

AGENDA

Montana Sage Grouse Oversight Team (MSGOT)

October 27, 2020: 10:30 a.m. – 12:30 p.m.

Zoom Webinar / Video Conference Meeting

10:30 – 10:40: Call to Order and Administrative Matters, John Tubbs, MSGOT Chair

- Introductions and Video Conference logistics
- Confirm Future Video Conference Meeting Dates for 2020
 - November 30, 1:00 – 3:30
 - December 14, 2:00 – 5:00

10:40 – 10:50: MSGOT Reports

10:50 - 11:20: Partner Reports

- John Carlson, Bureau of Land Management
- Mary Manning, US Forest Service
- Catherine Wightman, Montana Fish, Wildlife & Parks: 2020 Greater Sage-grouse Population Report
- Kyle Tackett, NRCS (see written report and SGI Infographic)

11:20 – 11:35: Modified Mitigation Policy Approach for Unsuccessful Oil & Gas Wells (Dry Holes) if Properly Plugged and Abandoned

- Introduction: Carolyn Sime, Habitat Conservation Program Manager
- Public Comment
- MSGOT Discussion and Possible Executive Action

11:35 – 12:15: Sage Grouse Habitat Conservation Program Report and MSGOT Adaptive Management Discussion

- 2019 Annual Report Presentation and MCA § 76-22-105(1)(h)
- 2020 Stewardship Account Grant Cycle
- Program and MSGOT Adaptive Management Discussion
- Public Comment

12:15 – 12:30: Public Comment on Other Matters

NOTE: Agenda item times are approximate. Actual times may vary by up to one hour. Attendees who may need services or special accommodations should contact Carolyn Sime (406-444-0554 or csime2@mt.gov) at least 5 working days before the meeting.





Natural Resources
Conservation Service

10/1/2020

Montana State Office

10 East Babcock
Street, Room 443
Bozeman
Montana, 59715

Voice 406.587.6811
Fax 855.510.7028

Members of MSGOT

I apologize for not being able to attend the virtual meeting, but I wanted to provide an update on NRCS activities. Please accept this written update in my absence.

The NRCS continues to work with a wide array of partners to put conservation on the ground in key landscapes throughout Montana. With nearly two-thirds of sage-grouse habitat on private land, our most important partner is the private landowner. NRCS across the West is currently working to update our Sage Grouse Initiative (SGI) strategies for Fiscal Years 2021-2025. This is our opportunity to update NRCS Montana's strategy for utilizing the Farm Bill in conservation efforts aimed at the following 4 primary rangeland threats to wildlife and working lands:

1. **Woodland expansion** (conifer encroachment) – In certain parts of the sage-grouse range in Montana, conifer encroachment is impacting rangelands from both the wildlife and ranching standpoint. NRCS will continue to partner with landowners and others to strategically remove conifers.
2. **Land use conversion** – NRCS will work with landowners in Montana to seed their marginal cropland back to perennial forage mixes. In addition, we are exploring opportunities to assist with transitioning expired CRP into grazing operations, thereby keeping in grass.
3. **Exotic annual grass invasion** – Cheatgrass and other invasive annual grasses, such as medusahead and ventenata, are taking over America's sagebrush rangelands, reducing forage productivity, and threatening wildlife habitat and rural economies. We will be working locally with landowners and partners on this resource issue that impacts both wildlife habitat and the livestock forage base.
4. **Riparian and wet meadow degradation** - Water is a precious resource in the arid West and the resilience of these wet areas is equally vital to livestock production. We are working to strategically protect, restore, or enhance mesic areas.

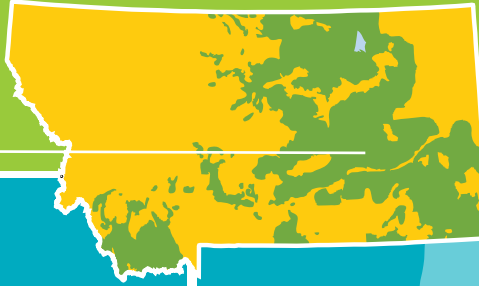
As you know, Montana has a remarkable land trust community and that has resulted in Montana being a national leader in easements through the NRCS Agricultural Land Easement program. This voluntary program will again be a large part of our strategy for the next several years and I fully expect our partners to continue bringing projects to the table, some of which may come before this group for match funding.

Included with this report is an infographic that displays some of the accomplishments from our SGI 2.0 effort, from 2015-2018. NRCS looks forward to continuing being a part of the conservation effort in Montana. Thank you.

Sincerely,
Kyle Tackett
NRCS Partnership Liaison

On Target: Sage Grouse Initiative

Montana is the second most populous sage grouse state with **18%** percent of the range wide sage grouse population.



Conservation here requires cooperation with private land-owners as **2/3** of the habitat is on privately owned lands.

Money to Montana



Montana's focus on conserving rangelands occupied by sage grouse increased the state's Environmental Quality Incentives Program cost-share funding by 26% in a two-year span, an increase of \$8.7 million!

Between 2010 and 2018, Montana received an **additional \$88 million** in EQIP and easement funding.

What did that buy?



1.2 million acres

of rangeland and habitat improvements and land easement protection. That's an area larger than Glacier National Park.



Rangeland benefits for everyone

Grazing



Well-managed NRCS grazing systems are highly compatible with healthy sage-grouse populations and also result in a 13% greater prevalence of preferred insects eaten by grouse chicks in grazed versus idled rangelands.

Mesic Habitats



Mesic restoration makes meadows 25% more productive and keeps water on the ranch in the fall when producers and wildlife need it most.

Easements

More than 50% of all conservation easements ever funded in the state of Montana by NRCS were through Working Lands for Wildlife. Many are linked together and support the longest known sage grouse migration in the West.

Conifer Removal



New satellite-mapping of expanding conifer trees into native rangelands helped target woodland management prescriptions that have been documented to boost sage grouse populations by 12% and restored water availability for ranchers.

Focusing conservation provides big results –

conserved sage grouse habitat, increased rangeland productivity and sustainability, and resulted in **no** additional endangered species regulations.



Wildlife Conservation Through Sustainable Ranching

Montana Natural Resources Conservation Service

nrcs.usda.gov/



MONTANA FISH, WILDLIFE & PARKS

Montana Greater Sage-grouse Population Report

August 18, 2020

Montana Greater Sage-grouse population estimates and associated uncertainty, and the number of known breeding sites (called leks) are presented here in compliance with MCA 87-1-201(1)(11), as amended in 2017.

Montana Fish, Wildlife and Parks (FWP) biologists work with federal agency and non-governmental organization partners and volunteers to count the number of displaying males at lek sites across the state in spring of each year. These data are used to assess population trends for use in sage-grouse management decisions. They are also provided to the Montana Sage-grouse Habitat Conservation Program and the Bureau of Land Management for use in land use decisions and permitting. Counts are conducted at leks 1 – 3 times within a season; however, all leks are not monitored in every year. Each lek is also categorized based on activity status, such as confirmed active or confirmed inactive, according to established definitions (see below). FWP manages the sage-grouse lek count and activity status database for the State of Montana.

Population Estimates - Methods

Montana FWP is working with Dr. Paul Lukacs, University of Montana, to estimate sage-grouse population numbers based on counts of displaying males at leks using *N*-mixture models. This modeling approach is a robust analytical method for estimating population size and trend over time for species like sage-grouse that congregate at discrete breeding sites (McCaffrey et al. 2016). Although FWP maintains a database of male counts at leks that date back to 1952, only data from 2002 onward could be used in this approach.

It is important to recognize these models use algorithms that will estimate similar, but not precisely the same, population numbers each time the models are run. This means that population estimates may vary slightly from previous reports but are well within reported confidence limit bounds.

Population Estimates – Results and Discussion

Montana FWP and partners surveyed 805 leks at least once in spring 2020. The models estimate that there were approximately 77,977 ($\pm 17,979$) sage-grouse in Montana in spring 2020 (Figure 1, Table 1). The increase in population estimates is likely a result of favorable weather conditions in 2019. The lack of widespread drought or extreme weather events (e.g., hail, flooding) during this period may have positively influenced late summer food resources and led to higher survival and recruitment. Data from FWP's sage-grouse research project in central Montana suggests nest success and hen survival were comparatively high in spring and

summer 2019 (Berkeley et al. 2019). If these data are representative of statewide patterns, they could explain the increase in the number of sage-grouse attending leks in spring 2020.

Sage-grouse population numbers oscillate over a period of 8 – 10 years across large scales (Fedy and Doherty 2011). The variation in estimates among years in Montana’s dataset may be due to natural fluctuations. It is important to consider long-term patterns over time and not make management decisions based on one or a few years of lek counts, especially at broad scales.

There are certain assumptions that were used in the development of these estimates, such as an assumed male to female ratio of 1:2.45. The 2018 and 2019 population reports list the main assumptions. There are also other analytical models that have utility for estimating population size and trends, such as Integrated Population Models. However, these models require additional demographic information, such as recruitment data, that are currently unavailable statewide. FWP may explore additional and/or improved modeling techniques in the future as new data become available.

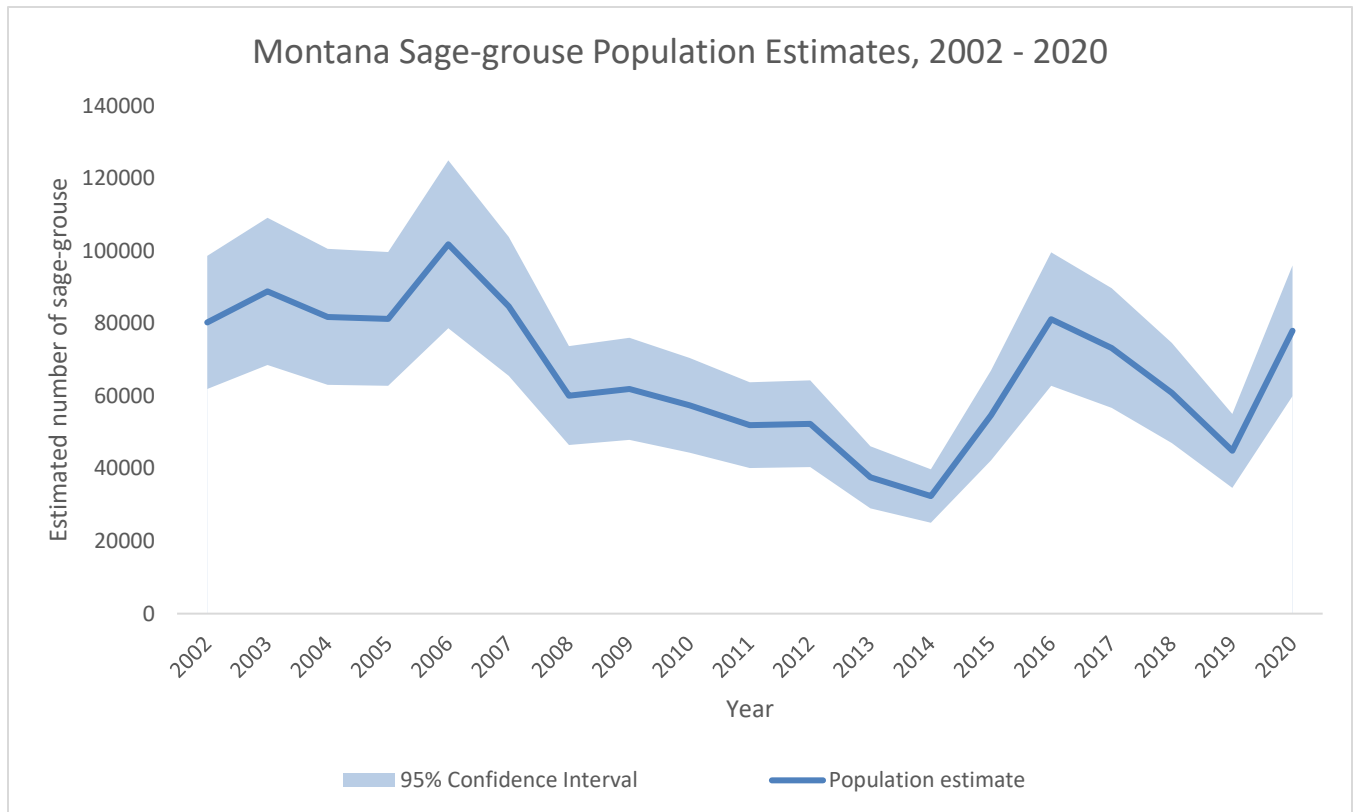


Figure 1. Graphical representation of Greater Sage-grouse population estimates and associated uncertainty from *N*-mixture models in Montana, 2002 – 2020. In general terms, confidence intervals are the range of values that describe the uncertainty around the population estimate.

Table 1. Numerical estimates of Greater Sage-grouse population numbers and associated uncertainty from *N*-mixture models in Montana, 2002-2020.

Year	Population Estimate	Standard Error	Confidence Interval	
			Lower Bound	Upper Bound
2002	80272	9364	61919	98625
2003	88874	10346	68596	109152
2004	81813	9563	63070	100556
2005	81244	9409	62802	99686
2006	101831	11806	78691	124971
2007	84692	9768	65547	103837
2008	60122	6964	46473	73771
2009	61969	7165	47926	76012
2010	57433	6644	44411	70455
2011	51970	6050	40112	63828
2012	52362	6090	40426	64298
2013	37613	4360	29067	46159
2014	32407	3762	25033	39781
2015	54673	6322	42282	67064
2016	81201	9395	62787	99615
2017	73222	8430	56699	89745
2018	60858	7050	47040	74676
2019	44867	5188	34699	55035
2020	77977	9173	59998	95956

Number of Leaks

FWP maintains a spatial database of Greater Sage-grouse leks, summarized by activity status in Table 2. FWP staff are continually working to confirm and record new lek locations and update lek status. In 2018, FWP added a new status category, *Provisionally Active*, to alert the Montana Sage Grouse Habitat Conservation Program, the Bureau of Land Management, and industry proponents of newly discovered leks immediately. Two survey years are required to meet the definition of a Confirmed Active lek; thus, without a Provisionally Active status option, there was a delay of over one year before resource agencies and industry were notified of newly discovered leks. Provisionally Active status is meant to be temporary. If data are not sufficient to meet the definition of Confirmed Active after a second year of surveys, a Provisionally Active lek will revert to Unconfirmed and would not be evaluated under state or federal assessments for new development. If data is sufficient in the second year of surveys, the lek will immediately be classified as Confirmed Active.

Table 2. Number of known Greater Sage-grouse leks in Montana by classification status, 2002 – 2020.*

	Confirmed Active	Confirmed Inactive	Confirmed Extirpated	Provisionally Active	Never Confirmed Active	Unconfirmed	Total
2002	548	79	17	.	29	512	1185
2003	613	84	17	.	47	519	1280
2004	650	88	19	.	56	530	1343
2005	675	94	19	.	64	544	1396
2006	718	96	19	.	67	604	1504
2007	753	98	20	.	72	630	1573
2008	809	100	22	.	75	591	1597
2009	851	104	25	.	92	551	1623
2010	948	110	40	.	119	444	1661
2011	971	125	50	.	150	382	1678
2012	979	133	50	.	180	352	1694
2013	978	144	59	.	200	331	1712
2014	985	154	65	.	227	292	1723
2015	988	172	65	.	242	269	1736
2016	993	185	66	.	255	270	1769
2017	1009	199	66	.	251	280	1805
2018	1012	220	66	(3)	260	255	1813
2019	1019	232	66	(3)	266	249	1832
2020	998	264	66	3	273	237	1841

*FWP’s database is dynamic and the status of a lek can change retroactively based on new information entered at any time. Reviewers may notice small changes in classification numbers from what was reported in previous reports. These are not errors; rather they are the most up-to-date numbers as of this report.

^New status created in 2018. See definition below. Provisionally Active status is only relevant for the current year; leks categorized as Provisionally Active in previous years have been moved to Confirmed Active or Unconfirmed status, as appropriate. The number of leks that meet the Provisionally Active criteria in 2018 and 2019 is noted in parenthesis.

Lek Status Definitions

Confirmed Active - Data supports existence of lek. Supporting data defined as 1 year with 2 or more males lekking on site followed by evidence of lekking (Birds - male, female or unclassified; -OR- Sign - vegetation trampling, feathers, or droppings) within 10 years of that observation.

Confirmed Inactive - A Confirmed Active lek with no evidence of lekking (Birds - male, female or unclassified; -OR- Sign - vegetation trampling, feathers, or droppings) for the last 10 years. Requires a minimum of 3 survey years with no evidence of lekking during a 10 year period. Reinstating Confirmed Active status requires meeting the supporting data requirements.

Confirmed Extirpated - Habitat changes have caused birds to permanently abandon a lek (e.g., plowing, urban development, overhead power line) as determined by the biologists monitoring the lek.

Never confirmed active – An Unconfirmed lek that was never confirmed active. Requires 3 or more survey years with no evidence of lekking (Birds - male, female or unclassified; -OR- Sign - vegetation trampling, feathers, or droppings) over any period of time.

Provisionally Active – Preliminary data supports existence of an active lek. This status can only apply during the first year of detection. Supporting data defined as 1 observation with 2 or more males lekking on site AND sign of lekking (vegetation trampling, feather, or droppings) or followed by a 2nd observation of 2 or more males lekking within the same survey year.

Unconfirmed - Possible lek. Grouse activity documented. Data insufficient to classify as Confirmed Active status.

References

- Berkeley, L., M. Szczypinski, J. Helm, and V. Dreitz. 2019. The impacts of grazing on greater sage-grouse habitat and population dynamics in central Montana, FY2019 Annual Progress Report. Montana Fish, Wildlife and Parks, Helena.
- Fedy, B.C. and K.E. Doherty. 2010. Population cycles are highly correlated over long time series and large spatial scales in two unrelated species: greater sage-grouse and cottontail rabbits. *Oecologia*; DOI 10.1007/s00442-010-1768-0.
- McCaffrey, R., J.J. Nowak, and P.M. Lukacs. 2016. Improved analysis of lek count data using N-Mixture models. *Journal of Wildlife Management*; DOI: 10.1002/jwmg.21094.
- Taylor, R.L., B.L. Walker, D.E. Naugle, and L.S. Mills. 2011. Managing multiple vital rates to maximize Greater Sage-grouse population growth. *Journal of Wildlife Management*; DOI: 10.1002/jwmg.267

MONTANA SAGE GROUSE OVERSIGHT TEAM AGENDA ITEM BRIEF SHEET

OCTOBER 27, 2020

AGENDA ITEM: MODIFIED MITIGATION POLICY APPROACH FOR UNSUCCESSFUL OIL AND GAS WELLS (DRY HOLES) IF PROPERLY PLUGGED AND ABANDONED

ACTION NEEDED: EXECUTIVE ACTION TO APPROVE THE PROPOSED MODIFIED MITIGATION POLICY APPROACH AND IMPLEMENTATION PROCESS

SUMMARY:

This agenda item addresses circumstances unique to the oil and gas industry, and its scope is limited to specific circumstances outlined below.

The MSGOT-approved sage grouse mitigation framework incorporates the Habitat Quantification Tool (HQT) to estimate changes in vegetation and environmental conditions and to quantify and calculate debits associated with a development project. Here, the focus is on drilling a new well that is regulated by the Montana Board of Oil and Gas Conservation (MBOGC or Board) and that turns out to be unsuccessful.

The HQT looks at changes in functional habitat attributed to the direct and indirect impacts of a project for the length of time a developer expects the project to be on the landscape. Using data provided by developers, the HQT results scale proportionally to the project type and any new permanent or temporary features like roads, the project size, whether the project is above or below ground, and the underlying habitat quality at the project location. Lastly, the HQT results also scale to and incorporate the element of time (or project duration). The HQT recognizes three phases over the full life of a project: Construction, Operations, and Reclamation. Results reflect changes in habitat quantity and quality in each phase, respectively, and ultimately, for as long as a project is on the landscape.

In Montana, one estimate is that one out of every ten exploratory oil and gas wells drilled in sage grouse habitat is successful, and the remaining nine are not. An unsuccessful well means that the Operator experienced a “dry hole” that will not produce oil or gas in sufficient economic quantities to transition the well to produce for years to come, or, alternatively, drilled the hole in a location that is not suitable for an injection well. The assumption of “success” did not bear true. Thus, the developer terminates efforts to further develop the well within a short period of time after the initial drilling activity.

However, the mitigation framework requires that impacts be estimated and offset prior to implementation of development projects, consistent with universal mitigation principles. For developers who decide to offset impacts by making a contribution to the Stewardship Account instead of implementing their own mitigation projects, the contribution is made *after* obtaining a permit and deciding to drill the well but *before* the start of drilling activity. The contribution, therefore, is made without knowing whether the well will be successful or not and what the project’s actual duration will be. An Operator’s assumed success, the actual uncertainty around whether or not a well will be successful, and the requirement to mitigate for the full life of a project up front do not align well for new oil, gas, or injection wells.

In the case of oil, gas, or injection wells, this means that an Operator’s contribution to the Account presently includes the HQT Operations phase, based on the assumption of success. The total amount includes the Operations phase, even if the well turns out to be dry hole and the well does not convert to production (or injection activities). In reality, unsuccessful wells or dry holes do not have an Operations phase once the well is properly plugged and the site properly restored according to the laws and regulations implemented by the Board.



The proposed modified policy approach for unsuccessful wells accommodates the speculative nature of the industry and the uncertainty around whether or not a well will be successful. At the same time, the proposed approach ensures that mitigation is provided in advance and in full, if in fact, the well does turn out to be successful.

Under the proposal, all Operators complete consultation with the Program. Mitigation is determined prior to the Operator submitting an application to drill to the Board. During the consultation process, the HQT results will be partitioned out as the Construction phase (drilling), Operations (operational life of the well assuming it's successful), and Reclamation (period of time required for the site to resume providing pre-project level functionality and vegetative cover after removal of all infrastructure). Upon receiving a permit to drill and immediately prior to drilling activity, Operators who select the Stewardship Account Option, make their contribution to the Account—assuming success.

If the well is unsuccessful (i.e. a dry hole), the Operator provides their required notice to the Board and begins efforts to properly plug the well and reclaim the site. Upon satisfying the regulatory requirements set forth in law, administrative rules, and as implemented by the Board, the Operator may submit a refund request to the Program equivalent to the Operations phase portion of the original contribution. Refund requests must be submitted within two years of the date plug/abandon efforts were approved by the Board. This provides ample time for an Operator to submit a refund request, while also assuring that all statutory and administrative rule requirements implemented by the Board were met and that the well is properly plugged and abandoned.

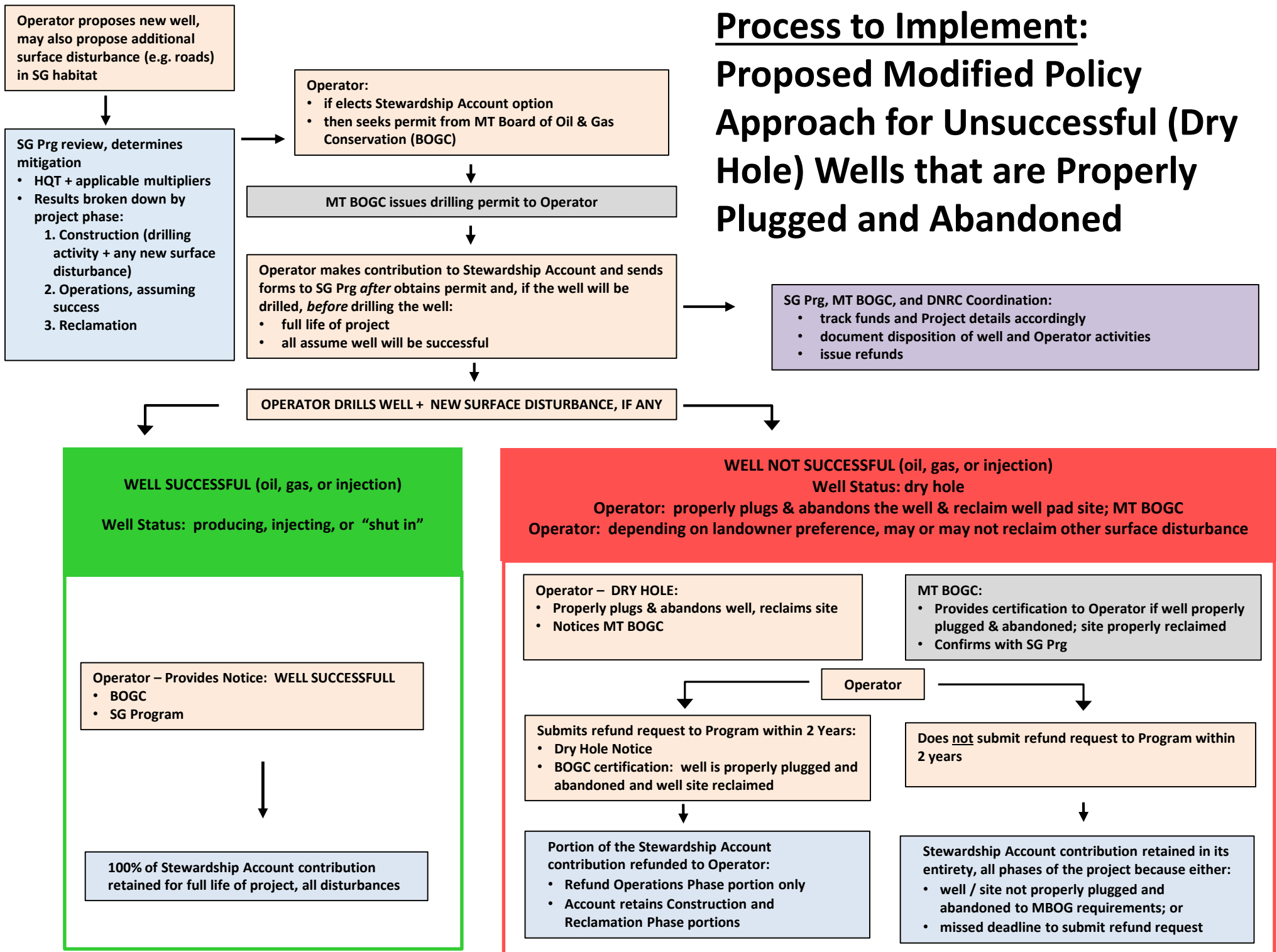
If the well is successful, the Operator moves forward and interacts with the Board over the life of the well. No refund opportunity is afforded.

Any additional surface disturbance required to drill the well (e.g. new roads) is also included in HQT calculations. These new temporary or permanent features will also be tracked as a part of this modified mitigation policy process. If the well is unsuccessful, the ultimate disposition on the landscape of these additional features, whether reclaimed fully and removed from the landscape or left in place after the well is properly plugged and abandoned will determine whether or not it is included within the scope of the refund. Specific details, including private landowner preference, will be considered on a case by case basis.

PROGRAM RECOMMENDATION:

The Program Manager commends MSGOT approve the modified mitigation policy approach for unsuccessful oil and gas wells or dry holes and the implementation process flow chart when the well is properly plugged and abandoned, and the site is reclaimed according to the legal requirements implemented by the Montana Board of Oil and Gas Conservation.

Process to Implement: Proposed Modified Policy Approach for Unsuccessful (Dry Hole) Wells that are Properly Plugged and Abandoned



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Montana/Dakotas State Office
5001 Southgate Drive
Billings, Montana 59101
<http://www.blm.gov/montana-dakotas>

August 5, 2020

In Reply Refer To:
3120 (MT922.AW) P

EMAILTRANSMISSION-08/04/2020
Instruction Memorandum No. MT-2020-018
Expires: 9/30/2023

To: State Leadership Team

From: State Director

Subject: Implementation of a Sage-Grouse Prioritization Sequence consistent with 2015 Sage-Grouse Resource Management Plans and Montana District Court Order in Case 4:18-cv-00069-BMM (5/22/2020)

Program Areas: Oil and Gas Leasing and Development, Land Use Planning, and Wildlife Greater Sage-Grouse (GRSG)

Purpose: This Instruction Memorandum (IM) provides guidance on prioritizing implementation decisions for the Bureau of Land Management (BLM) oil and gas leasing and development in sage-grouse habitat across the Montana/Dakotas in a manner that is consistent with the 2015 Approved Resource Management Plans (RMPs) and Plan Amendments for North Dakota, South Dakota, Miles City, Billings, Lewistown¹, and Dillon Field Offices and the HiLine District Office RMPs as well as recent court decisions. This IM applies to all Montana/Dakotas plans covered by the Rocky Mountain and Great Basin Region Record of Decisions (RODs) issued by the BLM in September 2015.

¹ The approved 2020 Lewistown ROD and RMP carries forward the prioritization objective and sage-grouse conservation buffers from the 2015 Rocky Mountain ROD and RMP amendment.

The objective of this IM is to ensure oil and gas leasing decisions are consistent with applicable goals, objectives, and management decisions in RMPs with respect to leasing Federal fluid minerals in sage-grouse habitat; thereby ensuring decisions are also consistent with the Federal Land Management and Policy Act, as amended (FLPMA).

Administrative or Mission Related: Mission Related.

Policy/Action: The Mineral Leasing Act of 1920 (MLA), as amended, provides that lands subject to disposition under this chapter which are known or believed to contain oil or gas deposits may be leased by the Secretary (30 U.S. Code § 226; Lease of oil and gas lands). As provided under 43 CFR § 3120 (Competitive Leases), the BLM shall make lands available for oil and gas leasing through competitive bidding, unless a parcel is withdrawn by the Bureau (43 CFR § 3120.3-1 and 3-4).

The BLM's RMPs identify large tracts of land open to oil and gas leasing subject to major or moderate restrictions, or standard stipulations. For example, management decisions made in the Miles City RMP designated 1,850,000 acres open for lease subject to a No Surface Occupancy (NSO) stipulation, 3,645,000 acres open for lease with a Controlled Surface Use (CSU) stipulation, and 179,000 acres open with a timing limitation (TL). An additional 987,000 acres are open subject to standard lease terms, and 83,000 acres within Wilderness Study Areas (WSAs) are closed to oil and gas leasing (Miles City ARMP, p. 3-13).

“Under the Mineral Leasing Act, the Secretary of the Interior, acting through BLM, has discretion to issue, or not to issue, a lease for any given parcel of Federal land available for oil and gas leasing. Thus, up until BLM accepts a high bidder's offer and executes a lease, the bureau has discretion to withdraw a parcel from leasing. BLM's exercise of discretion in deciding not to lease lands described in an oil and gas lease sale must be supported by a rational basis. A rational basis may include deciding not to lease lands when the public interest favors other resource considerations, such as wildlife, endangered species preservation, recreational use, and aesthetic or scenic values.”

IBLA-2014-122; Roy G. Barton, September 26, 2016.

This IM describes prioritization consideration factors the Montana/Dakotas BLM shall consider when deciding to offer parcels for lease, or when choosing not to lease lands in sage-grouse habitat. These considerations shall be disclosed in a National Environmental Policy Act (NEPA) document for an oil and gas lease sale and provided to the public for 30-day notice and comment.

This policy applies to leasing of Federal mineral estate and development on lands managed by the BLM and split estate lands in which the mineral estate is reserved to the United States. The BLM does not manage leasing on Tribal Trust or allotted lands; neither the GRSR Plans nor the policy in this IM applies to leasing on Tribal Trust or allotted lands. However, the BLM reviews and approves Applications for Permit to Drill (APDs) and other permitting actions related to

development on Tribal Trust and allotted lands. To the extent the BLM receives a request for such a permitting action within designated sage-grouse habitat, the BLM will consult with the appropriate tribe(s) on a case-by-case basis as a part of its permitting decision-making process.

Consideration Factors: In accordance with the discretion retained by the BLM under the Mineral Leasing Act, the BLM Montana/Dakotas will consider the following factors when deciding to lease, or not to lease, parcels in or near designated sage-grouse habitat:

1. Legal Obligation

Parcel is proposed for a reason such as drainage or in response to an IBLA case or litigation. The BLM should disclose in its analysis whether parcels are in habitat or non-habitat, and offer Category 1 parcels for lease as supported in the NEPA analysis.

2. Non-Habitat

The BLM should offer parcels for lease that are not in sage-grouse habitat as supported in the NEPA analysis. Category 2 lands rate highest priority for leasing outside of sage-grouse habitat unless some other resource value supports a decision not to lease.

3. Within Existing Disturbance/Outside 3.1 miles from Lek

Category 3 lands provide least valuable sage-grouse habitat. Parcels are more than 3.1 miles from a lek and in an area that is already disturbed. Leasing lands outside 3.1-mile lek buffer is consistent with RMPs to make lands available for lease, and requirements in Appendix B to avoid impacts by locating the action outside of the applicable lek buffer-distance(s). The BLM may offer Category 3 parcels for lease as supported by NEPA analysis. Category 3 lands rate second highest priority for leasing unless some other resource value supports a decision not to lease.

4. Within Existing Disturbance/Within 3.1 miles of Lek

Category 4 lands provide valuable habitat because of proximity to a lek but that habitat is already disturbed.

For parcels in Priority Habitat Management Area (PHMA), the BLM has a uniform NSO stipulation across all field offices. Therefore, development of the Federal mineral resource would occur off lease. In its NEPA analysis, the BLM should assess the potential for impacts that may occur off lease on state or private lands surrounding the lease parcel. As part of this review, the BLM should assess if there are locations available for development outside of a lek buffer, if development can be co-located with existing disturbance, or if development would result in areas of new disturbance that could significantly affect habitat. Appendix B of the sage-grouse plans state impacts should be avoided by locating the action outside of the lek buffer. The BLM may approve actions in PHMA within a lek buffer only if:

- The BLM, with input from the state fish and wildlife agency, determines, based on best available science, landscape features, and other existing protections, that a

buffer distance other than the distance identified above offers the same or greater level of protection to GRSG and its habitat, including conservation of seasonal habitat outside of the analyzed buffer area.

For parcels in General Habitat Management Area (GHMA), the BLM has various stipulations to minimize impacts that vary by field office. For example, Miles City, Billings, and HiLine each have a 0.6-mile NSO around a lek. Miles City and HiLine have a 2-mile CSU stating that surface occupancy and use within 2 miles of the perimeter of a lek active within the past 5 years may be restricted or prohibited. South Dakota has a CSU that prohibits surface use within 2 miles of a lek unless the project proponent can demonstrate that impacts can be adequately mitigated and conservation actions or needed design features are included.

In its NEPA analysis, the BLM should assess the impacts that could occur on or off lease like that noted for the PHMA above. Appendix B of the sage-grouse plans states that impacts should be avoided by locating the action outside the lek buffer-distance. The BLM may approve actions in the GHMA within a lek buffer only if:

- Based on best available science, landscape features, and other existing protections, (e.g., land use allocations, state regulations), the BLM determines that a lek buffer-distance other than the applicable distance identified above offers the same or a greater level of protection to GRSG and its habitat, including conservation of seasonal habitat outside of the analyzed buffer area; or
- The BLM determines that impacts to GRSG and its habitat are minimized such that the project will cause minor or no new disturbance (e.g., co-location with existing authorizations); and
- Any residual impacts within the lek buffer-distances are addressed through compensatory mitigation measures sufficient to ensure a net conservation gain, as outlined in the GRSG Regional Mitigation Strategy Appendix.

The BLM may make a decision to lease or not to lease as supported by the NEPA analysis and upon finding that the requirements noted above are satisfied.

5. No Existing Disturbance/Outside 3.1 miles from Lek/High or Medium Reasonably Foreseeable Development (RFD)

Category 5 lands provide good habitat but are less valuable to sage-grouse because they are further than 3.1 miles from a lek. Leasing lands outside a 3.1-mile lek buffer is consistent with the RMPs to make lands available for lease, and requirements in Appendix B to avoid impacts by locating the action outside of the applicable lek buffer-distance(s). A parcel may be offered for lease or not leased as supported by the NEPA analysis. In making its decision, the BLM should consider multiple resource values and any input provided by a state wildlife management agency with respect to state conservation objectives. In balancing multiple uses, Category 5 parcels have higher priority for leasing than Category 6 based upon a high or medium RFD.

6. No Existing Disturbance/Outside 3.1 miles from Lek/Low RFD

Category 6 lands provide good habitat but are less valuable to sage-grouse because they are further than 3.1 miles from a lek. Leasing lands outside a 3.1-mile lek buffer is consistent with RMPs to make lands available for lease, and requirements in Appendix B to avoid impacts by locating the action outside of the applicable lek buffer-distance(s). Parcels may be offered for lease, or not leased as supported by the NEPA analysis. In making its decision, the BLM should consider multiple resource values and any input provided by state wildlife management agency's with respect to state conservation objectives. Based upon low development potential, Category 6 lands rate as lower priority for leasing compared to Category 5 parcels.

7. No Existing Disturbance/Within 3.1 miles of Lek

Category 7 lands provide best available sage-grouse habitat based upon lack of disturbance and proximity to lek. To be consistent with Appendix B, impacts should be avoided by locating the action outside of the applicable lek buffer-distance(s). In weighing multiple uses, the BLM should place high priority on conserving the best available habitat. Category 7 parcels should not be offered for lease, and that decision should be supported with adequate rationale in the NEPA analysis, which may include discussion of the number of leks that could be directly, indirectly, or cumulatively affected by oil and gas development, lek surveys, or other considerations.

Any deviations from a decision not to lease Category 7 lands must be supported by the NEPA analysis. The record must provide supporting documentation based on best available science, landscape features, etc. that a smaller buffer area would provide the same or greater level of protection to sage-grouse habitat. Refer to the bullets in Category 4 above for specific determinations that would need to be made consistent with requirements of Appendix B in the 2015 RMPs and Plan Amendments.

For any parcel that the BLM elects not to offer for lease, the parcel could be re-nominated by the public and appear on a future sale. In that case, the BLM would complete the prioritization review for that sale and make a new decision based on the record at that time, whether to lease, or not to lease, based on the resource values identified at that point in time.

Similarly, when making a decision to approve an APD and subject to valid existing rights, the BLM shall strive to locate new development outside of lek buffers. The BLM may attach conditions of approval (COA) to minimize adverse impacts to sage-grouse habitat and may require proposed well pad locations to be moved by not more than 200 meters (43 CFR § 3101.1-2; Surface use rights). If impacts cannot be adequately mitigated, and pursuant to 43 CFR § 3162.3-1 (h); Drilling applications and plans), the BLM may approve applications with appropriate modifications or conditions or return the application and advise the applicant of the reasons for disapproval.

Timeframe: Effective immediately.

Budget Impact: None.

Background: The September 2015 Rocky Mountain Region and Great Basin RODs authorized RMPs or Plan Amendments for the BLM Montana/Dakotas North Dakota, South Dakota, Miles City, Billings, Lewistown, and Dillon Field Offices, and the HiLine District. The 2015 Sage-Grouse Plans designated large areas as GHMA, PHMA, or Restoration Habitat Management Area (RHMA) open for oil and gas leasing subject to various management decisions to conserve habitat. The stated goal and/or objective of sage-grouse management decisions in applicable RMPs is to maintain or increase habitat needed for sage-grouse in GHMA and PHMA, and to strive for no net loss of sage-grouse habitat in RHMA.

The 2015 RMPs and RMP Amendments impose stipulations on oil and gas lease parcels as one means to achieve stated goals and objectives. In PHMA, lands are available for lease subject to an all-encompassing NSO stipulation applied to a lease parcel. In GHMA, lands are available for lease subject to CSU stipulations, such as a NSO within 0.6 miles of an active lek and/or a stipulation that provides that surface occupancy and use within 2 miles of the perimeter of a lek active within the past 5 years may be restricted or prohibited (from the Miles City RMP).

The 2015 RMPs or Plan Amendments also include an objective to prioritize leasing and development of fluid minerals outside of PHMA and GHMA:

Objective 3: Priority will be given to leasing and development of fluid minerals outside of PHMA and GHMA. When analyzing leasing and authorizing development of fluid mineral resources in PHMA and GHMA, and subject to applicable stipulations for the conservation of GRSG, priority will be given to development in non-habitat areas first and then in the least suitable habitat for GRSG. The implementation of these priorities will be subject to valid existing rights and any applicable law or regulation, including, but not limited to, 30 U.S.C. 226(p) and 43 CFR, Part 3162.3-1(h).

On May 22, 2020, Judge Brian Morris, Montana District Court found that IM 2018-026, Implementation of Greater Sage-Grouse Resource Management Plan Revisions or Amendments—Oil & Gas Leasing and Development Prioritization Objective violated FLPMA by contradicting the 2015 plans for limiting the prioritization requirement only to situations when the BLM faces a backlog of Expressions of Interest (EOIs) and by rendering the prioritization requirement into a mere procedural hurdle. The BLM must prioritize non-sage-grouse habitat to accomplish two purposes: “to further limit future surface disturbance and encourage new development in areas that would not conflict with” sage-grouse habitat.

This Montana/Dakotas State Office IM provides guidance to the BLM Authorized Officers and field personnel to facilitate consistent implementation of the sage-grouse plans consistent with the Montana District Court’s order and the Federal Land Policy Management Act, as amended.

The 2015 RMPs and RMP Amendments include other Management Decisions and numerous appendices that provide additional guidance for how to meet stated goals and objectives for

conservation of sage-grouse habitat and provide additional framework for the sage-grouse prioritization consideration factors described above. One such management decision states:

“...In undertaking BLM management actions, and consistent with valid and existing rights and law in authorizing third-party actions, the BLM will apply the lek buffer-distances identified in the USGS Report Conservation Buffer Distance Estimates for Greater Sage-grouse – A Review (Open File Report 2014-1239), in accordance with Appendix B, GRSG Conservation Buffer.”

(GHMA, MD 1; Miles City Plan, p. 2-9 and PHMA MD 3; Miles City Plan p. 2-10).

Appendix B (GRSG Conservation Buffer – Applying Lek Buffer Distances when approving actions) requires the BLM to evaluate impacts to leks from actions requiring NEPA analysis using the lek buffer-distances as identified in a 2014 USGS Report on Conservation Buffer Distance Estimates for Greater Sage-Grouse. The lek buffer-distance infrastructure related to energy development is 3.1 miles. Appendix B further stipulates for both GHMA and PHMA that the BLM will apply the lek buffer-distances identified above as required conservation measures, such as Conditions of Approval, to fully address impacts to leks as identified in the NEPA analysis. Additionally, for both GHMA and PHMA, **Appendix B requires that impacts should first be avoided by locating the action outside of the applicable lek buffer-distance(s).** Appendix B states that the BLM may approve actions in GHMA that are within the applicable lek buffer-distance only if:

- Based on best available science, landscape features, and other existing protections, (e.g., land use allocations, state regulations), the BLM determines that a lek buffer-distance other than the applicable distance identified above offers the same or a greater level of protection to GRSG and its habitat, including conservation of seasonal habitat outside of the analyzed buffer area; or
- The BLM determines that impacts to GRSG and its habitat are minimized such that the project will cause minor or no new disturbance (e.g., co-location with existing authorizations); and
- Any residual impacts within the lek buffer-distances are addressed through compensatory mitigation measures sufficient to ensure a net conservation gain, as outlined in the GRSG Regional Mitigation Strategy Appendix.

The BLM may approve actions in PHMA that are within the applicable lek buffer-distance only if:

- The BLM, with input from the state fish and wildlife agency, determines, based on best available science, landscape features, and other existing protections, that a buffer distance other than the distance identified above offers the same or greater level of protection to GRSG and its habitat, including conservation of seasonal habitat outside of the analyzed buffer area...The BLM will explain its justification for determining the approved buffer distances meet these conditions in its project decision.

The use of a 3.1-mile conservation buffer around a lek is further supported by sage-grouse research conducted in southeastern Montana, where much of Montana's oil and gas development tends to be located. Foster and others² found that 59 percent of sage-grouse nests were within 1 mile of a known lek location, 84 percent within 2 miles, 93 percent within 3 miles, and 97 percent within 4 miles.

Manual/Handbook Sections Affected: None.

Coordination: This IM was coordinated with the Montana/Dakotas Branch of Fluid Minerals, Branch of Resources and Science, and the Solicitor's Office.

Contact: Amy Waring, Natural Resource Specialist, 406-896-5095.

Signed by:
John Mehlhoff
State Director

Authenticated by:
Kathy Iszler
Staff Assistant (MT-920)

² Foster, M. A., Ensign, J. T., Davis, W. N., & Tribby, D. C. 2013. Greater Sage-Grouse in the Southeast Montana Sage-Grouse Core Area. Montana Fish, Wildlife and Parks in partnership with U.S. Department of the Interior, Bureau of Land Management



United States Department of the Interior




BUREAU OF LAND MANAGEMENT
Montana/Dakotas State Office
5001 Southgate Drive
Billings, Montana 59101
<http://www.blm.gov/montana-dakotas>

June 3, 2020

Memorandum

To: Brian St. George, Acting Assistant Director for Resources and Planning (AD-200)
Nick Douglas, Assistant Director for Minerals and Realty (AD-300)
Grant Beebe, Assistant Director for Fire and Aviation (FA-100)

From: John Mehlhoff,
State Director, Montana/Dakotas State Office 

Subject: Status of Greater Sage-Grouse (GRSG) Population and Habitat Adaptive Management Triggers within Montana and South Dakota in 2019.

STATEMENT OF PURPOSE

Inform the Assistant Director for Resources and Planning (AD-200), Minerals and Realty (AD-300) and Fire and Aviation (FA-100) of the status of Montana and South Dakota Greater Sage Grouse (GRSG) habitat and populations with respect to 2019 hard and soft adaptive management triggers described in the adaptive management appendices for the South Dakota, Hi-Line, Billings, and Miles City Resource Management Plan Revisions and the Idaho and Southwestern Montana and Lewistown Greater Sage-Grouse Approved Resource Management Plan Amendments. There are no Adaptive Management actions in North Dakota as noted in the North Dakota Greater Sage-Grouse Approved Resource Management Plan Amendment.

IM 2016-140 instructs the Bureau of Land Management (BLM) State Offices to evaluate GRSG specific hard and soft triggers annually by the end of each calendar year (December 31), consult with federal, state, county or tribal governments (where appropriate) to assess findings, and notify the BLM Washington Office by February 1 of the following year.

BACKGROUND

Montana and South Dakota GRSG populations are monitored annually, and the population information is managed by Montana Fish, Wildlife, and Parks (MFWP) and South Dakota Game, Fish, and Parks (SDGFP). GRSG habitat measures are evaluated by the BLM National Operations Center based on the amount of disturbance that occurs within Biologically Significant Units (BSUs) within identified GRSG populations.

Hard triggers are indicators that management is not achieving desired conservation results. Hard triggers will be considered a catastrophic indicator that the species is not responding to conservation actions, or that a larger-scale impact is having a negative effect. Hard triggers are focused on three metrics: 1) number of active leks, 2) acres of available habitat, and 3) population trends based on annual lek counts.

Within the context of normal population variables, hard triggers shall be determined to take effect when two of the three metrics exceeds 60% of normal variability for the BSU in a single year, or when any of the three metrics exceeds 40% of normal variability for a three year time period within a five-year range of analysis. A minimum of three years is used to determine trends, with a five- year period preferred to allow determination of three actual time periods (Y1-2-3, Y2-3-4, Y3-4-5). Baseline population estimates are established by pre-disturbance surveys, reference surveys and account for regional and statewide trends in population levels. Lek survey protocols determined by MFWP are implemented consistently throughout the state. Counts of individual birds are tracked for each monitored lek.

The BLM Land Use Plans require an assessment of populations rather than an index of the population derived from raw lek counts of male sage-grouse. To achieve robust population estimates Montana FWP worked with Dr. Paul Lukacs, University of Montana, to estimate sage-grouse population numbers based on counts of displaying males at leks using N-mixture models. This modeling approach is a robust analytical method for estimating population size and trend over time for species like sage-grouse that congregate at discrete breeding sites and accounts for numerous sources of error and bias in raw lek counts. Although FWP maintains a database of male counts at leks that date back to 1952, only data from 2002 onward could be used with this modeling approach. The current population estimates provided by Montana FWP provide the population status for the entire state and do not include leks in PHMA in South Dakota. The conclusions in this memo are derived from statewide results combined with actual lek counts in each BSU, including leks in South Dakota. Montana/Dakotas BLM continues to work with MFWP and SDGFP to refine our monitoring, analysis, and reporting of Greater Sage-Grouse to provide a more accurate assessment of population status and trends and we anticipate that by the fall of 2020 we will be able to analyze lek data from 2002 and provide specific yearly population status and trend information for each BSU for past years as well as each subsequent year.

Based on the population estimate information provided by Montana FWP in 2019, no population hard or soft triggers were tripped in the BSUs in Montana/Dakotas BLM. We are continuing to monitor and assess specific portions of the Eastern Montana/South Dakota BSU to assess if there are soft triggers that may be tripped. The population estimate provided by Montana FWP documented a decline across MT in 2019 which was mirrored in South Dakota. However, the decline did not reach the level of the thresholds identified in the plan. The apparent decline in estimated population numbers in 2018 – 2019 is likely a result of natural fluctuations related to the reduction in recruitment and survival due to drought conditions during the summer of 2018.

The number of active leks has remained steady in Montana and South Dakota.

The BLM National Operations Center provides Montana/Dakotas BLM annual information on the amount of disturbance occurring within the BSU each year. The amount of disturbance (which is equated to the amount of habitat lost) was subtracted from the amount of available habitat to determine the loss percentage. The acres of habitat lost in 2019 did not reach the threshold level.

In summary, the 2019 decline is not in concert with any widescale habitat loss or degradation and does not warrant immediate concern.

RESULTS

No habitat or population hard triggers were tripped in 2019 in MT/DK BLM.

Custer Gallatin National Forest 2020 Land Management Plan Greater Sage Grouse Plan Components

Josh Hemenway - Wildlife Program Manager

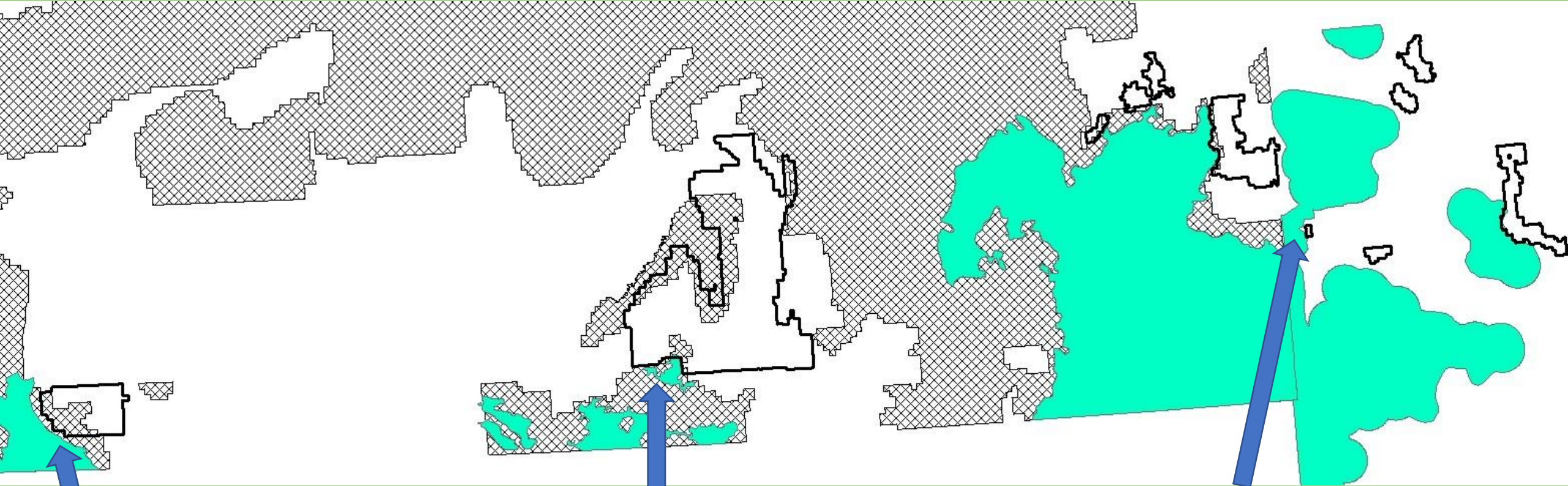


Forest Plan Revision

- Custer and Gallatin National Forests merged in 2014
- Currently managed under two different Forest Plans
- Changes in current conditions, risks, threats, knowledge, uses etc.
- Guide for future activities not a final decision on actions
- STATUS - internal review of objections
- Final signature spring of 2021

Total Habitat

- 2,204 acres of Priority
- 137,106 acres of General



Pryors

- Priority = 0 acres
- General = 27,392 acres

Ashland

- Priority = 204 acres
- General = 101,290 acres

Sioux

- Priority = 1,868 acres
- General = 8,424 acres

Plan Components

- **Desired Conditions (FW-DC-WLSG 01)**

- Greater sage-grouse habitat contains contiguous areas of native vegetation, including a variety of sagebrush-community compositions, little or no invasive species present, and variation in species composition, shrub cover, herbaceous cover and stand structure, to meet seasonal requirements for feeding, sheltering, breeding, nesting, brood rearing and habitat connectivity. Flight paths are unimpeded by man-made structures.

- **Goals (FW-GO-WLSG 01)**

- The Custer Gallatin National Forest actively engages in interagency efforts to coordinate greater sage-grouse habitat management across administrative boundaries, and works cooperatively with willing private landowners to conserve priority and general sage-grouse habitat and provide connectivity across landownership boundaries.

- **Standards (FW-STD-WLSG 01)**

- In greater sage-grouse priority and general habitat, vegetation management shall result in no net loss of habitat or result in a net conservation benefit to greater sage-grouse.

Plan Components

- **Guidelines (FW-GDL-WLSG 01-07)**

- In order to avoid fragmentation of greater sage-grouse habitat, wildfire management tactics and strategies should minimize loss of existing sagebrush habitat using the safest and most practical means as determined by fireline leadership and incident commanders.
- To avoid the degradation of habitat associated with establishment of undesirable grass species wildfire rehabilitation projects in greater sage-grouse habitat at high risk of annual grass invasions should seed with an appropriate mixture to reduce the probability of undesirable grass establishment.

Plan Components

- Guidelines cont.
 - New power line corridor infrastructure development should not be located in priority habitat unless the infrastructure can be buried without permanent damage to or loss of established sagebrush communities. The intent is to minimize habitat loss, avoid disturbing sage-grouse on breeding grounds, and limit the risk of sage-grouse mortality from collisions with infrastructure or from predators using infrastructure for hunting perches.
 - To avoid adding disturbance and mortality risk of sage-grouse, new recreation facilities such as roads, fences, campgrounds, picnic areas, etc. should not be constructed in priority or general sage-grouse habitat unless the development results in a net conservation gain to the species and its habitat.

Plan Components

- Guidelines cont.
 - In order to maintain or restore ecological integrity of sage-grouse habitat, vegetation management projects in general or priority sage-grouse habitat should be designed to remove or reduce conifer encroachment, control or stop the spread of invasive annual grasses, and/or reduce the extent of existing nonnative plants.
 - In order to avoid habitat fragmentation and limit mortality risk to sage-grouse, new range management structures (such as fences, stock tanks, etc.) should be designed and located to be neutral or beneficial to greater sage-grouse.

Plan Components

- Guidelines cont.
 - To avoid habitat fragmentation and limit disturbance and mortality risk to sage-grouse at or near leks, new energy and mineral developments should not be located in priority sage-grouse habitat, subject to valid existing or statutory rights.

Management Approaches

- Potential strategies used to meet desired conditions, standards, and guidelines
 - Location of development
 - Timing restrictions
 - Seeding and reclamation
 - Montana Mitigation System Habitat Quantification Tool
 - Habitat modification/enhancement
 - Fence markers and other deterrents

A male Tundra ptarmigan is shown in its winter plumage, standing in a snowy field. The bird's tail feathers are fanned out, and it has a distinctive yellow patch on its forehead. The background is a soft-focus, snowy landscape with some dry grasses.

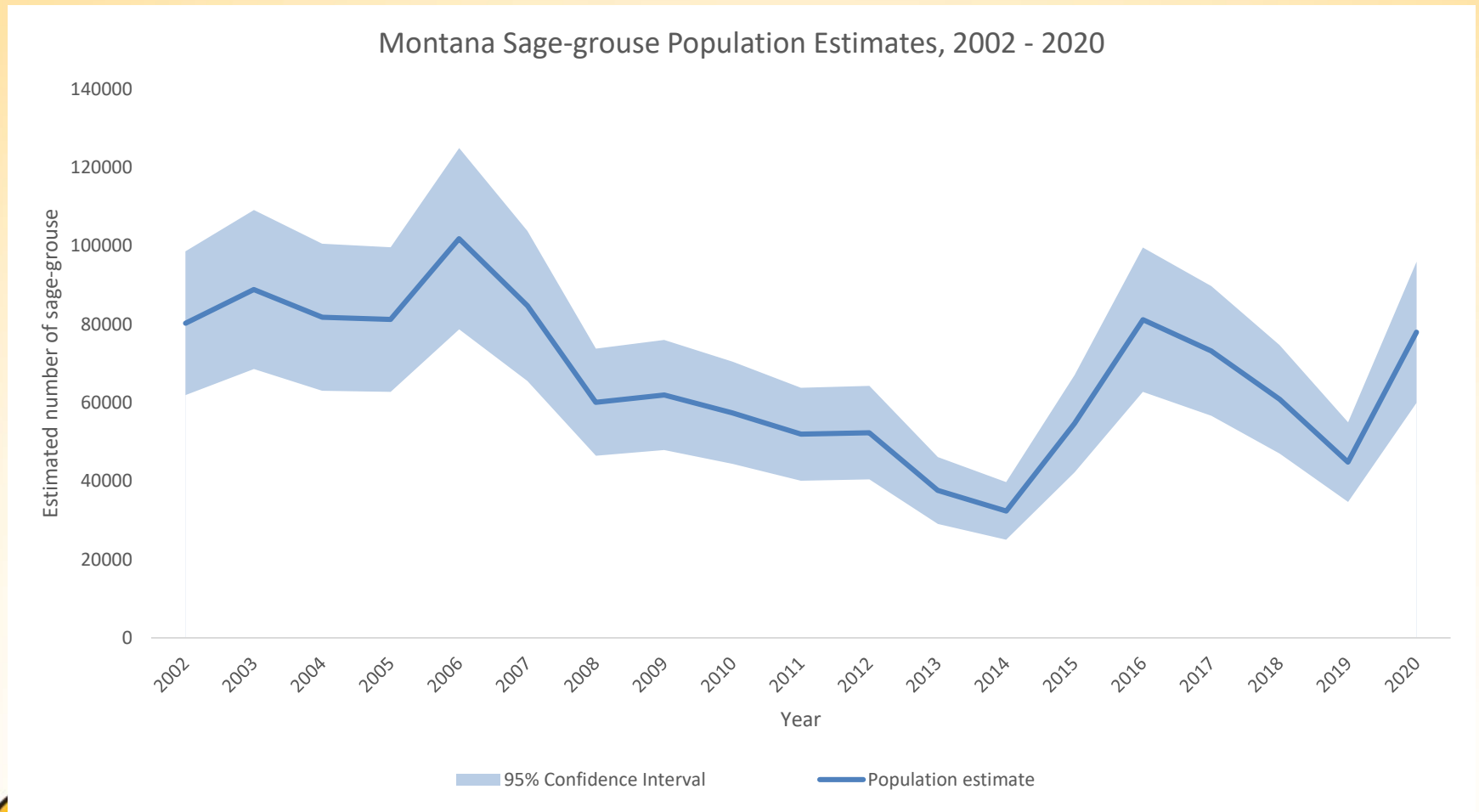
Questions?

2020 Greater Sage-grouse Population Report



V. Boccadori

2020 Greater Sage-grouse Population Report



2019 Annual Report
and
MSGOT Adaptive Management Discussion

Montana Sage Grouse Oversight Team
October 27, 2020



2019 Annual Report



First Things First

- Acknowledgements – all hands: *thank you!*
- 2018 Annual Report completed
- 2019 Annual Report: reporting period = January 1 to December 31, 2019
 - discrete snap shot in time
 - “Completed Reviews” for development projects by Dec. 31, 2019
 - “closed” Stewardship Account Grants, PRM implemented by Dec. 31, 2019
 - first full year of implementing mitigation framework
- 1. Quick Primer: Review of goals, strategy framework, work Flow and key concepts
- 2. Data Summary – 5 key areas: Program performance, debits through development, Stewardship Account contributions, credits through grants and PRM, credit-debit ledger
- 3. Key Findings

2019 Annual Report: Quick Primer and Review

- **Montana’s Goals and Purpose of Strategy:**
 - maintain viable populations, conserve habitat
 - balance conservation and development; maintain economic vitality
 - preclude the need for ESA protections so retain management
- **How?**
 - “all hands, all lands, all threats”
 - core area strategy to prioritize efforts where most effective
 - voluntary efforts
 - market-based incentives to minimize impacts / habitat loss & conserve habitat through mitigation
 - transparent, science-based
 - engage diverse stakeholders; key partnerships

MONTANA'S CONSERVATION STRATEGY

Consultation Process Helps Guide Development
Grants to Maintain, Enhance, Restore Habitat

Mitigation to Offset Impacts of Development, Address Threats: took effect January 2019

All Lands, All Hands, All Threats

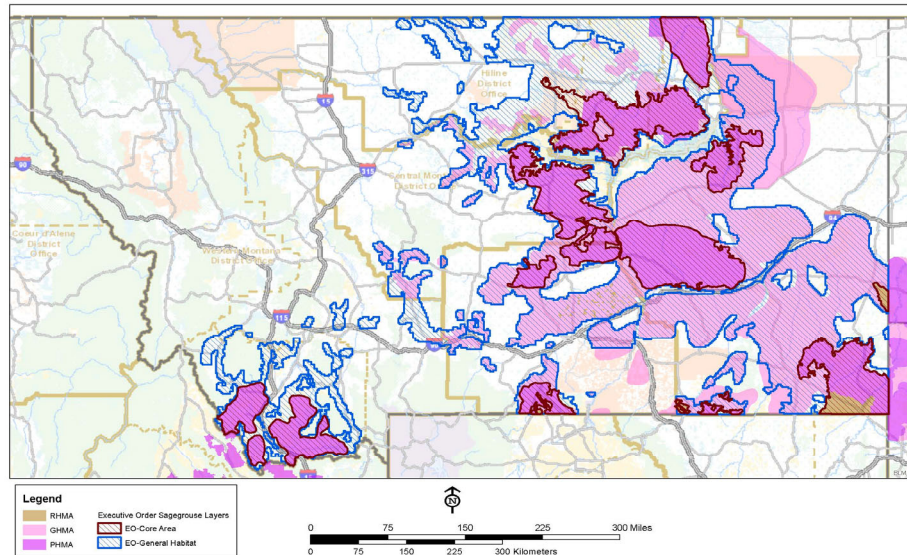


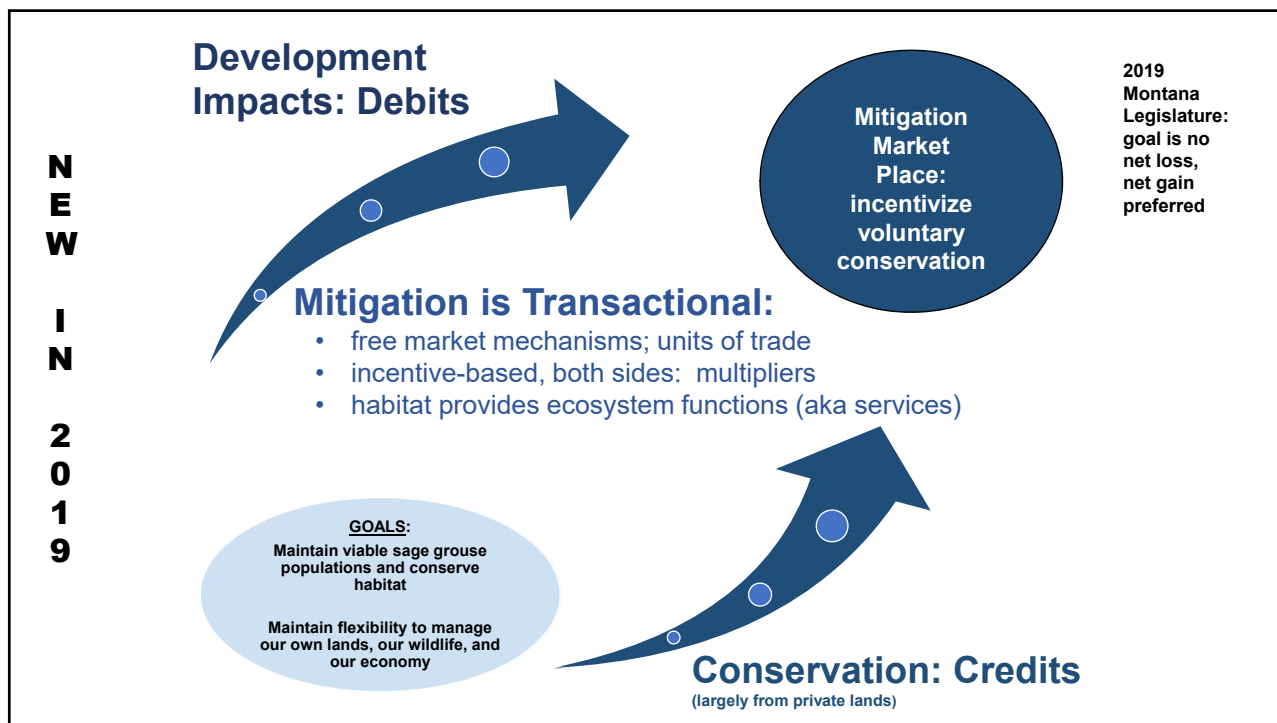
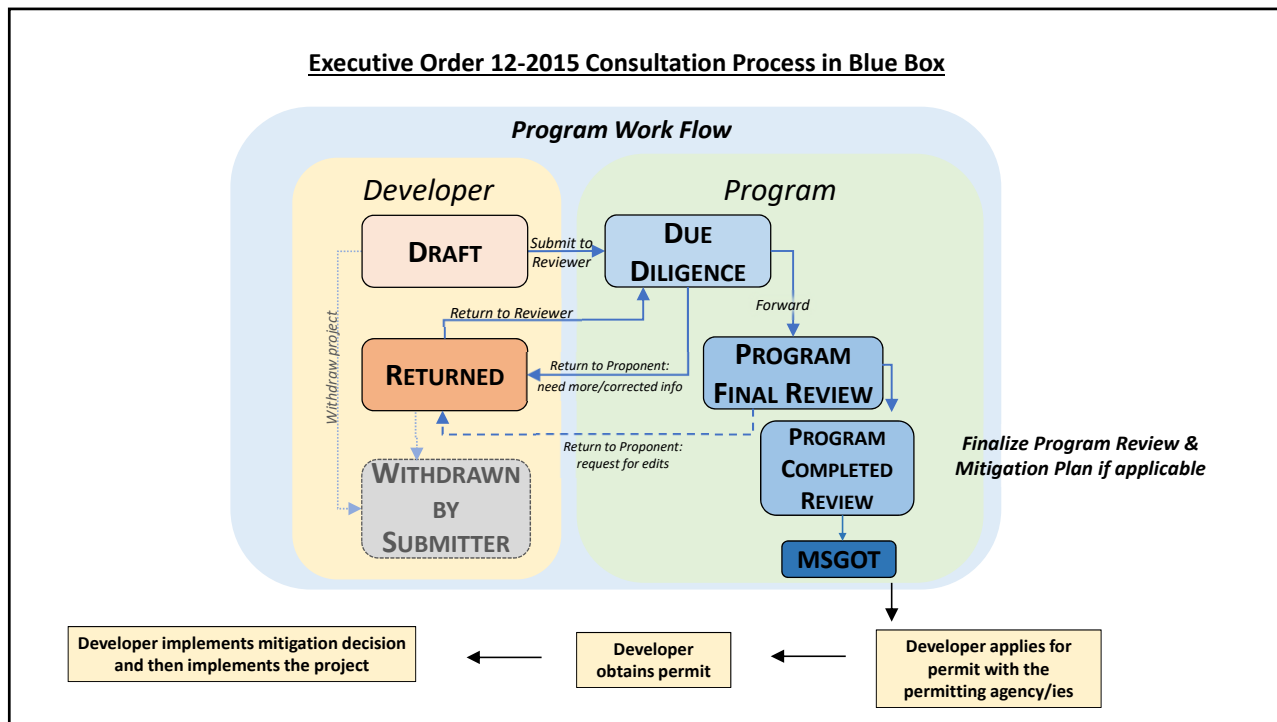
1. Executive Order 12-2015
2. Sage Grouse Stewardship Act, 2015
3. Private Land Stewardship
4. BLM, USFS Plans
5. Partnerships: NRCS, CDs, etc.

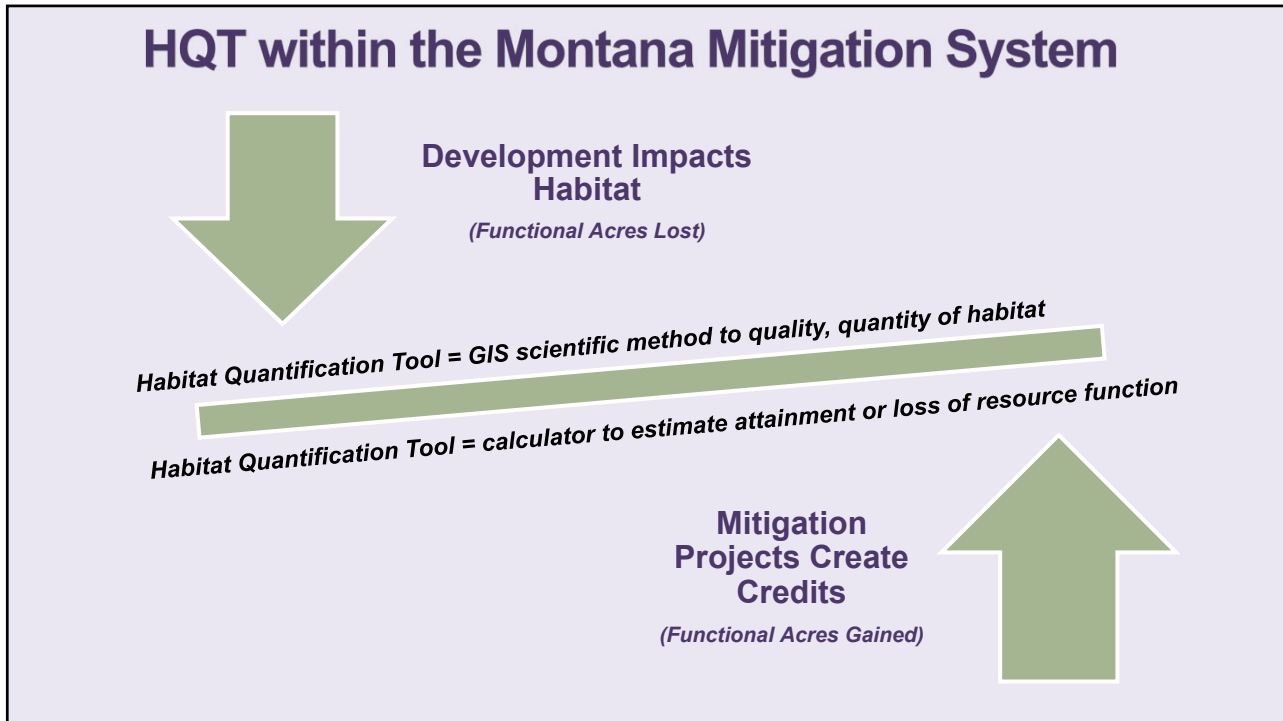
Lorelle Berkley

Areas of Focus:

- Executive Order 12-2015
- BLM Land Use Plans
- USFS Land Use Plans
- Voluntary Private Stewardship







What drives HQT results and total debits?

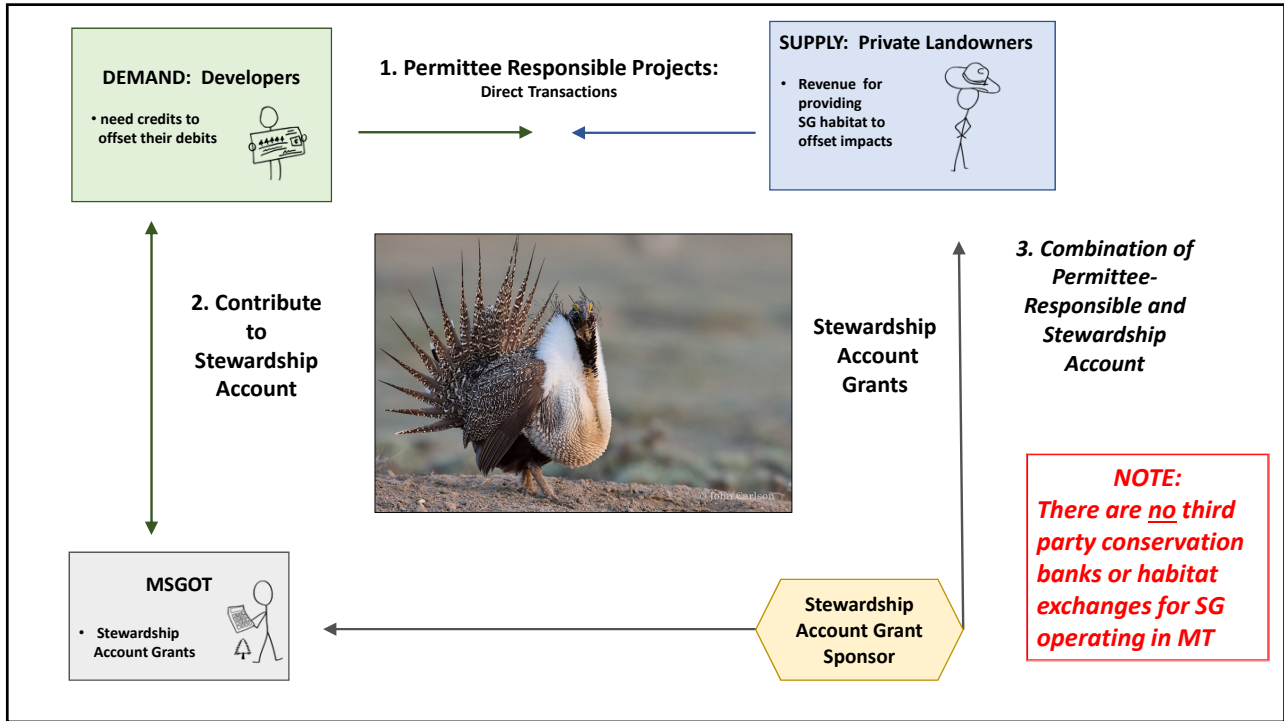
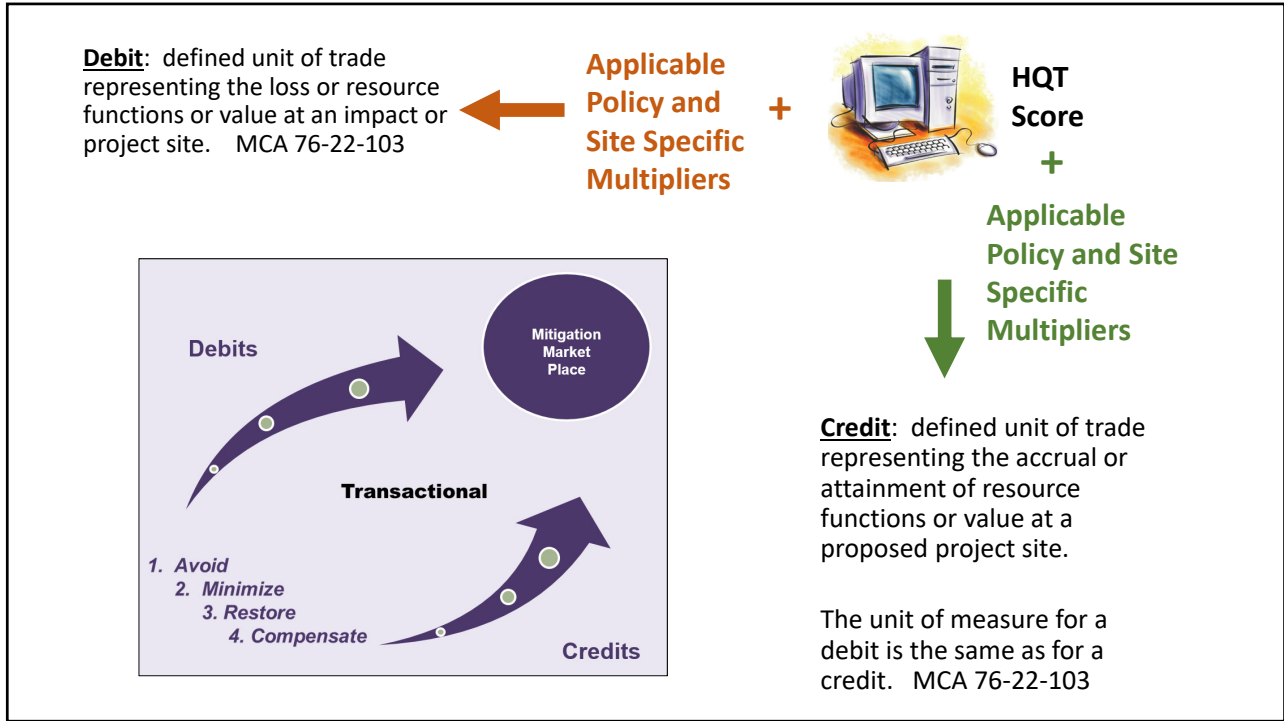
HQT scores depend on:

- underlying habitat quality (red or blue?)
- project location (Core vs. General?)
- project type (above or below ground?)
- project size (big or small?)
- project duration (short or long?)
- number/type of individual disturbances (few or many?)

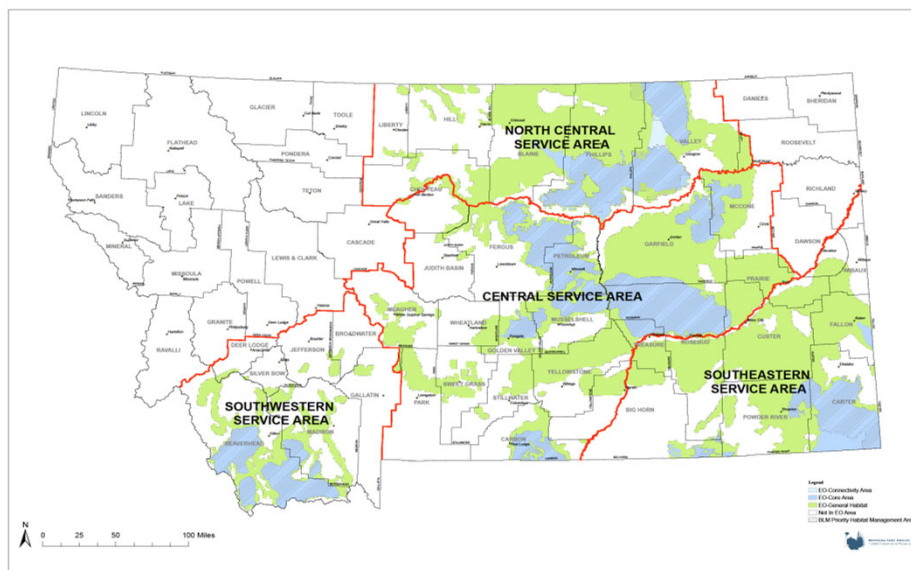
Total debits depend on:

- project itself (HQT results, debits proportional)
- consistency with Executive Order 12-2015
 - multipliers
 - vary, but Reserve Account common to all
 - based on project, how implemented; scale to HQT results and the project
- developer's chosen mitigation option
 - Stewardship Account or own permittee responsible project?

Results and Mitigation Obligations:
proportional, commensurate with habitat, project type, location, time, impacts, and EO Consistency



Four Service Areas



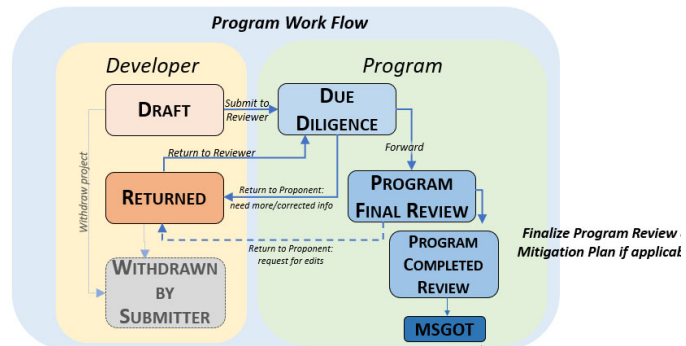
2019 Annual Report Data Summary

- Program Performance
- Debits through Development Projects
- Stewardship Account Contributions
- Credits through Grants and Developer Permittee Responsible Projects
- Credit-Debit Ledger



2019 Annual Report Data Summary

- **Program Performance**
- Debits through Development Projects
- Stewardship Account Contributions
- Credits through Grants and Developer Permittee Responsible Projects
- Synthesis: Credit-Debit Ledger



2019 Program Performance: Quick Metrics

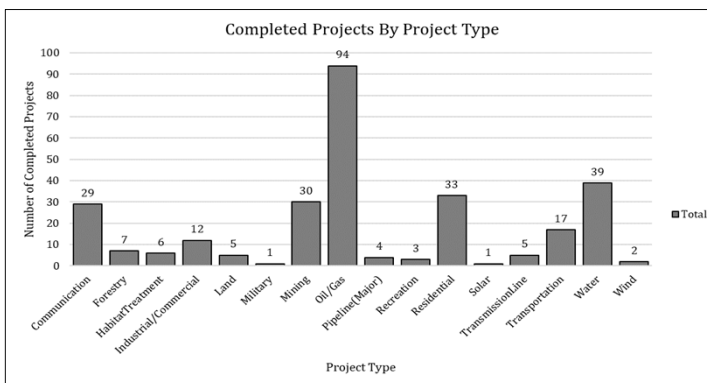
✓ **Projects turned around quickly when proponents provide all information, responsive to questions**

- Received 383 requests for reviews; completed 288 by Dec. 31, 2019 (75%)
 - 27 withdrawn by proponent
 - 55 projects required additional information from proponent; Program could not complete the review
 - 13 carried forward into 2020 by Program as Due Diligence
- Of 383 total projects: 277 in General Habitat (72%), 106 in Core (28%)
- Project review completion: Program’s “active review” days
 - 27% within 10 days
 - 52% within 20 days (cumulative)
 - 83% within 42 days (cumulative)

2019 Annual Report Data Summary



- Of all Program Performance
- **Debits through Development Projects**
- Stewardship Account Contributions
- Credits through Grants and Developer Permittee Responsible Projects
- Credit-Debit Ledger



- 32.6%: Oil/Gas related
- 22.9%: Communication, Mining, Transmission Line, Wind combined

2019 Debits through Development: Quick Takeaways



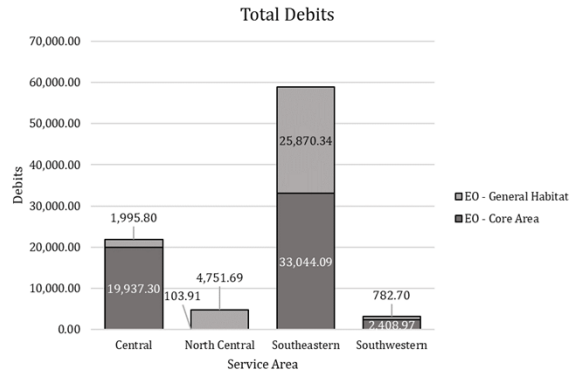
- ✓ **HQT's calculated for 151 of 288 "Completed Review" projects (52%)**
 - exempt, clerical, permit amendments without boundary adjustments
- ✓ **Mitigation obligation for 132 (45.8% of all development projects)**
 - 6 had HQT mathematical result = 0 (sited very well, consistent with EO)
 - 12 had unique facts (located within highly disturbed habitat or unincorporated area, commercial timber sale); no obligation, debits tracked
 - 1 MSGOT waiver
- ✓ **Total debits: 88,894 statewide, all Service Areas**
 - 59,638 functional acres lost
 - 29,256 policy and site-specific multipliers
 - deviation from seasonal use period most common
 - otherwise, generally consistent with EO 12-2015

2019 Debits through Development: Quick Metrics



Policy and Site-Specific Multipliers by Service Area, Statewide Total

Multiplier Type	Service Areas				Statewide
	Central	North Central	Southeastern	Southwestern	
Reserve Account	2,634.57	737.86	8,071.50	481.72	11,925.65
Advanced Payment	1,317.29	368.93	627.45	240.86	2,554.53
Federal Net Conservation Gain	0.32	59.53	1,632.64	60.49	1,752.98
NSO	0	0	0	0	0
DDCT	303.76	0	63.61	0	367.37
Seasonal Use	4,484.57	0	8,151.89	0	12,636.46
Vegetation Removal	19.69	0	0	0	19.69
Noise	0	0	0	0	0
Oil/Gas 1:640	0	0	0	0	0
Total Multipliers by Service Area	8,760.20	1,166.31	18,547.09	783.07	29,256.68



Total number of debits (functional acres lost + policy and site-specific multipliers) by Service Area and habitat category

2019 Debits through Development: Quick Metrics



✓ **Total debits per project varies widely, based on:**

- project type
- project location
- total number of disturbances / project
- project size
- project duration
- consistency or # deviations from Executive Order 12-2015
- how mitigation fulfilled: permittee responsible or contribution to Account

✓ **Obligation was higher for larger, more complicated projects above ground with a long duration in a Core Area that was not consistent with Executive Order 12-2015 (e.g. transmission line vs. buried pipeline)**

2019 Debits through Development: Quick Metrics



Total Debits by Major Project Type, Average, Minimum Value, Maximum Value

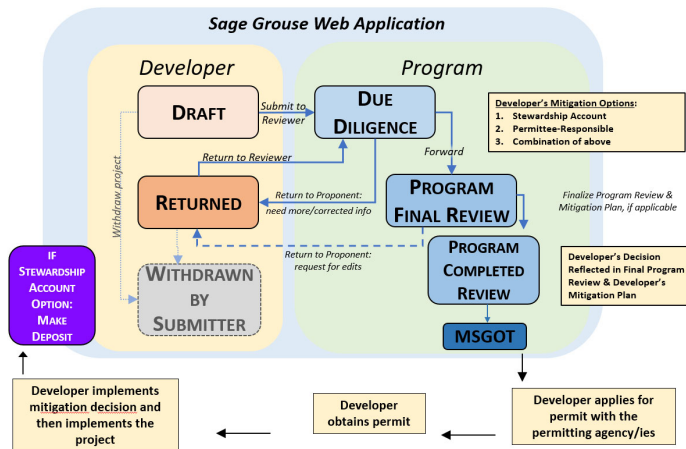
Project Types	Total Debits	Average Debits	Minimum Debits	Maximum Debits
Communication (n=21)	6,144.56	292.60	0.17	2,890.62
Forestry (n=5)	1,953.70	390.74	22.26	1,725.35
Industrial/Commercial (n=7)	546.42	78.06	0.00	351.88
Land (n=1)	81.03	81.03	81.03	81.03
Mining (n=24)	1,531.78	63.82	0.00	683.62
Oil/Gas (n=70)	70,190.80	1,002.73	0.01	18,898.67
Pipeline (Major) (n=4)	1,945.38	486.35	21.91	1,206.01
Recreation (n=2)	153.91	76.96	72.15	81.76
New subdivisions of land (n=4)	1,422.21	355.55	0.40	869.48
Solar (n=1)	8.94	8.94	8.94	8.94
Transmission Line (n=4)	4,635.38	1,158.85	7.75	3,016.87
Transportation (n=7)	263.28	37.61	0.00	84.02
Water (n=1)	17.39	17.39	17.39	17.39

Total Debits by Project Type:

- most attributed to Oil & Gas projects
- high variation within project type
- high variation between project types
- highest average/project: Transmission
- minimum value < 1.0:
 - Communication
 - Industrial/Commercial
 - Oil & Gas
 - Land subdivision
 - Transportation
- maximum value: Oil & Gas project
 - Core Area, deviated from seasonal use stipulation, many affected leks

2019 Annual Report Data Summary

- Program Performance
- Debits through Development Projects
- **Stewardship Account Contributions**
- Credits through Grants and Developer Permittee Responsible Projects
- Credit-Debit Ledger



2019 Stewardship Account Contributions: Quick Takeaways

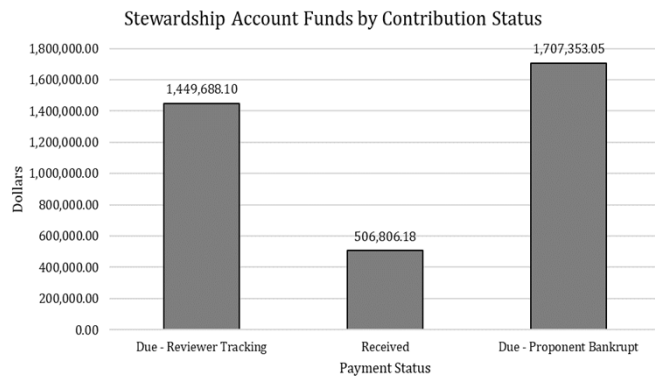


- ✓ **Most developers select Stewardship Account Contribution, not PRM**
 - of 132 projects with mitigation obligation:
 - 52 development projects offset by single developer using own PRM credits from 2018 and 2019
 - 80 other projects selected contribution (61%)
- ✓ **Contribution amount varies widely: project & fact specific**
- ✓ **Contribution option likely fastest path to implementation; convenient; possibly cheaper since obligation transferred to the state**
 - after permit obtained, before implementation
- ✓ **Time lag between “Completed Review” and actual deposit**
 - causes: project cancelled, delayed permit application, permitting process long, EA vs. EIS, multiple permits needed, delayed implementation after obtained permit
 - flexibility for developer
 - duration unknown to Program
 - could be 6-12 months; has been >2 years for some projects
 - unpredictable; presently no feedback mechanism

2019 Stewardship Account Contributions: Quick Metrics



- **As of December 31, 2019:**
 - \$506,806.19 received total
 - \$345, 627.18 deposited in 2019
 - \$1,449,688.10 expected, if all these projects are implemented (some probably won’t, but no way to know)
 - \$1,707,353 associated with project where proponent working through bankruptcy proceedings; would become due if project implemented



All 2019 projects in Completed Review as of December 31, 2019 + Legacy Projects with obligation triggered by non-SG authorities

2019 Stewardship Account Contributions: Quick Metrics



- **Individual contribution amount varies widely, even with a project type: each project individually unique**
 - type, location, underlying habitat quality, project size, duration, # individual disturbances, EO 12-2015 consistency, mitigation method
 - mitigation and contribution proportional to each unique project even though protocols consistent
- **Range across all (min-max): \$2.21 - \$85,878.01**
- **Average across all: \$4,427.14**
- **Average by project type varies widely:**
 - \$78.25 solar – \$12,510.35 oil & gas

Contribution statistics for all 2019 projects in Completed Review as of December 31, 2019, *without* respect to payment status

Project Type	Number of Projects	Average Contribution	Minimum Contribution	Maximum Contribution
Communication	20	\$3,443.86	\$2.21	\$26,612.98
Industrial/Commercial	4	\$272.48	\$4.35	\$889.64
Mining	20	\$880.21	\$3.07	\$8,496.18
Oil/Gas	17	\$12,510.35	\$47.22	\$85,878.01
Pipeline (Major)	4	\$5,481.82	\$283.21	\$14,810.48
Recreation	2	\$848.79	\$759.59	\$938.00
Subdivision of Land	3	\$1,996.75	\$323.13	\$3,415.96
Solar	1	\$78.25	\$78.25	\$78.25
Transmission Line	3	\$6,927.27	\$100.46	\$17,499.14
Transportation	5	\$644.53	\$74.11	\$1,092.24
Water	1	\$225.78	\$225.78	\$225.78
Grand Total	80	\$4,427.14	\$2.21	\$85,878.01



2019 Annual Report Data Summary

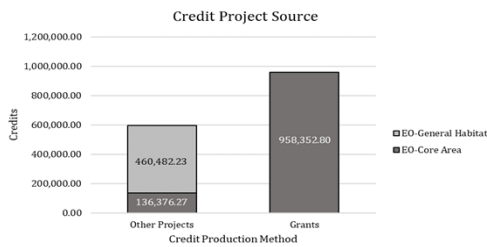
- Program Performance
- Debits through Development Projects
- Stewardship Account Contributions
- **Credits through Grants and Developer Permittee Responsible Projects**
- Synthesis: Credit-Debit Ledger

2019 Credits through Stewardship Account and PRM: Quick Takeaways



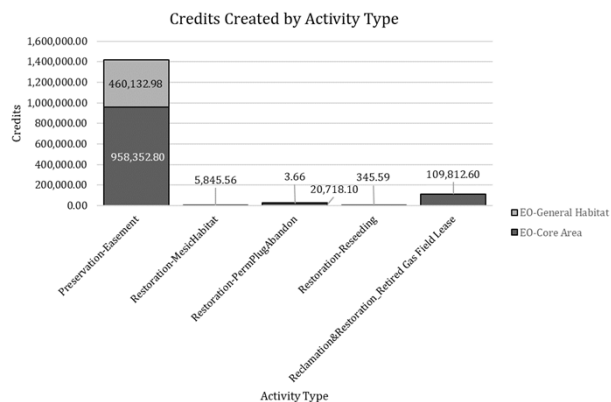
- ✓ **Stewardship Account grants account for greatest number of available credits and credits anticipated in the future**
 - 2 grant cycles: 2016 and 2019
 - 3 grants closed as of Dec. 31, 2019, credits available: 44 Ranch, Hansen, Rath
 - 5 additional grants will close in 2020 – 2022; credits anticipated
 - 2016: Watson
 - 2019: Marc Lewis, Willow Basin, Saurbier, Burgess
- ✓ **Permittee Responsible projects by developers rare, but can create a lot of credits; credits retained by developer**
- ✓ **Most credits associated with perpetual conservation easements (grants + developer PRM)**
- ✓ **Other sources of credits created by third parties; credits not retained, but also tallied & included**
 - mesic habitat restoration
 - reseeded
 - permanent plug & abandon of wells + site reclamation

2019 Credits through Stewardship Account and PRM: Quick Metrics



Credit Project Sources:

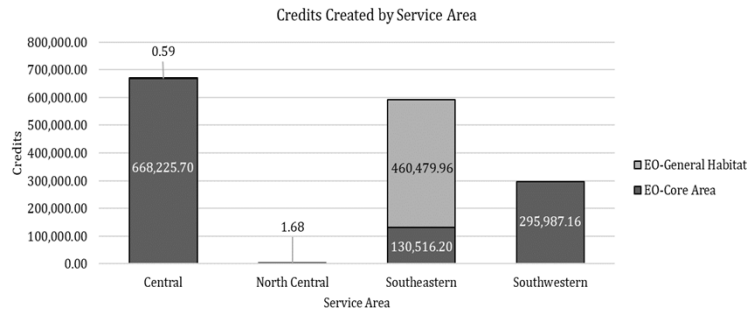
- 1,555,211.30 total credits
- 27 PRM and “other” credit projects
- 3 closed Stewardship Account grants
- most credits in Core Areas



Credit Type:

- 62% credits are perpetual easements through grants, PRM
- 38% restoration, enhancement

2019 Credits through Stewardship Account and PRM: Quick Metrics



Rank order of credits created:

1. Central Service Area: grants, other
2. Southeastern Service Area: permittee responsible and other (no grants)
3. Southwestern Service Area: grants
4. North Central: other

2019 Annual Report Data Summary



- Program Performance
- Debits through Development Projects
- Stewardship Account Contributions
- Credits through Grants and Developer Permittee Responsible Projects
- **Synthesis: Credit-Debit Ledger**

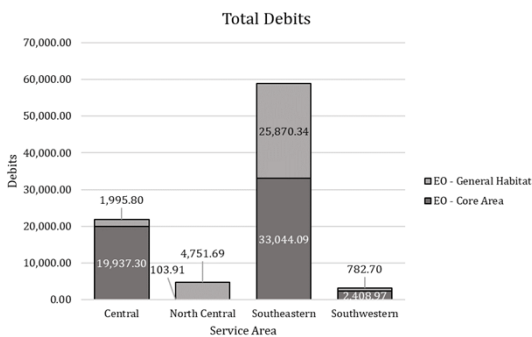
2019 Credit-Debit Ledger: Quick Takeaways



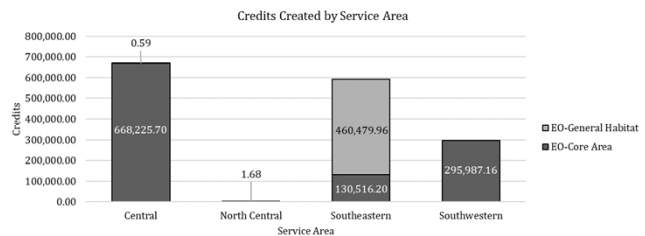
✓ **Montana meeting its goal of balancing conservation with development**

- achieved “no net loss, net gain preferred”
- number of Fx-A gained >> Fx-A lost
 - statewide
 - 3 of 4 Service Areas
 - [North Central will likely be met with closing of 2016 Watson grant]
- number of credits > debits
 - statewide
 - 3 of 4 Service Areas
 - [North Central will likely be met with closing of 2016 Watson grant]

2019 Credit-Debit Ledger: Quick Metrics



Total Debts Created
88,894 statewide, all Service Areas



Total Credits Created
1,555,211.30 statewide, all Service Areas

2019 Credit-Debit Ledger: Quick Metrics



	Service Area				Statewide
	Central	North Central	Southwestern	Southeastern	
Debit Project Count	40	21	12	78	151
Functional Acres Lost before multipliers	13,172.87	3,689.29	2,408.60	40,367.28	59,638.04
Total Debits	21,933.09	4,855.60	3,191.67	58,914.43	88,894.80
Credit Project Count, all sources	10	10	2	8	30
Functional Acres Gained before baseline adjustment and multipliers, all sources	1,670,541.75	1.68	730,668.15	1,281,179.11 (majority is Denbury PRM)	3,682,390.61
Total Credits	668,226.29	1.68	295,987.16	590,996.16	1,555,211.29
Credits Retired to Offset Debits	21,933.09	1.68	3,191.67	58,914.43	88,894.80
Balance of Available Credits as of December 31, 2019	+646,293.20 Surplus	-4,853.92 Deficit	+292,795.49 Surplus	+532,081.73 Surplus	+1,466,316.49 Surplus

Functional Acre Losses become Debits, after multipliers

Functional Acre Gains become Credits, after baseline & multipliers

Retire Credits to offset Debits

Surplus Credits, as of December 31, 2019

2019 Annual Report: Key Findings



- Mitigation framework is working, effective
 - limitations or unexpected outcomes successfully resolved at the Program level or through MSGOT
 - Stewardship Account grants wisely spent; funds leveraged well with matching sources
 - no conservation banks or habitat exchanges; Stewardship Account or implementing permittee responsible projects only option available
 - permittee responsible projects rare, but always possible
 - no rush of requests to MSGOT for policy exceptions or waivers
- Habitat objectives met:
 - functional habitat gains >> functional habitat losses
 - credits >> debits
- FWP: Population is secure; number of active leks stable 2015-2019
- Montana is well positioned for the upcoming Conservation Assessment (formal status possible, but unknown)
 - implemented commitments
 - birds doing fine

MSGOT Adaptive Management Discussion


- **Priorities**
- **Timeline**
- **Stakeholder Engagement**



MONTANA SAGE GROUSE
Habitat Conservation Program

Adaptive Management: First Year, Annual Review

- **Habitat-based objectives met**
 - Fx-A gained > Fx-A lost
 - credits > debits
- **No universal limitations identified that could not be overcome through MSGOT, existing policy options, and collaboration**
- **No new major science; new science since 2018 affirms current approach**
- **Not enough experience or data yet to inform, support major review or overhaul**
- **Two items identified by Program**
- **Others identified by stakeholders or MSGOT?**



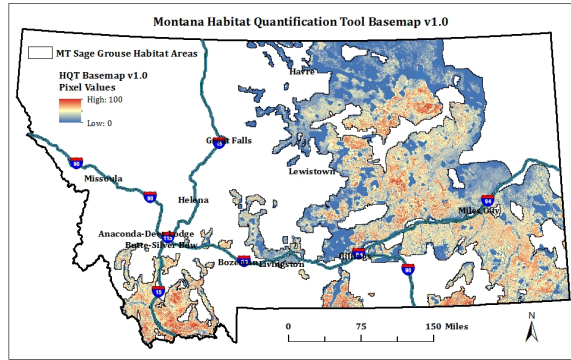
Adaptive Management: First Year, Annual Review



1. Minor revisions to the Basemap – transition to v1.1: data maintenance

- update existing disturbance layer
- correct spatial data from proponents through 2019
- account for development projects never implemented
- add credit sites, remove recovered wildfires
- account for recent wildfires
- update leks, lek density layers
- update vegetation layers

no changes to geoprocessing analytical protocols
just replace data layers and recalculate pixel values



Suggested: Implement Basemap v1.1 starting January 1, 2021

Adaptive Management: First Year, Annual Review

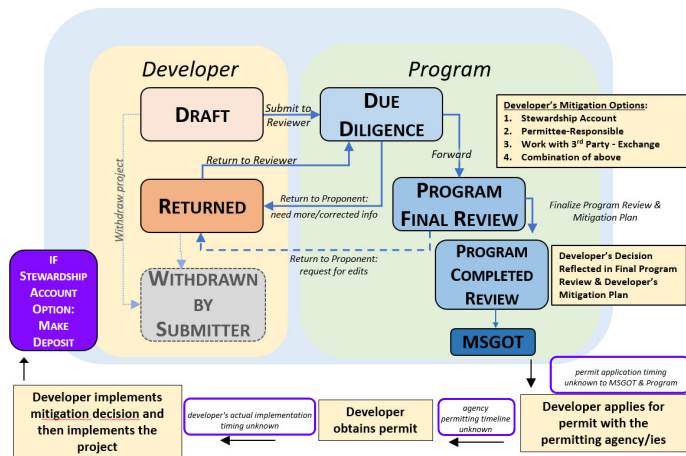


2. Feedback mechanism to improve knowledge of development project status and disposition: permitting and implementation by developer

- improve data accuracy (e.g. DDCT)
- improve accuracy of credit/debit registry
- improve fiscal management of Stewardship Account

Would not change or create new Program authority; just a business process

Suggested: engage stakeholders, agencies; MSGOT approval to implement as soon as feasible




For Available Resources: Ideas for Adaptive Management or Continued Development



**Adaptive Management:
First Year, Annual Review**

- Research, adjust credit valuation -- Stewardship Account term lease awards
- Research, account for land value appreciation since 2016; implement through Account grants, credit pricing -- goal to attract conservation bank or habitat exchange administrator & decrease state's role
- Research, adjust credit price to achieve full cost accounting
- Research potential new HQT policy exceptions; bring to MSGOT



**Continued Focus:
Development, Implementation**

- Website upgrade to include mitigation, HQT, grants, credit-debit registry (contract ongoing)
- Develop third-level work flow process, analytical protocols; set out Interagency Review Team process
- Consider guidelines for when consultations need to be updated if time lag is long
- Improve stakeholder outreach, web app training webinars
- Faster consultation reviews

MSGOT Adaptive Management Discussion

- **Priorities**
- **Timeline**
- **Stakeholder Engagement**



MONTANA SAGE GROUSE
Habitat Conservation Program

MONTANA SAGE GROUSE HABITAT CONSERVATION PROGRAM
2019 ANNUAL REPORT

THIS REPORT COVERS THE PERIOD JANUARY 1 THROUGH DECEMBER 31, 2019



MONTANA SAGE GROUSE
Habitat Conservation Program

TABLE OF CONTENTS

EXECUTIVE SUMMARY 1

- History and Background 1
- Implementation Framework 1
- Summary of 2019 Program Consultation Performance 3
- 2019 Development in Sage Grouse Habitats 4
- Stewardship Account Grants and Other Sources of Credits to Offset Development 5
- Synthesis of 2019 Mitigation Outcomes 5
- Adaptive Management and Conclusions 6

MONTANA SAGE GROUSE HABITAT CONSERVATION STRATEGY 7

- Background 7
- Development of Montana’s Sage Grouse Habitat Conservation Strategy: 2013-2015 8
 - Sage Grouse Advisory Council and Executive Order 10-2014 8
 - Greater Sage Grouse Stewardship Act of 2015 9
 - Executive Orders 12-2015 and 21-2015 9
 - The Montana Sage Grouse Oversight Team 11
 - The Sage Grouse Habitat Conservation Program 11
 - Collaboration with Other Conservation Partners 11
- USFWS 2015 “Not Warranted” Decision 12
- First Years of Implementing Montana’s Strategy: 2015 - 2019 14
- Montana Sage Grouse Habitat Conservation Program 15
 - Overview of the Consultation Process 15
 - Project Review Life Cycle in the Web Application 16
 - Project Type Categories and Disturbance Types 18

SUMMARY OF 2019 CONSULTATION ACTIVITIES 19

- Data Preparation Methods 20
- General Metrics: Consultations and Program Performance 20
 - Project Review Status by EO Designated Habitat 21
 - Efficacy of the Program Review Process 22
- Specific Metrics: Development Projects Reviewed in 2019 24
 - Project Information by Project Type 24
 - Agriculture (Land & Water) Projects 25
 - Energy – Oil/Gas Projects 26
 - Infrastructure – Communication Projects 26
 - Infrastructure – Industrial/Commercial Projects 27
 - Infrastructure – Pipeline (Major) Projects 28
 - Infrastructure – Transmission Line Projects 29
 - Infrastructure – Transportation Projects 30
 - Mining Projects 30

MITIGATION: BALANCING CONSERVATION AND DEVELOPMENT 31

- Introduction and Summary of How the Mitigation Framework was Developed 31
- Key Elements in Montana’s Mitigation System 34
 - The Habitat Quantification Tool: Quantifying Functional Habitat Gains and Losses 35
 - Executive Order and BLM Land Use Plan Consistency: Policy and Site-Specific Multipliers 36
 - Debits vs. Credits: What’s the Difference? 38
 - Mitigation Options for Developers 39

Service Areas 40

Development Project Impacts in Sage Grouse Habitats..... 41

Introduction and Context 41

Functional Acres Lost..... 42

 Data Preparation to Determine Functional Acres Lost and Sample Sizes 42

 Special Cases and Status of 2018 Legacy Projects in the Current Reporting Period 43

 Results: Sum of Functional Acres Lost 46

Policy Multipliers and Site-Specific Multipliers 48

 Data Preparation Methods to Determine Debits Related to Policy and Site-Specific
Multipliers..... 48

 Results: Debits Associated with Policy and Site-Specific Multipliers..... 48

Total Debits 50

 Data Preparation Methods for Total Debits 50

 Results: Total Debits 50

 Results: Total Debits Created by Development Project Type..... 52

Mitigation Option Selected by Developers 54

 Data Preparation Methods for Mitigation Options..... 54

 Results: Mitigation Option Selected 54

 Results: Permittee Responsible Projects Only 55

 Results: Other 56

Contributions to the Stewardship Account Transferring the Obligation to MSGOT through
Stewardship Account Grants..... 56

 Data Preparation Methods Specifically for Stewardship Account Contributions 57

 Results: Stewardship Account Contributions..... 58

MSGOT’s Stewardship Account Grants to Offset Impacts on behalf of Developers 61

 Introduction 61

 Overview of Stewardship Account Grants..... 62

 Status of Stewardship Account Grant Projects Awarded Funding During the First Cycle: 2016-
2017..... 63

 Status of the Stewardship Account Second Grant Cycle: 2019 64

Mitigation Credits Created by MSGOT through Stewardship Account Grants, by Developers
through Permittee-Responsible Projects, and Other Means 67

 Introduction 67

 Baseline and Policy Multipliers for Newly-Created Uplift from Restoration and Enhancement 67

 Data Preparation Methods 68

 Functional Acres Gained from Completed Projects: Stewardship Account Grants, PRM, and
Other Sources 68

 Credits Created by Completed Projects: Stewardship Account Grants, PRM, and Other Sources
..... 70

 Available vs. Anticipated Credit Totals for All Credit Projects..... 70

 Results: Available vs. Anticipated Credits..... 71

 Available Credits from Stewardship Account Grants vs. All Other Credit Providers..... 71

 Number of Credit Projects and Total Credits Created by Service Area and Habitat Category..... 73

 Available Credits by Credit Activity Type and Habitat Category 73

Synthesis of Mitigation System Key Metrics and the 2019 Ledger 74

ADAPTIVE MANAGEMENT AND OTHER EFFORTS TO IMPROVE IMPLEMENTATION 76

Adaptive Management..... 76

Efforts to Improve Implementation 80

 Implementation of 2019 Legislative Amendments to the Stewardship Act..... 80

GIFTS, TRANSFERS, BEQUESTS, or DONATIONS	82
PRIVATE LAND STEWARDSHIP	82
INTERAGENCY COLLABORATION	83
APPENDIX A	85
Montana Sage Grouse Conservation Benchmarks: 1965-2019	85
APPENDIX B	89
Montana Conservation Strategy: 2015-2019 Implementation Chronology.....	89
2015.....	89
2016.....	89
2017.....	91
2018.....	93
2019.....	95

LIST OF TABLES

Table 1. List of Project Types and their associated Disturbance Types available to proponents through the SG 2.0 website.....	19
Table 2. The Program completed a review for a total of 44 proposed Agriculture projects in 2019. Five of which were Agriculture – Land projects and 39 of which were Agriculture – Water projects. Of the five proposed Agriculture – Land projects, two were located in a Core Area and three were located in General Habitat. Of the 39 proposed Agriculture – Water projects, 20 were located in a Core Area and 19 were located in General Habitat. Of the 44 proposed Agriculture projects, each project contained various proposed activities necessary to implement the proposed Agriculture project. The Agriculture – Land Projects proposed a variety of activities to implement, with most involving livestock. The majority of proposed Agriculture – Water Projects involved water pipelines and stock tanks.....	25
Table 3. The Program completed a review for a total of 94 proposed Energy – Oil/Gas Projects in 2019. Of these, 29 were located in a Core Area and 65 were located in General Habitat. Some of those 95 proposed Energy – Oil/Gas Projects contained various proposed activities necessary to implement the proposed Oil/Gas Project. Most Oil/Gas Projects proposed various Gas/Oil Wells or Well Pads. Some were newly proposed structures, and some were proposed maintenance on existing well structures.....	26
Table 4. The Program completed a review for a total of 29 proposed Communication Projects in 2019. Of these, five were located in a Core Area and 24 were located in General Habitat. Of those 29 proposed projects, each contained various proposed activities necessary to implement the Communication Project. The majority of Communication Projects involved Fiber Optic Cable installation. Other infrastructure associated infrastructure included Fences, access Roads, and Towers.....	27

Table 5. The Program completed a review for a total of 12 proposed Infrastructure – Industrial/Commercial Projects in 2019. Of these, three was located in a Core Area and nine were located in General Habitat. Many of these 12 proposed Infrastructure – Industrial/Commercial Projects contained various proposed activities necessary to implement the Industrial/Commercial Project. Most Industrial/Commercial Projects proposed construction of Pipelines, Parking Areas, and Storage Yards..... 28

Table 6. The Program completed a review for a total of four proposed Infrastructure – Pipeline (Major) Projects in 2019. Of these, one was located in a Core Area and three were located in General Habitat. Many of the four proposed Infrastructure – Pipeline (Major) Projects contained various proposed activities necessary to implement the Pipeline (Major) Project. In addition to the majority of Pipeline (Major) projects proposing installation of pipelines, associated infrastructure often included Buildings, Compressor stations, and Trenches. 29

Table 7. The Program completed a review for a total of five proposed Infrastructure – Transmission Line Projects in 2019. All five of these proposed projects were located in General Habitat. The majority of Infrastructure – Transmission Line Projects involved the construction or maintenance of Power Lines. Additional associated infrastructure necessary to implement the proposed Transmission Line Projects included access Roads and Storage Yards..... 29

Table 8. The Program completed a review for a total of 17 proposed Infrastructure – Transportation Projects in 2019. Of these, two were located in a Core Area and 15 were located in General Habitat. Some of these 17 Infrastructure – Transportation Projects contained various proposed activities necessary to implement the Transportation Project. In addition to the majority of Transportation Projects proposing construction or maintenance of minor roads, additional project activities included Airport Runways, Borrow Pits, Bridges, Highways, and Parking Areas... 30

Table 9. The Program completed a review for a total of 30 proposed Mining Projects in 2019. Of these, 4 were located in a Core Area and 26 were located in General Habitat. Some of these 50 Mining Projects contained various proposed activities necessary to implement the Mining Project. The majority of Mining Projects proposed construction of a Core Hole or a Gravel Pit, with additional infrastructure including access Roads, Ponds, and Waste Rock/Tailings/Overburden.... 31

Table 10. Status of 2018 legacy projects considered by MSGOT in December 2018, and how data for those 2018 legacy projects are treated and reported during the current 2019 reporting period. 44

Table 11. The number of debits attributed to each of the above policy and site-specific multipliers for Projects that reached review complete status by December 31, 2019..... 49

Table 12. Total debits categorized by major project type and the average number of debits per project for that project type, respectively. The minimum and maximum number of debits for any single project within major project type categories is also shown..... 54

Table 13. Average, minimum, and maximum contribution amounts deposited into the Stewardship Account in the 2019 reporting period, by Project Type. This table represents projects that reached

Completed Review by December 31, 2019, for which a contribution to the Stewardship Account was the chosen method to fulfill the mitigation obligation (n=80). 61

Table 14. Status of all 2016 projects awarded grant funding in the first cycle, as of December 31, 2019. 64

Table 15. Status of all projects awarded funding in the second grant cycle in 2019, as of December 31, 2019. 65

Table 16. Stewardship Account 2019 / second cycle grant awards and funds committed, sources of matching funds, and acres of habitat conserved for credit generation, as of December 31, 2019. 66

Table 17. The number of functional acres gained due to the implementation of credit projects that closed (i.e. implemented by December 31, 2019 and available) across Service Areas, before baseline has been applied (closed Stewardship Account grants, PRM, other). 69

Table 18. Number of available credits for implemented and closed credit projects by Service Area after the baseline adjustment and any applicable policy modifiers have been applied. These numbers reflect credits gained by three Stewardship Account Grant projects and 27 other projects (permanent plug and abandonment of oil or gas wells, reseeding, mesic habitat restoration, and permittee-responsible efforts). 70

Table 19. Overview of the key mitigation metrics by Service Area. The data in this table represent all development projects for which an HQT was run and resulted in a mitigation obligation (n=151) and all credit-producing projects (n=3 closed Stewardship Account grants, n=27 permittee-responsible or third-party activities) implemented as of December 31, 2019. 76

Table 20. Habitat-based objectives and whether the objectives were met within each Service Area and on a statewide basis, as of December 31, 2019. 78

LIST OF FIGURES

Figure 1. Designated sage grouse habitat categories and exempt municipal boundaries in Montana, Executive Orders 12-2015 and 21-2015 and BLM land use plans. Core Areas are shown in purple, General Habitat is shown in green, and the North Valley Connectivity Area is shown in blue. Exempt municipal boundaries are outlined in pink. BLM habitat designations are shown with diagonal lines and correspond to Priority Habitat Management Areas in purple, General Habitat Management Areas in Green, and Restoration Areas shown with diagonal lines only. 13

Figure 2. Overview of the sage grouse consultation process and eventual permitting process with state or federal agencies, respectively. Developer activities are shown under Proponent in the yellow box, and Program / MSGOT activities are shown in the green box. Project permitting and implementation activities occurring after consultation is completed are outside the blue box and outside the scope of the Program and MSGOT. 16

Figure 3. Process flowchart for the SG 2.0 web application, with an example illustrating how days in review are counted for a project that took seven days between when it was first submitted, and a consultation letter was completed and sent to the developer. The project would be considered “under review by the Program” for a total of five review days (i.e. Due Diligence stage for the second, fourth and fifth day, Final Review on the sixth day, and Completed Review on the seventh day)..... 18

Figure 4. The Program received a total of 381 projects located in designated EO habitat to review during 2019. Additionally, the review for two projects originally submitted in 2018 were carried over in to 2019. As of December 31, 2019, the Program completed reviews for 288 projects with the remaining 95 projects in either Due Diligence (Program is still reviewing the project), Returned (developer is gathering the additional information need for the Program to complete a review), Withdrawn (developer has withdrawn the project of their own accord and for their own reasons), or Final Review (Program is undertaking the final quality control / quality assurance steps). 21

Figure 5. Of the 383 proposed projects reviewed by the Program in 2019, 277 projects were proposed in General Habitat and 106 projects were proposed in a Core Area. No projects were proposed in a Connectivity Area. 22

Figure 6. The number of all projects that either were submitted to the Program for review in 2019 (n=381) or for which review carried over from 2018 to 2019 (n=2) in all Designated Sage Grouse Habitat (Core Area = dark gray, General Habitat = gray) according to the number of days those projects spent in Active Review status (i.e. Due Diligence). Of the total 323 projects considered for review in 2018, the Program completed reviews for a total of 288 projects. Of the 288 projects for which the Program completed reviews in 2019, approximately 83% (n=240) were reviewed within 42 active review days of being submitted by the proponent to the Program for review..... 23

Figure 7. The total number of review days (i.e., days in Active Review + days in Returned Stage) across all projects reviewed in 2019 was 8,191 days, with 1,207 days spent in the Returned status (light gray) allowing proponents to address any Program questions or submit additional information. 23

Figure 8. The number of all Projects for which the Program completed review in 2019, broken out by the Project Type selected by project proponents (n=288). 24

Figure 9. Montana’s Mitigation System incentivizes voluntary conservation activity to increase the quantity and quality of sage grouse habitat while simultaneously incentivizing conservation by project developers through implementation of the mitigation hierarchy where impacts are offset and by private landowners who can benefit by providing mitigation opportunities to developers. A mitigation marketplace provides a platform where conservation actors and developers exchange credits and debits based on free market principles..... 35

Figure 10. The HQT supports Montana’s Mitigation System by providing an objective scientific method for measuring impacts to habitat from development and improvements to or conservation of habitat from conservation actions, with an overarching goal of no net loss, net gain preferred.... 36

Figure 11. General work flow to determine the number of credits produced by a conservation project (top row in green) or the number of debits attributed to a development project (bottom row in tan) over the life of a given project, respectively. The Raw HQT Score is calculated first and then applicable multipliers are factored in to determine the final number of credits or debits, respectively..... 39

Figure 12. Montana Mitigation System Service Areas. See Appendix 7.3 of the Montana Mitigation System Policy Guidance Document v1.0, October 2018 for more specific boundary descriptions..... 40

Figure 13. Number of Functional Acres lost by Service Area and EO habitat designation across all development projects for which an HQT calculation was performed and reached completed review status by December 31, 2019 (n=151). 47

Figure 14. Totals for the Reserve Account Multiplier across all four Service Areas. 50

Figure 15. Total number of debits created by Service Area and EO habitat designation for projects for which an HQT was calculated (n=151), with completed review status by December 31, 2019. Totals reflect the functional acres lost due to the project for its entire duration, along with policy multipliers for any project-specific deviations from EO stipulations, Reserve Account, and Advanced Payment (if applicable). 51

Figure 16. Debits created by Project Type for projects that were assessed mitigation, with completed review status by December 31, 2019. Oil/Gas projects contributed the clear majority of total debits. This category includes the following disturbance types: Gas/Oil Well (n=46 projects), maintenance activities (n=3 project), small pipelines or flow lines (14), power lines (n=5), roads (14), storage yards (n=4), and well pads (n=21). 52

Figure 17. The number of projects out of a total of 132 projects for which a mitigation obligation was due where proponents elected to fulfill the obligation by either: 1. Permittee Responsible Mitigation (PRM) where the developer implemented three credit projects to offset 52 of their own subsequent development projects; or 2. a contribution to the Stewardship Account (SA). Nineteen additional projects are not included in this graph because no mitigation was ultimately required from the developer because the HQT mathematical result was zero (n=7), the final debit calculation was near zero and local facts surrounding the project warranted revising the obligation to zero (n=11), or the developer obtained a waiver from MSGOT (n=1). 55

Figure 18. The Sage Grouse Program workflow is shown within the shaded light blue area, with project permitting process and the developer’s implementation activities occurring outside the scope of the Sage Grouse Program and MSGOT. If the developer selects the Stewardship Account contribution option to mitigate for impacts to sage grouse habitats, the deposit is made after obtaining all necessary permits and before starting construction. The time lag between Program/MSGOT and Developer’s implementation of the project creates the “accounts receivable” circumstance. 57

Figure 19. Stewardship Account funds by contribution status for projects in Completed Review status as of December 31, 2019 and legacy projects that reached Completed Review status in 2018.	59
Figure 20. Contributions received into the Stewardship Account in the calendar year 2019 reporting period only (\$345,627.18), according to Service Area and habitat category.	60
Figure 21. Locations of Stewardship Fund grant proposals that were funded in the first and second grant cycles and still active, as of December 31, 2019.....	66
Figure 22. Number of functional acres gained by Service Area and EO habitat designation for credit projects classified that were closed or implemented as of December 31, 2019 (n=3 Stewardship Account grants; n=27 PRM and other sources combined).....	69
Figure 23. Total credits available vs. credits anticipated as of December 31, 2019, categorized by source (Stewardship Account grants or other entities). “Other Projects” includes: 1. permanent plug and abandon oil or gas wells; 2. reseeding; 3. mesic habitat restoration; and 4. PRM projects. Available credits implemented projects or closed Stewardship Account grants as of December 31, 2019, respectively. Anticipated credits Stewardship Account grants that have a high likelihood of closing in 2020 or 2021 or other credit projects that will be implemented in the future.	72
Figure 24. Number of credits created by three MSGOT Stewardship Account grants that closed by December 31, 2019 compared to credits created by all other projects, by habitat category. Other Projects by other third parties includes: 1. permanent plug and abandonment of oil or gas wells; 2. Reseeding; 3. mesic habitat restoration; and 4. PRM projects.....	72
Figure 25. Total number of credits created by Service Area and by Executive Order 12-2015 habitat designation, all entities/sources combined (Stewardship Account grants, developer PRM projects and third parties), for projects that either were implemented or closed by December 31, 2019.	73
Figure 26. Types of credits created by different credit project activity types for all credit projects that have either been implemented by developers as PRM or third parties (n=27) or any MSGOT Stewardship Account grants that closed as of December 31, 2019 (n=3).....	74
Figure 27. The Sage Grouse Habitat Conservation Program’s Adaptive Management Strategy.....	80

EXECUTIVE SUMMARY

The Sage Grouse Habitat Program provides numerous interim reports and briefings throughout each calendar year. A formal written report is produced on a calendar year basis. This report covers the period from January 1 to December 31, 2019. Additional information about the strategy can be found at www.sagegrouse.mt.gov.

History and Background

The Greater Sage-grouse (*Centrocercus urophasianus*) was once a candidate for listing under the federal Endangered Species Act across its range in 11 western states. Montana and 10 other western states developed conservation strategies to conserve sage grouse and address threats caused by habitat fragmentation, development, loss of sagebrush, and invasive species. These state commitments, in conjunction with revised federal land management plans, led the US Fish and Wildlife Service (USFWS) to decide listing was not warranted. The decision was announced on September 22, 2015.

The 2015 Legislature passed the Montana Greater Sage Grouse Stewardship Act (Act) in 2015. Governor Bullock signed Executive Orders (EO or Order/s) 12-2015 and 21-2015 in 2015. The Act was amended in 2017 and 2019. Some provisions of Executive Order 12-2015 are codified in statute. The Executive Orders took effect on January 1, 2016. They are based on recommendations from an advisory council, which itself met ten times from 2013 through 2014. Additionally, seven public hearings were held in Montana. Montana's Sage Grouse Conservation Strategy (Strategy) is based on an "All Hands, All Lands, All Threats" approach which relies on the ongoing, successful collaboration of a diverse group of stakeholders, private landowners, the Montana Legislature, and state and federal agencies.

Taken together, the Act and Executive Orders 12-2015 and 21-2015 comprise Montana's Sage Grouse Conservation Strategy (Strategy). Montana's Strategy mirrors the approach taken in the State of Wyoming. Montana aims to balance conservation and development. Montana's goals are to: 1. maintain viable sage grouse populations and conserve habitat; 2. maintain flexibility to manage our own lands, our wildlife and our economy; and 3. fulfill commitments in our Strategy so that a listing under the federal Endangered Species Act is not warranted. These goals are shared by Montanans who understand the implications if federal protections are imposed.

Implementation Framework

The Sage Grouse Habitat Conservation Program (Program) is charged with implementing the Act and the Executive Orders across state government, coordinating with federal land management agencies as they implement the sage grouse conservation provisions in their land use plans, and working with other partners, especially private landowners who conserve the majority of important sage grouse habitat in Montana.

The Montana Sage Grouse Habitat Conservation Program is overseen by the Montana Sage Grouse Oversight Team (MSGOT), whose duties were established by the Act. MSGOT's composition is also established by statute. MSGOT establishes broad policy and implementation guidance and is administratively attached to the Montana's Governor's Office. The Program is administratively attached to and hosted by Montana Department of Natural Resources and Conservation (DNRC). DNRC provides critical administrative, fiscal, legal, and information technology support to the Program and MSGOT.

MSGOT meets at least four times a year to address timely issues related to implementing the Orders and the Act. These include: coordinating conservation and permitting efforts with state and federal agencies, selection of projects to receive funding from the Stewardship Account, oversight of the habitat mitigation framework and habitat quantification tool (HQT), and addressing concerns and priorities from various stakeholders as to the implementation and focus of the Program and Montana's Strategy overall.

Executive Order 12-2015 applies to all Executive Branch state agencies and is mandatory. EO-12-2015 requires the Program to review all proposed activities that require a state permit for implementation in sage grouse habitats designated as a Core Area, General Habitat, or a Connectivity Area by the map contained in Executive Order 21-2015. Statutory definitions of these habitat areas are also provided for in the Act. If the proposed activity will take place outside of these designated areas or a state permit, authorization or state funds are not involved, Program review is not required.

Scientific studies have shown that sage grouse are very sensitive to habitat loss, fragmentation, and disturbance particularly during the breeding, nesting, and early brood-rearing seasons. Sage grouse are nearly 100% dependent on sagebrush throughout their life history. Through consultation and implementation of the Executive Orders, Montana aims to first avoid adverse impacts to birds and their habitats, then minimize impacts, and then restore habitats. If residual impacts to habitat still remain after these measures, compensatory mitigation is required.

The Orders, along with market-based forces and incentives, help guide where and how development and other activities occur in the designated sage grouse habitat areas. Certain limitations, stipulations, or conditions may apply, depending on the project or activity, when it would be implemented, and where it would be implemented. Other components establish general practices that apply to everyone, such as noxious weed control. Mitigation may be required in some cases. Some activities are exempt from the Orders' requirements by the Orders themselves, by subsequent MSGOT decisions, or subsequent amendments to the original 2015 Act. Other activities may be "grandfathered" because the permitting process had been completed and a permit issued prior to January 1, 2016 (the effective date of Orders).

The Executive Orders apply to all programs and activities of state government, including permitting, grant programs, and technical assistance. Through a consultation process, the Program will work with project proponents to first avoid impacts, minimize impacts, and restore impacted areas. Restoration is already required by state law or administrative rule for some permitted activities. Compensatory mitigation may be required for residual temporal or spatial impacts that remain after avoidance, minimization, and restoration measures.

The Act provided that compensatory mitigation obligations can be fulfilled through transactions in a mitigation marketplace where providers of sage grouse habitat can sell mitigation credits to developers whose activities have residual impacts so that the impacts can be offset. Alternatively, if sufficient mitigation credits were not available in the mitigation marketplace, developers could offset their impacts and fulfill their compensatory mitigation obligations through a payment to the Montana Sage Grouse Stewardship Fund. A habitat quantification tool (a GIS model) has been developed to estimate the number of mitigation credits created through conservation efforts and the number of debits (residual impacts) due to development activity.

The Act had also created the Stewardship Account (Account or Fund; a special revenue account), and the 2015 Montana Legislature appropriated \$10 million. The purpose of the Stewardship Account is to maintain, enhance, restore, expand, or benefit sage grouse habitat and populations. The fund is a source of competitive funding to facilitate free-market mechanisms for voluntary, incentive-based conservation of private lands (and public lands as needed). Through a competitive grant process, organizations or agencies could receive funds to conserve habitats on private lands and create mitigation credits which would then become available in a Montana sage grouse mitigation marketplace to offset impacts of development elsewhere. MSGOT may transfer the mitigation credits created through Stewardship Account grants to an independent third party and recover the proceeds of any sales the third party makes. The Fund would be reimbursed when those credits were sold. The reimbursed funds will then be used to finance other habitat conservation projects. As of December 31, 2019, no third-party credit developers have entered Montana's mitigation marketplace to conduct individual credit-debit transactions with developers and entities who may create credits. That means the primary options available to developers to offset impacts are permittee-responsible projects they implement on their own behalf or to make a contribution to the Stewardship Account equivalent to the cost of credits created through Stewardship Account grants.

In 2017, the development and implementation of the Sagegrouse.mt.gov Version 2.0 website was finalized and replaced Version 1.0 on April 7, 2017. Website Version 2.0 (SG2.0) was in place and utilized throughout 2018 and 2019. The website offers developers an easy way to determine whether their project would occur in designated sage grouse habitat. If so, developers submit their consultation request and project information through the website. The Program is automatically notified that a new project has been submitted and the project is assigned a unique project identification number so it can be tracked throughout the review process until completion. The website automates many calculations, but presently, HQT calculations are performed on a desktop computer by Program staff. In mid-2019, the Program entered a contract with the original developer of the SG2.0 to enhance features, incorporate the mitigation aspect and habitat quantification tool, and make a credit-debit registry available to the public.

Summary of 2019 Program Consultation Performance

The Program completed reviews on the vast majority of projects for which a consultation was requested. In 2019, the Program received a total of 381 requests and carried over work on two projects initiated in 2018. As of December 31, 2019, the Program completed reviews for 288 projects (75%). Of the remaining 95 projects, 68 projects were carried forward into 2020. Additional information necessary to complete reviews on 55 of the 68 (80%) projects had been requested from the developer but had not been received by the Program as of December 31, 2019. The Program had all necessary information for the remaining 13 projects, but work carried forward into 2020 because these projects were either submitted late in 2019 or were larger / more complicated projects which require more time and collaboration with the developer. Some projects were withdrawn by developers of their own accord. Most development projects reviewed by the Program in 2019 were proposed in General Habitat (n=277, 72% of 383 projects) compared to a Core Area (n=106, 28% of 383 projects).

Version 2.0 of the web application prompts developers to provide information necessary for the Program to complete its review. However, it is often the case that details were lacking in specific areas that affects the outcome of the review (e.g. project description or implementation dates). Lack of having complete information pauses the Program's review while developers provide the additional necessary information. The web application automatically calculates the duration of a

project review and what proportion of the total review days are attributed to the Program actively performing its work vs. waiting for additional information. Across all projects, a total of 8,191 days were required to complete reviews, including the 1,207 days (15% of total), for which the Program was waiting for additional information necessary to complete the review.

Of the 288 development projects for which the Program completed reviews in 2019, 83% (n=238) of projects were reviewed within 42 days of being submitted to the Program. The Program completed reviews on 151 projects (52% of 288) were reviewed within 20 days of being first submitted to the Program. Reviews were completed on a total of 77 projects (26.7% of 288) within 10 days of being received.

2019 Development in Sage Grouse Habitats

Of the 16 major project types reviewed in 2019, 32.6% (94 of 288 total projects) was related to oil and gas development. Of the remaining major project types, Communication, Mining, Transmission Lines, and Wind combined accounted for 22.9% of the total projects reviewed (66 of 288). Four projects entailed reviewing a major pipeline.

Of the total 288 projects which reached Completed Review in 2019, an HQT was calculated was 151 projects (52%). Of those, a total of 132 development projects resulted in a mitigation obligation (45.8% of 288), whereas 156 projects did not. Of the 151 projects for which an HQT was calculated, six projects had a mathematical result of zero (4%), 12 projects were subject to a more detailed desktop analysis and no mitigation was ultimately required for reasons unique to those projects (8%), and 1 project received an MSGOT waiver. Across these 151 projects, a total of 59,638.11 functional acres were lost (58% in Core Areas and 42% in General Habitat. The greatest loss of functional acres was documented in the Southeastern Service area (68% of total), consistent with this Service Area having the greatest number of total development projects reviewed.

After accounting for policy multipliers, a total of 88,894 debits accrued across all Service Areas, with 66% of all debits being associated with the Southeastern Service Area (n=78 projects). Of the total debits, 29,256.68 are attributed to policy and site-specific multipliers, with deviations from the seasonal use stipulation of Executive Order 12-2015 accounting for 12,636.46 debits (43% of the total multiplier debits) and the Reserve Account accounting for 11,925.65 debits (40% of the total multiplier debits). Again, most multiplier debits accrued in the Southeastern Service area (18,547.09 debits, 63.3% of the total), with deviations from the seasonal use stipulation and the Reserve Account each accounting for about half of the total policy and site-specific debits within the Southeastern Service Area.

A developer presently has three mitigation mechanisms available to offset the impacts of their projects: permittee responsible actions, a contribution to the Stewardship Account, or a combination of those. In 2019, of the 132 projects for which a mitigation obligation was documented, impacts were offset by making a contribution to the Stewardship Account for 80 (61%). The remaining 52 development projects were offset through permittee-responsible actions implemented by the single developer who implemented their own credit projects.

Developers who select the Stewardship Account mechanism are asked to deposit the funds *after* receiving all necessary permits but immediately *before* implementation. That way, contributions are only made for projects which will move forward, and the developer retains full discretion to determine permitting and implementation timelines. A total of \$506,806.18 has been contributed to the Account by developers, of which \$345,627.18 was deposited in the 2019 reporting period.

An additional \$1,449,688.10 is expected if all projects which reached Completed Review are permitted and actually implemented. The amount of any single contribution in 2019 varies widely, in keeping with the wide variation in impacts attributed to specific projects. The smallest single contribution was \$2.21 and the largest contribution was \$85,878.01. Impacts and mitigation obligations can vary significantly due to a variety of factors, such as: project type, above vs. below ground, the number of individual disturbances included in the project, the project duration, the project location relative to habitat quality, and the degree to which the project is consistent with Executive Order 12-2015. Mitigation is proportional to the total impacts of a project, and market-based incentives exist to encourage voluntary efforts to impact as little habitat and local sage grouse populations as possible.

Stewardship Account Grants and Other Sources of Credits to Offset Development

Credits created through Stewardship Account grants are used to offset impacts of development projects for which the contribution is made. The first grant cycle was completed in 2016-2017, and of the original pool of projects awarded funding, some were withdrawn by the applicants. This left a total of four projects would eventually be implemented. Three of the four projects had closed by December 31, 2019. The fourth project was placed on hold by the family. The second grant cycle was completed in late 2019. A total of 6 projects were awarded funding. Of those six, two were withdrawn by the applicant which leaves 4 projects having a high likelihood of closing in 2020 or 2021. The three 2016 grants that have closed, a total of 958,352 credits were created, which accounts for 62% of *all* available credits created. An additional 502,524.70 credits are anticipated to be created from the five 2019 grants with a high likelihood of closing future years.

Credits are also created periodically by project sponsors undertaking restoration or enhancement actions like reseedling, mesic habitat restoration, or permanently plugging and abandoning oil or gas wells and reclaiming the site. Where the project sponsor does not wish to become a mitigation marketplace actor and retain those credits for eventual sale to a developer, the credits are retained by the state and pooled with credits created by the Stewardship Account. These projects result in a relatively small number of credits, but are still important to document. Credits can also be created through permittee-responsible projects by individual developers to offset the impacts of their own projects. Denbury Resources alone created a total of 590,649.18 through their permittee responsible projects in the Southeastern Service Area. Typically, these developers retain their credits for their own projects. Combined, these other and permittee-responsible credits amounted to 596,858.5 credits created as of December 31, 2019.

Across all Service Areas and credit-producing entities, a total of 1,555,211.30 credits were created as of December 31, 2019, with approximately 70% attributed to projects located in a Core Area. The Central Service Area accrued the greatest number of credits (668,226.29, 43%), followed by the Southeastern Service Area (590,996.16, 38%), the Southwestern Service Area (295,987.16, 19%), and the North Central Service Area with 1.68, <1.0%). The vast majority of credits were created through perpetual conservation easements (91%, 1,555,211.30) through three 2016 Stewardship Account grants that had closed and Denbury Resources' permittee-responsible easements. The remaining 9% of total credits were created through restoration or enhancement efforts.

Synthesis of 2019 Mitigation Outcomes

Montana has achieved its goal of balancing conservation with development. Montana met its mitigation specific habitat-based objectives in 2019. On a statewide basis, the total number of credits created exceeds the total number of debits. After subtracting the total number of debits

from the total number of credits, there is a surplus credit balance of 1,466,316.49 as of December 31, 2019. A surplus exists in three out of four individual Service Areas, with a deficit of 4,853.92 documented in the North Central Service Area. This deficit will be overcome as soon as the remaining 2016 Stewardship Account grant, which is located in the North Central Service Area, closes in 2020.

With the adoption of final administrative rules, all contributions to the Stewardship Account in 2019 and thereafter should be allocated towards Stewardship Account grants to offset the impacts for which the contributions were made. The timing of subsequent grant cycles will be determined by when developers make their contributions and how fast the Account balance is replenished after the 2019 grant award funds are transferred to close those projects.

Presently, there are no third-party conservation banks or habitat exchanges operating in Montana. Stewardship Account grants or permittee responsible projects are the only mechanisms available to developers at this time. Permittee responsible projects are rare, but always possible.

Adaptive Management and Conclusions

Adaptive management discussions after this first mitigation year will likely focus on the first minor revisions to the basemap through updating of individual GIS layers with the most currently-available data. Another topic for exploration relates to the Program's observation that implementation of the strategy overall could be improved by creating a feedback looping mechanism between developers, state permitting agencies, and the Program to overcome the Program's lack of knowledge about the status and disposition of projects (i.e. permitting process, implementation schedule, or whether a project was cancelled altogether). Closing this loop would improve data accuracy and integrity, accuracy of disturbance data, fiscal management of the Stewardship Account, and most importantly, the accuracy and reliability of the credit/debit registry. Additional topics may be identified by MSGOT or stakeholders for this first review, but major overhauls are not expected and would not be warranted given one-year's experience and the available data. Any limitations or unexpected outcomes have been successfully resolved at the Program level or through MSGOT.

The mitigation framework is working and effective. All limitations or unexpected outcomes of the framework were successfully at the Program level or through MSGOT. Stewardship Account grant funds were wisely spent and those funds were well-leveraged with matching sources.

Montana's conservation strategy is science-based, but also crafted by and continuously improved through stakeholder engagement and pragmatic problem-solving by all parties. Montana continues to work collaboratively with private landowners, state and federal agency partners, industry and conservation organizations, and elected officials. Conservation exceeded development, and no projects were barred by the Program, MSGOT. Based on reports from Montana Fish, Wildlife & Parks, the population is secure. The number of confirmed active leks has held steady since 2015, with minor increases or decreases in individual years.

Going forward, Montana is well-positioned for an assessment of conservation efforts across 11 western states, set to take place in 2020-2021. A formal status review in the future is possible, but presently unknown. Montana has implemented the commitments it made in 2015, along with its partners, and our efforts have been effective. The future of sage grouse in Montana and whether protections are warranted in the future both depend on our collective efforts. Through pragmatic problem solving and continuous improvement, Montana can continue to achieve our goals.

MONTANA SAGE GROUSE HABITAT CONSERVATION STRATEGY

Background

The Greater Sage-grouse (*Centrocercus urophasianus* – hereinafter referred to as sage grouse) is a native species in Montana. Lewis and Clark first described sage grouse when they saw birds near the Marias River. Sage grouse are also found in ten other western states and two Canadian provinces. Montana and Wyoming are the key strongholds for sage grouse across its range. Other states are: Oregon, Idaho, Colorado, Washington, Utah, North Dakota, South Dakota, Nevada and California. Small numbers are also found in Alberta and Saskatchewan Canada.

Science has shown that sage grouse are particularly sensitive to habitat loss and fragmentation caused by conversion of native sagebrush range to cultivation, invasive species, and other anthropogenic development. Population declines have been attributed to these changes in habitat at both local and landscape scales. At times and in some locations, predation can be a factor. Sage grouse depend on sagebrush for nearly every life history stage. They are particularly sensitive to surface disturbance and disrupting activities during breeding, nesting and early brood-rearing seasons. Sage grouse have a very high site fidelity to areas used for breeding called leks. Some have been used by birds for 80+ years. Hens usually nest within four miles of the lek on which they breed. Montana populations can be migratory or non-migratory. Home ranges vary from 1.5 to 237 square miles.

Sage grouse interact with their habitats at a landscape scale and are almost completely dependent on sagebrush for every phase of their life history. Intact, native sagebrush rangeland at a landscape scale is needed. Sage grouse are slow to respond to changing habitat conditions. They are poor pioneers at finding new habitat, and translocation efforts to supplement low bird numbers or re-establish extirpated local populations have been largely unsuccessful to date.

Between 1965 and 2005, sage grouse population declines and loss of habitat were well-documented across its range in 11 western states, including Montana. Once lost, sagebrush is not easily restored. While favorable weather patterns account for shorter term population rebounds, the long-term trend has been downward. By 2005, the USFWS had received eight different petitions to protect the sage grouse under the federal Endangered Species Act (ESA).

In 2005, Montana completed the first Montana Sage Grouse Management Plan. Important sage grouse habitats were mapped. Conservation efforts were increased through formation of local working groups, more formalized monitoring protocols, increased monitoring efforts, adoption of adaptive management guidelines to manage hunter harvest, and habitat conservation efforts.

In 2010, when responding to a petition for ESA protections, the USFWS found that listing the Greater Sage-grouse range-wide was “warranted but precluded” by other higher-priority actions. That finding was based on continuing population declines resulting from habitat loss and fragmentation going back decades and that habitat losses were still ongoing in Montana and range wide. Furthermore, this finding made sage grouse a “candidate species” for listing and ESA protections as threatened or endangered in the future. Two key findings included loss and fragmentation of habitat and lack of adequate regulatory mechanisms to conserve habitat and reverse population declines. Because sage grouse were a state wildlife trust species at the time of that decision, state-led conservation strategies became a key focus. It was also recognized that a significant portion of sage grouse habitat occurred on federal lands managed by the U.S. Bureau of Land Management (BLM) and U.S. Forest Service (USFS). States, federal agencies and interested

stakeholders came to understand that the key to the future of sage grouse and whether they would require ESA protections in the future rested on development of dedicated conservation strategies by states, federal land managers, private landowners, and other interested stakeholders.

The USFWS 2010 decision that listing was warranted by precluded was challenged in federal court. In 2011, USFWS entered a legal settlement agreement that required it to conduct a new status review. The review would analyze threats to sage grouse and its habitats, population status and trends, and whether the regulatory mechanisms were adequately addressing the threats. USFWS deadline was September 30, 2015.

This deadline spurred Montana and 10 other western states, several federal land agencies, and dozens private partners to cooperate and coordinate in an unprecedented way to conserve, restore and enhance sage grouse habitat to preclude the need to list the species. Efforts included: BLM and USFS land use plans or plan amendments placing greater emphasis on conserving sage grouse habitat; development of state sage grouse conservation plans; voluntary, multi-partner private lands efforts through Natural Resources Conservation Service; collaboration among federal, state, academic, and private sector scientists; and a comprehensive strategy to fight rangeland fires.

Development of Montana's Sage Grouse Habitat Conservation Strategy: 2013-2015

Sage Grouse Advisory Council and Executive Order 10-2014

Montana's Sage Grouse Conservation Strategy (Strategy) was born out of a comprehensive stakeholder process in 2013-2014, led by Montana Fish, Wildlife & Parks. Governor Bullock convened the Greater Sage Grouse Conservation Advisory Council in February 2013. It was charged to advise the Governor and recommend conservation measures to address threats to sage grouse in Montana. The Council held ten multi-day public meetings to consider existing strategies in Montana and other states, the best available science, and broad diverse public comment. Seven public meetings were held to get comment on the Council's draft strategy and preliminary recommendations.

The Advisory Council's work was funded by the 2013 Montana Legislature (HB 580), which supported its purpose to recommend policies and actions for a statewide strategy. Ultimately, the Council's advice and recommendations were captured in a document presented to the Governor, dated January 29, 2014.

Throughout the Council's deliberations, USFWS made it clear that for the USFWS to consider Montana's strategy as an effective regulatory mechanism for sage grouse conservation for purposes of its 2015 listing determination, the strategy had to pass two critical tests: 1. the USFWS must have certainty that the strategy would be implemented; and 2. once the strategy is implemented, USFWS must have certainty the strategy will be effective in protecting sage grouse habitat and conserving populations.

For its part, the Council considered threats identified by USFWS as well as additional threats the Council members identified. It made recommendations for ways to ameliorate and/or eliminate threats. The Council relied heavily on the Wyoming Sage Grouse Conservation Strategy, which it knew had already been reviewed and received favorably by USFWS. The Wyoming strategy took the form of an executive order that had originally been developed and implemented back in 2011 by then-Governor Freudenthal.

On September 9, 2014, Governor Bullock issued Executive Order 10-2014. It established regulatory mechanisms to guide development and conserve designated sage grouse habitats (Core, General, and Connectivity Areas, Figure 1). It created the Sage Grouse Habitat Conservation Program and was largely based on the Council's recommendations. This 2014 Order set the stage for and provided guidance to state agencies and interested parties to begin moving towards full implementation and had an immediate effective date.

Greater Sage Grouse Stewardship Act of 2015

The 2015 Montana Legislature passed the Greater Sage Grouse Stewardship Act (Stewardship Act or Act), which took effect in May. The Legislature found that it was in the best interests of Montana's economy, the economic stability of school trust lands, and sage grouse conservation and management to enact the legislation. There was strong bipartisan support among legislators and diverse stakeholders. The goal to conserve sage grouse, its habitats, and preclude a future listing under ESA was shared. It continues to be a commonly shared goal today.

The Act accomplished several important things in demonstrating Montana's commitments to implementing a comprehensive conservation strategy. The Act: 1. created the Montana Sage Grouse Oversight Team (MSGOT); created the Sage Grouse Stewardship Fund (Fund or Account) to provide competitive grant funding to create market-based incentives to conserve sage grouse habitat; 3. appropriated \$10 million for the Stewardship Fund grants and provided statutory guidance for how the funds could be spent; 4. established that impacts to sage grouse habitat would be mitigated and provided key statutory guidance; and 5. delegated rulemaking authority to MSGOT.

More specifically, the Act and other companion legislation established that MSGOT was administratively attached to the Governor's Office. Its members are the directors of the Departments of Fish, Wildlife & Parks (FWP), Natural Resources and Conservation (DNRC), Montana Department of Transportation (MDT), Department of Environmental Quality (DEQ), the Administrator of the Montana Board of Oil and Gas (MBOG), a member of the Montana Rangelands Resources Committee, a member of the Montana Senate, and a member of the Montana House of Representatives. The Program is charged with implementation of both the Act and EO 12-2015 and serves as MSGOT's only staff. The Program itself is administratively hosted by DNRC but reports to MSGOT.

Separately, the 2015 Legislature also appropriated funds to implement the Act and the Strategy through MSGOT and the Montana Sage Grouse Habitat Conservation Program.

Executive Orders 12-2015 and 21-2015

On September 8, 2015, Governor Bullock issued Executive Order 12-2015 (hereinafter EO or 2015 Order) to supplement the 2014 Order and to recognize the passage of the 2015 Stewardship Act. The 2015 EO supersedes the 2014 Order and is the operative document, along with the 2015 Act. In late December 2015, Governor Bullock issued Executive Order 21-2015 to correct a clerical error having to do with the map of designated habitats to which Executive Order 12-2015 applied. It directed that EO 12-2015 was applicable in the map included in EO 21-2015. Hereinafter, EO 21-2015 is incorporated by reference anytime EO 12-2015 is stated or referenced in this annual report. See Figure 1.

Montana's 2015 EO took full effect January 1, 2016. The scope and specific guidance largely mirror Wyoming sequential executive orders which date back to 2011 (e.g. Wyoming Executive Orders 2011-5, 2013-3, and 2015-4). Montana's guiding principles, specific provisions, and stipulations are the same as Wyoming's in most respects.

The 2015 EO requires the Program to review all proposed activities in sage grouse habitats designated as a Core Area, General Habitat, or a Connectivity Area if a state or federal permit or authorization is required, or if state grant money or technical assistance is involved. This process is often referred to as a "consultation" and must be completed prior to submitting a permit application to a state agency. The proposed activity is reviewed for consistency with the requirements of EO 12-2015 and EO 21-2015. If the proposed activity will take place outside of designated habitat, Program review is not required.

The Order guides where and how development and other activities occur in the designated sage grouse habitat areas. Certain limitations, stipulations or conditions may apply, depending on the project or activity, its location and its duration on the landscape. Other components establish general practices that apply to everyone. Mitigation may be required in some cases. Some activities are exempt from the Orders' requirements, either by the Orders themselves or by subsequent MSGOT decisions. Other activities may be grandfathered in because the permitting process had already started prior to January 1, 2016.

The Executive Orders apply to all programs and activities of state government, including permitting, grant programs, and technical assistance. Through a consultation process, the Program will work with project proponents to first avoid impacts, minimize impacts, and restore impacted areas. Restoration is already required by state law or administrative rule for some permitted activities. Compensatory mitigation may be required for residual temporal or spatial impacts that remain after avoidance, minimization, and restoration measures.

Montana's Strategy and the 2015 EO takes a "core areas" approach similar to Wyoming. Core Areas are statutorily defined as having the highest conservation value and having the greatest number of displaying male sage grouse and associated sage grouse habitat. Core Areas contain approximately 76% of the breeding male sage grouse population. Areas designated as General Habitat and Connectivity Areas are also important to sage grouse conservation (Figure 1). Habitats were previously designated by Montana Fish, Wildlife & Parks based on habitat attributes and breeding sage grouse densities (leks and number of males on leks).

This approach keeps the proactive focus on conserving habitats and minimizing or eliminating threats in the most important habitats where most birds live at a landscape scale.

The guiding principles of Montana's Strategy are to work together collaboratively across all lands to address threats, often referred to as an "all Hands, all Lands, all Threats" approach. In Montana, private, state, and federal lands exist in a checkboard pattern where land use activities depend on access to all lands, regardless of ownership. The approach strives to establish a consistent approach and common standards to sage grouse conservation across significant and interconnected working landscapes, regardless of landownership.

In summary, the three pillars of the Strategy are: 1. Executive Orders 12-2015, and 21-2015; 2. Greater Sage Grouse Stewardship Act of 2015 and as subsequently amended; and 3. Voluntary private land stewardship. The Strategy applies to the areas shown on the map contained in EO 21-2015 (not EO 12-2015 which contained a clerical error). The Strategy is proactive, based on peer-

reviewed science, respects private property rights and valid existing rights, and aims to achieve Montana's shared goal to preclude or avoid the need for ESA protections in the future.

The Montana Sage Grouse Oversight Team

Under EO 12-2015, the function of MSGOT is to oversee the administration of the Program. This includes: staying abreast of emerging science and developing appropriate guidance, reviewing and troubleshooting the consultation process, addressing issues delineated in applicable Executive Orders and attachments for further consideration, recommending to the Governor further improvements to the Program, and fulfilling the duties assigned by Senate Bill 261 (2015 Montana Legislative Session).

Under the Act, statutory duties include: promulgating administrative rules for Stewardship und grants, mitigation, and the habitat quantification tool; reviewing Stewardship Fund grant applications and awarding funds from the account; calculating and making mitigation credits available from conservation efforts funded through the Stewardship account, tracking and transferring conservation credits; assuring the Stewardship Fund is reimbursed when credits from the Stewardship account are sold; receiving payments for credits it tracks; reviewing and approving compensatory mitigation plans; and completing an annual report.

The Sage Grouse Habitat Conservation Program

Executive Order 12-2015 tasks the Program with the following roles: provide guidance to, exchange information with, seek input from, and consult with state agencies and other instruments of state government during permitting and other authorizations, or during consultation, or technical or financial, or other assistance for non-regulated activities; administration of applicable Executive Orders and attachments and Senate Bill 261 (the Act originally passed in 2015); provide assistance, input, and guidance to MSGOT on all matters before it; and serve as principal point of contact for the interested public and stakeholders regarding the Conservation Strategy.

Additionally, the Program has a role of consultation, recommendation, and facilitation of the permitting process with a special focus on sage grouse and sage grouse habitats. However, the Program has no authority to either approve or deny a permit. The regulatory authority to approve, deny, or condition a permit continues to rest with the original permitting agencies. The Program's consultation consists of reviewing the project and determining whether it's location and implementation would be consistent with the stipulations and requirements of EO 12-2015. Additional information about the consultation process follows below.

In describing statutory duties for MSGOT, the Stewardship Act designates the Program as MSGOT's staff to implement their responsibilities set out in the Stewardship Act and other requirements of EO 12-2015.

Collaboration with Other Conservation Partners

The State of Montana has cooperative and collaborative relationships with federal agencies in implementing its own Conservation Strategy, along with providing support and technical assistance to federal agencies implementing their own sage grouse conservation actions consistent with federal and state laws. Due to Montana's checkerboard ownership, particularly in sage grouse habitats, it is imperative that the state and federal agencies work collaboratively across property boundaries and with Montana's private landowners for consistent implementation. This avoids

inadvertent displacement of development projects or land use authorizations into higher quality habitats due to surface ownership patterns when the project could have equally been implemented nearby on a different surface owner.

In 2015, the BLM finalized sage-grouse specific conservation provisions in land use plans and plan amendments throughout the west. In Montana, a unique relationship was established that has the State of Montana providing technical assistance and support to the BLM when it considers land use authorizations in areas designated in the BLM plans as a “Priority Habitat Management Area” (which is the same as a state-designated Core Area in EO 21-2015) BLM General Habitat, or BLM Restoration Areas.

The USFS also updated land use plans and/or adopted plan amendments throughout the west to set forth specific strategies to conserve sage grouse. In Montana, only the Beaverhead Deer Lodge Forest Plan sets forth sage-grouse specific strategies. The forest plan revision process is ongoing for other USFS lands in Montana. Sage grouse specific conservation actions and requirements will be addressed and included.

A unique relationship also exists between the State of Montana and the USDA Natural Resources and Conservation Service (NRCS). Private land stewardship is a key pillar in Montana’s Strategy overall, and NRCS is an important partner in delivering conservation on private lands through the Farm Bill and Special Initiatives the like Sage Grouse Initiative or Working Lands for Wildlife. Montana signed a Memorandum of Understanding with the NRCS and the Soil and Water Conservation Districts of Montana (SWCDM) in July 2015. The purpose is to enhance joint efforts to conserve privately owned working rangelands that provide habitat for sage grouse. The agreement provides the necessary framework for cooperation, streamlining protection and enhancement of sage grouse habitat on privately-owned working rangelands. The Program works with NRCS and SWCDM to bring technical and financial resources together to leverage them to the greatest extent possible. See the Private Land Stewardship Section below.

Other federal agencies implement sage grouse and habitat conservation actions of their own accord and occasionally consult with the Program.

USFWS 2015 “Not Warranted” Decision

On September 22, 2015, the USFWS announced that listing of sage grouse under ESA was “not warranted.” The final decision was published in the Federal Register on October 2, 2015. It contained an extensive analysis of threats to sage grouse and a comprehensive review of the five ESA listing factors. As importantly, it provided a good summary of recent peer-reviewed science.

In its “not warranted” decision, the USFWS evaluated the best available scientific and economic information regarding the sage grouse, including threats to the species and its sagebrush habitats. USFWS concluded that the threats which caused the initial designation of “warranted but precluded” in 2010 had been significantly reduced due to sage grouse specific conservation activities in federal land use plans (BLM and USFS) and to the regulatory mechanisms and habitat conservation strategies adopted by states.

The USFWS identified that the primary threats to the species continued to be habitat loss, fragmentation, and degradation of sagebrush habitat due to a variety of causes. In the Rocky Mountains and Montana, habitat loss is driven primarily by energy development and the associated

infrastructure development. Other threats, such as habitat loss to ex-urban development, conversion to cropland, invasive grasses, wildfire, West Nile virus occur as well.

However, there was either a track record of implementation and efficacy for state regulatory mechanisms like Wyoming's Executive Orders or a high degree of certainty that strategies like Montana's and other states constituted strong enough regulatory mechanisms to ameliorate or eliminate threats that protection as a threatened or endangered species was not warranted. Lastly, USFWS stated that it would "monitor threats to sage grouse and its response to threats" and "conduct a status review in 5 years."

Key questions that would be addressed in a future status review include the status and trend of the sage grouse population. Additional questions states will have to address include how it implemented its respective strategy or regulatory mechanisms, whether the state strategies or regulatory mechanisms effectively reduced or eliminated threats, and whether implementation was successful. In short, what has happened to sage grouse habitat between 2015 and 2020 and what is the status and trend of the populations? Montana began formally implementing its Sage Grouse Conservation Strategy in late 2015 through preliminary actions taken by DNRC and then by Program staff and MSGOT when the manager was hired in September 2015 and MSGOT first formed. These efforts built upon and supplement the ongoing work of Montana Fish, Wildlife & Parks, other state and federal agencies, and Montana's private landowners.

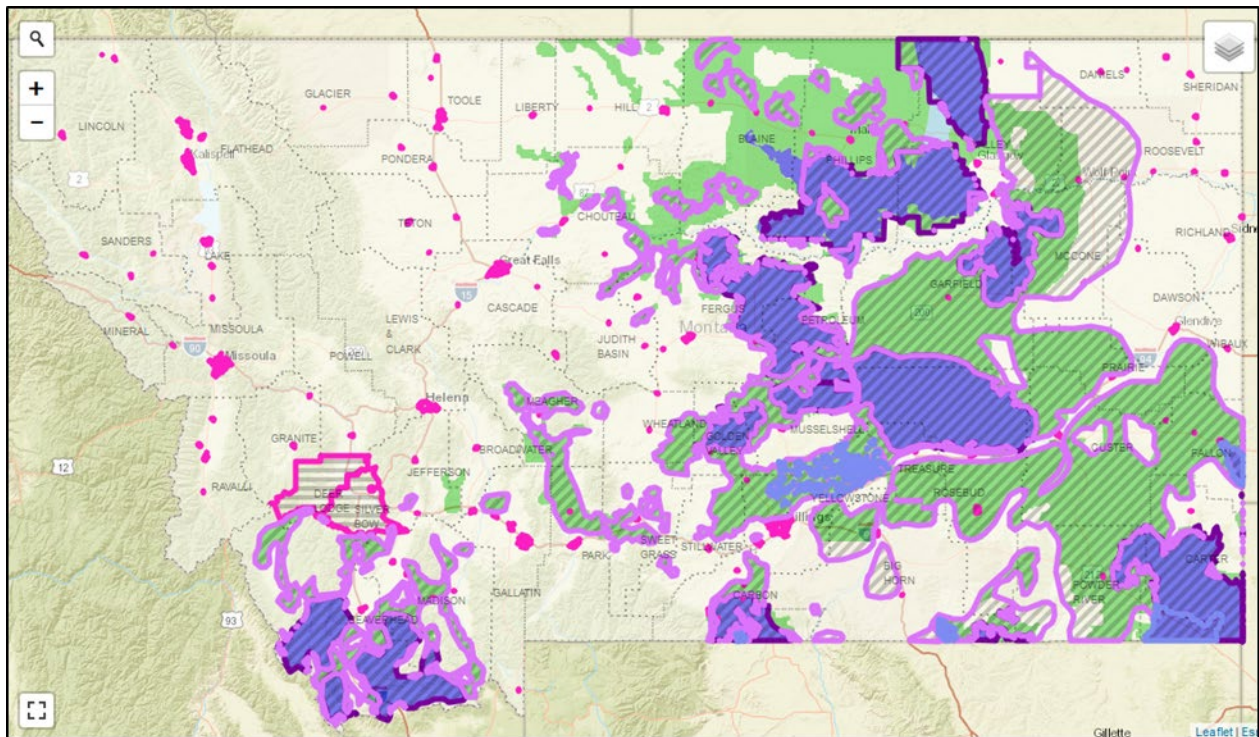


Figure 1. Designated sage grouse habitat categories and exempt municipal boundaries in Montana, Executive Orders 12-2015 and 21-2015 and BLM land use plans. Core Areas are shown in purple, General Habitat is shown in green, and the North Valley Connectivity Area is shown in blue. Exempt municipal boundaries are outlined in pink. BLM habitat designations are shown with diagonal lines and correspond to Priority Habitat Management Areas in purple, General Habitat Management Areas in Green, and Restoration Areas shown with diagonal lines only.

First Years of Implementing Montana's Strategy: 2015 - 2019

Executive Order 12-2015 took effect in September 2015. The Program officially began operational implementation on January 1, 2016. Appendix B provides an implementation chronology. Key highlights are briefly summarized below. Please see previous Annual Reports for 2016, 2017, and 2018 for details on the first years of implementation of the Strategy.

The first meeting of the Montana Sage Grouse Oversight Team (MSGOT) was held September 18, 2015. The Montana Sage Grouse Oversight Team met a total of three times in 2015, five times in 2016, and four times in 2017. In 2018, MSGOT held seven meetings. In 2019, MSGOT met four times. All MSGOT meetings are open to the public, with public notice and participation. Meeting materials are archived on the MSGOT Meeting Archives web page at: <https://sagegrouse.mt.gov/Team>.

An important duty of MSGOT in overseeing the Program is to assure efficient and consistent implementation of EO 12-2015. In working with state permitting agencies and project proponents, the Program has identified opportunities to bring greater efficiency to implementing EO 12-2015. The Program has brought these to MSGOT for its consideration from time to time when an implementation refinement would not: 1. exacerbate habitat loss or fragmentation; 2. ignore or render identified threats to sage grouse or habitats worse than they were at the time of the USFWS "not warranted" decision; or 3. forgo future opportunities for habitat restoration, enhancement, or preservation through mitigation activities.

Programmatic exceptions to the consultation requirement or specific provisions of EO 12-2015 are approved by MSGOT, not granted by the Program. None were requested in 2015. In 2016, MSGOT approved exceptions for projects that would be wholly located within incorporated cities and towns, certain waste and underground tank projects that require a permit, certain Department of Labor and Industry permits and licenses, and air quality permits.

In 2017, MSGOT approved an exemption that allows some BLM and NRCS range management projects meeting certain criteria to exceed the DDCT 5% disturbance cap limit. Projects such as water pipelines, habitat improvement, and restoration efforts that require temporary surface disturbance, and where benefits to sage grouse could be documented, were not required to adhere to the 5% disturbance cap. Additionally, MSGOT approved an exception for certain DEQ water quality permit modifications. This exception is specific to modifications of permanent facilities or minor modifications to existing permits that do not result in new surface disturbance or disrupting activities.

In 2018, MSGOT did not approve additional exceptions or modifications to the consultation as none were requested. The primary focus of the Program and MSGOT was finalizing the mitigation framework and Habitat Quantification Tool.

The Greater Sage-grouse Stewardship Act was first passed by the 2015 Montana Legislature. The 2017 Montana Legislature made minor amendments to the Act. The Act was amended again by the 2019 Montana Legislature. The 2019 amendments codified several provisions of EO 12-2015, established a mitigation goal of "no net loss, net gain preferred", and added additional duties and powers to MSGOT.

Stakeholder engagement has been a hallmark of sage grouse conservation going back to the 1990s and 2000s, well before the 2013-2014 Sage Grouse Advisory Council. Stakeholders continued to be engaged throughout the early years of implementing EO 12-2015 and the Stewardship Act.

Montana Sage Grouse Habitat Conservation Program

Overview of the Consultation Process

Montana EO-12-2015 requires the Program to review all proposed activities in sage grouse habitats designated as Core Area, General Habitat, or Connectivity Area that require a state permit or authorization or utilize state funds. EO 12-2015 also applies to work undertaken by state agencies themselves.¹ If the proposed activity will take place outside of these designated habitats, review is not required. MSGOT has granted certain limited exemptions from the review requirement.

Through the consultation review process, the Program works with project proponents before they submit applications for state permits, authorizations, or grant funds. This is to attempt to avoid or minimize project impacts to sage grouse and their habitats through project siting, design, construction dates, and implementation. This enables the project to be consistent with the requirements of EO-12-2015.

Completion of a sage grouse review is required prior to initiating a state permitting process (Figure 2). State permitting programs require evidence of a sage grouse review be provided at the time permit applications are submitted, if applicable. If evidence is not provided and sage grouse consultation is required, permitting programs will refer the applicant back to the Program.

The Program undertakes a review for consistency with the requirements of EO 12-2015. If the proposed activity is not consistent with EO-12-2015, the Program will work with the proponent to determine the best solutions to both achieve consistency with EO-12-2015 and to facilitate permitting of the proposed activity. Additionally, the Program works with proponents to determine what, if any mitigation is required to offset the impacts of the development project. See the Mitigation section below.

Once the review has been completed, a letter describing the proposed project activity, the location of the project relative to sage grouse habitat and active leks, and resulting stipulations, if any. A hard copy of the letter is mailed to the proponent, and a PDF copy is attached to the project record and is available online to the project proponent.

The project proponent then attaches the Program letter to the permit application submitted to the relevant state permitting agencies. The state agencies include the Program's recommendations as stipulations on the state permit. The Program works closely with the various state agency permitting programs and their respective stakeholder groups to identify and resolve issues as well as identifying opportunities for increased efficiency. The Program strives to provide responsive customer service through timely reviews of all projects to keep the State permitting process moving forward.

¹ See Appendix B, EO 12-2015 Attachment D.

Sage Grouse Consultation Process in Blue Box

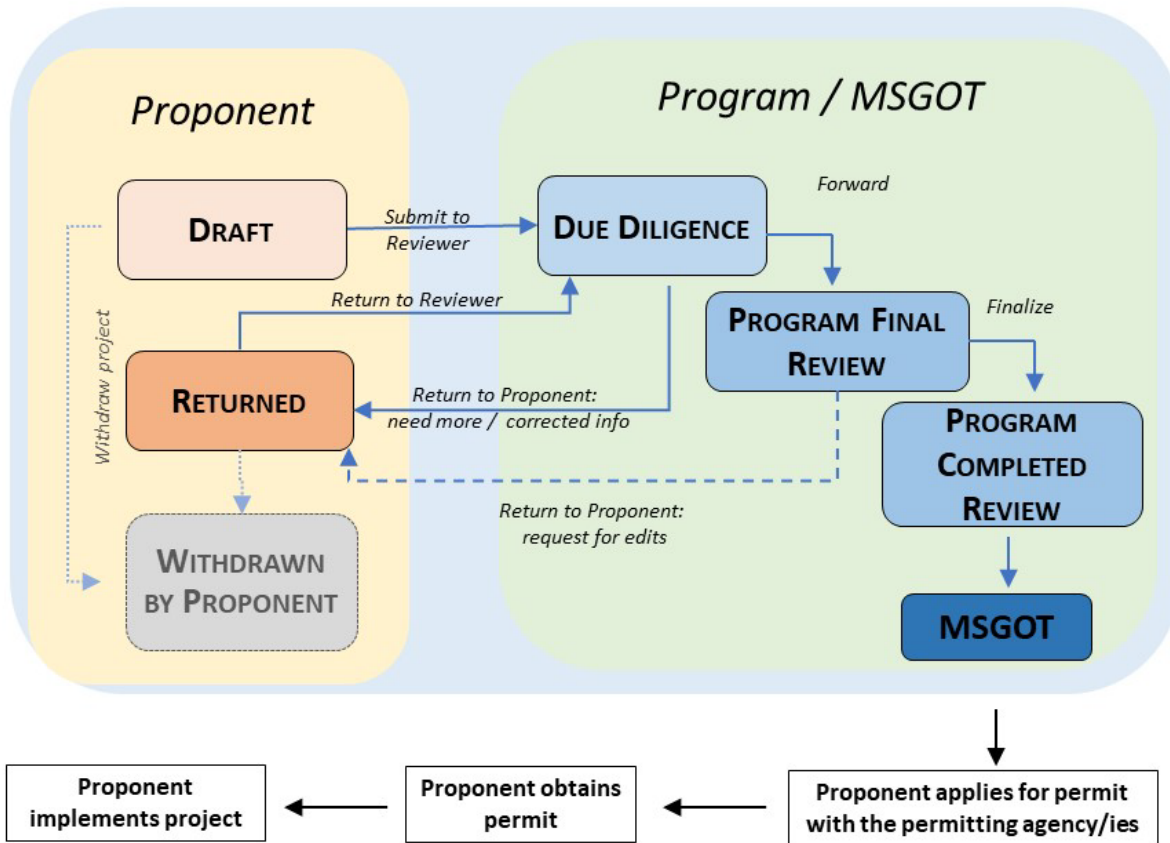


Figure 2. Overview of the sage grouse consultation process and eventual permitting process with state or federal agencies, respectively. Developer activities are shown under Proponent in the yellow box, and Program / MSGOT activities are shown in the green box. Project permitting and implementation activities occurring after consultation is completed are outside the blue box and outside the scope of the Program and MSGOT.

Project Review Life Cycle in the Web Application

The Program's strives to review proposed development projects in a timely, efficient manner. In doing so, the Program facilitates the State permitting process to move development projects forward to implementation.

Project proponents initiate the consultation process by providing information through the Program's website. This creates an orderly, consistent way for the Program to receive and process requests. Information provided to the Program is kept secure and is not sold or disseminated. Each submission is assigned a unique identification number that is used to track the project. The project proponent receives automated emails verifying that the information was received by the Program, if the project has been returned, and when the review has been completed.

If the proposed activity is not in designated habitat, the website notifies the proponent immediately and refers the proponent directly to the permitting agency. Proponents are also able to make the determination themselves by looking at the map provided on the website.

Once a developer logs into the website and initiates the consultation process, the project advances through individual stages of review (Figure 3). When a developer starts a new project, it is in the *Draft* stage. The *Draft* phase, provides developers with opportunities to proactively design and site projects to avoid designated habitat altogether when possible, avoid sensitive areas near leks, and consider other ways to minimize impacts. Once started, projects are saved in the *Draft* stage, and Developers can access and work on their projects anytime. Only the developer can see the information. The time (days) in *Draft* is not part of the Program's work flow since it has not been officially submitted yet.

When the developer is ready to submit the project and does so, the project advances to the *Due Diligence* stage. The Program's review clock then officially starts. If a reviewer determines that information needed to complete the review is missing, they will *Return* it to the developer to add the necessary information. The Program's review clock stops until the updated project is resubmitted. Once the project is resubmitted, the project is in the *Due Diligence* stage again. The clock starts again. The Program once again starts reviewing the project.

When Program staff have completed all the technical work and coordination with developers, staff move the project to *Final Review*. Here, the staff and Program Manager review all the technical work, conclusions, and recommendations. Errors or omissions can be addressed at this time, if any. Once the Program Manager gives final approval, the project advances to *Completed Review*.

Completed Review signifies the completion of the Program's consultation review under EO 12-2015. Program staff upload final consultation documents to a developer's project folder on the Program's web application. Developers can access the final documentation from the web application and download documents, as desired. The project and all its related documentation is stored securely in the database and can be accessed at a future date, if needed. The review process is then finished, and the project review life cycle is completed.

Once a developer accesses their final documentation from the Program's web application, they can initiate the permit application process with the respective permitting agencies. Occasionally, permit agencies refer permit applicants back to the Program if the project details reviewed by the Program are different than what a developer described in their permit application. It has also been the case that developers make their own changes to projects. Developers can, at any time, re-engage the Program by logging back onto the web application and re-submitting the project into the *Due Diligence* stage.

Proponents are also able to withdraw their own projects at any time and for any reason (e.g. changed their mind). Proponents do not have to provide advanced notice or provide a reason for withdrawing their own projects. This has the effect of removing their project from the Program's review process and active workload. The Program may not withdraw a project on a proponent's behalf. Withdrawing of a project by a proponent does not signify a denial of consultation review or a rejection of the project by the Program. It simply means that a proponent has taken the step with withdraw a request for consultation on their own initiative. The choice to withdraw a project is not reflected in Figure 3 because, once withdrawn, a proposed development project is not actively worked on by the Program. However, a proponent can re-active a withdrawn project at any time, again, of their own accord.

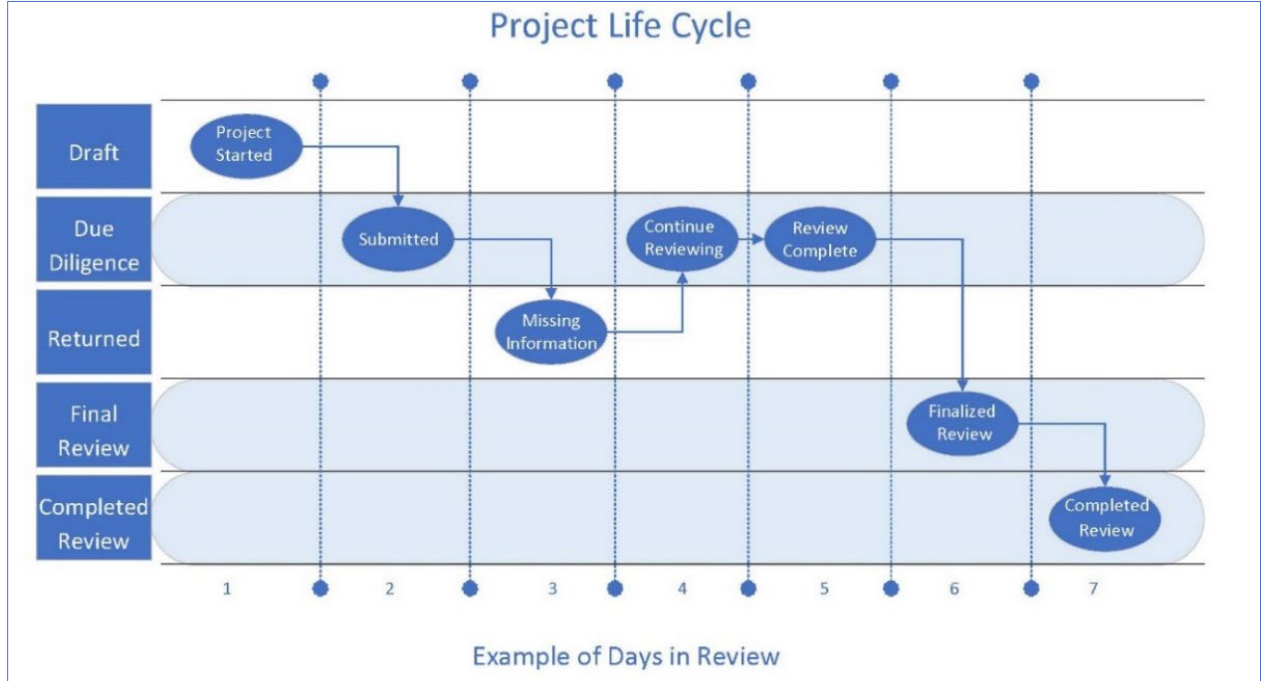


Figure 3. Process flowchart for the SG 2.0 web application, with an example illustrating how days in review are counted for a project that took seven days between when it was first submitted, and a consultation letter was completed and sent to the developer. The project would be considered “under review by the Program” for a total of five review days (i.e. Due Diligence stage for the second, fourth and fifth day, Final Review on the sixth day, and Completed Review on the seventh day).

Project Type Categories and Disturbance Types

Every development project submitted to the Program is described first as a Project Type, and then further defined by the individual disturbances (i.e. Disturbance Types) associated with that project. The Project Type category describes the primary purpose of the project. The Disturbance Types reflect the new individual disturbance features that are typically associated with the Project Type. For example, Project Type Energy-Wind entails construction of a new wind facility and individual disturbances necessary to construct a new wind facility may include turbines, new roads, new electrical lines, and a new substation (individual Disturbance Types). See Table 1 for a list of Project and Disturbance Types.

Table 1. List of Project Types and their associated Disturbance Types available to proponents through the SG 2.0 website.

Project Type	Associated Disturbance Types
Agriculture - Land	Building, Crop, Fence, Grazing, Livestock Area, Other, Power Line, Road, Unknown Polygon
Agriculture - Water	Building, Irrigation, Other, Pipeline, Power Line, Stock Pond, Stock Tank, Water Diversion, Water Well, Unknown Polygon
Energy - Geothermal	Building, Fence, Gathering Substation, Other, Pipeline, Power Line, Power Plant, Road, Storage Yard, Trench, Well, Unknown Polygon
Energy - Hydroelectric	Building, Fence, Maintenance Activities, Other, Pipeline, Pond, Power Line, Power Plant, Road, Spillway, Storage Yard, Substation, Trench, Unknown Polygon
Energy - Nuclear	Building, Fence, Other, Pipeline, Pond, Power Line, Power Plant, Road, Storage Yard, Substation, Trench, Unknown Polygon
Energy - Oil Shale	Building, Fence, Open Pit, Other, Pipeline, Pond, Power Line, Processing Facility, Railroad, Road, Well Pad, Unknown Polygon
Energy - Oil/Gas	Building, Central Battery System, Collection Facility, Compressor, Fence, Gas/Oil Well, Maintenance Activities, Other, Pipeline, Plug and Abandon, Pond, Power Line, Power Plant, Railroad, Road, Storage Yard, Temporary Abandonment, Well Pad, Unknown Polygon
Energy - Solar	Building, Fence, Field, Other, Pipeline, Power Line, Power Plant, Road, Substation, Unknown Polygon
Energy - Tar Sands	Building, Fence, Gravel Pit, Other, Pipeline, Pond, Power Line, Processing Facility, Railroad, Road, Storage Tank, Unknown Polygon
Energy - Wind	Building, Fence, Other, Pipeline, Power Line, Power Plant, Road, Storage Yard, Substation, Trench, Wind Turbine, Unknown Polygon
Forestry	Other, Timber Harvest, Unknown Polygon
Habitat Treatment	Fire, Mechanical, Other, Restoration, Unknown Polygon
Infrastructure - Communication	Building, Cable, Fence, Other, Power Line, Road, Storage Yard, Tower, Unknown Polygon
Infrastructure - Industrial/Commercial	Building, Gravel Pit, Other, Parking Area, Pipeline, Pond, Power Line, Road, Storage Yard, Unknown Polygon
Infrastructure - Military	Base, Building, Other, Parking Area, Pipeline, Power Line, Range, Road, Storage Yard, Unknown Polygon
Infrastructure - Pipeline (Major)	Building, Compressor, Fence, Other, Pigging Facility / Launcher, Pipeline, Pond, Power Line, Road, Storage Yard, Trench, Unknown Polygon
Infrastructure - Recreation	Building, Motorized/OHV Road, Motorized/OHV Trail, Other, Parking Area, Pipeline, Power Line, Unknown Polygon
Infrastructure - Residential	Building, Other, Park, Parking Area, Pipeline, Pond, Power Line, Road, Septic System, Subdivision Area, Water Storage, Water Well, Unknown Polygon
Infrastructure - Transmission Line	Fence, Other, Power Line, Road, Storage Yard, Substation, Tower, Unknown Polygon
Infrastructure - Transportation	Airport Radio Tower, Airport Runway, Borrow Pit, Bridge, Building, Culvert, Interstate Highway, Other, Parking Area, Pipeline, Railroad Mainline, Railroad Spur, Road, Storage Yard, Unknown Polygon
Mining	Building, Core Hole, Fence, Gravel Pit, Mine, Monitoring Well, Other, Pipeline, Pond, Power Line, Power Plant, Railroad, Road, Shaft, Storage Yard, Stormwater Discharge Outlet Pipe, Trench, Waste Rock / Tailings / Overburden, Water Well, Unknown Polygon

SUMMARY OF 2019 CONSULTATION ACTIVITIES

The SG 2.0 website and associated database provides interactive user tools, conducts automated analyses, and serves as a repository for sage grouse consultation review information. These three main functions yield the secured data the Program uses to create this report. These data were analyzed to create two unique summaries:

1. general metrics about the Program's consultation activities; and
2. specific metrics about development projects attaining *Completed Review* status by December 31, 2019.

General metrics about the Program's consultation activities provide insights into the consultation review process itself, Program performance metrics, and where development projects are being proposed. Specific metrics about projects in *Completed Review* provide insights into what kinds of future development may occur and where in designated sage grouse habitat. For this annual report, the Program has filtered data to maintain consistency and replicability and reports 2019 data only.

It is critical to note that the data included in this report are strictly for proposed projects, not implemented projects. It is likely that many of the projects reviewed are implemented within a short time frame of completing the consultation process. However, there are no existing mechanisms in place for the Program to monitor implementation status of the reviewed proposed

projects, as permit issuance and project implementation occur completely outside of the established review process (Figure 2).

This disparity in time introduces unique nuances to data presentation in this report, where the data for such proposed projects may serve as an index for future disturbance on the landscape in sage grouse habitat. Reported data for proposed projects should not be understood as disturbance currently on the landscape.

Data Preparation Methods

Information reported below on the general metrics of consultation and Program performance and on specific project metrics are derived using the SG2.0 database. Specific SQL queries will either include or filter out specific data or projects according to the metric of interest.

As shown in Figure 3 above, every development submitted through the web application follows a common work flow, beginning with Draft. Draft is a stage that is a virtual sandbox for project proponents whom have not formally submitted their project for review. While the information is stored in the SG 2.0 database, the Program does not report on such projects and associated activities because the formal review process has not been initiated by the project proponent at this point. Therefore, projects still in the Draft stage are filtered out.

The review stages that are included in the dataset are Due Diligence, Final Review, Completed Review, Returned, and Withdrawn (Figure 3). The web application auto-calculates how many days a project is in each review stage based on the date/time stamp of when it transitions from one review stage to the next. Program performance metrics are based on these auto-calculations.

Other filters that were used restricted projects to ranges of submission dates (Due Diligence) and completion dates (Completed Review). This allowed for the identification of projects that were being actively reviewed (Due Diligence, Final Review) during 2019. This includes projects that were submitted in 2018 and completed in 2019 as well as projects that were still being reviewed at the end of 2019.

Lastly, as shown in Table 1, each major project type may have more than one individual disturbance associated with it. Specific metrics about Project Types and their associated disturbances are based on projects which attained a Completed Review stage, meaning the Program completed its work and provided written documentation to proponents.

General Metrics: Consultations and Program Performance

The Program received 381 projects proposed in designated sage grouse habitat requiring sage grouse consultation in 2019 (Figure 4). Additionally, for two projects, Program review was initiated in 2018 but not completed until 2019, resulting in a total of 383 Projects requiring sage grouse consultation in 2019.

Of the 383 proposed projects, the Program completed sage grouse reviews for 288 projects (75%). Of the remaining 95 proposed projects, the Program continued sage grouse reviews for 68 proposed projects into 2020.

At the close of 2019, the Program was actively reviewing (e.g., Due Diligence or Final Review) 13 of the 68 proposed projects and was waiting for additional information necessary to complete the review from project proponents for the remaining 55 proposed projects.

Lastly, 27 proposed projects were withdrawn from the Program's web application and subsequently from the sage grouse consultation review process by the developer.

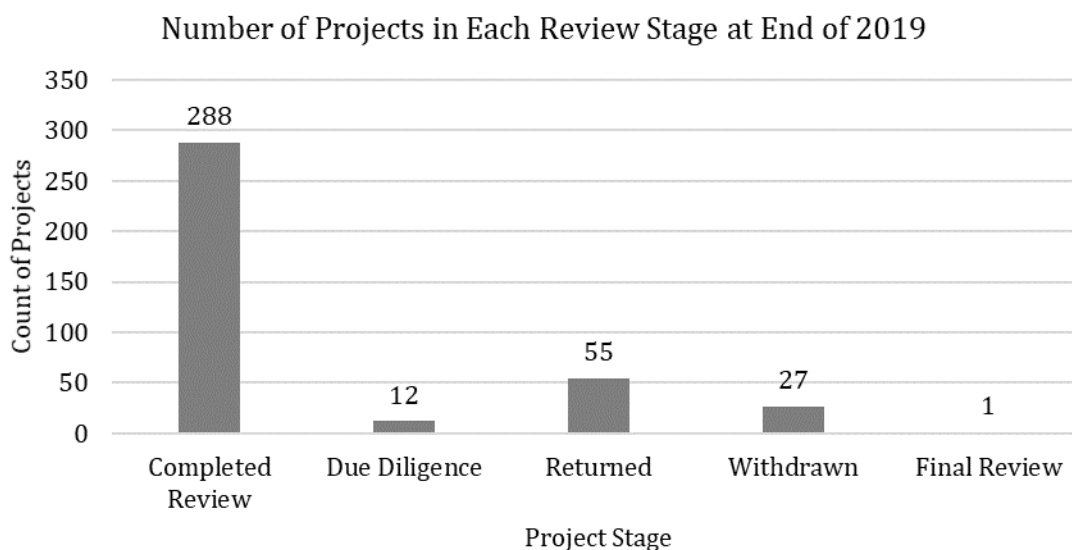


Figure 4. The Program received a total of 381 projects located in designated EO habitat to review during 2019. Additionally, the review for two projects originally submitted in 2018 were carried over in to 2019. As of December 31, 2019, the Program completed reviews for 288 projects with the remaining 95 projects in either Due Diligence (Program is still reviewing the project), Returned (developer is gathering the additional information need for the Program to complete a review), Withdrawn (developer has withdrawn the project of their own accord and for their own reasons), or Final Review (Program is undertaking the final quality control / quality assurance steps).

Project Review Status by EO Designated Habitat

Of the 383 proposed projects reviewed by the Program in 2019, 72% were in General Habitat (n = 277 projects), 28% were in a Core Area (n = 106 projects). See Figure 5. Of the 277 proposed projects located in General Habitat, the Program completed review for 78% of the projects by the end of 2019 (n = 215 projects). For the remaining 61 proposed projects, the Program was actively reviewing (i.e., Due Diligence) nine projects (3%), was waiting for additional information necessary to complete the review from proponents for 34 projects (12%), and 19 projects were withdrawn from Program's web application by the proponent (7%) by the close of 2019.

Of the 106 proposed projects located in a Core Area, the Program completed reviews for 69% (n = 73 projects) by the end of 2019. For the remaining 33 proposed projects, the Program was actively reviewing four projects (4%), was waiting for additional information necessary to complete the review from proponents for 21 projects (20%), and 8 projects were withdrawn from the Program's web application by the proponent (8%).

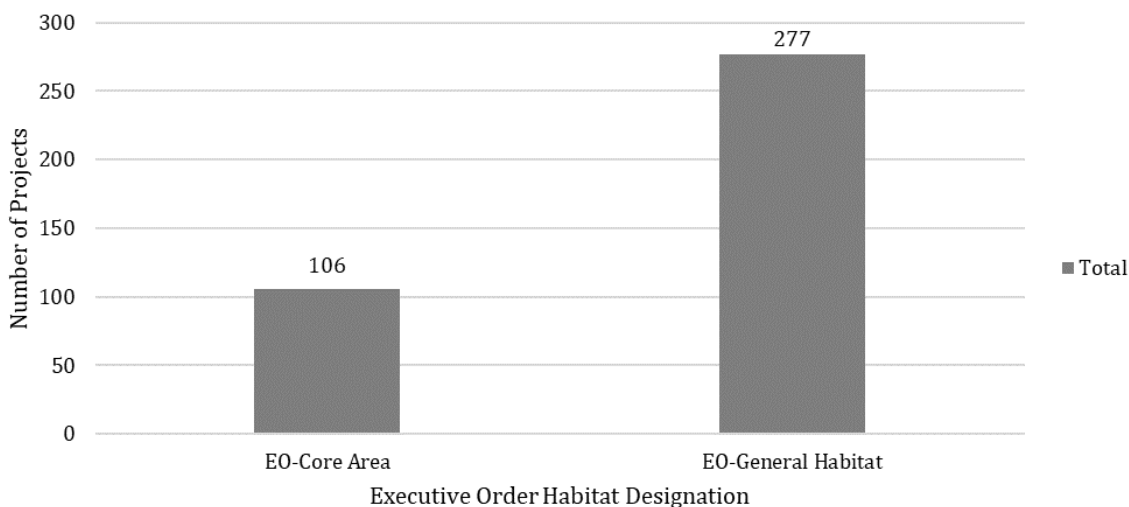


Figure 5. Of the 383 proposed projects reviewed by the Program in 2019, 277 projects were proposed in General Habitat and 106 projects were proposed in a Core Area. No projects were proposed in a Connectivity Area.

Efficacy of the Program Review Process

The Program tracks the review time for each proposed project once submitted to the Program for review (i.e., Due Diligence). For purposes of this report, the Active Review Time for a given proposed project is composed of the number of days the project spends in Due Diligence and Final Review with the clock stopping once the project transitions to Completed Review. Some proposed projects enter the Returned Stage, allowing Proponents to submit additional information about their proposed project deemed necessary for the Program to complete the review. The Program tracks the time spent in the Returned Stage separately from the Active Review Time.

Of the 288 proposed projects for which the Program completed reviews in 2019, 83% (n = 238) of the projects were reviewed within 42 active review days (6 weeks) (Figure 6). Overall, of the 73 projects located in a Core Area with completed reviews in 2019, 81% (n = 59 projects) reached Completed review within 42 active review days. This percentage increased slightly for projects located in General Habitat with completed reviews in 2019 (n = 215 projects) to 84% (n = 181 projects) of projects being completed within 42 active review days.

The Program works in close coordination with proponents through the consultation process for each project review. The Program can request additional information from proponents using a project review stage called “Return”. By returning the project, the proponent can add or submit additional information or clarify any questions the Program may have relevant to complete the assessments of any impacts from the project on sage grouse habitat. The total number of review days (i.e., days in Active Review + days in Returned Stage) across all projects with completed reviews during 2019 was 8,191 days. Of the 8,191 review days in 2019, 15% (n = 1,207 days) of the total review days were spent in the Returned status, allowing proponents to address any Program questions or submit additional information (Figure 7).

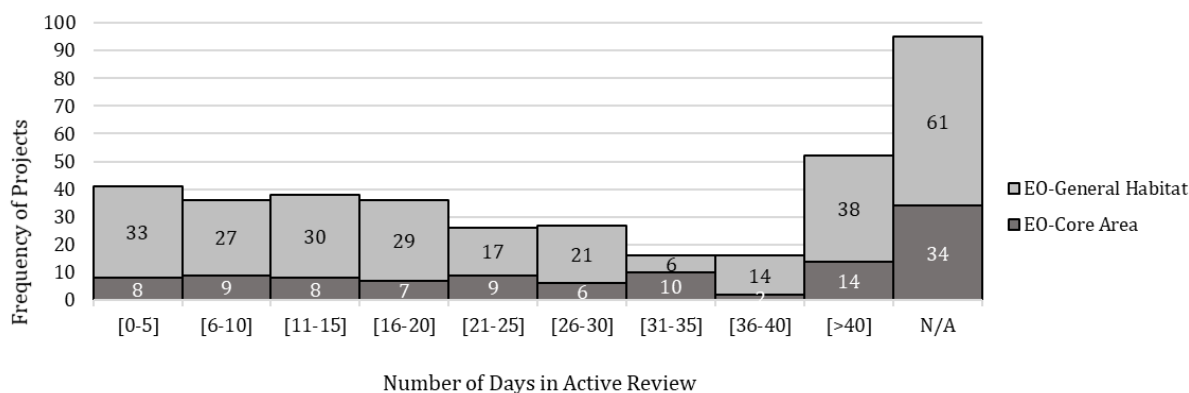


Figure 6. The number of all projects that either were submitted to the Program for review in 2019 (n=381) or for which review carried over from 2018 to 2019 (n=2) in all Designated Sage Grouse Habitat (Core Area = dark gray, General Habitat = gray) according to the number of days those projects spent in Active Review status (i.e. Due Diligence). Of the total 323 projects considered for review in 2018, the Program completed reviews for a total of 288 projects. Of the 288 projects for which the Program completed reviews in 2019, approximately 83% (n=240) were reviewed within 42 active review days of being submitted by the proponent to the Program for review.

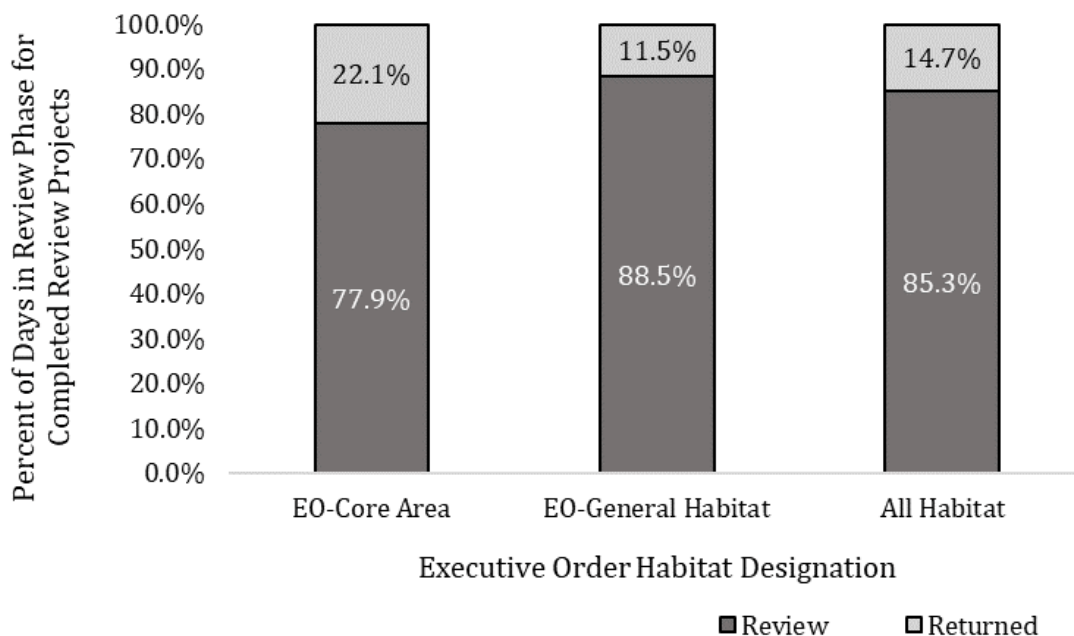


Figure 7. The total number of review days (i.e., days in Active Review + days in Returned Stage) across all projects reviewed in 2019 was 8,191 days, with 1,207 days spent in the Returned status (light gray) allowing proponents to address any Program questions or submit additional information.

Specific Metrics: Development Projects Reviewed in 2019

This section presents a more detailed consideration of projects for which reviews were completed in 2019. This enables consideration of development that is likely to occur within designated habitat at some point in the future.

The following discussion focuses on specific categories of Project Types and their associated disturbance activities (i.e., Disturbance Types) as submitted by proponents through the web application for Program review (see Table 1 above). All the projects reported in this section attained *Completed Review* status and received written documentation from the Program by the end of 2019. It may include projects that were originally submitted for review in calendar year 2018 and carried forward into 2019.

Project Information by Project Type

The Project Types explicitly discussed in this section represent some of the most common Project Types for which the Program conducts sage grouse consultation reviews. These Project Types include five proposed Agriculture – Land projects, 39 proposed Agriculture – Water projects, 94 proposed Energy – Oil/Gas projects, 29 proposed Infrastructure – Communication projects, 12 proposed Infrastructure – Industrial/Commercial projects, four proposed Infrastructure – Pipeline (Major) projects, five proposed Infrastructure – Transmission Line projects, 17 proposed Infrastructure – Transportation projects, and 30 proposed Mining projects (Figure 8). While there were 33 proposed Residential projects, most of those projects are exempt from sage grouse consultation review per Executive Order 12-2015.

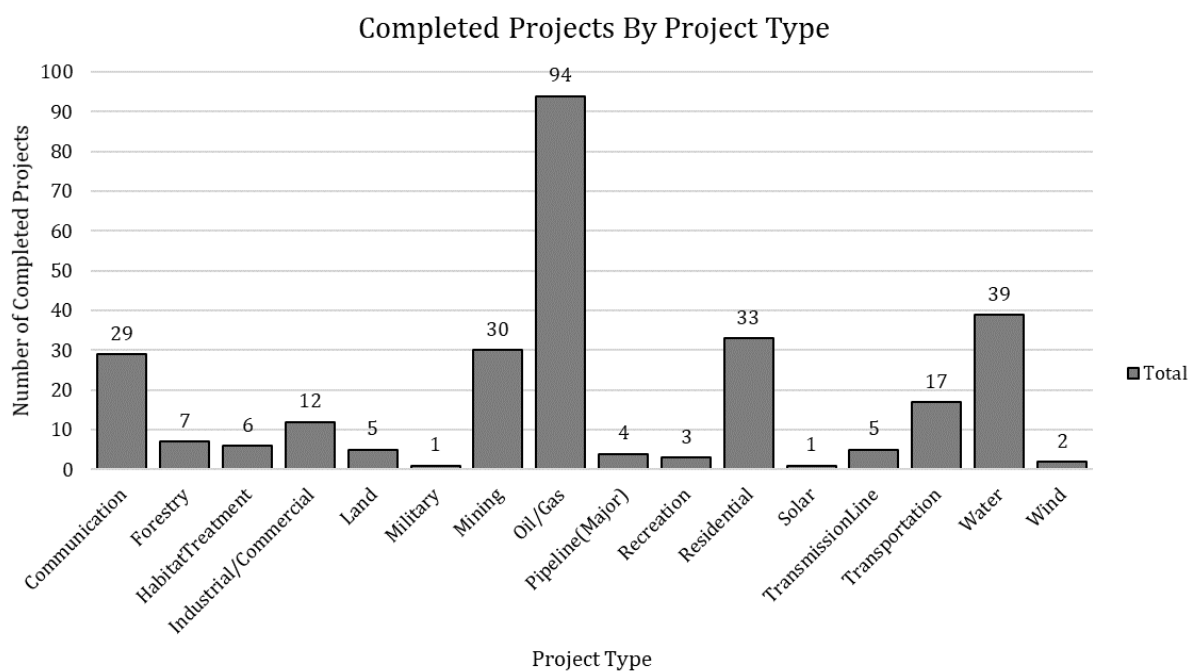


Figure 8. The number of all Projects for which the Program completed review in 2019, broken out by the Project Type selected by project proponents (n=288).

Agriculture (Land & Water) Projects

During 2019, the Program completed reviews for 44 proposed Agriculture Projects, including five Agriculture – Land Projects and 39 Agriculture – Water Projects. Approximately 40% of proposed Agriculture – Land Projects were located in a Core Area (n = 2 projects) and 60% were located in General Habitat (n = 3 projects). Whereas, approximately 51% of proposed Agriculture – Water Projects were located in a Core Area (n = 20 projects) and 49% were located in General Habitat (n = 20 projects). Overall, the total number of Agriculture Projects were split evenly between Core Areas and General Habitat.

Agriculture Projects may encompass a variety of proposed infrastructure and/or activities necessary for project implementation. Some common infrastructure associated with Agriculture – Land Projects may include Crops, Grazing, Livestock Areas, Roads, Buildings, Power Lines, and Fences. Most of the proposed Agriculture – Land Projects included Crops, Grazing, and Livestock Areas (Table 2). Some common infrastructure associated with Agriculture – Water Projects may include Irrigation, Stock Ponds, Stock Tanks, Pipelines, Water Diversions, Water Wells, Power Lines, and Buildings. Most of the proposed Agriculture – Water Projects included Pipelines (e.g., water pipelines), Irrigation, and Stock Ponds.

Table 2. The Program completed a review for a total of 44 proposed Agriculture projects in 2019. Five of which were Agriculture – Land projects and 39 of which were Agriculture – Water projects. Of the five proposed Agriculture – Land projects, two were located in a Core Area and three were located in General Habitat. Of the 39 proposed Agriculture – Water projects, 20 were located in a Core Area and 19 were located in General Habitat. Of the 44 proposed Agriculture projects, each project contained various proposed activities necessary to implement the proposed Agriculture project. The Agriculture – Land Projects proposed a variety of activities to implement, with most involving livestock. The majority of proposed Agriculture – Water Projects involved water pipelines and stock tanks.

Diversity of Activities Associated with Agriculture Projects	EO Designated Sage Grouse Habitat Classification			
	Core Area	General Habitat	Connectivity Area	All Habitat
Agriculture – Land				
Crops	1	0	0	1
Grazing	0	1	0	1
Livestock Areas	0	2	0	2
Roads	1	0	0	1
Agriculture – Water				
Building	0	2	0	2
Irrigation	1	1	0	2
Pipeline (e.g., water pipeline)	33	18	0	51
Stock Pond	1	2	0	3
Stock Tank	23	8	0	31
Water Diversion	1	5	0	6
Water Well	1	0	0	1

Energy – Oil/Gas Projects

During 2019, the Program completed reviews for 94 proposed Energy – Oil/Gas Projects. Approximately 31% of the proposed Oil/Gas Projects were located in a Core Area (n = 29 projects) and 69% were located in General Habitat (n = 65 projects). Therefore, of the Oil/Gas Projects proposed in sage grouse habitat, most were located in General Habitat, thereby avoiding some of the highest quality habitat in Core Areas.

Oil/Gas Projects may encompass a variety of proposed infrastructure and activities necessary for project implementation. Within the Montana Sage Grouse Website Application, such associated infrastructure or activities may include Gas/Oil Wells, Well Pads, Temporary Abandonment, Plug and Abandon, Roads, Storage Yards, Fences, Ponds, Pipelines, Power Lines, Maintenance Activities, Buildings, Compressors, or Collection Facilities (Table 3).

Table 3. The Program completed a review for a total of 94 proposed Energy – Oil/Gas Projects in 2019. Of these, 29 were located in a Core Area and 65 were located in General Habitat. Some of those 95 proposed Energy – Oil/Gas Projects contained various proposed activities necessary to implement the proposed Oil/Gas Project. Most Oil/Gas Projects proposed various Gas/Oil Wells or Well Pads. Some were newly proposed structures, and some were proposed maintenance on existing well structures.

Diversity of Activities Associated with Energy – Oil/Gas Projects*	EO Designated Sage Grouse Habitat Classification			
	Core Area	General Habitat	Connectivity Area	All Habitat
Gas/Oil Well	11	48	0	59
Maintenance Activities	0	3	0	3
Pipeline	11	6	0	17
Plug and Abandon	0	23	0	23
Power Line	1	4	0	5
Road	8	8	0	16
Storage Yard	4	0	0	4
Well Pad	15	13	0	28

Infrastructure – Communication Projects

During 2019, the Program completed reviews for 29 proposed Communication Projects. Approximately 17% of the proposed Communication Projects were located in a Core Area (n=5) and approximately 83% were located in General Habitat (n=24). Communication Projects may encompass a variety of proposed infrastructure and activities necessary for project implementation. Within Montana Sage Grouse Website Application, such associated infrastructure may include Towers, Cables, access Roads, Fences, Buildings, Power Lines, and Storage Yards.

Communication Projects vary greatly with their long-term and indirect impacts to sage grouse habitat. While Fiber Optic Cables may be buried and remain underground for many years, their aboveground disturbance is short-term. In this aspect, Communication Projects proposing to bury Fiber Optic Cables (or other types of utilities) decrease the potential indirect impact by shortening

or eliminating any long-term aboveground disturbance. However, Tall Structures present a very unique set of long-term indirect impacts on sage grouse habitat. While they occupy a relatively small physical space on the ground, they provide vast and long-term indirect impacts due to their height and persistence on the landscape (Table 4).

Table 4. The Program completed a review for a total of 29 proposed Communication Projects in 2019. Of these, five were located in a Core Area and 24 were located in General Habitat. Of those 29 proposed projects, each contained various proposed activities necessary to implement the Communication Project. The majority of Communication Projects involved Fiber Optic Cable installation. Other infrastructure associated infrastructure included Fences, access Roads, and Towers.

Diversity of Activities Associated with Communication Projects*	EO Designated Sage Grouse Habitat Classification			
	Core Area	General Habitat	Connectivity Area	All Habitat
Fiber Optic Cables	175	186	0	361
Fences	0	1	0	1
Roads	0	1	0	1
Towers (i.e., Tall Structures)	0	1	0	1

Infrastructure – Industrial/Commercial Projects

During 2019, the Program completed reviews for 12 proposed Infrastructure – Industrial/Commercial Projects. Approximately 25% of the proposed Industrial/Commercial Projects were located in a Core Area (n = 3 project) and 75% were located in General Habitat (n = 9 projects). Therefore, of the Industrial/Commercial Projects proposed in sage grouse habitat, most were located in General Habitat, thereby avoiding some of the highest quality sage grouse habitat in Core Areas.

Industrial/Commercial Projects may encompass a variety of proposed infrastructure and activities necessary for project implementation. Within the Montana Sage Grouse Website Application, such associated infrastructure or activities for Industrial/Commercial Projects may include Buildings, Gravel Pits, Parking Areas, Pipelines, Ponds, Power Lines, Roads, and Storage Yards. The majority of the proposed Industrial/Commercial Projects included construction of or activities involving Pipelines, Parking Areas, Storage Yards, Buildings, Powerlines, and access Roads. Occasional infrastructure included Gravel Pits and Ponds (Table 5).

Table 5. The Program completed a review for a total of 12 proposed Infrastructure – Industrial/Commercial Projects in 2019. Of these, three was located in a Core Area and nine were located in General Habitat. Many of these 12 proposed Infrastructure – Industrial/Commercial Projects contained various proposed activities necessary to implement the Industrial/Commercial Project. Most Industrial/Commercial Projects proposed construction of Pipelines, Parking Areas, and Storage Yards.

Diversity of Activities Associated with Infrastructure – Industrial/Commercial Projects*	EO Designated Sage Grouse Habitat Classification			
	Core Area	General Habitat	Connectivity Area	All Habitat
Building	1	2	0	3
Gravel Pit	0	2	0	2
Parking Area	1	3	0	4
Pipeline	2	8	0	10
Pond	0	2	0	2
Power Line	0	3	0	3
Road	0	3	0	3
Storage Yard	0	4	0	4

Infrastructure – Pipeline (Major) Projects

During 2019, the Program completed reviews for four proposed Infrastructure – Pipeline (Major) Projects. Approximately 25% of the proposed Pipeline (Major) Projects were located in a Core Area (n = 1 project) and 75% were located in General Habitat (n = 3 projects). Pipeline (Major) Projects may encompass a variety of proposed infrastructure and activities necessary for project implementation. Within the Montana Sage Grouse Website Application, such associated infrastructure or activities, in addition to Pipelines, may include Buildings, Compressors, Fences, Piggling Facilities / Launchers, Ponds, Power Lines, Roads, Storage Yards, and Trenches. The vast majority of the proposed Pipeline (Major) Projects included construction or maintenance of a Pipeline. Most of the projects contained ancillary infrastructure, including Buildings, Compressor stations, and Trenches.

Provided that a pipeline is buried and can remain underground for the life of the project after initial construction and installation, the aboveground disturbance of Pipeline (Major) Projects is relatively short-term. In this aspect, Pipeline (Major) Projects proposing to bury a pipeline, decrease the direct impact and indirect impact by shortening or eliminating any long-term aboveground disturbance structures (Table 6).

Table 6. The Program completed a review for a total of four proposed Infrastructure – Pipeline (Major) Projects in 2019. Of these, one was located in a Core Area and three were located in General Habitat. Many of the four proposed Infrastructure – Pipeline (Major) Projects contained various proposed activities necessary to implement the Pipeline (Major) Project. In addition to the majority of Pipeline (Major) projects proposing installation of pipelines, associated infrastructure often included Buildings, Compressor stations, and Trenches.

Diversity of Activities Associated with Infrastructure – Pipeline (Major) Projects*	EO Designated Sage Grouse Habitat Classification			
	Core Area	General Habitat	Connectivity Area	All Habitat
Building	0	3	0	3
Compressor	1	0	0	1
Pipeline	0	75	0	75
Trench	11	0	0	11

Infrastructure – Transmission Line Projects

During 2019, the Program completed reviews for five proposed Infrastructure – Transmission Line Projects. All the proposed Infrastructure – Transmission Line Projects were located in General Habitat for sage grouse. There were no proposed projects located in a Core Area. Transmission Line Projects may encompass a variety of proposed infrastructure and activities necessary for project implementation. Within the Montana Sage Grouse Website Application, such associated infrastructure or activities, in addition to Power Lines, may include Fences, Roads, Storage Yards, Substations, and Towers.

Transmission Line Projects may contain Power Lines that can be aboveground or buried depending on a variety of factors as determined by the project proponents. While the duration for the buried Power Lines may also be > 25 years, by burying the Power Lines, proponents effectively and substantially decrease the surface disturbance duration from permanent (e.g., > 25 years) to the year of construction and installation of the Power Lines. In this respect, Transmission Line Projects proposing to bury Power Lines, decrease the direct impact and indirect impact by shortening or eliminating any long-term aboveground disturbance structures (Table 7).

Table 7. The Program completed a review for a total of five proposed Infrastructure – Transmission Line Projects in 2019. All five of these proposed projects were located in General Habitat. The majority of Infrastructure – Transmission Line Projects involved the construction or maintenance of Power Lines. Additional associated infrastructure necessary to implement the proposed Transmission Line Projects included access Roads and Storage Yards.

Diversity of Activities Associated with Infrastructure – Transmission Line Projects*	EO Designated Sage Grouse Habitat Classification			
	Core Area	General Habitat	Connectivity Area	All Habitat
Power Line	0	17	0	17
Road	0	9	0	9
Storage Yard	0	3	0	3

Infrastructure – Transportation Projects

During 2019, the Program completed reviews for 17 proposed Infrastructure – Transportation Projects. Approximately 12% of the proposed Transportation Projects were located in a Core Area (n = 2 projects) and 88% were located in General Habitat (n = 15 projects). Therefore, of the Transportation Projects proposed in sage grouse habitat, most were located in General Habitat, thereby avoiding some of the highest quality habitat in Core Areas.

Transportation Projects may encompass a variety of proposed infrastructure and activities necessary for project implementation. Within the Montana Sage Grouse Website Application, such associated infrastructure or activities may include Airport Radio Towers, Airport Runways, Borrow Pits, Bridges, Buildings, Culverts, Interstate Highways, Parking Areas, Pipelines, Railroad Mainlines, Railroad Spurs, Roads, and Storage Yards.

The vast majority of the proposed Infrastructure – Transportation Projects involved the construction of new roads or miscellaneous maintenance activities associated with existing roads. Additional ancillary disturbances included Airport Runways, Borrow Pits, Bridges, and Parking Areas (Table 8).

Table 8. The Program completed a review for a total of 17 proposed Infrastructure – Transportation Projects in 2019. Of these, two were located in a Core Area and 15 were located in General Habitat. Some of these 17 Infrastructure – Transportation Projects contained various proposed activities necessary to implement the Transportation Project. In addition to the majority of Transportation Projects proposing construction or maintenance of minor roads, additional project activities included Airport Runways, Borrow Pits, Bridges, Highways, and Parking Areas.

Diversity of Activities Associated with Infrastructure – Transportation Projects*	EO Designated Sage Grouse Habitat Classification			
	Core Area	General Habitat	Connectivity Area	All Habitat
Airport Runway	0	2	0	2
Borrow Pit	0	1	0	1
Bridge	0	1	0	1
Interstate Highway	2	5	0	7
Parking Area	0	3	0	3
Road	44	47	0	91

Mining Projects

During 2019, the Program completed reviews for 30 proposed Mining Projects. Approximately 13% of the proposed Mining Projects were located in a Core Area (n = 4 projects) and 87% were located in General Habitat (n = 26 projects). Therefore, of the Mining Projects proposed in sage grouse habitat, most were located in General Habitat, thereby avoiding some of the highest quality sage grouse habitat in Core Areas.

Mining Projects may encompass a variety of proposed infrastructure and activities necessary for project implementation. Within the Montana Sage Grouse Website Application, such associated infrastructure or activities for Mining Projects may include Buildings, Core Holes, Fences, Gravel

Pits, Mines, Monitoring Wells, Pipelines, Ponds, Power Lines, Power Plants, Railroads, Roads, Shafts, Storage Yards, Stormwater Discharge Outlet Pipes, Trenches, Waste Rock / Tailings / Overburden, and Water Wells. The majority of the proposed Mining Projects included construction of or activities involving Core Holes and Gravel Pits. Occasional new or existing infrastructure included access Roads, Ponds, and Waste Rock/Tailings/Overburden (Table 9).

Table 9. The Program completed a review for a total of 30 proposed Mining Projects in 2019. Of these, 4 were located in a Core Area and 26 were located in General Habitat. Some of these 50 Mining Projects contained various proposed activities necessary to implement the Mining Project. The majority of Mining Projects proposed construction of a Core Hole or a Gravel Pit, with additional infrastructure including access Roads, Ponds, and Waste Rock/Tailings/Overburden.

Diversity of Activities Associated with Mining Projects*	EO Designated Sage Grouse Habitat Classification			
	Core Area	General Habitat	Connectivity Area	All Habitat
Core Hole	12	19	0	31
Gravel Pit	2	19	0	21
Mine	1	6	0	7
Pond	0	1	0	1
Road	2	19	0	21
Waste Rock / Tailings / Overburden	0	9	0	9

MITIGATION: BALANCING CONSERVATION AND DEVELOPMENT

Introduction and Summary of How the Mitigation Framework was Developed

The Stewardship Act is the second key pillar of Montana’s Sage Grouse Conservation Strategy. The Montana Legislature found that the Stewardship Act “is in the best interests of Montana’s economy, the economic stability of school trust lands, and sage grouse conservation and management” and that compensatory mitigation will also incentivize project developers to undertake voluntary conservation measures. A stated purpose of the Act is also to “provide competitive grant funding and establish ongoing free-market mechanisms for voluntary, incentive-based conservation measures that emphasize maintaining, enhancing, restoring, expanding, and benefitting sage grouse habitat and populations on private lands, and public lands as needed.”² In conjunction with MCA 2-15-243, the Act charges MSGOT with certain duties. The Act also authorizes MSGOT to adopt administrative rules to implement the Act’s Stewardship Account grants and compensatory mitigation.

Two main sections provide for: 1. the Stewardship Account, which is a state special revenue fund to incentivize habitat conservation primarily on private lands; and 2. that allowing project developers to provide compensatory mitigation to offset impacts of their development can also incentive voluntary conservation. Each is discussed in greater detail below.

² See Mont. Code Ann. §§ 76-22-102, 111 (2019).

The goal of Montana's Greater Sage-Grouse Conservation Strategy is to maintain viable sage grouse populations and conserve habitat so that Montana maintains flexibility to manage its own lands, wildlife and economy and so that a listing or designation as a candidate species under the federal Endangered Species Act is not warranted in the future. This goal is complimentary to goals and objectives set forth in BLM and USFS land use plans, respectively. Effective mitigation can promote both rangeland health and responsible economic development.

Implementation of the full mitigation hierarchy (sequence) - avoidance, minimization, reclamation, and compensation - using a systematic approach is an important facet of Montana's Conservation Strategy to address the threat of habitat loss, degradation, and fragmentation while at the same time allowing development and economic activity in Montana's sage grouse habitats. Mitigation is one tool, among many, included in Montana's conservation toolbox.

The Stewardship Act and EO 12-2015 establish that Montana will observe the mitigation hierarchy (sequence) with respect to activities subject to agency review, approval, or authorization in habitats designated as Core Area, General Habitat, or Connectivity Area for sage grouse conservation. The mitigation sequence applies to all designated habitats, but less rigorous standards apply to General Habitat and Connectivity Areas. Mitigation is required even if the adverse impacts to sage grouse are indirect or temporary.

The Act specifically sets forth several key requirements:

1. project developers can offset the loss of resource functions or values at an impact or project site through compensatory mitigation to incentivize voluntary conservation measures for sage grouse habitat and populations;
2. a habitat quantification tool will be designated to evaluate vegetation and environmental conditions related to the quality and quantity of sage grouse habitat and to calculate the value of credits and debits when compensatory mitigation is required;
3. there shall be a method to track and maintain the number of credits and debits available and used; and
4. there shall be a method to administer the review and monitoring of MSGOT funded projects using the Stewardship Fund. Rulemaking authority was also provided to MSGOT to adopt administrative rules.

From 2016-2018, Program worked with a large group of diverse stakeholders to develop approaches to incentivize habitat conservation and proactive planning by landowners and project developers. A small committee assisted the Program by helping to guide the stakeholder process. The steering committee was comprised of a representative from Denbury Resources, the Nature Conservancy, Willamette Partnership, SWCA Environmental Consultants, and the Program. Willamette Partnership and SWCA Environmental Consultants have considerable professional expertise in mitigation systems and further served in the capacity of "professional collaborators." Willamette Partnership had the lead role for drafting the policy guidance document based on the stakeholder discussions, while SWCA Environmental Consultants had the lead role for creating the conceptual HQT GIS-based model and drafting the HQT manual. The stakeholder process culminated with the transfer of the draft conceptual HQT model and supporting document to the State on approximately November 20, 2017. A draft policy guidance document was also transferred at approximately the same time.

The State then began to develop and write computer code to implement the conceptual model developed by SWCA and stakeholders, so the conceptual model could be applied to a variety of project types. The state also conducted a thorough literature review to further define and refine indirect impact buffers identified by stakeholders and completed test of hypothetical development projects to correct technical errors or coding bugs.

Stakeholder engagement was significant from 2016 to 2018. Opportunities included multi-day in person meetings, webinars, conference calls and multiple public comment opportunities on draft documents, as the documents and HQT were developed and evolved. Appendix B (Montana Conservation Strategy: 2015-2019 Implementation Chronology) notes key stakeholder engagement opportunities from September 2016 to December 2018. As importantly, the mitigation framework appeared on MSGOT's agenda seven times throughout the development period. Additionally, independent peer reviews were solicited from 10-12 subject matter experts in mitigation and sage grouse ecology in the summer of 2018.

Development of an integral component of the mitigation program, the Draft Montana Mitigation System Habitat Quantification Tool (HQT) Technical Manual for Greater Sage-Grouse, the associated draft HQT computer-based model, and the Draft Montana Mitigation System Policy Guidance Document for Greater Sage-Grouse, respectively, were significant outcomes of the stakeholder process.

The HQT is a GIS-based model that will become the scientific method used to evaluate the vegetation and environmental conditions related to the quality and quantity of habitat for both credit and debit projects, as required by the Stewardship Act.³ The HQT estimates functional acres gained as a result of conservation activities, as well as functional acres lost to sage grouse habitat as a result of development. The HQT itself is objective and policy-neutral. HQT results work in concert with the Policy Guidance Document.

The Policy Guidance Document outlines the process to develop credits, assess final debit obligations, and apply the letter and intent of the EO to all applicable activities in sage grouse habitat. The Policy Guidance Document incorporates key principles universal to all mitigation programs. The Policy Guidance Document sets forth key provisions that create voluntary conservation incentives, contains guidance for both credit providers and developers for how Montana's mitigation framework will be implemented.

On October 31, 2018, MSGOT approved Program adoption of the October 2018 version 1.0 Policy Guidance Document and the October 2018 version 1.0 Habitat Quantification Tool Technical Manual. This approval set in motion the administrative rulemaking process and publication of draft rules for public comment pursuant to the Montana Administrative Procedures Act. Likely because of the significant public involvement during the 2016-2018 stakeholder process to develop the mitigation framework and accompanying documents, very little public comment on the proposed rules was received. On December 31, 2018, MSGOT adopted final administrative rules designated the HQT and related elements of Montana's mitigation framework. The rules took effect January 11, 2019. Both mitigation documents and final administrative rules are published on MSGOT's webpage.

With the adoption of final rules in December 2018, MSGOT directed the Program to undertake the necessary steps to implement the mitigation framework. In truth, the Program had already begun

³ Mont. Code Ann. § 76-22-103(9) (2019).

developing standardized, consistent protocols, procedures, and recordkeeping during the second half of 2018. The Program also started developing the technical requirements for updating the existing SG2.0 web application to incorporate the mitigation framework and a registry.

In March 2019, the Program released a request for proposals (RFP) to solicit bids from potential contractors. Several responses were received. Ultimately, Sitka Technologies was selected, and a contract was executed in June 2019. Because Sitka Technologies had designed and built SG1.0, they were able to hit the ground running. The Program worked closely with Sitka Technologies throughout the second half of 2019 to prepare an initial batch of enhancements and improvements to the existing web application that would be released in January 2020. The work plan would then have Sitka Technologies and the Program work intensively on developing and integrating the HQT and mitigation, Stewardship Account grants, and the registry in 2020.

Key Elements in Montana's Mitigation System

Mitigation is one tool, among many, included in Montana's conservation toolbox. When mitigation is timely and effective, habitat loss and fragmentation due to development is offset so that the quantity and quality of habitat for sage grouse is at least maintained. This goal is complimentary to goals and objectives set forth in BLM and USFS land use plans, respectively.

Montana's Mitigation System is derived from and informed by both state and federal guidance. This Mitigation System incentivizes voluntary conservation activity to increase the quantity and quality of sage grouse habitat while simultaneously incentivizing conservation by project developers through implementation of the mitigation hierarchy where impacts are offset (Figure 9). Implementation of the full mitigation hierarchy – avoidance, minimization, reclamation, and compensation using a systematic approach directly and effectively addresses the threat of habitat loss, degradation, and fragmentation while at the same time allowing development and economic activity in Montana's sage grouse habitats.

A mitigation marketplace provides a platform where conservation actors and developers exchange credits and debits based on free market principles and in ways that incentive voluntary conservation. Developers are incentivized to keep mitigation obligations as low as possible, which is accomplished by thoughtful project siting and implementation to avoid high quality habitats and steer towards areas of existing surface disturbance, along with implementing the development project as consistently with EO 12-2015 as possible. Credit providers are incentivized to create the greatest number of credits possible per physical area for the expenditures incurred, which is accomplished by focusing their attention on high quality habitats with minimal to no existing surface disturbance.

The following sections provide a high-level overview of key elements in Montana's mitigation framework. Full details about the elements is available in the MSGOT-approved Habitat Quantification Tool Technical Manual and the Policy Guidance documents. Data specific to the following key elements is presented for calendar year 2019 below.

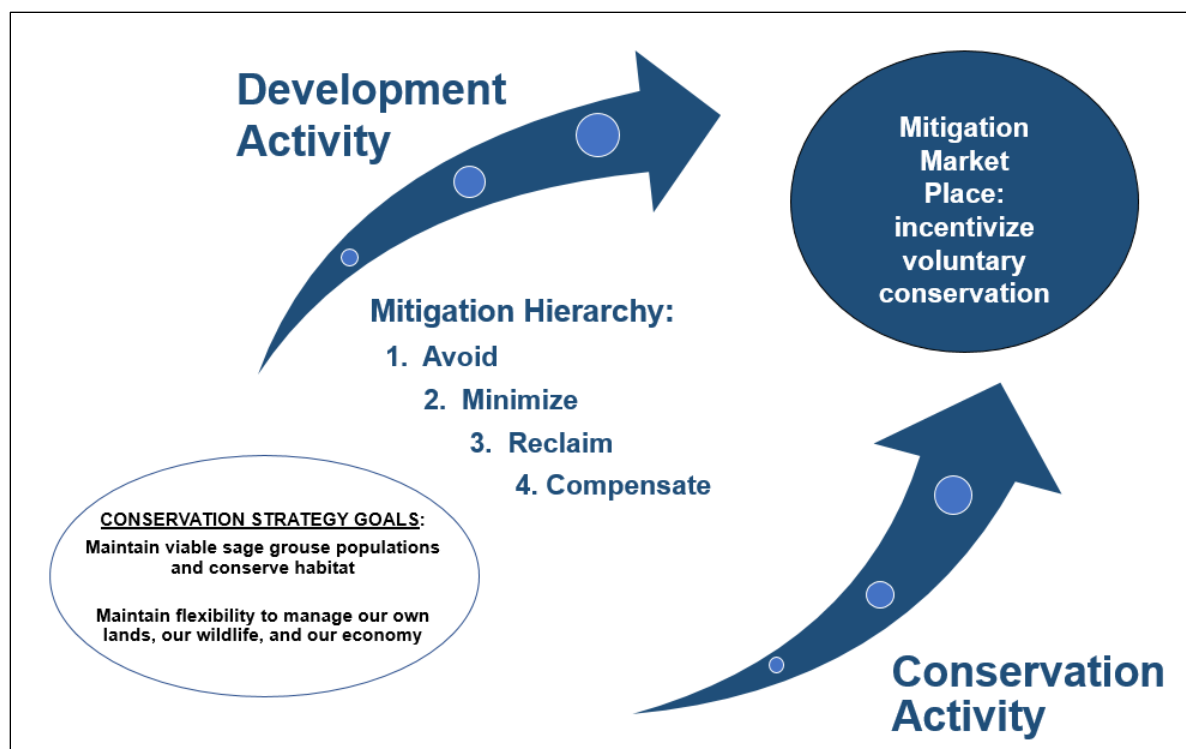


Figure 9. Montana’s Mitigation System incentivizes voluntary conservation activity to increase the quantity and quality of sage grouse habitat while simultaneously incentivizing conservation by project developers through implementation of the mitigation hierarchy where impacts are offset and by private landowners who can benefit by providing mitigation opportunities to developers. A mitigation marketplace provides a platform where conservation actors and developers exchange credits and debits based on free market principles.

The Habitat Quantification Tool: Quantifying Functional Habitat Gains and Losses

The purpose of the HQT is to evaluate vegetation and other environmental conditions related to the quality and quantity of sage grouse habitat and to quantify and eventually calculate the value of credits and debits. The HQT considers the biophysical attributes of sage grouse habitats and existing anthropogenic disturbance to provide an objective measure of habitat function. HQT calculations are based on data provided to us by developers or their consultants or by those considering applying for a Stewardship Account Grant or developing credits on their own. As such, HQT results indicate the number of functional acres lost as a result of a new development project or gained as a result of habitat enhancement, restoration, or preservation. Habitat function is quantified using scores ranging in value from 0 (unsuitable) to 100 (optimal). These measures of Habitat Function, expressed as Functional Acres (Raw HQT Score) (Figures 10 and 11).

These Functional Acres provide a common “habitat currency” that can be used for both conservation credit projects and for development projects that create debits, thereby ensuring an accurate accounting of habitat gains and losses using a consistent unit of measure for each half of the ledger.

The HQT is applied for all debit-producing projects, such as those seeking to undertake a new land use or activity in sage grouse habitat on state lands and private and federal lands in sage grouse habitat when that proposed activity receives state funding or is subject to state or federal agency review, approval, or authorization. The HQT strictly looks at changes in functional habitat attributed to the direct and indirect impacts of a proposed development project for the length of time it is on the landscape. Results scale objectively and proportionately to the project type, any new temporary or permanent features like roads, the project location, the project size, the underlying habitat quality at the project's location, and the length of time a project will be on the landscape. Results reflect changes in habitat quantity and quality for as long as a project is on the landscape. HQT scores alone help developers locate areas where habitat impacts would be lower because fewer functional acres would be lost over the life of the project, and because few functional acres would be lost, mitigation obligations would be lower.

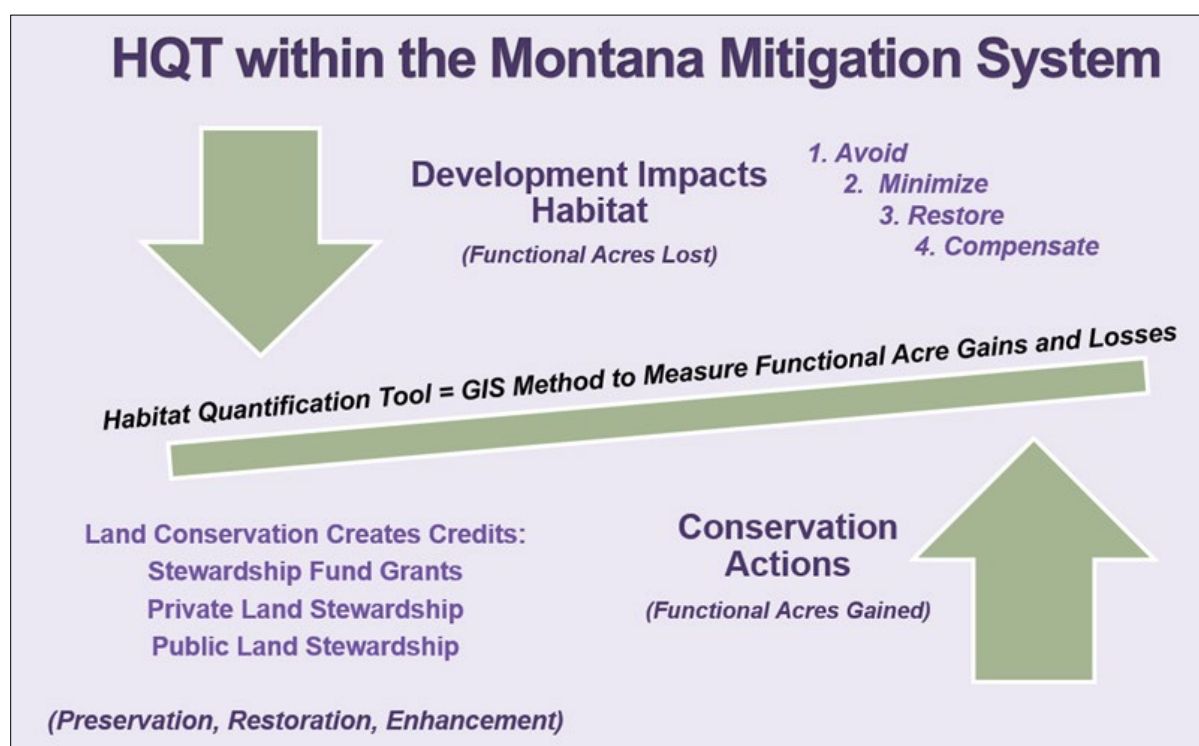


Figure 10. The HQT supports Montana's Mitigation System by providing an objective scientific method for measuring impacts to habitat from development and improvements to or conservation of habitat from conservation actions, with an overarching goal of no net loss, net gain preferred.

Executive Order and BLM Land Use Plan Consistency: Policy and Site-Specific Multipliers

To incentivize consistency with the stipulations set forth in Executive Order 12-2015 or special provisions of federal land use plans, developers are required to obtain additional credits for each deviation from these stipulations or federal plan provision, for each deviation project feature, and for as long as the project feature deviates from Executive Order 12-2015 or federal plans.

Project developers are encouraged to design and site projects to impact the fewest number of functional acres as possible. Developers can minimize cost and minimize their mitigation obligations by designing and implementing projects having the lowest HQT scores of all alternatives considered.

To create those incentives, Montana's Mitigation System incorporates both policy and site-specific multipliers. These multipliers are based on the Raw HQT score to incentivize conservation, consistency with Executive Order 12-2015, and ensure mitigation is timely and effective. Applying multipliers to the Raw HQT Score provides clear policy signals to incentivize voluntary actions which conserve habitat and cause the least amount of impact. The total mitigation obligation is determined after applying these multipliers.

The following policy multipliers are applied, uniquely and as appropriate to each development project, using a mathematical percentage of the Raw HQT Score:

- **Reserve Account:** A shared pool of credits to replace credits lost or impaired through unforeseen events such as wildfire (i.e., unavoidable loss or force majeure or "Acts of God"). Because this risk is shared among all participants in the Mitigation System, it is applied to all development projects since the Reserve Account functions as a common insurance pool, so credits can timely replace lost credits. This helps ensure against the potential failure of projects due to unavoidable causes and ensures that no single Mitigation System participant is singularly and overly affected. Twenty percent of the Raw HQT Score is calculated.
- **Advanced Payment:** Applied if the developer does not want to undertake permittee responsible mitigation actions of their own accord (permittee-responsible mitigation) and instead make a contribution to the Stewardship Account. While offering flexibility to the developer, advance payments transfer the responsibility to secure adequate compensatory mitigation to the State, through MSGOT and the Program and/or federal agencies. Ten percent of the total Raw HQT Score (functional acres lost) is calculated and applied to reflect the direct and indirect impacts for the life of the project. Advance payments are based on the average cost of credits that would otherwise be required. These funds are used by MSGOT to then award Stewardship Account grants so grant recipients can undertake projects to restore, enhance or preserve habitat and offset the impact of that development project. Thus, the Advanced Payment multiplier incentivizes developers to implement their own permittee responsible projects so that mitigation is timely and implemented prior to implementation, rather than implemented by a successful Stewardship Account grant applicant at some point in the future.
- **Federal Net Gain:** Applied to development project that would be implemented in BLM-designated habitat to ensure BLM is authorizing activities in conformance and consistent with requirements of the 2015 BLM land use plans or plan amendments. Federal net gain is calculated as 10% of the Raw HQT Score.
- **Site-specific Multipliers:** The Mitigation System Policy Guidance v1.0 October 2018 (Policy) outlines specific multipliers to incentivize consistency with the stipulations set forth in Executive Order 12-2015. Developers are afforded full discretion to develop and implement their projects to be consistent with the Order, or not. Consistency with the Executive Order is reviewed independently from the HQT. Consistency is incentivized through the absence of additional multipliers when determining the final mitigation outcome. Stated another way, lack of consistency with the Order's stipulations bears additional biological impacts to

sage grouse beyond the HQT habitat information, thereby increasing the mitigation outcome through additional multipliers, accordingly and proportional to the project's deviations from Executive Order 12-2015 and scaled proportionately to the HQT results. The framework is set up this way intentionally and works to the benefit of developers. Developers have maximum flexibility to design, construct and implement projects to avoid as many site-specific deviations from the Order's stipulations during each project phase as possible.

Site-specific multipliers are applied for each deviation from the EO-12-2015 stipulations, thus incentivizing developers to implement their projects as consistently with Executive Order 12-2015 as possible, particularly the stipulations in Attachment D, or specific federal land use plan provisions if the project must be located within habitats designated by the state or federal land management agencies.

Stipulations include limitations on new surface disturbance in Core Areas beyond 5% of the level of current disturbance, surface occupancy near active leks, noise, time-of-day and seasonal use near active leks and within breeding, nesting and early brood-rearing habitat, as well as siting and design requirements for specific project types or surface disturbance types. Among all the stipulations, limitations on the total surface disturbance within four miles of active leks, the no-surface-occupancy buffer requirement near active leks, seasonal restrictions within two miles of active leks during the breeding, nesting, and early-brood rearing season are particularly critical to meeting the State's conservation goals to maintain sage grouse populations according to the scientific literature.

Because consistency with EO 12-2015 may be possible during the construction phase of a development project but not during the operations phase or vice versa, consistency with EO 12-2015 stipulations is considered for each phase individually. This provides flexibility and incentives to developers to construct and operate their development projects as consistently as possible, thereby keeping impacts as low as possible and their ensuing mitigation obligations as low as possible. Site-specific multipliers for deviations from EO 12-2015 stipulations are calculated as 10% in Core Areas and 5% in General Habitat in keeping with the fact that Core Areas are Montana's highest conservation priority areas.

- **New Functional Acre Multiplier:** Conservation activities that restore or enhance sage grouse habitat are incentivized by adding an additional 10% to the Raw HQT Score. Restoration or enhancement projects can create new habitat "uplift" or create new functional acres for the project area which didn't exist prior to the restoration or enhancement activity, which contrasts with preservation of existing habitat. This multiplier is calculated by adding an additional 10% of the Raw HQT Score.

Debits vs. Credits: What's the Difference?

The Stewardship Act's mitigation and Stewardship Account provisions work in concert to balance conservation and development in sage grouse habitats. Credits and debits are units of trade in the mitigation marketplace. Credits represent the attainment of resource function or habitat through restoration, enhancement or preservation activities. In contrast, debits represent the loss of resource function caused by development. Credits and debits are both calculated using the same HQT model and the applicable policy multipliers, respectively (Figure 11). The unit of measure is the same for both debits and credits is the same, and there is a 1:1 correspondence. One credit is the market unit equivalent of one debit.

In practice, the Program works with developers to determine the final number of debits attributed to a development project by first applying the HQT using data provided by developers. Then policy and site-specific modifiers are applied based on information provided about the project to determine the total number of debits. During the consultation process, the Program provides ideas for ways to decrease the total number of debits and the developer ultimately decides their own course of action. Developers have full discretion to decide where and how to obtain an equivalent number of credits to offset the final number of debits.

Credits may be produced through grant funding provided by the Stewardship Account, developed under any other MSGOT-approved mechanism (e.g., conservation bank or habitat exchange), or created and used by project developers conducting their own compensatory mitigation projects to offset development impacts (i.e., permittee-responsible mitigation).

Developing and selling credits in the Mitigation System is achieved by preserving, restoring, or enhancing land which increases functional habitat quality or quantity for sage grouse. Developing credit sites and participation in the Montana Mitigation System is voluntary on the part of private landowners and Montana State Trust Lands.

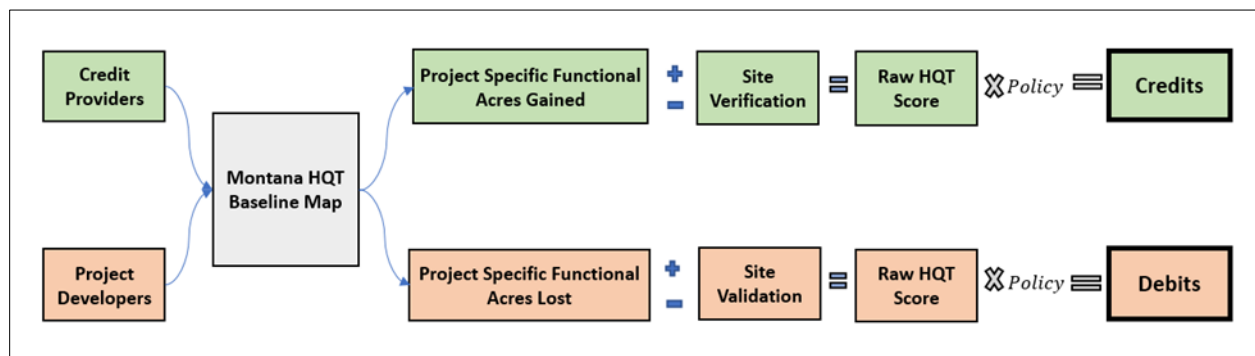


Figure 11. General work flow to determine the number of credits produced by a conservation project (top row in green) or the number of debits attributed to a development project (bottom row in tan) over the life of a given project, respectively. The Raw HQT Score is calculated first and then applicable multipliers are factored in to determine the final number of credits or debits, respectively.

Mitigation Options for Developers

Currently, a developer has three mitigation options to obtain an equivalent number of credits to offset the final number of debits attributed to their project. These three methods, or any combination of the three, can be used to obtain an equivalent number of credits to offset the debit impacts attributed to development Projects through Montana’s Mitigation System:

1. Permittee-responsible: Creating credits through habitat preservation, restoration, or enhancement activities. The developer is responsible for ensuring that compensatory mitigation activities are completed and successful. The developer works directly with the Program but undertakes all mitigation actions, retains liability and responsibility to ensure offsets are in place for the duration of the permitted activity.

2. Obtain Credits elsewhere: Obtain credits through any other MSGOT-approved mitigation mechanisms and third-party entities.
3. Make a financial contribution to the Stewardship Account: Transfer responsibility to secure adequate compensatory mitigation to MSGOT and the Program through future Stewardship Account grants.

Although the vast majority of developers are likely to choose to make a financial contribution to the Stewardship Account because of its simplicity and expediency allowing implementation as soon as the contribution is made, a developer can choose any one of the above options, or any combination, to offset impacts to sage grouse habitat. Calculations can be made proportional to the option selected by the developer.

Developers who select the Stewardship Account option are instructed to make the contribution *after* obtaining all necessary state and federal permits or authorizations but *before* implementing the project.

Service Areas

Developers are to offset their impacts by securing credits from within the same mitigation service area. There are four Service Areas in the Montana Mitigation System (Figure 12): North Central, Central, Southeastern, and Southwestern. Service Areas define the landscape scale geographic area within which an impact at a given location must be mitigated to ensure species-specific habitat needs are met at ecologically relevant scales. The geographic scale at which impacts are offset by mitigation has ecological relevance to sage grouse conservation at the landscape scale within Montana and regionally. Concurrent consideration should also be given to local scales to ensure that mitigation is spatially relevant and effective for locally-impacted leks and sub-populations.

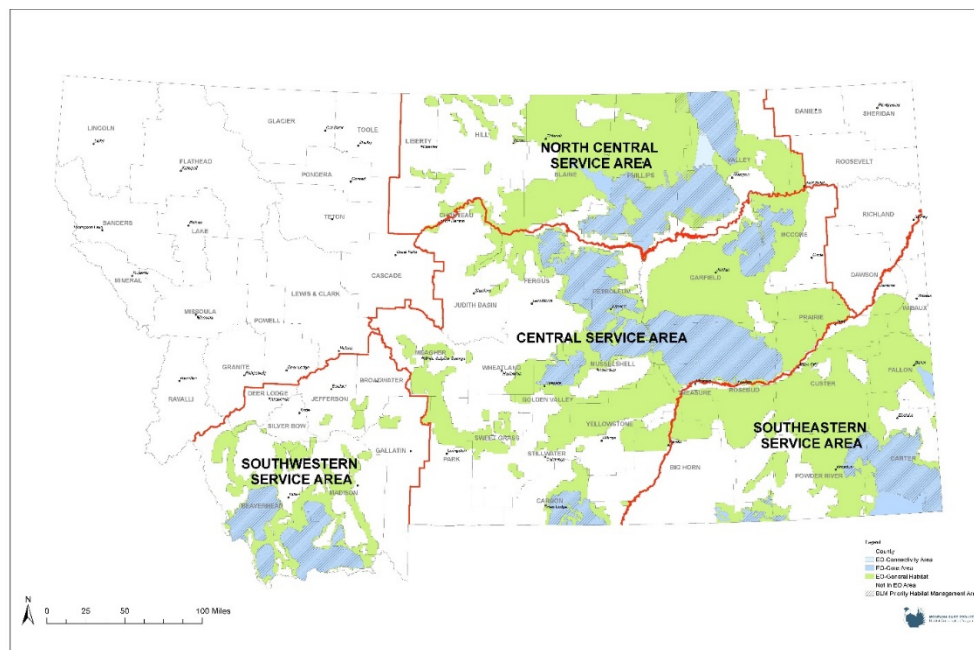


Figure 12. Montana Mitigation System Service Areas. See Appendix 7.3 of the Montana Mitigation System Policy Guidance Document v1.0, October 2018 for more specific boundary descriptions.

Development Project Impacts in Sage Grouse Habitats

Introduction and Context

The Stewardship Act, Executive Order 12-2015, and mitigation work in concert to balance the competing needs of conservation and economic activity/development in designated sage grouse habitats. All new land uses or activities that are subject to state agency review, approval, or authorization are required to avoid, minimize, and reclaim impacts to sage grouse habitat, and to provide compensatory mitigation for any residual effects. The State also provides technical support to BLM and USFS when those agencies are reviewing permit or authorization requests to use or develop public lands.

While there are several project types that require consultation and are subject to mitigation, Executive Order 12-2015 Attachment F provides a list of activities that are exempt from these requirements under certain circumstances. Additionally, MSGOT may approve exceptions to the consultation requirements of Executive Order 12-2015 on a case-by-case basis (e.g. activities requiring permits that would wholly occur within the boundaries of an incorporated municipality).

In addition to the Attachment F and MSGOT-approved exemptions, there are two additional circumstances where the resulting impact due to the implementation of a development project does not require mitigation, for one or two reasons. First, there are instances where a developer has sited a development project so well that the HQT mathematical calculation result is between 0.0 and 1.0. This means that the HQT indicates that no functional acres would be lost due to the project, no debits accrue, and there is no mitigation obligation. This occurs where projects are sited within and adjacent to existing surface disturbance where underlying habitat functionality is so low as to already be zero or very near zero and there is already significant disturbance in the indirect analysis area. For example, if a new gravel pit is proposed within the boundary of a large existing cultivated field, the HQT mathematical result is likely to be zero, meaning there are no direct or indirect functional acres lost.

Second, there are instances where a development project may produce an HQT result greater than 1.0, but the landscape surrounding the proposed development activity, the project type, the project's location, or other facts on the ground indicate that there would be little to no effect on sage grouse habitat or local populations. In these instances, the Program undertakes a more thorough review after the initial HQT result is obtained. Program staff consider the project location and closely examine and consult additional sources of aerial imagery, other GIS data sources, and may solicit local professional opinions. This more detailed analysis is called a desktop third-level analysis. This would be undertaken for development projects proposed in areas that are *already* highly fragmented and disturbed to the extent that they generally have little to no value to sage grouse in the first instance. The closest active leks or areas of functional habitat so far away that imposing a mitigation requirement would not yield any benefit to Montana's conservation efforts. Additionally, the project would not impair habitat or birds either directly or indirectly, and no future mitigation opportunities to preserve, restore, or enhance habitat locally are foregone. Examples include a new building outside the boundary of an incorporated municipal area but still within the exurban developed area, commercial timber sales on State Trust Lands at higher elevations far removed from sagebrush habitat and where the site has historically been managed for timber production and will be in the foreseeable future, or new utility infrastructure proposed between the interstate and adjacent railroad corridors, or where this is significant anthropogenic disturbance or large natural landscape features between the proposed development project and the closest active leks.

The Program has found that when projects fall into either the first or second set of circumstances, it is usually because the Program is reviewing projects at the site specific, fine scale whereas habitat area boundaries were delineated at a broad, more generalized scale. The Program exercises its best professional judgment, guided by the literature, on a project by project basis where the broadly delineated habitats do not account for finer, localized aspects of a project and/or the physical attributes or conditions on the ground.

It is important to note that even when a project falls in to one of the above categories (i.e., exempt, zero HQT result, or desktop analysis) and no mitigation is required of the developer, surface disturbance may still occur. Even in these cases, the information and data are still tracked and reported below.

Lastly, there is uncertainty around when a development project would be implemented in the future. It is known that developers sometimes delay or cancel projects altogether after the Program completes a review of the proposal. Therefore, the data presented below represent *anticipated and assumed* impacts on the landscape and sage grouse habitat in Montana using the Program's best available information. The assumption is made that the project will be implemented because developers have, of their own accord, initiated the consultation process with the Program. The Program will endeavor to confirm whether development projects were actually implemented and anticipates refining the data in future reports.

The sections below summarize functional acres lost as calculated using the HQT, debits accrued through policy and site-specific multipliers, total debits, methods developers selected to fulfill a mitigation obligation, and contributions to the Stewardship Account by developers who chose that option.

Functional Acres Lost

Functional acres lost is calculated using the HQT. The HQT is based on standardized data and used to quantify losses of functional habitat using a consistent, quantitative approach. The number of functional acres lost depends on: (1) the project location; (2) the underlying habitat quality both in the direct footprint and surrounding area (i.e. direct footprint and indirect impact area); (3) the project type; (4) the project size; (5) project complexity; (6) whether the project is located on existing anthropogenic disturbance; and (7) project duration (i.e. how long the project will exist on the landscape).

Data Preparation to Determine Functional Acres Lost and Sample Sizes

The data in this section include all Projects for which an HQT calculation was performed 2019 (n=151). This includes two projects that entered Due Diligence in 2018 and reached Completed Review in 2019.

This section includes projects having a mathematical HQT result of zero, projects for which a desktop analysis was undertaken, and one project for which MSGOT specifically waived the mitigation requirement. However, it is important to note that although an HQT was calculated, no mitigation was required from the proponents of these Projects. One project which reach completed review was excluded from the figures below because the project was "grandfathered" and all proposed infrastructure was sited within the pre-existing permitted boundary.

Projects that involve building residential homes on lands that were *already* subdivided at some point in the past prior to the effective date of EO 12-2015 are not included in this dataset. However, the data does include projects that involve the *new* subdivision of larger blocks of land and subsequent sale of the subdivided lots after the effective date of EO 12-2015.

Of the total 288 projects reached Completed Review status by December 31, 2019. Of these, an HQT calculation was performed for 151 projects, and an HQT calculation was not performed for 137 projects.

Special Cases and Status of 2018 Legacy Projects in the Current Reporting Period

Larger, more complicated projects or projects that trigger formal MSGOT review due to potentially significant impacts or deviations from the requirements of EO 12-2015 pose unique circumstances. Additionally, some legacy projects from 2018 carried forward into 2019, in part because mitigation for impacts to sage grouse habitat was required by other legal authorities (e.g. mining) or brought forth voluntarily as MSGOT had already taken executive action to designate the HQT in October 2018 and was already in the rulemaking process, with final rules expected to take effect in January 2019. Data for such projects are considered uniquely and treated accordingly for this reporting period, as described more fully below.

Pryor Mountain Wind Project: The Mud Springs Wind Project was reviewed in 2019. Planning for this project began in the mid 2000's. The project developer at that time obtained an initial permit in 2008 from the Montana Department of Environmental Quality, prior to Executive Order 12-2015. In 2019, the project was purchased by PacifiCorp and renamed to Pryor Mountain Wind. PacifiCorp proposed a new design layout having a new outer project boundary that included new, additional lands beyond the scope of the original 2008 permit boundary. Project elements like turbines and roads were also proposed outside the original 2008 project boundary. During their May 21, 2019 meeting, MSGOT determined that mitigation would not be required for any portion of the project sited within the originally permitted 2008 boundary. MSGOT also afforded the proponent full discretion to site any additional infrastructure outside of the 2008 project boundary, including wind turbines despite the Executive Order's prohibition on new wind turbines in Core Areas, but that mitigation would be required for any new development or surface disturbance outside the original 2008 permit boundary. Ultimately, PacifiCorp decided to build the project entirely within the original 2008 permit boundary, so no mitigation was formally required because all development would occur within the grandfathered 2008 permit boundary. PacifiCorp offered a voluntary compensatory mitigation contribution to the Stewardship Account of \$100,000. Therefore, the data for this Project has been filtered out and is not included in any of the following analyses for functional acres lost and debits.

DY Junction Communication Tower Project: Triangle Communications first proposed a cellular communication tower to be located at site #1 at DY Junction in 2016. Because of site #1's close proximity to active leks, an alternative site was selected (#2). The Program completed its review of site#2 in December 2016. Triangle Communications ultimately could not implement the project at Site #2 and proposed site #3 for Program review. The Program completed its review of site #3 in April 2017, and no mitigation was required as the stakeholder process was still ongoing and MSGOT had not designated the HQT. Triangle informed the Program in the first quarter of 2018 that site #3 was not feasible due to substantially higher development and maintenance costs. Triangle informed the Program that it wanted to site the project at the location originally proposed (site #1) in February of 2016. At the December 2018 meeting of MSGOT, Triangle informed MSGOT of its intentions to implement the project at site #1. However, by this point in time, MSGOT had

designated the HQT and initiated administrative rulemaking. Mitigation would be applicable to any site selected because Triangle did not have any permits in hand as a potentially “grandfathered” project. Triangle informed MSGOT that it would seek a waiver of all mitigation obligations in recognition that MSGOT could not take executive action on a matter that had not been publicly noticed for the December 2018 meeting. Site #1 was then analyzed by the Program, and the HQT results and applicable policy and site-specific multipliers for site #1 were provided to Triangle in January 2019 (24,816.57 total debits, equating to a \$231,459.62 contribution to the Stewardship Account if Triangle chose not to implement permittee responsible projects to offset the total debits). During their April 25, 2019 meeting, MSGOT considered Triangle’s written request for a 100% waiver of all mitigation obligations associated with the project. MSGOT denied the request for a 100% waiver, and instead decided that the obligation would be 5,205.54 debits or a \$48,556.53 contribution if Triangle chose not to implement permittee responsible projects. This amount corresponded to the HQT results for site #2, which was least impactful to sage grouse and habitat and the location that was most consistent with EO-12-2015 stipulations. As of December 31, 2019, this Project had not yet been implemented. Triangle Communications informed the Program that it does not intend to implement the project in the immediate future. Therefore, data for this Project has been filtered out and is not included in any of the following analyses for functional acres lost or debits.

The status of 2018 legacy projects considered by MSGOT in December 2018 varies considerably. Some projects moved forward and mitigation obligations were met. Still other projects have not yet been implemented as of December 31, 2019 and mitigation is still pending unless the project is cancelled altogether (Table 10).

Table 10. Status of 2018 legacy projects considered by MSGOT in December 2018, and how data for those 2018 legacy projects are treated and reported during the current 2019 reporting period.

Project Name	Project Status as of December 31, 2019	How Project Data are Treated in this Report
Cloud Peak Energy Spring Creek Mine Haul Road	Program review completed in 2018, but the project has not been implemented. Mitigation required by state law governing development and permitting of coal projects; mitigation obligation determined using methods agreed upon, not the HQT. Original project sponsor Cloud Peak Energy in bankruptcy proceedings and a buy/sell transaction to sell the mine and transfer state permits from Cloud Peak Energy to a third party is ongoing. Project not implemented as of December 31, 2019.	Anticipated Stewardship Account donation included in data summaries below as “Due - Proponent Bankrupt”

Project Name	Project Status as of December 31, 2019	How Project Data are Treated in this Report
TransCanada (TC Energy) Keystone XL Pipeline	Project had obtained all state permits and mitigation parameters identified prior to the effective date of EO 12-2015; mitigation obligation determined using methods previously agreed upon, not the HQT for all state, private, and BLM lands in the project area. MSGOT agreed to accept TC Energy mitigation funds into the Stewardship Account in December 2018. Federal authorizations still pending. Project not implemented as of December 31, 2019.	Because the mitigation was calculated using non-HQT methods, this project is omitted from the functional acres and debit summaries; Because MSGOT agreed to accept the mitigation funds in the Stewardship Account, the data are included in the Stewardship Account / Permittee-responsible data summary below and reported as "Due-Reviewer Tracking" below
Denbury Resources Cedar Creek Anticline CO ₂ Pipeline	Program review completed in 2018. Elected permittee responsible projects, which were approved by MSGOT and implemented in 2019. Project at least partially, if not completely implemented by December 31, 2019.	Data not included in project and debit summaries; mitigation data are included in Stewardship Account / Permittee-responsible data summary below
ONEOK Elk Creek Pipeline	Program review completed in late 2018. Additional project proposed and reviewed in 2019. Voluntarily agreed upon mitigation outcomes determined. Voluntary contributions to Stewardship Account received in 2018 and 2019 (\$27,978.44). Project at least partially if not completed implemented by December 31, 2019.	Data not included in project and debit calculation summaries; 2019 mitigation data are included in the Stewardship Account / Permittee Responsible data summary below
American Colloid Company Daun West Mine	Program review completed in 2018, including determination of mitigation. Project not implemented, as of December 31, 2019.	Data not included in project and debit summaries; mitigation data are included in Stewardship Account / Permittee-responsible data summary and reported as "Due - Reviewer Tracking" below
Western Energy Rosebud Coal Mine AM5	Program review completed in 2018, including mitigation. Project not implemented as of December 31, 2019.	Data not included in project and debit summaries; mitigation data are included in the Stewardship Account / Permittee-responsible data below and reported as "Due - Reviewer Tracking" below
American Colloid Company Warren Mine Site	Program review completed in 2018, including mitigation. Project not implemented as of December 31, 2019.	Data not included in project and debit summaries; mitigation data are included in Stewardship Account / Permittee-responsible data summary and reported as "Due - Reviewer Tracking" below

Project Name	Project Status as of December 31, 2019	How Project Data are Treated in this Report
NorVal Black Coulee Transmission Line	Program review completed in 2018; elected permittee-responsible mitigation approach that was approved by MSGOT. Neither the debit or credit projects was implemented as of December 31, 2019.	Data not included in the project and debit summaries or the Stewardship Account / Permittee-responsible data summary. Project is filtered out of this report because no activity was undertaken by the proponent.
Big Flat Transmission Line	Development project associated with KXL pipeline; project and mitigation plan reviewed by MSGOT in December 2018. The Electric Coop and the Program continued working on the project intermittently in 2019 and it was also placed “on hold”. The project was still in Due Diligence as of December 31, 2019. Project will be in metrics regarding project that were submitted in 2019. But not in money or debit metrics.	Project is included in metrics pertaining to Program Performance and proposed development project types above. However, because it was not in Completed Review by December 31, 2019, data are not included in the mitigation section on debits or Stewardship Account / Permittee-responsible data summary below.
TRECO Fallon Transmission Line	Program review initiated in 2018. During their December 18, 2018 meeting, MSGOT waived 100% of the debits attributed to this Project because it was largely located within and adjacent to the town of Fallon and Interstate 90 and sited within existing agricultural fields, with most of the project located outside designated habitat. Program review completed January 2, 2019.	Because the Program review was completed in 2019, data are included in the 2019 reporting period and this report. Although no mitigation was required by MSGOT, the functional acres lost and debits are included in these summaries, respectively.

Results: Sum of Functional Acres Lost

In 2019, the Program performed HQT calculations for 151 of the 288 projects that were submitted for Program review (52%). Of those 151 projects for which an HQT was calculated, a total of 132 projects resulted in a mitigation obligation by the developer. That means that 45.8% (n=132) of all projects reviewed by the Program in 2019 resulted in a mitigation obligation whereas the remaining development projects did not trigger a mitigation requirement.

Of the 151 projects for which an HQT was calculated, six projects had a mathematical result of zero (4%). Twelve of 151 projects for which an HQT was calculated were subjected to detailed desktop analysis and no mitigation was ultimately required (8%) and MSGOT waived the mitigation obligation for one project that was located largely within and immediately adjacent to a small, unincorporated area where cultivated agriculture was prevalent.

There was a total of 59,638.11 Functional Acres lost due to the implementation of development Projects across all Service Areas. This number takes in to account all development projects for which an HQT calculation was performed and that reached completed review status by December

31, 2019 (n = 151 projects). This includes two projects that initiated consultation in 2018 but the Program completed its review in 2019.

Of the 59,638.11 Functional Acres lost, 34,460.59 were attributed to projects located in a Core Area (58%) and 25,177.52 were attributed to projects located in General Habitat (42%).

The greatest loss of Functional Acres in 2019 occurred in the Southeastern Service Area, totaling 40,367.33 (68%) (Figure 13). Approximately 22% of the total Functional Acres lost in 2019 were located in the Central Service Area (13,172.88). The North Central and Southwestern Service Areas had similar loss of Functional Acres in 2019 at 3,689.29 and 2,408.61 Functional Acres respectively (6% and 4%).

The differences in the number of functional acres lost by Service Area is explained by the number of projects in each Service Area, respectively. The Southeastern Service Area had 78 projects. The Central Service Area had 40 projects. The North Central Service Area had 21 projects, and the Southwestern Service Area had 12 projects.

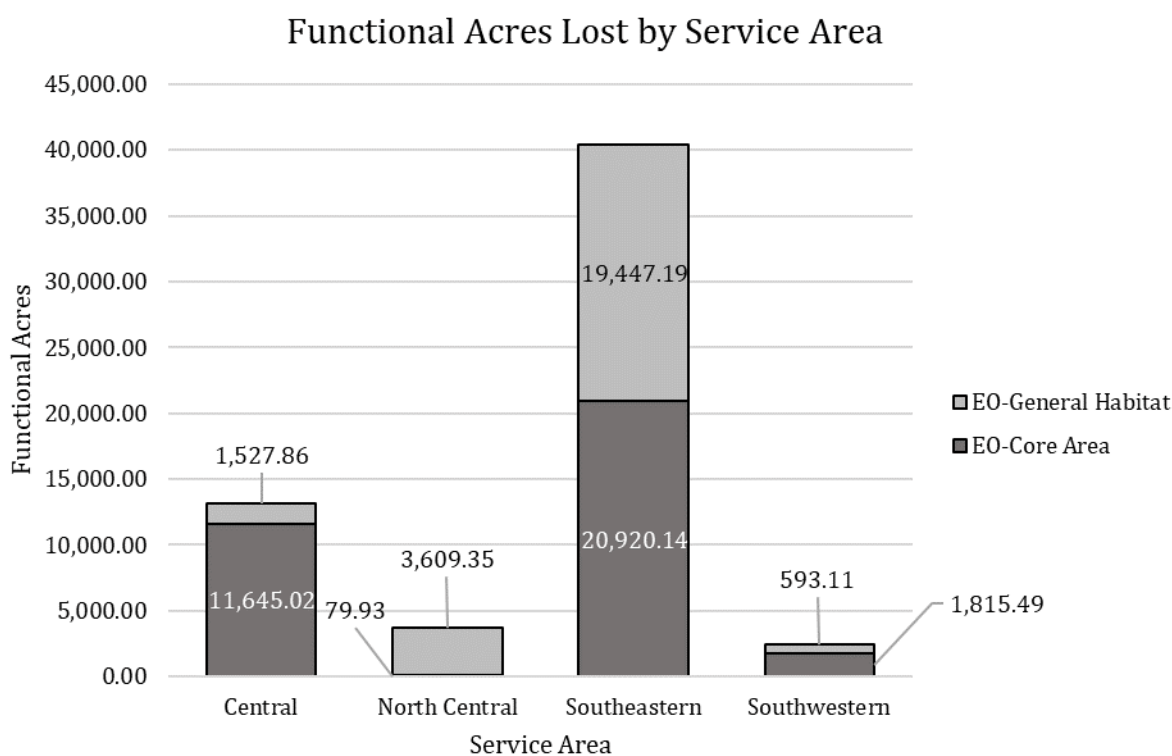


Figure 13. Number of Functional Acres lost by Service Area and EO habitat designation across all development projects for which an HQT calculation was performed and reached completed review status by December 31, 2019 (n=151).

Policy Multipliers and Site-Specific Multipliers

Multipliers provide clear policy-based incentives to developers to voluntarily implement projects in a manner and at locations that are consistent with the provisions of Executive Order 12-2015. More specifically, consistency with the Order conserves habitat, causes the least amount of impact, and incentivizes project siting, designs, and implementation that results in the fewest number of functional acres lost as possible.

The total mitigation obligation is determined after applying the following multipliers, as applicable to each individual development project: Reserve Account, Advanced Payment if a developer decides to make a contribution instead of implementing their own mitigation project to offset impacts, and Site-Specific multipliers for deviations from specific EO 12-2015 stipulations. For projects that require BLM authorizations, an additional multiplier is added to account for net gain. The federal net conservation gain multiplier is calculated for only those portions of the project that entail BLM surface lands or federal minerals.

The applicability of policy multipliers varies widely from project to project and always discussed with developers prior to the Program finalizing its review. In some cases, developers voluntarily modify their projects or how and when their projects are implemented to improve consistency with EO 12-2015 stipulations and decrease mitigation obligations. Because multipliers are calculated as a percentage of the Raw HQT Score for the applicable phase of a development project, multipliers also scale proportionately to the same project factors and details that influence the Raw HQT Score. Factors include project type, project location, project duration, underlying habitat quality, timing of implementation, etc. The unit of measure for multipliers is “debits” which are defined as units of trade representing the loss of resource functions of value at an impact or project site.⁴

Data Preparation Methods to Determine Debits Related to Policy and Site-Specific Multipliers

The following results are based on 151 development projects for which an HQT calculation was performed and the Program completed the review by December 31, 2019. This includes projects with final scores that were revised to 0 through a more detailed desktop analysis or waived by MSGOT.

Policy and Site-Specific multipliers were tallied individually and in sum by Service Area. Totals were also determined at the statewide level.

Results: Debits Associated with Policy and Site-Specific Multipliers

On a statewide basis across all Service Areas, a total of 29,256.68 debits were attributed to the combination of policy and site-specific multipliers applicable to that particular project (Table 11). A total of 11,925.65 debits were attributed to the Reserve Account multiplier (Figure 14). A total of 2,554.53 debits were attributed to the Advanced Payment multiplier.

Statewide, approximately 12% of the total site-specific multiplier debits were attributed to the BLM RMP requirement for Net Conservation Gain multiplier (1,752.98).

⁴ Mont. Code Ann. § 76-22-103(5) (2019).

Of the site-specific multipliers, the Seasonal Use multiplier was the most common deviation of any stipulation in EO 12-2015. Among all 151 projects in this subset of data, 86% of the total site-specific multiplier debits (12,636.46 debits) were accrued as a result of project activities being implemented and operational on the landscape between March 15 – July 15 within specified distances of active sage grouse leks. Twenty-nine of the 151 projects for which an HQT was calculated included at least one Seasonal Use multiplier.

Other site-specific deviations from EO 12-2015 stipulations were less common. Deviations from the DDCT and Vegetation Removal stipulations resulted in 367.37 and 19.69 debits, respectively, and accrued as specific multipliers (less than 3% of the total site-specific multiplier debits). There were no deviations from the NSO, Noise, and Oil/Gas 1:640 site-specific multipliers, and thus no debits accrued for these (Table 11).

Table 11. The number of debits attributed to each of the above policy and site-specific multipliers for Projects that reached review complete status by December 31, 2019.

Multiplier Type	Service Areas				Statewide
	Central	North Central	Southeastern	Southwestern	
Reserve Account	2,634.57	737.86	8,071.50	481.72	11,925.65
Advanced Payment	1,317.29	368.93	627.45	240.86	2,554.53
Federal Net Conservation Gain	0.32	59.53	1,632.64	60.49	1,752.98
NSO	0	0	0	0	0
DDCT	303.76	0	63.61	0	367.37
Seasonal Use	4,484.57	0	8,151.89	0	12,636.46
Vegetation Removal	19.69	0	0	0	19.69
Noise	0	0	0	0	0
Oil/Gas 1:640	0	0	0	0	0
Total Multipliers by Service Area	8,760.20	1,166.31	18,547.09	783.07	29,256.68

Reserve Account Totals by Service Area

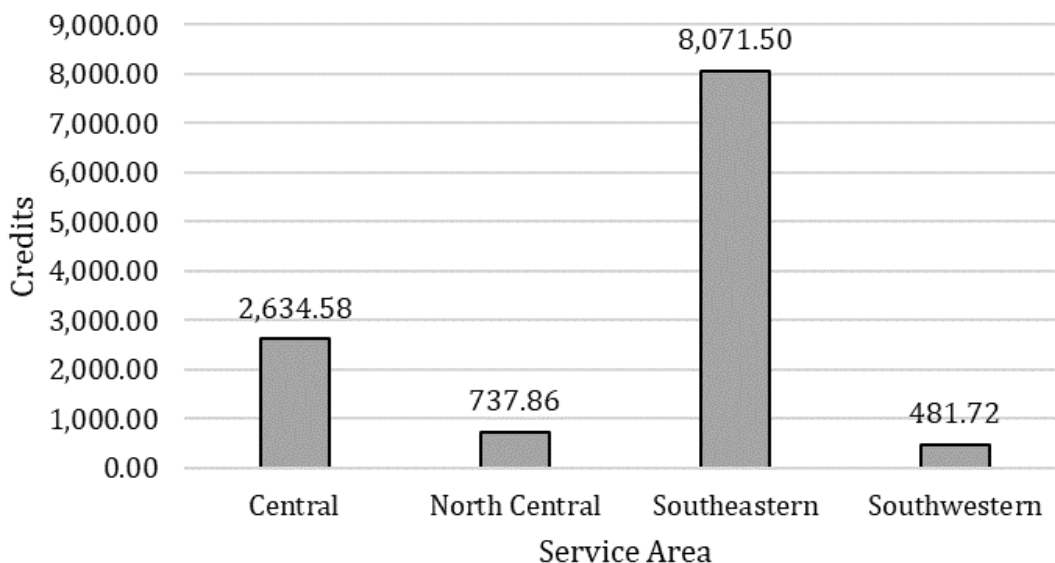


Figure 14. Totals for the Reserve Account Multiplier across all four Service Areas.

Total Debits

Data Preparation Methods for Total Debits

The following results are based on 151 development projects for which an HQT calculation was performed and the Program completed the review by December 31, 2019. The total debits data summary reported below includes the debits attributed to projects for which total debits includes projects for which the HQT score was revised to 0 after a desktop analysis because the Program assumes the project was still implemented and some disturbance occurred. The summary also includes the project for which the mitigation debits were waived by MSGOT.

Total debits were summed and reported by Service Area and habitat category. Total debits were also analyzed and reported according to the major project types listed in Table 1 above. Note that each project may include a variety of individual disturbance types.

Results: Total Debits

In 2019, there were a total of 88,894.80 debits created by projects for which the Montana Mitigation System was applicable and that reached completed review status by December 31, 2019. This includes two projects that entered Due Diligence in 2018 and reached completed review in 2019. The total number of debits reflects the total number of functional acres lost due to development, the degree to which projects were or were not consistent with Executive Order 12-2015 and adhered to the stipulations, Net Conservation Gain for projects having a BLM nexus, how the developer decided to fulfill a mitigation obligation, and the Reserve Account balance.

Of the 288 projects that reached completed review by December 31, 2019, only 151 projects had an HQT calculation resulting in a debit balance. An HQT calculation was not conducted on the

remaining 137 projects (i.e. projects were exempt per Executive Order 12-2015, grandfathered, residential homes, or projects did not require any additional surface disturbance).

The total number of debits attributed to projects within in each Service Area was highly variable, but the differences do correspond with the total number of projects within each Service Area, respectively. More total debits would be expected in Service Areas having a greater total number of development projects.

A total of 58,915.43 debits were attributed to projects located in the Southeastern Service Area (66%; n=78 projects). A total of 21,933.09 debits were attributed to projects located in the Central Service Area (25%; n=40 projects). A total of 4,855.60 debits were attributed to projects located in the North Central Service Area (5%; n=21). A total of 3,191.67 debits were attributed to projects located in the Southwestern Service Area (4%; n=12 projects). See Figure 15.

Of the 88,894.80 total debits, 55,494.27 debits were attributed to projects located in a Core Area and 33,400.53 debits were attributed to projects located in General Habitat (Figure 15).

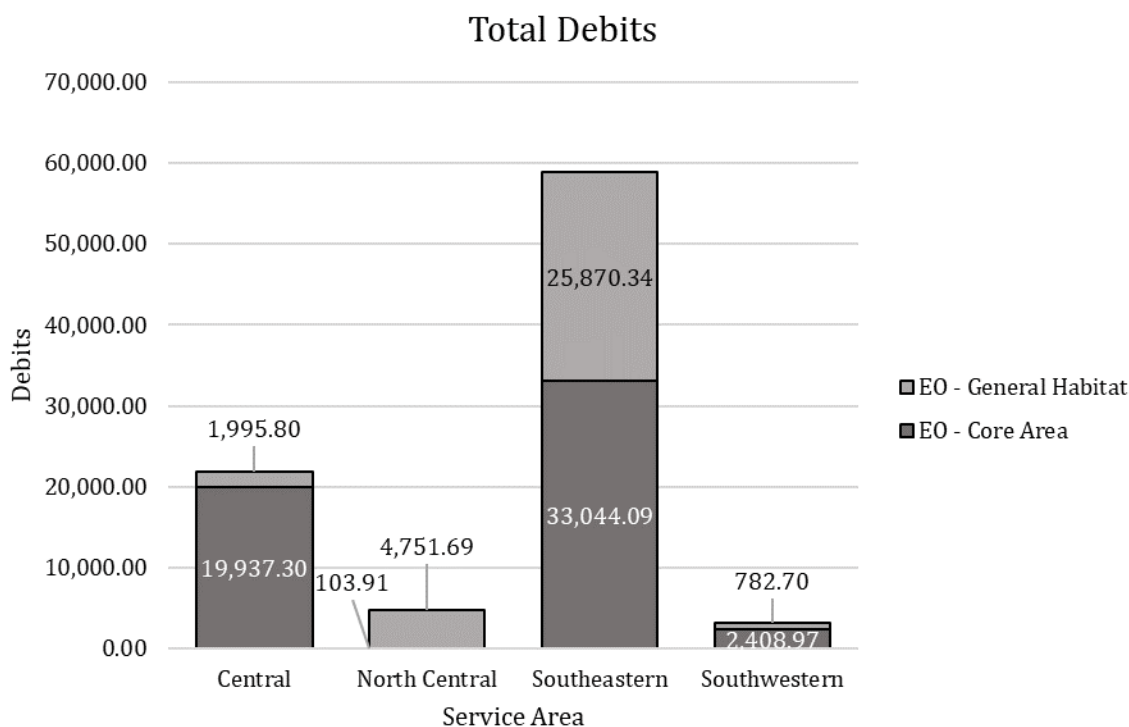


Figure 15. Total number of debits created by Service Area and EO habitat designation for projects for which an HQT was calculated (n=151), with completed review status by December 31, 2019. Totals reflect the functional acres lost due to the project for its entire duration, along with policy multipliers for any project-specific deviations from EO stipulations, Reserve Account, and Advanced Payment (if applicable).

Results: Total Debits Created by Development Project Type

Major project type categories are listed in Table 1 above. Each major project type could have several different individual disturbance types associated with them. For example, an oil and gas well could have several different disturbances associated with it, such as the well pad, a new access road, a collection facility, and a transmission line. Accordingly, the total debits for the project would be the sum of all debits attributed to each individual disturbance, respectively. The following summary includes all individual disturbances associated with major project type categories.

Of the total 88,894.80 debits created statewide in 2019, oil and gas projects were the main contributors with approximately 79% of the total debits created attributed to Oil and Gas project types (70,190.80 debits). Communication projects attributed approximately 7% (6,144.56 debits) and transmission line projects attributed to approximately 5% (4,635.38 debits). The remaining 7,924.06 debits were attributed to a variety of other project types, as seen below in Figure 16.

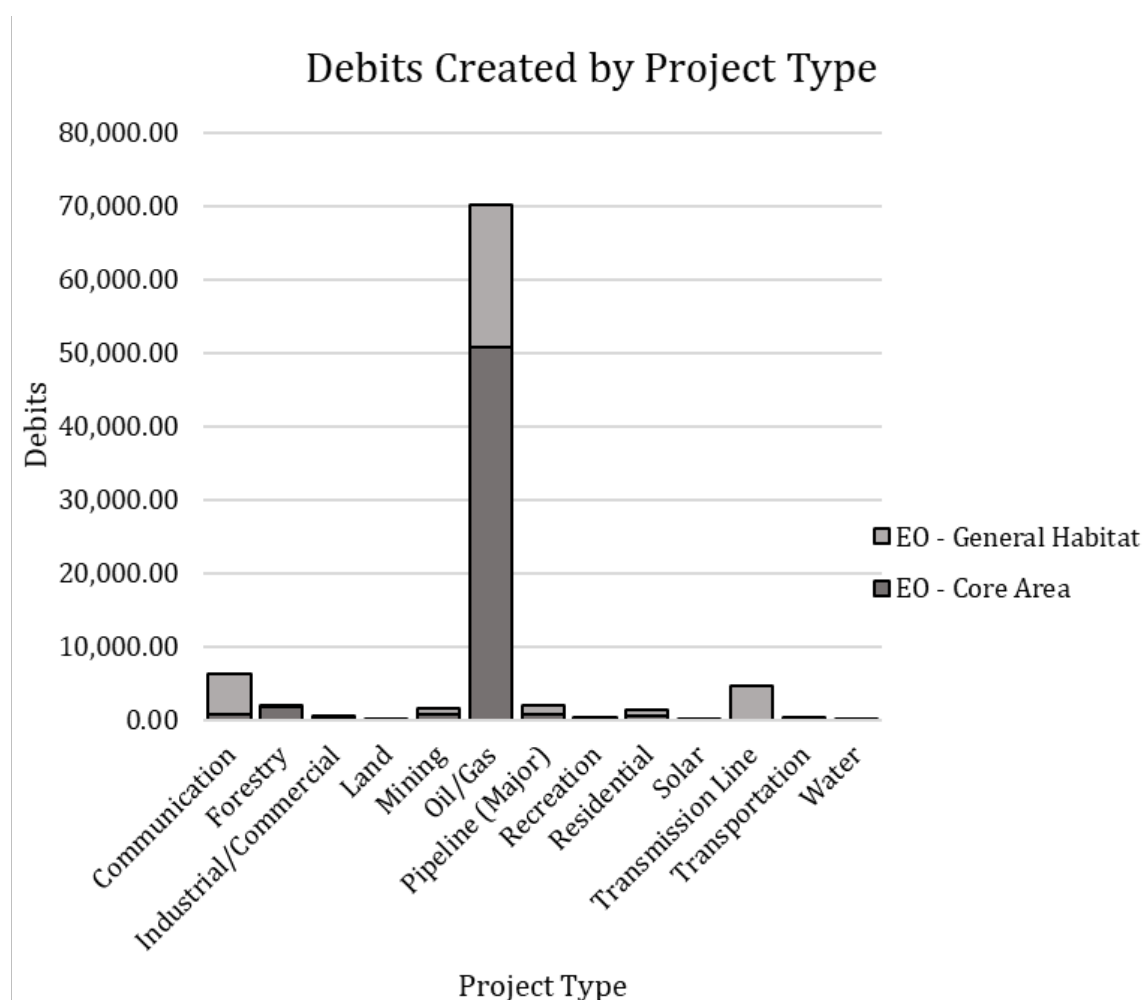


Figure 16. Debits created by Project Type for projects that were assessed mitigation, with completed review status by December 31, 2019. Oil/Gas projects contributed the clear majority of total debits. This category includes the following disturbance types: Gas/Oil Well (n=46 projects), maintenance activities (n=3 project), small pipelines or flow lines (14), power lines (n=5), roads (14), storage yards (n=4), and well pads (n=21).

Within each individual project type category, the number of total debits accrued can be highly variable from project to project. This is due to several major factors like: 1. project location - where the project and all of the individual disturbances are sited (i.e. highly functional generally pristine habitat vs. low functioning, disturbed habitat); 2. the number of individual new disturbances necessary to implement the project (i.e. using existing roads vs. building new roads); 3. project size (i.e. larger direct footprint vs. smaller direct footprint); and 4. when and how the project is implemented and consistency with Executive Order 12-2015 provisions. Other minor factors include whether the developer chose permittee-responsible mitigation or made a contribution to the Stewardship Account.

For each major project type category, the total debits summed for all projects within that category is shown in Table 12. The average total debits per project, along with the minimum and maximum debits are also shown. Quite a range in the total number of debits associated with each individual project type, respectively is shown.

The highest average total number of debits per project is associated with transmission line projects (average = 1,158.85; minimum = 7.75; maximum = 3,016.87). This is likely because above ground transmission lines are on the landscape for a long period of time, which is factored into HQT calculations. The wide range in total debits is likely related to the underlying habitat quality and functional acre values along the route, the degree to which it is co-located within other existing disturbance or alongside existing roads, and more importantly, whether the transmission line is above ground or buried.

The second highest average total debits per project is associated with oil and gas projects (average 1,002.73; minimum 0.01; maximum 18,898.67). This is likely because these projects often have several different additional disturbances associated with the project, in addition to just the well pad. Additionally, this type of development and the supporting infrastructure is on the landscape for a long period of time.

Table 12. Total debits categorized by major project type and the average number of debits per project for that project type, respectively. The minimum and maximum number of debits for any single project within major project type categories is also shown.

Project Types	Total Debits	Average Debits	Minimum Debits	Maximum Debits
Communication (n=21)	6,144.56	292.60	0.17	2,890.62
Forestry (n=5)	1,953.70	390.74	22.26	1,725.35
Industrial/Commercial (n=7)	546.42	78.06	0.00	351.88
Land (n=1)	81.03	81.03	81.03	81.03
Mining (n=24)	1,531.78	63.82	0.00	683.62
Oil/Gas (n=70)	70,190.80	1,002.73	0.01	18,898.67
Pipeline (Major) (n=4)	1,945.38	486.35	21.91	1,206.01
Recreation (n=2)	153.91	76.96	72.15	81.76
New subdivisions of land (n=4)	1,422.21	355.55	0.40	869.48
Solar (n=1)	8.94	8.94	8.94	8.94
Transmission Line (n=4)	4,635.38	1,158.85	7.75	3,016.87
Transportation (n=7)	263.28	37.61	0.00	84.02
Water (n=1)	17.39	17.39	17.39	17.39

Mitigation Option Selected by Developers

A developer has three mitigation mechanisms or options available to offset the impacts of their projects (see Key Elements Section above). A developer can choose any one of the options or a combination. The following section summarizes how developers decided to offset impacts (total debits).

Data Preparation Methods for Mitigation Options

The following results are based on 151 development projects for which an HQT calculation was performed and the Program completed the review by December 31, 2019.

Results: Mitigation Option Selected

In 2019, HQT calculations were performed for 151 projects. Of those 151 projects, 19 projects did not result in a mitigation obligation owed by the developer. This is because the project: 1. had an HQT mathematical result of zero functional acres lost (i.e., zero debits; n=7); 2. a desktop analysis was conducted (n=11) and no mitigation was assessed to the developer; or 3. received an MSGOT waiver (n=1) and no mitigation was assessed to the developer.

Of the remaining 132 projects, developers are given complete discretion to choose how to offset their impacts. In 2019, 80 developers elected to offset the impacts of their project and fulfill the mitigation obligation by contributing to the Stewardship Account (n=80 projects; 61% of 132 projects). See Figure 17 below.

Alternatively, a permittee-responsible mechanism (PRM) was selected for 52 development projects (39% of 132 projects). All 52 permittee-responsible projects are attributed to one developer utilizing three permittee responsible credit projects to offset 52 of their own subsequent development projects (i.e., n=1 proponent and 52 development projects). In other words, this developer created their own PRM pool of credits for their own use to offset their subsequent development projects. See Figure 17.

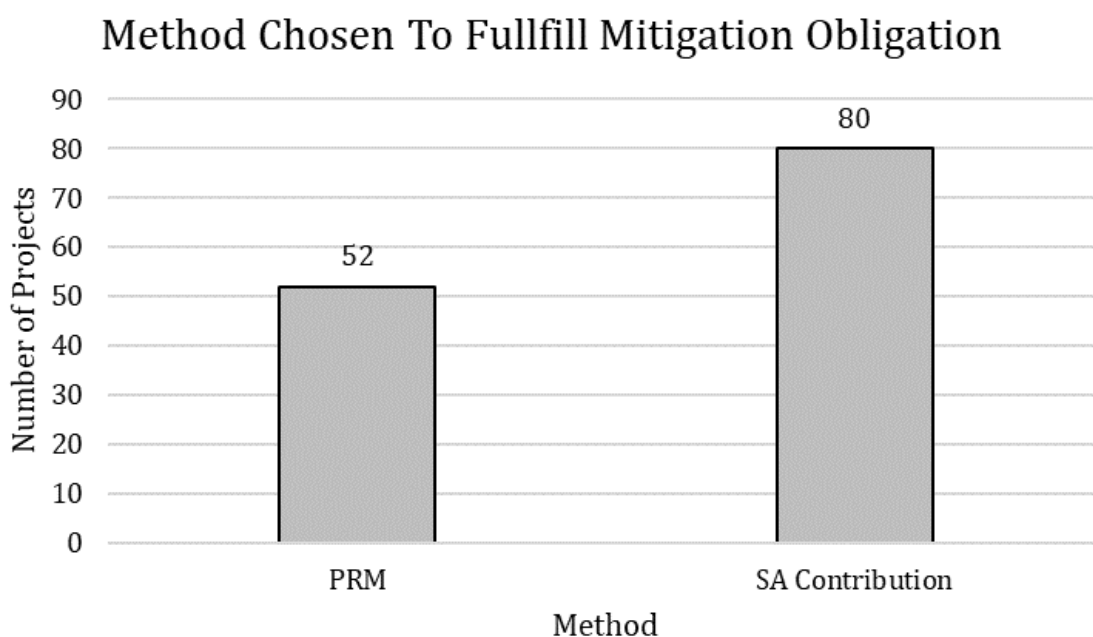


Figure 17. The number of projects out of a total of 132 projects for which a mitigation obligation was due where proponents elected to fulfill the obligation by either: 1. Permittee Responsible Mitigation (PRM) where the developer implemented three credit projects to offset 52 of their own subsequent development projects; or 2. a contribution to the Stewardship Account (SA). Nineteen additional projects are not included in this graph because no mitigation was ultimately required from the developer because the HQT mathematical result was zero (n=7), the final debit calculation was near zero and local facts surrounding the project warranted revising the obligation to zero (n=11), or the developer obtained a waiver from MSGOT (n=1).

Results: Permittee Responsible Projects Only

There were 52 projects for which permittee responsible mitigation (PRM) was selected as the method to fulfill the mitigation requirement. In 2018, Denbury Resources implemented two PRM projects with the Montana Land Reliance (MLR) to create credits through two conservation easements in the southeastern service area. Additionally, Denbury Resources worked with a third-

party oil and gas operator and the BLM to assume responsibility for permanently plugging and abandoning 32 wells and reclaiming the sites in an existing oil and gas filed in southeast Montana. All 52 PRM projects in Figure 17 were offset using credits generated through the first conservation easement being used to offset 52 of Denbury Resources' subsequent development projects.

Results: Other

Developers for a total of 19 other projects ultimately did not have a mitigation obligation, and thus did not have to select a mechanism through which to offset impacts. These projects are lumped into a category called "Other". These 19 projects either: 1. had an HQT mathematical result of zero functional acres lost (i.e., zero debits; n=7); 2. a desktop analysis was conducted (n=11); or 3. received an MSGOT waiver (n=1).

Contributions to the Stewardship Account Transferring the Obligation to MSGOT through Stewardship Account Grants

Contributing to the Stewardship Account is an in-lieu fee mechanism if sufficient credits are unavailable through other mechanisms and the developer does not wish to take a permittee-responsible approach. Contributions to the Stewardship Account shift the burden to MSGOT to secure an equivalent number of offsetting credits and subtracts those credits from its own balance sheet.

Developers have full discretion as to when to initiate the permitting process with the respective state or federal agency and when to actually implement the project after obtaining permits (*i.e.* start construction). The permitting process itself also takes time, with larger more complicated projects taking longer and may require an environmental impact statement. Sometimes developers obtain permits, but delay implementation. Sometimes developers decide to cancel the project altogether for whatever reason (whether or not permits were obtained) and reasons unrelated to the Program are often cited.

Mitigation obligations, including contributions to the Stewardship Account, should be implemented *after* a developer obtains all necessary permits but *before* the project is implemented and construction starts. This protocol affords developers the flexibility to decide when to initiate the permitting process, to modify a project during the permitting process, to decide on the exact timeline to implement a project or to delay implementation once permits are obtained, or to cancel the project altogether. There is certainty that funds are not deposited in the Account unless a project is actually going to be implemented by a developer.

Providing flexibility to developers to decide when to complete the permitting process and when to make their deposit to the Stewardship Account also creates uncertainty for MSGOT and the Program. Funds only become available to MSGOT and the Program after a contribution is made and recorded, creating an "accounts receivable" delay or an "amount due" inherent in the mitigation system (Figure 18).

Developers are instructed to make their deposit by paper check or wire transfer after obtaining permits but immediately prior to implementation. Thus, developers have full discretion when to make the donation and how to make the donation. When making donations, developers return forms to the Program to document the deposit and copies are returned to developers for their records. The Program's information is periodically cross-referenced with the DNRC accounting

records to make sure that funds are properly credited to the Stewardship Account and to make sure that the Program's own records are accurate.

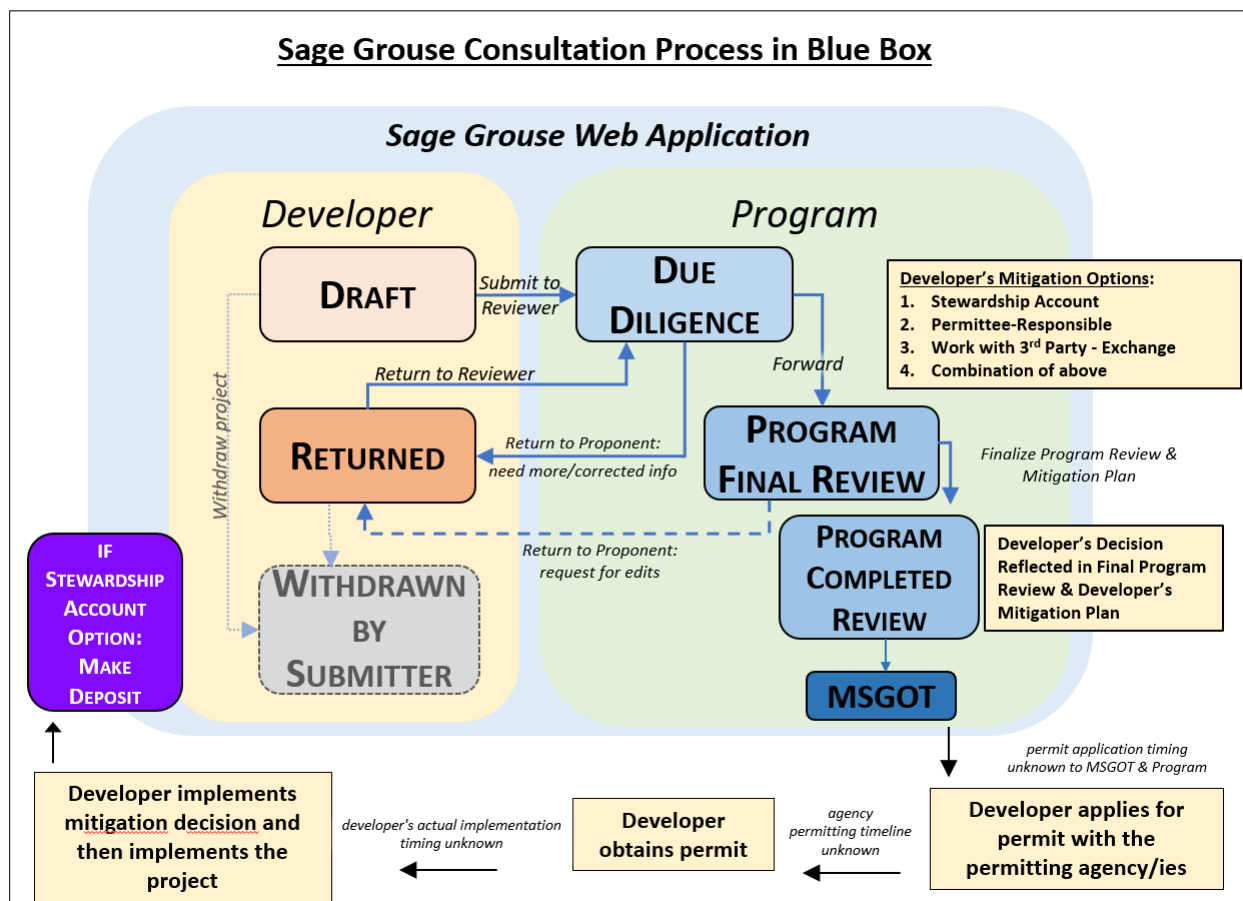


Figure 18. The Sage Grouse Program workflow is shown within the shaded light blue area, with project permitting process and the developer's implementation activities occurring outside the scope of the Sage Grouse Program and MSGOT. If the developer selects the Stewardship Account contribution option to mitigate for impacts to sage grouse habitats, the deposit is made after obtaining all necessary permits and before starting construction. The time lag between Program/MSGOT and Developer's implementation of the project creates the "accounts receivable" circumstance.

Data Preparation Methods Specifically for Stewardship Account Contributions

The Program compiled information about the status and disposition of contributions for all projects where the developer selected the Stewardship Account option (n=80 projects). Information presented below includes all actual Account activity or expected donations for projects where the project reach Completed Review by December 31, 2019. See Table 10 for additional details about legacy projects and special cases.

The following data represent all Stewardship Account activity since 2018 up until December 31, 2019 which is the end of the current reporting period. Data are reported by habitat category and Service Areas.

The disposition and status of a project's Stewardship Account contribution is classified as one of the following:

1. Due – Reviewer Tracking: The developer had selected the Stewardship Account at the time the Program completed its review, but the donation has not yet been received. The Program's project reviewers are actively tracking the project for eventual receipt of the funds. These funds are "due" to the Stewardship Account and the deposit is expected at some point in the future.
2. Received: Contributions were received and properly credited to the Stewardship Account.
3. Due – Proponent Bankrupt: One project proponent associated with a coal project entered bankruptcy. A new road was proposed to connect coal mines in Wyoming and Montana. The road has not been built yet and it is unclear if and when it might be built. Nonetheless, the mitigation obligation to Montana should the road ever be built in the future is preserved in the bankruptcy legal proceedings. Should a subsequent owner of the mine implement the road project, the contribution would still be required. Whether that donation will be made at some point in the future is unknown.

Results: Stewardship Account Contributions

A total of \$506,806.18 was received into to the Stewardship Account since 2018 (i.e. Received status) (Figure 19). This includes one legacy project for which payment was made in 2018 (\$161,179.00). Contributions are still pending for other legacy projects (categorized as Due-Reviewer Tracking, see also Table 10).

Of the total received as of December 31, 2019, 83% can be attributed to proposed projects located in a Core Area (\$419,045.69) and 17% can be attributed to proposed projects located in General Habitat (\$87,760.49).

A total of \$1,449,688.10 is categorized as Due – Reviewer Tracking as of December 31, 2019. For these projects, the Program has completed its review but the project proponent has either not yet obtained all necessary permits, has delayed the permitting process, or has obtained permits but not yet made the contribution so the project can get underway. Of this, approximately 67% can be attributed to proposed projects located in a Core Area (\$971,521.58) and approximately 33% can be attributed to proposed projects located in General Habitat (\$478,166.52).

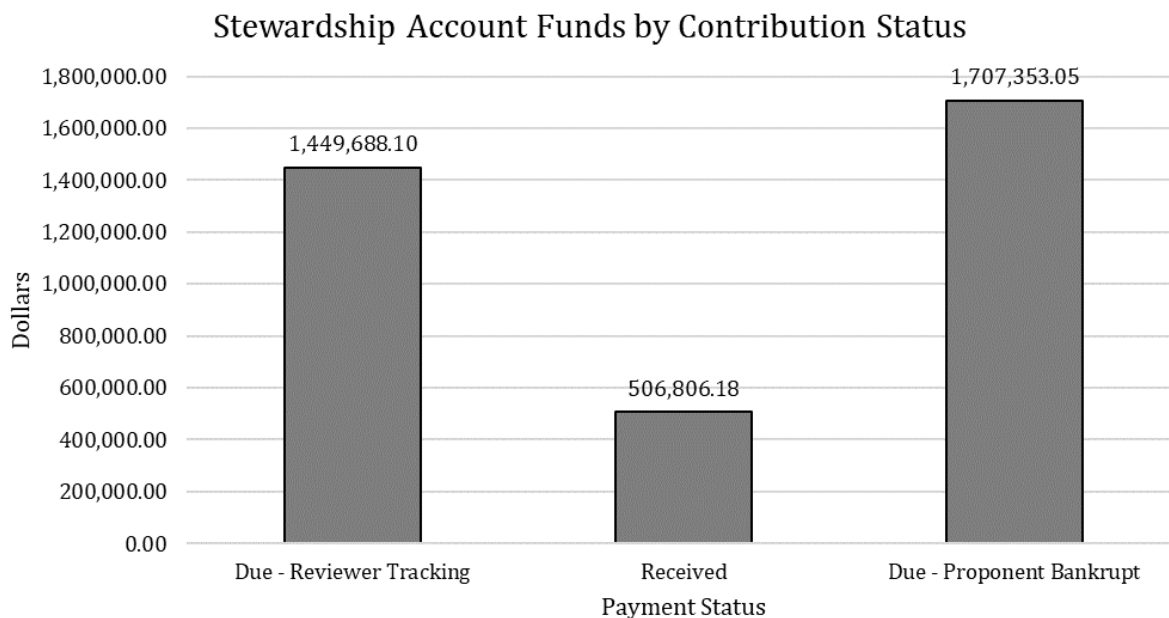


Figure 19. Stewardship Account funds by contribution status for projects in Completed Review status as of December 31, 2019 and legacy projects that reached Completed Review status in 2018.

Of the total \$506,806.18 received to date, a total of \$345,627.18 was deposited into the Stewardship Account during the 2019 reporting period (i.e. after filtering out any contributions made in calendar 2018).

Figure 20 depicts a narrower scope, showing contributions Received to the Stewardship Account in the 2019 reporting period for those projects reaching Completed Review by December 31, 2019. Contributions are further broken down by Service Area and habitat category (n=62 projects).

Of the 2019 Account deposits, 65% is attributed to projects located in the Central Service Area (\$223,209.75; n=27 projects), approximately 20% is attributed to projects located in the Southeastern Service Area (\$67,685.53; n=18 projects), approximately 13% is attributed to projects located in the North Central Service Area (\$44,223.39; n=14 projects), and approximately 3% were payments for projects located in the Southwestern Service Area (\$10,508.50; n=3 projects).

Across all Service Areas, approximately 75% of contributions were for projects located in a designated Core Area (\$257,866.70; n=18 projects). Approximately 25% of payments were for projects located in designated General Habitat (\$87,760.49; n=44 projects).

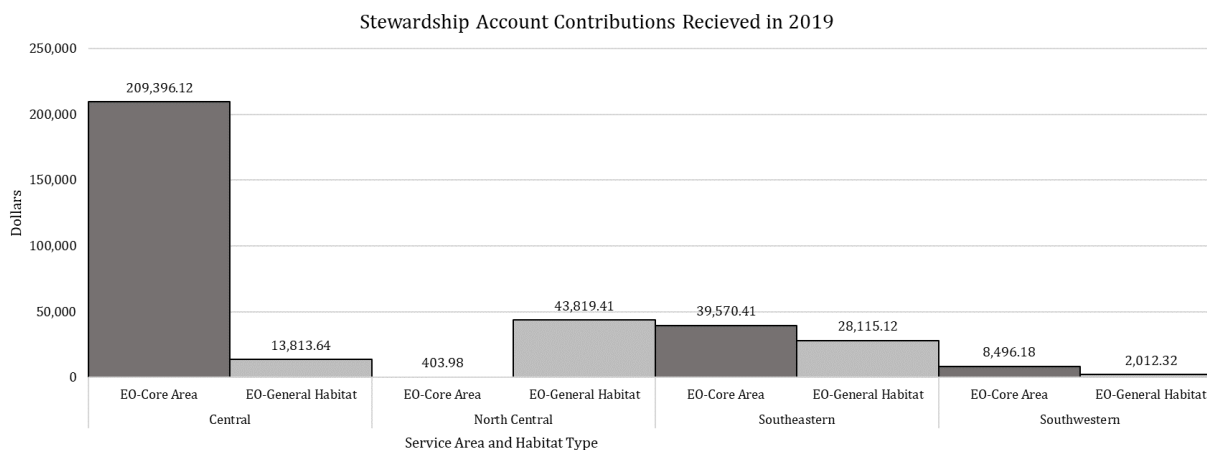


Figure 20. Contributions received into the Stewardship Account in the calendar year 2019 reporting period only (\$345,627.18), according to Service Area and habitat category.

The amount of any single Stewardship Account contribution in the 2019 reporting period varies widely. As with the total debits attributed to major project types listed in Table 1, the contribution amount can vary widely within a project type category. This can be explained by the same factors influencing the total debits calculated for a development project, including that the number of individual disturbances and types included for each individual project varies (even for the same project type), project size, project location, and the underlying habitat quality. For example, the major project type “Communications” includes individual disturbances ranging from a cell tower to overhead transmission lines, to buried fiber optic lines and new roads. Some Communications projects include all four of those disturbance types, whereas other Communications projects may only entail buried fiber optic lines. Thus, the amount of each Stewardship Contribution varies considerably. See Table 13.

Across all project type categories and habitats, individual contributions for a single project ranged from a minimum of \$2.21 to a maximum of \$85,878.01 (Table 13). The average contribution was \$4,427.14. The project type with the highest average contribution amount is Oil and Gas, likely due to additional disturbance elements beyond the well pad and the duration on the landscape.

Table 13. Average, minimum, and maximum contribution amounts deposited into the Stewardship Account in the 2019 reporting period, by Project Type. This table represents projects that reached Completed Review by December 31, 2019, for which a contribution to the Stewardship Account was the chosen method to fulfill the mitigation obligation (n=80).

Project Type	Number of Projects	Average Contribution	Minimum Contribution	Maximum Contribution
Communication	20	\$3,443.86	\$2.21	\$26,612.98
Industrial/Commercial	4	\$272.48	\$4.35	\$889.64
Mining	20	\$880.21	\$3.07	\$8,496.18
Oil/Gas	17	\$12,510.35	\$47.22	\$85,878.01
Pipeline (Major)	4	\$5,481.82	\$283.21	\$14,810.48
Recreation	2	\$848.79	\$759.59	\$938.00
Subdivision of Land	3	\$1,996.75	\$323.13	\$3,415.96
Solar	1	\$78.25	\$78.25	\$78.25
Transmission Line	3	\$6,927.27	\$100.46	\$17,499.14
Transportation	5	\$644.53	\$74.11	\$1,092.24
Water	1	\$225.78	\$225.78	\$225.78
Grand Total	80	\$4,427.14	\$2.21	\$85,878.01

MSGOT's Stewardship Account Grants to Offset Impacts on behalf of Developers

Introduction

The purpose of the Act is to “provide competitive grant funding and establish ongoing free-market mechanisms for voluntary, incentive-based conservation measures that emphasize maintaining, enhancing, restoring, expanding, and benefitting sage grouse habitat and populations on private lands, and public lands as needed.” In conjunction with MCA 2-15-243, the Act charges MSGOT with certain duties. The Act also authorizes MSGOT to adopt administrative rules to implement the Act’s Stewardship Account grants and mitigation.

Two main sections provide for: 1. the Stewardship Account, which is a state special revenue fund to incentivize habitat conservation primarily on private lands; and 2. that allowing project developers to provide compensatory mitigation to offset impacts of their development can also incentive voluntary conservation.

In allowing project developers to provide compensatory mitigation through contributions to the Stewardship Account, project developers transfer the obligation to secure an equivalent number of

credits to MSGOT. MSGOT then uses the contribution monies to fund credit-creating projects through a competitive grant process.

Overview of Stewardship Account Grants

The Stewardship Account is a source of competitive funding to facilitate free-market mechanisms for voluntary, incentive-based conservation on private lands (and public lands as needed) in habitats designated as necessary to conserve sage grouse and maintain state management. Free market mechanisms are envisioned as mitigation through conservation banks or a habitat exchange where conservation efforts create mitigation credits. These mitigation credits can then be sold to developers to offset direct and impacts of projects implemented in designated sage grouse habitats. The Montana Legislature provided specific statutory direction for the Stewardship Account.

Consult the Act for all the details, but the most important requirements are:

- MSGOT shall evaluate and select grant applications to receive funding from the sage grouse stewardship account.
- Projects are only eligible if they are located, at least in part, on land in sage grouse Core Areas, General Habitat, or Connectivity Areas.
- Applicants must be an agency or an organization.
- Organizations or agencies are only eligible if they hold and maintain conservation easements or leases or are directly involved in sage grouse habitat mitigation and enhancement activities approved by MSGOT.
- Eligible projects may include: reduction of conifer encroachment, maintenance, restoration, or improvement of sage brush health or quality, incentives to reduce the conversion of grazing land to cropland, restoration of cropland to grazing, fence marking, reduction of unnatural perching platforms for raptors, reduction of unnatural safe havens for predators, and purchase or acquisition of leases, term conservation easements or permanent conservation easements. MSGOT can consider other project ideas, but they must be consistent with the purpose of the Stewardship Act.

Some projects are statutorily ineligible. Examples include: fee simple acquisition of private land, water right purchase, leases or easements that require recreational access, supplementation or replacement of operating budgets except for budget items that directly relate to purposes of the grant.

Statutory guidance also establishes the key connections between the Stewardship Account and its dual purpose to not only conserve habitat but also to incentivize creation of credits to initiate a mitigation marketplace and to allow developers to transfer the mitigation obligation to MSGOT.

Key statutory provisions and crosswalks between grants and mitigation are:

- The majority of the account funds must be awarded to projects that generate credits that are available for compensatory mitigation under MCA 76-22-111 [Compensatory Mitigation].
- When selecting projects to receive funds, MSGOT shall prioritize projects that maximize the amount of credits generated per dollars of funds awarded.
- MSGOT shall retroactively calculate and make available credits for leases and conservation easements purchased with funds disbursed after May 7, 2015, but prior to the adoption of MSGOT's Rules.
- MSGOT is directed by statute to adopt rules to administer a method to track and maintain the number of credits attributable to projects funded by the Montana Greater Sage-Grouse

Stewardship Act that are available to a project developer to purchase for compensatory mitigation to offset debits.

- The majority of the funds in the sage grouse stewardship account may not be disbursed before the habitat quantification tool has been adopted. The habitat quantification tool must be applied to any project funded after the habitat quantification tool has been adopted.
- The majority of the funds in the account may not be disbursed before the habitat quantification tool has been adopted.
- The Legislature delegated rulemaking authority to MSGOT. MSGOT first proposed rules in November 2015. Proposed rules were published in December 2015, and public comment was accepted through late January 2016. Final rules were adopted and became effective in March 2016. In February 2016, MSGOT also adopted Procedures 01-2016 to set forth clear, transparent steps in the grant application and decision process. Additional rules to refine and further Stewardship Account grant rules with respect to the mitigation framework were promulgated and ultimately took effect January 2019. See Appendix B.

The time lag or delay between what Stewardship Account deposits are expected and what's actually been received is unpredictable at the individual development project level. Some deposits are made within days or weeks while other deposits may not be made for at least a year. Thus, when individual projects are aggregated up to the Account level, the timing of each Stewardship Account grant cycle and the amount of funding actually available to award to applicants can also be unpredictable. The Program estimates that about \$3-4 million is needed per grant cycle for it to be a meaningful grant opportunity that would attract applications and that would yield MSGOT the ability to select the best and strongest projects among many competing projects. Grant cycles would generally be offered when the Stewardship Account balance reaches \$3-4 million.

Despite the uncertainty, MSGOT has offered a total of two grant cycles as of December 31, 2019. The first was in 2016/2017 and the second cycle was in 2019. Funds awarded were primarily sourced back to the original statutory appropriation of 2015. A small amount of the Stewardship Account contributions received to date were obligated towards grants.

Additional details can be found in the MSGOT Meeting Archive, Audio Summary Minutes, Notes and Handouts.

Status of Stewardship Account Grant Projects Awarded Funding During the First Cycle: 2016-2017

The Stewardship Act provided an avenue for MSGOT to proactively jumpstart creation of credits through Stewardship Account grants while the Program concurrently worked with stakeholders to develop the mitigation framework and the HQT. MSGOT could not award more than \$5 million in grants (or half of the original \$10 million appropriation) prior to designating the HQT. Furthermore, once designated, the HQT had to be applied retroactively to calculate the number of credits created through Stewardship Account grants awarded prior to the final HQT designation.

The first grant cycle was offered in April 2016, and nine applications were received. After thorough peer review and public comment, MSGOT awarded funding to eight conservation easements in June 2017. An application for funds to mark fences with a high risk of sage grouse fence collisions was not awarded funding.

After MSGOT selected the grant award recipients, the next steps in the process were to: 1. negotiate and execute a grant agreement between MSGOT and grant recipients, including contingency and mitigation-related language; 2. negotiate conservation easement terms with the land trust

organization holding the easement and the landowner, including mitigation-related language and retention of the state's third party right of enforcement; 3. complete an environmental assessment; 4. obtain final MSGOT approval; and 5. transfer state funds so the grant recipients could execute and close the conservation easements.

Of the original eight conservations selected for funding in mid-2017, two projects were withdrawn by the grant recipient not long after the award because mutually satisfactory easement terms could not be negotiated. The status of the remaining six projects as of December 31, 2019 is shown in Table 14. Three projects have closed, one project is on hold at the request of the landowner, and two projects were withdrawn by the grant applicant when alternative sources of funding became available.

Table 14. Status of all 2016 projects awarded grant funding in the first cycle, as of December 31, 2019.

Proposal	Type ⁵	County	Habitat Class	Size (acres)	MSGOT Decision/Status
44 Ranch	Easement	Petroleum, Fergus	100% Core	18,033	Closed November 2016
Raths Livestock	Easement	Golden Valley	100% Core	11,230	Closed February 2019
Watson	Easement	Phillips	100% Core	2,833	Temporarily on hold by request of the family; expected to close in 2020
Hansen ⁶	Easement	Beaverhead	98% Core	13,535	Closed October 2018
Weaver	Easement	Choteau, Blaine	100% General	9,870	Withdrawn by grant applicant in May 2018 when other funding source secured
Smith	Easement	Beaverhead	100% Core	288	Withdrawn by grant applicant in August 2017 when other funding source secured

Status of the Stewardship Account Second Grant Cycle: 2019

The Program initiated the second Stewardship Account grant cycle in March 2019. MSGOT received six applications including three conservation easements and three term leases. After thorough peer review and public comment, MSGOT awarded funding to all six grant projects in September of 2019. Term leases are similar to perpetual easements in that the landowner receives payment in exchange for voluntarily not exercising rights to develop certain surface uses of the property. Term leases differ from perpetual conservation easements in that term leases are for a fixed number of years only, and the landowner decides the number of years or duration of the lease. At the expiration of the term, the lease expires, and the landowner is free to exercise those rights once again.

⁵ Any conservation easements funded, in part, by Stewardship Fund dollars are held by the grant applicant agency or organization – here, Montana Land Reliance or The Nature Conservancy. The state retains a third party right of enforcement, but otherwise does not hold the easement or own land. Private landowners are made aware of the Stewardship Fund and its purpose through the application itself where they are required to acknowledge disclosure statements with their initials. In this way, the Program and the grant applicant are assured that only willing private landowners engage in the process.

⁶ The conifer reduction portion of this project was implemented using alternative funding sources and MSGOT reallocated funds originally awarded for conifer reduction to the conservation easement.

As of December 31, 2019, the status of the six projects selected for funding is shown in Table 15. For all three conservation easements, executed grant agreements were in place and the Program had completed environmental assessments. For all three term leases, negotiations were ongoing to finalize a new template for a term lease grant agreement and the lease itself. Additionally, the Program was actively working to develop a template guidance document to outline how term leases should be monitored and a template for the initial condition report. The Program had completed all environmental assessments, so the term leases could proceed to closing as soon as templates were finalized and agreed upon.

Table 16 lists the Stewardship Account award amounts and leveraged matching funding for the four projects moved forward of the original six that were selected. Figure 21 shows the locations of Stewardship Fund grant proposals that were funded by MSGOT in the first and second grant cycles and still active at the end of 2019. Additional details can be found in the MSGOT Meeting Archive, Audio Summary Minutes, Notes and Handouts.

Figure 13 shows the locations of all Stewardship Fund grant proposals that were funded by MSGOT in the first and second grant cycles and still active at the end of 2019.

Table 15. Status of all projects awarded funding in the second grant cycle in 2019, as of December 31, 2019.

Proposal	Type⁷	County	Habitat Class	Size (acres)	MSGOT Decision/Status
Willow Basin	Easement	Beaverhead	100% Core	3,989	Grant agreement executed; environmental assessment completed; closing expected in 2020
Marc Lewis	Easement	Fergus, Petroleum	100% Core	3,743	Grant agreement executed; environmental assessment completed; closing expected in 2020
Sauerbier Ranch	Easement	Beaverhead, Madison	100% Core	7,697	Grant agreement executed; environmental assessment completed; closing expected in 2020
King Ranch	30-Year Term Lease	Petroleum	100% Core	11,703	Grant agreements with the conservation district and the landowner in negotiation; closing expected in 2020
Shultz-Gran Prairie	25-Year Term Lease	Petroleum	100% Core	6,367	Grant agreements with the conservation district and the landowner in negotiation; closing expected in 2020
Burgess Ranch	30-Year Term Lease	Garfield	80% Core	12,901	Grant agreements with the conservation district and the landowner in negotiation; closing expected in 2020

⁷ Any conservation easements or term leases funded, in part, by Stewardship Fund dollars are held by the grant applicant agency or organization – here, Montana Land Reliance or The Nature Conservancy. The state retains a third-party right of enforcement, but otherwise does not hold the easement or own land. Private landowners are made aware of the Stewardship Fund and its purpose through the application itself where they are required to acknowledge disclosure statements with their initials. In this way, the Program and the grant applicant are assured that only willing private landowners engage in the process.

Table 16. Stewardship Account 2019 / second cycle grant awards and funds committed, sources of matching funds, and acres of habitat conserved for credit generation, as of December 31, 2019.

Project	Stewardship Account	NRCS Match	Private Match	Other Match	Acres	TOTAL
Willow Basin	\$242,500	\$727,500		\$34,400	3,989	\$1,004,400
Marc Lewis	\$496,238			\$150,000	3,743	\$646,238
Sauerbier Ranch	\$1,013,500	\$2,887,500			7,697	\$3,901,000
King Ranch	\$564,405				11,703	\$564,405
Schultz-Gran Prairie	\$329,236	\$52,674	\$35,050		6,368	\$416,960
Burgess Ranch	\$787,673	\$2,936	\$124,969	\$5,000	12,901	\$920,578
Total Stewardship Account	\$3,433,552					\$3,433,552
Total Match		\$3,670,610	\$160,019	\$189,400		\$4,020,029
TOTAL HABITAT CONSERVATION					46,401	\$7,453,581

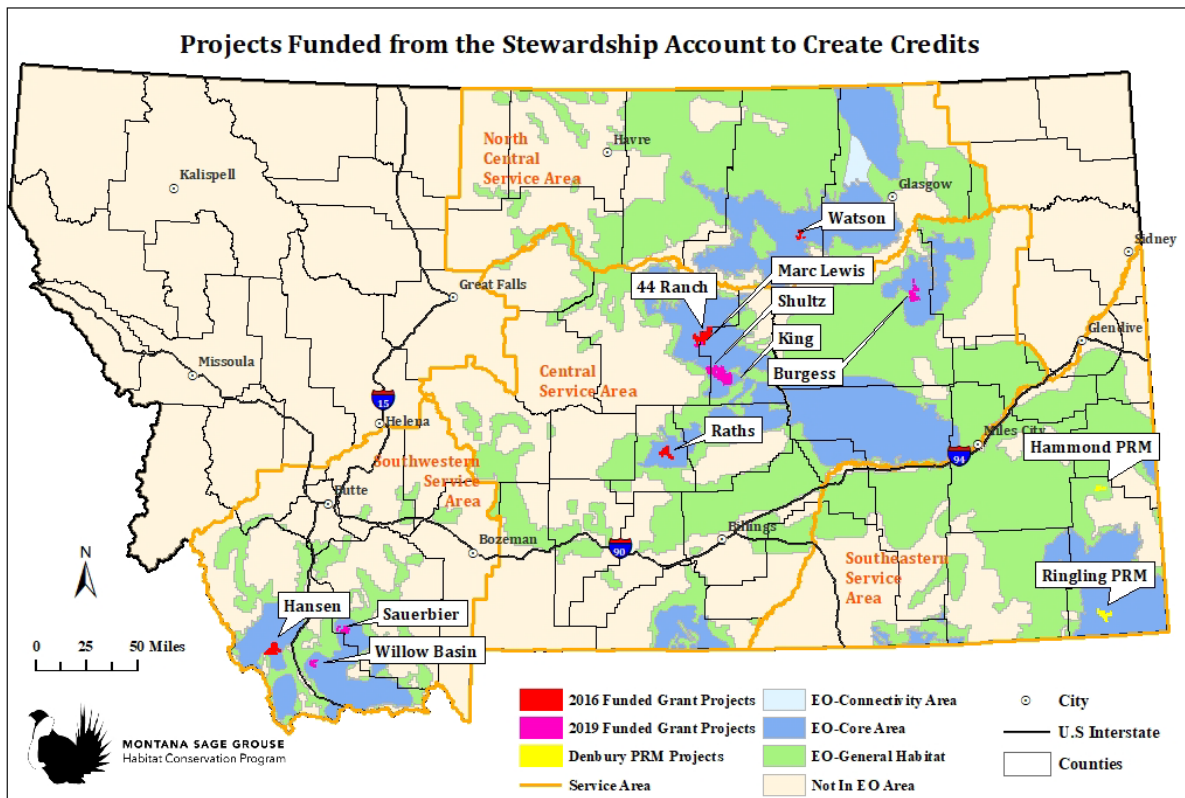


Figure 21. Locations of Stewardship Fund grant proposals that were funded in the first and second grant cycles and still active, as of December 31, 2019.

Mitigation Credits Created by MSGOT through Stewardship Account Grants, by Developers through Permittee-Responsible Projects, and Other Means

Introduction

Montana recognizes credit projects that avoid future loss or fragmentation of otherwise intact habitat by legally removing identified threats through preservation using perpetual conservation easements or term leases. Preservation credit projects create credits through land preservation using perpetual conservation easements, term easements, or term leases. Long-term, voluntary protection of remaining habitat is the gold standard of habitat conservation in Montana. Montana also recognizes credit projects that restore or enhance habitat through active management (e.g., conifer removal, reseeding). Unlike typical preservation credit sites, restoration or enhancement credit sites increase the quantity or quality of functional habitat at that particular site.

Developing and selling credits in the Mitigation System by preserving, restoring, or enhancing land which increases the functional habitat quality or quantity for sage grouse could generate revenue for the respective landowner. Developing credit sites and participation in the Montana Mitigation System is voluntary on the part of private landowners and Montana State Trust Lands.

Mitigation credits may be produced through grant funding provided by the Stewardship Account (i.e., Stewardship Account Grants), developed under any other MSGOT-approved mitigation mechanism (e.g., conservation bank or habitat exchange), or created and used by project developers conducting their own compensatory mitigation projects to offset development impacts (i.e., Permittee Responsible Mitigation) or by working with third parties to develop credit sites. Funding from the Stewardship Account is not required to create credit sites.

Baseline and Policy Multipliers for Newly-Created Uplift from Restoration and Enhancement

Each crediting project must demonstrate additionality. Additionality refers to the requirements that: (1) regulatory – credit-generating habitat benefits from a project must be in addition to what would have happened in the absence of a credit project (baseline before implementation) and in addition to what is already otherwise required by existing law and regulations; and (2) legal and financial commitments.

For permanent credits created through permanent conservation easements, the easement itself satisfies the additionality requirement, but the baseline will be adjusted to account for the fact that absent additional restoration or enhancement activities, perpetual easements preserve the status quo and do not create new functional acre credits. For restoration or enhancement credit sites, a legal site protection instrument permitting or prohibiting certain activities to preserve the integrity of the habitat, respectively, satisfies the additionality requirement.

To more accurately reflect that perpetual easements, in the absence of any additional restoration or enhancement activity, preserve the status quo and do not create new functional acres, Montana defines baseline for perpetual preservation credit projects as 40% of post-project habitat function determined by the HQT as a default. For this reason, the credits produced from the implementation of a preservation project will be approximately 60% less than the Raw HQT score (i.e., functional acres gained).

A positive multiplier is applied to the number of functional acre credits newly-produced at a given restoration or enhancement credit site because they increase functional acres above baseline. A

positive 10% multiplier is applied for newly produced functional acre credits in a Core Area and a positive 5% multiplier is applied for newly produced functional acre credits in General Habitat.

Data Preparation Methods

The HQT is also applied to mitigation credit projects. The initial HQT results are referred to as functional acres gained. After applying credit policy modifiers, functional acres are converted to credits (Figure 11). The sections below report data for both the functional acres gained and the total number of available and anticipated credits. Functional acres gained data are reported *before* the baseline adjustment and represent the number of functional acres gained due to the implementation of credit projects. Credits are reported *after* applying the baseline adjustment to preservation credits and applying any additional multipliers for newly-created credits through restoration or enhancement projects.

Non-Stewardship Account credit projects that reached Completed Review on or before December 31, 2019 are included in this reporting period. They include efforts by developers to implement PRM projects and who retained their own credits, restoration efforts by third parties who did not want to retain their credits, and wells that were permanently plugged and abandoned where a very small number of credits were created and not retained by the developer.

Stewardship Account grant projects that had all the necessary paperwork filed with their respective county and “closed” by December 31, 2019 are included (n=3: 44 Ranch, Raths Livestock, and Hansen Ranch).

Functional Acres Gained from Completed Projects: Stewardship Account Grants, PRM, and Other Sources

In 2019, there were a total of 3,682,390.61 Functional Acres gained due to the implementation and closing of credit projects across all Service Areas (i.e. available credits). This number takes in to account all 30 credit projects submitted through either developer PRM projects, Stewardship Account Grants (n=3), or other qualifying credit projects (e.g., permanent plug and abandonment, reseeding, mesic restoration; n=27). Each of the 30 projects included in this section have either closed (if MSGOT grant) or been implemented on the ground (if PRM or Other).

The greatest gain of functional acres was seen in the Central Service Area, totaling 1,670,541.75 Functional Acres gained (45%) (Figure 22). Approximately 35% of the total Functional Acres gained were located in the Southeastern Service Area (1,281,179.11 Functional Acres gained). Approximately 20% of the total Functional Acres gained were located in the Southwestern Service Area (730,668.15 Functional Acres gained) and the North Central Service Areas had <1% of the total gain in Functional Acres (1.60 Functional Acres gained). See Table 17.

Of the 3,682,390.60 functional acres gained, approximately 69% were attributed to projects located in a Core Area (2,531,726 Functional Acres gained) and approximately 31% were attributed to projects located in General Habitat (1,150,665 Functional Acres gained). The functional acres gained by Service area as of December 31, 2019 is also shown in Table 17 and Figure 22.

Table 17. The number of functional acres gained due to the implementation of credit projects that closed (i.e. implemented by December 31, 2019 and available) across Service Areas, *before* baseline has been applied (closed Stewardship Account grants, PRM, other).

Source	Functional Acres Gained by Service Area				
	Central	North Central	Southeastern	Southwestern	Statewide
Denbury Resources PRM	0.00	0.00	1,280,848.65	0.00	1,280,848.65
Stewardship Account Grants + credits from other projects not retained by the project sponsor	1,670,541.75	1.60	1.33	730,668.15	2,401,212.82
MT State Trust Lands	0.00	0.00	329.13	0.00	329.13
Total Functional Acres Gained	1,670,541.75	1.60	1,281,179.11	730,668.15	3,682,390.60

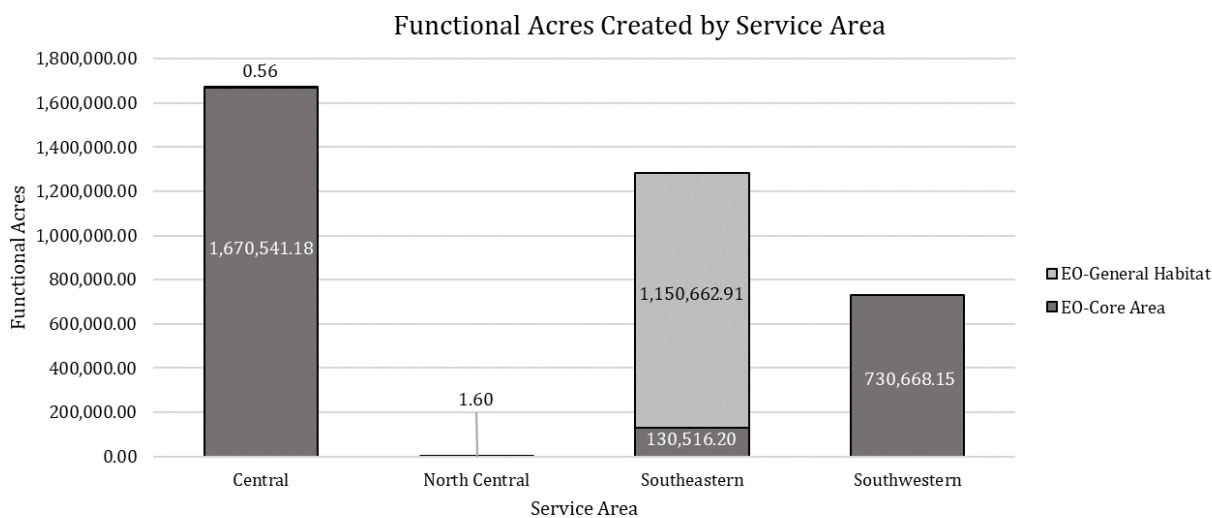


Figure 22. Number of functional acres gained by Service Area and EO habitat designation for credit projects classified that were closed or implemented as of December 31, 2019 (n=3 Stewardship Account grants; n=27 PRM and other sources combined).

Credits Created by Completed Projects: Stewardship Account Grants, PRM, and Other Sources

The number of credits for a credit project is determined *after* applying the baseline adjustment to preservation credits and applying any additional multipliers for newly-created credits through restoration or enhancement projects. The following summarizes the total number of credits created by credit projects completed by December 31, 2019 (i.e. closed Stewardship Account grant projects, PRM, and other sources). See Table 18.

Table 18. Number of available credits for implemented and closed credit projects by Service Area *after* the baseline adjustment and any applicable policy modifiers have been applied. These numbers reflect credits gained by three Stewardship Account Grant projects and 27 other projects (permanent plug and abandonment of oil or gas wells, reseeding, mesic habitat restoration, and permittee-responsible efforts).

Source or Entity	Credits Created by Service Area				
	Central	North Central	Southeastern	Southwestern	Statewide
Denbury Resources PRM	0.00	0.00	590,649.18	0.00	590,649.18
Stewardship Account Grants + credits from other projects not retained by the project sponsor	668,226.29	1.68	1.39	295,987.16	964,216.53
MT State Trust Lands	0.00	0.00	345.59	0.00	345.59
Total	668,226.29	1.68	590,996.16	295,987.16	1,555,211.30

Available vs. Anticipated Credit Totals for All Credit Projects

Credits can be considered “available” because the credit project has been implemented or the Stewardship Account grant has closed. A total of 30 credit projects were completed or closed, as of December 31, 2019. Three Stewardship Account grants from the first grant cycle closed by December 31, 2019 (44 Ranch, Raths Livestock, and Hansen Ranch). An additional 27 credit projects were also implemented either through developers’ PRM projects or by third parties and implemented by December 31, 2019.

Alternatively, credits can be considered “anticipated” because the project was being developed in during the reporting period and has a high likelihood of being successfully implemented in the next 1-2 years. A total of five projects awarded Stewardship Account funding either in 2016 or 2019 have a high likelihood of closing in 2020 or 2021 (Watson easement, Marc Lewis easement, Sauerbier easement, Willow Basin easement, and Burgess term lease). These grant projects are included herein and reported below as MSGOT Anticipated Grants. In addition, two developer PRM projects reached Completed Review during the reporting period and are also expected to be implemented in the future.

Therefore, any credit project which was implemented or Stewardship Account grant that has closed as of December 31, 2019 are considered “available” credits. Stewardship Account grant projects that are not yet closed and PRM projects that had not yet been implemented by December 31, 2019 are considered “anticipated” credits. Both available and anticipated credits are reported separately below.

Because developers have complete discretion over the eventual disposition of their own credits, the following summary reports MSGOT credits separately from those created by other entities. A developer reserves the right to keep their own PRM-created credits themselves but can also sell them to other developers through free-market transactions independent from MSGOT.

The credit data below represent the total number of credits *after* the baseline adjustment has been made and represent the number of credits available or anticipated to become available in 2020 or 2021.

Results: Available vs. Anticipated Credits

A total of 2,193,534.95 credits are either available or anticipated. Among all credits presently available or anticipated in the future, the majority are attributed to Stewardship Account grants awarded by MSGOT (66.5%; 1,461,383.2 credits). See Figure 23.

Of the credits currently available, approximately 62% are associated with MSGOT Stewardship Account grants (958,352.80 credits). Conversely, approximately 38% of all presently available credits are associated with projects implemented by third parties or developers who implemented their own PRM projects (596,858.50 credits). See Figure 23.

Most of the credits anticipated in the future are also attributed to Stewardship Account grants awarded by MSGOT. Approximately 79% will be created through the last 2016 grant yet to close and five 2019 grants with a high likelihood of closing after December 31, 2019 (502,524.70 credits: Watson, Marc Lewis, Sauerbier, Willow Basin, Burgess). Approximately 21% of anticipated credits in the future are associated with PRM projects by developers (135,798.96 credits). See Figure 23.

Available Credits from Stewardship Account Grants vs. All Other Credit Providers

The majority of credits were created through MSGOT’s Stewardship Account grants. See Figure 24.

Of the total 1,555,211.30 available credits created, approximately 62% were created by Stewardship Account grant projects (958,352.80 credits) and approximately 38% were created by entities or project sponsors other than MSGOT through: 1. permanent plug and abandonment of oil or gas wells; 2. reseeded projects; 3. mesic habitat restoration projects; or 4. Developer’s own permittee-responsible projects.

All the credits created by Stewardship Account Grant Projects were located in a designated Core Area. Approximately 77% of other credit projects were located in a designated Core Area (460,482.23 credits) and approximately 23% were located in General Habitat (136,376.27 credits).

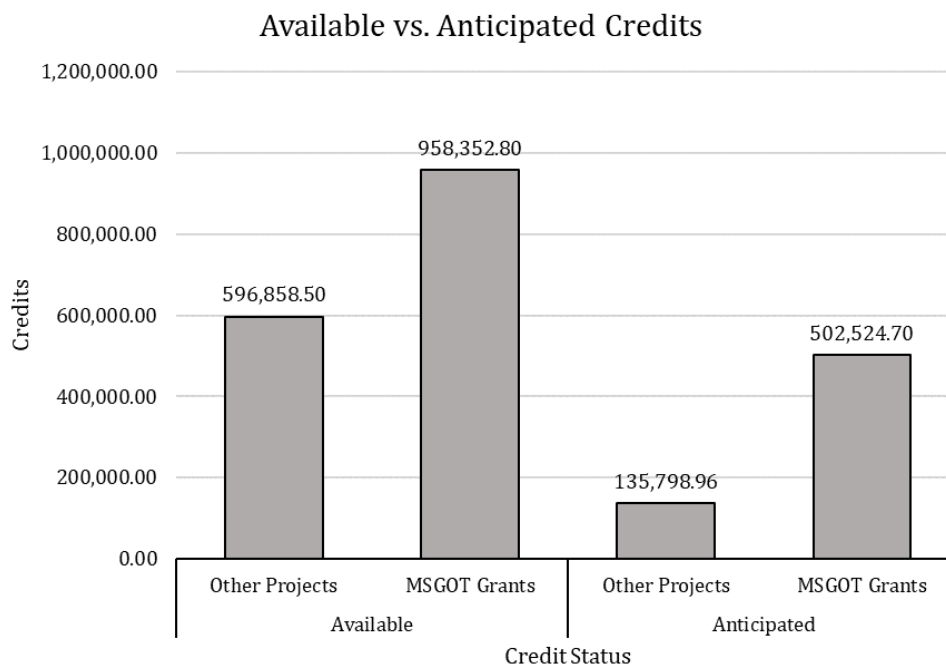


Figure 23. Total credits available vs. credits anticipated as of December 31, 2019, categorized by source (Stewardship Account grants or other entities). “Other Projects” includes: 1. permanent plug and abandon oil or gas wells; 2. reseeded; 3. mesic habitat restoration; and 4. PRM projects. Available credits implemented projects or closed Stewardship Account grants as of December 31, 2019, respectively. Anticipated credits Stewardship Account grants that have a high likelihood of closing in 2020 or 2021 or other credit projects that will be implemented in the future.

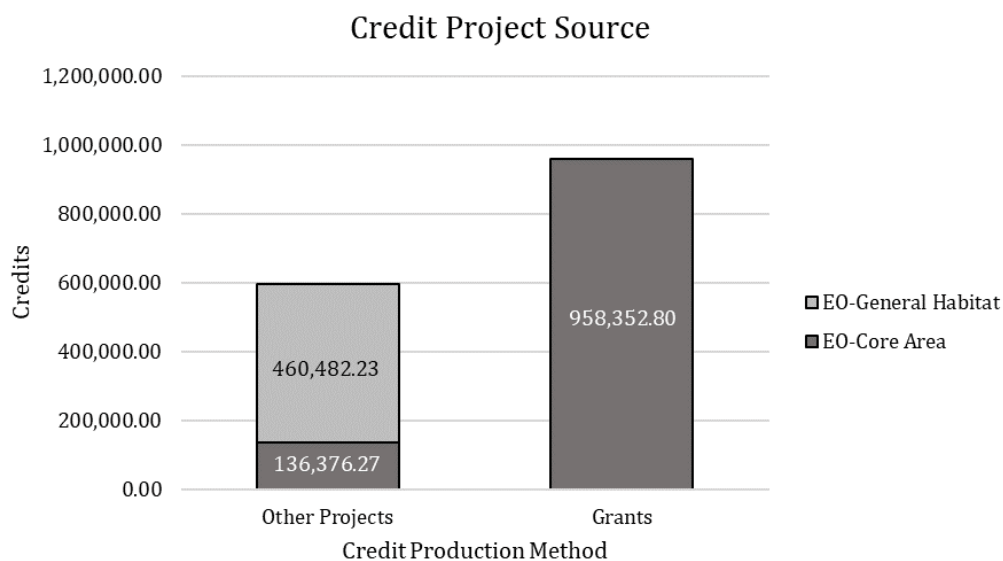


Figure 24. Number of credits created by three MSGOT Stewardship Account grants that closed by December 31, 2019 compared to credits created by all other projects, by habitat category. Other Projects by other third parties includes: 1. permanent plug and abandonment of oil or gas wells; 2. Reseeding; 3. mesic habitat restoration; and 4. PRM projects.

Number of Credit Projects and Total Credits Created by Service Area and Habitat Category

A total of 30 credit projects were either implemented or the Stewardship Account grant had closed. This resulted in the creation of a total of 1,555,211.30 credits. Of the 30 credit projects, 10 were implemented in the North Central and Central Service areas, respectively (33% each). Eight credit projects were located in the Southeastern Service Area (27%), and two were located in the Southwestern Service Area (7%).

The Central Service Area held the majority of available credits, totaling 668,226.29 credits (43%) (Figure 25). Approximately 38% of the total available credits were located in the Southeastern Service Area (590,996.16 credits). The Southwestern Service Area had approximately 19% of the total available credits (295,987.16 credits) and the North Central Service Area had <1% of the total credits (1.68 credits). See Figure 25.

The clear majority of credits have been created in a Core Area. Of the total 1,555,211.30 credits available, approximately 70% can be attributed to projects located in a designated Core Area (1,094,729.07 credits). Approximately 30% can be attributed to Projects located in designated General Habitat (460,482.23 credits).

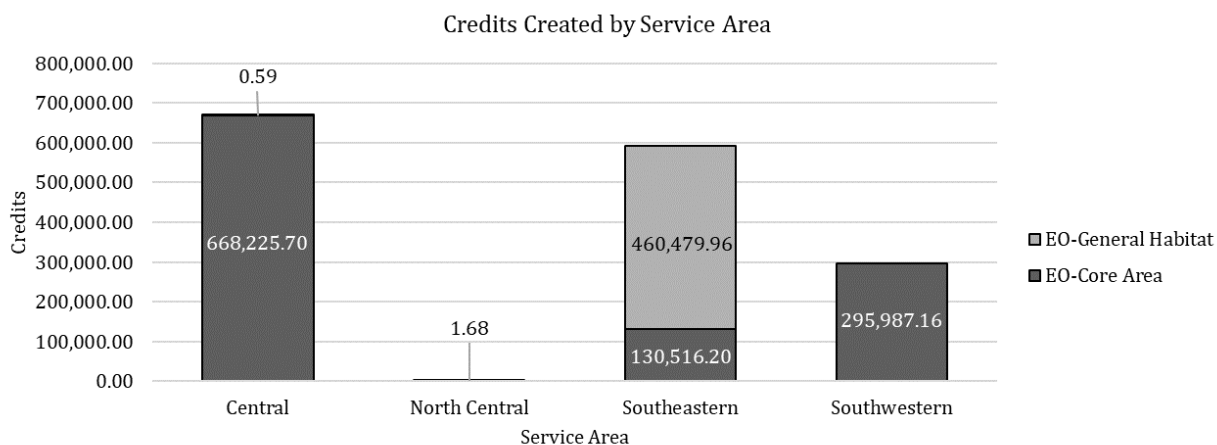


Figure 25. Total number of credits created by Service Area and by Executive Order 12-2015 habitat designation, all entities/sources combined (Stewardship Account grants, developer PRM projects and third parties), for projects that either were implemented or closed by December 31, 2019.

Available Credits by Credit Activity Type and Habitat Category

Credits can be categorized as preservation, restoration or enhancement. Preservation credits are created through perpetual or term conservation easements or through term leases. Preservation credits avoid future losses of habitat through development or new cultivation. Restoration and enhancement credits are created through intentional management actions which increase habitat quality (e.g. restoring mesic habitats or native range through reseeding). The following summary shows the available credits by credit activity type, respectively, across all credit project sponsors combined *after* the baseline adjustment and any applicable policy modifiers.

The clear majority of available credits are classified as preservation credits. Of the total 1,555,211.30 credits available statewide, approximately 91% of the total credits created were preservation credits (n=1,418,485.78) attributed to permanent conservation easements (Denbury Resources PRM and 3 closed Stewardship Account grants). See Figure 26.

The remaining 9% of total credits were created through restoration or enhancement efforts. Approximately 7% of the total credits (109,812.60) were created through a PRM project that permanently plugged wells and reclaimed lands within an existing oil and gas field that was then retired from future development by BLM. Projects that permanently plugged and abandon oil or gas wells attributed approximately 1% of the total credits created (20,721.76 credits). Projects that restored habitat through either mesic habitat restoration or reseedling activities both attributed to less than 1% of the total credits created (5,845.56 and 345.59 credits, respectively). See Figure 26.

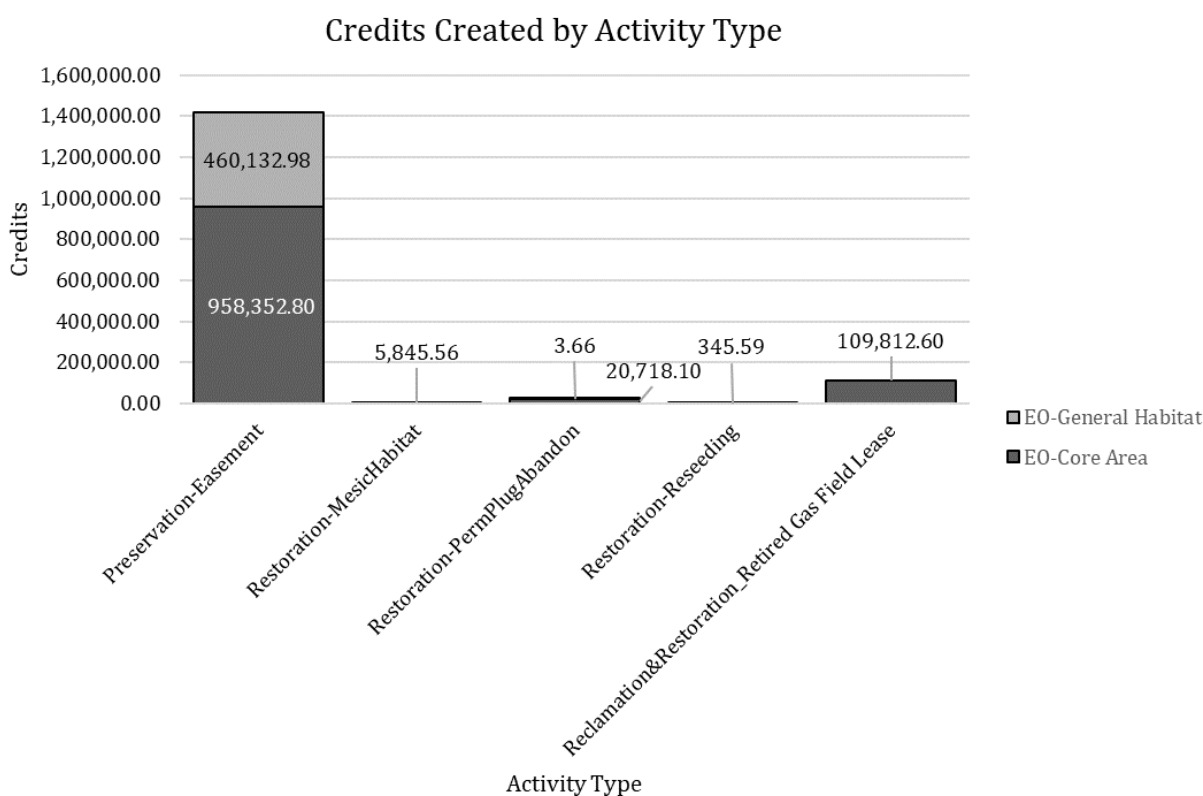


Figure 26. Types of credits created by different credit project activity types for all credit projects that have either been implemented by developers as PRM or third parties (n=27) or any MSGOT Stewardship Account grants that closed as of December 31, 2019 (n=3).

Synthesis of Mitigation System Key Metrics and the 2019 Ledger

The goal of Montana's Greater Sage-Grouse Conservation Strategy is to maintain viable sage grouse populations and conserve habitat so that Montana maintains flexibility to manage its own lands, wildlife, and economy and so that a listing or designation as a candidate species under the federal Endangered Species Act is not warranted in the future. Additionally, the Strategy aims to balance

development with conservation and promote Montana's economy with a statutory goal of "no net loss of habitat and net gain preferred." The Oversight Team formally approved the Mitigation System framework's administrative rules in December 2018. The rules took effect in January 2019.

As of December 31, 2019, a total of 88,894.80 debits have been created due to the implementation of development projects throughout all four Service Areas. This number takes in to account all projects that required an HQT, associated mitigation, and reached completed review status by December 31, 2019 (n=151). In contrast, a total of 1,555,211.30 credits were created by MSGOT through Stewardship Account grants, by developers through PRM projects, and by third parties. On a statewide basis after subtracting credits used to offset impacts during the reporting period, there is a remaining surplus credit balance of 1,466,316.49. See Table 19.

Since the final administrative rules took effect, all contributions to the Stewardship Account should be allocated towards Stewardship Account grants to offset the impacts of the development project for which the contribution was made. A total of \$506,806.18 has been contributed to the Stewardship Account through December 31, 2019 by developers who decided not to implement their own permittee-responsible mitigation projects and transferred their mitigation obligation to the state. This includes one legacy project for which a contribution was deposited in 2018 (\$161,179.00) and all other contributions recorded up to December 31, 2019 (\$345,627.18).

As of December 31, 2019, Program records reflect that an additional \$1,449,489.77 is owed to the Stewardship Account (excluding \$1.7 million attributed to a new major road for a coal mine and for which the proponent is currently working through bankruptcy proceedings; amount would become "due" if the road were built in the future). The \$1,449,688.10 owed to the Account is attributed to projects which reached Completed Review by December 31, 2019, a mitigation obligation exists, and the developer selected the Stewardship Account option to offset impacts of the proposed development project. It is the Program's understanding that these developers have delayed starting the permit application process, started the application process but have not yet obtained all necessary permits, or has obtained all necessary permits but delayed actual implementation.

Table 19. Overview of the key mitigation metrics by Service Area. The data in this table represent all development projects for which an HQT was run and resulted in a mitigation obligation (n=151) and all credit-producing projects (n=3 closed Stewardship Account grants, n=27 permittee-responsible or third-party activities) implemented as of December 31, 2019.

	Service Area				Statewide
	Central	North Central	Southwestern	Southeastern	
Debit Project Count	40	21	12	78	151
Functional Acres Lost before multipliers	13,172.87	3,689.29	2,408.60	40,367.28	59,638.04
Total Debits	21,933.09	4,855.60	3,191.67	58,914.43	88,894.80
Credit Project Count, all sources	10	10	2	8	30
Functional Acres Gained before baseline adjustment and multipliers, all sources	1,670,541.75	1.68	730,668.15	1,281,179.11 (majority is Denbury PRM)	3,682,390.61
Total Credits	668,226.29	1.68	295,987.16	590,996.16	1,555,211.29
Credits Retired to Offset Debits	21,933.09	1.68	3,191.67	58,914.43	88,894.80
Balance of Available Credits as of December 31, 2019	+646,293.20 Surplus	-4,853.92 Deficit	+292,795.49 Surplus	+532,081.73 Surplus	+1,466,316.49 Surplus

ADAPTIVE MANAGEMENT AND OTHER EFFORTS TO IMPROVE IMPLEMENTATION

Adaptive Management

Adaptive management is a fundamental principle of the Montana Mitigation System. When it comes to conserving sage grouse populations, much is known about the species' habitat preferences and population responses to the loss and fragmentation of sagebrush habitats. However, less is known about how sage grouse populations respond to anthropogenic disturbances and more generally to mitigation measures which are intended to offset anthropogenic disturbance. Furthermore, Montana's Mitigation System includes assumptions in both the Policy Guidance and the HQT Technical Manual in the absence of perfect knowledge or experience in implementation. For these reasons, the Montana Mitigation System implements an adaptive management approach to periodically evaluate whether mitigation effectively offsets impacts in space and through time, to ensure sage grouse populations are sustained, and to assure Montana achieves the standard of no net loss of habitat.

Adaptive management requires consideration of both habitat outcomes and population status and trends over time, in concert and at multiple spatial scales. The Program's focus is on habitat outcomes while population monitoring, population estimation and reporting, and harvest management remain the purview of MFWP. Please see MFWP's Greater Sage-Grouse Population Reports.

Sage Grouse Program specific habitat-based objectives are as follows:

- Meet the mitigation standard of no net loss, net gain preferred.
 - The number of functional acres created should be equal to or greater than the number of functional acres lost (i.e., HQT results prior to the application of modifiers).
 - The number of credits created should be greater than or equal to the number of debits.
- Maintain sufficient credits in the reserve account to replace lost or impaired credits.
 - The reserve account should have a sufficient number of reserve credits to replace lost or impaired credits listed and already used and assigned to offset debits.
- Produce and maintain an adequate credit supply, regardless of the entity who creates them.

Except for the North Central Service Area, Montana is meeting the habitat-based objectives, as calculated using the HQT and after incorporation of all policy elements. See Table 20.

There is a deficit of both a functional acres gained and credits in the North Central Service Area. This means that impacts of development projects exceeded mitigation activities to offset the impacts. This is because a very small number of credits were created in comparison to the development activities. Credits were created primarily through efforts to permanently plug and abandon oil or gas wells and to reclaim these sites (n=10). Due to the relatively small geographic direct footprint, the number of credits is very small; nonetheless, it remains important to document reclamation of these sites and the removal of all above ground infrastructure. Additionally, one Stewardship Account grant was awarded in this Service Area in 2016, but it had not closed as of December 31, 2019 (Watson easement). That Stewardship Account grant project is expected to close in 2020 and create an estimated 28,934.24 credits. When this grant project closes, the North Central Service Area is likely to have a surplus in subsequent reporting years.

The objective to maintain sufficient credits in the Reserve Account to replace lost or impaired credits was partially met. The balance of credits in the Reserve Account is presently below the total number of credits available as of December 31, 2019. However, the Reserve Account balance has been slowly growing and should be left to continue to grow. No reports of impaired credits were received in the reporting period; thus there were no "draws" upon the Reserve Account of pooled credits.

Table 20. Habitat-based objectives and whether the objectives were met within each Service Area and on a statewide basis, as of December 31, 2019.

Habitat Objective	Habitat-Based Objectives Met? Yes/No/Partially				
	Central Service Area	North Central Service Area	Southwestern Service Area	Southeastern Service Area	Statewide
Functional Acres created equal to or greater than Functional Acres Lost	Yes	No	Yes	Yes	Yes
Credits Created equal to or greater than Debits	Yes	No	Yes	Yes	Yes
No Net Loss, Net Gain Preferred	Yes	No	Yes	Yes	Yes
Reserve Account Balance	Partially (2,634.57)	Partially (737.86)	Partially (8,071.50)	Partially (481.72)	Partially (11,925.65)

Adaptive management does not just occur at static intervals, it is a fluid process and one that the Program, stakeholders, and interested publics continue to take part on throughout the years (Figure 27). Though the process of continual improvement, the Program developers and credit providers learn and implement improvements to protocols, documentation standards, etc. For example, upon request of the 2016 Stewardship Account grant applicants, the Program revised the 2019 grant application process to include a preliminary application from would-be applicants and the Program's preliminary HQT score. With this preliminary information, would-be applicants can assess the habitat quality of the project and the likelihood that it meets MSGOT's priorities.

During this first adaptive management review, the Program envisions implementing the first minor revision to the HQT basemap to replace individual spatial data layers with the most the most recently available data from the same publicly-available data sources used to create basemap v1.0. For example, the Program is:

- currently working with an independent contractor to validate proposed project data submitted by developers and determine implementation status, if possible, using the most NAIP aerial imagery and other data sources. This is the same contractor hired in 2015 to create the existing disturbance data layer. The contractor will also update the anthropogenic disturbance layer with the most current wildfire information, including adding recent burns and removing disturbance where old burns scars are no longer visible. Correcting errors in spatial data and updating the 2015 disturbance data using the same independent contractor assures data consistency and quality control, in addition to expertise independent from Program staff;
- investigating whether there are any newly-released vegetation layers;
- investigating the feasibility of updating the lek density layer originally created using 2015 data with the most current MFWP sage grouse monitoring data;

- identifying any new scientific literature that warrants material changes to the HQT or policies.

A second area for an adaptive management focus is that the Program lacks knowledge of the status and ultimate disposition of development projects for which it has completed a review. Additionally, the Program lacks knowledge about when contributions to the Stewardship Account will be made by developers who elect to offset impacts by making a contribution. See Figure 18.

Because there is no communication feedback mechanism between developers or the permitting agency and the Program, the Program lacks knowledge about whether a permit was applied for and when relative to the Completed Review date, whether the project is still in the permitting process, whether a permit was issued and when, and whether a project was cancelled or when it was implemented. In short, the Program lacks knowledge about whether a project did or did not proceed. While time lags can be expected, their duration and the final disposition of the project is unknown to the Program. The time lag between when the Program has completed its review and when a project is actually implemented could be a year and sometimes much longer. In some cases, proponents have cancelled projects altogether.

Another challenge associated with the lack of knowledge and the time lag is that the Program can't predict when a contribution to the Stewardship Account will actually be made when proponents select that option. Contributions might be made within 1-3 weeks of when the Program completes its review. On the end of the spectrum, some contributions have been pending for up to two years. Contributions are slated to be made after a developer obtains all necessary permits but before implementation. As of December 31, 2019, developers have committed to offsetting impacts of their projects through a contribution to the Stewardship Account, but about \$1.4 million in contributions is still pending (Figure 19).

Changes to reporting requirements and/or agency protocols would improve data integrity, accuracy of disturbance data, fiscal management of the Stewardship Account, and accuracy to the credit/debit ledger. Improvements here affect implementation of the existing mitigation framework and associated business processes but not the framework or HQT itself. Until a feedback mechanism and protocols are devised, the Program has followed up on a limited number of specific projects to learn the status and disposition, in addition to hiring an independent contractor to update the Program's existing disturbance spatial data. Both endeavors require staff time and budget resources.

Stakeholders have engaged with the Program on a regular basis and will continue to do so. The Program will work with MSGOT and stakeholders to identify additional topics and potential priorities for an annual adaptive management review in 2020-2021. Any changes after just one year should be minor in nature so there remains continuity of experience and data collection to amass enough information to establish a track record to identify major substantive issues and to inform deliberations and eventual policy solutions. Nothing suggests that limitations or unexpected outcomes have been so universally experienced by developers or credit providers that could not be overcome through MSGOT's deliberations or that would trigger a major review / overhaul on its own merits at this time.

Once every five years, a more substantive adaptive management review should take place. See Figure 27. Because 2019 marks the completion of only the first full year of implementing Montana's Sage Grouse Mitigation Framework, not enough experience and data have accumulated to inform or identify areas needing substantive, material review, triggering major changes and

administrative rulemaking. A more substantive review would be targeted for 2023-2024. However, in the intervening years, MSGOT remains available to address limitations of either the HQT or mitigation policies in the interim.



Figure 27. The Sage Grouse Habitat Conservation Program’s Adaptive Management Strategy.

Efforts to Improve Implementation

The Program routinely interacts with state permitting agencies and stakeholders to identify areas of concern and cooperatively develop solutions on an ongoing basis. It’s not possible to anticipate every detail or scenario for such a new Program in its first years. This is especially the case for the mitigation framework. However, a pragmatic, collaborative problem-solving approach has been taken, alongside stakeholders, MSGOT, the Montana Legislature, state and federal agencies, private landowners, and other interested organizations and parties when issues are identified.

More specifically starting in the second half of 2019, efforts focused on 2019 legislative amendments to the Stewardship Act. Efforts specific to the 2019 amendments will continue into 2020.

Implementation of 2019 Legislative Amendments to the Stewardship Act

During the 2019 legislative session, Senate Bill (SB) 299 was passed and ultimately became law on May 2, 2019, upon the Governor’s signature. Efforts to implement SB 299 have been ongoing since that day. They included the following.

- The Program has been working directly with state agency permitting programs to develop approaches to implement new Section 1 [clarifying the exemption for existing land uses and activities] and new Section 3 [operations and maintenance activities exempt from HQT calculations]. Considerations include roles, protocols, data, record keeping and reporting, and the regulatory authorities of the respective state permitting programs. Collaboration with the Montana Board of Oil and Gas and the Montana Department of Transportation has already begun and will continue into 2020.
- The Program has done some initial outreach with the stakeholder community to begin the process of devising a streamlined approach to the compensatory review process, including calculation of reduced mitigation costs for low-impact projects using trenchless excavation methods.

During the initial outreach calls, the Program requested that affected stakeholders whose work incorporates trenchless excavation identify some standards around what would be considered trenchless and what type of machinery or methods would qualify. While they work on the Program's request, the Program has also begun to pull together some data about projects that are buried that have been reviewed to date so that the Program can share its experience. Buried projects may or may not involve trenchless excavation, in that some projects may entail blading the topsoil, use of a backhoe, or some other circumstance that may not comport with what stakeholders with the most knowledge about their industry practices identify as standards for trenchless excavation.

The Program suggested an initial conference call where stakeholders outline their issues, concerns, experiences to date, and most importantly, their ideas. The initial conference call would be followed by an in-person meeting, which would then be followed by an MSGOT meeting to consider adopting the approach that emerged from the collaborative stakeholder process. Stakeholders were receptive to that approach, and the initial conference call was held in November. The effort was carried into 2020, and MSGOT will be asked to endorse a modified policy approach to mitigation for projects implemented through trenchless methods.

- The Program had already been implementing Section 1 of SB299 during the consultation process because SB 299 simply codified some language from Executive Order 12-2015 pertaining to existing land uses and activities. For example, a project may have already had a permit issued, but required additional or amended permits because the project changed, or additional area was to be included in the project. Only the newly-proposed portion of the project was analyzed for purposes of compensatory mitigation, consistent with both Executive Order 12 2015 and the new provisions of SB299.
- The Program and the Montana Department of Transportation (MDT) Environmental Services Bureau have been working together to develop an approach to mitigation for MDT's projects. Activities span simple activities like signage or noxious weed control to major activities like bridge replacement or adding more lanes and widening to existing roads. Some are considered operations and maintenance, while others are new. Collaborative efforts were ongoing during 2019 and continued into 2020.

- Efforts to streamline implementation of the compensatory mitigation review process are also underway. The Program released an RFP to incorporate mitigation and the HQT into the existing web application, along with other upgrades. The RFP process was completed, and a contract was executed in mid-2019. Efforts continued through 2019 and will be ongoing in 2020.

GIFTS, TRANSFERS, BEQUESTS, or DONATIONS

The Act also provides that MSGOT can review and decide whether to accept offers of grants, gifts, transfers, bequests, or donations of money, personal property or interests in real property other than fee simple. The Act also requires the Program to report any activity regarding appropriations, gifts, transfers, bequests, or donations received, including interest in real property on behalf of the Program. No such activities occurred in 2019.

PRIVATE LAND STEWARDSHIP

One of the keys to conserving sage grouse in Montana is conserving native rangeland (sagebrush grassland areas owned by private citizens), where almost 70% of Montana's sage grouse live. Through their stewardship, Montana landowners have played an important role in conserving sage grouse and sage grouse habitat. Private landowners will continue to play an important role in the future by helping to avoid a future listing under the federal Endangered Species Act.

Because loss and fragmentation of habitat is the key issue for sage grouse conservation, the 2015 Montana Legislature appropriated funds through the Stewardship Act to address threats to habitat.

Conversion of native range to cultivated cropland has been identified as a key threat to sage grouse habitat and population persistence by USFWS. It was recently shown that lek density may be reduced by more than 50% in the face of a 10% increase in cropland within 12.4 miles. Importantly, if one parcel of land is converted, lek persistence in a "landscape ten times the size" of the parcel itself could be "strongly" reduced. Therefore, efforts which conserve intact sagebrush landscapes already having little or no existing cropland contribute favorably to sage grouse persistence, particularly where the risk of conversion exists.

Sage grouse are a landscape scale species. Habitat conservation efforts such as conservation easements maintain sagebrush cover and distribution at finer scales, thereby maintaining opportunities for population connectivity, and in turn, population persistence at larger scales. Private lands are a vital and integral part of effective sage grouse conservation.

Landowners promote and support private land stewardship, often without any engagement with state or federal agencies. However, collaborative opportunities and assistance with range improvements are available through the NRCS Sage Grouse Initiative, NRCS EQIP, U.S. Fish and Wildlife Service Partners for Fish and Wildlife Program, and the Soil and Water Conservation Districts of Montana. In many situations, range improvement projects also are undertaken in conjunction with the U.S. Bureau of Land Management, the U.S. Forest Service, and/or DNRC State Trust Lands as projects cross multiple surface landownerships and are implemented to attain maximum benefits to both the agricultural producer and the public land management agency.

Private land stewardship can also be encouraged through participation in candidate conservation agreements with assurances. This tool enables a private landowner to voluntarily enter an

agreement that specifies land use practices that be undertaken going forward, and in some cases land use practices that will not be allowed in exchange for federal assurances that if sage grouse were ever listed under the federal Endangered Species Act those land use practices can continue without fear of enforcement of the Endangered Species Act prohibitions on take (which includes modification of habitat). Further, if sage grouse were ever listed, the federal government could not impose new or different restrictions. This means that participants to these agreements voluntarily commit to implement specific actions designed to remove or reduce threats to the covered species, so that listing may be necessary. In exchange, participating private landowners receive assurances.

According to the U.S. Fish and Wildlife Service, implementing conservation efforts before species are listed and their habitats become highly imperiled increases the likelihood that simpler, more cost-effective conservation options are available, and that conservation efforts will succeed. In addition, through early conservation efforts before species are listed, resource managers and property owners have more flexibility to manage their resources and use their land.

In the recent past, Montana landowners lacked the option to enter a Candidate Conservation Agreement. However, The Nature Conservancy of Montana worked with the U.S. Fish and Wildlife Service to develop a template agreement for Montana private landowners. This document, titled Montana Greater Sage-grouse and Declining Grassland Songbirds Programmatic Candidate Conservation Agreement with Assurances, was approved and signed on January 3, 2018. As a result, The Nature Conservancy can now enter agreements with willing private landowners regarding their agricultural practices. If sage grouse are ever listed under the Endangered Species Act, federal government would issue The Nature Conservancy a “take permit” (i.e. enhancement of survival permit) and participating landowners receive assurances under the permit for having entered into an agreement with The Nature Conservancy. Additional information is available from The Nature Conservancy.

INTERAGENCY COLLABORATION

The Program periodically consulted with the USFWS to assure the State is kept abreast of efforts to establish the process for how the 2020 status review will be conducted, or any changes to federal policy that might affect Montana’s Conservation Strategy. This included conference calls to discuss data needs, schedules, and tasks needed to meet anticipated status review requirements.

The Program participated in the monthly Western Association of Fish and Wildlife Agency Range-wide Interagency Sage-grouse Conservation Team conference calls. This affords the opportunity for Montana to stay abreast of developments in other states, learn of new research work products, and coordinate its activities across the range as appropriate.

The Program continued to meet periodically with FWP, USFS, BLM, USFWS, and NRCS to coordinate efforts. Coordination with FWP is particularly important in that FWP makes vital contributions to the Program, including compiling seasonal lek survey data, conducting and sharing ongoing research results, and providing critical input for mitigation tools and policy development.

The Program continued to coordinate closely with other state agencies and entities, including the Montana Legislature and the Environmental Quality Council, Montana Department of Transportation, and Montana Board of Oil and Gas Conservation, as these entities implement their own programs and statutory duties.

In 2019 the Program continued to develop its unique and productive relationship with the BLM. Montana BLM land use plans and amendments continue to implement the State of Montana's DDCT calculation method which provides important consistency across Montana's checkboard land ownerships and management boundaries. The State and BLM also continued to work closely on development of the HQT model and policy processes to ensure coordinated responses to development projects throughout the state. Thus, the Program provides technical support and stores data that will ultimately assist the BLM in demonstrating implementation and compliance with its own land use plans and amendments.

APPENDIX A

Montana Sage Grouse Conservation Benchmarks: 1965-2019

1965 – 2005

Sage Grouse Population Declines across 11 western states

- USFWS received eight different petitions to protect the sage grouse under the federal Endangered Species Act. All were denied.
- Threats: habitat loss, habitat fragmentation, conversion, lack of regulatory mechanisms at the state level.

In 1975, Montana Department of Fish and Game publishes Life History and Habitat Requirements of Sage Grouse in Central Montana in cooperation with the BLM (Wallestad, 1975). This publication described the results of ten years of intensive research on the life history of sage grouse in the Yellow Water Triangle Area. The project presented findings that sage grouse do not adjust to new patterns of land use which eliminate or seriously disturb any of their seasonal ranges and that their existence depended on the ability and willingness to maintain vital habitat.

2005

- Montana Fish, Wildlife & Parks first management plan
- Management Plan finalized.
- Important sage grouse habitats mapped.
- FWP ramped up conservation efforts: local working groups, leasing key habitats, conservation easements.

2009

- Montana Fish, Wildlife & Parks delineates core areas based on lek density, telemetry data, and habitat suitability.

2010

USFWS decided sage grouse warranted listing under ESA range wide but did not due to other higher priorities.

- Sage grouse a “candidate” species for listing [listing was warranted but precluded].
- Key threats: habitat loss, fragmentation, inadequacy of state regulatory mechanisms, energy development infrastructure, invasive species, conversion, etc.
- USFWS decision challenged in federal court.

2011

- USFWS entered a legal settlement agreement requiring it to conduct status review.
- Decision whether to list sage grouse range wide due by Sept. 30, 2015.
- Montana’s only “official” conservation efforts was the 2005 FWP Management Plan and its implementation; not considered a robust enough regulatory mechanism; new research and science available since 2005 and new or expanded potential threats to habitat and populations created need for Montana to update its plan and policies.
- Federal land management agencies initiate planning efforts specific to sage grouse.

2013

Governor Bullock convened the Greater Sage Grouse Conservation Advisory Council.

- Diverse stakeholders asked to recommend conservation measures to address threats; met nine times.
- Shared goal: conserve the bird and habitats to preclude the need to add sage grouse to the federal ESA list of threatened and endangered species.
- USFWS indicated that Montana’s strategy must provide certainty to the USFWS that it will be implemented and that, once implemented, it will be effective in protecting habitat and conserving populations.

- Significant public involvement; seven public hearings; 34-day written comment period
- Completed work and made final recommendations to the Governor January 29, 2014

2014

Governor Bullock issued Executive Order 10-2014 in September, setting forth Montana's Conservation Strategy.

- Based on the Advisory Council's 2014 recommendations.
- Establishes regulatory mechanisms to guide development, address habitat threats.
- Creates Sage Grouse Habitat Conservation Program (Program).
- "All hands, all lands, all threats".
- Conserve sage grouse and habitats.
- Maintain flexibility and authority to manage Montana's own lands, economy, and wildlife.
- Very similar to Wyoming's Strategy, which USFWS already accepted.

2015-2016

Montana Legislature passed the Greater Sage Grouse Stewardship Act, effective May 2015.

- Created the Montana Sage Grouse Oversight Team (MSGOT).
- Established the Sage Grouse Stewardship Fund (Fund).
- Appropriated \$10M for the Stewardship Fund Grant Program to conserve habitat, incentivize private land stewardship, create advance pool of compensatory mitigation credits.
- Biennial appropriation to implement Montana's Conservation Strategy through the Program.
- Demonstrated Montana's commitment to implementation.
 - Statutory framework complementing Executive Order.
 - Financial through appropriations.
 - Ability and capacity to implement Conservation Strategy.

Governor Bullock issued Executive Order 12-2015 on September 8, 2015.

- Recognized passage of the Montana Greater Sage Grouse Stewardship Act.
- A few updates to Executive Order 10-2014.
- Program fully operational in all respects no later than January 1, 2016.

Program Manager started September 9, 2015.

- Begin implementation of Conservation Strategy.
- Program reports to MSGOT; administratively attached to DNRC; DNRC provides critical services and efficiencies for administrative, fiscal, legal, and computer support.

USFWS announced decision that listing was "not warranted" range wide on Sept. 22, 2015.

USFWS Published "Not Warranted" Final Rule Oct. 2, 2015.

- Threats reduced from 2010 by State Conservation Strategies and federal land use plans and amendments (BLM and USFS).
- Follow through on commitments critical to future decisions on status.
- Status review in 2020 to see if the states and federal land management agencies implemented their respective commitments and whether the strategies were effective at conserving populations and habitat.

Many 2015 BLM and USFS land use plans litigated, in Montana and elsewhere; ongoing.

USFS land use plan on the Beaverhead-Deer Lodge National Forest implemented in Montana; litigated elsewhere.

USFWS adopted 2 mitigation policies through rulemaking

- USFWS Final Mitigation Policy ("umbrella") published in the Federal Register November 21, 2016 with an effective date of November 21, 2016. Applies to USFWS federal trust fish and wildlife resources. (81 Fed. Reg. 83440).
 - Provided overarching guidance to USFWS for all actions for which USFWS has specific authority to recommend or require mitigation of impacts to fish, wildlife, plants, and their habitats (i.e. federal trust species).
- USFWS Final ESA Compensatory Mitigation Policy published in the Federal Register December 27, 2016 (81 Fed. Reg. 95316).
 - Applied to all forms of mitigation for all species and habitat protected under ESA for which USFWS has authority.

- USFWS revised requirements for petitions to list, reclassify, or delist species under ESA Section 4(b)(3) through rulemaking.
- USFWS revised the requirements for new petitions and published new rules on September 27, 2016 (81 Fed. Reg. 66462).
- USFWS revised a policy to increase state agency roles and participation in ESA activities and particularly ESA Section 4 (listing and recovery).
- USFWS revised a 1994 policy, published new regulations February 22, 2016 (81 Fed. Reg. 8663).

2017

U.S. Department of Interior issued Secretarial Order 3353 on June 7, which established the Sage Grouse Review Team to review federal sage grouse plan amendments and revisions completed on or before September 2015.

The Report in Response to Secretarial Order 3353 was forwarded to the Secretary of the Interior on August 4. The Report included recommendations for immediate implementation of short term recommendations, initiation of stakeholder engagement for revisions, and investigation of potential plan amendments. In some cases, recommendations were very specific.

On August 4, the Secretary of the Interior directed that the recommendations in the Report in Response to Secretarial Order 3353 be implemented.

The U.S. Department of Agriculture separately decided to follow a parallel process to consider amending the USFS land use plans and amendments specific to sage grouse. The USFS accepted public scoping comments from November 21, 2017 through January 19, 2018.

On October 11, BLM publishes a Notice of Intent to amend all, some, or none of the land use plans that address sage grouse management in the Federal Register and requests public comment. Montana submits a letter in response to the published Notice of Intent. Scoping comments accepted through December 1.

On October 25, MSGOT Chair John Tubbs provided both written and oral testimony to the U. S. House Committee on Natural Resources during a hearing entitled "Empowering State-Based Management Solutions for Greater Sage-Grouse Recovery." The testimony focused on Montana's perspectives on how Congress and the federal Administration can most effectively empower state management for Greater Sage-grouse.

2018

USFWS approved TNC Candidate and Conservation Agreement with Assurances (CCAA), a voluntary habitat conservation tool for private lands.

- Provides assurances to landowners in a CCAA that they will not be subject to additional limits on agricultural practices should sage grouse become listed under the ESA in the future.

In January, BLM releases the Scoping Report for Potential Amendments to Land Use Plans Regarding Greater Sage-Grouse Conservation. The USFS released its public scoping comment summary in March.

January – February: The BLM Washington Office completed and issued six new Instruction Memoranda (IMs) with relevance to sage grouse habitat and land use plans / amendments.

In February, in consultation with Montana, the Montana/Dakotas BLM Office and the Beaverhead Deerlodge National Forest decided not to amend their respective land use plans / amendments aimed to conserve sage grouse. It was decided to address any implementation challenges through adaptive management, administrative tools, employee training, and local guidance.

In May, BLM released draft land use plan amendments for sage grouse and draft environmental impact statements for the states of Colorado, Idaho, Nevada/California, Oregon, Utah, and Wyoming. No amendments were proposed for the state of Montana. Through the remainder of 2018, BLM works on public

comment analysis, and drafting final plan amendments, final environmental impact statements, and records of decision. No documents were released by the end of calendar 2018.

From October 2018 through January 3, 2019, USFS conducted public meetings and accepted public comments on draft environmental impact statements for the states of Colorado, Wyoming, Nevada, Idaho, and Utah.

In December, BLM released Instruction Memorandum 2019-018 on compensatory mitigation, superseding all previous policies regarding compensatory mitigation. The IM allows BLM to consider voluntary proposals for compensatory mitigation and to consider state-mandated compensatory mitigation but prohibits BLM from requiring mitigation from public land users for any impacts attributed to their activity/ies. The BLM must refrain from authorizing any activity that causes unnecessary or undue degradation. The result is that for activities on BLM lands that do not require a state permit, compensatory mitigation is voluntary. If a state permit is required (in addition to BLM authorization), Montana's sage grouse mitigation framework is applicable to impacts on BLM lands.

In December, the Western Governors Association (WGA) unanimously adopted a policy resolution supporting compensatory mitigation.

2019

The BLM Montana-Dakotas State Office, in consultation with the State of Montana affirmed the 2018 decision not to amend the 2015 land use plans / plan amendments. The BLM and the State of Montana continue to work collaboratively to implement a well-coordinated "all lands, all hands" approach to sage grouse conservation.

State of Montana finalize a mitigation framework and habitat quantification tool and adopts final administrative rules. Rules took effect January 11, 2019. Montana's mitigation framework is implemented throughout 2019, based on the Oct. 2018 Montana Mitigation System Policy Guidance Document for Greater Sage Grouse v. 1.0 and the Oct. 2018 Montana Mitigation System Habitat Quantification Tool Technical Manual for Greater Sage-Grouse 1.0.

The Montana Legislature amends the Stewardship Act to codify some provisions of Executive Order 12-2015 and to adopt a statutory mitigation goal of "no net loss [of habitat], net gain [of habitat] preferred."

APPENDIX B

Montana Conservation Strategy: 2015-2019 Implementation Chronology

2015

May 2015

- May 7: Governor Bullock signed the Stewardship Act [effective upon passage and approval].

July 2015

- July 1: \$10M is transferred from the general fund to the Stewardship Account.

September 2015

- September 9: Program manager began employment.
- September 18: first MSGOT meeting.

September – November 2015

- Initiate rulemaking for Stewardship Fund Grants with proposed administrative rule.
- Develop and launch Program website.
- November 17 MSGOT meeting:
 - Approved proposed administrative rules to implement the Stewardship Act's grants for publication in the December 10, 2015 edition of the Montana Administrative Register. Public comment on the rule opened.

December 2015

- December 15 MSGOT meeting, approved:
 - Three step-down documents related to the proposed grant rules considered: (1) MSGOT procedures for receiving and processing grant applications; (2) a document summarizing the eligibility and evaluation criteria for grants set forth in the Act; and (3) a draft grant application.
- Draft grant documents published to the Sage Grouse Program's webpage.

2016

January 2016

- January 1: Program begins implementing consultation requirements of Executive Order 12-2015.
- Public hearings on the proposed administrative grant rules in Malta, Roundup, and Dillon. Printed copies of the proposed rule, draft MSGOT Procedures 01-2016, Draft Eligibility Criteria and Guidance document, and a draft application were available at the hearings and on the Program webpage.

February 2016

- February 19 MSGOT meeting:
 - Adopted the proposed administrative grant rules as final
 - Endorsed Procedures 01-2016; approved the Eligibility Criteria and Guidance document.
 - Directed the Program to move forward and have submitted applications available for its review and decision-making during the May 24, 2016 MSGOT meeting.
- February 22: Administrative Rule Adoption Notice filed with the Montana Secretary of State's Office.
- GIS Coordinator began employment; two experienced wildlife biologists begin employment as short term workers for 8-10 weeks.

March 2016

- March 5: Final administrative grant rules become effective.
- March 17: Program announced through its list serve and a media release that MSGOT opened the first Stewardship Fund grant cycle.

- March 31: Final administrative grant rule replacement pages submitted to the Montana Secretary of State's Office.

April 2016

- April 8: Stewardship Fund Grant application deadline.
 - Program and Peer Review of applications; assemble independent data to assess sage grouse habitat values as a surrogate for the habitat quantification tool.
- April 11: Environmental Science Specialist began employment.
- April 19 MSGOT meeting:
 - Approved programmatic exceptions to Executive Order 12-2015 consultation requirements so that Program review is not required for activities requiring a state permit or authorization under the following circumstances:
 - incorporated city limits
 - certain Dept. of Labor permits and licenses
 - certain Dept. of Environmental Quality permits (solid waste).
 - Approved deviation from the No Surface Occupancy requirement for a Mont. Dept. of Transportation highway reconstruction project.
- Complete two RFP processes to select contractors for IT-related Program needs: (1) create consistent digitized GIS layer of existing anthropogenic disturbances for the Density Disturbance Calculation Tool; and (2) new website and integrated web application tool for the consultation process (SG2.0).

May 2016

- May 24 MSGOT meeting:
 - reviewed nine grant applications; five selected for funding (four conservation easements and one habitat restoration project); others to be reconsidered in the future.
 - projects selected for funding totaled \$3,099,500
 - 1100 acres habitat restoration in Core Area, southwest Montana
 - 34,688 acres conservation easement in central and northeast Montana Core Areas.
 - Approved programmatic exceptions to Executive Order 12-2015 consultation requirements so that Program review is not required for activities requiring a state permit or authorization under the following circumstances:
 - Clarified exception for Butte-Silver Bow and Anaconda-Deer Lodge city-counties
 - Certain Dept. of Environmental Quality permits (air).

June – October 2016

- Program negotiations with grant recipients on grant agreement, conservation easement documents, and compensatory mitigation.
- Environmental Science Specialist (second and final) began employment.
- Through Sept. 9, Program reviewed 687 submissions for consultation; 55 projects cancelled; Program completed 578 consultations (91%).
- September 16: First mitigation stakeholder meeting
 - Two areas of emphasis: policy guidance and habitat quantification tool (HQT).
- Ongoing contract oversight for development of consistent existing disturbance GIS data and SG 2.0 web platform.
- October 26: Mitigation stakeholder meeting.

November 2016

- November 1: Mitigation stakeholders meeting.
- November 9-10: Mitigation stakeholder HQT subcommittee meeting; presentation and discussion of Denbury Resources and SWCA Environmental Consultants (a professional collaborator) example approach; also discussed draft administrative rules.
- November 16-17: Mitigation stakeholders meeting; consensus that more time was needed on both general policy and HQT prior to finalizing draft administrative rules for MSGOT's consideration.
- November 18 MSGOT meeting:

- Reviewed Draft DEQ Internal Guidance document.
- Information on Cloud Peak Energy Haul Road Corridor project.
- Mitigation Guidance and HQT presentation by mitigation stakeholders on progress to date given by Denbury Resources and The Nature Conservancy.
- Discussed draft mitigation proposed administrative rules but acknowledged that stakeholders wanted more time.
- Stewardship Fund Grants:
 - 44 Ranch Conservation Easement MSGOT final approval given.
 - Proposals Deferred for Future Reconsideration:
 - Hansen Ranch Conservation Easement: MSGOT awarded funding contingent on grant applicant securing and documenting matching funds by Sept. 30, 2017.
 - Smith Conservation Easement: MSGOT deferred action.
- November 29: First proposal funded through the Stewardship Act closed (44 Ranch Conservation Easement, 18,033 acres in Petroleum and Fergus counties).

December 2016

- December 6 MSGOT meeting:
 - Reviewed ongoing DEQ permitting for Cloud Peak Energy Haul Road Corridor
 - Authorized exemption from the Executive Order 12-2015 consultation requirements for implementation of the Colstrip Steam Electric Station Administrative Order on Consent.
 - Approved proposed administrative rules for Mitigation Guidance and the Habitat Quantification Tool and directed the Program to move forward with formatting and publication in the Montana Administrative Register; solicit public comment on line and schedule formal hearings.
 - Stewardship Fund Grant Agreements
 - Thomas L. Watson Conservation Easement: reviewed and approved for execution
 - Raths Livestock Corp. Conservation Easement: reviewed, approved for execution
- December 16: mitigation stakeholder conference call.
- December 19: HQT draft document v1.0 completed, provided to mitigation stakeholders for review and comment.
- December 23: Mitigation stakeholder comments on draft tool and framework due; draft administrative rules published in the Montana Administrative Register.

2017

January - February 2017

- January 12: public hearing on mitigation proposed administrative rules (Dillon).
- January 16: public hearing on mitigation proposed administrative rules (Roundup).
- January 17: public hearing on mitigation proposed administrative rules (Malta).
- January 23: public comment period closed on proposed rules; ultimately rulemaking was terminated with stakeholder support; final rules were not adopted because stakeholders desired more time.
- January 25: mitigation stakeholder webinar on HQT
- January 31 and February 1: Mitigation stakeholders workshop, Helena.
 - Review updated Habitat Quantification Tool GIS model.
 - Review Guidance and Procedures Policy concepts for compensatory mitigation, discussed the basics of the crediting and debiting process.
 - Sage Grouse Habitat Conservation Program SG 2.0 Website Demonstration.
 - Discussion of 3rd and 4th Order Assessment Methods and Protocols.
- February 16: mitigation stakeholder webinar on policy guidance document.

March 2017

- March 1 and 2: Mitigation stakeholders workshop, Helena
 - Reviewed progress on quantifying conservation benefits (credits) using HQT, SWCA.
 - Confirmed first and second orders remain settled, that 3rd order methodology and data sources are appropriate, and discussed 4th order assessment approach and protocol.

- Explored approaches for quantifying impacts using HQT with SWCA.
- Introduced concepts for potential impact models.
- Learned about Sweetwater Ranches Conservancy - a USFWS-approved conservation bank in Wyoming.
- Discussed DRAFT Guidance and Procedures Document with Willamette Partnership.
- March 27: mitigation stakeholder webinar on HQT.

April 2017

- April 4 and 5: Mitigation stakeholders workshop, Bozeman
 - Discussed how the mitigation approach would work under Stewardship Account and other mechanisms.
 - Discussed DRAFT Guidance and Procedures Document.
 - Reviewed impact model methodology and types of expected results.
 - Discussed types of projects that should be considered for functional acre gains.
 - Reviewed state-wide modeling efforts and looked at completed hypothetical examples.
 - Discussed next steps including modeling additional hypothetical projects desired by stakeholder group, and documentation of HQT process and protocols.
 - Discussed remaining challenges: Legal protection, Financial assurances, Baseline, Multipliers and discounts.
 - Assigned individuals to follow-up focus call groups for resolving outstanding issues such as site-specific verification/validation data surveys, wind farm impact curves, and transmission line definitions and buffers.
 - Discussed merits of finalizing proposed rules relative to draft nature of the mitigation documents.
- April 24-27: five mitigation stakeholder webinars – small working groups each focused on specific topics.

May 2017

- May 7: mitigation draft documents distributed to full mitigation stakeholder group for review and comment.

June 2017

- June 1 and 2: Mitigation stakeholders workshop, Helena
 - Discussed how the mitigation process would work by integrating the Guidance document with the Habitat Quantification document.
 - Draft Habitat Quantification Tool Technical Document with SWCA.
 - Draft Mitigation Guidance and Procedures Document with Willamette Partnership.
 - Substantive comments on key issues to seek resolution, determine final direction.
 - Need for Scientific Peer Review of final draft documents.
 - Details regarding Rulemaking process.
 - Timing and process for future MSGOT consideration of final documents and designation of the HQT.
- June 2 MSGOT meeting:
 - Approved the reallocation of funds from the Hansen conifer reduction project to the Hansen Conservation Easement.
 - Heard proposals to reconsider two conservation easement applications
 - Weaver Ranch Conservation Easement: approved award of \$300,000.
 - Smith Conservation Easement: approved award of \$36,000.
 - Mitigation presentations by professional collaborators and stakeholders:
 - Draft Mitigation Guidance Document: Willamette Partnership.
 - Draft Habitat Quantification Tool Document: SWCA Environmental Consultants.
 - Directed Program to finalize the draft Guidance and HQT documents and rulemaking.
- June 29: mitigation stakeholder conference call.

July 2017

- July 8: mitigation stakeholder webinar on policy guidance document and HQT technical manual; request for comment.

August 2017

- August 31 MSGOT meeting:
 - MSGOT endorsed exempting range improvement projects (e.g. removal of conifers encroaching into sagebrush areas) from the DDCT 5% disturbance cap limit.
 - where it can be shown they are short term, impacts are temporary, and have documented habitat benefits.
 - individual projects still reviewed by Program and all EO 12-2015 stipulations apply.
 - Montana Land Reliance found alternative funding for Smith Conservation Easement and withdrew request; other easements funded by MSGOT not expected to close this year.
 - Dept. of Env. Quality working with Program to identify potential permit types that could receive Program review exemptions.
 - NRCS provided information on grazing management research on private lands.
 - BLM provided information on Instruction Memorandum MT-2017-037.
 - BLM and USFS provided their agency's perspective on Secretarial Order 3353.

November 2017

- November 3 MSGOT meeting:
 - No executive action taken during this meeting.

December 2017

- December 15 MSGOT meeting:
 - No executive action taken during this meeting.
 - Development of Sage Grouse Mitigation: Program presentation in Parts I, II, and III; HQT and Policy Guidelines development, goals, challenges, and upcoming decisions
 - Presentation of HQT results for hypothetical credit and development projects.

2018January 2018

- January 30 MSGOT meeting:
 - MSGOT executed the Grant Agreement and approved funds to proceed with the Hansen Livestock Company Conservation Easement agreement, with contingencies, and to begin the Environmental Assessment process for public comment and review of terms.
 - MSGOT approved a narrow programmatic exception from consultation requirements of Executive Order 12-2015 for DEQ Water Protection Bureau for renewal and modification of certain Pollutant Discharge Elimination System and Montana Ground Water Pollution Control System permits for existing facilities.
 - exceptions specific to permits for modifications of permanent facilities, minor modifications to existing permits with no new disturbance or disrupting activities.
 - Program presentation and MSGOT discussion: Development of Sage Grouse Mitigation: Special focus on portions of the July DRAFT Guidance Document, and how the HQT and Guidance documents work together.
 - MSGOT decided to provide an opportunity for additional public and agency comments on the proposed rules, focusing on remaining issues where there is not consensus.

April 2018

- April 26 MSGOT meeting:
 - MSGOT approved the Cloud Peak Energy's Spring Creek Mine Amendment 5 Transportation Corridor Mitigation Plan.

May 2018

- May 4 MSGOT meeting:
 - MSGOT approved initiation of the second stewardship account grant cycle with discussion around streamlining and clarifying the MSGOT approval process.
 - Program presentation of the Draft Mitigation HQT Technical Manual.
 - Program presentation of the Draft Mitigation Policy Guidance Document, with discussion regarding how the HQT calculates direct and indirect effects, and how existing disturbances are evaluated.
 - Program presentation of proposed Administrative Rules to adopt the Draft HQT Technical Manual and the Draft Mitigation Guidance Document.
 - MSGOT decided to extend the public comment opportunity and obtain additional mitigation stakeholder group input prior to initiating rule making.
- May 16: mitigation stakeholder meeting.

July 2018

- July 5 through August 5: mitigation stakeholder and public comment period on the July 2018 Draft Sage Grouse Mitigation Policy Guidance Document and the July 2018 Draft Sage Grouse Mitigation Habitat Quantification Tool Technical Manual.
- July 5 – August 16: July 2018 draft mitigation documents under independent scientific peer review.
- July 24 MSGOT meeting:
 - MSGOT approved the Hansen Livestock Company Conservation Easement Final Environmental Assessment, Proposed Decision Notice and Stewardship Fund contribution with discussion regarding compatibility between subsurface mineral rights and easements, and how landowners can use tax benefits.

September 2018

- September 14 MSGOT meeting:
 - Program presentation on the Montana Mitigation System: Policy Guidance Document September 2018 version 1.0 and Habitat Quantification Tool Technical Manual September 2018 version 1.0
 - Program presentation and proposed timeline on the proposed Administrative Rules to adopt the Draft Mitigation HQT Technical Manual and the Draft Mitigation Guidance Document, initiating the public comment period, and subsequent final MSGOT decision to adopt.
 - MSGOT discussed additional public comment and the process and timing for adoption of the proposed Administrative Rules to adopt the Draft HQT Technical Manual and the Draft Mitigation Guidance Document; deferred executive action on whether to initiate rulemaking until October to allow for final opportunity for stakeholder and public input.
 - BLM presentation on disturbance management maintenance action to align the disturbance cap from 3% to 5% for consistency with the State Program, and further integrate BLM consideration of Executive Order 12-2015, MSGOT actions, and the Program when making decisions.
 - MSGOT approved the Raths Livestock Conservation Easement and Decision Notice.
 - MSGOT approved the KXL Pipeline and Associated Facilities Conservation and Mitigation Plan and contribution to the Stewardship Account.
 - MSGOT approved the Denbury Cedar Creek Anticline CO₂ Pipeline Mitigation Plan, noting creative permittee-responsible approach and voluntary multipliers to maximize conservation and create a surplus of credits available to future projects.
 - MSGOT approved the ONEOK Elk Creek Pipeline Project Mitigation Plan and contribution to the Stewardship Account.
 - MSGOT approved the American Colloid Company Daun West Mitigation Plan and contribution to the Stewardship Account.

October 2018

- October 4 MSGOT meeting:

- MSGOT discussed various policy options available to developers to meet debit obligations and changes to HQT model inputs for tall structures and transmission lines.
- MSGOT approved adoption of the October 2018 version 1.0 Policy Guidance Document and the October 2018 version 1.0 Habitat Quantification Tool Technical Manual subject to changes discussed and approved during this meeting specific to tall structures and transmission lines.
- MSGOT approved initiation of formal rule-making and public comment for the proposed Administrative Rules.
- MSGOT approved re-calculating American Colloid Company's Stewardship Account contribution for the Daun West Mitigation Plan to apply the 3% discount method.
- October 5-15: Program incorporated MSGOT's October 4th directives into the October 2018 v1.0 Policy Guidance Document and the October 2018 v1.0 Habitat Quantification Tool Technical Manual. Published the final documents to MSGOT's webpage.
- October 19: proposed mitigation administrative rules published in the Montana Administrative Register; public comment accepted through November 19.

November 2018

- November 9: public hearing on proposed mitigation administrative rules.

December 2018

- December 18 MSGOT meeting:
 - MSGOT noted the Western Governors Association unanimous adoption of policy resolution covering support for compensatory mitigation, mitigation strategies with federal partners, clarification of state authority, and important mitigation principles. MSGOT actions and MT's approach to mitigation have been consistent with this newly-adopted policy, and that although other states may have diverse approaches, all 22 governors supported the resolution.
 - MSGOT formally adopted Administrative Rules on Stewardship Grants and Mitigation; directed the Program to immediately begin preparing all that was necessary to implement the HQT and the policy guidance when final rules took effect in early 2019.
 - MSGOT approved the Rosebud Coal Mine AM5 Greater Sage-grouse Mitigation Plan.
 - MSGOT approved the American Colloid Amendment 5 to Opencut Permit 8 Warren Mine Site sage grouse Mitigation Plan.
 - MSGOT approved the NorVal Cooperative Inc., Black Coulee Transmission Line Project Mitigation Plan.
 - MSGOT approved the Big Flat Electric Cooperative PS-09 Transmission Line Project Mitigation Plan.
 - MSGOT approved the TRECO Fallon Transmission Line for Keystone XL Pump Station PS13 sage grouse Mitigation Plan.

2019

January 2019

- January 11: Final administrative rules on mitigation and the Habitat Quantification Tool took effect.

March 2019

- The Program released a request for proposals (RFP) to solicit bids from potential contractors to update the web application, incorporate mitigation, the Habitat Quantification Tool, and the credit/debit registry in the current web application.

April 2019

- April 25 MSGOT meeting:
 - MSGOT approved Denbury Resources Permittee Responsible Credit Project to offset impacts of a major pipeline – Ringling Ranch Limited Partnership Conservation Easement. Denbury worked directly with the Montana Land Reliance which will hold the easement and provide

annual reports to the Program assuring the future integrity of the credits calculated for the project.

- MSGOT granted a partial waiver of a portion of compensatory mitigation triggered by a cellular communication tower proposed by Triangle Communications that would be located in a Core Area at DY Junction on Highway 191. Triangle had sought a 100% waiver based on economic hardship. See the final minutes of the meeting for a complete record.
- Informational presentation on the Mud Springs Wind Facility Project located near Bridger, MT in Carbon County. The Project was initially scoped out in 2014 and had changed hands several times before ultimately being purchased by PacifiCorp from Innogy.

May 2019

- May 2: 2019 legislative amendments to the Stewardship Act (SB 299) became law.
- May 14 MSGOT meeting, single agenda item:
 - MSGOT decided that the boundary delineating the project area identified in a 2014 stormwater discharge permit issued by Montana DEQ constituted the portion of the project area that pre-dated Executive Order 12-2015. MSGOT determined that mitigation would not be required for any project elements located within the boundary delineated in the 2014 permit. MSGOT afforded PacifiCorp full discretion to site additional project infrastructure outside the 2014 boundary (including wind turbines even though new wind facilities are barred from Core Areas) but also required mitigation for anything PacifiCorp decided to locate outside the 2014 boundary.

June 2019

- The Program executed a contract with ProWest & Associates to update the existing disturbance spatial data layer using the most current 2019 NAIP imagery, and to verify whether development projects submitted to the Program had been implemented (and if so, to verify and correct if needed, the spatial data provided by developers to the Program).
- The Program executed a contract with Sitka Technologies to update the web application, incorporate mitigation, the Habitat Quantification Tool, and the credit/debit registry. Because Sitka Technologies had designed and built SG1.0, it was expected that they would hit the ground running. The Program worked closely with Sitka Technologies throughout the second half of 2019 to prepare an initial batch of enhancements and improvements to the existing web application that would be released in January 2020.

September 2019

- September 18 MSGOT meeting:
 - Selected six projects to receive funding from the Stewardship Account: three perpetual conservation easements and three term leases.
 - Marc Lewis Property Conservation Easement
 - Sauerbier Ranch Conservation Easement.
 - Willow Basin Ranch Conservation Easement.
 - King Ranch 30-Year Term Lease.
 - Schultz-Gran Prairie 25-Year Term Lease and Restoration.
 - Burgess 30-Year Term Lease and Restoration.
 - Substantive discussion regarding the valuation, baseline adjustments, and credit calculation methodology for term leases vs. perpetual conservation easements. Also discussion around complexity of land protection instruments like easements or leases and capacity for enforcement, proper monitoring, and documentation. Tentative direction provided to staff to refrain from negotiating any additional term leases in subsequent Stewardship Account grant cycles until the policy concerns were addressed by MSGOT during a future meeting.

November 2019

- November 15: Introductory conference call with stakeholders interested in participating to develop a modified policy approach to development projects utilizing trenchless excavation methods in

response to SB 299 directives that became law in May, 2019. Goal was to determine desired outcomes, processes and a timeline.

- November 21 MSGOT meeting:
 - Follow up discussion on future policy direction for Program staff concerning term leases vs. perpetual conservation easements. Executive action was taken. A motion directing to Program staff to not bring any more term lease projects for MSGOT's consideration and to do more outreach and research on the issues with landowners, NRCS and other interested parties for MSGOT's future consideration was passed.
 - MSGOT approved additional funding in support of the Watson Conservation Easement which had been awarded funding by MSGOT in 2016 but closing delayed by the Watson family. An updated land appraisal increased the cost of the project. The additional costs were also shared by NRCS, who also increased funding support.