LPCI/WLFW contract; planning/implementation must follow practice application criteria (provided below) and the conservation measures. See Criteria Below: (Non-LPCI/WLFW assistance must only follow the conservation measures.)</p> <p><i>LPCI/WLFW 612 Practice Criteria:</i></p> <ol style="list-style-type: none"> <li>1) Planting scattered plots of native shrub species that are beneficial to LPC as determined by Colorado Parks and Wildlife. Shrub species will be planted using manual or mechanical means including: tree planters, hand planting, or seeding.</li> <li>2) Plots will be designed to avoid creating linear features that can function as predator corridors.</li> <li>3) The length of a plot should be no more than twice the width.</li> <li>4) Individual plots will be up to one acre in size, at least 500 feet apart, and involve a maximum of 5 percent of the LPCI contracted acres within each state.</li> <li>5) A plot is defined as the area encompassing a localized planting of shrub species either as thickets, clumps, or individual plantings. In the presence of livestock, only the area from which livestock have been excluded by a perimeter fence will be considered to be a portion of the plot.</li> </ol>
<p>614-Watering Facility</p>	<p><b>CM 1 (Develop Site Specific Criteria):</b> NRCS planners will coordinate with local biologists (NRCS, CPW, USFWS Partners, SWAT etc.) in establishing a local solution where needed.</p> <ul style="list-style-type: none"> <li>▪ No additional state-specific criteria is provided.</li> </ul> <p><b>CM 1 (Non-disturbance Periods):</b> Defer implementation within 1/2 mile to known leks<sup>1)</sup> until all breeding and nesting activities are completed (<u>March 1 through July 15</u>).</p> <p><sup>1)</sup> Known leks, are leks that are occupied or have been recorded as active at least once within the previous five years. A GIS shapefile is provided at F:\geodata \wildlife.</p> <ul style="list-style-type: none"> <li>▪ Limit duration of construction period to the minimum practicable.</li> </ul> <p><b>CM 2, 3 (Minimize Soil/Vegetation Disturbances):</b> During planning, evaluate the site's potential for soil erosion and invasion by undesirable plants. Avoid or minimize potential increase in soil erosion or establishment or spread of invasive plants that may result from implementation of the practice. At a minimum, these measures will include:</p> <ul style="list-style-type: none"> <li>▪ Design conservation practice to minimize or avoid loss of shrubs during practice installation.</li> <li>▪ If access for operation and maintenance is required, limit access to one side of disturbance and a limit access to one vehicle width.</li> <li>▪ Use site specific reclamation strategies developed using ecological site descriptions (ESDs). Native species will be used whenever possible to meet practice objectives with preference to forbs, grasses and grass-like plants preferred by the LPC as well as those plants that reflect the potential of the specific ecological site to optimize LPC habitat needs. Seed mixes should be State-certified, meeting the appropriate State certification criteria as being free of state declared noxious and invasive vegetative material.</li> <li>▪ Monitor, evaluate and control State listed invasive and noxious plants during practice planning and design.</li> <li>▪ Machinery associated with the practice should be clean and free of vegetative debris prior to use to prevent the spread of invasive plant species.</li> <li>▪ Timing of planting and post-establishment vegetation management will be designed as per local site conditions to meet NRCS practice specifications.</li> <li>▪ Regularly monitor the site after implementation to ensure erosion and weed issues are addressed quickly. Include this requirement in the participant's O&amp;M.</li> </ul> <p><b>CM 5 (Reduce Mortality/Injury Risk):</b> Practices will be designed to reduce potential mortality or injury to individual birds.</p> <ul style="list-style-type: none"> <li>▪ Install wildlife escape ramps. Use state approved technical guidance (FOTG).</li> </ul>

NRCS Conservation Practice Standard	Conservation Measures (CM) including State-Specific Criteria
642-Water Well	<p><b>CM 1 (Develop Site Specific Criteria):</b> NRCS planners will coordinate with local biologists (NRCS, CPW, USFWS Partners, SWAT etc.) in establishing a local solution where needed.</p> <ul style="list-style-type: none"> <li>▪ No additional state-specific criteria is provided.</li> </ul> <p><b>CM 1 (Non-disturbance Periods):</b> Defer implementation within 1/2 mile to known leks<sup>1]</sup> until all breeding and nesting activities are completed (<u>March 1 through July 15</u>).</p> <p><sup>1]</sup> Known leks, are leks that are occupied or have been recorded as active at least once within the previous five years. A GIS shapefile is provided at F:\geodata \wildlife.</p> <p><b>CM 2, 3 (Minimize Soil/Vegetation Disturbances):</b> During planning, evaluate the site's potential for soil erosion and invasion by undesirable plants. Avoid or minimize potential increase in soil erosion or establishment or spread of invasive plants that may result from implementation of the practice. At a minimum, these measures will include:</p> <ul style="list-style-type: none"> <li>▪ Use the conservation measures provided for Critical Area Planting (342) in areas where reseeding disturbed areas is needed.</li> </ul> <p><b>CM 4 (Avoid/Minimize Permanent Habitat Loss):</b> Design the practice to avoid or minimize the permanent removal of habitat conditions that could be caused by the practice installation or where there is a reasonable expectation that, once implemented, will result in permanent degradation of habitat conditions.</p> <ul style="list-style-type: none"> <li>▪ Design the water well to minimize or avoid the loss of desirable shrubs during practice installation.</li> <li>▪ Install low profile pumping devices and housings and use solar pumps whenever practicable, as the power source for wells rather than electric lines.</li> </ul> <p><b>CM 6: (Reduce Predation Potential):</b> Design the practice to reduce the potential for predation to LPC; as direct or indirect consequences of implementing the practice.</p> <ul style="list-style-type: none"> <li>▪ Design solar panel mounting pole as short as possible to avoid creating a raptor/corvid perch.</li> <li>▪ Place wells and infrastructure as close as possible to existing structures rather than creating new vertical structure in areas presently devoid of such features. These measures will reduce the presence of raptor/corvid perch sites and prevent habitat fragmentation by allowing continued use of suitable habitat.</li> </ul>
643-Restoration and Management of Rare and Declining Habitats	<p><b>CM 1 (Develop Site Specific Criteria):</b> NRCS planners will coordinate with local biologists (NRCS, CPW, USFWS Partners, SWAT etc.) in establishing a local solution where needed.</p> <ul style="list-style-type: none"> <li>▪ No additional state-specific criteria is provided.</li> </ul> <p><b>CM 1 (Non-disturbance Periods):</b> Defer implementation within 1/2 mile to known leks<sup>1]</sup> until all breeding and nesting activities are completed (<u>March 1 through July 15</u>).</p> <p><sup>1]</sup> Known leks, are leks that are occupied or have been recorded as active at least once within the previous five years. A GIS shapefile is provided at F:\geodata \wildlife.</p> <ul style="list-style-type: none"> <li>▪ When implementing this practice on cropland for the purpose of establishing perennial vegetation; a number of activities, primarily planting, may take place during the primary breeding and nesting season (March 1<sup>st</sup>-July 15<sup>th</sup>). In these situations an effort shall be taken to complete activities with as little disturbance as possible to adjacent and surrounding existing LPC habitat. Clearly document this on the Job Sheet and in the NRCS-CPA-52. Contact a biologist to assist with developing these measures, if needed.</li> </ul> <p><b>For LPCI Only.</b> The conservation measures identified under the core practice of Upland Wildlife Habitat Management (645) shall be used. In addition, any vegetative or structural facilitating practices used to implement this management practice will follow the conservation measures of the practice used.</p>
645-Upland Wildlife Habitat Management (LPCI Core Practice)  &  649-Structures for Wildlife	<p><b>CM 1 (Develop Site Specific Criteria):</b> NRCS planners will coordinate with local biologists (NRCS, CPW, USFWS Partners, SWAT etc.) in establishing a local solution where needed.</p> <ul style="list-style-type: none"> <li>▪ The best scientific data available will guide the development of this practice; to ensure effectiveness, adaptability and increased knowledge. 1] Utilize the LPC Range-wide Conservation Plan, and 2] guidance provided by the LPCI Science Advisor, and 3] population-specific habitat data or guidelines when they are available or as they become available (i.e. use the most recent, relevant information available).</li> <li>▪ Utilize the habitat evaluation tools (WHEG) and monitoring protocol provided in the LPCI Biological Opinion to evaluate habitat conditions, on a regular basis*, to ensure the conservation plan is adapted to meet the habitat and wildlife needs. Colorado Criteria: habitat conditions will be evaluated (and the plan adapted) at least annually for the duration of the LPCI plan/contact, and may be continued at the participants request/approval (ie. for ESA Predictability).             <ul style="list-style-type: none"> <li>• Use the <u>Lesser Prairie Chicken Habitat Assessment for Sand Sagebrush and Grassland Habitats</u>.</li> </ul> </li> <li>▪ Ensure all facilitating/supportive practices include the critical non-disturbance dates to minimize their effects on leks and nesting periods, as appropriate to the practice.</li> <li>▪ This practice may be used to modify existing infrastructure to reduce or eliminate potential adverse effects resulting from those structures; including installation of wildlife escape ramps in open water sources or in open trenches/pits, and marking fence lines to prevent bird collision in critical areas.</li> <li>▪ NRCS shall ensure that plans and specifications for this practice are prepared by persons with adequate training in the fields of wildlife management, biology or range ecology. In Colorado, Job Approval Authority (JAA) needs to be achieved in CPS 645 and Wildlife.</li> <li>▪ NRCS will work with conservation partners to implement strategies to determine habitat use by wildlife species and/or to determine estimates/indices of abundance where possible.</li> </ul> <p><b>For LPCI Only.</b> For practices implemented through the Lesser Prairie-chicken Initiative (LPCI), the core practices Upland Wildlife Habitat Management (645) and Prescribed Grazing (528), when livestock are present, shall be used in all LPCI conservation plans and contracts in order to determine which, if any, facilitating conservation practices are needed, as well as the extent, location, and timing of facilitating practices to ensure that LPC habitat is maintained or improved following application.</p> <ul style="list-style-type: none"> <li>▪ For the purposes of the LPCI, NRCS will encourage the establishment of “permanent” photo points to serve as visual documentation of changing habitat conditions over a period of time for the life of the management system.</li> </ul>

<b>ADVERSE EFFECTS</b> (refer to LPCI BO pages 35-40 for full details)	
<b>Adverse effects to the species as a result of the conservation practice standard</b>	<b>Conservation Measure recommended to ameliorate, minimize or abate the potential adverse effects</b>
<b>AE 1:</b> Physical disturbance (including noise) of birds	<p><b>CM 1 (Develop Site Specific Criteria):</b> NRCS shall coordinate with the affected State Fish and Wildlife Agency, the NRCS State Technical Committee, and the Service’s Partners for Fish and Wildlife biologists, and other local experts to identify appropriate restrictions on the placement, extent, configuration, and timing of this conservation practice standard and the area where these practice restrictions would apply so as to avoid or minimize adverse effects to the LPC and supporting habitat conditions.</p> <p><b>CM 1 (Non-disturbance Periods):</b> Defer implementation of this conservation practice within 1/2 mile to known leks until all breeding and nesting activities are completed, typically March 1 through July 15, or as modified by State Fish and Wildlife Agency or State Technical Committee recommendations*. If a modification of the restrictions on the timing of this conservation practice could increase the likelihood or extend to adverse effects, these modifications need to be further coordinated with the Service’s local Field Office. *Colorado has not established modifications to the disturbance dates.</p>
<b>AE 2:</b> Temporary soil disturbance and vegetation removal, and <b>AE 3:</b> Increased potential for invasive plants (habitat frag.)	<p><b>CM 2, 3 (Minimize Soil/Vegetation Disturbances):</b> During planning, evaluate the site’s potential for soil erosion and invasion by undesirable plants. Avoid or minimize potential increase in soil erosion or establishment or spread of invasive plants that may result from implementation of the practice. Sources of disturbance could include use of equipment and those practices involved in planting or manipulation of vegetation. Common adverse effects include habitat degradation and fragmentation. The net effect of using these CMs is that practice installation and maintenance may result in short-term disturbances (where effects are reduced by the CM’s) but produce long-term restoration, maintenance, and enhanced gains for the LPC.</p>
<b>AE 4:</b> Permanent removal/loss of suitable habitat	<p><b>CM 4 (Avoid/Minimize Permanent Habitat Loss):</b> Design the practice to avoid or minimize the permanent removal of habitat conditions that could be caused by the practice installation or where there is a reasonable expectation that, once implemented, will result in permanent degradation of habitat conditions. Of primary concern is loss of forage or nest habitat and fragmentation. The practices associated to these effects are expected to result in only localized and minor habitat removal (such as vegetation removal for the purpose of installing a pipeline or fence). <b>NOTE:</b> this does not cover or include grassland conversion to row crops or “sod-busting”.</p>
<b>AE 5:</b> Increased potential of accidental mortality (or injury) to individuals	<p><b>CM 5 (Reduce Mortality/Injury Risk):</b> Practices will be designed to reduce potential mortality or injury to individual birds. These accidental harms may be caused from drowning in livestock water tanks, striking a fence or other wires, creation of raptor perches (see CM 6), or vehicle collision. Of primary concern is the construction and placement of fences. Conservation measures include the principle techniques for minimizing the adverse effects.</p>
<b>AE 6:</b> Increased potential for predation	<p><b>CM 6: (Reduce Predation Potential):</b> Design the practice to reduce the potential for predation to LPC; as direct or indirect consequences of implementing the practice. Examples may include unintentional creation of raptor/corvid perches (fence posts, power poles etc.) or creation of mammalian hiding cover such as brush piles, and reduction in concealing vegetation cover that LPC uses to avoid predation.</p>

**References**

Van Pelt, W.E., S. Kyle, J. Pitman, D. Klute, G. Beauprez, D. Schoeling, A. Janus, J. Haufler, 2013. [The Lesser Prairie-Chicken Range-wide Conservation Plan](#). Western Association of Fish and Wildlife Agencies. Cheyenne, Wyoming, pp.367

USDA, 2012. [Improving Lesser Prairie-Chicken Habitat Through Revegetation and Rangeland Management](#). USDA Plant Materials Center.

USDA, 2012. [Lesser Prairie-Chicken Habitat Assessment for Sand Sagebrush and Grassland Habitats](#). USDA-NRCS Lesser Prairie-chicken Initiative.

USDA, 2012. [Use of the WHEG for Conservation Planning under the Lesser-Prairie-Chicken Initiative](#). USDA-NRCS Lesser Prairie-chicken Initiative.

USDA, 2012. [Lesser Prairie Chicken Initiative Vegetation Monitoring Protocol](#). USDA-NRCS Lesser Prairie-chicken Initiative.

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