NEVADA CONSERVATION CREDIT SYSTEM MANUAL

February 2014

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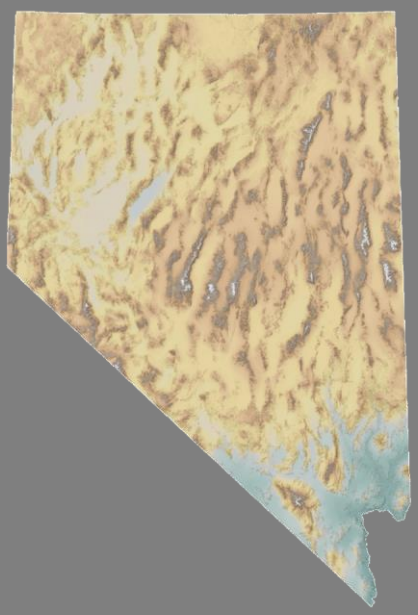

DRAFT

For Sagebrush Ecosystem Council Review

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

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[[This draft of the Nevada Conservation Credit System Manual is provided to the Sagebrush Ecosystem Council (SEC) for review in advance of the February 24th SEC meeting. It is expected that this draft will be revised based on amendments defined at the February 24th SEC meeting and submitted for incorporation into the Draft Environmental Impact Statement for the Northeast California/Nevada Sub Region of the National Strategy to Preserve, Conserve, and Restore Sagebrush Habitat.

This draft contains specifics, such as numbers for calculating the mitigation ratios, that are subject to significant change over the coming months based on additional analysis, engagements with the SEC, SETT, TRG and State and Federal Agency partners, and implementation of pilot transactions. The specifics are included to illustrate concepts only per the recommendation of the SEC Committee. The Draft EIS will only incorporate the general concepts so the specifics are permitted to change over time.

This draft is informed by informal feedback provided by the SEC Committee, SETT staff, Governor's Office staff, and State and Federal agency staff. However, it is important to note that this draft contains content that has not been reviewed by anyone other than Environmental Incentives' staff.

This draft contains context to assist the SEC with their review in double brackets and yellow font. This draft is also written in the current tense so that the document does not have to be rewritten in a different tense once it is finalized.]]

This manual was developed for the State of Nevada Department of Conservation and Natural Resources and Nevada Sagebrush Ecosystem Council. The project was funded by Question 1 Bond funding through a contract with the State of Nevada Natural Heritage Program.

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NEVADA CONSERVATION CREDIT SYSTEM MANUAL INTRODUCTION

The Nevada Conservation Credit System Manual (Credit System Manual) provides necessary materials for understanding and engaging in the Nevada Conservation Credit System (Credit System). The primary audience of the Credit System Manual is current and potential participants in the Credit System.

CREDIT SYSTEM MANUAL STRUCTURE

The Credit System Manual consists of the chapters and appendices as described below.

Chapter 1: Credit System Overview	Provides an overview of the objectives, scope and primary participants of the Credit System.
Chapter 2: Summary of Technical & Policy Considerations	Summarizes the primary technical and policy considerations that direct Credit System operations and enable consistent application of the Credit System by all participants.
Chapter 3: Credit System Operations	Defines the specific steps, roles and timing to: ▪ Quantify and verify credits and debits from individual project sites, including fulfilling ongoing verification requirements. ▪ Obtain credits and use them to mitigate negative impacts (debits) or define and report the effectiveness of conservation. ▪ Systematically evaluate new information, report results and improve the accuracy and efficiency of the Credit System and associated quantification tools over time.
Appendix A: Glossary	Defines key terms used throughout the Credit System Manual.
Appendix B: Forms and Instructions	Provides specific forms to be filled out by Credit System participants and submitted to the Credit System Administrator, with associated guidance. All forms and guidance documents are also available on the Credit System website.

The Nevada Conservation Credit System Website provides related documents, tools, forms and contact information, and is managed by the Credit System Administrator. [The initial website is expected to be available in the summer of 2014.] The items described below are referenced in the Credit System Manual and can be found on the Credit System Website:

- **Nevada Greater Sage-Grouse Habitat Quantification Tool (HQT)** - A set of metrics applied at multiple spatial scales that evaluate current conditions and changes in conditions indicative of habitat quality, or function, to inform the amount of credit and debit resulting from conservation and development impacts. [A draft of the HQT was distributed with this draft of the Manual]
- **Documentation of Rationale** – Describes the rationale for specific policy and technical decisions of the Credit System, including options considered and not selected. [A draft of this document is expected to be available in May 2014.]

NEVADA GUBERNATORIAL AND LEGISLATIVE DIRECTION

Governor Brian Sandoval's Executive Order 2012-09 fortified Nevada's commitment to sage-grouse conservation, bringing stakeholders and experts together to recommend a course of action that would conserve and enhance sagebrush ecosystems and their values for all Nevadans and to meet the intent of the Endangered Species Act (ESA). The Governor's Executive Order called for the development of the Strategic Plan for Conservation of Greater Sage-Grouse in Nevada, which defines the need for compensatory mitigation that uses a quantifiable credit to reward a wide-range of sagebrush habitat enhancement and restoration activities regardless of land ownership. Executive Order 2012-09 expired on July 31, 2012 when the Strategic Plan for Conservation of Greater Sage-Grouse in Nevada was published.

Governor Brian Sandoval's Executive Order 2012-19 created the Sagebrush Ecosystem Council (SEC) and Sagebrush Ecosystem Program. In addition, the Governor's Executive Order made the establishment of a credit program for sagebrush ecosystems a responsibility of the SEC.

Governor Sandoval sponsored, and later signed into law, Nevada Assembly Bill 461 of the 2013 Legislative Session (AB 461), which memorialized the Sagebrush Ecosystem Council (SEC) and other conservation priorities into Nevada Revised Statute. The law also directed the SEC to "establish a program to mitigate damage to sagebrush ecosystems in this State by authorizing a system that awards credits to persons, federal and state agencies, local governments and nonprofit organizations to protect, enhance or restore sagebrush ecosystems". In addition, AB 461 instructs the Division of State Lands of the State Department of Conservation and Natural Resources to oversee and administer the program. The Credit System implements key requirements of AB 461.

ACKNOWLEDGEMENTS

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Nevada Sagebrush Ecosystem Council

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Nevada Sagebrush Ecosystem Technical Team

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In addition, many knowledgeable and dedicated individuals from the Nevada Governor's Office and various other state agencies, U.S. Fish and Wildlife Service, U.S. Bureau of Land Management, U.S. Forest Service and citizens of the State of Nevada provided guidance, insight and support that was essential to ensuring the Credit System is aligned with the needs of key constituents and is a viable means for species conservation.

The consulting team was led by Environmental Incentives, LLC with the following partners: Ecometrix Solutions Group, RESOLVE, Environmental Defense Fund, and The Nature Conservancy.

The 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 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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CHAPTER 1: CREDIT SYSTEM OVERVIEW

Greater sage-grouse populations in Nevada, and throughout the 11-state range, have declined significantly from their historic numbers[1]. In 2010, the U.S. Fish and Wildlife Service (USFWS) announced the finding that listing the greater sage-grouse (range-wide) as threatened or endangered under the Endangered Species Act is warranted, but precluded by higher priority listing actions[2]. By 2015, the USFWS must decide whether or not to list the greater sage-grouse. This listing may have a greater impact to Nevada's economy and the lifestyle of its citizens than the listing of any other species.

Wildfire is one of the primary drivers of greater-sage grouse habitat loss in the western portion of the greater sage-grouse range. Habitat degradation and fragmentation also result from the incursion of invasive species and conifer encroachment. In addition, infrastructure, mineral and energy development, improper grazing and other human activity contribute to loss of functional habitat for the species[3].

The Conservation Credit System (Credit System) is a pro-active solution to ensure impacts from human activities generate a net benefit for the species, while enabling human activities vital to the Nevada economy and way of life. The Credit System creates new incentives for 1) human activities to avoid and minimize impacts to important habitat for the species, and 2) private landowners and public land managers to preserve, enhance, restore, and reduce the threat of wildfire to important habitat for the species.

The Credit System is a market-based mechanism that quantifies conservation actions (credits) and impacts from human activities (debits), operationalizes market transactions, and reports the overall progress from implementation throughout the greater sage-grouse range within Nevada. The Credit System establishes the policy, operations and tools necessary to facilitate more effective and efficient conservation investments, and regulatory certainty for industries in a pre-listing or post-listing environment.

GOALS & PRINCIPLES OF THE NEVADA CONSERVATION CREDIT SYSTEM

The goal of the Credit System is to achieve no net unmitigated loss of greater sage-grouse habitat from anthropogenic disturbances in the State of Nevada. While the near term goal of the Credit System is focused on greater sage-grouse habitat, the Credit System may be adapted to support the preservation, enhancement, and restoration of Nevada's sagebrush ecosystem and other sagebrush obligate species in the future.

The Credit System aims to produce net benefits for the greater sage-grouse, create regulatory certainty regarding conservation of the species, and ensures that conservation measures in the State of Nevada are sufficient to preclude listing. However, should USFWS determine on a range-wide basis to list the species as either threatened or endangered under the Endangered Species Act, the Credit System strives to provide management certainty to Nevadan landowners, and a means to continue using their lands for a full range of activities post-listing.

GUIDING PRINCIPLES

The Credit System enables the enhancement, restoration, and preservation of a resilient and resistant sagebrush ecosystem in a credible, rigorous and cost-effective way. The Credit System works within the

[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] "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.

[3] 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.

regulatory mitigation hierarchy, where development first avoids, then minimizes disturbance, and then uses the Credit System to mitigate unavoidable impacts. The Credit System abides by the following guiding principles to achieve no net loss of greater sage-grouse habitat:

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

These principles are meant to provide clarity and guidance in cases where the Credit System Manual is silent or unclear.

BENEFITS OF PARTICIPATION

Quantifying and reporting environmental benefits from conservation practices creates the following benefits for participants and stakeholders:

Credit Developers (including landowners, land managers, conservation organizations, agencies, and conservation bankers) are able to quantify the amount of environmental benefit (credits) from implementing conservation practices. These credits can be sold to the Administrator, who purchases credits for Buyers seeking to improve and preserve habitat for greater sage-grouse in Nevada, and a new source of income.

Buyers can invest with confidence, knowing that credits are 1) consistently defined, 2) useful in comparing the relative improvements across projects to find opportunities for achieving the greatest benefit for greater sage-grouse, and 3) aligned with regulatory requirements to offset the impacts (debits) of development projects. This increases accountability with taxpayers, regulators and local constituents.

Local Constituents and Conservationists can identify habitat priorities and show how the actions of Credit Developers are helping to improve habitat and address these priorities. Transparent tracking and regional accomplishment reports can rally communities around making progress toward common goals.

SCOPE

The Credit System applies to the 2014 Sage-Grouse Management Area (SGMA), depicted in Figure 1.1. Any anthropogenic disturbance to habitat on Bureau of Land Management and Forest Service lands within the SGMA requires consultation with the Sagebrush Ecosystem Technical Team (SETT), and unavoidable impacts require compensatory mitigation through the Credit System. See *2014 State Plan* for additional information on actions that trigger SETT consultation. Private landowners are not required to mitigate anthropogenic disturbances on their land; however they are welcome to voluntarily generate credits for sale using the Credit System. Credits are awarded for projects that create benefits for greater sage-grouse habitat, and debits are generated from disturbances to habitat. The Credit System scope can be expanded to support additional conservation needs and to correspond with

Figure 1.1: Sagebrush Ecosystem Program Sage-grouse Management Area Map, 2014.

revisions to habitat and management maps in the future. See Chapter 2, *Service Area* consideration for additional information. 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.

ORGANIZATIONAL STRUCTURE & ROLES

The organizational structure and interactions between the participants in the Credit System are depicted in Figure 1.2 below, followed by a description of each participant.

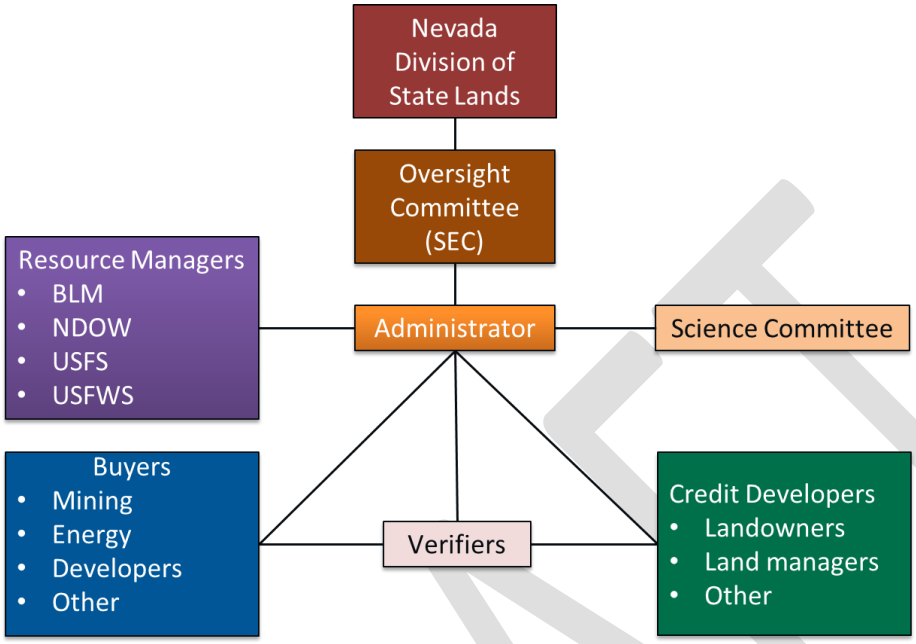

Figure 1.2: Operational structure of the Nevada Conservation Credit System

Nevada Division of State Lands (NDSL): NDSL is a division of the Nevada Department of Conservation and Natural Resources, and holds the ultimate authority to oversee and administer the Credit System.

Oversight Committee (SEC): The Sagebrush Ecosystem Council is a formal stakeholder group, including representatives from conservation interests, industry and ranching, and government which is responsible for overseeing the operations of the Credit System and making management decisions.

Resource Managers: Agencies that manage the greater sage-grouse species or lands related to the Credit System, and ensure that the Credit System functions according to current law, policy, and regulations.

Credit System Administrator: Manages the day-to-day operations of the Credit System, including facilitating and overseeing all credit generation and transaction activities. The Credit System Administrator ensures consistency, issues credits, and reports results. See Chapter 2, *Administrator Responsibilities* for additional information.

Science Committee: Expert scientists, 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: Assess the accuracy of credit and debit calculations. Verifiers are employees of state agencies or private contractors that must be trained and certified by the Credit System 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 bank facilitators, such as conservation banking companies, or other types of aggregators, who work with multiple landowners to implement conservation projects, secure performance assurances, and register and sell credits.

Buyers: Entities that purchase credits for mitigation or to meet other conservation objectives.

The Credit System creates additional market opportunities for 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 to help design credit projects, use the HQT to estimate credits, and submit all required materials to the Credit System Administrator. There is no formal process to designate or certify a technical support provider as qualified.

CREDIT SYSTEM OPERATIONAL OVERVIEW

This section provides an overview of the steps used to generate and transfer credits, and for the Credit System Administrator to manage the program. These processes are defined in detail in Chapter 3 of this Credit System Manual. Specific tools, forms, and guidance that are tailored to the Credit System are included in Appendix B.

Figure 1.3: Overview of the process steps to generate and purchase credits

The steps for generating and transacting credits are also depicted in Figure 1.3, above. Blue chevrons signify the steps undertaken to generate credits, green chevrons represent the steps to purchase credits, and the orange Track and Transfer connector represents the role of the Credit System Administrator who provides the platform for transactions to occur.

CREDIT SYSTEM CURRANCY

Credits are the currency of the Credit System and they represent "functional acres", which is based on habitat quality ("function"), relative to optimal conditions, and quantity (acres).

GENERATING CREDITS

The following steps outline the process to generate, verify and register credits from a conservation project (including habitat preservation, enhancement and restoration projects).

1. **Select & Validate Site:** Validation indicates to Credit Developers that they are eligible to generate credits, based on eligibility criteria, and provides some technical commentary on project design. This stage provides a screen to minimize investment and expenditures on the part of participants that may not be eligible to generate credits.
2. **Implement & Calculate Credit:** Credit Developers design the project, quantify the expected number of credits using HQT, implement conservation practices, and refine calculations based on on-the-ground conditions.
3. **Verify Conditions:** All projects undergo third-party verification to confirm that protocols were followed correctly and projected credits are appropriately calculated and match actual on-the-ground conditions.

4. **Register & Issue:** Once a project has been verified, supporting documentation is submitted to the Credit System Administrator where it is reviewed for completeness before credits are registered and issued to the Credit Developer's account on the 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 Credit System Administrator using unique serial numbers and a registry, and either transferred to Buyers or retired. Credit Developers annually confirm that performance standards are met and trigger phased credit releases, where applicable.

ACQUIRING CREDITS

The following steps outline the process to purchase credits.

1. **Indicate Initial Interest:** Buyers become aware of the opportunity or requirement to participate in the Credit System, and contact the Credit System Administrator to provide basic information. Additional assistance and technical support is available, if desired.
2. **Determine Credit Need:** Buyers determine the duration and amount of credit needed to best meet their needs. If fulfilling a regulatory offset, Buyers determine credit amount needed by determining baseline and post-project conditions of the debit site in accordance with the relevant regulatory instrument and the HQT.
3. **Acquire Credits:** Buyers contact the Administrator and come to terms on credit quantities, price, and timing of funding and other terms. The price, terms and conditions are all set and agreed upon by the Administrator and Buyer – with the only exception being the verification requirements. The Credit System 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, Buyers can use that information for internal and external reporting.

MANAGING THE CREDIT SYSTEM

The Credit System is managed by a Credit System Administrator that uses a transparent and inclusive dynamic 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 1.4 below.

1. **Update Manual & Tools:** Credit System Administrator updates this Credit System Manual, as well as tools, forms, and guidance to ensure practical

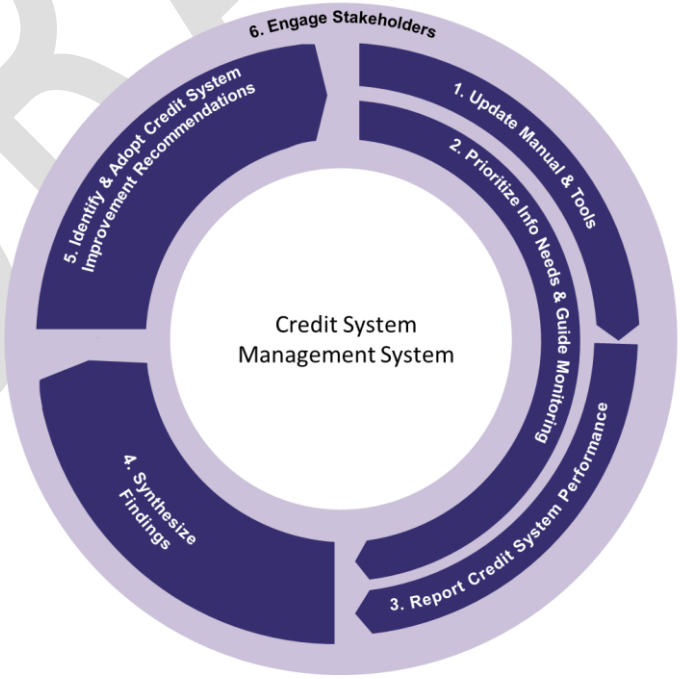

Figure 1.4: Overview of Credit System Management System

experience and new scientific information result in increased efficiency and effectiveness.

2. **Prioritize Information Needs & Guide Monitoring:** In coordination with the Science Committee, the Credit System Administrator identifies and prioritizes research and monitoring needs, coordinates funding efforts, and oversees monitoring and research.
3. **Report Credit System Performance:** Credit System Administrator develops the Annual Performance Report to summarize debits, credit awards and habitat improvements achieved. Routine reporting of accomplishments is essential to ensure transparency and drive accountability.
4. **Synthesize Findings:** Credit System 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 new information ensures the calculation of debits and credits is accurate by incorporating the best available science into HQT that improve project selection and design decisions, and improve accountability.
5. **Identify & Adopt Credit System Improvement Recommendations:** Credit System Administrator develops operational and technical improvement recommendations which are reviewed and adopted 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 predictability and transparency of this adjustment process enables Credit Developers, Buyers and other stakeholders to adjust practices and expectations without causing uncertainty.
6. **Engage Stakeholders:** Throughout the year, the Credit System 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 this overview are defined in detail in Chapter 3. The following legend is used in Chapter 3 to indicate process steps:

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

Chapter 2 summarizes the primary policy and technical considerations that enable consistent application of the Credit System by all participants.

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CHAPTER 2: POLICY & TECHNICAL CONSIDERATIONS

This chapter of the Credit System Manual (Manual) defines consistent direction for specific policy and technical considerations that arise during the generation and sale of credits, determination of debits, and management of the Nevada Conservation Credit System (Credit System). Table 2.1 below provides a summary of these considerations. Additional description is provided below for each consideration. The Documentation of Rationale provides additional detail related to each consideration including the logic used to arrive at the current direction, other options reviewed but not selected, and identification of potential management actions in the future.

Table 2.1: Summary of Policy & Technical Considerations

	CONSIDERATIONS	CREDIT SYSTEM DESIGN DIRECTION/ OPTIONS
	PARTICIPANTS	
1.	Administrator Responsibilities	▪ The Administrator facilitates day-to-day operations, participant engagement, and program reporting and improvement
2.	Credit Investment Strategies	▪ Flexible, but may include: Direct Credit Purchase, Reverse Auctions, and selection from list of credit development opportunities
3	Participant Confidentiality	▪ As a State run program certain information must be disclosed upon request; however published information protects participant confidentiality by aggregating information and removing identification information
	CALCULATING CREDITS AND DEBITS	
4.	Accounting Period	▪ Annual evidence of performance on credit sites ▪ Annual Credit System management process ▪ Annual programmatic audits
5.	Credit Project Types	▪ Habitat preservation ▪ Habitat enhancement ▪ Habitat restoration
6.	Service Areas	▪ All credits and debits must be located within the 2014 Sage-Grouse Management Area
7.	Habitat Quantification Tool Relationship to Credits and Debits	▪ HQT estimates habitat quality in terms of % function and functional-acres ▪ HQT generates habitat quality score for each seasonal habitat type ▪ HQT can estimate pre-project and project post-project habitat quality
8.	Mitigation Ratios	▪ Credit and debit ratio determined by habitat importance and seasonal habitat scarcity ▪ Debits are adjusted by the proximity to potential credit site to determine credit obligation that must be purchased to offset debit project
9.	Baseline	▪ **Credit baseline:** State-wide standard for each seasonal habitat type equivalent to the average or business as usual habitat functionality ▪ **Debit baseline:** Pre-project habitat function for each seasonal habitat type
10.	Credit Site Eligibility	▪ Site must be located in the Service Area ▪ Must attest to ownership or use rights, and past stewardship ▪ Post-project habitat functionality must meet 50% minimum functionality ▪ No evidence of an imminent threat of direct or indirect disturbance ▪ Necessary performance assurances must be complete ▪ Credit Developer must attest to the accuracy of the information
11.	Credit Release	▪ **Preservation Projects:** One habitat performance criteria triggered credit release ▪ **Enhancement Projects:** Habitat performance criteria triggered credit releases ▪ **Restoration Projects:** Combination of management actions and habitat performance criteria triggered credit releases

12.	Project Life	▪ **Credit Projects:** Minimum 10 year with 5 year increments afterwards, up to perpetual ▪ **Debit Projects:** Until verification that impacts have been reduced, up to perpetual
13.	Credit variability	▪ Tolerance threshold of 10% of overall habitat function to account for natural inter-annual variability
	ENSURING PERFORMANCE-BASED RESULTS AND NET BENEFIT	
14.	Verification	▪ **Credit Sites**: Before initial credit issuance, before increased credit releases, every 5th year, and periodic spot checks ▪ **Debit Sites**: Before construction, at time when debits are reduced or end, and periodic spot checks
13.	Stacking of Multiple Credits & Payments	▪ **Private Lands:** Baseline adjusted if under existing easement or habitat improved using publicly-funded program ▪ **Public Lands:** Baseline adjusted if competing uses already restricted or habitat improved due to existing mandate
16.	Reserve account	▪ Deposit amount determined by base contribution, probability of wildfire, and probability of competing land uses
17.	Performance Assurances	▪ Financial instrument contain sufficient funds for management of credit project and to remediate or replace invalidated credits throughout project life ▪ Contract payment is designed to maximize payment to Credit Developer while creating ongoing incentive to achieve credit site performance ▪ **Force Majeure Reversal:** Draw from the reserve account at no cost for a limited duration and Credit Developer provided option to remediate ▪ **Competing Land Use Reversal:** Draw from the reserve account at no cost for a limited duration, and redirect Credit Developer payments to replace invalidated credits ▪ **Intentional Reversal:** Credit Developer payments immediately cease, and payments redirected and other assurances used to replace invalidated credits
	REGULATORY ASSURANCE AND POLICY INTEGRATION	
18.	Public Lands	▪ Use restrictions and selection of sites less likely to be affected by other uses are incentivized, while ensuring invalidated credits can be covered ▪ Conservation activities are additional if not implemented using an existing mandate (e.g. statute, management or restoration plan)
19.	Application to State and Federal Policies and Regulatory Assurances	▪ Disturbances within the Sage Grouse Management Area on BLM and USFS lands are expected to be able to calculate debits and purchase credits to mitigate impacts ▪ The future State Plan is expected to direct compensatory mitigation to use the Credit System ▪ A Credit System agreement between the Administrator and the U.S. Fish & Wildlife Service is expected to authorize the use of Credits for mitigation purposes in pre- and post-listing environments

DESCRIPTION OF CONSIDERATIONS

The following descriptions are intended to provide sufficient information of how decisions are made for the Credit System related to generating and purchasing credits.

1. ADMINISTRATOR RESPONSIBILITIES

The Credit System Administrator facilitates and maintains the Credit System. Table 2.2 outlines the key responsibilities that are necessary for the Credit System Administrator to carry out.

Table 2.2: Key responsibilities of the Credit System Administrator

	CREDIT SYSTEM 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 ledger of credits and debits. ▪ Manages accounting of reserve and net benefit.
Credit Developer and Buyer Engagement	▪ Responds to inquiries of interest from Buyers and Credit Developers, connecting them to relevant resources. ▪ Ensures any necessary additional Credit Developer and Buyer outreach occurs.
Reporting & Accountability	▪ Develops Annual Performance Report, and Synthesis of Findings. ▪ Provides Annual Performance Report to the Oversight Committee, and other partners. ▪ Signs the Credit System agreements with state and federal agencies. ▪ Brings Improvement Recommendations to Oversight Committee, with input from the Science Committee. ▪ Contracts with third parties to conduct periodic program audits. ▪ Performs quality control checks on information submitted by Verifiers and Credit System participants. ▪ When necessary, implements corrective action or enforces contract compliance.
Financial & Contracting Support	▪ Manages funds, contracts and partnerships for monitoring. ▪ Confirms performance assurances are in place for projects. ▪ May facilitate reverse auctions for Buyers. ▪ Administers contract payments between Buyers and Credit Developers.
Science & Technical Support	▪ Defines Science Advisory Committee research questions. ▪ Trains Verifiers and technical support providers. ▪ Confirms verification and monitoring for projects. ▪ Designate preferred conservation areas, as appropriate. ▪ Periodically review Credit System incentives and adjust as needed.

2. CREDIT INVESTMENT STRATEGIES

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 2.3 describes a few of these potential investment approaches.

Table 2.3: Potential Administrator Investment Strategies

INVESTMENT STRATEGY	DESCRIPTION	BENEFITS	TYPICAL USES
Reverse Auction	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 ▪ Offsetting debits
Direct Credit Purchase	Credit Buyers purchase verified credits directly from the registry	Limits risk for Buyer – credits already verified	▪ High impact investing ▪ Offsetting debits
Select from Potential Project List	Select project from a list of eligible projects that have not yet been implemented that are expected to meet Buyer criteria; Credit Developers estimate expected number of credits	Buyers have quantified information to inform project selection	▪ Conservation funding programs ▪ Offsetting future debits

Each investment mechanism allocates risk between the Credit Developer and Buyer, and the allocation of risk should be considered in the selection of the appropriate investment strategy. For example, if a Buyer chooses to fund an eligible but not yet implemented project from the project registry, the Buyer holds the risk if that project does not perform as well as expected. If a Buyer chooses to conduct a reverse auction, this shifts some risk to the Credit Developer, who implements the project with assurances that credits generated will be purchased at an agreed upon price per credit.

3. PARTICIPANT CONFIDENTIALITY

The Conservation Credit System is run by the State of Nevada, and therefore certain information must be disclosed to the public upon request. To ensure sufficient participant confidentiality while still providing enough information to support a robust adaptive management process, published reports and Credit System information posted online protects participant confidentiality by only using aggregated project information that does not contain identifying participant or property identification unless consent is provided by the participant. Aggregated descriptions, such as the number of credits generated each year in specific regions, are included in the Annual Performance Report and other documents. Additionally, Buyers receive information related to their specific contracts. The Credit System Administrator may divulge information related to a participating property to a third-party contractor, if the third-party contractor has signed a confidentiality agreement provided by the Administrator.

4. ACCOUNTING PERIOD

The accounting period is the period of time when a credit is recognized before it must be confirmed with supporting documentation in a self-monitoring report or third-party verification. The Credit System uses the following annual accounting period guidelines:

- Credits generated for a project are confirmed every year throughout the life of a project through reporting and verification procedures. See *Verification* consideration for specific verification methods and schedules.
- Debits are assumed to persist across years unless Buyer initiated verification confirms an actual reduction in impacts.
- Annual Performance Reports developed by the Administrator describe the total number of confirmed credits and debits generated each year.

5. CREDIT PROJECT TYPES

To achieve the conservation needs of greater sage-grouse, three types of credit projects are needed, which can be applied to any project term length allowed under the Credit System:

1) **Habitat Preservation** – Maintenance or retention of existing habitat currently used by or in close proximity to habitat used by greater sage-grouse. An example is placing a conservation easement on existing high-quality habitat. Fire suppression activities without fulfilling the credit site eligibility criteria, see *Credit Site Eligibility* consideration for additional information, such as maintaining the habitat functionality and restricting competing land uses are not considered an eligible credit project; however, fire suppression activities on a site that fulfills the credit eligibility criteria is able to reduce the reserve account deposit amount if the probability of fire related to the site is reduced beyond the defined threshold. See *Reserve Account* consideration for additional information.
2) **Habitat Enhancement** – Manipulation of existing habitat to heighten, intensity, or improve specific habitat functionality. An example is improvement of functional scores through a prescribed grazing plan on existing rangeland.
3) **Habitat 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. Examples include the creation of useable greater sage-grouse habitat on abandoned mining claims or removal of pinyon-juniper trees on a site adjacent to existing sagebrush rangeland.

The cost of generating credits from each type of credit project may vary considerably. In addition, credits from enhancement and restoration projects may not be immediately available for release and purchase. Therefore the costs of generating credits from enhancement and restoration project sites may be greater compared to preservation project sites.

6. SERVICE AREAS

The Credit System service area is the mapped geographic region where credits and debits can be tracked, exchanged and reported. The service area designation has important implications for the viability of the Credit System transactions and for the ability of the System to achieve no net unmitigated loss of the greater sage-grouse habitat.

The 2014 Sage-grouse Management Area, depicted in Figure 2.1 below, is the Credit System service area. This map was produced by the Sagebrush Ecosystem Program based on the USGS Habitat Suitability Index, and was approved by the Sagebrush Ecosystem Council in January 2014. The boundaries of this management area are based on the range of the species in the state and are aligned with State of Nevada development project review requirements. Any anthropogenic disturbance to habitat on BLM and Forest Service lands within this area requires consultation with the SETT.

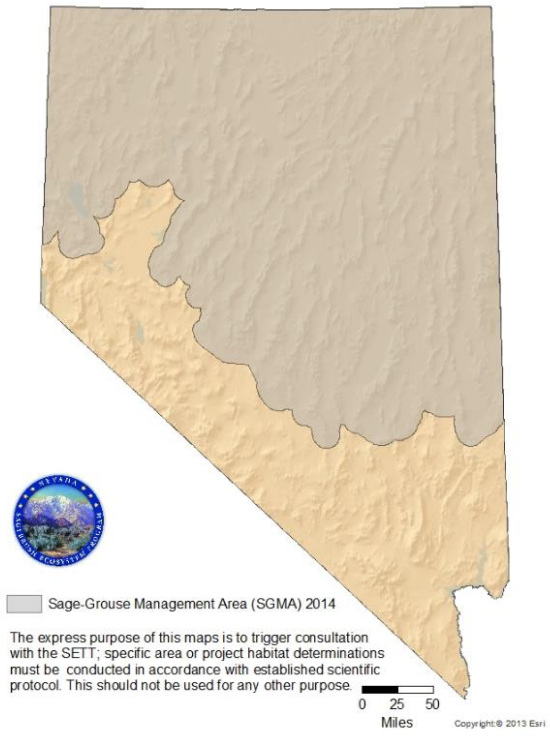

Figure 2.1: Greater sage-grouse service area

While the Service Area broadly defines the domain of the Credit System, the Mitigation Ratios establish incentivizes to generate credits in close proximity to debits. The *Mitigation Ratios* section describes how the Western Association of Fish and Wildlife Agencies (WAFWA) Management Zones and the Nevada Department of Wildlife (NDOW) Population Management Units, depicted in the figures 2.2. and 2.3 respectively, are incorporated into the proximity factor of the Mitigation Ratios to incentivize the generation of credits in close proximity to debits. In addition, the four Habitat Management Categories are also incorporated into the Mitigation Ratios to encourage the generation of credits and discourage debits in core and priority habitat areas.

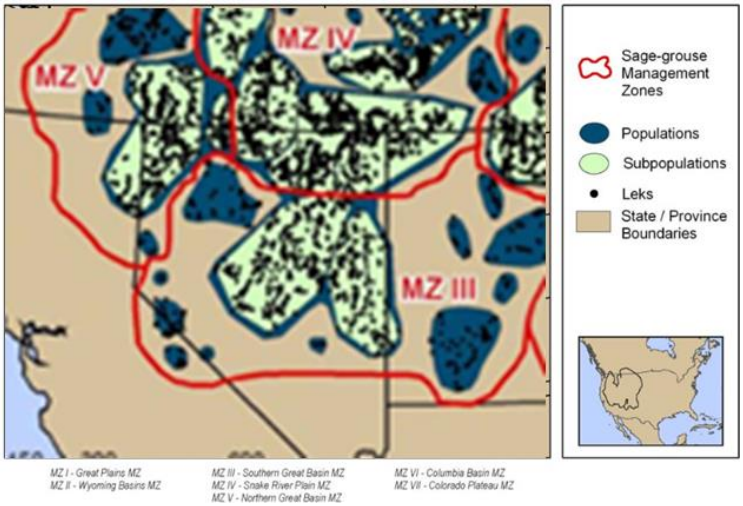

Figure 2.2: WAFWA Management Zones for Greater and Gunnison sage-grouse[1]

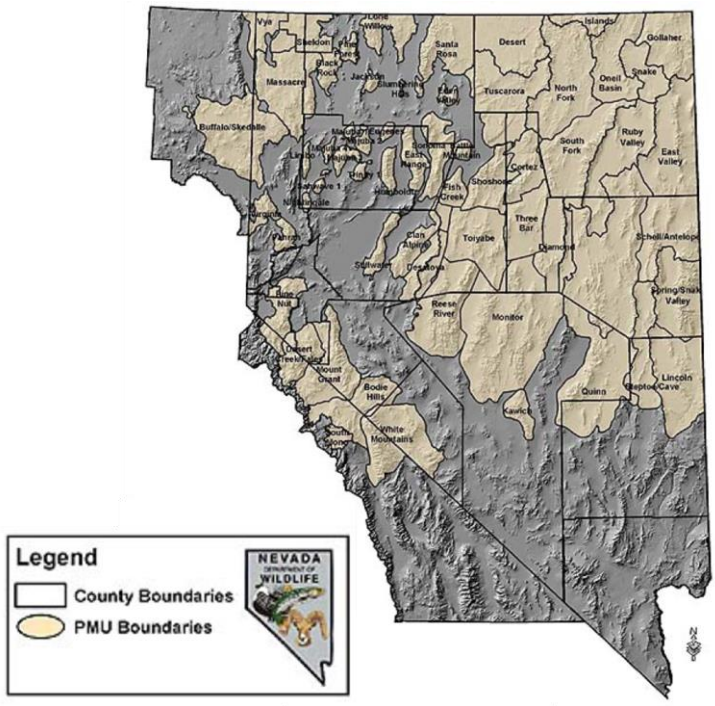

Figure 2.3: NDOW Population Management Units [NDOW is currently updating the PMU map.]

7. HABITAT QUANTIFICATION TOOL RELATIONSHIP TO CREDITS AND DEBITS

The Credit System uses the HQT to estimate habitat quality. Results are provided in terms of percent function and functional-acres within discrete map units[4] for each seasonal habitat type: nesting, late brood-rearing and winter habitat. The HQT is used consistently throughout the life of a credit project to substantiate the release of credits at the point that the project meets habitat performance thresholds, and to verify that conditions are being maintained over time. The HQT is used to determine debits before impacts occur and as necessary to determine if impacts are reduced over time. Pre-project HQT results can be used for up to 5 years after a site has been verified as long as the habitat quality is believed to be similar to the previous assessments and no significant changes have occurred on the project site.

The Credit System uses the greatest benefit (credits sites) or impact (debit sites) to the populations affected to determine the amount of credit or debit generated. This is accomplished by multiplying each of the habitat type functional acre amounts by the appropriate Credit Site or Debit Site Mitigation Ratio for each habitat type, as described in the following consideration, *Mitigation Ratios*. The highest of the three products is used from each map unit and summed to determine the overall credit or debit amount for the site.

8. MITIGATION RATIOS

Mitigation Ratios incorporate biologically significant factors that cannot currently be incorporated into the HQT. They enable offset transactions to achieve net benefit for the species by ensuring the total functional acres of credit acquired is greater than the functional acres of debit. The Mitigation Ratios create incentives for avoidance of impacts and preservation, enhancement and restoration of habitat in high priority areas. This includes avoiding and protecting seasonal habitats that are scarce for a particular population.

[4] See the HQT Methods Document for a description of the HQT approach overall and map units.

Credit and Debit Ratios

The Credit System applies mitigation ratios to credit and debit sites to adjust for 1) the importance of the habitat and 2) the scarcity of the specific seasonal habitat type impacted or enhanced.

Habitat Importance Factor

The Sagebrush Ecosystem Program's Habitat Management Categories map provides the reference point for the habitat importance factors. The numeric value assigned to each habitat importance factor depends on if the credit or debit site is impacting or benefiting a core, priority, or general management area. Impacts and benefits pertain to direct and indirect effects of credit and debit sites on sage-grouse habitat. The core management area is the highest conservation priority and the general management area is the lowest priority for conservation. Tables 2.4 and 2.5 below provide the values for debit and credit sites, respectively. The General + and Priority + refer to general or priority management areas where the site significantly improves connectivity for a population. The specific criteria for defining areas that significantly enhance connectivity are included in guidance for the development of project-specific Customized Management Plans.

Table 2.4: Debit Site Habitat Importance Factor

CATEGORY	FACTOR VALUE
Core	4.0
Priority or General +	2.0
General	1.0

Table 2.5: Credit Site Habitat Importance Factor

CATEGORY	FACTOR VALUE
Priority or General +	0.6
Core or Priority +	0.8

[[The numeric values are included for illustrative purposes only and will be revised through further analysis and engagement with scientists. The numeric values will be supported by available literature, and evaluated through programmatic adaptive management over time.]]

In accordance with the 2014 State Plan Table 3-1, disturbances in non-habitat management areas require habitat evaluations to determine whether the disturbance causes an indirect impact to core, priority, or general management areas. If the evaluation determines that an indirect impact is occurring in a core, priority or general management area, the habitat importance factor of that area is applied to the debit site causing the disturbance.

If a single map unit crosses two different habitat importance categories, the debits or credits is calculated using the habitat importance category with the greatest area.

Seasonal Habitat Scarcity Factor

Greater sage-grouse depend on different types of habitat throughout their life cycle - nesting, 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 no longer be suitable for the grouse. The Seasonal Habitat Scarcity Factor incorporates the effect of a credit or debit on each seasonal habitat type relative to the amount of the specific seasonal habitat currently available to the effected population. For debit sites, high numeric values are assigned to projects that eliminate or significantly reduce a limiting habitat type, and a low numeric value is assigned to projects that impact habitat types with significant redundancy for the effected populations. For credit sites, high numeric values are assigned to projects that benefit limited habitat types and low numeric values are assigned to projects that benefit habitat types that are already abundantly available to the effected populations. Tables 2.6 and 2.7 below

provide the values for debit and credit sites, respectively. The specific criteria for defining habitat scarcity are included in guidance for the development of project-specific Customized Management Plans.

Table 2.6: Debit Seasonal Habitat Scarcity Factor

CATEGORY	FACTOR VALUE
Impacts all of the remaining portion of a seasonal habitat type for the effected populations	4.0
Impacts but does not approach eliminating a limiting seasonal habitat for the effected populations	2.0
Impacts an abundantly available seasonal habitat type for the effected populations	0.0

Table 2.7: Credit Site Seasonal Habitat Scarcity Factor

CATEGORY	FACTOR VALUE
Significantly increases the availability of a limiting habitat type for the effected population	0.4
Increases the availability of a limiting habitat type for the effected population	0.2
Benefits a habitat type that is abundantly available for the effected population	0.0

[[The numeric values are included for illustrative purposes only and will be revised before the initial release of this manual through further analysis and engagement with scientists. The number values will be supported by available literature, and evaluated through programmatic adaptive management over time. In particular, the values for the seasonal habitat scarcity factor may be too low to incentivize the desired behavior and will need to be updated once in-depth analyses are completed.]]

Cumulative impacts to a population are accounted for through the seasonal habitat scarcity factor because as additional project impacts further deplete scarce habitat in an area, the seasonal habitat scarcity factor increases. For example, if Project A has eliminated a portion of a habitat type, then when Project B proposes to eliminate an additional portion of that depleted habitat, Project B will face a higher mitigation ratio factor because that habitat type has become more scarce, and thus the generation of additional debits through Project B is disincentivized. Initial impacts to very high quality habitat will also be strongly disincentivized through the HQT because the credit obligation would correspond to the quality of the habitat.

Combining Factors to Determine Debit or Credit Ratio

The habitat priority and seasonal habitat scarcity factors are summed to determine the overall debit or credit ratio for the site, as per Equation 1.

Equation 1

$$\textit{Credit or Debit Ratio} = \textit{Habitat Priority Factor} + \textit{Seasonal Habitat Scarcity Factor}$$

A unique ratio is developed for each seasonal habitat type for a given project. The greatest allowable value for credit ratio is 1.0 to ensure that the number of credits do not exceed the number of functional-acres produced by the site. The previous consideration, *Habitat Quantification Tool Relationship to Credits and Debits*, describes the mechanism for using the credit and debit ratios for each habitat type to determine the number of credit or debits generated from a site.

Offset Requirements

The credit obligation is the number of credits that must be purchased to offset the debits generated by an impact. The credit obligation is the number of debits adjusted by the proximity between the debit and credit sites.

Proximity Factor

The proximity factor incentivizes mitigation in close proximity to debit sites in order to increase the likelihood that mitigation serves the same populations of birds that are adversely impacted by the debit site. However, the proximity factor is not applied to credits generated in *preferred conservation areas*, as defined by the Administrator, in order to prioritize mitigation in areas that best serve the greater sage-grouse at a landscape-scale instead of focusing exclusively at the individual population level. The NDOW Population Management Units (PMUs) and the WAFWA Management Zones map 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. 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 range of numerical values associated with each of these three categories, are conveyed in the table 2.8.

Table 2.8: Proximity Factor

CATEGORY	FACTOR VALUE
No population connection between credit and debit sites	2.0
Credit and debit sites connected through population dispersal	1.0
Credit and debit sites located within a single population	0.0

[[The numeric values are included for illustrative purposes only and will be revised before the initial release of this manual through further analysis and engagement with scientists. The number values will be supported by available literature, and evaluated through programmatic adaptive management over time.]]

As part of the programmatic adaptive management process, if, over time, a population is impacted beyond the point of recovery and it would be more advantageous to implement credit sites in a location that would serve another population, then the proximity factor would be removed from the mitigation ratio equation for the relevant debit project. The habitat scarcity factor described above is designed to discourage this scenario from occurring; however, it is important to enable the ability to waive the proximity factor to ensure that mitigation efforts are redirected to areas that are most advantageous for the species at a landscape-scale. The Administrator makes the determination of when to remove the proximity factor from a debit site's mitigation ratio.

Credit Obligation

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

Equation 2

$$\textit{Credit Obligation} = \textit{Debits} * \textit{Proximity Factor}$$

Factors for Future Consideration

The incorporation of a restoration factor was considered, to incentivize potentially costly projects that restore significantly degraded habitat. While this mechanism was deemed inappropriate at this time, the restoration factor could be incorporated in the future, if identified as a priority through the programmatic adaptive management process. Guidance on developing and implementing the restoration factor can be found in the Documentation of Rationale.

9. BASELINE

Baseline is the starting point from which credits and debits are measured. Credits and debits represent the change from baseline that result from implementing a project. Baseline is not to be confused with pre-project conditions, meaning the conditions on a site before any actions are taken that either improve or impact the site. Baseline is defined differently for credit and debit sites.

The Habitat Quantification Tool generates a habitat functionality value for each seasonal habitat type affected by the credit or debit project. See *Habitat Quantification Tool Relationship to Credits and Debits* consideration for additional information. Therefore, a baseline value is required for each seasonal habitat type in order to determine the credits or debits generated by a credit project or debit project, respectively.

Credit Baseline

State-wide standard baseline values for each seasonal habitat type are used to determine credits. The state-wide baseline values represent the average or business as usual habitat functionality for each seasonal habitat type in the State of Nevada. [[The specific percent function for each seasonal habitat type will be developed in the coming months through an analysis of typical conditions.]] The credits generated by a particular project site are determined by measuring the additional functional acres above the state-wide standard for each seasonal habitat type[5] that a project site generates after implementation. For example, a 100 acre credit project site impacting a single seasonal habitat type and achieving 80% post-project habitat function using the HQT and a 30% state-wide standard baseline for that seasonal habitat type would generate 50 credits (the difference between 30% and 80% multiplied by 100 acres).

State-wide baseline values allow Credit Developers who have been and want to continue to be good stewards of their habitat to be eligible to receive credits, rather than simply measuring uplift (post-project function minus pre-project function) which would discourage these good stewards from participating. This also allows Credit Developers to incrementally increase the number of credits they receive as they improve habitat function on the site. State-wide baseline values encourage preservation and enhancement of high quality habitat as opposed to highly degraded habitat that may not be used by species. Further, state-wide baseline values eliminate the need for costly site analysis to determine baseline for each credit project and reduce concerns about perverse incentives to degrade habitat in order to generate more credits.

Note that only credit sites that meet all eligibility requirements may generate credits. See *Credit Site Eligibility* for additional information. For all projects that meet eligibility requirements, the actual amount of credits awarded at any given time is defined in the credit release schedule in the Customized Management Plan. See *Credit Release* consideration for additional information.

Debit Baseline

Pre-project habitat function baseline values for each relevant seasonal habitat type are used to determine debits. Pre-project habitat function is the condition of the site before the project implementation begins. Debits are calculated by subtracting post-project habitat functionality from pre-project habitat functionality. For example, a 100 acre debit site impacting a single seasonal habitat type and with pre-project habitat function of 80% and projected post-project habitat function of 10% would generate 70 debits (the difference between 80% and 10% multiplied by 100 acres). This requires Buyers to use the HQT to determine the actual functional acres of habitat on-site for each habitat type before any development on the site begins, and for these baseline values to be verified by a third party verifier. See *Verification* consideration for additional information.

[5] This function score refers to the 4th order, site-scale score before any modification from the surrounding landscape context that are captured through the 3rd order factors as defined by the HQT. Any 3rd order modifications should be applied equivalently to the baseline and the actual condition scores.

Although this approach requires more administrative effort than using a standard baseline (e.g. 100% habitat functionality), it allows for a more precise measurement of actual debits generated by the projects.

The Credit System uses the debit baseline in conjunction with the actual debit calculation and the appropriate mitigation ratios to determine the total credit obligation necessary to offset impacts from development. See *Mitigation Ratios* consideration for additional information.

10. 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 *Service Area* consideration for additional information. In addition, the credit site must be physically located within or indirectly affect core, priority or general management areas, or within the non-habitat management area and identified as viable habitat through field verification.

Ownership & Stewardship

Credit Developers must attest to their current ownership, tenure or use rights, as well as provide basic information related to past stewardship practices on-site, as applicable.

Minimum Performance Standards

The Credit System uses a minimum performance standard of 50% habitat functionality[6] post-project. This threshold is based on the Science Committee's expert opinion of state-wide conditions and needs for the greater sage-grouse. The anticipated site quality, based on the Customized Management Plan for the credit site, must be greater than 50% function post-project to be eligible to generate credits. See the *Credit Release* consideration for a description how credits are released.

[[The minimum performance standard of 50% is meant to be illustrative only at this point and will be revised through further analysis and scientific consultation. The minimum performance standard can be evaluated through the Credit System management process for future revision.]]

No Imminent Threat

There is no proof of imminent threat of direct or indirect disturbance by surface or subsurface development that will cause the habitat functionality of the total project area to be less than the minimum performance standard referenced above as measured by the HQT. Recently acquired subsurface rights and development plans would constitute proof of imminent threat that may disqualify a credit site from participating in the Credit System. Typical grazing practices are not anticipated to pose imminent threat of disturbance to the degree defined above.

Performance Assurances

Credit Developers must commit to performance assurances in the form of contract performance requirements and instruments that are specifically defined in each Credit Developers' contract with the Credit System. See *Performance Assurances* consideration for additional information.

Accuracy

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

[6] This function score refers to the 4th order, site-scale score before any modification from the surrounding landscape context that are captured through the 3rd order factors as defined by the HQT. Any 3rd order modifications should be applied equivalently to the baseline and the actual condition scores.

11. CREDIT RELEASE

Credit releases occur when a new milestone of performance criteria is achieved on the credit site that warrants an increase in the amount of credit generated on that project site. Specific performance criteria are defined in each project's Customized Management Plan. New credit releases are intended to occur only when sites increase habitat function. Degradation of habitat function outside of the tolerances defined in the *Credit Variability* section of this chapter are required to be remedied as defined in the *Performance Assurances* section of this chapter. See *Verification* section for additional information regarding third-party verification requirements necessary to trigger a new credit release.

Preservation Projects

For preservation projects where existing high quality habitat is maintained by the Credit Developer at its current functionality, credit release is determined by verifying that habitat function is meeting the defined performance criteria stated in the Customized Management Plan. Credits are released at the point of this determination and are valid for the duration of the project's life, provided that the Credit Developer continues to meet performance criteria confirmed in third-party verification and self-monitoring reports.

Enhancement Projects

For enhancement projects where existing high quality habitat is improved and maintained by the Credit Developer, credit releases occur when performance criteria defined in the project's Customized Management Plan are achieved. The credit release schedule in the Customized Management Plan uses performance criteria to define up to three credit release intervals with the first credit release occurring at the time of initial verification of habitat quality above the minimum performance standard defined in the *Credit Eligibility* section. Upon verifying conditions to release all credits projected from the site, these credits are expected to be maintained for the duration of the project's life according to the performance criteria and confirmed in verification and self-monitoring reports.

Restoration Projects

For restoration projects where habitat quality significantly improves over the life of the project and is maintained by the Credit Developer, credit releases occur when performance criteria defined in the project's Customized Management Plan are achieved. The credit release schedule in the Customized Management Plan uses performance criteria to define up to three credit release intervals.

- The first portion of credit may be released upon implementation of conservation actions defined in the project's Customized Management Plan. Credits released based on fulfilling action criteria are limited to **one third** of the total credits that the project is ultimately projected to generate. For example, a 1,000 acre credit project site impacting a single seasonal habitat type with a 30% state-wide standard baseline for that seasonal habitat type, and projected post-project habitat function of 90% after all habitat improvements have been achieved, has the potential to generate (600 credits). Up to one-third of the potential credits, or 200 credits, may be released upon implementation of specified conservation actions.
- The remaining **two thirds** or more of credits are released over up to two additional credit release intervals upon verification that the habitat quality is meeting performance criteria. Up to two thirds of total credits may be released when 66% of expected habitat function is achieved, and the full credit amount may be released when 100% of expected habitat function is achieved, as shown in Table 2.9 below. Performance criteria may be articulated by the Credit Developer as either quantitative goals tied to specific attributes that are included in the HQT, or as overall HQT scores for the project. Upon verifying conditions to release all credits projected from the site, these credits are expected to be maintained for the duration of the project's life according to the performance criteria and confirmed in verification and self-monitoring reports.

The Credit System limits risk from action-based credit release by using a combination of mechanisms that ensure net benefit and limit overall program risk, including mitigation ratios, reserve pool, and performance assurances. Should a restoration project fail to generate the credits indicated in the site's Customized Management Plan, this combination of mechanisms would cover 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 have incentive to undertake these types of projects. Table 2.9 shows an example of a credit release schedule for a hypothetical restoration project, with performance criteria articulated through overall HQT project site scores.

Table 2.9 Example Credit Release Schedule for a Restoration Project

PERFORMANCE CRITERIA ACHIEVED	CREDITS RELEASED
Milestone 1 - Action checked: Ex. restore riparian area - 1/3 of performance assurances secured	**33%** of Total Projected Credits
Milestone 2 - 66% of expected HQT score for the project - 2/3 of performance assurances secured	**66%** of Total Projected Credits
Milestone 3 - 100% of expected HQT score for the project - All performance assurances secured	**100%** of Total Projected Credits

12. PROJECT LIFE

Project life is the amount of time that the Credit System recognizes a project before requiring that the project be renewed. For credit projects, it is the length of time a Credit Developer has committed to creating and maintaining habitat conditions. For debit projects, project life is the length of time that the project is anticipated to impact habitat before full remediation and habitat impacts no longer occur.

Credit Projects

For credit projects, the minimum project life is 10 years and the maximum project life is perpetuity. Project life can is defined in 5 year increments. Thus, project life can be 10, 15, 20, 25 years, and so on, up to and including permanent contracts. The rationale behind the 10 year minimum is based on expert 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 Buyers are required to match credit life projects to the expected life of the debit project. See below for matching of duration discussion.

The Credit Developer defines the project life in the Customized Management Plan that is submitted to the Administrator. Upon completion of the credit project, the Credit Developer can elect to renew the project. Renewal entails developing a new Customized Management Plan and using the HQT and associated technical and policy considerations 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 *Verification* consideration for additional information. If the project is not renewed, the Credit System no longer recognizes credits after the end of the project life.

Debit Projects

The duration of impact from debit sites is expected to be defined in appropriate regulatory permitting documents. The Buyer seeking an offset proposes the debit project life and associated credit obligations to include in the applicable permit based on development design documents and HQT outputs, which is

confirmed by the Administrator. At the end of a debit project, third-party verification is required to demonstrate that the impact to the habitat is no longer occurring.

Decreases in impact may be recognized upon verification that impacts have been reduced. Once a decrease in impact is verified and a new debit calculation is complete, the credit obligation is adjusted for an additional term. See *Verification* consideration for additional information. Permanent debit projects have a perpetual project life.

Matching the Duration of Credits and Debits

The Credit System requires that the life of the contracted credit projects must be equal to, or greater than, the life of the debit project it is offsetting.

13. CREDIT VARIABILITY

Even on ideal credit sites, credit variability is likely to result due to annual climatic or other natural variability in habitat functionality that occurs on site and throughout the service area. Credit variability is also likely to occur due to sampling error that is inherent to any measurement methodology. 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.

Tolerance Thresholds

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 Customized Management Plan. Subsequent verifications may be up to 10% below the habitat function determined using the HQT. Project site verifications within this 10% threshold are considered as meeting defined requirements of the Customized Management Plan, and therefore are not required a reduction in credits, or trigger the use of Performance Assurances for the site.

14. VERIFICATION

All credit and debit projects require verification. The purpose of verification is to provide confidence to all participants, including the Credit System Administrator, that credit and debit calculations represent a true and accurate account of on-the-ground implementation actions and habitat function, as defined in each project's Customized Management Plan. Ongoing verification and monitoring ensures that projects are maintained over time and support the expected habitat quality commensurate with the amount of credits and debits generated. The required frequency and process for verification and choosing Verifiers is defined below.

Verification is an independent, expert check on the HQT calculations and all supporting documentation. Third-party Verifiers must be trained and certified by the Administrator. Verification is conducted using the HQT. As the HQT is improved over time, the verification protocol is adjusted accordingly, so it is critical to always use the latest version of the verification protocol.

Credit Verification

Verify credits at four points in time:

1. Before first credit release
2. Before increases in credit amount
3. Every 5th year
4. Periodic spot checks & audit
5. Self-monitoring

Before first credit release

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

Before increases in credit amount

Third party verification is required to confirm that conditions meet the performance criteria specified in the credit release schedule in a project's Customized Management Plan before an increase in credit amount is awarded.

Every 5th year

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 Credit System Administrator to evaluate the project based on performance criteria included in the credit release schedule. When verification is conducted to either support an increase in credit amount or a periodic spot check and audit, the fifth year requirement 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 Check & Audit

The Administrator conducts random audits of approximately 10% of credit sites in any particular year.

Self-monitoring

Credit Developers are expected to conduct self-monitoring annually, in years when third-party verification is not required, to ensure that the site is meeting performance criteria.

Debit Verification

Verify debits at four points in time:

1. Before debit project begins
2. During project implementation period
3. When debits end or decrease
4. Periodic spot checks & audit

Before debit project begins

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

During project implementation period

Third party verification is necessary to verify site conditions once the 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 permit and regulatory requirements. The specific details of the verification required during the project implementation period are defined in each project's Customized Management Plan.

When term debits end or reduce

Third party verification is necessary at the end of a term debit to confirm that remediation has occurred according to specified permit requirements and habitat impacts no longer persist.

Periodic spot checks & audits

The Credit System Administrator conducts random audits of approximately 10% of debit sites in any particular year.

Verifier Selection

For verification of credit and debit sites, contracting and payment is handled by the Credit System Administrator (i.e. a Credit Developer or Buyer does not directly hire a Verifier). The Credit System Administrator receives a verification fee and a signed verification contract to allow access to the site from the Credit Developer or Buyer. The Credit System anticipates that during the initial stages of ongoing operations, verification consists of one field day including travel and one day of administrative tasks to complete the Verification Report. The Credit System Administrator pays verification fees for visits conducted for periodic spot checks and audits. Credit Developers and Buyers pay verification fees for all

other occurrences. The Administrator selects from the pool of certified Verifiers, and notifies the Credit Developer or Buyer before the Verifier conducts a site visit.

15. STACKING OF MULTIPLE PAYMENTS & CREDITS

Credit sites that are enrolled in public conservation programs or have existing land protections, such as conservation easements, are eligible to generate credits, but the amount of credit may need to be adjusted. These programs provide payment to landowners with the expectation that they are benefitting the environment and thus the landowner has already been compensated for efforts that protect or enhance greater sage-grouse habitat. Stacking allows a Credit Developer to receive multiple payments from the same area of land.

Stacking Credits with Federal Programs

Payments from federal conservation programs, such are the Conservation Reserve Program or Wildlife Habitat Incentive Program, may be paired with payments from private sector mitigation markets for different services on the same land. Stacking credits from the Credit System with federal programs has the potential to create additional conservation benefits and leverage federal investments, as depicted in figure 2.4 below.

- **Inside of a Federally-Funded Contract**: Provisions may be defined to allow credits to be generated for creating and maintaining habitat function that is better than the minimum function that is expected from implementation of the practices that have already been paid for through a federal program. These additional benefits are the responsibility of and are paid for by the landowner throughout the length of the federal contract.
- **Outside of a Federally-Funded Contract**: Provisions may be defined to allow credits for long-term or permanent contract extensions, management or protection agreements following the expiration of a federal contract. Thus, the amount of credits eligible for sale following the expiration of a federal contract may be increased proportionate to the federal contribution to the overall conservation benefit.
- **Pairing Federal Funds with Mitigation Credits:** A landowner may enter into a federal cost share program to fund habitat enhancements. The portion of the functional acres generated from these habitat improvements can be used to generate credits in the proportion to the funding that was contributed by the private party. Thus, a 50 percent cost share project that results in 100 functional-acres greater than baseline is eligible to generate 50 credits for sale.

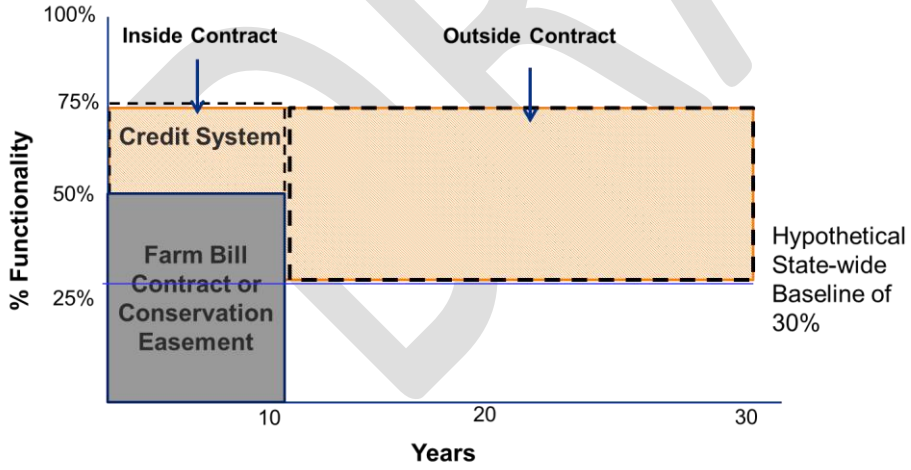

Figure 2.4: Illustration of Stacking Federal Programs with Credit System

Credits from Land with Existing Conservation Easements

Land which is already under a conservation easement that requires permanent preservation of habitat is not at risk of certain types of habitat impacts. The Customized Management Plan should define the habitat quality that is required by the existing conservation easement, so that any additional habitat function maintained on the site is eligible to generate credits.

Public Lands

Public lands already or planning to be restricted from competing land uses, such as Areas of Critical Environmental Concern or Wilderness Areas, are not at risk of certain types of habitat impacts. In addition, public lands already or planning to be improved using an existing mandate (e.g. statute, management or restoration plan) generate habitat benefits using public funds even in the absence of the Credit System. Similar to the logic described above for private lands, credits can be generated for enhancing and maintaining habitat function that is better than the minimum function that is expected given the existing land use restrictions and improvements using public funds.

[[The USFWS and BLM are currently developing national guidance for mitigation on public lands. Specific criteria to ensure projects on public lands are additional will be added to this section once the national guidelines are available.]]

Stacking Multiple Credit Types

Credit Developers may generate multiple types of credits on the same area of land, such as greater sage grouse and water quality credits. Following the same logic as for conservation easements, the Customized Management Plan should define the habitat quality that is required by the existing credit sales, so that any additional habitat function maintained on the site is eligible to generate credits. Further, participation in the Credit System does not foreclose opportunity to participate in other ecosystem service markets (water, carbon etc). Credits for these other programs may only be awarded for any additional benefits that are not already expected in order to maintain the quality of habitat necessary to meet the habitat performance standards for the Credit System.

16. RESERVE ACCOUNT

The reserve account is a pool of credits that are used when credits that have been generated and sold are invalidated due to a force majeure event, or competing land uses. In the event of these circumstances, credits held in the reserve account are used like an insurance fund to replace the invalidated credits until credits are replaced through remediation, direct purchase or outstanding payments. A percentage of credits from each credit transaction is deposited into the reserve account and the Administrator manages the account overall. Credits drawn from the reserve account never enter the market (i.e. are never sold), but instead are retired.

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 is a mechanism to provide insurance to the overall Credit System that ensures net benefit regardless if specific credit projects do not perform. The portion of credits that a credit project deposits into the reserve account is determined by the probability of the credits being invalidated, so it also creates an incentive for the Credit Developer to reduce the risks that could invalidate the credit. In addition, credits are deposited into the reserve account, as opposed to dollars, so the greater sage-grouse benefits when a credit project is developed instead of after a project site is degraded and new credit projects are completed.

The reserve account determines the unique deposit amount for each credit project and is the sum of the numeric values assigned to each of the factors. See *Equation 3* below. The net reserve account deposit percentage is multiplied by the number of credits transferred to determine the reserve account deposit amount, which is the portion of the credits transferred that must be deposited into the reserve account.

See *Equation 4* below. Thus a lower deposit percentage results in a Credit Developer having a lower deposit amount.

Equation 3:

$$\begin{aligned} &\textit{Reserve Account Deposit Percentage} \\ &= \textit{Base Contribution} + \textit{Probability of Wildfire} \\ &+ \textit{Probability of Competing Land Uses} \end{aligned}$$

Equation 4:

$$\begin{aligned} &\textit{Credit Site Reserve Account Deposit Amount} \\ &= \textit{Credits} * \textit{Reserve Account Deposit Percentage} \end{aligned}$$

Factor Descriptions

The factors in *Equation 3* above are defined below, along with the numeric values associated with each factor option.

Base Contribution

A base contribution to the reserve account is required of each transfer of credits to cover credits invalidated by intentional reversals. For each transfer of credits that occurs, a base contribution of 4% of those credits is deposited into the reserve account.

Probability of Wildfire

A portion of each transfer of credits is deposited into the reserve account in order 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 is determined by the primary Wildland Fire Potential category associated with the credit project site and potential adjustment for a reduction in fire risk based on suppression activities implemented as part of the credit project. Table 2.10 provides the values for different fire risk categories.

The USDA USFS Wildland Fire Potential map delineates areas based on fire intensity, weather, frequency, and size, which is then classified into a relative ranking of fire potential from very low to very high. Susceptibility to fire is also connected to vegetation type, proximity to urban areas, percentage of dead vegetation, and amount of time since the last burn. The map is easily accessible, updated regularly and is based on sub-products that get at key drivers of fire including proximity to roads, probability of lightning and presence of cheatgrass.

[[Alternative methods to determine the probability of wildfire for a credit site are being evaluated to ensure the best available method that is practical to implement is used. In addition, some forms of fire can be good for greater sage-grouse habitat and this concept will be addressed in Custom Management Plans and Remedial Action Plans.]]

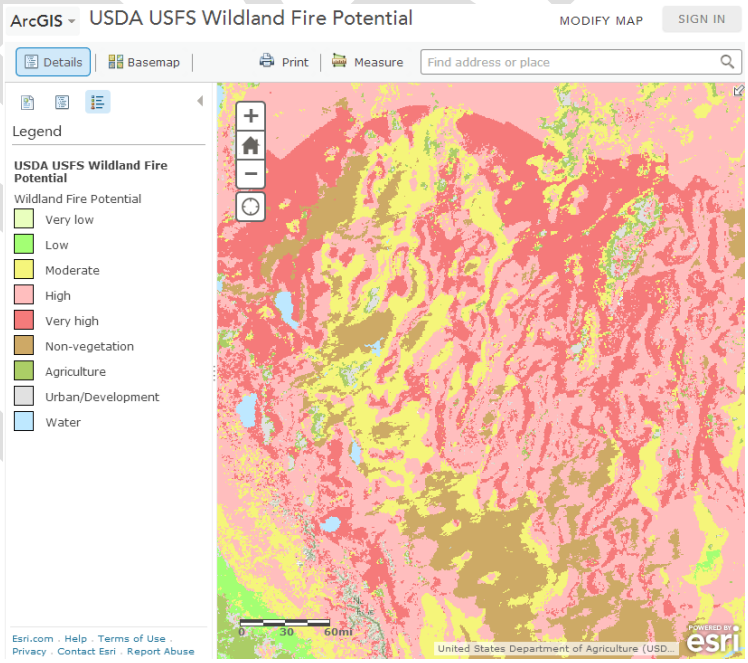

Figure 2.5: USDA USFS Wildland Fire Potential map

The primary Wildland Fire Potential category associated with the credit project site can be reduced a category if fire suppression activities (e.g. green strip) implemented achieve a quantifiable minimum fire risk reduction threshold for the period of the credit project. This additional fire risk reduction incentive is indicated by the "+" in Table 2.10.

[[The allowable methods to determine fire risk reduction and the threshold required has not be determined.]]

Table 2.10: Probability of Wildfire Factor Options & Values

OPTION	FACTOR VALUE
Very High	10%
High or Very High +	8%
Moderate or High +	6%
Low or Moderate +	4%
Very Low or Low +	2%

[[The numeric values are included for illustrative purposes only and will be revised before the initial release of this manual through further analysis and engagement with federal land management agencies. The number values will be evaluated through programmatic adaptive management over time.]]

Probability of Competing Land Uses

A portion of each transfer of credits is deposited into the reserve account in order to temporarily cover credits invalided by competing land uses, both obtainable and unobtainable by the Credit Developer. For each transfer of credits that occurs, a contribution is determined by the risk of competing land uses invaliding the credit as depicted in Table 2.11.

Different land protection mechanisms are available for privately- and publicly-owned land. The Credit System is agnostic to the mechanism used, and instead the probability of competing land uses invalidating a credit project is determined based on the mechansim and unique terms secured for each project credit project. Note that no proof of imminent threat of direct or indirect disturbance to a credit site is an eligibility requirement for a credit project. See *Credit Site Eligibility* consideration for additional information. It may not be possible to exclude some competing uses for a credit project site; however it may be possible to require sustainable practices related to some competing uses (e.g. sustainable wildhore management) in the land protection mechanism used and implementing these practices is considered by this factor. Further, it may be be possible to require future impacts to a credit site to mitigate using the Credit System by incorporating this requirement in the land protection mechanism or Participant Contract. If this requirement is implemented along with a required +1 increase to the mitigaiton ratio for the future impact, then this is considered by this factor.

Table 2.11: Probability of Competing Land Uses Options & Values

OPTION	FACTOR VALUE
Medium risk of competing land uses invaliding the credit project	20%
Low risk of competing land uses invaliding the credit project	10%
No risk of competing land uses invalidating the credit project or impacts from competing land uses are required to mitigate impacts using the Credit System with +1 to mitigation ratio	0%

[[Each option will be clearly defined based on each potential land protection mechanism (e.g. conservation easement on private land, Right-of-Way on public land) through further analysis and engagement with federal and state land management agencies. The numeric values are included for illustrative purposes only and will be revised before the initial release of this manual through further

analysis and engagement with scientists. The number values will also evaluated through programmatic adaptive management over time.]]

Reserve Account Management

The Administrator reviews the balance of the reserve account at least annually and may propose adjustments to the factors that determine reserve account deposit amounts, and terms of use to be approved by the SEC as part of the Credit System management process.

17. PERFORMANCE ASSURANCES

The Credit System uses performance assurances defined in Participant Contracts with Credit Developers to ensure the durability of credits generated throughout the life of a credit project. Performance assurances are implemented through contract terms and financial instruments. Financial instruments, such as endowment funds and contract surety bonds, ensure funds are available for the long-term management of each credit site, and that funds are available to promptly replace credits that have been sold but are invalidated due to intentional or unintentional reversals. The following overarching principles and basic minimum requirements guide the development of performance assurances:

- Minimize financial transaction costs and maximize payments to Credit Developers for actions that improve the environment.
- Appropriately allocate risk to Credit Developers and not solely to the Administrator.
- Preferentially 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 of no payments for projects that are not producing credits, even in the case of force majeure after a project has been deemed inappropriate to remediate.
- Design financial instruments to cover long-term management of credit project sites and replacement of reversals considering
  - Management and maintenance activities defined in Custom Management Plan
  - Monitoring and verification defined in Custom Management Plan
  - Bank interest rates
  - Relevant inflation rates
  - Credit market price trends

Financial Instrument Design

The Credit System requires that Credit Developers establish a financial instrument for each credit project site in order to sell credits. Financial instruments must be held either by the Administrator or a qualified third party institution.

The type of financial instrument required is determined by the duration of the credit project. Perpetual credit projects require a non-wasting endowment fund, such that the principal amount does not decrease in value over time. Term credit projects require a financial instrument term annuity, such as a wasting endowment fund, and are typically managed such that no funds remain at the end of the contract. Financial instruments should be interest bearing.

The principal amount required is determined by the specific characteristics of the credit project, and must contain:

- Sufficient funds for management, maintenance, monitoring, and other activities defined in the Customized Management Plan throughout the life of the project.
- Sufficient funds to remediate or replace invalidated credits due to intentional or unintentional reversals throughout the life of the project.

The Administrator determines the required principal amount using a predictive financial model that accounts for economic and financial conditions such as inflation and interest rates. Multiple financial instruments may be appropriate and permitted in unique situations. Further, the Administrator may require other types of performance assurances (e.g. contract penalty) deemed necessary in addition to the financial instruments.

Contract Payment Terms

The Administrator defines the terms of payment for credit projects. The terms of payment can create a strong ongoing incentive for the Credit Developer to achieve performance and eliminate the need for additional financial instruments. One such payment structure involves paying the Credit Developer an annual payment that is at least as much as the anticipated maintenance and monitoring costs and likely includes sufficient funds for profit. These payments may be structured to provide an additional amount on years when third-party verification is performed and the site is shown to perform at or above expected performance. These payments can be structured such that the project's endowment fund is sufficient to make payments for the life of the project. The Participant Contract ensures that if performance standards are not met, then the remaining funds in the endowment fund are used by the Administrator to either remediate the credit site or used to purchase credits from a different site. These payment terms align the incentives of the Credit Producer and the Administrator by sharing the financial risk for ongoing performance.

In situations where the Administrator either does not make ongoing payments or the contract is structured to make a large upfront payment to the Credit Developer, other financial instruments, such as performance bonds, may be used to ensure sufficient funds are available to the Administrator should the Credit Developer fail to produce the credits previously sold. Any financial instrument must clearly delineate what portion of funding is available to the Administrator to replace credits in the event of unintentional reversals, and an additional amount available to the Administrator in the event of intentional reversals.

Terms of Performance Assurance Use

The Credit System defines different expectations for using performances assurances under the following situations: 1) Force Majeure; 2) Competing Land Uses; and 3) Intentional Reversals.

Force Majeure

In the case of an unintentional reversal from force majeure events, the Administrator withdraws credits from the reserve account to cover the invalidated credits at no cost to the Credit Developer for a limited duration until the credits are replaced. See the *Reserve Account* section for additional information.

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, contract payment terms or financial instruments are used to fund activities included in the remedial action plan. If only a portion of the credits are recovered, payments are reduced according to the amount of credits actually being generated and the Administrator uses the remaining amount in the project site's financial instrument to purchase credits elsewhere. 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 and 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 to purchase credits from a different credit site.

Unintentional Reversals from Competing Land Uses

The risks associated with unintentional reversals from competing land uses are intended to be addressed by adjusting the reserve account contribution required from the credit site. In the case of an unintentional

reversal due to competing land uses, such as subsurface mineral rights held by another entity, the Administrator withdraws credits from the reserve account to cover the invalidated credits at no 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 to purchase credits elsewhere to cover the total amount required for the remainder of the contract. If the impact of the competing land use results in the credit site not being able to generate the credits required, the contract can be canceled without penalties because these credit site have contributed more to the reserve account. See *Reserve Account* consideration for additional information. The Administrator uses the remaining funds in the project site's financial instrument to purchase credits from a different credit site and thus reduces or eliminates the need to withdraw credits from the reserve account.

Intentional Reversals

In the case of an intentional reversal, such as not implementing management activities defined in the Custom Management Plan, all payments to the Credit Developer immediately cease. The Administrator uses the remaining funds in the project site's financial instrument to purchase credits from a different credit site. Further, the Administrator executes other relevant performance assurances, such as a performance bond, contract penalty, or other mechanism to recoup any remaining costs associated with the project. If there is a time lag between the intentional reversal and the Administrator securing new credit contracts, the Administrator withdraws from the reserve account for a limited duration to prevent any gaps in coverage for credits that have been sold for the purpose of mitigation. The credit withdrawal from the reserve account ceases as credits are acquired to cover the remainder of the contract.

18. PUBLIC LANDS

The Credit System allows for credits to be generated on public lands (i.e. BLM, Forest Service, etc.) for mitigation purposes. The durability of projects on public lands is safeguarded using land protection mechanisms (e.g. right-of-ways), financial instruments (e.g. contract performance bonds) and the Reserve Account as described in the *Performance Assurances* and *Reserve Account* sections above, similar to durability of projects on private lands. However, different mechanisms are used to protect public land from other uses and the risks associated to these different mechanisms is typically greater than the mechanisms (e.g. conservation easements) used to protect private land. Further, the additionality of projects on public lands takes into account similar but unique factors compared to projects on private lands. The unique differences related to projects on public lands in terms of durability and additionality are summarized below.

Durability

Mechanisms used to protect public lands from uses that threaten greater sage-grouse habitat are typically less restrictive, more complicated and less flexible than mechanisms used to protect private lands. The Credit System is agnostic to the mechanism used to protect public lands and instead uses financial instruments and the Reserve Account to incentivize the Credit Developer to produce the agreed upon amount of credits and ensure the Credit System is generating more credits than debits over time.

All credit projects are required to sign a Participant Contract with a Customized Management Plan that assigns liability for the credit site to the Credit Developer. The contract defines the rights owned by the Credit Developer and is valid through the life of the credit project. The contract requires financial instrument(s) capable of covering the cost of intentional reversals, and maintenance and monitoring of the credit site.

The Reserve Account considers the level of risk of the specific land protection mechanism and unique terms secured for each project credit project. The level of risk then determines the Reserve Account deposit 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 deposit amount also helps ensure the Reserve Account is capable of covering invalidated credits regardless of the land protection mechanisms used. Potential land protection mechanisms on public lands include Right-of-Ways, Recreation and Public Purpose Act leases and Stewardship Agreements; individual mechanisms may be preferable depending on the type of Credit Developer and specific project characteristics.

Additionality

Projects that generate credits must be additional to activities that would occur in the absence of the Credit System. On private land, credit projects are additional if the landowner is not already performing or planning to perform the specified conservation actions to receive payments from sources other than the Credit System. On public land, credit projects are additional if the government is not already performing or planning to perform the conservation using public funds based on an existing mandate (e.g. statute, management or restoration plan). See *Stacking of Payments & Credits* consideration for additional information.

19. APPLICATION TO STATE AND FEDERAL POLICIES AND REGULATORY ASSURANCES

The Credit System is an advanced credit acquisition system for a candidate species, and the State's preferred approach to mitigate impacts to sagebrush habitat. Current State policy directs the establishment of the Credit System, Proposed Federal policy creates the opportunity for disturbances on BLM lands to be mitigated using the Credit System, and in the event that the greater sage-grouse is listed as threatened or endangered, the Credit System aspires to be used to efficiently meet any federal regulatory requirements that may be imposed on private property.

State and Federal policies are expected to evolve over time in order to use the Credit System as the approach to mitigate disturbances to sagebrush habitat on different lands in the State of Nevada. In addition, the Credit System may be used by any entity, including the State and non-governmental organizations, to evaluate the functional-acres gained through non-offset/non-compensatory mitigation projects and the loss of habitat from natural causes, such as wildfire, and other types of disturbances.

State Policy

The establishment of 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). The Credit System is expected to be further integrated into State policy though the State's Plan for Conservation of Greater Sage-grouse in Nevada planned for completion in the summer 2014. The State Plan is expected to define any credit site in the State that fulfills the Credit Site Eligibility requirements as an eligible credit site, regardless of land ownership. Further, the State plan is expected to define any disturbance that has not been avoided and has residual impact after being minimized, and meets State criteria for requiring compensatory mitigation can use the Credit System. The need to offset is determined in consultation with the SETT.

Federal Policy

As an advanced credit acquisition system for a candidate species, the Credit System aspires to provide operational certainty to debit projects that use the Credit System in the event of a listing decision. The Credit System is expected to initiate a conservation banking review and approval process for a programmatic Credit System Agreement, which is a signed document between the Administrator and the US Fish & Wildlife Service (USFWS) that authorizes the use of Credits for mitigation purposes. In addition to the Credit System Agreement, the Credit System is designed to accommodate additional regulatory assurances to ensure that efforts taken to facilitate conservation of the greater sage-grouse are recognized by the USFWS in the event that the species is later designated as threatened or endangered.

For example, the Credit System is designed to accommodate regulatory mechanisms such as CCAs, CCAAs and Safe Harbor Agreements.

In the event of a listing decision, the Credit System could provide coverage for non-exempt actions on private lands in addition to impacts on public lands. Currently, since the greater-sage grouse is not listed there are no restrictions on private land unless landowners have signed into an existing CCAA. The Credit System could be used in listing scenarios as follows:

- In the event of a threatened (not endangered) listing, FWS may create a 4(d) rule that would exempt a number of activities from ESA restrictions. These would be activities that USFWS determines minimize the impacts to listed species to the extent that additional federal protections are not required. If this happens, it may be possible that activities using mitigation from the Credit System may be exempt from take requirements. Note that a 4(d) rule might be written that would exempt some agricultural and ranching practices from impacts of the listing so as not to be a burden on farmers and ranchers.
- In the event of a threatened or endangered listing, and not subject to a 4(d) rule, Incidental Take Permits and Certificates of Participation are issued through individual Habitat Conservation Plans (HCP) created for greater sage-grouse in the State. HCPs could potentially create demand for mitigation through the Credit System.

Disturbances on Nevada BLM Lands

The Credit System is expected to be integrated into Federal policy through federal Land Use Plans for the Northeastern California-Nevada Sub Region and an MOU between BLM, USFS and the State of Nevada. The proposal in the Nevada Alternative of the Draft Environmental Impact Statement for the Northeast California/Nevada Sub Region of the National Strategy to Preserve, Conserve, and Restore Sagebrush Habitat states that disturbances within the Sage Grouse Management Area [on Nevada BLM and USFS lands] will trigger evaluations and consultation with the SETT. The MOU is expected to define roles and responsibilities for implementation of the Credit System on BLM and USFS lands. Disturbances will be able to calculate debits and purchase credits to mitigate impacts to sagebrush habitat using the Credit System.

CHAPTER 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 changes in habitat function and quantity. The Credit System Operations are described in the following three sections:

Table 3.1 Overview of the Credit System Operations Sections

SECTION NAME	PRIMARY AUDIENCE	DESCRIPTION
Section 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 2: Acquiring Credits	Buyers	Steps to obtain credits and use them to meet mitigation requirements and report on accomplishments. These steps are primarily implemented by Buyers and thus are labeled B1 through B3.
Section 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 Credit System Administrators and thus are labeled A1 through A6.

SECTION 1: GENERATING CREDITS

QUESTIONS ANSWERED

- How does a Credit Developer estimate expected credits from planned conservation or restoration practices?
- 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 conservation 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 Buyers and Credit Developers. Figure 3.1 and Table 3.1 provide an overview of the steps of credit generation and the different participants engaged at each step.

Figure 3.1: 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 3.2: Overview of Roles, Tools & Products to Quantify, Issue and Track Credits from Projects

Process Step	Credit Developer[7]	Credit System Administrator	Buyer	Relevant Tools, Forms & Templates	Completed Products
D1. Select & Validate Site	■	■	☐	▪ Validation Checklist	▪ List of Credit Opportunities ▪ Notice of Validation
D2. Implement & Calculate Credit	■	☐		▪ Habitat Quantification Tools (HQT) ▪ Credit Estimate & Project Design Form ▪ Customized Management Plan ▪ Landowner Contract ▪ Verification Contract	▪ Pre-project Credit Estimate & Credit Project Design Form (optional) ▪ Post-project Credit Estimate & Credit Project Design Form ▪ Customized Management Plan
D3. Verify Conditions	■	■		▪ Conflict of Interest Form ▪ Agency Certification Form	▪ Verification Report ▪ Self-Monitoring Report
D4. Register & Issue	■	■		▪ n/a	▪ 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 3.2: Select & Validate Project Site

In this step, the Credit Developer identifies a project site that is likely to produce credits and the Credit System 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 Credit System Administrator by email or phone to provide basic information, such as name, area of interest and contact information. The Credit System Administrator provides a list of technical support providers in the project area to assist with project design, credit quantification and project implementation.

Product ■ Indication of Interest

[7] 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 environmental 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 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 conservation practices, 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 Credit System Administrator reviews the Validation Checklist. If all validation criteria are met, the Credit System 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 Chapter 2. The Administrator may include the conservation project on its list of conservation projects seeking funding, if so desired by the Credit Developer.

Product ■ Notice of Validation
Product ■ List of Credit Opportunities

D2 IMPLEMENT PROJECT & CALCULATE CREDIT

Figure 3.3: Implement & Calculate Credit

This is the most involved step in the Credit System Operations. Typically, a technical support provider or aggregator assists the Credit Developer in designing the conservation or restoration project and estimating the expected credit amount using the HQT. Credit calculation must be done by a person or entity qualified to do so and well-versed in the HQT. The Credit Developer has the option to check the design calculations with the Credit System 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 benefits 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 Credit System Administrator before initiating credit project implementation.

D2.1 DEFINE PRE-PROJECT CONDITIONS

The Credit Developer follows the process defined in the HQT to define the credit project boundaries and determine the pre-project conditions. 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 Credit System Administrator.

Product ■ Pre-project HQT Results with Associated Forms

D2.2 DEFINE & SUBMIT PROJECT DESIGN INFORMATION (OPTIONAL)

The Credit Developer, technical support provider or aggregator can develop multiple credit project design scenarios to estimate and compare the amount of credit generated from different design options. The following describes the process to estimate the credits that can be projected by a credit project. The Credit Developer may submit design estimate calculations for review by the Credit System Administrator if they wish to a review of estimated credits before implementing conservation practices.

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[8]. The Credit Developer, technical support provider or aggregator uses design assumptions to determine the projected post-action conditions (the expected conditions following completion of the credit project) and completes the Pre-Project Credit Estimate & Credit Project Design Form which outlines the area, scope and conservation measures to be completed as part of the project. Credits are calculated based on projected post-conservation project conditions using the HQT.

Product ■ Pre-project Credit Estimate & Credit Project Design Form

Submit Design to Credit System Administrator for Pre-Approval

The Credit Developer may submit project design credit estimates and other relevant information included in this step to the Credit System Administrator for pre-approval before initiating project implementation to gain assurance that the credit calculations are correct given the design assumptions used. If appropriate and requested by the Credit Developer or a potential 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.

Pre-Approve Credit Project Design Calculations

The Credit System Administrator reviews credit calculations based on design assumptions and confirms that calculations appear complete, and that the calculations are acceptable if the project is implemented as designed.

[8] 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.

Product ■ Pre-project Credit Estimate & Credit Project Design Form

D2.3 IMPLEMENT PROJECT, REFINE CALCULATIONS & SUBMIT

Implement Project

The Credit Developer, technical support provider 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.

Product ■ Complete Implemented Project

Confirm or Refine Credit Calculations

The Credit Developer, technical support provider, or aggregator either confirms that the project was completed consistently with the submitted Pre-Project Credit Estimate & Credit Project Design Form (if submitted for pre-approval in D2.2) 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-credit project conditions.

Product ■ Post-Project Credit Estimate & Credit Project Design Form

Develop Customized Management Plan & Credit Release Schedule

The Credit Developer completes a Customized Management Plan defining the specific management actions and expected outcomes for the site including ongoing maintenance and monitoring requirements. A template for this form is attached as in Appendix B. Guidance for selecting the appropriate duration of a credit project is included in the HQT and the Customized Management Plan template. The credit release schedule defines the amount of credits released based on the implementation of conservation actions and achievement of the desired habitat conditions as indicated by the HQT. Credit release schedule requirements are clearly documented in the Customized Management Plan. Lastly, the Credit Developer defines required reserve account contributions in the Customized Management Plan based on the Reserve Account Checklist (as described in Chapter 2).

Product ■ Draft Customized Management Plan

Secure Required Performance Assurances

The Credit Developer or aggregator must secure necessary performance assurances as required by the Credit System. See *Chapter 2* for additional guidance. Performance assurances ensure that funds are available to cover credit shortfalls and support long-term management of individual project sites, as specified in the Customized Management Plan.

Product ■ Customized Management Plan – Proof of Secured Performance Assurances

Submit Post-Project Calculations & Documentation

The Credit Developer submits the final credit estimate and all required documentation to the Credit System Administrator for verification reflective of post-project conditions.

Product ■ Signed Landowner Contract
Product ■ Final Credit Calculations and Related Forms
Product ■ Final Customized Management Plan

Establish Verification Contract

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

Product ■ Complete Verification Contract

D3 VERIFY CONDITIONS

Figure 3.4: Verify Conditions

All projects require verification. Verification is an independent, expert check on the credit estimates provided by the Credit Developer, technical support provider, 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 Chapter 2.

Initial project verification is completed for the credit project before credits are issued, and periodically over the life of the project as defined in Chapter 2. Self-Monitoring Reports must be completed in non-verification years to confirm that conditions are maintained according to the specifications in the Customized Management Plan.

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

D3.1 SELECT VERIFIER

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

Verifiers must be accredited by the Credit System Administrator before they are eligible to conduct verification activities. The independence of verification is important. Verifiers acting on behalf of the Credit System Administrator must work in a credible, independent, nondiscriminatory and transparent manner, complying with applicable state and federal law. 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 Buyer and the Verifier. Verifiers must provide a Conflict of Interest Form to the Credit System Administrator before verification can proceed.

Product ■ Completed Conflict of Interest Form
Product ■ Verification Contract
Product ■ Assigned Verifier

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 Customized 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 Customized Management Plan. In years when an on-site verification is not required, the Credit Developer submits a Self-Monitoring Report to the Credit System Administrator in accordance with the requirements defined in Chapter 2 and the specifics in the Customized 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.
- For sites with future credit releases scheduled, conservation 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[9]. 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 Credit System Administrator.

Credit calculations must be found to be free of material misstatements and meet the performance criteria defined in the Customized Management Plan. If performance criteria are not met, the Verifier discusses the issues with the Credit Developer. The Verifier and Credit Developer determine if corrective actions are necessary and appropriate, and the Verifier 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 Verifier and Credit Developer, they follow the dispute resolution process described in the textbox above by engaging the Credit System Administrator.

Dispute Resolution Process

The following structure is provided to settle disagreements that may occur between a Credit Developer, Verifier, Buyer, agency and/or Credit System Administrator.

- First attempt to resolve the dispute through direct conversation.
- Second, engage the Credit System Administrator or agency staff to facilitate resolution.
- Third, employ the governing body dispute resolution process defined in the Credit System Management System. [[The Credit System Management System will be completed in late 2014.]]

Submit Project Verification Report

Once successful verification is complete, the Verifier submits their Verification Report to the Credit System 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

D3.4 PROJECT CERTIFICATION (IF NECESSARY)

Project certification is only necessary for meeting the requirements of regulatory agencies that have not delegated the authority to certify credits for regulatory offsets to the Credit System Administrator. The

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

need for project certification is defined in the Chapter 2 as it relates to state policies and federal policies separately. When project certification is needed, public agencies, or their designated proxy, review verified credit estimates. The Credit System Administrator coordinates this process and notifies the Credit Developer when certification is complete.

Product ■ Agency Certification Form

D4 REGISTER PROJECT & ISSUE CREDITS

Figure 3.5: Register & Issue Credits

Registration ensures that credits from a specific project are real, transparent, 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 version used, duration of the credit, and owner of the credit.

D4.1 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 transferred. The Credit Developer submits project information to the Credit System Administrator, who tracks each project and all required documentation on a project registry.

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

Product ■ Registered Project

D4.2 ISSUE CREDITS

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

Product ■ Issued Credits

D5 TRACK & TRANSFER CREDITS

Figure 3.6: Track & Transfer Credits

Credits are assigned unique serial numbers that identify the source of each credit, the HQT and version used to estimate credits and debits, and the current owner. The sale, transfer and ownership of each

credit are tracked by the Credit System Administrator, and all information is subject to confidentiality provisions defined in Chapter 2.

D5.1 SELL AND TRANSFER OR RETIRE CREDITS

Transactions are facilitated by the Credit System Administrator. Once an agreement to transfer or sell credits is reached, the Credit Developer submits a Notice of Transfer to the Credit System Administrator. The Credit System Administrator transfers credits between accounts and assesses appropriate transaction fees.

Generally, all listed credits can be sold, retired or otherwise transferred between accounts until they are retired (or no longer available for use by another Buyer). If credits are not to be transferred at all, they can be issued directly to the reserve account or immediately retired. Once credits are retired, the registry moves them into a retirement account that can be reported on but not accessed for transfer.

Product ■ Notice of Transfer
Product ■ Transfer of Credits between Accounts

D5.2 ALLOCATE CREDITS TO RESERVE ACCOUNTS

Reserve account allocation requirements are defined in Chapter 2 and identified for the specific project in Step D2.3. The Credit System Administrator allocates the appropriate amount of credits to the reserve account once credits are transferred to a Buyer. Credits allocated to the reserve account are not available for sale.

Product ■ Notice of Credit Transfer

D5.3 REPORT OF ACCOMPLISHMENTS (OPTIONAL)

The Credit Developer can generate 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), estimation method and version, and duration of the credit. Reports can also be generated that show transfers and retirement of credits.

Product ■ Report of Accomplishments (optional)

SECTION 2: ACQUIRING CREDITS

QUESTIONS ANSWERED

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

Figure 3.7: Credit Acquisition Overview

This section describes the process to acquire credits. Buyers of credits include entities mitigating for impacts to fulfill regulatory requirements, and entities seeking to improve the environment. The Credit System enables private and public Buyers to efficiently invest with confidence, knowing that quantified environmental benefits are consistently defined, transparent and traceable. 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 Buyers to fund large-scale projects. Further, credits provide Buyers with quantitative information to evaluate and report on the environmental value generated from their investments. Figure 3.7 and Table 3.3 provide an overview of the steps of credit acquisition and the different participants that may be engaged at each step.

Table 3.3: Overview of Roles, Tools & Products to Purchase, Track and Report Credits

Process Step	Credit Developer	Credit System Administrator	Buyer	Relevant Forms & Templates	Completed Products
B1. Indicate interest		☐	■	▪ Sample Contract	▪ List of Credit Opportunities
B2. Determine Credit Need		■	■	▪ Credit Obligation & Project Design Form ▪ Verification Contract	▪ Credit Need Specifications ▪ Project Baseline Determination ▪ 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 3.8: Indicate Interest

The 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 Buyer is to become aware of the opportunity to participate in the Credit System. The Buyer is introduced to the Credit System through outreach materials or word of mouth, and learns about the potential benefits of participating. The Buyer or the Buyer's representative contacts the Credit System 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 Chapter 2 with specific requirements in permits and regulatory instruments. The Credit System 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.

Product ■ Indication of Interest
Product ■ List of Credit Opportunities

B2 DETERMINE CREDIT NEED

Figure 3.9: Determine Credit Need

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 Buyer identifies the specific geographic region from which to purchase Credits, in accordance with their investment goal. Chapter 2 defines the applicable geographic scope of the Credit System and specific service areas with unique characteristics. 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. Chapter 2 defines specific parameters for project duration. Regulatory requirements typically specify that the duration of mitigation must be at least as long as the duration of the impact, and that the credits be produced before impacts occur. These specifications are outlined further in Chapter 2.

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

Product ■ Determination of Credit or Project Specifications

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

Each Buyer defines their needed or desired amount of credit. If the 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 development activities and the associated amount of credit needed to offset these impacts in a regulatory context. Development activities must be avoided and minimized through the 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 ecosystem service loss. 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 *Section 2, Step D2* for additional information.

Define & Submit Baseline Assessment

Buyers first define the project boundary. For debits, baseline is generally defined as the condition of the site prior to any development action. Debit sites require a field assessment to determine pre-project conditions. The 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 function score. The project baseline information, photo point documentation and HQT scores are submitted to the Credit System Administrator.

The Credit System 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

Calculate Debits

Debits are the difference between the functional scores of the baseline and anticipated post-action conditions. For some development activities, the post-action condition (the condition following completion of the development action) is assumed to have zero ecosystem function. In these cases, the debit quantity is equal to the functional score for the baseline condition. In other cases, as outlined in Chapter 2, the Buyer applies functional assessments of the post-action condition. The initial assessment is produced using development design documents defining the area, scope and activities to be completed as part of the development actions. As described in Step D2.2 (Define and Submit Project Design Information), post-action data sets are created by modifying the baseline datasets to reflect projected post-action conditions. These data sets are entered in the HQT, which produce functional scores, and are submitted to the Credit System Administrator.

Product ■ Estimated Debits

Acquire Agency Approval (If Necessary)

Consult Chapter 2 and specific permit requirements to determine if agency approval is needed to use credits for regulatory offsets.

Establish Verification Contract

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

Product ■ Completed Conflict of Interest Form
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 Credit System Administrator, the Credit System Administrator reviews documentation to ensure completeness and assigns an accredited third-party Verifier to perform a full verification. Verification of debit baseline occurs before the development action has been implemented.

The Buyer's estimate must be found to be accurate and free of material misstatements. Resolving differences between estimates and dispute resolution is handled as described in Step D3 in Section 2 (Verify Project and Credit Calculations).

Once successful verification is complete, the Verifier submits the Verification Report to the Credit System 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
Product ■ Verification Protocol

Determine Credit Obligation

The credit obligation is the amount of credit required to meet regulatory requirements. The Buyer selects a credit site for offsetting impacts, and applies the appropriate mitigation ratio based on credit and debit site characteristics. Chapter 2 describes the mitigation ratio that is applied to determine credit obligations. The calculated debit amount is multiplied by the mitigation ratio to determine the ultimate credit obligation.

Product ■ Credit Obligation Form

B3 ACQUIRE CREDITS

Figure 3.10: Acquire Credits

B3.1 SUBMIT PROJECT INFORMATION

To acquire and track credits, the Buyer contacts the Credit System Administrator to provide information about the debit and credit obligation in order to acquire needed credits. All information provided to the Credit System Administrator is subject to the confidentiality provisions described in Chapter 2.

B3.2 PURCHASE CREDITS

Transactions are facilitated by the Credit System Administrator. Once an agreement to transfer or sell credits is reached, the Credit Developer submits a Notice of Transfer to the Credit System Administrator. The Credit System Administrator transfers credits between accounts and assesses appropriate transaction fees.

Product ■ Notice of Transfer
Product ■ Transfer of Credits between Accounts

B4 TRACK & TRANSFER CREDITS

Figure 3.11: 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 Credit System Administrator, and information is subject to confidentiality provisions defined in Chapter 2.

B4.1 TRANSFER CREDITS

Upon receiving a Notice of Transfer, the Credit System Administrator transfers credits between accounts. Credits used to meet mitigation requirements are retired and not available for resale. All remaining credits may be held by the 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 D3).

Product ■ Transfer of Credits between Accounts

B4.2 REPORT ON ACCOMPLISHMENTS (OPTIONAL)

Buyers can generate reports that show transfers and retirement of credits.

Product ■ Accomplishments Reports

SECTION 3: 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 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 3.12 and Table 3.4 provide an overview of the Credit System Management System steps and the different participants that may be engaged at each step[10] .

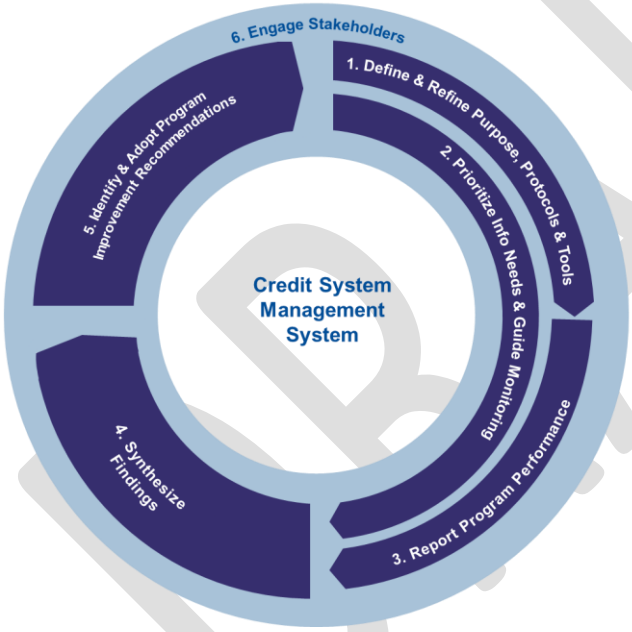

Figure 3.12: Overview of Credit System Improvement Management System Steps

[10] 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 Credit System Administrator performs the day-to-day functions to manage the Credit System. The Credit System 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, Credit System Administrator and Credit System participants are defined in Chapter 2.

Table 3.4: Overview of Roles, Tools & Products to Manage Credit System Operations

Process Step	Credit Developer	Credit System Administrator	Oversight Committee	Buyer & Stakeholders	Relevant Forms & Templates	Completed Products
A1. Update Protocol & Tools	☐	■	☐	☐	▪ Credit System Improvement Recommendation Form	▪ Credit System Improvements List ▪ New & Updated Documents, Guidance & Tools ▪ New & Updated Quantification 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 3.13: Update Manual & Tools

This Credit System Manual and associated tools, templates and forms provide guidance for the Credit System to consistently track and report improvements 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 Credit System 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 Credit System Administrator adds recommendations received to the compiled Credit System Improvements List. The Credit System 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 Credit System 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. Category 1 improvements may be executed by the Credit System Administrator at any time.
- **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 Credit System 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 agencies.

It is at the discretion of the Credit System 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 Credit System 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 Credit System 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 Credit System Administrator may implement Category 1 improvements throughout the year. The Credit System 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 QUANTIFICATION TOOLS

The Credit System Manual is built to easily integrate new credit types and HQT. Once a new credit type or 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 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 3.14: Prioritize Information Needs & Guide Monitoring

Monitoring and research are necessary to check that the ecosystem benefits projected by the HQT result in the projected improvements for the environmental 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 Credit System 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 conservation practices, and follow the status and trend of environmental attributes of concern.

The Credit System may be able to collaborate with other monitoring programs to monitor status and trend, but is likely to take a more active role in directing monitoring intended to calibrate HQT and improve their accuracy. HQT estimate 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 Credit System 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.

Product ■ Research & Monitoring Contracts and Results

A3 REPORT CREDIT SYSTEM PERFORMANCE

Figure 3.15 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 Credit System Administrator uses tracking outputs, such as the number of credits created during the year, to generate the quantitative information for the Performance Report that is posted online and submitted to any relevant regulatory agencies. Credits are summed across geographic locations and for each specific area of interest. The Performance Report may also show accomplishments compared to defined goals.

The Credit System 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, and submitted to any relevant agencies. It is then posted to the Credit System website within an appropriate timeframe and available to all interested stakeholders.

Product ■ Credit System Performance Report

A4 SYNTHESIZE FINDINGS

Figure 3.16: 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 Credit System 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 Credit System 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 conservation actions, and 3) the efficiency of Credit System operations. The Credit System 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 3.17: 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, 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 Credit System Administrator to consider when identifying Credit System Improvement Recommendations.

Develop Credit System Improvement Recommendations

The Credit System Administrator reviews the Credit System Improvements List and identifies priority improvements to recommend to the Oversight Committee for implementation. The Credit System 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 Credit System 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 Credit System 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 life, 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 Credit System Administrator. If the dispute is in reference to regulatory requirements, the regulatory agency has the final decision-making authority.

A6 ENGAGE STAKEHOLDERS

Figure 3.18: 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 Credit System 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 Credit System Administrator maintains an ongoing list of interested stakeholders and their email contact information. The Credit System 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 Credit System 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 Credit System Administrator or experienced technical support provider 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 Credit System Administrator annually convenes an open meeting. 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

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APPENDIX A: GLOSSARY

Accounting Period: The period of time when a credit is recognized by the Credit System (e.g. annually).

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.

Advanced Credit Acquisitions: Securing credits early for future impacts for as yet to-be-determined activities, including those that may occur in a post-listing scenario and may be used as measures to minimize and mitigate the impact of incidental take.[11]

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 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 from which credits and debits are measured.

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

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.[12]

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.[13]

Compensatory Mitigation: The preservation, enhancement, or restoration of habitat to compensate for unavoidable adverse impacts to the habitat elsewhere.[14]

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: A preservation, enhancement or restoration of habitat functionality.

Conflict of Interest: A situation in which, because of activities or relationships 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 using functional acres (see Functional Acre definition) and is consistently quantified and traded. A credit has legal and performance assurances that ensure the credit site achieves defined habitat functionality performance.

[11] USFWS DRAFT GRSG Mitigation Framework Glossary
[12] USFWS DRAFT GRSG Mitigation Framework Glossary
[13] USFWS DRAFT GRSG Mitigation Framework Glossary
[14] USFWS DRAFT GRSG Mitigation Framework Glossary revised

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

Credit Project: A conservation action that creates a debit.

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.

Credit System Agreement: The signed agreement with USFWS authorizing the use of Credit System credits for mitigation purposes within the State of Nevada.

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.

Custom 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.

Debit: A quantifiable unit of loss to conservation value from an impact. Based on the same methodology and HQT used to calculate credits.

Debit Project: An action 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 life.

Dynamic Permanent Mitigation: When a stream of term credits are used to cover a permanent debit, such that the mitigation is functionally permanent but able to shift 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.

Enhancement: Manipulation of existing habitat to heighten, intensity, or improve specific habitat functionality. .[15]

Financial Assurances: Mechanism to ensure that funds are available to remediate project sites should a credit project fail, and to ensure funds are available for long-term management of individual project sites.

First Order: The delineated occupied range of greater sage-grouse within the State of Nevada.

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.

Fourth Order: The delineated acreage of a credit or debit project site.

[15] USFWS DRAFT GRSG Mitigation Framework Glossary revised

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 set of local and landscape conditions

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.[16]

Habitat Functionality: The ability or value of a measured patch of land to meet the needs of the species.

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 to inform the amount of credit and debit resulting from credit and debit projects.

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.[17]

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.

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.

Mitigation: Preservation, enhancement or restoration of habitat to compensate for unavoidable adverse impacts from a debit project and verified through the Credit System.

Monitoring: The process to observe and record current environmental conditions and changes in environmental conditions 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.

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, Buyers, technical support providers, aggregators, and Verifiers.

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 Assurances: Mechanisms used if a credit site does not meet requirements of its contract and Customized Management Plan due to factors including force majeure or non-force majeure events.

Preservation: Maintenance or retention of existing habitat currently used by or in close proximity to habitat used by greater sage-grouse. An example is placing a conservation easement on existing high-quality habitat.

[16] USFWS DRAFT GRSG Mitigation Framework Glossary
[17] USFWS DRAFT GRSG Mitigation Framework Glossary

Project Life: 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.

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 Customized Management Plan.

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 any 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 duration that is required through natural or man-made causes.[18]

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.[19]

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.

Second Order: The landscape context used to prioritize areas for conservation and disturbance.

Service Area: The geographic area within which habitat credit trading occurs; 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.[20]

Split Estate: Surface rights and subsurface rights (such as the rights to develop minerals) for a piece of land are owned by different parties.[21]

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 Permanent Mitigation: Mitigation achieved by the use of credits produced in perpetuity on a participating credit site.

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 conservation 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 provider as qualified.

[18] USFWS DRAFT GRSG Mitigation Framework Glossary revised
[19] USFWS DRAFT GRSG Mitigation Framework Glossary
[20] USFWS DRAFT GRSG Mitigation Framework Glossary
[21] USFWS DRAFT GRSG Mitigation Framework Glossary

Third Order: The local context that effects the habitat functionality of a credit site and is effected by a debit project.

Tiered Mitigation Ratios: Multiplier used in combination with the number of debits, as determined by the HQT, to calculate the total credit obligation of the Buyer needed to meet regulatory obligations.

Transfer: The sale and conveyance of credits from a Credit Developer to a Buyer.

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 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, 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 product 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 Credit System Operations (Chapter 3).
- **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 will be 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 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	**CUSTOMIZED 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 Customized 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 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