MONTANA SAGE GROUSE HABITAT CONSERVATION PROGRAM
2018 ANNUAL REPORT

THIS REPORT COVERS THE PERIOD JANUARY 1 THROUGH DECEMBER 31, 2018

Photo: Joel Maes

MONTANA SAGE GROUSE
Habitat Conservation Program

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EXECUTIVE SUMMARY

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 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'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, development and 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 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 in because the permitting process had already started 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 for sale in a Montana sage grouse

mitigation marketplace to offset impacts of development elsewhere. The Fund would be reimbursed when those credits were sold. The reimbursed funds will then be used to finance other habitat conservation projects. The Act also established limitations on how much funding could be awarded and how MSGOT should prioritize spending the Stewardship Account dollars.

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 was in place and utilized throughout 2018. 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.

Summary of 2018 Activities

The Program completed reviews on the vast majority of projects for which consultation reviews were requested. In 2018, the Program received a total of 532 projects for consistency review that were proposed in designated sage grouse habitat. As of December 31, 2018, the Program completed reviews for 443 projects (83%). Of the remaining 89 projects, 40 were withdrawn from the review process by the developer / project sponsor. Program review on the remaining 49 projects carried forward into 2019.

Of the 49 projects for which reviews were carried forward into 2019, the Program could not complete reviews on 42 out of the 49 (86%) projects in 2018 because the Program was waiting for additional information necessary to complete the review from the developer. For the remaining seven projects, the Program had all the necessary information needed but work carried into 2019 because these projects were either submitted late in the calendar year or were larger, more complicated projects which require more time and collaboration with the developer.

Most development projects reviewed by the Program in 2018 were proposed for General Habitat. Of the 532 projects reviewed by the Program in 2018, 63% were in General Habitat (n = 337), 36% were in a Core Area (n = 191), and <1% were in a Connectivity Area (n = 4).

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. In 2018, the total number of review days across all projects with completed reviews was 9,699 days, combining the days the Program was actively reviewing projects and the days the Program was waiting for developers to provide additional information needed to complete the review. However, 29% of the total review days (n = 2,804 days) were identified as delays caused by a lack of all the information necessary for the Program to complete the review.

Because habitat quality and the number of active leks are both higher in Core Areas than General Habitat, project reviews for development proposed in Core Areas typically are more complex and require more details from developers. Accordingly, 32% of total review days specific to Core Area projects were identified as delays caused by a lack of all the information necessary for the Program to complete its review (n = 1,539 days). For projects specifically proposed in General Habitat, 26% of total review days were associated with delays caused by a lack of all necessary information (n =

1,248). For projects specifically proposed in the Connectivity Area, 16% of total review days were identified with delays caused by lack of all necessary information (*n* = 16 days).

In 2018, the Program accomplished consultation reviews in a timely fashion once all the necessary information was provided by the developer. Of the 443 reviews completed in 2018, 50% were completed within 10 days (n=220), 28% were completed within 20 days (n=124), 12% were completed within 30 days (n=56), 4% were completed within 40 days (n=17), and 6% required more than 40 days. All told, the Program completed reviews for 94% of the projects within 42 days of receiving a request from a developer. These totals are based on active review days by the Program when it had all the necessary information to complete its work and do not days during which the Program was waiting for a developer to provide the additional necessary information.

Projects located in a Core Area tended to take slightly longer than projects located in General Habitat. This is due to the Executive Order's greater emphasis of habitat protections for Core Areas, which require the Program to consider more aspects (e.g., DDCT thresholds). Overall, of the 135 projects located in a Core Area with completed reviews in 2018, 87% (*n* = 118 projects) reached *Completed* review within 42 active review days. This percentage increased for projects located in General Habitat with completed reviews in 2018 (*n* = 304 projects) to 98% (*n* = 297 projects) of projects being completed within 42 active review days.

From 2016-2018, the Program and stakeholders worked diligently to develop the sage grouse mitigation framework. Significant progress was made on the development and implementation of the Montana Mitigation System Habitat Quantification Tool Technical Manual and the associated Policy Guidance Document through 2018, culminating in the final adoption of those documents at the October 2018 MSGOT meeting. In December 2018, MSGOT adopted as final the Administrative Rules on Stewardship Grants and Mitigation. Final administrative rules will take effect in January, 2019.

MSGOT did not host a Stewardship Account grant cycle in 2018. Work continued on the original projects selected for funding in the first cycle in 2016-2017. Four projects remained of those originally selected. Some projects originally selected for funding were withdrawn by the grant applicant either due to landowner preference or because alternative funding sources were secured (and the project was implemented using non-Stewardship Account funds). All four projects were conservation easements in Core Areas and which are held by the land trust organization which submitted the grant application.

One of the four closed in 2016 (44 Ranch), two closed in 2018 (Hansen Livestock and Raths Livestock), and one is expected to close in 2019 (Watson).

A total of $3,040,000 was allocated from the Stewardship Account for these four conservation easements. Stewardship Account funds were mated with $8,363,571 of federal NRCS funds and private sources. This represents a total investment of $11,403,571 in private land conservation. Every state dollar is leveraged with about $2.75 from other matching sources.

All told, these four projects conserved 57,501 acres of private land. Conservation benefits will extend beyond the boundary of the deeded private lands. The habitat quantification tool will be applied to these projects upon MSGOT's final adoption of the tool and administrative rules in 2019. The number of credits will be retroactively calculated using the final tool and policy guidance and the credits will be allocated to the appropriate service area.

The successful implementation of these conservation strategy milestones codified Montana's stakeholder-crafted and science-based approach to effectively conserve sage grouse and their habitat while balancing the impacts of development through mitigation and enabling ongoing economic activity in sage grouse country. By continuing to implement its own conservation Program, Montanans can best maintain control of their lands, wildlife, and economy.

INTRODUCTION

The Greater 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, fragmentation, conversion of native sagebrush range to cultivation, invasive species, and development. 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 bred. 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-stablish extirpated local populations have been largely unsuccessful to date.

Between 1965 and 2005, declines in greater sage grouse and loss of sage grouse habitat were well documented across its range in 11 western states. Once lost, sagebrush is not easily restored. 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 (i.e. term easements, perpetual conservation easements).

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. 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 state 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 conservation activities were the key focus. States and

interested stakeholders came to understand that the key to the future of sage grouse and whether they would be listed was in the respective hands of the states.

The USFWS 2010 decision was challenged in federal court. In 2011, USFWS entered a legal settlement agreement that required it to make a final decision. Upon a thorough review of threats to sage grouse and its habitats throughout the west, USFWS would either submit a proposed rule to list sage grouse under ESA or a rule finding that listing was not warranted. USFWS deadline was September 30, 2015.

This deadline spurred Montana and 10 other western states, several federal land management agencies, and dozens of public and private partners to cooperate and coordinate in an unprecedented way in order to protect, restore and enhance important sage grouse habitat to preclude the need to list the species. Stakeholder efforts included: Bureau of Land management (BLM) and US Forest Service (USFS) land use plans placing greater emphasis on conserving sage grouse habitat; development of state sage grouse management plans; voluntary, multi-partner private lands effort to protect millions of acres of habitat on rangelands across the West; unprecedented collaboration with federal, state and private sector scientists; and a comprehensive strategy to fight rangeland fires.

The Montana 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 hearings were held to get comment on a 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 (an EO). It established regulatory mechanisms to guide development and protect 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 order set the stage and

provided guidance to state agencies and interested parties to begin moving towards full implementation and having an immediate effective date.

The 2015 Montana Legislature passed the Greater Sage Grouse Stewardship Act (Stewardship Act or Act), which took effect in May.[1] 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. 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)[2]; 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 would be mitigated and provided key statutory guidance; and 5. delegated rulemaking authority to MSGOT.

The 2015 Legislature also appropriated funds to implement the Act and the strategy through MSGOT and the Montana Sage Grouse Habitat Conservation Program. The funds were appropriated to Montana Department of Natural Resources and Conservation (DNRC). 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 shared goal today.

The Act 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. The Program is administratively hosted by DNRC.

On September 8, 2015, Governor Bullock issued Executive Order 12-2015 to supplement the previous executive order and to recognize the passage of the 2015 Stewardship Act. The 2015 EO supersedes the 2014 EO 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.

The conservation commitments Montana made through EO 12-2015 and the Act, along with the 2015 appropriations, were sufficient evidence of Montana's certainty and ability to implement a comprehensive strategy for the USFWS. Similar multi-year efforts were undertaken by other western states within the range of sage grouse.

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[1] *See* MCA § 76-22-101 *et seq*. (2015).
[2] *See* MCA § 2-15-243 (2015).

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."[3]

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.

The three pillars of the Strategy are: 1. Executive Orders 12-2015, and 21-2015; 2. Greater Sage Grouse Stewardship Act of 2015; and 3. 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 Strategy takes a "core areas" approach similar to Wyoming. Habitats were previously classified 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. In Montana, Core Area boundaries were drawn based on current sage grouse distribution using leks. Core Areas are statutorily defined as having the highest conservation value and having the greatest number of displaying male

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[3] 80 Fed. Reg. 59858, 59941-41 (Oct. 2, 2015).

sage grouse and associated sage grouse habitat.[4] 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).

The Program officially began operations on January 1, 2016. The guiding principles of the Program are to work together collaboratively across all lands to address threats, known as the "All Hands, All Lands, All Threats" strategy. 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. Please see the 2016 and 2017 Annual Reports for details on the first years of implementation of the Strategy.

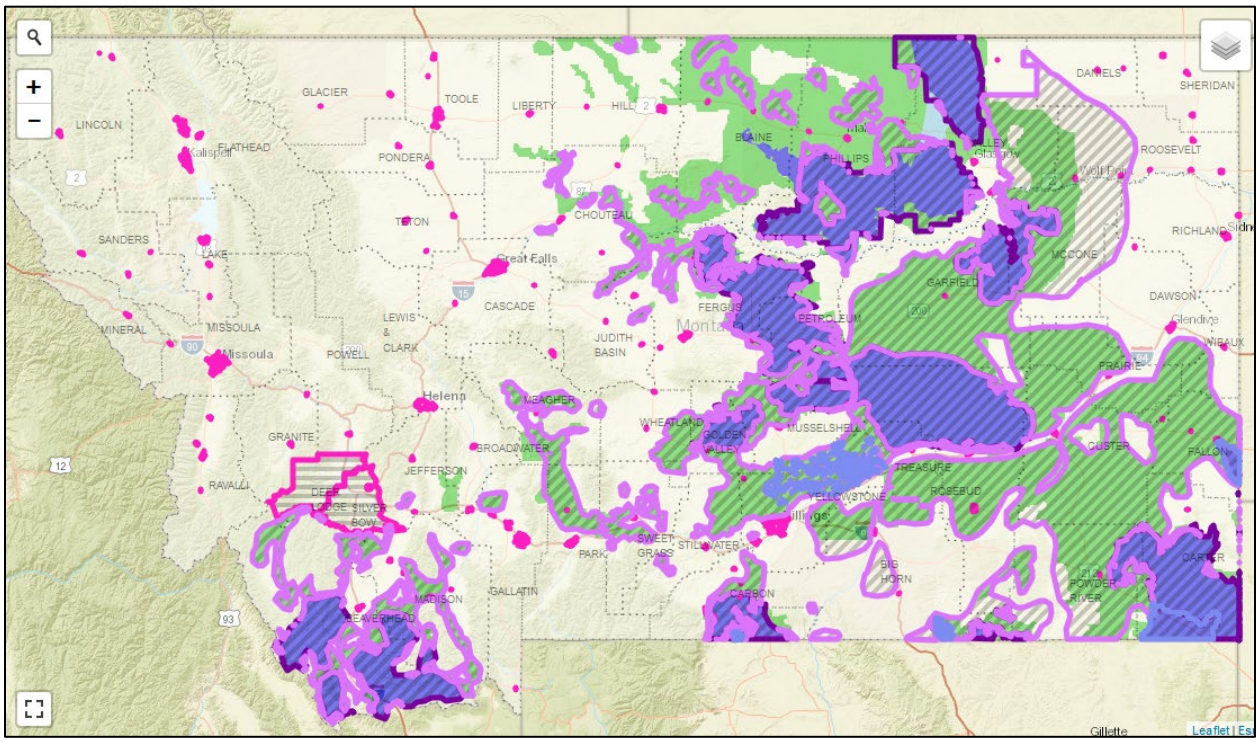

Figure 1. Designated Sage Grouse Habitat and exempt municipal boundaries in Montana, Executive Orders 12-2015 and 21-2015 and BLM land use plans. Core Areas are shown in purple, General Habitat is shown in green, and the North Valley Connectivity Area is shown in blue. Exempt municipal boundaries are outlined in pink. BLM designations are shown with diagonal lines.

[4] MCA § 76-22-103(3).

BACKGROUND AND HISTORY

Executive Orders 12-2015 and 21-2015

Overview

Executive Orders 12-2015 and 21-2015 took effect January 1, 2016. Montana's EO 12-2015 largely mirrors Wyoming's Executive Orders 2011-5, 2013-3, and 2015-4. The guiding principles, specific provisions, and stipulations are the same in most respects. Wyoming has had a long track of successful implementation and continues to be an important resource for Montana in the early phases of implementing this new Program.

The EOs require 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 Orders 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. 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.

The State of Montana seeks 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.

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.

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.

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

<u>How Core Areas were Delineated and Clarification of Executive Order 21-2015</u>

When Executive Order 12-2015 was signed on September 8, 2015, it erroneously included an earlier edition of the Montana Fish, Wildlife and Parks "Sage grouse Conservation Areas in Montana" map. EO 12-2015 was supposed to have included an updated version of that map entitled, "Sage grouse Core Areas and General Habitat in Montana", created on September 4, 2015. Due to a clerical oversight, the older map version was not replaced. Therefore, EO 21-2015 was issued to withdraw the earlier map version in Attachment A and replace it with the updated map dated September 4, 2015.

The methodology and total number of acres designated as Core Areas did not change between the two map versions. No other aspects of EO 12-2015 were changed with this action. The two EOs are typically referred to together in order to avoid confusion regarding which map version is applicable.

These maps were created by Montana Fish, Wildlife and Parks (FWP) to delineate Core Areas and General and Connectivity Habitat boundaries. The final map version in the EO was created by combining the Core Areas layer and the sage grouse habitat distribution map. Core Areas were based on displaying male densities on leks, peer reviewed literature, expert opinions of field biologists, and modeling efforts using a kernel density estimator. The goal was to identify the highest densities of displaying males based on lek locations and associated nesting and brood rearing habitats, particularly in lek complexes where many leks occurred in relatively close proximity.

Next, all habitat classes were dissolved to remove any internal boundaries and all of these areas were termed General Habitat. The areas of General Habitat were overlapped with Core and

Connectivity areas. Where Core Areas overlapped with General Habitat, the area was classified as a Core Area. Lands not covered by Core Areas, General Habitat, or Connectivity Areas were called "not in EO area" (i.e. not in designated habitats for purposes of implementing the Executive Order). This map was included in Executive Order 10-2014, signed by Governor Bullock in September 2014.

To improve accuracy, FWP undertook further efforts to refine the Executive Order Core Areas Map using similar methods as described above. FWP completed a more thorough review of sage brush habitat suitable for sage grouse occupancy and created a more current and accurate map in 2015. The methodology and total number of acres designated as Core Areas did not change from the 2014 to the 2015 map. Some acreage in General Habitat was removed due to existing agricultural conversion and or the occurrence of forested areas identified by more detailed mapping efforts and remote imagery. This 2015 map "Sage grouse Core Areas and General Habitat in Montana (dated September 4, 2015) is the map that should have been included in EO 12-2015.

Montana Sage Grouse Oversight Team

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. 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.

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.

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 agency program staff, as well as 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 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.

One example of such a refinement is granting exceptions to the consultation process otherwise required of all activities requiring a state permit within designated habitats. Exceptions to the consultation requirement are approved by MSGOT, not granted by the Program.

In 2016, these exceptions included incorporated cities and towns, waste and underground tanks, certain Department of Labor and Industry permits and licenses, and air quality permits.

In 2017, MSGOT voted to except some BLM and NRCS range management projects meeting certain criteria from 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. Discussions with the Montana Department of Transportation (MDT) were initiated for staff training for project reviews, and to identify potential project types that may qualify for exceptions.

In 2018, MSGOT did not approve additional exceptions or modifications to the consultation as none were requested.

Montana 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); 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.

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

The EO guides where and how development and other activities occur in these designated areas. Certain limitations, stipulations, or conditions may apply, depending on the project or activity. Other elements of EO 12-2015 establish general practices that apply to everyone.

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). 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.

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.

The project proponent then attaches the Program letter to the permit application submitted to the relevant state agencies. 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 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.

It is important to note that Figure 2 includes a *Withdrawn* stage. The withdrawn stage does not signify a denial of a sage grouse review letter by the Program. The withdrawn stage exists to allow proponents to remove their project from the review process for any reason of their own accord (e.g., changed their mind). The Program may not withdraw a project on a proponent's behalf.

More specific details about the life cycle of an individual project are provided below and depicted in Figure 3.

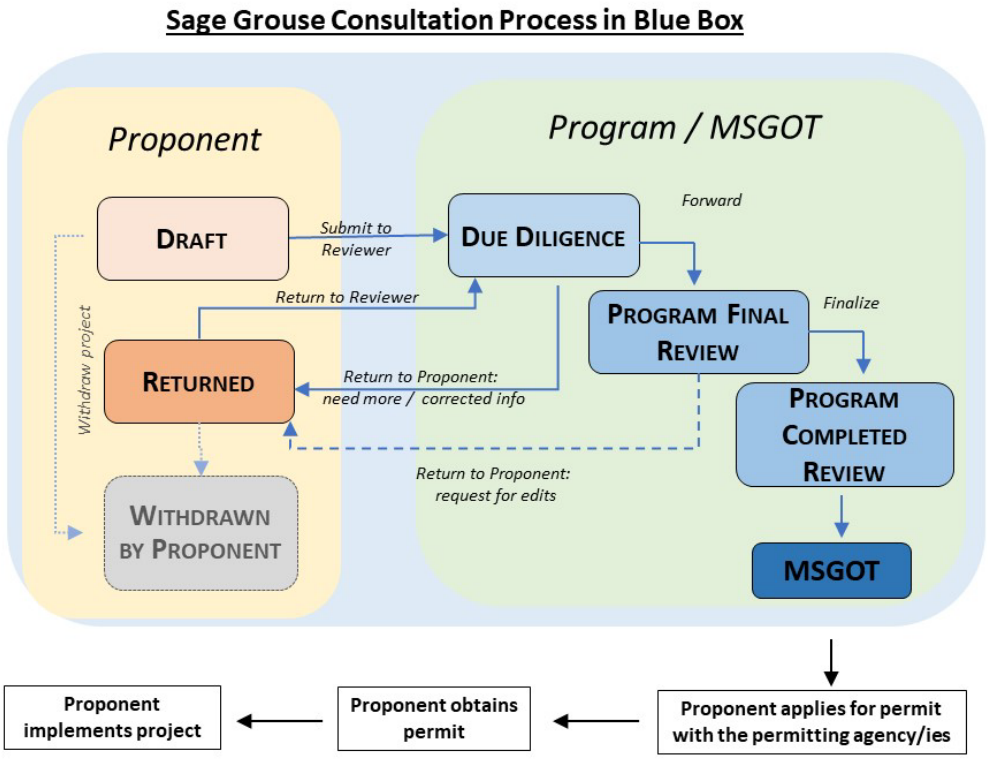

Figure 2. Overview of the sage grouse consultation process. Developer activities are shown under Proponent in the yellow box, and Program / MSGOT activities are shown in the green box. Project permitting and implementation activities occurring after consultation is completed are outside the blue box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

Individual Project Review Life Cycle in the Web Application

The Program's primary goal is to review projects in an 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 *Draft* stage, and Developers can access their project 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 submitted yet.

Once the developer submits the project, 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. At this point, the project is in the *Returned* stage. The 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 Program Manager reviews 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 web application. Developers can access the final documentation from the web application. The review process is finished, and the project review life cycle is completed.

Once a developer retrieves their final documentation from the Program's website, they initiate the permit application process with the permitting agencies. Occasionally, permit agencies refer applicants back to the Program if the project details reviewed by the Program differ from what a developer described in their permit application. Developers sometimes make changes to their own projects after the Program has completed its work. Developers can, at any time, re-engage the Program by logging back onto the website and re-submitting the project into *Due Diligence* stage.

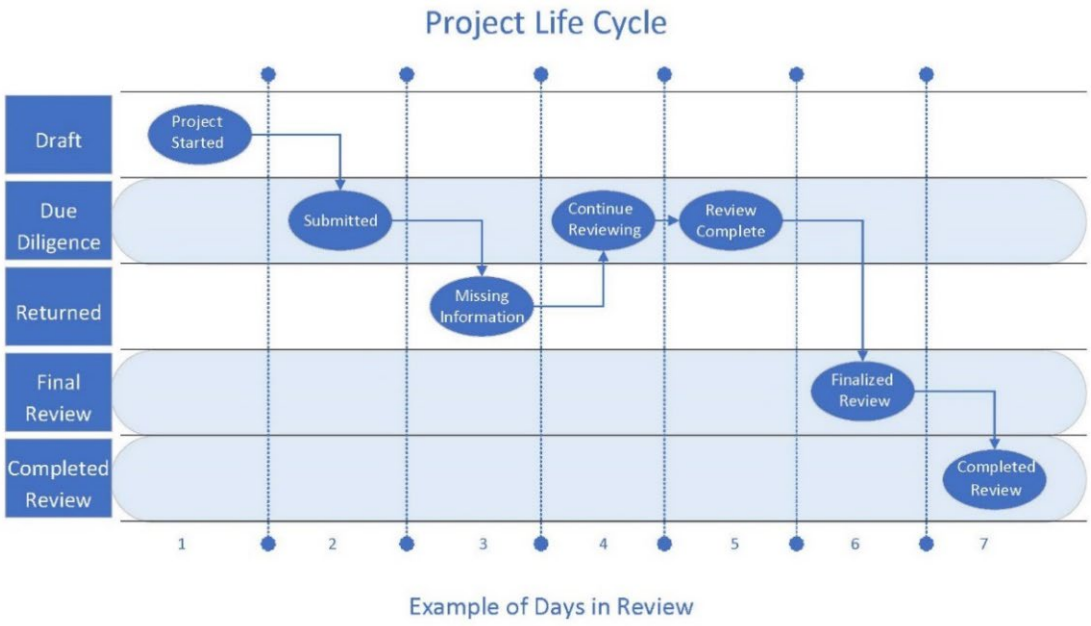

Figure 3. Life cycle of an individual project review, with an example illustrating how days are counted for a project that took seven days between when it was first submitted by a developer and when the Program completed its work. "Days in Review" tracks the number of days that a project is under program review. Time is not counted while a project is in draft or returned to a proponent. The project would be considered "under review by the Program" for a total of five days(*Due Diligence* stage for the second, fourth and fifth day, *Final Review* on the sixth day, and *Completed Review* on the seventh day).

SUMMARY OF 2018 CONSULTATION ACTIVITIES AND DEVELOPMENT PROJECTS

Introduction

The SG 2.0 website provides interactive user tools, conducts automated analyses, and serves as a secure data repository for project information and the consultation process overall. 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, 2018.

The summary of general metrics about consultation activities provides insights into the consultation review process itself, Program performance metrics, and where development projects are being proposed. The summary of specific metrics about projects in *Completed Review* for which Program review is completed provides insights into what kinds of development may occur and where in designated sage grouse habitat.

The Summary section first outlines how data were prepared for analysis of both general consultation metrics and specific project metrics. Then it presents each unique data summary.

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. However, data for proposed projects should not be understood as disturbance currently on the landscape.

The Program is currently working with an independent contractor to validate proposed project geometries and determine implementation status, if possible, of proposed projects using aerial imagery (e.g., NAIP). The data resulting from this process will serve as direct measurements of the change in landscape disturbance since the Program's inception in 2015.

Data Preparation Methods

Tabular data were obtained from the SG 2.0 database. Data were filtered into two unique groups: Dataset 1 for the general consultation metrics and Dataset 2 for the specific metrics about projects (Figure 4). This assures that only the appropriate records are included in each summary, respectively.

General Consultation Metrics: Dataset 1

The key focus of Dataset 1 is the Program's activities, review efficiency, and where development is being considered within designated habitats. For this purpose, a subset of the overall database was obtained by filtering out or removing records, so they could be analyzed in greater detail.

The first filter applied to the SG 2.0 database was a Review stage filter to exclude any projects in the *Draft* stage. 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 yet been initiated by the developer. Projects in the *Draft* stage are completely excluded from both Dataset 1 and Dataset 2.

The second filter applied to the SG 2.0 database was to eliminate any Program review activities that took place outside 2018. This ensures that Program consultation effort for any calendar other than 2018 are excluded.

After applying Filter 1 and Filter 2, the remaining data reflect projects for which Program staff were called upon to review projects–Dataset 1 ("ALL 2018 Review Dataset"). See the top half of Figure 4. Dataset 1 will include some projects that were originally submitted in calendar 2017 but that were completed by the Program in 2018. Dataset 1 was analyzed to understand general metrics about the Program's consultation activities and performance during calendar year 2018.

Specific Project Metrics: Dataset 2

The key focus of Dataset 2 is a more detailed consideration of projects for which reviews were completed. This enables consideration of development that is likely to occur within designated habitat at some point in the future. For this purpose, Dataset 1 was furthered narrowed down using two additional filters.

First, Habitat Treatment projects were removed. This ensured that only disturbance projects were included in the analysis. Conservation related activities such as conifer reduction projects were excluded from further analysis.

Next, all projects that were still somewhere in the review process were removed. Only projects in the *Completed Review* stage (bottom half of Figure 4) are subsequently analyzed and reported. This filter is important to get the most accurate results for assessing various proposed Project Types and associated disturbances as any given project may make changes to their information at any point during the consultation review process. A completed review provides the final snapshot of a project's activities.

The application of all four Filters results in the second processed dataset called "Completed 2018 Review Dataset" (Dataset 2). Dataset 2 represents all projects for which reviews were completed in 2018. It may include projects originally submitted in calendar year 2017. Similarly, some projects that were originally submitted for review in calendar year 2018 were carried forward into 2019.

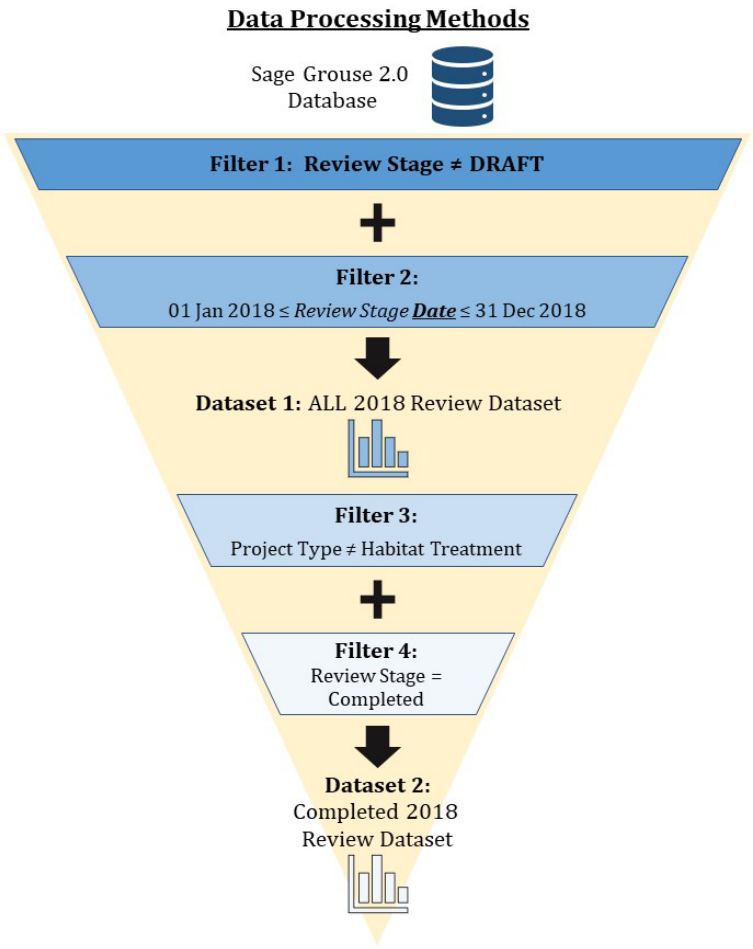

Figure 4. The data processing methods used to prepare project review data for analysis and reporting according to the guidelines established in the EO. The filters in the diagram are necessary to achieve the most accurate analysis and results as possible and are used to create two primary datasets used for computing reporting metrics in this report.

General Metrics about Consultation Activities: Dataset 1

Project Review Status and Completion Rate

Tracking the number of days needed to complete the review process (completion rate) is an effective measure of Program efficiency and one way to evaluate how quickly proposed projects move through the Program and advance to the permitting agencies. The completion rate is calculated from the date the project is first submitted through the date the review is completed.

The Program received 532 projects proposed in designated sage grouse habitat requiring sage grouse consultation in 2018 (Figure 5). Of the 532 projects submitted for review, the Program completed reviews for 443 projects (83%). Of the remaining 89 projects, the Program review activities for 49 projects carried into 2019.

At the close of 2018, the Program was still actively reviewing seven of the 49 (14%) proposed projects (i.e. the project was in the *Due Diligence* stage). The Program could not complete reviews

for an additional 42 (86%) projects submitted in 2018 because it was waiting for additional information necessary to complete the review from the developer (i.e. the project was in the *Returned* stage).

Lastly, 40 projects initially proposed in 2018 were withdrawn from the Program's web application by the developer. The *Withdrawn* stage of the web application exists to allow developers to remove their project from the consultation review process for any reason and completely of their own accord. It is not necessary to provide a reason to withdraw a project. Only a developer can withdraw their own project. The Program may not withdraw a project on a developer's behalf.

Once a developer moves their project to the *Withdrawn* stage, that project is removed from list of projects to be reviewed by the Program. The *Withdrawn* stage does not signify a denial of a sage grouse review letter or a regulatory permit by the Program. It simply means that the Program did not devote additional staff resources to a project that was withdrawn by the developer. Further, the Program does not have any regulatory permitting authority.

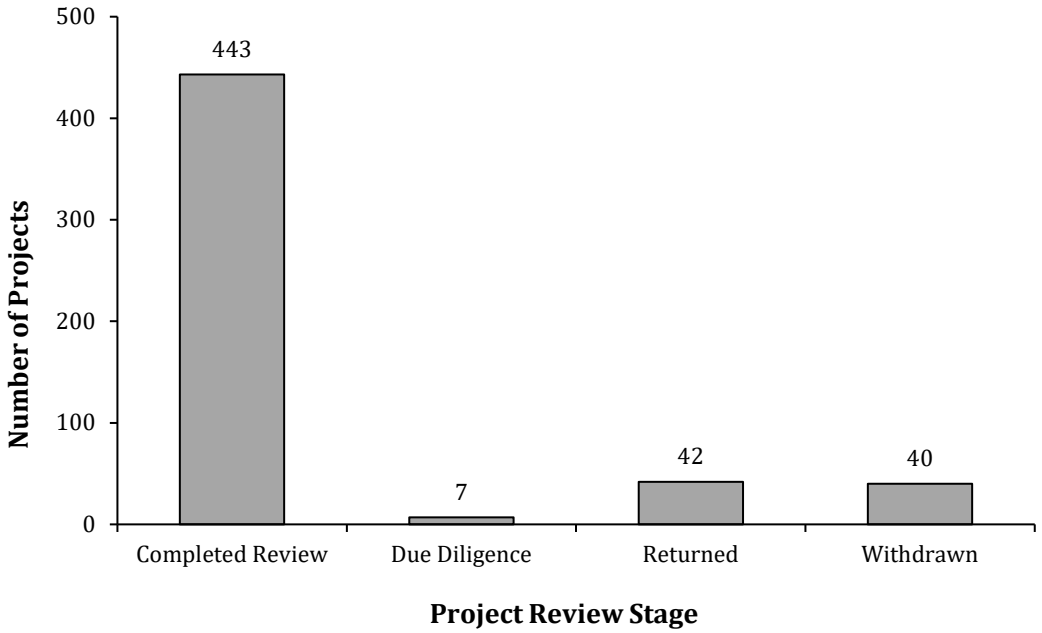

Figure 5. The Program received a total of 532 projects for review that located in designated EO habitat to review during 2018. As of December 31, 2018, the Program completed reviews for 443 projects (83.3%), with the remaining 89 projects in either *Due Diligence* (n=7, 1.3%), *Returned* (n=42, 7.9%), or *Withdrawn* (n=40, 7.5%) stages.

Project Review Status by Habitat Category

Of the 532 projects reviewed by the Program in 2018, 63% were in General Habitat (n = 337), 36% were in a Core Area (n = 191), and <1% were in a Connectivity Area (n = 4) (Figure 6).

A total of 337 projects were proposed in General Habitat. The Program completed review for 90% by the end of 2018 (*n* = 304 projects). For the remaining 33 projects, the Program was actively reviewing four projects (1%) (*Due Diligence*), was waiting for additional information necessary to

complete the review from proponents for 14 projects (4%) (*Returned*), and 15 projects were withdrawn by the proponent (5%) (*Withdrawn*) by the close of 2018.

A total of 191 projects were proposed in a Core Area. The Program completed reviews for 71% (n = 135). For the remaining 56 projects, the Program was actively reviewing three projects (<2%) (*Due Diligence*), was waiting for additional information necessary to complete the review from proponents for 28 projects (15%) (*Returned*), and 25 projects were withdrawn from the Program's web application by the proponent (13%) (*Withdrawn*).

A total of four projects were proposed in the North Valley Connectivity Area. The Program completed reviews for all four (100%) by the end of 2018.

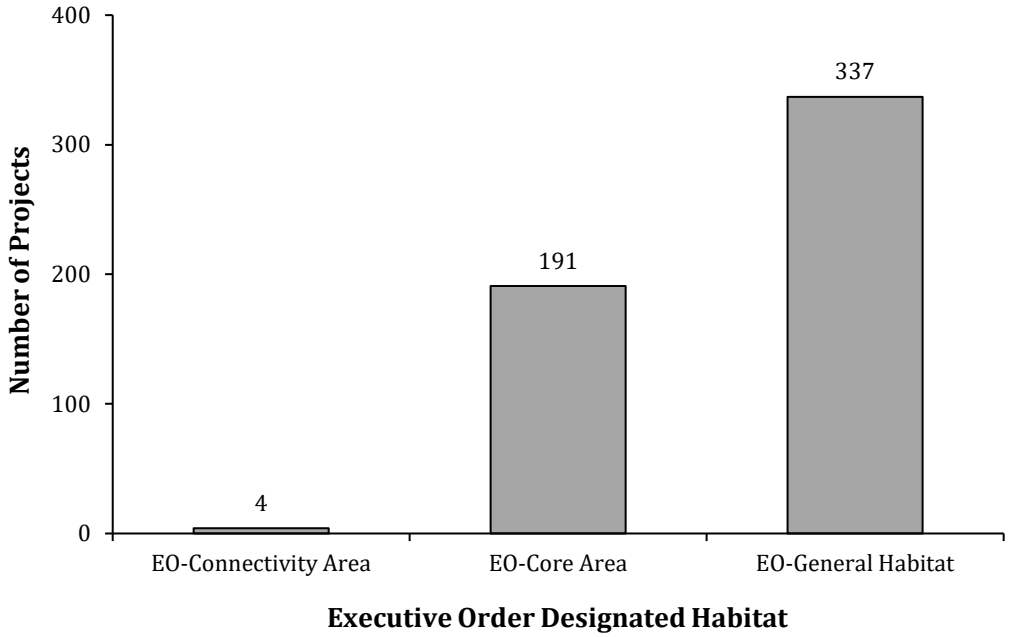

Figure 6. Of the 532 projects submitted for review in 2018, 337 projects were proposed in General Habitat, 191 projects were proposed in a Core Area, and four projects were proposed in the Connectivity Area.

Timeliness of the Program Consultation Process

The web application automatically tracks projects through various stages of the overall review process (Figures 2 and 3). The web application also records the number of days a project is actively being reviewed by the Program, beginning when a project is first submitted and enters the *Due Diligence* stage.

The Program works closely with developers throughout the consultation process. The Program is able to request additional information from developers using a project review stage called "*Return*". By returning the project, the proponent is able to 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.

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* and the Program completes the review.

Some proposed projects enter the *Returned* stage so Proponents can submit additional information about their proposed project 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 total 443 proposed projects for which the Program completed reviews in 2018, 94% (*n* = 415) of the projects were reviewed within 42 active review days (6 weeks) (Figure 7). Projects located in a Core Area tended to take slightly longer than projects located in General Habitat. This is due to the Executive Order's greater emphasis of habitat protections for Core Areas, which require the Program to consider more aspects (e.g., DDCT thresholds). Overall, of the 135 projects located in a Core Area with completed reviews in 2018, 87% (*n* = 118 projects) reached *Completed* review within 42 active review days. This percentage increased for projects located in General Habitat with completed reviews in 2018 (*n* = 304 projects) to 98% (*n* = 297 projects) of projects being completed within 42 active review days.

The total number of review days (i.e., days in *Active Review* + days in *Returned* stage) across all projects with completed reviews during 2018 was 9,699 days. Of the 9,699 total review days in 2018, 29% (*n* = 2,804 days) of the total review days were spent in the *Returned* status, allowing proponents to address any Program questions or submit additional information (Figure 8). The increased complexities of the review process for projects located in a Core Area resulted in a greater number of days spent in Returned status (32%, *n* = 1,539 days) than for projects located in General Habitat (26%, *n* = 1,248 days) or a Connectivity Area (16%, *n* = 16 days).

Specific Metrics about Development Projects for which the Program Completed its Review

Dataset 2 was used to generate the figures, tables, and associated metrics reported on proposed projects within this section of the report. This means, all the projects reported on in this section of the report received completed sage grouse review letters by the end of 2018.

When requesting a consultation, a developer initially selects from one of 21 different project type categories (Table 1). The project type describes the primary purpose of the project. The project types were defined using all project reviews submitted to first SG 1.0 web application.

After selecting a broad project type category, developers then identify the number and type of specific disturbances that would occur on the landscape to implement the development project. A total of 68 different possible disturbance types have been identified (Table 1). A project could have multiple disturbances associated with it. For example, a new oil/gas well may require a new road be built to the well pad site along with a new transmission line to provide electrical power. The project type would be Energy-Oil/Gas and the disturbance types would be well, well pad, road, powerline. A new major pipeline project may entail 20 different new roads to access 20 compressor stations, power line segments to each compressor station, and individual buildings to house compressor equipment. The project type would be Infrastructure-Pipeline (Major). There would be the pipeline itself, 20 individual road disturbances, 20 segments of new powerline disturbance, and 20 new individual building disturbances.

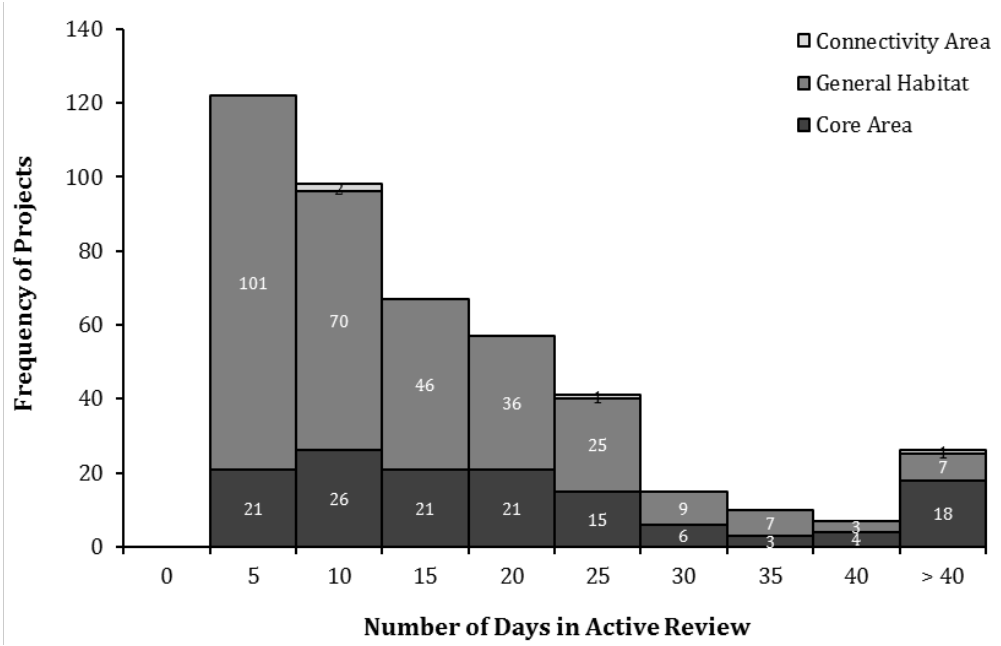

Figure 7. The number of all 2018 projects with completed reviews in all Designated Sage Grouse Habitat (Core Area = dark gray, General Habitat = gray, Connectivity Area = light gray) according to the number of days those projects spend in *Active Review* prior to reaching *Completed Review* once submitted for review (*Due Diligence*). Of the 443 projects for which the Program completed reviews in 2018, 94% (*n* = 415) of the projects were reviewed within 42 active review days of being submitted by the proponent to the Program for review.

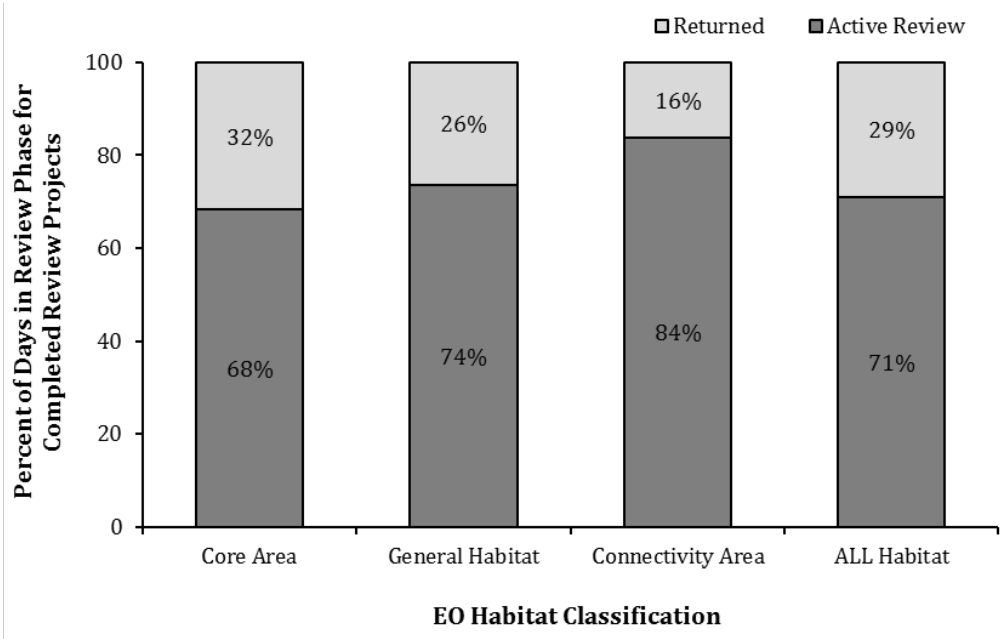

Figure 8. The total number of review days (i.e., days in *Active Review* + days in *Returned* Stage) across ***all*** projects with completed reviews during 2018 was 9,699 days, with 2,804 days spent in the *Returned* status (light gray) so that proponents could address any Program questions or submit additional information.

The SG 2.0 website tailors questions for each project type and individual disturbance type to reduce the amount of time required to submit a project, and to increase Program efficiency and shorten review time. Development project impacts are assessed based on Disturbance Types.

The following discussion focuses on a few specific project type categories and their associated disturbance activities (i.e., 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

Projects and Disturbance Types Associated with Them

This section summarizes the most common project types selected by developers of the 21 possible project type categories (Table 1).

Developers identify the number and type of individual disturbances that are associated with their project. In the underlying relational database, this represents a one:many relationship (i.e. one project will have many disturbances individual disturbances associated with it). The following sections describe the individual disturbances and the frequency with which they are included in the most common nine project type categories shown in Figure 9. For example, of all the projects for which the Program completed reviews in 2018, Energy – Oil/Gas projects were the most common (n=138) (Figure 9).

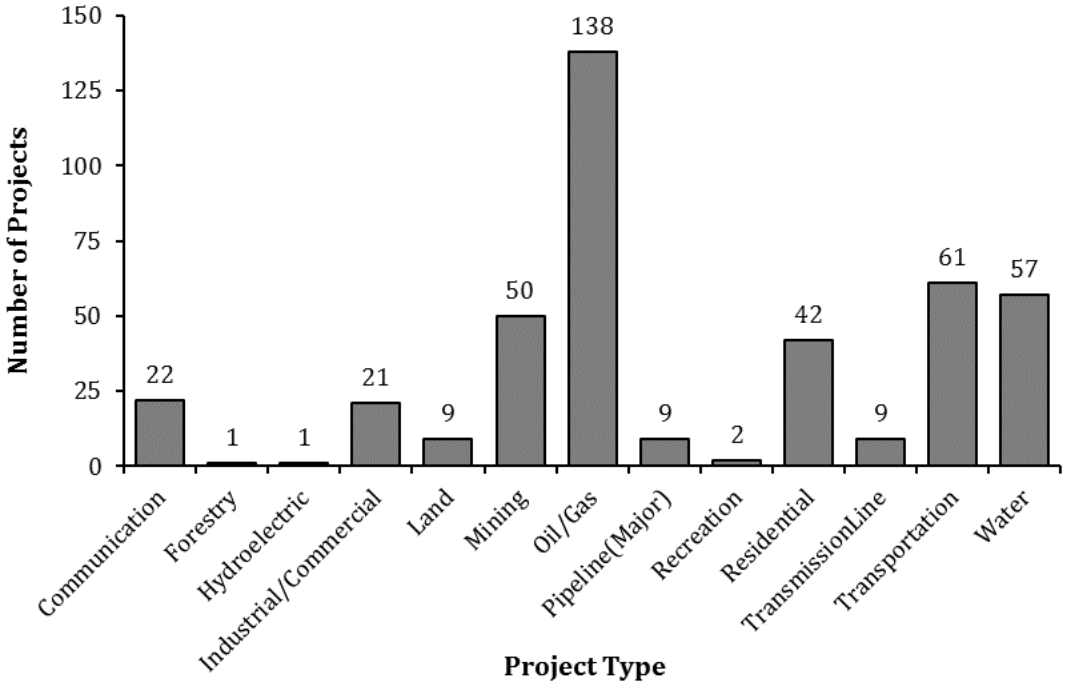

Figure 9. The count of all proposed projects with completed review letters (Dataset 2 Completed 2018 Review Data) during 2018 parsed out by the Project Type selected by project proponents.

Agriculture Land and Agriculture Water Projects

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. See Table 1.

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.

During 2018, the Program completed reviews for 66 proposed Agriculture Projects, including nine Agriculture – Land Projects and 57 Agriculture – Water Projects. Approximately 22% of proposed Agriculture – Land Projects were located in a Core Area (*n* = 2 projects), 78% were located in General Habitat (*n* = 7 projects), and 0% were located in a Connectivity Area. Whereas, approximately 46% of proposed Agriculture – Water Projects were located in a Core Area (*n* = 26 projects), 54% were located in General Habitat (*n* = 31 projects), and 0% were located in a Connectivity Area. Overall, more than half (58%) of all proposed Agriculture Projects were located in General Habitat (*n* = 38 projects). See Table 2.

Table 2. The Program completed a review for a total of 66 proposed Agriculture projects in 2018, nine of which were Agriculture – Land projects and 57 of which were Agriculture – Water projects. Of the nine proposed Agriculture – Land projects, two were located in a Core Area, seven were located in General Habitat, and zero were located in a Connectivity Area. The Agriculture – Land Projects proposed a variety of activities to implement, with most involving crops and livestock. Of the 57 proposed Agriculture – Water projects, 26 were located in a Core Area, 31 were located in General Habitat, and zero were located in a Connectivity Area. The majority of proposed Agriculture – Water Projects involved irrigation activities, water pipelines, and stock ponds.

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	2	0	3
Fences	1	0	0	1
Grazing	0	2	0	2
Livestock Areas	0	1	0	1
Other	0	2	0	2
Roads	0	1	0	1
Agriculture – Water†				
Irrigation	2	13	0	15
Other	0	2	0	2
Pipeline (e.g., water pipeline)	5	18	0	23
Power Line	0	3	0	3
Stock Pond	17	3	0	20
Stock Tank	3	6	0	9
Water Diversion	2	5	0	7
Water Well	0	1	0	1

* One Agriculture – Land proposed project contained two disturbances: Crop and Other.
† 16 Agriculture – Water proposed projects contained more than one type of disturbance activity and are included accordingly in the above table, but only counted once in the total number of 57 Agriculture – Water proposed projects.

Energy – Oil/Gas Projects

Energy-Oil/Gas Projects may entail a variety of proposed infrastructure and activities necessary for project implementation (i.e. individual disturbances of different types). 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. See Table 1.

During 2018, the Program completed reviews for 138 proposed Energy – Oil/Gas Projects (Figure 9). Approximately 25% of the proposed Oil/Gas Projects were located in a Core Area (*n* = 34 projects), 75% were located in General Habitat (*n* = 104 projects), and 0% were located in a Connectivity Area. 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. See Table 3.

The majority (71%; *n* = 136 projects) of the proposed Oil/Gas Projects included construction or maintenance of Gas/Oil Wells, Pipelines, or Well Pads. Some common secondarily associated infrastructure with the 138 proposed Oil/Gas Projects included access Roads and Power Lines. Approximately 5% of the Oil/Gas Projects submitted their project as a Plug and Abandon activity indicating their intent the permanently plug and abandon a gas/oil well and effectively removing the well from any surface disturbance (*n* = 10 projects). However, the number of proposed Plug and Abandon projects is likely higher because they may also be submitted by the project proponent as Gas/Oil Well activities.

Infrastructure – Communication Projects

Communication Projects may encompass a variety of proposed infrastructure and activities necessary for project implementation. Associated infrastructure may include Towers, Cables, access Roads, Fences, Buildings, Power Lines, and Storage Yards. See Table 1.

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.

During 2018, the Program completed reviews for 22 proposed Communication Projects (Figure 9). Approximately half of the proposed Communication Projects were located in a Core Area and the other half were located in General Habitat. No Communication Projects were proposed in a Connectivity Area.

Of the 22 proposed Communication Projects, 20 projects proposed installation of Fiber Optic Cables, one project included Fences, one project included Roads, and two projects proposed construction of Towers (i.e., Tall Structures; e.g., Cellular Towers; Table 3). One of the two Communication Projects proposing a Tower also proposed additional infrastructure including Fiber Optic Cables and Roads. See Table 4.

Table 3. The Program completed a review for a total of 138 proposed Energy – Oil/Gas Projects in 2018. Of these, 34 were located in a Core Area, 104 were located in General Habitat. Some of those 138 proposed Energy – Oil/Gas Projects contained various proposed activities necessary to implement the proposed Oil/Gas Project. Most projects entailed 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
Compressor	1	0	0	1
Gas/Oil Well	16	65	0	81
Maintenance Activities	0	4	0	4
Other	0	1	0	1
Pipeline	9	23	0	32
Plug and Abandon	1	9	0	10
Power Line	6	8	0	14
Road	12	10	0	22
Storage Yard	0	2	0	2
Unknown Polygon	0	1	0	1
Well Pad	15	8	0	23

* 25 Energy – Oil/Gas proposed projects contained more than one type of disturbance activity and are included accordingly in the above table, but only counted once in the total number of 138 Energy – Oil/Gas proposed projects.

Table 4. The Program completed a review for a total of 22 proposed Communication Projects in 2018. Of these, 12 were located in a Core Area, 10 were located in General Habitat. Of those 22 proposed projects, each contained various proposed activities necessary to implement the Communication Project. The majority of Communication Projects involved Fiber Optic Cable installation. Two Communication Projects entailed installation of new Towers (i.e., Tall Structures).

Diversity of Activities Associated with Communication Projects*	EO Designated Sage Grouse Habitat Classification			
	Core Area	General Habitat	Connectivity Area	All Habitat
Fiber Optic Cables	10	10	0	20
Fences	1	0	0	1
Roads	0	1	0	1
Towers (i.e., Tall Structures)	1	1	0	2

* One Communication Project contained a Fiber Optic Cable disturbance, a Road disturbance, and a Tower disturbance, thereby the single Project was included each of those three rows in the table, but only counted once for the total Communication Projects of 22 projects.

Infrastructure – Industrial/Commercial Projects

Industrial/Commercial Projects may encompass a variety of proposed infrastructure and activities necessary for project implementation. Associated infrastructure or activities for Industrial/ Commercial Projects may include Buildings, Gravel Pits, Parking Areas, Pipelines, Ponds, Power Lines, Roads, and Storage Yards. See Table 1.

During 2018, the Program completed reviews for 21 proposed Infrastructure – Industrial/ Commercial Projects (Figure 9). Approximately 5% of the proposed Industrial/Commercial Projects were located in a Core Area (*n* = 1 project), 90% were located in General Habitat (*n* = 19 projects), and 5% were located in a Connectivity Area (*n* = 1 project). 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.

The majority (85%; *n* = 40 projects) of the proposed Industrial/Commercial Projects included construction of or activities involving Buildings, Storage Yards, Ponds, Roads, or Pipelines. Occasional infrastructure included Parking Areas and Power Lines. See Table 5.

Table 5. The Program completed a review for a total of 21 proposed Infrastructure – Industrial/Commercial Projects in 2018. Of these, one was located in a Core Area, 19 were located in General Habitat, and one was located in a Connectivity Area. Many of these 21 proposed Infrastructure – Industrial/Commercial Projects contained various proposed activities necessary to implement the Industrial/Commercial Project. Most entailed construction of buildings, storage yards, ponds, or minor roads.

Diversity of Activities Associated with Infrastructure – Industrial/Commercial Projects*	EO Designated Sage Grouse Habitat Classification			
	Core Area	General Habitat	Connectivity Area	All Habitat
Building	0	10	0	10
Other	0	2	0	2
Parking Area	0	3	0	3
Pipeline	1	5	0	6
Pond	0	7	1	8
Power Line	0	2	0	2
Road	0	7	0	7
Storage Yard	0	8	1	9

* 10 Infrastructure – Industrial/Commercial proposed projects contained more than one type of disturbance activity and are included accordingly in the above table, but only counted once in the total number of 21 Infrastructure – Industrial/Commercial proposed projects.

Infrastructure – Pipeline (Major) Projects

Pipeline (Major) Projects may encompass a variety of proposed infrastructure and activities necessary for project implementation. Associated infrastructure or activities, in addition to Pipelines, may include Buildings, Compressors, Fences, Pigging Facilities / Launchers, Ponds, Power Lines, Roads, Storage Yards, and Trenches. See Table 1.

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.

During 2018, the Program completed reviews for nine proposed Infrastructure – Pipeline (Major) Projects (Figure 9). Approximately 44% of the proposed Pipeline (Major) Projects were located in a Core Area (*n* = 4 projects), 56% were located in General Habitat (*n* = 5 projects), and 0% were located in a Connectivity Area. See Table 6.

While the vast majority of the proposed Pipeline (Major) Projects included construction or maintenance of a Pipeline (88%; *n* = 8 projects), only one Pipeline (Major) Project proposed upgrade construction activities to an existing pump station. All eight projects that included pipelines, indicated intents to bury the pipeline or proposed maintenance activities on an existing buried pipeline. Most of the projects contained ancillary infrastructure (56%; *n* = 5 projects), including Fences, access Roads, and Storage Yards.

Table 6. The Program completed a review for a total of nine proposed Infrastructure – Pipeline (Major) Projects in 2018. Of these, four were located in a Core Area, five were located in General Habitat, and zero were located in a Connectivity Area. Many of the nine 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 minor roads.

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	1	0	1
Compressor	0	1	0	1
Fence	0	1	0	1
Pipeline	4	4	0	8
Road	3	2	0	5
Storage Yard	0	1	0	1

* Five Infrastructure – Pipeline (Major) proposed projects contained more than one type of disturbance activity and are included accordingly in the above table, but only counted once in the total number of 9 Infrastructure – Pipeline (Major) proposed projects.

Infrastructure – Transmission Line Projects

Transmission Line Projects may encompass a variety of proposed infrastructure and activities necessary for project implementation. Associated infrastructure or activities, in addition to Power Lines, may include Fences, Roads, Storage Yards, Substations, and Towers. See Table 1.

During 2018, the Program completed reviews for nine proposed Infrastructure – Transmission Line Projects (Figure 9). Approximately 44% of the proposed Transmission Line Projects were located in a Core Area (*n* = 4 projects), 56% were located in General Habitat (*n* = 5 projects), and 0% were located in a Connectivity Area.

One proposed Transmission Line Project included maintenance of an existing aboveground Power Line. Eight of the proposed Transmission Line Projects included construction of new Power Lines (89%; *n* = 8 projects). One proposed Transmission Line Project included construction of two Substations in association with new Power Lines. Most Transmission Line Projects included power lines with voltages sizes of 7.2 kV (*n* = 5 projects) with some projects including up to 115 kV power lines (*n* = 2 projects) (Table 7).

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. Of the nine proposed Transmission Line Projects, three projects included installation of aboveground Power Lines with project duration > 25 years. Those same three projects also included shorter segments of buried Power Lines. Five proposed Transmission Line Projects included installation of buried Power Lines. 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. The Program completed a review for a total of nine proposed Infrastructure – Transmission Line Projects in 2018. Of these, four were located in a Core Area, five were located in General Habitat, and zero were located in a Connectivity Area. In addition to proposing installation or maintenance of power lines, only one Infrastructure – Transmission Line Project contained additionally associated infrastructure necessary to implement the proposed Transmission Line Project. Only one Transmission Line Project proposed a substation.

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	4	5	0	9
Substation	1	0	0	1

* One Infrastructure – Transmission Line proposed project contained a Power Line and a Substation and is included accordingly in the above table, but only counted once in the total number of 9 Infrastructure – Transmission Line proposed projects.

Infrastructure – Transportation Projects

Transportation Projects may encompass a variety of proposed infrastructure and activities necessary for project implementation. 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. See Table 1.

During 2018, the Program completed reviews for 61 proposed Infrastructure – Transportation Projects (Figure 9). Approximately 20% of the proposed Transportation Projects were located in a Core Area (*n* = 12 projects), 79% were located in General Habitat (*n* = 48 projects), and 1% was located in a Connectivity Area (*n* = 1 project). 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 (Table 8).

Only two of the 61 proposed Transportation Projects proposed construction of new roads. The remaining 59 Transportation Projects proposed a variety of maintenance activities, which included activities such as bank stabilization, bridge replacements, chip seal, installation of warning signs, culvert replacements, and pavement preservation.

Table 8. The Program completed a review for a total of 61 proposed Infrastructure – Transportation Projects in 2018. Of these, 12 were located in a Core Area, 48 were located in General Habitat, and one was located in a Connectivity Area. Some of these 61 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, activities were proposed for bridges, highways, and railroads.

Diversity of Activities Associated with Infrastructure – Transportation Projects*	EO Designated Sage Grouse Habitat Classification			
	Core Area	General Habitat	Connectivity Area	All Habitat
Airport Radio Tower	0	1	0	1
Airport Runway	0	2	0	2
Borrow Pit	1	0	0	1
Bridge	0	7	1	8
Culvert	0	1	0	1
Interstate Highway	1	3	0	4
Other	0	3	1	4
Railroad Mainline	0	3	0	3
Road	10	31	0	41
Storage Yard	0	1	0	1

* Four Infrastructure – Transportation proposed projects contained more than one type of disturbance activity and are included accordingly in the above table, but only counted once in the total number of 61 Infrastructure – Transportation proposed projects.

Mining Projects

Mining Projects may encompass a variety of proposed infrastructure and activities necessary for project implementation. 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. See Table 1.

During 2018, the Program completed reviews for 50 proposed Mining Projects) (Figure 9). Approximately 32% of the proposed Mining Projects were located in a Core Area (*n* = 16), 64% were located in General Habitat (*n* = 32 projects), and 4% were located in a Connectivity Area (*n* = 2 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.

The majority of the proposed Mining Projects included construction of or activities involving Mines and Gravel Pits (61%; *n* = 40 projects). Occasional new or existing infrastructure included Roads, Ponds, and Trenches (Table 9).

Table 9. The Program completed a review for a total of 50 proposed Mining Projects in 2018. Of these, 16 were located in a Core Area, 32 were located in General Habitat, and two were located in a Connectivity Area. 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 mine or a gravel pit, with additional infrastructure including roads, ponds, and trenches.

Diversity of Activities Associated with Mining Projects*	EO Designated Sage Grouse Habitat Classification			
	Core Area	General Habitat	Connectivity Area	All Habitat
Core Hole	1	1	0	2
Gravel Pit	4	16	2	22
Mine	7	11	0	18
Other	1	2	0	3
Pond	2	2	0	4
Power Line	1	1	0	2
Road	2	5	0	7
Storage Yard	1	1	0	2
Stormwater Discharge Outlet Pipe	1	0	0	1
Trench	0	3	0	3
Waste Rock / Tailings / Overburden	1	1	0	2

* 10 Mining proposed projects contained more than one type of disturbance activity and are included accordingly in the above table, but only counted once in the total number of 50 Mining proposed projects.

GREATER SAGE-GROUSE STEWARDSHIP ACCOUNT AND GRANTS

Introduction

The Stewardship Act is the second key pillar of Montana's Sage Grouse Conservation Strategy. The Montana Legislature found that the 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.

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. Stewardship Account grants are addressed below. Compensatory mitigation is addressed in the next section.

Overview of Stewardship Account Grants

The 2015 Legislature created the Stewardship Account and appropriated $10 million. Implementation of Montana's Conservation Strategy through expenditures from the Fund is an important step in demonstrating Montana's commitment to ameliorate threats, take affirmative actions to conserve important habitats, and offset impacts of development through creation of a mitigation marketplace.

The Montana Legislature created the Stewardship Account to maintain, enhance, restore, expand or benefit sage grouse habitat and populations. Habitat conservation is an important part of Montana's Conservation Strategy, especially on private lands were most of Montana's sage grouse live.

The Stewardship Fund is also 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 Grant Fund. 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 Fund and its dual purpose to not only conserve habitat but also to incentivize creation of credits to initiate a mitigation market place. They 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 adopted 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.

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

The Program initiated the first grant cycle 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 grant recipient 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, execute and close the conservation easements.

As of December 31, 2018, the status of six of the original eight projects selected for funding is shown in Table 10. Table 11 lists the Stewardship Account award amounts and leveraged matching funding for the four projects moved forward of the original six that were selected. Figure 10 shows the locations of four Stewardship Fund grant proposals that were funded by MSGOT in the first grant cycle 2016-2017 and still active at the end of 2018. Additional details can be found in the MSGOT Meeting Archive, Audio Summary Minutes, Notes and Handouts.

Table 10. Status of all active grant projects awarded funding, as of December 31, 2018.[5]

Proposal	Type[6]	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	Closing expected in 2019
Watson	Easement	Phillips	100% Core	2,833	Temporarily on hold by request of the family; closing expected in 2019
Hansen[7]	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

[5] Two conservation easement applications that were selected for funding were withdrawn by the grant applicant in 2016 and omitted from the table.

[6] 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.

[7] 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.

Table 11. Sage Grouse Stewardship Account grant awards, sources of matching funds, and acres of habitat conserved for credit generation, as of December 31, 2018.

Project	Stewardship Account	NRCS Match	Private Match	Other Matching Source	Acres	TOTAL
44 Ranch Inc.	$1,500,000		$375,000	$527,971	18,033	$2,402,971
Raths Livestock	$425,000[8]	$1,275,000			11,230	$1,700,000
Watson[9]	$162,500	$487,500		$50,600	2,833	$700,600
Hansen Ranch Easement	$952,500[10]	$4,950,000	$50,000	$647,500	15,535	$6,600,000
Total Stewardship Account	$3,040,000					$3,040,000
Total Match		$6,712,500	$425,000	$1,226,071		$8,363,571
TOTAL HABITAT CONSERVATION					57,501	$11,403,571

[8] Original Stewardship Account grant award amount adjusted downward to $425,000 to reflect higher final appraisal.
[9] On hold by request of the family.
[10] In 2017, TNC secured alternative funding for the conifer reduction portion of the project. MSGOT reallocated $202,500 to the conservation easement to reflect higher final appraisal.

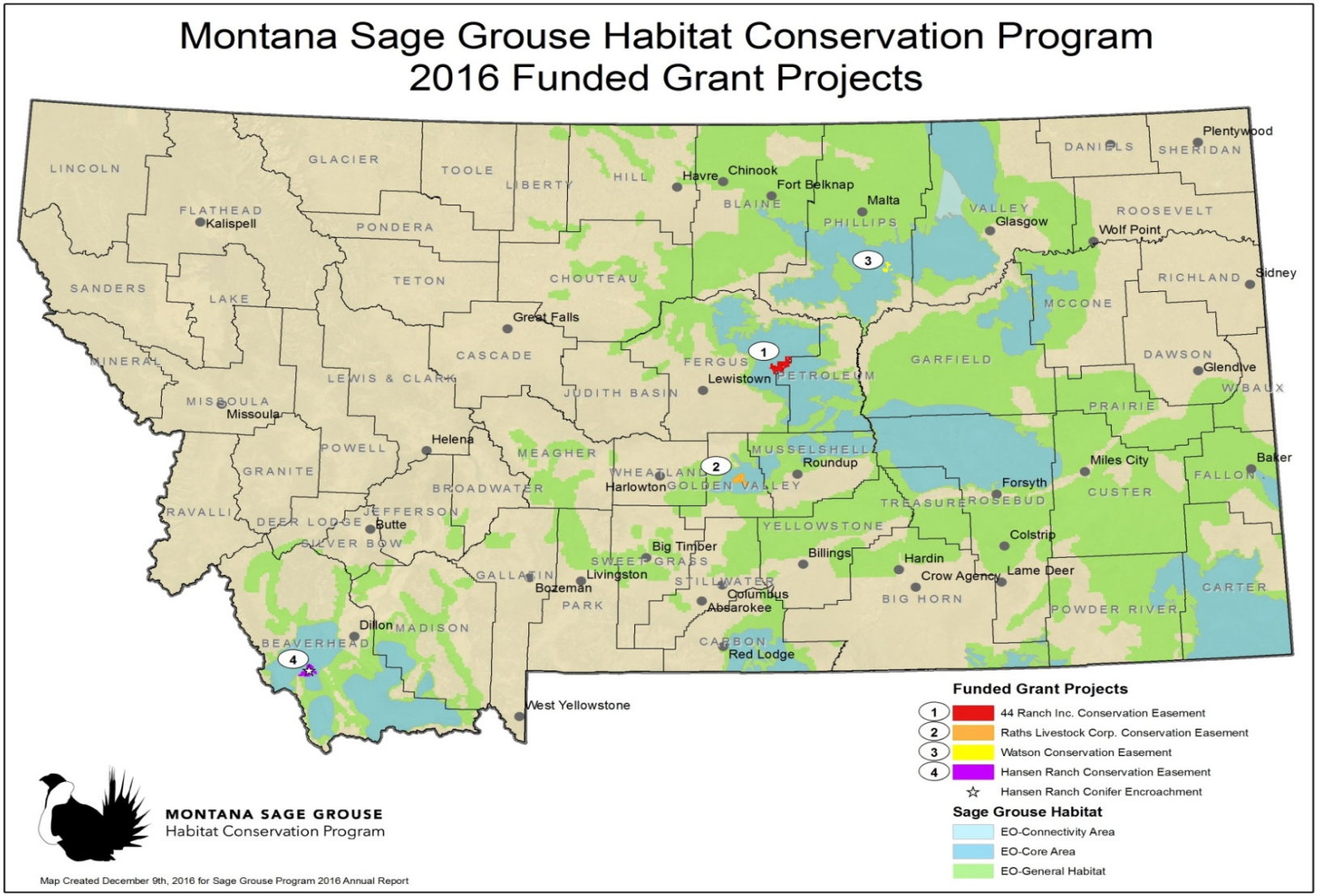

Figure 10. Locations of Stewardship Account grant projects that were originally funded in 2016-2017 and either closed or are still active as of December 31, 2018.

MITIGATION FRAMEWORK

Introduction

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 by offsetting in equal measure the impacts of 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 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.

Development of Mitigation Policy and the Habitat Quantification Tool

Significant progress in development of the mitigation component of the Conservation Strategy was made in 2018. The Program worked with a large group of diverse stakeholders to develop approaches to incentivize habitat conservation and proactive planning by landowners and project developers. This effort began in September 2016, continued through 2017, and produced draft documents and draft administrative rules for peer review and public comment in 2018.

The stakeholder process culminated with the transfer of the draft HQT model and supporting document to the State on approximately November 20, 2017. The guidance document materials were transferred at approximately the same time. The State then began to build out the model framework provided by SWCA to enable it to be applied to a variety of project types, proof literature citations, further define and refine indirect impact buffers as identified within the stakeholder process, generate hypothetical projects for analysis and evaluation, and continue to develop the stakeholder approach for finalization of the HQT and policy guidance process. This work continued in 2018.

A small committee assisted the Program by helping to guide the stakeholder process from 2016-2018. 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 HQT GIS-based model and drafting the HQT manual.

Stakeholder engagement was significant from 2016 throughout 2018. Opportunities included multi-day in person meetings, webinars, conference calls and multiple comment opportunities on draft documents as the documents developed and evolved. Appendix B (Montana Conservation Strategy: 2015-2018 Implementation Chronology) notes key stakeholder engagement opportunities from September 2016 through December 2018. As importantly, the mitigation framework appeared on the MSGOT agenda seven times throughout the development period and prior to MSGOT's final approval in October 2018. Additionally, independent peer reviews were solicited from upwards of 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, was a significant outcome of the stakeholder process.

The HQT itself is policy-neutral and works in concert with the Policy Guidance Document. The HQT is a GIS-based model that will become the scientific method used to quantify ecosystem function or value for both credit and debit projects, as required by the Stewardship Act. The HQT is used to estimate credits created as a result of conservation activities, as well as debits (impacts) to sage grouse habitat as a result of development. The Policy Guidance Document outlines the process to develop credits, assess 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 and sets forth the "rules of the road" that all will follow.

On October 31, 2018, 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. This approval set in motion the administrative rulemaking process and publication of draft rules for public comment pursuant to the Montana Administrative Procedures Act. In keeping with significant public involvement during the 2016-2018 stakeholder process to develop the documents, relatively little public comment was received on proposed administrative rules. On

December 18, 2018, MSGOT adopted final administrative rules on Stewardship Account Grants and Mitigation that would publish and take effect in January, 2019.

With the adoption of final mitigation administrative rules in December, 2018, MSGOT also directed the Program to undertake the necessary steps to implement the mitigation framework when the rules take effect in 2019. In truth, the Program had already begun developing business workflow processes, standardized review protocols, data forms, etc. during the second half of 2018 in anticipation of MSGOT's ultimate adoption. Also in anticipation of ultimately incorporating the mitigation, HQT, and registry into the Program's web application, the Program starting developing the technical requirements for updating the existing SG2.0 website and an eventual call for proposals from qualified entities.

Also in December, 2018, MSGOT noted the Western Governors Association (WGA) 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 WGA policy. All 22 governors supported the resolution, even though each state has developed its own unique approach to mitigating development impacts in sage grouse habitat.

Major Projects Engaged in Compensatory Mitigation Actions in 2018

During 2018, MSGOT reviewed and approved sage grouse mitigation plans for 10 proposed projects. These compensatory mitigation actions were either offered voluntarily or triggered by legal authorities other than the Sage Grouse Stewardship Act. The projects spanned a wide range of Project Types and associated infrastructure and activities. There were three mining projects, three pipeline projects, three transmission line projects, and one transportation project.

These 10 mitigation plans were placed before MSGOT prior to final adoption of the mitigation rules due to the unique facts and circumstances associated with each particular project. For example, in the case of the three proposed transmission line projects, the proponents sought MSGOT review and approval in anticipation of construction of the Keystone pipeline in 2019. These proponents chose to develop sage grouse habitat mitigation plans so they would have certainty that their review process was completed. Having the review process completed allowed proponents to achieve timely implementation of their projects.

See below for additional details concerning each mitigation plan that was reviewed and approved by MSGOT in 2018. For more information on a specific project's mitigation plan, please visit the Program's website (https://sagegrouse.mt.gov/Team). MSGOT did not reject any mitigation plans that were brought forward for review.

Cloud Peak Energy Spring Creek Mine's Haul Road Sage Grouse Mitigation Plan

Cloud Peak Energy submitted an application to the Montana Department of Environmental Quality (DEQ) to add new lands to their current Surface Mining Permit under the Montana Strip and Underground Mine Reclamation Act (MSUMRA). This proposed permit amendment (AM5) is for construction of a nine-mile-long transportation corridor (e.g., haul road) to connect Cloud Peak's existing Spring Creek Mine in Montana with their Youngs Creek Mine in Wyoming. MSUMRA requires this type of project to avoid or minimize impacts for designated State sensitive species, such as the Greater Sage-grouse. Cloud Peak Energy worked in consultation with the Program to

collaboratively develop the Greater Sage-grouse Mitigation Plan for the Spring Creek Mine's Proposed AM5 Haul Road Project (Haul Road Mitigation Plan) that included compensatory mitigation to accomplish off-site mitigation of project impacts. Cloud Peak Energy voluntarily committed to this mitigation plan (including compensatory mitigation) and will minimize impacts to sage grouse, as required by MSUMRA.

The Haul Road Mitigation Plan included voluntary restoration and enhancement actions in addition to the reclamation requirements by DEQ permits. By applying a physical acre approach using fixed ratios, Cloud Peak Energy's voluntary actions were valued at $72,475.00. The total impact of the haul road (an any ancillary infrastructure) using this approach was valued at $1,779,828.05. After subtracting the amount gained from the voluntary actions, the total compensatory mitigation obligation using this physical acre approach was $1,707,353.05. After confirmation of approval for both the permit amendment and the Haul Road Mitigation Plan, but before construction, Cloud Peak Energy agreed to deposit the compensatory mitigation obligation amount in the Montana Sage Grouse Stewardship Fund.

On April 26, 2018, MSGOT approved Cloud Peak Energy's Haul Road Mitigation Plan and contribution amount to the Stewardship Fund.

<u>TransCanada Keystone XL Pipeline Sage Grouse Mitigation Plan</u>

TransCanada proposed a pipeline that is estimated to be 285 miles long to transport crude oil from Canada to South Dakota (Keystone XL Pipeline Project). Ancillary infrastructure included six pump stations, three transmission lines less than 10 miles long, valves and associated power supplies, temporary pipe storage areas, right-of-way access roads, contractor yards, and temporary work areas. Pursuant to the Major Facilities Siting Act (MFSA), TransCanada was issued a Montana Certificate of Compliance (Certificate) by the Montana Department of Environmental Quality on March 30, 2012. The Keystone Pipeline Project is considered a pre-existing land use for purposes of Executive Order 12-2015 and pursuant to the 2012 Certificate. However, mitigation was required by the Certificate. Since the Keystone Pipeline Project was not implemented following the issuance of the 2012 Certificate, TransCanada voluntarily negotiated with the State of Montana and the Montana Bureau of Land Management to develop the Greater Sage-grouse Conservation Plan for the Keystone XL Project (April 2017 Plan).

Both the 2012 Certificate and the April 2017 Plan include a mitigation approach based on a physical acre approach. This method considers the physical acreage of the Keystone Pipeline Project's direct footprint and associated impacts, not the functionality of the habitat using the habitat quantification tool. The April 2017 Plan outlines voluntary avoidance, minimization, reclamation, and compensatory mitigation measures for impacts to sage grouse and sage grouse habitat specific to the Keystone Pipeline Project. The April 2017 Plan required MSGOT's authority because TransCanada's compensatory mitigation funds outlined in the April 2017 Plan will be deposited into the Sage Grouse Stewardship Account *instead of* being deposited with FWP and DEQ. Using the physical acre approach, the compensatory mitigation contribution to the Stewardship Account for the Keystone Pipeline Project totaled $761,519 for the section of pipeline and ancillary infrastructure located in Montana.

MSGOT approved the April 2017 Plan and associated contribution amount for the Keystone Pipeline Project on September 14, 2018.

Denbury Cedar Creek Anticline CO_2 Pipeline Sage Grouse Mitigation Plan

Denbury Green Pipeline – Montana, LLC and Denbury Onshore, LLC (collectively, Denbury), proposed construction of a 110-mile long pipeline and ancillary facilities that will connect one enhanced oil recovery unit in Powder River County with another enhanced oil recovery unit in Fallon County (Cedar Creek Pipeline Project). The Cedar Creek Pipeline Project required various state permits (e.g., storm water construction, surface use authorization on Montana State Lands) and federal authorizations by the BLM. For BLM authorizations, the Miles City Resource Management Plan requires this type of project to avoid or minimize impacts for designated State sensitive species, such as Greater Sage-grouse. The State of Montana worked collaboratively with BLM to implement Executive Orders 12-2015 and 21-2015 and the BLM land use plans to develop a cohesive mitigation plan with Denbury: Denbury Cedar Creek Anticline CO2 Pipeline Project Greater Sage-grouse Mitigation Planning Approach (Denbury Pipeline Mitigation Plan).

The Denbury Pipeline Mitigation Plan is consistent with the BLM Miles City Field Office Resource Management Plan, all BLM policy guidance, Executive Orders 12-2015 and 21-2015 (collectively, EO), and the Greater Sage Grouse Stewardship Act. The Denbury Pipeline Mitigation Plan entails adherence by Denbury to the mitigation hierarchy, expected impacts, consistency with EO stipulations, and a permittee responsible approach to offset impacts through a combination of preservation and restoration activities. The method used to quantify impacts was the July 2018 Habitat Quantification Tool Technical Manual (HQT) and the July 2018 Policy Guidance Document which use a functional acre approach and conversion to credits and debits based on consistency with EO stipulations. The HQT produced a Raw HQT Score of 11,128.93 Functional Acres Lost over the life of the Cedar Creek Pipeline Project. Through the application of appropriate policy multipliers outlined in the July 2018 Policy Guidance Document, the total debits accrued during the life of the Cedar Creek Pipeline Project was 17,310.09 Debits.

Denbury developed two permittee responsible mitigation projects to offset debits from their Cedar Creek Pipeline Project. The functional acres generated from their approximately 4,443-physical acre perpetual conservation easement project (Project ID: 2980; Denbury CCA Project – Mitigation Project – Ringling Ranch) totaled 277,035 functional acres. After the application of 40% baseline, 110,814.15 credits were available to Denbury for offsetting debits. Their second conservation project (Project ID: 3102; Denbury CCA Project – Mitigation Project – Hammond Field Federal Leases) included restoration of 17 existing gas wells and a 30-year lease preservation that totaled 7,278 physical acres. This project was estimated to generate a total of 130,516.11 credits over the 30-year time frame.

In total, Denbury created 241,330.26 credits from these two permittee responsible conservation projects. After using some of these credits to offset the 17,310.09 debits accrued from their Cedar Creek Pipeline Project, Denbury had a balance of 224,020.17 credits. The Denbury Pipeline Mitigation Plan was a creative permittee-responsible approach that included voluntary multipliers to maximize conservation and created a surplus of credits available to Denbury for future projects.

MSGOT approved the Denbury Pipeline Mitigation Plan, a highly collaborative and innovative approach, on September 14, 2018.

ONEOK Elk Creek Pipeline Sage Grouse Mitigation Plan

ONEOK, Inc. (ONEOK) proposed to build, own, and operate the Elk Creek Pipeline to transport natural gas liquids and parallels ONEOK's existing Bakken Natural Gas Liquids pipeline in eastern

Montana (Elk Creek Pipeline Project). The portion of the project located in Montana covers approximately 188 miles. As the Elk Creek Pipeline Project required multiple state permits and deviates from stipulations outlines in the EO, mitigation was required. ONEOK and the Program collaboratively developed a mitigation approach to achieve consistency with the EO and the Greater Sage Grouse Stewardship Act: the ONEOK Elk Creek Pipeline Project Greater Sage Grouse Mitigation Plan (Elk Creek Pipeline Mitigation Plan).

The Elk Creek Pipeline Mitigation Plan entails expected impacts, adherence by ONEOK to the mitigation hierarchy, and consistency with EO stipulations. ONEOK opted to apply the July 2018 Habitat Quantification Tool Technical Manual (HQT) and the July 2018 Policy Guidance Document to estimate functional acres lost due to the impacts of the Elk Creek Pipeline Project and determine the final mitigation obligation (i.e., debits). The HQT produced a Raw HQT Score of 8,612.15 functional acres lost over the life of the Elk Creek Pipeline Project. Through the application of appropriate policy multipliers outlined in the July 2018 Policy Guidance Document, the total debits accrued during the life of the Elk Creek Pipeline Project was 13,047.89 debits. As provided by the Greater Sage Grouse Stewardship Act, ONEOK opted to make a contribution to the Stewardship Account which totaled $169,622.12. These funds were deposited in the Stewardship Account in conjunction with the permitting process and prior to construction of the Elk Creek Pipeline Project.

MSGOT approved the Elk Creek Pipeline Mitigation Plan and the associated contribution to the Stewardship Account on September 14, 2018.

American Colloid Company Daun West Mine Sage Grouse Mitigation Plan

American Colloid Company (ACC) proposed an amendment to an existing permit (#670) to mine bentonite in Carter County Core Area (Daun West Mine Expansion Project). The amendment added approximately 893 physical acres to the originally permitted 160 physical acres for a total of 1,344 physical acres with a permit expiration of 2048, for a total of 30 years of operation. Because this project required a state permit approval (Montana Department of Environmental Quality), ACC and the Program collaboratively developed the Daun West Permit Amendment to Permit 670 Sage Grouse Mitigation Plan (Daun West Mitigation Plan) to achieve consistency with the EO and the Greater Sage Grouse Stewardship Act.

The Daun West Mitigation Plan entails expected impacts, adherence by ACC to the mitigation hierarchy, and consistency with EO stipulations. ACC and the Program agreed to apply the July 2017 version of the Habitat Quantification Tool and the July 2018 version of the policy guidance to estimate functional acres lost due to the impacts of the Daun West Mine Expansion Project and determine the final mitigation obligation (i.e., debits). The HQT produced a Raw HQT Score of 2,361 functional acres lost over the life of the Daun West Mine Expansion Project (30 years). Through the application of policy multipliers outlined in the July 2018 Policy Guidance Document, the total debits accrued during the life of the Daun West Mine Expansion Project was 3,441 debits.

As provided by the Greater Sage Grouse Stewardship Act, ACC opted to make a contribution to the Stewardship Account which totaled $44,734.61. ACC's Daun West Mitigation Plan and this contribution amount were approved by MSGOT on September 14, 2018. However, shortly following this approval, the Program and MSGOT developed a 3% annual discount rate to the annual cost per credit, starting at $13.00/credit. After applying this discount rate to the 3,441 debits, the total contribution to the Stewardship Account was decreased to $28,002.44, saving ACC approximately $16,732.17 over the life of the Daun West Mine Expansion Project. On October 4, 2018, MSGOT approved re-calculating ACC's contribution to the Stewardship Account for the Daun

West Mitigation Plan to apply the 3% discount method. These funds were deposited in the Stewardship Account in conjunction with the permitting process and prior to construction of the Daun West Mine Expansion Project.

Western Energy Rosebud Coal Mine AM5 Sage Grouse Mitigation Plan

Western Energy Company (Western Energy) proposed an amendment (AM5) to an existing permitted coal mine, the Area B Surface Mine Permit (SMP C1984003B), near Colstrip, Montana. AM5 proposed to increase Area B permit area by 9,108 physical acres and the disturbance area by 5,547 physical acres, resulting in a total permit area of 15,161 physical acres and total disturbance area of 11,202 physical acres. Because this project (Rosebud Coal Mine AM5) required a state permit approval (Montana Department of Environmental Quality), Western Energy and the Program collaboratively developed the Rosebud Coal Mine AM5 Greater Sage-Grouse Mitigation Plan (Rosebud Mitigation Plan) to achieve consistency with the EO and the Greater Sage Grouse Stewardship Act.

The Rosebud Mitigation Plan entails expected impacts, adherence by Western Energy to the mitigation hierarchy, and consistency with the EO. The Program calculated the functional acres lost for the life of the Rosebud Coal Mine AM5 project by applying the October 2018 version of the HQT Technical Manual and converted functional acres lost to debits through applying the October 2018 version of the Policy Guidance Document. The HQT produced a Raw HQT Score of 3,137.72 functional acres lost over the life of the Rosebud Coal Mine AM5 project. After application of policy multipliers to bring the Rosebud Coal Mine AM5 project into consistency with the EO, the total debits were 4,079.03. After application of the 3% annual discount rate for the cost of a credit, and because Western Energy opted to make a contribution to the Stewardship Account, the total compensatory mitigation obligation was $36,522.91. After confirmation of approval for both the permit amendment and the Rosebud Mitigation Plan, but before construction of the Rosebud Coal Mine AM5 project, Western Energy agreed to deposit the compensatory mitigation obligation amount in the Montana Sage Grouse Stewardship Fund.

MSGOT approved the Rosebud Mitigation Plan and associated contribution to the Stewardship Account on December 18, 2018.

American Colloid Company Warren Mine Site Sage Grouse Mitigation Plan

American Colloid Company proposed an amendment to an existing permit (#8) to mine bentonite in Big Horn County Core Area (Warren Mine Expansion Project). The amendment added approximately 175 physical acres over the life of the project (15 years). With some of the newly disturbance area occurring on BLM, ACC needed BLM to approve their plan of operations. ACC also needed permit approvals from Montana DEQ. The Program, DEQ, and BLM worked collaboratively with ACC to develop the Amendment 5 Permit Amendment to Opencut Permit 8 Warren Mine Site Sage Grouse Mitigation Plan (Warren Mine Mitigation Plan) that accommodates BLM's NEPA requirements, that supports DEQ in meeting state statutorily imposed timelines, and that allows the Program review of activities in sage grouse habitats.

The Warren Mine Mitigation Plan entails expected impacts, adherence by ACC to the mitigation hierarchy, and consistency with the EO. ACC and the Program agreed to apply the July 2017 version of the Habitat Quantification Tool and the July 2018 version of the policy guidance to estimate functional acres lost due to the impacts of the Warren Mine Expansion Project and determine the

final mitigation obligation (i.e., debits). The HQT produced a Raw HQT Score of 2,449 functional acres lost over the life of the Warren Mine Expansion Project (15 years). Through the application of policy multipliers outlined in the July 2018 Policy Guidance Document, the total debits accrued during the life of the Warren Mine Expansion Project was 3,383 debits.

As provided by the Greater Sage Grouse Stewardship Act, ACC opted to make a contribution to the Stewardship Account which totaled $25,280.87 after applying the 3% annual discount rate to the cost of a credit. After confirmation of approval for both the permit amendment and the Warren Mine Mitigation Plan, but before construction of the Warren Mine Expansion Project, ACC agreed to deposit the compensatory mitigation obligation amount in the Montana Sage Grouse Stewardship Fund.

MSGOT approved the Warren Mine Mitigation Plan and associated contribution to the Stewardship Account on December 18, 2018.

NorVal Black Coulee Transmission Line Sage Grouse Mitigation Plan

NorVal Electric Cooperative, Inc. (NorVal), proposed a transmission line project (Black Coulee Transmission Project) that included about 50 miles of 115 kV transmission line, 22 miles of 7.2 kV distribution line, and two 1.8-acre substations located in Valley and McCone counties. The project facilitated the construction and functionality of the proposed Keystone Pipeline Project. The Black Coulee Transmission Project required an approval of a plan of operations by BLM and additional state permits from DEQ. The Program, NorVal, and BLM worked collaboratively to develop the NorVal Cooperative Inc., Black Coulee Transmission Line Project Mitigation Plan (Black Coulee Transmission Line Mitigation Plan) that was consistent with the BLM 2015 HiLine District Office Approved Resource Management Plan, all BLM policy guidance, the EO, and the Greater Sage Grouse Stewardship Act.

The Black Coulee Transmission Line Mitigation Plan entailed expected impacts, adherence by NorVal to the mitigation hierarchy, and consistency with the EO. NorVal committed to adherence to all seasonal timing stipulations, burying all distribution lines, and constructing overhead transmission lines to be non-nest facilitating. NorVal and the Program used the October 2018 v1.0 Policy Guidance and HQT Technical Manual to calculate functional acres lost due to the impacts of the project and determine the final mitigation obligation (i.e., debits). The HQT produced a Raw HQT Score of approximately 28,777 functional acres lost over the life of the Black Coulee Transmission Project. Through the application of policy multipliers, the total debits accrued during the life of the project was approximately 37,411 debits.

The Program and NorVal worked together to identify options to help NorVal meet their mitigation responsibilities. NorVal opted to implement a permittee-responsible approach by burying approximately 66 miles of existing aboveground electrical distribution lines, which effectively removes the aboveground disturbance. NorVal divided the 66 miles of line across two credit projects: NorVal Electric Cooperative - conversion from overhead to underground associated with Project #2953 (Project ID: 3303) and NorVal Electric Cooperative - Credit - Associated with Project #2953 (Project ID: 3308). NorVal buried approximately seven miles of line in 2018 associated with Project 3303 and committed to having the remaining 59 miles of line buried by December 31, 2019. The total Raw HQT Score from both credit projects was 127,067 functional acres gained. Because NorVal was conducting restoration activities, they received a credit multiplier for new produced functional acres, which generated a total of 135,799 credits available to offset debits. After

offsetting debits for their Black Coulee Transmission Project, NorVal had approximately 101,266 credits remaining.

MSGOT approved the Black Coulee Transmission Line Mitigation Plan, a collaborative and innovative approach, on December 18, 2018.

Big Flat Transmission Line Sage Grouse Mitigation Plan

Big Flat Electric Cooperative (Big Flat) proposed construction of a new 115 kV transmission line and associated infrastructure (Big Flat Transmission Project) in Phillips County. The Big Flat Transmission Project required a right of way approval from BLM and state permits from Montana DEQ. This project would provide power to a pump station associated with the Keystone Pipeline Project (discussed above), as well as provide improved electrical services to Big Flat's other customers. The Program and Big Flat collaborated through the mitigation consultation process to consider multiple transmission line route options and to develop the Big Flat Cooperative PS-09 Transmission Line Project Greater Sage-Grouse Mitigation Plan (Big Flat Transmission Line Mitigation Plan) that, due to the unique facts and circumstances associated with this project, considered mitigation obligations for two alternative transmission line routes (Proposed Centerline and Alternative 3).

The Big Flat Transmission Line Mitigation Plan entailed expected impacts for both the Proposed Centerline and for the Alternative 3 route options, adherence by Big Flat to the mitigation hierarchy, and consistency with the EO. As assessed by the HQT and the Program, the Proposed Centerline option was expected to accrue more impacts on sage grouse habitat (total debits = 231,777) than the Alternative 3 option (total debits = 213,402). Due to various policy options available to MSGOT, if Big Flat opted to implement the Proposed Centerline and make a contribution to the Stewardship Account to offset impacts, the total compensatory mitigation obligation amount would be $1,591,237.20. However, because Alternative 3 option observed greater adherence to the mitigation hierarchy and the EO, but would require more construction costs for Big Flat, an innovated approach was developed to provide further incentive to Big Flat to implement Alternative 3 and not the Proposed Centerline option. If Big Flat opts to implement Alternative 3 and offset through permittee-responsible credit projects, the total debits for the Big Flat Transmission Project would be 61,796. If Big Flat opts to offset Alternative 3 through a combination of permittee-responsible credit projects and a contribution to the Stewardship Account, the amount to be deposited into the Stewardship Account would not exceed $455,671.94. Please refer to the Big Flat Transmission Line Mitigation Plan for greater details on how the mitigation obligation amounts were calculated.

MSGOT approved the Big Flat Transmission Line Mitigation Plan on December 18, 2018.

TRECO Fallon Transmission Line Sage Grouse Mitigation Plan

Tongue River Electric Cooperative (TRECO) proposed to construct a 16.2-mile, 115 kV transmission line and associated infrastructure (Fallon Transmission Project) in Prairie County to support a pump station associate with the Keystone Pipeline Project (discussed above). The Fallon Transmission Project will require state and federal permits and authorizations. The Program worked with TRECO to develop the TRECO Fallow Transmission Line for Keystone XL Pump Station PS13 Sage Grouse Mitigation Plan (Fallon Transmission Line Mitigation Plan) that, due to the

unique facts and circumstances associated with the Fallon Transmission Project, provided a 100% waiver of the compensatory mitigation obligation component of the mitigation plan.

The Fallon Transmission Line Mitigation Plan entailed expected impacts, adherence by TRECO to the mitigation hierarchy, and consistency with the EO. The Program used the October 2018 v1.0 Policy Guidance and HQT Technical Manual to calculate functional acres lost due to the impacts of the project and determine the final mitigation obligation (i.e., debits). The HQT produced a Raw HQT Score of approximately 2,320 functional acres lost over the life of the Fallon Transmission Project. Through the application of policy multipliers (the Reserve Account, 20%, was the only applicable multiplier in this case), the total debits accrued during the life of the project was approximately 2,784 debits.

The Program and TRECO worked together to identify a project-specific solution to help TRECO meet their mitigation responsibilities. TRECO committed to co-locating structures with existing disturbances and constructing power poles to be compliant with non-nest facilitating standards. Therefore, the Program developed in collaboration with TRECO the incorporation of a waiver for the remaining residual compensatory impacts because of facts related to the project and artifacts of the HQT analysis, including: 1) a small portion of the direct footprint of the project was inside General Habitat with the remaining portion of the project located outside of habitat, 2) the majority of the portion of the project inside General Habitat was contained within the unincorporated municipality of Fallon, 3) the nearest lek was about 11 miles away, 4) TRECO committed to avoidance and minimization measures (e.g., co-locating disturbances, non-nest facilitating structures), 5) project assessment area contains high levels of existing disturbances, 6) the project is entirely consistent with the EO, 7) a very low Raw HQT Score of functional acres lost, 8) Interstate 94 and the Yellowstone River lie between this project and the majority of the sage grouse habitat within the project assessment area, thus serving as existing barriers to any indirect impacts this project might create, and 9) incorporation of site-specific data into a third level assessment revision of the HQT Basemap would result in an even lower Raw HQT Score.

On December 18, 2018, MSGOT approved the Fallon Transmission Line Mitigation Plan with a waiver for the 2,784 debits (which MSGOT assumed responsibility for offsetting).

GIFTS

The Act 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 2018.

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

In keeping with the "all hands, all lands, all threats" approach, the Program works closely with both state and federal agencies. Collaboration entails efforts to continuously improve the mechanics and efficiency of the consultation process, modify policy as appropriate, Program contributions to environmental assessments and impact statements, and share information. Examples follow.

- The Program periodically consulted with the USFWS and the Western Association of Fish and Wildlife Agencies 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 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, as these entities implement their own programs and statutory duties.

- In 2018 the Program continued to develop it's unique and productive relationship with the BLM. 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. Montana BLM land use plans and amendments continue to use 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.

- In 2018, after thorough review consideration, the BLM Montana/Dakotas State Director notified the BLM Washington Office that a statewide amendment to the BLM Montana/Dakotas land use plans was not necessary. Montana and the BLM considered whether there were sufficient inconsistencies between the BLM plans and Montana's strategy and whether conflicts could be adequately addressed through administrative tools, adaptive management, training, and additional guidance. It was determined that a statewide plan amendment was not warranted. Montana and the BLM continued implementing their respective plans and strategy adaptively and without formal amendments.

- A parallel coordinated effort to review the Beaverhead Deerlodge National Forest Plan sage grouse amendments to identify any significant implementation conflicts with Montana's

strategy also occurred. Likewise, it was decided that any concerns did not rise to the level of amending the forest plan amendments.

- In those states which did move forward to amend their BLM and USFS plans statewide, public scoping occurred, and draft plan amendments were released for public comment in summer, 2018. Proposed final environmental impact statements and records of decision were slated for completion and release in 2019.

APPENDIX A

Montana Greater Sage-Grouse Conservation Benchmarks: 1965-2018

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 patters 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, easements.

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.

Also 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.

Also in 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 releases 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. 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 are released by the end of calendar 2018.

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

In December, BLM releases 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 that BLM can't require mitigation from public land users for any impacts attributed to their activity. 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.

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

APPENDIX B

Montana Conservation Strategy: 2015-2018 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 holder 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; general 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.

2018

January 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 CO_2 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.