

**MONTANA SAGE GROUSE HABITAT CONSERVATION PROGRAM**  
**2022 ANNUAL REPORT**

*THIS REPORT COVERS THE PERIOD JANUARY 1 THROUGH DECEMBER 31, 2022*



© John Carlson

TABLE OF CONTENTS

**INTRODUCTION.....1**

**SUMMARY OF 2022 PROGRAM ACTIVITIES .....2**

Project Consultations..... 2

    Development Projects..... 2

    Conservation Projects..... 2

Synthesis of 2022 Mitigation Outcomes..... 2

Efforts to Improve Implementation..... 2

    Program Website Improvements..... 3

    HQT Basemap..... 3

    Other Efforts to Improve Implementation of the Strategy ..... 3

Montana Sage Grouse Habitat Conservation Program Background..... 4

    Overview of the Consultation Process for Development Projects..... 4

    Project Review Life Cycle in the Web Application ..... 5

    Project Type Categories and Disturbance Types..... 6

**SUMMARY OF 2022 CONSULTATION ACTIVITIES FOR DEVELOPMENT PROJECTS .....7**

Data Preparation Methods..... 8

General Metrics: Consultations and Program Performance ..... 9

    Project Review Status by EO Designated Habitat..... 10

    Review Process Timeline..... 10

Specific Metrics: Development Projects Reviewed in 2022..... 11

    Project Information by Project Type ..... 11

        Infrastructure – Transportation Projects ..... 12

        Agriculture – Water Projects..... 12

        Oil/Gas Projects ..... 13

        Mining Projects ..... 13

Development Project Impacts in Sage Grouse Habitats..... 13

    Introduction and Context ..... 13

    Functional Acres Lost..... 14

2022 Development Project Statistics ..... 15

    Functional Acres Lost from Development Activities..... 15

        Data Preparation ..... 15

        Results: Sum of Functional Acres Lost ..... 15

Policy Multipliers and Site-Specific Multipliers ..... 16

    Data Preparation Methods to Determine Debits Related to Policy and Site-Specific Multipliers..... 17

    Results: Debits Associated with Policy and Site-Specific Multipliers..... 17

Total Debits ..... 18

    Data Preparation Methods for Total Debits..... 18

    Results: Total Debits..... 18

    Results: Total Debits Created by Development Project Type..... 20

**MITIGATION: BALANCING CONSERVATION AND DEVELOPMENT ..... 21**

    Key Elements in Montana’s Mitigation System ..... 21

**SUMMARY OF 2022 CONSULTATION ACTIVITIES FOR CONSERVATION PROJECTS ..... 22**

    Mitigation Options Selected by Developers in 2022 ..... 22

        Data Preparation Methods for Mitigation Options..... 22

        Results: Mitigation Option Selected ..... 22

Stewardship Account Contributions in Calendar Year 2022..... 23

    Stewardship Account Contributions..... 23

Mitigation Credits Created by MSGOT through Stewardship Account Grants, by Developers through Permittee-Responsible Projects, and Other Means ..... 25

    Introduction ..... 25

    Baseline and Policy Multipliers for Newly-Created Uplift from Restoration and Enhancement 26

Functional Acres Gained: Stewardship Account Grants, and PRM in 2022..... 26

    Data Preparation Methods ..... 26

    Credits Created by Completed Projects: Stewardship Account Grants and PRM Projects..... 28

    Number of Credit Projects and Total Credits Created by Service Area and Habitat Category..... 29

**SUMMARY OF STEWARDSHIP ACCOUNT CONTRIBUTIONS FOR ALL YEARS ..... 30**

    Data Preparation Methods ..... 31

    Results: Stewardship Account Contributions..... 31

**MSGOT’S STEWARDSHIP ACCOUNT GRANTS TO OFFSET IMPACTS ON BEHALF OF DEVELOPERS ..... 32**

    Summary of all Grant Cycles from 2016-2022 ..... 32

    Introduction..... 32

    Overview of Stewardship Account Grants for all Grant Cycles..... 32

    Status of Stewardship Account Grant Projects Awarded Funding in All Grant Cycles..... 33

**SYNTHESIS OF MITIGATION SYSTEM KEY METRICS FOR ALL YEARS..... 35**

    Stewardship Account Contributions..... 36

    Permittee-Responsible Projects for All Years..... 38

ADAPTIVE MANAGEMENT .....	39
GIFTS, TRANSFERS, BEQUESTS, or DONATIONS.....	41
INTERAGENCY COLLABORATION in 2022 .....	41
APPENDIX A.....	43
<b>Montana Sage Grouse Conservation Benchmarks: 2022</b> .....	43
APPENDIX B.....	44
<b>Montana Conservation Strategy: 2022 Implementation Chronology</b> .....	44

## LIST OF TABLES

<b>Table 1.</b> List of Project Types and their associated Disturbance Types available to proponents through the Program’s website. ....	7
<b>Table 2.</b> The number of debits attributed to each of the above policy and site-specific multipliers for projects which reached <i>Completed Review</i> or <i>Concluded</i> status between January 1 to December 31, 2022.....	18
<b>Table 3.</b> Total debits categorized by major Project Type and the median and average number of debits per project for that Project Type, respectively.....	21
<b>Table 4.</b> Median and average Stewardship Account contributions deposited between January 1, 2022, and December 31, 2022, by Project Type (n = 31 projects).....	25
<b>Table 6.</b> The number of functional acres gained due to the implementation of conservation projects that closed or reached <i>Completed Review</i> or <i>Concluded</i> between January 1, 2022, and December 31, 2022, across all Service Areas. Functional acres gained reported in this table are before baseline has been applied (closed Stewardship Account grants).....	27
<b>Table 7.</b> Number of credits created by conservation projects by Service Area and statewide through the application of applicable policy modifiers to the functional acres gained (e.g., baseline adjustment for preservation projects, newly created functional acre modifier for reservation or enhancement projects). Includes credits generated from both Stewardship Account grant projects closed and PRM projects Completed between January 1, 2022, and December 31, 2022.....	28
<b>Table 5.</b> Status of all projects selected for grant funding across all three cycles, as of December 31, 2022.....	34
<b>Table 8.</b> The total amount owed to the Stewardship Account attributed to each Project Type through December 31, 2022.....	36
<b>Table 9.</b> Overview of the key mitigation metrics by Service Area. The data in this table represent all development projects for which an HQT calculation was completed (n=298). These numbers include debit projects that are either in <i>Completed Review</i> or <i>Concluded</i> . All Stewardship Account grants (n=15) that have closed as of December 31, 2022 are also included. These numbers do not include debits attributed to projects for which permittee-responsible mitigation was the chosen mitigation method nor does it include credits attributed to permittee-responsible credit projects.	37
<b>Table 10.</b> Total credits attributed to Permittee-Responsible Mitigation Projects for all years through 2022.....	38

## LIST OF FIGURES

<b>Figure 1.</b> Overview of the Program consultation process. Developer activities are shown under Developer in the yellow box and Program activities are shown in the green box. A project may be moved between stages. ....	5
<b>Figure 2.</b> In 2022, the Program received a total of 268 new requests to review proposed development projects, and continued review on an additional 15 projects from either 2020 or 2021. As of December 31, 2022, the Program completed reviews for 256 projects with the remaining 27 projects in either <i>Due Diligence</i> (Program is still reviewing the project), <i>Returned or Information Request</i> (developer is gathering the additional information need for the Program to complete a review), or <i>Withdrawn</i> (developer has withdrawn the project of their own accord and for their own reasons). ....	9
<b>Figure 3.</b> Of the 283 projects reviewed by the Program in 2022, 200 projects were located in General Habitat and 83 projects were located in a Core Area. ....	10
<b>Figure 4.</b> The number of projects that reached Completed Review or Concluded that either were submitted to the Program for review in 2022 (n= 268) or for which review carried over from previous years (n=15) in all designated sage grouse habitat according to the number of days those projects spent in Active Review status (i.e., <i>Due Diligence</i> ). The Program completed reviews for a total of 256 projects in 2022. ....	11
<b>Figure 5.</b> The number of all projects by Project Type for which the Program completed reviews in 2022 (n=256). ....	12
<b>Figure 6.</b> Number of functional acres lost by Service Area and EO habitat designation across all development projects for which an HQT calculation was performed and reached <i>Completed Review</i> or <i>Concluded</i> status by December 31, 2022 (n=66). ....	16
<b>Figure 8.</b> Total number of debits created by Service Area and EO habitat designation for projects for which an HQT was calculated (n=66) with either a <i>Completed Review</i> or <i>Concluded</i> status by December 31, 2022. Totals reflect the functional acres lost due to the project for its entire duration, along with any applicable multipliers. ....	19
<b>Figure 9.</b> Debits created by Project Type for projects that were assessed mitigation with <i>Completed Review</i> or <i>Concluded</i> status from January 1 to December 31, 2022. ....	20
<b>Figure 10.</b> The mitigation method chosen by proponents for 52 projects that reached <i>Completed Review</i> or <i>Concluded</i> in 2022 and resulted in a mitigation obligation. ....	23
<b>Figure 11.</b> Contributions made to the Stewardship Account between January 1, 2022, and December 31, 2022, according to Service Area and habitat designation. ....	24
<b>Figure 12.</b> Contributions made to the Stewardship Account between January 1, 2022, and December 31, 2022, according to Service Area and habitat category. ....	24
<b>Figure 13.</b> Number of functional acres gained by Service Area and EO 12-2015 habitat designation for conservation projects that closed or reached <i>Completed Review</i> between January 1, 2022, and December 31, 2022 (n=4). ....	28
<b>Figure 14.</b> Number of credits created by three MSGOT Stewardship Account grant projects that closed and one PRM project that reached <i>Completed Review</i> between January 1, 2022, and December 31, 2022. ....	29
<b>Figure 15.</b> Total number of credits created by Service Area and by EO 12-2015 habitat designation, all entities/sources combined, for projects that closed or were completed between January 1, 2022, and December 31, 2022. ....	30

<b>Figure 16.</b> Stewardship Account funds by contribution status across all projects in <i>Completed Review</i> or <i>Concluded</i> status from 2018 to December 31, 2022. ....	31
<b>Figure 17.</b> Locations of all Stewardship Account grant proposals that were selected for funding by MSGOT in the first, second, third, and fourth grant cycles and are still active at the end of 2022. Additional details can be found in the MSGOT Meeting Archive, Audio Summary Minutes, Notes and Handouts. ....	33
<b>Figure 18.</b> Locations of Permittee-Responsible Mitigation projects that have been implemented from 2018 to December 31, 2022.....	38
<b>Figure 19.</b> The Sage Grouse Habitat Conservation Program’s Adaptive Management Strategy.....	41

## INTRODUCTION

The Greater Sage Grouse (*Centrocercus urophasianus*, hereafter referred to as sage grouse) is a native species in Montana. While they are found in ten other western states and two Canadian provinces, Montana and Wyoming are the key strongholds for sage grouse across its range.

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 necessary for their survival. Science has shown that sage grouse are particularly sensitive to habitat loss and fragmentation caused by conversion of native sagebrush range to cultivation, invasive species, and other anthropogenic development. Population declines have been attributed to these changes in habitat at both local and landscape scales.

In 2010, in response to a petition for protection under the Endangered Species Act (ESA), the United States Fish and Wildlife Service (USFWS) found that listing sage grouse range-wide was “warranted but precluded” by other higher-priority actions. In 2015, as a result of a comprehensive stakeholder process and the work of Governor Bullock’s Greater Sage Grouse Conservation Advisory Council, the Montana Legislature passed the Greater Sage Grouse Stewardship Act (hereafter, Stewardship Act or Act).

The Act accomplished several important things in demonstrating Montana’s commitment to implementing a comprehensive conservation strategy: the Montana Sage Grouse Conservation Strategy (hereafter, Strategy or Conservation Strategy). The Act: 1. Created the Montana Sage Grouse Oversight Team (MSGOT); 2. created the Sage Grouse Stewardship Fund (hereafter, Fund or Account); 3. Appropriated \$10 million for the Stewardship Fund grants and provided statutory guidance for how the funds could be spent; 4. Established that impacts to sage grouse habitat would be mitigated and provided key statutory guidance; and 5. Delegated rulemaking authority to MSGOT. Separately, the 2015 Legislature also appropriated funds to implement the Act and Strategy through MSGOT and the Montana Sage Grouse Habitat Conservation Program (hereafter, Program).

The Program is guided by Executive Order 12-2015 (EO 12-2015; hereafter, Order or EO). The Order guides where and how development and other activities occur in designated sage grouse habitat. Certain limitations, stipulations, or conditions may apply, depending on the project or activity, its location, and its duration on the landscape. Other components establish general practices that apply to everyone. The Order applies to all programs and activities of state government, including permitting, grant programs, and technical assistance. Through a consultation process, the Program works with project proponents to first avoid impacts, minimize impacts, and restore impacted areas. Compensatory mitigation may be required for residual temporal or spatial impacts that remain after avoidance, minimization, and restoration measures.

The Program provides numerous interim reports and briefings to MSGOT and the public throughout each calendar year. A formal written report is produced on a calendar year basis. This report covers the period from January 1 to December 31, 2022. Additional information on the Program and background information about the Strategy can be found at [www.sagegrouse.mt.gov](http://www.sagegrouse.mt.gov).

## SUMMARY OF 2022 PROGRAM ACTIVITIES

### Project Consultations

#### Development Projects

In 2022, the Program received a total of 283 consultation requests for development activities. These included 15 projects for which work was carried over from previous years (2020, n=3; 2021 =12). As of December 31, 2022, the Program completed reviews for 256 projects (90%). Of the remaining 27 projects, 17 projects were withdrawn, and 10 projects were carried forward into 2023. The majority of projects reviewed by the Program in 2022 were proposed in General Habitat (n=200; 71%) compared to in Core Areas (n=83; 29%). No projects were located in a Connectivity Area.

#### Conservation Projects

In 2022, the Program received a total of 32 consultation requests for conservation activities. Of these, 14 projects were proposed conservation easement or conservation lease applications for Stewardship Account grant funding, two projects were permittee responsible projects, and 16 projects were located in sage grouse habitat, but their primary purpose was not for sage grouse conservation. Of the 14 projects proposed for grant funding, six were withdrawn, nine moved forward through the grant process, and five were approved for funding by MSGOT. In addition to these 14 grant applications submitted for conservation easements or conservation leases, the Program also had one request for funding to investigate price discovery for highest conservation credits.

### Synthesis of 2022 Mitigation Outcomes

At the end of 2022, Montana achieved its goal of balancing conservation with development on a statewide basis. Further, as of December 31, 2022, there was a surplus of credits in the Central and Southwestern Service Areas and a deficit of credits in the North Central and Southeastern Service Areas. Details can be found in the *Synthesis of Mitigation System Key Metrics for All Years* section where we report a summary of all debit / credit transactions (Table 9).

The balance of debits and credits reported in Table 9 represents a snapshot in time. However, Montana's Mitigation System incorporates time. Debits or credits are calculated for the life of a project, which means not all debits and credits are actively on the landscape simultaneously. Development projects may have more fluctuation in their impacts where the majority of impacts occur in the first couple of years while the project is constructed followed by less impacts during the operation and reclamation timeframes. Therefore, the annual balance of credits and debits fluctuates greatly. Due to this fluctuation, the balance of credits and debits reported in Table 9 are combined to cover all years for the purposes of this report.

### Efforts to Improve Implementation

The Program routinely interacts with state permitting agencies and stakeholders to identify areas of concern and cooperatively develop solutions on an ongoing basis. A pragmatic, collaborative problem-solving approach has been taken, alongside MSGOT, the Montana Legislature, and



stakeholders, including state and federal agencies, private landowners, and other interested organizations and parties when issues are identified.

The Program continued to work with two independent contractors throughout 2022 to accomplish two tasks (1) implement improvements to the Program website and (2) update the Habitat Quantification Tool (HQT) basemap.

#### Program Website Improvements

The Program continued to implement upgrades to the website throughout 2022. These upgrades were based off feedback from proponents, stakeholders, and other website users. While some of these changes were minor (added help text, improved workflow, bug fixes), the major upgrades included:

- Continued adding content for the Conservation side of the website allowing proponents to submit preservation, restoration, and/or enhancement projects for Program review. These projects may be permittee-responsible projects meant to offset specific development projects, Stewardship Account Grants, or a conservation activity that may require a consultation letter from the Program in order to obtain state permits or authorizations. This Conservation side facilitates a workflow very similar to the existing Development side.
- Legacy data was migrated to the Program website.
- Incorporated credit-tracking mechanisms into the Program database.
- Incorporated a mechanism allowing the Program to edit website content.
- Addressed website bugs and/or issues identified by proponents and/or the Program.

#### HQT Basemap

The Program worked with an independent contractor to validate proposed project data submitted by developers and determine implementation status using the most recent NAIP aerial imagery and other data sources. This is the same contractor hired in 2015 to create the existing disturbance data layer. This iteration has been completed. Additionally, the Program continues to work with this contractor to provide the next iteration of the existing disturbance layer.

Throughout 2022, Program staff continued to identify and update individual spatial data layers within the HQT basemap with the most recently available data from the same publicly available data sources used to create the 2018 HQT Basemap (v1.0). It is anticipated that the next version of the basemap will be released in early 2023.

#### Other Efforts to Improve Implementation of the Strategy

The Program continued to work with a private contractor to update the existing disturbance layer incorporated in the HQT Basemap. In February 2022, the contractor provided the Program with increased spatial resolution for contiguous cultivated land and subdivision disturbance polygons. This allows the Program to discern existing disturbance sources with greater accuracy during Program consultations. Additionally, the contractor updated disturbance polygons throughout 2022 using the most recent NAIP aerial imagery (2021).

## Montana Sage Grouse Habitat Conservation Program Background

### Overview of the Consultation Process for Development Projects

Montana EO 12-2015 requires the Program to review all proposed activities in sage grouse habitats designated as a Core Area, General Habitat, or Connectivity Area that require a state permit or authorization or utilizes state funds. EO 12-2015 also applies to work undertaken by state agencies themselves.<sup>1</sup> 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<sup>2</sup>.

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 (e.g., location), design (e.g., buried power lines are less impactful than overhead power lines), and timing and duration of construction and implementation. This enables projects 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 1). 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 a sage grouse consultation is required, permitting programs will refer the applicant to the Program.

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

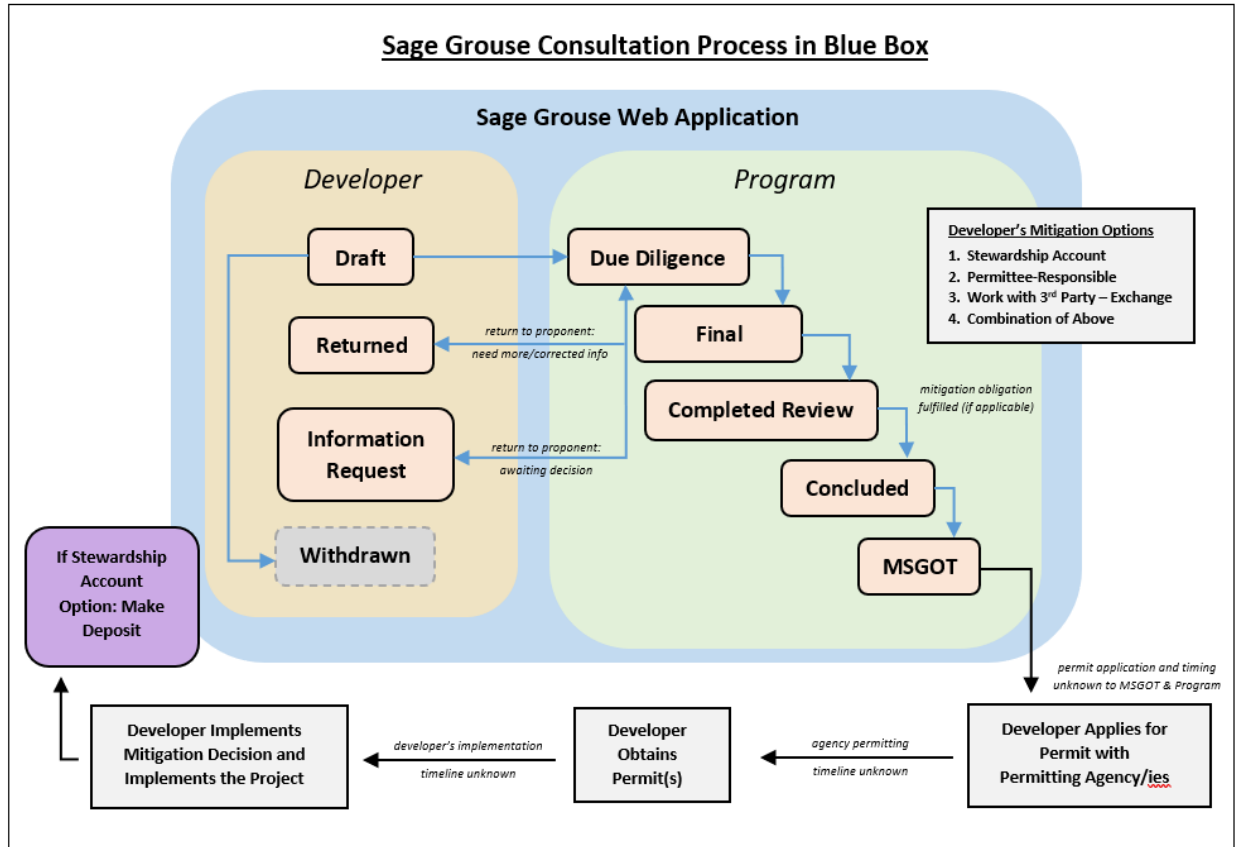
Once the review has been completed, a letter and mitigation plan, if applicable, are produced. A PDF copy of this documentation is attached to the project record and is available through the proponent's project link in the Program's web application.

The proponent then attaches the documentation to the permit application submitted to the relevant state permitting agencies. The state agencies include the Program's recommendations as stipulations on the permit. The Program works closely with the various state agencies, their permitting programs, and their respective stakeholder groups to identify and resolve issues as well as identifying opportunities for increased efficiency.

---

<sup>1</sup> See EO 12-2015 Attachment D.

<sup>2</sup> See EO 12-2015 Attachment F.



**Figure 1.** Overview of the Program consultation process. Developer activities are shown under Developer in the yellow box and Program activities are shown in the green box. A project may be moved between stages.

### Project Review Life Cycle in the Web Application

The Program strives to review proposed development projects in a timely, efficient manner. In doing so, the Program facilitates the State's 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 sage grouse habitat, the website notifies the proponent immediately and refers the proponent directly to the permitting agency, because a Program review is not required.

Once a developer logs into the website and initiates the consultation process, the project advances through individual stages of review (Figure 1). When a developer starts a new project, it is in the *Draft* stage. The *Draft* stage provides developers with opportunities to proactively design and site projects to avoid designated habitat altogether, when possible, avoid sensitive areas near leks, and

consider other ways to minimize impacts. Once started, projects are saved in the *Draft* stage, and Developers can access and work on their projects anytime.

When the developer is ready to submit the project and does so, the project advances to the *Due Diligence* stage and the Program can then begin the review process. If the Program determines that changes need to be made to the project submission in order complete the review, the Program will *Return* it to the developer so that the necessary adjustments can be made. A project may be moved to *Information Request* when the Program is waiting for the proponent to make a decision involving offsetting mitigation outcomes, awaiting federal agency outcomes of National Environmental Policy Act (NEPA) analysis, or similar informational needs.

Once the project is resubmitted, the project is in the *Due Diligence* stage again. The Program once again starts reviewing the project. A project may move between one or more of these stages multiple times before the Program has all the necessary information to continue and complete the review process.

When Program staff have completed all the technical work and coordination with developers, staff move the project to *Final Review*. Here, the staff and Program Manager review all the technical work, conclusions, and recommendations. Errors or omissions can be addressed at this time, if any. Once the Program Manager gives final approval, the project advances to *Completed Review*. *Completed Review* signifies the completion of the Program's consultation review under EO 12-2015. If the outcome of a project did not result in a mitigation obligation, it will then be advanced to *Concluded*. Otherwise, projects will remain in the *Completed Review* stage until the mitigation obligation has been fulfilled. At which time, the project will advance to *Concluded*.

Program staff upload final consultation documents to a developer's project folder on the Program's web application. Developers can access the final documentation from the web application and download documents, as desired. The project and all its related documentation are stored securely in the database and can be accessed at a future date, if needed. The review process is then finished, and the project review life cycle is completed. Proponents are also able to withdraw their own projects at any time and for any reason. Proponents do not have to provide advanced notice or provide a reason for withdrawing their own projects. This has the effect of removing their project from the Program's review process and active workload. Withdrawing of a project by a proponent does not signify a denial of consultation review or a rejection of the project by the Program. It simply means that a proponent has taken the step to withdraw a request for consultation on their own initiative. However, all project information is securely stored, and a proponent can re-activate a withdrawn project at any time by contacting the Program.

### Project Type Categories and Disturbance Types

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

**Table 1.** List of Project Types and their associated Disturbance Types available to proponents through the Program’s website.

Project Type	Associated Disturbance Types
Agriculture - Land	Building, Crop, Grazing, Livestock Area, Power Line, Road
Agriculture - Water	Bore Hole, Building, Irrigation, Pipeline, Power Line, Reservoir, Road, Soil Storage Pile, Stock Pond, Stock Tank, Water Diversion, Water Right Change/Clerical, Water Supply Well
Energy - Geothermal	Building, Facility Boundary, Pipeline, Power Line, Power Plant, Road, Storage Yard, Substation, Trench, Water Supply Well
Energy - Hydroelectric	Building, Facility Boundary, Maintenance Activities, Pipeline, Pond, Power Line, Power Plant, Road, Spillway, Storage Yard, Substation, Trench
Energy - Nuclear	Building, Facility Boundary, Pipeline, Pond, Power Line, Power Plant, Road, Storage Yard, Substation, Trench
Energy - Oil Shale	Building, Facility Boundary, Open Pit, Pipeline, Pond, Power Line, Processing Facility, Railroad, Road, Storage Yard, Well Pad
Energy - Oil/Gas	Building, Central Battery System, Collection Facility, Compressor, Field Boundary, Gas/Oil Well, Maintenance Activities, Monitoring Well, Pipeline, Plug and Abandon, Pond, Power Line, Power Plant, Railroad, Road, Soil Storage Pile, Storage Yard, Temporary Abandonment, Underground Storage Tank, Water Supply Well, Well Pad
Energy - Seismic	Buggy Lines, Cultural Survey, Facility Boundary, Road, Seismic Shot Hole/Probe Route, Storage Yard
Energy - Solar	Building, Facility Boundary, Field, Pipeline, Power Line, Power Plant, Road, Storage Yard, Substation, Water Supply Well
Energy - Tar Sands	Building, Facility Boundary, Gravel Pit, Pipeline, Pond, Power Line, Processing Facility, Railroad, Road, Storage Tank, Storage Yard
Energy - Wind	Building, Cable, Facility Boundary, Met Tower, Pipeline, Power Line, Power Plant, Road, Storage Yard, Substation, Trench, Turbine Pad
Forestry	Culvert, Firebreak/Dozer Line, Road, Timber Harvest
Habitat Treatment	Fire, Mechanical, Restoration
Infrastructure - Communication	Bore Hole, Building, Facility Boundary, Guy Wire, Met Tower, New Cable Route, Power Line, Replacement Cable Route, Road, Storage Yard, Tower Pad
Infrastructure - Industrial/Commercial	Building, Drone Path, Facility Boundary, Gravel Pit, Landfarm, Landfill, Laydown Yard, Parking Area, Pipeline, Pond, Power Line, Road, Septic/Sewer, Storage Yard, Stormwater, Underground Storage Tank, Water/Soil Sample, Water Supply Well, Water System
Infrastructure - Military	Base, Building, Gravel Pit, Parking Area, Pipeline, Power Line, Range, Road, Storage Yard, Water Supply Well
Infrastructure - Pipeline (Major)	Bore Hole, Building, Compressor, Facility Boundary, Laydown Yard, Pigging Facility / Launcher, Pipeline, Pond, Power Line, Road, Soil Storage Pile, Storage Yard, Trench, Water Supply Well
Infrastructure - Recreation	Building, Cable, Campground, Motorized/OHV Road, Motorized/OHV Trail, Park, Parking Area, Pipeline, Pond, Power Line, Septic/Sewer, Soil Storage Pile, Water Supply Well
Infrastructure - Residential	Building, Cable, Park, Parking Area, Pipeline, Pond, Power Line, Road, Septic System, Stormwater, Subdivision Area, Water Storage, Water Supply Well
Infrastructure - Transmission Line	Bore Hole, Guy Wire, Laydown Yard, Power Line, Road, Storage Yard, Substation, Tower
Infrastructure - Transportation	Airport Radio Tower, Airport Runway, Blasting, Bore Hole, Borrow Pit, Bridge, Building, CORS Site, Culvert, GeoProbe, Guard Rail, Interstate Highway, Laydown Yard, Parking Area, Pile Driving, Pipeline, Power Line, Railroad Mainline, Railroad Spur, Road, Signage, Spill/Remediation, Storage Yard, Underground Storage Tank
Mining	Building, Core Hole, Gravel Pit, Mine, Monitoring Well, Permit Boundary, Pipeline, Pond, Power Line, Power Plant, Railroad, Road, Shaft, Storage Yard, Stormwater Discharge Outlet Pipe, Trench, Underground Storage Tank, Waste Rock / Tailings / Overburden, Water Supply Well

## SUMMARY OF 2022 CONSULTATION ACTIVITIES FOR DEVELOPMENT PROJECTS

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

1. general metrics about the Program’s consultation activities; and
2. specific metrics about development projects attaining *Completed Review* or *Concluded* status by December 31, 2022.

General metrics about the Program’s consultation activities provide insights into the consultation review process itself, Program performance metrics, and where development projects are being proposed. Specific metrics about projects in either *Completed Review* or *Concluded* provide insights into what kinds of future development may occur and where in designated sage grouse habitat they

may occur. For this annual report, the Program has filtered data to maintain consistency and replicability and reports 2022 data only.

It should be noted 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.

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

### **Data Preparation Methods**

Information reported below on the general metrics of consultation, and specific project metrics are derived using the SG 4.0.1 database. Specific queries will either include or filter out specific data or projects according to the metric of interest.

As shown in Figure 1 above, every development project submitted through the web application follows a common workflow, beginning with *Draft*. *Draft* is a stage that is a virtual sandbox for project proponents who have not formally submitted their project for review. While the information is stored in the SG 4.0.1 database, the Program does not report on such projects and associated activities because the formal review process has not been initiated by the project proponent at this point. Therefore, projects still in the *Draft* stage are excluded from reporting in this document.

The review stages included in the filtered dataset for this report include *Due Diligence*, *Information Request*, *Final Review*, *Completed Review/Concluded*, *Returned*, and *Withdrawn* (Figure 1). The web application tracks the date/time stamp of when a project transitions from one review stage to the next. Program performance metrics are based on calculating the number of days a project spends in each review stage using these date/time stamps.

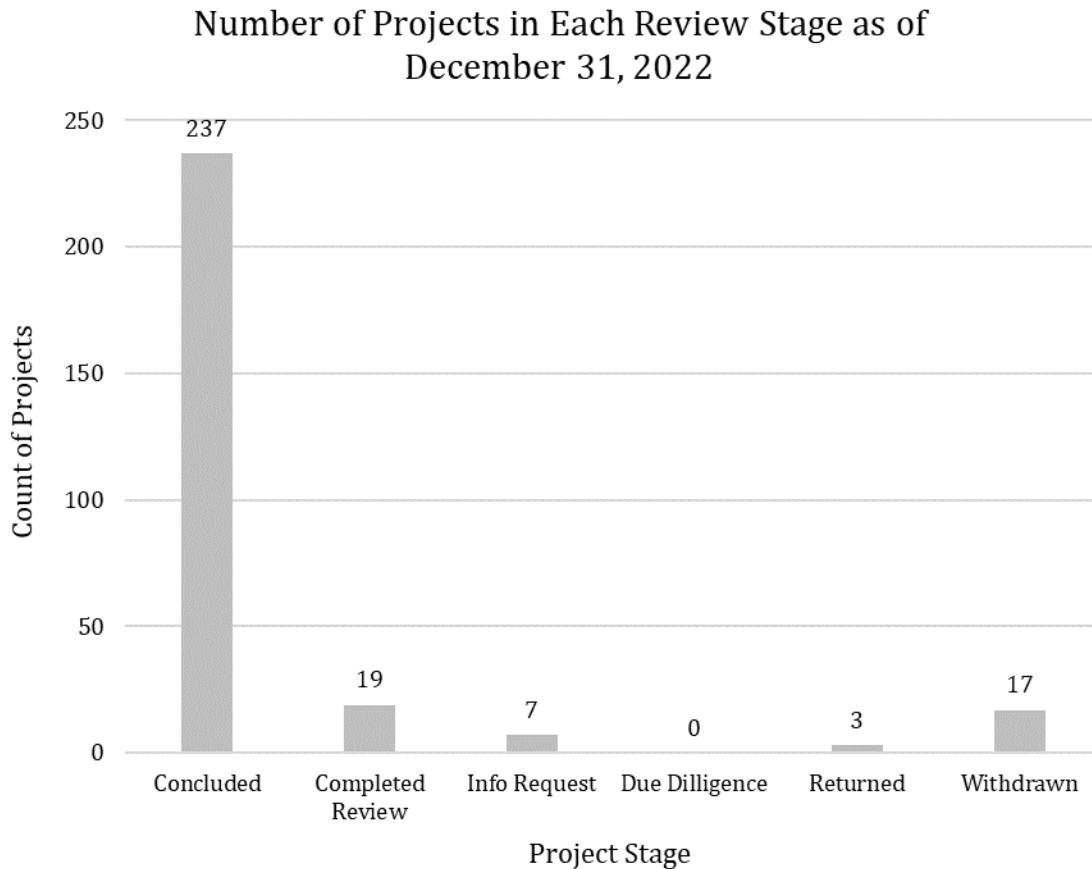
Other filters applied to the dataset included restricting the dataset to projects meeting specific ranges of submission dates (*Due Diligence*) and completion dates (*Completed Review*). This allowed for the identification of projects that were being actively reviewed (*Due Diligence*, *Final Review*) during 2022. This includes projects that were submitted for review in 2020 or 2021 and completed in 2022 as well as projects that were still being reviewed at the end of 2022.

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

### General Metrics: Consultations and Program Performance

The Program received requests for consultation review on 283 development projects in designated sage grouse habitat in 2022 (Figure 2). For three projects, Program review was originally initiated in 2020. For 12 projects, Program review was initiated in 2021. The remaining 268 projects were submitted in 2022. This resulted in a total of 283 projects requiring sage grouse consultation in 2022.

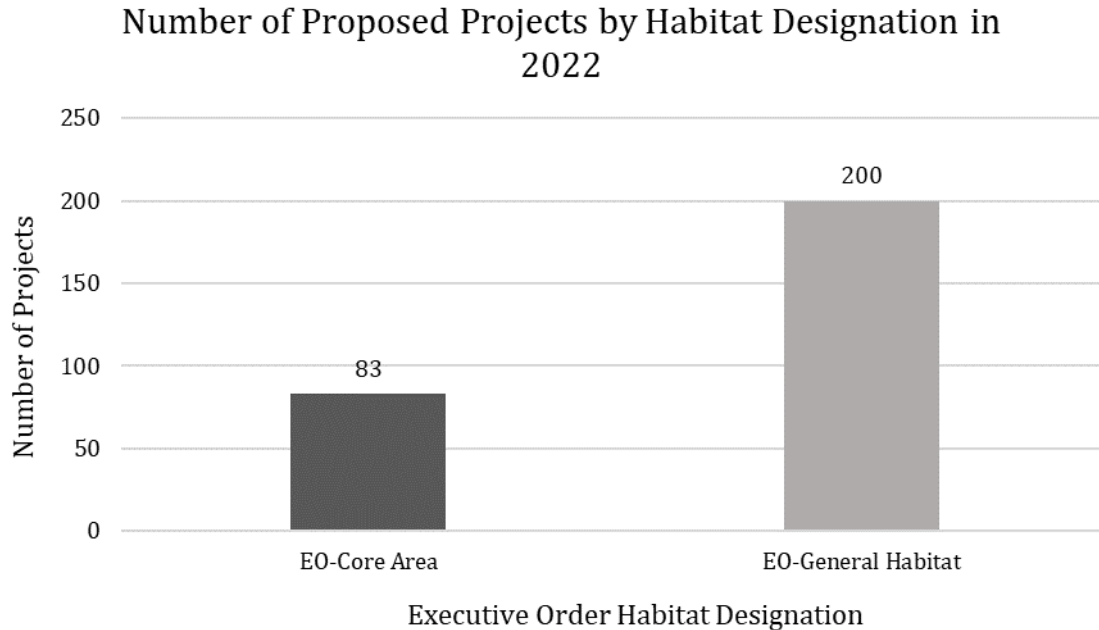
Of the 283 projects the Program worked on in 2022, the Program completed sage grouse reviews for 256 projects (90%). Of the remaining 27 projects, the Program continued sage grouse reviews for 10 proposed projects into 2022 (i.e., *Information Request, Returned*) and 17 projects were withdrawn by the developer. At the close of 2022, the Program was waiting for additional information necessary to complete the review from project proponents for all 10 proposed projects (i.e., *Information Request, Returned*).



**Figure 2.** In 2022, the Program received a total of 268 new requests to review proposed development projects, and continued review on an additional 15 projects from either 2020 or 2021. As of December 31, 2022, the Program completed reviews for 256 projects with the remaining 27 projects in either *Due Diligence* (Program is still reviewing the project), *Returned* or *Information Request* (developer is gathering the additional information need for the Program to complete a review), or *Withdrawn* (developer has withdrawn the project of their own accord and for their own reasons).

### Project Review Status by EO Designated Habitat

Of the 283 projects reviewed by the Program in 2022, 71% were located in General Habitat (n = 200 projects) and 29% were located in a Core Area (n = 83 projects). No projects were located in a Connectivity Area. See Figure 3.



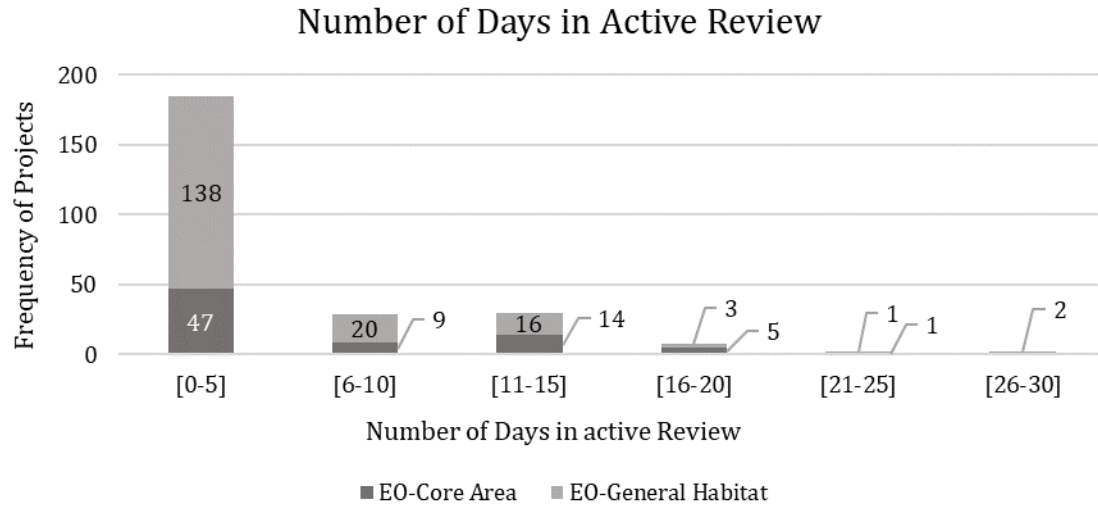
**Figure 3.** Of the 283 projects reviewed by the Program in 2022, 200 projects were located in General Habitat and 83 projects were located in a Core Area.

### Review Process Timeline

The Program tracks the review time for each proposed development project once submitted to the Program for review. For purposes of this report, the Active Review Time for a given proposed project is comprised 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* (Figure 4). Some proposed projects enter the *Returned* or *Information Request* stages, allowing Proponents to submit additional information about their proposed project deemed necessary for the Program to complete the review. The Program tracks the time spent in the *Returned* and *Information Request* stages separately from the Active Review Time.

Of the 283 total projects reviewed by the Program in 2022, 256 projects reached the *Completed Review* or *Concluded* stage by December 31, 2022.





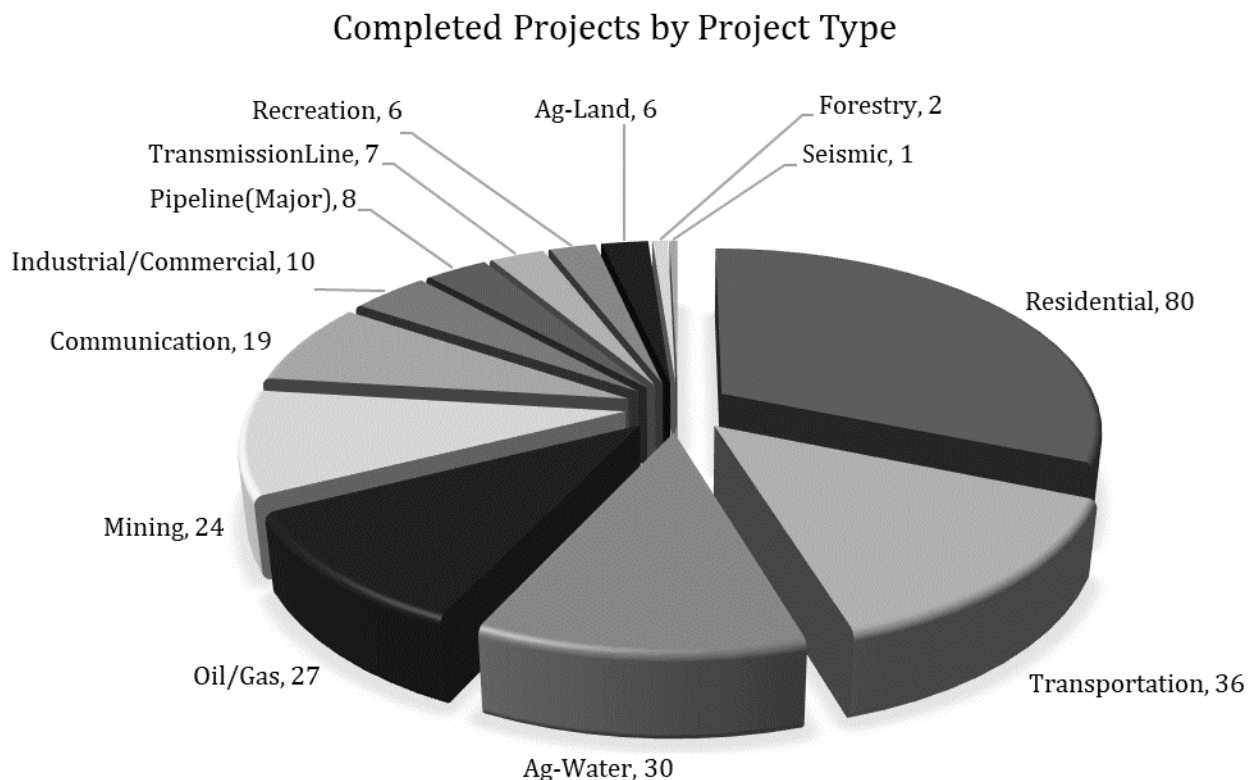
**Figure 4.** The number of projects that reached Completed Review or Concluded that either were submitted to the Program for review in 2022 (n= 268) or for which review carried over from previous years (n=15) in all designated sage grouse habitat according to the number of days those projects spent in Active Review status (i.e., *Due Diligence*). The Program completed reviews for a total of 256 projects in 2022.

### **Specific Metrics: Development Projects Reviewed in 2022**

This section presents a more detailed consideration of projects for which reviews were completed in 2022. The following discussion focuses on specific categories of Project Types as submitted by proponents through the web application for Program review. All the projects reported in this section attained *Completed Review* or *Concluded* status and received written documentation from the Program by the end of 2022. It also includes projects that were originally submitted for review in previous years and carried forward into 2022.

#### Project Information by Project Type

The Project Types explicitly discussed in this section represent some of the most common Project Types for which the Program conducts sage grouse consultation reviews. These Project Types include 36 Transportation projects, 30 Agriculture – Water projects, 27 Oil/Gas projects, and 24 Mining projects. Additionally, 80 Residential projects were also submitted for review (Figure 5).



**Figure 5.** The number of all projects by Project Type for which the Program completed reviews in 2022 (n=256).

#### *Infrastructure – Transportation Projects*

During 2022, the Program completed reviews for 36 proposed Infrastructure – Transportation Projects. Approximately 58% of the proposed Transportation Projects were located in General Habitat (n = 21 projects) and 42% were located in a Core Area (n = 15 projects).

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

#### *Agriculture – Water Projects*

During 2022, the Program completed reviews for 30 proposed Agriculture – Water Projects. Fifty percent of the proposed Agriculture – Water Projects were located in General Habitat (n = 15 projects) and 50% were located in a Core Area (n = 15 projects).

Agriculture – Water Projects may encompass a variety of proposed infrastructure and/or activities necessary for project implementation. Some common infrastructure (i.e., Disturbance Types) associated with Agriculture – Water Projects may include Irrigation, Stock Ponds, Stock Tanks, Pipelines, Water Diversions, Water Wells, Power Lines, and Buildings (Table 1). Most of the

proposed Agriculture – Water Projects included Pipelines (e.g., water pipelines), Irrigation, and Stock Tanks.

### *Oil/Gas Projects*

During 2022, the Program completed reviews for 27 proposed Oil/Gas Projects. Approximately 63% of proposed Communication Projects were located in General Habitat (n=17) and approximately 37% were located in a Core Area (n=10).

Oil/Gas Projects may encompass a variety of proposed infrastructure necessary for project implementation. Associated infrastructure may include Well Pads, Wells, Access Roads, and Power Lines (Table 1).

### *Mining Projects*

During 2022, the Program completed reviews for 24 proposed Mining Projects. Approximately 83% of the proposed Mining Projects were located in General Habitat (n = 20 projects) and approximately 17% were located a Core Area (n = 4 projects). Therefore, of the Mining Projects proposed in sage grouse habitat, most were located in General Habitat, thereby avoiding some of the highest quality sage grouse habitat in Core Areas.

Mining Projects may encompass a variety of proposed infrastructure necessary for project implementation. Associated infrastructure 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 (Table 1). The majority of the proposed Mining Projects included Core Holes, Access Roads, Trenches, and Gravel Pits.

## **Development Project Impacts in Sage Grouse Habitats**

### Introduction and Context

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

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

In addition to Attachment F and MSGOT-approved exceptions, there are two additional circumstances where the resulting impact due to the implementation of a development project does not require mitigation, for one of two reasons. First, there are instances where a developer has sited a development project in a location where the HQT mathematical calculation result is 0.0.

This means that the HQT indicates that no functional acres would be lost due to the project, no debits accrue, and there is no mitigation obligation.

Second, there are instances where a development project may produce an HQT result greater than zero, but the landscape surrounding the proposed development activity, the project's location, or other facts on the ground indicate that there would be little to no effect on sage grouse habitat or local populations. In these instances, the Program undertakes a more thorough review after the initial HQT result is obtained. Program staff consider the project location and closely examine and consult additional sources of aerial imagery, other GIS data sources, and may solicit local professional opinions. This more detailed analysis is called a desktop analysis. This would be undertaken for development projects proposed in areas that are *already* highly fragmented and disturbed to the extent that they generally have little to no habitat value for sage grouse.

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

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

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

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

### Functional Acres Lost

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

## 2022 Development Project Statistics

### Functional Acres Lost from Development Activities

#### *Data Preparation*

Of the 283 projects the Program reviewed in 2022, 256 projects reached *Completed Review* or *Concluded* status by December 31, 2022. Of these 256 projects, an HQT calculation was performed for 66 projects. An HQT calculation was not conducted on the remaining 190 projects (i.e., projects were exempt per EO 12-2015, residential homes, or projects did not require any additional surface disturbance or change in activity).

The data in this section includes all projects for which an HQT calculation was performed in 2022 (n=66) to estimate the total number of functional acres lost. A mitigation obligation may or may not have been incurred. This is because the project: (1) had an HQT mathematical result of zero functional acres lost (i.e., zero debits; n=5) or (2) a desktop analysis was conducted (n=9) and no mitigation was assessed to the developer.

This section includes seven projects that entered *Due Diligence* in 2021 and reached *Completed Review* or *Concluded* in 2022. The remaining 59 projects entered *Due Diligence* and reached *Completed Review* or *Concluded* in 2022.

#### *Results: Sum of Functional Acres Lost*

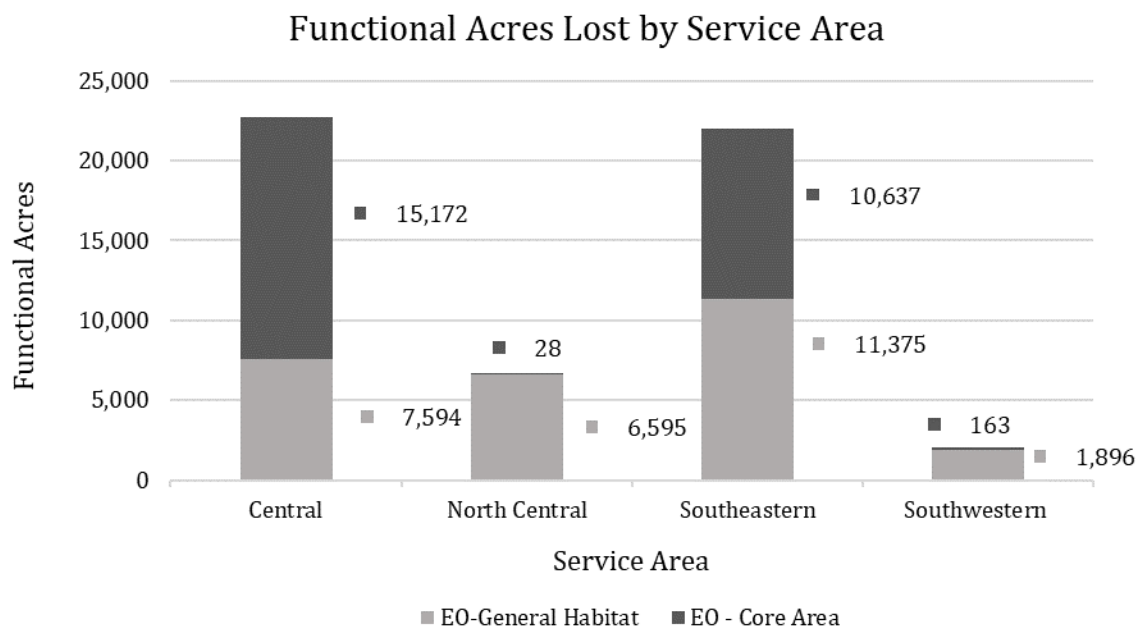
In 2022, the Program completed reviews for 256 proposed development projects. Of those 256 projects, the Program performed HQT calculations for 66 projects (26%). Of the 66 projects for which an HQT was calculated, only 52 projects incurred a final mitigation obligation (79%). The remaining development projects did not trigger a mitigation requirement (n=14; 21%).

Of the 66 projects for which an HQT was calculated, five projects had a mathematical result of zero (8%). This means that the project was located within the boundaries of existing disturbance and no new functional acres would be lost if the project were implemented. A total of nine projects were subjected to detailed desktop analysis. For these nine projects (14%), no mitigation was required.

In 2022, a total of 53,460 functional acres were lost due to the implementation of development projects across all Service Areas (n=66 projects). This number accounts for all development projects for which an HQT calculation was performed and that reached *Completed Review* or *Concluded* status by December 31, 2022 (n = 66 projects).

Of the 53,460 functional acres lost, 26,000 were attributed to projects located in a Core Area (49%) and 27,460 were attributed to projects located in General Habitat (51%). No functional acres were lost due to the implementation of projects in the Connectivity Area.

The greatest loss of functional acres in 2022 occurred in the Central Service Area, totaling 22,766 (43%; Figure 6). The remaining functional acres lost in 2022 were attributed to approximately 41% in the Southeastern Service Area (22,012), 12% in the North Central Service Area (6,623), and 4% in the Southwestern Service Area (2,059).



**Figure 6.** Number of functional acres lost by Service Area and EO habitat designation across all development projects for which an HQT calculation was performed and reached *Completed Review* or *Concluded* status by December 31, 2022 (n=66).

#### Policy Multipliers and Site-Specific Multipliers

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

The total mitigation obligation is determined after applying the following multipliers, as applicable, to each individual development project:

Reserve Account of 20% is applied to the Raw HQT Score for risk and replacement. The Reserve Account is a shared pool of credits to replace credits lost or impaired through unforeseen events such as wildfire (i.e., unavoidable loss or force majeure or “Acts of God”). Because this risk is shared among all participants in the Mitigation System, it is applied to all development projects.

Advanced Payment of 10% is applied to the Raw HQT Score for projects where the proponent opts to meet their mitigation obligation through a contribution to the Stewardship Account. It is *not* applied to projects mitigated through permittee responsible mitigation.

Federal Net Gain of 10% is applied when the project involves a federal nexus. Calculations are based on only the portion of the project’s Raw HQT Score having a federal nexus.

Site-Specific Impacts are addressed through a multiplier of 10% for a Core Area or 5% for General Habitat and Connectivity Area for each aspect of a proposed project that is not consistent with the

EO 12-2015 stipulations during the construction or operations phases of a project. These site-specific multipliers include Density Disturbance Calculation Tool (DDCT), No Surface Occupancy Areas (NSO's), Seasonal Use, Vegetation Removal, and Noise.

The applicability of site-specific multipliers varies widely from project to project and are always discussed with developers prior to the Program finalizing its review. In some cases, developers voluntarily modify various aspects of their projects (e.g., how and when their projects are implemented) to improve consistency with the EO 12-2015 stipulations and avoid application of site-specific multipliers, thus decreasing their total mitigation obligation. Because multipliers are calculated as a percentage of the Raw HQT Score for the applicable phase of a development project, multipliers also scale proportionately to the same project factors and details that influence the Raw HQT Score. Factors include project type, project location, project duration, underlying habitat quality, timing of implementation, etc. The unit of measurement for multipliers is “debits”, defined as the unit of trade representing the loss of resource functions or value at an impact or project site.<sup>3</sup>

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

The following results are based on the 66 development projects for which an HQT calculation was performed, and the Program completed the review between January 1, 2022, and December 31, 2022. This includes projects for which the mitigation obligation was revised to zero after a more thorough desktop analysis.

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

#### *Results: Debits Associated with Policy and Site-Specific Multipliers*

On a statewide basis across all Service Areas, a total of 20,372 debits were attributed to the combination of policy and site-specific multipliers applied across all 66 projects (Table 2). A total of 10,694 debits were attributed to the Reserve Account multiplier (Figure 7) and a total of 3,113 debits were attributed to the Advanced Payment multiplier.

Statewide, approximately 1% of the total multiplier debits were attributed to the BLM requirement for Net Conservation Gain multiplier (i.e., Federal Net Gain; 268 debits).

Of the site-specific multipliers, the Seasonal Use multiplier was the most common deviation of any stipulation in EO 12-2015. Among all 66 projects in this subset of data, 92% of the total site-specific multiplier debits (6,030 of 6,565 attributed to site-specific multipliers) were accrued as a result of project activities being implemented or constructed and operational on the landscape between March 15 – July 15 (i.e., the breeding, nesting and early brood-rearing period for sage grouse) within specified distances of active sage grouse leks.

---

<sup>3</sup> MCA § 87-5-903 (5) (2022).

**Table 2.** The number of debits attributed to each of the above policy and site-specific multipliers for projects which reached *Completed Review* or *Concluded* status between January 1 to December 31, 2022.

Multiplier	Debits Accrued				
	Service Area				Statewide
	Central	North Central	Southeastern	Southwestern	
Reserve Account	4,553	1,325	4,404	412	10,694
Advanced Payment	2,237	662	30	184	3,113
Federal Net Conservation Gain	91	128	46	3	268
DDCT	88	0	13	0	101
NSO	0	0	0	0	0
Seasonal Use	3,109	16	2,905	0	6,030
Vegetation Removal	132	0	34	0	166
Noise	0	0	0	0	0
Oil/Gas 1:640	0	0	0	0	0
<b>Total Multipliers by Service Area</b>	<b>10,210</b>	<b>2,131</b>	<b>7,432</b>	<b>599</b>	<b>20,372</b>

### Total Debits

#### *Data Preparation Methods for Total Debits*

The following results are based on 66 development projects for which an HQT calculation was performed, and the Program completed the review between January 1, 2022, and December 31, 2022.

The total debits summary reported below includes debits attributed to projects that had a desktop analysis. However, these debits did not result in mitigation incurred by the proponent for those projects. The Program assumes the project was still implemented and some disturbance occurred.

The total debits summary does not include debits attributed to either the Reserve Account or Advanced Payment multipliers. These are policy multipliers that determine the amount of funds set aside in an insurance pool and the amount of funds set aside as an administrative fee. These debits do not represent realized impacts to the habitat.

Total debits were summed and reported by Service Area and designated habitat category. Total debits were also analyzed and reported according to the major Project Types listed in Table 1. Note that each project may include one or more of a variety of individual Disturbance Types.

#### *Results: Total Debits*

In 2022, there were a total of 60,025 debits created by development projects for which mitigation was applicable and that reached either *Completed Review* or *Concluded* status by December 31, 2022 (n=66 projects). The total number of debits reflects the total number of functional acres lost plus all debits accrued through applicable multipliers<sup>4</sup>.

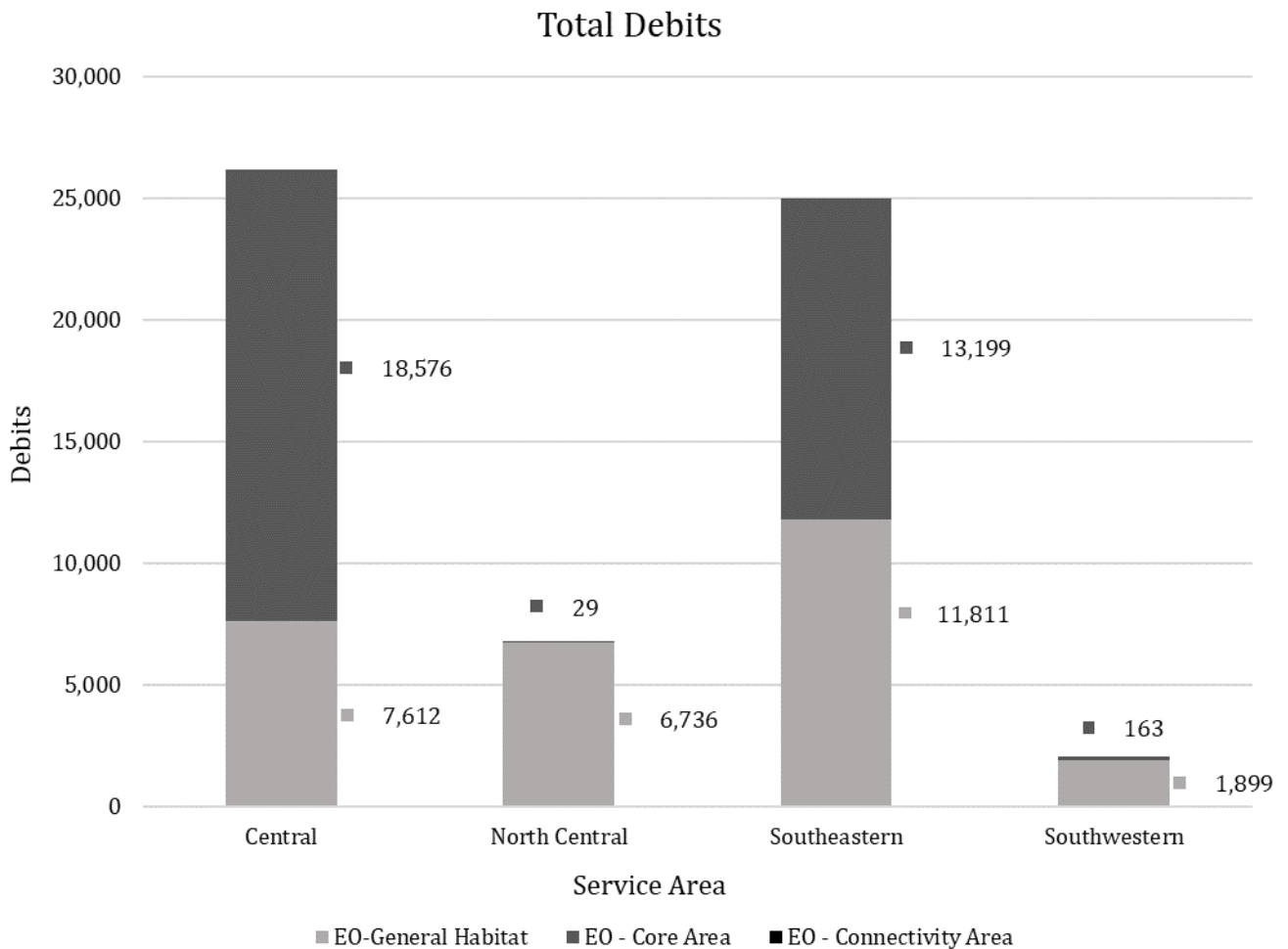
<sup>4</sup> Does not include debits attributed to either the Reserve Account or Advanced Payment multipliers.



The total number of debits attributed to projects within each Service Area was highly variable. The number of debits accrued in each Service Area in relation to the number of projects located in each Service Area is not a linear relationship. Rather, the number of debits generally corresponds with spatial extent and complexity of the development projects and the underlying habitat quality at the project's location. More total debits would be expected in Service Areas having projects with larger total impacts to sage grouse habitat and at locations where the underlying habitat quality is higher.

A total of 26,188 debits were attributed to projects located in the Central Service Area (44%; n=27 projects). The remaining 33,837 debits were attributed to Projects in the three remaining Service Areas: 25,010 debits in Southeastern (n=16), 6,765 debits in North Central (n=18), and 2,062 debits in Southwestern (n=5) Service Areas. See Figure 8.

Of the 60,025 total debits, 31,967 debits were attributed to projects located in a Core Area (53%) and 28,058 debits were attributed to projects located in General Habitat (47%). See Figure 8.



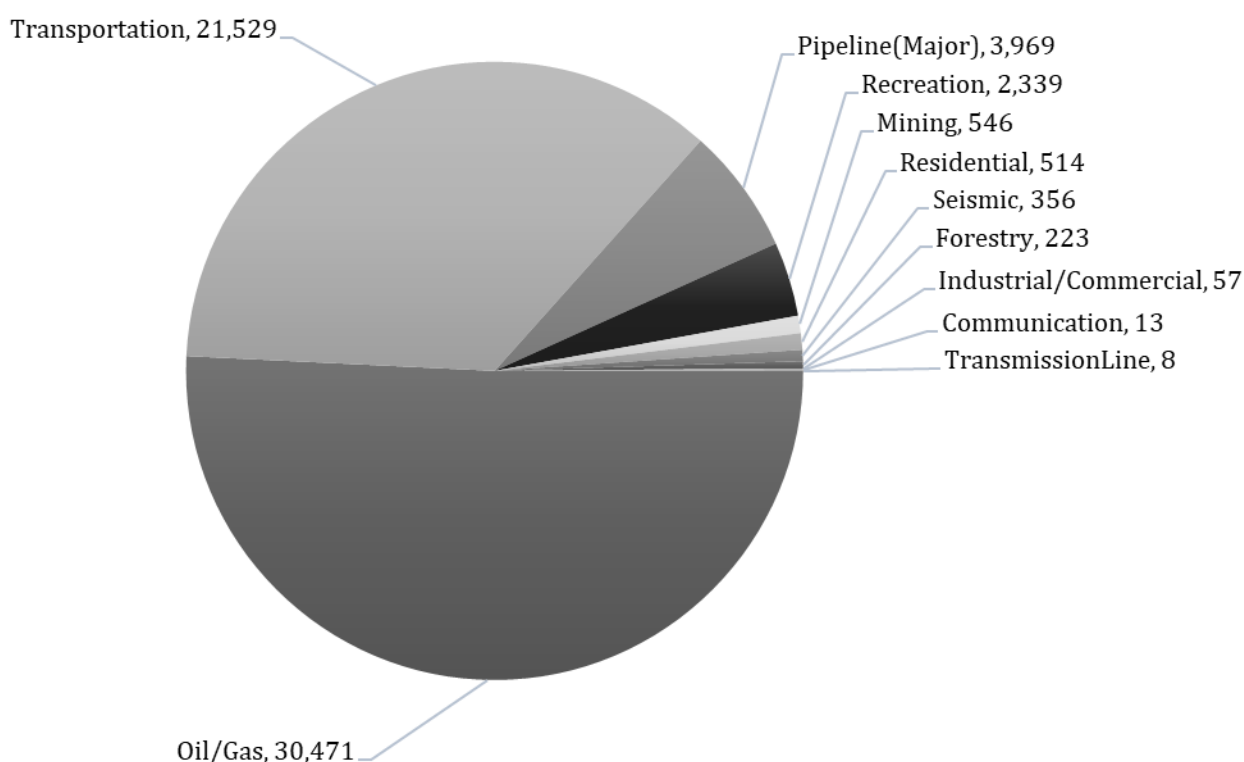
**Figure 7.** Total number of debits created by Service Area and EO habitat designation for projects for which an HQT was calculated (n=66) with either a *Completed Review* or *Concluded* status by

December 31, 2022. Totals reflect the functional acres lost due to the project for its entire duration, along with any applicable multipliers<sup>5</sup>.

*Results: Total Debits Created by Development Project Type*

Major Project Types are listed in Table 1. The following summary includes the total debits accrued across all Project Types in 2022. Of the total 60,025 debits accrued in 2022, Oil/Gas projects were the main contributors of the total debits created (30,471 debits; 51%). Infrastructure – Transportation projects attributed approximately 36% (21,529 debits). The remaining 8,025 debits were attributed to a variety of other Project Types, as seen below in Figure 9.

### Debits Created by Project Type



**Figure 8.** Debits created by Project Type for projects that were assessed mitigation with *Completed Review* or *Concluded* status from January 1 to December 31, 2022.

Within each individual Project Type, the number of total debits accrued can be highly variable from project to project. This is due to several major factors, including: (1) project location - where the project and all of the individual disturbances are sited (i.e., highly functional, generally pristine habitat vs. low functioning, disturbed habitat); (2) the number of individual new disturbances necessary to implement the project (i.e., using existing roads vs. building new roads); (3) project size (i.e., larger direct footprint vs. smaller direct footprint); (4) project duration; (5) project structure (i.e., whether disturbances are above or below ground); and (6) when and how the project is implemented and consistency with EO 12-2015 provisions.

<sup>5</sup> This data does not include debits attributed to either the Reserve Account or Advanced Payment multipliers.

For each Project Type, the total debits summed for all projects within that category is shown in Table 3. The average total debits per project are also shown.

**Table 3.** Total debits categorized by major Project Type and the median and average number of debits per project for that Project Type, respectively.

<b>Project Types</b>	<b>Total Debits</b>	<b>Median</b>	<b>Average Debits</b>
Communications (n=2)	13	7	7
Forestry (n=2)	223	112	112
Industrial/Commercial (n=3)	57	2	19
Mining (n=16)	546	11	34
Oil/Gas (n=20)	30,471	170	1,524
Pipeline (n=6)	3,969	288	662
Recreation (n=5)	2,339	26	468
Subdivision (n=2)	514	257	257
Seismic (n=1)	356	356	356
Transmission Line (n=1)	8	8	8
Transportation (n=8)	21,529	115	2,691

## **MITIGATION: BALANCING CONSERVATION AND DEVELOPMENT**

### **Key Elements in Montana's Mitigation System**

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

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

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

Full details about the elements are available in the MSGOT-approved Habitat Quantification Tool Technical Manual and the Policy Guidance documents (<https://sagegrouse.mt.gov/Team>). Data specific to the following key elements are presented for calendar year 2022, below.

## **SUMMARY OF 2022 CONSULTATION ACTIVITIES FOR CONSERVATION PROJECTS**

### **Mitigation Options Selected by Developers in 2022**

At this time, a developer has two mitigation mechanisms or options available to offset the impacts of their projects (see Key Elements in Montana's Mitigation System section above). A developer can choose either option or a combination of the two options. The following section summarizes how developers decided to offset impacts (total debits) in 2022.

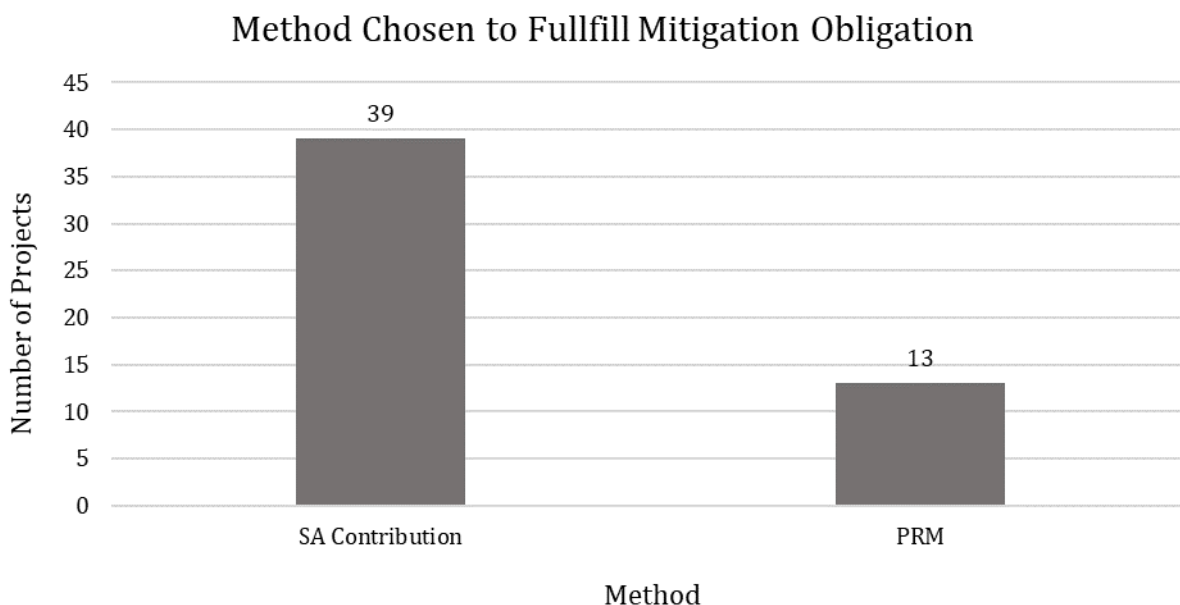
#### *Data Preparation Methods for Mitigation Options*

The following results are based on 66 development projects for which an HQT calculation was performed, and the Program completed the review between January 1, 2022, and December 31, 2022.

#### *Results: Mitigation Option Selected*

Of the 66 projects with an HQT, 52 projects resulted in mitigation where developers are given complete discretion to choose how to offset their impacts. In 2022, there were 39 projects for which developers elected to offset the impacts of their project and fulfill the mitigation obligation by contributing to the Stewardship Account (75%). See Figure 10 below.

Alternatively, a permittee-responsible mechanism (hereafter, PRM) was selected for 13 development projects (25%). These 13 projects are attributed to multiple proponents utilizing PRM credit projects to offset their own subsequent development projects. In other words, these proponents created their own PRM pool of credits for their own use to offset their subsequent development projects. See Figure 10. Permittee-responsible mitigation is tracked as credit, separately from mitigation paid through the Stewardship Account.



**Figure 9.** The mitigation method chosen by proponents for 52 projects that reached *Completed Review* or *Concluded* in 2022 and resulted in a mitigation obligation.

### **Stewardship Account Contributions in Calendar Year 2022**

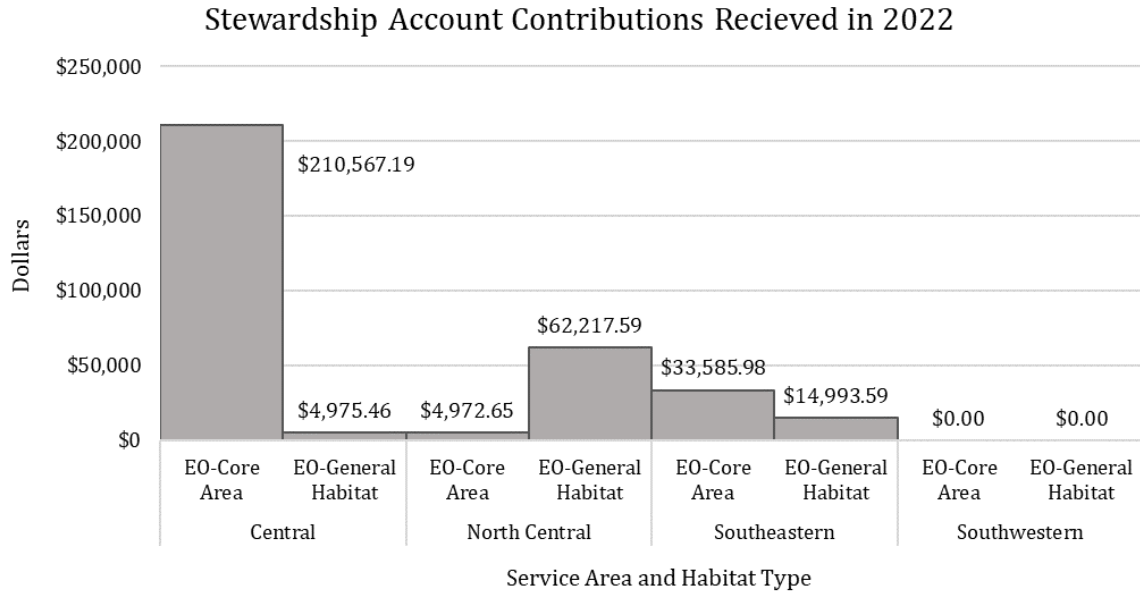
#### Stewardship Account Contributions

Of the total \$6,394,953.13 received through mitigation contributions to date, \$331,312.46 were deposited into the Stewardship Account during the 2022 reporting period.

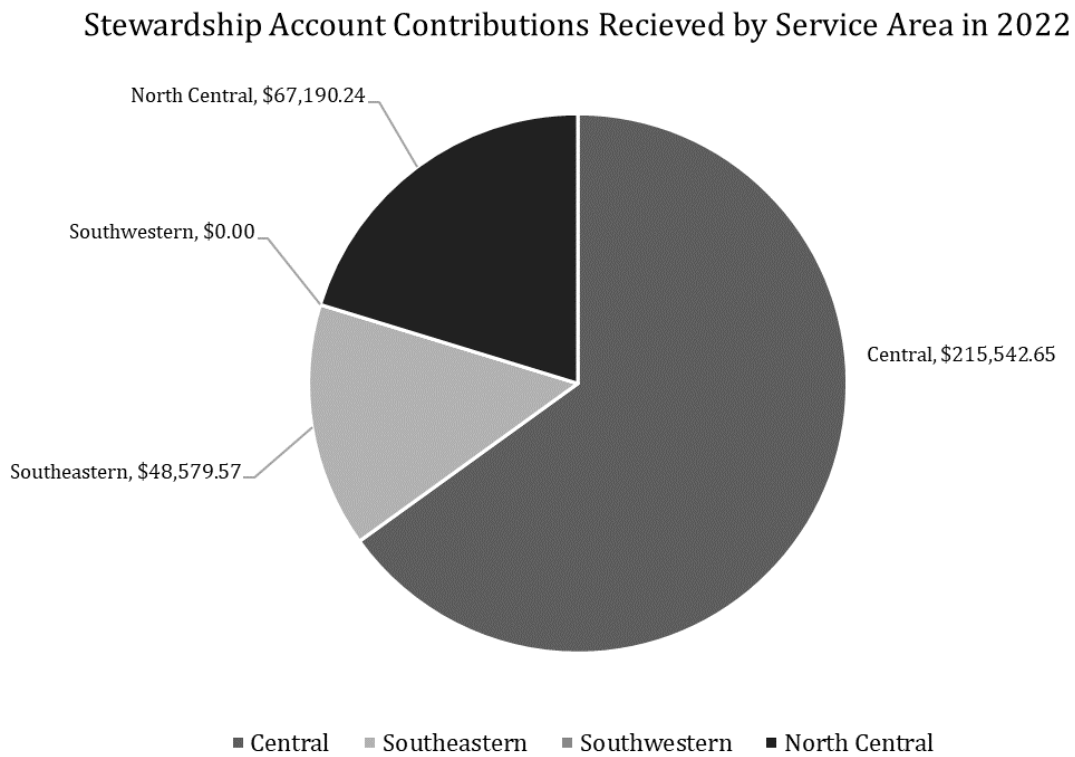
In total, the Program received Stewardship Account contributions for 31 projects in 2022. These contribution payments were for projects initiated between 2019 and 2022 (2019: 1 project; 2020: 1 project; 2021: 6 projects; 2022: 23 projects).

Of the 2022 Stewardship Account deposits, 65% were attributed to projects located in the Central Service Area (\$215,542.65), approximately 20% of the total payments were for projects located within the North Central Service Area (\$67,190.24), and approximately 15% of the total payments were for projects located within the Southeastern Service Area (\$48,579.57). No deposits were made for projects located in the Southwestern Service Area. See Figures 15 and 16.

Across all Service Areas, approximately 75% of contributions were for projects located in a designated Core Area (\$249,125.82). Approximately 25% of payments were for projects located in designated General Habitat (\$82,186.64).



**Figure 10.** Contributions made to the Stewardship Account between January 1, 2022, and December 31, 2022, according to Service Area and habitat designation.



**Figure 11.** Contributions made to the Stewardship Account between January 1, 2022, and December 31, 2022, according to Service Area and habitat category.

The amount of any single Stewardship Account contribution in the 2022 reporting period varies widely. As with the total debits attributed to major Project Types (Table 1), the contribution amount can vary widely within a Project Type category. This can be explained by the same factors influencing the total debits calculated for a development project, including that the number of individual disturbances and types included for each individual project varies (even for the same Project Type), project size, project duration, project location, and the underlying habitat quality. For example, the major Project Type “Communications” includes individual disturbances ranging from cell towers to overhead transmission lines, to buried fiber optic lines and new roads. Some Communications projects include all four of those Disturbance Types, whereas other Communications projects may only entail buried fiber optic lines. Thus, the amount of each Stewardship Contribution varies considerably. See Table 4.

Across all Project Type categories and habitat designations, individual contributions for a single project ranged from a minimum of \$17.67 to a maximum of \$115,545.03 (Table 4). The average contribution was \$10,687.50.

**Table 4.** Median and average Stewardship Account contributions deposited between January 1, 2022, and December 31, 2022, by Project Type (n = 31 projects).

<b>Project Type</b>	<b>Number of Projects</b>	<b>Median Contribution</b>	<b>Average Contributions</b>
Communication	3	\$108.95	\$1,562.05
Industrial/Commercial	1	\$3,998.59	\$3,998.59
Mining	7	\$81.85	\$290.23
Oil/Gas	10	\$552.09	\$1,162.87
Pipeline (Major)	3	\$6,480.19	\$7,248.04
Residential	1	\$783.74	\$783.74
Transmission Line	1	\$32,878.52	\$32,878.52
Transportation	5	\$47,677.16	\$50,712.21
<b>Grand Total</b>	<b>31</b>	<b>\$504.52</b>	<b>\$10,687.50</b>

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

#### Introduction

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

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

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

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

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

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

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

A positive multiplier is applied to the number of functional acre credits newly-produced at a given restoration or enhancement credit site because they increase functional acres above baseline. A positive 10% multiplier is applied for newly produced functional acre credits in a Core Area and a positive 5% multiplier is applied for newly produced functional acre credits in General Habitat.

### **Functional Acres Gained: Stewardship Account Grants, and PRM in 2022**

#### *Data Preparation Methods*

The HQT is also applied to conservation projects. The initial HQT results are referred to as functional acres gained. After applying credit policy modifiers, functional acres are converted to credits (Table 6). The sections below report data for both the functional acres gained and the total number of available and anticipated credits. Functional acres gained are reported *before* the baseline adjustment and represent the number of functional acres gained due to the implementation of credit projects. Credits are reported *after* applying the baseline adjustment to



preservation credits and applying any additional multipliers for newly created credits through restoration or enhancement projects.

Stewardship Account grant projects that had all the necessary paperwork filed with their respective county and “closed” between January 1, 2022, and December 31, 2022, are included (n=3: Alexander Ranch, Jackson Ranch, Roen Ranch). Additionally, one PRM project was completed between January 1, 2022, and December 31, 2022.

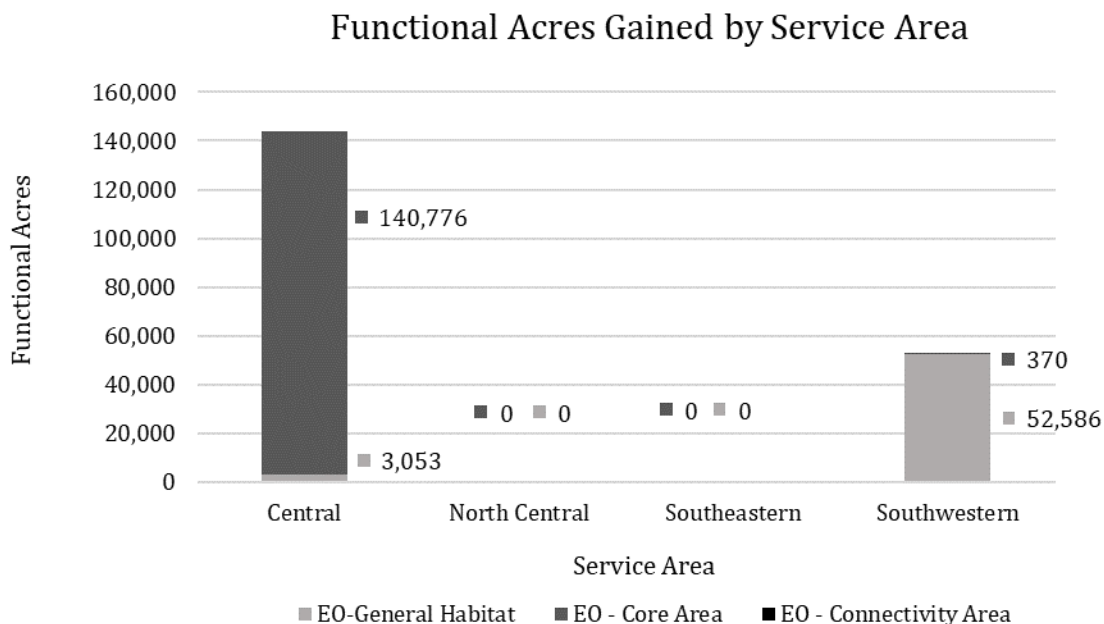
In 2022, there were a total of 196,784 functional acres gained due to the implementation and closing of credit projects across all Service Areas. This number accounts for conservation projects funded through Stewardship Account Grants (n=3) and permittee responsible conservation projects implemented by proponents (n=1). Each of the four projects included in this section have either closed (grants) or reached *Completed Review* or *Concluded* status (PRM).

The greatest gain of functional acres was seen in the Central Service Area, totaling 143,828 functional acres gained (73%; Figure 13). The remaining 27% of the total functional acres gained were located in the Southwestern Service Area (52,956 functional acres gained). The Southeastern Service Area and North Central Service Area had no functional acres gained in 2022. See Figure 13.

Of the 196,784 functional acres gained statewide, 72% were attributed to projects located in a Core Area (141,146) and 28% were attributed to projects located in General Habitat (55,639).

**Table 5.** The number of functional acres gained due to the implementation of conservation projects that closed or reached *Completed Review* or *Concluded* between January 1, 2022, and December 31, 2022, across all Service Areas. Functional acres gained reported in this table are before baseline has been applied (closed Stewardship Account grants).

Source	Functional Acres Gained				
	Service Area				Statewide
	Central	North Central	Southeastern	Southwestern	
Stewardship Account Grants + PRM Projects	143,828	0	0	52,956	196,784



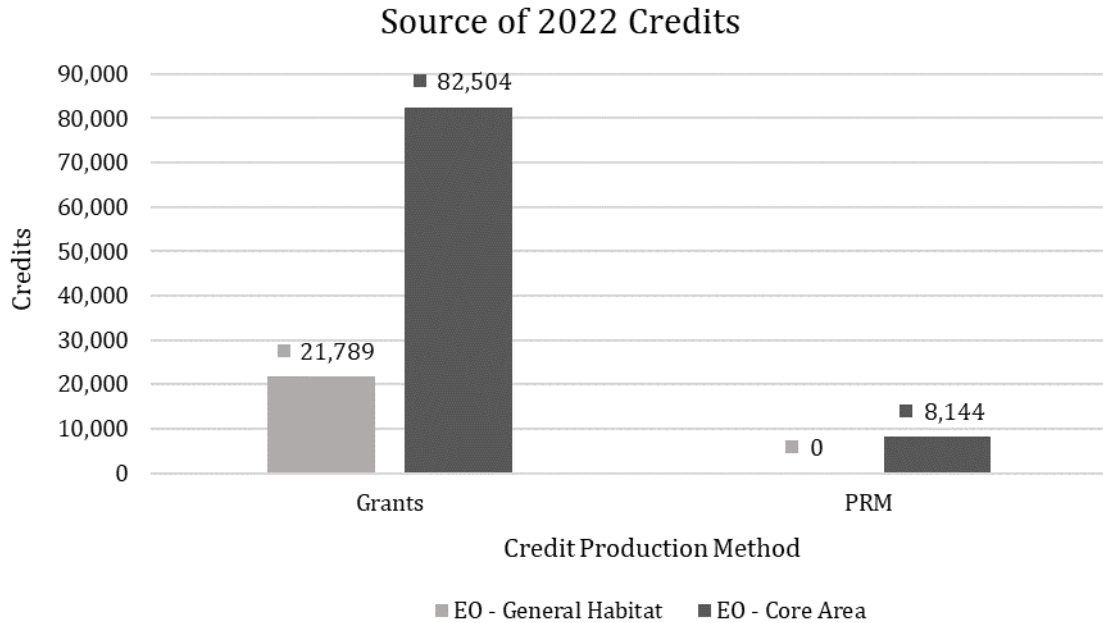
**Figure 12.** Number of functional acres gained by Service Area and EO 12-2015 habitat designation for conservation projects that closed or reached *Completed Review* between January 1, 2022, and December 31, 2022 (n=4).

#### Credits Created by Completed Projects: Stewardship Account Grants and PRM Projects

The number of credits for a conservation project is determined *after* applying the baseline adjustment to preservation functional acres gained and applying any additional multipliers. The following summarizes the total number of credits created by conservation projects completed or closed between January 1, 2022, and December 31, 2022, for Stewardship Account grants and PRM projects, respectively. See Table 7 and Figure 14.

**Table 6.** Number of credits created by conservation projects by Service Area and statewide through the application of applicable policy modifiers to the functional acres gained (e.g., baseline adjustment for preservation projects, newly created functional acre modifier for reservation or enhancement projects). Includes credits generated from both Stewardship Account grant projects closed and PRM projects Completed between January 1, 2022, and December 31, 2022

Source or Entity	Credits				
	Service Area				Statewide
	Central	North Central	Southeastern	Southwestern	
Stewardship Account Grants + PRM Projects	91,255	0	0	21,182	112,437

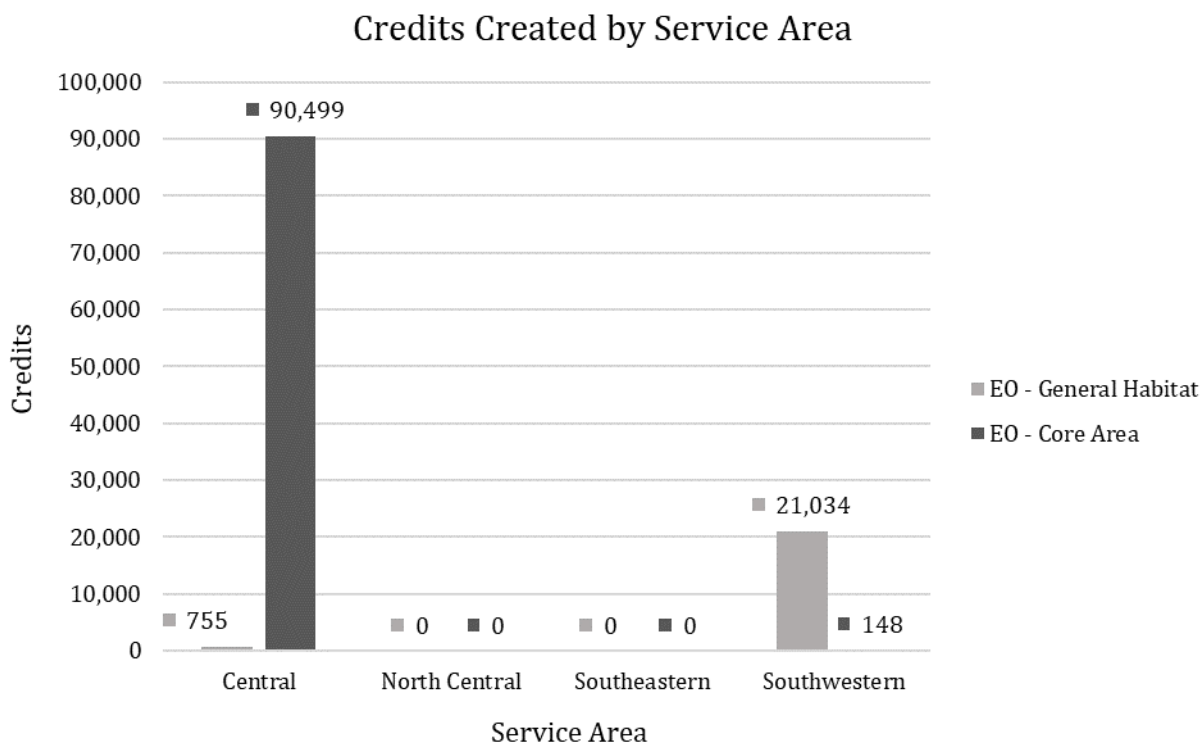


**Figure 13.** Number of credits created by three MSGOT Stewardship Account grant projects that closed and one PRM project that reached *Completed Review* between January 1, 2022, and December 31, 2022.

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

Between January 1, 2022, and December 31, 2022, a total of four credit projects were completed (3 Stewardship Account Grants; 1 PRM project). This resulted in the creation of a total of 112,437 credits. Of the four credit projects, two were implemented in the Southwestern Service Area and two were implemented in the Central Service Area. There were no credit projects implemented in the North Central or Southeastern Service Areas in 2022. See Figure 15.

The majority of available credits have been produced by projects located in Core Areas (81%). Of the total available credits, 19% can be attributed to projects located in designated General Habitat.



**Figure 14.** Total number of credits created by Service Area and by EO 12-2015 habitat designation, all entities/sources combined, for projects that closed or were completed between January 1, 2022, and December 31, 2022.

### **SUMMARY OF STEWARDSHIP ACCOUNT CONTRIBUTIONS FOR ALL YEARS**

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

Mitigation obligations, including contributions to the Stewardship Account, should be implemented *after* a developer obtains all necessary permits but *before* the project is implemented and construction starts. This protocol affords developers the flexibility to decide when to initiate the permitting process, to modify a project during the permitting process, to decide on the exact timeline to implement a project, to delay implementation once permits are obtained, or to cancel the project altogether.

Providing this flexibility to developers to decide when to complete the permitting process and when to make their deposit to the Stewardship Account also creates uncertainty for MSGOT and the Program. Funds only become available to MSGOT and the Program after a contribution is made and recorded, creating an "accounts receivable" delay or an "amount due" inherent in the mitigation system (Figure 16).

### Data Preparation Methods

The Program compiled information about the status and disposition of contributions for all projects for all years where the developer selected the Stewardship Account option. Stewardship Account activity is summarized here. Stewardship Account activity beginning in 2018 was compiled because this was when the first deposit into the Account was received. Account activity or expected donation summaries are limited to projects that reached *Completed Review* or *Concluded* by December 31, 2022 (i.e., the end of the current reporting period).

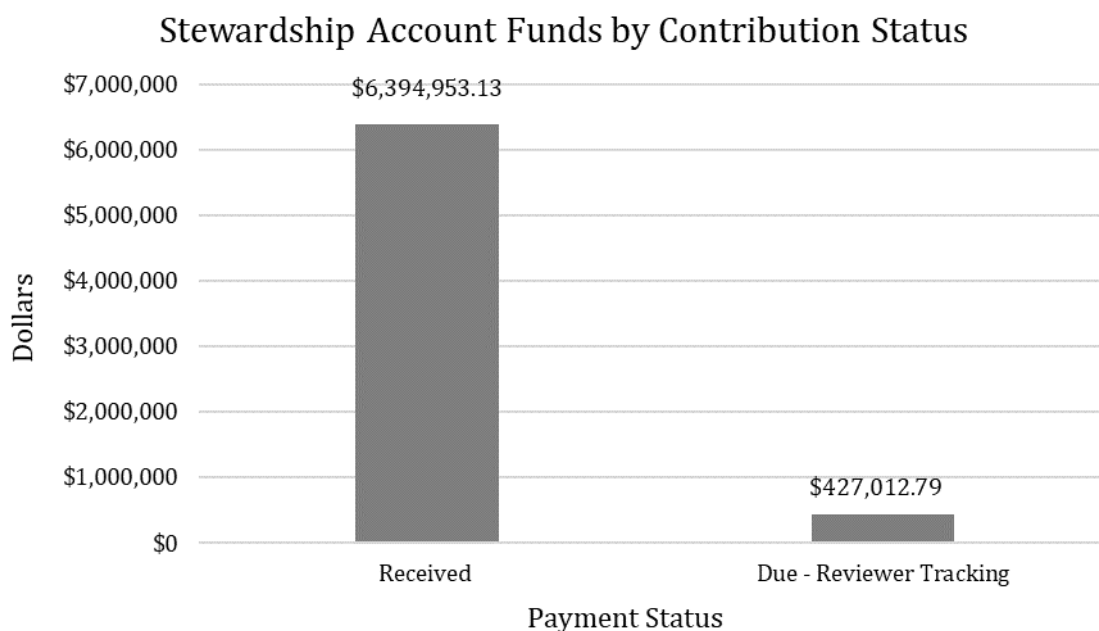
The disposition and status of a project's Stewardship Account contribution is classified as one of the following:

1. Due – Reviewer Tracking: The developer had selected the Stewardship Account at the time the Program completed its review, but the donation had not yet been received by December 31, 2022. The Program's project reviewers are actively tracking the project for eventual receipt of the funds. These funds are "due" to the Stewardship Account and the deposit is expected at some point in the future.
2. Received: Contributions were received and properly credited to the Stewardship Account.

### Results: Stewardship Account Contributions

A total of \$6,394,953.13 have been received into the Stewardship Account since 2018 (i.e., Received status; Figure 16).

A total of \$427,012.79 are categorized as Due – Reviewer Tracking as of December 31, 2022. For these projects, the Program has completed its review, but the project proponent has either not yet obtained all necessary permits, has delayed the permitting process, or has obtained permits but delayed implementation of the project.



**Figure 15.** Stewardship Account funds by contribution status across all projects in *Completed Review* or *Concluded* status from 2018 to December 31, 2022.

## **MSGOT'S STEWARDSHIP ACCOUNT GRANTS TO OFFSET IMPACTS ON BEHALF OF DEVELOPERS**

### **Summary of all Grant Cycles from 2016-2022**

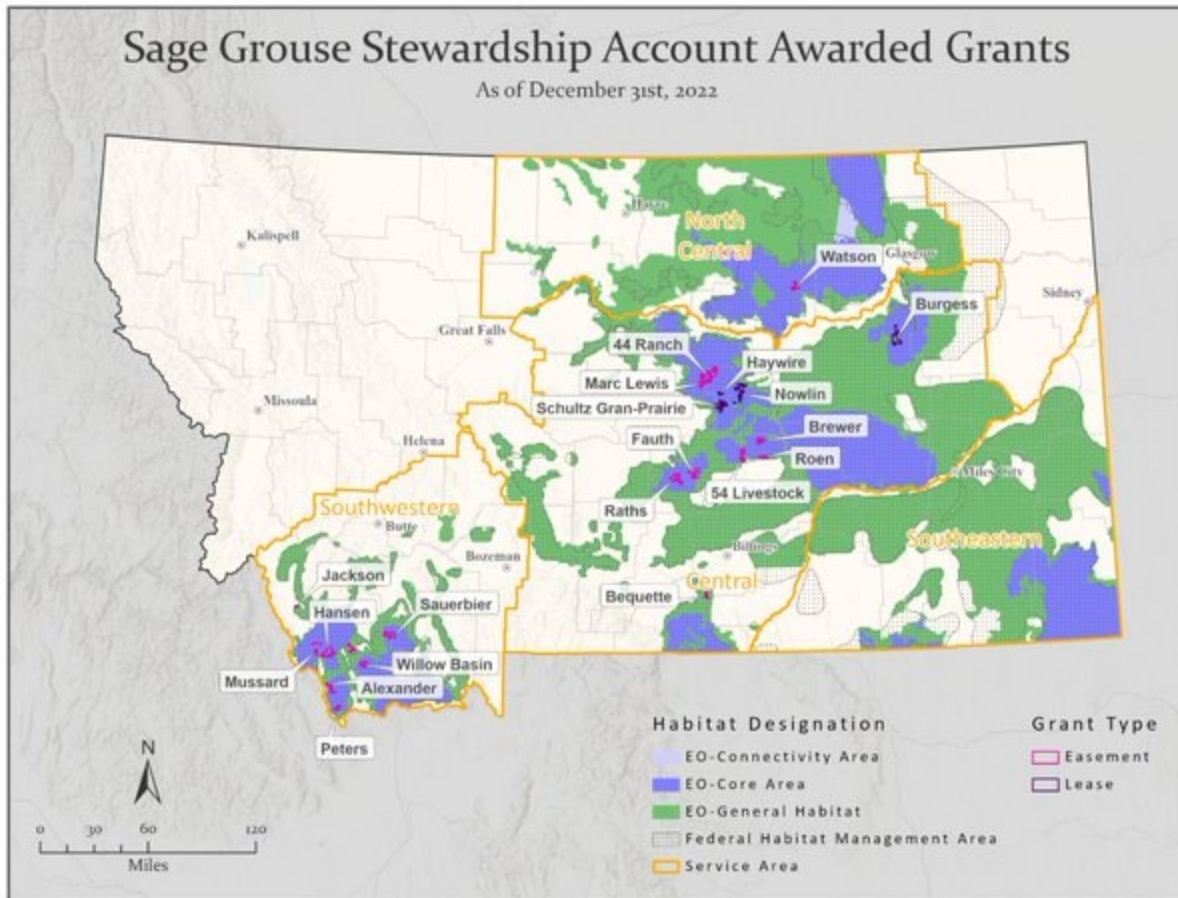
#### Introduction

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

In allowing project developers to provide compensatory mitigation through contributions to the Stewardship Account, project developers transfer the obligation to MSGOT to secure an equivalent number of credits. MSGOT then uses the contribution monies to fund credit-creating projects through a competitive grant process.

#### Overview of Stewardship Account Grants for all Grant Cycles

MSGOT has offered a total of four grant cycles from 2016 to December 31, 2022. The first was in 2016/2017, the second cycle was in 2019, the third in 2020, and the fourth in 2022. Funds awarded were primarily sourced back to the original statutory appropriation of 2015. As of December 31, 2022, a total of \$9,715,815 has been obligated towards Stewardship Account grants.



**Figure 16.** Locations of all Stewardship Account grant proposals that were selected for funding by MSGOT in the first, second, third, and fourth grant cycles and are still active at the end of 2022. Additional details can be found in the MSGOT Meeting Archive, Audio Summary Minutes, Notes and Handouts.

#### Status of Stewardship Account Grant Projects Awarded Funding in All Grant Cycles

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

The Program has initiated four grant cycles and funded (i.e., the grant has closed) a total of 14 perpetual conservation easements and one conservation lease across all four cycles. Conservation leases differ from perpetual conservation easements in that conservation leases are for a fixed number of years only, and the landowner decides the number of years or duration of the lease. At the expiration of the term, the lease expires, and the landowner is free to exercise those rights once again.

The status of all grant projects selected for funding across all four cycles as of December 31, 2022, is shown in Table 5. Of the total 24 projects selected for funding, four projects were withdrawn by the grant applicant, 15 projects have closed, and the remaining five projects are expected to close in 2023.

**Table 7.** Status of all projects selected for grant funding across all three cycles, as of December 31, 2022.

Proposal	Type	County	Habitat Class	Size (acres)	MSGOT Decision/Status
<b>First Cycle – 2016/2017</b>					
44 Ranch	Perpetual Easement	Petroleum, Fergus	100% Core	18,033	Closed November 2016
Raths Livestock	Perpetual Easement	Golden Valley	100% Core	11,230	Closed February 2019
Watson	Perpetual Easement	Phillips	100% Core	2,833	Closed May 2020
Hansen	Perpetual Easement	Beaverhead	98% Core	13,535	Closed October 2018
Weaver	Perpetual Easement	Choteau, Blaine	100% General	9,870	Withdrawn by grant applicant in May 2018 when other funding source secured
Smith	Perpetual Easement	Beaverhead	100% Core	288	Withdrawn by grant applicant in August 2017 when other funding source secured
<b>Second Cycle - 2019</b>					
Willow Basin	Perpetual Easement	Beaverhead	100% Core	3,989	Closed March 2020
Marc Lewis	Perpetual Easement	Fergus, Petroleum	100% Core	3,743	Closed December 2020
Sauerbier Ranch	Perpetual Easement	Beaverhead, Madison	100% Core	7,697	Closed March 2021
King Ranch	30-Year Conservation Lease	Petroleum	100% Core	11,703	Withdrawn by grant applicant May 2020 when another funding source was secured
Schultz-Gran Prairie	25-Year Conservation Lease	Petroleum	100% Core	6,367	Withdrawn by grant applicant May 2020 when another funding source was secured
Burgess Ranch	30-Year Conservation Lease + Restoration	Garfield	80% Core	12,901	Closed April 2020
<b>Third Cycle - 2020</b>					
54 Ranch	Perpetual Easement	Musselshell	60% Core	6,660	Closed April 2021
Alexander Ranch	Perpetual Easement	Beaverhead	99% Core	679	Closed December 2022
Bequette Property	Perpetual Easement	Carbon	100% General	2,524	Closing expected in 2023



Fauth Ranch	Perpetual Easement	Musselshell, Golden Valley	100% Core	8,313	Closed December 2021
Jackson Ranch	Perpetual Easement	Beaverhead	100% General	924	Closed March 2022
Mussard Ranch	Perpetual Easement	Beaverhead	100% Core	2,436	Closed February 2021
Peters Ranch	Perpetual Easement	Beaverhead	100% Core	3,429	Closed December 2021
<b>Fourth Cycle - 2022</b>					
Brewer Ranch	Perpetual Easement	Musselshell	100% Core	5,550	Closing expected in 2023
Haywire Ranch	15-Year Conservation Lease	Petroleum	94% Core	4,519	Closing expected in 2023
Nowlin Ranch	15-Year Conservation Lease	Fergus	100% Core	4,500	Closing expected in 2023
Roen Ranch	Perpetual Easement + Restoration	Musselshell	99% Core	3,639	Closed December 2022
Schultz-Gran Prairie	20-Year Conservation Lease	Petroleum, Fergus	100% Core	8,190	Closing expected in 2023

### **SYNTHESIS OF MITIGATION SYSTEM KEY METRICS FOR ALL YEARS**

As of December 31, 2022, a total of 957,561 debits have been created due to the implementation of development projects throughout all four Service Areas. This number takes into account all projects that required an HQT, associated mitigation, and reached *Completed Review* or *Concluded* status by December 31, 2022 (n = 298). In contrast, as of December 31, 2022, a total of 1,632,846 credits were created by MSGOT through Stewardship Account grants. See Table 9. These figures include only projects for which a contribution to the Stewardship Account was the chosen option to fulfill the mitigation obligation. It does not include projects for which permittee-responsible mitigation utilized to fulfill the mitigation obligation.

Additionally, the balance of debits and credits reported in Table 9 represent a snapshot in time, on December 31, 2022. However, Montana's Mitigation System incorporates time. Debits or credits are calculated for the life of a project, which means not all debits and credits are actively on the landscape simultaneously. For example, a conservation project may be on the landscape for 100 years and create 10 credits per year for a total of 1,000 credits for all time. However, not all 1,000 credits are actively on the landscape in the first year of the project. Disturbance projects may have more fluctuation in their impacts where the majority of impacts occur in the first couple of years while the project is constructed followed by less impacts during the operation and reclamation phases. Therefore, the annual balance of credits and debits fluctuates greatly. Due to this

fluctuation, the balance of credits and debits reported in Table 9 are combined to cover all years for the purposes of this report.

### Stewardship Account Contributions

Since the final administrative rules took effect, all contributions to the Stewardship Account should be allocated towards Stewardship Account grants to offset the impact of the development project for which the contribution was made. A total of \$6,063,640.67 has been contributed to the Stewardship Account from 2018 through December 31, 2022, by developers who decided not to implement their own permittee-responsible mitigation projects and transferred their mitigation obligation to the State.

As of December 31, 2022, Program records show that \$420,731.39 is owed to the Stewardship Account. See Table 8. The \$420,731.39 owed to the Account is attributed to projects which reached *Completed Review* by December 31, 2022, a mitigation obligation exists, and the developer selected the Stewardship Account option to offset impacts of the proposed development project. It is the Program's understanding that these developers have delayed starting the permit application process, started the application process but have not yet obtained all necessary permits, or have obtained all necessary permits but delayed actual implementation.

**Table 8.** The total amount owed to the Stewardship Account attributed to each Project Type through December 31, 2022.

Project Type	Number of Projects	Amount Owed
Communication	4	\$19,578.83
Forestry	1	\$7,378.24
Industrial/Commercial	1	\$167.39
Mining	28	\$96,276.71
Oil/Gas	9	\$187,877.75
Pipeline	1	\$24,279.48
Recreation	2	\$13,979.98
Residential	5	\$13,892.98
Transportation	3	\$56,861.39
Water	2	\$6,720.04
<b>Grand Total</b>	<b>56</b>	<b>\$427,012.79</b>

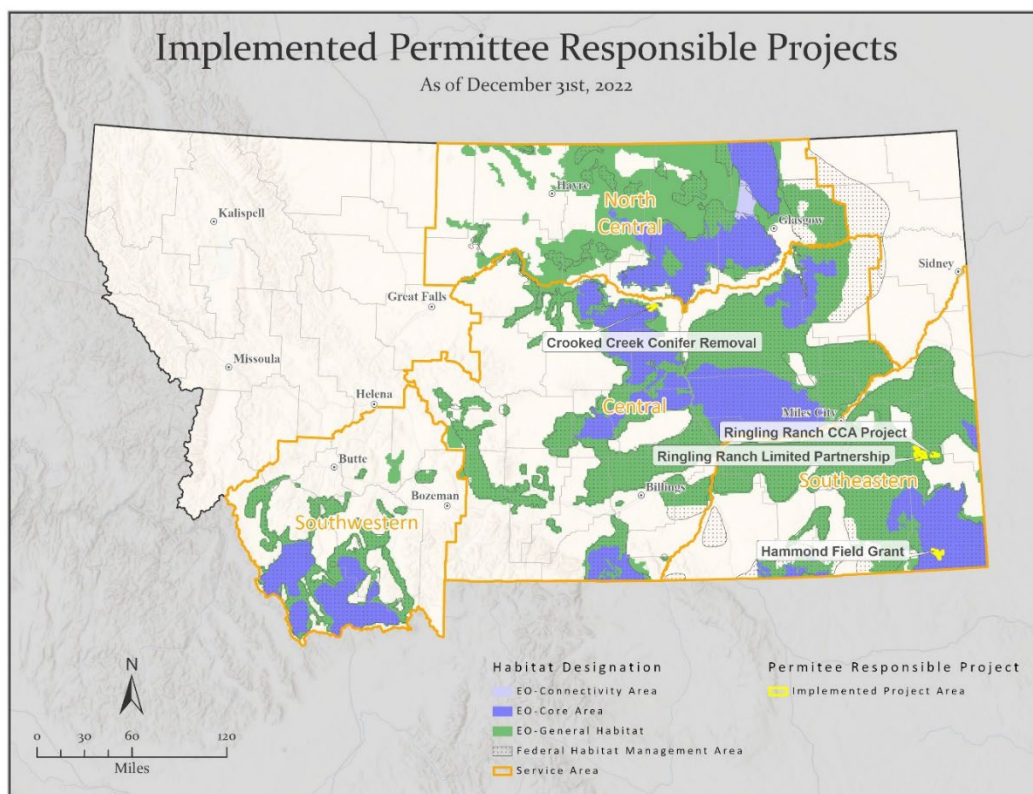
**Table 9.** Overview of the key mitigation metrics by Service Area. The data in this table represent all development projects for which an HQT calculation was completed ( $n=298$ ). These numbers include debit projects that are either in *Completed Review* or *Concluded*. All Stewardship Account grants ( $n=15$ ) that have closed as of December 31, 2022<sup>6</sup> are also included. These numbers do not include debits attributed to projects for which permittee-responsible mitigation was the chosen mitigation method nor does it include credits attributed to permittee-responsible credit projects.

	Service Area				Statewide
	Central	North Central	Southwestern	Southeastern	
Debit Project Count	125	76	32	65	298
Functional Acres Lost Before Multipliers	470,574	57,568	10,727	58,501	597,370
<b>Total Debits</b> (Excluding Advance Payment and Reserve Account Debits)	<b>820,523</b>	<b>57,975</b>	<b>11,075</b>	<b>67,988</b>	<b>957,561</b>
Credit Project Count (Stewardship Grants)	7	1	7	0	15
Functional Acres Gained Before Baseline Adjustment and Multipliers (Stewardship Grants)	2,378,661	72,336	1,723,006	0	4,174,003
<b>Total Credits</b>	<b>1,019,002</b>	<b>28,934</b>	<b>689,202</b>	<b>0</b>	<b>1,737,139</b>
<b>Balance of Available Credits</b>	198,479	-29,041	678,127	-67,988	779,578

<sup>6</sup> During the 2022 reporting period, updates to the web application included merging of the Program master database with the Program web application. This resulted in revisions of data for some earlier projects and may result in numbers that differ from previous reporting periods.

### Permittee-Responsible Projects for All Years

As of December 31, 2022, four permittee responsible projects have been implemented by two different developers. These projects include two conservation easements, one oil and gas field restoration project, and one conifer removal project. See Figure 18 below for locations of these projects and Table 10 for credit details.



**Figure 17.** Locations of Permittee-Responsible Mitigation projects that have been implemented from 2018 to December 31, 2022.

**Table 10.** Total credits attributed to Permittee-Responsible Mitigation Projects for all years through 2022.

Project Name	Credits
Ringling Ranch Conservation Easement	110,814.00
Ringling Ranch Ltd. Conservation Easement	118,094.04
Hammond Field Reclamation	349,318.83
Crooked Creek Conifer Removal	8,143.75
<b>Total</b>	<b>586,370.62</b>

## ADAPTIVE MANAGEMENT

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

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

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

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

Adaptive management does not just occur at static intervals, it is a fluid process and one that the Program, stakeholders, and interested publics continue to take part in throughout the years (Figure 19). Through the process of continual improvement, the Program developers and credit providers learn and implement improvements to protocols, documentation standards, etc. See the Efforts to Improve Implementation section above for details on efforts implemented in 2022.

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

Because there is no communication feedback mechanism between developers or the permitting agency and the Program, the Program lacks knowledge about whether a permit was applied for and, when relative to the *Completed Review* date, whether the project is still in the permitting process, whether a permit was issued and whether a project was cancelled or when it was implemented.

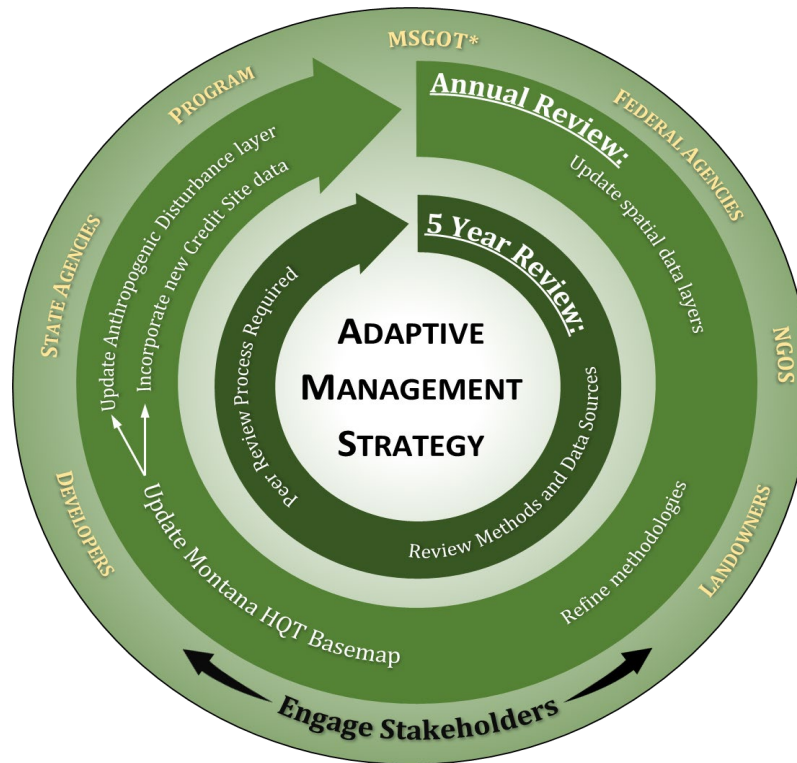
In short, the Program lacks knowledge about whether a project did or did not proceed. While time lags can be expected, their duration and the final disposition of the project is unknown to the Program. The time lag between when the Program has completed its review and when a project is actually implemented could be a year and sometimes much longer. In some cases, proponents have cancelled projects altogether.

Another challenge associated with the lack of knowledge and the time lag is that the Program can't predict when a contribution to the Stewardship Account will actually be made when proponents select that option. Contributions might be made within 1-3 weeks from when the Program completes its review. On the other end of the spectrum, some contributions have been pending for up to two years. Contributions are slated to be made after a developer obtains all necessary permits but before implementation. As of December 31, 2022, developers have committed to offsetting impacts of their projects through a contribution to the Stewardship Account, but \$420,731.39 in contributions are still pending (Figure 16).

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

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

Once every five years, a more substantive adaptive management review should take place. Because 2022 marks the completion of only the fourth full year of implementing Montana's Sage Grouse Mitigation Framework, not enough experience and data have accumulated to inform or identify areas needing substantive, material review, triggering major changes and administrative rulemaking. A more substantive review would be targeted for 2023-2024. However, in the intervening years, MSGOT remains available to address limitations of either the HQT or mitigation policies in the interim.



**Figure 18.** The Sage Grouse Habitat Conservation Program's Adaptive Management Strategy.

### **GIFTS, TRANSFERS, BEQUESTS, or DONATIONS**

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

### **INTERAGENCY COLLABORATION in 2022**

Throughout 2022, the Program periodically consulted with the USFWS to assure the State is kept abreast of efforts to establish the process for how the status review may 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 Natural Resources Conservation Service (NRCS) to coordinate efforts. Coordination with MFWP 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, the Environmental Quality Council, Montana Department of Transportation, and Montana Board of Oil and Gas Conservation, as these entities implement their own programs and statutory duties.

In 2022 the Program continued to develop its unique and productive relationship with the BLM. Montana BLM land use plans and amendments continue to implement the State of Montana's DDCT calculation method which provides important consistency across Montana's checkboard land ownerships and management boundaries. The State and BLM also continued to work closely on development of the HQT model and policy processes to ensure coordinated responses to development projects throughout the state. Thus, the Program provides technical support and stores data that will ultimately assist the BLM in demonstrating implementation and compliance with its own land use plans and amendments.



## APPENDIX A

### Montana Sage Grouse Conservation Benchmarks: 2022

Bureau of Land Management: The Bureau of Land Management (BLM) held multiple public meetings in January 2022 and issued a final Scoping Report on amendments to their 2015 and 2019 Greater sage-grouse conservation plans on June 30, 2022.

For conservation benchmarks between 1965 and 2021, see the Montana Sage Grouse Conservation Benchmarks document located on the Program website (<https://sagegrouse.mt.gov/About#resources>).

## APPENDIX B

### Montana Conservation Strategy: 2022 Implementation Chronology

#### February 2022

- February 11 MSGOT Meeting
  - MSGOT authorized the 2022 grant cycle.
  - MSGOT discussed SB 230 Transfer of surplus Stewardship Account Funds to General Fund

#### May 2022

- May 27 MSGOT Meeting
  - MSGOT heard a request for a waiver presented by HC Resources
  - Program introduced the need for initiating the rule making process to address an error found in the HQT Technical Manual.

#### June 2022

- June 28 MSGOT Meeting
  - Common Ground Capital presented their proposal for a credit banking system.
  - The Program provided MSGOT with an update on the 2022 grant cycle proposed projects.
  - No executive action was taken at this meeting.

#### October 2022

- October 27 MSGOT Meeting
  - MSGOT voted to approve five of nine Stewardship Account Grant requests presented for funding.

Upgrades to the Program website were implemented throughout 2022, as they became available. These upgrades sought to improve both user experience and program efficiency. Details can be found on the Program website (<https://sagegrouse.mt.gov/About>) in a document titled *What's New – New Web Application Features 3-7-22*.

For implementation chronology between 2015 and 2021, see the Montana Sage Grouse Implementation Chronology document located on the Program website (<https://sagegrouse.mt.gov/About#resources>).