What is a “Core Area Strategy”?

- Establish core population areas
- Limit development to defined thresholds
- Establish thresholds for affected areas
  - 5% disturbance averaged
  - Averaged 1 disruption per 640 acres
- Determine affected area and evaluate for thresholds
  - Affected areas:
    - 4 mile buffer from proposed project perimeter
    - Subsequent 4 mile buffer around occupied core area leks within initial 4 mile buffer
    - Clip to core area
  - Evaluate for thresholds:
    - Calculate density
    - Calculate disruptions
Determine the Affected Area (Assessment Area)

Evaluate for Thresholds (Disturbance)

Evaluate for Thresholds (Density)
Online Density and Disturbance Calculation Tool Application Training

Use of GIS:
- June 2010:
  - Project Impact Analysis Area (PIAA)
  - ArcGIS 9.3 Model (BLM)
- June 2011:
  - Desktop DDCT
  - ArcGIS to Python Script (WyGISC)
- July 2012:
  - Web DDCT
  - Creation of a DDCT Data and Application Steward position

Online Density and Disturbance Calculation Tool
Everything is run through the website

ddct.wygisc.org
Requires Registration

Registration
Go to the ddct.wygisc.org
- On the top of the page click on Register
- 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 of how to confirm the email address
- Once the email is confirmed the user has access to the site as a proponent
**Online Density and Disturbance Calculation Tool Application Training**

### User Roles

**Policy Reviewer**
- Review projects submitted for policy review
- Change project status
- View projects submitted for policy review

**Technical Reviewer**
- Review projects submitted for technical review
- Change project status
- View projects submitted for technical and policy review

**Proponent**
- Create and edit DDCTs
- Submit projects for technical review
- Submit projects for policy review
- View only projects created by the user

### Website Layout

- **Module Layout**
  - Application and History
  - Resources and Questions

### Application and History

- **History and Development of the Core Area Policy**
  - Introduction and background of the Core Area Policy
  - How to use the online DDCT application
  - DDCT workflow and online application procedures
  - Sign in and access the online DDCT application
- **Sign in**
- **Open the online DDCT application**
Resources and Questions

- Common Core Area Policy questions
- DDCT and Core Area Policy frequently asked questions
- Common application and website questions
- Website and application frequently asked questions
- Other available resources
  - State Resources
  - Federal Resources

Website Layout Demo

- Demonstration of the website and some of the features
- Note: Additional information is available when clicked

Information Needed to Run the DDCT

- Required Information
- Project Area
- Other Helpful Information
- Existing surface disturbances in the area
Software Needed to Run the DDCT

- Required Software
  - Web Browser
    - Adobe Flash (http://get.adobe.com/flashplayer/) – Free
  - Other Helpful Software
    - Adobe Reader (http://get.adobe.com/reader/) – Free
    - With terraGo toolbar (http://terragotech.com) – Free
    - Desktop GIS (e.g. ArcGIS or AutoCAD Map 3D)
      - Interface with esri© Shapefile built into web application
      - Interface with AutoCAD spatial referenced files coming soon

Procedures

Quick Overview

1. Create a New Project
2. Create a Project Area
3. Generate the DDCT Area Boundary
4. Map all Disturbances Within the DDCT Area
5. Run Preliminary Results – Optional
6. Submit for Technical Review
7. Address issues brought up in Technical Review and Resubmit for Technical Review
8. Once the Technical Review is Complete – Run Final Results, Complete the DDCT worksheet, and Submit for Policy Review
9. Work with Wyoming Game & Fish – Habitat Protection Program to Resolve any issues

Permitting Workflow
Communication Between Project Proponent and DDCT Steward

- Email sent to DDCT Steward
- DDCT Steward notifies Proponent: Project has been received
- Proponent starts worksheet
- HFP assigns Review Number
- Email sent to Proponent: set up cloud-sharing account
- Mapbook with comments on cloud drive, shared with Proponent
- Email sent to Proponent: review is complete
- Final Mapbook is moved to cloud drive
- Proponent submits final report for Policy Review
- Worksheet
- Final Results
- HFP notifies Proponent the project is ready

DDCT Development Workflow

Application Navigation

- Application Home Screen Layout
- Project Navigation Bottom
- WebApp: index
**Project Navigation Buttons**

- Home – Opens to the application home screen
- Project Details – Opens the project details screen
- Edit – Opens the project edit screen
- Create New – Opens the new project creation wizard

**Project List Area**

- Displays Project Name, Project ID, and Status
- Single click on a project zooms the Map Viewer to either the Project Boundary, or the Project Area if the boundary has not been generated
- Double Click opens the Project Home Screen with the Edit tab selected

**Map Navigation and Layer Information**

- Map Layer – Opens new window with MapLayer Information
- Measure – Opens the measure tool
- Identify – Opens the identify tool
- Zoom to State – Zooms to the full extent of Wyoming
- Zoom to previous extent – Zooms to the last extent used multiple times
- Zoom forward to next extent – Only available after the use of the Zoom to previous extent tool – can be used multiple times
- Zoom in – Zooms into a window drawn on the screen
- Zoom out – Zooms out using a window drawn on the screen
- Pan – Opens the pan tool
- Arrow – Opens the arrow tool
Layers Edited by Users

- Project Table
  - Project Identifier*
  - Name of project
  - Project Ownership Information
  - Description
  - Dates
  - HPP Project Identifier*

- Proposed Disturbance
  - Project Identifier*
  - Disturbance identifier
  - Disruption Identifier
  - Comments
  - Location and Area

*Created by Application

Layers Created by Application

- Boundary
  - Project Identifier
- Map Grids
  - Project Identifier
  - Grid Name
- Statistical Outputs
  - Disturbance Statistics
  - Lek Disturbance Statistics
  - Ownership Statistics

Layers Edited by the Data and Application Steward

- Statewide Existing Disturbance
  - Project Identifier
  - Disturbance-identifier
  - Disruption Identifier
  - Comments
  - User Information
  - Location and Area
Online Density and Disturbance Calculation Tool Application Training

Creating a New Project
- From the Application Home Screen click the Create New button
  - Enter Project Name
  - Enter Project Description
  - Enter Proposed Start of Construction
  - Enter Proposed End of Construction
  - Click Add Project Button

Project Details Screen
- Features of the project details screen

Project Details Screen
Project Information
- Contains a summary of the project information
  - Project Name
  - Project Description
  - Start of Construction
  - End of Construction
  - Project Status
  - Project ID
  - Planner
- The information can be edited by clicking the Update Info button
Project Details Screen
Project Details Screen

**Project Details Screen**

**Project Features**
- Contains a summary of the project features
  - Number of Planned Disturbances
    - Proposed Project Area
    - Data last updated
  - Project Boundary
    - Number of boundary features
    - Date last updated
  - Number of Preliminary Disturbance Features
    - User-entered existing disturbances
    - Date last updated

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**Project Details Screen**

**Additional Project Navigation Buttons**
- Add/Edit/Upload Data button
  - Takes the user to the Digitize Tab on the Edit Project Home Screen
  - Only available during the DDCT Development Phase
- Preliminary Results button
  - Takes the user to the Preliminary Results Tab on the Edit Project Home Screen
  - Only available during the DDCT Development Phase
- Final Results button
  - Takes the user to the Final Results Screen
  - Only available during the Technical Review Complete Phase
- Delete Project button
  - Deletes the project
  - Always available

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**Editing and Creating Features**

**Features of the project edit home screen**

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Create Features Using the online tool

- With the Digitize tab selected
- Zoom into area of interest
- Select either Proposed Disturbance or Preliminary Disturbance
- In the map view window, click on one edge of the feature you want to digitized to start the process
- Keep clicking along the edge of the feature until the entire outline is created
- Double click to finish the process
Create Features
Editing features using the online tool
• With the Digitize tab selected
  • Select either Proposed Disturbance or Preliminary Disturbance
  • In the map view window, click on the feature you want to edit to open the Edit Disturbances sub-tab
  • Select whether the feature is a Disturbance and/or Disruption
  • Select the Category and Type of disturbance
  • Enter any comments in the comments box (optional)
  • Click the Update Feature button to finish the process

Create Features
Selecting multiple features using the online tool
• With the Digitize tab selected
  • Select either Select Multiple Feature tool
  • Use the mouse to draw a box around the features desired for selection
  • The selected features will have a yellow inner glow
  • Any attribute changes or deleting of features will apply to all selected features

Create Features
Clearing a multiple selection
• With the Digitize tab selected
  • Click on the Clear Selected Features button
Create Features
Using the upload Shapefile tool – Schema

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Type</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disturbance</td>
<td>Disturbance</td>
<td>Integer</td>
<td>1 is yes, 0 is no</td>
</tr>
<tr>
<td>Disruption</td>
<td>Disruption</td>
<td>Integer</td>
<td>1 is yes, 0 is no</td>
</tr>
<tr>
<td>Category</td>
<td>Disturbance</td>
<td>Integer</td>
<td>First number of the type code</td>
</tr>
<tr>
<td>Type</td>
<td>Code for type of disturbance</td>
<td>Text</td>
<td>Values can be found on website</td>
</tr>
<tr>
<td>Comments</td>
<td>Comments</td>
<td>Text</td>
<td>Open</td>
</tr>
</tbody>
</table>

Create Features
Using the upload Shapefile tool – Step One

- With the Upload tab selected
- Select the Upload Shapefile button
- In the Upload Shapefile Dialog window Press the Select Zip File button
- Navigate to where zip file is stored, select it and click Open to close the window
- Press the Next button

Create Features
Using the upload Shapefile tool – Step Two

- Select whether the shapefile is a Proposed Disturbance or Existing Disturbance and click the Upload Shapefile button
- When the red text that says “Upload Complete. Continue to Step 3” appears, the upload has been successful, press the Next button
Create Features
Using the upload Shapefile tool – Step Three

- Select the fields that contain the Disturbance/Disruption/Category/Type/Comments Information
- Attribute fields are listed in alphabetical order, not in the order they appear in the feature
- If no field contains the information, leave the dropdown blank
- If the shapefile contains no pertinent attribute information select the check box at the bottom
- Press the Next button

Create Features
Using the upload Shapefile tool – Step Four

- Press the Write to DB button to finalize the upload
- Press the Done button to finish the process

DDCT Assessment Area
Generating the DDCT Boundary

- With the Boundary tab selected
- Select the radio button next to the name of the Core Area(s) to be used in the DDCT process
- Press the DDCT Boundary button
- Wait until the boundary generation process has run, the screen will refresh when the process is complete
DDCT Examination Area

**Download the DDCT Boundary**
- With the **Boundary** tab selected
  - Click the **Download** button
  - An email will be sent to the Data and Application Steward
  - Email sent proponent to ask GIS version
  - Data emails to proponent

**Download – What is Emailed?**
- The `<Project Name>.zip` contains an esri© File Geodatabase that contains the following features:
  - `ddctBoundary` – The DDCT boundary
  - `ExistingDisturbance` – Statewide Disturbance clipped to the DDCT boundary
  - `MapGrids` – Grid covering the DDCT boundary used to create a Mapbook for the project
  - `PrelimDisturbance` – Preliminary Disturbance for the project area, entered by the user
  - `ProposedDisturbance` – The proposed project boundary entered by the user
  - Layer files are included

**Preliminary Results**

**Preliminary and Statewide Disturbance Data**
- With the **Preliminary Results** tab selected
  - Select the **Core Area** for the calculation
  - Click the **Calculate Results** button
  - Wait until the preliminary calculation process has run, the tables will populate with data when the process is complete
  - These results are not stored in the database, and are only for Informative purposes
Online Density and Disturbance Calculation Tool Application Training

Preliminary Results

Saving Preliminary Results

• With the Preliminary Results tab selected
• Click the Save as PDF button
• Give the results a name and select the location to save the PDF

Submit a Project for Technical Review

• With the Submit tab selected
• Press the Submit button
• An email will be sent to the DDCT Data and Application Steward indicating that the project is ready for review
• Proponents will be contacted with the results of the technical review

Project Status:
Technical Review

Overview of the Technical Review Process
• Project is reviewed by the Data and Application Steward to ensure that all disturbances have been accounted for.
• There are two possible results of the technical review
  • Disturbances need revision
  • All disturbances are accounted for and mapped correctly

Technical Review Revision Process

Overview of Revision Process
• Project is moved back to the DOCT Development stage
• Proponent receives a series of PDF maps highlighting the areas of concern
• Proponent can either manually correct the problems using the online tool, or upload corrected disturbance data
• Once the concerns have been addressed the project is then re-submitted for Technical Review

Technical Review

All disturbances mapped correctly

Overview of the Technical to Policy Review transition
• Role of the Data and Application Steward:
  • Take the disturbances from the Preliminary layer and incorporate them into the Statewide Disturbance Data layer
  • Change the project status to Technical Review Complete
  • Notify the proponent that the Technical Review is complete
• Role of the Proponent:
  • Completes the steps necessary to start the policy review process
Policy Review
Generate Final Results and Start Policy Review
- From the Project Details screen click the Final Results button
- Select the Core Area for the calculation
- Click the Calculate Results button
- Wait until the final calculation process has run, the tables will populate with data when the process is complete
- Click the Write to DB button to save the results
- Click the Start Policy Review button to start the policy review process

Policy Review
Features of the Final Results Screen
- On the Final Results screen
  - The proposed project area can be turned off by unchecking the Proposed box
  - The disturbances used in the calculations can be turned off by unchecking the Existing box
  - The assessment area can be turned off by unchecking the Boundary box

Policy Review
Role of the DDCT in compliance with SGEO 2011-5
- The DDCT results are only one aspect of SGEO 2011-5
- Permitting agencies and the Wyoming Game & Fish Department evaluate the proposed project in terms of the applicable stipulations for development, both general and specific, outlined in Attachment B of Executive Order 2011-5
- Proponents should complete the DDCT worksheet with information pertaining to the proposed project, and submit it along with DDCT results to the Wyoming Game and Fish Department’s Habitat Protection Program, via the DDCT Data and Application Steward, for review
- Issues that arise during Policy Review may be handled directly between the proponent, permitting agency, and the WGFD Habitat Protection Program
Policy Review Summary

• Overview of the Policy Review Process
• Project is reviewed by the Wyoming Game & Fish Department, Habitat Protection Program, to ensure compliance with Governor’s Executive Order 2011-5
• The Habitat Protection Program is able to review and provide feedback and response for most projects within 30 days, depending on the completeness and specificity of the DDCT package that is submitted
• At the completion of the Policy Review a letter is issued indicating completion of the DDCT process, the overall compliance with Executive Order 2011-5, and/or recommendations pertaining to sage grouse.

Wyoming Density and Disturbance Calculation Tool

Thank you.
Questions?

DDCT.WyGISC.org