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# Appendix N

State of Nevada Conservation Credit System



# APPENDIX N

## STATE OF NEVADA CONSERVATION CREDIT SYSTEM

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The following information was provided by the State of Nevada and incorporated in the State of Nevada's Greater Sage Grouse Conservation Plan (2014; **Alternative E**). The conservation credit system is one form of mitigation that the BLM and Forest Service would consider using in the Proposed Plan.

### EXECUTIVE SUMMARY

The Conservation Credit System (Credit System) is a pro-active solution that provides net conservation benefits for the greater sage-grouse, while balancing the need for continued human activities vital to the Nevada economy and way of life. The Credit System creates new incentives for private landowners and public land managers to preserve, enhance, restore, and reduce impacts to important habitat for the species.

The Credit System is a market-based mechanism that quantifies conservation outcomes (credits) and impacts from anthropogenic disturbances (debits), defines standards for market transactions, and reports the overall progress from implementation of conservation actions throughout the greater sage-grouse range within Nevada. The Credit System establishes the policy, operations and tools necessary to facilitate effective and efficient conservation investments. The Credit System is intended to provide regulatory certainty for industries by addressing compensatory mitigation needs whether or not the species is listed under the Endangered Species Act.

### GOAL & SCOPE

The goal of the Credit System is to achieve no net unmitigated loss of greater sage-grouse habitat due to anthropogenic disturbances with the Sage-Grouse Management Area (SGMA; **Figure 1.1**), in order to stop the decline of greater sage-grouse populations. All proposed anthropogenic disturbances, as defined in the 2014 Nevada Greater Sage-Grouse Conservation Plan, must seek to avoid, minimize, and mitigate impacts to greater sage-grouse habitat. After all possibilities to avoid and minimize impacts to greater sage-grouse habitat have been exhausted, mitigation of residual adverse impacts on greater sage-grouse habitat are required to be offset by mitigation requirements as determined through the Credit System.

The Credit System applies to the 2014 SGMA. Anthropogenic disturbances to habitat on Bureau of Land Management (BLM) and Forest Service (USFS) lands within the SGMA require consultation with the Sagebrush Ecosystem Technical Team (SETT) and the appropriate federal land management agency. Private landowners are not required to mitigate anthropogenic disturbances on their land, but are welcome to voluntarily generate, sell, or purchase credits in the Credit System. The Credit System scope can be expanded in the future to support additional conservation needs, revisions to habitat and management maps, or to include other states within the greater sage-grouse range.

## GUIDING PRINCIPLES

The Credit System enables the preservation, enhancement, and restoration of a resilient and resistant sagebrush ecosystem in a credible, rigorous and cost-effective way. The Credit System abides by the following guiding principles:

- Produce high quality conservation where it makes significant ecological difference.
- Enable decision-making based on the best available science.
- Create an efficient 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.

## ROLES

The Nevada Division of State Lands, within the Nevada Department of Conservation and Natural Resources, holds ultimate authority over Credit System design, operations, and management. The Sagebrush Ecosystem Council oversees Credit System operations and approves changes to the program. The Administrator manages the Credit System's day-to-day operations and ongoing program improvements, facilitates transactions, and reports programmatic results. Credit System operations are also informed by Resource Managers (e.g., BLM, NDOW, USFS, USFWS) and by a Science Committee to ensure the System functions according to current law, policy, and regulations and is consistent with the best available science.

Credit Developers are landowners, land managers, organizations, or agencies, that produce, register, or sell credits in the Credit System. Buyers are entities that purchase mitigation credits for anthropogenic disturbances or to meet other conservation objectives.



**Figure 1.1: Sage-Grouse Management Area Map, 2014.**

## OPERATIONAL OVERVIEW & MANAGEMENT SYSTEM

The steps for generating and transacting credits are depicted in **Figure 1.2**, below. Blue chevrons signify the steps undertaken to generate credits, green chevrons represent the exchange of credits. More detailed information on each of these steps can be found in the Nevada Conservation Credit System Manual<sup>1</sup>.



**Figure 1.2: Overview of the Process Steps to Generate and Purchase Credits**

### Credit System Currency

Credits are the currency of the Credit System. A credit represents a verified “functional acre” that meets the durability criteria defined by the Credit System, such as committing to a Customized Management Plan that maintains habitat performance and limits risks from future impact for the duration of the project. A functional acre is based on habitat quality (“function”) relative to optimal conditions, and quantity (acres). This is determined through the Habitat Quantification Tool (HQT; see the HQT Overview).

### 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 on their project site, 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 the 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 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 Administrator using unique serial numbers and a registry, and are either transferred to Buyers or retired. Credit Developers annually confirm that performance standards are met and trigger phased credit releases, where applicable.

<sup>1</sup> The Nevada Conservation Credit System Manual can be found on the Sagebrush Ecosystem Program’s Website: <http://sagebrusheco.nv.gov/>

## Acquiring Credits

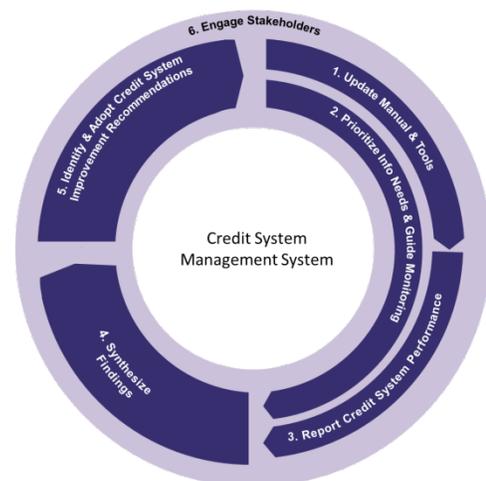
The following steps outline the process to purchase credits.

1. **Indicate Initial Interest:** Buyers become aware of the opportunity or requirement to participate in the Credit System, and contact the 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 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 Administrator manages the Credit System under a transparent and inclusive process that is designed to improve the efficiency and effectiveness of the Credit System over time. This management process is depicted in **Figure 1.3**, and each step is described in detail below.

1. **Update Manual & Tools:** The Administrator updates the Credit System Manual, tools, forms, and guidance to incorporate practical experience and new scientific information.
2. **Prioritize Information Needs & Guide Monitoring:** The Administrator identifies and prioritizes research and monitoring needs, coordinates funding efforts, and oversees monitoring and research.
3. **Report Credit System Performance:** The Administrator develops the Annual Performance Report to summarize debits, credits and habitat improvements.
4. **Synthesize Findings:** The Administrator synthesizes relevant research, monitoring and operational findings to inform Credit System improvements.
5. **Identify & Adopt Credit System Improvement Recommendations:** The Administrator develops operational and technical improvement recommendations which are



**Figure 1.3: Overview of Credit System Management System**

reviewed and adopted by the Oversight Committee to ensure the Credit System continues to motivate effective actions over time.

6. **Engage Stakeholders:** Throughout the year, the Administrator engages stakeholders to keep them informed of progress and solicit input for how to improve the Credit System.

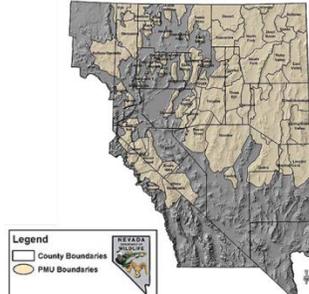
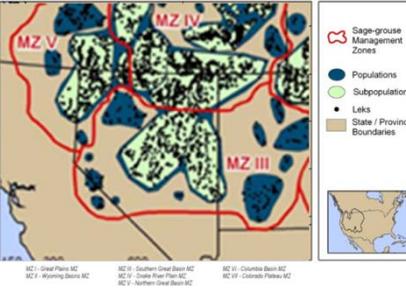
**POLICY & TECHNICAL CONSIDERATIONS**

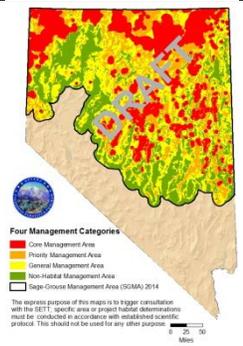
The Manual contains descriptions of the policy and technical considerations that arise during the generation and sale of credits, determination of debits, and the overall management of Credit System. The table below provides a summary of how the Credit System addresses each of these considerations. The Documentation of Rationale (currently under development), which will be available on the Sagebrush Ecosystem Program’s website, will provide additional detail on each consideration, including the rationale behind the current direction.

**Table I  
Credit System Considerations Summary**

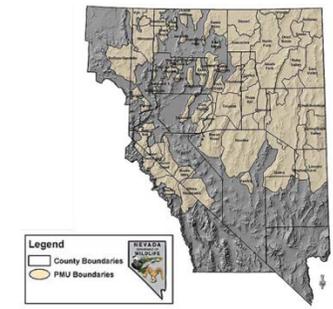
<b>Considerations</b>		<b>Credit System Design Direction/ Options</b>
<b><i>Participants</i></b>		
1.	Administrator Responsibilities	<ul style="list-style-type: none"> <li>• The Administrator facilitates day-to-day operations, participant engagement, and program reporting and improvement</li> </ul>
2.	Credit Investment Strategies	<ul style="list-style-type: none"> <li>• Flexible, but may include: direct credit purchase, reverse auctions, requests for proposals, and selection from list of credit development opportunities</li> </ul>
3.	Participant Confidentiality	<ul style="list-style-type: none"> <li>• As a State-run program certain information must be disclosed upon request by a member of the public; however Credit System published information protects participant confidentiality by aggregating information and removing identification information</li> </ul>
<b><i>Calculating Credits and Debits</i></b>		
4.	Accounting Period	<ul style="list-style-type: none"> <li>• Annual evidence of performance on credit sites</li> <li>• Annual Credit System management process</li> <li>• Annual programmatic audits</li> </ul>
5.	Credit Project Types	<ul style="list-style-type: none"> <li>• <b>Habitat Preservation:</b> Maintenance or retention of existing habitat currently used by or in close proximity to habitat used by greater sage-grouse</li> <li>• <b>Habitat Enhancement:</b> Manipulation of existing habitat to improve specific habitat functionality</li> <li>• <b>Habitat Restoration:</b> The reestablishment of ecologically important habitat or other resource characteristics and function(s) at a site where they have ceased to exist, or where they exist in a substantially degraded state, that renders a positive biological response for the species</li> </ul>
6.	Service Areas	<ul style="list-style-type: none"> <li>• All credits and debits must be located within the 2014 SGMA (see <b>Figure I.1</b>)</li> </ul>

**Table I**  
**Credit System Considerations Summary**

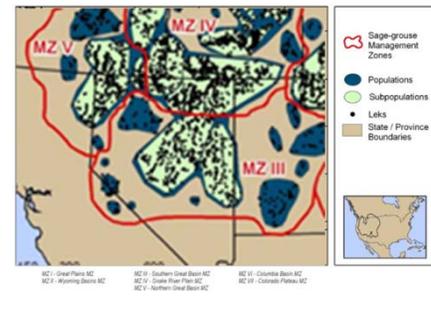
Considerations	Credit System Design Direction/ Options
<p>7. Habitat Quantification Tool Relationship to Credits and Debits</p>	<ul style="list-style-type: none"> <li>HQT estimates habitat quality in terms of % function and functional acres</li> <li>HQT generates habitat quality score for each seasonal habitat type</li> <li>HQT can estimate pre-project and projected post-project habitat quality</li> <li>Credits or debits are determined by applying the appropriate mitigation ratio to the functional acres above or below baseline</li> </ul>
<p>8. Mitigation Ratios</p>	<ul style="list-style-type: none"> <li>Credit and debit ratios are determined by the:                             <ul style="list-style-type: none"> <li><b>Habitat Importance Factor:</b> This is based on the Sagebrush Ecosystem Program’s Management Categories Map depicted in Figure I.4. The value is influenced by the location of a credit or debit site in Core, Priority, or General Management Areas.</li> <li><b>Seasonal Habitat Scarcity Factor:</b> This is determined by the portion of seasonal habitat type (nesting, late-brood rearing, and winter) impacted by a debit or increased by a credit.</li> </ul> </li> <li>Debits are adjusted by the proximity to potential credit sites (<b>Proximity Factor</b>) to determine credit obligation that must be purchased to offset a debit project. This incentivizes mitigation in close proximity to debit sites. The Proximity Factor value increases as follows:                             <ul style="list-style-type: none"> <li>The debit and credit sites are within the same Population Management Unit (PMU), depicted in Figure I.5 (the impacts and benefits are located within a single population);</li> <li>The debit and credit sites are located within the same WAFWA management zone, depicted in Figure I.6 (the credit and debit sites are connected through population dispersal);</li> <li>The credit and debit sites are located within different WAFWA management zones (there is no population connection).</li> </ul> </li> </ul> <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div data-bbox="568 1465 901 1774" style="text-align: center;">  <p><b>Figure I.5: NDOW’s PMU Map</b></p> </div> <div data-bbox="990 1465 1421 1774" style="text-align: center;">  <p><b>Figure I.6 WAFWA Management Zones</b></p> </div> </div>



**Figure I.4: Management Categories Map**



**Figure I.5: NDOW’s PMU Map**



**Figure I.6 WAFWA Management Zones**

**Table I**  
**Credit System Considerations Summary**

<b>Considerations</b>		<b>Credit System Design Direction/ Options</b>
9.	Baseline	<ul style="list-style-type: none"> <li>• <b>Credit baseline:</b> State-wide standard for each seasonal habitat type equivalent to the average habitat functionality</li> <li>• <b>Debit baseline:</b> Pre-project habitat function for each seasonal habitat type</li> </ul>
10.	Credit Site Eligibility	<ul style="list-style-type: none"> <li>• Site must be located in the Service Area</li> <li>• Must attest to ownership or use rights, and past stewardship</li> <li>• Post-project habitat functionality must meet 50% minimum functionality</li> <li>• No evidence of an imminent threat of direct or indirect disturbance</li> <li>• Necessary performance assurances must be complete</li> <li>• Credit Developer must attest to the accuracy of the information</li> </ul>
11.	Credit Release	<ul style="list-style-type: none"> <li>• <b>Preservation Projects:</b> Single habitat performance criteria triggers credit release</li> <li>• <b>Enhancement Projects:</b> Habitat performance criteria triggers multiple credit release</li> <li>• <b>Restoration Projects:</b> Combination of management actions and habitat performance criteria triggers multiple credit release</li> </ul>
12.	Project Life	<ul style="list-style-type: none"> <li>• <b>Credit Projects:</b> Minimum 10 year with 5 year increments afterwards, up to perpetual</li> <li>• <b>Debit Projects:</b> Until verification that impacts have been restored, up to perpetual</li> </ul>
13.	Credit variability	<ul style="list-style-type: none"> <li>• Tolerance threshold of 10% below overall habitat function</li> </ul>
<b>Ensuring Performance-Based Results and Net Benefit</b>		
14.	Verification	<ul style="list-style-type: none"> <li>• <b>Credit Sites:</b> Before initial credit issuance, before increased credit releases, every 5<sup>th</sup> year, and periodic spot checks</li> <li>• <b>Debit Sites:</b> Before construction, at time when debits are reduced or end, and periodic spot checks</li> </ul>
15.	Stacking of Multiple Credits & Payments	<ul style="list-style-type: none"> <li>• Credit sites that are enrolled in public conservation programs or have existing land protections, such as conservation easements, are eligible to generate credits for work done above and beyond what is contracted in those existing programs or protections. Stacking allows a Credit Developer to receive multiple payments from the same area of land, but only receive credit for the additional conservation benefits.</li> </ul>
16.	Reserve account	<ul style="list-style-type: none"> <li>• Deposit amount determined by base contribution, probability of wildfire, and probability of competing land uses</li> </ul>
17.	Performance Assurances	<ul style="list-style-type: none"> <li>• Financial instrument contains sufficient funds for management of credit project and to remediate or replace invalidated credits throughout project life</li> <li>• Contract payment is designed to maximize payment to Credit Developer while creating ongoing incentive to achieve credit site performance</li> <li>• <b>Force Majeure Reversal:</b> Draw from the reserve account at no cost for a limited duration and Credit Developer provided option to remediate</li> <li>• <b>Competing Land Use Reversal:</b> Draw from the reserve account at no cost for a limited duration, and redirect Credit Developer payments</li> </ul>

**Table I**  
**Credit System Considerations Summary**

<b>Considerations</b>		<b>Credit System Design Direction/ Options</b>
		to replace invalidated credits <ul style="list-style-type: none"> <li>• <b>Intentional Reversal:</b> Credit Developer payments immediately cease, and payments redirected and other assurances used to replace invalidated credits</li> </ul>
<b>Regulatory Assurance and Policy Integration</b>		
18.	Public Lands	<ul style="list-style-type: none"> <li>• <b>Durability:</b> 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.</li> <li>• <b>Additionality:</b> Projects that generate credits must be additional to activities that would occur in the absence of the Credit System. On public lands, credits are additional if the government is not already performing or planning to perform conservation practices using public funds based on an existing mandate.</li> </ul>
19.	Application to State and Federal Policies and Regulatory Assurances	<ul style="list-style-type: none"> <li>• 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</li> <li>• The future State Plan is expected to direct compensatory mitigation to use the Credit System</li> <li>• A Credit System agreement between the Administrator and the U.S. Fish &amp; Wildlife Service is expected to authorize the use of Credits for mitigation purposes in pre- and post-listing environments</li> </ul>

### **HABITAT QUANTIFICATION TOOL OVERVIEW**

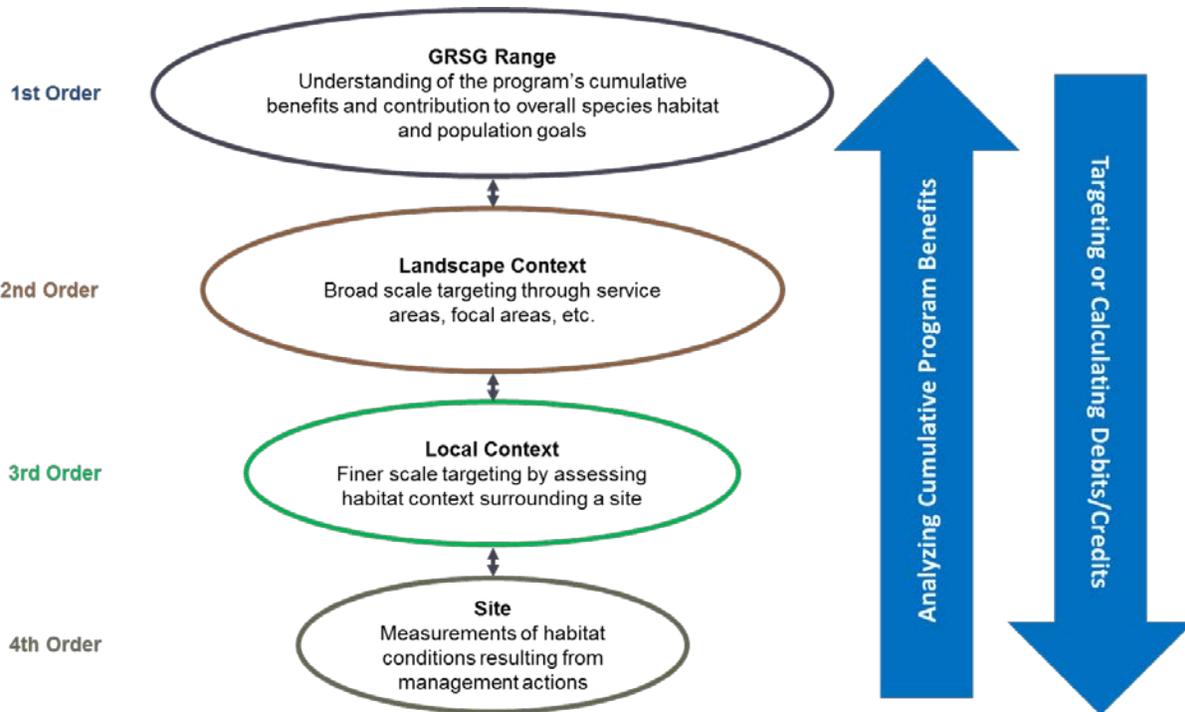
The Credit System's Habitat Quantification Tool (HQT)<sup>2</sup> is the method for quantifying debits and credits. The HQT uses a set of metrics, applied at multiple spatial scales, to evaluate vegetation and environmental conditions related to greater sage-grouse habitat quality and quantity. The HQT enables the Credit System to create incentives to generate credits on the most beneficial locations for the greater sage-grouse, and to minimize impacts to existing high quality habitat.

The HQT is used to calculate scores for each type of seasonal habitat, including nesting habitat (mating, nesting, and early brood-rearing areas), late brood-rearing habitat, and winter habitat. Habitat condition is expressed in "functional acres", which are units of habitat quality ("function") and quantity ("acres") relative to optimal conditions.

The HQT metrics are applied at four spatial scales derived from the Habitat Assessment Framework<sup>3</sup>, as illustrated in the diagram below.

<sup>2</sup> The HQT Scientific Methods Document can be found at the Sagebrush Ecosystem Program's Website: <http://sagebrusheco.nv.gov/>

<sup>3</sup> Stiver, S.J., E.T Rinkes, and D.E. Naugle. 2010. Sage-grouse Habitat Assessment Framework. U.S. Bureau of Land Management. Unpublished Report. U.S. Bureau of Land Management, Idaho State Office, Boise, Idaho.



To quantify the quality of greater sage-grouse habitat, pre-project conditions are measured at the site to determine current ecological performance, or the functional acre score. The debit/credit score is adjusted to account for indirect effects of the local area surrounding the site. Mitigation ratios are applied at the 2<sup>nd</sup> order scale to ensure that the functional acres of credit acquired are greater than the functional acres of debit. Actual conditions are verified using the HQT, and credits are released according to the habitat quality achieved.

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