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Federal and State Permitting Agency Coordination

Background

> The DDCT process and review of project compliance with Executive Order 2011-5 (SGEO) will be coordinated through the DDCT web application (ddct.wygisc.org).

The proponent should provide the most complete and comprehensive description of a project as possible. Splitting a project into smaller components can cause delay in review and could risk denial of a permit necessary for the entire project. It is recommended that proponents thoughtfully consider and include for review potential future development(s) and/or infrastructure associated with or that may be needed to support the current proposed project.

If the proponent has a concern that a project will not comply with the SGEO, the proponent should contact the WGFD and appropriate land management and/or permitting agencies as soon as possible. Noncompliance with the SGEO is not an automatic permit denial and all projects will be reviewed and potential impacts to local sage-grouse populations and habitat will be assessed. Advanced planning with the permitting agencies and WGFD is the recommended way to resolve issues.

If the proponent submits a DDCT that is not in compliance, the agencies involved will need to discuss all options and potential impacts to local sage-grouse populations and habitat. Initiating these discussions in advance of the final DDCT submittal may yield timelier review/decision results.

Federal Surface or Mineral Rights are involved in the Proposed Project

> If, on federal surface/mineral, the proponent works with the appropriate federal land management agency on the DDCT process and disturbance delineations, then:

- The federal agency submits the DDCT (and worksheet) for technical review to the DDCT Data Steward. The DDCT Data Steward will work with the federal agency in completing the technical review process (Note: the federal agency may use a contractor to make the corrections). When completed, the federal agency also submits the DDCT worksheet to the DDCT Data Steward.
- Once technical review is completed, The DDCT Data Steward submits the DDCT final results and DDCT worksheet to WGFD HPP for policy review.
- HPP coordinates with state agencies and the federal agency if there are issues with SGEO exceedances or compliance.

- HPP sends a letter regarding SGEO compliance and recommendations to the federal agency and cc's the proponent and permitting agencies that may also be involved in the project.
- If agencies have questions about the recommendations, they should contact HPP.

No Federal Surface or Mineral Rights are involved in the Proposed Project

> If federal surface or mineral is not involved, the project proponent (Note: could be a consultant) completes the DDCT process, then:

- Submits the DDCT to the DDCT Data Steward for technical review. The DDCT Data Steward will work with the proponent to complete the technical review process. When completed, the proponent submits the DDCT worksheet to the DDCT Data Steward.
- The DDCT Data Steward submits the DDCT final results and DDCT worksheet to WGFD HPP for policy review.
- HPP coordinates with state agencies if there are issues with SGEO exceedances or compliance.
- HPP sends a letter regarding SGEO compliance and recommendations to the proponent and cc's permitting agencies.
- If agencies have questions about the recommendations, they should contact HPP.

Letters from Wyoming Game and Fish Department

> Letters from WGFD will determine whether or not the project complies with the process and stipulations outlined in the SGEO and may provide recommendations on whether the permit should be issued and/or recommendations on how impacts to the bird may be minimized. These recommendations may or may not be accepted by the permitting agency and incorporated in the conditions of the permit. If there are changes to the project, the proponent should complete the DDCT review process again.

The permitting agency should document whether or not these recommendations have been accepted and if not, why they have not been accepted or cannot be implemented (EX: not within the agency's regulatory authority, but the permitting agency passed along WGFD recommendations to the proponent for voluntary compliance; or it was not physically or legally possible to make the recommended changes).

● Large Scale Disturbances

Core Area Definitions

● **Definition of Non-Core**
  > Non-Core is that area outside of core but inside the sage-grouse habitat range.

Wildfires within a DDCT

● **What the Executive Order says**
  > Sage Grouse Executive Order "Following wildfire, lands shall be treated as disturbed pending an implementation management plan with trend data showing the area returning to functional sage grouse habitat". This is specific only to wildfire situations. This direction is not intended for other incentive/mitigation situations.

● **Clarification of what the Executive Order says**
  > The goal is to incentivize restoration of wildfire burns to return as much of the affected burned area back to suitable habitat over time. This is a landscape effort and is not considered mitigation banking. This process should be used when wildfire is impacting the disturbance percentages.

  > A Technical Team comprised of BLM, USFS, WGFD, NRCS, LWG, private landowners would develop the plan and trending data. It would be the responsibility of the project proponent to conduct the monitoring. An upward trend would be determined through the collection of 5 years of data and reviewed by the technical team.[1]

Suitable Sage-Grouse Habitat Definition

● **Definition**
  > Sage-grouse require somewhat different seasonal habitats distributed over large areas to complete their life cycle. All of these habitats consist of, are associated with, or are immediately adjacent to, sagebrush. If sage-grouse seasonal habitat use maps do not exist for the project site the following description of suitable habitat should be used to determine areas of unsuitable sage grouse habitat for development siting purposes. An abbreviated description of a complex system cannot incorporate all aspects of, or exceptions to, what habitats a local sage-grouse population may or

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[1] Approved by the SGIT on January 10th, 2013

may not utilize. Refer to the BLM's Sage-Grouse Habitat Assessment Framework (HAF) for further information.

"**Suitable**" sage-grouse habitat (nesting, breeding, brood-rearing, or winter) is within the mapped occupied range of sage-grouse, and:

1. has 5% or greater sagebrush canopy cover (for nesting, brood-rearing and/or winter) as measured by the point intercept method. "Sagebrush" includes all species and subspecies of the genus Artemisia except the mat-forming sub-shrub species: frigida (fringed) and pedatifida (birdfoot); or
2. is riparian, wet meadow (native or introduced) or areas of alfalfa or other suitable forbs (brood rearing habitat) within 275 meters of sagebrush habitat with 5% or greater sagebrush canopy cover (for roosting/loafing); or
3. is reclaimed habitat containing at least 2 native grasses (at least one bunchgrass) and 2 native forbs (see "reclamation" in Attachment B) and no point with in the grass/forb habitat is more than 60 meters from adjacent 5% or greater sagebrush cover; or
4. is "**transitional**" sage-grouse habitat which is land that has been treated or burned prior to 2011 resulting in < 5% sagebrush cover but is actively managed to meet a minimum of 5% sagebrush canopy cover with associated grasses and forbs by 2021 (as determined by analysis of local condition and trend) and may or may not be considered "disturbed". Land that doesn't meet the above vegetation criteria by 2021 should be considered disturbed.

Habitat treatments conducted after 2010 must meet the current "Wyoming Game and Fish Department Protocols for Treating Sagebrush to be Consistent with Wyoming Executive Order 2011 -5; Greater Sage-Grouse Core Area Protection" or the habitat treated will be considered disturbed. Following wildfire, lands shall be considered "disturbed" pending an implemented management plan with trend data showing the area returning to functional sage grouse habitat.

"**Unsuitable**" sage-grouse habitat[2] is land within the historic range of sage-grouse that did not, does not, nor will not provide sage-grouse habitat due to natural ecological conditions such as badlands, canyons or forests. See "Specific Stipulation" number 4 in Attachment B of Executive Order 2011-5 for conditions under which less restrictive stipulations may be applied to unsuitable habitats.

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[2] The BLM Habitat Assessment Framework (HAF) definition of "unsuitable" includes both "disturbed" and "unsuitable" habitats as defined above.

"**Disturbed**" suitable sage-grouse habitat[2] is land that has been converted from formerly suitable habitat to grasslands, croplands, mined, or otherwise physically disturbed areas.

To evaluate the 5% disturbance cap per average 640 acres using the Density/Disturbance Calculation Tool (DDCT), suitable habitat is considered disturbed when it is removed and unavailable for immediate sage-grouse use. These areas may provide habitat at some time in the future through succession or restoration. Disturbed suitable habitats could also include those permanent disturbances such as major reservoirs and cities that once were considered suitable.

- ● **Determining Disturbed Habitat (Change to SGEO Page 14)**
  - ❯ The following items are guidelines for determining disturbed habitat for the DDCT process:

    1. Long-term removal occurs when habitat is physically removed through activities that replace suitable habitat with long term occupancy of unsuitable habitat such as a road, well pad or active mine.
    2. Short-term removal occurs when vegetation is removed in small areas, but restored to suitable habitat within a few years of disturbance, such as a successfully reclaimed pipeline, or successfully reclaimed drill hole or pit.
    3. There may be additional suitable habitat considered disturbed between two or more long term (greater than 1 year) anthropogenic disturbance activities with a footprint greater than 10 acres each if the activities are located such that sage grouse use of the suitable habitat between these activities is significantly reduced due to the close proximity (less than 1.2 miles apart, 0.6 mile from each activity) and resulting cumulative effects of these large scale activities. Exceptions may be provided.
    4. Land in northeast Wyoming (Figure 1 of Attachment B) that has had sagebrush removed post-1994 (based on Ortho-photo interpretation), and not recovered to suitable habitat will be considered disturbed when using the DDCT[3].

Vegetation Monitoring for Suitability Criteria
When is Disturbance Considered Suitable

- ● **Measurement Goal**
  - ❯ Define measurements that should be taken when there is uncertainty concerning the status of reclaimed areas contributing to suitable habitat. If sagebrush canopy cover is + 5%, as measured by the method described in

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[3] Approved by the SGIT on October 11th, 2012

the Habitat Assessment Framework (HAF), it is considered suitable. Executive Order 2011-5 requires the below standards plus sagebrush for all reclamation (where appropriate as described). When sagebrush canopy cover is <5%, but within 60 meters of >10% sagebrush canopy cover measure to determine compliance with the following conditions:

Measure for 2 (or more) desirable native grasses at least one of which is a bunchgrass. The species present in the reclaimed area should be reflected in an appropriate reference site, described in the ecological site description (ESD) for the reclaimed site(s), or be representative of pre-disturbance species data. A reference site will be agreed upon and determined by the land management agency or owner, WGFD and the proponent. It is recognized that reference sites could be numerous for linear features.

The frequency of occurrence of grass is expected to meet or exceed 70% of the frequency of grass as measured on the reference site, or as described in the ESD for the reclaimed sites(s), or as represented in the pre-disturbance species data. Grass canopy cover measurement is expected to meet or exceed 70% of the grass canopy cover as measured on the reference site, or as described in the ESD for the reclaimed sites(s), or as represented in the pre-disturbance species data.

Likewise, measure for 2 desirable native forbs. The frequency of occurrence of forbs is expected to meet or exceed 70% of the frequency of forbs as measured on the reference site, or as described in the ESD for the reclaimed sites(s), or as represented in the pre-disturbance species data. Forbs canopy cover is expected to meet or exceed 70% of the forb canopy cover as measured on the reference site, or as described in the ESD for the reclaimed sites(s), or as represented in the pre-disturbance species data.

- ● **Methodology**
  - ❯ Sampling timing for grasses, forbs, and shrubs is typically not later than July 1.

    Canopy cover for grasses/forbs: Line Point Intercept (see HAF). Frequency for grasses/forbs: Plot (rectangles, squares or circles) frequency computed as number of quadrats with the species of interest rooted within it divided by the total number of quadrats that are sampled. This value will be multiplied by 100 to yield frequency as a percentage. It is recommended that a minimum of 5 to 10, 30-50-m transects be conducted with a minimum of 10 to 20 quadrats (e.g. Daubenmire frame or quadrat appropriate to the site) placed equidistantly along each transect.

    Canopy cover for sagebrush: Line Intercept (see HAF).

Sample size: The HAF provides sample size recommendations. Final estimates must include a 90% confidence interval computed around the mean values estimated from vegetation sampling[4,5].

Vegetation Treatment Protocols

● **Vegetation Treatment Protocols for Sage Brush**
  ❯ Wyoming Game and Fish has put together treatment protocols and are available to download at (http://wgfd.wyo.gov/web2011/Departments/Wildlife/pdfs/SGEO_VEGTREATMENT0003620.pdf).

● General DDCT and Data Questions

What is the DDCT and why is it needed

● **What is the DDCT?**
  ❯ The Density and Disturbance Calculation Tool, or DDCT, is a spatially based tool that calculates both the number of disruptive activities averaged per square mile (640 acres) and total surface disturbance within the DDCT assessment area. The assessment area is created based on buffers around proposed projects in sage-grouse core areas, and subsequent buffers around any occupied, core area leks within the first buffer. Limits for disruptive activities and disturbances, along with buffer distances are outlined in the Governor's Executive Order 2011-5.

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[4] Approved by the SGIT on March 22nd, 2012

[5] The purpose in providing a 90% confidence interval is twofold. First, the 90% confidence interval provides an assessment of the precision of each estimate. For example, an estimate that includes zero indicates an estimate with no confidence, likely related to inadequate sampling in variable landscapes. Second, a 90% confidence interval can be used as a statistical diagnostic tool to assess whether each respective vegetation objective has been met. For example, once the target recovery level is identified, the recovery team can assess whether that level has been reached by assessing whether the target objective is included within the estimated 90% confidence interval. For instance, if the target objective is 5% canopy cover for big sagebrush canopy cover and the 90% confidence interval for the estimate from the line intercept method is 3% to 7%, then the reclamation objective has been met. If the 90% confidence interval is –3% to 13%, then there is no confidence in this estimate. On the other hand, a 90% confidence interval from 8% to 10% would indicate that the reclamation effort exceeded the recovery objective.   Likewise, a 90% confidence interval of 2%–4% indicates the objective of 5% big sagebrush canopy cover has not been met. Precision of estimates can be improved through stratification of sampling units and/or increasing the number of sub-samples in each sampling unit. We encourage practitioners to conduct pilot studies and consult with statisticians to identify sampling designs that will provide precise estimates.

For additional information please refer to the following documents:

[Executive Order 2011-5 - Greater Sage-Grouse Core Area Protection](#)

[Greater Sage-Grouse Habitat Management Policy on Wyoming BLM Administered Public Lands Including the Federal Mineral Estate](#)

[Sage Grouse Executive Order Worksheet](#)

Why is the DDCT needed?

> With the signing of the Governor's Executive Order 2011-5, state or federally permitted development within a Sage-Grouse Core Areas must comply with the SGEO requirements. The DDCT provides information on the density and disturbance thresholds related to the SGEO requirements.

Surface Disturbances

What is a surface disturbance?

> Any anthropogenic development activity or wildfire event that results in removal of sagebrush vegetation or loss of sage-grouse habitat is considered surface disturbance in the DDCT calculation. Surface disturbance includes, but is not limited to: Roads, well pads, mining operations, agricultural fields, buildings, some vegetation treatments, wind turbines, power lines pipelines, or other oil and gas infrastructure. Some linear features are considered exempt from DDCT calculations. Please see the "Disturbance Calculation Process for Linear Features" for additional information.

How are surface disturbances mapped?

> Some surface disturbances come from other spatial datasets; however, these spatial datasets are not complete for all disturbances statewide. Mapping disturbances in the DDCT assessment area uses a method called "head's up digitizing" to ensure all disturbances are mapped. When performing head's up digitizing use a minimum 1:5000 scale and the 2012 NAIP aerial photography images, and digitize around the outside perimeter of the disturbance.
>
> Visual examples of disturbances are provided on http://ddct.wygisc.org/faqs.aspx.

What information about surface disturbances is needed?

> Information needed for surface disturbances to be handled correctly within the web application includes defining whether it is a disruption, a disturbance

only, or exempt. Disturbance and Disruption are the two fields used to determine how the web application counts the disturbances. Below is a table with example of valid combinations:

Disturbance	Disruption	Model Use	Use
Yes	Yes	Disruption (1/640 count and contribute to percent disturbed)	Oil and Gas infrastructure with human presence excluding access road, pipelines, and power lines, or active mining operations.
Yes	No	Disturbance (only used in percent disturbed)	All other anthropogenic disturbance
No	No	Exempt	Areas determined to be "de minimus" or disturbed but meeting the suitable habitat definition or pre-1994 conditions in Northeast Wyoming

Other useful information recorded with the disturbance is the type of disturbance it is. Values for the disturbance types can be found in the "Where can I find the values to put in the "Type" and "Category" Fields?" question below. The surface disturbance types are grouped into categories, which is the first number of the disturbance type number

How are surface disturbances uploaded?

> Uploading surface disturbances, either proposed or existing, is possible in the web application if the features are contained in esri© Shapefile format.

What information is needed in the esri© Shapefile?

> The esri© Shapefile must contains polygons of disturbances and a valid spatial reference. Other information contained in the esri© Shapefile can be used in the application if the data are available. Below is an example of how to code the disturbances and disruptions during the upload process

Name	Description	Type	Values
Disturbance	Disturbance Indicator	Integer	1 is yes, 0 is no
Disruption	Disruption Indicator	Integer	1 is yes, 0 is no
Category	Disturbance Category	Integer	First number of the type code
Type	Code for type of disturbance	Text	Values can be found below
Comments	Comments	Text	Open

● **Can I download a blank disturbance shapefile?**

> A blank disturbance shapefile is available by downloading this file
> (https://ddct.wygisc.org/Data/Sites/24/files/Blank_Disturbance.zip).

● **Where can I find the values to put in the "Type" and "Category" Fields?**

> The "Category" and "Type" are derived from the same table. The type is the
> whole two digit number, while the category is the first digit of the number. For
> example, a well pad would have a type of 48 and a category of 4. Below is
> the complete table:

ID	Description	ID	Description
0	**Unknown**	**4**	**Oil and Gas**
0	Unknown Type of Disturbance	40	General Oil/Gas Disturbance (type unknown or varied)
1	**Road / Transportation**	41	Abandoned Well Pad (oil/gas)
10	General Road (Unknown Type)	42	Drill Hole
11	Highway/Street (paved)	43	Pipeline
12	Dirt Road (BLM, County)	44	Test Well (oil/gas)
13	Other Improved Road	45	Blowout Mud Pit (oil/gas)
14	Residential Driveway	46	Oil/Natural Gas Pipeline Building
15	Oil/Gas Access Road	47	Evaporation Pit
16	Uranium Access Road	48	Well Pad (general)
17	Landing Strip	**5**	**Mining**
18	Buffered BLM, County, State, Federal	50	General Mining Disturbance (type unknown or varied)
19	Interstate with buffer	51	Exploratory Scours (uranium)
2	**Structure / Development**	52	Blowout Mud Pit (mining)
20	General Structure (type unknown or varied)	53	Drill Hole
21	Private House/Structure	54	Test Well (uranium)
22	Oil/Gas structure (type unknown or varied)	55	Abandoned Pad
23	Uranium structure (type unknown or varied)	56	Mining Pit
24	Snow fence	57	Mining Reclamation (Large Scale)
25	General fence (type unknown)	58	Gravel Pit/Gravel Storage
26	Private Residential Development (general)	**6**	**Utilities**
27	Agricultural Development	60	General Electrical Disturbance (type unknown)
28	Residential Area / City	61	Power supply center

	Boundaries		
29	Man-made wetland	62	Power line/pole
3	**Range Land / Railroad / Road cut**	63	Windmill
30	General Range Disturbance (type unknown or varied)	64	Landfill
31	Water Source General (type unknown)	**7**	**General Linear Disturbance**
32	Cattle Waterhole	70	General Linear Disturbance (type unknown)
33	Water Trough/Tank	8	Fire and Vegetation Treatments
34	Dam/Reservoir	80	Wildfire
35	Cattle salt-lick	81	Prescribed Burn
36	Vegetation Treatment-some qualify	82	Mechanical Treatment
37	Exclosure Fence	83	Chemical Treatment
38	Railroad		
39	Highway Excavation Cut		

Disturbance Calculation Process for Linear Features

The impacts of linear disturbances are varied. The following are suggestions for dealing with linear features:

- **Roads**
  - Roads will contribute towards disturbance calculations, with the exception of two-track road less than 10 feet wide for a majority of the length. The actual footprint should be digitized.

- **Transmission Lines**
  - Overhead transmission corridors established in Executive Order 2011-5 (1/2 mile either side of existing 115kV or larger lines and the east-west corridors mapped in Attachment D will not count toward disturbance calculations for any new projects located outside the corridors. In essence, Executive Order 2011-5-established corridors are considered unsuitable habitat for the purpose of DDCT calculations and will not be counted in the numerator (disturbance) or denominator (total DDCT acreage).

  The goal of Executive Order 2011-5 is to avoid further fragmenting areas with distribution and transmission lines of all sizes.

  Distribution and transmission lines are permitted inside SGEO designated corridors (Pages 4, 15, & 16). The same distribution and transmission lines are

not permitted outside of corridors unless there is demonstration of no declines in sage-grouse populations (Pages 4 & 17).

Currently, it is unknown what type of lines impact sage-grouse populations, and to what extent.   There will be new distribution and transmission lines that will need to be built to service existing approved projects.

If the need for future distribution and transmission lines is likely, new projects that require a DDCT for approval should include distribution and transmission lines in their DDCT as part of the proposed disturbance. If it is absolutely necessary to site new distribution and transmission lines through a core area outside of an existing corridor and lines cannot be buried, lines should be sited to minimize any potential impact on sage grouse or their habitats, and preferentially consider siting along or adjacent to existing long-term linear disturbance features whenever possible (i.e., along existing occupied above ground utilities, roads).

Lines permitted but not located in an Executive Order 2011-5 transmission corridor (described above) will be counted towards the 5% disturbance calculation. Line disturbance is equal to right-of-way (ROW) Width x Length and includes all access roads, staging areas, and other surface disturbance associated with construction outside of the ROW.

All new transmission and distribution towers/structures should be designed to include raptor proofing/perch deterrent[6].

- **Pipelines**
  - Any new pipelines constructed in utility corridors established by and as defined in BLM Resource Management Plans (RMP) including those portions of the corridors located on non-Federal lands in core population areas, that have been disturbed by a previous utility installation, are exempt from conducting a DDCT analysis and will not be included in disturbance calculations for any new projects located outside these corridors. In essence BLM RMP established corridors occupied by utility infrastructure are considered unsuitable habitat for the purpose of DDCT calculations and will not be counted in the numerator or denominator. New pipelines outside BLM RMP corridors, but in core population areas, would contribute towards the 5% surface disturbance calculation until the area is reclaimed to suitable sage grouse habitat.

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[6] Approved by the SGIT on July 10th, 2012

● **Units located within a new project DDCT:**

> When dealing with situations where the DDCT encounters a Federal Unit established prior to 8.1.2008, the BLM field manager will need to work collaboratively with both the unit holders and the project proponents to determine if the existing unit boundary accurately reflects the actual disturbance likely to occur within the unit under a full development scenario. It is imperative that each of these situations is addressed with flexibility and on the ground knowledge of the landscape and habitat within the DDCT Assessment Area:

1. New Development inside Units: The key to planning development in units within core areas is to create the least amount of disturbance to suitable habitat. A unit is not automatically considered an approved activity; however, there is an expectation that development of the unit will occur. Each situation will need to be handled case-by-case and information such as development plans and reservoir characteristics will play into the BLM's decision on how to manage density and disturbance. In many cases this will best be accomplished by concentrating activity within existing (pre- 8.1.2008) unit boundaries. Disturbance and density calculations may exceed the thresholds for a DDCT because development is being concentrated in a pre-8.1.2008 unit.

2. New Development outside Units: Within existing, (pre- 8.1.2008) recognized federal oil and gas units and other recognized developments (per Executive Order 2011-5 page 2), coordination will be a key element for the BLM, the existing unit holder, and any new project proponent inside or outside the unit. A unit will be considered 100% disturbed based on the current unit boundary and will be counted as 1 disruption unless a plan of development showing long-term development is available for consideration. A unit will often have an approved plan of development that contemplates a shorter time than the life of the project, so available information may only show a portion of the entire development. In the event that a unit within the DDCT assessment area, but outside the project area, causes the project to exceed the disturbance/disruption thresholds when the unit is considered 100% disturbed and 1 disruption per 640 acres, the BLM Field Manager must work with the unit operator to determine actual development plans or the proposed project will violate the Executive Order.

Features that do not contribute to the disturbance and disruption thresholds

- ● **Exempt ("de minimus") Activates**
  - ❯ Existing Land Uses and Landowner Activities in Greater Sage-Grouse Core Population Areas That Do Not Require State Agency Review for Consistency With Executive Order No. 2011-02

  1. Existing animal husbandry practices (including branding, docking, herding, trailing, etc).
  2. Existing fanning practices (excluding conversion of sagebrush/grassland to agricultural lands).
  3. Existing grazing operations that utilize recognized rangeland management practices (allotment management plans, NRCS grazing plans, prescribed grazing plans, etc).
  4. Construction of agricultural reservoirs and **aquatic** habitat improvements less than 10 surface acres and drilling of agriculture and residential water wells (including installation of tanks, water windmills and solar water pumps) more than 0.6 miles from the perimeter of the lek. Within 0.6 miles from leks no review is required if construction does not occur March 15 to June 30 and construction does not occur on the lek. All water tanks shall have escape ramps. Any **terrestrial** habitat improvements <10 acres will require compliance with the SGEO[7].
  5. Agricultural and residential electrical distribution lines more than 0.6 miles from leks. Within 0.6 miles from leks no review is required if construction does not occur March 1 5 to June 30 and construction does not occur on the lek. Raptor perching deterrents shall be installed on all poles within 0.6 miles from leks.
  6. Agricultural water pipelines if construction activities are more than 0.6 miles from leks. Within 0.6 miles from leks no review is required if construction does not occur March 15 to June 30 and construction is reclaimed.
  7. Pole fences. Wire fences if fitted with visibility markers where high potential for collisions has been documented[8].
  8. Irrigation (excluding the conversion of sagebrush/grassland to new irrigated lands).
  9. Spring development if the spring is protected with fencing and enough water remains at the site to provide mesic (wet) vegetation.

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[7] Approved by the SGIT on March 22nd, 2012
[8] Approved by the SGIT on October 11th, 2012

10. Herbicide use within existing road, pipeline and power line rights-of-way. Herbicides application using spot treatment. Grasshopper/Mormon cricket control following Reduced Agent-Area Treatments (RAATS) protocol.
11. Existing county road maintenance.
12. Cultural resource pedestrian surveys.
13. Emergency response.

Website Questions

Who is this website intended for?

> This website is intended for people who have a need to run the DDCT before pursuing necessary permit(s) to develop.

Who is allowed to use this website?

> This website requires people to register before all of the features of the website can be used. Registration is not restricted, but does require a valid email address.

How do I register to use this site?

> Using any web browser go to ddct.wygisc.org/ Secure/Register.aspx and do the following:

- Enter a User ID, Email Address, Password, Security Question, Security Answer, and Time Zone
- Click the **Create Account** button

An email will be sent to the email address provided in the registration with information on how to confirm the email address. Once the email address has been confirmed, the user can begin using the site as a proponent.

Hardware and Software Requirements

What hardware is required to run the DDCT?

> The DDCT application is designed to perform largely independent of hardware. A computer with internet access is all that is required.

What software is required to run the DDCT?

> A web browser and Adobe Flash Player (http://get.adobe.com/flashplayer/) is all that is required. Both are available as freeware. The website has been tested on Internet Explorer 8 and higher, Firefox and Google Chrome. The

DDCT application runs on Adobe Flash Player version 10 and above. During the review process, maps are sent using a PDF format, so Adobe Reader (http://get.adobe.com/reader) is also recommended.

● **Note to Internet Explorer Users**

> Internet Explorer does not always work correctly with the DDCT application. To minimize the chance of errors it is recommended to change the cache settings by going to the **Internet Options** under the **Tools** menu. On the **General** Tab there is a **Browsing history** area. Click on the **Settings** button to open the **Temporary Internet Files and History Settings** dialog window. Choose the **Every time I visit the webpage** radio button under the **Check for a newer version of stored pages:** questions.

● **What additional Software is helpful when running the DDCT?**

> The web application is designed to use data created with desktop GIS. Features can be uploaded from an esri© Shapefile. All uploads need to have a spatial reference for the web application to correctly convert them. Uploading AutoCAD dwg files is planned in a future release of the web application.

> PDF maps produced during the review process have spatial information recorded within the map. TerraGo Technologies makes a free add-on to Adobe Reader, called TerraGo Toolbar (http://terragotech.com) that can read and display the spatial information contained in the map.

● Website and Data Security Questions

User Roles and Project Security

● **Is my login secure?**

> WyGISC web servers have traffic routed to them via the University of Wyoming, Information Technologies (UWIT)'s F5 BIGIP security appliance. The F5 provides secure and monitored HTTP, HTTPS (SSL) and secure FTP traffic for both external web and campus network traffic. External web traffic also has to pass through the UW perimeter firewall.

● **Who can see the data entered into the website?**

> Users can only see their own data. Data that is passed to the web application is filtered based on the User ID of the person who entered the data. The User ID filtering allows only the user that entered the data to see the data, keeping confidential plans safe.

● **Are there users other than proponents?**

> ❯ "Technical Reviewers" can see project data only after the project has been submitted for technical or policy review. Technical reviews are performed by the DDCT Application and Data Steward. "Policy Reviewers" can see project data only after the project has been submitted for policy review. Policy reviews are performed by the Wyoming Game & Fish Department, Habitat Protection Program or permitting agency personnel.

Data Security and Backup

● **How is the data secured?**

> ❯ The data is stored in an ArcGIS Server Spatial Database Engine (SDE) environment, which is running on a Microsoft SQL database. The SQL database is username and password protected.

● **Is the data backed up?**

> ❯ Full SQL database backups are taken nightly via Microsoft SQL Server Maintenance plans and SQL Server Agent. Backups are written via Tivoli Storage Manager (TSM) to an enterprise backup system at UWIT and to a remote backup nightly.

● **How long are projects stored on the web application?**

> ❯ Projects are kept on the server until they are deleted by the project proponent.

● What Data is used in the DDCT Process?

> ❯ All data, with the exception of the "proposed surface disturbance or project boundary", is already integrated into the application. Downloading data is not necessary to complete the DDCT process.

● **Proposed surface disturbance and/or project boundary:**

> ❯ This is the area that is being proposed for disturbance. This file must be a polygon file or a complete line file that can be converted into a polygon. The project proponent must provide this.

● **Most recent occupied leks/perimeter:**

> ❯ Created and maintained by the Wyoming Game & Fish Department, this file is a hybrid of occupied lek perimeters and occupied lek points, buffered by 5 feet. This was done to make sure that all occupied leks were represented by polygons.

● **Sage-Grouse Core Areas Version 3 and Connectivity Areas:**
   › Created by the Sage-Grouse Implementation Team (SGIT) and are available for download on the Wyoming Game and Fish Department website – Sage-Grouse page.
   (http://gf.state.wy.us/wildlife/wildlife_management/sagegrouse/index.asp).

● **Land Ownership:**
   › Compiled by the Bureau of Land Management, the most recent land ownership file can be found on the Wyoming BLM website (http://www.blm.gov/wy/st/en/resources/public_room/gis/datagis.html) under the PLSS/Ownership heading.

● **NAIP (National Agricultural Imagery Program) imagery:**
   › Created by the US Department of Agriculture, Farm Service Agency as part of National Agriculture Imagery Program, this is statewide aerial imagery with a ground resolution of one meter. Used for detecting additional disturbances in the DDCT Assessment area. True Color images are available in seamless statewide coverage in an ArcGIS Server format from the Aerial Photography Field Office server. (http://gis.apfo.usda.gov/arcgis/services)

● **Statewide surface disturbance file:**
   › Statewide surface disturbance file contains a collection of disturbances from various sources and previous projects.   The file contains information on features that are considered disruptions, disturbance, or exempt from DDCT calculations. Any disruption is also considered a disturbance. Features that are disruptions are used in the density and disturbance calculation; features that are disturbances, but not disruptions are only used in the disturbance calculation. The file also contains information on the type of disturbance. The disturbance types are organized into categories. For additional information on categories and types, see the Surface Disturbance Types Tab.

● Spatial Data Sources for Surface Disturbances

   › Below is a list of spatial data sources that may be useful in finding disturbances, and some tips on digitizing disturbances. This list should not be considered complete and ultimately any anthropogenic or wildfire disturbance visible in the 2012 NAIP imagery needs to be mapped. Disturbances that have occurred since the 2012 NAIP was completed, which would not be represented on the 2012 imagery, also need to be included.

- **Roads and Transportation Networks**
  - Capture any road greater than or equal to 10ft wide that does not have a noticeable strip of vegetation down the middle. Roads less than 10ft wide that are clearly discernible as improved should also be captured. When possible digitize the road disturbance from ditch to ditch across the road. The Wyoming Department of Transportation (WYDOT) has a good road file for maintained roads. This file will help to identify where some of the roads are located in the DDCT. Smaller or new roads may still have to be digitized. The WYDOT file can be used to buffer state highways by 34ft, county roads by 28ft, and interstates by 38ft in either direction. The most accurate way to capture the footprint of the road disturbance is to digitize it. BLM offices are also a good source of road data.

- **Oil and Gas Wells**
  - The current well file can be obtained from the Wyoming Oil and Gas Conservation Commission (WOGCC) website (http://wogcc.state.wy.us). Go to the WOGCC webpage and click Down Load. Scroll to the bottom of the list, select the Well Header file and click the bucking bronco icon to the left to start downloading. The "WH" file is comprised of active wells and the "PA" file is comprised of plugged and abandoned wells. The WOGCC spatial data is available in an ArcGIS Server format from the WOGCC IMS server (http://wogccms.state.wy.us)

- **Oil and Gas Unit Boundaries**
  - The most current oil and gas unit file can be viewed from the WOGCC website (http://wogccms.state.wy.us). This web address can also be used in ArcMap to add an ArcIMS Server site. This file is updated quarterly. Please see the Additional Information section for more information on units.

- **Mining**
  - Use the mine plan permit boundary to digitize actual mining disturbance using the NAIP imagery. Mining files can be downloaded from the Department of Environmental Quality (DEQ) website (http://deq.state.wy.us/lqd). Scroll down the page to the **CHIA - Cumulative Hydrologic Impact Assessments heading.** These files are updated annually, usually in February. For questions or concerns please contact Chad Kopplin with DEQ (307.777.6470 or ckoppl@wyo.gov).

- **Agricultural Fields**
  - Digitize all cropland. If the field is determined to be sage-grouse habitat it can be changed to exempt in the disturbance dataset.

- **Buildings**
  - This also includes ranches and developed subdivisions. If there is disturbance around structures that would prohibit sage-grouse use, then digitize the entire disturbance footprint. If the building is only used intermittently, digitize the actual building footprint.

- **Vegetation Treatments**
  - Contact WGFD or the land management agency to determine whether or not vegetation treatment data are available.

- **Pipelines**
  - Digitize pipeline corridor scar. Pipelines regardless of width/distance are not to be considered toward the density calculations. Pipelines will contribute towards the disturbance calculation until the area is successfully reclaimed per Executive Order 2011-5. The Wyoming Pipeline Authority has spatial pipeline data; please contact them directly (http://www.wyopipeline.com/) for access to the data.

    Any new pipelines constructed in utility corridors established by and as defined in BLM Resource Management Plans (RMP) including those portions of the corridors located on non-Federal lands in core population areas, that have been disturbed by a previous utility installation, are exempt from conducting a DDCT analysis and will not be included in disturbance calculations for any new projects located outside these corridors. In essence BLM RMP established corridors occupied by utility infrastructure are considered unsuitable habitat for the purpose of DDCT calculations and will not be counted in the numerator or denominator. New pipelines outside BLM RMP corridors, but in core population areas, would contribute towards the 5% surface disturbance calculation until the area is reclaimed to suitable sage grouse habitat.