

Executive Order 2019-3: Wyoming Greater Sage-Grouse Core Area Protection Strategy

2019 Conservation and Development Activities Report



Image Source: U.S. Fish and Wildlife Service Mountain Prairie Region

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With contributions from the following State of Wyoming and federal agencies:

- Game and Fish Department
- Office of State Lands and Investments
- Department of Environmental Quality
- State Engineer's Office
- Department of Transportation
- Oil and Gas Conservation Commission
- Governor's Office
- Bureau of Land Management
- U.S. Fish and Wildlife Service
- Natural Resources Conservation Service

Introduction

Executive Order (EO) 2019-3, known as “Wyoming’s Greater Sage-grouse Core Area Protection Strategy,” is the State of Wyoming’s primary regulatory mechanism to protect Greater sage-grouse and its habitat. It outlines procedures that seek to avoid and minimize disturbance and incentivize development outside of designated “core population areas” for the species.

Appendix H of the EO 2019-3 recognizes that collecting and analyzing data is essential in assessing the influence of the Core Area Protection Strategy. The EO directs State agencies to collect and analyze Greater sage-grouse population and habitat trend data, identify data gaps and research needs and recommend adaptive management actions as needed, and work with federal partners, researchers, managers, and conservation organizations to aggregate all relevant, non-proprietary data being collected in sage-grouse habitats throughout the state. Appendix H indicates that federal agencies are expected to contribute permitting actions, conservation efforts and other relevant reports annually as well.

Summary of Key Findings

This is the first annual report on Greater sage-grouse Conservation and Development activities in Wyoming pursuant to EO 2019-3. The long-term goal is to meet the analysis directives as outlined by Appendix H of EO 2019-3, which include compilation of technical data (Greater sage-grouse population and habitat trend) to establish the effect on populations and habitats of all activities pursued under purview of the Executive Order.

Goals of this Annual Report

This first iteration of the Conservation and Development Activities report focuses on an evaluation of existing relevant data, an analysis of what can be gleaned from the available data in terms of population and habitat trends, and an identification of data gaps with recommendations on next steps.

Summary of Limitations

Directly relevant habitat data are collected by the agencies to indicate a possible direct tie to disturbance (i.e. - number of acres disturbed). However, these data are inconsistently collected or recorded and do not necessarily indicate actual project completion on the ground. Moreover, some data points overlap between agencies (i.e.- the Wyoming Department of Transportation (WYDOT) tracks the number of DDCTs completed, which would also show up in Wyoming Game and Fish Department's (WGFD) DDCT report).

In the early years of implementing the requirements under Greater sage-grouse Executive Orders, the WGFD requested that State agencies report certain information on an annual basis. After a few years, it was clear that the information overlapped across various agencies or was not clear for them to utilize in an objective manner. Consequently, some agencies stopped collecting information specifically for the purposes of reporting on activities as it relates to the EO.

Today, many State agencies continue to collect Greater sage-grouse information, as outlined below. However, in most instances the data these agencies collect currently may not be easily extractable. Additionally, multiple permits may be issued across state agencies for the same activity. Most agencies have an established a process to ensure each activity only requires one consultation with WGFD, when appropriate. For data collection purposes, a similar type of protocol will need to be developed to ensure the same activity recorded across agencies is not counted multiple times.

Recommendations for Next Steps

After review of the draft first iteration of the Conservation and Development Activities annual report, the Sage Grouse Implementation Team recommended that State of Wyoming agencies hone in on the most informative tasks of the EO that seek to convey actual, on-the-ground

impacts to Greater sage-grouse and their habitat. Moving forward, State agencies should do their best to track information that could indicate realized (“as-built”) disturbance on the ground. Additionally, agencies should explore how to optimize as-built data collection over the next year. It is expected that recommendations should be worked on over the next year for inclusion into the 2020 report.

Summary of Data Sources

Below is an outline of available data points as of 2019. Relevant sources of data are indicated in parentheses:

1. Population (WGFD)

- Lek counts/surveys
- Harvest statistics

2. Habitat Trends

- Indicators of disturbance
 - DDCT (WGFD)
 - Compensatory Mitigation (WGFD)
 - State Permitting
 - Oil and Gas Development (OGCC)
 - Highways and Roads (WYDOT)
 - Water Impoundments (SEO)
 - Environmental Disturbances (DEQ)
 - Land Transactions (OSLI)
 - De Minimis Activities (WYDOT, SEO, OSLI)
- Conservation efforts
 - WyCED data (WGFD)

3. Populations of Concern

- Jackson Local Working Group
- Northeast Wyoming Local Working Group

4. Federal Agency Data

Summary of 2019 Population Data*

*Please reference the “2018 Wyoming Sage-Grouse Job Completion Report 2018” prepared by the Wyoming Game and Fish Department for further details on Greater sage-grouse population history, trends and current status.

Background

Greater sage-grouse are relatively common throughout Wyoming, especially southwest and central Wyoming, because sage-grouse habitat remains relatively intact compared to other states. However, available datasets and anecdotal accounts indicate long-term declines in Wyoming sage-grouse populations over the last six decades.

Past analyses suggest Wyoming sage-grouse populations are cyclic. While weather and climate undoubtedly influence sage-grouse population cycles, such influences have not been quantified and factors other than weather (predation, disease) may also play a role. It is important to acknowledge and control for the cyclic nature of sage-grouse when conducting impact studies and monitoring grouse response to management.

Key Findings from 2018-19 Population Report (WGFD)

Lek counts/surveys

There are about 1,800 known occupied sage-grouse leks in Wyoming. WGFD personnel and others surveyed 87% of these leks in the spring of 2019. Results of the survey indicate 1,127 leks were confirmed active, 296 confirmed inactive, and 140 unknown or unchecked. The average number of males observed on leks was 20/active lek, a 21% change from the 26/active lek observed in the spring of 2018, suggesting a population decrease. However this figure is substantially higher than the low of 13/active lek reported in 1996.

Harvest Statistics

Due to concerns over low populations, the statewide hunting season was shortened and the daily bag limit decreased to two sage-grouse in 2002 and has remained very conservative since that time. Hunting Areas 2 and 3 in eastern Wyoming and the Snake River Drainage in northwest Wyoming are closed to sage-grouse hunting. Hunting Area 1 in the central part of the state ran from September 15-30th, 2018 (reported for 2019) and September 15-17th for Area 4 in northwest Wyoming.

The number of sage-grouse wings collected from hunters increased by 3% in the 2018 hunting season. In 2018, 2,112 wings were recorded, which is 20% of the estimated harvest. This is equal to the 10-year average of 20% with most changes between years being minor. The 2018

hunting season chick:hen ratio (based on harvested wing analysis) was 0.8 chicks per hen. This level of productivity is typically associated with a declining population. This is consistent with the 2019 lek data (all lek checks), which indicated an 21% decrease in the average numbers of males on leks.

Additional data

See the 2018-19 Population Report prepared by the WGFD for further details regarding weather, habitat, conservation strategies, policy issues and management recommendations.

Summary of Habitat Trend Data -- Indicators of Disturbance

The following section describes various data points that are connected to potential developments within the regulatory purview of the State of Wyoming. These data points have been reviewed by relevant state agencies, in context to the goals for reporting as established by EO 2019-3 and the SGIT, to convey possible information that may be helpful for evaluating possible indicators of disturbance. Each section describes the purpose of the data accordingly.

DDCT

The Density and Disturbance Calculation Tool (DDCT) is a spatially based application managed by the Wyoming Geographic Information Science Center at the University of Wyoming that calculates the number of disruptive activities averaged per square mile and total surface disturbance within the DDCT assessment area, which is the project area relative to core area and core area leks. Proponents of surface disturbing activities in Greater sage-grouse Core or Connectivity Areas must submit their project footprints through this tool to complete their permitting process. If the proposed activity DDCT is at or above Executive Order thresholds, the project proponent, WGFD and the permitting agency identify opportunities to avoid or minimize impacts to Greater sage-grouse in accordance with EO 2019-3 Appendix E: Permitting.

The WGFD reviews and tracks projects in EO-delineated habitats (Core Areas, Connectivity Areas, Winter Concentration Areas, and Non-Core Areas) for compliance with EO 2019-3. Upon review, the agency records the number of projects that require a DDCT (located in Core or Connectivity Areas) and those that do not ("Non-DDCTs").

Tables 1 and 2 detail the number of DDCTs that the WGFD performed in 2019. From this information, we can infer that the Executive Order does not prohibit development activity in Greater sage-grouse Core or Connectivity Areas. A majority (84%) of the projects proposed in Core or Connectivity Areas are compliant with the parameters of the Executive Order.

Table 1: Number of DDCTs performed in 2019

# of DDCTs completed through policy review	100
# of DDCTs deemed compliant with the SGEO	66
# of DDCTs deemed consistent with the SGEO	18
# of DDCTs deemed exception to the SGEO	16
# of potential disturbance acres added in core area	2032.56
De minimis DDCT disturbance acres	18.48

Table 2: Number of Non-DDCTs performed in 2019

# of non-DDCT projects reviewed for compliance with the SGEO	76
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Compensatory Mitigation

EO 2019-3 stipulates protective measures that are designed to avoid, minimize and mitigate impacts to the species, with compensatory mitigation employed only where avoidance and minimization are either inadequate or impossible. Should mitigation measures be determined to be required, the State applies the Compensatory Mitigation Framework as outlined by EO 2019-3 Appendix F: Compensatory Mitigation.

The process to identify the potential need for compensatory mitigation starts when a project proponent submits a proposed project for review that does not comply with EO 2019-3 disturbance thresholds or requests relief from EO 2019-3 stipulations. WGFD works with the project proponent to review site and project specific factors and identify avoidance and minimization measures. WGFD evaluates the exception request, including coordination with other agencies as described in EO 2019-3 Appendix A, and makes a recommendation to the permitting agency. When Compensatory Mitigation is required, WGFD determines and includes the amount of compensation required (“debits”) in its recommendations (for further details on this process, see Appendix E of EO 2019-3).

Table 3 details the number of exception requests reviewed by the WGFD in 2019 as well as the number of compensatory mitigation debits calculated under these reviews, where applicable. The 26 exception requests for review include Non-Core Area Timing Limitation Stipulations (TLS). Eight of these exceptions applied to the 5% or 1 per 640 acres disturbance thresholds under EO 2019-3; 17 exceptions applied to TLS relief in either Core (3 total) or Non-Core (14 total) Areas. One Exception was not approved for TLS relief in Non-Core.

From this information, we can infer that the majority of exceptions relative to the Executive Order are for TLS relief and apply mostly to Non-Core Areas.

Table 3: Exceptions and Compensatory Mitigation Debits Reviewed in 2019

# of exception requests reviewed	26
# of exception requests granted with compensatory mitigation	21
# of exception requests granted without compensatory mitigation	4
# of debits calculated	460.2
# exceptions not approved	1

Limitations

- WGFD does not track the number of projects actually completed. The agency can tell to some extent if the credits were purchased by looking on the Regulatory In-lieu fee and Bank Information Tracking System (RIBITS) site, which is a tracking system developed by the United States Army Corps of Engineers to monitor wetland mitigation banking.
- To confirm any actual, on-the-ground development of projects that are reviewed under the DDCT and for which compensatory mitigation debits are required, the WGFD would have to cross reference its determinations with the permitting agencies.

State Permitting

EO 2019-3 directs all State of Wyoming permitting agencies to comply with the Core Area Protection Strategy during the permitting process, including consultation with the Wyoming Game and Fish Department. These state agencies include, but are not limited to:

- Office of State Land and Investments (OSLI)
- Department of Environmental Quality (DEQ)
- State Engineer's Office (SEO)
- Department of Transportation (WYDOT)
- Oil and Gas Conservation Commission (OGCC)

Under the EO, the State of Wyoming is directed to collect and analyze Greater sage-grouse population and habitat trend data, identify data gaps and research needs and to also recommend adaptive management actions as needed. EO 2019-3 Appendix E: Permitting outlines detailed permitting coordination requirements that include the process for state permit review and determining project compliance with EO 2019-3. The State is further directed to work with federal partners, researchers, managers, and conservation organizations to aggregate all relevant, non-proprietary data being collected in sage-grouse habitats throughout the state.

This report is a compilation of the above listed data, analyzed to establish the effect on populations and habitats of all activities pursued under purview of EO 2019-3.

The following sections break down relevant sage-grouse permit data that State agencies have determined to be relevant for the purposes of this report. Table 3 details common data points that can be reported across agencies.

Table 3: Common State Agency Permit Data Points

Parameter	Agency
DDCTs	WGFD
	WYDOT
Proposed Disturbance (acres)	WOGCC
	WYDOT
	DEQ -- LQD
Compensatory Mitigation (debits/credits)	WOGCC
	WYDOT
Number of Activities proposed in Core Area	WOGCC
	SEO
	DEQ – WQD
Number of exceptions	WOGCC
De Minimis activities	WYDOT
	SEO Ground Water Division

Oil and Gas Development (WOGCC)

Wyoming Oil and Gas Conservation Commission (WOGCC) is the administrative agency that governs oil and gas operations in the State. The Commission has statutory authority to establish drilling and spacing units and to govern the location of wells. Before operators can drill a well, regardless of mineral type, they must obtain a permit to drill from the WOGCC. Only one well is allowed per drilling and spacing unit when a drilling and spacing unit is established. When additional wells are needed, any operator may file an application to increase the number of wells per formation.

2019 data

WOGCC permitted 21 wells spud in Core Areas from 18 well pads during 2019. One drilling project exceeded density and disturbance thresholds and provided 55.45 compensatory mitigation credits. This project was proximal to a densely developed area in the southern part of the Greater South Pass Core Area. The reported proposed disturbance in the DDCT was 9.09 acres.

In 2019, drilling of wells in locations subject to timing limitations largely occurred outside the stipulation period. 202 wells spudded in 2019 were located in a Sage-Grouse Population Area with timing stipulations. In five instances exceptions were recommended by WGFD Habitat Protection Program and compensatory mitigation credits were submitted in order to perform WOGCC regulated development during the stipulation period. Two wells were spudded during the stipulation period under pre-existing rights exemptions. Wells in the Pinedale Anticline and Jonah Field, included in the total above, were spudded in accordance with applicable EISs that have their own set of regulations for when and where well development may occur.

Limitations

- WOGCC does not generally regulate the size of well pads, therefore information on disturbance acreage is sporadic.

Highways and Roads (WYDOT)

WYDOT engineers and technical support staff perform a wide range of tasks in the course of maintaining and improving Wyoming's transportation infrastructure. WYDOT oversees development of plans and specifications for improvement plans for highways, bridges and related infrastructure.

When a project is proposed by WYDOT, the agency must consult with the WGFD to determine if a DDCT is required. The project is reviewed to determine if it is located in EO-delineated habitats.

Below is a summary of the information tracked by WYDOT for projects with a possible EO 2019-3 nexus:

2019 data

- 25 activities ranging from fence replacements, asphalt/pavement work, landslide repairs, culvert lining, bridge replacement, mill and overlay
- 7 activities performed a DDCT
- 16 activities required stipulations -- Noise restrictions, seasonal restrictions
- 2 activities required compensatory mitigation -- 12.3 credits total
- 5.48 acres of new disturbance

Limitations

- WYDOT does not track information regarding what type of EO-delineated habitat a proposed project may be located.

Water Impoundments (SEO)

The State Engineer's Office collects, analyzes, maintains and provides water related information for ensuring the appropriate management and regulation of Wyoming's water resources. The SEO transmits relevant surface water and groundwater permit data to WGFD on a monthly basis with information for every permit that undergoes review for its location within Core Areas and a De Minimis Sage Grouse Condition of Approval is attached.

Below is a summary of the information tracked by WYDOT for projects with a possible EO 2019-3 nexus:

2019 data

- *Surface Water Division*
 - Total permits reviewed and issued in Core Area -- 30
 - Permits qualifying for de minimis uses are not tracked
 - 45.9 acres of proposed surface disturbance associated with the above permitted issued
- *Groundwater*
 - Total permits reviewed and issued in Core Area -- Unknown
 - Total de minimis permits reviewed and issued in Core Area -- 92

Limitations

- The information tabulated by the Surface Water Division only captures facilities that are completed in the calendar year of 2019, which means this could potentially also include some facilities that were previously constructed but not permitted.
- No data are being reported for new permits that were issued on existing facilities since they do not currently collect any data on when an existing facility was constructed, only that it was constructed prior to permitting.
- Generally speaking, the information tabulated by the Groundwater Division does not capture how much land was proposed to be or actually disturbed in the process of someone developing their water well or spring development.

Environmental Disturbances (DEQ)

The Wyoming Department of Environmental Quality (DEQ) can identify which permits required consultation with the WGFD and identify the location of those permitted activities. Aggregating this information within each of DEQ's multiple permitting programs varies in difficulty and resource intensity, trending towards resource intensive. One division, Abandoned Mine Lands, can provide information about its reclamation and conservation efforts. At this time, DEQ does not capture information relative to exceptions, exemptions (except for limited cases within the Industrial Siting Division), disturbance or compensatory mitigation. It is presumed that WGFD has this information in a more consolidated location.

If a permit required consultation with WGFD and WGFD provided SGEO recommendations, DEQ appends those to the permit. When a facility is inspected, DEQ Division's review the recommendations provided by WGFD during an inspection and records information on compliance forms. Below is an overview of the six divisions within DEQ which have permitting authority.

Disturbance Activities Associated with Mining (Land Quality Division)

DEQ Land Quality Division (LQD) has the authority to require permitting and licensing of all operator actions of surface and underground mine facilities. LQD permit application forms or required Annual Report formats do not collect Core Area disturbance data. The process as currently structured determines: 1) if the proposed action is in Core Area or within two miles of an occupied lek, 2) if mitigation will apply, and/or 3) if seasonal restrictions are to be imposed.

The MIDAS (LQD's database) digital system currently has a check box to capture if the permitting action is in Core Area and/or within two miles of an occupied lek. The WGFD determination and any Density and Disturbance Calculation Tool (DDCT) calculations are kept in the Temporary File Number (TFN) correspondence folder of the respective application. Table 4 details the total number of LQD Permitted Disturbances associated with mining in 2019:

Table 4: Common State Agency Permit Data Points

Permit Type	Total TFN's Approved	TFN's With New Approved Acreages to Affect In Core	TFN's With New Approved Acreages to Affect <2 miles From Occupied Lek	New Acres Approved to be Affected in Core	New Acres Approved to be Affected <2 miles From Occupied Lek
Coal Drilling Notice (CN)	2	0	0	0	0
Non-Coal Drilling Notice (DN)	15	5	1	15.83	5
Coal Permits (Large Permit)	112	1	2	57.67 ²	-41.14 ¹
Non-coal Permits (Large and Small Permits)	104	5	4	195.17 ¹	324.46 ¹
License to Explore (LE)	29	4	1	16.95	5
Limited Mine Operation (LMO)	22	1	0	3.05	0
Research and Development Coal	3	0	0	0	0
Research and Development Non-Coal	1	0	0	0	0
Total	288	16	8	288.67	293.32

¹These figures reflect both newly approved acreages to affect and reductions to previously approved acreages to affect that resulted from refined Mine Plans.

²This figure reflects newly approved acreage to affect is within a coal mine permit boundary approved as of October 2, 2015.

Reclamation Activities Associated with Mining (Abandoned Mine Lands Division)

The primary activities AML performs are reclamation-focused – restoration of abandoned mine lands to wildlife habitat and functioning rangeland. AML strives to reestablish native vegetation in the open areas that it reclaims, and therefore, habitat is typically restored through AML activities rather than being negatively impacted. AML collects information on the number of acres of land reclaimed, in general.

The AML Division consults with WGFD before each project in Sage-Grouse Core Area, soliciting suggestions and requesting concurrence with the project revegetation plans. Whenever timing or distance stipulations apply, AML's projects are scheduled around such stipulations in keeping with SGEO conditions.

Activities Associated with Construction (Water Quality Division)

The Water Quality Divisions' (WQD) Pollution Discharge Elimination System Permitting Program, specifically stormwater permitting, does not permit the construction activities, but rather ensures erosion sediment control from construction activities. Activities between 1-5 acres of disturbance are authorized through a permit by rule. Their location or activities would not be known to the division unless a suspected violation is reported. Operators are expected to follow the same stipulations as activities with greater than 5 acres of disturbance, including conformance with the SGEQ. WQD's Underground Injection Control Program can distill the number and location of the permitted activities and whether a permit requires WGFD consultation. Only Class I and Class V permits are relevant for this reporting. Similarly, the Water and Wastewater Program would be able to distill information about permits which required WGFD consultation. Location of the activity would be known.

Waste (Solid and Hazardous Waste Division)

Most Solid and Hazardous Waste Division (SHWD) activities are not within greenfield areas. For permitting programs, SHWD requires proposed permittees to consult with WGFD if the activity falls in a habitat protected under SGEQ 2019-3. In these instances, SHWD would only have information on the location of the activity and relies on the permittee to have the necessary consultations with WGFD for compliance with the SGEQ.

Activities Associated with Energy Development (Air Quality Division)

Many of the activities that the Air Quality Division (AQD) permits also require a permit from another regulatory authority, such as Land Quality for mining operations or WOGCC for oil and gas drilling. Consultation with WGFD in those instances is handled by the other permitting authority. For certain permits in which the AQD is the "lead" permitting entity, AQD requires permittees to consult with WGFD if the activity falls in a habitat protected under SGEQ 2019-3. In these instances, AQD would only have information on the location of the activity. Through AQD's IMPACT System, a query could be run that would allow AQD to pull the permits which have sage grouse stipulations applied. It is likely that only locational data would be available.

Industrial Facilities (Industrial Siting Division)

The Industrial Siting Division (ISD) has a statutory process of collaborating with nineteen other state agencies in the process of permitting industrial facilities. WGFD routinely participates in this process, including for sage grouse consultation. In a permit, ISD requires conformance with the SGEQ. The ISD permit is primarily focused on ensuring preconstruction and construction activities occur in a certain manner, with specific focus on the socio-economic impacts which

occur with development. After a short period from completing construction, ISD's role is to ensure the financial assurance of an entity for bonding purposes, when applicable.

Most of the permits ISD has issued recently are for the development of wind energy projects, which have not been compatible with sage-grouse core. ISD has issued permits for electric transmission infrastructure, which are exempt from the SGEO if built within a designated corridor. The transmission lines have been sited within these corridors, with limited exceptions. Where minimization or compensatory mitigation has been required, ISD receives notice of these recommendations but is not the primary entity housing this information. ISD would differ to the WGFD.

2019 data

- *Mining activities*
 - *Disturbance (LQD)* -- In 2019, 288 Temporary Filing Numbers were processed and approved for the various mining commodities by LQD. LQD conducted geospatial analyses of the TFN actions in order to evaluate these actions and their relationships to Greater sage-grouse. [See Table 4 for details]
 - *Reclamation (AML)* -- During the 2019 construction year (July 2018-June 2019), AML reclaimed approximately 184 acres of unproductive abandoned mine lands (AML). Of that, 145 acres of potential Sage-Grouse habitat adjacent to core areas was reclaimed, repairing some of the habitat fragmentation caused by past mining. A large portion of AML's work in 2019 was concentrated on underground actions to abate mine subsidence rather than surface revegetation efforts. Many of the areas AML works on, such as virtually all of the Gas Hills, were intentionally excluded from core area.
- *Construction activities (WQD)*
 - *Stormwater permits* -- In 2019, 211 construction stormwater authorizations were issued. Of those 15 were in or partially in sage grouse core. Five were issued in Carbon County (with one crossing into Sweetwater), three additional in Sweetwater, two in Converse, one each in Johnson, Lincoln, Park, Sheridan and Uinta Counties. This data aggregation required a physical review of each permit issued in 2019 as currently there is not a mechanism to capture it.
 - *Underground Injection Control Program permits* -- Only Class I and Class V permits are relevant for this reporting. Currently, the UIC Program has 87 of these permits active, 73 of which are Class V and six which are Class I. Eight permits were issued either wholly or partially in sage grouse core area – six Class V and two Class I. There is one each in the counties of Converse, Carbon, Natrona, Hot Springs, Fremont, Park, Teton and Sublette.

- *Water and Wastewater Program permits* -- In total, 53 commercial oilfield waste disposal facilities are operating in Wyoming. Two are currently located either wholly or partially in Core Area.

Limitations

- At this time, it would not be feasible for DEQ to aggregate Greater sage-grouse permit information as it would require a permit-by-permit review. While DEQ ensures compliance with the EO, DEQ is not able to inspect all permitted activities on an annual basis due to resource constraints, staff limitations and provisions specific to each permit.
- *Land Quality/Mining*-- One difficulty in obtaining the desired information moving forward relates to individual permits that lie either wholly or partially inside of Core Area. In this case, the reporting and ensuing calculations will need to include area in Core and outside of Core for undisturbed, disturbed, and reclaimed acreage. This level of data resolution is not presently required as part of the Annual Reports. Further complicating collection of this resolution of data is that Annual Reports are not calendar year reports and are filed at various times throughout the year based on permit issuance date. Therefore, as these data are developed it will take two calendar years to develop complete information, and there will be a data lag because of the different reporting cycles.

Land Transactions (OSLI)

The Office of State Lands and Investments (OSLI) is the administrative arm of the Wyoming Board of Land Commissioners and Wyoming State Loan and Investment Board. Collectively, these programs serve the trust beneficiaries and include the management of easement conveyances, forest product sales and trust land sales, exchanges and acquisitions, to name a few.

Since it is not a permitting agency, OSLI does not collect information concerning Greater sage-grouse. However, in the case of easements OSLI requires hard copy surveys of the "as-builts." OSLI records the associated acreage in an ad hoc manner and not in a normalized way.

De Minimis Activities

EO 2019-3 recommends general stipulations for all activities in Core Population Areas, with the exception of exempt ("de minimis") actions defined in Appendix G or specifically identified activities. The specific industry and/or activity stipulations are considered in addition to the general stipulations.

During the permitting process, State agencies exercise discretion regarding which activities fall within the "de minimis" parameters as defined by the EO. Agencies that do not have regulatory authority over permitting but are subject to the requirements of the EO, such as WYDOT and the Office of State Lands, are still required to submit projects to WGFD for review.

2019 data

- WYDOT -- 9 projects
- SEO -- 92 groundwater wells; unknown surface water impoundments
- Office of State Lands and Investments (OSLI) -- unknown (this information can be tracked but has not been formally conducted to-date)

Limitations

- For all agencies, de minimis information has not been consistently tracked across the board. To some extent this information can be reported however it is important to consider that some de minimis activities do not have a permit associated with it (i.e.- maintenance on a power line).

Conservation Efforts

The State of Wyoming has been collecting information documenting conservation efforts to benefit Greater sage-grouse since 2015. Such data are provided by a variety of state and federal agencies, as well as energy companies and non-governmental organizations.

The Wyoming Conservation Efforts Database (WyCED) is a web application specifically designed to provide a portal for entities to upload their spatial and project information. This application was designed in coordination with the U.S. Fish and Wildlife Service and their Conservation Efforts Database (CED) so that Wyoming's data can be fed into their database to inform species review and reporting.

WyCED is available through the Wyoming Geographic Information Science Center's OneSteppe web application at: <https://onesteppe.wygisc.org/>.

Federal and Non-Federal Reporting

Federal agencies will report their efforts directly to the U.S. Fish and Wildlife Service CED on an annual basis. State agencies and partners in the private and county sectors should report their efforts to the WyCED on an annual basis.

For projects occurring on private land, private land reporting units will be used to generalize the actual location of conservation efforts to protect the identity of private landowners. The private land reporting units were developed by the U.S. Fish and Wildlife Service range-wide to encourage the reporting of efforts on private lands while not disclosing landowner names. Project proponents can use the true project footprint on private lands and the WyCED will automatically obscure the data. The uploaded true footprint is never stored.

Type of Data and Timeline for Reporting

Annually, by March 31st, the following information may be submitted:

- Conservation-related projects in sage-grouse core area and other Executive Order 2019-3 delineated habitats (connectivity, winter concentration, non-core area).

Projects are considered to be beneficial to sage-grouse if they specifically address Conservation Objectives Team (COT) threats (<https://www.fws.gov/greatersagegrouse/documents/COT-Report-with-Dear-Interested-Reader-Letter.pdf>).

In Wyoming, projects benefiting habitat can include:

- Treatment of noxious weeds and annual grasses

- Vegetation treatments aimed to improve vegetation composition and diversity
- Removal of juniper
- Riparian habitat enhancements
- Prescribed burns
- Infrastructure removal efforts or modifications
- Abandoned mine land restoration
- Modifying fences to reduce sage-grouse collisions
- Conservation easements

All of these types of projects can be entered by authorized users in the WyCED on an annual basis. Table 5 details the types of conservation activities entered in to WyCED and associated number of acres in 2019.

Table 5: WyCED Activities in 2019

Conservation activity (WyCED)	# acres
Riparian, wet meadow, or spring restoration	100
Annual grass treatment	45,884
Conifer removal	653
Vegetation management/habitat enhancement	1,744
Noxious weed treatments	22,361
Total	70,742

Populations of Concern

Jackson Local Working Group (LWG)

Low counts of male sage-grouse on leks in 2019 prompted the Upper Snake River Basin LWG to notify the Statewide Adaptive Management Working Group (S-AMWG) of a possible soft trigger. The S-AMWG identified Technical Team members and chair. The Technical Team met twice in Jackson and are currently circulating a final draft of recommendations within the Technical Team before sending their recommendations back to the S-AMWG. Pertinent points from the Technical Team's draft document follows.

The Upper Snake River Basin Conservation Area (USRBCA) consists of two sub-populations of sage grouse within the Jackson Core Area: Jackson Hole and the Gros Ventre. These two sub-populations are both isolated and genetically distinct, although the Gros Ventre does show some ancestral connectivity to birds in the Green River Basin. Recognition of these sub-populations is important with respect to recommendations generated by the Technical Team.

Lek counts in 2019 for the Jackson Core Area reached their lowest point since consistent monitoring efforts began in 1986. Although a similar number of birds were seen in 1999, several leks were not known at that time, resulting in 2019 being the lowest recorded with respect to the average number of males per lek (see Appendix A). Lek surveys in spring 2019 documented 43 males in the Jackson Hole subpopulation, making it the lowest count on record. Substantial loss of critical winter habitat (23% since 2003) in the recent past, and above average snow depths in two of the last three winters, has reduced the availability of these critical habitats. Efforts are currently underway to minimize risk of further loss of sage grouse habitats. These two sub-populations are isolated and at-risk with some unique genetic attributes; however, population size/persistence concerns may outweigh genetic issues. Predation is likely not the primary cause of current population decline. Other potential impacts such as mineral development and livestock grazing are not having a substantial influence on sage grouse or their habitats in the Jackson Core Area. Current recreation levels and patterns are likely not the primary cause for the current population decline.

The Technical Team feels current population status warrants management action to prevent further declines. Recommendations to address this situation include: habitat conservation, habitat restoration and enhancement, re-establishment of connectivity (Jackson Hole to Gros Ventre to Upper Green River), and translocation. In the Jackson Hole subpopulation, thresholds and responses should be based on past performance and recovery. If 2020 lek counts result in >52 males (>21% increase), then the plan is to continue to monitor. If 43-51 males (0-20% increase) are observed on leks, then the recommendation is to either conduct translocation or continue to monitor. If <43 males are observed on leks, then the recommendation is to conduct a translocation. This is felt to be a population in need of action to avoid extirpation.

Northeast Wyoming Local Working Group (LWG)

The causal factor for the Buffalo Connectivity soft trigger was primarily the Tidwell fire that started in Montana and continued to burn southeast into Wyoming. The wildfire (known as Deer Creek in Wyoming) bisected the Buffalo Connectivity Area by consuming the majority of fuels in-between the very north and south ends of the Connectivity Area. This and other smaller wildfires in the summer of 2017 consumed over 15,000 acres or about 6.3% of the Buffalo Connectivity Area. The Northeast Local Working Group identified this as a soft trigger in 2018 and notified the Statewide Adaptive Management Working Group (S-AMWG) in September 2019. The S-AMWG identified members and a chair of the Technical Team in October 2019. The Technical Team has not met yet.

Federal agency data

Appendix A of EO 2019-3 recognizes that successful conservation of Greater sage-grouse requires a shared stewardship vision among states, local governments, private citizens, landowners, federal land management agencies, and partners to ensure that each state can manage the habitat within its borders for the particular needs of its landscapes and communities. Each federal agency plays an important role in contributing information about the various types and distribution for conservation activities across the state.

Federal agencies' roles

- *United States Fish and Wildlife Service (USFWS)* -- Under the Endangered Species Act (ESA), the USFWS administers protective and recovery requirements for threatened and endangered species as well as the ecosystems upon which they depend. The USFWS' "not-warranted" determination for Greater sage-grouse relies on the effective implementation and reporting of federal and state land-use plans.
- *Bureau of Land Management (BLM) and United States Forest Service (USFS)* -- As federal land management agencies, the BLM and USFS manage Greater sage-grouse habitat as part of the agencies' multiple use missions under applicable regulations.
- *Natural Resources Conservation Service (NRCS)* -- NRCS offers technical and financial assistance to help agricultural producers voluntarily conserve private lands and associated leased lands. NRCS' Greater sage-grouse efforts are part of Working Lands for Wildlife (WLFW), through which NRCS helps agricultural producers voluntarily conserve private lands and associated leased land by targeting Environmental Quality Incentives Program (EQIP) and Agricultural Conservation Easement Programs (ACEP) funds.

Conservation Efforts Database

The USFWS Conservation Efforts Database (CED) collects information from partners about the various types and distribution of conservation activities and to evaluate their effectiveness in reducing or eliminating threats contributing to sagebrush habitat loss and degradation across the ecosystem. This standardized way of collecting information allows USFWS to work with partners and stakeholders to monitor implementation and aid in assessing the long-term benefits realized through effective implementation of conservation efforts.

In Wyoming, all conservation efforts from non-federal partners are first recorded in the Wyoming CED for further reporting to the USFWS CED. Information from federal agencies is also entered into the database and then provided to the Western Association of Fish and Wildlife Agencies

(WAFWA) to support its 2020 Sage-Grouse Conservation Assessment. Additional details on select federal agencies have been provided as follows:

- *USFWS*
 - As the lead CED agency, the USFWS sends conservation actions through the CED. USFWS then pushes that national information (of which all federal agencies report in to) back to the Wyoming Game and Fish Department so that it can be combined with the State's data. Since the agency is not involved with consultations regarding the State's permitting processes, there are no disturbance data points that can be provided.

- *NRCS*
 - Protecting private landowner privacy was a priority for WAFWA and USFWS to ensure that this important conservation could be effectively captured in updating CED conservation tracking, since 2015. WAFWA has worked with the state wildlife agencies, USGS, and USFWS to create Sagebrush Reporting Units for entering aggregated information on private lands conservation into the CED in an aggregated fashion.
 - At the time of this report, practice information from 2015-2019 is in the process of being aggregated by the NRCS' WLFW Sage Grouse Initiative (SGI), a voluntary incentive partnership between state and federal agencies, non-governmental organizations, private sector, universities and conservation districts to conserve rangelands. Aggregated information by each SGI state includes practices utilizing the CED Private Lands Sagebrush Reporting Units. Aggregated SGI practice totals will be reported into the CED by the units appropriate (acres, feet, etc.) to the practice that is addressing the threat.

- *BLM*
 - The BLM participated in the first CED in 2015 and was one of the largest contributors of both spatial and non-spatial information to the CED. The BLM again provided a suite of data and information related to sage-grouse conservation efforts implemented or planned between 2015 and 2018 to the CED.
 - BLM datasets queried for inclusion were the National Fire Plan Operations and Reporting system (NFPORS), National Invasive Species Information Management System (NISIMS), Vegetation Treatment Geodatabase (VTRT), Density and Disturbance Calculation Tool (DDCT), Range Improvement Project System (RIPS), Rangeland Administration System (RAS), Wildhorse and Burro Statistics (WHB), Land Use Plan Allocation Decisions, and Legacy Rehost System (LR2000).