

## Colorado Parks and Wildlife's (CPW) Recommendations to Avoid and Minimize Impacts to Wildlife from Land Use Development in Colorado

Species and Associated High Priority Habitat	Recommendations <sup>1</sup> (by animal type - Big Game, Grouse, Raptors, Other Birds, Small Mammals, Aquatics)
<i>(Brown shading indicates that this habitat map is maintained by the United States Fish and Wildlife Service and can be found at <a href="https://ecos.fws.gov/ecp/report/table/critical-habitat.html">https://ecos.fws.gov/ecp/report/table/critical-habitat.html</a>)</i>	
<b>Big Game</b>	
<a href="#">Big Game Pinch Points</a>	NSO/NGD (year-round) in CPW-identified big game pinch point areas.
<a href="#">Bighorn Sheep Migration Corridor</a>	CSU/SSR - Surface density limitation of one pad per square mile and less than one linear mile of routes per square mile (640 acres). If pad or route density cannot be achieved or maintained, implement offsite mitigation to offset functional habitat loss.
<a href="#">Bighorn Sheep Production Area</a>	NSO/NGD (year-round) in CPW-identified bighorn sheep production areas; TL - No permitted or authorized human activities (including overflights) from April 15 to June 30 (Rocky Mountain Bighorn Sheep) or from February 1 to May 1 (Desert Bighorn Sheep).
<a href="#">Bighorn Sheep Winter Range</a>	TL - No permitted or authorized human activities (including overflights) from November 1 to April 30; CSU/SSR - Surface density limitation of one pad per square mile and less than one linear mile of routes per square mile (640 acres). If pad or route density cannot be achieved or maintained, implement offsite mitigation to offset functional habitat loss.
<a href="#">Elk Migration Corridor</a>	CSU/SSR - Surface density limitation of one pad per square mile and less than one linear mile of routes per square mile (640 acres). If pad or route density cannot be achieved or maintained, implement offsite mitigation to offset functional habitat loss.
<a href="#">Elk Production Area</a>	TL - No permitted or authorized human activities from May 15 to June 30; CSU/SSR - Surface density limitation of one pad per square mile and less than one linear mile of routes per square mile (640 acres). If pad or route density cannot be achieved or maintained, implement offsite mitigation to offset functional habitat loss.
<a href="#">Elk Severe Winter Range</a>	TL - No permitted or authorized human activities from December 1 to April 30; CSU/SSR - Surface density limitation of one pad per square mile and less than one linear mile of routes per square mile (640 acres). If pad or route density cannot be achieved or maintained, implement offsite mitigation to offset functional habitat loss.
<a href="#">Elk Winter Concentration Area</a>	TL - No permitted or authorized human activities from December 1 to April 30; CSU/SSR - Surface density limitation of one pad per square mile and less than one linear mile of routes per square mile (640 acres). If pad or route density cannot be achieved or maintained, implement offsite mitigation to offset functional habitat loss.
<a href="#">Mule Deer Migration Corridor</a>	CSU/SSR - Surface density limitation of one pad per square mile and less than one linear mile of routes per square mile (640 acres). If pad or route density cannot be achieved or maintained, implement offsite mitigation to offset functional habitat loss.
<a href="#">Mule Deer Severe Winter Range</a>	TL - No permitted or authorized human activities from December 1 to April 30; CSU/SSR - Surface density limitation of one pad per square mile and less than one linear mile of routes per square mile (640 acres). If pad or route density cannot be achieved or maintained, implement offsite mitigation to offset functional habitat loss.
<a href="#">Mule Deer Winter Concentration Area</a>	TL - No permitted or authorized human activities from December 1 to April 30; CSU/SSR - Surface density limitation of one pad per square mile and less than one linear mile of routes per square mile (640 acres). If pad or route density cannot be achieved or maintained, implement offsite mitigation to offset functional habitat loss.

<a href="#">Pronghorn Migration Corridor</a>	CSU/SSR - Surface density limitation of one pad per square mile and less than one linear mile of routes per square mile (640 acres). If pad or route density cannot be achieved or maintained, implement offsite mitigation to offset functional habitat loss.
<a href="#">Pronghorn Winter Concentration Area</a>	TL - No permitted or authorized human activities from January 1 to April 30; CSU/SSR - Surface density limitation of one pad per square mile and less than one linear mile of routes per square mile (640 acres). If pad or route density cannot be achieved or maintained, implement offsite mitigation to offset functional habitat loss.
<b>Grouse</b>	
<a href="#">Columbian Sharp-Tailed Grouse Winter Range</a>	TL - No permitted or authorized human activities within known CSTG wintering areas from November 15 to March 15.
Columbian Sharp-Tailed Grouse Lek Site	NSO/NGD (year-round) within 0.6-mile of a lek.
<a href="#">Columbian Sharp-Tailed Grouse Production Area</a>	TL - No permitted or authorized human activities from March 15 to July 30 within a Production Area or within 1.25 miles of a lek - whichever is greater; CSU/SSR - Surface density limitation of one pad per square mile and less than one linear mile of routes per square mile (640 acres); limit noise to not exceed 49 dB as measured 30 feet from the source. If pad or route density cannot be achieved or maintained, implement offsite mitigation to offset functional habitat loss.
Greater Prairie Chicken Lek Site	NSO/NGD (year-round) within 0.6-mile of a lek.
<a href="#">Greater Prairie Chicken Production Area</a>	TL - No permitted or authorized human activities within 2.2 miles of a lek or from March 1 to June 30; CSU/SSR - Surface density limitation of one pad per square mile and less than one linear mile of routes per square mile (640 acres); limit noise to not exceed 49 dB as measured 30 feet from the source. If pad or route density cannot be achieved or maintained, implement offsite mitigation to offset functional habitat loss.
<a href="#">Greater Sage-Grouse General Habitat Management Area</a>	NSO/NGD (year-round) within 2 miles of a lek site; TL - outside of a 2-mile buffer from a lek site no permitted or authorized human activities from March 1 to July 15; CSU/SSR - limit noise to not exceed 49dB as measured 30 feet from the source.
Greater Sage-Grouse Lek Site	NSO/NGD (year-round) within 1.0-mile of a lek site.
<a href="#">Greater Sage-Grouse Priority Habitat Management Area</a>	NSO/NGD (year-round); If exceptions, waivers, or modifications are granted, TL - No permitted or authorized human activities from March 1 to July 15; CSU/SSR - Surface density limitation of one pad per square mile and less than one linear mile of routes per square mile (640 acres). If pad or route density cannot be achieved or maintained, implement offsite mitigation to offset functional habitat loss. Limit noise to not exceed 49dB as measured 30 feet from the source.
<a href="#">Greater Sage-grouse Undesignated Habitat</a>	Consult with CPW for recommendations on measures to avoid, minimize, and mitigate impacts.
Gunnison Sage-Grouse Lek Site	No Lease (Leasable Minerals only); NSO/NGD (year-round) within 1.0-mile of lek sites; CSU/SSR - Surface density limitation of one pad per square mile and less than one linear mile of routes per square mile (640 acres). If pad or route density cannot be achieved or maintained, implement offsite mitigation to offset functional habitat loss. Relocate compressors > 4 miles from a lek and limit noise to not exceed 49 dB as measured 30 feet from the source.
<a href="#">Gunnison Sage-Grouse Occupied Habitat</a>	No Lease (Leasable Minerals only); CSU/SSR - Surface density limitation of one pad per square mile and less than one linear mile of routes per square mile (640 acres). If pad or route density cannot be achieved or maintained implement offsite mitigation to offset functional habitat loss.
<a href="#">Gunnison Sage-Grouse Production Area</a>	No Lease (Leasable Minerals only); TL - No permitted or authorized human activities within 4 miles of a lek from March 1 to June 30; CSU/SSR - Surface density limitation of one pad per square mile and less than one linear mile of routes per square mile (640 acres). If pad or route density cannot be achieved or maintained, implement offsite mitigation to offset functional habitat loss.

<a href="#">Lesser Prairie Chicken Connectivity Zones</a>	Lek surveys if area not surveyed; If a lek is identified within 2.2 miles, LPC Lek Site recommendations apply.
<a href="#">Lesser Prairie Chicken Estimated Occupied Range (EOR)</a>	Lek surveys if area not surveyed; If a lek is identified within 2.2 miles, LPC Lek Site recommendations apply.
<a href="#">Lesser Prairie Chicken Focal Area</a>	No Lease (Leasable Minerals only). If leased: Lek surveys if area not surveyed. NSO/NGD (year-round) within 1.25 miles of an active lek; CSU/SSR in remaining focal area with seasonal timing limits on permitted and authorized human activities from March 1 to July 15; CSU/SSR - Surface density limitation of one pad per square mile and less than one linear mile of routes per square mile (640 acres); Noise not to exceed 49 dB as measured 30 feet from the source; Structure design that limits perch locations for raptors.
Lesser Prairie Chicken Lek Site	No Lease within 1.25 miles of active lek (Leasable Minerals only). If leased: NSO/NGD (year-round) within 1.25 miles of an active lek; CSU/SSR - Within 2.2 miles of an active lek with seasonal timing limits on permitted and authorized human activities from March 1 to July 15; Surface density limitation of one pad per square mile and less than one linear mile of routes per square mile (640 acres); Noise not to exceed 49 dB as measured 30 feet from the source; Structure design that limits perch locations for raptors.
Plains Sharp-Tailed Grouse Lek Site	NSO/NGD (year-round) within 0.4-mile of a lek site.
<a href="#">Plains Sharp-Tailed Grouse Production Area</a>	TL - No permitted or authorized human activities from March 1 to June 30 within production area or within 1.25 miles of a lek, whichever is greater; CSU/SSR - Surface density limitation of one pad per square mile and less than one linear mile of routes per square mile (640 acres) and limit noise to not exceed 49 dB as measured 30 ft from the source. If pad or route density cannot be achieved or maintained, implement offsite mitigation to offset functional habitat loss.
<b>Raptors</b>	
Bald Eagle Active Nest Site	NSO/NGD (year-round) within 0.25-mile of active nest. If active nest is located within a highly developed area (10 daily occupied structures within 1/4 mile of nest), then NSO/NGD distance reduced to within 660 feet of the active nest; TL - No permitted or authorized human activities within 0.5-mile of active nest from December 1 to July 31. If active nest is located within a highly developed area, no permitted or authorized human activities distance is reduced to within 0.25-mile from December 1 to July 31; CSU/SSR - Pre-construction surveys may be required.
<a href="#">Bald Eagle Winter Night Roost or Communal Roost Site</a>	TL - No permitted or authorized human activities within 0.50-mile of winter night roost or communal roost site from November 15 to March 15 if there is direct line of sight to the activity; No permitted or authorized human activities within 0.25-mile of winter night roost or communal roost site from November 15 to March 15 if there is no direct line of sight to the activity; In highly developed areas (10 daily occupied structures within 1/4 mile of the winter night roost) - No permitted or authorized human activities distance is reduced to within 660 feet if the winter night roost has no line of sight to the disturbance, or within 0.25-mile if line of sight is present. Highly developed area buffer reduction does not apply to communal roosts. CSU/SSR - Pre-construction surveys may be required.
Burrowing Owl Active Nest Site	TL - No permitted or authorized surface disturbing activities within 656 feet (200 meters) of burrowing owl nest during the nesting season (March 15 - August 31). CPW recommends 0.25-mile (400 meters) for large industrial disturbances (drill rig, building a residential development, etc.). CSU/SSR - Pre-construction surveys may be required.
Ferruginous Hawk Active Nest Site	NSO/NGD (year-round) within 0.5-mile of nest site; TL - No permitted or authorized human activities within 0.5-mile of nest from February 1 to July 15; CSU/SSR - Pre-construction surveys may be required.
Golden Eagle Active Nest Site	NSO/NGD (year-round) within 0.25-mile of nest; TL - No permitted or authorized human activities with 0.5-mile of nest from December 15 to July 15; CSU/SSR - Pre-construction surveys may be required.

Mexican Spotted Owl USFWS Designated Critical Habitat	NSO/NGD (year-round) within designated Critical Habitat; TL -No permitted or authorized human activities within 0.5-mile of designated Critical Habitat from March 1 to August 31; CSU/SSR - Pre-construction surveys may be required.
Mexican Spotted Owl USFWS Protected Activity Center, Nest or Roost Site	NSO/NGD (year-round) within entire Protected Activity Center (PAC); No permitted or authorized human activities within 0.5-mile of a PAC from March 1 to August 31; CSU/SSR - Pre- construction surveys may be required.
Northern Goshawk Active Nest Site	NSO/NGD (year-round) within 0.5-mile of a nest; TL - No permitted or authorized human activities within 0.5-mile of a nest from March 1 to September 15; CSU/SSR - Pre-construction surveys may be required.
Peregrine Falcon Active Nest Site	NSO/NGD (year-round) within 0.5-mile of a nest; TL - No permitted or authorized human activities within 0.5-mile of a nest from March 15 to July 31; CSU/SSR - Pre-construction surveys may be required.
Prairie Falcon Active Nest Site	NSO/NGD (year-round) within 0.5-mile of a nest; TL -No permitted or authorized human activities within 0.5-mile of a nest from March 15 to July 15; CSU/SSR - Pre-construction surveys may be required.
<b>Other Birds</b>	
<a href="#">Least Tern Production Area</a>	NSO/NGD (year-round); TL - No permitted or authorized human activities with 0.5-mile of a nest from April 1 to July 31; CSU/SSR - Pre- construction surveys may be required.
<a href="#">Piping Plover Production Area</a>	NSO/NGD (year-round); TL - No permitted or authorized human activities within 0.5-mile of a nest from April 1 to July 31; CSU/SSR - Pre- construction surveys may be required.
Southwestern Willow Flycatcher USFWS Designated Critical Habitat or Active Nest Site	NSO/NGD (year-round) within 300 feet of nest sites; TL - No permitted or authorized human activities within 300 feet of a nest from May 15 to August 1; CSU/SSR - Pre- construction surveys may be required.
Western Yellow-billed Cuckoo USFWS Designated Critical Habitat or Active Nest Site	NSO/NGD (year-round) within 300 feet of nest sites; TL - No permitted or authorized human activities within 300 feet of a nest from May 15 to August 1; CSU/SSR - Pre- construction surveys may be required.
<b>Small Mammals</b>	
New Mexico Meadow Jumping Mouse USFWS Designated Critical Habitat or documented location	NSO/NGD (year-round) within 300 feet of the Ordinary High Water Mark of the stream or wetland.
Preble's Meadow Jumping Mouse USFWS Designated Critical Habitat or documented location	NSO/NGD (year-round) within 300 feet of the Ordinary High Water Mark of the stream.
Townsend's Big-eared Bat, Mexican Free- tailed Bat, Myotis species winter hibernacula	NSO/NGD within 350 feet of cave or mine entrance of the hibernacula/winter roost; TL - For site entry from October 15 to April 15.

<b>Aquatics</b>	
<a href="#">Cutthroat Trout Designated Crucial Habitat</a>	NSO/NGD (year-round) within 500 feet of the Ordinary High Water Mark of the stream and 0.5 mile of the Ordinary High Water Mark of the lake; TL to protect spawning - No instream work from May 1 to September 30.
<a href="#">Native Fish and Other Native Aquatic Species Conservation Waters (100s, 200s)</a>	All streams and/or lakes categorized as a Native Species Conservation Water: NSO/NGD (year-round) within 500 feet of the Ordinary High Water Mark of the stream and 0.5-mile from Ordinary High Water Mark of the lake; TL to protect spawning - Contact the CPW Area Aquatic Biologist.
<a href="#">Sportfish Management Waters (300s, 400s, 500s)</a>	All streams and/or lakes categorized by CPW as sportfish management: NSO/NGD (year-round) within 500 feet of the Ordinary High Water Mark of the stream and/or lake; TL to protect spawning - Contact the Area Aquatic Biologist.

### **<sup>1</sup>Recommendation Type Definitions**

No Surface Occupancy (NSO) and Controlled Surface Use (CSU) stipulations apply to fluid mineral leasing and development of fluid mineral estates. No ground disturbance (NGD) and site-specific relocation (SSR) apply to other types of surface disturbing activities. Timing Limitation (TL) may be applied to either fluid mineral leasing and development or other types of surface disturbing activities. These are terms used by the USDI Bureau of Land Management, but are adopted here by CPW for consistency in the format of our recommendations for all development activities across jurisdictions.

- **No Surface Occupancy (NSO)** means that use or occupancy of the land surface for fluid mineral exploration or development and all activities associated with fluid mineral leasing (e.g. truck-mounted drilling, stationary drilling, geophysical exploration equipment off designated routes, and construction of wells, pads, compressors or pipelines) are prohibited to protect resource values.
- **No Ground Disturbance (NGD)** means that the area is closed to all surface-disturbing activities.
- **Controlled Surface Use (CSU)** means the area is open to fluid mineral leasing and development subject to special operating constraints to protect the specified resource values.
- **Site Specific Relocation (SSR)** is similar to a CSU in that it allows some development while protecting the identified resource values with special constraints. These constraints may include shifting the activity away from the resource value needing protection.
- **Timing Limitation (TL)** means the area is closed to fluid mineral exploration and development, surface-disturbing activities, and additional specified activities during the time-frame identified.