

SDARTT Data Digitizing Rules

Updated 8/2/2018 JS

GENERAL

1. Compare to most recent year of NAIP imagery
 - a. Digitization lines should follow visible disturbance as closely as possible
 - b. Considered accurate if within 10 meters of imagery
2. Digitize data at a visual scale of 1:4000
3. Disturbances seen on aerial imagery that have an unknown category of disturbance can be digitized and attributed using the Data Source column with the "Unknown" field
4. Priority will be given to areas with a lease (LR2000/AFMSS)
5. Required attribute fields for SDARTT upload: (MUST be filled in on attribute table for SDARTT upload)
 - a. Object ID
 - b. Disturbance Type
 - c. Disturbance Name
 - d. Spatial Collection Date
 - e. BLM Field Office
 - f. Reclamation Status

LAYERS

1. Most current NAIP imagery
 - a. <https://gis.apfo.usda.gov/arcgis/rest/services/NAIP>
2. Disturbance layer(s)
 - a. Layer from the state with their marked disturbances, should be lines, points, and/or polygon shapefiles
3. Priority Habitat Management Areas (PHMA) boundaries
 - a. Idaho Habitat Management Areas (IHMA) (Idaho only)
 - b. PHMA/IHMA areas should be digitized first
4. BLM office boundaries
 - a. <https://data.doi.gov/dataset/blm-national-surface-management-agency-area-polygons-national-geospatial-data-asset-ngda>
5. Grid
 - a. The grid should be designed to optimize the 1:4000 visual scale
 - b. A grid needs to be overlaid on top of the disturbance areas
6. Any supplementary layers needed to aid with digitizing
 - a. Supplementary layers will be needed to be recorded in metadata

GOALS OF SDARTT

1. Be able to track disturbances and reclamation within BLM (Bureau of Land Management) and HMAs (Habitat Management Areas) for comparison with disturbance caps.
2. Be able to relate these disturbances to LR2000/AFMSS lease numbers.
3. To use the disturbance and reclamation inventory to approve or deny proposed disturbances nears HMAs.
4. Allow users to view, download, and analyze disturbances and reclamation for reporting purposes.

DISTURBANCES

ENERGY

1. COAL MINE

- a. Retention Ponds
 - i. Footprint boundary will follow the fence-line and include the area within the fence-line surrounding the impoundment
 - ii. If the pond is not fenced, the impoundment itself is the footprint
 - iii. Other infrastructure associated with the containment pond (roads, well pads, etc.) will be captured in other disturbance categories
- b. Footprint including all visible facilities (fence, road, etc.) and undisturbed areas within facility's perimeter.
- c. The particular coal mine lease should be consulted for extent

2. GEOTHERMAL

- a. The point data will be buffered to represent a 5-acre direct area of influence, unless actual surface data is visible

3. HYDROELECTRIC

- a. Footprint boundary includes visible facilities (fence, road, etc.) and undisturbed areas within the facility's perimeter

4. MINING NON-COAL

5. NUCLEAR

- a. The footprint boundary includes visible facilities (fence, road, etc.) and undisturbed areas within facility's perimeter.

6. OIL SHALE EX-SITU

7. OIL SHALE IN-SITU

8. OIL AND GAS

- a. If there is a well point in the top hole but no disturbance is visible - do not digitize
 - i. If surface disturbance layer shows well pad and no top hole and no visible disturbance then delete the well pad.
- b. Update dataset according to imagery.
 - i. Remove well pads where no evidence exists on imagery.
 - ii. Add new well pads, and edit existing well pads to match what is seen on imagery (+/- 10m).
 - iii. Collect well pads and associated disturbance.
- c. If there are multiple drilled wells on a single well pad, include 'MANY' in the naming convention to indicate multiple wells

9. SOLAR

- a. Point data will be buffered to represent a 3-acre direct area of influence

10. TAR SANDS

11. WIND

- a. The point dataset from Federal Aviation Administration (FAA) Digital Obstacles point file
- b. Filter to only include windmills
- c. Convert to polygon with a direct area of influence of 3-acres centered on windmill tower

INFRASTRUCTURE

1. AIRPORTS

- a. Footprint will follow the boundary of the airport/heliport and includes
 - i. Mowed areas
 - ii. Parking lots
 - iii. Hangers
 - iv. Taxiways
 - v. Driveways
 - vi. Terminals
 - vii. Maintenance facilities
 - viii. Beacons
 - ix. Any other related features
- b. Indicators
 - i. Distinct land cover changes
 - ii. Fences
 - iii. Perimeter roads

2. MILITARY

- a. Footprint is the outer edge of the disturbed areas around buildings and includes undisturbed areas within the facility's perimeter.

- b. The USA Surface Management Agency Data set layer from ArcGIS online may be added to check for extent of military boundaries if area is unclear.

3. PIPELINE

4. POWER LINES

- a. Transmission lines might need to be digitized from substation to substation because of low visibility on aerial imagery.
 - i. Drop points at base of towers and buffer to represent these features more accurately.
 - ii. If a kV is listed in the attributes buffer accordingly:
 - 1. 1-199 kV : 100 ft.
 - 2. 200-399 kV : 150 ft.
 - 3. 400-699 kV : 200 ft.
 - 4. 700+ kV : 250 ft.
 - iii. If no kV is listed, create a buffer the width of the supporting structure
 - iv. If the width of the supporting structure is indistinguishable, use a buffer width of 100 ft.
- b. Can also use EV Energy Map, Platts/Global Energy to help locate features
 - i. Transmission lines
 - ii. Substations
 - iii. Electric power generation plants
 - iv. Energy distribution control facilities
- c. Will not include buried lines
- d. Every intersection of power lines must have a break

5. RAILROAD

- a. Use centerlines to map all railroad tracks
- b. Can also use the Federal Railroad Administration (FRA) Rail Lines of the USA dataset to find active rails
 - i. Only digitize active rails
- c. Every intersection of railroads must have a break

6. RECREATION

- a. Includes all sites/facilities larger than 0.25 acres in size
- b. The footprint boundary will include any undisturbed areas within the site/facility
- c. The USA Recreational Areas layer from ArcGIS online may be added to check for extent of recreation boundaries if area is unclear.

7. ROAD

- a. Should be digitized from out cut ditch to cut ditch
- b. Road polygons need to be collected at the full width of the disturbance (including ditches and other associated disturbance - not just the road bed)
- c. Every intersection of roads must have a break, except where minor roads intersect with larger roads

- i. At road intersections where this occurs, the dominant road should stay intact
- d. Unnamed Roads
 - i. Roads with an unknown name will be 'Unknown Road #' where # is a unique, sequential number (attributed post-collection) and include grid number
 - ii. If spur roads are unnamed, they will be named for the attached well pad and include the grid number
- e. Well pad attributes supersede road attributes

8. TOWER

- a. Meteorological towers
 - i. Long term and temporary towers associated with short term wind testing
 - ii. The footprint includes area beneath guy wires
- b. Communication towers
 - i. Point dataset from the Federal Communications Commission (FCC) communication towers point file
 - ii. Convert points to polygon with direct area of influence of 2.47-acres centered on the structure
- c. Other vertical structures
 - i. Point dataset from the Federal Aviation Administration (FAA) Digital Obstacle point file
 - ii. Remove windmills and communication towers
 - iii. Remaining points will be converted to polygons with direct area of influence of 2.47-acres centered on each vertical structure
 - 1. To get a 2.5-acre polygon, use a radius of 56.75m.