For Assistance with Reclamation Policy:
Email Ryan Snyder: rlsnyder@blm.gov

For Technical Support:
Email Haylee Schweizer: schweizerh@usgs.gov
Uploading Batch Line-point Intercept Files............................................................................... 70
Belt Transect Batch Upload........................................................................................................... 72
Belt Transect File Naming Convention.......................................................................................... 72
Uploading Batch Belt Transect Files.............................................................................................. 72
Batch Upload Error Messages and Guidelines.............................................................................. 74
Errors and Messages Encountered on the Line-point Intercept Batch Upload ...................... 74
Errors and Messages Encountered on the Belt Transect Batch Upload .................................... 76
Data Dictionaries............................................................................................................................ 78
Line-point Intercept Data Dictionary ............................................................................................. 78
Belt Transect Data Dictionary ......................................................................................................... 79
Examples of Completed Data Forms.............................................................................................. 80
Completed Line-point Intercept Form............................................................................................. 80
Line-point Intercept Data Formats Accepted per Field ................................................................. 82
Completed Belt Transect Data Form............................................................................................... 83
Belt Transect Data Formats Accepted per Field ........................................................................... 84
How to Log Into the System

Locate the White River Data Management System (WRDMS) Site

Go to: https://my.usgs.gov/wrfo
Login using your username and password

Change or Forgot Your Password

Please contact Ryan Snyder at rlsnyder@blm.gov or Haylee Schweizer at schweizerh@usgs.gov.

NOTE: USGS utilizes my.usgs.gov for centralized user management for all applications hosted on the USGS site. Therefore, usernames and passwords are managed by the USGS User Profile store at https://my.usgs.gov. As a result, users are forwarded to this system to enter their authentication credentials. The myUSGS site has a team who helps with password resets and access questions. The WRDMS Application allows myUSGS to determine if a user is authorized and authenticated and does not store any user profile information.

Disable the Security Information Pop-Up

If you receive the following alert while using the application (only seen in Internet Explore), select Yes.

![Security Information Pop-Up](image.png)
Introduction

WRDMS is an application used by the White River Field Office and energy companies to track and document disturbance and reclamation activities associated with oil and gas operations in the Mesa Verde Play area by utilizing buffering and the threshold concept. Operators have the ability to look at all data entered into the application but are only allowed to edit their own data. Agency managers have the ability to view as well as edit all data. The application allows querying of the data entered to provide useful information to all users.

When fully deployed, WRDMS information will be visible to the public through the web interface.

WRDMS Entry Page

Start: Entry Page (http://my.usgs.gov/wrfo)

When a WRDMS user logs into WRDMS, the first page displayed is the Entry Page. This is the page users will employ to navigate to the individual operator pages and reporting component.
Operators Section (1)

Start: Entry Page (http://my.usgs.gov/wrfo)

Because WRDMS has numerous operators, the Operators section provides a list of the 5 most used operators while allowing the ability to search for all operators in the application. Each name in the list is a link, and when selected, will navigate to that particular operator’s page. This is the link used when an operator would like to add / edit data.

If the operator name doesn’t appear in the operator list then a user can type the name of the operator into the Find box to select the correct operator and navigate to the operator page.

E.g. If an Exxon / XTO user logs in and select “Exxon/XTO” from the operator list, this user will be able to edit data. If an Exxon/XTO user logs in and selects “WR Delux Drilling” from the operator list, this user will only be able to view WR Delux Drilling’s data.

![Well Pad Operators:](http://my.usgs.gov/wrfo)

- Exxon/XTO
- WR Delux Drilling
- Sontera Energy LLC
- Williams/WPX
- Encana Ltd

Operator Search

Find

Figure 2: Operators Section
Reports, Downloads, & Interactive Maps Section (2)

Start: Entry Page (http://my.usgs.gov/wrfo)

Frequently Used Reports

The reports component is comprised of “canned” and ad hoc reports.

Canned Reports

A “canned” report is a report that has the criteria preselected so when the link is selected, the report runs automatically with minimal additional information required.

Frequently Used Reports:

- Presence of Noxious Weeds
- Presence of Undesirable Species
- All Hoc
- All Data

Presence of Noxious Weeds: Displays the type of noxious weeds present per location.

1. Select the Presence of Noxious Weeds link from the Frequently Used Reports section

<table>
<thead>
<tr>
<th>Operator</th>
<th>Name</th>
<th>Type</th>
<th>Weeds Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>ArcHub</td>
<td>BLP Ref. Point</td>
<td>Reference Point</td>
<td>Hydrocotyle niger L. (black horsetail) - HN90 Lythrum salicaria L. (purple loosestrife - Lysa2)</td>
</tr>
<tr>
<td>SWEDLP</td>
<td>ANT. 2-4</td>
<td>Wall Pad</td>
<td>Bromus tectorum L. (cheatgrass - BRT2) Cardaria draba (L.) Desv. (white top - CA2) Cardaria Desv. (white top - CARDA2)</td>
</tr>
<tr>
<td>2 Operator(s)</td>
<td>2 Locations</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 4: Presence of Noxious Weeds Report
Presence of Undesirable Species: Displays the type of undesirable species present per location

1. Select the **Presence of Undesirable Species** link from the **Frequently Used Reports** section

![Figure 5: Presence of Undesirable Species Report](image)

All Data Report: Displays all of the operators and the data they’ve entered

1. Select the **All Data** link from the **Frequently Used Reports** section

![Figure 6: All Data Report](image)
Ad-Hoc Report
The Ad-Hoc report allows the user to select specific criteria to query in the application. Ad-Hoc reports provide much more criteria to select and query from as opposed to the canned reports.

1. Select the Ad-Hoc link from the Frequently Used Reports section
2. Select specific criteria to refine the report results.

**Report Title:** Use this field to name the report

**Scope:** Select a specific operator and / or location type

**Spatial Reports:** Search for locations with specific spatial data  
**E.g.** Search for locations only having disturbance with no reclamation

**Status Reports:** Search for locations with specific status report data  
**E.g.** Search for locations with a specific status or has no qualitative data

**Output Modes:** Choose the output of the report; default is On-screen list (HTML)  
Reports can also be sorted by using the **Sort by** and **Ordered** fields

**Weed Status**  
Select the type of weed querying, choices are **Noxious** and **Undesirable Weeds**

**Noxious or Undesirable Weed Species:** Selecting weeds in this field will display locations that have the  
Specified weed present

**Seeding Method:** Specify a specific seeding method

3. Select the **Run Report** button to produce the report or select the **Reset Form** button to display the Ad Hoc Report selection page again.

---

**Figure 8:** Ad-Hoc Report results

<table>
<thead>
<tr>
<th>Operator</th>
<th>Name</th>
<th>Type</th>
<th>Dist Acres</th>
<th>Recr Acres</th>
<th>Last Seeding</th>
<th>Seed Type</th>
<th>Last Spatial</th>
<th>Last Qualitative</th>
<th>Last Frequency</th>
<th>Last Intercept</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anadarko</td>
<td>ABD</td>
<td>Road</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Reclamation Not Started</td>
</tr>
<tr>
<td>Anadarko</td>
<td>BLM Rd. Point</td>
<td>Reference Point</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anadarko</td>
<td>BLM Rd. Point</td>
<td>Reference Point</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>07/23/2010</td>
</tr>
<tr>
<td>Anadarko</td>
<td>Ref Point 1</td>
<td>Reference Point</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anadarko</td>
<td>Ref Point 2</td>
<td>Reference Point</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anadarko</td>
<td>Second Pad</td>
<td>Well Pad</td>
<td></td>
<td></td>
<td>07/23/2010</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Interim Reclamation Initiated</td>
</tr>
<tr>
<td>Anadarko</td>
<td>Test Pad</td>
<td>Well Pad</td>
<td>15.73</td>
<td></td>
<td>04/01/2011</td>
<td></td>
<td></td>
<td></td>
<td>04/02/2010</td>
<td>04/27/2011</td>
<td>Interim Reclamation Initiated</td>
</tr>
<tr>
<td>Anadarko</td>
<td>Test Pad</td>
<td>Pipeline</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Reclamation Not Started</td>
</tr>
<tr>
<td>OGP Energy</td>
<td>Testing Pad</td>
<td>Reference Point</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OGP Energy</td>
<td>Testing Pad</td>
<td>Reference Point</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SNRIP LP</td>
<td>ANT 2.6</td>
<td>Well Pad</td>
<td>0.00</td>
<td>0.00</td>
<td>04/10/2011</td>
<td>Cover Crops</td>
<td>08/03/2011</td>
<td>08/03/2011</td>
<td>Interim Reclamation Initiated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SNRIP LP</td>
<td>B. 7-31</td>
<td>Well Pad</td>
<td>0.02</td>
<td></td>
<td>07/24/2011</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Final Reclamation Achieved</td>
</tr>
<tr>
<td>3 Operator(s)</td>
<td>13 Locations</td>
<td>24.25</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Report Main Menu

After a report runs, the main menu bar at the top of the page changes and allows the user more options.

![Figure 9: Report Main Menu](image)

The options available in the Report Main Menu are described below from left to right:

- **Home:** Directs the user back to the Entry Page
- **Reporting:** Directs the user to the Ad-Hoc selection page
- **Modify Search:** Directs the user to the Ad-Hoc selection page
- **Map Report:** Displays a map containing all the locations in the report’s results list
- **Acrobat Reader (PDF):** Outputs the displayed report in PDF format
- **Microsoft Excel (XLS):** Outputs the displayed report in Excel format
- **ESRI Shapefile (SHP):** Zips all of the spatial data for all locations listed in the report’s results list
- **Comma-Separated (CSV):** Outputs the displayed report in a comma-separated file
The WRDMS Map displays the Mesa Verde Play boundary, disturbance and reclamation areas, and buffered areas around disturbances.

By default all the layers are turned off; checking the box to the left of the layer name will allow the layer to display in the map. The user can also select a specific location type along with the spatial layer. Once all criteria have been selected, click the Refresh Map button to display the new criteria.

For more information on the location types, the user can click the “click for definitions” link.

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well Pad</td>
<td>Location of oil and gas well drilling and development where the surface is disturbed. Well pads are approximately 1 – 9 acres in size and may have one or multiple wells.</td>
</tr>
<tr>
<td>Pipeline</td>
<td>Buried and surface pipelines for oil and gas development and production can either be on or off-lease/unit to serve a particular location or as a gathering system.</td>
</tr>
<tr>
<td>Roads</td>
<td>Lease and/or access roads built or used for operations.</td>
</tr>
<tr>
<td>Facility</td>
<td>Ancillary equipment used to support oil and gas development such as gas plants, compressor stations, produced water and condensate tanks, tank battery storage, centralized production or collection facilities, centralized fracturing, staging areas, water recycling facilities.</td>
</tr>
<tr>
<td>Powerlines</td>
<td>Power Transmission lines, both for the support of oil and gas facilities and larger scale lines.</td>
</tr>
<tr>
<td>Other</td>
<td>Electric compressors, pipeline cathodic protection, etc. for support of oil and gas facilities and operations.</td>
</tr>
</tbody>
</table>

Figure 10: Definitions of Location Types

The Print Map button captures the map with the selected criteria displayed and allows the user to print the map. On the print page, the map is displayed along with a map legend below it which indicates what criteria is displayed.
Map Controls:

- Zoom in/out by using the gray sliding bar in the upper left corner of the map
- Change the background by selection Map, Aerial, or Terrain from the upper right corner of the map
- Pan the area by clicking the left mouse button and dragging
- For additional information about a spatial feature, select a specific disturbance or reclamation area, or reference point by zooming in then clicking on the polygon. This will cause a pop-up box to appear with more information regarding the specific spatial feature.

![Figure 11: WRDMS map and layers](image-url)
Lease Holder / Operator Unit (4)
Start: Entry Page (http://my.usgs.gov/wrfo)

Because WRDMS has numerous lease holders and operator units, the Lease Holder/Operator Unit section provides a list of the 5 most used lease holders/operator units while allowing the ability to search for all lease holders/operator units in the application. Each name in the list is a link, and when selected, will navigate to that particular lease holder’s page.

If the lease holder name doesn’t appear in the list then a user can type the name of the lease holder into the Find box to select the correct lease holder and navigate to the lease holder page.

E.g. If an EXXON MOBIL CORP user logs in and selects “EXXON MOBIL CORP” from the lease holder/operator unit list, this user will be able to edit data. If an EXXON MOBIL CORP user logs in and selects “ANNE W PHILLIPS TR” from the operator list, this user will only be able to view ANNE W PHILLIPS TR’s data.

Lease Holder/Operator Unit:
- EXXON MOBIL CORP
- ANNE W PHILLIPS TR
- ENCANA OIL & GAS (USA) INC
- WILLIAMS PRODUCTION RMT CO
- BACRON OIL

Leaseholder/Unit Operator Search

Find

Figure 12: Lease Holder/Operator Unit selection
Mesa Verde Status Summary (5)

Start: Entry Page (http://my.usgs.gov/wrfo)

The Mesa Verde Status Summary chart shows a summary of all developments in the Mesa Verde Area. It displays the different statuses each oil and gas feature can be in, the number of features currently in that status, and the total number of unreclaimed acres occupied by those features. The user can hover over each one of the statuses to get the description of that status.

![Mesa Verde Status Summary](image1)

### Mesa Verde Status Summary:

<table>
<thead>
<tr>
<th>Status</th>
<th># Pads</th>
<th>Unreclaimed Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planned Unapproved</td>
<td>15</td>
<td>89.75</td>
</tr>
<tr>
<td>Planned Approved</td>
<td>5</td>
<td>8.95</td>
</tr>
<tr>
<td>Construction</td>
<td>15</td>
<td>406.36</td>
</tr>
<tr>
<td>Drilling</td>
<td>4</td>
<td>23.25</td>
</tr>
<tr>
<td>Completion</td>
<td>4</td>
<td>7.70</td>
</tr>
<tr>
<td>Production</td>
<td>13</td>
<td>50.41</td>
</tr>
<tr>
<td>Abandoned</td>
<td>2</td>
<td>7.80</td>
</tr>
</tbody>
</table>

![Figure 13: Mesa Verde Status Summary](image2)

Reclamation Status Summary (6)

The Reclamation Status Summary chart displays the statuses of reclamation, the number of features that have initiated that status, the total number of acres initiated in that status, the number of features meeting required standards in that status, and the total number of acres that have met the required standards for that reclamation status. The user can hover over each of the statuses to get its description.

![Reclamation Status Summary](image3)

### Reclamation Status Summary:

<table>
<thead>
<tr>
<th>Reclamation</th>
<th># Pads</th>
<th>Initiated Acres</th>
<th># Pads</th>
<th>Acres Meeting Std/Approved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase II</td>
<td>7</td>
<td>15.25</td>
<td>3</td>
<td>4.28</td>
</tr>
<tr>
<td>Final Abandonment</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>5.33</td>
</tr>
</tbody>
</table>

![Figure 14: Reclamation Status Summary](image4)
Lease Holder / Operator Unit

Start: Entry Page (http://my.usgs.gov/wrfo) → Select a lease holder from the Lease Holder / Operator Unit list or search for a lease holder using the Find box to navigate to the Lease / Unit Operator Summary Page

The Lease / Operator Summary Page displays uploaded data specific to the lease holder selected from the Lease Holder section on the Entry Page. This page provides a detailed view of the lease holder’s thresholds and status of uploaded locations.

Figure 15: Lease/Operator Summary Page
Lease Holder / Operator Unit Map & Downloads (1)

The Lease / Operator Map functions the same as the map found on the Entry Page; however, the spatial data displayed on the Lease / Operator Map is specific to the lease holder chosen from the Lease Holder / Operator Unit section on the Entry Page.

For more information on the location types, the user can select the “click for definitions” link.

The Downloads section contains data downloads or information specific to the selected lease holder.

Figure 16: Lease Holder Map with buffers, disturbance and reclamation layers turned on
Lease / Unit Summary Section (2)

The Lease / Unit Summary section exhibits a chart that quantifies the number of locations that have a specific status (e.g. Production) and cumulatively the amount of unreclaimed acres of those statuses.

For more information on each status, hovering over a status will display a pop-up box with a status definition.

<table>
<thead>
<tr>
<th>Status</th>
<th># Pads</th>
<th>Unreclaimed Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planned Unapproved</td>
<td>10</td>
<td>100.22</td>
</tr>
<tr>
<td>Planned Approved</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Construction</td>
<td>4</td>
<td>104.00</td>
</tr>
<tr>
<td>Drilling</td>
<td>2</td>
<td>5.14</td>
</tr>
<tr>
<td>Completion</td>
<td>1</td>
<td>2.72</td>
</tr>
<tr>
<td>Production</td>
<td>2</td>
<td>7.83</td>
</tr>
<tr>
<td>Abandoned</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
<td>219.91</td>
</tr>
</tbody>
</table>

Figure 17: Lease/Unit Summary displaying ‘Abandoned’ status description

Reclamation Status Summary (3)

The Reclamation Status Summary chart displays only the lease holder’s statuses of reclamation, the number of features that have initiated that status, the total number of acres initiated in that status, the number of features meeting required standards in that status, and the total number of acres that have met the required standards for that reclamation status. The user can hover over each of the statuses to get its description.

<table>
<thead>
<tr>
<th>Reclamation</th>
<th># Pads</th>
<th>Initiated Acres</th>
<th># Pads</th>
<th>Acres Meeting Stds/Approved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase II</td>
<td>7</td>
<td>15.28</td>
<td>3</td>
<td>4.28</td>
</tr>
<tr>
<td>Final Abandonment</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>5.33</td>
</tr>
</tbody>
</table>

Figure 18: Reclamation Status Summary for Lease Holder
Threshold Tracking (4)

The WRDMS application utilizes the threshold and buffering concept to encourage operators to cluster drill as well as move the well to the production status quickly.

### Threshold Tracking

<table>
<thead>
<tr>
<th>Range and Status</th>
<th>Pads</th>
<th>Disturbance Acres</th>
<th>Total Range Acres</th>
<th>Max Threshold Acres</th>
<th>Percent of the Threshold Used</th>
<th>Percent of Range Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer Range Acute</td>
<td>0</td>
<td>0.00</td>
<td>119,975.74</td>
<td>27,743.93</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Summer Range Collective</td>
<td>0</td>
<td>0.00</td>
<td>119,975.74</td>
<td>27,743.93</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Winter Range Acute</td>
<td>0</td>
<td>0.00</td>
<td>180,796.21</td>
<td>45,199.05</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Winter Range Collective</td>
<td>0</td>
<td>0.00</td>
<td>180,796.21</td>
<td>45,199.05</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Severe Winter Acute</td>
<td>0</td>
<td>0.00</td>
<td>31,444.47</td>
<td>7,051.12</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Severe Winter Collective</td>
<td>0</td>
<td>0.00</td>
<td>31,444.47</td>
<td>7,051.12</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Winter Concentration Areas Acute</td>
<td>0</td>
<td>0.00</td>
<td>17,771.94</td>
<td>4,442.98</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Winter Concentration Areas Collective</td>
<td>0</td>
<td>0.00</td>
<td>17,771.94</td>
<td>4,442.98</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Winter Severe/Concentration Acute</td>
<td>0</td>
<td>0.00</td>
<td>1,143.63</td>
<td>114.36</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Winter Severe/Concentration Collective</td>
<td>0</td>
<td>0.00</td>
<td>1,143.63</td>
<td>228.73</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Figure 19: Threshold Summary table

Buffering of Disturbance Polygons

When a disturbance polygon is uploaded into the application, a “buffer” polygon is created. This buffer is 200 meters extending from the perimeter of the disturbance polygon. This 200 meter buffer is calculated for each disturbance polygon, regardless of disturbance type (well pad, facility, pipeline, etc.)

Figure 20: Buffer displaying around a disturbance polygon
As part of the upload process, calculations are made to identify the “potential” buffered disturbance acres that may be added to the specific lease. These calculations are made for each range type (Summer Range, Winter Range, etc.). The calculations take into account overlap between buffer areas so that the same acreage is not counted multiple times. In GIS terms, the disturbance buffers are “dissolved” into one polygon per range type.

**Upload Spatial Reports for Operator WR Delux Drilling**

<table>
<thead>
<tr>
<th>Status</th>
<th>Name</th>
<th>Feature Type</th>
<th>Cell Date</th>
<th>DistType</th>
<th>Lease</th>
<th>Range</th>
<th>Buffer Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>OK</td>
<td>Pad 388-CI</td>
<td>Well Pad</td>
<td>11/01/2012</td>
<td>Disturbance</td>
<td>ENCAVA OIL &amp; GAG (USA) INC</td>
<td>Winter Range</td>
<td>69</td>
</tr>
<tr>
<td>Warning</td>
<td>Pad 499-CI</td>
<td>Well Pad</td>
<td>11/01/2012</td>
<td>Disturbance</td>
<td>ENCAVA OIL &amp; GAG (USA) INC</td>
<td>Severe Winter Range</td>
<td>76</td>
</tr>
</tbody>
</table>

ENCANA OIL & GAS (USA) INC
A potential of 69 acres will be added to ENCAVA OIL & GAG (USA) INC Winter Range threshold limit
A potential of 76 acres will be added to ENCAVA OIL & GAG (USA) INC Severe Winter Range threshold limit

![Figure 21: Potential acreage and range effected by the spatial upload](Image)

The message on the planning page indicates that the disturbances have the potential for adding “X” number of acres to the threshold limit (Figure 21). This indicates the maximum the disturbances would add to the limit; however, because the disturbance buffers are not added to the threshold limits until specific actions are taken (i.e. construction begins). It’s possible that a disturbance may be in a “planned” phase for a period of time and not contribute to the threshold limit.

**Threshold Calculations**

Threshold calculations are made for each leaseholder / range type combination. For each combination there is an acute disturbance calculation and a collective disturbance calculation. Depending on the status of the disturbance either the 200 meter buffer and corresponding area or the actual disturbance area is used in calculating the total disturbed area.

**NOTE:** If the disturbance is planned it is not included in the calculations

The 200 meter buffer is used when the following conditions are met:

- Pad status is: Construction, Drilling, Completion
- Pad status is: Production and Interim Reclamation is not yet approved or the trips to the site is > 7 per week

These disturbance criteria above are what make-up the **Acute** threshold disturbance limit.
The actual disturbance footprint is used when the following conditions are met:

- Pad status is **production**
  - Reclamation status is **Interim** or **Final Reclamation** approved by the BLM AND
  - Trips to the site is < 7 per week
- Pad status is **Abandoned**

These disturbances are added to the **Acute** disturbance acres to form the **Collective** disturbance limit.

**Current Threshold Calculations:**

<table>
<thead>
<tr>
<th>Disturbance Type</th>
<th>Threshold Calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer Range and Winter Range Acute disturbances</td>
<td>Max of 10% of the lease/range type area</td>
</tr>
<tr>
<td>Summer Range and Winter Range Collective disturbances</td>
<td>Max of 20% of the lease/range type area</td>
</tr>
<tr>
<td>Severe Winter Range, Winter Concentration Areas, Severe Winter Range/Winter Concentration area Acute disturbances</td>
<td>Max of 5% of the lease/range type area</td>
</tr>
<tr>
<td>Severe Winter Range, Winter Concentration Areas, Severe Winter Range/Winter Concentration area Collective disturbances</td>
<td>Max of 10% of the lease/range type area</td>
</tr>
</tbody>
</table>

**Lease / Operator Location Summary Table (5)**

The **Lease / Operator Location Summary Table** displays the most recent date the data was collected for each location of the specific lease holder. The user can navigate to a specific location’s page by clicking on a location’s name. By clicking on a collection date, the user will be directed to the specific report.

**E.g.** If the user selects the date in the “Last Spatial” column for pad101, the user will be directed to the spatial report for that date and location.
Operator Summary Page

Start: Entry Page (http://my.usgs.gov/wrfo) → Select an operator from the Operators list or search for an operator using the Find box to navigate to the Operator Summary Page

The Operator Summary Page displays uploaded data specific to the operator selected from the Operator section on the Entry Page. This page provides a more detailed view of the operator’s activities and status of uploaded locations.

Figure 23: Operator Summary Page
Operator Map (1)

The Operator Map functions the same as the map found on the Entry Page; however, the spatial data displayed on the Operator Map is specific to the operator chosen from the Operator section on the Entry Page.

For more information on the location types, the user can select the “click for definitions” link.

![Operator Summary Map with disturbances and buffers displayed](image)

Figure 24: Operator Summary Map with disturbances and buffers displayed

The Downloads section contains downloads for information specific only to this operator.

Downloads:
- ESRI Shapefile (shp)
- Microsoft Excel (xls)
- Adobe Acrobat (pdf)
Operator Summary Section (2)

The Operator Summary section exhibits a chart that quantifies the number of locations that have a specific status (e.g. Production) and cumulatively the amount of unreclaimed acres of these statuses.

![Operator Summary Table]

Figure 25: Operator Summary Table
Operator Location Summary Table (3)

The Location Summary Table displays the most recent date the data was collected for each location. The user can navigate to a specific location’s page by clicking on a location’s name. By clicking on a collection date, the user will be directed to the specific report.

E.g. If the user selects the date in the “Last Spatial” column for “AAAAA”, the user will be directed to the spatial report for that date and location.

![Operator Location Summary Table](image)

Specify the Types of Locations to View (Listing Drop Down Menu)

The Listing drop down menu, located above the Location Summary Table (Figure 26), allows the user to specify the types of locations to view. If an operator has a large number of pads, selecting a specific type of location can significantly reduce the locations listed in the table and provide a more manageable list to view.
Reclamation Status Summary (4)

The **Reclamation Status Summary** chart displays only the operator’s statuses of reclamation, the number of features that have initiated that status, the total number of acres initiated in that status, the number of features meeting required standards in that status, and the total number of acres that have met the required standards for that reclamation status. The user can hover over each of the statuses to get its description.

Figure 27: Reclamation Status Summary for Operators

Operator Summary Main Menu

**Start:**  
Entry Page ([http://my.usgs.gov/wrfo](http://my.usgs.gov/wrfo)) → Select an operator from the Operators list or search for an operator using the Find box to navigate to the Operator Summary Page

The main menu at the top of the Operator Summary Page contains all of the necessary links to navigate the site and perform data entry activities.

From this menu the user can:

- Navigate to the WRDMS Entry Page by selecting Home
- Navigate to the reports page by selecting Reporting
- Add a new location by selecting New Location
- Batch upload spatial data by selecting Upload Spatial Reports
- Batch upload photographs by selecting Upload Photographs
- Batch upload qualitative and quantitative data by selecting Upload Status Reports
- Search for a location using the Location Search box
- **Add Modify Authorized User for <Operator Name>** - Once a user has been added to myUSGS and has been added to the correct WRFO community role, their email address can then be entered on this page to allow edit access to the specified operator page.

Figure 28: Main Menu and Location Search
Location Search

The Location Search (Figure 28) eases the search process by auto-populating a list of locations based on what the user begins to type (Figure 29).

Figure 29: Example of the search auto-populating a list of potential locations based on what has been typed in the search box.
Location Entry Page

Start:  Entry Page (http://my.usgs.gov/wrfo) → Select an operator from the Operators list or search for an operator using the Find box to navigate to the Operator Summary Page → select the Name of a location in the Location Summary Table

The Location Entry Page is a detailed view of the activities for a specific location. This page displays the spatial, photographs, documents, qualitative and quantitative data that have been uploaded into the application.

This page allows the user to edit data already entered into the application one record at a time as opposed to a batch upload. This is advantageous in the event data was erroneously entered for one or two specific fields of a report. Instead of performing a batch upload to replace all data the user selects the location with the incorrect data and fixes the specific fields.

Figure 30: Location Entry Page

Navigation (1)

The Navigation box provides links to all the different activities performed on a pad and allows you to easily advance to the next or the previous location

Summary:  Directs the user to the Location Entry Page
Status Reports:  Navigates to the page that houses uploaded quantitative and qualitative data
Spatial Reports:  Navigates to the page that houses uploaded spatial data
Photographs:  Directs to the page that houses uploaded photographs
Downloads:  ESRI Shapefile contains all spatial data ever uploaded for the specific location

Microsoft Excel contains ALL LPI and Belt Transect data uploaded for the location
Location Status (2)

On the Location Entry Page, the Location Status box displays the location type, range site, status, reclamation status, latest spatial report, the amount of disturbed acres, the amount of reclaimed acres, +/- 8 trips to the pad per week, and a link to the BMP (Best Management Practices) answers. The location name, type, and range site can be edited by using the “Pencil” icon found in the upper right corner of the box.

The Status, Reclamation Status, and number of trips to the pad per week can be edited by clicking on the status (e.g. “Production”). BMP Answers can be edited by clicking on the “Show/Edit BMP Answers” link. They must be answered before the location’s status can be changed to “Production”. 

![Figure 31: Location Status box](image1)

![Figure 32: Status and BMP Answers links](image2)
**Latest Belt Transect (3)**

The **Belt Transect** area displays the most recent status report (Line-point Intercept, Qualitative) as well as the most recent belt transect that have been uploaded for the specific location. If there have been no status reports uploaded then only the belt transect will display as seen in Figure 33.

![Latest Belt Transect Display](image)

**Location Map (4)**

The map displayed on the **Location Entry Page** presents the spatial data that has been uploaded for the specified site. A legend is displayed to describe each graphic on the map.

**Map Legend**

- Selected Location’s Surface Disturbance
- Selected Location’s Redomination
- Other Location Surface Disturbance
- Other Location Redomination
- Disturbance Buffer

![Map Legend](image)
Most Recent Documents (5)
The **Most Recent Documents** displays the most current documents that have been uploaded to the location. Select the blue link to the right of the document title to view the document.

![Figure 35: Most Recent Documents display](image)

Most Recent Photographs (6)
The **Most Recent Photographs** area displays the most current photo collection that has been uploaded for the location. Each picture has edit tools in the upper left corner, which allows the user to delete or edit individual pictures.

![Figure 36: Most Recent Photographs section](image)
Pad History (7)

This area of the Location Entry Page records when events happen on to this location. This includes status changes, new data uploads, etc.

<table>
<thead>
<tr>
<th>Pad History:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sep/18/2012</td>
</tr>
<tr>
<td>Sep/18/2012</td>
</tr>
</tbody>
</table>

Figure 37: Pad History
Adding and Editing a Location

Start: Entry Page (http://my.usgs.gov/wrfo) → Select an operator from the Operators list or search for an operator using the Find box to navigate to the Operator Summary Page

Adding a New Location

There are two different links that can be used to add a new location to the application.

**Link 1:**
1. From the Operator Summary Page select the New Location link in the main menu bar

![Figure 38: Add a new location from the Operator Summary Page](image)

2. Enter the name of the location and select the location type and range site descriptions from the drop down menus.

   **NOTE:** It’s recommended that naming conventions are consistent for all locations.

![Create Location for WR Delux Drilling](image)

3. Select Create to create and save the location or select Cancel to terminate the “add new location” process
1. From the Operator Summary Page select the Upload Spatial Reports. This link is used to batch upload spatial data. (Please see Batch Uploads section for detailed instructions)

After selecting this link, a file can be chosen to upload. Once the file is selected, the system will “read” the data. If there are locations that do NOT exist in the application but are found in the uploaded file, the user will have the opportunity to allow the application to automatically create locations.

Figure 40: Adding a location using the batch upload feature
Editing a Location

Start: Entry Page (http://my.usgs.gov/wrfo) → Select an operator from the Operators list or search for an operator using the Find box to navigate to the Operator Summary Page.

The Location Edit Tool is found at the end of each row in the Location Summary Table on the Operator Summary Page.

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Dist. Acres</th>
<th>Rec. Acres</th>
<th>BLM Rec. Approved</th>
<th>Last Sending</th>
<th>Latest Edit Tool</th>
<th>Last Spatial</th>
<th>Last Qual.</th>
<th>Last Intercept</th>
<th>Status</th>
<th>Plan Approved</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMMA</td>
<td>Well Pad</td>
<td>0.00</td>
<td>No</td>
<td>No</td>
<td>08/01/2011</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Planned</td>
<td>Yes</td>
</tr>
<tr>
<td>Big Circle</td>
<td>Well Pad</td>
<td>0.00</td>
<td>No</td>
<td>No</td>
<td>08/01/2011</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Planned</td>
<td>Yes</td>
</tr>
<tr>
<td>Big Square</td>
<td>Wall Pad</td>
<td>13.41</td>
<td>5.41</td>
<td>No</td>
<td>08/01/2011</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Construction</td>
<td>Yes</td>
</tr>
<tr>
<td>Big TEST 897</td>
<td>Well Pad</td>
<td>87.61</td>
<td>No</td>
<td>No</td>
<td>04/01/2011</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Planned</td>
<td>No</td>
</tr>
<tr>
<td>Dist 266</td>
<td>Well Pad</td>
<td>7.22</td>
<td>6.26</td>
<td>No</td>
<td>08/07/2012</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Planned</td>
<td>No</td>
</tr>
<tr>
<td>Dist 279</td>
<td>Wall Pad</td>
<td>13.91</td>
<td>14.49</td>
<td>No</td>
<td>08/19/2012</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Planned</td>
<td>No</td>
</tr>
<tr>
<td>Dist 321177</td>
<td>Wall Pad</td>
<td>4.75</td>
<td>Yes</td>
<td>Yes</td>
<td>09/19/2012</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Abandoned</td>
<td>No</td>
</tr>
<tr>
<td>Exxon</td>
<td>Well Pad</td>
<td>0.00</td>
<td>No</td>
<td>No</td>
<td>08/01/2011</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Planned</td>
<td>Yes</td>
</tr>
<tr>
<td>Outside Circle</td>
<td>Wall Pad</td>
<td>134.38</td>
<td>No</td>
<td>No</td>
<td>08/01/2011</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Planned</td>
<td>Yes</td>
</tr>
<tr>
<td>T5 E12 T12</td>
<td>Wall Pad</td>
<td>72.13</td>
<td>No</td>
<td>No</td>
<td>08/12/2011</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Planned</td>
<td>Yes</td>
</tr>
<tr>
<td>Pad 112</td>
<td>Well Pad</td>
<td>6.99</td>
<td>No</td>
<td>No</td>
<td>08/12/2011</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Construction</td>
<td>Yes</td>
</tr>
<tr>
<td>Pad 245</td>
<td>Well Pad</td>
<td>7.00</td>
<td>7.01</td>
<td>No</td>
<td>12/18/2012</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Planned</td>
<td>No</td>
</tr>
<tr>
<td>Pad 456</td>
<td>Well Pad</td>
<td>5.99</td>
<td>Yes</td>
<td>Yes</td>
<td>08/18/2012</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Abandoned</td>
<td>No</td>
</tr>
</tbody>
</table>

NOTE: Only managers can delete spatial data.

Edit Location for Exxon/XTO

The Disturbance/Reclamation Plan has been approved by the BLM.

Name: * pad103

Location Type: * Well Pad

Range Site Description: * PJ Woodlands

Request Pad Ownership Transfer: [ ]

* designates required fields

Figure 42: Editing an existing location

Once the appropriate changes have been made, the user can select the Save button to save the changes or select the Cancel button to stop the edit process and discard changes.
Changing the Ownership of a Pad

When a pad has changed ownership, the current operator of the pad needs to initiate the change. Below are the steps to follow to accomplish this.

1. On the Location Entry Page select the pencil icon in the upper right corner of the Location Status box

2. Check the Request Pad Ownership Transfer check box
3. Choose the new operator from the **Change operator to** drop down list and click **Save**

![Figure 45](image)

**Figure 45:** Select the operator that is to be the new owner of a location then select Save

4. Once **Save** is selected the following message will appear. From this screen, the user can select the **Back to Operator** button to return to the **Operator Summary Page**

![Figure 46](image)

**Figure 46:** Message indicating the request to change operator ownership has been submitted
Uploading Individual Spatial Reports

Start: Entry Page (http://my.usgs.gov/wrfo) → Select an operator from the Operators list or search for an operator using the Find box to navigate to the Operator Summary Page → select the Date in the Last Spatial field for the particular location

OR

Entry Page → Select an operator from the Operators list to navigate to the Operator Summary Page → select the Name of the location to navigate to the Location Entry Page → select Spatial Reports from the Navigation box on the left side of the screen

Spatial Reports

Spatial Reports Box:
All spatial reports that have been uploaded into the application will appear in the box with the heading “Spatial Reports”. The report that is highlighted in red will appear on the right side of the screen.

If a spatial report doesn’t yet exist for a location, in place of the Spatial Reports Box, there will be text indicating no spatial reports exist and provides a link for the user to add one.

Figure 47: Spatial Reports Page

- **Green** polygons represent reclamation acreage
- **Blue** polygons represent disturbed acreage
Uploading an Individual Spatial Report

Start: Entry Page (http://my.usgs.gov/wrfo) → Select an operator from the Operators list or search for an operator using the Find box to navigate to the Operator Summary Page → select the Name of a location in the Location Summary Table.

Spatial Data Rules

Following is a list of rules for uploading spatial polygons into the application. These rules are also included in the Spatial Template found on the Entry Page.

General Shapefile Construction

1. Shapefile submissions must be zipped (a .zip file) and contain valid DBF, SHP, SHX, and PRJ files.
2. The PRJ file must contain legitimate projection information. The system will attempt to automatically transform the spatial data found in your shapefile to the system’s internal projection, Web Mercator (EPSG:3857). This process may have varying degrees of accuracy and you should use the preview map to verify that the system has completed the transformation properly. To ensure maximum accuracy, use NAD-27, NAD-83, or WGS-84 for your projection’s datum. Area calculations are determined by transforming to EPSG:26913 during the upload process.
3. Empty Spatial Templates are provided for WGS-84 Geographic, and NAD-83 UTM13N.
4. Disturbances and reclaimed spatial submissions must consist of a single polygon or multipolygon feature.
5. All polygons and multipolygons must conform to the OpenGIS Simple Features Specification for SQL
6. The implications of this are:
   a. The shell and holes of all polygons cannot self-intersect.
   b. Holes can touch the shell or another hole at a single point only. This means that holes cannot intersect one another at multiple points or in a line segment.
   c. Polygon interiors must be connected (this is implied by the previous statement).
   d. There is no requirement that a point where a hole touches the shell be a vertex.
   e. The element Polygons in a MultiPolygon may touch at only a finite number of points (e.g. they may not touch in a line segment).
   f. The interiors of the element Polygons in a MultiPolygon must be disjoint (e.g. they may not cross).

Associating Shapefile Records with Disturbed Areas

1. The system will allow users to associate one and only one record in a shapefile to a disturbance. All disturbed areas associated with a pad must be dissolved into a multipolygon record before submission.
2. If an area consists of multiple polygons (pad, equipment area, road), then these polygons must be made into a single multipolygon feature in the shapefile that conforms to the geometry.
standards outlined above. Generally, polygons (except for pipelines) are not allowed to intersect more than 5% of the disturbance surface area. NOTE: The intersection constraint is for pad disturbance and reclamation areas, the buffer area associated with a disturbance can overlap other features.

3. The disturbance feature must represent the total disturbance area of the pad/location, including any areas that have been reclaimed.
4. A collection date must be supplied with the disturbance multipolygon.
5. The disturbance area can not overlap any disturbance areas for other features.

**Associating Shapefile Records with Reclaimed Areas**

1. The reclamation feature for the pad/location must be a subset of the current disturbance feature. In other words, it must be completely contained by the disturbance feature.
2. The system will allow users to associate one and only one record in a shapefile to the reclamation area. All reclaimed areas associated with a disturbance must be dissolved into a multipolygon record before submission.
3. The reclamation feature must represent the total reclaimed area of the pad/location, including any areas that areas that have been reclaimed in different timeframes.

**Multiple Pads in the Same Shapefile**

1. If a shapefile contains multiple pads, roads, pipelines, and other features, it can be batch uploaded as long as it follows these rules:
   a. Features can be uploaded if they do not already exist in the system but only if this is specified during the upload. Otherwise, the feature name (pad name, road name, etc) must already exist in the system, and the shapefile's use of that name must be identical to the one the system stores.
   b. If the system has a pad named SHB 1-31, the shapefile must name that pad SHB 1-31. Names like "shb1-31", "shb/cor 1-31", and "shb1a-31b" do not match up and will be rejected.
2. The Shapefile Data Dictionary (the attributes in the dbf) must conform to the following:
   a. **Name** (Character(254)) -- The name of the feature. If this is a Well Pad, this should be the Pad name. If this is a pipeline, this should represent the beginning and end point of the pipeline. This will be unique for an operator.
   b. **FeatType** (Character(254)) -- This is the type of feature. *Allowed Entries*: Well Pad, Road, Pipeline, Other.
   c. **CollDate** (Date or Character(254)) -- Date the data was collected; this should represent the date of the observation, not processing. Format = MM/DD/YYYY.
   d. **DistType** (Character(20)) -- *Allowed Entries*: disturbance or reclamation

**NOTE:** The shapefile can contain other fields but these will NOT imported
Uploading Spatial Data

Spatial reports can be entered individually using two different methods.

**Method 1:**

1. If spatial data hasn’t been entered for the location, the user can select the **Add a Spatial Report** link found in the right corner of the **Location Entry Page**.

![Add a Spatial Report](image1)

**Figure 48:** Add a Spatial Report when no spatial data has been entered for the location

2. Browse and select the zip file for upload

   **NOTE:** Once **Submit** is selected it may take a few moments for the application to upload the data and verify that it contains no errors

![Upload Individual Spatial Report](image2)

**Figure 49:** Upload individual Spatial Report page

---

**Add New Spatial Report for Location Facility 123**

Upload a ZIP file containing a valid shapefile (SHP) and its associated support files (PRJ, SHX, DBF, etc).

![Upload ZIP File with Shapefile](image3)

*designates required fields

---

42
3. If there are multiple SHP files included in the zip file the user will need to select which SHP needs to be uploaded into the system. (Figure 50)

**Add New Spatial Report for Location Pad000**

The file you uploaded contains more than one shapefile. Please select the one you wish to import from.

<table>
<thead>
<tr>
<th>Filename</th>
</tr>
</thead>
<tbody>
<tr>
<td>SpatialData/Pad000 - New.shp</td>
</tr>
<tr>
<td>SpatialData/Pad000 - Old.shp</td>
</tr>
</tbody>
</table>

Submit  X  Cancel

Figure 50: If a zip file contains multiple SHP files, the user must select the correct one to upload

4. Once the file has been read into the application, the shapefile is displayed on the left with the attribute data displayed on the right. The user can review the spatial and attribute data to ensure it is correct.

**Upload Spatial Reports for Operator WR Delux Drilling**

Add locations if they don’t already exist  Yes  No

Allow new reclamation areas to be smaller than the corresponding previous spatial report’s reclamation area  Yes  No

<table>
<thead>
<tr>
<th>Status</th>
<th>Name</th>
<th>Feature Type</th>
<th>CallDate</th>
<th>DistType</th>
<th>Lease</th>
<th>Range</th>
<th>Buffer Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>OK</td>
<td>Demo Pad</td>
<td>Well Pad</td>
<td>01/01/2010</td>
<td>disturbance</td>
<td>XTO ENERGY INC</td>
<td>Winter Range</td>
<td>87</td>
</tr>
<tr>
<td>Warning</td>
<td>Demo Pad</td>
<td>Well Pad</td>
<td>01/01/2010</td>
<td>reclamation</td>
<td>XTO ENERGY INC</td>
<td>Winter Range</td>
<td>0</td>
</tr>
</tbody>
</table>

XTO ENERGY INC
A potential of 87 acres will be added to XTO ENERGY INC Winter Range threshold limit

Figure 51: Spatial upload

5. **Select Save**

The user can also cancel the spatial upload or go back to the list of SHP files to pick a different file.
6. Once the upload is complete a message will appear on the following screen indicating if the upload was successful.

![Spatial report upload successful!](image)

Figure 52: Message displayed after a successful upload

**Method 2**
From the **Location Entry Page**, select the **Add Spatial Report** link from the main menu bar and follow steps 2 – 5 found in **Method 1** above.

![Main menu bar found at the top of the Location Entry Page](image)

Figure 53: Main menu bar found at the top of the Location Entry Page
Uploading, Editing and Deleting Individual Photographs

Start: Entry Page (http://my.usgs.gov/wrfo) → Select an operator from the Operators list or search for an operator using the Find box to navigate to the Operator Summary Page → select the Name of the location to navigate to the Location Entry Page

Uploading Photographs

From the Location Entry Page, the user can use three different links to upload individual photo collections.

Figure 54: Upload photograph navigation
Links 1 and 2
Links 1 and 2 will take the user to the Add Photograph page for the specific location. Link 3 has an interim page that will be illustrated later.

1. Enter the required data into the Add Photograph form

![Add Photograph for Location Demo Pad](image)

**NOTE:** Collection Date, Direction and Image are required
Image formats accepted are:
- JPG
- GIF
- PNG

2. Use the **Browse** button to search your computer for a photo to upload

3. Select **Save** to complete the Add Photograph process or select **Cancel** to stop the process

4. Once the photo is uploaded, the user will be returned to the Location Entry Page. If the uploaded photo is the most recent it will appear in the Most Recent Photographs area on the Location Entry Page
If more photos need uploaded, select the blue Add Photograph link in the upper right corner of the Most Recent Photographs area.

By selecting the Photographs link on the Location Entry Page, the user can view all the photo records that have been uploaded for the location.

Photos are grouped in 30 day intervals by Collection Date. The most recent photo record is highlighted red in the Photograph Groups area and the photos are also displayed on the right. The user can select the “magnifying glass” icon next to other records to view the photos in the Selected Photographs area (Figure 57).
Link 3
If the location has no photos, selecting link 3 (Figure 54) will bring the user to the following page:

Location Entry Page: ANT_2-6 (SWEPI LP)

This location has no photographs. Perhaps you would like to add one?

Navigation:
- Summary
- Status Reports
- Spatial Records
- Photographs
- Linked Reference
- Ports

Figure 58: Using the Photographs link from the Navigation box directs the user to this page

Once the user selects the blue add one text, the page will direct to the Add Photograph Page (Figure 55).
Editing and Deleting Uploaded Photographs

Start: Entry Page (http://my.usgs.gov/wrfo) → Select an operator from the Operators list or search for an operator using the Find box to navigate to the Operator Summary Page → select the Name of the location to navigate to the Location Entry Page

The most current photos can be edited and deleted from the Location Entry Page. To edit or delete older photos, the user must select the Photographs link from the Navigation box located on the left side of the page.

Edit and Delete Most Recent Photographs

From the Location Entry Page, use the icons found in the upper left corner of each photo to edit / delete a photo.

- Use the “X” to delete the selected photo
- Use the pencil icon to edit the photos information, such as, direction, collection date, etc.

Figure 59: Use the edit tools located in the left corner of each image to edit / delete the photo
Edit and Delete Photographs
To edit any photo regardless of collection date, select the **Photographs** link from the **Navigation** box located on the left side of the **Location Entry Page**.

Photos are grouped into collections based on the collection date entered and edit tools can be found in the upper left corner of each photo. If more photos need to be added, the **blue Add Photograph** link is found in the upper right corner of the **Selected Photographs** box.

![Figure 60: Photographs Page](image)

**Edit Photographs**
Users can edit photos one at a time by selecting the pencil icon in the upper left corner of each photo. Once the pencil icon is selected, the edit screen will appear.

**Edit Photograph for Location Second Pad**

![Figure 61: All fields can be changed when editing a photo except for the Location field](image)
On the edit screen the user can change all of the fields except Location. Once the changes have been made, select Update to save the changes or select Cancel to terminate the edit process.

Delete Photographs
Users can only delete photos one at a time by selecting the red “X” found in the left corner of each photo. Once the “X” is selected, the user will be asked to verify that they want to delete the selected photo.

Delete Photo for Location Second Pad

Are you sure you want to delete this photo from location Second Pad?

![Image of a photo and a red "X" in its left corner]

Figure 62: Application verifying photo deletion

The user can then select Yes to complete the delete process or No to cancel the delete process.
Uploading, Editing and Deleting Individual Status Reports

Start: Entry Page (http://my.usgs.gov/wrfo) → Select an operator from the Operators list or search for an operator using the Find box to navigate to the Operator Summary Page → select the Name of the location to navigate to the Location Entry Page → select the Status Report link found in the Navigation box on the left side of the screen.

Status Reports

Please see the Data Dictionaries section of the manual which provides the definitions for each field contained within the data forms.

From the Location Entry Page, the Status Reports link is found in the Navigation box on the left side of the screen. This link directs the user to the page that houses all of the status reports that have been uploaded into the system.

There are two different Status Reports a user must enter for each location:
1. Line-point Intercept (LPI)
2. Belt Transect

Status Reports Box:
All status reports that have been uploaded into the application will appear in the box with the heading Status Reports. The report that is highlighted in red will appear on the right side of the screen.

If a status report doesn’t yet exist for a location, in place of the Status Reports box, there will be text indicating no status reports exist and provides a link for the user to add one.

Figure 63: Line-point Intercept (LPI) status report being displayed on the Status Reports page
**Status Reports Edit Tools:**

Edit tools can also be found in the top right corner of the *Selected Status Report*.

- ![Select the magnifying glass to view a different status report](image)
- ![Select the “X” to delete a status report](image)
- ![Select the pencil to edit a status report](image)
- The lock indicates a manager, such as a user with the BLM, has entered the status report. These reports are not editable by operators.

**Figure 64: Status Reports edit tools**

<table>
<thead>
<tr>
<th>Date Collected</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>01/01/2011</td>
<td>Qualitative</td>
</tr>
<tr>
<td>06/01/2009</td>
<td>Qualitative</td>
</tr>
</tbody>
</table>
Editing and Deleting Status Reports

Start: Entry Page (http://my.usgs.gov/wrfo) → Select an operator from the Operators list or search for an operator using the Find box to navigate to the Operator Summary Page → select the Name of the location to navigate to the Location Entry.

Data Entry Error Message

If any required fields are left blank or the wrong data format is entered, a red error box will appear indicating the errors that have been encountered with the submission of a Status Report.

You must specify a valid collection date (MM/DD/YYYY).
You must specify a data source.

Figure 65: Example error messages encountered when entering data for a Status Report

Editing an Existing Line-point Intercept Report

There are many rules for entering data into the Top Canopy, Lower Canopy Layers, and Soil Surface fields. Please carefully read all bullet points to ensure the data is entered correctly.

- Verify Top Canopy and Soil Surface fields have data entered
- Verify that all species codes are valid. Check the USDA Plant Database at: http://plants.usds.gov/java
- Verify there are NO duplicate species found in the Top Canopy and Lower Canopy Layers fields
- Verify the codes L and WL are only found in the Lower Canopy Layers fields
- Verify the codes R, BR, LC, S, M, EL, and D are only found in the Soil Surface field
- Verify NONE is only found in the Top Canopy field

NOTE: To add more than one LPI Report to a location the Transect Number must be different for each report.

E.g. Location CAB-31 can have multiple LPI Reports if there are no duplicate Collection Dates. If there are multiple LPI Reports with the same Collection Date then the Transect Numbers must be different.
1. Use the **pencil icon** to add / edit species that have been encountered along the transect

In all of the species selection pop up boxes, the user can either select the species by activating the drop down menu using the down arrow to the right of the field or start typing in the species name. The species list will auto-populate based on what the user types in this field.

![Upper Canopy Selection](image)

**Figure 66**: Example of the species list auto-populating based on the characters typed in

a. **Top Canopy** – this field must be filled out with either a species code or the word “NONE”. “NONE” indicate there is no top canopy.

Selecting the pencil icon in the top canopy filed will activate the **Upper Canopy Selection** pop up box. The user can select a species from the drop down menu or select the **NONE** button to fill in the top canopy field.

![Upper Canopy Selection](image)

**Figure 67**: Top Canopy species selection box
b. **Lower Canopy Layers** – up to 3 species codes can be entered for this layer. Duplicate species codes amongst the **Lower Canopy Layers** and the **Top Canopy** is **NOT** allowed.

**E.g.** Figure 68, point 1 and 2 are invalid because there are duplicate species codes. Point 3 is the only valid entry.

![Lower Canopy Layers](image)

Selecting the pencil icon in the lower canopy fields will activate the **Lower Canopy Selection** pop up box. The user can select from the **Species** field or the **Layer** field.

If a species is selected from the **Species** field, the user must select the **Add Species** button to add the species to the form.

The **Layer** field contains codes specific to the **Lower Canopy Layers** fields. If a code is selected from this field, the user must select the **Add Layer** button to add the code to the form.
c. **Soil Surface** – this field can contain a species code or a code specific to the soil surface. A species code entered in the **Top Canopy** or the **Lower Canopy Layers** fields are allowed to be entered in the **Soil Surface** field. In this case duplicate species codes are permitted.

Selecting the pencil icon in the **Soil Surface** fields will activate the **Soil Surface Selection** pop up box. The user can select from the **Species** field or the **Soil Surface** field.

If a species is selected from the **Species** field, the user must select the **Add Species** button to add the species to the form.

The **Soil Surface** field contains codes specific to the **Soil Surface** field. If a code is selected from this field, the user must select the **Add Soil Surface** button to add the code to the form.

![Soil Surface Selection](image)

**Figure 70: Soil Surface species selection pop up box**

3. After all data has been entered, select the **Save** button to save the data or select **Cancel** button to stop the process.

**NOTE:** **ALL** 150 points must contain data or the following error will occur.

![Error Message](image)

**Figure 71: Error message displayed when data is missing from any point**
When data is missing from a point, the field will be outlined in red. Please see Figure 72 below for an example.

<table>
<thead>
<tr>
<th>Point</th>
<th>Top Canopy</th>
<th>Code1</th>
<th>Code2</th>
<th>Code3</th>
<th>Soil Surface</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>AF1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 72: The fields outlined in red are missing required data

Deleting an Existing Status Report

Start: Entry Page (http://my.usgs.gov/wrfo) → Select an operator from the Operators list or search for an operator using the Find box to navigate to the Operator Summary Page → select the Date in the Status Report column in the Location Summary Table for any location

OR

Entry Page → Select an operator from the Operators list or search for an operator using the Find box to navigate to the Operator Summary Page → select the Name of the location in the Location Summary Table to navigate to the Location Entry Page → select Status Reports from the Navigation box on the left side of the screen

To edit or delete an existing Status Report, the user can use the edit tools found to the right at the end of each row (Figure 73).

1. Select the appropriate tool to the right of the record to edit / delete – the record does not need to be highlighted in red in order to edit.
2. By selection the pencil icon, the user may edit the form as necessary and select the **Save** button to save the changes or select **Cancel** to undo changes.

   a. If the “X” icon is selected, the user will be presented with a confirmation page to delete the specified record. Select **Yes** to confirm deletion of the record or select **No** to cancel the delete process.

![Delete Status Report for Location Dst 456]

*Figure 74: Confirmation page for deleting an LPI Report*
Batch Uploads

Start: Entry Page (http://my.usgs.gov/wrfo) → Select an operator from the Operators list or search for an operator using the Find box to navigate to the Operator Summary Page.

Spatial Data Batch Uploads

Spatial Data Batch Upload Rules

Following is a list of rules for uploading spatial polygons into the application. These rules are also included in the Spatial Template found on the Entry Page.

General Shapefile Construction

1. Shapefile submissions must be zipped (a .zip file) and contain valid DBF, SHP, SHX, and PRJ files.
2. The PRJ file must contain legitimate projection information. The system will attempt to automatically transform the spatial data found in your shapefile to the system's internal projection, Web Mercator (EPSG:3857). This process may have varying degrees of accuracy and you should use the preview map to verify that the system has completed the transformation properly. To ensure maximum accuracy, use NAD-27, NAD-83, or WGS-84 for your projection's datum. Area calculations are determined by transforming to EPSG:26913 during the upload process.
3. Empty Spatial Templates are provided for WGS-84 Geographic, and NAD-83 UTM13N.
4. Disturbances and reclaimed spatial submissions must consist of a single polygon or multipolygon feature.
5. All polygons and multipolygons must conform to the OpenGIS Simple Features Specification for SQL
6. The implications of this are:
   a. The shell and holes of all polygons cannot self-intersect.
   b. Holes can touch the shell or another hole at a single point only. This means that holes cannot intersect one another at multiple points or in a line segment.
   c. Polygon interiors must be connected (this is implied by the previous statement).
   d. There is no requirement that a point where a hole touches the shell be a vertex.
   e. The element Polygons in a MultiPolygon may touch at only a finite number of points (e.g. they may not touch in a line segment).
   f. The interiors of the element Polygons in a MultiPolygon must be disjoint (e.g. they may not cross).
Associating Shapefile Records with Disturbed Areas

1. The system will allow users to associate one and only one record in a shapefile to a disturbance. All disturbed areas associated with a pad must be dissolved into a multipolygon record before submission.

2. If an area consists of multiple polygons (pad, equipment area, road), then these polygons must be made into a single multipolygon feature in the shapefile that conforms to the geometry standards outlined above. Generally, polygons (except for pipelines) are not allowed to intersect more than 5% of the disturbance surface area. NOTE: The intersection constraint is for pad disturbance and reclamation areas, the buffer area associated with a disturbance can overlap other features.

3. The disturbance feature must represent the total disturbance area of the pad/location, including any areas that have been reclaimed.

4. A collection date must be supplied with the disturbance multipolygon.

5. The disturbance area cannot overlap any disturbance areas for other features.

Associating Shapefile Records with Reclaimed Areas

1. The reclamation feature for the pad/location must be a subset of the current disturbance feature. In other words, it must be completely contained by the disturbance feature.

2. The system will allow users to associate one and only one record in a shapefile to the reclamation area. All reclaimed areas associated with a disturbance must be dissolved into a multipolygon record before submission.

3. The reclamation feature must represent the total reclaimed area of the pad/location, including any areas that areas that have been reclaimed in different timeframes.

Multiple Pads in the Same Shapefile

1. If a shapefile contains multiple pads, roads, pipelines, and other features, it can be batch uploaded as long as it follows these rules:
   a. Features can be uploaded if they do not already exist in the system but only if this is specified during the upload. Otherwise, the feature name (pad name, road name, etc) must already exist in the system, and the shapefile's use of that name must be identical to the one the system stores
   b. If the system has a pad named SHB 1-31, the shapefile must name that pad SHB 1-31. Names like "shb1-31", "shb/cor 1-31", and "shb1a-31b" do not match up and will be rejected.

2. The Shapefile Data Dictionary (the attributes in the dbf) must conform to the following:
   a. Name (Character(254)) -- The name of the feature. If this is a Well Pad, this should be the
Pad name. If this is a pipeline, this should represent the beginning and end point of the pipeline. This will be unique for an operator.

b. **FeatType** (Character(254)) -- This is the type of feature. *Allowed Entries:* Well Pad, Road, Pipeline, Other.

c. **CollDate** (Date or Character(254)) -- Date the data was collected; this should represent the date of the observation, not processing. Format = MM/DD/YYYY.

d. **DistType** (Character(20)) -- *Allowed Entries:* disturbance or reclamation

**NOTE:** The shapefile can contain other fields but these will **NOT** imported
Uploading Batch Spatial Files

1. Select the **Upload Spatial Reports** link in the main menu at the top of the page.

![Select the Upload Spatial Reports link to start the batch upload spatial process](image)

2. Use the **Browse** button to search your computer for a zipped **spatial** file to upload.

![Spatial batch upload screen](image)

3. Select the **Submit** button after the zip file has been selected.

4. Select the SHP file to uploaded (if necessary) and select the **Submit** button.

**NOTE:** The zip file can contain multiple SHP files. See Figure 77 for an example.

**Upload Spatial Reports for Operator SWEPI LP**

The file you uploaded contains more than one shapefile. Please select the one you wish to import from.

![Select the SHP file to upload into the application](image)
5. The following page will display the locations that are contained within the selected SHP. The **Status** column found at the beginning of the table indicates whether errors or warnings associated with the location exist. If there are no errors the status is displayed as **OK**.

![Image of the White River Data Management System Operator's Manual](image)

**Figure 78**: List of locations with errors contained within an SHP file displaying an error message

If the location doesn’t yet exist in the application, select **Yes** to the **Add locations if they don’t already exist** question found at the top of the screen. This will create the new location and upload the corresponding shapefile(s).

**E.g.** If Demo Pad doesn’t exist, by selecting **Yes**, the process will create a location named Demo Pad.

**Figure 78** above displays the explanation for the **Error** status.

![Image of the White River Data Management System Operator's Manual](image)

**Figure 79**: The "yes" radio button is selected

White River Data Management System Operator’s Manual – **Version 1.5.3** (05/26/15)
6. Only records in a shapefile that have a status of **Warning** or **OK** will be uploaded when the **Save** button is selected. Once all locations have the appropriate statuses, select the **Save** button.

7. After the upload has completed successfully, the user will be brought to the **Operator Summary Page**. Above the map will be a **blue** box indicating the upload was successful.

![Spatial report upload successful message](image)

**Figure 80: Blue spatial upload successful message**
Photograph Batch Uploads

Photograph Naming Conventions

Ensure the photos are named as <location name>_<direction as N, S, E, W, Close-up>

**Direction choices are:**

- **N** = North
- **S** = South
- **E** = East
- **W** = West
- **O** = Other

**Close-up**

**Example:** North facing picture of CAN 1-25 would be named CAN_1-25_N

**NOTE:** Do NOT leave any spaces in the photograph name; use an underscore (_) for spaces in a name.

There is no naming convention for the name of the zip file

Uploading Batch Photograph Files

**Start:** Entry Page [http://my.usgs.gov/wrfo](http://my.usgs.gov/wrfo) → Select an operator from the Operators list or search for an operator using the Find box to navigate to the Operator Summary Page.

1. Select the **Upload Photographs** link in the main menu at the top of the page

   ![Figure 81: Select the Upload Photographs link to start the batch upload photo process](image)

2. Use the **Browse** button to search your computer for a zipped photo file to upload.

   ![Figure 82: Photograph batch upload screen](image)
3. Select the **Submit** button

4. The following page will list the photos that are contained within the zip file. If there are any errors found with a photo, it will be indicated in the **Status** column. See Figure 83 below.

**NOTE:** **Collection Date** is required. Image formats accepted are:
- JPG
- GIF
- PNG

If there are any photos with errors, only the **Cancel** button is displayed at the bottom of the page. All errors must be fixed before an upload can successfully complete.

---

**Figure 83:** Displaying an error with a photograph. Notice the “Save” button doesn’t appear.
5. Once all errors have been fixed and all photos have a status of OK, select the **Save** button.

### Upload Photographs for Operator Anschutz

**Collection Date:** 01/01/2011  
*Required. This date will be assigned to all photos in this upload.*

<table>
<thead>
<tr>
<th>Status</th>
<th>File</th>
<th>Location</th>
<th>Direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ok</td>
<td>Mesa_3-19_5.jpg</td>
<td>Mesa 3-19</td>
<td>S</td>
</tr>
<tr>
<td>Ok</td>
<td>Mesa_3-19_W.jpg</td>
<td>Mesa 3-19</td>
<td>W</td>
</tr>
<tr>
<td>Ok</td>
<td>Mesa_3-10_E.jpg</td>
<td>Mesa 3-10</td>
<td>E</td>
</tr>
<tr>
<td>Ok</td>
<td>Mesa_3-10_N.png</td>
<td>Mesa 3-10</td>
<td>N</td>
</tr>
</tbody>
</table>

**All statuses must be "OK" before the "Save" button appears**

---

6. After the photos are uploaded successfully, the user will be brought to the **Operator Summary Page**. A **blue** box will appear above the map indicating the upload was successful.

---

**Photo upload successful**

**Operator Summary Page: WR Delux Drilling**

---

Figure 84: Because all photos have a status of "OK", the "Save" button appears at the bottom of the screen.

---

Figure 85: Blue photo upload successful message.
Downloading Data Forms

Start: Entry Page (http://my.usgs.gov/wrfo)

1. The user must be logged into the WRDMS application

2. Select the Belt Transect or LPI Template found in the Reports, Downloads & Interactive Maps section under the Downloads heading.

3. These links will allow the user to download or save the form. Once the name of the data form has been selected a gray pop up box appears. This allows the user to choose between saving and opening the file.
Line-point Intercept Batch Upload

Line-point Intercept File Naming Convention
It is recommended that each Line-point Intercept data form be named according to what has been entered into the Site field within the data form.

E.g. The text in the Site field is ANT 2-6; name the LPI form ANT_2-6.xls

NOTE: Do NOT leave any spaces in the file name; use an underscore (_) for spaces in the name.

There is no naming convention for the name of the zip file.

Uploading Batch Line-point Intercept Files

Start: Entry Page (http://my.usgs.gov/wrfo) → Select an operator from the Operators list or search for an operator using the Find box to navigate to the Operator Summary Page.

1. Select the Upload Status Reports link in the main menu at the top of the page.

Figure 88: Select the Upload Status Reports link to begin the batch upload process

2. Use the Browse button to the right of the LPI Status Report (zip file) file upload box to search your computer for a zipped Line-point Intercept file to upload.

Upload Status Reports for WR Delux Drilling

Note: Only 1 zip file may be uploaded at a time for LPI.

Figure 89: LPI batch upload controls
3. Select **Submit Intercept Reports** button
4. Once the zip file has been successfully uploaded, the user will be brought back to the Upload Status Reports page and a blue box will appear indicating the upload was successful.

**Upload Status Reports for WR Delux Drilling**

*Note:* Only 1 zip file may be uploaded at a time for LPI.

Figure 90: Blue upload successful message
Belt Transect Batch Upload

Belt Transect File Naming Convention

It is recommended that each Belt Transect data form be named according to what has been entered into the Location field within the data form.

E.g. The text in the Location field is ANT 2-6; name the LPI form ANT_2-6.xls

NOTE: Do NOT leave any spaces in the file name; use an underscore (_) for spaces in the name.

There is no naming convention for the name of the zip file.

Uploading Batch Belt Transect Files

Start: Entry Page (http://my.usgs.gov/wrfo) → Select an operator from the Operators list or search for an operator using the Find box to navigate to the Operator Summary Page.

1. Select the Upload Status Reports link in the main menu at the top of the page.

   ![Figure 91: Select the Upload Status Reports link to begin the batch upload process](image)

2. Use the Browse button to the right of the Belt Transect Reports (zip file) file upload box to search your computer for a zipped Belt Transect file to upload.

   ![Figure 92: Belt Transect zip file upload](image)
3. Select **Submit Belt Transect Reports** button

4. Once the zip file has been successfully uploaded, the user will be brought back to the **Upload Status Reports** page and a blue box will appear indicating the upload was successful.

![Spreadsheet uploaded successfully from Excel](image)

**Figure 93:** Blue upload successful message
Batch Upload Error Messages and Guidelines

Errors and Messages Encountered on the Line-point Intercept Batch Upload

All error messages will have the file name that the error is found in at the end of the message.

“File must be a zip file”
- Verify that the file being uploaded is a zip file

“Operator not found at row: <row #>”
- Verify that there is data in the Operator field in the data form
- Verify that the name is spelled correctly in the Operator field in the data form
- Verify there are no extra spaces before, after or in the middle of the name

“Observer not found at row: <row #>”
- Verify that there is data in the Observer field in the data form

“Site not found at row: <row #>”
- Verify that there is data in the Site field in the data form
- Verify that the Site exists in the Location Summary Table; if not use the Add New Location feature to add it
- Verify that the Site name is spelled exactly as it appears in the application
- Make sure spaces are in the appropriate places
- Make sure periods (.) are used when appropriate

E.g. If the correct name is ANT 2-6 then there MUST be a space between ANT and 2.

- Edit the location name in the application by selecting the pencil icon located to the right, at the end of the row in the Location Summary Table. Make sure there isn’t a space at the end of the location name

“Transect Number not found at row: <row #>”
- Verify that there is data in the Transect # field in the data form

“Recorder not found at row: <row #>”
- Verify that there is data in the Recorder field in the data form

“Direction invalid at row: <row #>”
- Verify that there’s data in the Direction field in the data form
- Verify that the data entered in the Direction field is numeric between 0 – 359. NO alpha characters are accepted in this field.

“Collection Date not found at row: <row #>”
- Verify that there is a date entered in the Collection Date field in the data form
"Duplicate Collection Date <day, date and time>"

Multiple line-point intercept status reports can be uploaded for the same location on the same date as long as the transect numbers are different. The definition of a duplicate line-point intercept form is when the Site Name, Collection Date, and Transect # are the same between 2 or more status reports.

- Verify that there are no duplicate LPI forms within the zip file being uploaded.

  E.g.  LPI1 and LPI2 both have the following data entered:
  - Site Name = ANT-24
  - Collection Date = 06/30/2011
  - Transect # = N12

  **NOTE:** If there are multiple forms within the same zip file that are duplicates, the batch upload feature will accept the first file it encounters and will display the duplicate collection date for all subsequent duplicate forms.

- Verify that the Site Name, Collection Date, and Transect # are correct. If an error is found correct it. If no correction is necessary and the information in the 3 fields are correct then delete one of the duplicate forms.

- Verify that there are no other LPI status reports entered into the application for the location listed in the Site Name field of the form that also have the same data entered in the Site Name, Collection Date, and Transect # fields.
  - When the duplicates are found in the application and in the zip file, the user must delete either the status report from the application or delete the form from the zip file.

"Invalid Species, duplicate species or invalid Soil Surface found at row: <row #>"

There are many rules for entering data into the Top Canopy, Lower Canopy Layers, and Soil Surface fields. Please carefully read all bullet points to ensure the data is entered correctly.

- Verify that the Top Canopy and Soil Surface fields have data entered
- Verify that all species codes are valid. Check the USDA Plant Database at https://plants.usda.gov/java
- Verify that there are NO duplicate species found in the Top Canopy and Lower Canopy Layers fields.
- Verify that the codes L and WL are only found in the Lower Canopy Layers fields
- Verify that the codes R, BR, LC, S, M, EL, and D are only found in the Soil Surface field
- Verify that NONE is only found in the Top Canopy field
- Verify that points 1 – 75 and 76 – 150 appear in rows 15 – 89. If they do not, the data form is corrupted and a new form will need to be downloaded, filled out, and uploaded
Errors and Messages Encountered on the Belt Transect Batch Upload

All error messages will have the file name that the error is found in at the end of the message.

“File must be a zip file”
- Verify that the file being uploaded is a zip file

“Observer or Recorder not found at row <row #>”
- Verify that there’s data in the Observer and Recorder data fields on the data form

“Location not found at row <row #>”
- Verify that there is data in the Site field in the data form
- Verify that the Site exists in the Location Summary Table; if not use the Add New Location feature to add it
- Verify that the Site is spelled exactly as it appears in the application
- Make sure spaces are in the appropriate places
- Make sure periods (.) are used when appropriate

“Transect Number or Transect Direction not Found at row: <row #>”
- Verify that there is data in the L – P Transect Number field in the data form
- Verify that there is data in the Transect Direction field in the data form

“Valid Date not Found at row: <row #>”
- Verify that there is a date entered in the Date field in the data form
- Verify date is in mm/dd/yyyy format

“Direction invalid at row: <row #>”
- Verify that there’s data in the Direction field in the data form
- Verify that the data entered in the Direction field is numeric between 0 – 359. NO alpha characters are accepted in this field.

“Duplicate Collection Date <day, date and time>”
Multiple belt transect status reports can be uploaded for the same location on the same date as long as the transect numbers are different. The definition of a duplicate belt transect form is when the Location, Date, and L – P transect number are the same between 2 or more belt transect status reports.

- Verify that there are no duplicate LPI forms within the zip file being uploaded.

E.g. BeltTransect1 and BeltTransect2 both have the following data entered:
- Location = ANT-24
- Date = 06/30/2011
- L – P Transect Number = N12

NOTE: If there are multiple forms within the same zip file that are duplicates, the batch upload feature will accept the first file it encounters and will display the duplicate date error for all subsequent duplicate forms.
• Verify that the **Location, Date,** and **L – P Transect Number** are correct. If an error is found correct it. If no correction is necessary and the information in the 3 fields are correct then delete one of the duplicate forms.
• Verify that there are no other belt transect status reports entered into the application for the location listed in the **Location** field of the form that also have the same data entered in the **Location, Date,** and **L – P Transect Number** fields.
  o When the duplicates are found in the application and in the zip file, the user must delete either the status report from the application or delete the form from the zip file.

“Invalid Species <species code> found at row: <row #>”
• Verify that all species codes are valid. Check the USDA Plant Database at [https://plants.usda.gov/java](https://plants.usda.gov/java)
Data Dictionaries

Line-point Intercept Data Dictionary

Operator - The name of the operator

Observer – The individual who observes or “calls out” the data

Data Source – The company who provides the data (e.g. name of a contractor, business, etc.)

Site – The name of the well pad, road, pipeline, equipment area, etc.

Transect # - The number of a transect for a site (e.g. 1 of 1, 1 of 3, etc.)

Recorder – The individual who records / writes the observed/ called out data

Direction – The direction of a transect (numeric value)

Collection Date – The date the data was collected

Top Canopy – The first species the pin flag intercepts, if none is encountered, record NONE*

Lower Canopy Layers (Code 1 – 3) – The 2nd, 3rd and 4th species the pin flag intercepts, or herbaceous litter (L), woody litter (WL), etc. (>5 MM, ~1/4” diameter).*

*If a species is intercepted in the top canopy and a lower canopy, it is ONLY recorded in the top canopy. Similarly, if a species is intercepted in more than one of the lower canopy levels (i.e. code 1 – 3), it is only recorded in the first code where it intercepts. In other words, if a species is intercepted more than once in the top canopy, and any of the three lower canopy layers, it is recorded only in the first layer of intercept.
Belt Transect Data Dictionary

**Observer** – The individual who observes or “calls out” the data

**Location** – The name of the well pad, road, pipeline, equipment area, etc.

**L – P Transect Number** - The line-point intercept transect number for a site (e.g. 1 of 1, 1 of 3, etc.)

**Recorder** – The individual who records / writes the observed/ called out data

**Operator** - The name of the operator

**Transect Direction** – The direction of a transect (numeric value)

**Date** – The date the data was collected

**Species Code** – The code of the species encountered

**Individual Tally** – Individual tick marks for every time the same species is encountered

**Individual Count** -The sum of the individual tally marks as a numeric value
Examples of Completed Data Forms

Completed Line-point Intercept Form

<table>
<thead>
<tr>
<th>Pl</th>
<th>Top Canopy</th>
<th>Lower Canopy Layers</th>
<th>Soil Surface</th>
<th>Pl</th>
<th>Top Canopy</th>
<th>Lower Canopy Layers</th>
<th>Soil Surface</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>RATR</td>
<td>RATR</td>
<td>76</td>
<td>RATR</td>
<td>ALYSS</td>
<td>MEOF</td>
<td>SAKA</td>
</tr>
<tr>
<td>2</td>
<td>SAKA</td>
<td>L</td>
<td>RATR</td>
<td>77</td>
<td>MENTH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>MENTH</td>
<td>WL</td>
<td>S</td>
<td>78</td>
<td>AFI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>AFI</td>
<td>PTERI</td>
<td>L</td>
<td>79</td>
<td>SALU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>AFI</td>
<td>L</td>
<td>R</td>
<td>80</td>
<td>SAKA</td>
<td>AFI</td>
<td>SAKA</td>
</tr>
<tr>
<td>6</td>
<td>SALU</td>
<td>SABE2</td>
<td>SAKA</td>
<td>SARA2</td>
<td>EL</td>
<td>81</td>
<td>PTERI</td>
</tr>
<tr>
<td>7</td>
<td>NONE</td>
<td>M</td>
<td>82</td>
<td>NONE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>NONE</td>
<td>BR</td>
<td>83</td>
<td>PTERI</td>
<td>AFI</td>
<td>MEOF</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>NONE</td>
<td>D</td>
<td>84</td>
<td>ALYSS</td>
<td>AFI</td>
<td>MEOF</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>NONE</td>
<td>S</td>
<td>85</td>
<td>ALYSS</td>
<td>AFI</td>
<td>SABE2</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>NONE</td>
<td>S</td>
<td>86</td>
<td>ALYSS</td>
<td>AFI</td>
<td>SABE2</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>NONE</td>
<td>S</td>
<td>87</td>
<td>NONE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>NONE</td>
<td>S</td>
<td>88</td>
<td>NONE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>NONE</td>
<td>S</td>
<td>89</td>
<td>NONE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>AFI</td>
<td>ALYSS</td>
<td>MEOF</td>
<td>SAKA</td>
<td>S</td>
<td>90</td>
<td>NONE</td>
</tr>
<tr>
<td>16</td>
<td>ALYSS</td>
<td>S</td>
<td>91</td>
<td>NONE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>ALYSS</td>
<td>AFI</td>
<td>S</td>
<td>92</td>
<td>NONE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>ALYSS</td>
<td>S</td>
<td>93</td>
<td>NONE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>ALYSS</td>
<td>AFI</td>
<td>SAKA</td>
<td>S</td>
<td>94</td>
<td>NONE</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>ALYSS</td>
<td>S</td>
<td>95</td>
<td>NONE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>ALYSS</td>
<td>S</td>
<td>96</td>
<td>NONE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>ALYSS</td>
<td>AFI</td>
<td>MEOF</td>
<td>S</td>
<td>97</td>
<td>NONE</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>ALYSS</td>
<td>AFI</td>
<td>MEOF</td>
<td>S</td>
<td>98</td>
<td>NONE</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>ALYSS</td>
<td>AFI</td>
<td>SABE2</td>
<td>S</td>
<td>99</td>
<td>NONE</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>ALYSS</td>
<td>AFI</td>
<td>SABE2</td>
<td>S</td>
<td>100</td>
<td>AFI</td>
<td>ALYSS</td>
</tr>
<tr>
<td>26</td>
<td>ALYSS</td>
<td>S</td>
<td>101</td>
<td>AFI</td>
<td>SAKA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>ALYSS</td>
<td>S</td>
<td>102</td>
<td>AFI</td>
<td>ALYSS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>ALYSS</td>
<td>S</td>
<td>103</td>
<td>AFI</td>
<td>MEOF</td>
<td>SAKA</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>NONE</td>
<td>S</td>
<td>104</td>
<td>AFI</td>
<td>SABE2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>NONE</td>
<td>S</td>
<td>105</td>
<td>AFI</td>
<td>L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Option</td>
<td>Select</td>
<td>Value</td>
<td>Type</td>
<td>Name</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----</td>
<td>-----------------</td>
<td>--------</td>
<td>-------</td>
<td>------</td>
<td>--------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>NONE</td>
<td>S</td>
<td>106</td>
<td>AF1</td>
<td>WL</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>NONE</td>
<td>S</td>
<td>107</td>
<td>AF1</td>
<td>PTERI</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>NONE</td>
<td>S</td>
<td>108</td>
<td>AF1</td>
<td>SACE2</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>NONE</td>
<td>S</td>
<td>109</td>
<td>AF1</td>
<td>S</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>NONE</td>
<td>S</td>
<td>110</td>
<td>AF1</td>
<td>ALYSS</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>NONE</td>
<td>S</td>
<td>111</td>
<td>AF1</td>
<td>SAKA</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>NONE</td>
<td>S</td>
<td>112</td>
<td>AF1</td>
<td>ALYSS</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>RTR</td>
<td>S</td>
<td>113</td>
<td>AF1</td>
<td>MEOF</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>MENTH</td>
<td>S</td>
<td>114</td>
<td>AF1</td>
<td>SACE2</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>AF1</td>
<td>S</td>
<td>115</td>
<td>AF1</td>
<td>L</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>SALU</td>
<td>L</td>
<td>116</td>
<td>AF1</td>
<td>WL</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>SAKA AF1 SAKA</td>
<td>R</td>
<td>117</td>
<td>AF1</td>
<td>PTERI</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>PTERI</td>
<td>S</td>
<td>118</td>
<td>AF1</td>
<td>S</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>NONE</td>
<td>R</td>
<td>119</td>
<td>AF1</td>
<td>S</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>PTERI AF1 MEOF</td>
<td>R</td>
<td>120</td>
<td>AF1</td>
<td>S</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>46</td>
<td>ALYSS AF1 MEOF</td>
<td>R</td>
<td>121</td>
<td>AF1</td>
<td>ALYSS</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>AF1 SACE2</td>
<td>M</td>
<td>122</td>
<td>AF1</td>
<td>SAKA</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>48</td>
<td>ALYSS AF1 SACE2</td>
<td>D</td>
<td>123</td>
<td>AF1</td>
<td>ALYSS</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>49</td>
<td>NONE AF1 MEOF</td>
<td>S</td>
<td>124</td>
<td>AF1</td>
<td>SAKA</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>NONE AF1 SACE2</td>
<td>S</td>
<td>125</td>
<td>AF1</td>
<td>SACE2</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>NONE AF1 L</td>
<td>S</td>
<td>126</td>
<td>AF1</td>
<td>L</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>52</td>
<td>NONE AF1 WL</td>
<td>S</td>
<td>127</td>
<td>AF1</td>
<td>WL</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>53</td>
<td>NONE AF1 PTERI</td>
<td>S</td>
<td>128</td>
<td>AF1</td>
<td>SAKA</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>54</td>
<td>NONE AF1</td>
<td>S</td>
<td>129</td>
<td>AF1</td>
<td>S</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>55</td>
<td>NONE</td>
<td>S</td>
<td>130</td>
<td>NONE</td>
<td>S</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>56</td>
<td>NONE AF1</td>
<td>S</td>
<td>131</td>
<td>NONE</td>
<td>S</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>57</td>
<td>NONE AF1</td>
<td>S</td>
<td>132</td>
<td>NONE</td>
<td>S</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>58</td>
<td>NONE AF1</td>
<td>S</td>
<td>133</td>
<td>NONE</td>
<td>S</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>59</td>
<td>NONE AF1</td>
<td>S</td>
<td>134</td>
<td>NONE</td>
<td>S</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>60</td>
<td>NONE AF1</td>
<td>S</td>
<td>135</td>
<td>NONE</td>
<td>S</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>61</td>
<td>RTR ALYSS MEOF</td>
<td>S</td>
<td>136</td>
<td>NONE</td>
<td>S</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>62</td>
<td>MENTH</td>
<td>S</td>
<td>137</td>
<td>NONE</td>
<td>S</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>63</td>
<td>AF1</td>
<td>S</td>
<td>138</td>
<td>NONE</td>
<td>S</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>64</td>
<td>SALU</td>
<td>L</td>
<td>139</td>
<td>NONE</td>
<td>S</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>65</td>
<td>SAKA AF1 SAKA</td>
<td>R</td>
<td>140</td>
<td>NONE</td>
<td>S</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>66</td>
<td>PTERI</td>
<td>S</td>
<td>141</td>
<td>NONE</td>
<td>S</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>67</td>
<td>NONE AF1</td>
<td>R</td>
<td>142</td>
<td>NONE</td>
<td>S</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>68</td>
<td>PTERI AF1 MEOF</td>
<td>R</td>
<td>143</td>
<td>NONE</td>
<td>S</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>69</td>
<td>ALYSS AF1 MEOF</td>
<td>S</td>
<td>144</td>
<td>NONE</td>
<td>S</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>70</td>
<td>ALYSS AF1 SACE2</td>
<td>D</td>
<td>145</td>
<td>NONE</td>
<td>S</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>71</td>
<td>ALYSS AF1 SACE2</td>
<td>D</td>
<td>146</td>
<td>NONE</td>
<td>S</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>72</td>
<td>NONE AF1</td>
<td>S</td>
<td>147</td>
<td>NONE</td>
<td>S</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>73</td>
<td>NONE AF1</td>
<td>S</td>
<td>148</td>
<td>NONE</td>
<td>S</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>74</td>
<td>NONE AF1</td>
<td>S</td>
<td>149</td>
<td>NONE</td>
<td>S</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>75</td>
<td>NONE AF1</td>
<td>S</td>
<td>150</td>
<td>NONE</td>
<td>S</td>
<td>S</td>
<td></td>
</tr>
</tbody>
</table>

Notes:

Enter any important comments here to upload into the application.
**Required Fields**

- **Operator:** Alphanumeric
- **Observer:** Alphanumeric
- **Site:** Alphanumeric
- **Transect #:** Alphanumeric
- **Recorder:** Alphanumeric
- **Direction:** Numeric range 0 – 359
- **Collection Date:** mm/dd/yyyy, will not accept any date prior to 01/01/1990
- **Top Canopy:** Alphanumeric, only species codes and “NONE” accepted
- **Soil Surface:** Alphanumeric, only species and soil surface codes accepted

**Soil Surface Codes:**
- BR = Bedrock
- EL = Embedded Litter
- LC = Biological Crust
- D = Duff
- M = Moss
- R = Rock Fragment
- S = Soil

**Optional Field**

- **Data Source:** Alphanumeric
- **Lower Canopy Layers (Code 1-3):** Alphanumeric, only species and layer codes accepted

**Layer Codes:**
- L = Herbaceous Litter
- WL = Woody Litter

**Notes:** Alphanumeric
## Belt Transect Data Form

### Completed Belt Transect Data Form

**Observer:** Me  
**Location:** Pad 456  
**L-P Transect Number:** 1 of 2  
**Recorder:** Me  
**Operator:** WR Delux Drilling  
**Transect Direction (°):** 360  
**Date:** 6/6/2013

---

**Example**

<table>
<thead>
<tr>
<th>SPECIES</th>
<th>INDIVIDUAL TALLY</th>
<th>INDIVIDUAL COUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTR4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Do not count grass species*

<table>
<thead>
<tr>
<th>SPECIES CODE</th>
<th>INDIVIDUAL TALLY</th>
<th>INDIVIDUAL COUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABAR</td>
<td>11111111</td>
<td>10</td>
</tr>
<tr>
<td>ABEL</td>
<td>111111</td>
<td>8</td>
</tr>
<tr>
<td>ACBL</td>
<td>111</td>
<td>4</td>
</tr>
<tr>
<td>AECY</td>
<td>1111111111111111</td>
<td>12</td>
</tr>
<tr>
<td>AF1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>SARA2</td>
<td>111111</td>
<td>6</td>
</tr>
<tr>
<td>SABE2</td>
<td>111111111111111111</td>
<td>3</td>
</tr>
<tr>
<td>RATR</td>
<td>111111111111111111</td>
<td>18</td>
</tr>
</tbody>
</table>

---
Belt Transect Data Formats Accepted per Field

**Required Fields**
- **Observer:** Alphanumeric
- **Location:** Alphanumeric
- **L – P Transect Number:** Alphanumeric
- **Recorder:** Alphanumeric
- **Operator:** Alphanumeric
- **Transect Direction:** Numeric range 0 - 359
- **Date:** mm/dd/yyyy, will not accept any date prior to 01/01/1990

**Optional Field**
- **Species Code:** Alphanumeric, only species codes accepted
- **Individual Tally:** Alphanumeric
- **Individual Count:** Numeric