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To: State Directors (California, Colorado, Idaho, Montana/Dakotas, Nevada, Oregon/Washington, Utah, and Wyoming), and Center Directors

From: Deputy Director

Subject: Tracking and Reporting Surface Disturbance and Reclamation

Program Area: Fluid Minerals, Solid Minerals, Lands and Realty, Renewable Energy, Recreation, and Land Use Planning and NEPA.

Purpose: This Instruction Memorandum (IM) provides the policy on tracking and reporting surface disturbance and reclamation within and outside of Greater Sage-grouse (GRSG) Priority Habitat Management Areas (PHMA). The *Approved Resource Management Plan Amendments for the Rocky Mountain and Great Basin GRSG Regions and Nine Approved Resource Management Plans in the Rocky Mountain GRSG Region* (collectively referred to as the GRSG Plans) require the BLM to track disturbance and reclamation in designated GRSG Priority Habitat Management Areas (PHMA).[1] The Surface Disturbance Analysis and Reclamation Tracking Tool (SDARTT) will be used to fulfill this requirement. Authorized Officers outside of GRSG PHMA may choose to use SDARTT to track disturbance and reclamation. This IM explains the capabilities of the national web-based SDARTT, user support options, and guidance for field offices (FOs) use an existing disturbance and reclamation tracking tool. Additionally, the IM provides information and policy about the annual all-land disturbance estimates on PHMA in GRSG Biologically Significant Units (BSUs)[2], which are defined in the GRSG Plans, finalized in September 2015.[3] This policy will be implemented in conjunction with the protocols in the GRSG Plans' disturbance cap calculation method appendix, GRSG Monitoring Framework, and GRSG Implementation Guide.

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[1] This policy also applies to Important Habitat Management Areas - IHMA (in Idaho only). Whenever discussing PHMA, IHMA also applies. Sagebrush Focal Areas (SFA) are a subset of PHMA; therefore, disturbance and density caps need to be tracked in SFAs as well.

[2] BSU's are a mid-scale geospatial area comprised of GRSG habitats that contains relevant and important habitats that are used as the basis for comparative calculations to support evaluation of changes to habitat. BSU were developed by the BLM and individual state wildlife agencies; therefore, the delineation varies from state to state.

[3] Exception: Lander ROD was finalized in June 2014.

Policy/Action:
The GRSG Plans require that the BLM track surface disturbance and reclamation in PHMA. Surface disturbance and reclamation will be tracked at two scales: project and BSU. Proposed development in PHMA will be entered into SDARTT to determine whether disturbance and density percentages will exceed thresholds. Of the 19 degradation threats identified in the FWS' 2010 listing decision, 12 were identified for tracking at the broad and mid-scale (BSU scale) in PHMA, with an additional 7 site scale disturbances to be tracked when authorizing proposed actions (project scale, e.g., proposed well location). Refer to Attachment 1 in this IM, which is copied from a Disturbance Cap Calculation Method Appendix included in each GRSG Plan. If a threat is not listed in Attachment 1, it will not be included in the PHMA disturbance calculation, unless a respective GRSG Plan includes additional threats or exceptions. Existing disturbance at the project scale will be calculated using existing disturbance data layers that can be input in SDARTT or digitizing on-the-ground disturbance using high resolution imagery, e.g. NAIP and uploading these data into SDARTT. BLM FOs should refer to their respective Appendix of the GRSG plan for the project scale disturbance cap details.

BSU estimates will use the data sets and estimated footprints outlined in the GRSG Monitoring Framework and will be calculated annually by the National Operations Center for all-lands in priority habitat. This information will be available via the BLM Geospatial Gateway (https://blmspace.blm.doi.net/oc/intra/drs/Pages/GeoSpatialGateway.aspx). This all-lands estimate will be used to inform the cumulative effects National Environmental Policy Act (NEPA) analysis, the appropriate disturbance objective(s), and, in some plans, the disturbance cap at the BSU scale. Please refer to the appropriate land use plan for details regarding disturbance calculations at the BSU scale. At both the project and BSU scales, co-located disturbances are encouraged and overlapping disturbance footprints are not additive in the calculations.

Use of SDARTT at the Project Scale:

BLM field offices with GRSG PHMA will use SDARTT to plan, calculate, track, and analyze project scale disturbances and reclamation in PHMAs, using the following website: https://blm.sciencebase.gov. Some offices (as described in the background section) have existing geodatabases and tools that comply with portions of this policy.[4] It is appropriate for these FOs to continue using existing tools with the understanding that all disturbance and reclamation data will ultimately be consolidated into a national database. Efforts are underway to integrate existing systems with SDARTT.

The BLM, in conjunction with the project proponents, will use SDARTT or an existing disturbance quantification tool to upload surface disturbance proposals, compare and track siting alternatives, document the authorized disturbance footprints, record as-built footprints, generate maps and reports, and track interim and final reclamation. BLM staff will first be trained to use SDARTT; thereafter, operators and their third-party contractors will be trained. See Attachment 2 for a summary of SDARTT training plan and capabilities. In addition, when undertaking

[4] For example, the State of Wyoming and its partners (including BLM Wyoming) have been using the Density Disturbance Calculation Tool (DDCT) since 2010 and the web-based application since 2012.

internally generated BLM projects that pertain to the 19 threats of surface disturbing activities in PHMA (see Attachment 1), the BLM will upload the proposed and final as-built spatial data of the disturbance into SDARTT for tracking and calculation purposes.

The BLM has also committed to track and calculate the density of energy and mining facilities at the project scale (except in NV), which will also be performed in SDARTT or other existing system. The density is limited to 1 facility for each 640 acres, on average, within the project analysis area. If a project that would exceed the degradation cap or density cap (for energy or mining facilities) cannot be deferred due to valid existing rights or other existing laws and regulations, fully disclose the local and regional impacts of the proposed action in the associated NEPA. Please refer to the density cap calculation methods in the appropriate land use plan, GRSG Monitoring Framework (p.28), Implementation Guide, and SDARTT User Guide.

There are variations and exceptions in the GRSG Plans, therefore refer to your respective GRSG plan, and the corresponding Disturbance Appendix for further information on how to calculate disturbance and reclamation. Some variations, where appropriate, are being incorporated into SDARTT functionality, such as Oregon's decadal calculations.

In the GRSG Plans, locatable minerals were considered one of the threats; therefore, disturbances and associated reclamation will need to be entered into SDARTT. Consistent with the mining laws, operations and post-mining land use must comply with the applicable BLM land-use plans and activity plans.

Template of Deficiencies and Condition of Approval (COA) /Stipulation Language to Include in Authorizations:

When writing deficiency letters or responses to proponents, the BLM may need to request that spatial data be submitted for all planned surface disturbance associated with that proposal, if they are located in PHMA or if a field office has chosen to use SDARTT outside of PHMA, or if the proponent did not provide these with their first submittal.

When approving surface disturbing authorizations, the BLM will apply COAs or Stipulations, to the extent consistent with applicable law, so the actual disturbance footprint, modification to the approval, and reclamation can be tracked. Refer to Attachment 3 for template COA/Stipulation language that can be included in authorizations, leases, permits, and grants.

Disturbance in GRSG BSUs:

The National Operations Center:
The National Operations Center (NOC) will calculate an all-lands estimate of disturbance levels of the 12 threats for the PHMA in each BSU on an annual basis. The first disturbance estimates, which used buffered datasets in Table 6 of the GRSG Monitoring Framework, are approximations and are available to all FOs through the BLM Geospatial Gateway. Moving forward, the NOC will produce the annual estimate and a 5-year trend estimate for all lands in PHMA by BSU. This information will be incorporated into a report produced by the

Washington Office and posted to the BLM Landscape Data Portal (http://www.landscape.blm.gov/geoportal/catalog/main/home.page).

State, District, and Field Offices:
The NOC calculation of the disturbance on PHMA in a BSU is only an estimate, which can be more precisely calculated using existing data, by digitizing disturbance, and/or conducting field inventories. State offices may perform BSU level disturbance calculations using locally available data to conform to additional requirements. More precise local calculations will be part of the land use plan conformance process and will be incorporated into the NEPA analysis for a proposed surface disturbing activity, when necessary, to ensure that BSU disturbance caps are not exceeded. Existing disturbance on private, state and other lands can be calculated using existing data or via digitization with aerial NAIP/other imagery and should include the threats listed in Attachment 1. This can be done in coordination with local partners. Data standards and templates for digitizing can be found in the SDARTT online Instructional User Guide.

Timeframe: This IM is effective immediately.

Budget Impact: The BLM received additional funding in Fiscal Year 2016 for geospatial data management including disturbance-related data. The workload associated with this policy includes development of and participation in WebEx training; working with and training local partners (e.g., states, counties, and other government and quasi-governmental entities), proponents and their third party contractors; assigning SDARTT verification roles; verifying proponent submitted spatial data (through aerial imagery, field inspections, or local knowledge); and incorporating SDARTT results into NEPA analysis. Data entry into SDARRT will occur in several levels of the agency at field/district offices, state offices, and the NOC, and the workload associated with data entry will vary by unit. Where cost-recovery is authorized, BLM will incorporate the costs of tracking disturbance and reclamation into the cost-recovery estimate. In the long-term, SDARTT should enable the BLM and proponents to save time and funds by providing consistent tools and simple calculations when processing activities causing disturbance as defined in each GRSG Plan. SDARTT will enable land managers to effectively implement planning decisions in site specific applications, and to detect unauthorized disturbances and unreclaimed lands; thereby reducing financial risk.

Background: The SDARTT tool was developed to fulfill the commitments made in the GRSG Plans to manage the amount of disturbance in GRSG PHMA. The USGS worked with several BLM FOs (Pinedale, Vernal, and White River) beginning in 2006, to develop disturbance and reclamation tracking databases which evolved into this national web-based tool. For example, the State of Wyoming and its partners (including BLM Wyoming) have been using the Density Disturbance Calculation Tool (DDCT) since 2010 and the web-based application since 2012.

Manual/Handbook Sections Affected:
Multiple program Manuals and Handbooks are likely to be affected.

Coordination: WO-300, WO-200, NOC, Office of the Assistant Secretary for Land and Minerals Management, and Office of the Solicitor.

Contacts: If you have any questions regarding this IM, please contact Gordon Toevs, National Sage Grouse Coordinator (202) 567-1589, Janna Simonsen, Senior Natural Resource Specialist Fluid Minerals (202) 912-7154, and Anthony Titolo, Natural Resource Specialist at the NOC (303) 236-0446. SDARTT user support is provided through the Help Desk, and via email: sdartt@usgs.gov or phone: (970) 226-9116.

3 Attachments

1-The 19 GRSG Disturbance Threats (1p)
2- SDARTT Training, User Support, Capabilities, Authentication (2pp)
3- Template for Deficiency Letters and Conditions of Approval or Stipulations (2pp)

Attachment 1 - The 19 GRSG Disturbance Threats

The 12 GRSG Degradation Threats for disturbance calculations at the BSU and project scale		
1	Energy	Oil and Gas
2		Coal
3		Wind
4		Solar
5		Geothermal
6	Mining	Locatable, Leaseable, Saleable
7	Infrastructure	Roads
8		Railroads
9		Power lines
10		Communication
11		Other vertical structures
12		Other ROW
7 Additional GRSG threats for disturbance calculations at the project scale		
1		Coalbed Methane Ponds
2		Meteorological Towers
3		Nuclear Energy Facilities
4		Airport Facilities and Infrastructure
5		Military Range Facilities and Infrastructure
6		Hydroelectric Plants
7		Recreation Areas Facilities and Infrastructure

More detailed subcategories and attributes can be found in the data dictionary templates in SDARTT than is included in this basic list of the 19 threats. Refer to the each GRSP Plan Disturbance Appendix for definitions and further information about the 19 threats.

Attachment 2: SDARTT Training, User Support, Capabilities, Authentication

Training

- Introductory webinars for GIS Leads & other State Leads
- Followed by introductory FO/DO training
- Scheduled monthly follow-up online training
- Additional training available per user request and as needed
- Reclamation training
- Eventually Operator and Third-Party Contractor

User Support

- Webinar will be recorded and distributed
- BLM Information: https://blm.sciencebase.gov/
- Log in only: https://blm.sciencebase.gov/sdartt
- Instructions User Guide Link: https://blm.sciencebase.gov/sdartt/manual
- Help Desk Email: sdartt@usgs.gov
- Help Desk Phone: 970-226-9116
- Technical questions about project and disturbance analysis procedures; Anthony Titolo 303-236-0446

Capabilities of the SDARTT website

Upload Batches of Existing/Legacy Inventory Surface Disturbance and Reclamation Spatial Data

- Accepts spatial data uploads
- Individual as well as one all-inclusive data dictionary template for each of the 19 disturbance types.

Disturbance Estimation Planning Tool

- Upload new proposed surface disturbance, which must be linked to a project analysis area.
- Upload a user created Project Analysis Area polygon

- Calculations: Track Disturbance Caps
    - SDARTT produces acres and percent of disturbance for each threat/total acres and percentage of disturbance within the proposed analysis area.
    - SDARTT produces density cap calculations averaged per project analysis area.
    - SDARTT produces either an "Exceeds" or "Within" determination.
    - The BLM will then approve or deny the proposed disturbance in SDARTT.
    - If the proposed disturbance is denied and needs a revision, then the revised polygon will be date stamped and linked to the initial project analysis area to be reanalyzed.

Map Functions

- Basic map functions – zoom in/out, pan, switch basemap, turn on/off all layers, etc.
- Draw or upload spatial data to view results within its boundary.
- Identify features with multiple data tabs.

Reporting

- Ad Hoc customizable query with result list and map display
  - Ability to export result set as PDF, CSV spreadsheet, (can be added to NEPA document) or spatial data.
- Predefined reports

Future Capability - Reclamation (In-Process and Final)

Once in-process and final reclamation spatial data are uploaded and verified, results of acres and percent calculation can be produced.

Authentication - Access Groups and Roles

- Field, district, state, and national office users can only access the offices to which they are directly granted permission. A tiered hierarchy of permission levels facilitates multiple user roles and verification responsibilities. These include: Approvers, Verifiers, Editors, and Readers, which are all tracked in SDARTT's database tables. Approvers grant access; Verifiers validate Editor's uploads; Editors provide data to the tool; and Readers view data but may not manipulate it.

Attachment 3 – Template for Deficiency Letters and Conditions of Approval or Stipulations

After the BLM staff is trained to use SDARTT, the operators and third party contractors will be trained to enter spatial data directly into SDARTT. Thereafter the wording for the deficiency letters and COAs will be modified slightly so that operators/ proponents will be required to enter the spatial data into SDARTT.

Template for Review Process – Deficiency Letters and Responses to Applications

When writing deficiency letters or response letters to applications, the BLM may need to request spatial data for all planned disturbance associated with a proposal, so that it may be uploaded in SDARTT, if the proposal is located in PHMA or if a field office has chosen to use SDARTT outside of PHMA. If the proponent did not provide spatial data for SDARTT with their initial submittal the following language can be applied to deficiency letters as a necessary item needed for processing, to the extent provided in applicable law.

APDs: "Submit spatial data for upload into SDARTT of all planned disturbance associated with the APD."

Sundries: "Submit spatial data for upload into SDARTT of all planned disturbance associated with the Sundry."

Saleable- exclusive material sales, free use permits and exploration permits: "Submit spatial data(s) for upload into SDARTT of all planned disturbance associated with the application for the contract or permit."

Locatable: "Recommended submittal of spatial data for upload into SDARTT of all planned disturbance associated with the mining plan of operations (MPO)."

ROW: "Submit spatial data for upload into SDARTT of all planned disturbance associated with the Right of Way (ROW)."

Template of Conditions of Approval (COAs) or Stipulations

Consistent with applicable law, the following language may be applied as a COAs or stipulation when located in PHMA or if the Authorized Officer (AO) has chosen to use SDARTT outside of PHMA.

Fluid Minerals:

"Within 60 days of construction the operator must provide as-built spatial data(s). If a sundry or amendment involves additional or different surface disturbance, then the proposed project spatial data must be loaded into SDARTT as part of the BLM's review of all necessary items needed to make an informed decision. The operator must provide interim and reclamation spatial data for the purpose of being loaded into SDARTT in conjunction with the sundry submittal."

Rights-of-Way:

"Within 90 days of completing construction the proponent must provide as-built spatial data(s) for the purpose of being uploaded into SDARTT. If a ROW amendment or renewal involves additional or different surface disturbance, then the proposed project spatial data must be loaded into SDARTT as part of the BLM's review of all necessary items needed to make an informed decision. The proponent will provide reclamation spatial data for the purpose of being loaded into SDARTT. Upon ROW termination and approval of final reclamation, spatial data will be provided to the BLM.

Solid Minerals:

Non-Energy Leasable

"The proponent will provide spatial data(s) for the purpose of being uploaded into SDARTT for modifications or new disturbance associated with the Exploration or Mining Plan as part of the BLM's review process. "This includes prospecting permits, exploration licenses, and competitive and non-competitive leases." The proponent will also provide interim and reclamation spatial data for the purpose of being loaded into SDARTT."

Coal Leaseable-

"The proponent will provide spatial data(s) for the purpose of being uploaded into SDARTT for modifications or new disturbance associated with the application area as part of the BLM's review process. This includes an exploration license, lease by application, preference right lease, negotiated sale, or lease exchange. The proponent will also provide interim and reclamation spatial data for the purpose of being loaded into SDARTT."

Locatable –

Provided that the operator agrees to inclusion of this in its approved plan of operations this language may be included: "The proponent will provide spatial data(s) for the purpose of being uploaded into SDARTT for modifications or new disturbance associated with the mining plan of operations (MPO) as part of the BLM's review process. The proponent will also provide interim and reclamation spatial data for the purpose of being loaded into SDARTT."

Saleable-

"The proponent will provide spatial data(s) for the purpose of being uploaded into SDARTT for modifications or new disturbance associated with the application area for mineral material sales contracts and free use permits as part of the BLM's review process. The proponent will also provide interim and reclamation spatial data for the purpose of being loaded into SDARTT."