AGENDA

Montana Sage Grouse Oversight Team (MSGOT)

December 18, 2018: 11:00 a.m. – 2:30 p.m.
Montana State Capitol, Room 172

11:00: Call to Order, John Tubbs, MSGOT Chair and DNRC Director
  • Administrative Matters:
    o Approve Minutes: July 24, September 14, October 4

11:10 - 11:30: Reports and Implementation of Executive Order 12-2015
  • Reports from Individual MSGOT Members
  • Program Report
  • Reports from Partner Federal Agencies
  • MSGOT Discussion, if any

11:30 – 11:50: Montana Fish, Wildlife & Parks Sage-grouse Population Monitoring
  • Catherine Wightman, FWP Wildlife Habitat Coordinator

11:50 – 12:30: Conservation Spotlight: An Introduction to the Rangeland Analysis Platform
  • Dr. Matthew Jones, Remote Sensing Ecologist and Dr. Brady Allred, Rangeland Ecologist, University of Montana

12:30 – 1:00: LUNCH BREAK

1:00 – 1:30: Final Adoption of Proposed Administrative Rules on Stewardship Grants and Mitigation
  • Introduction: Carolyn Sime, Program Manager
  • Public Comment
  • MSGOT Discussion and Potential Executive Action

1:30 – 1:40: Rosebud Coal Mine AM5 Greater Sage-Grouse Mitigation Plan
  • Introduction: Carolyn Sime, Program Manager; DEQ
  • Public Comment
  • MSGOT Discussion and Potential Executive Action to Approve the Plan

1:40 – 1:50: American Colloid Company Amendment 5 to Opencut Permit 8 Warren Mine Site Sage-Grouse Mitigation Plan
  • Introduction: Carolyn Sime, Program Manager
  • Public Comment
  • MSGOT Discussion and Potential Executive Action to Approve the Plan

1:50 – 2:00: NorVal Cooperative Inc., Black Coulee Transmission Line Project Mitigation Plan
  • Introduction: Carolyn Sime, Program Manager
  • Public Comment
  • MSGOT Discussion and Potential Executive Action to Approve the Plan

Continued
2:00 – 2:10: Big Flat Electric Cooperative PS-09 Transmission Line Sage-Grouse Mitigation Plan
   • Introduction: Carolyn Sime, Program Manager
   • Public Comment
   • MSGOT Discussion and Potential Executive Action to Approve the Plan

2:10 – 2:20: TRECO Fallon Transmission Line for Keystone XL Pump Station PS13 Sage-Grouse Mitigation Plan
   • Introduction: Carolyn Sime, Program Manager
   • Public Comment
   • MSGOT Discussion and Potential Executive Action to Approve the Plan

2:20: Public Comment on Other Matters

NOTE: Agenda item times are approximate. Actual times may vary by up to one hour. Attendees who may need services or special accommodations should contact Carolyn Sime (406-444-0554 or csime2@mt.gov) at least 5 working days before the meeting.
These abbreviated summary minutes and the audio recording will become the official adopted minutes at the next Montana Sage Grouse Oversight Team meeting when they will be approved. Until then, they are considered a draft.

MINUTES
MONTANA SAGE GROUSE OVERSIGHT TEAM

July 24, 2018 Teleconference Meeting Summary
Montana Department of Natural Resources and Conservation Headquarters
Montana Rooms North and South
1539 11th Ave, Helena

Note: Pursuant to Senate Bill 261 Section 1 (2015 Montana Legislature), meetings of the Montana Sage Grouse Oversight Team (MSGOT) are to be recorded electronically. The electronic recording is the official record. These summary minutes provide an abbreviated summary of the action taken and public comment. The time designations listed are approximate and may be used to locate the referenced discussion on the audio recording of this meeting. Access to the electronic copy of these minutes and the audio recording is provided from the Sage Grouse Habitat Conservation Program webpage hosted by the Montana Department of Natural Resources and Conservation at https://sagegrouse.mt.gov. The agenda, summary minutes, MSGOT meeting materials, and audio recordings are listed by meeting date on the MSGOT Meeting Archive webpage.

Members Present
John Tubbs, Montana Department of Natural Resources & Conservation, Director, by Phone
Jim Halvorson, Montana Board of Oil and Gas, Administrator, by Phone
Tom Livers, Montana Department of Environmental Quality, Director
Casey Knudsen, Representative HD 33, by Phone
Diane Ahlgren, Rangelands Resources Executive Committee, by Phone
Senator Mike Lang, Malta, Montana, by Phone
Mike Tooley, Montana Department of Transportation, Director, by Proxy
Martha Williams, Montana Department of Wildlife, Fish and Parks, Director
Patrick Holmes, Montana Governor's Office, by Proxy

Staff Present
Ms. Carolyn Sime, Sage Grouse Habitat Conservation Program, Manager

Call to Order
00:00:03 Director Livers called the meeting to order.

Hansen Livestock Company Conservation Easement: Final Environmental Assessment and Proposed Decision Notice [Handout]

00:02:09 Ms. Sime: The purpose of this teleconference meeting is for MSGOT to consider a final environmental assessment (EA) and proposed decision notice to transfer Stewardship Account funds to The Nature Conservancy (TNC) for its purchase of a perpetual conservation easement on the Hansen Livestock Company in Beaverhead County. If approved MSGOT would authorize transfer of Stewardship funds to secure the Hansen Livestock Company perpetual easement. The state’s share includes 14 to 15% of the total cost. The total cost of the easement is $6,600,000.

In 2016, TNC proposed a conifer reduction project in combination with a perpetual easement. MSGOT funded only the conifer reduction portion of the project in 2016. That work was accomplished with other funds. MSGOT then approved reallocation of the conifer reduction project funds towards the easement. TNC secured matching funds. The total award from the Stewardship Account is $952,500.

The project is in Core Habitat. There are active leks on or near the property. It is located within the proposed southwest Montana service area. In 2016, Program staff toured the property. The easement would protect 13,535 physical acres of habitat and includes the area involving the conifer treatment.
The easement prohibits new development and allows for continued agricultural use. The easement provides for the creation of credits. The final EA is dated June 26, 2018. Terms are settled and under review by NRCS.

This project came before MSGOT several times since 2016. The draft EA process included public scoping and public comments. Two comments were received. The Program recommends approval of the easement because the project is in high quality habitat, connects southwest Montana sage grouse to sage grouse in Idaho populations. The Hansen family have been good stewards of the land.

Public Comment

00:07:44 Director Livers: Asked for public comment.
00:08:38 Mr. Mark Aagenes, The Nature Conservancy.
00:11:26 Mr. Alan Olson, Executive Director Oil and Gas Association.
00:04:30 Mr. Glenn Marx, Montana Association of Land Trusts.
00:16:00 Director Livers: Asked for additional comments.
00:16:15 Mr. Jim Berkey, The Nature Conservancy.

MSGOT Discussion and Executive Action

00:17:04 Director Livers: Asked for additional questions from MSGOT.
00:17:37 Director Williams: Asked of Glenn Marx, his experience with mineral ownership.
00:18:06 Glenn Marx: Stated landowners who don’t own subsurface rights, don’t have authority over subsurface minerals. The 44 Ranch easement did not restrict subsurface development because the surface owner did not own the subsurface rights.
00:19:27 Ms. Sime: The remoteness report was negligible for the 44 Ranch, having to do with the potential for future development.
00:18:06 Glenn Marx: Development of the subsurface rights are not a requirement of the department. Rather they are covered under an arrangement between the surface and subsurface owners. Development of those rights are up to the owners of those rights. In the case of the Hansen easement project, the owner of the subsurface rights has decided to retire those rights.
00:21:16 Ms. Sime: The subsurface rights involved with the Hanson Livestock easement are partially owned by Hanson Livestock and other members of the Hanson family. The terms of the easement are those made by the landowner and the land trust organization. The state’s interests are centered around the value of the habitat and the credits that can be produced. The state does not view surface conservation and subsurface rights to be mutually exclusive.
00:22:34 Jim Berkey: Confirmed that the Hanson’s and various other family members are the owners of the subsurface rights.
00:23:18 Director Tubbs: In the EA, under Land and Soil Resources, the mineral estate was evaluated (page 21 and 22).

00:24:02 Senator Lang: Asks if the MEPA review would reveal the mineral rights.

00:24:37 Ms. Sime: The language referenced by Director Tubbs states, reasonable use of the surface is allowed.

00:25:03 Director Tubbs: One of the issues, when conducting a full minerals search is the cost. The EA acknowledges the mineral estate exists. The conditions of the easement then state if the rights are to be exercised or not. We are well within the bounds of state law and the protection of the mineral estate is strong. It would cost tens of thousands of dollars to conduct full research into mineral ownership.

00:17:37 Director Williams: A conservation easement document cannot abrogate Montana law. Montana law states that the mineral estate is dominant. The conservation easement doesn’t have to reference that for that law to stand.

00:27:10 Mr. Olson: Not arguing the point. Page 10 of the easement says no exploratory wells, no new roads. Who will stick up for that in court. Concern there is boilerplate language that can’t be enforced.

00:28:17 Director Livers: Mr. Olson used the term these are boiler plate documents but, in this case, the mineral ownership is resolved because of the ownership. Asked if the concern is that MSGOT should use caution in using boiler plate language going forward.

00:29:05 Mr. Olson: If the surface owner is the same as the mineral owner why have that language in the document. If you can’t do a mineral research to see who might be affected that brings up issues. If you can’t deny someone from developing their mineral estate, don’t put in there they can’t drill an exploratory well.

00:30:10 Senator Lang: Asked for an explanation from TNC about the $647,500 participation from the landowner. Asked how that comes about.

00:30:36 Mr. Berkey: This is the donated portion of the easement. The Hansen’s agreed to a bargain sale. In other words, they are selling below market value. A licensed appraiser calculated the value, and this represents money the Hansen’s will not receive. There is also $50,000 TNC is donating to make up the full appraised value.

00:31:42 Senator Lang: This raises more questions. Asked if donate mean it goes to TNC. Is this treated as income by the IRS as a profit? Do we need tax documents on this?

00:32:20 Mr. Berkey: This is a below market sale through a charitable organization and could be used as a charitable gift. The Hansen’s have chosen not to take this benefit. Because TNC will own the easement they own the value and are receiving a guardianship, liability over time. It is not a marketable interest.

00:33:32 Senator Lang: If I were to own something worth $100,000 but sell it for $80,000. If the state by giving them $952,500 minus $647,000 would give them $300,000 in cash of taxpayer’s money.

00:34:05 Director Tubbs: The certified appraiser evaluates the land without the easement then when the easement is imposed, establishes the taxable amount. The owner is allowed to use the donation of the difference between the appraised land and the value with the
easement as a tax deduction for the owner. It isn’t hard currency, it’s the difference in appraised value.

00:45:42 Mr. Max Hansen: Legal counsel to the Hansen’s: In communication with the accountant for the Hansen Livestock Company. If the Hansen Livestock Company wanted to use the charitable donation for this transaction based on their ownership, they cannot use the appraisal done by TNC. The amount they would be able to claim was found to be insufficient to cover costs of a second appraisal.

00:37:07 Director Livers: Asked for additional questions from MSGOT. Asked for a motion.

00:37:31 Director Williams: Moved MSGOT approve the Decision Notice and authorize the Program to transfer $952,500 from the Stewardship Account so that The Nature Conservancy can purchase a perpetual conservation easement on the Hansen Livestock Company ranch. Seconded by Director Tubbs.

00:37:07 Director Livers: Asked for additional MSGOT discussion.

00:38:05 Senator Lang: Related to the 13,500 deeded acres, what are the functional acres that come back to the state in respect to credits?

00:38:28 Ms. Sime: Preliminary numbers using the July version of the HQT, the physical acres result in 290,000 functional acres or credits. Subject to change should the HQT change.

00:39:33 Senator Lang: Asked what the functional acres are.

00:39:40 Ms. Sime: For the physical acres on the property there are approximately 290,000 functional acres.

00:39:33 Senator Lang: Acres or credits? Asking about functional acres. There are 13,500 deeded acres.

00:40:08 Ms. Sime: The number of functional acres is the same as the number of credits. When we put the physical acres into the model, it becomes 290,000 functional acres. That becomes 290,000 credits available to offset impacts. It’s a 1 to 1 ratio.

00:41:04 Senator Lang: I guess I am really confused.

00:41:05 Director Tubbs: A disconnection is it is the number of physical acres, multiplied by the number of years in a perpetuity easement to get to the 290,000.

00:41:37 Senator Lang: Asks are we using 100 years.

00:41:40 Ms. Sime: Yes.

00:41:49 Senator Lang: From what we have seen at these meetings, were coming back to 290,000 functional acres.

00:42:12 Ms. Sime: To clarify if you use the physical acres under the term of the easement over 100 years it is 290,000 functional acres or credits. For comparison using the same math and July HQT, for the 44 Ranch, it’s 381,000 functional acres of habitat or credit available.
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00:43:27 Director Livers: Asked for additional discussion or questions.

00:43:38 Representative Knudsen: For the record, thinks the continued use of perpetual easements is infiltration of the government into private land ownership through non-profits and other land organizations. It ends up being an end run around regulations governing the purchase of land by the government. For that reason, votes no.

00:44:13 Director Livers: Asked for additional discussion. None.

00:44:24 Director Livers: Called for a vote on the motion. Ms. Ahlgren had to leave the teleconference meeting early and did not vote by proxy. Administrator Halverson, Director Williams, Director Tubbs and Director Livers vote in favor. Representative Knudsen and Senator Lang vote no. Director Tooley and Mr. Holmes vote yes by proxy. Motion passes 6 to 2 in favor.

Public Comment on Other Matters

00:46:18 Director Livers: Asked for public comment on other matters. None.

Adjournment

00:47:00 Senator Lang moved to adjourn. Director Williams seconded. Motion passed unanimously. Meeting Adjourned.

Chair for this meeting:

/s/ Director Livers
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MINUTES
MONTANA SAGE GROUSE OVERSIGHT TEAM

September 14, 2018 Meeting Summary
Montana State Capitol, Helena, Room 152

Note: Pursuant to Senate Bill 261 Section 1 (2015 Montana Legislature), meetings of the Montana Sage Grouse Oversight Team (MSGOT) are to be recorded electronically. The electronic recording is the official record. These summary minutes provide an abbreviated summary of the action taken and public comment. The time designations listed are approximate and may be used to locate the referenced discussion on the audio recording of this meeting. Access to the electronic copy of these minutes and the audio recording is provided from the Sage Grouse Habitat Conservation Program webpage hosted by the Montana Department of Natural Resources and Conservation at https://sagegrouse.mt.gov. The agenda, summary minutes, MSGOT meeting materials, and audio recordings are listed by meeting date on the MSGOT Meeting Archive webpage.

Members Present
John Tubbs, Montana Department of Natural Resources & Conservation, Director
Jim Halvorson, Montana Board of Oil and Gas, Administrator
Diane Ahlgren, Rangelands Resources Committee
Senator Mike Lang, Malta, Montana
Mike Tooley, Montana Department of Transportation, Director
Patrick Holmes, Montana Governor’s Office
Martha Williams, Montana Department of Wildlife, Fish and Parks, Director
Casey Knudsen Representative HD 33
Director Livers, Montana Department of Environmental Quality, Director

Staff Present
Ms. Carolyn Sime, Sage Grouse Habitat Conservation Program, Manager

Call to Order
00:00:03 Director Tubbs called the meeting to order.

00:00:41 Approval of April 26, 2018 and May 4, 2018 Meeting Minutes. Motion to approve by Director Tooley, seconded by Director Williams. Motion passed unanimously.

00:01:02 Director Tubbs: MSGOT received a large volume of information pertaining to the Policy and HQT. It became apparent, more time will be needed for MSGOT to review the documents prior to making a decision to approve adoption of the documents and final rules. This meeting will be informational only. Approval by MSGOT will be postponed until October 4, 2018 via a teleconference meeting.

00:02:26 Director Tooley: Asked if public comment would be taken at today’s meeting.

00:02:36 Director Tubbs: Yes, public comment would be taken today and at the October 4th meeting.

00:03:28 Senator Lang: Asks about MSGOTs obligation for rule based on public comment. Will decisions be made on October 4th or after public comment.

00:03:50 Director Tubbs: The October 4th meeting will include final adoption of the HQT and Policy documents and issuance of the Draft Rule for public comment. The rule will point to the documents. Adoption of the documents will allow public to know what the rule does. Public comments on the draft documents will conclude by the October 4th meeting. The issuance of the draft rule will allow for further public comment with the goal of final adoption in December.
00:05:17 Ms. Sime: We aim for publication of the proposed rules by October 19th which would allow for 28 or 29 days of public comment. We would review those comments and bring the rule back to MSGOT for a decision in December. If adopted by MSGOT, the rules could be published in early 2019.

00:06:10 Director Tubbs: The December meeting would include final approval of the rule.

**Reports and Implementation of Executive Order 12-2015**

00:06:44 Director Tooley: MDT continues to work collaboratively with the Program. MDT has submitted 63 projects for review since the initiation of the Program. In 2018, 31 projects were submitted. There were 40 projects in General Habitat and 4 in Core Areas. Thirty-five of the projects were completed within MDT’s ROW. Of the 44 projects, 9 occurred within 2 miles of a lek with 7 being completed within MDT’s ROW.

00:08:08 Director Williams: Last week, MTFWP presented to EQC the agency’s report on sage grouse population report [Notes2, Handout 12]. Would like to walk through the analysis with MSGOT at a future meeting. MTFWP recently hosted a Western Association of Fish and Wildlife Agencies sharp tailed grouse and greater sage grouse workshop. The workshop included a field tour lead by Diane Ahlgren and was well received.

00:09:25 Ms. Ahlgren: Enjoyed the workshop and field tour. Julie Haggarty from MSU, brought a group of professors and PhD students to look at areas that experienced fires to see what has occurred on the land. Would invite MSGOT, the Program or others who might be interested to come tour the area.

00:10:35 Senator Lang: Has been traveling a lot. Concurs that sage grouse are doing well. Anxious to see what goes on during this meeting. Wants to stay with a three-kilometer buffer for tall structures and would oppose anything that is not scientific in that regard.

00:11:15 Representative Knudsen: Echoed the sentiments of Senator Lang. Mitigation costs have been a big concern.

00:11:30 Administrator Halvorson: Complemented the Program for the way it has been working with oil and gas operators. Operators can have significant difficulty getting things done, scheduling, changing operations and sometimes need the Program to review their project quickly. This is working well.

00:12:32 Director Tubbs: Staff and IT support staff have been burning a lot of midnight oil. It has been an amazing grind pulling the materials together. Staff has been addressing concerns from the telecommunications and electric coops. The Program staff has been working diligently with experts at a national level to ensure the science basis for tall structures is there. The HQT is a science-based model that we have to agree to as the fundamental basis of the model. Political decisions can’t drive those numbers. The best available science is being used. Hope in the end Senator Lang and Representative Knudsen agree the Program has used the best science. There was a large set of peer reviewers and public providing comments.

**Informational: BLM Maintenance Action Regarding Disturbance Management [Handouts 1 and 2]**

00:15:34 Mr. John Carlson, Sage Grouse Implementation Lead, State Office, Montana-Dakotas BLM: Reported on the Bureau of Land Management (BLM) maintenance actions made to all Montana BLM plans to align the BLM disturbance cap of 3% to 5%. The BLM and the Program have been working together by applying the Executive Order across all ownerships including BLM lands since January 2016. This is the formalization that
recognizes the BLM’s determination that the State Program (and Strategy) is operational, effective, and consistent with BLM goals and objectives for sage grouse conservation. The action also includes the process for deviations and exceptions that had been previously overlooked and not addressed in BLM land use plans. The maintenance action will increase consistency between BLM while implementing their land use plans and the State of Montana and achieve more effective conservation across all lands. The maintenance action allows BLM to consider Executive Order 12-2015, MSGOT actions, along with technical support provided by the Program, when making decisions.

**Raths Livestock Conservation Easement Final EA, Proposed Decision Notice [Handouts 3 and 4]**

00:18:00 Ms. Sime: This action would consider approval of the Raths Livestock Conservation Easement to be held by the Montana Land Reliance. The approved grant award was for $812,500. The appraisal came back with less than what was expected so the grant agreement has been amended to reflect the final market appraisal. The decision before MSGOT today, is to approve and adopt the decision notice. It is expected the closing would be by the end of the year.

00:19:19 Director Tubbs: Asked for public comment.

00:19:34 Mr. Glenn Marx, Montana Association of Land Trusts.

00:22:30 Mr. Kendall Van Dyk, Montana Land Reliance (MLR).

00:23:44 Director Tubbs: Asked for Discussion by MSGOT.

00:23:48 Senator Lang: Asked if we have an estimate of what the available credits might be for this ranch.

00:24:12 Ms. Sime: The estimated number of credits accounting for the adjustment of 40% to the baseline, are 286,489 credits over the 100 years of the easement.

00:24:51 Ms. Ahlgren: Question for Mr. Van Dyk. Thinks this is a good project but concerned that the final appraisal value had dropped by almost a half. Curious how this occurred.

00:25:34 Mr. Van Dyk: It is a chicken and egg kind of thing. When applying for NRCS funding there is a range of values arrived at to estimate the value of a property. This range was used to determine the amount of NRCS funds MLR applied for. The Raths need 100% funding so MLR determined the request based on the high-end estimated value. In the case of NRCS funding you can’t go back and ask for more money later, so the request is made on the high end of the estimated value to get the most out of the NRCS funds.

MLR appreciates the difficulty for MSGOT to keep track of this moving funding target and will make an effort to try to provide more accurate numbers with future applications.

00:27:56 Ms. Ahlgren: Has concerns that the $3.2 million-dollar figure had been publicized and would like to see this corrected.

00:28:24 Mr. Van Dyk: He had discussed this with the Raths and it could be resolved. The Program was going off MLR’s MSGOT application and didn’t have the final appraisal. This was a communication failure on MLR’s part. When it is published in the future the corrected amount will be presented. Part of the issue is MLR doesn’t want to spend $20,000 on the front end to have an appraisal done until they are confident the easement will go forward.
00:30:08 Ms. Ahlgren: Appreciates that it is complicated and this has been a learning experience.

00:30:22 Mr. Van Dyk: There are several things MLR is committed to do to streamline the process.

00:30:37 Director Tubbs: When we are working with MRL dollars they will probably be on the high end. That dynamic and how we describe it in the future would be a good idea.

00:31:20 Director Tubbs: Asked for a motion.

00:31:22 Director Williams: Moved that the Program approve the Decision Notice and authorize the Program to transfer $425,000 from the Stewardship Account so that The Montana Land Reliance can purchase a perpetual conservation easement on the Raths Livestock Corporation ranch.

00:31:45 Director Tubbs: Asked for a second. Ms. Ahlgren seconded.

00:31:49 Director Tubbs: Asked for discussion by MSGOT.

00:31:55 Director Williams: Thanked the Raths family for allowing MTFWP to conduct research on their property.

00:32:09 Director Tubbs: Asked for additional discussion. Hearing none, asked for a vote. All in favor. The motion passes unanimously.

**KXL Pipeline and Associated Facilities Conservation and Mitigation Plan [Handouts 5 and 6]**

00:32:36 Director Tubbs: Opened the discussion on the KXL Pipeline Conservation and Mitigation Plan.

00:32:46 Director Livers: Introduced the project. In 2012 DEQ certified aspects of the Keystone pipeline project under the Major Facility Siting Act. DEQ conducts some of the analysis for siting and economics associated with the pipeline. State Lands is responsible for major river crossings. Montana’s regulatory authority over pipelines is limited. The Pipeline and Hazardous Materials Administration under the US Department of Transportation has the primary responsibility for overseeing the project.

The pipeline enters the state from Canada near the Port of Morgan in Phillips County and travels 285 miles south east of Baker. It is a crude oil pipeline with capacity to carry 800,000 barrels per day.

The Siting Act Certificate covers the pipeline and associated facilities, including six pump stations, three transmission lines, shut off valves and associated power supplies and temporary storage areas, access roads, yards and temporary work areas.

This action predated the Executive Order, but the project does have a pre-EO management plan that mitigates for sage grouse habitat. The scope of this agenda item is limited to the Montana Sage Grouse Oversight Team’s (MSGOT) consideration of whether to accept a financial contribution to the Stewardship Account for compensatory mitigation and award the funds through Stewardship Account grants, as directed by the Greater Sage-Grouse Conservation Plan for the Keystone XL Project (April 2017 Plan or Plan).

The April 2017 Plan was voluntarily negotiated between TransCanada Keystone Pipeline LP (Keystone) and entities with the State of Montana and the Montana Bureau of Land Management (BLM). For reasons beyond the scope of MSGOT, the Project was not
constructed immediately after the Montana Certificate was issued. Federal authorizations were not issued at that time, but federal environmental reviews were reinitiated in 2017-2018. The Certificate requires construction to be completed by March 30, 2022 (ten years from the date of issuance) unless extended by DEQ. The Project’s requirement to mitigate for sage grouse impacts originates in the Montana Certificate and its Attachments.

00:37:05 Ms. Sime: The Certificate was completed, and a mitigation plan was developed and finalized in conjunction with the Certificate. In 2017, the parties took the prior mitigation plan and provided some updates related to the federal lands portion. The updated mitigation plan would have deposited into the Sage Grouse Stewardship Account instead of being deposited with FWP and DEQ and that the funds be used within the counties where the pipeline is located. Funds are to be used within three years of being deposited in the Stewardship Account. The compensatory mitigation contribution to the Stewardship Account would be $761,519.

The Keystone approach for estimating mitigation is done using a physical acre approach which is different than the state’s current HQT method (functional acres) under development. The Keystone approach method uses a $650.00 per acre figure to arrive at the dollar amount.

00:39:44 Director Tubbs: Asked for public comment. Seeing none, asked for discussion by MSGOT.

00:40:06 Senator Lang: Made a motion that MSGOT accept the Program’s recommendation to accept the funds to be contributed to the Stewardship Account. Seconded by Mr. Holmes.

00:40:28 Director Tubbs: This is a decision by MSGOT. However, there is a pending decision to be made by BLM. This allows the BLM to go ahead with their decision but, any transfer of funds is pending the BLM decision and is not pre-decisional until it closes.

00:41:09 Director Tubbs: Asked for a vote. All in favor. The motion passes unanimously.

**Denbury Cedar Creek AnticlineCO₂ Pipeline Mitigation Plan [Handouts 7 and 8]**

00:41:23 Ms. Sime: This agenda item comes with gratitude and acknowledgement from the Program for the leadership and support provided by Denbury and Mr. Shaw. The agenda item asks MSGOT to consider approval of Denbury’s Cedar Creek AnticlineCO₂ Pipeline Mitigation Plan. The pipeline route includes BLM lands, so the plan includes consideration for the BLM approval process. The Program, BLM and proponent worked collaboratively on the plan to satisfy the requirements of both the EO and Stewardship Act and the requirements of the BLM. In agreement with Denbury, the Program applied the July version of the HQT and Policy documents. The BLM is in the process of reviewing public comment and finalizing their EA.

The mitigation plan incorporates the entire mitigation hierarchy and provides an example of creativity on the part of the proponent. Denbury has taken a permittee responsible approach for mitigation. This approach lessens the responsibility for the state. Denbury worked with Montana Land Reliance to secure a perpetual conservation easement in the near vicinity of the pipeline. A second piece of their mitigation plan is to provide restoration work on federally leased lands, that would permanently plug and abandon 17 existing oil and gas wells. This is a good example of restoration approach and diverse way to put a project together.
In calculating the functional acres lost from the pipeline project and the functional acres gained from the conservation easement and restoration project there will be a surplus of credits. Denbury anticipates future activities and development in that part of the state and those credits will be available to them to be used in the future.

00:45:26 Director Tubbs: Asks if the credit calculations are shown on page 37 of the mitigation plan.

00:45:30 Ms. Sime: In MSGOT’s packet, page 37, Table 10 is a summary of all calculations. Denbury offered some additional voluntary multipliers including 10% for net conservation gain and 10% because a portion of the project goes through two separate Core areas.

00:46:30 Director Tubbs: Asked for public comment.

00:46:44 Mr. Kendall Van Dyke, Montana Land Reliance.

00:47:55 Mr. Rusty Shaw, Environmental Compliance Manager, Denbury Inc.

00:52:26 Director Tubbs: Asked for additional public commend. Hearing none, asked for MSGOT discussion.

00:52:30 Director Tooley: Likes this project. Glad to accept money but this project generates extra credits and leaves the landscape in better shape than it was before.

00:53:08 Director Tubbs: Asked for a quick synopsis of the four mitigation hierarchy steps Denbury has taken with this project (referencing the maps in the mitigation plan).

00:53:54 Mr. Shaw: One of the two maps in the plan shows the pipeline overlaid on the basemap from the HQT. You can see the existing disturbance from the ONEOKs Bakken pipeline and existing Trans Canada pipelines and the new pipeline following those existing lines. Where not collocating with existing pipelines Denbury is collocating with existing roads plus Denbury navigated through the area avoiding leks for avoidance and minimization. On the restoration side, the construction timeframe will be June 15 to December 1, then one year to address other wildlife stipulations. With one year one of construction the project will be complete. That’s 8000 debits required for the pipeline, 6000 debits are for construction by itself. We heard boisterous comment at EQC about 75 years for the habitat to come back. It’s not just grass. Sage grouse need more than grass. The science tells us that sagebrush takes 75 years to come back. Most of the work is in the construction phase and the disturbance is underground. We hope to have reclamation start in winter of year 1. There are only a small number of debits applied to the 75-year reclamation phase.

On a well pad with a thirty-year operation life, it’s going to be big numbers and is why Denbury is looking ahead to the need for extra credits. On the compensatory mitigation piece, Denbury has 17,000 debits that need to be offset. The state side will depend on what MSGOT approves with the new rules. On the BLM side there is a unique situation because the federal administration has backed down on landscape scale mitigation, net gain. Those concepts have been stricken from the federal mitigation policy, but the Resource Management Plan has those concepts in it. It’s voluntary on the state side but not the BLM side. To change it would require a lengthy process of an RMP Amendment, that could take 3-5 years. The other method could be a congressional action. The way we dealt with it was to work with the BLM using a maintenance action. This allows the mitigation piece to move forward to satisfy the RMP requirements. Outside the RMP requirements there wouldn’t be a mitigation need because they are avoiding, minimizing and working within the sage grouse timing stipulations.
Director Tubbs: This gives a real example of how a company was able to navigate a major capital investment. It is important to note that this is a buried feature and the impacts are for one year. Projects are evaluated based on the construction phase, then the operational phase. In this case the operational phase is zero because they are underground and go right into the reclamation phase. Where we will see the big numbers, as Rusty pointed out, will be if you occupy the surface permanently or for a long period of time. Those debits will keep hitting you every year of operation. That's where you will see the real difference between a gravel pits that are long term in their nature. Anything that remains constant for a long duration is going to drive the debits. This is an example of a company that avoided, minimized and identified restoration opportunities with a project that really bumps up sage grouse habitat. They are not just protecting existing habitat. Restoration of an old oilfield provides uplift. If you look at the reclamation curve, you have rapid regrowth of vegetation early on. It just takes 75 years to come back to existing condition. The debits are reduced quickly in reclamation, but it still takes a long time for the ground to return to the natural state. But reclamation is not a driver in the debits. MSGOT needs to focus on what is driving the numbers.

Senator Lang: Seconded Director Tooley's opinion about the project. Thanked Denbury for their professionalism. Montana taxpayers will welcome them once the project gets going. The project is CO2 recovery and part of energy in Montana. Very happy they are here, and he will be voting yes on the project.

Ms. Ahlgren: Appreciated Mr. Shaw's call and explanation of the project. It looks like a good precedent-setting project of how it should and could work. Ask if there is mitigation necessary for Denbury to conduct while they are conducting the well restoration project.

Director Tubbs: Clarified, would the process of restoration cause any debits.

Ms. Sime: The July HQT was applied to the restoration work. The math is in reverse. The basemap shows the presence of the wells today as disturbed features on the landscape. Referring to the map titled Mitigation Field Hamond Federal Leases, in the packet. The green circles represent present day with the wells on the landscape. Currently they are blue. When the HQT is calculated, the math is reversed, and that disturbance is removed mathematically. The number of credits are added for each well. This would be the same process if you removed other infrastructure from the landscape. For example, removal of obsolete transmission lines, as a permittee responsible mitigation option. They are taken out of the basemap to determine the number of credits generated.

Ms. Ahlgren: Asking about the restoration process, if making noise while plugging and reclaiming, is that activity a disturbance for the sage grouse.

Ms. Sime: It could be. In this situation, Denbury will be conducting the work in the fall, within days and are consistent with the Executive Order.

Director Livers: Expressed appreciation for Denbury's approach and cooperation.

Director Tubbs: Had it not been for Denbury's high priority for this project we wouldn't have had the resources, during the past the three years in developing the HQT. Denbury has proved themselves to be a positive actor in both the economy and protection of the bird. Asked for a motion.

Mr. Holmes: Made a motion that MSGOT approve the Denbury Cedar Creek Anticline CO2 Pipeline Project Greater Sage-grouse Mitigation Planning Approach Document and permittee responsible mitigation actions. Seconded by Director Tooley.
00:09:30 All voted in favor. The motion passed unanimously.

ONEOK Elk Creek Pipeline Project Mitigation Plan [Handouts 9 and 10]

01:09:49 Ms. Sime: ONEOK proposes to build a 188-mile-long pipeline in Carter, Wibaux and Fallon Counties. The Program began working with ONEOK four months ago. The Program applied the July 2018 version of the HQT and Policy Guidance so that ONEOK could begin construction of the project as soon as possible. ONEOK met with the program in Helena to expedite the process. The company opted to make a contribution to the Stewardship Account rather than develop permittee-responsible mitigation. Application of the 2018 documents resulted in a total obligation of $169,6612.

This project is longer in length than the Denbury project, but they also incorporated some avoidance and minimization mitigation measures. The project is co-located with the existing Bakken Natural Gas Liquids pipeline. Also, fewer linear miles occur within designated habitat. As a result, the total number of debits is less than the Denbury project.

01:12:35 Director Tubbs: Asked for public comment.

01:12:44 Mr. Eddie Zedaker, ONEOK Environmental Project Manager.


01:13:41 Director Williams: Appreciates that this project also adheres to the mitigation hierarchy through avoidance and minimization. While not providing permittee-responsible mitigation they are making a deposit into the Stewardship Account.

10:14:09 Director Tubbs: Hopes there is a feeling the process is working, and projects are getting on the ground. There is documentation for the Fish and Wildlife Service that were conserving sage grouse. There will be changes to the July documents and thanks these proponents for working with the Program to move their projects forward, so they can be brought to MSGOT for approval while MSGOT works through the process. Asked for a motion.

01:15:33 Director Tooley: Made a motion that MSGOT approve the ONEOK Elk Creek Pipeline Project Greater Sage Grouse Mitigation Plan. Seconded by Senator Lang.

01:15:53 All voted in favor. The motion passed unanimously.

American Colloid Company Daun West Mitigation Plan [Handouts 11 and 12]

01:16:11 Ms. Sime: Daun West is a bentonite mining project in Carter County. American Colloid has a mining permit and wishes to amend their permit to add acres to the mine site. The permitted acres will be 1344 acres adding 893 acres of disturbance to the site. The permit would run until 2048. Appreciates the cooperation of ACC throughout this long journey. The company would like to move forward to complete their amendment process. This project took time while working through the BLM and what processes were needed. The Program applied the July 2017 HQT model and the July 2018 Policy Guidance document as these provided the most benefit to ACC’s Daun West project. The Program applied flexibility in this case resulting in a lower total obligation.

ACC opted to make a contribution to the Stewardship Account rather than develop permittee-responsible mitigation. The total is $44,734.61.
These abbreviated summary minutes and the audio recording will become the official adopted minutes at the next Montana Sage Grouse Oversight Team meeting when they will be approved. Until then, they are considered a draft.

01:19:04 Director Tubbs: Asked for public comment.

01:19:09 Ms. Melody Smith, Environmental Coordinator, American Colloid Company.

01:19:51 Director Tubbs: Asked for additional public comment. Hearing none asked for discussion from MSGOT.

01:20:08 Director Tubbs: Takes to heart that mining of bentonite is dependent on where the resource is. Gravel is another one of those type of projects that can be hard to find and you get it where you can. Asked for a motion.

01:20:49 Senator Lang: Made the motion that MSGOT approve the Daun West Permit Amendment to Permit 670 Sage Grouse Mitigation Plan. Seconded by Director Williams.

01:21:04 All voted in favor. The motion passed unanimously.

Break

01:21:44 Director Tubbs: Called the meeting back to order.

Informational: Montana Mitigation System: Policy Guidance Document September 2018 v1.0 and Habitat Quantification Tool Technical Manual September 2018 v1.0 [Notes 2, Handout 1, 2, 3, 4, 5, 6, 7 and 8]


01:35:51 Ms. Sime: Power Point Presentation, Summary Peer Review Comments.

02:02:00 Ms. Jamie McFadden: Power Point Presentation, Summary HQT Updates.

02:14:20 Director Tubbs: Asked for public comment.

02:14:9 Senator Lang: Asked for clarification about changes to wind.

02:14:20 Director Tubbs: There was no change to wind. The wind industry did not comment.

02:15:39 Ms. Sime: Most of the public comment centered around cell towers and transmission. One comment letter included concern for wind however, those concerns had already been addressed earlier drafts. There was some misunderstanding that we were including unconfirmed leks. That was clarified in prior drafts.

02:16:29 Director Tubbs: The buffer distance for indirect impacts was the key issue. Asked what the buffer distance is for wind.

02:17:38 Ms. Sime: There are just a few primary scientific literature papers specific to wind. The primary author is LeBeau. Each appendix contains a literature cited section.

02:18:01 Senator Lang: Asks if wind towers are not susceptible to nesting.

02:18:19 Ms. Sime: Yes. Wind towers lack the lattice structure to support a nest. Some literature suggests that wind turbines can discourage raptors due to the mobility of the blades.

02:18:56 Director Tubbs: Asked for additional public comment.
02:19:20 Tim Nixdorf, Director of Wireless Communications, Triangle Communications. Asked for clarification about nesting vs non-nesting structures.

02:20:50 Director Tubbs: Described the difference between nesting vs non-nesting structures. Electrical Transmission industry has guidelines and standards to reduce nests. Asks if the cellular communication industry has such guidelines they would be helpful to the Program. A cell tower without a structure to support a nest could be non-nest supporting compared to a structure that provides 20-30 places where a nest could be built.

02:22:22 Mr. Holmes: In the absence of an industry standard it would be the duty of the proponent to make a case why a particular structure would not support a nest.

02:22:56 Director Tubbs: We look to the applicant, if there is something operational that would prevent nest building, such as a maintenance plan that would include taking down nest if they were to be built.

02:26:50 Mr. Nixdorf: Unsure how the HQT handles buried fiber optic lines.

02:28:01 Ms. Sime: The HQT handles a fiber optic and pipeline similarly because they are a buried feature. A fiber optic line would be similar to a water pipeline and the math would capture that and any accelerated reclamation that might occur.

02:29:57 Mr. Holmes: The expectation is there will be interest in seeing examples of more projects to reflect the changes in the documents. Probably within the next two weeks.

02:34:00 Director Tubbs: Asked for additional public comment.

02:34:07 Mr. Gary Wiens, Montana Electric Coops Association.

02:35:24 Mr. Jonathan Madill, WyoBen Inc.

02:41:50 Mr. Richard Stooker, Rancher.

02:46:43 Mr. John Bradley, Montana Wildlife Federation.

02:48:24 Mr. Mike Zook, Triangle Communications.

02:52:33 Mr. Mark Peterson, Hill County Commissioner.

02:57:06 Ms. Mckinsey McCarthy, Environmental Defense Fund.

03:01:00 Mr. Jeff Berglund, U.S. Fish and Wildlife Service, for Ms. Jody Bush.

03:02:01 Ms. Gretchen Boardman, Big Flat Electric.

03:03:43 Director Tubbs: Asked for MSGOT discussion.

03:03:58 Director Tubbs: Some of the materials came in as late as last night and this is why this is not a decision making meeting but informational. Asked Mr. Nixdorf, there were alternative sites proposed for the DY Junction site that would have been beyond the 4-mile buffer of a lek, but these were not pursued. Asked, what was the reason was for not using those sites that could have had a cost savings.

03:05:39 Mr. Nixdorf: In 2016 they were asked to look at alternative locations. They looked for locations that would provide enough power at key locations and fulfill desire to be able to cover certain areas of the highway. One location on Highway 66, would have been a
good location. It involved a landowner connected with a grazing association land swap proposed in the future. The new landowner did not want a cell tower on his property. Another location was off the highway but the cost of $30,000 per mile to bring in power and fiber optics was too high. This cell site is not a money-making project but for public safety. The DY Junction is a better location for their needs.

03:09:31 Director Williams: Surprised by Mr. Nixdorf’s comment on conserving sage grouse not having to do with habitat. Asked Ms. Sime to describe how the Program came to focus on the habitat and not the bird numbers.

03:10:12 Ms. Sime: Sage grouse are dependent on sagebrush for nearly every phase of their life history. They nest almost exclusively under sagebrush and represents 95% of their diet in winter. They are not particularly resilient to the loss of sagebrush regardless of the cause. Where sagebrush is eliminated the birds just don't make it. Focusing on habitat has been a long-standing tradition in Montana for wildlife conservation and is particularly pertinent for this species due to their dependence on sagebrush.

03:11:22 Director Tubbs: Another criticism is that we’re not killing predators. FWP is aware of the pressures that predators cause. Asked Director Williams if FWP is seeing or documenting areas where sage grouse population decline is connected to predators.

03:12:41 Director Williams: Understanding is that FWP has focused on habitat.

03:13:03 Director Tubbs: Asks if there is a particular local area where they are seeing a sage grouse population decline due to predation, maybe we could address it.

03:13:28 Ms. Catherine Wightman: FWP does not have any information that would suggest sage grouse populations are being unduly impacted by predators. Don’t have the data to say in a particular part of the state predators are impacting population trends. FWP will continue to monitor populations and plans to dig down in scale and develop a more comprehensive look at populations in the coming years.

03:14:20 Director Tubbs: This is a species that has always been a food source for predators and evolved that way. If there is science to show us we have a problem, it is likely to be a local problem and we can address that. There once was a time when they put out poison to kill prairie dogs and were not going back to that. As we get more information we will get it to Senator Lang and his constituents so they know that we are keeping an eye on it.

03:16:18 Senator Lang: Anthropogenic human cause. Asks how a tower can result in such a high number. The square footage is 75 feet by 75 feet. The tower can possibly be seen by sage grouse two miles away. With Jake breaks and everything else along the highway, and now center stripe thunder strips causing noise along the highway, thought being a little over two miles it would not be an issue. Finds it hard to accept that the tower can create a human environment that you have to go out 6 and 8 km. Maybe we do a study and see what the affect is. We have good birds in Montana. Wants an explanation how the number got so high when it’s just a cell tower.

03:18:57 Ms. Sime: The two-mile distance is a timing stipulation. That is the beginning of our analysis. Four miles comes from the Executive Order related to transmission lines and communication towers and has to do with nesting. Most sage grouse nest within four miles of a lek in Montana. To reconcile the small direct footprint of a cell tower with the larger buffer distances, each activity has some associated indirect impacts and considers the zone of influence beyond the direct footprint and how that might affect habitat or chick survivorship, and populations.
The proponent provides the Program with the direct footprint including roads or additional buried fiber optics. Everything new is assigned an indirect buffer. The buffers come from peer reviewed scientific literature. Some project types have a lot of scientific literature to tell us what the buffer should be, others may not have as much but the Program used the science to determine the buffers.

03:21:35 Director Tubbs: Asked for specifics related to tall structures since a lot of comments were related to that project type.

03:21:58 Ms. Sime: The tall structure section lists all the literature that was used. We can provide them by mail if requested. A tall structure could be a weather station, cell tower or any other type of tall structure. The papers we used show the outer limit of impacts could be out to 18 km. That would suggest that some leks just don’t make it. Other literature suggests the zone of influence could be smaller. We have endeavored to find something in the middle, on the conservative side, that is supported by literature.

03:23:40 Senator Lang: Asked if wind turbines can be closer to a lek or further away, cost more.

03:24:09 Ms. Sime: The total cost of a project is going to vary by where it’s located. If a project is located where the habitat is very red indicating high quality habitat, it will cost you more money. If you take the exact same footprint and locate it in blue lower quality habitat the cost will come down. That is one way operators can adjust siting their project location to bring their cost down. In the case of mining or oil and gas the resource is where it is.

03:25:07 Senator Lang: We all want to partake in the Executive Order and the four distinctions we have to do. What has not been listened to is economic feasibility. From talking to Director Tooley it seems economic feasibility of a wetland is more costly than what we are talking about with sage grouse. We have heard about economic problems with paying mitigation. In the COOP way, they are directed in their process to get communication out to rural areas. They get a grant, but any deviation means less service to the people. Safety hasn’t been talked about enough. Asks, who gets to decide economic feasibility. In the bill we left that word in there for underground vs overhead. Underground is more costly. They just want to be heard, their economics are not affordable to this stuff. Predation, would like to see data for all of the leks under powerlines in Montana. We have powerlines in Core Areas and should be looked at. Haven’t received that data. There is a lot of variation shown in the handout from FWP today. The numbers vary and that’s the distinction of sage grouse. Weather and mother nature are a bigger player. The data coincide with how the populations move up and down by weather. Region 6 hasn’t changed for 150 years. The only thing that’s changed is chicken crews aren’t there so predators aren’t controlled that way. There has been no build out of cities or ranches. It is sagebrush that’s keeping these animals there. We can show we had a big drop when 1080 went away. We don’t want that but were lucky that populations have stayed because predation has not been addressed. We talk about avian on the towers and we have to talk about racoons and foxes. One thing about the coyote if you get too many they get a disease and go away. Predation is an issue. Hopes some of the money gets used for predation studies or implementation of predation. Respects FWPs study of how we come up with these numbers because we have to. It is not 100% scientific, so many leks looked at in a period of years and that’s how we come up with. There is a lot of variance from 2002 to 2018. It’s not how the landscape changed. It is mother nature and predation. Ranching and farming in the area has sustained their way of life since then.

03:30:12 Director Tooley: Thanked the staff for being responsive to public comment. The tool is meant to be objective. It’s not necessarily garbage in garbage out but data in data out. Today we’re learning more about the economic impacts of what the tool spits out in the end. An objective tool isn’t going to take into consideration other important factors we
need to consider. You can’t do all this with a tool. What about the greater public good of some of these projects that aren’t there for profit reason. It’s there for public good from a small cooperative that doesn’t have 1.8 million dollars to pay for anything. Asks if there isn’t a way, after the tool is finalized, to apply other factors that may be more subjective. A tower for Triangle isn’t a tower for Verizon. Verizon may pay 1.8 million. As we go forward were talking about two different things. We have to ask: how do you quantify the impacts to sage grouse and as we go forward, how do you prevent larger impacts than intended to small Montana businesses. We might want to break this issue into two parts. You have the quantification and you have the effect on Montana business.

03:32:38 Director Tubbs: We have a policy tool here.

03:32:42 Mr. Holmes: Echo those sentiments and appreciate all those who have made time to share their comments. What we have demonstrated today is we are willing to make changes as we improve the process working with certain industries. For those industries where we haven’t had the opportunity to do that and commitment to have those meetings to learn more about your business and how we can adjust over time. The tool and policy have done a great job of balancing the ledger from a science-based approach. It’s analytically rigorous. It’s transparent and right now is treating all industries fairly and equitably. A problem is a disproportionate impact on some industries and I don’t think we have fully considered the broader challenges of balancing the public good and other public needs. There are more changes that MSGOT is going to have to make. One specific change centers around adaptive management. The Program had excellent criteria and objectives around habitat balance and population and numbers of what’s happening to the bird. There is an opportunity to look at impacts to regulated industry and the share of costs relative to capitol cost for projects. Some continual learning about how we are balancing conservation needs and economic development goals for the state are needed for this body to be effective. One caution is that this information resides with the industry. This body will need strong partnerships to get good information to make sound decisions. Need to be thinking about the balance for public safety and how we can demonstrate a level of conservation to avoid a future listing.

03:35:54 Ms. Ahlgren: Agree with the comments that have been made and heading down the right road. Hopes the media will give this a chance to work. The Program has made a big effort here and is interested in knowing what others think once they have had a chance to look at these new numbers. Hopes folks will communicate if it is working. Living in rural Montana, knows coops are not self-sustaining and increases in fees would take us out. Economics has got to be considered. Conservation is great, but economics has got to be considered with it. Eastern Montana struggles with being so rural. Don’t have answers but confident we can get there. The Program is receptive and hopes everyone will give the process a chance.

03:38:13 Director Tubbs: Asked telecommunication and rural coops to step up. It’s not useful to hear criticism of the Program without reference to the scientific reports industry is relying on that says the impacts don’t exists. If industry has science that adds value to our ability to understand industry and how it might affect sage grouse, were open to receiving it. That is why there was a peer review and included everyone who signed up, to give you an opportunity have professionals that are aware of your industry to participate in the review. Other than Denbury and coal companies, that are in it for the long run, the idea of permittee responsible investment has gone through a lot of thought. There truly are opportunities for coops to take advantage of, such as removing old poles, adding new technologies, that can add up credits as shown by Denbury with the closing of an old oil field, that generated several hundred thousand credits. Encourage industry to work with the Program to help us understand other opportunities. We’ve only recently been looking at nesting and non-nesting industry standards. Encourage industry to work with the Program to start banking credits. The least cost way forward is like Denbury did in
working independently and closing their own deal. We don’t know what the credits cost. They closed their own deal. Presumably it was less than they would have paid through the state. All we know is it generated so many credits and they offset the debits they created with their project. There are other options shown today. One is to make a donation to the Fund but that’s when you don’t have another idea. It’s not a cash cow. It’s to provide industry a way to move forward. If we did not have a Stewardship Account, the projects that were approved today would not have been able to proceed, because there are no credits that they saw that they could buy. Stay engaged and keep communicating. The management control is the policy. The less we touch the HQT unless you have science to change it we should stay away from it. That is the basis. If we muck with the science without science behind it, we will have no floor to stand on and will cave to the politics of the time and the FWS might as well just manage the bird. It won’t work for Montana if that’s what we get to. We have a policy document and is what generates the credits and debits. We have gears, so we don’t have to push the Program to question their science. The legislature has given fairly broad authority in how we use the funds. Open to innovative ways that we can assist public service investments. Maybe the State can bank credits for public service, so the general taxpayer is footing the bill. If we don’t have credits to sell or they are overpriced, we won’t have a functioning system. The Governor changed Director Tubbs with two tasks. Protect the bird, protect the economy. The story in the Havre paper was based on fear and some misinformation. It is true there is no more patience with this legislature for the Program to delay. It’s not an option. The Program will continue to work with industry, but we must move forward and put the tool in operation. There needs to be a team of people representing a broad coalition that believes were on the right track and we need to get there by January.

03:47:30 Ms. Sime: In light of earlier discussion, would like to go back and recalculate numbers for the Elk Creek Pipeline and ACC Daun West projects using the discounting method.

03:48:20 Director Tubbs: Would not be adverse, as a onetime deal.

03:48:48 Director Tooley: Wouldn’t have an objection for these projects. The discounting going forward, applying the discount as deflation, but questions if you aren’t getting a double whammy when you have inflation increasing 3% per year. In the end you purchase future credits you’re doing it with devalued money.

03:49:25 Director Tubbs: We’re using a real discount rate rather than a nominal discount rate so were protected against that. The discount rate is anchored to the BLM RMP’s.


03:50:09 Mr. Mark Bostrom, Division Administrator, CARDD: Informational presentation in preparation for executive action on this matter on October 4th. Not a lot has changed since the May document. Changes to the draft rule statement of Reasonable Necessity (page 2) was bolstered to include, “In particular, the terms related to the mitigation system and the documents describing the technical function of the Habitat Quantification tool and policy for application of its outputs and how changes to those are managed through time are new introductions to administrative rules.”

This is a dynamic system where there can be minor or major revisions to the tool and the changes are not necessarily predictable. Operator generated inputs, fire etc. can affect the basemap, so there is a need for the program to pull this information in as a minor version change. A minor revision is not the type of change that would require rule making. Major changes would come from an annual or five-year review that would be
substantive. MSGOT could decide they want to do rule making at any time. Edits for clarity should move forward without rule making.

New Rule 1 Item (2, talks about accepting written or oral comment for proposed new major versions. Item (4) allows versioning to apply to the current activity if new activities are proposed.

03:56:19 Director Tubbs: So, this would be an example, if we changed the policy document a year from now that would require oil and gas industry to produce 10% more credits. If your project was approved with the current basemap and prior policy, you stay with the prior requirements and don’t have to find 10% more credits. This would be true if it goes the other way. Your bargain is done when the Program issues its final decision.

03:57:00 Mr. Bostrom: That is correct. It’s just grandfathering.

03:57:18 Director Tubbs: On the conservation end, when we determine what the credits are, those stick. Any subsequent change to the baseline is not going to change the credits.

03:57:34 Mr. Bostrom: That is correct. New Rule 2 mirrors Rule 1 and talks about how the Policy document is changed in versioning. While not a technical document having dynamic input, the changes to the Policy document would be editorial or changes needed to synchronize the documents over time, keeping them concurrent in numbering. New Rule 3 and 4 have not changed.

03:59:08 Ms. Sime: The Rules and all of the materials are currently on the web site with exception of the Powerpoint, which will be on the web site as soon as possible.

03:59:52 Mr. Bostrom: Path forward, the HQT and Policy documents follow with the Rule. MSGOT will make a decision at the October 4th meeting. Filing with the Secretary of State would occur October 9th, followed by the Secretary of State publication of the Rule October 19, that initiates a public comment period for the rule making portion. A public meeting will be held in Helena on November 9th. End of the Rule public comment period would be November 19th. Final adoption would be at the December MSGOT meeting.

04:01:10 Director Tubbs: Asked for public comment on the draft rule. Hearing none asked for MSGOT discussion. No further MSGOT discussion.

Public Comment on Other Matters

04:02:39 Director Tubbs: Asked for public comment.

04:03:00 Ms. Algren: Asked when the next period would open for application of credit projects.

04:03:22 Ms. Sime: Have not had time to focus on it but have reached out to the land trust community. Would like to pick their brains for ideas how to improve the process.

04:04:02 Director Tubbs: Recommends giving an update at the October 4th meeting. Wed like to see more habitat investment that restores or enhances habitat. These projects carry their weight. Every acre is 100% positive so would like to encourage these types of projects. Need strong discussion for a third-party banker so there is an independent broker.

Adjournment
These abbreviated summary minutes and the audio recording will become the official adopted minutes at the next Montana Sage Grouse Oversight Team meeting when they will be approved. Until then, they are considered a draft.

04:06:09 Moved to adjourn. Senator Lang moved to adjourn; Director Tooley seconded. Motion passed unanimously. Meeting Adjourned.

Chair for this meeting:

/s/

Director John Tubbs
MINUTES
MONTANA SAGE GROUSE OVERSIGHT TEAM

October 4, 2018 Meeting Summary
DNRC Headquarters, Montana Room

Note: Pursuant to Senate Bill 261 Section 1 (2015 Montana Legislature), meetings of the Montana Sage Grouse Oversight Team (MSGOT) are to be recorded electronically. The electronic recording is the official record. These summary minutes provide an abbreviated summary of the action taken and public comment. The time designations listed are approximate and may be used to locate the referenced discussion on the audio recording of this meeting. Access to the electronic copy of these minutes and the audio recording is provided from the Sage Grouse Habitat Conservation Program webpage hosted by the Montana Department of Natural Resources and Conservation at https://sagegrouse.mt.gov. The agenda, summary minutes, MSGOT meeting materials, and audio recordings are listed by meeting date on the MSGOT Meeting Archive webpage.

Members Present
John Tubbs, Montana Department of Natural Resources & Conservation, Director
Diane Ahlgren, Rangelands Resources Committee
Senator Mike Lang, Malta, Montana
Mike Tooley, Montana Department of Transportation, Director
Patrick Holmes, Montana Governor's Office
Martha Williams, Montana Department of Wildlife, Fish and Parks, Director, by Proxy
Casey Knudsen Representative HD 33, by Phone
Jim Halvorson, Montana Board of Oil and Gas, Administrator, by Phone
George Mathews, Department of Environmental Quality, Acting Director

Staff Present
Ms. Carolyn Sime, Sage Grouse Habitat Conservation Program, Manager

Call to Order
00:00:02 Director Tubbs called the meeting to order.

Reports and Implementation of Executive Order 12-2015

00:02:03 Ms. Sime: Of the initial nine recipients of grants, four have moved to completion, 44 Ranch, closed in November 2016. The Hanson Livestock easement closes today. Raths Livestock is in final NRCS review and expected to close in 2018. The Watson easement is in negotiations with the family. The total expected funds for these projects is $3,040,000. This leaves approximately one million available for future grants. In anticipation of the next grant cycle, will have a briefing at final MSGOT meeting in 2018.

00:04:50 Ms. Ahlgren: Attended Western Landowners Alliance meeting in Billings, where the topic was the economics of conservation. Found it to be an interesting meeting.

00:05:18 Director Tooley: Nothing new to report.

00:05:22 Director: Mathews: Nothing new to report.

00:05:25 Mr. Holmes: Thanked the Program for conducting additional analysis and including stakeholders for additional engagement.

00:06:06 Senator Lang: At the last meeting mitigation projects were approved. Asked when funds would come in.
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00:06:27 Ms. Sime: Funds will be deposited in connection with the permitting process and before construction begins.

00:07:01 Senator Lang: Wants a Montana sage grouse program. Montana has the habitat and sage grouse populations but were included in the eleven-state group. Sage grouse is not on the endangered species list and there won’t be a full review before 2020. Montana has the data to support conservation efforts and effects, but we have not used the data. The NRCS initiated the Sage Grouse Initiative. Millions have been spent in this state to promote habitat.

The President has initiated changes that Montana should capitalize on. Better accountability of the impact of the ESA in relationship to personal property rights and social economic wellbeing. Another change reverses where threatened species have the same restrictions as endangered species and threatened species should not be given the same restrictions as an endangered species. The EO says we shall respect private property rights in equal manner as we manage sage grouse. In July USFWS did revisions to their compensatory mitigation policy for natural resource extraction, stating it lacks authority to require net gain. Montana needs to follow their lead, so the Program doesn’t have regulations abusing industry, maintenance and development of our resources.

This committee has talked about adaptive management. Can work with this if we start with the basics and data we have, like strong bird populations, sufficient habitat. We can defend that. We can adapt these changes to be more stringent if we find the birds need them. Once regulations are in place they are very seldom reduced.

At EQC we were told peer review comments were not oppressive to the Program. This is true for the opening statements, but we have many suggestions that are contrary to the Program. Such as credits for mitigation, third-level assessments, incorporation of scientific data into the HQT, reclamation curves need to be lessened, basic cost of the mitigation multiplier. Thinks the $650 figure for agriculture is way too much. The tall structure format cannot be documented scientifically. Wants to go back and start with 1.5-km for the buffer on tall structures. Electric lines with 115 kV should be treated as 69 kV lines. That’s going back to the basics. Wants to start at lower square because we can always go up.

We have a Program that uses GIS called Land Stat. Numerous comments said it is not adequate. We have a new program called Google Earth coming, so that’s another way we can adapt. We have resources to figure this out and should proceed with management of the HQT and policy manual that starts with the bird and habitat as a base and make sure the social and economic structures are taken care of.

00:11:59 Representative Knudsen: Had conversations with industry and they are frustrated with the costs of mitigation. Thinks the cost is extremely inflated. Being in the real estate industry, he is a firm believer the figures used for a per acre value are inflated.

Application of the 3% Discount Method to Re-Calculate American Colloid Company’s Contribution to the Stewardship Account for the Daun West Mitigation Plan [Handout 1]

00:13:11 Ms. Sime: MSGOT was asked to approve a mitigation plan for the American Colloid Company, during the September 14 MSGOT meeting. At that meeting there was discussion about application of an alternative 3% discount method. This method could be applied to projects where the proponent chooses to make a deposit in the Stewardship Account, rather than undertake permittee responsible mitigation. The Program asked ACC to consider application of the 3% discounting method as a gesture of good faith. If approved by MSGOT, the method would be incorporated into the
October Draft Policy Document. The recalculation would result in a savings to ACC in the amount of $16732. The revised contribution to the Stewardship Account would be $28,002.40.

00:15:09 Director Tubbs: Asked for public comment.

00:15:14 Mr. Lyndon Bucher, Lands and Environmental Manager, American Colloid Company.

00:20:48 Director Tubbs: Asked for additional public comment, none.

00:21:03 Director Tubbs: Asked for MSGOT discussion.

00:21:05 Senator Lang: Thanked ACC for their reclamation efforts in Phillips County.

00:21:41 Director Tubbs: Thanked the Program for working with ACC on this mitigation plan. The Program is listening, working with and adapting to the issues that come before the Program.

00:22:08 Mr. Holmes: Made a motion that MSGOT approve application of the 3% discounting method to recalculate ACC’s contribution to the Stewardship Account. Senator Lang seconded the motion.

00:22:24 Director Tubbs: Asked for a vote. All members present voted aye. Administrator Halvorson and Director Williams voted aye by proxy.

Proposed Administrative Rules to Adopt the October 2018 v1.0 Habitat Quantification Tool Technical Manual and the October 2018 v1.0 Policy Guidance Document [Handouts 2, 3, 4, 5 and 6]

00:23:19 Ms. Sime: Appreciates the stakeholders and MSGOT for their time, input and substantive comments [HANDOUT 6]. Changes made to the Policy document are primarily in response to economic feasibility. Those concerns were high costs of mitigation and what happens when those costs are high and might affect the viability of a project. In response to Director Tooley’s suggestion, the Program looked at broader public interest issues involving telephone communication and electricity in rural areas. The Program was charged with coming up with ideas for adaptive management having to do with economics of particular industry types. Meeting materials were limited to just those areas where changes were made. With respect to the technical manual, the Program responded to comments related to buffers being too high or the correct use of science.

Referring to the Policy Document [HANDOUT 4], page 54, addresses concerns for policy-based tools to address economics. This page includes insertion of a policy tool where MSGOT would set aside 5% of the Reserve Account Credit in a separate pool of credits that MSGOT could use at its discretion.

00:26:57 Director Tubbs: Important for everyone to understand, we hear about costs a lot. However, the fundamental basis of what we are doing, is using a model that calculates debits for impacts to sage grouse. Those debits are functional acres and don’t have dollar signs in front of them. The Program endeavors to find credits through conservation easements or habitat enhancements to create functional acres. The 5% set aside isn’t a dollar amount. Of the debits that are paid for, 5% will be set aside as credit to be used later to address a hardship that debits are creating for certain projects. The user created credits can be tracked but we don’t know the costs. Going forward, it is important to distinguish the difference between the functional acres and the dollars.
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00:28:50 Ms. Sime: This is important for context. The framers of the Stewardship Act envisioned a market-based approach that would calculate gains and losses. The entities trade with each other, but the costs are up in the air. Be thinking in the contexts of gains and losses in habitat and no net loss. The HQT tool calculates acres lost. The proponent has flexibility to choose how they will create credits. The Stewardship act allows for direct payment but a proponent could undertake conservation actions of their own to generate credits. They could work with third parties or MSGOT to develop credits. All of these mechanisms are available. It is only when discussion moves to direct payment that we begin to discuss a dollar amount. The Program encourages proponents to be thinking creatively when working to keep their cost down. Market signals can help.

When we look at policy tools available to MSGOT, they are covered in section 3.6 (page. 68) of the Policy document. The highlighted items on page 69 have been in the document for some time, but now they are more obvious. One of these are the opportunity for accelerated reclamation. The obligation could be decreased because the proponent brings habitat back sooner. Another highlighted item is a phased credit schedule. A credit schedule could be developed through MSGOT or a third party and the schedule is up to them.

On page 70, section 3.6.1 focuses on feasibility issues raised through public comments. On page 71 phased contributions are discussed. We encourage proponents to mix and match between policy tools and the various mechanisms. The state does have responsibility to share in these things and that they are balanced for the broader public interest.

A new method is discussed adjusting the discount method rate. At a prior meeting 3% was contemplated. Using this method, the total costs would come down. This could be adjusted on a project by project basis. Long duration projects would see the greatest benefit. The method is not as useful when impacts are short term.

Functional gains and losses, credits and debits, (section 3.6.1.2) would allow MSGOT to use a credit matching approach. MSGOT could choose to match a project’s credits. Credits could be sourced from the reserve using the 5% set aside, discussed earlier.

00:36:22 Senator Lang: Asked why, on page 70, “Program or interagency review team” is crossed out.

00:36:42 Ms. Sime: This was a clerical edit that should have been made a long time ago and doesn’t belong with this section and is covered elsewhere.

Page 74, section 3.6.1.3 offers a policy tool to waive all or some of the mitigation obligation for a particular project. This contemplates that MSGOT would need to make up for it in some other way to keep the scale balanced. It is anticipated that MSGOT would require some kind of contribution in keeping with the “all hands all lands” approach (notion of a public/private endeavor to create a match to share that obligation). To avoid a listing does require an all hands all lands approach. Under this waiver, MSGOT could choose to accept all of the obligation, but it would need to be fulfilled in a different way.

Section 3.6.1.4 outlines the process an industry proponent would use to take advantage of one of these tools. Developers would do what they could to plan their project to avoid and minimize their impacts, and then work with the Program to fine tune the project. After that the Program would work with the proponent to work out the mitigation to offset impacts using various mechanisms.

Page 74 describes how developers who utilize these more flexible tools will be required to bring something to the table such as avoidance and minimization, to share in the
match that MSGOT would consider when applying these tools. At the end of the year, the Oversight Team would sit down and look at the ledger and consider gains and losses and determine if there is a need to make any adjustments through adaptive management.

00:41:21 Director Tubbs: Clarifies the Oversight Team could accept a proposal as is, or modify it, or deny it. MSGOT doesn’t have the experience or data to apply a categorical exclusion of certain project types but can evaluate these in the future, as we learn more. The initial year would be a one by one review but assume we may have an exception process in the future.

00:43:03 Ms. Sime: Materials were added to the Adaptive Management section on page 84, in consideration of economics by various industries. Page 86 describes the process and participation by industry to provide input for the Program to better understand their costs. We currently don’t have this information. Sharing of data information from various industries can better inform the Program in decisions going forward through the adaptive management process.

00:44:36 Senator Lang: Asked what data would be requested.

00:44:49 Ms. Sime: Not sure, but don’t envision bank statements. Just looking for an understanding of the cost of implementing a particular project. For example, what would be the cost associated with reclamation, what are the debits and were you able to obtain credits. We do want to understand the real costs, so we can fine tune the process. We’re not looking for tax returns. We want to understand the facts around the cost of implementing a project and mitigation, so we can fine tune how we apply these policy tools going forward.

00:46:12 Senator Lang: We have data like property taxes or whatever that a coop or company is paying the state. Asked if this would be part of the data collection. If a company is paying half million dollars in taxes and they want to do a project that increases their taxes by $250,000, that becomes part of the play of what we have to decide. The revenue to the state, justifying what they are going to do, and how much stipulation we want to put on them for this $250,000 increase in revenue to the state.

00:47:18 Director Tubbs: A number of commenters said they wanted a percentage of project costs as a cap. We don’t have this kind of information. If we go this way, we would require much more information to determine that cap. This is more of a quality control opportunity for industry to voluntarily work with the Program concerning what the economics cost of a project are and how the Program will impact industry.

00:48:27 Director Tooley: Referring to the annual review. If you want to be adaptive don’t paint yourself into a once a year review. If you find an example of a $400,000 cost project with a $1,000,000 mitigation cost and you want to adjust that but can’t until next year. As a minimum make the review annual but make provision for an “as needed option” to truly be adaptive.

00:49:20 Mr. Holmes: It is intended to be as flexible as possible. There needs to be a predictable system. We need a commitment to do this at a minimum annually, but we have tools to address these issues as they arrive with the waivers and credit matching to deal with these issues as they arrive and to get us by, until that annual review. We can’t have substantive changes without updating the rule. There are non-substantive issues we can update more frequently. We need to make good use of these flexibilities on a case-by-case basis.

00:50:30 Director Tooley: Asked the Chair if he is satisfied we have the flexibility to make these changes as needed.
Director Tubbs: A lot of work has gone into this over the past two weeks, to incorporate that flexibility. After a couple of cycles, we’ll get good at it.

Ms. Sime: MSGOT should contemplate the documents together. There is flexibility incorporated on the policy side and some flexibility incorporated in the HQT as well.

Ms. Jamie McFadden: Summarized changes in HQT document [HANDOUT 5]. Nothing technically has changed. The Program took a deeper dive looking at the literature. Page 124 includes a table of take home information. There were no changes to tall structures. What the Program endeavored to do is separate scientific literature, where the publication talks about tall structures or transmission lines. The Program discussed the inferences from the studies. The Program contacted authors of the published scientific papers used by the Program to develop buffer distances. All of the authors confirmed that the Program correctly reported the results of these studies. Page 136 includes a table specific to transmission literature. The Program cited some of the same papers for both tall structures and transmission lines. In these instances, the author reported results for both.

Ms. Sime: Provided a summary of the proposed Administrative Rules [HANDOUT 3]. Language for the Administrative Rules are the same as what we were providing on September 14. The proposed rules point to the October 2018 Policy and HQT documents and they work together. Adaptive management review is considered an annual process, at a minimum. This allows for major and minor revisions. The rules apply to both credit and debit projects. Future rule making can occur in one of three ways. The rule itself may require a change or an entity could petition MSGOT for a change or MSGOT could elect to initiate a change. Nothing is set in stone with either document. A hearing date is set for November 9, 2018 for oral comments.

There are two key definitions. One being definition number 11, Major Version. Think of this as involving major updates. Changes the calculations or multipliers. Definition number 12, Minor Version. Includes routine updates such as swapping out old data layers for new ones. These rules speak to how we work through time to make changes and improvements.

Proposed rule 14.6.102 is specific to the grants program. This rule will have the Oversight team give greater priority to mitigation projects in a core area. MSGOT may still consider funding conservation activities in general habitat and connectivity areas where high resource values for sage grouse exists.

New Rule I, focuses on HQT itself and its designation. Major version would prompt new rule making to incorporate big changes. New Rule I, Number 3, Minor versions changes are things the Program would undertake on their own with MSGOT and public input.

New Rule I, Number 4, parts A–C include grandfathering. When a project goes through the process the version that was used stays with that project. Part B describes how a project involving a permit amendment, resulting in something more or different, there would be a formal amendment process and the current HQT would apply.

New Rule I, Number 5, would have the Program put information on the web site, so the public knows what the current HQT version is. Past versions would be archived.

New Rule I, Number 6, says credit providers must apply the current version of the tool. In summary the new rules set in place a process for updating and revising the tool and technical manual.
New Rule II Compensatory Mitigation System. These are similar concepts. The mitigation system policy document could undergo major revisions that trigger new rule making. Minor version changes could be made with MSGOT input and public input. The current version would be available on the web site. Anytime there is a process to amend a permit having new or different activity, the current version would apply.

New Rule II, Number 8 says that all parties are using the same rules.

New Rule II, Number 9 affirms language in the Stewardship act. There are three ways to create credits through preservation, restoration or reclamation. Using a conservation bank, participating in a habitat credit exchange, contributing to the Stewardship Account or funding a stand-alone mitigation action.

New Rule II, Number 10 establishes all mitigation plans will be consistent with policy guidance. During the 2017 session the act was amended to say in consideration of applicable USFWS sage grouse policies.

New Rule II, Number 11 is a point of clarification, research or educational endeavors don’t qualify for credit.

New Rule III, discusses the creation of a registry. MSGOT is required to track credits and this rule sets out how we do that. It requires each credit and debit have a unique number. Number 5 requires the registry to be available to the public.

Proposed New Rule IV, describes how MSGOT will track the use of Stewardship funds using a database and tracking system to allow for review of how the Stewardship Account is creating credits.

The public comment period for the proposed rules will be open until November 19th. Comments can be submitted online or at the hearing.

01:11:32 Director Tubbs: Clarified, in order to move forward with rule making, an affirmative vote would be required for the October documents.

01:11:51 Ms. Sime: With an affirmative, the Proposed Administrative Rules point to the October Policy and HQT documents, these then become the operative documents.

01:12:18 Director Tubbs: When asking for an action, it applies to the two underlying documents.

Public Comment

01:12:50 Director Tubbs: Asked for public comment.

01:12:56 Ms. Gretchen Boardman, Big Flat Electric Coop Malta.

01:17:00 Mr. Jack Hamlin, Ekalaka Electric Coop.

01:19:37 Mr. Rollie Miller, Dillon Electric Coop.

01:24:43 Mr. Mark Hayden, Missoula Electric Coop, Chairman of Electric Cooperative Legislative Committee.

01:25:46 Mr. Mark Grotgo, Ravalli Electric Coop.

01:27:07 Mr. Dave Kelsey, Huntly MT. Triangle Cooperative.
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01:29:50 Mr. John Burgmaier, Sun River Electric.

01:30:47 Mr. Dean Peterson, Rancher, Big Hole Vigilante Coop Dillon.

01:32:26 Mr. Clyde Robinson, Big Flat Electric Coop.

01:33:39 Mr. Allen Martinell Vigilante Electric Coop, Three Rivers.

01:35:21 Mr. Doug Hardy, Montana Elec Coops.

01:43:16 Mr. Tim Nixdorf, Triangle Communications.

01:50:12 Mr. Duane Klindworth, Big Flat Electric Coop.

01:54:35 Ms. Shelby DeMars, Association of Oil Gas and Coal Counties.

Discussion by MSGOT

01:57:57 Director Tubbs: Opened the meeting for MSGOT discussion.

01:58:24 Senator Lang: Asked how amendments can be made to the Rules. Made a motion to exempt 115 kV power lines and smaller from the cost of mitigation requirements; to be exempt as stated by Mr. Hardy. Also, reduce, until we have further study, because he feels the studies are inconclusive, tall structure buffer to 1.5-km in the HQT. Representative Knudsen seconded.

01:59:26 Director Tubbs: asked for MSGOT discussion.

01:59:28 Director Tooley: Asked if we are amending the rule.

01:59:30 Director Tubbs: For clarification, the motion was to exempt 115 kV lines from the mitigation requirement and reduce the buffer for tall structures to 1.5-km. These are in the underlying documents, not the rule.

Asking for MSGOT discussion.

A concern with straight exceptions is how we balance impacts to the bird not being offset. The business of no net loss; how do we make up the known impacts today if we accept this.

02:00:28 Senator Lang: Doesn’t believe the research is 100% accurate. Hasn’t read all of the literature but in one study the birds were captured and flew 8 km away. They didn’t return that year because they were scared away after being captured and collared. The premise is adaptive management. In a year from now we can look at this. The birds aren’t going to go extinct in the next 12 months. Let’s get down to the scale that is low that we know. We have lived with cell towers, power lines and rancher stewardship. We haven’t talked about predators. Believes avian predators aren’t the biggest issue. We probably have more problems with swift fox, coyotes and raccoons. These predators know the hen has to get off the nest in four days and they are going to rob it. That’s been proven by Moynahan who found 67% of predation in Phillips county was done during nesting. Those are the things we have with us so start there now. We can go back up in 12 months if we have to. Wants to credit Montana for having the birds we have. That’s the structure we have today, not the structure we’re trying to create. If we see fit we can go there. We need more study in Montana. We know the data is not topographical and not looked from a point of view of seeing what’s going on. We’ve seen the conversation and conflicts. There are conflicts. If we start low we can go up if we
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have to. That's were our policy of adaptive management in this case should be. Let's get some programs going and look it at a year from now and change it if we need to.

02:03:09 Director Tooley: Senator Lang put out 1.5-km. Asked where does that come from?

02:03:16 Senator Lang: That's the number for wind towers right now. Tall structures and cell towers are 3-km. Wind turbines are taller than cell towers so let's go there. They have blades. There's going to be a lot of discussion on that. I believe in renewables. I believe in the bird and the processes were doing but we have to put it into perspective. What is wrong with renewables today? There's no storage. Once we solve that it will be a bigger thing. In Montana, if you have five turbines, that is a pain in the butt for everybody. If you go to Judith Gap you have 150 turbines. That's a manageable situation. That's a good thing. Everybody involved knows what's coming out of that. If you have seen in a sock center, what happens, the people that are looking at this wind. They are looking at the wind up in Portland to come into Montana within five hours, so they can adjust power. It's taken a long time to get that stuff in there. This is a long process were working with. So let's start with now and start low and we can build it up if we have to. That's what the citizens have told us they want. Believes in the science and Mother Nature we have today. If the science tomorrow says different let's go for it.

02:05:08 Mr. Holmes: Reserved comments on the broader set of policy issues and focus on the motions before MSGOT right now. Important to take these as two separate issues. One is the proposal for the exemption; the other is considering a reduction in the indirect impacts to reflect the lowest values were seeing in the science. It is important to consider programmatic approaches for exemptions. There have been proposals brought forward by the communication industry who have has asked us to look at and do some evaluation. We need to do the same thing with the proposal that's been brought before MSGOT in considering single pole, 115 kV structures and factors that were brought forward for exemption. Does not feel we have done the due diligence to make a decision today but it does warrant further discussion.

The second piece of the proposal is where MSGOT has been asked to consider the lower range for indirect impacts. We have done the due diligence here. Doesn't know if all members have had a chance to review it but he feels satisfied the Program has done a thorough job, best in the country look at the science and documented this in a transparent way that everyone can understand exactly how they relied upon it. The proposal the Program has brought forward is to consider a mid-point. It is within the discretion of the body to consider adjustments from that midpoint. The midpoint as proposed is accurate in what is in the science.

Hearing the concerns around indirect impacts; the concerns are in part cost and part uncertainty in science. On the cost side, we have policy tools in place. Prefers to deal with cost on the policy side and not the impact and science side. Science is going to be the ledger by which we will be judged and it's important that we have credibility and a science-based decision. The specific proposal of 1.5-km, tiering off wind is a different set of science and doesn't have solid footing based on the review the Program did. There are lower bounds in the studies and upper bounds. Looking at the science one of the greater issues is raptor predation. There was an effort to look at nest facilitating and non-nest facilitating to create incentives to create better projects through the system. Prefer not to go back to a one size fits all approach. Would not be prepared to support a lower bound not grounded in science.

02:09:29 Ms. Ahlgren: Asked if topography is a layer in the model.

02:09:53 Director Tubbs: We need to stick to the motion and limit comments to Senator Lang's motion to accept all lines 115 kV single pole, and a 1.5-km buffer for tall structures.
02:10:20 Ms. Ahlgren: Would like to see this as two motions. Would be inclined to wait to do an exemption on the lines. Wants to see more study and thought on that. Asks if this is something MSGOT can do at a later date. As far as buffer goes, inclined to lower that but wonders if there is a median to the median. Appreciates the work that has gone into this, since we were building the runway as we take flight.

02:11:50 Ms. Sime: Speaking as a scientist with 20 plus years' experience and not the Program manager, having read the literature. The Stakeholders had very explicit discussion about the science and what universe should be used, and where we should get it. In the HQT document, beginning on page 25 it is described how we prioritized what science we would draw from and its importance by priority. The first was peer reviewed literature, dissertations specific to Montana, second are gray literature, agency management reports or datasets for studies in Montana. Third is peer reviewed literature, dissertations specific to the Rocky Mountain portion of the range, including Wyoming. Trying to avoid literature for the Great Basin because it is a different ecological system. Lastly, professional judgement.

In comparing the project types of wind, we specifically relied on Chad LeBeau. This is addressed in Appendix E. While he detected no decrease in habitat use in proximity to turbines, by hens, he did detect a decrease in nests out to 5-km. There is wind specific literature that suggests higher buffers than what the Program put forward.

Secondly, there is specific literature the Program brought forward, for tall structures communication towers and transmission towers. From the Program’s perspective the stakeholder’s intent has been honored in the way the Program applied the science. The Program has brought forward, in the most transparent way, a discussion of the conclusions from those papers.

02:14:52 Senator Lang: The reason he went to 1.5-km was because of the turbines. He thinks they are a bigger structure than cell towers or other tall structures. Asked Rusty Shaw what number did the stakeholders bring up for tall structures? Since we are putting a lot of faith in the stakeholders.

02:15:38 Mr. Rusty Shaw: Where we left it for tall structures was 3-km. The 1.5-km for wind turbines stayed the same from where we left it in the September version.

02:16:06 Director Tubbs: Asked of the electric cooperative representatives in the audience: how many coops have a proposed a powerline to be permitted before December 18th, in the Program’s system now? One, Big Flat, and one cell tower. Raised this because the stakes are extremely high, and MSGOT has another opportunity to review the policy on December 18th. Asked about electric lines proposed for 2019 construction. One in Carter County, and one in McCone County. Wanted to get a scope of what the Program is up against for implementing policy.

02:18:09 Mr. Holmes: Knows the issue of affordability and reliability were raised and there is some unpredictability of what comes forward. MSGOT may have to work quickly to provide certainty.

02:18:24 Director Tubbs: Wanted a see if there are a large number of projects or just a couple now. With a couple the Program can work with the proponent to work through the uncertainty in the Guidance Document today. Asked if you go from a lower kV to a higher kV line, do you need some state approval in some way? For basic maintenance you don’t even come to the Program. Only a new storm water permit would trigger a Program review. Asked Senator Lang to bifurcate the motion into two.
Director Tooley: Senator Lang has a motion that would change part of the HQT document. Would this be a major change or minor change?

Ms. Sime: This would be a major change.

Director Tubbs: If we adopt this change, it gives MSGOT the power to accept it.

Ms. Sime: These documents are constructed in observance of language in the Executive Order. Cautions to be mindful, if any of the decisions today result in a conflict with language in the EO from language in the documents. That may require additional study.

Director Tubbs: Asks if there wasn’t already a way to waive the mitigation requirements, in the Policy Document.

Ms. Sime: In the Policy Document there is a policy-based tool that allows MSGOT to waive the obligation and have MSGOT take on that obligation in whatever way seen fit. Such as matching credits from the Stewardship Account, Reserve Account or by some other mechanism. It’s described on page 74.

Mr. Holmes: In the past, this body has approved a categorical exemption for things like agricultural irrigation. Asks, for purposes of the rule, would a fiber optic or 115 kV transmission line project go through a similar process or would we have to restart the rule making process.

Ms. Sime: For the prior exemptions MSGOT has granted, they have fallen under the EO itself to exempt from review and compliance certain project types or activities.

Mr. Holmes: This body has the discretion to offer further exceptions within the confines of the EO. MSGOT has the opportunity to do that and incorporate it in subsequent rule making. MSGOT’s ability to make these changes moving forward can be considered in this process.

Director Tubbs: Expressed a preference that we exercise MSGOT’s authority in the policy world. Doesn’t like the 1.5-km buffer change. A basic request at MSGOT’s last meeting, was we should stick to the science. MSGOT can exercise authority in the policy.

In responding to public comment, we asked, and the Program performed, a detailed review of the literature. If MSGOT makes changes in the policy and the U.S. Fish and Wildlife Service criticizes those changes, MSGOT can respond to that. Opposed to MSGOT making arbitrary changes to the science. Asked public to continue to challenge the Program and bring forward new science if they have it.

Interested in the powerline exception because in some cases it may be just a change to an insulator and wouldn’t change the habitat for the bird. He would like the Program to have the opportunity to tell MSGOT if that is correct. MSGOT can probably carve out something that relies on the science and shows that we don’t have to have a debit for that type of project. A brand new 115 kV powerline across the landscape would have an effect and would result in a debit. I would like the Program to be able to weigh in, what literature says. The EO says service lines are excepted but that’s where it stops.

Senator Lang: Respects the fact we had stakeholders here for a couple of years. Satisfied with going with 3-km. Somewhere we need to start this, and we can change things in a year. Willing to change the 1.5-km to 3-km. When he looks at a cell tower and wind tower he doesn’t see a lot of difference from his personal view, not a scientific
These abbreviated summary minutes and the audio recording will become the official adopted minutes at the next Montana Sage Grouse Oversight Team meeting when they will be approved. Until then, they are considered a draft.

view. Need to bring the 115 kV down to the 69kV regulation and change the radius. Agreed to amend the motion to two. Just wants a vote on the thing.

02:30:00 Director Tubbs: This will be an important vote. Takes Senator Lang’s motions very seriously and wants to be thoughtful on this.

02:30:17 Ms. Sime: It would help if the motion could be restated.

02:30:37 Director Tubbs: Offered to restate the motion.

02:30:520 Senator Lang: Carolyn can make the motion, just go ahead and make it 3-km on tall structures.

02:30:58 Director Tubbs: One thing he wanted to know, is the exception for transmission and the indirect buffer for tall structure.

02:31:06 Senator Lang: Tall structures is 3-km on the buffer. The exception is for transmission lines. Take 115 kV down to 69 kV and go to a 3-km, 4-km area there.

02:31:23 Director Tubbs: Now you just added stuff.

02:31:25 Senator Lang: Stated, ok, where are we at.

02:31:34 Director Tubbs: Called for a break.

Break

02:31:35 Resume after the break, Director Tubbs proposed an amendment to the motion. On the issue of the 115 kV or possibly 116 kV line exception, asked Senator Lang to withdraw this as a motion and then direct MSGOT to analyze that as an exception as MSGOT has done before. First, the exception gets requested, then MSGOT asks the Program staff to analyze and then come back before MSGOT with a recommendation.

As for the buffer, Director Tubbs said he may violate his standard and go into the science. For the buffer there is a range in the science. Cautions there may new science that could inform a year from now. Could accept as a motion that MSGOT reduce the criteria for tall structures to 6-km and 3-km for those structures that are nest preventing. It would be 6km if you don’t take additional measures for nest preventing. Then for power, reducing the greater than 116 kV or 115 kV to 6-km and for lines below that to 3-km. Thinks we could get support for that.

02:34:45 Senator Lang: Withdrew his motions.

02:34:55 Mr. Holmes: Made a motion to make amendments the HQT document, to provide buffer for tall structure and for transmission lines that distinguishes between nest facilitating and non-nest facilitating at 6km. In accordance with the existing rubric. Right now, there is 6-km and 3-km for nest facilitating and non-nest facilitating for tall structures. Powerlines are broken out at different capacity levels. In lieu of the 8-km and 6-km that are proposed in the draft the motion is to adjust those to 6-km and 3-km. Seconded by Senator Lang.

02:35:57 Director Tubbs: In the HQT, on page 126, referring to the flowchart, distance from leks, less than 4 miles, would be 3-km and distance from lek greater than four miles would go to 6-km. Then on page 139, three different sizes; change, greater than 115 kV km to 6-km and for 69 kV lines 6-km to 3-km.
02:39:41 Representative Knudsen: Asked if someone could restate motion.

02:39:57 Mr. Holmes: The motion is to keep the existing framework but modify the indirect buffers such that the current 8km distance is now 6-km and the 6-km buffer is now a 3-km buffer. There would be no other changes to the way they are calculated.

02:40:23 Director Tubbs: Asked for additional MSGOT discussion. Hearing none asked for a vote. All voted in favor.

02:40:38 Director Tubbs: Asked for additional questions from MSGOT for the underlying documents regarding the HQT.

02:41:50 Ms. Ahlgren: Had questions about how topography was addressed but now understands that the Stakeholders felt it would be too complicated to include. The Program does address it on a case-by-case basis during project review.

02:42:33 Director Tubbs: Science is a problem there too because we don’t have good science around topography.

02:43:47 Ms. Ahlgren: Asked if a payment comes to the Program, is it in the document that it needs to be spent within three years in the same service area.

02:43:14 Ms. Sime: It is in the document, just not in the pages provided at the meeting today.

02:43:28 Ms. Ahlgren: Knew that MSGOT had talked about it and thinks it’s a good thing.

02:43:45 Director Tubbs: Asked for additional questions.

02:43:58 Mr. Holmes: One issue raised but not addressed is certainty and predictability in the program going forward. Responsibility of this body to balance economic needs and conservation needs on the landscape. Particularly when it comes to rural and underserved areas and the need for infrastructure. Those details were written in the EO and codified in the waivers and exceptions and other policy tools. Pleased to see we've affirmed that it is this body’s job to consider those issues and act with a certain level of reasonableness as we deal with these issues moving forward. Realizes that landowners, through good stewardship provide the habitat. There is a need for greater predictability and certainty. We can work through these issues with some of the projects we have. Encourage proponents to work with the Program as we work through the unpredictability moving forward. Acknowledged the concerns were heard.

02:46:19 Director Tubbs: Asking for a motion on the two underlying documents as a package. Reminded MSGOT timing is such that only an affirmative will allow the Program to begin. EQC Chair spoke to the Program at their last meeting stating, he supported the Program, but “you need to bring this home and bring it home now”. With the changes made to the proposed HQT, Director Tubbs requested a motion to adopt the two underlying documents.

02:47:40 Director Tooley: Moved that MSGOT approve the two underlying documents, Version 1.0 as amended today. Ms. Ahlgren second the motion.

02:47:54 Director Tubbs: Asked for MSGOT discussion. Hearing none, asked for a vote. All voted in favor with exception of Representative Knudson who voted no. Motion passes.

02:48:25 Director Tubbs: Asked for motion to approve issuance of the draft rule for public comment.
Mr. Holmes: Made a motion to move forward with the draft rule. Director Tooley second. All in favor, except Representative Knudson who voted no.

Public Comment on Other Matters

Director Tubbs: Asked for public comment on matters not on the agenda. None

Adjournment

Representative Knudson moved to adjourn. Motion passed unanimously. Meeting adjourned.

Chair for this meeting:

/s/

Director John Tubbs
A. BACKGROUND

1. Through their sovereign and statutory powers, states have primary management authority over all fish and wildlife within their borders. Following decades of work by staff and contractors, states have developed extensive science, expertise, and knowledge of species within their borders.

2. Governors bear responsibility for managing state interests, authorities and property rights within state borders – including fish and wildlife – and oversee state agencies charged with properly managing wildlife, habitat and related resources within their states.

3. States are the primary recipients of economic benefits associated with healthy species and ecosystems. At the same time, the economic costs of compliance with federal environmental regulations can fall disproportionately on western states and local communities. States recognize the importance of economic development and acknowledge the challenges of managing the risk of impacts to fish and wildlife populations and habitat while advancing economic development.

4. Compensatory mitigation plays an important role in fish and wildlife management and conservation, and states rely on its use in developing and executing species conservation strategies. Compensatory mitigation strategies employed by states include, but are not limited to, habitat protection, habitat restoration, establishment, enhancement, or conservation activities and advance mitigation where conservation benefits are secured before project impacts occur.

5. The mitigation hierarchy is a commonly referenced and widely utilized strategy in determining compensatory mitigation requirements for projects. The mitigation hierarchy consists of first avoiding adverse impacts to fish and wildlife populations and habitat where practicable, then minimizing adverse impacts where they cannot be avoided including on-site restoration where possible. The next step is employing compensatory mitigation measures to replace resources or offset direct and indirect adverse impacts that remain following avoidance and minimization. This practice is memorialized under the Council of Environmental Quality's implementing regulations and other federal policy and guidance. Some states have identified and utilized a final step in the mitigation hierarchy, monitoring project impacts and mitigation actions and taking appropriate corrective measures to achieve the identified goal.

6. While states exercise primary management authority over fish and wildlife within their borders, habitat for fish and wildlife often spans a patchwork of land ownership types, complicating state efforts to manage and conserve species under their management jurisdiction. This is particularly challenging in western states, where federal ownership constitutes a generally higher percentage of overall land ownership.

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1 40 CFR 1508.20
B. GOVERNORS’ POLICY STATEMENT

1. States have the responsibility to establish appropriate statutes, regulations, policies and programs to manage fish and wildlife within their borders. This responsibility extends to the development of compensatory mitigation standards and implementation of compensatory mitigation for species under their management purview.

2. Compensatory mitigation approaches vary from state to state, but they are designed to fully offset residual impacts to habitat function and value. Governors recognize that habitat functionality and value are the primary metric by which mitigation outcomes are measured. Compensatory mitigation efforts must be sufficient to fully offset direct and indirect residual impacts to habitat function at the appropriate scale necessary to meet conservation goals.

3. Where state mitigation programs or standards are in place, consistency with existing state policy should be the primary guiding principle for a federal agency’s development or implementation of compensatory mitigation on lands within their management authority or jurisdiction.

4. Whether or not state mitigation programs or standards are in place, Western Governors urge federal agencies to coordinate with states in the development of compensatory mitigation programs and policies. Where state compensatory mitigation programs or standards exist, federal agencies should adopt and implement state-supported compensatory mitigation programs and policies. Consistency between federal mitigation standards and those in state-supported programs allows wildlife managers, state and federal regulators, and developers to use a consistent compensatory mitigation program across differing land ownership within a state. States will engage federal agencies in the development or amendment of compensatory mitigation programs and policies.

5. Western Governors recognize that the diversity of conceivable species, habitat, and project specific circumstances make quantifying measures, with clearly defined goals for compensatory mitigation, challenging for both state and federal agencies. Governors urge federal agencies, in consultation with states, to provide consistency in the use of and improve assessment criteria for mitigation goals. Governors believe mitigation goals should establish clear expectations backed by effective assessment criteria.

6. Western Governors recognize that mitigation of development impacts to habitat or natural resources must account for a level of risk and uncertainty that a particular compensatory mitigation action may fail to adequately offset adverse impacts to fish, wildlife and habitat. Federal agencies should acknowledge a variety of tools and measures for incorporating risk and uncertainty based on the diverse experience of states in designing and implementing compensatory mitigation programs.

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2 Habitat value is an assessment of the affected fish and wildlife habitat based on three attributes; scarcity, suitability and importance. Importance is the relative significance of the affected habitat, compared to other examples of a similar habitat type in a landscape context.
7. Governors believe that federal mitigation policies should be developed in coordination with Governors, and the state agency officials they designate, to achieve the following objectives:

- Provide measurable and documentable habitat and conservation values, services and functions that are at least equal to the lost or degraded values, services and functions caused by the impact.

- Incorporate measures to account for a level of risk that a particular compensatory mitigation action may fail or not achieve its stated objectives, and uncertainty about the level and duration of estimated impacts.

- Compensatory mitigation projects should be sited and designed strategically to support the most effective conservation or restoration projects; the effectiveness of mitigation actions should be based on the best available science.

- Provide benefits that are durable and in place for at least the duration of the residual adverse impacts.

- Encourage the application of compensatory mitigation prior to the impact occurring to ensure no lag time occurs between impacts and offsets.

- Offer transparency and certainty to developers, regulators, and the public to the extent feasible. This necessitates early and substantive consultation with states and consistency with state-designed compensatory mitigation standards where they exist.

C. GOVERNORS’ MANAGEMENT DIRECTIVE

1. The Governors direct WGA staff to work with Congressional committees of jurisdiction, the Executive Branch, and other entities, where appropriate, to achieve the objectives of this resolution.

2. Furthermore, the Governors direct WGA staff to consult with the Staff Advisory Council regarding its efforts to realize the objectives of this resolution and to keep the Governors apprised of its progress in this regard.

Western Governors enact new policy resolutions and amend existing resolutions on a bi-annual basis. Please consult westgov.org/resolutions for the most current copy of a resolution and a list of all current WGA policy resolutions.
Now in its third year, the Montana Sage Grouse Habitat Conservation Program is fully implemented and provides an effective, highly efficient process for balancing conservation and Montana’s economic life. Landowners, developers and businesses can control many of the impacts associated with a development activity through proactive planning. And the program offers flexibility when needed to address the unique circumstances of a project.
Montana Greater Sage-grouse Population Report

September 4, 2018

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

Population Estimates

Montana Fish, Wildlife and Parks (FWP) worked with Dr. Paul Lukacs, University of Montana, to estimate sage-grouse population numbers based on counts of displaying males at leks using N-mixture models (Fig. 1, Table 1). This modeling approach is a robust analytical method for estimating population size and trend over time for species like sage-grouse that congregate at discrete breeding sites (McCaffrey et al. 2016). Although FWP maintains a database of male counts at leks that date back to 1952, only data from 2002 onward could be used with this modeling approach.

Some Caveats...

All models are an approximation and rely on certain assumptions. The assumptions that were made in the development of these population estimates include:

- FWP does not count females but can estimate the number of females based on an assumed sex ratio. We used an average ratio of 2.45:1 females to males based on published literature (Taylor et al. 2011). True population numbers may be larger or smaller than estimated depending upon the actual ratio in each year.
- Only data from known leks were used in the calculations. This could lead to under-estimating the true population if there were a sizeable number of unknown leks.
- Models assumed each male visited one lek. This could lead to over-estimating the true population if individual males visited and were counted at multiple leks.
- Models assumed each male was detected independently. This could lead to under-estimating the true population if detection of some individuals was dependent upon detection of other individuals.

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

Sage-grouse population numbers oscillate over a period of 8 – 10 years across large scales (Fedy and Doherty 2011). The lower numbers estimated for Montana’s population in the years 2008 – 2014 relative to preceding or subsequent years are likely due, in part, to natural population fluctuations. It is not appropriate to make decisions based on estimates from a single or few years without putting them in the context of a longer timeframe.

There are other analytical models that have utility for estimating population size and trends, such as Integrated Population Models. However, these models require additional demographic information, such as recruitment data, that are currently unavailable statewide. FWP may explore additional modeling techniques in the future as new data become available.
Figure 1. Graphical representation of Greater Sage-grouse population estimates and associated uncertainty from $N$-mixture models in Montana, 2002 – 2018. In general terms, confidence intervals are the range of values that describe the uncertainty around the population estimate.

Table 1. Numerical estimates of Greater Sage-grouse population numbers and associated uncertainty from $N$-mixture models in Montana, 2002-2018.

<table>
<thead>
<tr>
<th>Year</th>
<th>Population Estimate</th>
<th>Standard Error</th>
<th>Confidence Interval</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
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<tbody>
<tr>
<td>2002</td>
<td>77621</td>
<td>8981</td>
<td>60019</td>
<td>95224</td>
<td></td>
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<tr>
<td>2003</td>
<td>84770</td>
<td>9746</td>
<td>65668</td>
<td>103873</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>78180</td>
<td>9063</td>
<td>60417</td>
<td>95943</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>77422</td>
<td>8893</td>
<td>59992</td>
<td>94852</td>
<td></td>
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<tr>
<td>2006</td>
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<td>81280</td>
<td>9298</td>
<td>63055</td>
<td>99505</td>
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<td>2008</td>
<td>57790</td>
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<td>38504</td>
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<td>6120</td>
<td>41342</td>
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<tr>
<td>2016</td>
<td>81527</td>
<td>9371</td>
<td>63160</td>
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<td>2017</td>
<td>74581</td>
<td>8545</td>
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</tr>
<tr>
<td>2018</td>
<td>61251</td>
<td>7098</td>
<td>47338</td>
<td>75164</td>
<td></td>
</tr>
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</table>
Number of Leks

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

Table 2. Number of known Greater Sage-grouse leks in Montana by classification status, 2002 – 2018.*

<table>
<thead>
<tr>
<th>Year</th>
<th>Confirmed Active</th>
<th>Confirmed Inactive</th>
<th>Confirmed Extirpated</th>
<th>Provisionally Active^</th>
<th>Never Confirmed Active</th>
<th>Unconfirmed</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>548</td>
<td>79</td>
<td>17</td>
<td>.</td>
<td>29</td>
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<td>17</td>
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<td>88</td>
<td>19</td>
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<td>675</td>
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<td>19</td>
<td>.</td>
<td>64</td>
<td>545</td>
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<td>96</td>
<td>19</td>
<td>.</td>
<td>67</td>
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<td>753</td>
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<td>20</td>
<td>.</td>
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<td>2011</td>
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<td>50</td>
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<td>150</td>
<td>383</td>
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<tr>
<td>2012</td>
<td>979</td>
<td>133</td>
<td>50</td>
<td>.</td>
<td>180</td>
<td>353</td>
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<tr>
<td>2013</td>
<td>978</td>
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<td>59</td>
<td>.</td>
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<td>985</td>
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<td>.</td>
<td>227</td>
<td>293</td>
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<td>3</td>
<td>259</td>
<td>253</td>
<td>1806</td>
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</tbody>
</table>

*FWP’s database is dynamic and the status of a lek can change retroactively based on new information entered at any time. Reviewers may notice small changes in classification numbers from what was reported in the 2017 report. These are not errors; rather they are the most up-to-date numbers as of this report.

^New status created in 2018. See definition below.
Lek Status Definitions

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

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

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

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

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

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

References
Fedy, B.C. and K.E. Doherty. 2010. Population cycles are highly correlated over long time series and large spatial scales in two unrelated species: greater sage-grouse and cottontail rabbits. Oecologia; DOI 10.1007/s00442-010-1768-0
Introduction

• Sage-grouse population monitoring
  – Traditional emphasis
    • Survey and inventory
    • Maintain biological records
    • Make hunting season setting decisions
  – Emerging needs
    • Help inform land use decisions (e.g., BLM, FS) and recommendations (e.g., Program)
    • Help inform policy (e.g., MSGOT)
Monitoring Partners

- Private landowners
- Bureau of Land Management
- Natural Resource Conservation Service
- Consultants
- Not for profit organizations and programs, e.g., Adopt-a-lek
- Universities
- Volunteers
General methods

- Lek – display grounds where males congregate in spring
- Count number of displaying males
- Count between ½ hour before sunrise to 1 hour after sunrise
- Single to multiple visits within a season
- Use season male high count as index
Survey Records

- First record – 1899
- More regular reporting - 1952
- Standardized reporting - 1980
- Surveys standardized – 1990’s
- Database improvements and additions - ongoing
Adaptive Harvest Management

- Developed to help assist with season setting decisions
  - Initially liberal vs conservative bag limits
  - In recent years thresholds for closing the season
- Subset of leks with long history of data
- Visit each AHM lek 3 times/season
Adaptive Harvest Management

Average male attendance at AHM leks
1980 - 2018

*Index to population trends*
Population Report
per MCA 87-1-201(1)(11)

- Annual sage-grouse population estimates
- Dr. Paul Lukacs at University of Montana
- All male count data since 2002 (not just AHM leks or high counts)
- Estimates based on assumptions
  - Male to female ratio of 1:2.45
  - Assumes all leks are known
  - Assumes each male visited only one lek/season
  - Assumes each male was detected independently from other males
Population Estimates 2002-2018

Estimated number of sage-grouse

YEAR

95% Confidence Interval

Average Estimate
Comparison

AHM trends

Population estimate

YEAR

95% Confidence Interval

Average Estimate
Future analysis

• To help answer conservation status questions
• To provide MSGOT and BLM with reporting and management information
• Trend analysis:
  – Core versus non-core
  – Within core areas
  – Within WAFWA management zone & FWP harvest management zone
  – Within BLM Biologically Significant Units
Lek Status

![Diagram showing the status of leks with UC, PA, NCA, CA, CI, and CE categories.](image-url)
MSGOT and BLM Needs

- Data being used in land use decisions
- New lek status – provisionally active
- Regular updates to agency partners
  - Location
  - Counts
  - Local consultation, when requested
Core Area Designation

• Broad criteria
  – Areas of greatest abundance
  – Areas important for connectivity beyond MT

• Purpose
  – Strategically target conservation and protection
  – Avoid, manage, and mitigate development
Core Area Designation
Core Areas

- Completed 2009, 2013
- Based on:
  - Density of displaying males
  - Telemetry data
  - Habitat suitability
- Include:
  - 68% of confirmed active leks in Montana
  - 75% of displaying males
  - 28% of sage-grouse habitat
Moving Forward

• Continued coordination with WAFWA on range-wide management issues:
  – Range-wide population analysis
  – Standardization of terms and methods
  – Translocation guidelines and projects
  – Drone recommendations
  – USFWS Conservation Review

• Continue to adapt to address emerging needs of MSGOT, BLM, and other partners
Thank you!
In Brief: The Rangeland Analysis Platform (RAP) is a free online tool that empowers landowners and resource managers to track vegetation through time, equipping people with the information they need to improve America's grazing lands.

Plants provide the foundation for profitable livestock production, sustainable wildlife habitat, healthy soils, and clean water. Powered by Google Earth Engine, RAP merges machine learning and cloud-based computing with remote sensing and field data to provide the first-ever annual vegetation cover maps of rangeland vegetation on U.S. grazing lands.

This easy-to-use mapping technology allows people to view trends in rangeland resources through an unprecedented blend of space (from the Great Plains to the Pacific Ocean), time (1984 to present) and scale (at the ranch, county, or watershed level).

RAP helps people develop strategies that improve rangeland productivity and sustainability. Designed to be combined with local knowledge, RAP helps users analyze the outcomes of land management actions. For instance, it can help: visualize the impacts of drought on perennial forage, identify where to reduce woody encroachment, or evaluate the effectiveness of weed control treatments.
RAP In Action: Across the West, invasive woody plants are expanding due to the lack of fire. Forage for livestock and habitat for grassland-dependent birds is reduced as trees take over rangeland. Ranchers and partners are implementing conservation practices to restore range health (photo right). The graph, produced by RAP, illustrates how vegetation responded to a prescribed fire in 2015, which was designed to improve forage for livestock and wildlife: average tree cover decreased from 18% to 2% post-fire, making more room for perennial grasses and forbs.

What is RAP?
The Rangeland Analysis Platform is an interactive web application designed to assist in managing and monitoring America’s valuable rangelands. This free tool allows users to instantaneously visualize and estimate the percent vegetation cover of annual grasses and forbs, perennial grasses and forbs, shrubs, trees, and bare ground.

Why is it useful?
The vast grazing lands that span the western states are irreplaceable assets that produce food, support rural economies, generate recreation revenues, and sustain wildlife. Managing land for livestock and wildlife requires understanding how vegetation responds to human- or natural-caused changes through time, such as drought, irrigation, grazing, or wildfire.

RAP is a revolutionary new way to monitor rangelands, which will help landowners and managers to keep them profitable and productive for future generations. Information available through RAP can help sustain valuable water and soil resources, improve forage for livestock and wildlife, or manage weed treatments and post-wildfire rehabilitation projects.

Who can use it?
This free tool was developed for landowners, managers, and conservationists to quickly and easily access information to guide land management decisions. RAP is designed to be used in conjunction with on-the-ground data and site-specific knowledge to plan management actions that improve agricultural operations, enhance rangelands, or boost wildlife habitat.

Why is it innovative?
The rise of cloud computing and machine learning technology allows RAP to instantaneously monitor rangelands across time and space. By combining field data and massive satellite imagery archives, RAP is the first all-encompassing view of millions of acres of rangelands. The online app monitors rangeland vegetation from 1984 to present at any scale, from ranches to regions. That’s nearly four decades of detailed data available as fast as the click of a mouse!

How does it work?
RAP combines over 30,000 field plots from the U.S. Department of Agriculture’s NRCS National Resources Inventory (NRI) and the Bureau of Land Management’s Assessment, Inventory, and Monitoring (AIM) datasets with the historical Landsat satellite record, gridded meteorology, and abiotic land surface data (e.g., elevation, soils). Utilizing the computational power of Google Earth Engine, RAP produces charts and maps across the western half of the U.S. at 30x30 meter resolution. This means that each pixel is slightly larger than a baseball diamond.

Who developed it?
RAP was developed by the University of Montana in collaboration with the USDA’s Natural Resources Conservation Service and the Department of Interior’s Bureau of Land Management.
Rangeland Analysis Platform

Introducing a free, online tool to help manage and monitor western rangelands

Matthew O. Jones, Remote Sensing Ecologist, University of Montana, Missoula, MT
Brady Allred, Rangeland Ecologist, University of Montana, Missoula, MT

www.rangelands.app
Plants provide the foundation for productive lands, abundant wildlife habitat, healthy soils, and clean water.
When you Google “rangeland monitoring”....
Field sampling is essential but...how can we monitor an allotment or pasture?
Field sampling is essential but...how can we monitor a region?
Field sampling is essential but...how can we monitor statewide?
Field sampling is essential but...how can we monitor through time?
Landsat – an exceptional history of earth observation

- 438 miles above Earth
- 4.7 miles/second
- 1 orbit = 99 minutes
- 115 mile wide swath
- 16 Days = entire Earth surface coverage
Innovation in Rangeland Monitoring

### Field Measurements
- **Line-Point Intercept Quadrats**

### Remote Sensing Estimates
- **NLCD Land Cover 2011**

<table>
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<tr>
<td>Temporal Coverage: Historic to Present</td>
<td>✓</td>
</tr>
<tr>
<td>Land Surface Heterogeneity</td>
<td>✓</td>
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</tbody>
</table>

| Geographic Coverage | ✗ |
| Temporal Coverage | ✗ |
| Land Surface Heterogeneity | ✓ |
Methods

Field Plots

31,000+ NRI & AIM plots from 2004-2016 converted to percent cover of:

- Annual Forbs & Grasses,
- Perennial Forbs & Grasses,
- Shrubs, Bare Ground, Trees

Predictor Variables

- Soils
- Elevation
- Climate Data
- Landsat Reflectance
- Vegetation Indices
- ... 215 layers

Machine Learning and Cloud Computing

- Train predictive model
- Build data cubes from 1984-2017
- Predict % cover at 30m from 1984-2017 of:

- Annual Forbs & Grasses,
- Perennial Forbs & Grasses,
- Shrubs, Bare Ground, Trees

Table:

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<thead>
<tr>
<th>Geographic Coverage at 30m</th>
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<td>Land Surface Heterogeneity</td>
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</tr>
<tr>
<td>Temporal Coverage Historic to Present*</td>
<td>✓</td>
</tr>
</tbody>
</table>

*Maps produced immediately at year’s end
Field Plots + Landsat + Cloud-Computing = Innovation

www.rangelands.app
Field Plots + Landsat + Cloud-Computing = Innovation

The Rangeland Analysis Platform (RAP)
Innovation in rangeland monitoring: annual, 30 m, plant functional type percent cover maps for U.S. rangelands, 1984–2017

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9 Eastern Oregon Agricultural Research Center, USDA Agricultural Research Service, 67826-A Hwy 205, Burns, Oregon 97720 USA
10 The Nature Conservancy, 67826-A Hwy 205, Burns, Oregon 97720 USA
11 Eastern Oregon Agriculture Research Center, Oregon State University, 372 S 10th Street, Union, Oregon 97883 USA


Abstract. Innovations in machine learning and cloud-based computing were merged with historical remote sensing and field data to provide the first moderate resolution, annual, percent cover maps of plant functional types across rangeland ecosystems to effectively and efficiently respond to pressing challenges facing conservation of biodiversity and ecosystem services. We utilized the historical Landsat satellite record, gridded meteorology, abiotic land surface data, and over 30,000 field plots within a Random Forests model to predict per-pixel percent cover of annual forbs and grasses, perennial forbs and grasses, shrubs, and bare ground over the western United States from 1984 to 2017. Results were validated using three independent collections of plot-level measurements, and resulting maps display land cover variation in response to changes in climate, disturbance, and management. The maps, which will be updated annually at the end of each year, provide exciting opportunities to expand and improve rangeland conservation, monitoring, and management. The data open new doors for scientific investigation at an unprecedented blend of temporal fidelity, spatial resolution, and geographic scale.
Applications #1 – Grazing and Rangeland Health

Perennial Forbs & Grasses
Annual Forbs & Grasses
Shrubs
Bare Ground
Precipitation

Photos: BLM. Billings, MT

2002 Average = 39%
2002 Average = 20%
2010 Average = 58%
2010 Average = 9%
Applications #2 – Wildfire and Cheatgrass

Photo: The Oregonian

Percent Annual Herbaceous 2017

Herbicide Treatment Areas
- Applied 2015
- Applied 2016
Applications #3 – Prescribed Fire & Woody Plant Expansion

Perennial Forbs & Grasses

2014 Average Cover = 18%
2016 Average Cover = 2%

Percent Perennial Cover

Perennial Forbs & Grasses
Tree
Treatment Year

Percent Tree Cover

0 5 10 15 20 25 30

Photo: Tri-State Livestock News
RAP is another tool for your toolbox

⚠️ This tool **DOES NOT** replace boots on the ground.

The maps and data provided by RAP are intended to be used alongside local knowledge and site-specific data.

⚠️ This tool **IS NOT** for precision monitoring and management.

The RAP should *not be used in isolation* to quantify rangeland resources, to define thresholds, or to evaluate the efficacy of management practices or treatments.

✔️ RAP provides a historical and spatially complete view of your area.

✔️ Use RAP to examine *land cover trends through time*.

✔️ Use RAP to *assess land cover variability* in your area of interest.

✔️ Use RAP alongside local knowledge and data to inform conservation and management action plans.
RAP is your tool for monitoring rangelands across space and time as never before.

rangelands.app
**SUMMARY:**

The 2015 Montana Legislature passed the Montana Greater Sage-Grouse Stewardship Act (Act). Executive Order 12-2015 complements the Act. Taken together, they establish that Montana will observe the mitigation hierarchy (avoidance, minimization, reclamation, and compensation) for activities requiring agency review, approval, or authorization in habitats designated as Core Areas, General Habitat, and Connectivity Area.

The Act specifically sets forth that: (1) project developers can offset the loss of resource functions or values at an impact or project site through compensatory mitigation to incentivize voluntary conservation measures for sage grouse habitat and populations; (2) a habitat quantification tool (HQT) will be designated to evaluate vegetation and environmental conditions related to the quality and quantity of sage grouse habitat and to calculate the value of credits and debits when compensatory mitigation is required; (3) there shall be a method to track and maintain the number of credits and debits available and used; and (4) there shall be a method to administer review and monitoring of projects funded through the Stewardship Account. MSGOT has authority to adopt administrative rules to implement these provisions.

**MITIGATION: HQT DESIGNATION, HQT TECHNICAL MANUAL, AND POLICY GUIDANCE DOCUMENT**

On October 4, 2018, the Oversight Team approved the Montana Mitigation System Habitat Quantification Tool, Version 1.0, October 2018 and the Montana Mitigation System Policy Guidance Document, Version 1.0, October 2018, respectively, and as amended. That approval culminated an extensive collaborative stakeholder process undertaken between September 2016 and December 2017. Multiple opportunities for comment and discussion were provided both during the stakeholder process and thereafter. The mitigation system documents have undergone independent scientific peer review. The Oversight Team reviewed drafts, written public comments, and took oral public comments during their public meetings December 15, 2017, January 30, 2018, May 4, 2018, September 14, 2018, and again on October 4, 2018.

The October 2018 v1.0 mitigation system documents are the current and operative documents that would be implemented by MSGOT, the Program, and all participants in the mitigation system under the administrative rules proposed for final adoption. The rules describe the process MSGOT, the Program and mitigation participants would undertake to revise and update the mitigation documents. The rules clearly contemplate that through adaptive management there will be revisions and that those revisions are undertaken through publicly-noticed MSGOT meetings and transparent deliberations. The rules should be considered in tandem with the adaptive management sections in each document, respectively.

**PROPOSED RULES OR AMENDMENTS**

MSGOT first reviewed draft proposed administrative rules in May of 2018 and again in September 2018. Executive action to approve moving forward with administrative rulemaking was taken on October 4, 2018. The proposed rules were published in the Montana Administrative Register on October 19, 2018, and this opened the public comment period for the proposed rules. A public hearing was held in Helena on Nov. 9, 2018. Written public comment was accepted through the postal mail or by fax. The public could also submit comments through the public comment web application.
tool located on the MSGOT webpage at https://sagegrouse.mt.gov/msgot.html. The public comment period on the proposed rules closed Nov. 19, 2018 at 11:59 p.m.

Approximately five people attended the public hearing. Two individuals offered oral and five written comment letters were received. The adoption notice includes the substantive comments received and responses to public comments. Some changes were made to the rules as originally proposed. These are also shown in the adoption notice. Changes were made in response to public comment, to correct typographical errors, or to improve clarity.

After an exhaustive public process to develop both the technical and policy aspects of the mitigation system, MSGOT is encouraged to adopt these rules. The Oversight Team has also been encouraged by the Montana Environmental Quality Council to finalize administrative rules prior to the start of the Adaptive management sections of each of the underlying document and MSGOT's commitment to transparency will assure that issues can be timely addressed and corrected, while at the same time as enabling Montana to balance development with conservation and achieve its goal of no net loss of habitat.

Further delays will result in more habitat loss and fragmentation through unmitigated development. A status assessment of Greater Sage-Grouse is still scheduled for 2020. The State's documented track record of implementing its conservation strategy, population status and trends, and changes in habitat must all be reported and considered.

**NEXT STEPS**

If MSGOT votes in favor of final adoption, these rules would be submitted to the Montana Secretary of State’s Office for publication in the Montana Administrative Register at the earliest opportunity in 2019. The rules would become effective upon publication. This is expected to be either January 11, 2019 or January 25, 2019.

**PROGRAM RECOMMENDATION:**
The Program Manager recommends MSGOT take executive action to adopt as final the proposed administrative rules.
BEFORE THE GOVERNOR'S OFFICE
OF THE STATE OF MONTANA

In the matter of the amendment of
ARM 14.6.101 and 14.6.102 and the
adoption of New Rules I, II, III, and
IV, pertaining to implementation of
the Greater Sage-Grouse
Stewardship Act

) NOTICE OF AMENDMENT AND
) ADOPTION

TO: All Concerned Persons

1. On October 19, 2018, the Sage Grouse Habitat Conservation Program on behalf of the Governor's Office published MAR Notice No. 14-5 pertaining to the public hearing on proposed amendment and adoption of the above-stated rules at page 1997 of the 2018 Montana Administrative Register, Issue Number 20. On November 9, 2018, a public hearing was held in Helena, MT. Public comment was accepted until November 19, 2018. Five written comment letters were received, and two oral comments were received during the hearing.

2. The Governor's Office has amended the following rules as proposed: 14.6.101(3) - (12); 14.6.102(9).

3. The Governor's Office has adopted New Rules I - IV as proposed, but with the following changes from the original proposal, new matter underlined, deleted matter interlined:

NEW RULE I (14.6.103) HABITAT QUANTIFICATION TOOL DESIGNATION

(1) and (2) remain as proposed.

(3) Minor versions of the Montana Mitigation System Habitat Quantification Tool Technical Manual for Greater Sage-Grouse shall be recorded by the program after a publicly announced meeting of the Montana Sage Grouse Oversight Team and after accepting public comment.

(4) Once the current Montana Mitigation System HQT has been applied to calculate the functional acres gained on credits of a proposed mitigation site, or the functional acres lost on debits of a proposed development site; the program has completed its review; and the project developer obtains the necessary state or federal permits, any subsequent versions of the HQT will not apply to the project except as provided in (b).

(a) Once the HQT has been applied to calculate the number of functional acres gained or lost credits or debits for a project and MSGOT has approved, the number of calculated functional acres gained or lost credits created or debits will not be changed without written approval from every party to the mitigation transaction for the project all affected parties, including, but not limited to:

(i) MSGOT;
(ii) the project developer; and
(iii) the credit provider;

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(iv) any affected third parties.
(b) Permit amendments will be subject to the current version of the HQT to calculate functional acres lost debits resulting from new activities associated with the amendment.
(c) remains as proposed.
(5) The current version of the MSGOT designated Montana Mitigation System Habitat Quantification Tool Technical Manual for Greater Sage-Grouse is the version made available to the public on the program’s web site. Past versions of HQT and technical manual will be blocked from further use except as allowed in (4)(a) and preserved in archive by the program.
(6) MSGOT or any other third party must apply the current version of the Montana Mitigation System Habitat Quantification Tool Technical Manual for Greater Sage-Grouse to calculate functional acres gained or lost credits and debits as provided on the program’s website and applied by the program to perform the calculations for the following:
(a) through (d) remain as proposed.
(e) calculating functional acres gained credits created by funding from the Sage-Grouse Stewardship Account; or
(f) calculating functional acres gained credits through stand-alone efforts to create mitigation credit sites.

NEW RULE II (14.6.104) COMPENSATORY MITIGATION SYSTEM
(1) The mitigation sequence is applicable to all activities within sage grouse core areas, general habitat and connectivity habitat subject to agency review, approval, or authorization including temporary impacts that are later rectified through reclamation and restoration activities, unless exempted by MSGOT.
(2) and (3) remain as proposed.
(4) Minor versions of the Montana Mitigation System Policy Guidance for Greater Sage-Grouse shall be recorded by the program after a publicly announced meeting of the Montana Sage Grouse Oversight Team and after accepting public comment.
(5) The current version of the Montana Mitigation System Policy Guidance for Greater Sage-Grouse is the version made available to the public on the program’s website. Past versions of the Montana Mitigation System Policy Guidance for Greater Sage-Grouse will be blocked from further use except as allowed in NEW RULE I (4)(a) and preserved in archived by the program.
(6) and (7) remain as proposed.
(a) the number of calculated credits or debits will not be changed without written approval from every party to the mitigation transaction for the project all affected parties, including, but not limited to:
(i) MSGOT;
(ii) the project developer; and
(iii) the credit provider;
(iv) any affected third parties; and
(b) and (c) remain as proposed.
(8) MSGOT or any other third party shall use the current Montana Mitigation System Policy Guidance for Greater Sage-Grouse provided on the program’s web
site and applied by the program to determine the number of debits or credits for the following:

(8) MSGOT or any other third party shall use the current Montana Mitigation System Policy Guidance for Greater Sage-Grouse provided on the program's web site and applied by the program to determine the number of debits or credits for the following:

(a) through (11) remain as proposed.

NEW RULE III 14.6.105 METHOD TO TRACK AND MAINTAIN THE NUMBER OF CREDITS AND DEBITS AVAILABLE AND USED (1) through (4)(d) remain as proposed.

(e) credit transactions between parties; and

(f) service area of the debits and credits, respectively.

(5) remains as proposed.

NEW RULE IV (14.6.106) METHOD TO ADMINISTER THE REVIEW AND MONITORING OF MSGOT FUNDED PROJECTS (1) through (2)(g) remains as proposed.

(h) the geospatial location and/or legal description of where the project was implemented;

(i) through (n) remain as proposed.

(o) the grant agreement number assigned by the Program and any amendments to the original grant; and

(p) service area.

4. The Governor's Office, the Montana Sage Grouse Oversight Team, and the Sage Grouse Habitat Conservation Program have thoroughly considered the comments and testimony received and undertaken their own critical reading of the proposed rules. The following is a summary of the public comments received and the responses to those comments:

PUBLIC COMMENTS/RESPONSES

COMMENT 1: MSGOT should reconsider the change to the Montana Mitigation System Policy Guidance Document for Greater Sage-Grouse, October 2018 Version 1.0 that sets aside 5% of each individual Reserve Account contribution for use, at its discretion to address economic feasibility constraints. The new language redirects a portion of a reserve credits intended to function as an insurance pool to replace credits lost due to unavoidable losses and diverts to a pool of credits to address economic concerns for projects yet to be initiated. If a change to the underlying documents cannot be made within the context of the current rulemaking process, MSGOT should do so at the earliest possible opportunity.

RESPONSE TO COMMENT 1: MSGOT will take the comment into consideration. MSGOT approved the Policy Guidance Document on October 4, 2018. The concern expressed by this commenter can be discussed and considered by MSGOT during the future adaptive management reviews. MSGOT has discretion to work with

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developers who show economic feasibility constraints and has a variety of policy tools at its disposal. The Policy Guidance provides a process by which developers can endeavor to show economic feasibility constraints and request MSGOT assistance through either financial or credit-matching policy tools, one of which entails MSGOT matching the developer's credits with some of its own credits set aside in the Reserve Account. It is unknown if or when MSGOT might be asked to tap its own set-aside credits in the Reserve Account. If MSGOT receives such a request, it would exercise its discretion at that time to decide whether or not to do so. MSGOT may have credits available from the pool created by Stewardship Account grant awards or seek to apply other policy tools outlined in the Policy Guidance Document. Because MSGOT meetings are open to the public, the public is afforded an opportunity to comment prior to MSGOT making a decision about use of credits set aside in the Reserve Account or any of the other policy tools it has available.

COMMENT 2: Two commenters expressed concern about, and sought changes to, the Policy Guidance Document (Version 1.0, October 2018) and the Habitat Quantification Tool Technical Manual (Version 1.0, October 2018).

RESPONSE TO COMMENT 2: MSGOT approved both mitigation documents on October 4, 2018 after an extensive collaboration process among diverse stakeholders between September 2016 and December 2017, multiple opportunities for informal comment and discussion during the stakeholder process, and at least four MSGOT solicitations for comment on successive drafts. Stakeholders acknowledged that they could not agree on certain issues and that MSGOT ultimately had to resolve differences among stakeholder viewpoints. MSGOT endeavored to balance competing interests among diverse stakeholders holding strong and divergent views. Both mitigation system documents include an adaptive management section that calls for an annual stakeholder workshop to gather information, identify concerns, and discuss ideas for improvement. An adaptive management report would be prepared and provided to MSGOT for discussion during a publicly-noticed meeting, during which additional public comment may be taken. MSGOT also assess whether specific adaptive management objectives identified in the mitigation documents are being met and ultimately decides whether major or minor changes are needed. MSGOT is committed to transparency through open deliberations by and with participants in the mitigation system, as well as ongoing improvement that reflects adaptive management learning, new information, and especially new science.

COMMENT 3: One commenter supported the proposed rules.

RESPONSE TO COMMENT 3: Thank you for your comment.

COMMENT 4: Some commenters expressed that certain statements were not in the actual text of the proposed administrative rules. Examples include: (1) the rules should require MSGOT meetings to be publicly noticed; (2) the rules do not provide sufficient assurance that developers can seek and obtain dispensation for mitigation obligations by using one or more of the policy tools in circumstances of economic

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infeasibility based on MSGOT’s discretionary decision authority; and (3) developers should be able to challenge an HQT determination without having to incur the costs, delays, and uncertain outcomes of a full MAPA proceeding.

RESPONSE TO COMMENT 4: MSGOT approved the Montana Mitigation System Policy Guidance Document Version 1.0 October 2018, and the Montana Mitigation System Habitat Quantification Tool Technical Manual Version 1.0, October 2018 on October 4, 2018. The rules themselves direct implementation of these two mitigation system documents and describe the process by which future versions of the HQT and mitigation system documents will be established and managed. Accordingly, the rules and the underlying documents should be read as a whole and considered in tandem. This is particularly important with respect to the adaptive management sections within each document, respectively. In the Policy Guidance Document, see pages 84-87. In the Habitat Quantification Tool Technical Manual, see pages 64-68. Some of the perceived textual omissions in the rules are actually included in either or both of the two documents, respectively, and fully operational even if not also stated in the rules. Information contained in the supporting documents need not be duplicated in rule, and administrative rules need not delineate requirements that are otherwise legally provided for.

For example, the requirement for MSGOT meetings to be publicly noticed resides within the Montana Constitution; therefore, the requirement does not need to be duplicatively stated in rule. As a second example, the Policy Guidance Document itself provides for the process a developer can employ to obtain MSGOT’s approval and application of policy tools to lessen or forgive the portion of the mitigation obligation borne by the developer (see Section 3.6 beginning on page 68). The process is well described in the Policy Guidance Document, including the procedural step that states MSGOT would make the decisions, with the underlying legal requirement that MSGOT meetings be publicly noticed resting elsewhere. In a third example, the Habitat Quantification Tool Technical Manual describes the process a developer would follow if HQT results were suspect (e.g. developer undertakes a third level site visit to collect data and the program applies the HQT using the updated data). The process falls well short of MAPA’s formal rulemaking process and can be implemented by the developer, the program, and MSGOT through the course of regular MSGOT meetings.

COMMENT 5: Two commenters stated that the terms “major version” and “minor version” were ambiguous, were not actually defined in the glossary of the mitigation system documents and created uncertainty. These commenters went on to state that what constituted a major vs. a minor change was unclear, the process was ill-defined and subject to potentially arbitrary decisions, and the nexus between major / minor changes and the public comment process as contemplated in the Policy Guidance Document was not clear.

RESPONSE TO COMMENT 5: The terms “major version” and “minor version” are defined in administrative rules 14.6.101(5) and 14.6.101(6), respectively. It is true that they are not expressly defined in the Policy Guidance Document or the Habitat

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Quantification Tool Technical Manual. While administrative rules take precedent over the mitigation system documents, this oversight will be addressed at the earliest adaptive management review opportunity. Both mitigation system documents outline the adaptive management review process (see RESPONSE TO COMMENT 2 above) and clearly anticipate that some changes will be more common and routine in nature, while other, more significant changes may also be reasonably expected at this time because the program will be collecting and adding new credit and debit project data on a near-daily basis; because satellite imagery incorporated into the HQT will need to be replaced as new imagery becomes available; and because new, more refined science will become available and should be incorporated to reduce uncertainty.

The mitigation system documents and the administrative rules that describe the process for how the documents will change through time must be read in tandem (See RESPONSE TO COMMENT 4). MSGOT needs a method to record which version of the HQT and mitigation system documents were applied at the time of the program’s analysis and its own decisions. Participants in the mitigation system will also need this information. Recordation of major and minor versions and the accompanying numbering system is the only means to implement other provisions of the rules, such as New Rule I(4)(a) and New Rule II(7)(a). Without versioning of the HQT and policies applied at the time decisions were made, the principles of grandfathering and finality of mitigation transactions could not be realized. Without a method and a process to manage change to the mitigation system documents, participants in the mitigation system (e.g. credit providers, developers, the program, and MSGOT) would not know what version of the HQT and Policy Guidance document formed the basis for any mitigation-related calculations and subsequent market-based financial transactions.

MSGOT seeks to balance the need for flexibility to implement the mitigation system documents so it can be responsive to new science, incorporate new data into the overall mitigation system on a project-by-project basis, correct editorial or technical errors, and refine analytical approaches with its needs to not only keep track of versions of both mitigation system documents as they evolve through time but also to establish a predictable, transparent method to do so that also fulfills MSGOT’s public notice and comment requirements. MSGOT cannot implement the duties and powers assigned to it in its enabling statute and the Greater Sage Grouse Stewardship Act if it were in a perpetual state of formal administrative rulemaking. Decisions would be delayed, which in turn would delay developers’ ability to obtain necessary state permits.

The rules require MSGOT to initiate formal rulemaking to incorporate major versions of the Habitat Quantification Tool Technical Manual by reference. This would occur after the adaptive management review, preparation of an adaptive management report, and opportunities for public comment during a publicly noticed MSGOT meeting. After any MSGOT decision to move forward with major changes and rulemaking, the public will have the ability to again review and comment on any proposed major version changes during the formal rulemaking process. For minor

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versions, both mitigation system documents outline an adaptive management process that engages stakeholders and interested members of the public prior to completion of the adaptive management report for MSGOT and MSGOT discussion during a publicly-noticed meeting.

Nonetheless, to address these commenters' concerns, language was added to these rules that requires minor versions of both mitigation system documents to be recorded by the program after a publicly announced MSGOT meeting and after accepting public comment. Lastly, MSGOT could be petitioned to initiate rulemaking or MSGOT could initiate formal rulemaking of its own accord at any time pursuant to the Montana Administrative Procedures Act.

COMMENT 6: One commenter believes the mitigation system documents ignore the Governor's Executive Order which states that tall structures may be located outside of the 0.6 mile buffer in cases of economic infeasibility. It is not clear in the proposed rules or the policy manual that the program will apply a buffer of 0.6 miles to tall structures when economic infeasibility is demonstrated.

RESPONSE TO COMMENT 6: This comment appears to be based on a very narrow and incomplete reading of Executive Order 12-2015, which in turn, leads to an incorrect understanding of not only Executive Order 12-2015 but also conflates how Executive Order 12-2015 and the policy tools contained in the Policy Guidance document work together. Executive Order 12-2015 establishes a "no surface occupancy" of 0.6 miles in Core Areas or 0.25 miles in General Habitat or Connectivity areas from active sage grouse leks for any new proposed disturbance, regardless of the type of disturbance. Observance of this stipulation is mandatory for all developers, and adherence to this stipulation is incentivized through site specific multipliers, as described in the Policy Document.

Attachment D of Executive Order 12-2015 also contains industry-specific requirements, in addition to the preamble statements, general principles, and guidance for how the conservation strategy applies to land uses and activities, included in the main body of Executive Order 12-2015 which are required of all developers who require state permits to implement a project. Except for Attachment D, due to its specificity, all attachments are also to be applied, as is relevant and appropriate for a particular development project. Executive Order 12-2015 also sets forth that new development projects will be required to follow the mitigation hierarchy.

Focusing on the Executive Order 12-2015 passage mentioned by the commenter for tall structures such as communication towers or overhead (power) transmission lines, the complete text of Attachment D, Core Area Stipulations, paragraph 6 reads as follows:

6. Overhead Power Lines and Communication Towers:
Power lines and communication towers should be sited to

Montana Administrative Register 14-5
minimize negative impacts on sage grouse or their habitats. When placement is demonstrated to be unavoidable:

a. If economically feasible, power lines within 4 miles of active leks should be buried and communication towers should be located a minimum of 4 miles from active leks;

b. If not economically feasible, then power lines and communication towers should be consolidated or co-located with existing above ground rights of way, such as roads or power lines, at least 0.6 miles from the perimeter of active leks;

c. If co-location is not possible, the power lines and communication towers should be located as far as economically feasible from active leks and outside of the 0.6 mile active lek buffer.

If situating of overhead power lines is necessary within 2.0 miles of important breeding, brood-rearing, and winter habitat, follow the measures recommended by the Avian Power Line Interaction Committee to minimize collision potential and raptor perch sites or bury a portion of the line.

Anti-collision measures should be installed within 0.6 mile of the perimeter of known sage-grouse concentration areas such as leks and winter ranges, where icing conditions are unlikely to occur. If effective perch preventers are identified, they should be installed within 0.6 mile of known concentration areas.

Follow USFWS Best Management Practices for tall structures when erecting new communication towers. Communication towers should be constructed to preclude the need for guy wires; where guy wires are necessary, they should be fitted with anti-collision devices.

Burying existing overhead lines that have been identified as contributing to a decline in sage grouse populations will be considered as a mitigation option.

Electric utilities (including electric cooperatives) and the Avian Power Line Interaction Committee (which includes federal agencies and state wildlife agencies), have developed a set of Best Management Practices (BMPs) to guide construction, operation, and maintenance activities by electric utilities in sage grouse habitats. These BMPs should be applied to electric utility projects as appropriate.
The Program should conduct additional research into the challenges posed to sage grouse by overhead lines and communication towers and should bring that research to MSGOT for further consideration.

Executive Order 12-2015 is based on the best available science at the time of its 2015 signing. The newer mitigation system documents, and the HQT itself are also based on the best science available, with the stakeholders and the program incorporating scientific literature published through September 2018. Research and peer reviewed science is available specific to communications towers and overhead powerlines, which is summarized in Appendices C and D of the Habitat Quantification Tool Technical Manual.

Executive Order 12-2015, Paragraph 6, is the only industry-specific passage that contemplates consideration of economic feasibility when considering placement of structures. Consideration of economic infeasibility is incorporated into the Policy Guidance document and is the mechanism by which MSGOT considers economic feasibility when implementing Executive Order 12-2015.

The Policy Guidance Section 3.6 document provides that developers can seek MSGOT's approval for dispensation from their mitigation obligations when economic infeasibility is shown. A variety of policy tools are outlined in the Policy Guidance document, as well as the process developers should follow to obtain relief from MSGOT. MSGOT can weigh and balance impacts on sage grouse due to specific projects, but also when those specific projects are sited in various locations relative to active sage grouse leks, the facial mitigation obligation determined through application of the HQT and Policy Document, and information provided by the developer to support its request for dispensation.

Taken together, Executive Order 12-2015 and the Greater Sage Grouse Stewardship Act demonstrate that Montana contemplates mitigating impacts of development to sage grouse populations and habitat as an integral component of the conservation strategy and observance of the mitigation hierarchy is required, including compensatory mitigation, which the Montana Legislature found was consistent with incentivizing conservation.

It has been recognized since at least 2013 that development will impact sage grouse habitat even if all stipulations of Executive Order 12-2015 are followed. Mitigation is an integral tool to offset impacts so that Montana can continue to issue permits for economic development, resource extraction, and infrastructure projects, even in Core Areas. Mitigation is viewed as a viable alternative to denying state permits.

COMMENT 7: One commenter objected to the requirements in New Rule I(4)(a) and New Rule II(7)(a) that written approval of changes in the number of calculated credits or debits also be obtained from MSGOT, the credit provider, the project developer, and any affected third party. MSGOT has authority to initiate rulemaking and MSGOT already represents debit and credit stakeholders, as well as various

Montana Administrative Register 14-5
state Executive and Legislative parties. The rule's requirement that any affected third party provide written approval constitutes an effective veto. Even though MSGOT has authority to initiate rulemaking, it would be stymied.

RESPONSE TO COMMENT 7: New Rule I(4)(a) and New Rule II(7)(a) refer to specific credit or debit projects, not rulemaking. Once the HQT has been applied to calculate functional habitat gains or losses for a specific project, the rule provides that written approval is required by MSGOT, the project developer and the credit provider before the HQT results could be changed that would cause an increase or decrease in functional habitat. Similarly, once the Policy Guidance document has been used to determine the total number of credits or debits for a specific project, the rule provides that written approval is required by MSGOT, the project developer, and the credit provider before the number of debits or credits could be changed that would cause an increase or decrease in the number of debits owed or credits created. MSGOT seeks to provide clarity in the administrative rules that it cannot unilaterally change HQT results, the number of debits owed or mitigation obligation, or the number of credits created from a conservation project. MSGOT also seeks to recognize that once negotiated, mitigation transactions can be considered final, unless all parties to the transaction agree to amend the transaction in writing. MSGOT agrees that the proposed language was ambiguous and overly broad. Language has been added to both New Rule I(4)(a) and New Rule II(7)(a) to clarify that the rule pertains to a specific project, and written approval is required from every party to that mitigation transaction.

Lastly, MSGOT does not represent credit providers or developers in mitigation transactions. MSGOT's role is to implement Executive Order 12-2015 and the Greater Sage-grouse Stewardship Act, consistent with the duties and powers granted by the Montana Legislature.

COMMENT 8: One commenter alternatively wants MSGOT to consider whether to initiate rulemaking on a quarterly basis but also suggests that MSGOT should have flexibility to make decisions and be agile without having to initiate formal rulemaking. Further, the commenter suggested the rules establish specific timelines for MSGOT decisions with respect to rulemaking, including text requiring MSGOT to complete rulemaking within 180 days.

RESPONSE TO COMMENT 8: MSGOT appreciates the commenter's awareness. As stated above, MSGOT seeks to balance the need for flexibility to make decisions after public notice and comment with the certainty and predictability that mitigation system participants need in order to plan either development projects that result in debits or conservation projects that create credits, respectively. See RESPONSE TO COMMENT 2, 4, and 5 above.

The Montana Administrative Procedures Act provides detailed statutory guidance with respect to administrative rulemaking and timelines for steps in the rulemaking process. In addition, the Montana Administrative Procedures Act establishes the requirements for the validity of rules, including the requirement that an adoption
notice must be published within six months of filing the proposal notice, or else the entity proposing the rules must restart the rulemaking process from the beginning. MSGOT is required to implement, and will adhere to the requirements of, the Montana Administrative Procedures Act.

Governor's Office

RAPHAEL GRAYBILL
Rule Reviewer
Governor's Office

PATRICK HOLMES
Natural Resource Policy Advisor

Certified to the Secretary of State [DATE].
<table>
<thead>
<tr>
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<th>Name of Association</th>
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<td>438</td>
<td>National Wildlife Federation</td>
<td>Missoula, MT</td>
<td>Please find attached comments from the National Wildlife Federation concerning the Proposed Administrative Rules on Mitigation and Stewardship Account Grants</td>
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<td>439</td>
<td>Montana Petroleum Association, Montana Mining Association, Treasure State Resources Association, Montana Contractors’ Association, Montana Coal Council</td>
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<td>Please see attached</td>
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<td>440</td>
<td>Triangle Communications</td>
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<td>Please see attached</td>
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<td>Montana Association of Oil, Gas &amp; Coal Counties, Inc.</td>
<td>Helena, MT</td>
<td>Please see the attached comment.</td>
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<td>Montana Electric Cooperatives’ Association</td>
<td>Great Falls, MT</td>
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<td>443</td>
<td>Montana Telecommunications Association</td>
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<td>Great Plains Wildlife Consulting, Inc.</td>
<td>Banner, WY</td>
<td>Regular mail; received after deadline</td>
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November 19, 2018

Department of Natural Resources and Conservation
P.O. Box 201601
Helena, MT  59620

Submitted via electronic portal

Dear DNRC Sage Grouse Habitat Conservation Program Manager Carolyn Sime and Montana Sage Grouse Oversight Team:

Please accept this letter of the National Wildlife Federation concerning the DNRC’s proposed amendments to ARM 14.6.101 and 14.6.102 and the adoption of New Rules I, II, III, and IV, pertaining to implementation of the Montana Greater Sage Grouse Stewardship Act.

The National Wildlife Federation has engaged with MSGOT on several occasions, including submitting a request for funding early in the mitigation credit program to support our sage-grouse fence-flagging project, as well as reporting on achievements of that project. We also supported the state’s conservation plan and remain committed to helping ensure its implementation to achieve recovery of sage-grouse in Montana and throughout its habitat.

We support the DNRC’s Proposed Rule and its emphasis on crediting activities that have immediate outcomes beneficial to sage-grouse. In particular, we agree that the Habitat Quantification Tool and crediting system’s reliance on functional acreage will help ensure that credits support immediate and long-term protective actions. Additionally, we support the Proposed Rule’s plan to use multipliers to further incentivize positive conservation action in important habitat areas.
We look forward to cooperating with the DNRC and other agencies, as well as conservation and community partners, to ensure that Montana’s sage-grouse population is properly managed for the long-term public interest. We hope to continue working with you.

Sincerely,

[Signature]

Sarah Bates
Deputy Director, Northern Rockies, Prairies & Pacific Region
Senior Director, Western Water
National Wildlife Federation
240 N. Higgins St., #2
Missoula, MT 59802
406-541-6730 (O)
406-207-9071 (M)
www.nwf.org
Uniting all Americans to ensure wildlife thrive in a rapidly changing world
November 16, 2018

Ms. Carolyn Sime
Manager-Montana Sage Grouse Program
c/o Montana Department of Natural Resources and Conservation
P.O. Box 201601
Helena, MT 59620-1601

Re: In the matter of the amendment of ARM 14.6.101 and 14.6.102 and the adoption of New Rules I, II, III and IV, pertaining to implementation of the Greater Sage-Grouse Stewardship Act

Dear Ms. Sime:

Thank you for the opportunity to comment on the proposed rules referenced above (MAR Notice No. 14-5 – Dated 10/19/18). We understand the proposal before us guides the use of the Habitat Quantification Tool and the accompanying technical manual, and the Montana Mitigation System Policy Guidance document. We further understand that it is the Program and MSGOT’s intent to consider adoption of the rules and any amendments without considering additional changes to the technical and policy guidance documents at this time. We suggest, however, that due to the undeniable regulatory relationship between the rules and those documents, it is impractical to make such a bright-line distinction.

**Montana Mitigation System Policy Guidance Document for Greater Sage-Grouse, October 2018 Version 1.0**

We don’t wish to delay adoption of the rules, but do ask that all comments made in this process be considered and addressed, that includes comments submitted throughout the process. Relative to the Montana Mitigation System Guidance Document For Greater-Sage Grouse, October, 2018 Version, we request that MSGOT reconsider the change made to the **Reserve Account Contribution**. We ask that the language stating “MSGOT will set aside 5% of each individual contribution to establish a pool of credits that it may use, at its discretion, to address economic feasibility constraints, as described more fully in Section 3.6.1. “be stricken as well as the entire Section of 3.6.1.2 (2) that references use of the credits set aside in the Reserve Account.** The new language was adopted by the Montana Sage Grouse Oversight Team in October, even though final revisions to the document were made available to the public on short notice. That statement is not a criticism of the Program or the process. We appreciate the desire to create flexibility in meeting cost burdens posed by mitigation requirements and recognize there was only a limited time to consider potential options. However, we believe this action was taken without fully vetting the significance of the change.
Creation of the Reserve Account, and the percentage developers would contribute, was a hotly debated topic during the stakeholder process. Whether one thought 20% was too high, or too low; throughout the debate it was clear the purpose of the reserve credits was to serve as an “insurance policy” for unavoidable losses for projects already underway. That definition is confirmed in the Glossary contained within the document.

There is no logical connection between that intent, and the new language that redirects this “insurance coverage” for purposes not related to unavoidable losses. Rather it seeks to address economic concerns for projects yet to be initiated. MSGOT is likely to face strong pressure to exercise this option. The unintended result would be having insufficient credits available when needed to respond to such things as habitat loss from wildfire; a situation that puts the overall conservation strategy at risk.

As noted earlier, we would argue that the regulatory connection between the proposed rules and the documents adopted in October keep both in play in terms of this comment process. We believe MSGOT can make this change within the context of the current rulemaking process. If that is determined not to be the case, we respectfully ask that MSGOT initiate the necessary steps to allow the revision be considered at the earliest possible opportunity.

**MAR Notice No. 14-5**

During the November 9, 2018 public hearing on the proposed rules commenters expressed concern with a lack of clear definition for what is considered a major or minor change to the HQT Quantification Tool and the Mitigation Policy documents. In 14.6.101, the definitions of “Major and Minor Versions” found in the draft rules speak to the process of keeping track of what “edition” of the documents a project developer is operating under, but don’t outline what constitutes a major or minor change that would trigger designation of a new “version” of the document.

The Adaptive Management section found in the Montana Mitigation System Policy Guidance Document for Greater Sage-Grouse October, 2018 provides an opportunity for MSGOT and the public to engage in an annual review of the Program and its implementation, and notes changes will be entertained. The document states the potential changes will be evaluated as to whether they are “major” or “minor”, but contemplates that both “major” and “minor” changes will be noticed to the public for comment. There is not a definition of “major” and “minor” in the Glossary.

Under New Rule II, language in subsections 2, 3 and 4 states that:

1. **Designation of major versions of the Montana Mitigation System Policy Guidance for Greater-Sage Grouse shall prompt the initiation of rulemaking to incorporate the new major version by reference.**

2. **MSGOT shall review major proposed changes to its designated Montana Mitigation Policy Guidance for Greater Sage-Grouse after a publicly announced MSGOT meeting, and after accepting written and oral comment, and**

3. **Minor versions of the Montana Mitigation System Policy Guidance for Greater Sage-Grouse shall be recorded by the program.**
We remain unclear as to the nexus between the major and minor changes, and the public comment process as contemplated in the Policy document and the “major and minor versions” and “major proposed changes” referenced in the proposed rules. Can MSGOT adopt any “major proposed changes” without triggering rulemaking to incorporate a new major version? If so, what is the threshold? Why does the Policy document state that minor changes will be noticed to the public, but the proposed rules reference only major changes? If these are intended to be different public processes (i.e. informal stakeholder review under adaptive management vs. a formal public comment process under MAPA) we recommend language be added to clarify the distinction.

Further, we recommend language be added to New Rule II, that provides more clarity as to what constitutes a major versus minor proposed change.

Again, thank you for the opportunity to comment. We recognize there is difference of opinion as to what this comment period encompasses, but invite you to consider our recommendations concerning the mitigation policy document as an effort to address what we believe is a serious concern of such consequence that it cannot wait until an annual review. We look forward to continuing to work with MSGOT and the Program and want to express our appreciation for the significant progress that has been made.

Regards:

Alan Olson
Executive Director
Montana Petroleum Association

Tammy Johnson
Executive Director
Montana Mining Association

Peggy Trenk, CAE
Executive Director
Treasure State Resources Association

Cary Hegreberg
Executive Director
Montana Contractors’ Association

Bud Clinch
Executive Director
Montana Coal Council
November 19th, 2018

Montana Sage Grouse Oversight Team

RE: Comments on the Administrative Rule for the Sage Grouse Program.

Dear Committee Members,

Thank you for the opportunity to comment on the rulemaking and amendments put out by your department. Triangle Telephone Cooperative Association, Inc., Hill County Electric Cooperative, Inc. and Triangle Communication System, Inc. fully support the comments as submitted by the Montana Telecommunications Association (MTA).

Sincerely,

[Signature]

Timothy Nixdorf
Director of Wireless Operations
Sage Grouse Oversight Team  
c/o Ms. Carolyn Sime, Sage Grouse Conservation Program Manager  
Department of Natural Resources & Conservation  
PO Box 201601  
Helena, MT 59620-1601  

November 18th, 2018  

Members of the Sage Grouse Oversight Team,  

On behalf of the Montana Association of Oil, Gas, and Coal Counties (MAOGCC) and its 34 member counties, I present the following comments for your consideration regarding the Policy Guidance Document (v1 October 2018) or “Policy” and the Habitat Quantification Tool Technical Manual (v1 October 2018) or “HQT”.

**General Comments**  
We appreciate the efforts of the Sage Grouse Oversight Team and their willingness to work with stakeholders in forming the Policy and HQT. While this process has successfully addressed many stakeholder concerns, there are still some issues that have gone largely unaddressed. One such aspect is that the impact of predation on the population of Sage Grouse has not been fully explored or considered. While both the HQT and Mitigation Policy focus extensively on the impact of development on habitat, little time has been spent on the subject of predation and ways in which predator populations can be controlled in order to allow sage grouse populations to increase.

**Policy Goals**  
While the goals of the Policy document are to provide a management plan that is predictable, equitable, flexible, and economically feasible, the Montana Association of Oil, Gas, and Coal Counties remains concerned that the uncertainty and financial risk imposed by the Policy may limit developer investment in communities across Montana.

While we understand the need for adaptive management, and agree that it is critical to ensuring the future success of the program and protection of the species, there must also be a degree of certainty. New iterations of the plan should be implemented at a pace that will allow adequate time for investors and developers to plan and budget their resources.
Compensatory Mitigation
While progress has been made through the stakeholder process to address concerns surrounding the uncertainty of implementing the HQT and corresponding Mitigation Plan, there is still a large degree of ambiguity regarding what circumstances would require compensatory mitigation.

It remains unclear whether a project that complies with the Executive Order is required to engage in compensatory mitigation when other methods of mitigation—such as avoidance, minimization, and restoration—may be used successfully.

Multipliers
Our organization has ongoing concerns about the use of multipliers on project impacts/debits and the devaluation of functional acres/credits in the mitigation plan. The use of a multiplier may inaccurately inflate the impact of a debit project, while a high devaluation of post project functional acres on a credit project will make attaining enough credits to offset inflated project debits extremely difficult.

It is our hope that the Sage Grouse Oversight Team will seriously consider a lower multiplier on debit projects and allowing a higher percentage of functional acres under a conservation easement to be used on credit projects.

Exempt Activities
We are appreciative of the time that members of the Sage Grouse Oversight Team have taken to craft a thoughtful list of exemptions. It is our hope that as the Oversight Team continues its work that they continue to consider exemptions of activities that do not impact Sage Grouse or their habitat.

Thank you for the opportunity to comment on this important issue.

Respectfully,

/s/
Shelby DeMars, Executive Director
Montana Association of Oil, Gas, and Coal Counties
TO:

Carolyn Sime  
Sage Grouse Habitat Conservation Program Manager  
Montana Sage Grouse Oversight Team  
c/o Department of Natural Resources and Conservation  
P.O. Box 201601  
Helena, MT  59620-1601

Subject: In the matter of amendment of ARM 14.6.101 and 14.6.102 and the adoption of New rules I, II, III, and IV, pertaining to implementation of the Greater Sage-Grouse Stewardship Act

Dear Ms. Sime,

On behalf of Montana’s electric cooperatives, we are writing to provide our comments regarding the proposed administrative rule.

Montana Electric Cooperatives’ Association remains hopeful the adaptive management process outlined in the mitigation documents will prove functional and helpful. At this point, we are adopting a “wait-and-see” approach on whether we find it acceptable.

Regarding the proposed rule, 14.6.101 DEFINITIONS (6), second sentence, the statement is made “Examples of routine inputs include updates to Geographic Information System layers used in the HQT and editorial changes [emphasis added].” The term “editorial changes” is quite broad. Thus, we request use of more specific language in the wording of this sentence to provide more narrow application of this term.

We request greater clarity in the content of NEW RULE I HABITAT QUANTIFICATION TOOL DESIGNATION (1) and NEW RULE II COMPENSATORY MITIGATION SYSTEM (2). Proposed New Rule I (1) states, “Designation of major versions of the Montana Mitigation System Habitat Quantification Tool Technical Manual for Greater Sage-Grouse shall prompt the initiation of rulemaking to incorporate the new major version by reference.” Similarly, Proposed New Rule II (2) states, “Designation of major versions of the Montana Mitigation System Policy Guidance for Greater Sage-Grouse shall prompt the initiation of rulemaking to incorporate the new major version by reference.”
Neither of these statements provides clarity as to how the process for designation of major versions of either the HQT or policy document is initiated. We request greater clarity in this matter in both of these proposed rules.

Without these clarifications there exists considerable doubt on our part as to whether changes requested by the public will be taken up by the Montana Sage Grouse Oversight Team for formal consideration.

Thank you for the opportunity to submit these comments.

Dave Wheelihan

CEO
Montana Electric Cooperatives’ Association
In the matter of the amendment of ARM 14.6.101 and 14.6.102 and adoption of New Rules I, II, III, and IV, pertaining to implementation of the Greater Sage-Grouse Stewardship Act)

NOTICE OF PUBLIC HEARINGS ON PROPOSED AMENDMENT AND ADOPTION

Comments of the Montana Telecommunications Association

The Montana Telecommunications Association (MTA) is pleased to have the opportunity to submit comments in the above-captioned rulemaking proceeding. MTA represents telecommunications providers serving rural Montana with advanced broadband services that are essential to Montana’s economic vitality. As U.S. Secretary of Agriculture, Sonny Purdue stated in October, 2017, “Reliable and affordable high-speed internet connectivity will transform rural America as a key catalyst for prosperity.”1 MTA member companies invest over $100 million every year in CAPEX and OPEX to build and operate Montana’s rural broadband infrastructure—despite the challenges of distance and density; i.e., where capital and operating expenses are large and the customer base is sparse.

There is more to do to attain ubiquitous access to broadband that meets future needs, particularly in rural Montana, where connectivity brings more cost-effective access to health care, education, and remote working opportunities, etc. The demand for ever-increasing amounts of bandwidth shows no sign of abating.

It is no wonder, therefore, that Congress, the Federal Communications Commission (FCC), and a variety of states are taking action to promote faster broadband deployment either through funding initiatives (i.e., grants and loans), tax incentives and/or removing barriers to broadband deployment like right-of-way fees, zoning or other permitting fees and other regulatory obstacles that restrict broadband investment.

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For example, the FCC recently adopted a wireless facility citing order to facilitate deployment of wireless infrastructure for 5G connectivity. The FCC’s order, among other things, explains when a state or local regulation of wireless infrastructure deployment constitutes an effective prohibition of service barred by Sections 253 or 332 of the Telecommunications Act of 1996. The decision also establishes “shot clocks” for government approval of small wireless facilities (60 days for collocation on preexisting structures and 90 days for new builds).

Such actions at the FCC and elsewhere underscore the numerous economic benefits of broadband deployment across all sectors of the economy and the public policy imperative to remove barriers to broadband investment and deployment.

With regard to this rulemaking, it is important that sage grouse mitigation policy balances the critical need for further broadband investment and deployment in Montana with the conservation objectives of the sage grouse mitigation program. The proposed rules in this Notice fall short of achieving the balance necessary to accommodate broadband deployment while recognizing the conservation goals of the program. Following is a discussion of MTA’s concerns.

“Major” vs. “Minor” Versions

The proposed new definitions for “Major Version” and “Minor Version” depend on subjective determinations and thereby lead to an unacceptable level of uncertainty and unpredictability. In fact, “Major Version” is not actually defined. Instead, the proposed rule in 14.6.101(5) simply describes how a major version is identified and tracked. Perhaps this ambiguity is intentional, designed to give the Program or MSOT maximum flexibility in

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3 47 U.S.C. Sections 253 or 332.
4 see Notice. 14.6.101 DEFINITIONS
determining when and whether to initiate a rulemaking. If that is the case, the definition should state as much.

Similarly, “Minor Version” is defined as “a means to track routine inputs to the HQT made by the program...” While the proposed definition to Minor Version provides examples, we are still left with an ill-defined process subject to potentially arbitrary decisions. For example, who determines what constitutes a major vs. minor change? Is there a process for identifying minor or major versions? What sort of notice, review and/or approval are applied to such determinations?

In short, the definitions of “major version” and “minor version” create uncertainty at best. MTA questions whether these terms are necessary in light of MSGOT’s authority to initiate a rulemaking.\(^5\) MTA understands the need for flexibility in making appropriate changes to the HQT or Policy Guidance without necessarily invoking a full rulemaking under the Montana Administrative Procedures Act (MAPA). On the other hand, MAPA ensures public transparency and accountability in circumstances in which substantive rules changes are contemplated.

Regardless of whether the Program retains or modifies the definitions of “Major Version” and “Minor Version,” there needs to be a process for parities to seek redress in a timely and non-burdensome manner particularly where substantive changes to the HQT or Policy Manual are not required.

For example, the rules do not provide sufficient assurance that MTA members can seek and obtain accommodations based on economic infeasibility. While MTA appreciates efforts by the Governor’s Office to include recent changes in the Policy Manual to address economic feasibility (Sec. 3.6.1 et seq.) and by MSGOT to revise tall structure buffers (HQT at p. 126), the rules, as well as the HQT and Policy Guidance continue to ignore the Governor’s Executive Order which states that tall structures may be located outside of a 0.6mi buffer in cases of economic infeasibility. MTA should not have to petition MSGOT for a full-fledged MAPA

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Proposed Amendment and Adoption of New Rules
Pertaining to Implementation of the Sage-Grouse Stewardship Act

proceeding to press its case for economic infeasibility when existing rules should suffice. This is a matter of interpretation and implementation, not setting new standards in the HQT or Policy Guidance. Yet, it is not clear under these proposed rules that parties can obtain redress by appealing to MSGOT without initiating a MAPA proceeding that would result in higher costs to developers and delays in broadband deployment.

Similarly, the rules do not provide sufficient assurance that MTA members can challenge the HQT determination that a buried fiber line requires a 1,000m buffer zone. Again, parties should be able to bring their case to MSGOT for resolution without having to incur the costs, delays and uncertain outcomes of a full MAPA proceeding.

MSGOT review

As a general policy matter, MSGOT should have agility to be able to review proposals for redress of grievances without necessarily invoking a MAPA proceeding. For example, when a developer meets criteria for demonstrating economic infeasibility, MSGOT arguably already has the authority to issue a waiver or modify compensatory mitigation.6 However, as noted above, it is not clear in the proposed rules or the Policy Manual that the Program will apply a buffer of 0.6 miles to tall structures when economic infeasibility is demonstrated.7 Matters pertaining to interpretation or application of existing rules should not have to incur a MAPA proceeding.

Moreover, in a meeting with Director Tubbs, and the Governor’s and Program staff on September 27, 2018, MTA raised its concern regarding the buffer applied to buried fiber cable. The HQT tool assigns a 500m buffer on either side of a buried cable—for a 1-foot wide trench.8 MSGOT should be able to appeal this rule as unrealistic and/or economically infeasible without having to initiate a rulemaking.

Alternatively, if MSGOT determines that a formal MAPA proceeding is statutorily required, there should be an accelerated comment/review/approval process so that parties—

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6 See Sec. 3.6.1.4. Process to Take Advantage of Policy-Based Tools. "MSGOT may apply various policy-based tools, with flexibility commensurate with its considerable discretion."
7 Policy Manual, including footnote 1, which fails to reference the EO. p. 126.
including Montana’s broadband consumers—are not unreasonably delayed. Such a process should not have to wait for a 5-year or even an annual review period. Parties should be able to bring their petitions for redress to MSGOT at its next meeting on a rolling basis throughout the year. MTA believes the process of bringing proposed changes to MSGOT, notice of public comment and adoption of changes can take place within a six-month period from start to finish. Construction season in Montana is short. Montana’s rural broadband providers are spending millions of dollars every year in deploying broadband infrastructure to our rural communities. Permitting delays can mean the difference between deploying infrastructure as planned or delaying for another year investment that could have been made timelier.

Finally, MTA objects to the proposed process for written approval of changes in the number of calculated credits or debits, as proposed in New Rule I(4)(a) and New Rule II(7)(a). MSGOT has authority to initiate rulemaking or not. Moreover, MSGOT already represents debit and credit stakeholders, as well as various state Executive and Legislative parties. The requirement in the proposed rules for written approval from other parties, “including but not limited to... any affected third parties” constitutes an effective veto granted to anyone any time. Such authority is not authorized by statute; it effectively negates the purpose of MSGOT. Who are “affected third parties?” What if any parties (except MSGOT, whose responsibility it is to approve changes) objects, or simply fails to provide written approval? MSGOT, despite its authority to initiate rulemaking, effectively would be stymied.

Amendments:

Delete “(5) ‘Major Version’ and “(6)’Minor Version” and renumber (7) though (10).

Explanation: These terms are ambiguous; they are unnecessary for implementation of the program.

NEW RULE I. HABITAT QUANTIFICATION TOOL DESIGNATION

(1)(a) Designation of major versions of MSGOT shall at each quarterly meeting on its own motion or upon petition from interested parties consider whether to initiate a rulemaking to incorporate changes in the Montana Mitigation System Habitat Quantification Tool Technical
Manual for Greater Sage-Grouse shall prompt the initiation of rulemaking to incorporate the new major version by reference: after issuing public notice of

(2) MSGOT shall review all proposed changes to major versions of its designated the Montana Mitigation System Habitat Quantification Tool Technical Manual for Greater Sage-Grouse after a publicly announced MSGOT meeting and after accepting written and oral public comment.

(b) Petitions for interpretation of rules or other matters that do not require substantive change to the Montana Mitigation System Habitat Quantification Tool Technical Manual for Greater Sage-Grouse do not require initiation of rulemaking.

(2) MSGOT shall approve, amend or deny a proposed change to the Montana Mitigation System Habitat Quantification Tool Technical Manual for Greater Sage-Grouse within 180 days of receiving a petition for rulemaking and initiating a rulemaking on its own motion.

(3) The program will record all changes to minor versions of the Montana Mitigation System Habitat Quantification Tool Technical Manual for Greater Sage-grouse shall be recorded by the program.

(4) Once the current Montana Mitigation System HQT has been applied to calculate the credits...

(a) Once the HQT has been applied to calculate credits or debits, the number of calculated credits or debits will not be changed without written approval from all affected parties, including, but not limited to:

(i) MSGOT;
(ii) the project developer;
(iii) the credit provider; and
(iv) any affected third parties.

... Explanation: The proposed amendment eliminates uncertainty surrounding “designation” of “major” and “minor versions” and assigns discretion to MSGOT to initiate a rulemaking either on its own motion or by petition. The amendment further applies a 180-day “shot clock” to rulemaking proceedings, from receipt and notice of a petition for rulemaking to
final determination. Finally, the amendment removes the ambiguity of allowing written approval from an undetermined number of third parties and restores MSGOT’s authority to make appropriate determinations regarding revisions to the HQT Manual.

NEW RULE II. COMPENSATORY MITIGATION SYSTEM (1) ...

(2)(a) Designation of major versions of MSGOT shall at each quarterly meeting on its own motion or upon petition from interested parties consider whether initiate a rulemaking to incorporate changes in the Montana Mitigation System Policy Guidance for Greater Sage-Grouse shall prompt the initiation of rulemaking to incorporate the new major version by reference: after issuing public notice of

(3) MSGOT shall review major proposed changes to its designated Montana Mitigation System Policy Guidance for Greater Sage-Grouse after a publicly announced MSGOT meeting and after accepting written and oral public comment.

(b) Petitions for interpretation of rules or other matters that do not require substantive change to the Montana Mitigation System Policy Guidance for Greater Sage-Grouse do not require initiation of rulemaking.

(3) MSGOT shall approve, amend or deny a proposed change to the Montana Mitigation System Policy Guidance for Greater Sage-Grouse within 180 days of receiving a petition for rulemaking or initiating a rulemaking on its own motion.

(4) The program will record all changes to Minor versions of the Montana Mitigation System Policy Guidance for Greater Sage-Grouse for Greater Sage-Grouse shall be recorded by the program.

... 

(7) Once the current Montana Mitigation System Policy Guidance for Greater Sage-Grouse has been applied to calculate the credits or debits:

(a) the number of calculated credits or debits will not be changed without written approval from all affected parties, including, but not limited to:

(i) MSGOT;

(ii) the project developer;
(iii) the credit provider; and
(iv) any affected third parties; and

(b) Permit amendments will be subject to the current version of the Montana Mitigation System Policy Guidance for Greater Sage-Grouse for Greater Sage-Grouse to calculate debits...

...

Explaination: The proposed amendments, and rationale, to New Rule II are identical to the proposed amendments to New Rule I, except as to reference to the Policy Manual instead of the HQT.

Respectfully submitted,

/s/
Geoffrey A. Feiss, General Manager
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406-442-4316
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November 19, 2018
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November 19, 2018

Ms. Carolyn Sime
Sage Grouse Resource Program Manager
MT Dept. of Natural Resources and Conservation
P.O. Box 201601
Helena, MT 59620-1601

RE: Public comment on proposed Administrative Rules for sage-grouse Mitigation and Grants

Dear Carolyn,

Please accept the comments below regarding the proposed New Rules I and II regarding implementation of portions of the Greater Sage-Grouse Stewardship Act, as outlined in the public notice issued on October 19, 2018. I greatly appreciate the work that you and your team continue to do toward sage-grouse management in Montana, and the opportunity to actively participate in the process.

Respectfully,
Gwyn

Gwyn McKee
President/Principal Biologist

New Rule I (4) and New Rule II (6): In both cases, I would respectfully propose the following revision, as shown in track changes below.

New Rule I (4): Once the current Montana Mitigation System HQT has been applied to calculate the credits of a proposed mitigation site, or the debits of a proposed development site; the program has completed its review; and both the project developer obtains the necessary state or federal permits and permitting agency have officially accepted the results of the HQT as part of expected permit conditions, any subsequent versions of the HQT will not apply to the project except as provided in (b).

New Rule II (6): Once the current Montana Mitigation System Policy Guidance for Greater Sage-grouse has been applied to calculate the credits of a proposed mitigation site, or the debits of a proposed development site; the program has completed its review; and both the project developer obtains the necessary state or federal permits and permitting agency have officially accepted the outcome of application of the Policy Guidance as part of expected permit conditions, any subsequent versions of the Montana Mitigation System Policy Guidance for Greater Sage-Grouse will not apply.
The reason I offer this option for consideration is due to the frequent long timeline associated with the permitting process, even after all parties have agreed to the components. This is especially true in situations where NEPA and/or MEPA analyses are required. Because those analyses typically occur after HQT and Policy Guidance have been provided for a given project (because those results must be included in analyses), the timeline to complete the permitting process is necessarily extended. Completion of the permitting process also may be delayed for other reasons unrelated to sage-grouse, though I am not an expert on all components.

I believe the intent of the language as originally proposed is to ensure that: 1) interested parties operate in good faith and commit to appropriate credit or mitigation actions for the project; and 2) once those commitments are made, all affected parties can have confidence that project requirements and commitments will not change due to timing issues as the permitting process itself is completed.

This belief is supported by the language immediately following both excerpts from New Rules I and II, specifically stating that “Once the HQT (or current Policy Guidance, respectively) has been applied to calculate credits or debits, the number of calculated credits or debits will not be changed without written approval from all affected parties...” (New Rule I (4)(a) and New Rule II (7)(a), respectively). Subsequent language in each proposed New Rule also accounts for changes to the project after agreements have been reached, such as permit amendments; that also would presumably apply to substantive changes to the project itself that might require additional assessments under the HQT and Policy Guidance.

I recognize that it is not likely that frequent changes will be made to either the HQT or the Policy Guidance. Nevertheless, I believe the proposed minor text revisions for both New Rules will retain the intent of the original language and be more consistent with subsequent text under each Rule.
SUMMARY:

Western Energy Company (Western Energy) is proposing to amend the Area B Surface Mine Permit (SMP C1984003B), AM5, near the town of Colstrip, Montana. AM5 would increase the Area B permit area by 9,108 acres and the disturbance area by 5,547 acres. This results in a total permit area of 15,161 acres and 11,202 acres of disturbance. The state permitting authority is Montana Department of Environmental Quality (DEQ).

The Sage Grouse Habitat Conservation Program (Program) has been working with Western Energy and DEQ since March 2018 in conjunction with preparation of an Environmental Impact Statement pursuant to the Montana Environmental Policy Act. The Greater Sage Grouse Stewardship Act charges MSGOT to review and approve compensatory mitigation plans. MSGOT is being asked to review and approve the Rosebud Coal Mine AM5 Greater Sage-Grouse Mitigation Plan (Plan) now so that Western Energy can move forward and complete the permitting process.

The Plan describes the project, expected impacts, adherence to the mitigation hierarchy (avoidance, minimization, reclamation, and compensatory mitigation), and consistency with Executive Order 12-2015. The Program calculated the functional acres lost for the life of the project by applying the Montana Mitigation System Habitat Quantification Tool Technical Manual for Greater Sage-Grouse and the Montana Mitigation System Policy Guidance Document for Greater Sage-Grouse, respectively, as amended on October 4, 2018.

Western Energy opted to make a contribution to the Stewardship Account, as allowed by the Stewardship Act, instead of implementing permittee-responsible actions. The amount, after applying the 3% discount, would be $36,522.91. Funds would be deposited after completion of the permitting process and prior to new mining. MSGOT would award these funds through the Stewardship Account grant process to conserve habitat and sage grouse populations in the Southeastern Service Area.

PROGRAM RECOMMENDATION:
The Program Manager recommends MSGOT approve the Rosebud Coal Mine AM5 Greater Sage-Grouse Mitigation Plan.
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**Acronyms and Abbreviations**

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<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>°F</td>
<td>Fahrenheit</td>
</tr>
<tr>
<td>AMS or Area B Extension South</td>
<td>Proposed Amendment to Area B SMP 1984003B</td>
</tr>
<tr>
<td>MDEQ</td>
<td>Montana Department of Environmental Quality</td>
</tr>
<tr>
<td>MFWP</td>
<td>Montana Fish, Wildlife, &amp; Parks</td>
</tr>
<tr>
<td>mi²</td>
<td>square miles</td>
</tr>
<tr>
<td>MNHP</td>
<td>Montana Natural Heritage Program</td>
</tr>
<tr>
<td>Western Energy</td>
<td>Western Energy Company</td>
</tr>
</tbody>
</table>
Western Energy Company (Western Energy) operates the Rosebud coal mine in southeastern Montana near the town of Colstrip. The Rosebud Mine is a surface mine that has been in operation since 1968. The proposed amendment to the Area B Surface Mine Permit (SMP C1984003B), AM5, is located in Rosebud County, adjacent to the southern boundary of the existing Rosebud Mine permit area and approximately 5 miles southwest of Colstrip in Rosebud County, Montana. The proposed tract overlaps all or portions of Sections 13, 17, 20–29, and 33–36, T1N:R40E. AM5 would increase the Area B permit area by 9,108 acres and the disturbance area by 5,547 acres, this results in a total permit area of 15,161 acres and 11,202 acres of disturbance. The wildlife survey area included the entire proposed AM5 tract and a surrounding perimeter that encompasses 54.3 mi² or 34,789 acres.

Generally, the process of mining and reclamation at the Rosebud Mine follows the following sequence:

1. vegetation is cleared
2. topsoil is salvaged and either directly hauled to regraded areas or stockpiled for future use
3. blasting techniques are employed to loosen and move some of the overburden to the previous open pit
4. dragline removes remainder of overburden and exposes coal
5. blasting techniques are employed to fracture coal
6. coal is extracted by a truck and loader fleet
7. open pit is backfilled with spoil (blasted overburden)
8. surface is graded to approximate original contour
9. topsoil is placed
10. revegetation by seeding and hand planting

Surface ownership within the wildlife survey area is a mixture of private and state land. The area is relatively remote and only accessed via old mine roads associated with the Big Sky Mine from the east, extended mine roads on the Rosebud Mine from the north, or numerous rural dirt roads associated with the other surrounding ranches and private lands. Current principal land uses in the general vicinity include a long history of mining, as well as recreation (e.g., hunting), ranching, and agriculture.

Wildlife monitoring based on guidance from the Montana Department of Environmental Quality (MDEQ) is ongoing and has been conducted annually in portions of the Rosebud Mine from 1973 through 2018. The proposed Area B Extension South tract overlaps the south-central extent of the current Rosebud Mine annual wildlife monitoring area (permit areas and a 1.0-mile perimeter) and the western portion of the no longer active Big Sky Mine and its historical 1.0-mile wildlife survey area. Monitoring was conducted at the Big Sky Mine annually from 1974 through 2015, after which monitoring was no longer required by MDEQ due to the mine’s inactive status. Monitoring included standardized wildlife surveys for big game, game birds, breeding birds, and nesting raptors. However, all animal species (including any federally listed species and other species of concern listed with the Montana Fish, Wildlife, & Parks [MFWP] and Montana Natural Heritage Program [MNHP]) were also incidentally recorded in all years.
The proposed AM5 tract is within the Northwestern Great Plains Ecoregion. The climate is semi-arid, averaging 15.0 inches of precipitation annually, with the majority occurring between April and October. The 50-year mean maximum and minimum temperatures in July and January were 88.1 degrees Fahrenheit (°F) and 9.5°F, respectively.

AM5 lies near the base and to the east of the Little Wolf Mountains, and elevation ranges from approximately 3,160 to 3,820 feet above sea level. Topography is a series of alternating drainages and prominent ridgelines, primarily running northwest to southeast. Topography in the southwestern and southern extent is composed of taller steeper slopes and narrower valleys. More open valleys and rolling topography occur in the central-western, extreme northern, and northeastern portions of the area.

Minor ridgelines and hillsides border drainages found in these areas as well. Ridgelines throughout the area are characterized by moderately steep slopes with exposed rock outcrops (primarily clinker, but some sandstone) accompanied by some large areas of flat terrain on top of ridgelines.

Drainages are generally azonal alluvial soils, often loamy in texture. Several named and unnamed drainages, including Lee Coulee, Richard Coulee, and Rape Coulee flow from the northwest throughout the area towards Rosebud Creek. The East Fork of Armells Creek also flows west to east along the northern margin of the area. Water availability is limited to ephemeral runoff associated with the more prominent drainages.

The area is dominated by woodlands interspersed with large open grasslands at the higher elevations and level to rolling grasslands interspersed with sagebrush and woody draw habitats along the numerous drainages at the lower elevations. High-elevation woodlands primarily consist of sparse to dense stands of ponderosa pine (Pinus ponderosa).

In late summer 2012, the Chalky wildfire spread throughout the southwestern and southern portions of the area; thus, a significant portion of the pine stands present are composed of dead standing trees with a relatively open canopy and short to sparse undergrowth. However, some scattered patches of unburned pine stands also exist in areas where the wildfire did not extend (particularly in the northeast). Some stands of ponderosa pine also occur at the lower elevations and along most creek drainages but are generally sparser and mixed with individuals or small stands of green ash (Fraxinus pennsylvanica), boxelder (Acer negundo), or cottonwoods (Populus spp.). Many of the larger stands of cottonwoods present along Richard Coulee and Rape Coulee were also burned in the Chalky wildfire but are still standing.

Large expanses of grassland habitat extended throughout the lower elevations, especially along the northwestern and southeastern ends of Richard Coulee and the northwestern portion of Lee Coulee. Herbaceous cover throughout the survey area varied from dense among the rolling hills and draws to sparse or bare along many of the steeper ridgelines or in the burned areas. The majority of grasses throughout the survey area ranged from approximately 6 to 32 inches in height.

---

Common grasses within the project area included wheatgrasses (*Agropyron* and *Pascopyron* spp.), needle-and-thread (*Hesperostipa comata*), junegrass (*Koeleria macrantha*), Japanese brome (*Bromus japonicus*), bluegrass (*Poa* spp.), green needlegrass (*Stipa viridula*), crested wheatgrass (*Agropyron cristatum*), and cheatgrass (*Bromus tectorum*).

The survey area also overlaps with previously mined areas at the former Big Sky Mine. As a result, approximately 3.2 mi² of reclaimed grassland exist within the central-eastern margin of the proposed AM5 tract and extended wildlife survey area. Grass cover in that area is dense and ranges in height from 12 to 38 inches.

Dominant shrubs in the area include big sagebrush (*Artemisia tridentata*) and silver sagebrush (*Artemisia cana*). Sagebrush communities typically occurred along the slopes at the lower elevations in a patchy mosaic of sparse to moderately dense stands. Sagebrush height generally varied from 12 to 30 inches (averaging 24 inches).

The majority of the sagebrush habitats occurred along the northwestern extent of Lee Coulee, the central stretch of Richard Coulee, and the southeastern portion of Rape Coulee on the drier east- and south-facing slopes. Dense, but less common shrubs were also observed in woody draw habitats. Those species included chokecherry (*Prunus virginiana*), snowberry (*Symphoricarpus alba*), gooseberry and currant (*Ribes* spp.), and serviceberry (*Amelanchier alnifolia*). Skunkbush sumac (*Rhus trilobata*) was also present at some of the higher elevations, and typically associated with rocky outcrops.

Seven major vegetation types including: conifer, grassland, improved pasture, mixed shrub, revegetation, sagebrush, and woody draw were classified within the proposed AM5 tract and extended wildlife study area.

### Table 1. Vegetation Types¹ and Wildlife Habitat Acres within the Proposed AM5 Tract and Surrounding Area

<table>
<thead>
<tr>
<th>Original Permit Designation</th>
<th>Corresponding Vegetation Types</th>
<th>Total Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lowland</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grassland</td>
<td>Grassland</td>
<td>0</td>
</tr>
<tr>
<td>Deciduous Tree/Shrub</td>
<td>Woody Draw</td>
<td>0</td>
</tr>
<tr>
<td><strong>Upland</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grassland</td>
<td>Grassland</td>
<td>7,244.1</td>
</tr>
<tr>
<td>Big Sagebrush</td>
<td>Sagebrush</td>
<td>281.8</td>
</tr>
<tr>
<td>Silver Sagebrush</td>
<td>Sagebrush</td>
<td>827.0</td>
</tr>
<tr>
<td>Skunkbush Sumac</td>
<td>Conifer/Sumac</td>
<td>1,056.8</td>
</tr>
<tr>
<td>Deciduous Tree/Shrub</td>
<td>Woody Draw</td>
<td>92.3</td>
</tr>
<tr>
<td><strong>Mixed Shrub</strong></td>
<td>Mixed Shrub</td>
<td>332.6</td>
</tr>
<tr>
<td><strong>Conifer</strong></td>
<td>Conifer/Sumac</td>
<td>5,927.4</td>
</tr>
<tr>
<td><strong>Wetlands - Wet Meadow</strong></td>
<td>Wetland</td>
<td>14.7</td>
</tr>
<tr>
<td><strong>Disturbed Grassland</strong></td>
<td>Improved Pasture</td>
<td>28.7</td>
</tr>
<tr>
<td><strong>Revegetation</strong></td>
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<tr>
<td><strong>Wildlife Habitat Features:</strong></td>
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<tr>
<td>Sandstone Rock</td>
<td></td>
<td>5.2</td>
</tr>
<tr>
<td>Pond</td>
<td></td>
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</tr>
</tbody>
</table>

Greater Sage-Grouse

The Montana Sage Grouse Habitat Conservation Program has reviewed the proposed project. The greater sage-grouse is of high management concern, and the conservation of the species and associated habitats is outlined in Executive Order 12-2015. Because of concerns regarding this species, Rosebud Mine biologists watch for and record all observations and sign of this species in all mine areas and associated wildlife survey areas during annual field surveys.

Historic occurrence of greater sage-grouse within the vicinity of the Rosebud Mine is rare, with the most recent documented sighting in 1999. This species has only been documented on leks in the historic mine-wide survey area in two previous years since annual monitoring began in 1973. Two male sage grouse were repeatedly observed at a sharp-tailed grouse lek (lek #20) in 1984, and one male was seen at the lek throughout spring 1985. However, lek #20 is outside the current Rosebud Mine wildlife survey area and has been for many years.

No sage grouse have been recorded within AM5, the current Rosebud Mine wildlife survey boundary, or the Big Sky Mine wildlife survey areas during the previous monitoring at these sites.

Program Analysis and Deviations from EO 12-2015

The proposed AM5 project area is located entirely within General Habitat for sage grouse. Stipulations recommended in EO 12-2015 are designed to maintain existing sage grouse populations and levels of suitable sage grouse habitat by regulating uses and activities in General Habitat in a manner that sustains sage grouse abundance and distribution in Montana.

Delineated General Habitat areas are important for maintaining the abundance and distribution of sage grouse across Montana, but not identified as Core or Connectivity Areas. Development scenarios in General Habitat are more flexible than in Core Areas but must still be designed and managed to maintain sage grouse populations and habitats.

Potential EO stipulation deviations for this project include surface occupancy (NSO), seasonal use timing stipulations, and vegetation removal timing stipulations. No active sage grouse leks are located within 4 miles of the proposed AM5 (Figure 1). The nearest active leks are TR-004 (approximately 15 miles northwest corner of AM5) and RO-004 (approximately 14 miles northeast corner of AM5).

This project is fully consistent with EO 12-2015; therefore, no site-specific multipliers were applied to the HQT Score.

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2 MCA 76-22-103(7).
Figure 1. 2750 - Rosebud Mine Area B AM5 Disturbance Limit, Active Leks and 4-Mile Buffer, and HQT Basemap.

Figure 1. Rosebud Mine AM5 project location, nearest active leks with 4-mile buffers, and the Montana HQT Basemap showing relative functional acre values.
Mitigation

The Program worked with Western Energy to review the proposed AM5 project. Although there were no active sage grouse leks within four miles at the time of this review, direct and indirect impacts to sage grouse habitat will occur with the proposed AM5 project. For this Mitigation Plan, all references to the Montana Mitigation System Habitat Quantification Tool Technical Manual for Greater Sage-Grouse (HQT) and the Montana Mitigation System Policy Guidance Document for Greater Sage-Grouse refer to the October 2018, Version 1.0 documents.

Avoidance

Avoidance is defined as avoiding an impact from a proposed debit project altogether by not taking a certain action or parts of an action.\(^3\) The entirety of this project is located within General Habitat, therefore direct and indirect impacts from this project to sage grouse habitat will not be avoided under the AM5 expansion.

Minimization

Minimization is defined as minimizing impacts by limiting the degree or magnitude of the action and its implementation.\(^4\) Indirect project impacts to sage grouse habitat would be minimized under the AM5 expansion by locating roads within the Disturbance Limit of the project and continuing to use ground power cables rather than build overhead power lines during the life of the project. Removing the minimum amount of vegetation required for work under the AM5 expansion would also minimize impacts to sage grouse habitat.

Reclamation

Included in the AM5 amendment application to the Area B SMP C1984003B is a reclamation plan\(^5\) with associated vegetation map\(^6\) and reclamation map\(^7\) which depict the post-mine, reclaimed state.

Reclamation is defined as rectifying the impact by repairing, rehabilitating, or restoring the affected environment.\(^8\)

Reclamation for coal mines in Montana is required in the Montana Code, Title 82, Chapter 4, Part 2:\(^9\)

“The operator shall commence the reclamation of the area of land affected by the operator’s operation as soon as possible after the beginning of strip mining or underground mining of that area in accordance with plans previously approved by the department”

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\(^5\) AM5 Amendment to Area B SMP 1984003B Section 17.24.313 Reclamation Plan.

\(^6\) AM5 Amendment to Area B SMP 1984003B Exhibit C – Post-mine Vegetation Plan.

\(^7\) AM5 Amendment to Area B SMP 1984003B Exhibit J – Approximate Reclamation Plan.


\(^9\) MCA 82-4-234.
Per MCA 82-4-234, reclamation of AM5 will proceed as soon as possible. The following is a general overview of the plan for reclamation.

**Soil**

Soil materials will be salvaged with mobile equipment in advance of overburden blasting and pit excavation. The extent and depth of salvaged soils will be based on pre-mine soil surveys and the past intensive Western Energy pre-salvage soil sampling program. To the maximum extent possible, salvaged soil materials will be immediately redistributed.

The vegetation map shows the approximate locations for each post-mining reclamation type. These locations were selected after examining pre-mining topographic associations for each reclamation type and selecting comparable areas on the post-mine topography. Final locations may be adjusted during the regrading process as opportunities to develop appropriate topography (e.g. slope, aspect, position on slope, extent of feature, etc.) for selected reclamation types are identified. This is particularly applicable to reclamation types requiring more specific topographic features, aspect, substrates, etc. (e.g. mixed-shrub, conifer, etc.). Cropland and pastureland land uses, in addition to specific topographic limitations, require addition of wildlife enhancement features. This requirement will be met by the inclusion of a combination of grassed waterways with various shrub plantings, incised drainages with concentrated woody species plantings, irregular field shapes, and/or placement near native vegetative and topographic escape cover as appropriate.

Soil laydown depths will be of a thickness consistent with the soil resource availability and appropriate for the reclamation type. Actual soil laydown will vary across a reclamation unit in an attempt to resemble a pattern consistent with natural soil depth (e.g. shallower on ridge tops and deeper in swales and depressions). The average depth will be within a given variance, defined for each reclamation type, from the average laydown depth. Variability of the soil laydown depths within a reclamation type will be dependent on the desired vegetative results. For instance, in a cropland area where uniform production is desired soil laydown depths will be restricted to a narrow variance from the target laydown depth. In the grasslands where more vegetative diversity is desired, a larger variance from the target depth will be allowed, and the number of sample soil laydown depths that must be within the variance interval will be reduced. For reclamation types where the establishment of woody species is desired, a greater variance from the target soil laydown depth is allowable and the number of sample laydown depths that must be within the variance interval is further reduced.

To promote vegetative diversity by increasing establishment of woody species and forbs, suitable spoil (as defined in MDEQ Soil, Overburden and Regraded Spoil Guideline), sandy or sandy loam subsoil, or scoria may be used as a soil substitute). Sites identified to have similar slope complexity and aspect as native sites supporting the desired woody species will be selected for soil substitution. When available, tree substrate, including pockets of deeper tree subsoil and sandy or otherwise suitable overburden may be salvaged and direct hauled or stockpiled as needed to provide additional suitable conifer root zone material. This same practice may be used to provide additional rooting material to promote establishment of shrubs, particularly skunkbush.

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10 MCA 82-4-322(9).
Vegetation

Recognizing that wildlife considerations are still important on the grazing lands, Western Energy has included shrub species in all seed mixes except pastureland. Soil substitution and variable soil laydown depths will also encourage shrub establishment and survival within the various reclamation types further compensating for the reduced shrubland and conifer acres. Post-mine tree and shrub stand size and shape will vary to generally resemble pre-mine shrub/tree stands. Shrub and tree planting rates assume a 50 percent mortality rate. The average plant spacing is 12 feet on center at a density of 300 plants per acre; however, the spacing of actual plantings will vary, in order to simulate natural conditions.

It is anticipated that the relatively small size of the stands and the often linear or irregular shape of the stands will expedite natural invasion of herbaceous species.

The diversity of reclamation types present in this plan use the best technology currently available to reclaim environmental resources in the permit area. The methods described in this plan are based on the results of previous investigations, observations, and trials.

Vegetation types are described below:

LOWLAND: This area is associated with reconstructed drainages and lowland surface water run-in sites. These are ephemeral drainage areas that collect surface runoff from surrounding sites and accumulate moisture, effectively increasing soil moisture content. Lowland areas are typically located within larger ephemeral drainages. In general, lowlands are found within drainages between the transition points (the point at which the gentle slope of the drainage bottom transitions from the steeper slopes of the adjacent hillsides) on the valley slopes. Lowland areas contain stabilizing grass, as well as woody species providing food and cover for both wildlife and livestock. Grassland, silver sagebrush, grassland shrub complex, and deciduous tree/shrub reclamation types occur in this topographic position.

Prior to mining, natural topographic position, parent material, and biota of the type resulted in soils of greater depth than generally found in uplands, conifer, and mixed shrub types. Topsoil and subsoil lifts will be redistributed to replicate pre-mine conditions. Topographic position will be replicated by targeting this reclamation type for the area from the main drainage upslope to the lower transition point of the side slope, approximately 10-30 feet above the drainage bottom.

Erosion features found within the native lowland type have little or no topsoil; therefore, soil substitution sites may be incorporated into post-mine reclamation to mimic these sites. Areas of soil substitution will be used for re-establishment of the silver sagebrush-grassland and deciduous trees and shrubs.

UPLAND: These are areas that occur on level, nearly level and moderate slopes. They are more xeric than the lowlands, but do have sites of elevated moisture levels, including snow catchment areas the lee sides of hillocks and ridges, incised drainages, dry washes, and small basins. Uplands are interspersed with various shrub associations that provide utility for both wildlife and livestock. Grassland, shrub-grassland (skunkbush sumac, shrub complex, silver sagebrush and big sagebrush types), mixed shrub and deciduous tree/shrub reclamation types occur in the uplands.

Soils on the pre-mine upland sites were not as deep as those found on lowland sites. With the exception of skunkbush sumac areas, soils will be salvaged in two approximately 12-inch lifts. Pockets of deeper soils will be created during reclamation to promote thick vegetative diversity. These pockets will...
be located on the lee sides of hillocks and ridges and other areas where soil material naturally accumulates due to their landscape position (i.e. deposition from wind and water erosion). Soil depths in these pockets will vary; however, they will not exceed 36 inches ± 6 inches. Since erosion features found within the upland type have little or no topsoil, soil substitution sites will be incorporated into post-mine reclamation to mimic these sites. Areas of soil substitution will be used for re-establishment of the shrub-grassland, mixed shrub and deciduous tree/shrub reclamation types.

AGRICULTURE AND PASTURELAND RECLAMATION TYPES:

Cropland: Agricultural development in the Colstrip vicinity includes various small grains and hay. While this reclamation type is primarily intended for livestock usage or as cash crops, agricultural fields will be utilized by various wildlife species on a seasonal basis. Specific locations and post-mine acreages of Agricultural areas are described in the Alternative Reclamation Plan for Cropland and Special Use Pastures.

Pastureland: This type was formerly referred to as Special Use Pasture and includes areas seeded or inter-seeded to native or introduced species (or in combination). These lands provide seasonal or special use for livestock on a more intensively managed basis than would occur if the land was grazing land. Pasturelands are typically limited in species diversity and are often nearly a monoculture. Occasional cutting of the forage species for livestock feed may be done for management of the stand or for emergency/supplemental livestock feed.

OTHER RECLAMATION TYPES:

Sandstone outcrops and cliffs are a common feature of the pre-mine landscape and are used by many wildlife species. Raptor and cliff dwelling bird species use them for nesting and/or hunting perches. Several other species (i.e. sagebrush lizards and scorpions) are also associated with these structures, which are usually impacted during the mining process. Two post-mine types (rock piles and cliffs) are designed to mitigate these impacts. Other wildlife habitat features included in post-mine reclamation planning include water features such as ponds and wet meadows. Such water features were present in the pre-mine landscape either as naturally formed features or ranching infrastructure, such as stock ponds and irrigation excavations. These features will provide both vegetation diversity and surface water for use by livestock and/or wildlife.

Compensatory Mitigation and the Habitat Quantification Tool Process

Compensatory mitigation is defined as actions that provide compensation for unavoidable adverse residual impacts to species or their habitat and when taken in advance of the impact through activities that preserve, enhance, restore, and/or establish habitat through the Montana Mitigation System.12

The HQT (Montana Mitigation System Habitat Quantification Tool Technical Manual for Greater Sage-Grouse October 2018, Version 1.0) was used to calculate the total debit obligation for this project. The analysis was conducted on November 13, 2018. The HQT assessment area associated with the development project’s impacts was the Disturbance Limit. This is the area within the Permit Boundary where the actual activity and surface disturbance for the project will occur under the terms of the permit(s). See Figures 2 and 3 below.

---

The Program discussed options for meeting this obligation with Western Energy, including permittee-
responsible actions, purchasing credits from third-party private entities, making a financial contribution
to the Stewardship Account, or some combination thereof. Western Energy informed the Program that
they have selected the Stewardship Account contribution option.

Multipliers are applied to the Raw HQT Score (Montana Mitigation System Policy Guidance Document
for Greater Sage-Grouse October 2018 Version 1.0) to account for: (1) risk and uncertainty through a
Reserve Account; (2) net conservation gain where federal authorization is required (not applicable here);
(3) advance payment if a cash payment is made to the Stewardship Account; and (4) site specific impacts
when EO stipulations are violated.

Multipliers considered for this project:

- **Risk and The Reserve Account Contribution of 20%** will be applied to the Raw HQT Score
  for the Reserve Account multiplier. It is mandatory. This accounts for the fact that
  impacts are estimated. Actual impacts could be greater or smaller. The Reserve
  Account also functions as a shared insurance pool so that credits may be replaced if
  credit sites do not produce as many credits as predicted or credits are lost due to an Act
  of God, such as a wildfire.

- **Advance Payment of 10%** will be applied to the Raw HQT Score for direct and indirect
  impacts for the life of the project. This is included because Western Energy has selected
  the in-lieu fee approach by contributing to the Stewardship Account (as provided by the
  Stewardship Act) rather than undertaking a permittee-responsible approach of securing
  sufficient mitigation offsets of its own accord. Advance payments are included when a
  proponent elects to make a contribution because impacts would occur prior to
  mitigation offsets and there would be a temporary, short term loss of habitat.

- **Site-Specific Impacts** are addressed through a multiplier of 5% for General Habitat for
  each aspect of a proposed project that is not consistent with the Executive Order 12-
  2015 stipulations during either construction or operations phase of a project. Potential
  stipulations could include No Surface Occupancy (NSO), seasonal use timing for
  activities, and vegetation removal timing. This project is fully consistent with EO 12-
  2015; therefore, no site-specific multipliers were applied to the HQT Score.
Figure 2. The Montana HQT Basemap, Rosebud AM5 Disturbance Limit, and project disturbance features.
Figure 3. The Rosebud Mine AM5 expansion Disturbance Limits and the HQT Indirect impact buffer area overlaid on the HQT Basemap. The functional acres lost calculation is based on the difference in values between the Basemap and project impact buffer shown here.
HQT and Calculation of Project Impacts

The Program calculated the compensatory mitigation obligation based on Western Energy’s decision to make a contribution to the Stewardship Fund. The HQT model run for the AM5 project resulted in a raw score of 3,137.72 functional acres lost due to the direct and indirect impacts for the life of the project. Added to this are the reserve account (20%) of 627.54 debits, and the advance payment (10%) of 313.77 debits for a total debit obligation of 4,079.03. No site-specific Executive Order stipulations apply to this project. Table 2 summarizes the debit obligations for this project.

Table 2: Compensatory Mitigation Debit Obligation Summary

<table>
<thead>
<tr>
<th>Debit Component</th>
<th>Compensatory Mitigation Obligation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw HQT Score</td>
<td>3,137.72</td>
</tr>
<tr>
<td>Reserve Account</td>
<td>627.54</td>
</tr>
<tr>
<td>Advance Payment(^\text{13})</td>
<td>313.77</td>
</tr>
<tr>
<td>Site-Specific EO Stipulation</td>
<td>0</td>
</tr>
<tr>
<td>Total Debit Obligation</td>
<td>4,079.03</td>
</tr>
<tr>
<td>Total Stewardship Fund Contribution after applying Credit Discount Method</td>
<td>$36,522.91</td>
</tr>
</tbody>
</table>

Commitments

After working with the Program to fully consider all options for meeting their project debit obligations, Western Energy opted to make a contribution in the full amount of $36,522.91 to the Stewardship Fund for the Rosebud Area B AM5 project. A key condition of this option is that the contribution must be deposited after all permits are issued, but prior to commencing construction.

\(^{13}\) Advance Payment to the Stewardship Account of 10%.
**SUMMARY:**

American Colloid Company (ACC) is proposing to amend an existing permit (#8) to mine bentonite in Big Horn County Core Area. The amendment expands the original 533.92 acres of lands in the Amendment 5 Warren permitted area. It is anticipated that there would be about 174.9 acres of new disturbance over a 15-year period. This includes 129.4 acres of disturbance on ACC lands and 45.5 acres of disturbance on Bureau of Land Management lands (BLM). The BLM will need to approve a plan of operations. The state permitting authority is Montana Department of Environmental Quality (DEQ).

The Sage Grouse Habitat Conservation Program (Program) has been working with DEQ, BLM, and bentonite mining companies to develop an overall process that accommodates BLM’s requirements to conduct environmental reviews under the National Environmental Policy Act (NEPA), allows for Program review of activities in sage grouse habitats, allows DEQ to fulfill state statutorily imposed timelines within which DEQ must complete review of a mining permit application and issue a permit, and allows DEQ to tier to BLM’s NEPA environmental analyses when available. And, if not more importantly, the work flow endeavors to streamline the process as much as possible for bentonite mining companies while being flexible enough to accommodate operator's timelines.

The Program has been working with ACC since October 2017, when all project-related information was exchanged. Most recently, ACC and the Program developed a mitigation plan. The Greater Sage Grouse Stewardship Act (Act) charges MSGOT to review and approve compensatory mitigation plans. MSGOT is being asked to review and approve the ACC Amendment 5 Permit Amendment to Permit 8 Warren Mine Site Sage Grouse Mitigation Plan (Plan) now so that ACC can move forward with the BLM and DEQ.

The Plan describes the Project, expected impacts, adherence to the mitigation hierarchy (avoidance, minimization, reclamation, and compensatory mitigation), and consistency with Executive Order 12-2015 (EO). After consideration of alternative methods based on physical acres, ACC and the Program agreed to apply the July 2017 habitat quantification tool to estimate functional acres lost. The parties agreed to apply the October 2018 version of the policy guidance. As a good faith gesture, the Program gave the benefit of the doubt to ACC and offered options that kept the mitigation obligation as low as possible given that the project has been in review, all while still being consistent with the EO, the Act, and the approach taken with other proponents. It was recognized that MSGOT had not yet approved the final HQT and policy guidance.

ACC opted to make a contribution to the Stewardship Account, as allowed by the Stewardship Act, instead of implementing permittee-responsible actions. The amount, after applying the 3% discount would be $25,280.87. Funds would be deposited with the permitting process and prior to new mining. MSGOT would award these funds through the Stewardship Account grant process to conserve habitat and sage grouse populations in the Central Montana Service Area.

**PROGRAM RECOMMENDATION:**
The Program Manager recommends MSGOT approve the ACC Amendment 5 Permit Amendment to Permit 8 Warren Mine Site Sage Grouse Mitigation Plan.
American Colloid Company
Montana Amendment 5
To Opencut Permit 8, Warren Mine Site
Sage Grouse Mitigation Plan

Project Number 46

November 6, 2018
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1.0 INTRODUCTION AND BACKGROUND

American Colloid Company (ACC) in Lovell mines bentonite in Carbon County, Montana and across the state line into Big Horn County, Wyoming. ACC has been continuously mining and marketing bentonite since 1928. ACC has operated in Carbon County since 1970 and has continued to mine to present day. Currently all bentonite mined by ACC in Carbon County is hauled to ACC’s processing plant in Lovell, Wyoming. Major markets served by ACC include oil and gas drilling, pet litter, geosynthetic clay liners, taconite pellets for the steel industry, and numerous other uses.

ACC is proposing to amend existing Montana Department of Environmental Quality (MT DEQ) Opencut Mining Permit #8 located in southern Carbon County, which is identified as a Core Sage Grouse habitat area. The amendment application was submitted to the Bureau of Land Management in April of 2016 and will be updated after receipt of the required approval of this mitigation plan by the Montana Sage Grouse Oversight Team (MSGOT). The project will then be submitted to the Montana Department of Environmental Quality for final approval. The project is identified as Amendment 5 to Opencut Mining Permit 8 (Warren Mine Site) and is referenced by the Montana Sage Grouse Habitat Conservation Program as Project 46.

ACC’s open cut permit in Carbon County (Permit 8) was issued on March 12, 1973 and is present in two major locations. The first is located roughly 8 miles south of Bridger, and the second is located roughly 6 miles southeast of Warren. ACC’s permit (Open cut Permit 8 and BLM Plan of Operations MTM-88653) currently is composed of 7493.7 acres. 3754.4 acres of the permit are privately owned by American Colloid Company and 3739.3 are federal lands, under jurisdiction of the Bureau of Land Management. ACC’s permit in the Warren area consists of approximately 3950 acres and has been amended to four times. Amendment 5 is located in the Warren Area. Amendment 1 added 20 acres of BLM land to the permit for a haul road and Amendment 2 added 40 acres of BLM land (19.8 acres of disturbance) for mining activities. Amendment 3 added 490 acres of land to Permit 8 (390 acres ACC private land and 100 acres BLM land). 263.5 acres of disturbance were approved on ACC private lands and 34.1 acres of disturbance were approved on BLM lands. Amendment 4 added 170.32 of ACC private lands into Permit 8, with 73.42 acres of approved disturbance.

At the time of this submittal, 1127.0 acres have been disturbed in Permit 8. See Table 1 for accounting by ownership of disturbed lands by current land status within Permit 8. Note that areas designated as reclaimed badlands are areas that were considered badlands with very little to no soil or vegetation prior to disturbance. Final reclamation on these areas involved backfilling and contouring to reconstruct approximate pre-mine contours and drainages. Areas designated as seeded were vegetated prior to disturbance and have been topsoiled and seeded and are considered to be fully reclaimed to MT DEQ standards and specifications. Also, note that active areas are areas where final reclamation has not occurred. These areas include open pits, partially backfilled pits, pits that have been backfilled and contoured but have not been soiled, equipment camp and stockpiling areas where soil has been stripped but no mineral has been removed, areas that have been topsoiled but not seeded, and unkontoured areas that were.
Map 1  General Overview of Permit 8
barren badlands prior to disturbance (final reclamation on these areas only involves final contouring). No areas within Permit 8 have been issued bond release. Map 1 displays the location of the Amendment 5 project in relation to ACC’s Permit 8 and includes the extents and current status of lands that have been affected by mining activities approved by that permit. Also shown is the surface ownership of lands within Permit 8.

Table 1: Permit 8--Ownership and Current Land Status Summary

<table>
<thead>
<tr>
<th>Land Status</th>
<th>ACC Patented (acres)</th>
<th>BLM Unpatented Mining Claims (acres)</th>
<th>Total (acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active&lt;sup&gt;1&lt;/sup&gt;</td>
<td>150.7</td>
<td>1.6</td>
<td>152.3</td>
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<tr>
<td>Haul Roads</td>
<td>37.1</td>
<td>13.8</td>
<td>50.9</td>
</tr>
<tr>
<td>Reclaimed Badlands&lt;sup&gt;2&lt;/sup&gt;</td>
<td>178.7</td>
<td>18.8</td>
<td>197.6</td>
</tr>
<tr>
<td>Seeded Lands&lt;sup&gt;3&lt;/sup&gt;</td>
<td>647.7</td>
<td>72.5</td>
<td>720.2</td>
</tr>
<tr>
<td>Ponds</td>
<td>6.0</td>
<td>0.0</td>
<td>6.0</td>
</tr>
<tr>
<td>Total</td>
<td>1020.2</td>
<td>106.8</td>
<td>1127.0</td>
</tr>
</tbody>
</table>

<sup>1</sup>Active areas are composed of areas that have not had final reclamation performed

<sup>2</sup>Reclaimed Badlands are lands that required contouring as final reclamation

<sup>3</sup>Seeded lands are lands that have had been topsoiled and seeded and are considered fully reclaimed

Amendment 5 includes 533.92 acres of lands in the Warren area. 340.83 acres of these lands are ACC private lands and 193.09 acres are BLM lands. Of these 533.92 acres, 423.92 acres are already included in Permit 8 as part of the original permit. Mining activities proposed in this submittal were not included in the original approved Permit and the disturbance is not currently bonded for. 110.00 acres of BLM lands are also proposed to be amended into Permit 8 in this action.

Within the Amendment 5 project area, 174.9 acres of proposed disturbance were reviewed by the Program and are included in this mitigation plan. This includes 129.4 acres of disturbance on ACC lands and 45.5 acres of disturbance on BLM lands. 136.1 acres within the project area are haul roads or lands that have been disturbed by historical mining activities and are fully reclaimed. 0.6 acres of this disturbance are composed of seeded BLM lands. All other disturbance is located on ACC patented lands. See Table 2 for accounting by ownership and current land status within the Amendment 5 project area. 3.4 acres of roads and 11.4 acres of seeded lands are present within the proposed disturbance area in Amendment 5. The proposed life-of-mine for Amendment 5 would be approximately 15 years. Map 2 illustrates the Amendment 5 project area and the proposed disturbance boundary for that project. Also shown is the surface ownership and current land status of areas that have been disturbed within the Amendment 5 project area.
Because the surface ownership within the Amendment 5 Project Area is a combination of American Colloid patented lands and federal unpatented mining claims, a BLM Plan of Operations was required for this project and was submitted to the Billings Field Office in April of 2016. The final analysis by the BLM will be performed after the acceptance of this mitigation plan by the MSGOT committee and inclusion of the results in the Plan of Operations.

**Table 2: Amendment 5 to Permit 8—Ownership and Current Land Status Summary**

<table>
<thead>
<tr>
<th>Land Status</th>
<th>ACC Patented (acres)</th>
<th>BLM Unpatented Mining Claims (acres)</th>
<th>Total (acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active ¹</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Haul Roads</td>
<td>6.4</td>
<td>0.0</td>
<td>6.4</td>
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<tr>
<td>Reclaimed Badlands ²</td>
<td>13.1</td>
<td>0.0</td>
<td>13.1</td>
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<tr>
<td>Seeded Lands ³</td>
<td>111.8</td>
<td>0.6</td>
<td>112.4</td>
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<tr>
<td>Ponds</td>
<td>4.2</td>
<td>0.0</td>
<td>4.2</td>
</tr>
<tr>
<td>Total</td>
<td>135.5</td>
<td>0.6</td>
<td>136.1</td>
</tr>
</tbody>
</table>

¹Active areas are composed of areas that have not had final reclamation performed
²Reclaimed Badlands are lands that required contouring as final reclamation
³Seeded lands are lands that have had been topsoiled and seeded and are considered fully reclaimed

The MT DEQ Permit to Mine authorizes an open pit bentonite mining operation in which the mineral is incrementally mined in a series of small pits (typically one to two acres each) by the cut and fill method. Mining in the Amendment 5 area will involve one series that will continue mining of a series that began across the state line in Wyoming. Mining related disturbance includes construction of haul roads, soil stockpiles, an overburden borrow area, and areas for equipment maintenance. Activity may be initiated any time after DEQ approval of the project. Please see the Amendment 5 Project Area Map 2 for a detailed summary of the proposed mine plan for the Amendment 5 area.

Only one pit will be fully open at a time in the series proposed by this project. Reclamation (backfill) of the open pit will be initiated concurrently with each successive new pit (cut) in the series. Soil resources will be salvaged and live spread over the backfilled pits or stockpiled for later use in reclamation. Overburden from the first pit in the series proposed in Amendment 5 will be used to fill the open pit located to the southwest in Wyoming. The final pit in the series will be reclaimed by borrowing overburden from the adjacent area to the west and contouring both the borrow area and the final pit to blend in with the surrounding topography. As a result of the practice of concurrent reclamation, it is estimated that no more than 25% will be actively disturbed (unreclaimed) at any point in time. The identified Amendment 5 proposed disturbance boundary is conservative relative to anticipated needs; the actual disturbance boundary is likely to be smaller.
The typical equipment at this mine would include CAT 637 scrapers, CAT D-10 or D-9 dozers, and 360 Komatsu Excavators. During mining there are usually between two and four pieces of equipment operating at a given point in time. Sometimes there is just a single dozer working. Once the clay is exposed the clay will either be hauled immediately to ACC’s processing facility Lovell or temporarily stockpiled. Hauling will occur with a CAT 980 Loader which loads the bentonite into over-the-road, belly dump semi tractor-trailers. If the open pit is relatively narrow or steep, the clay may be temporarily stockpiled into an area more accessible to haul trucks. These stockpile areas will be located in an area that has previously been mined and backfilled but not topsoiled. Hauling the clay usually takes a few days, and if hauled from a stockpile, may occur simultaneously with mining activities. Back-up alarms on the dozers and loader would be noticeable since they intermittently move forward and backward. Overall, activity is intermittent. There could be regular activity at the site for a week or two and then no activity for several days up to several weeks, depending on demand for the grade of clay in this series.

After the bentonite has been removed from a pit, activity on the next pit in the series will begin. Soil (if present) will be stripped from the next pit in the series and either livespread on contoured areas from older pits in the series or stockpiled. Overburden from the new pit will be used to backfill the previous pit and will be contoured to blend into the surrounding topography, closely approximating pre-mine contours. Any topsoil that was livespread will be prepared for seeding. Topsoiled areas will be seeded with a BLM/DEQ approved seedmix in the late fall or early spring. Areas that were badlands prior to mining activities will be backfilled and contoured to blend in with the surrounding topography. As these areas were not vegetated prior to disturbance, they will not be seeded.

2.0 AMENDMENT 5 PROJECT AREA DESCRIPTION

2.1 Habitat and Landscape Characteristics

The Amendment 5 Project area receives 5-9 inches of mean annual precipitation and has a mean annual air temperature of 46-50 degrees Fahrenheit. The topography of the area displays approximately 120 feet of elevation change, with a maximum elevation of 4600 feet and a minimum of 4480 feet (USGS, 2009). Dry Creek runs roughly northwest/southeast through the project. A relatively gentle hill system is present to the east of Dry Creek and runs roughly parallel to the drainage. A large, steep ridge is located immediately to the west of the project area.

The project area is dominated by shallow, sodic soils that support little to no vegetation. The vegetated areas are mostly sparsely populated Gardner Saltbush communities, while barren badland areas make up most of the remainder of the Amendment 5 area. Livestock and wildlife grazing is limited, due to the lack of vegetation. Livestock may be present but make little use of these lands. The main concentration of livestock focuses near a pond in the northern portion of the project area. ACC has historically deemed it unnecessary to fence reclamation in this area due to the general lack of vegetation and use by livestock. Bentonite mining has been active in the area for almost 50 years.
Map 3  
Soil Types in the Amendment 5 Project Area
2.2 Soil Types

Soil types were mapped and analyzed by Mary Cornia, Environmental Coordinator for American Colloid Company in August of 2015. Seven soil mapping units were identified in the area by analyzing many exposed soil profiles in relation to topography, slope, vegetation, and other physical characteristics. Soil mapping and sampling by qualified and experienced soil specialists is standard practice for bentonite permit applications to the MTDEQ Open Cut Program. Table 3 displays a summary of the soil types in the area, the acreage of each soil type, the salvage depths for each type, and general chemical and physical suitability characteristics.

The vast majority of the Amendment 5 Project Area does not contain soils suitable to support a Big Sagebrush Shrubland community. The soils, where present, are shallow, sodic, and very heavy in clay. Soil material is not present on 42.5% of the project area (BSO and DL). 48.3% of the project area contains soils which are chemically and physically unsuitable for sagebrush vegetation (high sodium contents and textures heavy in clay). Included in this 48.3% is 10.9 acres of soils that were salvaged and stockpiled in the 1970’s during mining activities and were recently respread. These soils are sodic as well and currently support relatively little desirable shrubs and grasses. Only 9.2% of the project area contains soils that are relatively suitable and support desirable perennial vegetation in the project area. Map 3 displays the soil types in relation to the proposed disturbance area in the Amendment 5 project area.

Table 3: Summary of Soil Types Present in the Amendment 5 Project Area

<table>
<thead>
<tr>
<th>Soil Type</th>
<th>Acreage</th>
<th>Percent of Disturbance Area (%)</th>
<th>Salvage Depth (Topsoil (in.) /Subsoil (in.))</th>
<th>Physical and Chemical Suitability Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bentonite Shale Outcrop (BSO)</td>
<td>69.5</td>
<td>39.7</td>
<td>0&quot;/0&quot;</td>
<td>No soil to salvage</td>
</tr>
<tr>
<td>Disturbed Lands (DL)</td>
<td>4.8</td>
<td>2.7</td>
<td>0&quot;/0&quot;</td>
<td>No soil to salvage</td>
</tr>
<tr>
<td>Midway clay loam (Mi)</td>
<td>10.4</td>
<td>5.9</td>
<td>6&quot;/6&quot;</td>
<td>Physically and chemically suitable; Bedrock encountered at 12&quot; average</td>
</tr>
<tr>
<td>Mudray-Larim Variant Complex (Mu-La’)</td>
<td>27.7</td>
<td>15.8</td>
<td>4&quot;/4&quot;</td>
<td>Chemically Unsuitable; Very high sodium content and clay-rich textures</td>
</tr>
<tr>
<td>Reclaimed Lands (RL)</td>
<td>10.9</td>
<td>6.2</td>
<td>6&quot;/0&quot;</td>
<td>Chemically Unsuitable; Very high sodium content, bedrock</td>
</tr>
<tr>
<td>Sayles-Persayo-Youngston-like Complex</td>
<td>45.9</td>
<td>26.2</td>
<td>4&quot;/0-10&quot;</td>
<td>Sodic overburden material below 6&quot; average</td>
</tr>
<tr>
<td>Steep Sideslope Soils (SS)</td>
<td>5.7</td>
<td>3.3</td>
<td>4&quot;/0-14&quot;</td>
<td>Bedrock encountered at shallow depths</td>
</tr>
</tbody>
</table>

2.3 Vegetation Communities

The vegetation inventory for the Amendment 5 Project Area was performed by Matthew Dillon and Mary Cornia, environmental supervisor and environmental coordinator for American Colloid Company, in July of 2015. Community types (vegetated and non-vegetated) were mapped across the entire project area, and community type delineations were based on dominant vegetation species. A vegetation species list was also compiled by Matthew Dillon in June and July of 2015. Vegetation mapping and sampling by qualified and experienced range specialists is standard practice for bentonite permit applications to the MTDEQ Open Cut Program. Table 4 displays the extents of vegetation communities present in the Amendment 5 Project Area and in the proposed disturbance area. Eight vegetation communities were mapped in the Project Area;
five of these communities are located within the proposed disturbance area. A brief description of these community types appears below. Map 4 displays the vegetation communities within the Amendment 5 Project Area and the proposed disturbance area.

Table 4: Summary of Vegetation Communities Present in the Amendment 5 Project Area

<table>
<thead>
<tr>
<th>Vegetation Community</th>
<th>Acres within Project Area</th>
<th>Percent of Project Area</th>
<th>Acres within Disturbance Area</th>
<th>Percent of Disturbance Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bentonite Shale Outcrop (BSO)</td>
<td>179.4</td>
<td>33.6</td>
<td>69.5</td>
<td>39.8</td>
</tr>
<tr>
<td>Big Sagebrush Shrubland (BSS)</td>
<td>1.6</td>
<td>0.3</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Black Greasewood Shrubland (BGW)</td>
<td>7.6</td>
<td>1.4</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>Disturbed Land (DL)</td>
<td>9.9</td>
<td>1.9</td>
<td>5.6</td>
<td>3.2</td>
</tr>
<tr>
<td>Gardner Saltbush Shrubland (GSB)</td>
<td>206.1</td>
<td>38.6</td>
<td>88.4</td>
<td>50.7</td>
</tr>
<tr>
<td>Reclaimed Land (Badlands)</td>
<td>14.7</td>
<td>2.7</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Reclaimed Land (Seeded)</td>
<td>110.4</td>
<td>20.7</td>
<td>10.9</td>
<td>6.2</td>
</tr>
<tr>
<td>Reclaimed Land (Ponds)</td>
<td>4.2</td>
<td>0.8</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Gardner Saltbush Shrubland (GSB)
Gardner Saltbush Shrubland comprises over half of the proposed disturbance area and 38.6% of the project area. This community is dominated by Gardner saltbush (Atriplex gardneri). Other vegetation species common in the community include scurfless saltbush (Atriplex suckleyi), halogeton (Halogeton glomeratus), and plains pricklypear (Opuntia polyacantha). Inclusions of big sagebrush (Artemisia tridentata) and black greasewood (Sarcobatus vermiculatus) are commonly found in ephemeral drainages that cross this community.

The average absolute vegetation cover of this community was 13.8% and litter and rock cover averaged 5.9% for a total of 19.7% total ground cover. Big Sagebrush comprised 5.2% of the relative cover by species and 0.7% of absolute cover by species. Bottlebrush squirreltail (Elymus elymoides) was the dominant grass species in this vegetation type and comprised 1.2% relative cover and 0.2% absolute cover in this community.

Bentonite Shale Outcrop (BSO)
Bentonite Shale Outcrop is very common in the project area and is primarily composed of outcrops of black fissile shale and bentonite beds associated with the Thermopolis Shale. This community makes up 33.6% of the project area and 39.8% of the proposed disturbance area. As previously stated in Section 2.2 Soil Types, soils in this community are very poor and shallow or absent. As such, it is predominantly non-vegetated. Any inclusions of vegetation are composed of annual forbs such as scurfless saltbush (Atriplex suckleyi) and Nuttall’s povertyweed (Monolepsis nuttalliana). No sampling was performed for the vegetation inventory due to the general lack of vegetation in the community.

Reclaimed Land (Seeded) (RL)
6.2% of the proposed disturbance area and 20.7% of the project area are composed of reclaimed lands that have been seeded. These areas consist of bonded reclaimed land associated with previous bentonite mining activities. The majority of these areas had previously been mapped as Gardner Saltbush Shrubland and Bentonite Shale Outcrop and were reclaimed as such. These
areas are currently sparsely vegetated. No sampling was performed for this community as it is still being bonded for.

**Currently Disturbed Land (DL)**
3.2% of the proposed disturbance area is composed of lands in which vegetation and/or soil have been removed or disturbed. In the project area, disturbed lands consist of an existing bentonite haul road.

**Black Greasewood Shrubland (BGW)**
This community type is present in certain topographically low areas in the study area where relatively poorer quality soils associated with the Thermopolis Shale are found. It is dominated by black greasewood (**Sarcobatus vermiculatus**) and other salt tolerant species, such as Gardner saltbush (**Atriplex gardneri**). 1.4% of the project area was mapped as Black Greasewood Shrubland, while only 0.1% of the proposed disturbance area is composed of this community.

**Reclaimed Lands (Badlands) (RL)**
Reclaimed lands in the project area that required no seeding compose 2.7% of the project area and are not within the proposed disturbance area. These lands are very barren to sparsely vegetated, due to a lack of soil and steep slopes.

**Reclaimed Lands (Ponds) (RL)**
Lands that were reclaimed to ponds represent 0.8% of the project area but are not proposed to be disturbed by mining activities in the Amendment 5 Project. The ponds currently support open water year-round and are accessible to livestock in one location. The areas immediately surrounding the ponds were seeded with a wetland seedmix, which included a DEQ approved mix of Nebraska sedge, common spikerush, and various bulrush species. Golden willows and plains cottonwoods were also planted along the edges of the ponds.

**Big Sagebrush Shrubland (BSS)**
A small area (1.6 acres) of Big Sagebrush Shrubland is present in the southeastern corner of the project area where relatively higher quality soils associated with the Cloverly Formation are found. The community type is dominated by perennial shrubs, including big sagebrush (**Artemisia tridentata**). No Big Sagebrush Shrubland was mapped within the proposed disturbance boundary. Additionally, no sampling was performed for this community type, as only 1.6 acres are present within the project area.

**Weeds**
The area was visually assessed in 2015 during vegetation, hydrology, and soil studies for the occurrence of plant species listed by the Montana Department of Agriculture as noxious or regulated. The amendment area was relatively free of listed weed species. One species, **Tamarix**, listed on Carbon County’s County Weeds of Concern List (Carbon County, 2015) and the Montana Noxious Weed List (MT-DA, 2015) was observed in the study area. However, the species was minimally present in association with wetland-like areas associated with the reclaimed land in the northern part of the study area. The species is targeted for eradication as part of the reclamation of the area and should not be present upon commencement of future mining associated with the Amendment 5 project. No other weed occurrences were identified by
Map 4  Vegetation Communities in the Amendment 5 Project Area

Amendment 5 Vegetation Communities

<table>
<thead>
<tr>
<th>Amendment 5 Project Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5 Miles</td>
</tr>
</tbody>
</table>

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

American Colloid Company
PO Box 428
Lovell, WY 82431

Scale: 1 inch = 1,500 feet

Author: MC
Date: 10/31/2018
Revised:
Map: 1 of 1
Carbon County Weed District or American Colloid Personnel. ACC is responsible for noxious weed spraying on the mine site after mining activities have commenced until the site is released from bonding liability by Montana DEQ and the Bureau of Land Management.

Species of Special Concern
No Ute ladies-tresses (*Spiranthes diluvialis*) were observed within the study area. Given the soil types present in the area, it is unlikely that this species would be present in the area. One species, *Grayia spinosa*, listed on the Montana Natural Heritage Program’s Plant Species of Concern List (MT-NHP, 2015) and the BLM’s Montana/Dakotas Sensitive Species List (BLM, 2009) was observed in the area. However, this species is unlikely to be disturbed as it was observed in association with the Big Sagebrush Shrubland, which will not be disturbed.

2.4 Hydrology

Background
The hydrology of the Amendment 5 Project Area was inventoried and analyzed by Mary Cornia and Matthew Dillon, environmental coordinator and environmental supervisor for American Colloid Company, in the spring of 2015. No alluvial aquifers will be affected by mining activities due to the shallow nature (30-50 feet deep) of the bentonite mining ACC proposes to perform in the project. Extensive exploration drilling to these depths was conducted by American Colloid for the project area, and no groundwater was encountered. Additionally, according to a search performed on Montana’s Ground-Water Information Center performed on March 22, 2016, there are no wells located within the project area or within 1000 feet of the project area. Consequently, no groundwater is expected to be encountered/affected during mining of this area.

The Amendment 5 project area is geomorphically young with an active, weathered topography. The landscape is composed of hills, steep ridges, plateaus, and ephemeral drainages. There are numerous ephemeral drainage systems in the Amendment 5 Project Area. Of these drainages, Dry Creek and three other drainages are represented as “blue lines” on USGS topographic maps. All drainages in the Amendment 5 Project Area consist of washes that normally flow only in direct response to precipitation. When infrequent rainfall does generate runoff, it is typically characterized by high-volume, high-velocity, sediment-laden, and turbulent flows with high kinetic energy that cease soon after the precipitation event stops. For most of these highly localized, short-duration precipitation events, the runoff water never reaches the mainstem channels downstream. Flows typically run above ground for short to moderate distances and gradually dissipate into the channel beds as the channel slopes flatten out.

Runoff in the area is characteristically generated by a single storm event that may last from a few minutes to a few hours. The dominant precipitation events that produce runoff are generally between 1-hour and 3-hour duration peaks. Typically, evidence of their passage is gone within a few hours to a couple of days except for a high-water scour line. Instability within the drainage system is readily observed with channel head-cutting, degradation, and bank slumping. Although water is sparse, the amount of water that physically runs off is significant due to the nature of the soils and the lack of effective surface cover. Runoff has created the highly-eroded landscape and variable topography that is so prevalent throughout the area.
No wetlands are present in the Amendment 5 Project Area.

**Surface Water Control During Mining**

ACC may temporarily divert surface flows if deemed necessary to minimize the effect of runoff from mined lands onto undisturbed lands. Diversion channels will be constructed as needed to convey runoff around the disturbed lands. ACC will divert flows from Dry Creek and the other ephemeral drainages into these diversion channels. Diversion channels will be constructed using a grader blade in areas where soil has been salvaged and will be triangular in shape. If erosion or sediment deposition becomes a concern, ACC will utilize best management practices (BMPs) in the form of straw bales, straw wattles, sediment fences, erosion control blankets, or water bars placed in the channel as needed to control sediment deposition in undisturbed areas. 18-inch culverts may also be placed under in and out of pit haul roads as necessary to allow the surface flow of ephemeral channels.

**Reclaimed Channels**

Reclaimed channels will tie in to native channels. Native bedrock or other appropriate rock substitutes will be incorporated into transition zones. Feathering between the native and reclaimed channels will take place in order to ensure that the transition zones remain stable. Armoring or the use of grade control structures may be used when necessary. Due to the nature of the strata being mined, the channel will primarily be constructed on regraded spoil, though it will be constructed on bedrock and/or the pit floor when possible to minimize the potential for erosion. Reclaimed channels will be constructed using a motor grader and/or a scraper.

### 2.5 Sage Grouse Populations

Four leks were documented within four miles (2.5 miles) of the Amendment 5 Project Area in the Montana Fish, Wildlife and Parks (MTFWP) lek database. These leks are identified as the Prospects lek, Bear Canyon Road lek, Gyp lek, and the Gravel Pit lek. Data has been collected for these leks beginning in the early 1990’s. The Prospects and Gyp leks have been classified by MTFWP as Confirmed Extirpated (CE) since 2013. The high male count on the Prospects lek varied from 6-19 from 1993 through 2005. Beginning in 2006, no males were observed at the lek until 2018, where one was observed. Counts varied on the Gyp lek from 1-8 from 2000-2004. Beginning in 2005, no males were observed at the lek until 2018, where one was observed.

Two leks were considered during the Program’s consistency review with Executive Order 12-2015. The Bear Canyon Road lek and Gravel Pit leks are classified as Confirmed Active (CA) by MTFWP and are within four miles of the project area. The high male count on the Bear Canyon Road lek has varied from 10 to 36 from 1993 to 2018. The high male count on the Gravel Pit lek has varied from 8 to 35 from 1993-2018 (Stewart, personal communication, 2018).

See Figure 1 for the high male counts by year for the Bear Canyon Road, Gravel Pit, Gyp, and Prospects leks. ACC personnel have conducted lek observations for these four leks beginning in the late 2000’s. The Lek Locations and Buffer map illustrates the Amendment 5 Project Area in relation to these four leks and buffers of one, two, three, and four miles from the leks.
Map 5  
Lek Locations and Buffers in Relation to the Amendment 5 Project Area

Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IFL, swisstopo, and the GIS User Community.

Lek Location
- Active
- Extirpated
- Proposed Disturbance Area
- Amendment 5 Project Area

Lek Locations and Buffers

<table>
<thead>
<tr>
<th>Active</th>
<th>Extirpated</th>
<th>Proposed Disturbance Area</th>
<th>Amendment 5 Project Area</th>
</tr>
</thead>
</table>

Scale: 1 inch = 10,000 feet

Opencut Permit 8  
MSGOT Project 46  
Amendment 5 Project Area

American Colloid Company  
PO Box 428  
Lovel, WY 82431

Author: MC  
Date: 10/31/2018  
Revised:  
Map 1 of 1
ACTIVITIES AND DEVIATIONS FROM MT EO 12-2015

Stipulations recommended in EO 12-2015 (State of Montana 2015a) are designed to maintain existing sage-grouse populations and levels of suitable sage-grouse habitat by regulating uses and activities in Core Areas and General Habitat in a manner that sustains sage-grouse abundance and distribution in Montana. The Montana EO and the Stewardship Act delineated Core Areas as those of “highest conservation priority” (State of Montana 2015a, MCA 76-22-103(3)). As a result, stipulations and conditions for development under the EO are most conservative in Core Areas. Delineated General Habitat areas represent those important for maintaining the abundance and distribution of sage-grouse across Montana, but not identified as Core or Connectivity Areas (MCA 76-22-103(7)). Development scenarios in General Habitat are more flexible than in Core Areas but must still be designed and managed to maintain sage-grouse populations and habitats (State of Montana 2015a).

The entire Amendment 5 Project Area is within a designated greater sage grouse Core Area and is 3.04 and 3.31 miles from two active sage grouse leks. The direct footprint of the mining operation will allow for the direct loss of 174.5 acres of lands within designated Core Area.

3.1 DDCT Results

The Program originally calculated the density and disturbance levels within the project area on August 24, 2016 using a Density Disturbance Calculation Tool (DDCT). The DDCT Analysis Area included 1,311.5 acres. The results were compared to allowable thresholds set forth in the Executive Order 12-2015. The DDCT result was 3.9%. DDCT calculations in the Draft
Mitigation Outcomes document were based on the 2017 DDCT model (that was in place when the calculations were first run). Calculations were run on the 174.5-acre Disturbance boundary (as opposed to the larger Permit boundary).

3.2 Expected Deviations from MT EO 12-2015

The following activities will result in a deviation from the Montana EO 12-2015 outlined in Attachment D.

Vegetation Removal: limited to the minimum disturbance required by the project. All soil stripping and vegetation removal in suitable habitat will occur between July 16 and March 14 in areas within 4 miles of an active lek. Initial disturbance in suitable habitat between the referenced dates may be approved on a case-by-case basis.

Soil Stripping/Vegetation Removal will occur year around.

4.0 ADHERENCE TO THE MITIGATION HIERARCHY

The Program worked with ACC to review the proposed Amendment 5 over a 2-year period as the Program developed plans and policies. The Program compiled a Draft Mitigation Outcomes document (dated 7-11-2018) capturing the relevant resulting information.

4.1 Avoidance

Surface disturbance will be minimized to the extent possible. Disturbance estimates were calculated using the maximum case scenario. The actual disturbance footprint is anticipated to be significantly smaller than the referenced 174.5 acres. The one active lek within the analysis area is 3.04 miles away.

4.2 Minimization

ACC will implement the required Stormwater Pollution Prevention Plan (SWPPP) covering ACC’s mine permit for the Warren Mine Site. Erosion (off-site sediment migration) will be minimized through use of stormwater Best Management Practices (BMPs) during mining. There are some existing BLM grazing allotment fences that will be affected by mining activities. These fences will be temporarily moved around disturbed areas and replaced after final reclamation. Markers will be installed on fence wires of replaced fences to enhance visibility per current guidelines from Montana Fish, Wildlife and Parks (MFWP) and/or USDA (2012) Natural Resources Conservation Service (NRCS).

Noxious weed infestation may occur in and adjacent to the project area prior to mining. Visual monitoring and chemical control will be conducted for noxious weed species from the time disturbance is initiated through life-of-mine. Potential spread of noxious weeds will managed by
• Seeding reclaimed lands with a native seed mix that is as weed-free as is commercially available.
• Monitoring mine sites and reclaimed lands periodically for noxious weed establishment and revegetation success (to outcompete weed species).
• Spraying noxious weed populations as necessary if significant infestations are noted.

4.3 Reclamation

Reclamation (backfill, contouring, soil re-spread, and seeding) will occur concurrently with mining, with an anticipated maximum of 25% of the total disturbance area being active at any one time.

Reclamation areas and soil piles will be contoured and/or seeded as soon as feasible to prevent wind and water erosion. Seeding of areas that supported vegetation pre-mine (and have been topsoiled) will establish desirable vegetation providing a measure of protection against weed establishment.

The area will be incrementally disturbed and reclaimed over the life-of-mine, thereby minimizing the active disturbance footprint at any given time. Based upon historic mine and reclamation practices, it is expected that final reclamation on most disturbed areas will be re-seeded within 5 years of initial activity. Experience has shown that reclaimed land can meet the desired post-mine land use of grazing within 3 – 5 years of seeding, depending on rainfall.

Therefore, it is estimated that all but long-term features such as haul roads will be returned to a similar and even improved functionality as the pre-mine condition within 10 years of disturbance or sooner by contouring and seeding a native seed mix of grasses and forbs on areas that have been topsoiled (areas that were vegetated prior to mining disturbance).

4.4 Compensatory Mitigation

ACC agreed to develop a compensatory mitigation approach specific to this project to avoid permitting delays while the State of Montana continued efforts to finalize a mitigation approach. ACC did not want to pursue a permittee-responsible approach that would have required additional time and analysis, resulting in further permitting delays. Instead, ACC and the Program considered approaches that entailed ACC making a financial contribution into the Stewardship Account as provided for in the Stewardship Act.

On July 11, 2018 the Program provided ACC with three specific options for achieving compensatory mitigation objectives for the project. The options were:

• apply a functional acre approach using the July 2017 draft version of the Program’s HQT and July 2018 Policy Guidance because the calculations had already been made and discussed with ACC and the July 2018 Policy Guidance was more favorable to ACC. An estimate of $43,979.40; or
• apply a physical acre approach using fixed ratios, as outlined in the draft Keystone XL Pipeline project’s draft Sage-grouse Conservation Plan (WESTECH, April 2017). The estimate was $86,287.50; or
• apply a physical acre approach following Utah’s preliminary fixed ratio of 4:1 (four acres mitigated for every 1 acre impacted), regardless of habitat type. The estimate was $453,700.00.

The September 2018 v1.0 Policy Guidance revised the method for calculating the credit price (and thus total cost) for developers who choose to make a contribution to the Stewardship Account instead of undertaking permittee-responsible projects or working with third party credit providers (e.g., conservation bankers, habitat exchange administrators, or individual private landowners). Under the new method, the annual cost per credit would be discounted annually at a rate of 3% per year for the life of a project. The initial starting price was $13.00. On October 4, 2018 MSGOT approved application of a 3% discount method to calculate costs. Application of the discount method would reduce ACC’s obligation from $43,979.40 to $25,280.87.

The Program has worked with the Proponents to develop a mitigation plan for larger projects, particularly in Core Areas on a project-by-project basis for those projects needing to move forward prior to MSGOT finalizing administrative rules. MSGOT approves all mitigation plans, both during this interim period and after final approval administrative rules are accepted. Ideally, the Montana mitigation approach and rules would have been finalized prior to beginning the Plan of Operations Application with the BLM and subsequent mine application with the MTDEQ. However, American Colloid is in need of the grade of bentonite in this area as quickly as possible. As such, American Colloid has agreed to utilize the July 2017 Draft Habitat Quantification Tool and the October 2018 Policy approach to avoid further permitting delays.

ACC provided public comments to MSGOT associated with its decision process to finalize an HQT and the associated policy. ACC and the Program have agreed that should application of the final HQT and policy designated by MSGOT results in a lower obligation and cost, this mitigation plan will be revisited and outcomes adjusted accordingly.

The Habitat Quantification Tool functional acre approach is based on a raster GIS model, and accounts for differences in habitat quality and functionality. The HQT estimates functional acres lost in the direct footprint and also accounts for indirect effects. The HQT model is “policy neutral.”

The HQT includes time so that impacts over the life of the project (construction, operations, and reclamation) are estimated. Reclamation to pre-project baseline conditions with full vegetative recovery is set for 75 years. The HQT includes standardized biologically relevant data to establish a consistent baseline of habitat functionality throughout all designated sage grouse habitats. The baseline map is applied to all development and credit projects. The baseline map already accounts for existing disturbance.

The HQT model then analyzes a specific development project. The direct project footprint is entered into the model and buffered by a standardized distance based on the project type and the
projects various disturbances to account for indirect effects. The HQT result is called the Raw HQT Score. It represents the functional acres lost for the life of the project.

The Mitigation System Policy Guidance document outlines specific multipliers to encourage or discourage certain practices (e.g. consistency with Executive Order 12-2015). Multipliers also ensure that mitigation is timely and effective through time.

Multipliers are applied to the Raw HQT Score to account for: (1) risk and uncertainty through a Reserve Account; (2) net conservation gain where federal authorization is required (not applicable here); (3) advance payment if a cash payment is made to the Stewardship Account; and (4) site specific impacts when EO stipulations are violated.

For this analysis, the Program has applied the July 2017 HQT model using a 30-meter pixel size and the October 2018 Policy Guidance document because the HQT model refinements were made after our initial mitigation discussions took place. This works to ACC’s benefit because subsequent refinements to the HQT model increase the mitigation obligation.

For this analysis, the following multipliers were included (October 2018):

- **Risk and The Reserve Account Contribution** is accounted for through the Reserve Account multiplier. It is mandatory. Twenty percent of the Raw HQT Score is calculated and added to the Raw HQT Score. This accounts for the fact that impacts are estimated. Actual impacts could be greater or smaller. The Reserve Account also functions as a shared insurance pool so that credits may be replaced if credit sites do not produce as many credits as predicted or credits are lost due to an Act of God, such as a wildfire.

- **Advance Payment** of 10% will be applied to the total Raw HQT Score for direct and indirect impacts for the life of the project where applicable and in anticipation that ACC will not undertake permittee responsible mitigation and would make a payment to the Stewardship Account. This is included because American Colloid has selected the in-lieu fee approach by making a contribution to the Stewardship Account (as provided by the Stewardship Act) rather than undertaking a permittee-responsible approach of securing sufficient mitigation offsets of its own accord. Advance payments are included when a proponent elects to make a contribution because impacts would occur prior to mitigation offsets and there would be a temporary, short term loss of habitat.

- **Site-Specific Impacts** are addressed through a multiplier of 10% for Core Areas and 5% for General habitat for each aspect of a proposed project that is not consistent with the Executive Order 12-2015 stipulations during either construction or operations phase of a project. The difference in percentage reflects the intent of EO 12-2015 to apply a ‘less rigorous’ standard to General Habitat.

### 4.4.1 HQT and Calculation of Project Impacts

The Program calculated compensatory mitigation debit obligation option cost. The HQT model calculates project impacts, and the model run for the Amendment 5 project resulted in a raw
score of 2,449.3 for all phases, with a score of 994.8 for the Constructions and Operations Phases and 1454.5 for the Reclamation Phase. Added to this is 489.9 for the reserve account (20% of 2,449.3), advance payment of 244.91 (10% of total raw HQT score), and site-specific Executive Order stipulations for vegetation removal of 99.5 (10% of 994.8). A 3% Credit Discount Method was applied to the debit obligation, resulting in a final total cost of $25,280.87. Table 5 summarizes the debt obligations for this project.

**Table 5: Compensatory Mitigation Debit Obligation Summary**

<table>
<thead>
<tr>
<th>Debit Component</th>
<th>Compensatory Mitigation Obligation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw HQT Score</td>
<td>2449.3</td>
</tr>
<tr>
<td>Reserve Account</td>
<td>489.9</td>
</tr>
<tr>
<td>Advance Payment(^1)</td>
<td>244.91</td>
</tr>
<tr>
<td>Site-Specific EO Stipulation: Vegetation Removal(^2)</td>
<td>199.0</td>
</tr>
<tr>
<td><strong>Total Debit Obligation</strong></td>
<td><strong>3383.0</strong></td>
</tr>
<tr>
<td><strong>Total Cost at $13 per Debit</strong></td>
<td><strong>$43,979.40</strong></td>
</tr>
<tr>
<td><strong>Total Cost after applying Credit Discount Method</strong></td>
<td><strong>$25,280.87</strong></td>
</tr>
</tbody>
</table>

\(^1\)Advance Payment to the Stewardship Account  
\(^2\)Vegetation Removal within 4.0 miles of two Active leks from March 15 through July 15

4.4.2 **Commitments**

ACC committed to a compensatory mitigation obligation of $25,280.87 to be deposited in the Montana Sage Grouse Stewardship Fund (see MCA 76-22-111((1)(a)(ii)). Funds would be deposited after confirmation of approval for both the permit amendment by DEQ and BLM, the compensatory mitigation plan by MSGOT, and before construction begins.

The MSGOT and Program would disburse these funds through the Stewardship Account granting process to conserve habitat and sage-grouse populations through offsite mitigation. Any benefit of onsite mitigation would be negated until such activities were completed and disturbed lands fully reclaimed. The ACC Amendment 5 project is in the Central Service Area. MSGOT will be encouraged to apply these funds to mitigation within the project’s same Service Area so that greater conservation benefits to sage-grouse can be secured offsite.
5.0 REFERENCES


Carbon County, MT Weed District. 2015. County Weeds of Concern.


Montana Natural Heritage Program. 2015. Plant Species of Concern.


6.0 LIST OF ACRONYMS

ACC       American Colloid Company
BLM       Bureau of Land Management
BMP       Best Management Practice
DDCT      Density Disturbance Calculation Tool
EO        Montana Executive Order 12-2015
HQT       Habitat Quantification Tool
MFWP      Montana Fish, Wildlife and Parks
MSGOT     Montana Sage Grouse Oversight Team
MT DEQ    Montana Department of Environmental Quality
NRCS      National Resources Conservation Service
NSO       No Surface Occupancy
SWPPP     Stormwater Pollution Prevention Plan
USDA      United State Department of Agriculture
## Agenda Item: NorVal Cooperative Inc., Black Coulee Transmission Line Project Mitigation Plan

### Action Needed: Review and Approval of the NorVal Cooperative Inc., Black Coulee Transmission Line Project Mitigation Plan

### Summary:
NorVal Electric Cooperative Inc. (NorVal) proposes to construct approximately 50-miles of 115kV transmission line, 21.99-miles of 7.2kV distribution line and two 1.8-acre substations (Black Coulee and Cherry Creek) located in Valley and McCone counties. The project facilitates the construction and functionality of the proposed Keystone XL pipeline. The new 115kV transmission line will be the sole source of electrical power for the Keystone XL Pump Station 10. The Bureau of Land Management (BLM) must approve a plan of operations. The state permitting authority is Montana Department of Environmental Quality (DEQ).

The Program has worked with NorVal, their consultants and BLM representatives since April 2018, when all project-related information was first exchanged. Most recently, NorVal and the Program developed a mitigation plan that is consistent with the BLM 2015 HiLine District Office Approved Resource Management Plan, all BLM policy guidance, Executive Order 12-2015, and the Greater Sage Grouse Stewardship Act (Act). The Act charges MSGOT to review and approve compensatory mitigation plans. MSGOT is asked to review and approve the NorVal Cooperative Inc., Black Coulee Transmission Line Project Mitigation Plan now so that NorVal can advance efforts to obtain all the necessary state and federal permits and authorizations, even though construction of the pipeline itself and NorVal’s project are presently delayed by litigation. NorVal anticipates moving forward with construction in 2019, unless prohibited from doing so. If construction is delayed past 2019, NorVal will move forward when any remaining legal issues are resolved. Similar to TransCanada’s Major Facility Siting Act Certificate, all of NorVal’s construction should be completed by March 30, 2022. But this can be extended upon a showing of good faith efforts to complete construction.

The Plan describes the Project, expected impacts, adherence to the mitigation hierarchy (avoidance, minimization, reclamation, and compensatory mitigation), and consistency with Executive Order 12-2015 (EO). Avoidance is not possible, but NorVal has minimized impacts through adherence to all seasonal timing stipulations during all phases of construction. Furthermore, all distribution lines will be buried, and overhead transmission lines will be non-nest facilitating.

Mitigation calculations followed the October 2018, v1.0 Policy Guidance and Habitat Quantification Tool Technical Manual, respectively. NorVal opted to implement a permittee-responsible approach by burying electrical distribution lines. The debit and credit projects are all within the North Central Montana Service Area.

NorVal’s permittee-responsible credit projects produce more credits than the number of debits attributed to the impacts of the transmission lines and substation facilities. NorVal intends to place them on the state’s credit registry so they are available to offset future NorVal activities. NorVal may consider making them available to other proponents needing credits, but the state would not be an actual party to those future transactions.

### Program Recommendation:
The Program Manager recommends MSGOT approve the NorVal Cooperative Inc., Black Coulee Transmission Line Project Mitigation Plan.
NorVal Electric Cooperative, Inc. (NorVal)

Black Coulee Transmission Line Project

Project #2953

Sage Grouse Mitigation Plan

November 30, 2018
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Appendices
A. Map 1 & 2; Project ID: 2953 – Construction and Operations Phases
B. Credit Project #3303 Map 3 and Credit Project #3308 Map 4
1 INTRODUCTION AND BACKGROUND

The purpose of this document is to describe the approach used by NorVal Electric Cooperative, Inc. (NorVal) to mitigate for direct and indirect impacts anticipated by the development of the NorVal Black Coulee Transmission Line Project. The Montana Sage Grouse Habitat Conservation Program and Oversight Team work to implement Executive Order (EO) 12-2015. Since NorVal Electric Cooperative, Inc. (NorVal) Black Coulee Transmission Line Project involves a permitted activity within Sage Grouse (SG) Core, General, and Connectivity habitat, this project was submitted to the Program for review. The project review period began in April 2018 and was assigned Project No. 2953.

1.1 BACKGROUND AND PURPOSE OF THE PROPOSED ACTIVITY

The purpose of the NorVal Project is to construct approximately 48.9-miles of 115 kilovolt (kV) transmission line (Figure 1-orange line), 22.00-miles of distribution line (Figure 1-locations A through G), and the Black Coulee and Cherry Creek substations (Figure 1-labels with yellow highlights), located in Valley and McCona counties.

The project is proposed to facilitate the construction and functionality of the proposed Keystone XL PS10 pipeline. The new 115kV transmission line will be the sole provider of electrical power for the Keystone XL PS10 substation. The purpose of the new distribution line will be to supply power for valves, construction, water wells, and man camps and is intended to be implemented in 2019 unless otherwise prohibited from doing so. The TransCanada Keystone XL pipeline project is permitted through the Montana Department of Environmental Quality (DEQ) under the Major Facilities Siting Act (MFSA) certificate, with an expiration date of March 30, 2022.

According to Plan of Development for TransCanada Keystone XL, Fort Peck to Pump Site 10, 115 kV Transmission Line, submitted to the BLM, Havre office, June 1, 2009. "NorVal Electric Cooperative has proposed the construction of a 115 kilovolt (115kV) transmission line to supply electrical power to TransCanada’s Keystone XL Pump Site #10 located 22 miles northwest of Glasgow, Montana from the source at a to-be-constructed substation bay at the Fort Peck Power Station located at Fort Peck Dam, Montana. This plan of development includes descriptions of and guidelines for the design, construction, operation, reclamation, and maintenance of the Fort Peck to Pump Site #10 115kV Transmission Line Project. NorVal will construct and operate the project in conformity with the approved plan of development that shall be included as part of the right-of-way grant. These guidelines have been developed following guidelines from the Bureau of Land Management (BLM) by NorVal and will apply to the proposed route under consideration. The design, construction, operation, and maintenance of the project will meet or exceed the requirements of the National Electrical Safety Code and U.S. Department of Labor
Occupational Safety and Health Standards, as well as NorVal’s requirements for the safety and protection of landowners and their property."

2 PROJECT AREA DESCRIPTION

The project spans Valley and McConé counties as shown in Figure 1. The 48.9-miles of 115kV transmission line starts at the Fort Peck Substation located in Section 15, Township 26 North, Range 41 East, McConé County and ends at the Keystone XL PS 10 Substation, located in Section 1, Township 31 North, Range 37 East, Valley County. Please note: NorVal is not responsible for permitting the Keystone XL Pump Station 10 and Fort Peck Substation.

The project includes two substations: Black Coulee and Cherry Creek. Black Coulee Substation, Section 1, Township 31 North, Range 37 East, is located on land purchased by TransCanada. NorVal is using approximately 0.42-acres for the substation. Cherry Creek Substation, Section 18, Township 29 North, Range 40 East, is located on a two 2-acre parcels (4-acres total) owned by NorVal.

The 22.00-miles of distribution line will be buried using the plow-cat and horizontal direction drill methods. The distribution line, shown in purple on Figure 1, is labeled Location A through G.

- Location A – 8.46-miles, buried / underground (URD),
- Location B – 3.46-miles, buried / URD,
- Location C – 4.03-miles, buried / URD,
- Location D – 4.70-miles, buried / URD,
- Location E – 0.42-miles, buried / URD,
- Location F – 0.40-miles, buried / URD,
- Location G – 0.52-miles, buried / URD.

2.1 HABITAT AND LANDSCAPE CHARACTERISTICS

The EO 12-2015 identifies four types of habitat intersection: 1) Non-EO land, 2) EO-General Habitat, 3) EO-Connectivity Area, and 4) EO-Core Area.

The 48.9-mile 115 kV transmission line crosses:

- 24.1 miles (49.3%) - EO-General Habitat,
- 22.1 miles (45.3%) - Non EO land,
- 2.7 miles (5.4%) - EO-Core Area,
- 0% - Connectivity Area.

The 22.00-mile distribution line crosses:

- 12.1 miles (68%) - EO-General Habitat
- 5.5 miles (15%) – Non-EO land

2
• 3.5 miles (10%) - EO-Connectivity Area
• 0.9 miles (7%) - EO-Core Area

2.2 VEGETATION COMMUNITY
The vegetation types encountered throughout the project route (overhead and underground) are listed in Table 1.

<table>
<thead>
<tr>
<th>VEGETATION TYPE</th>
<th>MILES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great Plains Mixed-grass Prairie</td>
<td>25.8</td>
</tr>
<tr>
<td>Cultivated Crops</td>
<td>21.9</td>
</tr>
<tr>
<td>Introduced Upland Vegetation - Annual and Biennial Forbland</td>
<td>5.9</td>
</tr>
<tr>
<td>Other Roads</td>
<td>5.8</td>
</tr>
<tr>
<td>Big Sagebrush Steppe</td>
<td>4.7</td>
</tr>
<tr>
<td>Great Plains Sand Prairie</td>
<td>1.9</td>
</tr>
<tr>
<td>Pasture/Hay</td>
<td>1.6</td>
</tr>
<tr>
<td>Great Plains Riparian</td>
<td>1.2</td>
</tr>
<tr>
<td>Great Plains Floodplain</td>
<td>1.1</td>
</tr>
<tr>
<td>Major Roads</td>
<td>0.9</td>
</tr>
<tr>
<td>Great Plains Badlands</td>
<td>0.5</td>
</tr>
<tr>
<td>Open Water</td>
<td>0.1</td>
</tr>
<tr>
<td>Low Intensity Residential</td>
<td>0.1</td>
</tr>
</tbody>
</table>

2.3 SAGE GROUSE POPULATIONS AFFECTED
Two leks were documented within four miles of the NorVal Electric Cooperative Black Coulee Transmission Line project area in the Montana Fish, Wildlife and Parks (MTFWP) lek database as shown on Maps 1 and 2, Appendix A. The 115-kV line, Part 1 is within 3.41 miles of the SG20-097 lek and 2.58 miles of the SG20-106 lek. The Black Coulee Substation is 3.39 miles from the SG-097 lek. One buried distribution line is within 1.36 miles of the SG20-097 lek.

The SG20-97 lek was first counted in 2000. The high male count for the lek has varied from 2 to 35 males. The SG20-106 lek was first counted in 2009 and the high male count has varied from 1 to 5 males.

The project is divided into three areas of concern as shown on Map 1 included in Appendix A:

Area 1 The route shown on the top of Map 1 (blue line/blue hatch), intersects EO-Connectivity Area and is within the two (2)-mile buffer of a SG lek (EO-Core Area).
Area 2 The route shown on Map 1 (blue line/red hatch), is buried distribution line and intersects EO-Connectivity Area and is within the four (4)-mile buffer of a SG lek (EO-Core Area).

Area 3 The route south of the Black Coulee Substation shown on Map 1 (green circle), is overhead transmission line (yellow line/red hatch), intersects EO-Connectivity Area, and is within the four (4)-mile buffer of a SG lek (EO-Core Area).

Two leks were documented within four (4) miles of the NorVal project area in the Montana Fish, Wildlife and Parks (MTFWP) lek database as shown on Map 2 (Appendix A). One buried distribution line is within 1.36 miles of the SG20-097 lek. The Black Coulee Substation is 3.39 miles from the SG-097 lek. The 115kv overhead transmission line is within 3.41 miles of the SG20-097 lek and 2.58 miles of the SG20-106 lek.

The SG20-097 lek was first counted in 2000. The high male count for the lek has varied from 2 to 35. The SG20-106 lek was first counted in 2009 and the high male count has varied from 1 to 5.

3 PROJECT ACTIVITIES AND ADHERENCE TO MONTANA EO 12-2015
In April 2018, the project was submitted to the MT Sage Grouse Habitat Conservation Program for review. The Program worked with NorVal personnel, their primary consultants over several months to develop this mitigation plan. Randy Fisher formerly of Heberly Engineering and currently representing TransCanada, and Jay Slocum & Patty Hamblock-WET, have been involved in this project between April and November 2018.

NorVal’s proposed activity is to install overhead transmission line, underground distribution line, and two substations. NorVal will observe seasonal stipulations during construction of the entire project, which include conducting construction activities outside the March 15 to July 15 timeframe. NorVal will adhere to all EO stipulations for vegetation removal within sage grouse habitat and all overhead transmission lines will be non-nest supporting.

3.1 DENSITY AND DISTURBANCE CALCULATION TOOL (DDCT) RESULTS
The Program calculated the disturbance levels within the project area on May 31, 2018 using the Density Disturbance Calculation Tool (DDCT). The DDCT Analysis area included 83,501.96 acres. The results were compared to allowable thresholds set forth in EO 12-2015. The DDCT result was 2.79%.

4 PROGRAM ANALYSIS FOLLOWING MT EO 12-2015
Stipulations recommended in EO 12-2015 (State of Montana 2015a) are designed to maintain existing sage-grouse populations and levels of suitable sage-grouse habitat by regulating uses and activities in Core Areas and General Habitat in a manner that sustains sage-grouse abundance
and distribution in Montana. The Montana EO and the Stewardship Act delineated Core Areas as those of “highest conservation priority” (State of Montana 2015a, MCA 76-22-103(3)). As a result, stipulations and conditions for development under the EO are most conservative in Core Areas. Delineated General Habitat areas represent those important for maintaining the abundance and distribution of sage-grouse across Montana, but not identified as Core or Connectivity Areas (MCA 76-22-103(7)). Development scenarios in General Habitat are more flexible than in Core Areas but must still be designed and managed to maintain sage-grouse populations and habitats (State of Montana 2015a).

4.1 STIPULATIONS THAT APPLY TO THE NORVAL ELECTRIC COOPERATIVE BLACK COULEE TRANSMISSION LINE PROJECT

Seasonal Use Within Sage Grouse Habitat: activities are prohibited from March 15 through July 15 outside the No Surface Occupancy (NSO) perimeter of an active lek where breeding, nesting, and early brood-rearing habitat is present.

Vegetation Removal Within Sage Grouse Habitat: limited to the minimum disturbance required by the project. All soil stripping and vegetation removal in suitable habitat will occur between July 16 and March 14 in areas within 4 miles of an active lek. Initial disturbance in suitable habitat between the referenced dates may be approved on a case-by-case basis.

5 ADHERENCE TO THE MITIGATION HIERARCHY

The mitigation hierarchy includes avoidance, minimization, reclamation, and compensation.

5.1 AVOIDANCE

The planning stages of the 115kV transmission line to serve as the sole provider of electrical power to the Keystone XL PS10 Substation began during Hillary Clinton’s term as the US Secretary of State (2009-2013). Planning route options and/or avoidance discussions were conducted prior to the EO 12-2015. However, NorVal is committed to avoiding impacts to sage grouse and sage grouse habitats through adherence to seasonal stipulations, which include conducting construction activities outside the March 15 to July 15 timeframe.

Adherence to Seasonal Stipulations

NorVal has committed to adhering to all seasonal stipulations for all phases of construction activities from March 15 through July 15. Soil stripping and vegetation removal will not occur from March 15 through July 15.

5.2 MINIMIZATION

NorVal Electric Cooperative employs the following minimization measures to reduce impacts to sage grouse and their habitat.
Burying Distribution Line
The minimization measures used to bury distribution line are the use of plow-cat and horizontal direction drilling (HDD) methods. The plow-cat opens the ground with a vibratory plow blade, inserts the line, and immediately flattens and compacts the surface; it has a temporary disturbance to landscape equal to the width of the equipment. The HDD is used to bore under roads and water bodies, such as wetland areas. This method requires two bore holes on either side of the road/waterway which are filled upon completion with excavated topsoil, the top surface is graded to match the pre-development contours, and the area is reseeded. Reseeding measures are addressed in Section 5.3.

Pole Installation
The minimization measure used to install poles is an auger-rig. The auger-rig drills 2 to 3-ft diameter holes to a depth of 7.5 to 8.5 feet for a 65-foot pole and 12- to 14-inch diameter holes are needed for a single pole. Poles may be moved up to 3-feet from a staked location to minimize disturbances to sagebrush cluster locations.

Pole Design
The poles used for the 115kV overhead transmission lines do not have cross arms will be non-nest supporting. The triangle devise(s), shown in Illustration 1, prevent twigs or nesting material from accumulating.

Illustration 1

Avian Nest Monitoring and Mortality Reporting
NorVal personnel conduct monthly routine facility inspections to identify any new or potential avian impacts and to determine if remedial measures are needed. Identified issues are followed by appropriate repair and/or maintenance.

No Additional Access Roads
Existing access roads will be used to install overhead transmission and underground distribution lines. New roads and/or trails will not be constructed; thus, disturbances associated with roadways are minimized.

5.3 RECLAMATION
The methods and areas to be reclaimed depend on the size of the disturbance, time of year, landowner requests, County/State requirements. Hand tool and/or mechanical restoration methods may be used.

Reclamation Plan
Restoration at pole locations includes utilizing structural Best Management Practices to limit soil erosion, recontouring surfaces to pre-existing conditions, and reseeding. EO 12-2015 states reclamation should re-establish native grasses, forbs and shrubs; specifically, the seed mix needs to include two native forbs, two native grasses, and at least one bunchgrass species.

Practices to encourage revegetation include:
- surface roughen/scarify to loosen seedbed,
- broadcast seed-spreader to uniformly cover the area
- follow application rate specifications,
- apply seed during the spring and/or fall seeding window, and
- rake/harrow seeded area to promote seed to soil contact and limit seed wind drift

Weed Management Plan
Per EO 12-2015, the control of noxious and invasive weed species is required within designated sage grouse habitat. Reclamation of disturbed areas must include control of noxious weeds and invasive plant species, including cheatgrass (Bromus tectorum) and Japanese brome (Bromus japonicas).

NorVal personnel will include noxious and invasive weed species requirements, specified in the EO 12-2015, in construction bid packages along with an assignment for who is responsible for weed management.

5.4 COMPENSATORY MITIGATION
The Habitat Quantification Tool (HQT) functional acre approach is based on a raster GIS model, and accounts for differences in habitat quality and functionality. The HQT estimates functional acres lost in the direct footprint and also accounts for indirect effects. The HQT model is “policy neutral.”
The HQT includes a time factor so that impacts over the life of the project (construction, operations, and reclamation) are estimated. Reclamation to pre-project baseline conditions with full vegetative recovery is set for 75 years.

The HQT includes standardized, biologically relevant data to establish a consistent baseline of habitat functionality throughout all designated sage grouse habitats. The baseline map is applied to all development and credit projects. The baseline map already accounts for existing disturbance.

The HQT model then analyzes a specific development project. The direct project footprint is entered into the model and buffered by a standardized distance based on the project type and the projects various disturbances to account for indirect effects. The HQT result is called the Raw HQT Score. It represents the functional acres lost for the life of the project.

The Mitigation System Policy Guidance document outlines specific multipliers to encourage or discourage certain practices (e.g. consistency with EO 12-2015). Multipliers also ensure that mitigation is timely and effective throughout the life of the project.

Multipliers are applied to the Raw HQT Score to account for:

(1) risk and uncertainty through a Reserve Account;
(2) advance payment if a cash payment is made to the Stewardship Account; and
(3) site specific impacts when EO stipulations are violated.

The Program applied the October v1.0 Habitat Quantification Tool (HQT) to the NorVal Electric Cooperative Black Coulee Transmission Line Project. The HQT was run on November 9, 2018. Results are as follows:

Table 2. Project 2953 HQT score calculations by habitat type.

<table>
<thead>
<tr>
<th>Habitat Type</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Area</td>
<td>9,311.50</td>
</tr>
<tr>
<td>General Habitat</td>
<td>19,465.91</td>
</tr>
<tr>
<td><strong>Total Raw Score</strong></td>
<td><strong>28,777.41</strong></td>
</tr>
</tbody>
</table>
Figure 2. NorVal Electric Cooperative Black Coulee HQT Basemaps for pre-construction and pre-operation phases.
Figure 3. Nor Val Electric Cooperative Black Coulee HQT after project implementation for construction and operation phases.
Application of Policy Multipliers
The Mitigation System Policy Guidance v1.0 October 2018 document was applied to the NorVal project. The Policy outlines specific multipliers to encourage or discourage certain practices (e.g. consistency with EO 12-2015). Multipliers also ensure that mitigation is timely and effective throughout the life of the project.

Risk and The Reserve Account Contribution is accounted for through the Reserve Account multiplier. It is mandatory. Twenty percent of the Raw HQT Score is calculated and added to the Raw HQT Score. This accounts for the fact that impacts are estimated. Actual impacts could be greater or smaller. The Reserve Account also functions as a shared insurance pool so that credits may be replaced if credit sites do not produce as many credits as predicted or credits are lost due to an Act of God, such as a wildfire.

Site-Specific Impacts are addressed through a multiplier of 10% for Core Areas and 5% for General Habitat for each aspect of a proposed project that is not consistent with the EO 12-2015 stipulations during either construction or operations phase of a project. The difference in percentage reflects the intent of EO 12-2015 to apply a ‘less rigorous’ standard to General Habitat.

In this case NorVal has agreed to adhere to all seasonal stipulations, therefore site-specific multipliers were not applied.

Table 3. Project 2953 Policy Multiplier calculations specific to project.

<table>
<thead>
<tr>
<th>Project 2953 Policy Multiplier Calculations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw HQT Score</td>
</tr>
<tr>
<td>Reserve Account (20%)</td>
</tr>
<tr>
<td><strong>Total Debit Obligation</strong></td>
</tr>
</tbody>
</table>

5.5 CREDITS TO OFFSET DEBIT OBLIGATION
The Program worked with NorVal to identify options to meet their mitigation responsibilities. Three mitigation options were discussed to offset the NorVal Black Coulee Transmission Line project debit obligation. One option would be Permittee-responsible where the permittee undertakes mitigation to offset impacts. A second option would have NorVal contribute to the Stewardship Account in lieu Fee, or a third option would have NorVal work with a third party, who conducts buy-sell transactions with the respective parties. Finally, NorVal could use some combination of the three.
NorVal chose the Permittee-responsible option to meet its debit obligation by converting other NorVal distribution lines from overhead (OH) line to underground (URD).

Credit Projects Description

Mitigation credits may be created by removing or limiting a threat to Greater Sage-Grouse (GRSG) through preservation or by improving habitat quantity and/or quality through restoration or enhancement actions. Developers can create credits for themselves through the permittee-responsible mechanism by taking actions that preserve, restore, or enhance habitats.

The Program worked with NorVal to develop two credit projects (ID: 3303 & ID: 3308) to offset their debit obligation. The Program agreed to apply mitigation credits to all lines the company has buried between September 8, 2015, the effective date of EO 12-2015 and December 31, 2019.

Project #3303

Credit Project ID: 3303 includes eight segments of distribution line as shown in Credit Project ID: 3303 Map 3 included in Appendix B. The project involves converting approximately 16.05 miles of overhead distribution line to buried line. Portions of the project, 6.96 miles, were buried in 2018. The project is located within designated Core Area and Connectivity Area habitat.

Table 4. Credit Project ID 3303 summary of project segments.

<table>
<thead>
<tr>
<th>Job</th>
<th>Feet</th>
<th>Miles</th>
<th>Completion Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.133</td>
<td>29,550</td>
<td>5.60</td>
<td>2018</td>
</tr>
<tr>
<td>11.43_1</td>
<td>2,850</td>
<td>0.54</td>
<td>2018</td>
</tr>
<tr>
<td>11.43_2</td>
<td>4,350</td>
<td>0.82</td>
<td>2018</td>
</tr>
<tr>
<td>sub-total</td>
<td>6.96</td>
<td></td>
<td></td>
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<tr>
<td>Funk</td>
<td>1,075</td>
<td>0.20</td>
<td>2019</td>
</tr>
<tr>
<td>Stahl</td>
<td>13,150</td>
<td>2.49</td>
<td>2019</td>
</tr>
<tr>
<td>Wesa*</td>
<td>27,035</td>
<td>5.12</td>
<td>2019</td>
</tr>
<tr>
<td>Jones</td>
<td>765</td>
<td>0.14</td>
<td>2019</td>
</tr>
<tr>
<td>Ellsworth</td>
<td>5,950</td>
<td>1.13</td>
<td>2019</td>
</tr>
<tr>
<td>sub-total</td>
<td>9.09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>16.05</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*The Wesa segment is within two miles of an active lek. No construction activity will occur between March 15 and July 15 within two miles of an active lek.
NorVal has buried 6.96 miles of overhead distribution lines since September 8, 2015 and will bury 66.42 miles of line before December 31, 2019. **All of lines proposed will be buried no later than December 31, 2019.**

Credit Project 3303 HQT calculations were run on November 20, 2018 using HQT v.1.0 October 2018. The Raw HQT score is 24,336.94 (Table 5). Credit projects that result in newly-produced functional acres are given a 10% multiplier where the project is in Core Area habitat and 5% multiplier within Connectivity Habitat (Table 6). Credit Project # 3303 generated a total of 25,975.3 credits.

Table 5. Project 3303 HQT Score by habitat type.

<table>
<thead>
<tr>
<th>Project 3303 HQT Score Calculations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Habitat Type</td>
</tr>
<tr>
<td>Core Area</td>
</tr>
<tr>
<td>Connectivity Habitat</td>
</tr>
<tr>
<td><strong>Total Raw Score</strong></td>
</tr>
</tbody>
</table>

Table 6. Project 3303 Policy Multipliers for credit project.

<table>
<thead>
<tr>
<th>Project 3303 HQT Score Calculations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw HQT Score Project</td>
</tr>
<tr>
<td>Newly Produced Functional Acres</td>
</tr>
<tr>
<td>Add (10% in Core, 5% in General Habitat)</td>
</tr>
<tr>
<td><strong>Total Credits Available</strong></td>
</tr>
</tbody>
</table>
Credit Project #3308

Credit Project #3308 includes seven segments of distribution line. See Credit Project ID 3308 Map 4, Appendix B. The project involves converting approximately 50.37 miles of overhead distribution line to buried line. All segments of the project will be completed no later than December 31, 2019. The project is located within a Core Area, General Habitat and Connectivity Area.

Table 7. Credit Project ID 3308 summary of project segments.

<table>
<thead>
<tr>
<th>Job</th>
<th>Miles</th>
<th>Completion Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Larb Creek tap*</td>
<td>25.56</td>
<td>2019</td>
</tr>
<tr>
<td>Wright tap</td>
<td>3.07</td>
<td>2019</td>
</tr>
<tr>
<td>Vandalia tap*</td>
<td>9.00</td>
<td>2019</td>
</tr>
<tr>
<td>Copenhaver tap**</td>
<td>12.74</td>
<td>2019</td>
</tr>
<tr>
<td>TOTAL</td>
<td>50.37</td>
<td></td>
</tr>
</tbody>
</table>

*The Larb Creek and Vandalia segment are within two miles of an active lek. No construction activity will occur between March 15 and July 15 within two miles of an active lek. **Portions of the Larb Creek and Copenhaver segments are within four miles of an active lek. No vegetation removal activity will occur between March 15 and July 15 within two miles of an active lek.

Credit Project 3308 HQT calculations were run on November 30, 2018, using HQT v.1.0. The Raw HQT score is 102,730.24 (Table 8). Credit projects that result in newly-produced functional acres are given a 10% multiplier where the project is in Core Area habitat and 5% multiplier within General Habitat. Credit Project # 3308 generated a total of 109,823.66 credits (Table 9).

Table 8. Project 3308 HQT Score by habitat type.

<table>
<thead>
<tr>
<th>Habitat Type</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Area</td>
<td>39,405.36</td>
</tr>
<tr>
<td>General and Connectivity Habitat</td>
<td>63,324.88</td>
</tr>
<tr>
<td><strong>Total Raw Score</strong></td>
<td><strong>102,730.24</strong></td>
</tr>
</tbody>
</table>

Table 9. Project 3308 Policy Multipliers for credit project.

<table>
<thead>
<tr>
<th>Project 3308 HQT Score Calculations</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw HQT Score Project</td>
<td>102,730.24</td>
</tr>
<tr>
<td>Newly Produced Functional Acres Add (10% in Core, 5% in General Habitat)</td>
<td>7093.42</td>
</tr>
<tr>
<td><strong>Total Credits Available</strong></td>
<td><strong>109,823.66</strong></td>
</tr>
</tbody>
</table>
Figure 4. Credit Project 3303 Basemap pre-implementation of project showing pixel values of existing functional acres.
Figure 5. Credit Project 3303 Post-implementation of project showing anticipated pixel values of functional acres.
Figure 6. Credit Project 3308 Basemap pre-implementation of project showing pixel values of existing functional acres.
The Program applied NorVal’s Permittee-responsible mitigation and determined the credits generated offset NorVal’s debit obligation. Additionally, the credit projects, when implemented, will result in a surplus of available credits (Table 10).

NorVal will use the surplus credits for future NorVal-associated projects. The surplus credits may be applied to a future project NorVal activities or NorVal could choose to negotiate the transfer of their credits to another developer. The state’s role would be limited to calculating the number of debits for the proponent, determining that those credits have not been used by others and are still providing functional habitat, and managing the information contained in the registry.

Table 9. Calculations for debit/credit offsets.

<table>
<thead>
<tr>
<th>NorVal Projects 2953, 3303 and 3308 Debit/Credit Calculations</th>
<th>Functional Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Credit Project #3303</strong></td>
<td></td>
</tr>
<tr>
<td>Raw HQT Score</td>
<td>24,336.94</td>
</tr>
<tr>
<td>Newly Produced Functional Acres, Credit Multiplier</td>
<td>1,638.06</td>
</tr>
<tr>
<td><strong>Credits Available from Project #3303</strong></td>
<td>25,975.30</td>
</tr>
<tr>
<td><strong>Credit Project #3308</strong></td>
<td></td>
</tr>
<tr>
<td>Raw HQT Score</td>
<td>102,730.24</td>
</tr>
<tr>
<td>Newly Produced Functional Acres, Credit Multiplier</td>
<td>7,093.42</td>
</tr>
<tr>
<td><strong>Credits Available from Project #3308</strong></td>
<td>109,823.66</td>
</tr>
</tbody>
</table>

Debit Obligation Project #2953

| Raw HQT Score for Project #2953                              | 28,777.41        |
| Reserve Account (20%)                                        | 5,755.48         |
| **Total Debit Obligation**                                  | 34,532.89        |
| **Total Credits Available**                                 | 135,798.96       |
| **Surplus Remaining Mitigation Credits**                     | 101,266.07       |
NorVal Electric Cooperative, Inc. (NorVal) Black Coulee Transmission Line Project 2953 is in association with the TransCanada Keystone XL pipeline project which is permitted through the Montana Department of Environmental Quality (DEQ) under the Major Facilities Siting Act (MFSA) certificate with an expiration date of March 30, 2022. Therefore, this mitigation plan is valid until March 30, 2022. If the NorVal Electric Cooperative, Inc. (NorVal) Black Coulee Transmission Line Project is not completed by March 30, 2022, NorVal will be required to resubmit the project to the Program for a re-evaluation.
Appendix A

Map 1 & 2; Project ID: 2953 – Impacted Sage Grouse Leks
NorVal Electric Cooperative Black Coulee Transmission Line Project
Proximity to Two and Four Mile Buffers of Active Sage Grouse Leks
Map 2

Legend
- Black Coulee Substation
- Cherry Creek Substation
- NorVal Coop 115 kV Transmission Line
- NorVal Coop Buried Line
- 2 Mile Buffer Sage Grouse Lek
- 4-Mile Buffer Sage Grouse Lek
- EO-Connectivity Area
- EO-Core Area
- EO-General Habitat
- Not in EO Area
Appendix B

Credit Project #3303 Map 3 and Credit Project 3308 Map 4
**Agenda Item:** Big Flat Electric Cooperative PS-09 Transmission Line Project Mitigation Plan

**Action Needed:** Review and Approval of the Big Flat Cooperative PS-09 Transmission Line Project Mitigation Plan

**Summary:**

Big Flat Electric Cooperative (Big Flat) proposes to construct a new 115 kV transmission line in Phillips County to provide power to Pump Station 09 of the Keystone XL pipeline. A new substation at Whitewater would also be constructed to provide improved services to Big Flat’s other customers. The Bureau of Land Management (BLM) must approve a right of way, and the state permitting authority is Montana Department of Environmental Quality.

The Program has worked with Big Flat and their consultants to develop a mitigation plan (Plan) that addresses two alternative routes: (1) Proposed Centerline (PC) and (2) Alternative 3 (A3). The PC route was originally proposed in 2013, prior to the 2015 BLM land use plan amendments for sage grouse and Montana’s Executive Order 12-2015. It was never finalized and permitted, however, because TransCanada did not obtain the necessary permits and authorizations for the pipeline. The PC route is about 61 miles long. The A3 route was developed recently to more carefully hone the project to both the state and federal sage grouse conservation efforts and address resource concerns (including avoiding the no-surface-occupancy around an active sage grouse lek).

The A3 route is about 64 miles long, but results in considerably fewer impacts to sage grouse habitat, is more consistent with Executive Order 12-2015, and presents a lower mitigation obligation for Big Flat as compared to the PC route. Although the A3 route is the preferred and intended route, Big Flat must still obtain three additional rights-of-way and conduct cultural surveys related to the additional 3 miles. All parties are hopeful these remaining issues can be resolved in the coming weeks. If they cannot be resolved, Big Flat intends to construct the PC route. Thus, some uncertainty remains as to which of the alternatives would ultimately be constructed. Nonetheless, the Plan analyzes and presents the mitigation obligation for both routes.

MSGOT is asked to review and approve Big Flat's project and mitigation plan covering two alternatives now so that Big Flat can advance efforts to obtain all the necessary state and federal permits and authorizations as soon as it can finalize a route and without having to wait until MSGOT's first meeting in 2019 (likely to be June). Additionally, even though construction of the pipeline itself and Big Flat's project are presently delayed by litigation, Big Flat anticipates moving forward with construction in 2019 or as soon as it is no longer prohibited from doing so. If construction is delayed past 2019, Big Flat will move forward as soon as any remaining legal or permitting issues are resolved. Similar to TransCanada's Major Facility Siting Act Certificate, all of Big Flat's construction should be completed by March 30, 2022, according to the mitigation plan. But this can be extended upon a showing of good faith efforts to complete construction.

*Continued*
The Plan describes the Project, expected impacts, adherence to the mitigation hierarchy (avoidance, minimization, reclamation, and compensatory mitigation), and consistency with Executive Order 12-2015 for both the PC and the A3 alternatives, respectively. Mitigation calculations followed the October 2018, v1.0 Policy Guidance and Habitat Quantification Tool Technical Manual, respectively.

The state’s preferred route is Alternative 3 because it is most consistent with Executive Order 12-2015 and the BLM land use plan amendments and poses the fewest resource concerns. However, it is about 3 miles longer. Big Flat will incur additional costs if it implements A3 because: (1) more construction materials must be purchased; (2) cultural surveys must be completed for the new segments of A3 that have not previously been surveyed; and (3) additional rights of way are required from three, or possibly more, landowners. Big Flat estimates its additional costs total $1,010,000.

The Program accounted for these additional costs and adjusted the mitigation obligation downward accordingly, should A3 ultimately be selected as the final route. Big Flat should not be penalized for implementing an alternative route that is more consistent with both the state and federal sage grouse provisions and has less impact. Only the difference in additional costs for the additional 3 miles was used to adjust the total mitigation obligation downward, whether expressed and ultimately fulfilled as an equivalent number of credits secured through permittee responsible actions, working with a third party, or as the amount of a contribution to the Stewardship Account.

Here, aggressive timelines are also paired with uncertainty. Not only has Big Flat not selected a final route, Big Flat has also not yet decided how (the mechanism it will use) to fulfill the mitigation obligation. But enough is known for Big Flat to move forward now: only two routes are still under consideration, and the mitigation obligation has been calculated and is known for each. MSGOT also has enough information to consider approving the Plan at this time.

Big Flat will explore opportunities for undertaking permittee responsible projects such as burying other transmission lines. Big Flat may also work with third parties who have credits available for purchase, make a contribution to the Stewardship Account, or opt for some combination of mechanisms. Big Flat simply needs more time to identify opportunities and constraints for each of the mechanisms.

Regardless of the mechanism/s selected, Big Flat does not anticipate requesting MSGOT approval for application of policy tools in the future. Big Flat plans to fulfill the obligation of its own accord in full but requires more time to determine how it will do so. The Plan outlines these contingencies and allows Big Flat to work directly with the Program to finalize remaining details once it makes a decision, without further MSGOT approval. If Big Flat later changes its mind and seeks MSGOT’s dispensation for hardship through one or more policy tools, Big Flat would be required to formalize that request, and MSGOT could consider it at a future meeting.

**Program Recommendation:**
The Program Manager recommends MSGOT approve the Big Flat Electric Cooperative PS-09 Transmission Line Project Greater Sage-Grouse Mitigation Plan.
Big Flat Electric Cooperative PS-09
Transmission Line Project

Greater Sage-Grouse Mitigation Plan

Project ID Number 2815

Version 1.0

December 2018
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Figure 3. Basemap for both routes south of Highway 2, and the direct and indirect effects of the Proposed Centerline (shown in green) and Alternative 3 (shown in orange) routes on sage grouse habitat .................................................................................................................................11
1.0 Introduction and Background

Big Flat Electric Cooperative (BFEC) is proposing to construct, operate, and maintain a new 115kV transmission line in Phillips County, MT. The transmission line is being built to support a pump station (PS-09) for the Keystone XL pipeline project (KXL). BFEC will also construct a new substation at Whitewater (Whitewater Substation) to support power needs and provide additional reliability to the consumers in the northern portion of their system. This new substation will allow for a second path for power, increased reliability and reduced outages to consumers. Both State and Federal authorizations [e.g. Bureau of Land Management (BLM)] will be required.

The project is proposed to facilitate the construction and functionality of the proposed Keystone XL pipeline. The new 115kV transmission line will be the sole provider of electrical power for the Keystone XL PS09 substation. The TransCanada KXL pipeline project is permitted through the Montana Department of Environmental Quality (DEQ) under the Major Facilities Siting Act (MFSA) certificate with an expiration date of March 30, 2022. Under the terms of the certificate, construction must be completed within 10 years. However, the time limit may be extended upon demonstrating that a good faith effort has been undertaken to complete construction. This Mitigation Plan applies to only the transmission line and the Whitewater substation. If any additional power uses related to the KXL pipeline project are added to the system, such as valves, construction, or construction labor camps, BFEC will submit a new application for those ancillary facilities which will require additional consultation with the Montana Sage Grouse Habitat Conservation Program (Program) and their own mitigation plan.

There are two routes included in this Mitigation Plan: The Proposed Centerline (PC), and Alternative 3 (A3). The PC is 61.43 miles long, and A3 is 64.54 miles long. In construction terms, that means there will be an additional 3.11 miles of poles, wire, etc. for the longer A3 route. The actual difference in alignment between the two routes occurs south of Highway 2 and totals 14.13 linear miles. See Figure 1. The difference in length between the two routes is because a segment of the shorter PC alignment would be moved to avoid several leks in the Saco Hills, thus becoming the longer A3 route. This new alignment has not yet been surveyed, and landowner permission will need to be acquired. The new alignment would also require additional engineering design work and cultural resource studies. Base costs are estimated to be a minimum of $16 million for either alternative.

The PC route was designed with input from landowners, engineers, Montana Fish, Wildlife and Parks (FWP), Bureau of Land Management (BLM), State Historic Preservation Office (SHPO), and other agencies prior to the suspension of the KXL project in 2013. The project area is located in the Milk River valley and surrounding hills with many culturally significant Native American and European settler sites. A significant amount of effort was required to locate, identify, and avoid cultural resources within the original PC route. Consideration of landowner rights-of-way and other wildlife resources informed the final PC route. When the status of the KXL project changed in 2017 and the transmission line was again viable, the Executive Order 12-2015 (EO) was in effect. The resumption of the permitting process required consultation with the Program.
Figure 1. BFEC 2815 Big Flat 115kV Transmission Line: Project Geometry

Figure 1. BFEC 115kV transmission line locations for the Proposed Centerline and Alternative 3 routes, active sage grouse lek locations, and two- and four-mile buffers.
Consultation with the Program began in April 2018. The Program worked with BFEC to identify the segments of the PC route that were inconsistent with the EO, and to identify alternative routes. One of them, A3, was selected as being most consistent with the EO. Both routes are located entirely within General Habitat. The centerline alignment for both routes is identical except for a segment south of Highway 2 in the Saco Hills, where A3 would be adjusted to avoid a No Surface Occupancy (NSO) area, and several other active leks. In this Mitigation Plan we discuss only the PC and A3.

1.1 Transmission Line Description

Regardless of which route is selected, the majority of the transmission line is proposed to be constructed using single pole structures, supporting three phase wires, and an optical ground (shield) wire. For select portions of the transmission line, H-Frame structures will be required to span longer distances to avoid culturally sensitive areas, or if the terrain is such that H-Frames are required for the longer spans. The H-Frames will support three phase wires, an optical ground wire, and a steel shield wire. All proposed insulators for the project are polymer and will be horizontal posts for the single pole structures. Suspension insulators will be used for the H-Frame structures. The supporting structures, whether single pole or H-Frame, will be western red cedar wood poles directly embedded in the ground, with angles supported by guy wires and anchors. There is an exception for three locations which landowners would not allow guy wires and anchors to support the angle structures. These locations are proposed to be steel poles on concrete drilled pier foundations. To reduce or eliminate the creating of nesting platforms for avian predators, all poles and H-Frames will use a non-nest facilitating design.

Access roads will be required for both construction and maintenance of the transmission line. To every extent possible, existing roads and two-tracks will be utilized for those purposes. Minimal to no grading is expected for the majority of the transmission line. Grading will be required for access to structure locations in the rough terrain south of Highway 2 in the Saco Hills, regardless of which route is selected.

Fence gates will be installed along the centerline of the transmission line in areas where existing fences do not have gates near the alignment. The quantity of gates for the project has not yet been determined, but the installation of these gates will be utilized to minimize the amount of new access roads needed for construction and maintenance.

There are three proposed laydown yards anticipated for the project. Laydown yards will store poles, wires, material trailers, and construction equipment. It is not anticipated any fencing, power, or gravel will be installed at these sites.

1.2 Whitewater Substation Description

BFEC purchased a three-acre site to construct the Whitewater Substation. The substation is expected to be approximately one acre in size. For this site, the entire one-acre area will be graded, fenced, and graveled. All equipment will be located inside an eight-foot high chain link substation fence, with the exception of exiting overhead power lines. Typical site protection
measures will be deployed during construction of the site, including silt fence, straw waddle, or other required erosion mitigation techniques. Any required site reclamation will be in conjunction with the transmission line, as described in this document in further detail below.

Table 1 describes the construction timing and sequence based on wildlife resource timing requirements throughout the project area.

Table 1. Construction timing and sequencing based on seasonal timing requirements for avoiding disturbance to wildlife resources in the project area.

<table>
<thead>
<tr>
<th>Construction Timing</th>
<th>From</th>
<th>To</th>
<th>Reason</th>
<th>Approximate Location(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 15th</td>
<td>July 15th</td>
<td>Migratory Bird Nesting. No BLM Access.</td>
<td>Most of line, with exception from Highway 2 north for approximately 10 miles and 2-3 miles by Bowdoin</td>
<td></td>
</tr>
<tr>
<td>December 1st</td>
<td>May 15th</td>
<td>Antelope Winter Range. No Construction in Designated Areas.</td>
<td>Right around Milk River, then 3 miles north of Cole Ponds to 4 miles north of Whitewater</td>
<td></td>
</tr>
<tr>
<td>March 1st</td>
<td>July 15th</td>
<td>Sage Grouse. No Construction within 1/4 mile of strutting ground ever. No construction within 2 miles during this timeframe.</td>
<td>4 areas designated on map. Mostly BLM and State Land.</td>
<td></td>
</tr>
<tr>
<td>November 30th</td>
<td>March 31st</td>
<td>Bald Eagle winter roost. No construction in designated area during this timeframe.</td>
<td>Around Cole Ponds and Milk River</td>
<td></td>
</tr>
<tr>
<td>December 1st</td>
<td>May 15th</td>
<td>Mule Deer winter range. No construction in designated area.</td>
<td>3 miles north of Bowdoin to Highway 2</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Construction Sequence</th>
<th>Start</th>
<th>End</th>
<th>Description</th>
<th>Approx. Line Mileage &amp; Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 15th</td>
<td>April 15th</td>
<td>Build from Whitewater Sub north to PS-09. Any remaining line will be built after July 15 the following year.</td>
<td>Mile 41 (WW Sub) to PS-09 (23 miles)</td>
<td></td>
</tr>
<tr>
<td>April 15th</td>
<td>July 15th</td>
<td>Build from Highway 2 north to start of large BLM sections. Two short sections will be built after July 15 the following year.</td>
<td>Mile 16 to Mile 29 (13 miles)</td>
<td></td>
</tr>
<tr>
<td>July 15th</td>
<td>December 1st</td>
<td>Continue north to Whitewater Sub (and pick up 2 small skips from previous sequence). Crews will be doubled.</td>
<td>Mile 29 to Mile 41 (WW Sub) (12 miles)</td>
<td></td>
</tr>
<tr>
<td>July 15th</td>
<td>December 1st</td>
<td>Build from Highway 2 south through mule deer winter range. Crews will be doubled.</td>
<td>Mile 4 to Mile 16 (12 miles)</td>
<td></td>
</tr>
<tr>
<td>December 1st</td>
<td>April 15th</td>
<td>Build from mule deer winter range south to Bowdoin Substation to finish the line.</td>
<td>Bowdoin Sub to Mile 4 (4 miles)</td>
<td></td>
</tr>
<tr>
<td>April 15th</td>
<td>July 15th</td>
<td>Right-of-Way cleanup and button up any missing sections on private land outside of sensitive areas.</td>
<td>Private land outside sensitive areas</td>
<td></td>
</tr>
<tr>
<td>July 15th</td>
<td>December 1st</td>
<td>Right-of-Way cleanup and button up any missing sections on all remaining work.</td>
<td>All</td>
<td></td>
</tr>
</tbody>
</table>
2.0 Project Area Description

The transmission route spans a combination of dry farmland, irrigated hay land, rolling hills prairie and badlands. The majority of the project area has very few trees, with the exception of where the transmission line crosses the Milk River north of Highway 2. A small amount of tree removal may be required to create safe clearances between the transmission line and the vegetation at that location.

Local and regional vegetation throughout the project area consists mainly of short and tall prairie grasses, sagebrush and prickly pear. Major water sources that intersect the project area include the Milk River and Whitewater Creek. The proposed transmission line will be built on both dry and irrigated lands that cross the Milk River approximately seven miles northwest of Saco, Montana.

The north section of the project area is located near the town of Whitewater, Montana, and the Canadian border, and continues south along rolling high plains and the Whitewater Creek valley. The north segment consists of both public and private lands that are mostly utilized for grazing. The middle segment is located in the larger Milk River valley, where some of the lands are irrigated and utilized for agricultural production. The southern segment runs through the Saco Hills, south of Highway 2, and is mostly BLM lands with rolling hills, flat benches and coulees.

3.0 Program Analysis and Consistency with Executive Order 12-2015

The proposed BFEC PS-09 transmission line project area is located entirely within General Habitat for sage grouse. Stipulations recommended in EO 12-2015 are designed to maintain existing sage grouse populations and levels of suitable sage grouse habitat by regulating uses and activities in General Habitat in a manner that sustains sage grouse abundance and distribution in Montana. Delineated General Habitat areas are important for maintaining the abundance and distribution of sage grouse across Montana, but not identified as Core or Connectivity Areas.¹

Development scenarios in General Habitat are more flexible than in Core Areas but must still be designed and managed to maintain sage grouse populations and habitats.

Based on consistency with EO 12-2015, A3 is the preferred and intended route for this transmission line. Both direct and indirect impacts to sage grouse and sage grouse habitat are lower for A3 than for the PC. The 3.1 miles of adjustment to the route in A3 demonstrates adherence to the mitigation hierarchy by minimizing impacts from the project to sage grouse and their habitat.

The PC route is the alternate route if final rights-of-way cannot be obtained for A3, or if cultural resource survey results for A3 are more significant than those for the PC.

¹ MCA 76-22-103(7).
3.1 Executive Order 12-2015 Stipulations Common to Both Alternatives

The Montana Sage Grouse Habitat Conservation Program has reviewed both route alternatives for consistency with Executive Order 12-2015 and all of its stipulations. North of Highway 2 both routes are the same, while portions of the segments south of Highway 2 differ (Figure 1). Analysis results for each alternative is described below in section 3.2 Adherence to the Mitigation Hierarchy for Each Alternative.

Applicable Executive Order Stipulations Relevant to this Project:

Surface Occupancy: Within 0.25 miles of the perimeter of an active sage grouse lek there will be no surface occupancy (NSO).

Seasonal Use: activities are prohibited from March 15 – July 15 within two miles of an active lek where breeding, nesting, and early brood-rearing habitat is present.

Vegetation Removal: limited to the minimum disturbance required by the project. All soil stripping and vegetation removal in suitable habitat will occur between July 16 and March 14 in areas within four miles of an active lek.

3.2 Adherence to the Mitigation Hierarchy for Each Alternative

Table 2 describes the location of active leks relative to the nearest point on each route, whether or not that route is within an NSO, and monitoring survey information for males on each lek.

Table 2. Active lek locations relative to the Proposed Centerline and Alternative 3 routes.

<table>
<thead>
<tr>
<th>Lek Names</th>
<th>Leks Within Four Miles</th>
<th>Leks within Two Miles - Proposed Centerline</th>
<th>Leks within Two Miles - Alternative 3 Route</th>
<th>In NSO</th>
<th>Monitoring Start</th>
<th>High Count</th>
<th>Low Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>SG11-88</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>2005</td>
<td>40</td>
<td>7</td>
</tr>
<tr>
<td>SG11-29</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>1998</td>
<td>55</td>
<td>11</td>
</tr>
<tr>
<td>SG11-71</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>2000</td>
<td>22</td>
<td>0</td>
</tr>
<tr>
<td>SG11-72</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes (PC only)</td>
<td>1999</td>
<td>25</td>
<td>4</td>
</tr>
<tr>
<td>SG11-73</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>2000</td>
<td>107</td>
<td>27</td>
</tr>
<tr>
<td>SG11-78</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>2002</td>
<td>29</td>
<td>7</td>
</tr>
<tr>
<td>SG11-90</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>2008</td>
<td>14</td>
<td>2</td>
</tr>
</tbody>
</table>
3.2.1 Avoidance

Avoidance is defined as avoiding an impact from a proposed debit project altogether by not taking a certain action or parts of an action.2

Proposed Centerline and Alternative 3:

The entirety of both routes is located within General Habitat, therefore direct and indirect impacts from this project to sage grouse habitat will occur and cannot be avoided. The preferred A3 route avoids direct and indirect impacts more effectively than the PC route.

3.2.2 Minimization

Minimization is defined as minimizing impacts by limiting the degree or magnitude of the action and its implementation.3 Project impacts to sage grouse habitat would be minimized by locating access roads within the transmission line right-of-way and minimizing scraping for either alternative for the life of the project. Removing the minimum amount of vegetation required for work would also minimize impacts to sage grouse habitat.

Proposed Centerline:

This route is within two miles of five active leks (Table 1). The route passes through the NSO of lek SG11-72. An attempt was made to increase the proposed distance from the line to lek SG11-78, to 0.95 miles. No attempt will be made to avoid the other leks with this route.

BFEC has agreed to observe Seasonal Use dates for construction and will not construct the line from March 15 – July 15 within two miles of an active lek.

BFEC has committed to using non-nest facilitating structures for this route. These are single pole horizontal posts (no cross-arms) that eliminate nesting substrate for avian predators. Any required H-Frame structures will also be non-nest facilitating by using a single cross-arm configuration.

The shield wire of the transmission line on this route will be marked to avoid bird collisions in areas designated by FWP.

Alternative 3:

This route is within two miles of three active leks (Table 1), however the re-routed line is the furthest distance from those leks. This route avoids the NSO by re-routing the line west to the base of the Saco Hills, where it is co-located with an existing railroad line.

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BFEC has agreed to observe Seasonal Use dates for construction and will not construct the line from March 15 – July 15 within two miles of an active lek.

BFEC has committed to using non-nest facilitating structures for this route. These are single pole horizontal posts (no cross-arms) that eliminate nesting substrate for avian predators. Any required H-Frame structures will also be non-nest facilitating by using a single cross-arm configuration.

The shield wire of the transmission line on this route will be marked to avoid bird collisions in areas designated by FWP.

3.2.3 Reclamation

Reclamation is defined as rectifying the impact by repairing, rehabilitating, or restoring the affected environment.4

Proposed Centerline and Alternative 3:
Once power line construction is complete, the contractor will reclaim the right-of-way to near original state, consistent with other sections of this agreement. This work will include smoothing of ruts, cleaning up any construction debris, and re-seeding if necessary. Grass mix will be of the variety recommended by the county extension office.

3.2.4 Compensatory Mitigation

The Program calculated the compensatory mitigation obligation for the PC and A3 alternatives assessed in this Plan. Compensatory mitigation is defined as actions that provide compensation for unavoidable adverse residual impacts to species or their habitat and when taken in advance of the impact through activities that preserve, enhance, restore, and/or establish habitat through the Montana Mitigation System.5 See Section 4.0.

4.0 Habitat Quantification Tool Process

The HQT (Montana Mitigation System Habitat Quantification Tool Technical Manual for Greater Sage-Grouse October 2018, Version 1.0) was used to calculate the total functional acres lost due to the direct and indirect impacts for the PC and A3 alternatives for the life of the project. The analysis was conducted on November 19, 2018. The HQT assessment area associated with the development project’s impacts was the centerline location of each transmission line route, as submitted by BFEC.

Figure 2 below shows the Basemap for both routes north of Highway 2, and the direct and indirect effects of the project on sage grouse habitat. Figure 3 shows the Basemap for both routes

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south of Highway 2, and the direct and indirect effects of the PC and A3 routes on sage grouse habitat.

Multipliers are applied to the Raw HQT Score (Montana Mitigation System Policy Guidance Document for Greater Sage-Grouse October 2018 Version 1.0) to account for: (1) risk and uncertainty through a Reserve Account, (2) advance payment if a cash payment is made to the Stewardship Account; and (3) site specific impacts when EO stipulations are violated.

The Program discussed options for meeting this obligation with BFEC, including permittee-responsible actions, purchasing credits from third-party private entities, making a financial contribution to the Stewardship Account, or some combination thereof. Under the terms of this Mitigation Plan, BFEC will select the option to determine how this obligation will be met prior to commencing construction, as described more fully below.

Applicable multipliers considered for this project include the following.

- **Risk and The Reserve Account Contribution** of 20% will be applied to the Raw HQT Score for the Reserve Account multiplier. It is mandatory. This accounts for the fact that impacts are estimated. Actual impacts could be greater or smaller. The Reserve Account also functions as a shared insurance pool so that credits may be replaced if credit sites do not produce as many credits as predicted or credits are lost due to an Act of God, such as a wildfire.

- **Advance Payment** of 10% will be applied to the Raw HQT Score for direct and indirect impacts for the life of the project. This is included in the event BFEC has selected the in-lieu fee approach by contributing to the Stewardship Account (as provided by the Stewardship Act) rather than undertaking a permittee-responsible approach of securing sufficient mitigation offsets of its own accord. Advance payments are included when a proponent elects to make a contribution because impacts would occur prior to mitigation offsets and there would be a temporary, short term loss of habitat.

- **Site-Specific Impacts** are addressed through a multiplier of 5% for General Habitat for each aspect of a proposed project that is not consistent with the EO 12-2015 stipulations during either construction or operations phase of a project. Potential stipulations could include No Surface Occupancy (NSO), seasonal use timing for activities, and vegetation removal timing. This project is fully consistent with EO 12-2015; therefore, no site-specific multipliers were applied to the HQT Score.
Figure 2. Basemap for both routes north of Highway 2 (left) and the direct and indirect effects of the project on sage grouse habitat (right).
Figure 3. Basemap for both routes south of Highway 2 (far left, 3a), and the direct and indirect effects of the Proposed Centerline route shown in green (center, 3b) and Alternative 3 (far right, 3c).
The HQT and Policy Guidance results are shown in Table 3. The total number of debits and thus the total mitigation obligation are determined by the number of functional acres lost for the life of the project calculated by the HQT and application of the policy modifiers to the HQT Raw Score.

Table 3. HQT Results for Debit Obligations, Multipliers, and Fulfillment Options for the Proposed Centerline and Alternative 3.

<table>
<thead>
<tr>
<th>Route Name</th>
<th>Total Raw HQT Score (COR)</th>
<th>Site-Specific Multipliers (EO Stipulations) ONLY</th>
<th>Raw Score + Site Specific Multipliers ONLY</th>
<th>Reserve ONLY; all projects</th>
<th>Total Obligation: Raw Score + EO Multipliers + Reserve</th>
<th>IF Advance Payment, add 10% of Raw Score</th>
<th>Total Debits if Advance Payment</th>
<th>Stewardship Account Contribution: Raw Score + EO Multipliers + Reserve + Advance Payment ($13/3%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposed Centerline</td>
<td>144,154.39</td>
<td>44,376.98</td>
<td>188,531.37</td>
<td>28,830.88</td>
<td>217,362.25</td>
<td>14,415.44</td>
<td>231,777.69</td>
<td>$1,591,237.20</td>
</tr>
<tr>
<td>Alternative 3</td>
<td>146,347.46</td>
<td>23,150.27</td>
<td>169,497.73</td>
<td>29,269.49</td>
<td>198,767.22</td>
<td>14,634.75</td>
<td>213,401.97</td>
<td>$1,465,671.94</td>
</tr>
</tbody>
</table>

4.1 Mitigation Obligation for Each Alternative

4.1.1 Mechanisms and General Approach

Under the terms of this Mitigation Plan, BFEC will select the option to determine how this obligation will be met for either transmission line route prior to commencing construction. The Policy Guidance Document describes various mechanisms available to developers to fulfill debit obligations:

1. Permittee responsible (e.g. bury existing transmission or distribution lines; buy credits from a third-party entity; work with a land trust organization or private landowner).
   a. If burying lines, the Program will run the HQT on any lines buried between Sept. 8, 2015 and Dec. 31, 2019 to determine the number of functional acres gained. These dates correspond to the effective date of Executive Order 12-2015 and allow for permittee-responsible action during the 2019 construction season.
   b. Lines for which a public agency paid a rural electric cooperative to bury (e.g. BLM) do not qualify since public funds were used.
   c. The Program would run the HQT and apply policies for any permittee-responsible conservation projects, compare to the total debit obligation, and then adjust for the remaining obligation.

2. Contribution to Stewardship Account for the entire obligation.

3. Combination of permittee-responsible projects and a contribution to the Stewardship Account.

If BFEC selects one of the above options, no subsequent MSGOT approval would be required, and the finalized details of how the mitigation obligation would be fulfilled would be determined by BFEC and the Program at a later date. Having entered into this agreement with the Program
and upon MSGOT approval of this Plan, BFEC would not later seek policy tools for dispensation under any of the above mechanisms.

Regardless of the mechanism selected by BFEC, all mitigation offsets must be in place prior to construction or Dec. 31, 2019 if BFEC elects to bury line or relies on other permittee-responsible options. If a contribution to the Stewardship Account is selected for all or a portion of the obligation, the deposit must be made prior to starting construction.

BFEC must complete construction by March 30, 2022, corresponding to the expiration date of TransCanada’s Major Facilities Siting Act Certificate issued by DEQ. The time limit may be extended for both TransCanada and BFEC upon demonstration that a good faith effort is being undertaken to complete construction.

4.1.2 Specific Details of the Mitigation Obligation for Each Route and Rationale

Proposed Centerline
If additional rights-of-way for Alternative 3 are not attainable, or newly documented cultural resources would be significantly impacted, BFEC will attempt to find opportunities to locate as much of the line as possible outside the two-mile buffers for the active leks.

- If the PC remains within the two-mile buffers, the multiplier for the deviation from the EO is included in the calculation and the final mitigation obligation.
- If BFEC proposes an alternative to move the line outside of the two-mile buffers, the multiplier for this deviation will be removed from the calculation and the final mitigation obligation.

The mitigation obligation for the PC route is as follows.

- Total debits for this route are 217,362.25.
- If BFEC chooses the option for 100% Stewardship contribution, the amount is $1,591,237.20 (includes reserve, advance payment, modifiers for deviations from the EO, and 3% discount).

Alternative 3
Alternative 3 is the intended route for this transmission line. But as compared to the PC route, BFEC would incur additional costs if it implemented the Alternative 3 route. This is because: (1) BFEC will have to investigate and secure additional rights of way that it presently does not have; (2) additional engineering design is required; (3) additional cultural surveys are required for the new segments; and (4) additional materials are required because this route is physically longer than the PC route. Based on the cost figures provided by BFEC, Alternative 3 will cost BFEC an additional $1,010,000.

Notwithstanding additional effort and construction costs, this route poses the least amount of impact to sage grouse habitat and populations and has a lower overall mitigation obligation for BFEC (see Table 3). From a resource perspective, Alternative 3 is the preferred route because it:

- has fewer deviations from Executive Order 12-2015;
o avoids all NSOs around active leks;
o is the furthest from all active leks;
o co-locates with existing railroad and road corridors (outside of existing rights-of-way) near the Saco Hills, which is the area of greatest concern for impacts to sage grouse due to close proximity to many active leks; and
o is more consistent with the sage grouse specific requirements of the 2015 BLM land use plan amendments.

Therefore, the mitigation obligation if BFEC were to implement Alternative 3 will account for BFEC’s increased costs to implement it. The mitigation obligation for the Alternative 3 route would be as follows.

If BFEC opted to make a contribution to the Stewardship Account for 100% of the mitigation obligation, the total amount would be $455,671.94. This is derived by taking the value in Table 3 of $1,465,671.94 and subtracting the additional costs of $1,010,000 associated with selection of this route.

If BFEC opted to fulfill the debit obligation through 100% permittee responsible projects, the total number of debits would be 61,796. This is derived by taking a mathematical proportion of the debits reflected in Table 3 and accounts for the additional costs associated with selection of this route. The obligation is expressed in debits and not dollars.

If BFEC chooses a combination of permittee responsible and Stewardship Account contributions, the Program will work with BFEC to apply the HQT for the permittee responsible projects and any applicable modifiers outlined in the Version 1.0, October 2018 Policy Guidance document. The amount of any contribution to the Stewardship Account would not exceed $455,671.94.

If BFEC opted to work with a third party to obtain the necessary credits to offset some or all of the debits, then similarly, the Version 1.0, October 2018 Policy Guidance document and the HQT, respectively, would be applied. BFEC and the third party would enter into a transaction. The negotiations would be between BFEC and the third party, and the state would not be a party to the transaction.

The state is willing to account for BFEC’s higher costs if it were to select Alternative 3 because it has the least impact and is the most consistent with Montana’s conservation strategy. The state seeks to balance conservation with development and Alternative 3 is the best option to do so given the facts surrounding this project.

4.1.3 Sage Grouse Service Area of Project
Both the PC and A3 routes are located in the Central Service Area. Mitigation offsets, therefore, should also be located in the Central Service Area. If BFEC elects to make a contribution to the Stewardship Account for all or a portion of the mitigation obligation, MSGOT will endeavor to award grants to implement credit projects within the same service area within three years.
4.2 Final Commitments and Summary

BFEC will pursue Alternative 3 with due diligence as the preferred and intended route. If Alternative 3 cannot be implemented, BFEC will implement the Proposed Centerline route. Either way, this Plan sets forth the mitigation obligation for either alternative. BFEC will select the final mechanism/s for how it will fulfill the obligation at a later date. Mitigation offsets should be in place prior to initiating construction on the final route.

The Big Flat Electric Cooperative (BFEC) PS-09 Transmission Line Project 2815 is in association with the TransCanada Keystone XL pipeline, which is permitted through the Montana Department of Environmental Quality (DEQ) under the Major Facilities Siting Act (MFSA). By the terms of the MFSA certificate, TransCanada must complete construction of the pipeline by March 30, 2022, which is ten years from when it issued. But the time limit may be extended upon a showing that a good faith effort is being undertaken to complete construction. Accordingly, BFEC also anticipates completing this project prior to the expiration date of the Certificate and this mitigation plan will be operational until March 30, 2022. If the Big Flat Electric Cooperative (BFEC) PS-09 Transmission Line Project 2815 is not constructed by March 30, 2022, BFEC should contact the Program for a re-evaluation given the relationship between the pipeline and the MFSA certificate issued to TransCanada.
SUMMARY:

Tongue River Electric Cooperative (TRECO) proposes to construct a 16.2 mile, 115 kV transmission line in Prairie County to support the Keystone XL Pipeline Pump Station 13. The project also includes: (1) an interconnection at an existing substation in the unincorporated municipality of Fallon; (2) a small expansion to the existing substation; and (3) a new substation.

The project occurs entirely on private lands. Only about 8% of the project’s direct footprint is within General Habitat, most of which lies within and on the outskirts of the unincorporated municipality of Fallon. The remaining portion of the direct footprint (92%) is completely outside designated habitat. Only the portion of the project within designated habitat is analyzed.

The Program worked with TRECO and their consultants to develop a mitigation approach. TRECO seeks MSGOT’s review and approval now so that TRECO can advance efforts to obtain all the necessary state and federal permits and authorizations, even though construction of the pipeline itself and TRECO’s project are presently delayed by litigation. TRECO anticipates moving forward with construction in 2019, unless prohibited from doing so. If construction is delayed past 2019, TRECO will move forward when any remaining legal issues are resolved. Similar to TransCanada’s Major Facility Siting Act Certificate, all of TRECO’s construction should be completed by March 30, 2022. But this can be extended upon a showing of good faith efforts to complete construction.

The Plan describes the Project, expected impacts, adherence to the mitigation hierarchy (avoidance, minimization, reclamation) and incorporates a waiver for the remaining residual compensatory impacts because of facts related to the project and artifacts of the HQT analysis, including:

- The project is located on the edge of General Habitat. The majority (92%) of the project’s direct footprint is completely outside of sage grouse designated habitat.
- The remaining 8% of the direct footprint is within General Habitat, but largely contained within the unincorporated municipality of Fallon.
- The nearest lek is approximately 11 miles away.
- TRECO has incorporated avoidance and minimization measures: co-location with existing disturbed corridors (roads, other transmission lines) and use of non-nest-facilitating poles.
- The area already has high levels of cultivation and other anthropogenic disturbance.
- The project is entirely consistent with Executive Order 12-2015.
- The number of functional acres of habitat lost within the direct footprint is very low because only 8% of the direct footprint is within General Habitat and pre-project functionality is already very low due to the existing disturbance.

Continued
• The number of functional acres lost within the indirect impact analysis area comprises the vast majority of the total debits. However, the indirectly impacted area is across both Interstate 94 and the Yellowstone River from the location of the direct footprint.
• The presence and impacts of Interstate 94 likely negate and exceed any residual indirect impacts of TRECO’s project because both the interstate highway and the river sit in between the direct and indirect analysis areas.
• While a third level assessment was not conducted here, remote imagery was carefully reviewed at a finer resolution. Upon inspection, it is quite likely that incorporation of more detailed, site-specific data, including additional anthropogenic disturbance that is likely not within the HQT Basemap) would result in an even lower HQT Raw Score.

The total number of debits calculated was 2784.08, which includes the Raw HQT Score (functional acres lost in the direct and indirect analysis areas) and a 20% contribution to the Reserve Account (required of all development projects). If approved by MSGOT, TRECO’s compensatory mitigation obligation would be waived, and TRECO would be relieved from securing an equal number of credits or making a contribution to the Stewardship Account. Instead, MSGOT can use some of its own credits to offset the remaining residual impacts, given this project’s unique facts and circumstances.

PROGRAM RECOMMENDATION:
TRECO Fallon Transmission Line for Keystone XL Pump Station PS13 Sage Grouse Mitigation Plan

Project Number 3182

Version 1.0

Prepared for:
Tongue River Electric Cooperative, Inc.

Prepared by:
Electrical Consultants, Inc.

December 2018
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## FIGURES

Figure 1. Project location for the Tongue River Electric Cooperative Fallon transmission line Project for KXL PS13. Project direct footprint clipped to General Habitat with the nearest sage grouse lek NSO, Yellowstone River, and I-94 shown in main map. General Habitat boundary and full project footprint shown in the inset.  

Figure 2. Project location for the Tongue River Electric Cooperative Fallon transmission line Project for KXL PS13. Project direct footprint clipped to General Habitat shown in the main map with existing transmission power lines, existing distribution lines, I-94, and the Yellowstone River. Full project footprint and General Habitat boundary shown in the inset with I-94 and the Yellowstone River.  

Figure 3. The HQT Basemap for Tongue River Electric Cooperative Fallon transmission line Project for KXL PS13. White areas are those areas outside of sage grouse habitat and do not contribute to direct or indirect impacts for the HQT Score.  

Figure 4. The HQT Direct and Indirect Impacts (within the dark black polygon) on sage grouse habitat for Tongue River Electric Cooperative Fallon transmission line Project for KXL PS13. White areas are those areas outside of sage grouse habitat and do not contribute to direct or indirect impacts for the HQT Score.
1.0 PROJECT INTRODUCTION
The TransCanada Keystone XL Pipeline is a proposed 875-mile pipeline extending from Steele City, Nebraska to Morgan, Montana. The proposed pipeline would allow the delivery of up to 830,000 barrels per day to Steele City for onward delivery to refineries in the Gulf Coast Area. To operate the pipeline a pumping station is required roughly every 50 miles along the Project route, which requires reliable power interconnection into existing transmission systems. Pump Station 13 (PS13) is one of the supporting pump stations and would be located in Prairie County, Montana within the boundaries of the Tongue River Electric Cooperative (TRECO) Service Area.

TRECO proposes to construct a 16.2-mile, 115kV transmission line (Project) in Prairie County, Montana to support the Keystone XL Pipeline PS13 (Figure 1). The Project would lie entirely on private lands and would begin approximately 800 feet northwest of Fallon, Montana. Fallon is an unincorporated municipality that is just east of I-94 and mostly surrounded by cultivated agriculture. The Project would include a new transmission line, an interconnection at Western Area Power Administration’s (WAPA) O’Fallon Substation (O’Fallon) resulting in a small expansion of the substation, small line upgrade and a new distribution substation to serve PS13. The interconnection is within WAPA’s Upper Great Plains Region.

A portion of the proposed Project’s direct impact footprint is within sage grouse General Habitat (Figure 1). The O’Fallon Substation is located on the edge of sage grouse General Habitat. TRECO contacted the Sage Grouse Habitat Conservation Program to review the Project.

2.0 PROJECT AREA DESCRIPTION
The new overhead 115 kV transmission line would begin at the existing O’Fallon Substation and connect to a new PS13 distribution substation. A portion of the Project encompassing the existing transmission line, parallel to I-94, will be upgraded to support the 115kV transmission line and is located within the current maintenance right-of-way (ROW). The new proposed line will follow the beginning of Fallon Loop Road around the perimeter of the unincorporated municipality of Fallon (Figure 2). The new line will then turn east adjacent to the railway corridor, out of sage grouse General Habitat, and continue through private property until its terminus at PS13.

To avoid or minimize disturbance to sage grouse and their habitat from the direct and indirect effects of this project, TRECO designed and located this proposed route to incorporate existing ROWs and previously disturbed utility and transportation corridors (Figure 2).

2.1 Habitat and Landscape Characteristics
The landscape surrounding the Fallon area is characterized as Yellowstone Valley land, with parcels of agriculturally developed and irrigated farm land with residential tracts, utility and railway corridors, and access, state and county roads. A drainage ditch runs parallel with the northern portion of Fallon Road approximately 150 feet to the north. The Yellowstone River is approximately 0.87 miles north of the closest Project structure. Nearly all tracts in the Project area are cultivated or developed land.

The I-94 corridor to the west, adjacent to the O’Fallon Substation and current transmission line, provides steady roadway noise throughout the year.
Figure 1. Project location for the Tongue River Electric Cooperative Fallon transmission line Project for KXL PS13. Project direct footprint clipped to General Habitat with the nearest sage grouse lek NSO, Yellowstone River, and I-94 shown in main map. General Habitat boundary and full project footprint shown in the inset.
Figure 2. Project location for the Tongue River Electric Cooperative Fallon transmission line Project for KXL PS13. Project direct footprint clipped to General Habitat shown in the main map with existing transmission power lines, existing distribution lines, I-94, and the Yellowstone River. Full project footprint and General Habitat boundary shown in the inset with I-94 and the Yellowstone River.
2.2 Vegetation Community
The vegetative community for the Project area is cultivated fields for crop and hay production, with very small corridors of upland prairie native grasses, swales and sagebrush. The area surrounding the Project is mostly disturbed by cultivation, with riparian meadows to the north near the Yellowstone River.

2.3 Sage Grouse Populations within Project Area
The Montana Sage Grouse Habitat Conservation Program has reviewed the proposed Project. Approximately 1.4 miles (8%) of the westernmost segment of the Project is located on the edge of General Habitat, and the remaining 92% is outside of sage grouse habitat (Figures 1 and 2). The line enters the unincorporated limits of the town of Fallon, Montana on the east side, and follows roads and existing power lines to connect with the existing O’Fallon substation.

There are no active leks within four miles of the Project area; the nearest lek is approximately 11 miles west of the Project (Figure 1).

3.0 PROJECT AFFECTED AREA
The Interstate-94 corridor to the west, adjacent to the current O’Fallon Substation and transmission line, provides steady roadway noise throughout the year. The proposed Project falls in an area of extensive existing disturbance, with multiple transmission lines and utility corridors, so the indirect impact analysis would be low to the surrounding habitat. TRECO proposes to collocate the transmission line upgrades and new structures to lessen the footprint of this Project.

The Project will use the existing disturbed corridor for approximately 1990 ft, from leaving the substation (upgrades) to N. Railroad Avenue and out of the designated sage grouse General Habitat area. The corridor parallels existing facilities (historic roadway, transmission line, railroad) and it is anticipated to use the existing access and to not require any new access roads (Figure 2).

Transmission structures are anticipated to require approximately 0.28 acres (50-ft x 150-ft) of short term disturbance per structure for installation with a resultant 0.01 acres (30-ft x 30-ft) of long term disturbance remaining after installation. Pulling sites and a lay down yard are short term disturbances and would only be used during construction. These areas are anticipated to be approximately 0.92 acres (150-ft x 200-ft).

4.0 PROGRAM ANALYSIS AND DEVIATIONS FROM EXECUTIVE ORDER 12-2015
A portion of the Project is located within General Habitat. Stipulations recommended in Executive Order 12-2015 (EO) are designed to maintain existing sage grouse populations and levels of suitable sage grouse habitat, and guide development activities in General Habitat in a manner that sustains sage grouse abundance and distribution in Montana.

Delineated General Habitat areas are important for maintaining the abundance and distribution of sage grouse across Montana. Development scenarios in General Habitat are more flexible than in Core Areas but must still be designed and managed to maintain sage grouse populations and habitats.
Here, no active sage grouse leks are within four miles of the Project; the nearest lek is approximately 11 miles to the west.

The Project is fully consistent with EO 12-2015; therefore, no site-specific multipliers were applied to the HQT score.

5.0 ACTIVITIES FOR AVOIDANCE AND MINIMIZATION

Through the use of co-location for structures and transmission lines, adherence to the mitigation hierarchy, and the use of mitigation features incorporated into Project design, TRECO avoided as much sage grouse habitat as possible. Only 8% of the entire Project is located within General Habitat. TRECO will minimize impacts by using tower structures that are a non-nest facilitating, monopole design with no cross-arms to minimize opportunities for avian predator perching and nesting on the new structures. These structures will comply with the recommendations of the Avian Power Line Interaction Committee (APLIC 2015) guidelines.

The footprint for the power line structures will be co-located in previously disturbed corridors with other anthropogenic disturbances, including the Interstate 94 highway corridor.

6.0 STABILIZATION, REHABILITATION AND REVEGETATION

The temporary areas of construction disturbance would be re-contoured to match the surrounding terrain. Construction sites, access and material lay down yards would be kept to the minimum footprint practical, with limited soil and vegetation removal, allowing for focused stabilization efforts. Vehicles and equipment will be routinely washed during construction to avoid the introduction of invasive and noxious plants, prior to reseeding. Disturbed areas would be reseeded using a United States Department of Agriculture National Resources Conservation Service recommended local seed mix for sage grouse habitat.

7.0 THE HABITAT QUANTIFICATION TOOL PROCESS

The Program ran the Habitat Quantification Tool (HQT) for the Project using HQT v1.0 October 2018. The HQT models direct and indirect impacts from a project, and overlays those impacts on the HQT Basemap to calculate the total amount of functional acres lost due to the project (Figures 3 and 4). The HQT was run October 31, 2018. The total Raw HQT score is 2,320.67.

- The HQT direct impact score for the Construction phase (one-year time frame) is 0.30 debits, and the indirect impact score is 46.48 debits, summed for a total of 46.78 debits.
- The HQT direct impact score for the Operations phase is 0.28 debits, and the indirect impact score is 45.19 debits. For the Operations phase, the sum of the direct and indirect impact scores are then multiplied by the 50-year time frame for the life of the project. This results in a total of 2,273.68 debits.
- The HQT score for the Reclamation phase is 0.21 debits. This number is low (four-years for this phase) due to the co-location within existing disturbance.

The sum of the direct and indirect impacts for the Construction, Operations, and Reclamation phases results in the total Raw score of 2,320.67 debits.

Here, the project is consistent with EO stipulations and therefore no site-specific multipliers are applied to the Raw score. The Reserve Account multiplier (20% applied to all projects) is then applied to this score, resulting in a final HQT debit score of 2,784.8 debits.
Figure 3. 3182 - Fallon 115-kV Transmission Line for KXL PS13: HQT Basemap v1.0

Figure 3. The HQT Basemap for Tongue River Electric Cooperative Fallon transmission line Project for KXL PS13. White areas are those areas outside of sage grouse habitat and do not contribute to direct or indirect impacts for the HQT Score.
Figure 4. The HQT Direct and Indirect Impacts (within the dark black polygon) on sage grouse habitat for Tongue River Electric Cooperative Fallon transmission line Project for KXL PS13. White areas are those areas outside of sage grouse habitat and do not contribute to direct or indirect impacts for the HQT Score.
8.0 WAIVER

TRECO seeks a waiver of its compensatory mitigation obligation, which is a total of 2,784.8 debits. Facts unique to this Project and its location support the conclusion.

TRECO’s avoidance and minimization efforts have already decreased the compensatory mitigation obligation considerably (Figure 2), as follows:

- The TRECO Fallon PS13 Transmission Line Project is located on the edge of General Habitat. The majority (92%) of the Project’s direct footprint is completely outside of sage grouse designated habitat.
- The remaining 8% of the direct footprint is within General Habitat, but largely contained within the unincorporated municipality of Fallon (Figure 2).
- The nearest lek is approximately 11 miles away (Figure 1).
- TRECO has co-located the Project route through and adjacent to existing disturbed corridors, including roads and other existing transmission lines (Figure 2).
- The Project will connect to the existing O’Fallon Substation, and several existing transmission lines are in close proximity (Figure 2). The habitat within the Project area already has high levels of cultivation and agricultural development (consistent with irrigated river bottoms, not irrigated uplands in proximity to native rangelands having a sagebrush component).
- Non-nest facilitating poles will be used.
- The Project is entirely consistent with Executive Order 12-2015.

TRECO’s waiver is further supported by considering the HQT results for the direct and indirect analysis areas (Figures 3 and 4) and other artifacts of the HQT analysis for this Project, as follows:

- The number of functional acres of habitat lost within the direct footprint is very low. This is because only 8% of the direct footprint is within General Habitat and because the 8% within General Habitat already has high levels of disturbance and thus habitat functionality is very low from the outset. The remaining 92% is completely outside designated sage grouse habitat, and thus is excluded from the HQT analysis completely.
- HQT results are only applied to the portions of the direct and indirect analysis area that lie within designated habitat. The analysis area boundaries are “clipped” to the sage grouse habitat boundaries, resulting in a relatively small number of physical acres analyzed by the HQT.
- The number of functional acres lost within the indirect impact analysis area comprises the vast majority of the total debits.
- Any indirect impacts of the Project within the indirect impact analysis area are negated by Interstate 94 and the Yellowstone River. Interstate 94 and the Yellowstone River lie between the direct footprint and the indirect impact area, separating the Project area from a small physical area of intact habitat to the northwest. Because Interstate 94 is such a significant anthropogenic feature, it’s presence may already be negatively affecting habitat functionality to the northwest and its impacts likely exceed any indirect impacts.
that would accrue because of this new transmission line Project because the indirect analysis area lies not only across Interstate 94, but also across the Yellowstone River (Figure 2). Any residual impacts this Project would have are likely nullified by the indirect impacts of Interstate 94.

- While a third-level assessment was not conducted, visual inspection of aerial imagery suggests that localized conditions and incorporation of more detailed, site-specific data, including additional anthropogenic disturbance that may not be incorporated into the HQT Basemap (Figure 3), would result in an even lower Raw HQT Score.

9.0 IMPLEMENTATION SCHEDULE AND SUMMARY

TRECO’s Project is presently delayed by litigation related to the Keystone XL Pipeline. TRECO anticipates moving forward with construction in 2019, unless prohibited from doing so. If construction is delayed past 2019, TRECO will move forward when any remaining legal issues are resolved. Similar to TransCanada’s Major Facility Siting Act Certificate, all of TRECO’s construction should be completed by March 30, 2022. This deadline can be extended upon a showing of good faith efforts to complete construction. TRECO should contact the Program if it expects construction will not be completed by March 30, 2022.

The avoidance and minimization measures outlined in this Plan will be incorporated into the terms of any required state permits and considered binding on TRECO. The compensatory mitigation requirement to offset 2,784.80 debits is waived, according to any terms and conditions imposed by MSGOT during their meeting on December 18, 2018. MSGOT is expected to offset the debits for this Project.

10.0 PROJECT REFERENCES
