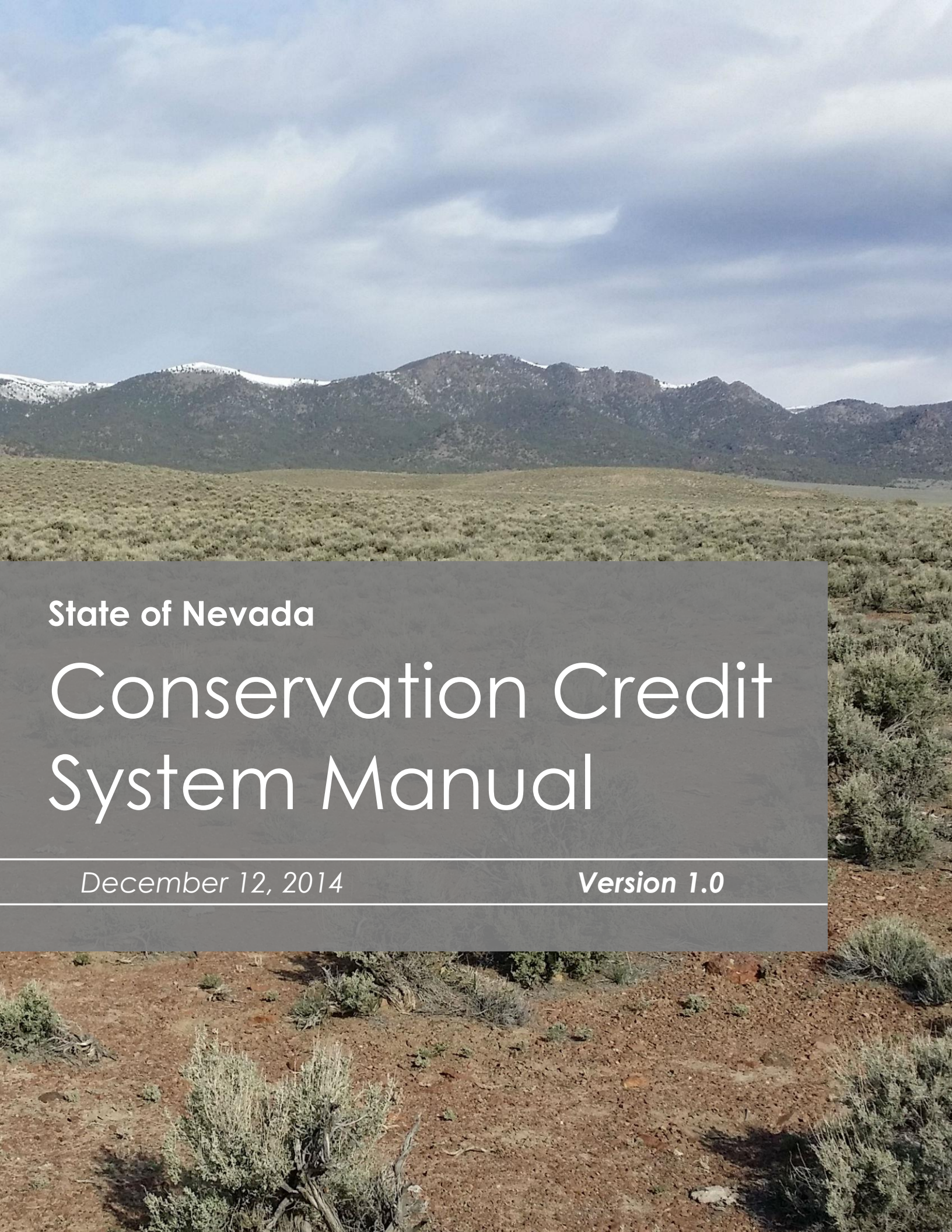

State of Nevada

Conservation Credit System Manual

December 12, 2014 ***Version 1.0***

The Nevada Conservation Credit System is administered by Sagebrush Ecosystem Technical Team of the Division of State Lands' Sagebrush Ecosystem Program within the State Department of Conservation and Natural Resources.

For information and questions about the Nevada Conservation Credit System, please contact:

Kacey KC
Program Manager
Nevada Sagebrush Ecosystem Program
(775) 684-8600
kaceykc@sagebrusheco.nv.gov

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Dr. Kent McAdoo*
Chris MacKenzie
Tina Nappe
Dr. Sherman Swanson
Jim Barbee, Ex-Officio
Leo Drozdoff, Ex-Officio
Bill Dunkelberger, Ex-Officio
Ted Koch, Ex-Officio
Amy Leuders, Ex-Officio
Tony Wasley, Ex-Officio

Nevada Sagebrush Ecosystem Technical Team

John Copeland
Melissa Faigeles
Kacey KC
Kelly McGowan
Lara Niell Enders
Tim Rubald*

Nevada Department of Conservation and Natural Resources

Leo Drozdoff
Jim Lawrence
Jennifer Newmark

*Denotes former SEP members

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The Nevada Conservation Credit System incorporates design, organization, and content from documents developed by Environmental Incentives, LLC, Willamette Partnership, and Environmental Defense Fund, among others. In particular, the Nevada Conservation Credit System operations were adapted from the Colorado Habitat Exchange Manual Version 0.95. Thus, in accordance with the Open Content License from that document: This content was created in part through the adaptation of procedures and publications developed by Environmental Incentives, LLC (www.enviroincentives.com), Environmental Defense Fund (www.edf.org), and the Willamette Partnership (www.willamettepartnership.org), but is not the responsibility or property of any one of these entities.

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IMPLEMENTATION TIMELINE

As of October 2014, the Nevada Conservation Credit System (Credit System) is open for *credit project* enrollment and development. The Credit System *Administrator* – the Nevada Sagebrush Ecosystem Technical Team - is working with landowners to validate potential credit sites to determine if they are eligible to produce credits and estimating the expected credits generated by the proposed projects using the Habitat Quantification Tool (HQT) and site-specific *Management Plans*. The Nevada Sagebrush Ecosystem Program (SEP) encourages landowners and other parties interested in developing credits to contact the Nevada Sagebrush Ecosystem Technical Team (SETT) to get started. All application fees are waived through the end of 2014.

In January 2015, the Credit System will begin evaluating *debit projects* for *credit obligations* and start the process of awarding credits to *offset* debit projects. The Credit System's policies and technical requirements will be updated systematically through a formal, annual adaptive *management process*. Significant updates are anticipated during the years of implementation, as the Nevada Sagebrush Ecosystem Program gains transactional experience. Any changes will only apply to new credit and debit projects, thus credits awarded and credit obligations fulfilled through the Credit System will not be impacted by future updates to the Credit System.

The Credit System can be used to meet regulatory requirements established by State of Nevada statute NRS Chapter 232.162, and are intended to fulfill *compensatory mitigation* requirements currently under development for anthropogenic disturbances to greater sage-grouse habitat on Bureau of Land Management (BLM) and U.S. Forest Service (USFS) lands in the State of Nevada. However, the Credit System does not currently provide *participants* with federal regulatory assurances in the event that greater sage-grouse is listed as threatened or endangered under the Endangered Species Act (ESA). In the future, the Credit System intends to provide regulatory assurances by developing a programmatic *agreement* with the U.S. Fish and Wildlife Service (USFWS).

INTRODUCTION TO THIS MANUAL

The Nevada Conservation Credit System Manual (Credit System Manual) provides the necessary materials and information for understanding and participating in the Nevada Conservation Credit System (Credit System). The table below provides a summary of the contents of the Credit System Manual. The Credit System Administrator will use this document to guide *Credit System operations* and policies over time. Landowners and other parties interested in generating credits, and any parties interested in purchasing credits through the Credit System should refer specifically to guidance provided in *Section 2: Technical and Policy Considerations*, regarding specific technical and policy considerations that arise during the generation and *transfer* of credits to *Credit Buyers* and the determination of credit obligations for debit projects.

CREDIT SYSTEM MANUAL CONTENTS

Section 1: Credit System Overview	Provides an overview of the objectives, scope and primary participants of the Credit System.
Section 2: Policy & Technical Elements	Summarizes the primary policy and technical requirements necessary to develop credits and offset credit obligations, and govern the Credit System.
Section 3: Credit System Operations	Defines the detailed steps, tools and timing to: ▪ Quantify and verify credits generated and credit obligations from individual project sites, including fulfilling ongoing *verification* requirements. ▪ Obtain credits and use them to mitigate debit projects (credit obligations), or define and report the effectiveness of *management actions* not used to offset impacts. ▪ Systematically evaluate new information, report results and improve the accuracy and efficiency of the Credit System over time.
Appendix A: Glossary	Defines key terms used throughout the Credit System Manual.
Appendix B: Forms and Instructions	Lists forms to be filled out by Credit System participants and submitted to the Credit System Administrator. Contact the Sagebrush Ecosystem Technical Team for form and guidance documents.

The first use of a term defined in the glossary in *Appendix A* is in italic font.

CREDIT SYSTEM TOOLS & DOCUMENTS

Several tools and documents are used to describe and operationalize the Credit System. The primary tools and documents are summarized in **Error! Reference source not found.** and the most recent versions are available on the Credit System website (https://www.enviroaccounting.com/NVCreditSystem/Program/Home) or through the Administrator.

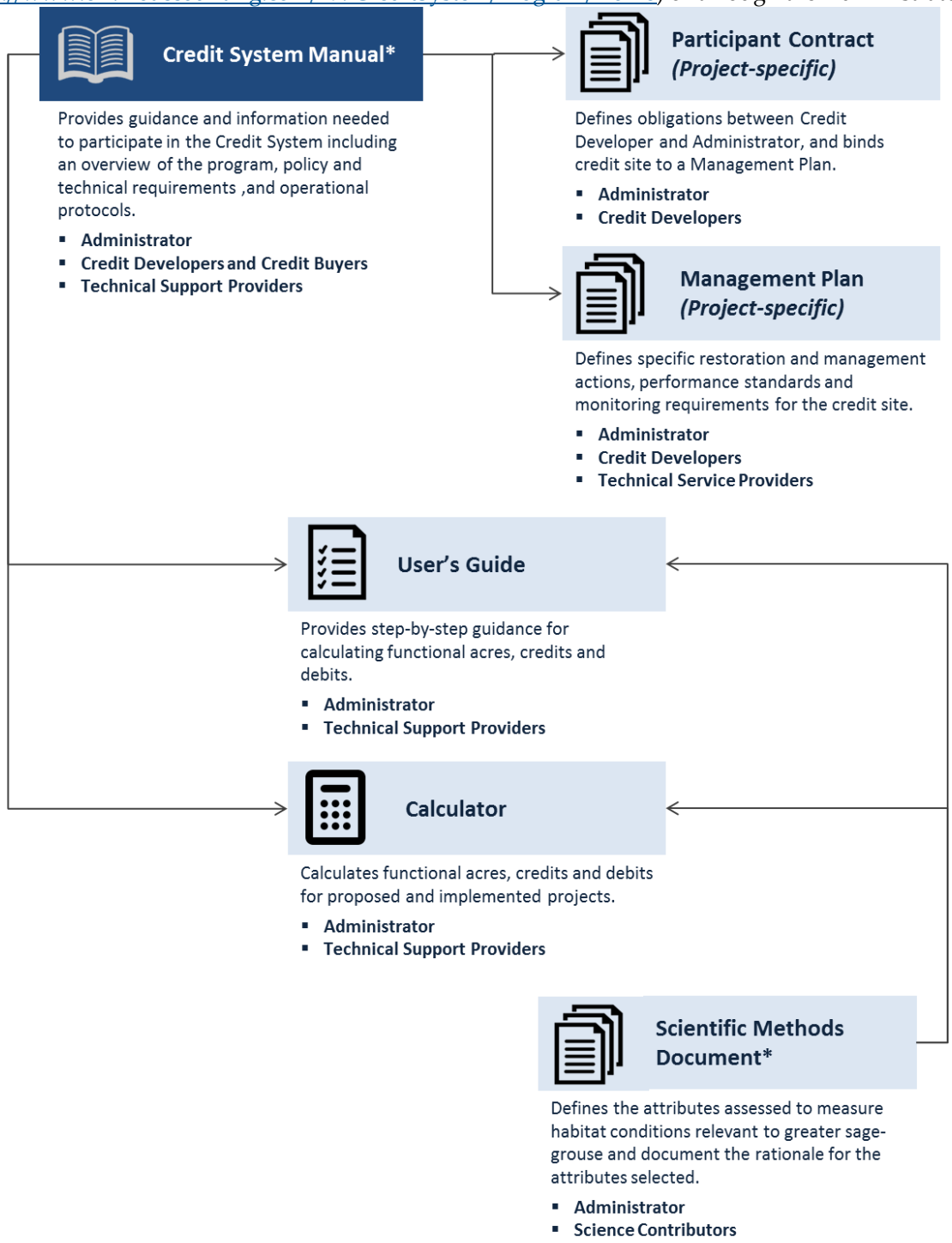

Figure 1: Primary Credit System tools and documents (documents with an * define the scope and form of the Credit System and changes to these documents will be approved by the Oversight Committee as described in *Step A1.1 in Section 3*)

LIST OF ACRONYMS

ACEC	Area of Critical of Environmental Concern
AIM	BLM's Assessment, Inventory, and Monitoring data
BLM	Bureau of Land Management
CCA	Candidate Conservation Agreement
CCAA	Candidate Conservation Agreement with Assurances
ESA	Endangered Species Act
FOIA	Freedom of Information Act
HCP	Habitat Conservation Plan
HSI	Habitat Suitability Index
HQT	Habitat Quantification Tool
MOU	Memorandum of Understanding
MZ	Management Zone
NDOW	Nevada Department of Wildlife
NEPA	National Environmental Policy Act
PMU	Population Management Unit
ROW	Right-of-Way
SEC	Sagebrush Ecosystem Council
SEP	Sagebrush Ecosystem Program
SETT	Sagebrush Ecosystem Technical Team
SHA	Safe Harbor Agreement
SGMA	Sage-grouse Management Area
USDA	U.S. Department of Agriculture
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
WAFWA	Western Association of Fish and Wildlife Agencies

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SECTION 1: CREDIT SYSTEM OVERVIEW

Greater sage-grouse (*Centrocercus urophasianus*) populations have declined significantly from historic numbers[1], in Nevada and throughout their current range (which includes 11 US states and 2 Canadian provinces). The decline of greater sage-grouse populations is largely attributable to the degradation, fragmentation and loss of habitat caused by wildfire, particularly in the western portion of the species range, and by the increased prevalence of invasive species and conifer encroachment. Additionally, anthropogenic disturbances resulting from infrastructure, mineral and energy development, improper grazing practices and other human activity contribute to habitat loss for the species[2].

In 2010, the U.S. Fish and Wildlife Service (USFWS) announced the finding that listing the greater sage-grouse as threatened or endangered under the Endangered Species Act is warranted, but precluded by higher priority listing actions[3]. By September 2015, the USFWS must propose whether or not to list the greater sage-grouse as threatened or endangered. This listing could significantly impact Nevada's economy and way of life. One component of Nevada's proactive conservation strategy is the development of the Nevada Conservation Credit System (Credit System).

The SEP was established in 2013 and its purpose is to protect and enhance Nevada's sagebrush ecosystems, culture and economy by promoting good stewardship, as stated in the Sagebrush Ecosystem Council mission statement. The Credit System provides a mechanism to achieve sage-grouse conservation goals while preserving the integrity of the culture and economy of the State of Nevada.

The Credit System is an innovative solution to greater sage-grouse habitat protection that ensures habitat impacts from anthropogenic disturbances are fully compensated by long-term enhancement and protection of habitat that result a net benefit for the species, while allowing appropriate anthropogenic disturbances that are vital to the Nevada economy and the Nevada way of life. The Credit System creates new incentives 1) to avoid and minimize impacts from anthropogenic disturbances to important species habitat, and 2) for private landowners and public land managers to preserve, enhance, and restore habitat, while reducing threats to important habitat for the species. The Credit System is a performance-driven and market-based approach to species conservation that quantifies benefits from enhancement and protection of habitat (*credits*) and negative impacts to habitat from anthropogenic disturbances (*debits*), operationalizes market transactions, and reports net benefit from all transactions processed by the Credit System.

1.1 CREDIT SYSTEM GOALS & PRINCIPLES

The goal of the Credit System is for impacts from anthropogenic disturbances to be offset by enhancement and protection that results in a net benefit for greater sage-grouse habitat in the State of Nevada. In the future, the Credit System may be expanded to support the *stewardship* and *restoration* of Nevada's sagebrush ecosystem overall and other sagebrush obligate species, in addition to the greater sage-grouse.

[1] Garton, E.O., J.W. Connelly, J.S. Horne, C.A. Hagen, A. Moser, and M. Schroeder.2011.Greater sage-grouse population dynamics and probability of persistence.

[2] U.S. Fish and Wildlife Service. 2013. Greater Sage-grouse (Centrocercus urophasianus) Conservation Objectives: Final Report. U.S. Fish and Wildlife Service, Denver, CO. February 2013.

[3] "Endangered and Threatened Wildlife and Plants; 12-Month Findings for Petitions to List the Greater Sage-Grouse (Centrocercus urophasianus) as Threatened or Endangered," 50 Federal Register 17. Volume 75, No. 55 (23 March 2010), pp. 13910-13911.

GUIDING PRINCIPLES

The Credit System enables the stewardship and restoration of a resilient and resistant sagebrush ecosystem. The Credit System works within the regulatory *mitigation* hierarchy, where anthropogenic disturbance impacts are first avoided, then minimized, and then the residual unavoidable impacts are mitigated using the Credit System. The following principles guide the development and operation of the Credit System and are meant to provide clarity and guidance in cases where the Credit System Manual is silent or unclear.

- Produce high quality conservation where it makes a significant ecological and biological difference.
- Enable decision-making based on the best available science.
- Create an efficient marketplace, where each transaction is anticipated to result in a net benefit for greater sage-grouse.
- Foster transparency, accountability, and credibility.
- Improve the effectiveness and efficiency of the Credit System over time.

1.2 GEOGRAPHIC & PARTICIPANT SCOPE

The geographic scope of the Credit System is consistent with the current Sage-Grouse Management Area (SGMA), the 2014 SGMA map is provided in Figure 2 as an example. The range of the Bi-State Distinct Population Segment of the greater sage-grouse in the State of Nevada is not included in this Credit System.

Proposed anthropogenic disturbances to habitat on State of Nevada, BLM, USFS, and local government lands within the SGMA require consultation with the SETT and the appropriate federal agency, as defined in the 2014 Nevada Greater Sage-Grouse Conservation Plan[4]. This consultative process will determine when residual unavoidable impacts require compensatory mitigation through the Credit System. Private landowners are not required to mitigate anthropogenic disturbances on their land; however, they are encouraged to voluntarily participate in the Credit System by generating or purchasing credits. The Credit System scope can be expanded in the future to support additional conservation needs and to correspond with revisions to habitat and management maps.

Figure 2: Sagebrush Ecosystem Program Sage-grouse Management Area Map, 2014

1.3 ORGANIZATIONAL STRUCTURE & ROLES

The organizational structure and interactions between the participants in the Credit System are depicted in Figure 3 below, followed by a description of each participant. Additional detail regarding the governance structure and roles is provided in *Section 2.1.1: Program Governance.*

Nevada Division of State Lands (NDSL): NDSL is a division of the Nevada Department of Conservation and Natural Resources, and holds the ultimate responsibility to ensure the Credit System functions as designed.

[4] http://sagebrusheco.nv.gov/uploadedFiles/sagebrusheconvgov/content/home/features/2014_ConsolidatedStatePlan.pdf

Oversight Committee: The Sagebrush Ecosystem Council (SEC) is a legislatively established council comprised of representatives from conservation interests, industry, ranching, and government which is responsible for overseeing the operations of the Credit System and making policy decisions.

Administrator: The SETT is responsible for managing the day-to-day operations of the Credit System, including facilitating and overseeing all credit generation and transaction activities. The SETT ensures consistent operations, issues credits, and reports results.

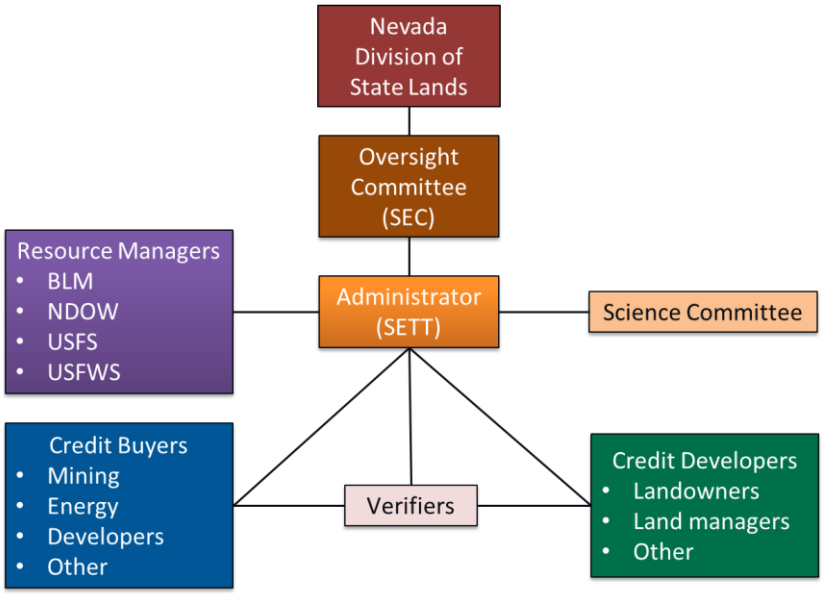

Figure 3: Operational structure of the Nevada Conservation Credit System

Resource Managers: Agencies that manage greater sage-grouse populations or habitat areas within the scope of the Credit System, and ensure that the Credit System functions according to current law, policy, and regulations.

Science Committee: Species and ecology scientists and experts who inform science-related policy decisions and development of technical products and tools, like the HQT. The Science Committee makes recommendations to the Administrator, based on the best-available science regarding the greater sage-grouse and its habitat.

Verifiers: State, local and federal agency staff or private contractors who assess the accuracy of credit and debit calculations. Verifiers must be trained and certified by the Administrator and must meet qualifications established by the Oversight Committee.

Credit Developers: Landowners or managers, organizations, or agencies, that produce, register, or sell credits in the Credit System. *Credit Developers* may also be facilitators, such as conservation banking companies or other types of *Aggregators*, who work with multiple landowners to implement credit projects, develop Management Plans, secure *financial assurances*, and register and sell credits.

Credit Buyers: Entities that purchase credits to meet credit obligations or to meet other conservation objectives.

Technical Support Providers ***(Not included in Figure*** 3***)***: Individuals and entities with technical expertise in conservation planning and project design, who understand how to use the Credit System tools and forms. Technical Support Providers may be hired by Credit Developers or Credit Buyers to help design credit projects and estimate credit obligations, use the HQT to estimate credits and debits, and submit all required materials to the Administrator. There is no formal process to designate or certify a Technical Support Providers.

1.4 HABITAT QUANTIFICATION & CREDIT SYSTEM CURRENCY

Credits are the currency of the Credit System. A credit consists of verified habitat value that is made durable for the defined duration of the project through financial assurances and contract requirements to maintain habitat performance standards as defined in a site-specific Management Plan. Credits are primarily awarded for meeting performances standards, not for implementing conservation practices.

Credits are used to offset debits, which represent units of greater sage-grouse habitat value lost by anthropogenic disturbances. The credit obligation is the quantity of credits required to offset a debit project.

The Credit System measures habitat value in units of *functional acres.* Function refers to the role of the habitat in providing life history requirements for greater sage-grouse, and includes the direct and indirect effects of anthropogenic disturbances. Function is expressed as a percent function in relation to fully-functioning habitat for greater sage-grouse. Functional acres are the product of percent function and acres within the relevant area assessed as illustrated in Figure 4.

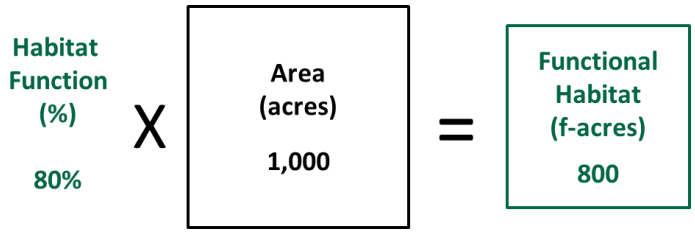

Figure 4: Illustration of functional acre concept

The Credit System uses the HQT to quantify functional acres for both credit and debit sites. A summary of the HQT and credit and debit calculation is provided below, and the concepts below are described in detail in the *HQT Scientific Methods Document*, and the following sections of this Manual: *Section 2.3.4: Calculating Credit Baseline Habitat Function*, *Section 2.5.4: Calculating Debit Baseline Habitat* and *Section 2.2: Habitat Quantification and Credit and Debit Calculation*.

Habitat Quantification Tool

The HQT quantifies *habitat function* for greater sage-grouse habitat in the State of Nevada. The HQT generates a percent function and a number of functional acres for each seasonal habitat type (breeding, late brood-rearing, and winter) within the area assessed.

The HQT accounts for habitat characteristics or attributes that influence sage-grouse habitat selection across multiple scales. These habitat characteristics were based on different orders of selection (Johnson 1980, Stiver et al. 2010) that represent four spatial scales at which habitat attributes influence where greater sage-grouse reside and obtain resources necessary for survival and reproduction[5]. The HQT assessed habitat quality at four orders.

Key Terms

Credit: A quantifiable unit of a greater sage-grouse habitat conservation value measured as the difference between credit baseline functional acres and post-project functional acres multiplied by a mitigation ratio, and secured by contract requirements, a project-specific Management Plan and financial assurances.

Credit Obligation: Quantify of credits that must be acquired to offset debits generated by a debit project.

Debit: A quantifiable unit of loss to greater sage-grouse habitat value from an impact measured as the difference between debit baseline functional acres and post-project functional acres multiplied by a mitigation ratio.

Habitat Function: The ability for habitat to provide life history requirements for greater sage-grouse considering needs across multiple spatial scales. Function is expressed as a percentage in relation to fully functioning habitat for greater sage-grouse.

[5] While the term 'selection' may be interpreted as relating to individual bird behavior, in this context the term is applied broadly to describe the four geographic scales at which sage-grouse occur, are organized into populations and use habitat (per Johnson 1980, Connelly et al 2003, Stiver et al 2010). These four scales also correspond to scales at which sage-grouse policy and management are

Range-wide Scale (1st order): The range considered by the Credit System is the geographic range of the sage-grouse population in Nevada.

Landscape Scale (2nd order): Landscape selection is based on the availability of seasonal habitats needed to support a population or subpopulation.

Local Scale (3rd order): Local selection is based on suitability of the habitat within their home range and the effects of anthropogenic disturbances.

Site Scale (4th order): Site selection is based on vegetation structure and composition that provide forage and cover.

See the *HQT Scientific Methods Document* for additional information on the attributes measured at each scale (order), and the methods used to measure those attributes.

Credits, Debits and Credits Obligations

Credits and debits represent the difference between baseline functional acres and post-project functional acres, multiplied by a mitigation ratio that incorporates biologically significant factors that are not captured through the HQT. Figure 5 illustrates how baseline is subtracted from the post-project habitat value to determine the functional acres above baseline for a credit project. Figure 6 illustrates how the functional acres above baseline are multiplied by a mitigation ratio to determine the number of credits generated by the credit site. Debits are calculated in a similar way; however the post-project functional acres are subtracted from the baseline functional acres to determine the loss in habitat value.

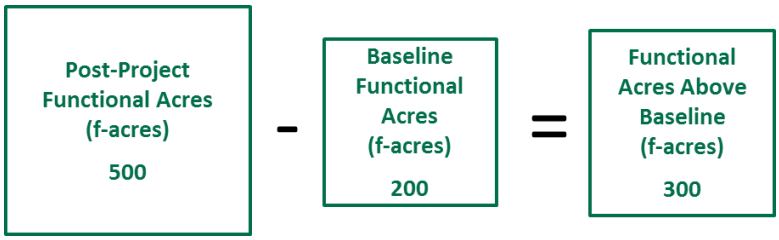

Figure 5: Illustration of functional acres above baseline for a credit project

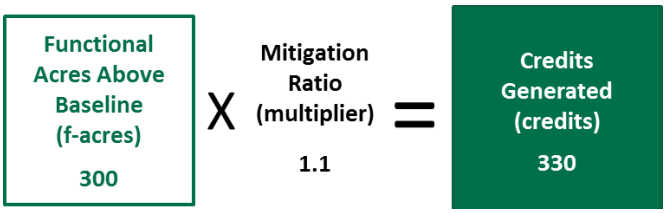

Figure 6: Illustration of the credits generated from a credit project

The HQT generates functional acre values for each seasonal habitat type (breeding, late brood-rearing and winter), and unique mitigation ratios are also generated for each habitat type. The change in habitat value for each seasonal habitat is tracked and reported by the Credit System; however only the most valuable habitat type is used to determine the credits or debits generated from the site. Guidance for determining the mitigation ratio for each seasonal habitat type is provided in *Section 2.2.2: Mitigation and Proximity Ratios*, and the calculation to determine the seasonal habitat type of greatest value is illustrated in *Section 2.2.3: Credits and Debit Calculation*.

The amount of credits required to offset a debit project, the credit obligation, is the number of debits generated by the project adjusted by a proximity ratio, determined by the proximity between the debit site and the offsetting credit site. Guidance for determining the proximity ratio and the credit obligation for a debit project is provided in *Section 2.2.2: Mitigation and Proximity Ratios*.

1.5 CREDIT SYSTEM OPERATIONS OVERVIEW

typically implemented (Stiver et al. 2010). Throughout this document, orders of selection will be identified by their descriptive terms (e.g., site scale, local scale, landscape scale).

This section provides an overview of the steps used to generate and transfer credits between accounts for credit and debit projects, and for the Administrator to manage the program. These processes are defined

Figure 7: Overview of the process steps to generate and purchase credits

in detail in *Section 3: Credit System Operations* of this Credit System Manual. Specific tools, forms, and guidance that are tailored to the Credit System are included in *Appendix B*.

The steps for generating and transacting credits are depicted in Figure 7, above. Blue chevrons signify the steps undertaken to generate credits, green chevrons represent the steps to buy credits to offset credit obligation or for conservation purposes, and the orange Track and Transfer connector represents the steps and platform within which transactions occur.

GENERATING CREDITS

The following steps outline the process to generate, verify and register credits from a credit project under the Credit System.

1. **Select & Validate Site:** Credit Developers may select any project site on private or public land that provides verified benefit to greater sage-grouse habitat, as determined by the Credit System's *credit site eligibility* requirements. The Credit Developer completes a Validation Checklist to determine whether eligibility requirements are met and submits to the Administrator for approval or rejection and commentary. This stage provides a screen to minimize investment and cost to participants for sites that may not be eligible to generate credits.
2. **Implement & Calculate Credit:** Credit Developers design the project, quantify the expected number of credits using the HQT, implement conservation practices, and refine calculations based on *conditions* on-the-ground.
3. **Verify Conditions:** All projects undergo third-party verification to confirm that protocols were followed correctly and projected credits are appropriately calculated, according to actual on-the-ground conditions.
4. **Register & Issue:** Once a project has been verified, supporting documentation is submitted to the Administrator where it is reviewed for completeness before credits are registered and issued to the Credit Developer's account on the Credit System Registry. Upon issuance, credits are given a unique serial number so they can be tracked over time.
5. **Track & Transfer:** Issued credits are tracked by the Administrator using the Credit System Registry and are either transferred to a Credit Buyer's account or held in other accounts. After transfer, the Credit Developer is responsible for meeting the *monitoring*, reporting and verification requirements of each project for the life of the project (described in *Step D3 in Section 3*). Credit Developers annually confirm that *performance standards* are met and additional *credit releases* are triggered, where applicable.

ACQUIRING CREDITS

The following steps outline the process to purchase credits under the Credit System.

1. **Indicate Initial Interest:** Credit Buyers become aware of the opportunity or requirement to participate in the Credit System and contact the Administrator to provide basic information. Additional assistance and technical support is available, if desired.
2. **Determine Credit Need:** Credit Buyers determine the duration and amount of credit needed to best meet their needs. If fulfilling a regulatory offset, Credit Buyers determine credit amount needed by estimating and verifying debit baseline and post-project conditions of the debit site in accordance with the relevant regulatory instrument and the HQT, and the geographic location of credit offsets.
3. **Acquire Credits:** Credit Buyers contact the Administrator and confirm needed credit quantities. The price, terms and conditions are all set by the Credit Buyer and Credit Developer, or Administrator. The Administrator provides notice when credits have been transferred between accounts.
4. **Track & Transfer:** Credits are tracked using unique serial numbers that identify the source of each credit, the HQT version used to estimate credits, and the current owner. Once credits are transferred to a Credit Buyer's account, the Credit Buyer can use that information for internal and external reporting.

MANAGING THE CREDIT SYSTEM

The Credit System is managed by an Administrator, using a transparent and inclusive management process to improve the efficiency and effectiveness of the Credit System over time. The Oversight Committee acts as a board of directors for the Credit System, and is responsible for adopting any changes made to the Credit System through a defined management process. This process follows the steps depicted in Figure 8.

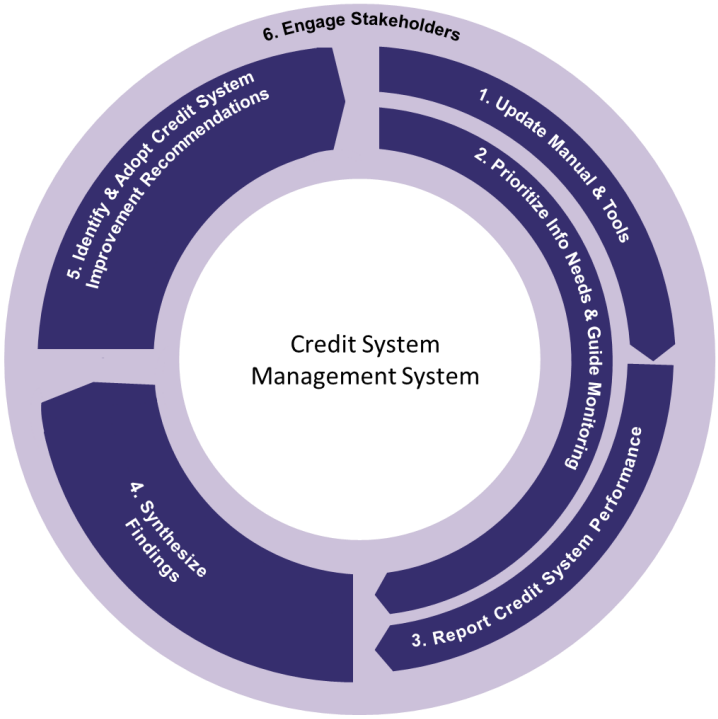

Figure 8: Overview of Credit System Management

1. **Update Manual & Tools:** Administrator updates this Credit System Manual, as well as tools, forms, and related guidance to ensure practical experience and new scientific information result in increased efficiency and effectiveness.
2. **Prioritize Information Needs & Guide Monitoring:** In coordination with the Science Committee and federal land management agencies, the Administrator identifies and prioritizes research and monitoring needs, coordinates funding efforts, and oversees monitoring and research.
3. **Report Credit System Performance:** Administrator develops the Annual Performance Report to summarize credit awards, debits and habitat improvements achieved. Routine reporting of accomplishments is essential to ensure transparency and drive accountability.

4. **Synthesize Findings:** Administrator synthesizes relevant research, monitoring and operational findings to inform Credit System improvements. Synthesizing findings into information that is directly related to the operations of the Credit System is essential to inform management decisions. Incorporating the best available science and other new information into the program and HQT ensures the calculation of credits and debits is accurate, improves project selection and design decisions, and improves accountability.
5. **Identify & Adopt Credit System Improvement Recommendations:** Administrator develops operational and technical improvement recommendations which are reviewed and acted upon by the Oversight Committee to ensure the Credit System continues to motivate effective actions over time. Creating and transparently adopting clear recommendations to improve the Credit System is the most critical step in the annual Credit System management process. The transparency of this adjustment process enables Credit Developers, Credit Buyers and other stakeholders to participate in the process and gain knowledge of the reasoning for adjustments as adopted.
6. **Engage Stakeholders:** Throughout the year, the Administrator engages stakeholders to keep them informed of progress and solicit input for how to improve the Credit System. Consistent stakeholder engagement is necessary to ensure the Credit System operates efficiently, increases understanding, and facilitates accountability.

All of the steps described in Section 1.4 above are defined in detail in *Section 3: Credit System Operations*. *Section 2: Policy and Technical Elements* defines the primary policy and technical requirements that enable consistent application of the Credit System by all participants.

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SECTION 2: POLICY & TECHNICAL ELEMENTS

This section of the Credit System Manual defines specific policy and technical requirements and additional considerations for generating credits for sale, determining debits and credit obligations, and managing the Nevada Conservation Credit System (Credit System). Table 1 below provides a summary of these requirements and considerations, including the primary audience and brief description.

Table 1: Summary of Policy & Technical Considerations

Credit System Elements		Primary Audience	Element Description & Guidance
2.1 Program Governance			
2.1.1	Governance Roles	**Administrator**	▪ The Administrator facilitates day-to-day operations, participant engagement, and program reporting and improvement
2.1.2	Implementation of State Policy		▪ State of Nevada policy that established the Credit System, and requires mitigation for anthropogenic disturbances which impact greater sage-grouse habitat to be determined by the Credit System
2.1.3	Federal Regulatory Predictability		▪ Credit System is designed to accommodate different regulatory mechanisms and provide certainty to Credit Buyers and Credit Developers
2.1.4	Accounting System & Reporting		▪ Rigorous accounting system tracks functional acres, credits and debits ▪ Annual Performance Report includes Credit System performance and program improvements
2.1.5	Adaptive Management		▪ Formal, structured programmatic adaptive management approach that deals with uncertainty and leverages management experience and research results
2.1.6	Participant Confidentiality		▪ As a State-run program, certain information must be disclosed upon request by a member of the public; however, published information protects *participant confidentiality* by aggregating information and removing identification information
2.1.7	Reserve Account Management and Use of Financial Assurances		▪ *Reserve account* serves as an insurance mechanism for the overall Credit System by allowing the Administrator to temporarily cover invalidated credits until they are *remediated* or replaced ▪ Financial assurances are used to remediate unintentional *reversals*, or to replace credits lost due to unintentional and intentional reversals that cannot be remediated
2.2 Habitat Quantification and Credit and Debit Calculation			
2.2.1	Habitat Quantification Tool	**Credit Developers & Credit Buyers**	▪ Percent function and an amount of functional acres for each seasonal habitat type are generated for each *map unit* within a project boundary, including the area indirectly impacted by debit projects ▪ Field sampling must be collected during specific times of the year for breeding and late brood-rearing habitat
2.2.2	Mitigation & Proximity Ratios		▪ Credit and debit ratios determined by management importance and limiting seasonal habitat ▪ Debits are adjusted by a proximity ratio, determined by the proximity between the debit site and offsetting credit site
2.2.3	Credit and Debit Calculation		▪ Total credits and debits generated by a project represent the difference between baseline and post project functional acres multiplied by a mitigation ratio

2.3 Credit Additionality Provisions			
2.3.1	Credit Service Area	**Credit Developers**	▪ All sites must be located within the current SGMA
2.3.2	Credit Project Types		▪ Habitat stewardship ▪ Habitat restoration
2.3.3	Credit Site Eligibility		▪ Site must be located in the *Service Area* ▪ *Participant Contract* with Administrator is required and must attest to ownership or use rights and past stewardship ▪ *Additionality* must be demonstrated and post-project habitat functionality must meet minimum habitat function requirements ▪ No evidence of an imminent threat of direct or indirect disturbance ▪ Necessary financial assurances must be complete ▪ Credit Developer must attest to the accuracy of the information
2.3.4	Calculating Credit Baseline Habitat Function		▪ Local-scale, pre-project habitat function combined with a site-scale, regional standard habitat function for each seasonal habitat type
2.3.5	Developing Credits on Public Lands and Other Land Designations		▪ Additional benefit is required above and beyond what would have been achieved by planned and funded public *conservation actions*, and existing land designations

2.3.6	Partnering with Federal Programs on Private Lands		▪ Additional benefit is required
			  ▫ **During Federal Contract:** Allocation of credits proportionate to non-federal contribution
			  ▫ **Following Federal Contract:** Full credit for long-term extensions or agreements following expiration of federal contract

2.3.7	Stacking Credit Types		▪ Credits from other conservation programs can be generated on a Conservation Credit System credit site if the credit site can demonstrate additional benefits based on specific conservation and management practices
2.3.8	Integration with CCA/CCAAs		▪ Credits can be generated in combination with enrollment in CCA/CCAAs if they demonstrate additionality of specific conservation and management practices
2.4 Credit Durability Provisions			
2.4.1	Credit Site Protection	**Credit Developers**	▪ Participant Contract with Administrator and accompanying Management Plan is required for all credit projects ▪ Additional site protection measures such as easements reduce reserve account contribution and thus increase generated credits available for sale
2.4.2	Credit Project Duration		▪ Minimum 10 year with 5 year term increments afterwards, up to in perpetuity
2.4.3	Reserve Account Contrition		▪ Contribution amount determined by base contribution, probability of adverse impacts from wildfire, and probability of *competing land uses*
2.4.4	Credit Release		▪ **Stewardship Projects:** One or more habitat function performance standards triggers credit releases ▪ **Restoration Projects:** Combination of one performance standard defined by management actions and multiple habitat performance standards triggers credit releases

2.4.5	Credit Site Verification		▪ Before initial credit release, before increased credit releases if applicable, every 5th year, and periodic spot checks ▪ Site-specific verification variability tolerance is defined as a percentage below site-scale habitat function
2.4.6	Financial Assurances		▪ Financial instrument contains sufficient funds for management of credit project ▪ Financial penalty or instrument provides appropriate funds to disincentivize intentional reversals and replace invalidated credits
2.5 Credit Obligation Provisions and Credit Investment Strategies			
2.5.1	Debit Service Area	**Credit Buyers**	▪ All sites must be located within the current SGMA
2.5.2	Debit Project Types		▪ Anthropogenic disturbances to greater sage-grouse habitat on state and federal lands within the current SGMA
2.5.3	Mitigation Hierarchy and Permit Requirements		▪ Credits are used to offset debits that occur when disturbances are proven unavoidable and minimization does not provide for complete *direct or indirect impact* avoidance ▪ Debit projects must fulfill regulatory requirements of relevant public agency permitting process
2.5.4	Debit Project Duration		▪ Time until verification confirms that habitat function impacted by a debit project returns to pre-project habitat function and an additional set period of time to allow greater sage-grouse to begin to use the site, up to in perpetuity, and can be different for different portions of a debit project
2.5.5	Calculating Debit Baseline Habitat Function		▪ Local-scale, pre-project habitat function combined with site-scale, pre-project habitat function
2.5.6	Debit Site Verification		▪ Before construction, at time when debits are reduced or end, and periodic spot checks
2.5.7	Credit Investment Strategies		▪ Strategies include direct credit purchase, reverse auctions, requests for proposals, and selection from list of credit development opportunities

2.1 PROGRAM GOVERNANCE

This section describes the Credit System's governance, enforcement, accounting and adaptive management procedures pursuant to NRS 321.594, as well as other relevant state and federal policies and assurances. The Administrator is the primary audience of this section.

2.1.1 GOVERNANCE ROLES

The Credit System uses a governance structure that includes an Oversight Committee, Administrator and Science Committee to ensure that the program is managed consistently and policy and technical requirements are improved over time without causing uncertainty for regulators or participants. Information regarding the key duties and responsibilities for each of these entities are provided below.

Oversight Committee

The SEC serves as the Credit System Oversight Committee. State of Nevada statute NRS 232.162 established the SEC; it also directed the SEC to institute and oversee a program to mitigate damage to sagebrush ecosystems. Statute NRS 232.162 also defines the membership, duties, and other aspects of the SEC, including the oversight of any team within the Division of State Lands of the Department of Natural Resources and Conservation, which provides technical services concerning sagebrush ecosystems. The SEC contains nine voting members representing specific constituencies that are appointed by the Governor, and six ex-officio members representing specific State and Federal agencies.

The SEC is responsible for overseeing the operations of the Credit System, making high-level Credit System management decisions, and conducting other critical ongoing duties described in Table 2.

Table 2: Key Responsibilities of the Oversight Committee

	Oversight Committee Key Responsibilities
Ensure Program Performance	▪ Pursues the memorandum of understanding (MOU) with BLM and potentially programmatic agreements with USFWS and other participating agencies; and participates in negotiations with USFWS and other participating agencies to amend the agreements as necessary. ▪ Oversees Administrator's implementation of the Credit System policy and technical components. ▪ Evaluates annual reports from the Administrator that include assessment of the effectiveness of credit projects in relation to both species habitat and overall programmatic performance goals of the Credit System and provide reports to USFWS, BLM and other participating agencies as necessary. ▪ Executes annual audit, or contract for the auditing of, the Administrator's finances and operations, and determine if corrective actions are needed to ensure finances and operations are sufficiently in order for the ongoing, consistent operations of the Credit System.
Ensure Programmatic Adaptive Management	▪ Considers and adopts Credit System improvement recommendations provided by the Administrator and participants. Specifically approves any changes to the Credit System Manual and HQT. ▪ Gains input from the Administrator and Science Committee on new scientific information to be incorporated into the Credit System's tools and processes as necessary and at least annually. ▪ Evaluates and approves adaptive management actions.
Participant Oversight	▪ Resolves disputes among Credit System participants that cannot be resolved independently or in consultation with the Administrator.

Administrator

The SETT serves as the Administrator of the Credit System. As Administrator, the SETT implements the Credit System, making day-to-day management decisions based on the direction detailed in this Credit System Manual and authority granted in the BLM MOU and programmatic agreements with USFWS and other agencies.

Table 3 outlines the key responsibilities of the SETT, and is aligned with the processes described in *Section 3: Credit System Operations*. The SETT will develop and maintain a comprehensive work plan to guide the allocation of resources, and define procedures to consistently and efficiently facilitate transactions.

Table 3: Key Responsibilities of the Administrator

Administrator Key Responsibilities	
Program Administration & Credit Accounting	▪ Manages day-to-day Credit System operations. ▪ Manages all Credit System tools, guidance and forms. ▪ Manages credit accounts and the complete ledger of all credits and debits. ▪ Manages accounting of reserve account credits.
Credit Developer & Credit Buyer Engagement	▪ Responds to inquiries of interest from Credit Buyers and Credit Developers, connecting them to relevant resources as desired. ▪ Ensures any necessary outreach to Credit Developers and Credit Buyers occurs.
Adaptive Management & Reporting	▪ Implements Credit System adaptive management process. ▪ Compiles Improvement Recommendations throughout the year, develops the annual Synthesis of Findings, and develops the Annual Performance Report. ▪ Brings products developed through the adaptive management process to the Oversight Committee for consideration. ▪ Makes improvements to the Calculator, User's Guide, Forms and Guidance Documents consistent with direction defined in the Manual and HQT. Informs Oversight Committee on operational changes so that the Oversight Committee can elect to review and provide alternative direction.
Compliance & Enforcement	▪ Performs quality control review on information submitted by Verifiers and Credit System participants. ▪ Ensures programmatic compliance of the Credit System with relevant USFWS, BLM, Nevada Department of Wildlife (NDOW) and other relevant agency policies. ▪ Works with Credit Developers to implement corrective actions through *remedial action plans* when appropriate in cases of intentional and unintentional reversals. ▪ Enforces contract compliance and any associated penalties in cases of intentional reversals.
Financial & Contracting Support	▪ Manages funds, contracts, and partnerships for monitoring. ▪ Confirms financial assurances are in place for credit projects. ▪ May facilitate credit auctions or Request for Proposals for Credit Buyers. ▪ May administer contract payments between Credit Buyers and Credit Developers.
Science & Technical Support	▪ Creates and gains input from the Science Committee on new scientific information to be incorporated into the Credit System's tools and processes. ▪ Defines questions to guide monitoring and research investments, and Science Committee input. ▪ Trains and certifies Verifiers. ▪ Evaluates results of any effectiveness monitoring established for credit and debit projects.

Science Committee

The Science Committee consists of species and ecology scientists and experts whose purpose is to inform the development and revision of HQTs for species and habitat included in the scope of the Credit System. The Sciences Committee contributes to prioritizing and defining monitoring efforts to improve HQTs and the Credit System, and informing the conservation and species recovery objectives that influence and guide Credit System design.

The Science Committee is composed of a minimum of four and a maximum of seven biologists, rangeland ecologists or other qualified scientists with recognized knowledge and expertise on the species and habitat. One position on the Science Committee will be held by the NDOW upland game staff specialist responsible for greater sage-grouse. The SETT appoints members of the Science Committee and members commit to serve two-year terms. Specific duties of the Science Committee include:

- Compile and analyze the latest and best-available science regarding the species and habitat, and make recommendations to the SETT regarding how that new information may be used to update the HQT through the Credit System adaptive management process; and
- Assist the SETT with making changes to the HQT through the Credit System adaptive management process.

As of November 2014, the Science Committee has not been created. A Technical Review Group made up of six greater sage-grouse scientists and experts advised the development of the initial version of the HQT. Several members of the Technical Review Group shared interest in participating in the Science Committee. The Science Committee will be created in early 2015.

2.1.2 IMPLEMENTATION OF STATE OF NEVADA POLICY

In 2012, under Governor Brian Sandoval, the 2012 Strategic Plan for Conservation of Greater Sage-Grouse in Nevada was developed and recommended the creation of Sagebrush Ecosystem Program, including the SEC and the SETT. The SEC was originally established under Executive Order 2012-19, on November 19, 2012, and later codified under State of Nevada statute NRS Chapter 232.162, which also directed the SEC to establish a crediting program for compensatory mitigation of sagebrush ecosystems[6].

The Credit System was developed to fulfill NRS Chapter 232.162 requirements and is included in the updated 2014 Nevada Greater Sage-Grouse Conservation Plan, which states mitigation requirements for anthropogenic disturbances that impact habitat will be determined by the Credit System, as approved by the SEC on October 1, 2014.

2.1.3 FEDERAL REGULATORY PREDICTABILITY

The Credit System is designed to accommodate different regulatory mechanisms to ensure that efforts taken to facilitate conservation of the greater sage-grouse are recognized and certainty is provided to Credit Buyers and Credit Developers.

BLM Compensatory Mitigation

The Credit System is expected to be included in the BLM/USFS Land Use Plans for the Northeastern California-Nevada Sub Region as the tool for defining and fulfilling compensatory mitigation requirements for anthropogenic disturbances to greater sage-grouse habitat on BLM and USFS lands in the State of Nevada. The proposal in the Nevada Alternative of the Draft Environmental Impact Statement for the Northeast California/Nevada Sub Region states that disturbances within the SGMA [on Nevada BLM and USFS lands] will trigger evaluations and consultation with the SETT. Credits are expected to be purchased to meet credit obligations established when disturbances are proven unavoidable and minimization does not provide for complete direct or indirect impact avoidance.[7] As of November 2014, the Sagebrush Ecosystem Program is working with BLM and USFS to develop a MOU to define roles and responsibilities for implementation of the Credit System on BLM and USFS lands.

[6] The establishment of the Credit System by the Sagebrush Ecosystem Council is outlined in State statue (NRS 232.162 (7)(e)), and the administration of the Credit System by the Division of State Lands of the State Department of Conservation and Natural Resources is authorized in State statute (NRS 232.162).

[7] US Fish and Wildlife Service. Greater Sage-Grouse Range-Wide Mitigation Framework Version 1.0. September 3, 2014. Page 6.

USFWS Pre-Listing and Endangered Species Act

The Credit System is intended to be consistent with the Greater Sage-Grouse Range-Wide Mitigation Framework[8] (Mitigation Framework), and as such, the Credit System aims to provide regulatory certainty to both Credit Buyers and Credit Developers.

The Sagebrush Ecosystem Program intends for credits generated prior to the listing decision to be considered prelisting mitigation credits and treated as measures to mitigate the impact of *incidental take*, should greater sage-grouse be listed. As of November 2014, the Sagebrush Ecosystem Program is working with the USFWS to enter into a prelisting mitigation agreement that authorizes the use of Credit System credits for mitigation purposes. This agreement would signify that the Credit System can be integrated with other regulatory mechanisms to provide incidental take protection assurances to Credit Developers and Credit Buyers.

The Credit System could be used in listing scenarios as follows:

- In the event of a threatened (not endangered) listing, USFWS may create a 4(d) rule that would exempt a number of activities from ESA restrictions. These would be activities that USFWS determines to minimize the impacts to listed species to the extent that additional federal protections are not required. If a 4(d) rule is issued, it may be possible for activities using mitigation from the Credit System, both credit and debit projects, to be exempt from take requirements. Note that a 4(d) rule could also include exemptions for some agricultural and ranching activities to reduce the burden on farmers and ranchers.
- In the event of either a threatened or endangered listing, and if the Credit System is not included as an exemption in a 4(d) rule, take protection for Credit Buyers may be secured using Incidental Take Permits or Certificates of Participation issued through individual or regional Habitat Conservation Plans (HCPs) created for greater sage-grouse in the State of Nevada, or permittee-responsible mitigation. Any of these regulatory take coverage mechanisms could use the Credit System by specifying that the credit obligation for all debit projects will be determined and offset using the Credit System.
- In the event of either a threatened or endangered listing, and if the Credit System is not included as an exemption in a 4(d) rule, take protection for Credit Developers may be secured using additional types of regulatory mechanisms. More discussion on these regulatory mechanisms is needed and currently underway.

2.1.4 ADMINISTRATIVE TRANSACTION FEES

The Administrator collects transaction fees from Credit Buyers at transfer of credits between accounts (e.g. between Credit Developer and Credit Buyer accounts) in order to cover administrative costs incurred by the Administrator. Administrative costs range from the evaluating and awarding credits to credit projects and verification of credit and debit projects throughout their duration, to executing the annual Credit System adaptive management process. The Administrator maintains and publishes the fee structure and amounts, and regularly reviews the fee structure and amounts through the Credit System adaptive management process. Changes to the fee structure and amounts must be approved by the Oversight Committee. Fees are expected to include a per transfer component and a per credit component.

[8] US Fish and Wildlife Service. Greater Sage-Grouse Range-Wide Mitigation Framework Version 1.0. September 3, 2014. Page 5. http://www.fws.gov/greatersagegrouse/documents/Landowners/USFWS_GRSG%20RangeWide_Mitigation_Framework20140903.pdf

2.1.5 ACCOUNTING SYSTEM & REPORTING

The Credit System employs a rigorous accounting system that operates on an annual cycle. Credits and debits are tracked according to Credit System reporting and verification standards. See *Section 2.4.2 Credit Project Duration*, *Section 2.4.5 Credit Site Verification*, *Section 2.5.3 Debit Project Duration* and *Section 2.5.5 Debit Site Verification* for more information on credit and debit project reporting and verification standards. The Credit System accounting and reporting system uses the following key tools:

- **Credit System Registry:** Tracks functional acres, credits, debits, and other transactional information.
- **Annual Performance Reports:** Use Credit System Registry outputs and the Credit System adaptive management process to report on the change in functional acres, and the number of credits and debits generated each year, along with other information needed by state and federal regulatory agencies.

Tracking & Accounting

The Credit System tracks the functional acres impacted by anthropogenic as well as those enhanced and protected by credit projects. Each credit is tracked on the Credit System Registry and related to the specific debit project it is used to offset, if applicable. This tracking facilitates annual reporting, verifies the Credit System always generates more credits than debits in any given year, and provides information necessary for effective adaptive management.

The Credit System accounting structure can also account for the functional acres impacted by natural disturbances, such as wildfire, and management actions that do not generate credits for offset. Tracking functional acres impacted by natural disturbances and management actions facilitates a complete understanding of the state of habitat for the greater sage-grouse and provides useful data for adaptive management of the Credit System and other conservation strategies. The quantification of functional acres for calculating credits and debits is accomplished using the HQT, which uses vegetation characteristics collected in the field along with desktop analyses. Pre-natural disturbance vegetation characteristics would not be available and it would not be practical to collect post-natural disturbance vegetation characteristics for large natural disturbances, therefore a proxy assessment of vegetation characteristics would need to be used and there are options that would provide relatively accurate results. See *Section 2.2.1: Habitat Quantification Tool* for additional information on the HQT.

The Administrator will use a basic version of the Credit System Registry initially. Depending on transaction volume and cost, the Administrator may elect to develop a robust Credit System Registry or utilize an established environmental registry to efficiently track large volumes of transactions.

Annual Performance Reports

The Administrator will use the Credit System Registry and adaptive management process to report annually on the performance of the Credit System. See *Section 3.3: Managing the Credit System* for detailed information about the annual reporting process. Annual reports are expected to include the following information:

- Total functional acres lost by anthropogenic disturbances, and natural disturbances if tracked
- Total functional acres protected by credit projects, and management actions if tracked
- Total number of debit and credit projects statewide that are enrolled in the Credit System
- Total debits and credits generated by enrolled projects, and by WAFWA Zone and PMU
- Total credits held in the reserve account
- A description of any credit reversals that occurred over the course of the previous year, including a brief summary of the method and status of replacing invalidated credits
- A description of anticipated improvements to be made to Credit System operations identified through the adaptive management process

2.1.6 ADAPTIVE MANAGEMENT

The Credit System uses a formal, structured adaptive management approach to dealing with uncertainty, using the experience of management and the results of research as an ongoing feedback loop for continuous improvement. The Oversight Committee and Administrator are responsible for implementing the annual adaptive management process with support from the Science Committee and other stakeholders, as described in *Section 3.3: Managing the Credit System*.

The annual adaptive management process focuses on improving the effectiveness of Credit System Manual policy and technical elements, the HQT, and individual management actions used to generate credits by:

- Evaluating Credit System performance data related to changes in functional acres and the volume of credits relative to debits in the Credit System to improve the Credit System Manual and HQT;
- Identifying priorities and conducting research and monitoring, including comparing project success to overall population dynamics; and
- Collecting input on the application and results of 1) the Manual policy and technical elements, and 2) HQT scoring from Credit System participants and cooperating public agencies.

Each year, adaptive management findings are synthesized and improvement recommendations are produced by the Administrator. Significant changes are approved by the Oversight Committee through a public meeting process. Any changes will only apply to new credit and debit projects, thus credits awarded and credit obligations fulfilled through the Credit System will not be impacted by future updates to the Credit System.

2.1.7 PARTICIPANT CONFIDENTIALITY

Some Credit Developers may be concerned about the Credit System publicly disclosing personal information. However, it may also be necessary for federal and state agencies to evaluate individual actions in order to properly assess the effectiveness of the Credit System in reducing threats and providing net benefit to the species. Furthermore, the Credit System is run by the State of Nevada; therefore, certain information must be disclosed to the public in response to Freedom of Information Act (FOIA) requests.

The Credit System will annually publish a Performance Report that describes overall Credit System performance. This Performance Report will be provided to relevant federal and state agencies. To the maximum extent possible under federal, state, and local law, the Credit System will protect against disclosure of personal and confidential information from participants by using a case by case review and determination. Personal and confidential information may include: names, contact information, general and legal description of the enrolled property, grazing practices, land use practices, commercial activities on the land, recreational activities on the land, site-specific species sightings, and site-specific species habitat condition.

Disclosure of Information

In the event that a request for information is made to the Administrator that would result in the possible disclosure of personal or commercial confidential information, the Credit Developer or Credit Buyer will be notified of the request. Additionally, the Credit Developer or Credit Buyer will be provided the opportunity to state in writing why a release of the requested information would constitute a clearly unwarranted invasion of privacy or cause substantial harm to their commercial interest. The USFWS will provide a notice when a FOIA request for records concerning the Credit System is made, and allow the Administrator, Credit Developer or Credit Buyer to prepare a notification requesting that any confidential personal or commercial information be withheld.

2.1.8 RESERVE ACCOUNT MANAGEMENT AND USE OF FINANCIAL ASSURANCES

The Credit System creates a reserve account of credits and requires credit projects to provide financial assurances so that the Administrator can ensure the Credit System generates net benefit even if specific credit projects do not fulfill performance standards throughout the duration of each credit project. Credit projects that do not fulfill performance standards are considered credit reversals.

The reserve account is not a financial assurance method to hold a Credit Developer financially responsible in the event of project failure. Rather, the reserve account includes verified, released credits that are providing greater sage-grouse benefits and have not used to offset debit projects. The reserve account serves as an insurance mechanism for the overall Credit System. Each credit transaction contributes a percentage of credits generated based on the probability of the credits being invalided as described in *Section 2.4.3: Reserve Account Contribution*.

Financial assurances are fiscal mechanisms used to ensure that funds are available for the implementation and long-term management of each credit project, including remedial actions in the event of unintentional reversals, and to promptly replace credits that have been sold but become invalidated due to intentional reversals. Financial assurances can consist of contract terms, such as financial penalties for intentional reversals, and financial instruments, such as long-term stewardship funds and contract surety bonds. See *Section 2.4.6: Financial Assurances* for additional information on financial assurance requirements and guidance.

Reserve Account Management

The Administrator manages the reserve account and uses credits in the reserve account to temporarily cover credits invalidated due to unintentional or unintentional causes as described in this section. Credits in the reserve account are never used to offset debit projects. Credits withdrawn from the reserve account to temporarily cover invalidated credits are transferred back into the reserve account after the invalidated credits that they were withdrawn to temporarily cover are remediated or replaced using financial assurances associated to the invalidated credits. Term credits in the reserve account are permanently withdrawn from the reserve account when the term of the credits has expired.

The Administrator reviews the balance of the reserve credits at least annually. The Administrator at any time may propose adjustments to the required reserve account allocation to be approved by the Oversight Committee as part of the Credit System adaptive management process. The Administrator can propose the required contributions be adjusted upward or downward as needed to account for insufficient or excessive amounts of reserve credits.

Use of Reserve Account and Financial Assurances

Depending on the specific cause and circumstances of a reversal, invalidated credits can be replaced using a combination of the reserve account and financial assurances, as illustrated in Figure 9 below.

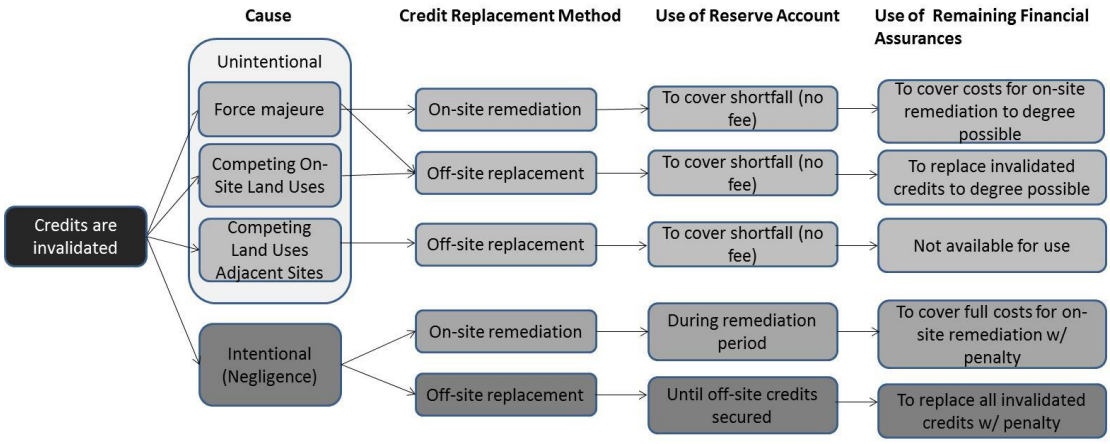

Figure 9: Credit invalidation replacement process

Unintentional reversals

Force Majeure

When credits generated by a credit site are invalided by an extraordinary event or circumstance beyond the control of the Credit Developer, such as wildfire, the Credit Developer is not liable and thus the financial assurances secured for intentional reversals are not available to the Administrator to replace the invalided credits. Instead, the Administrator withdraws credits from the reserve account to cover the invalidated credits at no cost to the Credit Developer. In cases where the credit site can be fully or partially recovered within a reasonable amount of time and cost, the Credit Developer has the option to develop a remedial action plan that is approved by the Administrator. In this situation, financial instruments secured for long-term management and unintentional reversals may be used to pay for activities included in the remedial action plan. See *Section 2.4.6: Financial Assurances* for additional information on financial assurance requirements. If only a portion of the credits are recovered following a *force majeure* event, then payments from financial instruments secured for long-term management and unintentional reversals are reduced according to the amount of credits actually being generated on the ground. The Administrator may use the remaining amount in the project site's financial instruments to purchase credits elsewhere. Any dedicated reserve account credits are returned to the reserve account if the invalidated credits are remediated, assuming all requirements of those reserve account credits are still being met.

In cases where the credit site cannot be recovered within a reasonable amount of time and cost, the Credit Developer has the option to cancel the contract without penalties, but retains the ability to re-enroll the site as a different project at a later time. If the contract is canceled, payments to the Credit Developer cease immediately and the Administrator uses the remaining amount in the project site's financial instrument for long-term management and unintentional reversals to purchase credits from a different credit site.

Competing On-site Land Uses

In the case of an unintentional reversal due to competing land uses on-site, such as *split estate* minerals development, the Administrator will withdraw credits from the reserve account to cover the invalidated credits at no additional cost to the Credit Developer. Similar to the policies described for force majeure events, if the impact of the competing land use reduces credit generation on a credit site, payments are reduced according to the amount of credits actually being generated. The Administrator uses the remaining funds in the project site's financial instrument to purchase credits elsewhere to the extent feasible. If the impact of the competing land use results in the credit site not being able to generate credits as expected, the contract can be canceled without penalties. If the contract is canceled, payments to the Credit Developer cease immediately and the Administrator uses the remaining amount in the project site's financial instrument to purchase credits from a different credit site.

Competing Land Uses on Adjacent Sites

There may be cases where verification shows that competing land uses on sites adjacent to enrolled credit project sites have occurred, which impairs the ability of the enrolled credit project site to generate benefit for the species. The effect of competing land uses on sites adjacent to the enrolled credit project sites are determined using the anthropogenic disturbance curves defined in *Section 3.3.1: Cumulative Anthropogenic Disturbances* in the *HQT Scientific Methods Document*. These occurrences are out of the direct control of the Credit Developer. Therefore in cases of unintentional reversals due to competing land uses on adjacent sites, the Administrator will withdraw credits from the reserve account to cover the invalidated credits at no cost to the Credit Developer. In these cases, the remaining financial assurances for the credit project site are not available to the Administrator to purchase replacement credits. The Credit Developer must continue to maintain habitat function at the project site-scale according to the performance requirements stated in the credit project's Management Plan.

Intentional Reversals

In the case of an intentional reversal, such as not implementing management activities to achieve habitat quality as defined in the Management Plan or intentional mineral development, all payments to the Credit Developer immediately cease. The Credit Developer and Administrator determine if a remedial action plan can be developed or if credits must be replaced off-site. The Credit Developer is responsible to the Administrator for the entire cost of purchasing replacement credits from a different credit site, any associated legal fees, and an additional 10% administrative fee (i.e. contract penalty). If there is a time lag between the intentional reversal and the recovery of the site, or a time lag between the intentional reversal and when the Administrator secures new credit contracts, the Administrator will withdraw from the reserve account for a limited duration to prevent any gaps in coverage for sold credits. The credit withdrawal from the reserve account ceases as credits are acquired to cover the remainder of the contract.

2.1.9 RECOGNITION AND SUPPORT OF EXISTING GREATER SAGE-GROUSE CONSERVATION PROGRAMS

To the extent appropriate, the Administrator may work with the sponsors of existing greater sage-grouse conservation programs to make Credit System tools and operations, such as the HQT, credit accounting and transfer protocols, verification protocols and credit investment strategies available to such programs. The terms under which the Credit System will be available to such programs shall be set forth in agreements between the Administrator and the program sponsors.

2.2 HABITAT QUANTIFICATION AND CREDIT AND DEBIT CALCULATION

This section describes how to calculate Credit System credits, debits and credit obligations, which are the amount of credits required to offset the debits generated by a debit project. The credit obligation is the number of debits generated by a debit project adjusted by a proximity ratio, determined by the proximity between the debit site and offsetting credit site. Credit Developers and Credit Buyers are the primary audience of this section.

Credits and debits represent the functional acre difference between baseline functional acres and post-project functional acres, multiplied by a mitigation ratio that incorporates biologically significant factors that are not captured through the HQT. This section begins with an overview of the HQT, which is used to quantify functional acres for both credit and debit sites. The difference in baseline functional acres and post-project functional acres is the starting point for calculating credits and debits, and guidance for determining baseline functional acres is provided in *Section 2.3.4: Calculating Credit Baseline Habitat Function* and *Section 2.5.4: Calculating Debit Baseline Habitat Function* for credit and debit sites, respectively. Following the overview of the HQT, guidance is provided for determining the mitigation ratio for credit and debit sites, and the credit obligation for debit projects. Lastly, an example calculation of credits and debits beginning with baseline and post-project functional acres is provided.

2.2.1 HABITAT QUANTIFICATION TOOL

The HQT quantifies habitat function for greater sage-grouse habitat in the State of Nevada. Habitat function refers to the role of the habitat in providing life history requirements for greater sage-grouse, and includes the direct and indirect effects of anthropogenic disturbances. Habitat function is expressed as a percent function in relation to fully-functioning habitat for greater sage-grouse, and is multiplied by the area (acres) assessed to calculate functional acres associated to the area assessed.

HQT Framework for Quantifying Habitat Function

The HQT was developed to account for habitat characteristics or attributes which influence sage-grouse habitat selection across multiple scales. These habitat characteristics were based on different orders of selection (Johnson 1980, Stiver et al. 2010), which represent four spatial scales at which habitat attributes influence where sage-grouse reside and obtain resources necessary for survival and reproduction[9]. The HQT assessed habitat quality at four orders.

Range-wide Scale (1st order): The range considered by the Credit System is the geographic range of the sage-grouse population in Nevada.

Landscape Scale (2nd order): Landscape selection is based on the availability of seasonal habitats needed to support a population or subpopulation.

Local Scale (3rd order): Local selection is based on suitability of the habitat within their home range and the effects of anthropogenic disturbances.

Site Scale (4th order): Site selection is based on vegetation structure and composition that provide forage and cover.

See the *HQT Scientific Methods Document* for additional information on the attributes measured at each scale (order), and the methods used to measure those attributes.

[9] While the term 'selection' may be interpreted as relating to individual bird behavior, in this context the term is applied broadly to describe the four geographic scales at which sage-grouse occur, are organized into populations and use habitat (per Johnson 1980, Connelly et al 2003, Stiver et al 2010). These four scales also correspond to scales at which sage-grouse policy and management are typically implemented (Stiver et al. 2010). Throughout this document, orders of selection will be identified by their descriptive terms (e.g., site scale, local scale, landscape scale).

Functional Acre Calculation

The HQT generates a percent function and a number of functional acres for each seasonal habitat type (breeding, late brood-rearing, and winter) for each *map unit* delineated within a project site. Map units are sub-divisions of the project area based on unique vegetation communities and vegetation structure. Map units are delineated based on variation in habitat attributes assessed by the HQT, such as sagebrush canopy cover, forb abundance and distance to sagebrush cover. Guidance for delineating map units within a credit or debit site is provided in the *HQT Scientific Methods Document*.

The HQT generates a local-scale habitat function score and site-scale habitat function scores for each seasonal habitat type. The product of the local-scale habitat function and site-scale habitat function scores for each seasonal habitat type determines overall habitat function for each seasonal habitat type for a map unit. The overall habitat function for each seasonal habitat type is multiplied by the acreage of the map unit to produce a functional acre value for each seasonal habitat type. Table 4 provides an example calculation of functional acres for each seasonal habitat type for a single map unit.

Table 4: Example calculation of functional acres for a single map unit

Seasonal Habitat Type	Local-Scale Habitat Function	Site-Scale Habitat Function	Overall Habitat Function	Acres	Functional Acre Values
Breeding	80%	60%	48%	500	240
Late Brood-Rearing	80%	0%	0%	500	0
Winter	80%	45%	36%	500	180

Application of the HQT

The Credit System uses the functional acre difference between baseline functional acres and post-project functional acres for each seasonal habitat type as the starting point for calculating credits and debits for each map unit delineated within a project site, including the area indirectly impacted by a debit project. Guidance for determining baseline functional acres is provided in *Section 2.3.4: Calculating Credit Baseline Habitat Function* and *Section 2.5.4: Calculating Debit Baseline Habitat Function* for credit and debit sites, respectively.

The HQT is used consistently throughout the life of a credit project to 1) substantiate the release of credits at the point that the project meets habitat function thresholds, and 2) verify that conditions are being maintained as expected over time. For debit projects, the HQT is used to determine pre-project functional acres before impacts occur, to determine post-project functional acres after impacts occur, and is used as necessary over time to determine if impacts are increased or reduced. Pre-project HQT results for debit projects can be used for up to 5 years after a site has been verified as long as the habitat function is believed to be similar to the previous assessments and no significant changes have occurred on the project site.

Field Data Collection Timing

Site-scale vegetation measurements required by the HQT must be collected during specific times of the year to accurately measure the function of breeding, late brood-rearing, and winter habitat. These vegetation measurements are primarily related to sagebrush, forbs and grasses. The forbs and grasses necessary to sustain greater sage-grouse are often different, or differ in availability, during specific greater sage-grouse life cycle stages. To ensure accurate quantification of the functionality for each seasonal habitat on a site, field work for the collection of forbs and grasses needs to occur during an appropriate season.

Permissible Windows

Credit Developers and Credit Buyers must collect data during the following permissible windows in order for functional acre scores to be official and approved by the Administrator:

Breeding: April 1st through June 15th
Late brood-rearing: July 1st through September 15th
Winter: Anytime

The permissible window may need to be shifted each year due to annual variation in climatic conditions. Shifts of the permissible window will be limited to significant departures from mean climatic conditions, and to no more than a 3 week shift forward or backward from the standard windows above. If the permissible window is shifted, the Administrator will post an announcement on the Nevada Conservation Credit System Website as soon as a determination is made.

Date Confirmation

Credit Developers and Credit Buyers may request written confirmation from the Administrator that their planned field work is scheduled within permissible windows in order in to ensure functional acre scores based on the field data collected will be accepted by the Administrator.

Field Data Outside of Permissible Windows for Planning Purposes

Credit Developers and Credit Buyers may collect field data outside the permissible windows to estimate credit generation and credit obligations for **project planning purposes only**, such as to negotiate options contracts between Credit Developers and Buyers. Credits will not be released for sale based on field data collected outside of permissible windows. Similarly, debit projects are not permitted to develop any area where field data has not been collected during a permissible window when it is needed to generate accurate quantification of habitat function. All credit and debit amounts must be finalized based on field data collected during a permissible window.

All preliminary estimates of habitat function collected outside the permissible windows will be clearly indicated as such. These estimates should also include an indication of when field work will occur during the permissible window. Credit Developers and Credit Buyers should make conservative estimates when using field data collected outside of permissible windows (e.g. under-estimate credits, over-estimate debits). In particular, estimates for forbs, grasses and other attributes that are affected by specific growing seasons should be conservative in order to minimize risk in planning decisions and capital investments.

2.2.2 MITIGATION AND PROXIMITY RATIOS

A mitigation ratio is applied to the functional acre difference between baseline functional acres and post-project functional acres for each map unit within a credit or debit project respectively. See *Section 2.2.1: Habitat Quantification Tool* for additional information on calculating functional acres, and guidance for determining baseline functional acres is provided in *Section 2.3.4: Calculating Credit Baseline Habitat Function* and *Section 2.5.4: Calculating Debit Baseline Habitat Function* for credit and debit sites, respectively. The mitigation ratio incorporates biologically significant factors that are not incorporated into the quantification of functional acres using the HQT.

The mitigation ratio enables credits acquired to offset debits generated by debit projects to achieve net benefits for greater sage-grouse by ensuring the total functional acres of credit acquired are greater than the functional acres of debit. The mitigation ratio incentivizes avoidance of impacts, while encouraging enhancement and protection of habitat in high priority areas.

The mitigation ratio is defined for each map unit delineated within a credit or debit project, including the area indirectly impacted by a debit project, and is based on multiple factors described below. The mitigation ratio is applied to the difference between baseline functional acres and post-project functional acres associated to each map unit for both credit and debit projects, as illustrated in Figure 10. See *Section 2.3.4: Calculating Credit Baseline Habitat Function* and *Section 2.5.4: Calculating Debit Baseline Habitat Function* for determining baseline for credit and debit projects respectively.

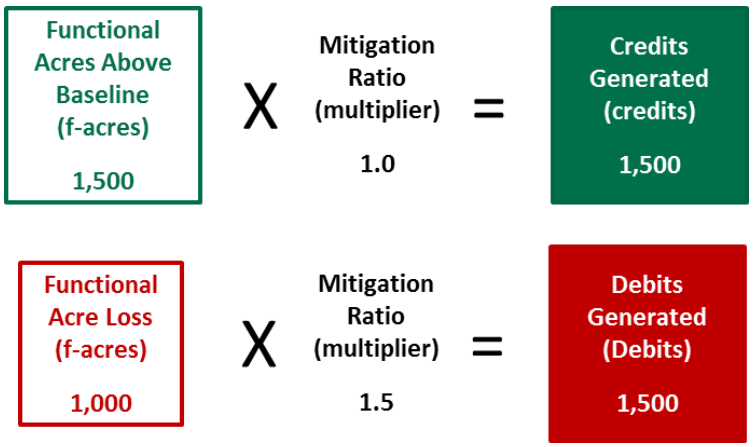

Figure 10: Illustration of calculation of debit and credits

The amount of credits required to offset a debit project, or the credit obligation, is the number of debits generated by the project adjusted by a proximity ratio, determined by the proximity between the debit site and offsetting credit site. The proximity ratio incentivizes credit sites used for mitigation to be in close proximity to debit sites.

Credit and Debit Mitigation Ratios

The Credit System applies a mitigation ratio to credit and debit sites to incorporate 1) estimated space use by greater sage-grouse, and 2) limiting seasonal habitat impacted, negatively or positively.

Management Importance Factor

The management importance factor incorporates estimated space use by greater sage-grouse into the calculation of credits and debits. The management importance factor is determined by the Core, Priority or General Management Area for which the credit or debit is located within, as defined by the Sagebrush Ecosystem Program's Management Categories map depicted in Figure 11. The Core Management Area is the highest conservation priority and the General Management Area is the lowest conservation priority under the management importance factor. Table 5 and Table 6 below provide the management importance factor values for debit and credit sites, respectively. These values will be reevaluated by the SEC after testing pilot projects.

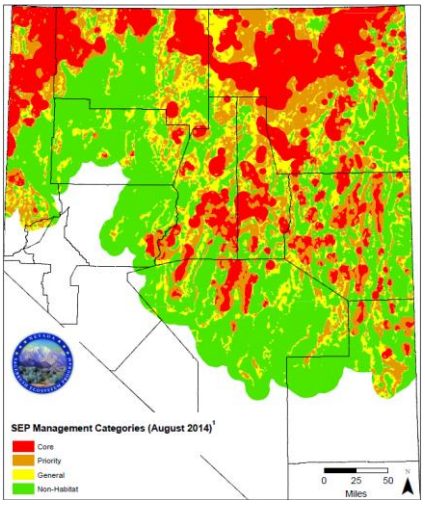

Figure 11: Sagebrush Ecosystem Program's Management Categories map

Table 5: Debit Site Management Importance Factor Values

Category	Factor Value
Core	2.0
Priority	1.5
General	1.0

Table 6: Credit Site Management Importance Factor Values

Category	Factor Value
Core	1.1
Priority	1.0
General	0.85

In accordance with the 2014 Nevada Greater Sage-Grouse State Plan Table 3-1, disturbances located in Non-Habitat Management Areas require evaluations to determine whether the disturbance will cause an indirect impact to Core, Priority, or General Management Areas. If the evaluation determines that an indirect impact will occur in a Core, Priority or General Management Area, the management importance factor of that area is applied to the indirect disturbance area of the debit project.

If a single map unit crosses two or more management importance categories, the management importance factor value used is an area-weighted average based on the management categories included in the map unit (see Figure 15 for an example of calculating an area-weighted average value).

Limiting Seasonal Habitat Factor

Greater sage-grouse depend on different types of habitat to accommodate different phases of their life cycle - breeding, late brood-rearing and winter. If one or more of these habitat types is impacted to the point that it can no longer support the corresponding life cycle phase, then the entire area is potentially no longer suitable for the greater sage-grouse. The limiting seasonal habitat factor incorporates the effect of a credit or debit project on each seasonal habitat type relative to the amount of the specific seasonal habitat currently available to the affected population within and surrounding the project site. The proportion of seasonal habitat affected by a credit or debit project is determined using a seasonal habitat map that excludes all disturbed habitat and non-habitat within and surrounding the project site due to existing anthropogenic disturbances, recent fire, and other factors. Including concepts of existing anthropogenic disturbances and recent fire into limiting habitat helps to provide the relative value of these habitats when some has already been lost to disturbance. See *Section 3.2.3: Limiting Seasonal Habitat* in the *HQT Scientific Methods Document* for additional information including the analysis method and area within and surrounding the project included in the analysis.

A limiting seasonal habitat factor value is incorporated in the mitigation ratio if the project impacts a seasonal habitat type with less than the proportions defined in Table 7, within and surrounding the project site.

Table 7: Limiting seasonal habitat proportion of analysis window thresholds

Breeding & Winter	**Late Brood-Rearing**
Proportion of Analysis Window	Proportion of Analysis Window
<40%	<4%

If the project impacts a limiting seasonal habitat, as defined in Table 7, the equation associated with that seasonal habitat type in Table 8 is used to determine the limiting seasonal habitat factor value.

Table 8: Limiting seasonal habitat factor value equations

Breeding & Winter	**Late Brood-Rearing**
Ratio Equation	Ratio Equation
$(.4\text{-}proportion)*100$	$\frac{1}{proportion}$

Combining Factors to Determine Credit and Debit Mitigation Ratio

The management importance and limiting seasonal habitat factors are summed to determine the overall mitigation ratio for a site, as per Equation 1.

Equation 1: Combining factor values to determine overall debit or credit mitigation ratio

$$\textit{Mitigation Ratio} = \textit{Habitat Importance Factor Value} + \textit{Limiting Seasonal Habitat Factor Value}$$

Proximity Ratio

The credit obligation is the number of credits that must be purchased to offset the debits generated by a debit project. The credit obligation is the number of debits calculated using the debit ratio above adjusted by a proximity ratio, determined by the proximity between the debit site and offsetting credit site.

The proximity ratio incentivizes debit projects to offset their credit obligation (purchase credits) in close proximity to debit sites in order to increase the likelihood that the mitigation serves the same populations of birds that are adversely impacted by the debit site. The WAFWA Management Zones and the NDOW PMU maps illustrated in Figure 12 and Figure 13. respectively are used to determine whether the debit and credit sites 1) have no population connection, 2) are connected through population dispersal, or 3) impact and benefit a single population.

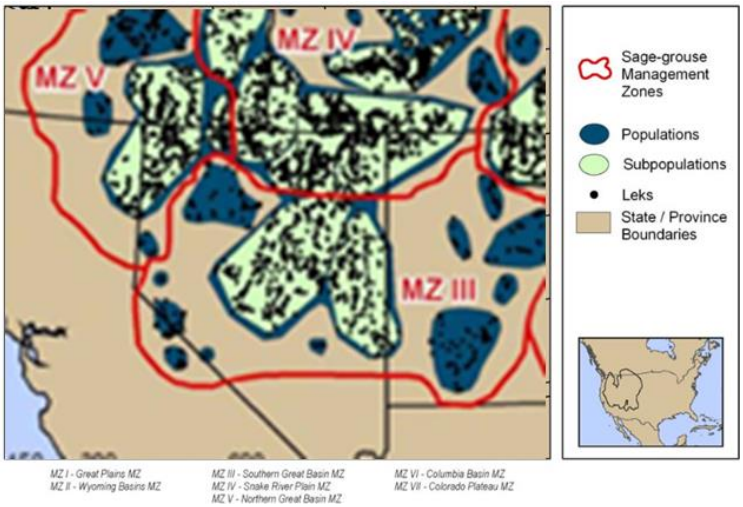

Figure 12: WAFWA Management Zones for Greater and Gunnison sage-grouse

- If the debit and credit sites are located within one PMU, they are considered to be relevant to a single population.
- If the debit and credit sites are located within the same WAFWA management zone, but not the same PMU, they are considered to be connected through population dispersal.
- Finally, if the debit and credit sites are located in different WAFWA management zones they are considered to have no population connection.

The proximity ratio value associated with each of these categories is in the Table 9.

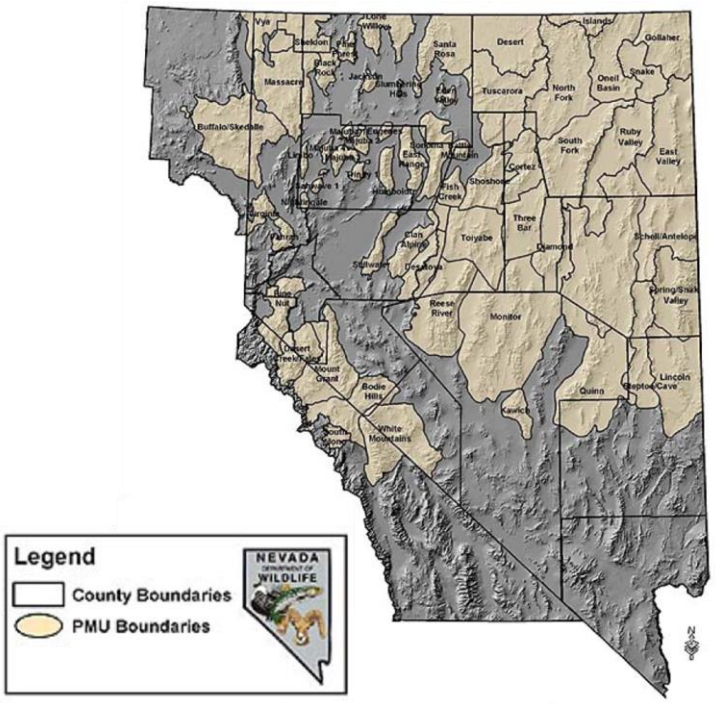

Figure 13: NDOW Population Management Units

Table 9: Proximity Ratio Values

Category	Factor Value
No population connection between credit and debit sites (different WAFWA Management Zone)	1.50
Credit and debit sites connected through population dispersal (same WAFWA Management Zone)	1.25
Credit and debit sites located within a single population (same PMU, even if in different WAFWA Management Zones)	1.00

Preferred conservation areas are expected to be defined and incorporated into the State of Nevada's strategic action plan in 2015. After preferred conservation areas are defined, waiving the proximity ratio for debit projects that acquire credit offsets from these areas but outside of the PMU or WAFWA zone for which the debit is located will be considered. This exception will be considered as an additional method to prioritizing mitigation in areas that best serve the greater sage-grouse at a landscape-scale instead of focusing exclusively at the individual population level.

Credit Obligation

The credit obligation for each debit project is determined by multiplying the number of debits by the proximity ratio, as per Equation 2.

Equation 2: Credit obligation for debit projects

$$Credit\ Obligation = Debits\ * Proximity\ Factor\ Value$$

2.2.3 CREDIT AND DEBIT CALCULATION

The amount of credits and debits generated from a project is determined by the greatest benefit for credit projects or the greatest impact for debit projects. The greatest benefit or impact from a project is the sum of the greatest benefit or impact determined for each delineated map unit within a credit or debit project. The greatest benefit or impact associated with each map unit is the largest product of the difference between baseline functional acres and post-project functional acres and the unique mitigation ratio associated to each seasonal habitat type. See *Section 2.2.1: Habitat Quantification Tool* for additional information on calculating functional acres, and guidance for determining baseline functional acres is provided in *Section 2.3.4: Calculating Credit Baseline Habitat Function* and *Section 2.5.5: Calculating Debit Baseline Habitat Function* for credit and debit sites, respectively.

An example calculation of the credits generated from a credit project with three map units is provided in Table 10. The left most group of columns contain the difference between baseline functional acres and post-project functional acres for each seasonal habitat type, and the next group of columns moving the right contains the unique mitigation ratio for each seasonal habitat type. The next group of columns to the right contains the potential credit value of each seasonal habitat type, which is the product of the difference between baseline functional acres and post-project functional acres and the unique mitigation ratio for each seasonal habitat type. The last column contains the credits generated by each map unit, which is the highest seasonal habitat credit value circled in red. The sum of the credits generated by each map unit is the total credits generated by the project.

Table 10: Example credit calculation for a project with three map units and enhancement and protection of limiting late brood-rearing habitat

Map Unit	Breeding F-Acres Above Baseline	Late Brood-Rearing F-Acres Above Baseline	Winter F-Acres Above Baseline	Breeding Mitigation Ratio	Late Brood-Rearing Mitigation Ratio	Winter Mitigation Ratio	Breeding Value	Late Brood-Rearing Value	Winter Value	Credits Generated
Map Unit 1	6	15	3	.95	25.95	.95	6	389	3	390
Map Unit 2	15	0	20	.95	25.95	.95	14	0	19	19
Map Unit 3	10	0	7	.95	25.95	.95	10	0	7	10
									Total Project	**419**

2.3 CREDIT PROJECT REQUIREMENTS & ADDITIONALITY PROVISIONS

This section describes requirements including additionality provisions for credit projects to ensure credit projects provide benefits beyond those that would be achieved if the project and associated management actions had not taken place. Additionality provisions address credit projects on public lands, credit projects that have received public funds, and *stacking* of multiple credit types. Credit Developers are the primary audience of this section. Specifics related to Credit Buyers are outlined in *Section 2.5: Credit Obligation Provisions and Credit Investment Strategies*.

2.3.1 CREDIT SERVICE AREA

The Credit System service area is the mapped geographic region where credits can be generated and will be tracked and reported. The service area designation has important implications for the viability of the Credit System transactions and for the ability of the Credit System to generate a net benefit for greater sage-grouse habitat from the impacts from anthropogenic disturbances.

The current SGMA is the Credit System service area, and the 2014 SGMA map is provided in Figure 14 as an example. The boundaries of this management area are based on the range of the species in the State of Nevada and are aligned with State of Nevada development project review requirements for greater sage-grouse.

Figure 14: Greater sage-grouse service area

While the Service Area broadly defines the domain of the Credit System, mitigation ratios establish incentives to offset debits using credits generated in close proximity to debit sites. *Section 2.2.2: Mitigation and Proximity Ratios* describes how the WAFWA Management Zones and the NDOW PMUs, depicted in the Figure 12 and Figure 13 respectively, are incorporated into the proximity ratio. In addition, three Management Categories are also incorporated into the mitigation ratios to encourage the generation of credits and discourage debits in Core and Priority Management Areas, which are estimated to have high space-use by greater sage-grouse. Credits and debits will be tracked in the Credit System Registry and reported by the Administrator by WAFWA Zones and PMUs.

2.3.2 CREDIT PROJECT MANAGEMENT ACTION TYPES

To achieve conservation needs and facilitate recovery of greater sage-grouse, the Credit System defines two credit project management action types:

1) **Habitat Stewardship** – Maintenance of high quality habitat currently used by or in close proximity to habitat used by greater sage-grouse, or manipulation of existing habitat to increase specific habitat functionality. An example project could be placing a conservation easement on existing high quality habitat and committing to maintaining that high quality for the full duration of the credit project. Another example project could be, and improvement of medium quality habitat through a prescribed grazing plan on existing rangeland, and committing to maintaining the post-project habitat function for the duration of the credit project.
2) **Habitat Restoration** – The reestablishment of ecologically important habitat and other ecosystem resource characteristics and functions at a site where they have ceased to exist or where they exist in a substantially degraded state. Examples include the reestablishment of useable greater sage-grouse habitat on abandoned mining claims, eradication of cheatgrass, removal of power line towers no longer in use, or restoration of a wet meadow that is currently not functioning properly.

Riparian Properly Functioning Condition Assessment

A riparian properly functioning condition (PFC) assessment is required for riparian areas included in a credit project. The results of the assessment in report format including the information from the field forms, map, riparian plant list, and photographs must be included in the Management Plan associated with the credit project. The assessment is intended to inform the Credit Developer and Administrator of the ecosystem health of the riparian areas and thus the risk of generating credits from those areas. The Credit Developer is not required to implement management actions to increase the functioning condition of riparian areas. However, the habitat function of riparian areas as measured by the HQT is likely to decrease when those areas are nonfunctional or functional at risk. Credit Developers are encouraged to implement management actions to achieve properly functioning condition to reduce the risk (as identified by the PFC assessment) of credits becoming invalidated.

2.3.3 CREDIT SITE ELIGIBILITY

To be eligible to participate in the Credit System, credit sites must meet the eligibility criteria defined below.

Service Area

All credit sites must be located within the Credit System Service Area. See *Section 2.3.1 Credit Service Area* consideration for additional information.

Ownership & Stewardship

Credit Developers must attest to their current ownership, tenure or use rights, and past land management and land uses over the previous 10 years. . On federal lands, credit developers must have an approved request or application depending on the land protection instrument.

Minimum Performance Standards

The Credit System requires that credit sites meet minimum performance standards related to habitat function and space use for the greater sage-grouse in order to be eligible to generate and release credits. The following minimum performance standards are based on post-project habitat function and must be met at all three scales in order to ensure credit sites are fulfilling the needs of greater sage-grouse at each scale:

- **Landscape-scale** – Credit projects must be located within the Core, Priority or General Management Areas using the SEP's current Management Categories map.
- **Local-scale** – Anticipated local-scale, post-project habitat function (area-weighted average across all map units) determined using the HQT must be greater than or equal to 20%.
- **Site-scale** – Anticipated site-scale post-project habitat function (area-weighted average across all map units using maximum seasonal habitat function associated to each map unit) determined using the HQT must be greater than or equal to the relevant site-scale regional standard habitat functions plus 10% (area-weighted average across all map units using the relevant seasonal habitat type regional standard habitat function). See *Section 2.3.4: Calculating Credit Baseline Habitat Function* for

Area-weighted average is the sum of products of Habitat Function and Area for each map unit divided by total area.

Step 1: Calculate product of habitat function and area, and total area

	Habitat Function	Acres	Product of Habitat Function and Area
Map Unit #1	70%	100	70
Map Unit #2	50%	500	250
Total		**600**	**320**

Step 2: Divide the sum of products of habitat function and area for each map unit by total area

Area-weighted Average Habitat Function = 320/600 **= 53%**

Figure 15: Definition of and an example calculation of area-weighted average habitat function for a credit site with two map units

site-scale regional standard habitat functions, and Figure 15 for additional detail on calculating area-weighted averages.

Additionality

Credit Developers must demonstrate that the performance standard defined for the credit site in the Management Plan exceeds what is otherwise required by federal, state, and local regulations and statutes. Credit Developers must also describe how federal funds have been previously or are currently used to support the development and management of the credit project site. Credit Developers must demonstrate that the credit project site will provide additional benefit to the species above and beyond those generated through the application of existing federal funds or participation in other credit markets. See *Sections 2.3.5* through *2.3.8* for additional information on additionality provisions.

No Imminent Threat

There cannot be evidence supporting imminent threat of direct or indirect disturbance by land uses that will cause the habitat function of the total credit site to be less than the minimum performance standard referenced above as measured by the HQT. Recently acquired subsurface rights, development plans (e.g. a building permit recently submitted or National Environmental Policy Act (NEPA) documents currently under development), or development designations (e.g. renewable energy zone or transmission corridor) would constitute proof of imminent threat that may disqualify a credit site from participating in the Credit System. Proper grazing practices are not anticipated to pose an imminent threat of disturbance. However, in order to develop credits on public land within a grazing allotment, the Credit Developer must either be the permittee or have an agreement with the permittee that are necessary to ensure grazing practices are compatible with the performance standards defined in the Management Plan associated with the credit project.

Site Protection

Credit Developers must show evidence of site protection for the duration of the contract period. A Participant Contract that commits to maintain habitat function above the minimum performance standard is the minimum level of site protection. The Participant Contract includes contractual language and references any other legally binding agreements, such as conservation easements.

Financial Assurances

Credit Developers must commit to financial assurances in the form of contract terms and financial instruments. Financial assurances are specifically defined in each Credit Developers' Participant Contract with the Credit System and associated Management Plan. See *Section 2.4.6: Financial Assurances* for additional information.

Accuracy

Credit Developers must attest to the accuracy of the information provided in all documentation.

2.3.4 CALCULATING CREDIT BASELINE HABITAT FUNCTION

Credit project baseline habitat function is the starting point from which the functional acre difference relative to post-project functional acres is calculated. The difference between a project's post-project functional acres and the baseline functional acres are multiplied by the mitigation ratio to determine the credits generated for each map unit within a credit project. The resulting sum of the functional acres of the map units is the total credits for the project. See *Section 2.2.2: Mitigation and Proximity Ratios* for additional information on determining mitigation ratios.

The credit baseline habitat function is based on the pre-existing local-scale habitat function and the typical site-scale habitat function for the relevant region and habitat type to account for the avoided risk of potential threats that would degrade habitat function if the project was not implemented. In addition, using the typical site-scale habitat function instead of pre-existing site-scale habitat function rewards Credit Developers who have demonstrated stewardship and enables credits to be generated by credit

projects that will maintain and protect currently high quality habitat. See *Section 2.2.1: Habitat Quantification Tool* for description of scales. Credit baseline habitat function is calculated by multiplying

- Local-scale, pre-project habitat function as determined by the HQT, and
- Site-scale, regional standard habitat function as defined in Table 11.

The credit site-scale, regional habitat functions shown in Table 11 are used for the WAFWA Zone and seasonal habitat type associated to each map unit. These site-scale regional standard habitat functions are based on median habitat function values, and these values and spatial delineations will be reevaluated in the future as additional site-scale data on existing conditions and more effective methods of delineating habitat throughout the State of Nevada become available.[10]

Table 11: Site-scale regional standard habitat functions

		WAFWA Management Zones		
		MZ III	MZ IV	MZ V
SEASONAL HABITAT TYPES	Breeding	30%	30%	20%
	Late Brood-Rearing	20%	30%	20%
	Winter	65%	60%	60%

The winter regional standard habitat function values in Table 12 are expected to be adjusted in 2015. The current values are expected to be higher than appropriate because the winter scoring curves currently in the HQT and which were used to inform these baseline values do not entirely incorporate snow depth. The values in this table and the HQT will be adjusted at the same time in order to avoid impacting the relative value of winter habitat quantified before and after this change.

An example credit baseline habitat function calculation is illustrated in Table 12 for a map unit with high pre-project local-scale habitat function and a 20% site-scale regional standard habitat function.

Table 12: Example credit baseline habitat function calculation

Local-scale Pre-Project Habitat Function	Site-scale Regional Standard Habitat Function	Credit Baseline Habitat Function
80%	20%	16%

Additional Credit Baseline Habitat Function Considerations

Credit projects on public lands, or sites currently or previously participating in a federal funding program, or currently generating credits under other *ecosystem service* program or market, may require an adjusted credit baseline habitat function as defined by the following sections.

2.3.5 DEVELOPING CREDITS ON PUBLIC LANDS AND OTHER DESIGNATIONS

The Credit System allows for credits to be generated on public lands (e.g. BLM, Forest Service, State of Nevada trust lands etc.) or other lands already under permanent conservation restrictions (e.g. existing conservation easements) for mitigation purposes if the proposed credit project would add additional benefit above and beyond what would be achieved under the existing land designation or planned and funded conservation actions. Credit projects on public land are able to meet additionality requirements of the Credit System if the Credit Developer can demonstrate that verifiable benefit using the HQT can be attained by the credit project.

[10] The site-scale regional standard habitat function values below are based on BLM's Assessment, Inventory, and Monitoring (AIM) data and adjusted for identified bias in the data set for the use as regional standard within baseline calculations in the Credit System.

In order to generate credits on public lands, the Credit Producer must have authorization from the relevant public land management agency, under which the public land manager maintains management authority over the land.

2.3.6 PARTNERING WITH FEDERAL PROGRAMS ON PRIVATE LANDS

The Credit System allows for credits to be generated on private lands currently or previously participating in a federal funding program (e.g., U.S. Department of Agriculture (USDA) Farm Bill conservation programs). Guidance for determining the number of potential credits on sites that are currently or have previously participated in a federal funding program is provided below. There are two discrete time periods when payments may be partnered with federal funds including 1) when a current federal contract is still in effect, and 2) after a previous federal contract has expired.

Where conservation values have already been permanently protected or restored under other federal programs benefitting the greater sage-grouse, the Credit Developer can only receive credit for conservation values if enrollment of the credit site in the Credit System would create additional conservation benefit above and beyond the terms of the original agreement.

During an Existing Federal Contract

Within an existing federal contract, a Credit Developer can receive credits for additional habitat benefit generated. The allocation of credits on affected acreage will be proportionate to the non-federal contribution to the conservation benefit for sage-grouse. For example, acreage capable of producing ten credits, but with a fifty percent (50%) federal contribution, will be allocated five credits. This rule only applies to the portion of the benefit on a particular credit site that can be attributed to federal funds. The rest of the benefit is fully creditable.

Following a Federal Contract

A Credit Developer may receive full credit for long-term or permanent contract extension, management or protection agreements following expiration of a federally-funded contract. These long-term contract extensions and permanent conservation agreements could be entered into contemporaneously with execution of the underlying contract or thereafter, but these provisions (and Credit System credits) would not take effect until after the expiration of the underlying contract.

2.3.7 STACKING CREDIT TYPES

Although the Credit System currently only supports the generation and sale of one type of credit (e.g. greater sage-grouse credits), the Credit System allows for multiple credit types to be generated from spatially overlapping areas. However, the amount of each type of credit generated must be based on additional habitat function maintained compared to the habitat function maintained for other credit types. If a site under the Credit System is currently or has previously generated and sold credits under a different ecosystem service program or market (i.e. carbon, water quality, etc.), then restrictions related to partnering with federal funds during existing or following previous federal contracts apply.

In the future, the Credit System may expand to support the generation and sale of credits for other species and resources (e.g. mule deer) in addition to greater sage-grouse. Similar to restrictions on generating credits within a federally-funded contract or on public lands, Credit Developers would be able to generate and sell credits for different species and resources if they demonstrate additionality of specific conservation and management practices. A Credit Developer would not be eligible to sell multiple habitat credits from a single management practice. However, additional and unique management practices undertaken for a particular species would be eligible to generate additional credits. In order to demonstrate additionality for different species and resources, the Credit System will need to quantify and track habitat benefits for each species or resource. HQTs will need to be developed to provide habitat function scores for multiple species on a single project site. The species that receives the highest pre-

project score will be the focus of the initial project design. Then, any additional and unique management actions built into that project design in order to generate function for other species or resources will be considered additional, and can be sold as separate credits under the Credit System.

2.3.8 INTEGRATION WITH CCA/CCAAS

Credit Developers enrolled in Candidate Conservation Agreements (CCAs) or Candidate Conservation Agreement with Assurances (CCAAs) can enroll in the Credit System and generate credits if the benefits generated are additional to the minimum conservation measures required by the CCA or CCAA. Credit projects previously enrolled in a CCA or CCAA must work with the Administrator to determine an appropriate site-scale credit baseline, such as pre-project conditions, considering the existing CCA or CCAA. This site-scale credit baseline adjustment should consider the increased additionality and durability resulting from securing conservation benefits through a long-term or permanent credit project that goes beyond the duration of the CCA or CCAA.

2.4 CREDIT DURABILITY PROVISIONS

This section describes credit project durability provisions to ensure credit projects are producing expected outcomes for their entire duration. Durability provisions include legal, financial and Credit System management mechanisms. Credit Developers are the primary audience of this section.

2.4.1 CREDIT SITE PROTECTION

All participating credit projects are required to complete and sign a Participant Contract and accompanying Management Plan that assigns responsibility for meeting monitoring, reporting and verification requirements of each project to the Credit Developer for the duration of the project. Additional information on credit project duration is provided in *Section 2.4.2: Credit Project Duration*. The Participant Contract is the legal agreement between one or more Credit Developers and the Administrator that defines obligations of the Credit Developers and secured financial assurances, binds a participating credit site to a Management Plan, and lays out the relevant terms and conditions for the development of credits under the Credit System. This includes habitat function performance standard, financial assurances for long-term management and intentional reversals, and other provisions related to the signatories.

Additional site protection measures, such as easements or public land use designations on private and public lands respectively, can reduce the probability of competing land uses invaliding the credits generated on the credit site. Reserve account contributions for individual projects reflect these considerations – the probability of competing land uses, the level of risk of the specific site protection mechanism secured, and the unique terms secured for each credit project. The level of risk then determines the reserve account contribution amount required of each project, which creates an incentive to increase land protection and select sites less likely to be affected by other uses. The increased contribution amount also helps ensure the Reserve Account is capable of covering invalidated credits regardless of the site protection measures in place. See *Section 2.4.3: Reserve Account Contribution* for more information on the competing land use factor including how the probability of a reversal from competing land uses is determined.

2.4.2 CREDIT PROJECT DURATION

Credit project duration is the length of time that the Credit System recognizes a project. Credit project duration is the length of time that a Credit Developer has committed to enhancing and maintaining habitat function as stated in credit project's Participant Contract and Management Plan. The duration of credit projects can be either limited term or in perpetuity, and limited term credit projects can be renewed within the Credit System after the credit project duration expires.

. The minimum credit project duration is 10 years and the maximum project duration is in perpetuity. Project duration is defined in 5 year increments. Thus, project duration can be 10, 15, 20, 25 years, and so on, up to and including in perpetuity. The rationale behind the 10 year minimum is based on scientific opinion that rapidly changing habitat function can be detrimental to populations. Longer-term credit projects are preferable and credits from long-term projects are anticipated to attract greater market demand, as Credit Buyers are required to match credit project duration to the expected duration of the debit project, which includes the time required to allow species to begin to use the site after the debit project. See below for matching of duration discussion.

Credit Developers define project duration in the Participant Contracts and Management Plans submitted to the Administrator. Upon expiration of the duration of the credit project, the Credit Developer can elect to renew the project under the Credit System. Renewal entails developing a new Management Plan, using the current HQT and the Credit System Manual policy and technical requirements that are approved at

the time of renewal to assess the habitat function and amount of credit generated by the site. Renewal also requires a qualified, third-party verification. See *Section 2.4.5: Credit Site Verification* for additional information on credit site verification. If the project is not renewed, the Credit System no longer recognizes credits after the end of the project duration.

2.4.3 RESERVE ACCOUNT CONTRIBUTION

A percentage of credits generated by a credit projects are transferred into the reserve account at the time that credits are transferred to a Credit Buyer's account. Credits in the reserve account may be used to temporarily cover credits invalidated from intentional and unintentional reversals in order to ensure there are always more credits than debits in the Credit System. The percentage of credits that a credit project contributes to the reserve account is determined by the probability of the credits on that site becoming invalidated unintentionally, which creates an incentive for the Credit Developer to reduce the risks that could invalidate those credits. The use of the reserve account and financial assurances is defined in *Section 2.1.7: Reserve Account Management and Use of Financial Assurances*.

The reserve account checklists determine the unique contribution amount for each credit project, taking the sum of the numeric values assigned to each of the factors defined below. As described in greater detail below and illustrated in Equation 3, the total reserve account contribution percentage consists of a standard base contribution and additional contributions related to the probability of adverse impacts from wildfire and competing land uses. As shown in Equation 4, the total reserve account contribution percentage is multiplied by the total number of credits transferred to a Credit Buyer's account to determine the total reserve account contribution amount for each credit transfer. The credit site must have sufficient credits available to fulfill the amount transferred to the Credit Buyer's account and the reserve account contribution.

Equation 3: Total reserve account contribution percentage equation

$$\begin{aligned}\textit{Total Reserve Account Contribution Percentage} \\ &= \textbf{Standard } \textit{Base Contribution Percentage} \\ &+ \textit{Probability of Adverse Impacts from Wildfire Percentage} \\ &+ \textit{Probability of Competing Land Uses Percentage}\end{aligned}$$

Equation 4: Total reserve account contribution percentage equation

$$\begin{aligned}\textit{Total Reserve Account Contribution Amount} \\ &= \textit{Credits Transferred to Credit Buyer} \\ &* \textit{Reserve Account Contribution Percentage}\end{aligned}$$

Base Contribution

The base reserve account contribution for all credit projects is 4% of the credits generated on-site that are transferred to a Credit Buyer's account. The base contribution is required due to the inherent uncertainty in the measurement and estimation of the long-term benefits of credit projects due to force majeure events, climate change, and other circumstances.

Probability of Adverse Impacts from Wildfire

In addition to the base reserve account contribution, a portion of each transfer of credits to a Credit Buyer's account is transferred into the reserve account to be available to temporarily cover credits invalided by wildfire, the predominant force majeure event anticipated to affect greater sage-grouse habitat in the State of Nevada. For each transfer of credits that occurs, a contribution for wildfire is determined by the credit site's:

1) Resistance to invasive annual grasses and resilience following wildfire
2) Ability to control wildfire

The Ability to Control Wildfire factor is currently not required because the score card is not currently available developed and adopted by SEC. The score card is expected to be developed in 2015 and included in a future version of the Manual. The description of the factor is included below as a place holder for the expected inclusion of this factor once the scorecard is available.

Resistance & Resilience

Using concepts of resistance and resilience to determine the reserve account contribution encourages credit sites to be located in areas that are less likely to be negatively affected by fire and more likely to recover from disturbances and helps to ensure that the reserve account is capable of covering credits invalidated based on natural disturbances from wildfire.[11]

The resistance to invasive annual grasses and resilience following wildfire is determined using the Miller et al. 2014 (Score Sheet for Rating Resilience to Disturbance, Resistance to Annual Invasive Grasses, and the Suitability of an Ecological Site or Type for Treatment) field guide and score sheet illustrated in Figure 16.[12] Variables defined in the score card produce a field assessment with scoring based on soil temperature, moisture indicators, and vegetation. Credit projects often include more than one ecological site type, and scores are determined for each ecological site type or grouping of similar ecological sites within the credit project area. The score for each ecological site type within the credit project area has a range of 0 – 26, with a score of <10 = Very Low; 10 -14 = low; 15 – 20 = Moderate; and >20 = High. A weighted score, based on the proportion of the area within each ecological site type is calculated for the credit project area. Table 13 provides the reserve account contribution percentage based on the weighted score for the credit project site.

Score Sheet for Rating Resilience to Disturbance and Resistance to Invasive Annual Grasses in the Great Basin

Ecological Site or Type Name: _____

_____

%Area: _____ **UTMs:** _____

(Use ecological site descriptions or guidelines for the MLRA with field assessment to complete score sheet.)

PLOT SCORE*
(Sample two to five plots per ecological site depending on size and variability of area.)

SITE CHARACTERISTICS	SCORE FOR VARIABLE	1	2	3	4	5
Temperature (Soil temperature regime + Species or subspecies of sagebrush)						
Soil temperature regime	1=hot-mesic, 2=warm-mesic, 3=cool-mesic, or cool-cryic (resilience is low but resistance is high), 4=warm-frigid, 5=cool-frigid, 6=warm-cryic					
Species or subspecies of sagebrush	1=Wyoming, low, black, or Lahontan; 2=basin, Bonneville, or xeric; 3=mountain					
A. Temperature Score =						
Moisture (Precipitation + Soil texture + Soil depth)						
Precipitation in inches (in)	1=<10, 2=10-12, 3=12-14, 4=>14					
Soil texture	1=clay, sand, or silt; 2=silty, sandy, or clay loams; 3=loam					
Soil depth in inches (in)	0=very shallow (<10), 1=shallow (10-20), 3=moderately deep to deep (>20)					
B. Moisture Score =						
Temperature Score (A)+ Moisture Score (B)						
Pre-Treatment Vegetation (PTV) (Plant groups modified by soil depth)						
Plant Groups: Deep-rooted perennial grasses (DRPG) (potentially dominant in shallow to deep soils >10 in) Sandberg bluegrass (POSE) (potentially dominant in very shallow soils <10 in) Perennial forbs (PF) Invasive annual grasses (IAG)	0=DRPG and POSE scarce to severely depleted (DRPG <2-3/m² and/or less than 5% foliar cover) 3=DRPG on soils >10 in deep scarce, but POSE or PF are >50% foliar cover (resistance may be relatively high but resilience is low) 6=DRPG on soils >10 in deep depleted (2-3/m²or about 5-10% foliar cover), and/or co-dominant with IAG; or on soils <10 in deep, POSE and PF 5-15% foliar cover and co-dominant with IAG 9=DRPG and PF dominant on soils >10 in deep; or POSE and PF dominant on soils <10 in deep.					
Pre-Treatment Vegetation (PTV) Adjusted for Treatment Severity (Estimated)						
C. Adjusted Pre-Treatment Vegetation *(Estimate fire severity by plot based on fuels and burn prescription; estimate mechanical treatment severity by plot based on woody species biomass.)*	*Low severity prescribed fire or mechanical treatment = PTV x 95%* *Moderate severity prescribed fire or mechanical treatment = PTV x 80%* *High severity prescribed fire = PTV x 20%*					
Total Resilience & Resistance Score=Temperature (A) + Moisture (B) + Adjusted PTV (C)						
Resilience & Resistance Rating: Very low = <10, Low = 10-14, Moderate = 15-20, High = >20						

Figure 16: Miller et al. 2014 score sheet

Table 13: Resistance and Resilience reserve account categories and contribution percentages

Score sheet Score	Contribution Percentage
>20	0%
15-20	1%
10-14	2%
<10	4%

[11] Chambers, Jeanne C.; Pyke, David A.; Maestas, Jeremy D.; Pellant, Mike; Boyd, Chad S.; Campbell, Steven B.; Espinosa, Shawn; Havlina, Douglas W.; Mayer, Kenneth E.; Wuenschel, Amarina. 2014. Using resistance and resilience concepts to reduce impacts of invasive annual grasses and altered fire regimes on the sagebrush ecosystem and greater sage-grouse: A strategic multi-scale approach. Gen. Tech. Rep. RMRS-GTR-326. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 73 p.

[12] Miller, Richard F.; Chambers, Jeanne C.; Pellant, Mike. 2014. A field guide for selecting the most appropriate treatment in sagebrush and piñon-juniper ecosystems in the great basin: Evaluating resilience to disturbance and resistance to invasive annual grasses, and predicting vegetation response.. Gen. Tech. Rep. RMRS-GTR-322 REVISED. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 66 p.

Ability to Control

Factoring the ability to control wildfire to into the overall reserve account contribution for credit projects encourages sites to be placed where natural and human-created features improve the ability to control a wildfire, including existing and new (e.g. developed as part of the credit project) human-created pre-suppression features (e.g. green strips). Any human-created feature that impacts the reserve account contribution must be maintained throughout the term of the project, and described in the site's Management Plan.

The ability to control wildfire is determined using the area and site-level assessment checklist developed by the Sagebrush Ecosystem Program with contributions from other State of Nevada and Federal agency staff.[13] The assessment evaluates common risk factors (i.e. fuels, topography, ease of access, and distance from initial attack fire-fighting resources) that hinder or improve the ability of firefighting resources to control a wildfire under typical summer weather conditions for the project site. The assessment includes evaluation of the effectiveness of existing fire suppression features on the landscape, as well as the effectiveness of fire suppression features implemented as part of the credit project. Table 14 provides the reserve account contribution percentage based on the assessment score for the credit project site.

Table 14: Ability to Control reserve account categories and contribution percentages

Assessment Category	Contribution Percentage
High	*TBD*
Moderate	*TBD*
Low	*TBD*

Probability of Competing Land Uses

In addition to the base reserve account contribution, a portion of each transfer of credits to a Credit Buyer's account is contributed into the reserve account to be available to temporarily cover credits invalided by competing land uses. The Credit System determines the probability of competing land uses based on credit site ownership, the application of land protection mechanisms on the credit site and other characteristics of the credit project.

Different land protection mechanisms are available on privately- and publicly-owned land, and other unique characteristics of privately- and publicly-owned land influence the probability of completing land uses invaliding credit sites. Table 15 and Table 16 identify different credit site characteristics related to the probability of completing land uses invalidating credits for private- and publicly-owned lands, respectively. Note that each credit site must meet minimum site eligibility requirements, including proof of no imminent threat of direct or indirect disturbance to the credit site. See the *Section 2.3.3: Credit Site Eligibility* for additional information.

Important credit site characteristics related to the probability of competing land uses are expected to arise that do not justify a different contribution percentage than defined by the tables below. In these cases, the Credit Developer and Administrator will address issues as they arise on a case-by-case basis. Further, federal agencies are currently working on guidance related to durability on public lands - Table 16 is expected to be updated once this guidance becomes available.

[13] As of December 4, 2014, the assessment checklist is currently under development by the SEP.

Table 15: Competing Land Uses reserve account categories and contribution percentages for credits on privately-owned land

Minimum Competing Land Use Related Requirements	Contribution Percentage
Participant Contract and Conservation Easement and Ownership of Subsurface Rights	0%
Participant Contract and Conservation Easement	1%
Participant Contract and Ownership of Subsurface Rights	3%
Participant Contract	4%

Table 16: Competing Land Uses reserve account categories and contribution percentages for credits on publicly-owned land

Minimum Competing Land Use Related Requirements*	Contribution Percentage
Participant Contract and Public Land Authorization and Located within BLM Priority Habitat Management Area and Other Authorizations on the Site Prohibited*	0%
Participant Contract and Public Land Authorization and (Located within BLM Priority Habitat Management Area or (Located within BLM General Habitat Management Area and No Existing Authorizations on the Site under Other Ownership**))	2%
Participant Contract and Public Land Authorization	4%

*Other authorizations may be prohibited due to the Credit Developers authorization (e.g. Easement) and protection described in the associated NEPA decision or special land use designations (e.g. Area of Critical of Environmental Concern (ACEC)).

**Existing authorizations include mining claims, oil and gas leases, and grazing leases. Note that other authorizations (e.g. grazing lease) owned by the Credit Developers comply with this requirement since the Credit Developer has control of the other authorizations effect on the credit site achieving the performance standard.

Credit Developers must provide evidence that minimum competing land use related requirements have been fulfilled. For example, public land authorizations and relevant existing authorizations owned by the Credit Developer must be attachments to the Management Plan.

2.4.4 CREDIT RELEASE

The Credit System uses credit release schedules to manage risk and uncertainty by releasing credits only when specific performance standards are met. Credit releases occur when a new milestone of performance standards, in terms of habitat function, is achieved on the credit site that warrants an increase in the amount of credit generated on that project site. Credit releases require third-party verification, defined in *Section 2.4.5: Credit Site Verification*. Specific performance standards are defined in each credit project's Management Plan, and each credit project will have a unique credit release schedule based on those performance standards. A credit release schedule is different than credit payment schedules described in *Section 2.4.6 Financial Assurances*.

If a credit project is unable to achieve performance standards defined in the credit project's Management Plan in order to release credits, the Credit Developer will work with the Administrator to adjust the performance standards and release schedule. A decline in habitat function outside of the tolerances defined in *Section 2.4.5: Credit Site Verification* after credits are released will require the credit site to be remedied, or the credit site's financial assurances may be used to replace the invalidated credits. See *Section 2.4.6: Financial Assurances* for additional information on financial assurances.

Stewardship Management Actions

For credit projects based on stewardship management actions, credit release occurs when a habitat function performance standard defined in the credit project's Management Plan is achieved. Credit projects based on stewardship management actions cannot include performance standards defined by management actions, but rather only performance standards defined by habitat function. Credit projects that primarily maintain pre-project habitat function are likely to have a single credit release. If a credit project based on stewardship management actions includes multiple credit releases, the portion of credits released at each milestone must be less than or equal to the percent increase in habitat function relative to the total increase in habitat function expected to be achieved by the project. A credit release schedule associated with specific performance standards in the credit project's Management Plan can include multiple credit release intervals; however each release must require at least a 5% increase in site-scale habitat function. Credits are released at the point when a third-party verifies an achieved performance standard. Credits released are valid for the full duration of the project's life, provided that the Credit Developer continues to meet that performance standard as confirmed by third-party verification and self-monitoring reports. Verification requirements are defined in *Section 2.4.5: Credit Site Verification*.

Restoration Management Actions

For credit projects containing restoration management actions and habitat quality is anticipated to significantly improve over the life of the project, credit releases occur when a performance standard defined in the project's Management Plan is achieved. Credit projects containing restoration management actions can include performance standards defined by management actions and habitat function, as described in the bullets below. Credits are released at the point that a third-party verifies an achieved performance standard. A credit release schedule associated to a performance standard in the credit project's Management Plan can include multiple credit release intervals; however each credit release defined by habitat function must require at least a 5% increase in site scale habitat function. Credit release does not necessarily follow the same schedule as the payment structure for Credit Developers described in *Section 2.4.6 Financial Assurances*.

- Up to, but no more than the first **one third** of credits may be released upon implementation of management actions defined in the project's Management Plan. Credits released based on fulfilling management action criteria are limited to **one third** of the total credits that the project is ultimately anticipated to generate and the portion must be agreed to by the Administrator. For example, a credit project site with the potential to generate 600 credits, only 200 credits, may be released upon implementation of specified management actions.
- The remaining **two thirds** or more of credits are released over additional credit release intervals upon verification that the habitat quality is meeting the performance standards. The portion of credits released at each milestone must be less than or equal to the percent increase in habitat function relative to the total increase in habitat function expected to be achieved by the project.

Table 17 below illustrates an example credit release scheduled with one third of credits released based on management actions, and the remaining two thirds released in two additional credit releases. Upon verifying conditions to release all credits anticipated by the credit project, all credits are expected to be maintained for the full duration of the project's life, according to the performance standards defined in the Management Plan and confirmed in verification and self-monitoring reports.

Table 17: Example Credit Release Schedule for a Restoration Project

Performance criteria achieved	Credits Released
Milestone 1: Management Actions - Restore riparian area - 1/3 of performance assurances secured	**33%** of Total Anticipated Credits
Milestone 2: Habitat Function Performance - 66% of expected HQT score for the project - 2/3 of performance assurances secured	**66%** of Total Anticipated Credits
Milestone 3: Habitat Function Performance - 100% of expected HQT score for the project - All performance assurances secured	**100%** of Total Anticipated Credits

The Credit System ensures net benefit for greater sage-grouse and limits overall program risk by limiting management action-based credit releases to up to one third of the anticipated credits and using a combination of additional mechanisms, including mitigation ratios, the reserve account, and financial assurances. Should a restoration project fail to generate the credits indicated in the credit site's Management Plan, this combination of mechanisms covers any shortfalls in credits.

Although restoration projects may carry some risk of not achieving projected outcomes, it is important for the long-term viability of the species that habitat is restored to improved functionality, and therefore important that Credit Developers are incentivized to undertake these types of projects. A credit release upon implementation of management actions, along with the credit baseline function for restoration projects defined in *Section 2.3.4: Calculating Credit Baseline Habitat Function*, helps to enable restoration activities to be more economically viable.

2.4.5 CREDIT SITE VERIFICATION

All credit projects require verification prior to the release of any portion of the anticipated credits generated from projects, and throughout the duration of each credit project. See *Section 2.4.4: Credit Release* for additional information on credit release requirements and schedules.

The purpose of verification for credit projects is to provide confidence to all participants, including the Administrator, that credit calculations represent a true and accurate account of on-the-ground implementation actions and habitat function, as defined in each project's Management Plan. In addition, ongoing verification and monitoring ensures that projects are maintained over time and support the expected habitat quality commensurate with the amount of credits generated. Ongoing verification also confirms whether activities on adjacent project sites have occurred that compromise the ability of enrolled credit sites to generate credits according to their Management Plan. The required frequency and process for verification, and Verifier selection is described below.

Verification of the HQT functional acre calculations and other criteria defined in the Management Plan is required prior to a credit release and periodically throughout the duration of the project. These verifications are conducted using the HQT and review of the Management Plan by third-party Verifiers who are trained and certified by the Administrator. Credit Developers are also required to conduct and report on annual self-monitoring, as defined in each Management Plan.

Credit Verification Schedule

The verification schedule for a credit project is based on the credit release schedule defined in each Management Plan, and incorporates the following requirements:

1. Before first credit release (Verifier)
2. Before additional credit releases (Verifier)
3. At least every 5th year (Verifier)

4. Periodic spot checks and audits (Administrator or relevant public land management agency)
5. Annual self-monitoring (Credit Developer)

Before first credit release

Third-party verification is required and the Administrator reviews the verification report as a necessary component of the documentation before the first credit release is approved.

Before additional credit releases

Third-party verification is required to confirm that conditions meet the performance standard specified in the credit release schedule in a project's Management Plan before a release of additional credits.

At least every 5th year

At least every fifth year, a third-party verification is conducted and all documentation (i.e. current conditions data, HQT outputs, and final credit calculations) is reviewed by the Administrator to evaluate the project based on performance standards included in the Management Plan. When verification is conducted to either support an increase in credit amount or for a periodic spot check and audit, the verification required every five years is reset. Thus, if project verification is completed in year 3 to support a new credit release, then the next verification is not required until year 8.

Periodic spot checks and audits

The Administrator or relevant public land management agency for credit projects on public lands conduct random audits of approximately 5-10% of credit sites in any particular year.

Self-monitoring

Credit Developers are expected to conduct self-monitoring annually to ensure that the site is meeting defined performance standards and to report results to the Administrator.

Credit Variability & Verification Results

Credit variability is variation in habitat function on a site as measured by the HQT at two different points in time. Even on relatively stable sites, variability is likely to result due to variation in climatic conditions and other natural events that influence habitat function. Credit variability is also likely to occur due to sampling error that is inherent to any measurement method. Based on these considerations, the Credit System allows for limited variability in habitat function as a mechanism to insulate Credit Developers from being subject to penalties for minor fluctuations in habitat quality.

Upon each credit release, third-party verification must substantiate that the site meets or exceeds the habitat function defined in the credit release schedule of the project's Management Plan. Subsequent verifications may be no more than an appropriate site-specific percentage below the site-scale habitat function performance standard as determined using the HQT. The appropriate percentage, or credit variability tolerance, must be approved by the Administrator and documented in the Management Plan prior to the first credit release. Credit project verifications within the credit variability tolerance are considered as meeting performance standards defined in the Management Plan, and therefore do not require a reduction in credits, or trigger the use of Financial Assurances for the site.

If verification shows that a credit site is performing below the credit variability tolerance and is therefore not meeting performance standards, the Credit Developer must work with the Administrator to determine a remedial action plan. Credit projects outside of the credit variability tolerance may be subject to the Credit System's processes related to credit reversals. See *Section 2.1.7: Reserve Account Management and Use of Financial Assurances* for more information on how credit reversals are addressed.

Verifier Selection

Contracting and payment for verification of credit projects is handled by the Administrator. The Credit Developer does not directly hire a Verifier. The Administrator receives a verification fee and a signed verification contract to allow access to the site from the Credit Developer. The Administrator selects from

the pool of certified Verifiers, and notifies the Credit Developer before the Verifier conducts a site visit. Verifications conducted as periodic spot checks and audits are funded by the Administrator.

2.4.6 FINANCIAL ASSURANCES

The Credit System requires that Credit Developers establish appropriate financial assurances for each credit project site in order to sell credits. Financial assurances are fiscal mechanisms that are used to ensure the durability of credits generated throughout the full duration of a credit project. Financial assurances are defined in each Credit Developer's Participant Contract and documented in an accompanying Management Plan, and can consist of contract terms, such as financial penalties for intentional reversals and specific payment terms, and financial instruments, such as long-term stewardship funds and contract surety bonds. Financial assurances must ensure that funds are available:

1) For the implementation and long-term management of each credit project, including remedial actions in the event of unintentional reversals, and
2) To promptly replace credits that have been sold but become invalidated due to intentional reversals.

The Administrator and Credit Developer will define a financial assurance package that is acceptable to both the Administrator and Credit Developer. The specific financial assurances package can be a combination of one or various mechanisms (e.g., long-term stewardship funds, contract payment terms, contract surety bonds and contract penalties) that ensure sufficient funds are available to meet the above needs. Financial instruments must be held either by the Administrator or a qualified third party institution that is approved by the Administrator.

The following overarching principles and basic minimum requirements guide the development of financial assurance packages:

- Minimize financial transaction costs and maximize payments to Credit Developers for actions that improve habitat;
- Appropriately allocate risk to Credit Developers and not solely to the Administrator;
- Preferably use mechanisms that do not require the Administrator to engage in costly litigation with Credit Developers to secure funds for credit replacement;
- Include provisions that hold to the principal that projects will not receive any future payments for projects that are not producing credits, even in the case of force majeure if a credit project has been deemed inappropriate to remediate;
- Design financial instruments to cover long-term management of credit project sites and replacement of credit reversals, considering:
  - Management and maintenance activities defined in Management Plan
  - Monitoring and verification defined in Management Plan
  - Appropriate fund management and rate of return
  - Relevant inflation rates
  - Credit market price trends

Financial Assurances for Long-term Credit Site Management, Monitoring, and Unintentional Reversals

Financial assurances are required for the long-term management and monitoring of all credit projects. Financial assurances established for long-term management and monitoring must be designed to meet the following requirements:

- Cover all anticipated costs expected to perform maintenance and monitoring of the project as defined in the Management Plan for the duration of the contract;
- Ensure contingency funds are available to address periodic project-related costs that are likely to occur; and

- Ensure an ongoing financial incentive that is greater than the anticipated cost to maintain and monitor the project.

Financial instruments may be secured to ensure long-term credit site management, monitoring, and remedial actions in the event of unintentional reversals. If used, the type of financial instrument required is dependent on the duration of the credit project. Permanent credit projects require a long-term financial instrument for which the principal amount is managed in perpetuity. Term credit projects require a financial instrument that is managed such that no funds remain at the end of the credit project.

Financial instruments established for long-term management and monitoring must use an initial deposit amount that factors in annual payments intended for the Credit Developer and accounts for inflation, as well as expected financial returns from appropriately investing funds for long-term management and monitoring. Annual payments may be structured to provide variable annual amounts when additional costs are expected in specific years or on years when third-party verification is performed and the credit site is shown to perform at, or above, expected performance. Variable payments must be structured such that the financial instrument is sufficient to make all defined payments for the full duration of the project. The Administrator must agree that the initial deposit amount for each credit project will cover the necessary annual payments using a predictive financial model that accounts for inflation and interest rates.

Financial instruments established for long-term management and monitoring must be accompanied by contract terms that ensure funds intended for the Credit Developer are available to the Administrator in the case of an unintentional reversal, so that all remaining funds for long-term management and monitoring can be used to remediate the credit site or to purchase credits from a different site, as defined in *Section 2.1.7: Reserve Account Management and Use of Financial Assurances*. These payment terms align the incentives of the Credit Developer and the Administrator by sharing the financial risk for ongoing performance.

In situations where credit projects do not require long-term management and monitoring funds, or a large upfront payment is made to the Credit Developer, such as for restoration projects, other financial instruments, such as a contract surety bond, may be used to ensure sufficient funds are available to the Administrator in the case of unintentional reversals.

Financial Assurances for Intentional Reversals

Financial assurances must be established to ensure the Administrator has access to funds at the level required to replace credits sold but that have become invalidated due to intentional reversals. Financial assurances established for intentional reversals must be designed to meet the following requirements:

- Cover the monetary costs of acquiring new credits to replace all invalidated credits; and
- Ensure that the additional effort incurred by the Administrator to secure new credits is fully funded.

Financial assurances that can fulfill the intentional reversals requirement include contract terms, such as financial penalties, and financial instruments, such as contract surety bonds. Contract terms must define that if performance standards on a credit project site are not met, the financial assurances used to fulfill the intentional reversal requirement as well as remaining funds in that project's financial assurances for long-term management and monitoring are available to the Administrator. See *Section 2.1.7: Reserve Account Management and Use of Financial Assurances* for additional information on how the Administrator will use the reserve account and financial assurances in the case of intentional reversals.

2.5 CREDIT OBLIGATION PROVISIONS & CREDIT INVESTMENT STRATEGIES

This section describes credit obligation provisions for debit projects to ensure credit obligations offset the direct and indirect impacts of debit projects. Credit obligation provisions include debit project duration and verification requirements. In addition, this section describes investment strategies that debit projects and other Credit Buyers can be used to acquire credits, depending on the goal of the acquisition. Credit Buyers are the primary audience of this section.

2.5.1 DEBIT SERVICE AREA

The Credit System service area is the mapped geographic region where credits are required to offset debits that occur when disturbances are proven unavoidable, and minimization does not provide for complete direct or indirect impact avoidance.[14] Debits on public lands within the service area will be tracked and reported by the Credit System. The service area designation has important implications for the viability of the Credit System transactions and for the ability of the System to generate a net benefit for greater sage-grouse habitat from the impacts from anthropogenic disturbances.

Figure 17: Greater sage-grouse service area

The current SGMA is the Credit System service area, and the 2014 SGMA map is provided in Figure 17 as an example. The boundaries of this management area are based on the range of the species in the State of Nevada and are aligned with State of Nevada development project review requirements. Anthropogenic disturbances to habitat on BLM, USFS, State of Nevada, and local government lands within the service area require consultation with the SETT and the appropriate government agency, as defined in the 2014 Nevada Greater Sage-Grouse Conservation Plan.

While the Service Area broadly defines the domain of the Credit System, the Mitigation Ratios establish incentivizes to offset debits using credits generated in close proximity to debit sites. *Section 2.2.2: Mitigation and Proximity Ratios* describes how the WAFWA Management Zones and the NDOW PMUs, depicted in the Figure 12 and Figure 13**Error! Reference source not found.** respectively, are incorporated into the proximity ratio. In addition, three Management Categories are also incorporated into the Mitigation Ratios to encourage the generation of credits and discourage debits in Core and Priority Management Areas, which are estimated to have high space-use by greater sage-grouse. Credits and debits will be tracked in the Credit System Registry and reported by the Administrator by WAFWA Zones and PMUs.

2.5.2 DEBIT PROJECT TYPES

Proposed anthropogenic disturbances to habitat on BLM, USFS, State of Nevada and local government lands within the SGMA require consultation with the SETT and the appropriate government agency, as defined in the 2014 Nevada Greater Sage-Grouse Conservation Plan. Anthropogenic disturbances are considered debit projects when they are proven to be unavoidable, and when minimization does not

[14] US Fish and Wildlife Service. Greater Sage-Grouse Range-Wide Mitigation Framework Version 1.0. September 3, 2014. Page 6.

provide for complete direct or indirect impact avoidance[15]. A debit project may be a new anthropogenic disturbance, an expansion in the operation of an existing anthropogenic disturbance, or an extension in duration of an existing anthropogenic disturbance.

As defined in the 2014 Nevada Greater Sage-Grouse Conservation Plan, an anthropogenic disturbance is defined as any human-caused activity or action or human-created physical structures that may have adverse impacts on greater sage-grouse or their habitat. Anthropogenic disturbance project categories include:

- Mineral development and exploration and its associated infrastructure;
- Renewable and nonrenewable energy production, transmission, and distribution and its associated infrastructure;
- Paved and unpaved roads and highways;
- Cell phone towers;
- Landfills;
- Pipelines;
- Residential and commercial subdivisions;
- Activities undertaken pursuant to special use permits and right-of-way grants; and
- Other infrastructure development.

Livestock operations and agricultural activities and infrastructure related to ranch and farm businesses (e.g. water troughs, fences, etc.) are not included in this definition of debit project types. Section 7.5 and Appendix A of the 2014 Nevada Greater Sage-Grouse Conservation Plan address how to minimize impacts to greater sage-grouse and their habitat from these activities.

2.5.3 MITIGATION HIERARCHY AND PERMIT REQUIREMENTS

The Credit System is intended to be used in the context of state and federal policies that require the full mitigation hierarchy sequence (e.g. avoidance, minimization, compensatory mitigation). Credits are used to offset debits that occur when disturbances are proven unavoidable, and minimization does not provide for complete direct or indirect impact avoidance.[16] Debit projects permitted through federal and state agencies will use the Credit System to purchase credits that fulfill their compensatory mitigation obligations prior to development of the debit project.[17]

2014 Nevada Greater Sage-Grouse Conservation Plan

The State of Nevada's overriding policy for all management actions within the Sage-grouse Management Area is to "avoid, minimize, and mitigate" impacts to sage-grouse habitat.

Credit Buyers can acquire verified credits directly from Credit Developers, including Aggregators, or the Administrator who may carry an inventory of Credits to facilitate offset transactions. Credits cannot be acquired from Credit Developers or the Administrator until credits are released by the Administrator, which requires verification that habitat function is meeting the defined performance criteria for the credit project. Credit Buyers may use alternative investment mechanisms to acquire credits, such as reverse auctions that leverage competitive bidding processes to procure the greatest amount of credits for a set

[15] US Fish and Wildlife Service. Greater Sage-Grouse Range-Wide Mitigation Framework Version 1.0. September 3, 2014. Page 6.

[16] US Fish and Wildlife Service. Greater Sage-Grouse Range-Wide Mitigation Framework Version 1.0. September 3, 2014. Page 6.

[17] As of December 4, 2014, debit projects permitted through federal agencies are not required to use the Credit System to fulfill their compensatory mitigation obligations. However, the Credit System is expected to be included in the BLM/USFS Land Use Plans for the Northeastern California-Nevada Sub Region as the tool for defining and fulfilling compensatory mitigation requirements for anthropogenic disturbances to greater sage-grouse habitat on BLM and USFS lands in the State of Nevada.

amount of funding. The Credit Buyer pays the full cost of acquiring credits including all necessary administrative fees.

Those Credit Buyers who purchase credits to fulfill regulatory requirements for compensatory mitigation are responsible for meeting all requirements of the relevant permitting process through the State of Nevada, BLM, or other government agencies. Credit Buyers must provide documentation of the permit stipulations and debit project design documents to the Administrator to ensure proper identification of the total amount of credits needed to offset the debit project, and the total duration of the debit project. This allows the Administrator to 1) ensure that the debit project is appropriately offset with a credit project and 2) transparently track and report on all credit transactions and programmatic net benefit generated. See *Section 2.2: Habitat Quantification and Credit and Debit Calculation* for additional information on calculating credit obligations and *Section 2.5.4: Debit Project Duration* for additional information on project duration provisions.

2.5.4 DEBIT PROJECT DURATION

Debit project duration is the length of time that the project is anticipated to impact habitat function or in perpetuity. For impacts that are anticipated to return to pre-project habitat function, an additional set period of time beyond the length of time that the project is anticipated to impact habitat function is required to allow the species to begin to use the site. The stated duration in the permit or lease for each anthropogenic disturbance plus an additional 10 years will be used as a starting point for establishing the debit project duration for impacts with limited term impacts..

Like credit projects, the duration of debit projects can be either limited term or in perpetuity. Debit projects that are not expected to return to pre-project habitat function have an in perpetuity project duration. *Rehabilitation* necessary to return a debit site to pre-project habitat function will be defined in the permit or lease for the anthropogenic disturbance in order for the Administrator to agree to the debit project duration.

Debit projects may include areas within the project boundary that are expected to return to pre-project habitat function and other areas that are not expected to return to pre-project habitat function. Further, debit may include areas that are impacted for longer durations than others. For example, habitat indirectly impacted by a debit project is likely to return to pre-project habitat function with minimal rehabilitation such as removal of roads and structures. However, habitat directly impacted by a debit project such as an open-pit mine are not expected to return to pre-project habitat function. Therefore, debit projects may generate debits with different project durations, including different term periods and a mix of term and in perpetuity.

For term debits, third-party verification is required to demonstrate that the habitat impacted by the debits has returned to pre-project habitat function. See *Section 2.5.6: Debit Site Verification* additional information on verification requirements. If verification demonstrates that a term debit project has not yet been fully rehabilitated, the Administrator will require additional credits sufficient to cover the residual impact be purchased for an additional term.

Matching the Duration of Credits and Debits

The Credit System requires the duration of a contracted credit project to be equal to, or greater than, the duration of the debit project it is offsetting. The Administrator ensures that credit project durations are sufficient to meet or exceed the duration of the debit project they are offsetting through *static offsets* or *dynamic offsets*.

- **Static Offsets –** A debit project is offset by a credit project that is fixed in a single geographic location with the Participant Contract, Management Plan and associated site protection mechanisms in place for the contracted duration of the debit project.

- **Dynamic Offsets –** A debit project is offset by a series of limited term credit projects such that the location of the credit projects can shift across a defined geographic space (i.e. a set of rolling term projects funded for the full duration of the debit project). Dynamic offsets are defined as a series of strategically located, limited term-based agreements that, when sequentially aggregated, meet or exceed the duration of the impact.

Requirements for Dynamic Offsets

A Credit Developer, Aggregator or the Administrator may develop a dynamic offset arrangement that commits to meet the credit requirements for a debit project using a series of limited term credit projects. The series of limited term credit projects under a dynamic offset arrangement must cover the credit obligation of the debit project for each year of the debit project. For example, if the credit obligation of a debit project is 1,000 credits into perpetuity, then the limited term credit projects must provide 1,000 credits for each year into perpetuity. The limited term credit projects cannot provide 3,000 credits for the first 30 years and 0 credits for the next 60 years.

In addition, each limited term credit project under a dynamic offset arrangement must have duration of at least 30 years because the debit project is permanent and rapidly changing habitat function (credit sites) can be detrimental to populations.

The financial assurances associated with a dynamic offset credit project are similar to those required for static offset projects but include additional requirements to ensure durability and require that finances are in place to secure new limited term contracts for the full length of the impact. Additionally, the Administrator must be able to ensure compliance and accountability through tracking and reporting, enforcement for credit reversals, and direct management of financial instruments. See *Section 2.1.7: Reserve Account and Use of Financial Assurances* for more information.

The potential benefits of dynamic offset projects include increased participation and a greater number of total credit projects and credits available for sale due to Credit Developer preferences for term contracts. Term projects also enable the ability to shift the location of high quality habitat in response to population dynamics and potential effects of climate change.

2.5.5 CALCULATING DEBIT BASELINE HABITAT FUNCTION

Debit baseline habitat function is the starting point from which functional acre loss is measured. Functional acre loss is then multiplied by a mitigation ratio to determine the debits generated for each map unit within a debit project. See *Section 2.2.2: Mitigation and Proximity Ratios* for additional information on determining mitigation ratios. Functional acre loss represents the functional acre change from debit baseline functional acres that results from implementing a project. Functional acre loss is equal to the difference between the post-project functional acres and the pre-project functional acres.

Debit baseline habitat function is the pre-project habitat function of each map unit within the debit site, and is calculated by multiplying

- Local-scale, pre-project habitat function as determined by the HQT, and
- Site-scale, pre-project habitat function as determined by the HQT.

See *Section 2.2.1: Habitat Quantification Tool* for description of scales.

An example debit baseline habitat function is illustrated in Table 18 for a map unit with high local-scale and moderate site-scale pre-project habitat function.

Table 18: Example debit baseline calculation

Local-scale Pre-Project Habitat Function	Site-scale Pre-Project Habitat Function	Debit Baseline Habitat Function

80%	40%	32%

Pre-project habitat functional-acres calculated must be verified by a third-party Verifier before any development on the site can begin. See *Section 2.5.6: Debit Site Verification* for additional information on verification requirements.

Recent Wildfire

Vegetation characteristics required to calculate site-scale habitat function by the HQT are unlikely to reflect the future habitat function on the site if wildfire has impacted a debit site recently. If wildfire has impacted a debit site within the last 10 years, site-scale habitat function is calculated using the greater of the following for the portion of the project area impacted by wildfire to calculate debit baseline:

1) Site-scale pre-project habitat function as determined by the HQT.
2) Site-scale regional standard habitat function as defined in Table 11 plus 10%.

Inaccessible Areas

For some debit projects, the Credit Buyer will not be able to calculate the site-scale pre-project habitat function for a portion of the area indirectly impacted by the debit project. For example, the debit project may indirectly impact a private party for which the Credit Buyer is not able to secure access to in order to collect field data necessary to calculate site-scale habitat function using the HQT. In these situations, the Habitat Suitability Index (HSI) score, as measured by the HQT as part of the local-scale habitat function calculation, is used as a proxy for the site-scale habitat function for the inaccessible areas. The HSI is spatially explicit and easily available for any site within SGMA.

2.5.6 DEBIT SITE VERIFICATION

All debit projects require verification prior to beginning the development of the debit project and throughout the entire duration of each debit project. The purpose of verification for debit projects is to provide confidence to all participants, including the Administrator, that debit calculations represent a true and accurate account of on-the-ground habitat function, as defined in each debit project's regulatory permit. Ongoing verification and monitoring ensures that debit projects are implemented and impacts cease as defined in the project's permit. The required frequency and process for verification, as well as the process for verification selection, is described below.

Verification of debit projects is an independent, expert check on the HQT calculations and other project design documentation. Verifications are conducted using the HQT by third-party Verifiers trained and certified by the Administrator. Verification includes a review of changes to the site over the previous 10 years to ensure that the site was not been recently degraded intentionally to reduce the credit obligation

Biological Monitoring

Biological monitoring is an essential element of the Credit System, and is a separate but complementary process to verification. Biological monitoring is executed through the Credit System's adaptive management process as described in *Section 3.3: Managing the Credit System*. While verification confirms on-site performance in relation to a Management Plan and HQT score, biological monitoring means observing, recording and assessing the quantity and quality of all credit-producing activities, as well as the biological response of greater sage-grouse and critical habitats across the Credit System service area. The goals of biological monitoring under the Credit System are to:

- Assess the status and trend of greater sage-grouse populations
- Assess the net contribution of conservation management outcomes to greater sage-grouse habitat and population goals at a variety of spatial scales
- Assess the effectiveness of management actions in regard to achieving expected habitat outcomes
- Collect and incorporate new information for adaptive management
- Detect and address changed or unforeseen circumstances (e.g. shifts in species distribution)

of the current permit application.

Debit Verification Schedule

Debits under the Credit System are verified at four distinct points in time:

1. Before debit project begins (Verifier)
2. During the project implementation period (Verifier)
3. When debits end or decrease (Verifier)
4. Periodic spot checks and audits (Administrator or relevant public land management agency)

Before debit project begins

Third-party verification of the pre-project condition of greater sage-grouse habitat on debit sites is required before development of debit projects can begin.

During project implementation period

Third-party verification is necessary to verify site conditions after a debit project has been implemented to confirm that the appropriate amount of debit is being attributed to the debit project. Verification during this period is aligned with project design documentation and permit and regulatory requirements.

When term debits end or reduce

Third party verification is necessary at the end of a term debit to confirm that the term debit site is no longer impacting habitat function. If, at the end of the debit project's duration, the site has not been rehabilitated to recover habitat function and allow for species use, the Credit Buyer will be required to purchase additional credits for an additional term. If third-party verification demonstrates a reduction in the impact and amount of credits needed as an offset, the Credit Buyer may sell and transfer surplus credits to another Credit Buyer's account to fulfill their credit obligation in accordance to Credit System requirements defined in *Step D5.2: Sell and Transfer Credits in Section 3*.

Periodic spot checks and audits

The Administrator or relevant public land management agency conducts random audits of approximately 10% of debit sites in any particular year.

Verifier Selection

Contracting and payment for verification of debit projects is handled by the Administrator. The Credit Buyer does not directly hire a Verifier. The Administrator receives a verification fee and a signed verification contract to allow access to the site from the Credit Buyer. The Administrator selects from the pool of certified Verifiers, and notifies the Credit Buyer before the Verifier conducts a site visit. Verifications conducted as periodic spot checks and audits are funded by the Administrator.

2.5.7 CREDIT INVESTMENT STRATEGIES

Credit Buyers have the flexibility to acquire credits in whatever way best meets their credit investment goals, within the bounds and requirements of the Credit System. Credit Buyers can create financial agreements and contracts to secure desired credits with Credit Developers, including Aggregators, completely independent of Administrator oversight. However, financial agreements must provide for financial assurances to be appropriately accessible to the Administrator in the case of reversals, and must include provisions for all administrative fees and contract terms required by the Credit System. Further, all credits and debits generated under the Credit System must be quantified, verified and managed according to Credit System requirements, giving appropriate access and authorities to the Administrator and other designated parties.

Different mechanisms can be used to acquire credits, depending on the goal of the acquisition. The goal of acquisitions ranges from acquiring credits for future sales to acquiring credits for a specific debit project.

Table 19 describes a few of these potential investment approaches, but is not intended to be an exhaustive list.

Table 19: Potential investment strategies

Investment Strategy	Description	Benefits	Typical Uses
Reverse Auction or Requests for Proposal	Bids are solicited for credits or projects that meet defined criteria; Credit Developers submit applications specifying price to deliver a defined quantity of credits	Efficient mechanism to procure the most habitat benefit (credits) for a set amount of funding	▪ Investing set pools of funding ▪ Fulfill credit obligations
Direct Credit Purchase	Credit Buyers purchase verified credits directly from the Credit System Registry	Limits risk for Credit Buyer –credits already verified	▪ High impact investing ▪ Fulfill credit obligations
Select from Potential Project List	Select project from a list of eligible projects that have not yet been implemented that are expected to meet Credit Buyer criteria; Credit Developers estimate expected number of credits	Credit Buyers have quantified information to inform project selection	▪ Conservation funding programs ▪ Fulfill future credit obligations

SECTION 3: CREDIT SYSTEM OPERATIONS

This section defines the Nevada Conservation Credit System (Credit System) Operations, along with associated tools, forms, and templates used to quantify, track, transfer, and report on habitat credit generated through the Credit System. The Credit System Operations are described in the three sections described in Table 20:

Table 20: Overview of the Credit System Operations Sections

Section Name	Primary Audience	Description
Section 3.1: Generating Credits	Credit Developers	Steps for estimating and verifying quantified credits from an individual credit site, including fulfilling ongoing verification requirements. These steps are primarily implemented by Credit Developers and thus are labeled **D1 through D5**.
Section 3.2: Acquiring Credits	Credit Buyers	Steps to obtain credits and use them to meet mitigation requirements and report on accomplishments. These steps are primarily implemented by Credit Buyers and thus are labeled **B1 through B3**.
Section 3.3: Managing the Credit System	Credit System Administrator	Steps to systematically evaluate new information, report results, and improve Credit System operations. These steps are primarily implemented by Administrators and thus are labeled **A1 through A6**.

The following legend is used throughout this section to indicate process steps:

- "**D**" indicates steps taken to develop credits
- "**B**" indicates steps taken to buy credits
- "**A**" indicates steps taken to administer and manage the Credit System over time

SECTION 3.1: GENERATING CREDITS

QUESTIONS ANSWERED

- How does a Credit Developer estimate expected credits from planned management actions?
- How are monitoring and verification results used to determine the amount of credit issued?
- How does a Credit Developer and the Credit System Administrator resolve issues and questions, and agree to final credit estimates and release schedules?

This section describes the process of turning management actions into verified credits. It begins by selecting a site and determining eligibility to generate credits, estimating credits from projected actions, and verifying that on-the-ground conditions are consistent with the submitted credit estimates. Credits are then issued, tracked and transferred between Credit Developer and Credit Buyer accounts. After transfer, the Credit Developer is responsible for meeting the monitoring, reporting and verification requirements of each project for the life of the project (described in *Step D3*). Figure 18 and Table 21 provide an overview of the steps of credit generation and the different participants engaged at each step.

Figure 18: Credit Generation Overview

Effective credit projects result in improved habitat and environmental conditions. Effectiveness depends both on implementing a quality project design and ensuring the project site is maintained to produce the expected environmental outcomes. Steps D1 and D2 define the process for estimating the number of credits generated from implementing the credit project. Step D3 defines the process to verify that actual on-the-ground conditions support the expected credits over time. Steps D4 and D5 describe how credits are issued, tracked and transferred.

Table 21: Overview of Roles, Tools & Products to Estimate, Verify, Issue and Track Credits from Projects

Process Step	Credit Developer[18]	Administrator	Buyer	Relevant Tools, Forms & Templates	Completed Products
D1. Select & Validate Site	■	■	□	▪ Validation Checklist	▪ List of Credit Opportunities ▪ Notice of Validation
D2. Calculate Credit & Implement Project	■	■		▪ Habitat Quantification Tool (HQT) & Associated Forms ▪ Management Plan ▪ Participant Contract ▪ Verification Contract	▪ Pre-project Draft Management Plan ▪ Final Management Plan ▪ Proof of Construction Period ▪ Financial Assurances
D3. Verify Conditions	■	■		▪ Conflict of Interest Form	▪ Verification Report ▪ Self-Monitoring Report
D4. Register & Issue	■	■		▪ n/a	▪ Registry Account ▪ Registered Project ▪ Issued Credits
D5. Track & Transfer Credits	■	■	■	▪ Notice of Transfer Form	▪ Accomplishments Report
■ Indicates a necessary or active role □ Indicates potential participation or a support role					

D1 SELECT & VALIDATE PROJECT SITE

Figure 19: Select & Validate Project Site

In this step, the Credit Developer identifies a project site that is likely to produce credits and the Administrator validates that the site is eligible to produce credits through the Credit System.

D1.1 INDICATE INITIAL INTEREST & INITIATE COMMUNICATION

This first step for the Credit Developer is to become aware of the opportunity to participate in the Credit System. The Credit Developer is introduced to the Credit System through outreach, communication materials or word of mouth, and learns about the potential benefits of participating. The Credit Developer or the Credit Developer's representative makes contact with the Administrator by email or phone to provide basic information, such as name, area of interest, and contact information. The Administrator provides a list of Technical Support Providers in the project area to assist with project design, credit quantification, and project implementation.

[18] Any reference to steps undertaken by Credit Developers may actually be implemented by Technical Support Providers or aggregators.

D1.2 SELECT PROJECT SITE

The Credit Developer should consider potential conservation opportunities, the likelihood that a project will deliver significant sage-grouse habitat benefits, and the potential costs and challenges to implement the project. Technical Support Providers or Aggregators can help provide advice to Credit Developers on these considerations.

D1.3 SUBMIT PROJECT VALIDATION CHECKLIST

The Credit Developer completes an eligibility screen, addressing a site's ability to generate credits, and its potential alignment with identified Credit Buyers and funding programs. This step is typically supported by a knowledgeable Technical Support Provider or Aggregator who helps the Credit Developer complete a Validation Checklist. This checklist records the proposed management actions, timeline, and location of a proposed project site. It also confirms certain minimum eligibility criteria, such as basic information related to ownership, site history, and land protection.

Product ■ Completed Validation Checklist

D1.4 VALIDATE & IDENTIFY CONSERVATION OPPORTUNITY

The Administrator reviews the Validation Checklist. If all validation criteria are met, the Administrator coordinates approval from any additional validation leads, such as relevant regulatory agencies, and issues a Notice of Validation to the Credit Developer. The Notice of Validation is a statement that the project is eligible to generate credits if all information provided is accurate and complete. It is not a confirmation of the quantity of credits to be issued. All information and documentation provided in the Validation Checklist is reviewed in greater depth during verification (Step D3).

If validation criteria are not met, the Administrator provides reasons why the project may not be eligible to participate in the Credit System.

The Administrator maintains a list of projects seeking funding for implementation while respecting confidentiality rules outlined by the Credit System and described in *Section 2: Policy and Technical Elements*. The Administrator may include the credit project on its list of credit projects seeking funding on the List of Credit Opportunities, if so desired by the Credit Developer.

Product ■ Notice of Validation
Product ■ List of Credit Opportunities

D2 CALCULATE CREDIT & IMPLEMENT PROJECT

Figure 20: Calculate Credit & Implement Project

Typically, a Technical Support Provider or Aggregator assists the Credit Developer in designing the credit project and estimating the expected credit amount using the HQT. Credit calculation must be done by a person well-versed in the HQT. The Credit Developer has the option to check the design calculations with the Administrator to gain confidence that the initial estimate of credits is accurate. Typically, practical opportunities and constraints that arise during implementation cause actual conditions to differ from design plans. Thus, final calculations must be revised to reflect actual post-project conditions.

Alternatively, the Credit Developer may wait to calculate habitat function until the project is complete, and then perform all calculations using post-project conditions. If this is the desired course of action, care must be taken to thoroughly document pre-project conditions using the HQT. Project proponents are advised to consult with the Administrator before initiating credit project implementation.

D2.1 CALCULATE PRE-PROJECT CONDITIONS

The Credit Developer follows the process defined in the HQT to define the credit project boundaries and calculate the pre-project conditions. Although baseline habitat function for credit projects is based on the site scale, regional standard baseline, calculating pre-project condition is necessary for the Credit Developer to confidently estimate and Administrator to agree to post-project habitat function performance standards. The Credit Developer or Technical Support Provider fills in the pre-project data results from the field inventory, completes any necessary calculations using the HQT, and provides the completed field datasheets to the Administrator.

Product ■ Pre-project HQT Results with Associated Forms

D2.2 DEFINE & SUBMIT PROJECT DESIGN INFORMATION

The Credit Developer completes a pre-project draft Management Plan that defines credit project boundaries and anticipated post-project conditions, based on initial HQT estimates. The Credit Developer can elect to include multiple credit project design scenarios in the pre-project draft Management Plan to estimate and compare the amount of credit generated from different design options. The pre-project draft Management Plan is submitted to the Administrator for pre-approval, prior to the implementation of management practices. These steps are described in further detail below.

Delineate Project Boundaries & Estimate Projected Credits

The Credit Developer follows the process defined in the HQT to define the credit project boundaries and estimate expected post-action conditions[19]. Guidance for selecting the appropriate duration of a credit project is included in the *Section 2.4.2: Credit Project Duration*. Project boundaries, planned management actions, including ongoing maintenance and monitoring, project duration, and expected post-project conditions for the site are documented in the pre-project draft Management Plan.

Product ■ Pre-project Draft Management Plan

Submit Pre-project Draft Management Plan to Administrator for Pre-Approval

The Credit Developer submits the pre-project draft Management Plan to the Administrator for pre-approval before initiating project implementation to gain assurance that the credit calculations are correct given the design assumptions used. The pre-project draft Management Plan may contain multiple project design scenarios, with associated credit calculations. If appropriate and requested by the Credit Developer or a potential Credit Buyer, regulatory entities may also be involved in this pre-approval check to confirm the credit project meets any special requirements necessary for regulatory approval. This optional step provides the Credit Developer with an indication of the amount of credits expected from the project if the conservation measures are implemented as designed.

Product ■ Pre-project Draft Management Plan

Secure Project Implementation Funding (If Applicable)

The Credit Developer secures any necessary funding to implement the project, as needed. For restoration projects, the Administrator may require proof of financial assurances for the construction period. The full

[19] Note that pre-project and post-project boundaries must be exactly the same to develop an accurate comparison between pre- and post-project conditions. Map units, as defined in the HQT, may change between pre- and post-project calculations.

set of financial assurances is not required until step D2.3 when all materials are submitted to the Administrator to signal readiness for verification.

Product ■ Proof of Construction Period Financial Assurances (if applicable)

D2.3 IMPLEMENT PROJECT, REFINE CALCULATIONS & SUBMIT

Implement Project

The Credit Developer, Technical Support Providers or Aggregator implements the project with the understanding that final credit amounts will be determined using post-project conditions. The ability to adjust calculations based on site design enables the Credit Developer to identify additional opportunities to make improvements during project implementation and enables practical adjustments that may be necessary due to unforeseen site constraints.

Confirm or Refine Credit Calculations

The Credit Developer either confirms that the project was completed consistent with the submitted pre-project draft Management Plan, or includes a new project design scenario that accurately reflects post-project conditions. If post-project conditions differ from design expectations, or if pre-project calculations were not completed, the Credit Developer uses the HQT to calculate the number of credits generated using post- project conditions.

Product ■ Revised draft Management Plan

Refine Management Plan & Credit Release Schedule

The Credit Developer further refines the draft Management Plan to define the specific management actions and expected outcomes for the site including ongoing maintenance and monitoring requirements. The Credit Developer also includes a credit release schedule in the Management Plan, defining the amount of credits released based on the implementation of management actions and achievement of the desired habitat conditions as indicated by the HQTs.

Product ■ Management Plan

Secure Financial Assurances

The Credit Developer must secure necessary financial assurances. See *Section 2.4.6: Financial Assurances* for guidance. Financial assurances ensure that funds are available to cover credit shortfalls and support long-term management of individual project sites, as specified in the Management Plan.

Product ■ Management Plan with proof of secured financial assurances

Submit Post-Project Calculations & Documentation

The Credit Developer submits the final credit estimate and all required documentation to the Administrator for verification reflective of post-project conditions. Once the Administrator verifies the credit estimates and other documentation, the Management Plan is finalized and the Credit Developer and Administrator sign a Participant Contract.

Product ■ Signed Participant Contract
Product ■ Final Management Plan

Establish Verification Contract

The Credit Developer completes a contract with the Administrator for verification services. A sample contract is available in Appendix B: Tools, Forms & Templates.

Product ■ Completed Verification Contract

D3 VERIFY CONDITIONS

Figure 21: Verify Conditions

All projects require verification. Verification is an independent, expert check on the credit estimates provided by the Credit Developer, Technical Support Providers, or Aggregator. The purpose of verification is to provide confidence to all Credit System participants that credit calculations represent a faithful, true and fair account of impacts and benefits – free of material misstatement and conforming to accounting and credit generation standards. Ongoing verification ensures the project is maintained over time and supports the expected level of credit reflected in calculations. The required frequency of verification is defined in *Section 2.4.5: Credit Site Verification*.

Initial project verification is completed for the credit project before credits are issued, and periodically over the life of the project as defined in *Section 2.4.5: Credit Site Verification*. Self-Monitoring Reports must be completed in non-verification years to confirm that conditions are maintained according to the specifications in the Management Plan.

D3.1 SELECT VERIFIER

Upon receiving complete documentation and a finalized contract for verification services from the Credit Developer, the Administrator assigns an accredited third-party Verifier to perform a full verification.

Verifiers must be accredited by the Administrator before they are eligible to conduct verification activities. The independence of verification is important. Verifiers acting on behalf of the Administrator must work in a credible, independent, nondiscriminatory and transparent manner, complying with applicable state and federal laws. Verifiers must demonstrate their ability to professionally assess a specific type of credit without conflicts of interest. This includes disclosing any pre-existing relationships between the Credit Developer or Credit Buyer and the Verifier. Verifiers must provide a Conflict of Interest Form to the Administrator before verification can proceed.

Becoming an Accredited Verifier

The Credit System Administrator will accredit Verifiers to review credit projects. Verifiers will act as subcontractors to the Credit System Administrator. Verifiers bear no liability for project implementation or project performance. Interested Verifiers must complete the following steps:

- Attend a Verification Training Session
- Keep the Credit System Administrator informed of any changes affecting the accreditation (e.g. potential conflicts of interest)
- Participate in refresher courses held by the Credit System Administrator at least biannually

Product ■ Completed Conflict of Interest Form

D3.2 PERFORM ONGOING PROJECT MAINTENANCE AND MONITORING

The Credit Developer is responsible for monitoring and maintaining project conditions throughout the life of the project to ensure that on-the-ground conditions reflect the information provided in the verified credit estimate and Management Plan. Depending on the implemented conservation practices, project conditions may appropriately degrade throughout the year. Before project monitoring is finalized, the Credit Developer maintains the project as necessary to ensure that actual, on-the-ground conditions support the credits calculated in Step D2 and documented in the Management Plan. In years when an on-site verification is not required, the Credit Developer submits a Self-Monitoring Report to the

Administrator in accordance with the requirements defined in *Section 2.4.5: Credit Site Verification* and the specifics in the Management Plan.

Product ■ Self-Monitoring Report (non-verification years)

D3.3 PROJECT VERIFICATION

The Verifier confirms that:

- The Credit System Manual was followed completely and accurately.
- Appropriate documentation is in place (e.g. land protection or management agreements).
- The amount of credit issued for a project is appropriate given actual, on-the-ground conditions as verified through the HQT methods.
- For sites with future credit releases scheduled, management actions have been implemented and the desired performance criteria have been achieved as indicated by the HQT.

The Verifier performs a review of all relevant forms and documentation, and schedules a site visit with the Credit Developer[20]. The Verification Report is completed with information gathered during the site visit using the HQT User Guide. An example Verification Report and the HQT User Guide are available through the Administrator.

Credit calculations must be found to be free of material misstatements and meet the performance criteria defined in the Management Plan. If performance criteria are not met, the Verifier discusses the issues with the Credit Developer and Administrator. The Credit Developer and Administrator determine if corrective actions are necessary and appropriate, and the Administrator defines the appropriate amount of credit to be awarded given site conditions. If appropriate corrective actions or amount of credit cannot be agreed to by the Credit Developer and Administrator, then the Oversight Committee will facilitate the dispute resolution process.

Submit Project Verification Report

Once successful verification is complete, the Verifier submits their Verification Report to the Administrator. The Verification Report contains a summary of verification activities, an opinion on the credit estimates, and a log of activities and findings.

Product ■ Verification Report

D4 REGISTER PROJECT & ISSUE CREDITS

Figure 22: Register & Issue Credits

Registration ensures that credits from a specific project are real and traceable throughout the entire life of the project. All verified and certified credits generated through the Credit System must be registered. Supporting information related to each credit include vintage (year issued), HQT and Manual version used, duration of the credit, and owner of the credit.

[20] Verifiers follow a defined Verification Protocol that is the focus of the Verifier certification training conduct by the Credit System Administrator.

D4.1 CREATE A CREDIT SYSTEM REGISTRY ACCOUNT

The Credit Developer sets up an account on the Credit System Registry. Once a Credit Developer establishes a user account, any number of projects can be registered under the same user account. The Administrator provides detailed guidance on using the Credit System Registry.

Product ■ Credit System Registry Account

D4.2 REGISTER PROJECT

The Credit Developer can register a project as soon as a project is validated (Step D1), and a project must be registered before credits can be released or transferred to Credit Buyers. Registering a project does not indicate a release of credits into the project account on the Credit System Registry (see step D4.3 below). The Credit Developer begins a new project on the Credit System Registry and uploads all required documentation, as specified by the Administrator.

The Administrator reviews all documentation before the project is registered. If errors are found or additional documentation is needed, the Administrator contacts the Credit Developer to request the needed information.

Product ■ Registered Project

D4.3 RELEASE CREDITS

The Credit Developer requests issuance after verification is complete and all required documentation is submitted to the Administrator. The Administrator confirms all documentation is complete, the amount of credits registered is correct, and issues the credits to the Credit Developer's registry account.

Product ■ Issued Credits

D5 TRACK & TRANSFER CREDITS

Figure 23: Track & Transfer Credits

Credits issued on the Credit System Registry are assigned unique serial numbers so that they can be tracked over time. Once issued, credits can be sold and transferred between Credit System Registry accounts. The sale, transfer and ownership of each credit are tracked by the Credit System Registry. The terms of payments and sales are completed external to any of the Credit System Registry or processes. All Credit System Registry activities, including credit transfers, are monitored by the Administrator.

D5.1 ALLOCATE CREDITS TO RESERVE ACCOUNTS

Reserve account allocation requirements are defined in *Section 2.4.3: Reserve Account Contribution* and identified for the specific project in Step D2.3. The Administrator allocates the appropriate amount of credits to the reserve account upon transfer to a Credit Buyer. Credits allocated to the reserve account are never available for sale.

Product ■ Notice of Transfer From

D5.2 SELL AND TRANSFER CREDITS

Credit Developers and Credit Buyers connect via the Credit System Registry. The price, terms and conditions are all set by the Credit Developers and Credit Buyers, and are completed external to any of the Credit System Registry or Administrator processes with the exception of provisions provided in the Participant Contract. Once an agreement to transfer credits is reached, the Credit Developer submits a Notice of Transfer Form to the Administrator, who transfers credits between accounts and assesses appropriate transaction fees.

All listed credits can be transferred between accounts until they expire and are no longer available to be transferred to another Credit Buyer. Thus, a Credit Buyer may resell and retransfer credits that have not expired and are no longer used to fulfill credit obligations to another Credit Buyer. Once credits expire, the Credit System Registry moves them into an expired credit account that can be reported on but not accessed for transfer.

The portion of credits from each transaction that are dedicated to the reserve account are transferred directly to the reserve account, which can be accessed by the Administrator in the future for authorized uses, such as to cover invalidated credits from a credit reversal.

Product ■ Notice of Transfer

D5.3 REPORT OF ACCOMPLISHMENTS (OPTIONAL)

The Administrator generates reports that summarize the amount of credit generated from each registered project and the total amount of credit generated from all registered projects. Supporting information related to each credit can also be produced, including vintage (year issued), HQT version, and duration of the credit. Reports can also be generated that show transfers of credits and expired credits.

Product ■ Accomplishments Report (optional)

SECTION 3.2: ACQUIRING CREDITS

QUESTIONS ANSWERED

- How does a Credit Buyer use credits to demonstrate mitigation requirements have been met?
- How does a Credit Buyer use credits to report on the accomplishments of their investments?

Figure 24: Credit Acquisition Overview

This section describes the process to acquire credits. Credit Buyers include entities mitigating for impacts to fulfill regulatory requirements, and entities seeking to improve the environment. The Credit System enables private and public Credit Buyers to efficiently invest with confidence, knowing that quantified environmental benefits are consistently defined, transparent and traceable. Credit Buyers can increase efficiency by relying on the programmatic structure to guide project design and verify that completed projects deliver expected environmental benefits. This increases accountability with Credit Developers and allows for greater coordination with other Credit Buyers to fund large-scale projects. Further, credits provide Credit Buyers with quantitative information to evaluate and report on the environmental value generated from their investments. Figure 24 and Table 22 provide an overview of the steps of credit acquisition and the different participants that may be engaged at each step.

Table 22: Overview of Roles, Tools & Products to Purchase, Track and Report Credits

Process Step	Credit Developer	Administrator	Credit Buyer	Relevant Forms & Templates	Completed Products
B1. Indicate interest		☐	■	▪ Sample Contract	▪ List of Credit Developers & Credit Buyers
B2. Determine Credit Need		■	■	▪ Credit Obligation & Project Design Form ▪ Verification Contract	▪ Credit Need Specifications ▪ Project Baseline Assessment ▪ Verification Report ▪ Estimated Credit Obligation
B3. Purchase & Acquire Credits	☐	■	■	▪ n/a	▪ Notice of Transfer
B4. Track & Transfer	■	■	■	▪ Notice of Transfer Form	▪ Annual Accomplishments Report

■ Indicates a necessary or active role
☐ Indicates potential participation or a support role

B1 INDICATE INTEREST

Figure 25: Indicate Interest

The Credit Buyer defines their investment goal and selects an appropriate strategy for acquiring credits.

B1.1 INDICATE INITIAL INTEREST & INITIATE COMMUNICATION

This first step for the Credit Buyer is to become aware of the opportunity or requirement to participate in the Credit System. The Credit Buyer is introduced to the Credit System through outreach materials or word of mouth, and learns about the potential benefits of participating. The Credit Buyer or the Credit Buyer's representative contacts the Administrator to provide basic information, such as name, area of interest and contact information. General information for how credits can be used to meet regulatory requirements is provided in *Section 2.1: Program Governance* with specific requirements in permits and regulatory instruments. The Administrator provides a list of Technical Support Providers in the project area who can assist with developing an investment strategy, if this assistance is desired. The Administrator compiles a list of identified Credit Developers and Credit Buyers.

Product ■ List of Identified Credit Developers & Credit Buyers

B2 DETERMINE CREDIT NEED

Figure 26: Determine Credit Need

Credit Buyers determine the geographic region, duration and amount of credit needed to best meet their regulatory requirements or investment goals.

B2.1 DETERMINE APPLICABLE GEOGRAPHY & PROJECT CHARACTERISTICS

The Credit Buyer identifies the specific geographic region from which to purchase Credits, in accordance with their investment goal. *Section 2.3.1: Credit Service Area* defines the applicable geographic scope of the Credit System and *Section 2.2.2: Mitigation and Proximity Ratios* defines the proximity ratio applied to debits and determined by the proximity between the debit site and offsetting credit site. Credit Buyers may also choose to focus investment within a specific geographic area to achieve unique investment goals.

The Buyer must also consider the duration or term to purchase credits. Projects produce credits for specific durations of time, including some projects which produce credits perpetually. *Section 2.5.4: Debit Project Duration* defines specific parameters for project duration.

The Buyer may also be interested in other characteristics that would focus investment on specific project types or Credit Developers. For instance, the Credit Buyer may want to only invest in projects that produce new habitat on working lands from small farms and ranches.

Product ■ Determination of Credit or Project Specifications

B2.2 DETERMINE CREDIT AMOUNT (REGULATORY OFFSET CREDIT BUYERS ONLY)

Each Credit Buyer defines their needed or desired amount of credit. If the Credit Buyer is not in a regulatory context, skip ahead to Step B3.

The remainder of this step defines the process to determine the amount of debit resulting from anthropogenic disturbances and the associated credit obligation to offset these impacts in a regulatory context. Development activities must be avoided and minimized through the SETT Consultation process, using best available and practicable technology and practice. Full compliance with all relevant laws and rules is required before credits can be used to satisfy the remaining regulatory requirements from unavoidable impacts.

Debits are quantified and verified units of functional acre loss using the HQT, and adjusted based on a mitigation ratio defined in *Section 2.2.2: Mitigation and Proximity Ratios*. The number of credits that must be acquired to offset the debits generated is the number of debits calculated adjusted by the proximity ratio defined in *Section 2.2.2: Mitigation and Proximity Ratios*. The process to calculate and verify debits is the same as the process to quantify credits except that verification occurs prior to project implementation. The following sections are a summary of that process. See Step D2 for additional information on calculating credits from a credit site.

Define & Submit Baseline Assessment

Credit Buyers first define the project boundary using guidance in the HQT. For debits, baseline is defined as the condition of the site prior to any new or expansion of an existing anthropogenic disturbance. Debit sites require a field assessment to determine pre-project conditions. The Credit Buyer conducts an assessment of the project area and applies the applicable HQT to calculate the baseline site functionality. Field and data collection forms are used to run the HQT and generate a habitat function score. The project baseline information, photo point documentation and HQT scores are submitted to the Administrator. As described later in this step, third party verification commissioned by the Administrator of debit baseline habitat function scores is required before the anthropogenic disturbance can be implemented. Since there are specific permissible windows for collecting official habitat function scores, commissioning an approved third-party Verifier to conduct the field assessment and gaining pre-approval from the Administrator to use those scores as the verified scores may be preferred by the Credit Developer to avoid a delay in the permitting process.

The Administrator reviews the baseline information and confirms all calculations are complete and consistent with relevant regulatory guidance, and allows the project to proceed.

Product ■ Complete Baseline Assessment

Determine Credit Obligation

A Credit Buyer's credit obligation is based on the difference between baseline functional acres and anticipated post-project functional acres, adjusted by mitigation and proximity ratio as defined in *Section 2.2: Habitat Quantification and Credit and Debit Calculation*. The estimated post-project habitat function is produced using the baseline functional acre assessment and development design documents defining the area, scope and activities to be completed as part of the development actions. The data sets are entered in the HQT, which produce the functional acre loss, debits and the credit obligation, and are submitted to the Administrator.

Product ■ Estimated Credit Obligation & Project Design Form

Acquire Agency Approval (If Necessary)

Consult with development permitting agencies for specific permit requirements to determine if agency approval is needed to use credits for regulatory offsets.

Establish Verification Contract

The Credit Buyer completes a contract with the Administrator for verification services. A sample contract is available in Appendix B: Tools, Forms & Templates.

Product ■ Complete Verification Contract

Verify Baseline

Verification of debits, like credits, is an independent review of all projects by third parties. Once final versions of all required documents are submitted to the Administrator, the Administrator reviews documentation to ensure completeness and assigns an accredited third-party Verifier to perform a full verification. Verification of debit baseline functional acres occurs before the anthropogenic disturbance has been implemented.

Once successful verification is complete, the Verifier submits the Verification Report to the Administrator. The Verification Report contains a summary of verification activities, an opinion on the debit estimates and a log of activities and findings.

Product ■ Verification Report

Post-Project Verification (If Necessary)

Consult *Section 2.5.6: Debit Site Verification* and specific permit requirements to determine if post-project verification is required to ensure that the amount of debit is not greater than what was estimated during project design.

B3 ACQUIRE CREDITS

Figure 27: Acquire Credits

B3.1 SUBMIT PROJECT INFORMATION

To acquire and track credits, the Credit Buyer contacts the Administrator to provide information about the debit and credit obligation in order to acquire needed credits. All information provided to the Administrator is subject to the confidentiality provisions described in *Section 2.1.7: Participant Confidentiality*.

B3.2 PURCHASE CREDITS

Credit Developers and Credit Buyers connect via the Credit System Registry, and come to agreement on credit quantities, price, timing of funding, and other terms. The terms of payments and sales are completed between Credit Developers and Credit Buyers, external to any of the Credit System Registry or Administrator processes. Once an agreement is complete, the Credit Buyer or Credit Developer submits a Notice of Transfer to the Administrator.

Product ■ Notice of Transfer

B4 TRACK & TRANSFER CREDITS

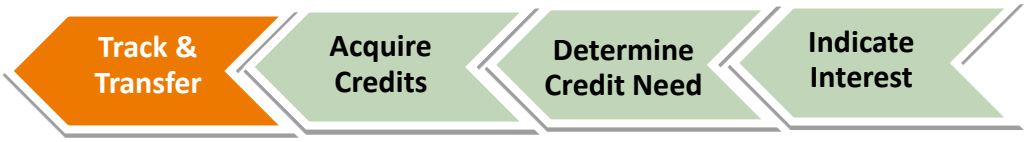

Figure 28: Track & Transfer Credits

Credits and debits are assigned unique serial numbers that identify the source of each credit or debit, the HQT and version used to estimate credits and debits, and the current owner. All registered projects are tracked by the Administrator, and information is subject to confidentiality provisions defined in *Section 2.1.7: Participant Confidentiality*. The terms of payments and sales are completed external to any of the Credit System Registry or Administrator processes.

B4.1 TRANSFER CREDITS

Upon receiving a Notice of Transfer, the Administrator transfers credits between accounts. Credits used to fulfill credit obligations are not available for resale. All remaining credits may be held by the Credit Buyer or resold. Even after transfer, the Credit Developer is responsible for meeting the monitoring, reporting and verification requirements of each project for the life of the project (described in *Section Step D3 in Section 3*).

B4.2 REPORT ON ACCOMPLISHMENTS (OPTIONAL)

The Administrator can generate reports for Credit Buyers that show transfers of credits and expired credits.

Product ■ Annual Accomplishments Reports

SECTION 3.3: ADAPTIVELY MANAGING THE CREDIT SYSTEM

QUESTIONS ANSWERED

- How is the Credit System managed to improve accuracy and efficiency without causing market uncertainty?
- What information is reported to ensure transparency and increase accountability?
- How are research and monitoring findings synthesized and used to improve the Credit System?
- How are Credit System improvement recommendations developed and used to inform annual Credit System improvement decisions?

The Credit System Management System is defined as a formal, structured programmatic adaptive management approach to dealing with uncertainty in natural resources management, using the experience of management and the results of research as an ongoing feedback loop for continuous improvement. This section describes the transparent and inclusive management process used for the Credit System. The Credit System Management System requires an ongoing flow of information from 1) research and monitoring activities conducted by scientists, 2) the practical experiences of Credit Developers and Credit Buyers, and 3) changing context from stakeholders to inform Credit System improvements. A systematic and transparent decision making process ensures that improvements to the Credit System do not cause uncertainty for participants. Figure 29 and Table 23 provide an overview of the Credit System Management System steps and the different participants that may be engaged at each step[21].

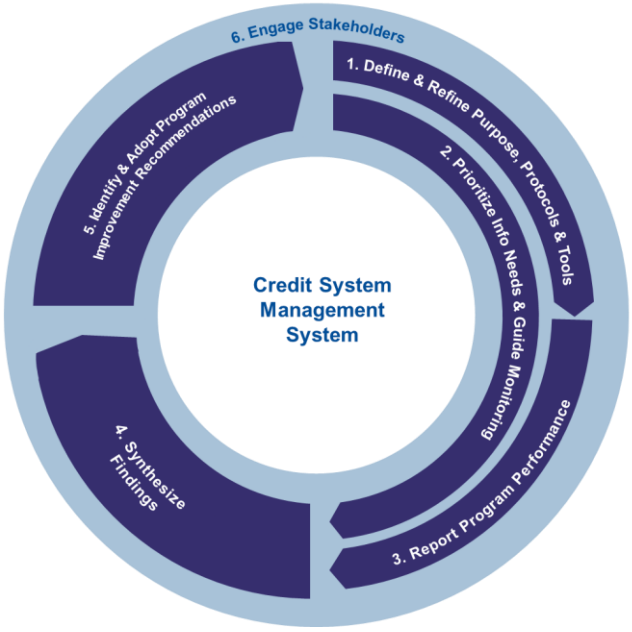

Figure 29: Overview of Credit System Improvement Management System Steps

[21] This management process has been adapted from The Conservation Measures Partnership's Open Standards for the Practice of Conservation, which can be found at www.conservationmeasures.org. Significant changes were made to adapt the Open Standards to 1) a market context where individual projects are selected and implemented by individual market participants and 2) be a formally governed process that balances the needs for improvements with the needs to limit market uncertainty for all participants.

The Administrator performs the day-to-day functions to manage the Credit System. The Administrator is accountable to an Oversight Committee, which approves all changes to the Credit System Manual and HQT. The composition of the Oversight Committee and the relationship between the Oversight Committee, Administrator and Credit System participants are defined in *Section 2.1.1: Governance Roles*.

Table 23: Overview of Roles, Tools & Products to Manage Credit System Operations

Process Step	Credit Developer & Credit Byers	Administrator	Oversight Committee	Science Committee & Stakeholders	Relevant Forms & Templates	Completed Products
A1. Update Protocol & Tools	☐	■	☐	■	▪ Credit System Improvement Recommendation Form	▪ Credit System Improvements List ▪ New & Updated Documents, Guidance and Tools
A2. Prioritize Information Needs & Guide Monitoring	☐	■	☐	■	▪ Research & Monitoring Contract Templates	▪ List of Research Needs
A3. Report Credit System Performance	☐	■	☐	☐	▪ Performance Report Template	▪ Annual Performance Report
A4. Synthesize Findings	■	■	■	■	▪ Input Request Template	▪ Synthesis of Findings Report
A5. Identify & Adopt Credit System Improvement Recommendations	☐	■	■	☐	▪ Credit System Improvement Recommendation Form	▪ Credit System Improvements Recommendations ▪ Record of Decisions ▪ Audit Report
A6. Engage Stakeholders	☐	■	■	■	▪ n/a	▪ Updated Website ▪ Quarterly Email Updates ▪ Stakeholder Meeting ▪ Summary of Input

■ Indicates a necessary or active role
☐ Indicates potential participation or a support role

A1 UPDATE PROTOCOL & TOOLS

Figure 30: Update Manual & Tools

This Credit System Manual and associated tools, templates and forms provide guidance for the Credit System to consistently track and report benefits and impacts. Updating the Credit System Manual, tools, templates, and forms is necessary to ensure practical experience and new scientific information result in increased efficiency and effectiveness. This step describes the process for the Credit System to review and update guidance documents, policies and tools.

A1.1 UPDATE CREDIT SYSTEM IMPROVEMENTS LIST

Credit System participants, the Administrator and other stakeholders may make suggestions to improve the Credit System at any time throughout the year by submitting a recommendation through the Credit System website. The Administrator adds recommendations received to the compiled Credit System Improvements List. The Administrator may also add improvement recommendations to the list reflecting personal experience or non-formal input from stakeholders. The Credit System Improvements List ensures that suggestions are not overlooked during the annual Credit System adjustment process.

Product ■ Credit System Improvements List

Review & Sort Improvement Suggestions

The Administrator reviews the Credit System Improvements List throughout the year and identifies relevant thematic changes that are categorized according to the following definitions:

- **Category 1** improvements consist of minor administrative adjustments or clarifications to communication or guidance materials that does not change the intent, form or operations. Category 1 improvements may be executed by the Administrator at any time; however the Oversight Committee and public must be informed of these changes as they occur.
- **Category 2** improvements are substantive changes to technical tools, protocols or guidance. Category 2 adjustments require input and approval from the Oversight Committee before they are implemented. The process for Oversight Committee review and adoption is defined in Step A5: Identify & Adopt Credit System Improvement Recommendations. When in doubt, the Administrator assigns the recommendation to Category 2. Upon review by the Oversight Committee, these suggestions may be re-categorized as needed.
- **Category 3** improvements necessitate adjustments to related policies if adopted. Category 3 adjustments are reviewed and approved or rejected by the Oversight Committee with consultation from the appropriate agency staff. These improvements may require agency approval, and thus follow the appropriate policy change process as defined by relevant state and federal agencies.

It is at the discretion of the Administrator, with guidance from the Oversight Committee, to prioritize funding to implement the most important improvements which can be successfully completed using available resources. The Administrator provides a prioritized Credit System Improvements List to the Oversight Committee, which includes Category 1 improvements implemented so that they can be reviewed and confirmed by the Oversight Committee. The Oversight Committee decides which improvement recommendations are to be implemented, at the periodic meetings described in Step A5:

Identify & Adopt Credit System Improvement Recommendations. For improvements that require additional time or resources to implement, the Administrator develops a brief implementation plan that is approved by the Oversight Committee.

Product ■ Updated Credit System Improvements List

A1.2 UPDATE EXISTING HQT, FORMS AND TEMPLATES

The Administrator may implement Category 1 improvements throughout the year. The Administrator implements all additional approved Category 2 and 3 improvements within a timeline approved by the Oversight Committee. The date at which updates go into effect should be clearly defined by the Oversight Committee with the expectation that changes which may affect the amount of credit generated from a project are not applied to previously registered projects.

Product ■ Updated Documents, Guidance & Tools

A1.3 INTEGRATE NEW AND ALTERNATIVE QUANTIFICATION TOOLS

The Credit System Manual is built to easily integrate new credit types (e.g. mule deer) and new or alternative HQTs. Once a new credit type and a new or alternative quantification tool is identified as needed, the Administrator convenes a technical committee to assess the proposed method and provide recommendations for improvement or adoption. Quantification tools require several field tests to determine accuracy, repeatability, sensitivity and ease of use. Once improvement recommendations are addressed, the Administrator presents the proposed new or alternative quantification tool, with supporting materials that define the use of any new credit types, to the Oversight Committee for review and approval (as described in Step A5: Identify & Adopt Credit System Improvement Recommendations).

Product ■ New Quantification Tools

Recommended Research and Monitoring Contract Terms

Research and monitoring contracts should reflect the need for clear, timely and consistently presented- findings so that findings can be easily used to address identified needs. Specific contract requirements can increase the likelihood that funded research and monitoring projects produce directly useful findings by:

- Identifying specific questions for investigators to address through specific projects.
- Requesting a one-to-two page summary of findings that directly relates findings to identified questions and related items on the List of Areas for Investigation.
- Requiring that reports be submitted in a timely manner so findings may be considered in the development of the Synthesis of Findings Report (Step A4).
- Requesting interim updates for long-duration projects, in order for these projects to provide insights with potential to influence current decisions and future expectations.
- Holding final payments until a draft report has been reviewed by an appropriate group of participants and review comments have been satisfactorily addressed.

A2 PRIORITIZE INFORMATION NEEDS & GUIDE MONITORING

Figure 31: Prioritize Information Needs & Guide Monitoring

Monitoring and research are necessary to check that the habitat benefits projected by the HQT result in the projected improvements for the habitat attributes of concern. The Credit System may collaborate with monitoring initiatives led by other active programs in the region or initiate its own research with approval from the Oversight Committee.

A2.1 DEVELOP & ADJUST LIST OF AREAS FOR INVESTIGATION

The Administrator takes input from the Science Committee and other technical experts and maintains the List of Research Needs. The List of Research Needs catalogs and prioritizes research and monitoring needs identified by participants as being important to improve HQT, better understand the effectiveness of management actions and impact of anthropogenic disturbances, and follow the status and trend of habitat attributes of concern.

The Credit System may be able to collaborate with other monitoring programs to monitor status and trend of habitat conditions and greater sage-grouse populations, but is likely to take a more active role in directing monitoring intended to calibrate HQTs and improve their accuracy. The HQT estimates the amount of credit expected from credit projects based on technical assumptions. These assumptions are tested by technical experts and practitioners conducting monitoring and research to address items on the List of Research Needs. Scientists review results and improve HQT and associated field methods accordingly.

Product ■ List of Research Needs

A2.2 PROVIDE INPUT TO RESEARCH & MONITORING FUNDING PROCESSES

The Administrator coordinates with participants, regulators, technical support, grant funders and stakeholders to identify and secure funding for priority needs identified on the List Research Needs. Research and monitoring may be conducted through direct contracts with the Credit System funded through transaction fees or conducted through partnerships with existing monitoring programs, or any other parties.

Product ■ Research & Monitoring Contracts and Results

A3 REPORT CREDIT SYSTEM PERFORMANCE

Figure 32: Report Credit System Performance

Routine reporting of accomplishments is essential to ensure transparency and drive accountability. The annual Credit System Performance Report (Performance Report) reports all credits tracked by the Credit System and informs interested parties of recent changes to the Credit System. The Performance Report highlights successes and challenges from the past year, both regionally and for each specific geographic area of interest. This is the highest profile product produced by the Credit System and is targeted to an informed public audience.

Recommended Performance Report Content

The use of a standard report template both increases efficiency and enhances understanding by providing information in a consistent format. The Performance Report addresses:

- Overall credit and debit results from the past year and over the life of the Credit System, including progress towards goals
- Credits and debits within specific geographic areas of interest
- Summary of recent and expected near-term changes

A3.1 COMPILE CONTENT & PUBLISH PERFORMANCE REPORT

The Administrator uses tracking outputs, such as the number of credits created during the year, to generate the quantitative information for the Performance Report, which includes a ledger of all credits and debits generated cumulatively and each year to demonstrate net benefit for greater sage-grouse. Credits are summed across geographic locations and for each specific area of interest. Additionally, information related to non-habitat accomplishments may also be highlighted, such as administrative improvements. The Performance Report is posted online and submitted to any relevant regulatory agencies.

The Administrator updates the content from the previous year's Performance Report and develops a narrative summary of overall accomplishments, and projected improvements to the Credit System over the past year. The Performance Report is annually approved by the Oversight Committee. It is then posted to the Credit System website within an appropriate timeframe and available to all interested stakeholders.

Product ■ Annual Credit System Performance Report

A4 SYNTHESIZE FINDINGS

Figure 33: Synthesize Findings

Synthesizing findings into information that is directly related to the operations of the Credit System is essential to inform management decisions. The Synthesis of Findings Report bridges the gaps between the Oversight Committee, Credit System participants, engaged scientists, and agency staff, by synthesizing learning from experience implementing the Credit System and from new monitoring and research findings. It is not intended to be a comprehensive review of all literature and available information. Providing highly-nuanced recommendations with extensive discussion does not meet the primary audience's needs. Rather, findings are presented in clear statements. Supporting information should be targeted, providing the most relevant information necessary to understand the issues in context of the Credit System.

The Synthesis of Findings report is developed by the Administrator annually. A more formal review of the Credit System and committee structure is recommended to occur at least every fifth year.

A4.1 COMPILE FINDINGS & DEVELOP SYNTHESIS OF FINDINGS REPORT

The Administrator requests input from participants and relevant stakeholders, including posting an invitation for input to the Credit System website. Findings may address needs related to improving 1) the accuracy of credit estimation and verification methods, 2) the effectiveness of different management actions, and 3) the efficiency of Credit System operations. The Administrator decides how to catalogue and organize input received and develops a brief report to present to the Oversight Committee.

Product ■ Synthesis of Findings Report

A5 IDENTIFY & ADOPT CREDIT SYSTEM IMPROVEMENT RECOMMENDATIONS

Figure 34: Identify & Adopt Credit System Improvement Recommendations

Creating and transparently adopting clear recommendations to improve the Credit System is the most critical step in the annual Credit System management process. The predictability and transparency of the adjustment process enables Credit Developers, Credit Buyers and other stakeholders to adjust practices and expectations without causing market uncertainty or disruptions that result in participants becoming resistant to changes.

A5.1 PROPOSE CREDIT SYSTEM IMPROVEMENT RECOMMENDATIONS

The process for maintaining and prioritizing the Credit System Improvements List is described in Step A1: Update Credit System Improvements List. The Credit System Improvement List and the Synthesis of Findings Report are the most critical inputs for the Administrator to consider when identifying Credit System Improvement Recommendations.

Develop Credit System Improvement Recommendations

The Administrator reviews the Credit System Improvements List and identifies priority improvements to recommend to the Oversight Committee for implementation. The Administrator will engage the Science Committee in the development and prioritization of the Improvements List. The Administrator describes the following for each recommended improvement:

- Clear statement of need for change and expected improvements to efficiency or effectiveness resulting from implementing the change.
- Description of what specific portions of documents, forms, guidance, or the HQT will be changed, potentially including red-line versions of recommended changes.
- Identification of any potential complications or impacts the change may have to stakeholders or to the Credit System.
- For changes that require contract resources or greater than one-month to implement, a brief implementation plan with associated budget.

Recommendations are grouped by the Categories described in Step A1.1. Note, all Category 1 improvements implemented by the Administrator during the year are documented and may be reviewed by the Oversight Committee to confirm that changes are acceptable.

Product ■ Draft Credit System Improvement Recommendations

Develop Final Recommendations

The Credit System Improvement Recommendations are sent to the Oversight Committee for review in advance of the next Oversight Committee meeting. The Oversight Committee members discuss recommendations of interest or concern with the Administrator and consult stakeholders as necessary.

Product ■ Final Credit System Improvement Recommendations

A5.2 ADOPT CREDIT SYSTEM IMPROVEMENTS

The Oversight Committee meets, discusses and considers adopting Credit System Improvement Recommendations at least annually. For policy decisions and those directly related to regulatory or funding requirements, the decision may be to bring a proposal before relevant agency management or other decision making authorities.

The Oversight Committee designates an individual to compile a Record of Decisions. A Record of Decisions defines the agreed-to changes, the rationale, the party responsible for implementing the changes, and the date when changes go into effect for any new projects or operational practices. Changes do not alter the amount of credit available from previously registered projects for the duration of the project, and should not require changes to existing project management plans or credit obligations. Any recommendations not acted upon are addressed by providing a brief rationale and an indication of whether the recommendation may be considered at a later date or if the recommendation has been rejected and should not be brought back in the future.

Product ■ Record of Decisions

A5.3 OVERSEE CREDIT SYSTEM OPERATIONS

Annually, the Oversight Committee conducts or designates an independent entity to conduct a third-party audit of Credit System operations, including a detailed review of a portion of individual credit and debit sites. The audit confirms that procedures are being consistently followed, all documentation is present and complete, and all Credit System management products are developed and maintained. An Audit Report describes the audit procedures, findings and any proposed areas where corrective actions should be considered. The Audit Report is made available to the Oversight Committee and discussed at a subsequent Oversight Committee meeting. The final Audit Report, less information identified as confidential, is posted to the Credit System website.

Product ■ Audit Report

A5.4 RESOLVE OUTSTANDING DISPUTES

As defined in the dispute resolution process defined in Step D3, the Oversight Committee or a subcommittee of the Oversight Committee resolves disputes between Credit System participants that cannot be resolve independently or in consultation with the Administrator. If the dispute is in reference to regulatory requirements, the regulatory agency has the final decision-making authority.

A6 ENGAGE STAKEHOLDERS

Figure 35: Engage Stakeholders

Consistent stakeholder engagement is necessary to ensure the Credit System operates efficiently, increases understanding, and drives accountability. Stakeholder engagement occurs throughout the year using the reports and products defined in Steps A1-A5, as well as through email and in-person engagements.

A6.1 MAINTAIN CREDIT SYSTEM WEBSITE

The Administrator maintains the Credit System website as the central location for all publicly available information not deemed confidential. This includes all tools, guidance and reference materials related to the Credit System. The website also informs interested stakeholders of upcoming events and meetings, and provides the opportunity for stakeholders to provide Credit System improvement recommendations (as described in A1).

Product ■ Updated Credit System Website

A6.2 DISTRIBUTE UPDATE EMAILS

The Administrator maintains an ongoing list of interested stakeholders and their email contact information. The Administrator disseminates a periodic email update to interested stakeholders to provide information about Credit System progress. Email updates also notify stakeholders when reports are expected to be available for public review, and about upcoming opportunities for in-person engagement.

Product ■ Email Communications

A6.3 PRESENT AT COMMUNITY FORUMS

The Administrator and other participants may make presentations at community events and meetings upon request and as resources are available. This is critical to ensure local groups understand the basic functions and role of the Credit System and understand how they may be able to participate.

Product ■ Community Presentations

A6.4 CONDUCT TRAININGS

The Administrator or experienced Technical Support Providers periodically conducts trainings to teach potential Credit System participants how to efficiently use the Credit System, including guidance on using tools and forms. These trainings are generally open to all interested parties. Verifier certification trainings are conducted as needed with an expectation of at least annually.

Product ■ Hosted Trainings

A6.5 CONVENE ANNUAL STAKEHOLDER MEETING

The Administrator annually convenes meeting open to all stakeholders. This meeting is an opportunity to highlight accomplishments and identify areas for improvement with participants and interested stakeholders. The meeting is held after the annual Performance Report is posted to the Credit System website for review, and before final Program Improvement Recommendations are considered by the Oversight Committee (as described in Step A5).

At this annual meeting, stakeholder input should be structured such that input directly related to identified areas of operational improvement and areas for investigation are recorded in context of the specific need. Stakeholders also should have the opportunity to identify new needs and concerns for consideration. Input may be added to the Credit System Improvements List or List of Research Needs.

Stakeholder input that does not directly relate to these ongoing lists of needs is summarized and the notes posted to the Credit System website.

Product ■ Stakeholder Meeting & Summary of Input Received

APPENDIX A: GLOSSARY

Additionality: Habitat functionality improvements that represent an overall increase in, or avoided reduction of, habitat functionality, relative to the habitat functionality that would occur in absence of the Credit System.

Administrator: An organization or entity responsible for managing the day-to-day operations of the Credit System, including facilitating and overseeing all credit generation and transaction activities.

Aggregator: A person or institution that works with multiple landowners to implement credit projects, secure performance assurances, and register and sell credits. An Aggregator facilitates financial transactions between the Credit Buyers and Credit Developers, and may charge a fee for the service, but is not directly involved in the chain of ownership of credits.

Baseline: The starting point for calculating the functional acres generated by a credit or debit, which is the difference between baseline and post-project functional acres. Baseline does not necessarily mean pre-project condition.

Candidate Conservation Agreement (CCA): A formal agreement between the USFWS and one or more Federal or non-Federal parties to address the conservation needs of proposed or candidate species, or species likely to become candidates for listing under the Endangered Species Act, in which participants voluntarily commit to implementing specific actions that will remove or reduce the threats to these species, so that listing is no longer necessary.[22]

Candidate Conservation Agreement with Assurances (CCAA): A formal agreement between the USFWS or NMFS and one or more non-Federal parties who voluntarily agree to manage their lands or waters to remove threats to candidate or proposed species and in exchange receive assurances that their conservation efforts will not result in future regulatory obligations in excess of those they agreed to at the time they entered into the Agreement.[23]

Competing Land Uses: Land uses that reduce the functionality of habitat and invalidate the credits being generated on a site.

Compensatory Mitigation: The stewardship or restoration of habitat to compensate for unavoidable adverse impacts to the habitat elsewhere.[24]

Condition: Condition is the relative ability of a site to support and maintain its complexity and capacity for self-organization with respect to species composition, physicochemical characteristics and functional processes.

Conservation Action: Actions to conserve habitat and do not generate credits.

Conflict of Interest: A situation in which, because of activities or relationships with or perceived to be with other persons or organizations, a person or firm is unable or potentially unable to render an impartial verification opinion of Credit Developer's estimated credits.

Credit: A quantifiable unit of a greater sage-grouse habitat conservation value which serves as the currency in the Credit System. A credit is a measure of the difference between credit baseline functional acres (see Functional Acre definition) and post-project functional acres multiplied by a mitigation ratio. Credits are consistently quantified and traded, and secured by contract requirements, a project-specific Management Plan and financial assurances.

[22] USFWS DRAFT GRSG Mitigation Framework Glossary

[23] USFWS DRAFT GRSG Mitigation Framework Glossary

[24] USFWS DRAFT GRSG Mitigation Framework Glossary revised

Credit Buyer: An entity that purchases credits for a range of reasons including general conservation purposes or mitigating the adverse effects of a debit project.

Credit Developer: Landowners or managers who produce and sell credits in the Credit System.

Credit Obligation: Quantity of credits that must be acquired to offset debits generated by a debit project. Credit obligation is the number of debits calculated using the HQT and debit mitigation ratio adjusted by the proximity ratio, determined by the proximity between the debit site and offsetting credit site.

Credit Project: Management actions and administrative requirements including a Participant Contract and Management Plan that create a credit.

Credit Release: An award of credits made available for transfer by the Administrator to a Credit Developer upon meeting specified management and performance criteria.

Credit Site Eligibility: A set of requirements that a credit project site must meet in order to be able to participate in the Credit System.

Agreement: A signed agreement between the Administrator and other public agencies that authorizing the use of Credit System credits for mitigation purposes within the State of Nevada, or between the Administrator and other parties to use Credit System tools and procedures.

Credit System Operations: A set of rules that defines the universal processes through which credits and debits are generated, tracked, and traded within the Credit System.

Credit Variability: Fluctuations in the generation of credits and debits on a project site that are created due to factors that are outside the control of the participants, such as environmental conditions and climatic effects.

Debit: A quantifiable unit of loss to greater sage-grouse habitat conservation value from an impact. A debit is a measure of the difference between debit baseline functional acres (see Functional Acre definition) and post-project functional acres multiplied by a mitigation ratio (but not yet multiplied by proximity factor), and are based on the same methods and HQT used to calculate credits.

Debit Project: An anthropogenic disturbance that creates a debit.

Direct Impact: The effects that are caused by, or will ultimately result from, the direct footprint of a debit project.

Durability: Credit projects that demonstrate defined habitat functionality performance prior to credit release through the end of the project's duration.

Dynamic Offsets: When a stream of term credits are used to cover a debit, such that the mitigation is functionally the same duration as the debit but shifts on the landscape.

Ecosystem Services: The benefits people obtain from nature. These include provisioning services such as food, water, timber, and fiber; regulating services that affect climate, floods, disease, wastes, and water quality; cultural services that provide recreational, aesthetic, and spiritual benefits; and supporting services such as soil formation, photosynthesis, and nutrient cycling.

Financial Assurances: Mechanism to ensure that funds are available to replace credits invalidated by intentional causes, and to ensure funds are available for long-term management and monitoring of individual project sites.

Force majeure: Event or circumstance beyond the control of Participants under which they are not liable. This includes Acts of God, including fire, flood, earthquake, storm, hurricane or other natural disasters.

Functional Acre: The single unit of value that expresses the assessment of quantity (acreage) and quality (function) of habitat or projected habitat through the quantification of a range-wide scale, landscape-scale, local-scale and site-scale attributes defined in the *HQT Scientific Methods Document*.

Habitat Conservation Plan (HCP): A conservation plan that specifies the anticipated effects of a proposed activity on the taking (see "*Incidental take*") of federally-listed species and how those impacts will be minimized and mitigated. The HCP is submitted with an incidental take permit application to the USFWS or NMFS. Incidental take permits are available to private landowners, State and local governments, Tribal governments and other non-Federal landowners through section 10 of the Endangered Species Act.[25]

Habitat Function: The ability or value of a measured patch of land to meet the needs of greater sage-grouse.

Habitat Suitability Index (HSI): A continuous map surface developed by Nevada's Sagebrush Ecosystem Program that contains the probability of use by sage-grouse per pixel across Nevada. This surface is represented by probability values that range across a continuous spectrum of 0.0 to 1.0.

Habitat Quantification Tool: A set of metrics (i.e. measurements and methods), applied at multiple spatial scales, to evaluate current conditions and changes in conditions indicative of habitat quality, baseline, and mitigation ratios to determine the amount of total credit or credit obligation debit resulting from credit and debit projects. The attributes measured and methods used to measure those attributes are defined in the *HQT Scientific Methods Document*.

Incidental Take: take of listed species that results from, but is not the purpose of, carrying out an otherwise lawful activity. Incidental take may be authorized through section 7 or 10 of the Endangered Species Act.[26]

Indirect Impact: Effects that are caused by or will ultimately result from a debit project. Indirect impacts could occur at some point in the future or outside of the direct footprint of the debit project site.

Landscape Scale (2nd order): 2nd order selection is described by the home range of a sage-grouse population or subpopulation, and attributes are measured to delineate the best areas for conservation and identify where credit projects should be targeted and disturbances should be avoided.

Local Scale (3rd order): 3rd order selection is based on sage-grouse use of, and movement between, seasonal habitats within their home range according to their life cycle needs, and attributes are measured to consider the availability of suitable habitat and the effects of anthropogenic disturbances.

Management Actions: Stewardship and restoration of a site in order to generate credits.

Management Plan: Plan that defines specific restoration and management actions over the life of a credit project, including ongoing maintenance and monitoring requirements. Plan includes existing project site information, such as a site map and information on current management practices, and anticipated project start and end dates, and any management limitations.

Management Process: A formal, structured programmatic adaptive management approach to dealing with uncertainty in natural resources management, using the experience of management and the results of research as an ongoing feedback loop for continuous improvement.

Map unit: Sub-divisions of the project area based on unique vegetation communities and vegetation structure.

[25] USFWS DRAFT GRSG Mitigation Framework Glossary

[26] USFWS DRAFT GRSG Mitigation Framework Glossary

Mitigation: Stewardship or restoration of habitat to compensate for unavoidable adverse impacts from a debit project and verified through the Credit System. Credit projects are mitigation for debit projects.

Monitoring: The process to observe and record current environmental conditions, changes in environmental conditions and effects of management actions over space and time.

Offset: *See Mitigation*.

Oversight Committee: Formal, representative stakeholder group, which is responsible for overseeing the operations of the Credit System and making Credit System management decisions. The Sagebrush Ecosystem Council serves as the Oversight Committee.

Participant: General term for all entities participating in the Credit System, with the exception of the Administrator and the Oversight Committee. Participants include: Credit Developers, Credit Buyers, Technical Support Providers, Aggregators, and Verifiers.

Participant Contract: Legal agreement between one or more Credit Developers and the Administrator that defines obligations of the Credit Developers and secured financial assurances, binds a participating credit site to a Management Plan, and lays out the relevant terms and conditions for the development of credits under the Credit System.

Participant Confidentiality: Processes to ensure sufficient information is available to monitor compliance, ensure progress toward environmental goals, and inform a robust Credit System management process, while not revealing identifying information of participants.

Performance Standards: Management actions and habitat function described in a credit project's Management Plan that defined credit project expectations including requirements for credit releases.

Project Duration: The period of time that the Credit System recognizes a credit or debit before requiring that the project be renewed using current HQT and protocols.

Range-wide Scale (1st order): 1st order selection is described by the geographic range of the sage-grouse population in Nevada.

Rehabilitate: Return habitat function of a debit site to pre-project or better condition.

Remedial Action Plan: Any corrective measure which the Administrator or a Credit Developer is required to take to correct an adverse impact to a participating credit site as a result of a failure to achieve the performance criteria outlined the site's Management Plan.

Remediate: Correction of an adverse impact to a credit site.

Reserve Account: A pool of credits, funded by a percentage of the credits transferred in each transaction, that are used to cover shortfalls when credits that have been generated and sold are invalidated due to contract breach, a force majeure, or other circumstances**.** The Reserve Account helps to ensure that there is always a net positive amount of habitat tracked under the Credit System.

Restoration: The reestablishment of ecologically important habitat or other ecosystem resource characteristics and function(s) at a site where they have ceased to exist, or where they exist in a substantially degraded state, and that renders a positive biological response by the species or habitat.

Reversal: Credit project that does not persist for the full, required, duration due to natural or man-made causes.[27]

[27] USFWS DRAFT GRSG Mitigation Framework Glossary revised

Safe Harbor Agreement (SHA): Formal agreement between the USFWS or NMFS and one or more non-Federal landowners in which landowners voluntarily manage land for listed species for an agreed amount of time providing a net conservation benefit to the species at the end of the time period and, in return, receive assurances from the Federal agency that no additional future regulatory restrictions will be imposed.[28]

Science Committee: The group of species and ecology experts appointed by the Sagebrush Ecosystem Council and are responsible for analyzing the best-available species and ecological science and making adaptive management recommendations.

Service Area: The geographic area within which habitat credit trading occurs, as defined by the current SGMA; the geographic area within which impacts to covered species' habitat can be offset at a particular habitat offset site as designated in an agreement or program.[29]

Site Scale (4th order): 4th order selection is based on sage-grouse selection for vegetation structure and composition that provide for their daily needs, including forage and cover.

Split Estate: Surface rights and subsurface rights (such as the rights to develop minerals) for a piece of land are owned by different parties.[30]

Stacking Payments and Credits: The creation of different credit types or payments on the same project site. Stacking credits allows Credit Developer to market multiple ecological values, and also allows payments from federal programs to be paired with payments from private sector mitigation markets for different services on the same land.

Static offset: Mitigation achieved for a debit project by the use of single credit project produced for the duration of the relevant debit project.

Stewardship: Maintenance of high quality habitat currently used by or in close proximity to habitat used by greater sage-grouse, or manipulation of existing habitat to increase specific habitat functionality. Examples range from placing a conservation easement on existing high quality habitat and committing to maintaining that high quality for the full duration of the credit project to improvement of habitat quality, as measured through functional HQT scores, through a prescribed grazing plan on existing rangeland.

Technical Support Provider: Entities with technical expertise in conservation planning and project design, who understand how to use the Credit System tools and forms. May be hired by Credit Developers to help design credit projects, use the HQT to estimate credits, and submit all required materials to the Administrator. There is no formal process to designate or certify a Technical Support Providers as qualified.

Transfer: The transfer of credits between account, such as between the account of a Credit Developer and Credit Buyer, or a Credit Developer and the reserve account. After transfer of credits between the accounts of a Credit Developer and a Credit Buyer, the Credit Developer is responsible for meeting the monitoring, reporting and verification requirements of each project for the life of the project (described in Step D3 in Section 3).

Verification: An independent, expert check on the HQT calculations and other specifications of the Credit System. The purpose of verification is to provide confidence to all participants, including the

[28] USFWS DRAFT GRSG Mitigation Framework Glossary

[29] USFWS DRAFT GRSG Mitigation Framework Glossary

[30] USFWS DRAFT GRSG Mitigation Framework Glossary

Administrator, that credit and debit calculations represent a faithful, true and fair account of conditions on-the-ground.

Verifier: A person that conducts site visits to assess the accuracy of credit and debit calculations. Verifiers must be trained and certified by the Administrator and must meet qualifications established by the Oversight Committee.

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APPENDIX B: TOOLS, FORMS & TEMPLATES

The following tools, forms and templates with associated instructions are referenced in the Credit System Manual and help to support ongoing operations of the Nevada Conservation Credit System (Credit System). The Tools, Forms & Templates Table describes these products, including the officially approved version that should be used in association with the current version of the Credit System Manual.

- **Tool**: A document, spreadsheet, or website used by Credit Developers, Credit Buyers or the Administrator to carry out a particular operational step in the Credit System Manual. For example, the Habitat Quantification Tool (HQT) is used to determine credit and debit from project sites. Tools are maintained by the Administrator.
- **Form**: A document with pre-defined fields that participants fill out and submit to the Administrator. For example, the Validation Checklist provides a set of fields that Credit Developers fill out to provide basic information to the Administrator about a proposed credit project.
- **Template**: A document with defined content outline and formats that a Credit System participant uses to efficiently populate with unique information. For example, the Administrator uses the previous year's Annual Performance Report to update information and create the next year's Annual Performance Report.

The Tools, Forms & Templates Table uses the following fields to define each product.

- **Name & Version**: Name of the document and the currently approved version for use by participants in the Credit System.
- **Type:** Specifies whether the document is a tool, form, or template as described above.
- **Description**: A brief description of the purpose of each document.
- **Related Step(s)**: Related steps where the document is referenced in the *Section 3: Credit System Operations*.
- **Responsible Party**: Specifies which party is responsible for using a tool, filling out a form, or creating a product from a template.

[The tools, forms and templates in the following table will be built out over the coming months including specific supporting guidance. The only exception is the Habitat Quantification Tool, which a draft has been released along with the Manual.]

#	name & Version	Type	Description	Related Step(s)	Responsible Party
1	**VALIDATION CHECKLIST** (VERSION - TBD)	Form	Basic information to provide an initial screen of a credit project's eligibility to participate in the Credit System.	D1.3	Credit Developer
2	**LIST OF CREDIT OPPORTUNITIES** (VERSION – TBD)	Template	List of credit projects seeking funding and Credit Buyers interested in purchasing credits.	D1.4, B1.1	Administrator
3	**HABITAT QUANTIFICATION TOOL (HQT)** (VERSION – TBD)	Tool	A set of metrics (i.e. measurements and methods), applied at multiple spatial scales, to evaluate vegetation, anthropogenic, and environmental conditions related to habitat quality and quantity.	D2, B2.2	Credit Developer, Buyer

#	name & Version	Type	Description	Related Step(s)	Responsible Party
4	**CREDIT ESTIMATE FORM** (VERSION – TBD)	Form	Records and documents the results of HQT outputs including: ▪ Pre-project site condition. ▪ Credits projected to be achieved on site under the proposed restoration or management plan. ▪ Description of conservation threats.	D2.2, D2.3	Credit Developer
5	**MANAGEMENT PLAN** (VERSION – TBD)	Template	Template that guides a Credit Developer to define specific restoration and management actions over the life of a credit project, including ongoing maintenance and monitoring requirements. ▪ Existing project site information, such as a site map and information on current management practices. ▪ Management plan information, including proposed management or restoration practices, anticipated start and end dates, and any management limitations.	D2.3	Credit Developer
6	**VERIFICATION CONTRACT** (VERSION – TBD)	Form	A Credit Developer or Buyer signs a contract with the Administrator for third-party verification of a credit or debit site.	D3.1, B2.2	Credit Developer, Buyer
7	**CONFLICT OF INTEREST FORM** (VERSION – TBD)	Form	Submitted by a Verifier to the Administrator about any pre-existing conflicts of interest for verification.	D3.1, B2.2	Verifier
8	**VERIFICATION REPORT** VERSION – TBD)	Template	Report submitted by a Verifier after site verification attesting to his or her opinion on whether a Credit Developer's Credit Estimate Report matches on-the-ground conditions, or a Buyer's baseline measurement.	D3.3, B2.2	Verifier
9	**SELF-MONITORING REPORT** (VERSION – TBD)	Template	Report submitted by Credit Developers in non-verification years demonstrating that specifications of the Management Plan have been fulfilled.	D3.3, B2.2	Credit Developer
10	**CREDIT OBLIGATION FORM** (VERSION – TBD)	Form	Form submitted to the Administrator outlining to total credit obligation of a mitigation buyer, including the total debit multiplied by the appropriate mitigation ratio.	B2.2	Buyer
11	**VERIFICATION PROTOCOL** (VERSION – TBD)	Tool	The step-by step description of the verification process for Verifiers to use as guidance.	D3.3, B2.2	Administrator
12	**NOTICE OF CREDIT TRANSFER** (VERSION – TBD)	Form	Notice from the Credit Developer or Buyer to direct the Administrator to transfer credits between accounts.	D5.1, D5.2, B3.2	Credit Developer, Buyer

#	name & Version	Type	Description	Related Step(s)	Responsible Party
13	**ACCOMPLISHMENT REPORTS** (VERSION – TBD)	Template	Reports provided by the Administrator to Credit Developers and Credit Buyers outlining project accomplishments.	D5.3, B4.2	Administrator
14	**CREDIT SYSTEM IMPROVEMENTS LIST** (VERSION – TBD)	Template	Suggestions for improving the Credit System collected throughout the year and maintained by the Administrator.	A1.1	Administrator
15	**LIST OF RESEARCH NEEDS** (VERSION – TBD)	Template	Catalogs and prioritizes research and monitoring needs identified by participants.	A2.1	Administrator
16	**CREDIT SYSTEM PERFORMANCE REPORT** (VERSION – TBD)	Template	The Administrator generates quantitative information to show Credit System accomplishments with respect to overall goals.	A3.1	Administrator
17	**SYNTHESIS OF FINDINGS REPORT** (VERSION – TBD)	Template	Synthesizes learning from experience implementing the Credit System and from new monitoring and research findings	A4.1	Administrator
18	**CREDIT SYSTEM IMPROVEMENT RECOMMENDATIONS MEMO** (VERSION – TBD)	Template	Recommendations of priority Credit System improvements for approval by the Oversight Committee	A5.1	Administrator
19	**RECORD OF DECISIONS** (VERSION – TBD)	Template	Defines the agreed-to changes, rationale, the party responsible for implementing changes, and the date changes go into effect.	A5.2	Administrator
20	**AUDIT REPORT** (VERSION – TBD)	Template	Independent audit of the Credit System operations by the Oversight Committee or third-party.	A5.3	Oversight Committee