

Greater Sage-grouse Record of Decision

Anthropogenic Disturbance Calculation Implementation Guide for Idaho, Nevada, and Utah

Version 4.2

Standards and Guidelines

The Standard GRSG-GEN-ST-004 states:

“In priority habitat management areas and sagebrush focal areas, do not issue new discretionary written authorizations unless all existing discrete anthropogenic disturbances cover less than 3% of the total greater sage-grouse habitat within the Biologically Significant Unit and the proposed project area, regardless of ownership, and the new use will not cause exceedance of the 3% cap.”

Sagebrush focal Areas (SFA) are a subset of Priority Habitat Management Areas (PHMA). Disturbance in Idaho is also monitored in Important Habitat Management Areas. Within SFA, PHMA and IHMA, it must be determined whether proposed discretionary activities will exceed the cap on anthropogenic disturbances before a new project can be permitted.

The Standard also states:

“Discretionary activities that might result in disturbance above 3% at the Biologically Significant Unit and proposed project area would be prohibited unless approved by the forest supervisor with concurrence from the regional forester after review of new or site-specific information that indicates the project would result in a net conservation gain at the Biologically Significant Unit and proposed project area scale.”

Discretionary activities would normally not be permitted if the 3% cap has been exceeded, unless a net conservation gain can be demonstrated. Refer directly to the amendment and the Mitigation guide to determine if compensatory mitigation can be used to create a net conservation gain and allow permitting.

What is an Anthropogenic Disturbance?—Clarification of the Amendment

There are some potential discrepancies within the amendments as to which activities should be considered as Anthropogenic Disturbances. The threats that the BLM and Forest Service (FS) Final Environmental Impact Statements (FEISs) considered fully are the ones being used in Anthropogenic Disturbance Cap Calculations after the ROD. The disturbances that are being monitored do not include all activities named in the amendment glossary (e.g., grazing-related facilities and structures). The Anthropogenic Disturbances at the **Biologically Significant Unit (BSU) scale** are: *Oil/Gas Wells and Development Facilities, Coal Mines, Wind Towers, Solar Fields, Geothermal Development Facilities, Mining, Roads, Railroads, Power lines, Communication Towers, Other Vertical Structures, and Other Developed Rights of Ways*. The additional threats that are also considered at the **Project Scale** are: *Coal Bed Methane Ponds, Meteorological Towers, Nuclear Energy Facilities, Airport Facilities, Military Range Facilities, Hydroelectric Plants, and Recreation Areas and Facilities (> 0.25 acres)*.

Anthropogenic Disturbance Calculation

Note that only those discretionary projects that result in an anthropogenic footprint (see Table 1 below) in habitat within SFA, PHMA, or IHMA are required to calculate Anthropogenic Disturbances at the Biologically Significant Unit and Project scales.

A. The Biologically Significant Unit

The Biologically Significant Unit (BSU) used in the Anthropogenic Disturbance Calculation is the BSU defined in the relevant amendment. The BSU is the geographical/spatial used to aggregate PHMA and IHMA for comparative calculations. The BSUs can be found as defined within each applicable amendment and are mapped within the Supplemental Data information in the [USFS Vegetation Monitoring and Assessment Application](#).

The BLM calculates Anthropogenic Disturbance and Density at the BSU scale yearly. It is published here: <http://www.landscape.blm.gov/geoportal/catalog/main/home.page>

Use the BLM site to determine what the percent and density of disturbances are for the BSU where a project is proposed. This information is updated yearly and relies upon the proprietary, large-scale data bases that the BLM manages.

Disturbance Density: In Utah for Anthro Mountain and for parts of the Ashley and Uinta-Wasatch-Cache National Forests that are in Wyoming, disturbance is limited to an average of one disturbance per square mile (640 acres). The one facility per 640 density decision does not apply to Idaho, Nevada, or other parts of Utah other than Anthro Mountain.

B. The Project Area

The Project Area is a more precise, small scale area around the proposed project. Appropriate staff resources must be identified to create a Project Area Map for the analysis (see below). Contact the Regional office Wildlife Program Leader or GIS specialists for assistance, if needed.

Project Area, in the context of the Anthropogenic Disturbance Calculation, has a specific spatial definition and is not necessarily the analysis area that would be used in NEPA documents for a permitting decision. Specifically, the Anthropogenic Disturbance Project Area is created using GIS layers of the proposed project footprint, active or occupied lek locations, and SFA, PHMA, and IHMA. Anthropogenic Disturbances corresponding to the 19 specific disturbance categories identified above are used to calculate the Anthropogenic Disturbance rate at the Project Area scale.

Non-Discretionary Disturbances

For actions that are non-discretionary, there is no requirement to calculate the Project Scale disturbance. The project footprint would, however, be counted within the Project Scale analysis of a discretionary disturbance proposed at a later date.

Non-habitat

Proposed projects require calculating disturbance at the Project Area scale. If, however, a project within PHMA or IHMA can be located in non-habitat (see Habitat Guide) residual impacts could be completely avoided and minimized. Avoiding and Minimizing disturbance will usually be a preferred alternative.

NEPA Considerations

If the proposed project falls within SFA, PHMA or IHMA, NEPA analysis should include the Anthropogenic Disturbance Calculation on the Project Area scale, the disturbance calculation at the BSU scale, and a determination of residual, cumulative, direct, and indirect effects by an action. Applicable elements of standards and guidelines specific to a proposed action must be incorporated into the decision.

If upon analysis it is determined that the proposed disturbance is sited in non-habitat without other effects (e.g., creating unacceptable noise levels) the standards and guidelines of the sage-grouse amendment do not apply (this exemption is only within PHMA, GHMA, and IHMA and does not apply within SFA).

Already Degraded Habitat and Co-locating Disturbances

If a proposed project occurs within degraded habitat within PHMA or IHMA areas, no additional habitat is being degraded. A biological report should consider the indirect effects of existing activities to determine an appropriate buffer influence of degraded habitat around the footprint of existing activities. For example, locating a new recreational facility in sagebrush habitat adjacent to a high-speed highway likely does not degrade additional habitat due to the wide corridor of influence of a highway, but locating new structures adjacent to a low use, ungraded and low-speed road would likely degrade additional habitat. It is essential to have a site-specific biological evaluation.

Note that co-location of activities within already degraded habitat does not add to the sum of anthropogenic disturbances within a Project Area for analysis purposes.

Inter-agency Coordination

When a project scale analysis extends into BLM lands, contact the state BLM office to ensure that there is continuity in mapping and disturbance calculations.

GIS Requirement: Creating an Anthropogenic Disturbance Project Area and Disturbance Calculation

1. Open Regional mxd file template with Disturbance Layers from the following folder:
<T:\FS\NFS\R04\Collaboration\GreaterSagegrousePlanningStrategy\GIS\Data\Disturbance\r04>
 - *Use ArcGIS in Citrix: <https://citrix.fs.usda.gov/Citrix/StoreWeb/>
2. Create a 4 mile buffer around the digitized proposed project footprint if it falls in or partially in SFA, PHMA, or IHMA. (See Table 1, below, for helpful buffer sizes).
3. Identify any active or occupied leks that fall within the 4 mile project buffer.
4. Create a 4 mile buffer around each active or occupied lek that falls within the project buffer. If there are no leks within the project buffer, the analysis area is the spatial intersection of the proposed project buffer and SFA/PHMA/IHMA.
5. Merge the intersection of the project buffer, lek buffers, and mapped SFA/PHMA/IHMA. The

intersection of the layers is the **Anthropogenic Disturbance Project Area** for calculating the percent of area disturbed by Anthropogenic Disturbances.

6. In the Anthropogenic Disturbance Project Area, check for accuracy of disturbance layers using site visit and/or imagery. Correct or add anthropogenic disturbance footprints (using imagery or other appropriate data sources) as needed. Consider, at a minimum, the direct area of influence buffers identified in Table 1 (below) when digitizing.
7. Calculate the % disturbance as the disturbed area over the total area for the Project Area polygon.

Table 1. Activities Included in Project Scale Disturbance Calculations as Adapted from Table 6 of Monitoring Framework

Degradation Type	Specific Activity	Feature Buffer Radius
Oil and Gas	Wells	263 feet (5.0 ac buffer)
	Power Plants	263 feet (5.0 ac buffer)
Coal	Mines	Digitized Polygon Area
	Power Plants	Digitized Polygon Area
	Coal Bed Methane Ponds	Digitized Polygon Area
Wind	Wind Turbines	204 feet (3.0 ac buffer)
	Power plants	204 feet (3.0 ac buffer)
Solar	Fields/Power Plants	316 (7.2 ac buffer)
Geothermal	Wells	204 feet (3.0 ac buffer)
	Power plants	Digitized Polygon Area
Mining	Locatable Developments	Digitized Polygon Area
Roads	Surface Streets*	40.7 ft
	Major Roads	84.0 ft
	Interstate Highways	240.2 ft
Railroads	Active Lines	30.8 ft
Powerlines	1-199 kV	100 ft
	200-399 kV	150 ft
	400-699 kV	200 ft
	700+ kV	250 ft
Communication	Towers	186 feet (2.5 ac buffer)
	Meteorological towers	186 feet (2.5 ac buffer)
Facilities		
	Nuclear Energy Facilities	Digitized Polygon Area
	Airport Facilities	Digitized Polygon Area
	Military Range Facilities	Digitized Polygon Area
	Hydroelectric Plants	Digitized Polygon Area
	Recreation Areas and Facilities (>0.25 acres)	Digitized Polygon Area

*Includes graded gravel roads and those more improved, not dirt and two-track roads or trails