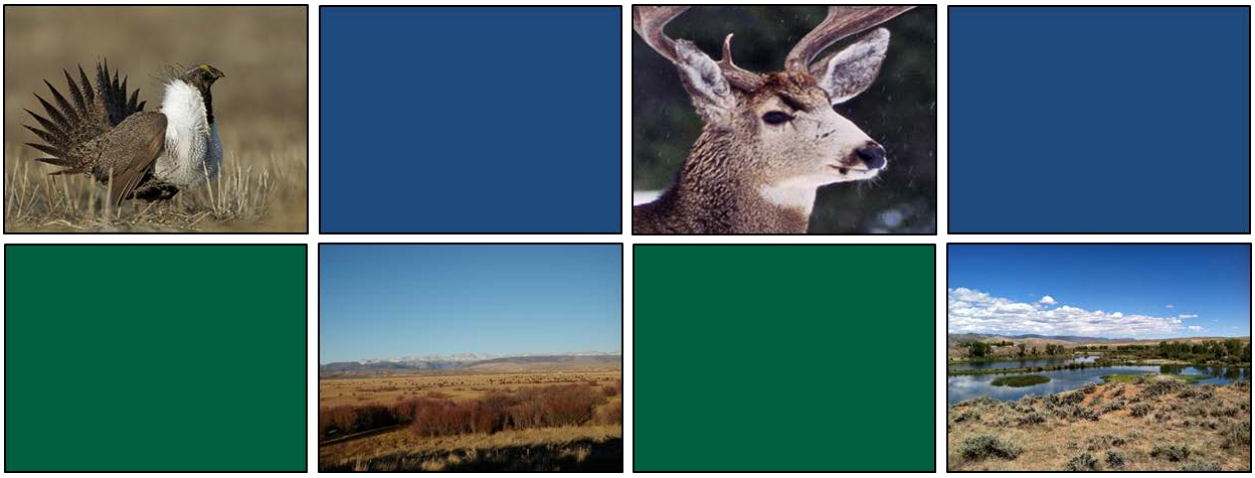
Wyoming Conservation Exchange

Exchange Manual



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WYOMING CONSERVATION EXCHANGE

The Wyoming Conservation Exchange is endorsed by the following organizations:

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ACKNOWLEDGEMENTS

Discussions among Wyoming landowners about how best to structure a payment for ecosystem services program in the Green River Basin have been underway for several years. This interest spurred an Advisory Group of local leaders to collaboratively launch development of an ecosystem services program in the Upper Green River Basin and connect it to relevant stakeholder groups. In response to the need for increasing conservation opportunities statewide, this effort was expanded from the Upper Green River Basin into the Wyoming Conservation Exchange (Exchange), which includes the entire state of Wyoming. The Exchange Advisory Group consists of representatives from Sublette County Conservation District (SCCD), University of Wyoming, The Nature Conservancy (TNC), and the Environmental Defense Fund (EDF). The guidance, insight and support of the individuals on the Advisory Group has been essential to ensure the Exchange is aligned with the needs of key constituents and is a viable means for provision of ecosystem services.

The Exchange incorporates design, organization and content from documents developed by Environmental Incentives, LLC; Willamette Partnership; and Environmental Defense Fund, among others. In particular, the Exchange Operations were adapted from the Klamath Tracking and Accounting Program Pilot Operational Protocol Handbook Version 1.0. 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 the Willamette Partnership (www.willamettepartnership.org) and Environmental Incentives, LLC (www.enviroincentives.com), but is not the responsibility or property of the Willamette Partnership.

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WYOMING CONSERVATION EXCHANGE MANUAL INTRODUCTION

The Wyoming Conservation Exchange Manual (Exchange Manual) provides all materials necessary for understanding and engaging in the Wyoming Conservation Exchange (Exchange). The primary audience of the Exchange Manual is the Exchange Administrator, the Board of Directors, regulatory agencies and current and potential participants in the Exchange. The Exchange Manual defines consistent direction for specific technical and policy considerations that arise during the generation and sale of credits, determination of debits, and management of the Exchange. The Exchange Manual is subject to future revision with approval from the Board of Directors based on analysis and consultation.

EXCHANGE MANUAL CONTENTS

Section 1: Exchange Overview	Provides an overview of the objectives, scope and primary participants of the Exchange.
Section 2: Exchange Elements	Summarizes the primary policy and technical considerations that enable consistent application of the Exchange by all participants.
Section 3: Exchange Operations	Defines the specific steps, roles and timing to: ▪ Quantify and verify credits from individual project sites. ▪ 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 Exchange and associated quantification tools over time.
Appendix A: Glossary	Defines key terms used throughout the Exchange Manual.
Appendix B: Forms, Templates & Tools	Describes the specific forms with associated guidance to be filled out by Exchange participants and submitted to the Exchange Administrator. All forms and instructions are available on the Exchange website.
Appendix C: Dynamic Offsets Considerations	Describes the rationale for use of Dynamic Offsets and provides supporting documentation.

EXCHANGE TOOLS & DOCUMENTS

The following Exchange documents and tools are available online or through the Exchange Administrator, and are referenced in this Exchange Manual:

- **Wyoming Conservation Exchange Website—**Provides introductory materials, contact information and basic forms for participants. The website is managed by the Exchange Administrator, and is available at www.wyomingconservationexchange.org.
- **Greater Sage-Grouse Habitat, Mule Deer Habitat, and Hydrologic Function Quantification Tools (HQTs) –**A set of metrics applied at multiple spatial scales that evaluate current conditions and changes in conditions indicative of habitat or ecosystem function, used to inform the amount of credit and debit resulting from conservation and development impacts.
- **Exchange Agreement –** The signed agreement with relevant regulatory agencies (i.e., U.S. Fish and Wildlife Service (USFWS) and Wyoming Game & Fish Department (WGFD)) authorizing the use of Exchange credits for mitigation purposes for greater sage-grouse.

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SECTION 1 EXCHANGE OVERVIEW

The Wyoming Conservation Exchange (Exchange) creates incentives for generating quantifiable conservation outcomes that improve and protect greater sage-grouse (*Centrocercus urophasianus*) habitat, mule deer (*Odocoileus hemionus*) habitat, and hydrologic function. The Exchange creates a way for energy companies, developers and other public and private organizations to acquire credits for compensatory, off-site mitigation or natural resource conservation by providing financial compensation to landowners who engage in beneficial projects for wildlife habitats or hydrologic function and water resources. The Exchange promotes landscape-level conservation benefits by directly linking investment and conservation outcomes, through quantifiable tools and local stakeholder guidance.

Energy and residential development in Wyoming are significantly impacting the future of greater sage-grouse habitat, mule deer habitat, and hydrologic function. All three problems are addressed by the Exchange. Habitat for greater sage-grouse is receiving heightened attention at present because of the potential for the listing of the species as threatened or endangered under the Endangered Species Act (ESA). Accordingly, the initial focus of the Exchange is on greater sage-grouse.

PROBLEM

Fragmentation and degradation of sagebrush habitat nationwide has reduced the amount of viable habitat for species that only occur in these habitats, such as greater sage-grouse. The greater sage-grouse now occupies approximately 56 percent of its historic range (USFWS 2013). Estimates of greater sage-grouse populations indicate that Wyoming is home to the largest number of birds in the range of the species (USFWS 2010). The expansion of oil and natural gas development, residential development, and other land use changes in parts of Wyoming has the potential to further impact important sagebrush habitat. The participation of private landowners in conservation of greater sage-grouse habitat is essential to species recovery and long-term population viability (Sage-Grouse Initiative 2014).

The greater sage-grouse is a candidate species under the ESA. The U.S. Fish and Wildlife Service (USFWS) has determined that there is sufficient scientific evidence to warrant a listing for the greater sage-grouse but it has been precluded from doing so because other, higher-priority species take precedence (USFWS 2012). A listing under the ESA would result in significant limitations on many human activities in Wyoming and elsewhere in greater sage-grouse range.

SOLUTION

The Exchange is a programmatic approach to compensatory mitigation, which is defined as an offset for disruption that may be caused by a project even after avoidance, minimization, and reclamation for that project has occurred to the greatest practical extent. The Exchange facilitates the creation of mitigation credits by multiple landowners, conservation banks, and land managers (collectively referred to as Credit Developers), for sale to multiple Buyers. The Exchange complements the Greater Sage-Grouse Core Areas Protection Strategy (State of Wyoming Executive Order 2011-5), which was issued to conserve greater sage-grouse in critical habitat areas. The Exchange is a mechanism for pre-listing mitigation credits, which are compensatory mitigation credits that may be purchased when a species is a candidate for listing but prior to the listing decision. Pre-listing mitigation credits can both 1) create conservation benefit that can be taken into account in the listing decision, and 2) provide assurance to participants that the work they have undertaken via the Exchange will fulfill USFWS requirements for compensatory mitigation in the event that the species is listed**.** If greater sage-grouse is listed under the Endangered Species Act, the Exchange may be used to fulfill compensatory mitigation requirements by providing mitigation credits for projects that affect greater sage-grouse or greater sage-grouse habitat.

HOW THE EXCHANGE WORKS

The Exchange measures and tracks the outcomes of habitat conservation projects and reports the overall benefit to the species throughout Wyoming. The Exchange provides the market infrastructure and necessary tools to value and support transactions. These include the habitat quantification tools (HQTs), a registry, and a trading platform along with the protocols (i.e., processes and rules) to ensure conservation benefits are measurable and repeatable. This results in near-term investments and creates a scalable platform to include additional conservation issues, a wide array of conservation projects, and multiple sectors for investment over time. The Exchange works by:

- Creating a viable source of revenue for farmers and ranchers who create high-quality habitat for species from development entities and groups concerned with environmental conservation.
- Enabling mitigation actions that result in a net increase in functional habitat while enabling resource-use projects to proceed with greater certainty and lower administrative costs.
- Significantly improving the effectiveness and efficiency of conservation investments, resulting in more meaningful and longer-lasting benefits for species and water resources.

The subsections that follow provide the following basic information about the Exchange:

- **Subsection 1.1** describes the origins, vision and benefits of the Exchange.
- **Subsection 1.2** describes the local context and scope of the Exchange.
- **Subsection 1.3** describes the organizational roles and participants of the Exchange.
- **Subsection 1.4** provides an overview of how the Exchange operates.

1.1 VISION & GUIDING PRINCIPLES

The Exchange evolved from a multi-year stakeholder process involving local ranchers, the Sublette County Conservation District (SCCD), University of Wyoming (UW), The Nature Conservancy (TNC) and the Environmental Defense Fund (EDF), with input from other stakeholders, industries and agencies.

The long-term vision of the Exchange is to establish a self-sustaining program in Wyoming that will support the stewardship, enhancement and restoration of the state's wildlife, water and range resources through investments by entities concerned with conservation and mitigation of the impacts of development, as well as other non-regulated entities seeking conservation for other reasons.

The Exchange will initially provide compensatory mitigation credits just for greater sage-grouse habitat; additional credits for mule deer habitat and hydrologic function will be defined and added in the future.

GUIDING PRINCIPLES

The Exchange enables the stewardship, enhancement and restoration of resilient ecosystems in a credible and rigorous way. As such, it is designed to work within existing regulatory structures and constantly strives to meet the following principles:

- Produce the highest quality conservation where it makes the greatest ecological difference;
- Foster transparency, accountability, credibility and continuous improvement; and,
- Facilitate the connections between Buyers and Credit Developers that put the greatest amount of resources towards measurable conservation outcomes while minimizing transaction costs.

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

BENEFITS OF PARTICIPATION

Quantifying and reporting on the benefits from stewardship, enhancement and restoration efforts enables the following benefits to participants and stakeholders:

Credit Developers (including landowners, land managers, aggregators, and conservation banks) are able to quantify the amount of environmental benefit (credits) created by implementing conservation projects. These credits can be sold to public and private Buyers seeking to improve and maintain greater sage-grouse habitat, mule deer habitat, and hydrologic function in Wyoming, and can provide revenue for landowners, farmers and ranchers.

Buyers can efficiently invest with confidence, knowing that credits are 1) developed using consistent standards and metrics; 2) useful in comparing the relative improvements across credit and debit projects to find opportunities for achieving the greatest environmental benefit; 3) aligned with regulatory requirements to offset the impacts (debits) of development projects; and 4) result in measurable benefit to the species, reducing the burden of future regulatory requirements. This increases accountability with regulators and local constituents and allows for greater coordination with other investors to fund large-scale projects.

Local Constituents and Conservationists can identify habitat priorities and show how credit projects are helping to improve habitat and address these priorities. Transparent tracking and regional accomplishment reports can rally the community around making progress toward common goals.

Regulatory Agencies can use the Exchange as a programmatic approach to 1) report measurable benefit to the species for consideration in listing and permitting decisions; and 2) ensure implementation of improved conservation measures through adaptive management.

1.2 CONTEXT & SCOPE OF THE EXCHANGE

In recent years, USFWS has documented the dramatic decline of greater sage-grouse, which now occupies less than approximately 56 percent of its original range (USFWS 2013). Wyoming is ground zero for new greater sage-grouse conservation work. Although ranching dominated the economy through much of the 20th century, now tourism, recreation, and energy production increasingly drive the local economy. The Exchange was originally initiated by stakeholders in the Upper Green River basin of Wyoming to facilitate the accomplishment of federal and state objectives for greater sage-grouse conservation. Recognizing the need for these mechanisms across the state of Wyoming and the Western United States, the Exchange has been scaled up to include all of Wyoming. The Exchange provides a programmatic way for local Credit Developers to become engaged in greater sage-grouse conservation, and for Buyers to fund that conservation as a form of compensatory mitigation.

The Exchange covers the current estimated occupied range (EOR) of greater sage-grouse in Wyoming. Credits are awarded for projects that create benefits for greater sage-grouse habitat, and debits are accrued from impacts to habitat. Projects must adhere to the mitigation hierarchy (avoid, minimize, restore, offset), as the Exchange is a mechanism that addresses offsets, or compensatory mitigation, within the hierarchy. The Exchange's scope will be revised to support additional conservation needs (such as mule deer habitat and hydrologic function) and to correspond with revisions to habitat and management maps in the future. See Section 2.11- *Service Areas* for a full description of the Exchange's geographic scope and service areas.

1.3 GOVERNANCE STRUCTURE & ROLES

The governance structure and interactions between the different participants in the Exchange are depicted in Figure 1.1, with a description of each participant described below the figure.

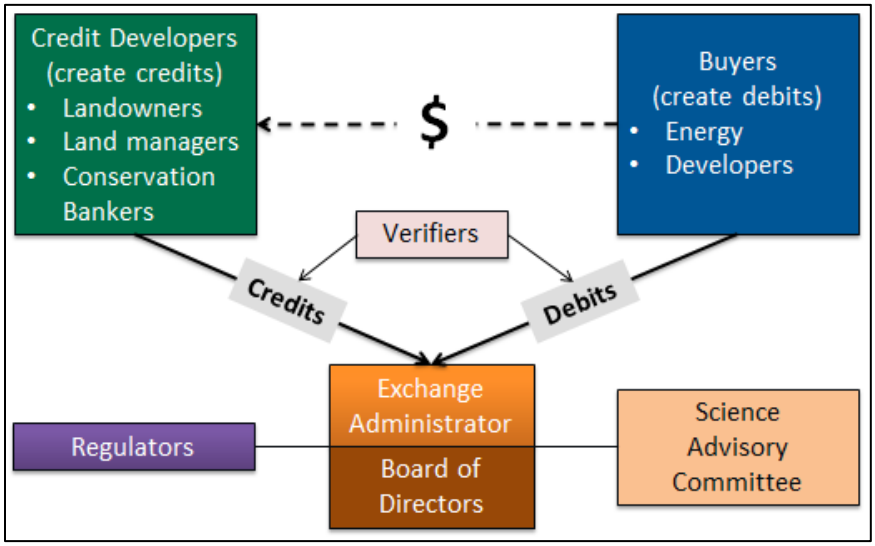

Figure 1.1 Organizational Structure of the Wyoming Conservation Exchange

Credit Developers: Landowners or managers who produce or sell credits in the Exchange. Credit Developers may also be bank facilitators, such as conservation banks, or other types of aggregators, who work with multiple landowners to implement conservation projects, secure financial assurances, and sell credits.

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

Exchange Administrator: Entity that manages the day-to-day operations of the Exchange, including facilitating and overseeing all credit generation and transaction activities. The Exchange Administrator ensures consistency and transparency, issues credits, and reports results.

Verifiers: Contractors or individuals that are certified by the Exchange Administrator to assess the accuracy of credit and debit calculations.

Science Advisory Committee: Develops and manages biological standards for the species and its habitat, and makes technical recommendations to the Exchange Administrator and Board of Directors.

Board of Directors: Formal stakeholder group, including representatives from agriculture, commercial industry, conservation groups and the Science Advisory Committee. This group is responsible for overseeing Exchange operations and making formal management decisions.

Regulators: Agencies that authorize the Exchange to generate credits used for compensatory mitigation and ensure that the Exchange functions according to current law, policy, and regulations**.**

Technical Support Providers*:* Individuals and entities with technical expertise in conservation planning and project design, who understand how to use the Exchange tools and forms. Technical support providers may be hired by Credit Developers and Buyers to help design projects, use the HQTs to estimate credits and debits, and submit all required materials to the Exchange Administrator. The Exchange does not have a formal process to designate or certify a technical support provider.

1.4 EXCHANGE OPERATIONS OVERVIEW

This section provides an overview of the steps used to generate, acquire and transfer credits, and for the Exchange Administrator to manage the Exchange. A list of the specific tools, forms, and guidance for Exchange participants is included in Appendix B.

Figure 1.2: Overview of the process steps to generate and purchase credits

Figure 1.2 depicts the steps for generating and transacting credits. 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 Exchange Administrator who provides the platform for transactions to occur.

GENERATING CREDITS

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

1. **Select & Validate Project Site**: Credit Developers may select any project site on private or public land that meets the Exchange's credit project eligibility requirements (see Section 2.12 - *Credit Project Requirements*). The Credit Developer completes a Validation Checklist to determine whether eligibility requirements are met and submits that information to the Exchange Administrator for review and approval. This stage provides a screen to minimize upfront investment and expenditures on the part of potential Credit Developers that may not be eligible to generate credits.
2. **Implement & Calculate Credit**: Credit Developers draft a project Management Plan, quantify the expected number of credits using HQTs, 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 anticipated 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 Exchange 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 Exchange Administrator and either transferred to Buyers or retired (i.e., no longer available to be transferred to a Buyer) using the registry. Credit Developers annually confirm that the project Management Plan is being followed and request phased credit releases, where applicable. Third-party verification is required in order to trigger a credit release.

Exchange Currency – "Credits"

Credits are the currency of the Exchange. Credits are based on "functional acres", which represent habitat quality ("function") relative to fully-functioning conditions, and quantity (acres). See Section 2.8 - *Habitat Quantification Tool* for a more detailed description of calculating credits and functional acres.

ACQUIRING CREDITS

The following steps outline the process to purchase credits.

1. **Indicate Initial Interest**: Buyers become aware of the opportunity to participate in the Exchange, and contact the Exchange Administrator to provide basic information. Additional assistance and technical support is available, if desired.
2. **Determine Credit Need**: Buyers work with the Exchange Administrator and relevant permitting agencies to determine the geographic region, duration and amount of credit necessary 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 HQTs. Baseline for debit projects is verified on the ground by a third-party verifiers, who also review post-project calculations to confirm the amount of credit needed.
3. **Acquire Credits**: Buyers create an account on the registry, which brings them together with Credit Developers to agree 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 Credit Developer and Buyer. The Exchange Administrator determines the verification requirements and provides notice when credits have been transferred between accounts.
4. **Track & Transfer**: Credits listed on the registry are assigned 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 EXCHANGE

The Exchange is managed by the Exchange Administrator using a transparent and inclusive dynamic management system to improve the efficiency and effectiveness of the Exchange over time. The Board of Directors is responsible for adopting any changes made to the Exchange through a defined management process. This process follows the steps depicted in Figure 1.3.

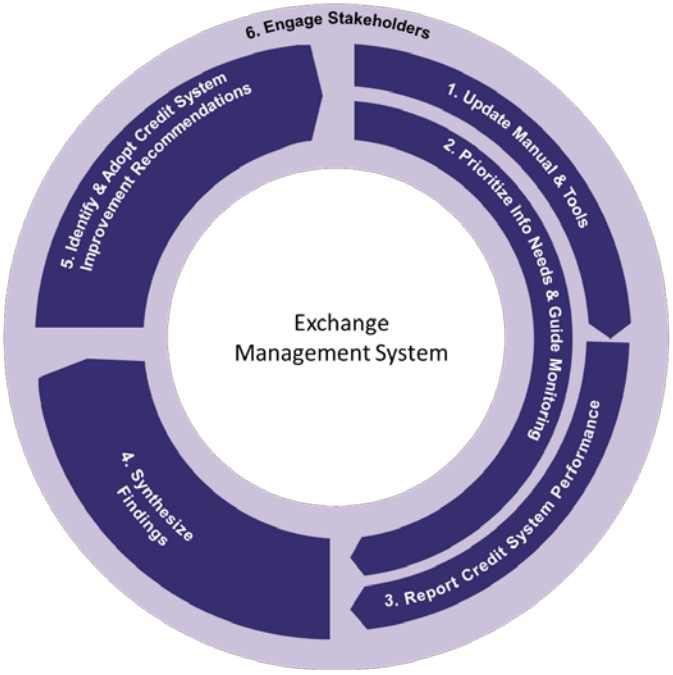

Figure 1.3: Overview of Exchange Management System

1. **Update Exchange Manual & Tools**: Exchange Administrator updates this Exchange Manual, as well as tools, forms, and guidance to ensure practical experience and new scientific information result in increased efficiency and effectiveness.
2. **Prioritize Information Needs & Guide Monitoring**: In coordination with the Science Advisory Committee, the Exchange Administrator identifies and prioritizes research and monitoring needs, coordinates funding efforts, and oversees monitoring and research.
3. **Report Exchange Performance**: Exchange Administrator develops the Annual Performance Report to summarize debits, credits and habitat improvements achieved. Routine reporting of accomplishments is essential to ensure transparency and drive accountability.
4. **Synthesize Findings**: In coordination with the Science Advisory Committee, Exchange Administrator synthesizes relevant research, monitoring and operational findings to inform Exchange improvements. Synthesizing findings into information that is directly related to the operations of the Exchange is essential to inform management decisions and guide future credit and debits projects. Incorporating new information ensures the calculation of debits and credits is accurate by incorporating the best available science into HQTs that improve project selection and design decisions, and improve accountability.
5. **Identify & Adopt Exchange Improvement Recommendations**: Exchange Administrator develops operational and technical improvement recommendations which are reviewed and adopted by the Board of Directors to ensure the Exchange continues to motivate effective actions over time. Creating and transparently adopting clear recommendations to improve the Exchange is the most critical step in the annual Exchange 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 Exchange Administrator engages stakeholders to keep them informed of progress and solicit input for how to improve the Exchange. Consistent stakeholder engagement is necessary to ensure the Exchange operates efficiently, increases understanding, and facilitates accountability.

Section 2 – *Exchange Elements* summarizes the primary policy and technical considerations that enable consistent application of the Exchange by all participants. Section 3 – *Exchange Operations* describes the detailed steps for generating and acquiring credits, and managing Exchange operations.

SECTION 2 EXCHANGE ELEMENTS

This section of the Exchange Manual defines consistent direction for specific technical and policy considerations (i.e., Exchange elements) that arise during the generation and sale of credits, determination of debits, and management of the Exchange. In the future, the Exchange will add additional Exchange elements for mule deer habitat and hydrologic function credits as they are developed. The descriptions that follow provide guidance and requirements for Exchange participants related to generating and purchasing credits.

Table 2.1: Exchange Elements

2.1 GOVERNANCE

The Exchange utilizes an organizational structure that includes an Exchange Administrator, Board of Directors, and Science Advisory Committee to ensure the Exchange is consistently managed and improved over time. Information regarding the key duties for each of these entities is provided below.

BOARD OF DIRECTORS

The Board of Directors is a formal, representative stakeholder group responsible for selecting a qualified Exchange Administrator, overseeing the operations of the Exchange, and making high-level Exchange management decisions. The Board of Directors and its processes are governed by the Bylaws in the Articles of Incorporation for the Wyoming Conservation Exchange. The President of the Board of Directors or other authorized representative(s) of the Board signs the Wyoming Conservation Exchange Agreement (Exchange Agreement) with the USFWS, and other agencies as necessary, to authorize the Exchange to generate credits.

The current members of the Advisory Group at the time the Exchange Agreement is signed are responsible for incorporating the Exchange as a non-profit entity and for convening the initial Board of Directors. Once the Board of Directors is formed, the Advisory Group will provide technical advisement as the Technical Advisory Committee, and the Board of Directors will become the official body that oversees the Exchange moving forward.

The Board of Directors will consist of at least seven representatives. Members will include two representatives each from landowner, commercial industry and conservation organizations and one member representing the Science Advisory Committee. The Board may elect to include up to an additional four members representing state and federal agencies. Table 2.2 outlines key ongoing duties of the Board of Directors.

Table 2.2: Key Responsibilities of the Exchange Board of Directors

BOARD OF DIRECTORS - KEY RESPONSIBILITIES	
Ensure Program Performance	▪ Signs the Exchange Agreement with USFWS and other participating agencies and participates in negotiations with USFWS and other participating agencies to amend the Exchange Agreement as necessary. ▪ Evaluates annual reports from the Exchange Administrator that assess the effectiveness of credit projects in relation to both species habitat and overall Exchange performance goals; provides reports to USFWS and other participating agencies as necessary. ▪ Executes annual audit, or contracts for the auditing of, the Exchange Administrator's finances and operations, and determines if corrective actions are needed to ensure finances and operations are sufficient to support ongoing, consistent operations of the Exchange.
Ensure Exchange-wide Adaptive Management	▪ Discusses and adopts Exchange improvement recommendations provided by Exchange Administrator and participants. ▪ Evaluates and implements adaptive management actions to better address compliance with federal and state regulations. ▪ Gains input from Science Advisory Committee on new science to be incorporated into the Exchange's tools and processes.
Participant Oversight	▪ Approves and convenes the Science Advisory Committee as necessary, and at least annually. ▪ Selects and trains a qualified Exchange Administrator. ▪ Resolves disputes among Exchange participants that cannot be resolved independently or in consultation with the Exchange Administrator.

EXCHANGE ADMINISTRATOR

The Exchange Administrator manages the operations of the Exchange, and reports directly to the Board of Directors. The Exchange Administrator acts as the Executive Director of the Exchange, making day-to-

day management decisions based on authority granted in the Exchange Agreement, the Bylaws, and the direction provided by this Exchange Manual. The Board of Directors selects a qualified Exchange Administrator through a fair and transparent process. Table 2.3 outlines the key responsibilities that are necessary for the Exchange Administrator to perform.

Table 2.3: Key Responsibilities of the Exchange Administrator

EXCHANGE ADMINISTRATOR - KEY RESPONSIBILITIES	
Exchange Administration & Credit Accounting	▪ Manages day-to-day Exchange operations. ▪ Manages all Exchange tools, guidance and forms. ▪ Manages credit accounts and the ledger of all credits and debits. ▪ Manages accounting of reserve account credits, and makes recommendations to the Board of Directors for adjustments, as needed.
Credit Developer & Buyer Engagement	▪ Responds to inquiries of interest from Buyers and Credit Developers, connecting them to relevant resources. ▪ Ensures any necessary additional outreach to Credit Developers and Buyers occurs.
Reporting & Accountability	▪ Develops the Annual Performance Report and Synthesis of Findings, and provides these documents to the Board of Directors and relevant agencies. ▪ Brings Improvement Recommendations to the Board of Directors for consideration. ▪ May also contract with third parties to conduct periodic Exchange audits. ▪ Performs quality-control checks on information submitted by Verifiers and Exchange participants.
Compliance & Enforcement	▪ Ensures Exchange compliance with relevant state and federal policies. ▪ Works with Credit Developers to implement corrective actions through remedial action plans, when appropriate, in cases of compliant and noncompliant reversals. ▪ Enforces contract compliance and penalties in cases of noncompliant reversals.
Financial & Contracting Support	▪ Manages funds, contracts and partnerships for monitoring. ▪ Confirms financial assurances are in place for credit projects. ▪ May facilitate credit auctions or requests for proposals (RFPs) for Buyers. ▪ May administer contract payments between Buyers and Credit Developers.
Science & Technical Support	▪ Defines Science Advisory Committee and provides suggested monitoring research questions. ▪ Certifies Verifiers. ▪ Confirms verification and monitoring for credit and debit projects.

SCIENCE ADVISORY COMMITTEE

The Science Advisory Committee consists of scientists whose purpose is to inform the development and revision of HQTs and biological standards for species and habitat included in the current scope of the Exchange, and to inform monitoring efforts across the Exchange service areas. The Science Advisory Committee also contributes a scientific perspective to setting objectives that influence and guide Exchange transactions. The Science Advisory Committee and its processes are governed by the Bylaws in the Articles of Incorporation for the Wyoming Conservation Exchange.

The Science Advisory Committee is composed of a minimum of three (3) and a maximum of seven (7) biologists or other qualified scientists with recognized knowledge and expertise on the species, or its habitats.

The Bylaws govern process by which Science Advisory Committee members are selected and replaced. The Bylaws provide the Board with the authority to appoint additional Science Advisory Committees in the future to provide guidance on other species or natural resources addressed by the Exchange.

The Science Advisory Committee compiles and analyzes the latest and best-available science regarding the species and habitat, and makes recommendations to the Board of Directors and Exchange Administrator regarding how that new information may be used to update the HQTs through the

adaptive management process. Changes to the HQT and Exchange based on these recommendations are approved by the Board of Directors. Best available science means scientific data and information with the greatest degree of excellence, sound reasoning and evidence that are available at the time and that are accurate, reliable and relevant for use.

REGULATORY AGENCY OVERSIGHT

The Exchange is designed to streamline the process for project design, review and approval by the relevant regulatory agencies. Agency approval and oversight is an important part of the structure and operation of the Exchange. The Exchange is designed to accommodate different regulatory mechanisms to ensure that efforts taken to facilitate conservation are recognized and certainty is provided to Buyers and Credit Developers. USFWS provides primary regulatory oversight for greater sage-grouse credits issued through the Exchange. The Exchange Agreement governs the relationship between the Exchange and USFWS, providing detail on USFWS approval and oversight of the Exchange, including approval of credit projects. In addition to the USFWS, credit and debit projects may fall under the jurisdiction of the agencies listed below.

- **Wyoming Game and Fish Department (WGFD)** has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants and the habitat necessary for biologically sustainable populations of these species. This includes greater sage-grouse (unless federally-listed under the ESA). WGFD will provide guidance and review of both credit and debit projects.
- **Wyoming's Sage-Grouse Implementation Team (SGIT)**, as authorized by the Greater Sage-Grouse Core Areas Protection Strategy (State of Wyoming Executive Order 2011-5), may provide guidance and consultation on both credit and debit projects.
- Public agencies, including the Wyoming **Office of State Lands and Investment (OSLI)** and the **Bureau of Land Management (BLM)**, have jurisdiction over projects on state and federal lands. The Exchange will work with these agencies on design and approval for credit projects on these lands. For example, a rancher managing both private lands and adjacent public lands (under a grazing lease) might consider enrolling all of the lands they manage in the Exchange. Due to the laws and regulations governing the management of public lands, some requirements will vary for federal and state lands as detailed in Section 2.20 – *Federal & State Lands*.

Federal and state land agencies, including BLM, also have authority over debit projects permitted on lands under their management. Agency oversight of debit projects will be conducted in accordance with the agency's typical process for permitting. BLM or other permitting agencies may choose the Exchange as an option for compensatory mitigation and incorporate the Exchange into relevant permitting mechanisms and project analyses such as those conducted under the National Environmental Policy Act (NEPA). In these cases, the Exchange Administrator works with the permitting agency and permittee to use the Exchange to fulfill requirements for compensatory mitigation.

2.2 FEDERAL REGULATORY PREDICTABILITY

The Exchange is designed to meet the criteria outlined in the USFWS Greater Sage-Grouse Mitigation Framework (USFWS 2014) and qualify as pre-listing mitigation for greater sage-grouse, currently a candidate species, as well as post-listing mitigation if the species is listed as threatened or endangered under the Endangered Species Act (ESA). The Exchange provides operational certainty to Buyers and Credit Developers that use the Exchange. If greater sage-grouse is listed as threatened or endangered, any entity or project that disturbs the species or habitat would need to secure protection from prohibited "take" of the species The Exchange intends that pre-listing mitigation credits be treated as measures to minimize and mitigate the impact of incidental take, should greater sage-grouse be listed. Therefore, the

Exchange is entering into a pre-listing mitigation agreement with the USFWS through the Exchange Agreement.

The Exchange Agreement is the regulatory document based on template Conservation Bank Enabling Instruments and signed by regulators and the Exchange Board of Directors. The Exchange Agreement describes the legal obligations of regulators, the Exchange Administrator, and Board of Directors under the Exchange. The Exchange Agreement will undergo a conservation banking review and approval process for regulators to authorize the use of Exchange credits for compensatory mitigation. By signing the Exchange Agreement, regulators signify that efforts undertaken through the Exchange to facilitate conservation of greater sage-grouse will be recognized by the USFWS as compensatory mitigation (whether or not the species is listed).

Neither conservation banks nor habitat exchanges authorize, in and of themselves, incidental take of listed species. In addition to meeting the needs for mitigation, the Exchange is designed to be integrated with other regulatory mechanisms that provide regulatory assurances for incidental take protection to participating Credit Developers and Buyers. Credit Developers will be issued Certificates of Inclusion in an Enhancement of Survival Permit that is held by the Exchange, or provided assurances through a Conference Opinion (which will be converted to a Biological Opinion in the event of listing), or through another USFWS-approved assurance mechanism. The Exchange can be used in combination with a Candidate Conservation Agreement (CCA) or Candidate Conservation Agreement with Assurances (CCAAs) as described in more detail in Section 2.19 – *Credit & Payment Stacking*.

Buyers will need to participate in either a Habitat Conservation Plan (HCP) if their actions are all private or else adhere to the provisions of a Conference/Biological Opinion (if part or all of their actions involve a federal nexus) in order to receive incidental take protection. The Exchange is intended to be identified as a preferred means of meeting compensatory mitigation obligations within HCPs, as well as within Conference/Biological Opinions so as to provide an integrated combination of compensatory mitigation and regulatory assurances.

2.3 INTEGRATION WITH STATE POLICY

The Wyoming state government has long been concerned by the decline in greater sage-grouse populations in the state, and the impact that a potential listing of the species would have on land uses. As a result, the state initiated significant, coordinated planning efforts over a decade ago to create a statewide strategy for greater sage-grouse conservation in Wyoming. Those efforts resulted in an executive order designating greater sage-grouse "core areas" statewide (E.O. 2011-05), shown in Figure 2.1. The executive order provides guidelines for

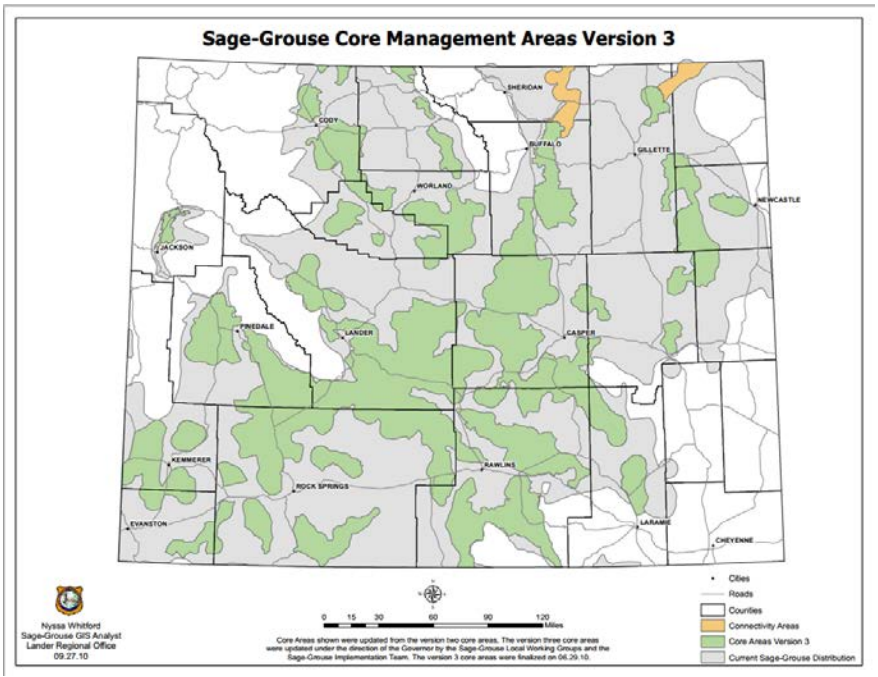

Figure 2.1: Wyoming Sage-Grouse Core Management Areas

how development could occur inside and outside of core areas in such a way that maintains suitable greater sage-grouse habitat. The Exchange is intended to support the state's core areas strategy by providing compensatory mitigation for development that occurs both inside and outside of core areas when project proponents or the permitting agency desire compensatory mitigation in addition to the protections afforded by the core areas strategy.

The Exchange is intended to be used in the context of state and federal policies that require the full mitigation hierarchy sequence (i.e., avoidance, minimization, reclamation, and then compensatory mitigation). Credits are only used to offset debits that occur when disturbances are proven unavoidable, and minimization does not provide for complete direct or indirect impact avoidance (USFWS 2014). Credits must be acquired in advance of implementing the proposed debit project.

Buyers who purchase credits to fulfill regulatory requirements for compensatory mitigation are responsible for meeting all requirements of the relevant permitting process through the permitting agency. Buyers must provide documentation of the relevant permit stipulations and debit project design documents to the Exchange Administrator to ensure proper identification of the relevant service area, the total amount of credits needed to offset the debit project, and the total duration of the debit project. This allows the Exchange Administrator to ensure that the debit project is appropriately offset with a credit project, and transparently track and report on all credit transactions and programmatic net benefit generated.

Buyers and Credit Developers are encouraged to consult with the WGFD and SGIT, if appropriate, when identifying potential credit projects through the Exchange. Buyers are encouraged to purchase credits from credit projects located according to the priority list identified by the SGIT, relative to the debit project:

1. Within the Density Disturbance Calculation Tool (DDCT) area
2. Within the same core area
3. Adjacent to the same core area (typically within 5.3 miles (8.5 km) of the nearest lek)
4. Within a nearby core area

Adaptive management and flexibility are key components of the Exchange. Exceptions may be made when they result in the best outcome for greater sage-grouse. The permitting agency has the ultimate authority to determine if credits purchased through the Exchange meet permit stipulations. Credits must also be located within the same service area as the debit project they are offsetting. See Section 2.11 - *Service Areas* for more information.

Information used to implement the core areas policy, along with other relevant landscape-level data, will be incorporated into the HQT methods that assess the quality of greater sage-grouse habitat at a landscape level. The mitigation ratios, which help target credits and debits to the most beneficial areas in the state for greater sage-grouse, may be informed in part by the HQT's landscape-level methods. See Section 2.10 - *Mitigation Ratios* for more information.

2.4 ACCOUNTING SYSTEM OVERVIEW

The Exchange employs a rigorous accounting system that operates on an annual cycle. Credits and debits are tracked according to specific reporting and verification standards. See Section 2.13 – *Credit & Debit Project Duration*, and Section 2.15 – *Credit & Debit Verification* for more information on credit and debit project reporting and verification standards. The Exchange's accounting system includes the following key components:

- **Exchange Registry:** Tracks credits, debits and other transactional information.

- **Annual Performance Reports:** Include registry outputs and the Exchange adaptive management process to report on the total number of confirmed credits and debits each year, and other information needed by state and federal regulatory agencies.

REGISTRY

All credits and debits are tracked in the Exchange's registry, which transparently tracks the issuance, transaction and retirement of credits using unique serial numbers. Credit retirement is when credits are no longer available to be transferred to another Buyer. An example of credit retirement is a credit that is used to offset a permanent impact or debit and therefore cannot be transferred to another Buyer. Once credits are retired, the Exchange Administrator moves them into a registry retirement account that can be reported on but not accessed for transfer. The Exchange Administrator may use a locally developed registry in the initial years of implementation. Depending on transaction volume and cost, the Exchange Administrator may elect to use an established environmental registry (for example, Markit) to efficiently track a large volume of transactions.

ANNUAL PERFORMANCE REPORTS

The Exchange Administrator will use the registry and Exchange adaptive management process to report annually on the performance of the Exchange. Information that will be included in each annual report may include the following:

- Total debit and credit projects statewide enrolled in the Exchange;
- Total number of debits and credits generated by projects and net benefit produced;
- Total number of debits and credits generated by service area;
- Total number of credits held in the reserve account;
- Any credit reversals that occurred over the course of the year and a brief summary of the method and status of replacement of lost credits;
- Anticipated improvements to be made to Exchange operations identified through the program-wide management process.

2.5 ADAPTIVE MANAGEMENT

The Exchange uses a formal, structured adaptive management process to engage stakeholders and execute monitoring and research to identify, recommend and implement improvements to the Exchange Manual and HQTs over time. The Board of Directors and Exchange Administrator are responsible for implementing the annual adaptive management process with support from the Science Advisory Committee and other stakeholders, as described in Section 3.3 - *Managing the Exchange*.

Adaptive Management Priority Considerations

The initial years of program-wide adaptive management will specifically focus on several program design elements described in this section of the Exchange Manual. These include:

- **Service Areas** – Assessing the need to allow cross-service area transactions and criteria for these types of transactions, including proximity factors, etc.
- **Credit calculations –** Ensuring that the aggregation of seasonal habitat function into a single score sufficiently meets species needs.
- **Baseline and credit site eligibility –** Reviewing HQT values used for requirements and refining values based on land type categories such as private lands, public lands, and lands that have received funds for conservation projects in the past.
- **Reserve account contributions –** Determining if adjustments to contribution percentages are warranted.

2.6 PARTICIPANT CONFIDENTIALITY

The Exchange recognizes that some Credit Developers may be concerned about the Exchange publicly disclosing personal information. However, it may be necessary for federal and state agencies to evaluate individual projects in order to properly assess the effectiveness of the Exchange to reduce threats and provide net benefit to the species. To ensure sufficient participant confidentiality, and information for a robust Exchange management process, the Exchange uses aggregated project information, and permits only restricted access to proprietary or sensitive information as required by state and federal law.

ANNUAL REPORTING

The Exchange will annually provide a transparent, program-wide report on the Exchange's performance to federal and state agencies. The report will include aggregated descriptions of properties and actions sufficient to confirm compliance and habitat performance. To the maximum extent possible under federal, state, and local law, the Exchange will protect against disclosure of personal and confidential information from participants. Personal and confidential information may include: names, contact information, general and legal descriptions of the enrolled property, grazing practices, land-use practices, commercial activities on the land, recreational activities on the land, site-specific species sightings, and site-specific species habitat condition.

DISCLOSURE OF INFORMATION

Information submitted to USFWS or BLM by the Exchange Administrator may be subject to federal Freedom of Information Act (FOIA) requests. In the event that a request for information is made to the Exchange Administrator that would result in the possible disclosure of personal or commercial confidential information, the impacted Credit Developer will receive notice of the request. Additionally, the Credit Developer will be provided with the opportunity to state, orally or in writing, why a release of the requested information would constitute a clearly unwarranted invasion of privacy or cause substantial harm to their commercial interest. The USFWS will provide notice when a FOIA request for records concerning the Exchange is made, and allow the Exchange Administrator or Credit Developer to prepare a notification requesting that any confidential personal or commercial information be withheld.

The Exchange 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 Exchange Administrator.

RESTRICTED ACCESS

The Exchange Administrator maintains collected data in a facility to which USFWS, BLM, and WGFD, with prior notice to the Exchange Administrator, may have access to view the data at any time during normal business hours. USFWS, BLM, and WGFD may not remove any property documents or records not identified as publicly available from the Exchange Administrator's facility and may not copy, record, or duplicate such information in any way. Information establishing a violation of any law is not subject to the confidentiality provisions above.

2.7 TRANSACTION STRATEGIES

Many transaction decisions influence how credits are transferred from a Credit Developer to a Buyer. Table 2.4 describes a few of the decisions that must be made for transfers to occur. The Exchange Administrator will work with Credit Developers and Buyers to determine the most appropriate transaction mechanism. Regardless of the specific transaction mechanism used, credits must be generated

and verified prior to finalizing and completing a credit transfer. See Section 2.15 – *Credit & Debit Verification* and Section 3.3 - *Managing the Exchange* for more information.

Table 2.4 Transaction Type Design Decisions

Market Mechanism: Do the Buyer and Credit Developer have a direct relationship with each other?	
Yes	**Bilateral negotiation**. Buyer and Credit Developer negotiate with each other to determine price; money changes hands directly between Buyer and Credit Developer or through a brokerage house.
No	**Auction or Registry**. The Buyer and Credit Developer do not necessarily know their transaction partner. The Exchange Administrator solicits bids for credits or projects that meet defined criteria, through an auction or registry. Credit Developers (or Buyers depending on auction or registry structure) submit applications specifying price to deliver a defined quantity of credits; money changes hands through a brokerage house.
Risk Sharing: Does the Buyer share the risk that management actions taken do not result in outcomes that will generate credits?	
Yes	**Buyer assumes or shares the risk of non-attainment** (i.e., that management practices undertaken do not result in outcomes that will generate credits.) This could mean that the Buyer rather than the Credit Developer would be responsible for purchasing endowment funds or contract surety bonds to ensure that funds are available for the long-term management of a credit site.
No	**Cash-and-carry deal for the Buyer**. The Credit Developer and Exchange Administrator bear the risk of non-attainment. The reserve account and financial assurances are designed to help the Credit Developer and Exchange Administrator bear this risk.
Additional Credit Attributes: Are credit projects selected based on other attributes, in addition to price?	
Yes	**Credits may be based on other attributes besides price**. For example, a regulator may require a Buyer (or an environmental NGO Buyer may decide) to purchase credits based on additional stipulations not necessarily required by the Exchange.
No	**Credits are based solely on price**. This would be the case if the market mechanism were an auction.

TRANSACTION FEES

The Exchange Administrator will collect transaction fees per credit or per credit project to fund the administration of the Exchange. The Exchange Administrator will work with the Board of Directors to set an initial transaction fee structure and amount, which will be periodically reviewed in the program-wide adaptive management process.

2.8 HABITAT QUANTIFICATION TOOL

The Exchange uses the HQT to calculate functional acres for credit and debit projects. "Function" refers to the role of the habitat in providing life history requirements for greater sage-grouse, and includes the direct and indirect effects of anthropogenic disturbances. Conditions specific to each seasonal habitat type for greater sage-grouse (i.e., nesting, summer and winter) are accounted for independently. Accordingly, the HQT calculates functional acres for each seasonal habitat type. The HQT measures habitat quality at the following spatial scales:

- **Range-wide Scale** (1st order): Occupied range of greater sage-grouse in Wyoming
- **Landscape Scale** (2nd order): Habitats required by subpopulations
- **Local Scale** (3rd order): Habitats required by an individual throughout the year

- **Site Scale** (4th order): Vegetation attributes relevant to greater sage-grouse

See the Greater Sage-Grouse HQT Scientific Methods Document for more information.

FUNCTIONAL ACRE CALCULATION

Functional acres are calculated within "map units," which are subdivisions of the project area with similar vegetative characteristics. To calculate functional acres for a map unit, the landscape-scale and local-scale habitat function for each seasonal habitat type is multiplied by the site-scale habitat function to produce the overall habitat function for each seasonal habitat type. The overall habitat function is then multiplied by the acreage of the map unit to produce the functional acres for each seasonal habitat type, and the highest functional acre value determines the functional acres for the map unit. Table 2.5 provides an example calculation of functional acres for a single map unit. Functional acres are the basis for credits and debits, but should not be confused with verified credits and debits.

Table 2.5: Example Functional Acre Calculation - Single Map Unit

SEASONAL HABITAT TYPE	LANDSCAPE-SCALE HABITAT FUNCTION	LOCAL-SCALE HABITAT FUNCTION	SITE-SCALE HABITAT FUNCTION	OVERALL HABITAT FUNCTION	ACRES	FUNCTIONAL ACRES
Nesting	75%	80%	60%	36%	200	72
Summer	75%	80%	0%	0%	200	0
Winter	75%	65%	45%	22%	200	44
			MAP UNIT FUNCTIONAL ACRES (HIGHEST SEASONAL HABITAT VALUE)			72

CREDIT & DEBIT CALCULATION

Credits are the currency of the Exchange, and are used to offset debits. Credits and debits represent the difference in functional acres between baseline and post-project habitat function, multiplied by a mitigation. Baseline for credit and debit habitat function is defined in Section 2.9 - *Credit & Debit Baseline*. Mitigation ratios are described in Section 2.10 - *Mitigation Ratios*. The calculation of credits and debits is completed for each map unit within the project area and summed to calculate total credits or debits associated with the project.

Although each map unit will have three functional acre values (one for each seasonal habitat type) the Exchange only tracks one credit type. The Exchange uses the greatest benefit for credit projects or the greatest impact for debit projects to each seasonal habitat type affected to determine the amount of credit or debit generated per map unit. Table 2.6 provides an example illustration of the calculation of credits for a hypothetical credit project consisting of three map units.

Table 2.6: Example Credit Calculation

	FUNCTIONAL ACRE DIFFERENCE RELATIVE TO BASELINE * MITIGATION RATIOS			
MAP UNIT	NESTING	SUMMER	WINTER	TOTAL
Map Unit 1	10	**15**	5	15
Map Unit 2	5	0	**20**	20
Map Unit 3	5	**10**	5	10
Sum of Functional Acre Difference Relative to Baseline *Mitigation Ratios				**45**

USE OF THE HQT

The HQT is used consistently throughout the duration of a credit project to 1) substantiate the release of credits at the point that the project meets habitat function thresholds, and 2) verify that conditions are

being maintained as expected over time. Credit projects may define multiple levels of increasing habitat function that are expected to be achieved over time, which will result in generation of additional credits once the expected habitat function has been achieved.

For debits, the HQT is used to determine pre-project functional acres before impacts occur, and is used as necessary over time to determine if impacts are reduced. Pre-project HQT results for debits can be used for up to five years after a site has been verified, as long as the habitat function is believed to be similar to the previous assessments and no significant changes have occurred on the site.

2.9 CREDIT & DEBIT BASELINE

Baseline is the starting point from which credits and debits are calculated.

CREDIT BASELINE

For credit projects, the amount of credit generated on the site is equal to the difference between the functional acres on the site and credit baseline. See Section 2.8 - *Habitat Quantification Tool* for more information on functional acres.

Regional Average Site-Scale Habitat Function

Existing data is analyzed to estimate the average habitat function of the region at the site-scale using the HQT. This estimate represents the expected habitat function in the "business-as-usual" case.

Credit baseline is determined by using a regional average site-scale habitat function multiplied by local-scale and landscape-scale habitat function, as determined by the HQT. The regional average site-scale habitat function is estimated to be **20%**. This number was recommended by the Science Team based on best available science and information about habitat function. The regional average site-scale habitat function may be adjusted by Service Area or other ecological zone to reflect conditions unique to those areas through adaptive management of the Exchange. The **stewardship project example** in Table 2.7 illustrates this calculation. In the example, the regional average site habitat function (20%) is multiplied by the project's local-scale habitat function (80%) and landscape-scale habitat function (75%) to derive the total baseline habitat function of 12%.

Projects that involve habitat restoration will typically start with a habitat function less than the regional average site-scale habitat function of 20%. In these cases, the credit baseline is determined by using the actual site-scale habitat function in place of the regional average site-scale habitat function (20%). This case is also illustrated in Table 2.7 as the **restoration project example**. In the example, the credit project's actual site-scale habitat function (10%) is multiplied by the project's local-scale habitat function (80%) and landscape-scale habitat function (75%) to derive the total baseline habitat function of 6%. If the credit site's pre-project condition is below baseline, and it has experienced avoidable degradation in habitat function within the past 10 years that caused the condition to fall below baseline, the Exchange Administrator may decide if the site is eligible to use pre-project condition in lieu of the 20% baseline.

Table 2.7: Example Credit Baseline Calculations

EXAMPLE PROJECT	LANDSCAPE-SCALE HABITAT FUNCTION	LOCAL-SCALE HABITAT FUNCTION	REGIONAL AVERAGE SITE-SCALE HABITAT FUNCTION	BASELINE HABITAT FUNCTION	ACRES	BASELINE FUNCTIONAL ACRES
Stewardship Project Example	75%	80%	20%	**12%**	200	24
Restoration Project Example	75%	80%	10%**	**6%**	200	12

***Actual site-scale habitat function used in place of the regional average site-scale habitat function*

Using a 20% regional average site-scale habitat function in the credit baseline calculation allows the Exchange to balance the desire to provide some reward to Credit Developers who have demonstrated historically good stewardship, with the need to provide incentives for Credit Developers to restore degraded habitat. In the future, different regional average site-scale habitat functions may be evaluated for categories such as credit projects on public lands and for credit projects that have received payments for habitat conservation (i.e., federal payment programs) based on data that becomes available. Average regional site-scale habitat function will be reevaluated during adaptive management of the Exchange to ensure it is accurate and that it is providing incentives as intended.

DEBIT BASELINE

Baseline for debit projects is equal to the pre-project habitat function. Buyers must use the HQT to determine the actual functional acres of habitat that may be affected by the debit project before any development on the site begins. Significant changes in vegetation structure and composition that affect habitat function occurring within the past ten years may be considered when determining debit baseline. The Buyer may decide it is more cost-effective not to verify pre-project site-scale conditions, and instead may assume a site-scale habitat function of 100%, modified by local and landscape-scale habitat function.

2.10 MITIGATION RATIOS

Mitigation ratios are multiplied by the difference between post-project functional acres and credit and debit baseline functional acres to calculate credits and debits, respectively. This calculation is done per map unit in the project area and summed across map units to calculate total credits or debits for the project area. Equation 2.1 demonstrates this calculation for an example credit project.

Equation 2.1:

$$\boldsymbol{Credits\ or\ Debits} = (\boldsymbol{Post\ Project\ Functional\ Acres} - \boldsymbol{Baseline\ Functional\ Acres}) * \boldsymbol{Mitigation\ Ratio}$$

Mitigation ratios ensure net benefit for greater sage-grouse by addressing uncertainty in the quantification of credits and debits. Mitigation Ratios also create additional incentives for achieving policy-based conservation goals. Mitigation ratios may be adjusted over time based on input from the Science Advisory Committee and upon approval of the Board of Directors. Any changes in mitigation ratios will not be applied in a retroactive manner to debit projects that are already being implemented through the Exchange.

Because the HQT definition of habitat quality addresses factors related to habitat function at the site, local and landscape scales, a mitigation ratio may not be needed to compensate for unaccounted differences in function between debit and credit projects. The Exchange differs from most other mitigation programs that do not directly incorporate a robust assessment of habitat function into the definition of credits and debits and thus require a mitigation ratio to ensure net benefit in the context of uncertainty. A Buyer may nevertheless be required to apply a mitigation ratio as a stipulation of their permit or regulatory assurance agreement with a regulatory agency.

This section will be developed upon finalization of the HQT Scientific Methods Document to describe how mitigation ratios may be used for both credit and debit sites to overcome uncertainty and achieve important conservation outcomes. Mitigation ratios will be informed by attributes measured by the HQT and will incorporate any biologically significant factors that cannot be fully incorporated into the HQT.

2.11 SERVICE AREAS

Service areas are mapped geographic sub-regions with unique ecological or political significance within which credits may be used to offset debits. Service areas protect species populations and sub-populations by ensuring that conservation benefits are located within an appropriate proximity to impacts to the species. Each credit is identified by the service area where it was created. Credits are eligible to offset debits within the same service area. An exception may be justified if the USFWS and the Exchange Administrator agree the purchase of credits in service areas other than the one in which a debit is located produces an equivalent or preferable benefit to the species.

The service areas proposed for greater sage-grouse are based on the populations and subpopulations identified in the Conservation Objectives Team (COT) Final Report (USFWS 2013) and correspond to recommendations in the USFWS Greater Sage-grouse Range-wide Mitigation Framework (USFWS, 2014). Delineations between service areas are drawn to avoid splitting sage-grouse local working groups (LWGs). The service areas are as follows Figure 2.2:

1. **WAFWA Management Zone I:** Powder River Basin population (includes Northeast WY LWG)
2. **WAFWA Management Zone II:** Wyoming Basin population, Big Horn Basin subpopulation (includes Big Horn Basin LWG)
3. **WAFWA Management Zone II:** Wyoming Basin population, Southcentral subpopulation & Laramie population (includes Wind River/Sweetwater River Basin LWG, Southcentral WY LWG, and Bates Hole/Shirley Basin LWG)
4. **WAFWA Management Zone II:** Wyoming Basin population, Southwest subpopulation (includes Southwest WY LWG and Upper Green River Basin LWG)
5. **WAFWA Management Zone II:** Jackson Hole population (includes Upper Snake River Basin WY LWG)

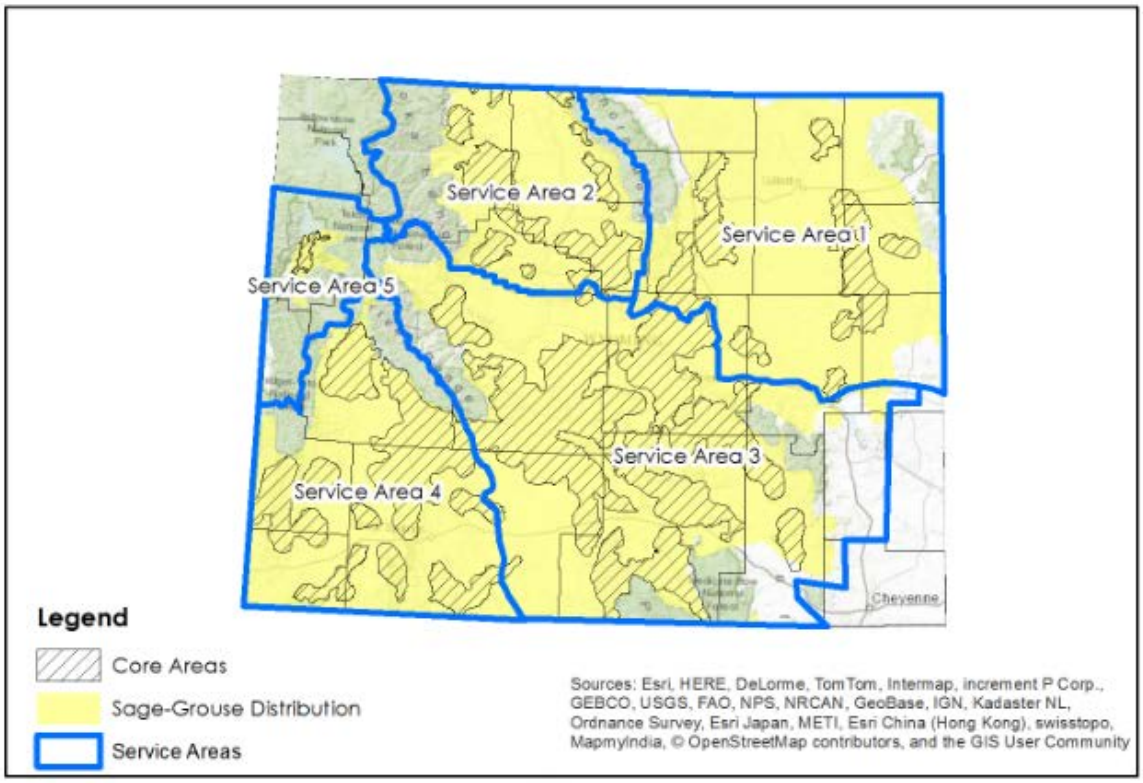

Figure 2.2: Wyoming Conservation Exchange greater sage-grouse service areas

2.12 CREDIT PROJECT REQUIREMENTS

To be eligible to participate in the Exchange, credit projects must meet the criteria defined below.

SERVICE AREAS

All credit projects must be located within a relevant Exchange Service Area. See Section 2.11- *Service Areas* for more information.

OWNERSHIP & STEWARDSHIP

Credit Developers must attest to current ownership of the project site, tenure or use rights, as well as provide basic information related to past stewardship practices on the site, as applicable. See draft Participant Contract and Management Plan for more information.

MINIMUM HABITAT FUNCTION STANDARDS

The Exchange requires that credit projects meet minimum habitat function standards for greater sage-grouse. Habitat function standards must be met at the site scale, local scale and landscape scale. These standards were recommended by the Science Team based on best available science and information about habitat function.

- **Site Scale:** Anticipated habitat function achieved before the end of the project must be greater than or equal to 60% at the site-scale to be eligible to generate and release credits. See the Section 2.14 - *Credit Release* for a description of how credits are released. Details are also described in the Management Plan for credit projects.
- **Local and Landscape Scale**: Requirements for credit project eligibility related to local and landscape scales will be determined upon finalization of the HQT. The purpose of minimum habitat function standards at the local and landscape scales is to eliminate potential credit projects that are not located in fully-functioning landscapes as required by greater sage-grouse.

DEVELOPMENT RISK

The Exchange prevents the sale of credits that are likely to become invalidated before the end of the credit project. In cases where the credit project has an elevated risk of being developed over the initial 10 year project duration, the Exchange Administrator will work with the Credit Developer to ensure that the potential benefit for the species of enrolling the credit project outweighs the risk of future development.

Due diligence will be performed to determine the suitability of credit projects with one or more of the following characteristics:

- Existing Application to Drill approved by the Wyoming Oil and Gas Conservation Commission (WOGCC);
- Spacing for mineral development approved by the WOGCC within the past five years;
- Located in a renewable energy zone or transmission corridor that has an approved right of way with uses that are incompatible with the HQT;
- Building permit submitted for multiple sites within the project boundary;
- An area targeted for mineral leasing or other development in a Master Leasing Plan or Resource Management Plan developed by the BLM or similarly identified by a state or federal agency as being in an area with high development potential;
- Other conflicting encumbrances or contractual agreements that affect surface use as described in the Participant Contract.

If one or more of the above characteristics apply to a credit project, the Credit Developer must demonstrate a legal agreement or other mechanism that provides sufficient protection for the habitat function on the credit project. In core areas where additional development is precluded (i.e., the cap on development has been met or exceeded), credit projects may be considered as low risk for development.

FINANCIAL ASSURANCES

Credit Developers must commit to financial assurances that are specifically defined in the Participant Contract with the Exchange. See Section 2.16 - *Financial Assurances* for more information.

SITE PROTECTION

Credit projects on public and private lands must be able to provide documentation of site protection for the full duration of the proposed credit project. See Section 2.20 – *Federal & State Lands* for more information on durability on public lands. Permanent credit projects on private lands must secure a covenant, conservation easement, deed restriction, or similar device to demonstrate durability. Term credit projects on all lands must have in place a Participant Contract and Management Plan that includes appropriate language to ensure project durability for the life of the contract. The Participant Contract and Management Plan form a legally binding agreement to create a credit and describe all of the necessary arrangement including management, monitoring, verification, and enforcement. Participant Contracts and Management Plans will include the following information related to each credit project:

- Reference to the Exchange and its purpose;
- Survey and legal description of the property, along with other property rights or interests.
- Description of conservation resources on the site, including any state- or federally-listed or imperiled species;
- Right of enforcement by the Exchange Administrator and Regulators;
- Amendment and transfer notification requirements;
- Any prohibited and acceptable uses of the site;
- Identification of any preexisting easements, liens, encumbrances, or surface use agreements with subordination of any preexisting agreements that may conflict with the use of the property as a compensatory mitigation site;
- Other information required by applicable laws.

ADDITIONALITY

Credit Developers must demonstrate that the credit project generates benefit or commitment in addition to what is legally required under existing agreements. Credit Developers must also describe how federal funds have been previously used or are currently being used to support the development and management of the credit project. Credit Developers must demonstrate that the credit project will provide additional benefit to the species other than those generated through the application of existing public funds. See Section 2.19 – *Credit & Payment Stacking* for more information.

2.13 CREDIT & DEBIT PROJECT DURATION

Project duration is the amount of time that the Exchange recognizes a credit or debit project before requiring that the project be renewed. For credit projects, it is the length of time that a Credit Developer has committed to creating and maintaining habitat conditions. For debit projects, project duration is the length of time that the project is anticipated to impact habitat at the site before habitat impacts no longer occur and full rehabilitation of the site is achieved, as measured by the HQT.

CREDIT PROJECT DURATION

The duration of credit projects can be term or permanent. The minimum project duration is 10 years. Credit Projects can be defined in increments of 10 years and can renew and re-enroll in the Exchange an unlimited number of times. Permanent credit projects enroll in the Exchange in perpetuity.

The Credit Developer defines the project duration in the Management Plan that is submitted to the Exchange Administrator. Upon completion of the credit project, the Credit Developer can elect to renew the project. Renewal entails developing a new 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 will also require a qualified, third-party verification. See Section 2.15 – *Credit & Debit Verification* for more information. If the project is not renewed, the Exchange will cease recognizing credits at the end of the project.

Credit projects should be a reasonable length in comparison to the types of activities being conducted on the site. For example, it would likely be inappropriate to secure a single 10-year contract for a property undertaking sagebrush restoration activities that could take up to 50 years to achieve full benefit. Long-term restoration projects should not be covered by a short-term contract because credits are released as habitat improvements are demonstrated on the ground. The Exchange Administrator will provide guidance to Credit Developers on reasonable project lengths for restoration activities.

DEBIT PROJECT DURATION

Debit project duration is expected to be defined in appropriate regulatory permitting documents. A Buyer seeking an offset should propose the debit project duration and associated credit obligations to meet the terms of the applicable permit based on development design documents and HQT outputs.

At the end of a term debit project, third-party verification is required to demonstrate that the impact to the habitat is no longer occurring and the habitat has returned to pre-project baseline as measured by the HQT. If expected end of impacts or decrease in impacts has not occurred, the relevant permitting agency can extend or adjust permit requirements and the debit project owner may seek a new transaction through the Exchange to meet the new permit requirements. Decreases in debit may similarly be recognized upon verification that impacts have been reduced on the ground. Once a decrease in impact is verified and a new debit calculation is complete, the credit obligation is adjusted for the remainder of the debit project. Permanent debit projects have a perpetual project life, and do not require end-of-life verification. See Section 2.15 – *Credit & Debit Verification* for more information.

MATCHING CREDIT AND DEBIT DURATION

The Exchange requires that the life of contracted credit projects must be equal to, or greater than, the life of the debit project being offset.

Permanent Offsets

A Buyer may use permanent credits to offset term or permanent debits. Permanency is ensured using a combination of financial assurances and real estate instruments or contracts. Typical or static permanent offsets are designed to be consistent with the Guidance for the Establishment, Use and Operation of Conservation Banks (USFWS 2003). A permanent credit may be either static or dynamic, as described below.

Dynamic Permanent Offsets

A Buyer may use a dynamic permanent offset that commits to meet the credit requirements for a permanent debit project using a series of term credit projects such that the quantity and quality of the mitigation matches the debit and is permanent in duration. The financial assurances associated with a dynamic permanent contract are similar to those required for static permanent projects (includes a long-

term stewardship fund in an amount sufficient to provide for the financial requirements of management in perpetuity) with additional requirements to ensure finances are in place to develop new term contracts upon the end of project life for the initial term projects.

Term Offsets

A Buyer may use term credits to offset a term debit project if the credits are equal to, or greater than, the term of that debit project.

Dynamic Term Offsets

A Buyer may develop a dynamic term offset, similar to a dynamic permanent contract. A series of term credit projects may be used to meet the credit obligations for a term debit project. For example, a 40-year debit project could use four 10-year credit projects in which one credit project begins immediately after the other. The financial assurances associated with dynamic term contracts are similar to those required for other term projects (funds in an amount sufficient to provide for the financial requirements of management for the length of the contract) with additional requirements to ensure finances are in place to develop new term contracts upon the end of each credit project for the full duration of the debit project.

Considerations for Dynamic Offsets

While the Exchange is designed to incentivize conservation of high value sites, it is still important to examine site selection to ensure the success of the Exchange and the provision of net benefit. This will be especially important for the administration of dynamic offsets due to the unique ecological, economic, legal, and policy issues related to dynamic offsets (See Appendix C: Dynamic Offsets Considerations for a discussion of these issues).

The Exchange Administrator will monitor dynamic offset transactions, taking into account the following considerations, and provide adaptive management recommendations to the Board if changes are needed to ensure net benefit is being generated from dynamic offsets.

Spatial aggregation

Offsets are of greater value when they are spatially aggregated near other high-value, conserved sites that result in large, connected areas of durable conservation. Parcels located near other high-value habitat generate more functional acres, as measured by the HQT, based on their local and landscape context. The Exchange also has minimum habitat function standards (Section 2.12 - *Credit Project Requirements*) to ensure that sites are located in areas that are ecologically beneficial to greater sage-grouse. Consideration should be given to both the habitat value and the conservation status of surrounding areas. For instance, dynamic offsets could better ensure longer-lasting benefits if located in proximity to currently protected areas (e.g., core areas, areas under easements, public lands protected by habitat use designations) or other sites enrolled in the Exchange.

Proximity to impacts

Credit projects must be geographically located in areas that are biologically relevant to impacts. Credits must also be located within an appropriate proximity of the impact it is intended to offset, unless an opportunity is identified that would result in a better outcome for greater sage-grouse. When determining appropriate location, consideration will be given to the location and conservation value for the particular habitat, population or landscape unit affected by the impact. For example, it is likely that it would be most beneficial for an impact within a particular core area to be offset by a credit within that core area, unless a higher conservation value may be achieved elsewhere. Higher conservation value could be found adjacent to or providing connectivity to a core area, or within another core area if conservation objectives have already been met within the core area of the impact. See Section 2.3 - *Integration with State Policy* for more information on the preference for location of impacts and offsets.

Relationship to Impacts

Offsets must be commensurate with impacts. The Exchange ensures the value of a credit project for greater sage-grouse is aligned with the value of the impacts. This is a core principle of the Exchange and it is achieved by using the HQT to assess both impacts (debits) and benefits (credits) in the same way. Additional considerations include:

Size of credit projects: The market is expected to favor large, high-value credit projects over multiple, low-value credit projects. In some cases, the conservation of a few small, dispersed areas of high-value habitat may be what is needed most in an area (e.g., limiting summer habitat on private land in a landscape of nesting and winter habitat on BLM). In addition, low-value sites may be improved through restoration and enhancement efforts and one purpose of the Exchange is to improve the overall conservation value of the landscape. It is expected that stewardship, enhancement and restoration efforts will all be needed to stabilize populations of greater sage-grouse. The comparable value of impacts and offsets should be taken into consideration to ensure that large high-value debits are not consistently being replaced with multiple low-value credits.

Seasonal habitat types: The HQT takes into account three seasonal periods and their habitat associations (nesting, summer and winter). Credits and debits represent the greatest benefit or impact, respectively, to the seasonal habitat types affected; however, credits and debits are not differentiated by seasonal habitat type (see Section 2.8 - *Habitat Quantification Tool* for more information on calculating credits and debits). The Exchange Administrator will monitor transactions to ensure that seasonal habitat types of one type (e.g., nesting habitat) are not being consistently replaced with seasonal habitat credits of another type (e.g., winter habitat).

Temporal loss: Credits must be matched to the duration of debits. Credits only become available when habitat benefits have been achieved as discussed in the Section 2.14 - *Credit Release*. However, it is important to ensure there is no temporal loss of habitat value associated with multiple term-limited projects offsetting a single permanent project over time. This could occur in situations in which credit projects in a dynamic offset involve restoration of habitat, and which take time for greater sage-grouse to reoccupy the site. The Exchange Administrator will evaluate credit projects used in dynamic offsets to ensure temporal loss is not occurring.

2.14 CREDIT RELEASE

The Exchange uses credit release schedules to manage risk and uncertainty by releasing credits only when specific habitat function criteria are met. Credit release occurs when a new milestone of habitat function is achieved for a credit project, warranting an increase in the amount of credit generated. Specific habitat function criteria are defined in each credit project's Management Plan, and each credit project will have a unique credit release schedule based on those habitat function criteria. Credit releases require third-party verification and are approved by the Exchange Administrator. See Section 2.15 – *Credit & Debit Verification* for more information regarding third-party verification requirements necessary to trigger a new credit release.

A decline in habitat function outside of the tolerances defined in Section 2.15 – *Credit & Debit Verification* is required to be remedied or the credit project's financial assurances may be used to replace the invalidated credits. See Section 2.16 – *Financial Assurances* for additional information on financial assurances.

STEWARDSHIP & ENHANCEMENT PROJECTS

Stewardship and enhancement projects are credit projects where existing high-quality habitat is maintained at current condition or functioning habitat is improved and maintained over time by the Credit Developer.

For credit projects where existing high-quality habitat is maintained at current condition by the Credit Developer, credit release is determined by verifying that habitat function is meeting the defined habitat function criteria stated in the Management Plan and that land protection instruments and financial assurances are in place. Credits are released at the point of this determination and are valid for the full duration of the credit project, provided that the Credit Developer continues to meet habitat function criteria confirmed in verification and self-monitoring reports.

The Credit Developer may set a goal of increasing habitat function and thus generating more credits in the Management Plan. The credit release schedule in the Management Plan uses habitat function criteria to define several potential credit release intervals, with the first credit release occurring at the time of initial verification of habitat quality above baseline and procurement of land protection instruments and financial assurances. The Credit Developer or Exchange Administrator may at any time request an additional verification at the requesting party's own expense and petition for subsequent release of any credits verified on a participating property. Upon verifying conditions to release all credits anticipated from the project, these credits are expected to be maintained for the duration of the project's life, provided that the Credit Developer continues to meet habitat function criteria confirmed in verification and self-monitoring reports.

RESTORATION PROJECTS

For restoration projects where habitat quality significantly improves over the project duration and is maintained by the Credit Developer, credit releases occur when habitat function criteria defined in the project's Management Plan are achieved. The credit release schedule in the Management Plan uses habitat function criteria to define the following credit release intervals:

- Up to, but not more than, the first **one-third** of expected credits may be released upon implementation of conservation actions defined in the credit project's Management Plan. Credits released based on fulfilling action criteria will be limited to one-third (33%) of the total credits that the project is ultimately anticipated to generate.
- The remaining **two-thirds** of credits are released over additional credit release intervals upon verification that the habitat function is meeting habitat function criteria and procurement of financial assurances. For example, an additional one-third 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 illustrated in Table 2.8. Habitat function criteria may be articulated by the Credit Developer as either quantitative goals tied to specific attributes that are included in the HQTs, or as overall HQT scores for the project. Upon verifying conditions to release all credits anticipated from the project, these credits are expected to be maintained for the full duration of the credit project, and will be confirmed in ongoing verification and self-monitoring reports.

The Credit Developer or Exchange Administrator may at any time request an additional verification at the requesting party's own expense and petition for subsequent release of any credits verified on a participating property.

Table 2.8 shows an example of a credit release schedule for a hypothetical credit restoration project, with habitat function criteria articulated through overall HQT project scores.

Table 2.8 Example Credit Release Schedule - Restoration Project

HABITAT FUNCTION CRITERIA ACHIEVED	CREDITS RELEASED
Milestone 1: Actions - Participant Contract and Management Plan signed, - Financial assurances secured, and; - Native vegetation planted	**One-third** of Total Anticipated Credits
Milestone 2: Habitat Function Achieved - 66% of expected habitat function (HQT score for the project)	**One-third** of Total Anticipated Credits
Milestone 3: Habitat Function Achieved - 100% of expected habitat function (HQT score for the project)	**One-third** of Total Anticipated Credits

The Exchange limits risk from pre-release of credits by using a combination of mechanisms, including the reserve account and financial assurances. Should a restoration project fail to generate the credits indicated in the project's Management Plan, these mechanisms cover any shortfalls in credits. Although restoration projects may carry some risk of not achieving expected habitat function, it is important to restore habitat in critical areas, and gain additional experience with innovative approaches to improve habitat quality. Limited credit release for initial management actions creates some incentive to enable restoration activities to be economically viable.

PAYMENT STRUCTURE

Payment for credits does not necessarily follow the same schedule as the credit release schedule. See Section 2.16 – *Financial Assurances* for more information.

REMEDIAL ACTION

Each credit project has a Management Plan and Participant Contract that specifies required actions if the project's habitat function standards are not met. For example, if a project does not meet expected habitat function, the Credit Developer and Exchange Administrator must develop a remedial action plan to determine how the project can meet habitat function requirements or other appropriate remedies. See Section 2.18 – *Credit Project Reversals* for more information.

2.15 CREDIT & DEBIT VERIFICATION

All credit and debit projects require verification. Verification is an independent, expert check on the HQT functional acre calculations and all supporting documentation. Third-party Verifiers are certified by the Exchange Administrator. Verification is conducted through the use of the HQT. As the HQT is improved over time, the verification protocol will be adjusted accordingly.

The purpose of verification is to provide a standardized process for measuring and confirming that credit and debit calculations represent a true and accurate account of on-the-ground implementation actions and habitat function, as defined in the credit project's Management Plan and debit project's design documents. Ongoing verification and monitoring ensures that projects are maintained over time and support the expected habitat function commensurate with the amount of credits and debits generated. The required frequency and process for verification and choosing Verifiers is defined below.

CREDIT MONITORING AND VERIFICATION

The Exchange requires that credit projects are verified at the following frequencies over the full duration of a credit project:

1. **Before first credit release**

2. **Before additional credit releases**
3. **At least every five years**
4. **Periodic spot checks and audits**

Credit Developers are expected to conduct self-monitoring annually, in years when verification is not required, to ensure that management actions agreed to in the Management Plan are occurring and the project is meeting habitat function criteria.

Before first credit release

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

Before subsequent credit releases

Third-party verification is required to confirm that conditions meet the habitat function criteria specified in the credit release schedule in a project's Management Plan before any subsequent credits are released.

At least every five years

At least every five years, a third-party verification is conducted and all documentation (i.e., current conditions data, HQT outputs, and final credit calculations) is reviewed by the Exchange Administrator to evaluate the project based on habitat function criteria included in the credit release schedule. When verification is conducted to either release additional credits or as 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 Checks & Audits

The Exchange Administrator or designated Verifier conducts random audits of approximately 10% of all enrolled credit projects in any particular year. In selecting a site for periodic verification, the Exchange Administrator should consider how recently the site was verified, so as not to unreasonably burden the Credit Developer.

Biological Monitoring

Biological monitoring is an essential element of the Exchange, and is a separate but complementary process to verification. Biological monitoring is executed through the Exchange's adaptive management process (See Section 3.3 - *Managing the Exchange*). While verification confirms on-site habitat function in relation to a Management Plan and HQT functional acre calculation, biological monitoring means observing, recording and assessing the quantity and quality of all credit-producing activities, as well as the biological response of the target species and critical habitats across the Exchange. The goals of biological monitoring under the Exchange are to:

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

CREDIT VARIABILITY & VERIFICATION RESULTS

Credit variability is variation in habitat function on a site as measured by the HQT. Even on relatively stable sites, variability is likely to result due to variation in precipitation patterns and other natural events that influence habitat function. Credit variability is also likely to occur due to sampling error that is inherent to any measurement method. Based on these considerations, the Exchange allows for limited

variability in habitat function as measured by the HQT as a mechanism to insulate Credit Developers from being subject to penalties for minor fluctuations.

For each credit release, third-party verification must substantiate that the credit project meets or exceeds the habitat function defined in the credit release schedule of the project's Management Plan. Subsequent verifications may be up to 10% below the habitat function determined using the HQT. Credit project verifications within this 10% threshold will be considered as meeting defined requirements, and therefore will not require a reduction in credit or trigger remedial action or the use of financial assurances for the project.

If verification shows that a credit project is outside the 10% verification tolerance and is therefore not meeting the habitat function standards outlined in the Management Plan, the Exchange Administrator will work with the Credit Developer to develop a remedial action plan. Credit projects outside of the credit variability tolerance may be subject to the Exchange's processes related to credit reversals. See Section 2.18 – *Credit Project Reversals* for more information on these processes.

DEBIT VERIFICATION

The Exchange requires that debit projects are verified at the following frequencies over the full duration of each debit project:

1. **Before debit project begins**
2. **During project implementation period**
3. **When term debits end or decrease**
4. **Periodic spot checks and audits**

Before debit project begins

The Exchange recommends third-party verification of the habitat function on debit projects before development begins. The Buyer may decide it is more cost-effective not to verify pre-project site-scale conditions, and instead may assume a site-scale habitat function of 100%, modified by local and landscape-scale habitat function.

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, which may allow for desktop verification. The specific details of the verification required during the project implementation period are defined in each debit project's relevant regulatory permits.

When term debits end or reduce

Third-party verification is necessary at the end of a term debit to confirm that a debit project is no longer impacting habitat function. It is assumed that all impacts are permanent unless it can be verified otherwise. If, at the end of a term debit project's duration, a site has not been rehabilitated and habitat function restored, the Buyer should purchase additional credits to cover the additional term. If third-party verification demonstrates a reduction in the impact and amount of credits needed as an offset, the Buyer may sell or transfer surplus credits to another debit project or entity if consistent with the terms of their permit or project approval.

Periodic spot checks & audits

The Exchange recommends third-party, random audits of approximately 10% of debit projects in any particular year, giving consideration to how recently the site was verified so as not to unreasonably burden the Buyer.

VERIFIER SELECTION

The Exchange Administrator may contract and pay for verification at credit and debit sites. The Exchange Administrator receives a verification fee and a signed verification contract to allow access to the site from the Credit Developer or Buyer. The Exchange Administrator selects from a pool of certified Verifiers, and notifies the Credit Developer or Buyer before the Verifier conducts a site visit. Alternatively, a Credit Developer or Buyer may hire a third-party Verifier that is trained and certified by the Exchange Administrator.

2.16 FINANCIAL ASSURANCES

Financial assurances are mechanisms that are used to ensure the durability of credits generated throughout the duration of a credit project. Financial assurances are defined in each Participant Contract with Credit Developers and consist of 1) contract terms, such as financial penalties for reversals due to noncompliance and specific payment terms, and 2) financial instruments. Financial instruments, such as long-term stewardship funds and contract surety bonds, ensure funds are available for the long-term management of each credit project. Both contract penalties and financial instruments ensure that funds are available to promptly replace credits that have been sold but become invalidated due to reversals. The following overarching principles and basic minimum requirements guide the development of financial assurances for each Credit Developer:

- Minimize financial transaction costs and maximize payments to Credit Developers for actions that improve habitat;
- Appropriately allocate risk to Credit Developers and not solely to the Exchange Administrator;
- Preferably use mechanisms that do not require the Exchange Administrator to engage in costly litigation with Credit Developers to secure funds for credit replacement;
- Include provisions that hold to the principle of "no payments for projects that are not producing credits," even in the case of force majeure if a project has been deemed inappropriate to remediate;
- Design financial instruments to cover long-term management of credit projects and replacement of credit reversals considering:
  - Management and maintenance activities defined in the Management Plan
  - Monitoring and verification defined in the Management Plan
  - Appropriate fund management and rate of return
  - Relevant inflation rates
  - Credit market price trends

FINANCIAL ASSURANCE DESIGN & MINIMUM REQUIREMENTS

The Exchange requires that Credit Developers establish appropriate financial assurances for each credit project in order to sell credits. Financial instruments must be held by a qualified third-party institution that is approved by the Exchange Administrator.

Minimum Financial Assurance Requirements

The Exchange Administrator and Credit Developer will define a financial assurance package that ensures funds are sufficient to:

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

The specific financial assurances package can be fulfilled with a combination of various mechanisms (i.e., long-term stewardship funds, bonds, contract payment terms) that ensure sufficient funds are available to meet the above needs subject to the guidelines in the following sections.

Financial Assurances

The type of financial assurance required is determined by the duration of the credit project. Permanent credit projects require a long-term stewardship fund, where the principal amount is managed in perpetuity. Buyers mitigating a permanent impact using a dynamic permanent offset approach must secure a long-term stewardship fund where principle does not decrease in value over time and has sufficient funds to secure new term credit project contracts into perpetuity. Long-term stewardship funds are similar to the non-wasting endowment funds used in conservation banking. Permanent credit projects are required to meet the same standards for financial assurances that are used in conservation banking.

Term credit projects require a stewardship fund that is typically managed such that no funds remain at the end of the contract. The Exchange Administrator determines the required principal amount for each credit project using a predictive financial model that accounts for economic and financial conditions such as inflation and interest rates. If a stewardship fund is used, the expected financial return from appropriately investing the funds can be factored into the initial deposit amount.

In situations where the Exchange Administrator either does not make ongoing payments or the contract is structured to make a large upfront payment to the Credit Developer, other financial assurances, such as performance bonds, may be used to ensure sufficient funds are available to the Exchange Administrator throughout the duration of the project should a credit reversal occur that cannot be remediated. Any financial assurance must clearly delineate what portion of funding is available to the Exchange Administrator to replace credits in the event of reversals for projects otherwise in compliance, and an additional amount available to the Exchange Administrator in the event of reversals due to noncompliance.

Contract Terms

The Exchange Administrator may require specific contract terms in the Participant Contract to ensure ongoing habitat function from credit projects. A template Participant Contract may be found as an appendix to the Exchange Agreement. One type of contract term that can be defined is terms of payment. The terms of payment can create a strong ongoing incentive for the Credit Developer to achieve habitat function and reduce the need for financial instruments. One such payment term structure involves paying the Credit Developer an annual payment that is at least as much as the anticipated maintenance and monitoring costs. These payments can be structured such that the retained funds are sufficient to make payments for the full duration of the project. If habitat function standards are not met, the remaining retained funds can be used by the Exchange Administrator to either remediate the credit project or to purchase credits from a different site. These payment terms align the incentives of the Credit Developer and the Exchange Administrator by sharing the financial risk for ongoing habitat function.

The other type of contract term that can be defined and required by the Exchange Administrator is contract penalties. In the case of reversals due to noncompliance, the Credit Developer pays contract penalties to the Exchange Administrator to ensure sufficient funding to purchase credits from another credit project.

2.17 RESERVE ACCOUNT

The reserve account is a dedicated pool of credits which the Exchange Administrator can use to cover any credit shortfalls under the Exchange. The reserve account is created and maintained by the Exchange Administrator, who allocates a portion of all credits transferred into the reserve account. The credits that are contributed to the reserve account are never sold, but instead are used to replace credits that have

been sold, but later become invalidated due to a credit reversal. The reserve account ensures that, should projects fail, the credits that were generated and sold from those projects can be immediately replaced, even if a specific credit, or series of credits, is invalidated.

RESERVE ACCOUNT CONTRIBUTION

The reserve account consists of credits as opposed to money so that a reserve of habitat is created that can immediately benefit the target species.

For each initial transfer of each credit (see Section 3.1 - Step D5.1), a percentage of those credits transferred are deposited into the reserve account. As described in greater detail below and illustrated in Equation 2.2, the total reserve account contribution percentage consists of a standard base contribution, with the potential for up to a 5% discount for projects with a low risk of mineral development (i.e., a total reserve account contribution of 7% rather than 12%). As shown in Equation 2.3, the total reserve account contribution percentage is multiplied by the number of credits transferred to determine the total reserve account contribution amount for the credit transfer. Credits contributed to the reserve account must be additional to the number of credits used to offset a debit.

Equation 2.2:

$$\textit{Total Reserve Account Contribution Percentage} = \textit{Base Contribution} - \textit{Low–Risk Mineral Discount}$$

Equation 2.3:

$$\textit{Credit Site Reserve Account Contribution Amount} = \textit{Credit Amount} * \textit{Total Reserve Account Contribution Percentage}$$

Required Base Contribution

The base reserve account contribution for all credit projects is 12% of the credits generated that are transferred from a Credit Developer to a Buyer. The base contribution is required due to the inherent uncertainty in the durability of long-term benefits of credit projects due to force majeure events, wildfire, and other circumstances.

The base contribution also includes the risk of split-estate development on the credit project. A split estate is when surface rights and mineral rights are owned by different parties. For example, one party may own the surface rights to farm the land, build a house, or graze cattle on a property, but another party may hold the right to extract the minerals on the same property. In Wyoming, mineral rights are the dominant estate, meaning the party owning the minerals may use reasonable means to access them, even if extracting the minerals may damage or otherwise impact the surface owner's use of the property. Credit projects on split estates carry more risk than credit projects on non-split estates because of the potential for the mineral owner to develop minerals and in the process undermine or negate the conservation work of the surface owner. Two-thirds of the mineral estate in Wyoming is federally-owned, while less than one-third of the surface is federally-owned (Meyer & Robinson 2014). Given the prevalence of split estates across Wyoming, the Exchange expects participation from Credit Developers who do have surface, but not mineral, ownership of their properties. The reserve account is designed to help manage the risk of development of sites with split estates when the potential benefit for the species outweighs the potential risk of mineral development. See Section 2.12 - *Credit Project Requirements* for more information on how to determine if a credit project has an acutely elevated risk of development and therefore may not be eligible to generate credits.

Low-Risk Mineral Discount

Credit Developers that can demonstrate that a legal agreement or similar mechanism exists that will reasonably ensure protection for the habitat function on the credit project for the duration of the project may receive up to a 5% discount in the reserve account contribution (i.e., a total reserve account

contribution of 7% rather than 12%). A mineral remoteness assessment that indicates negligible mineral development potential on the site may be sufficient to receive up to a 5% discount in the reserve account contribution. This discount can apply to public or private credit projects.

2.18 CREDIT PROJECT REVERSALS

Depending on the specific cause and circumstances of the reversal, invalidated credits can be replaced using a combination of the reserve account and financial assurances, as illustrated in Figure 3.3.

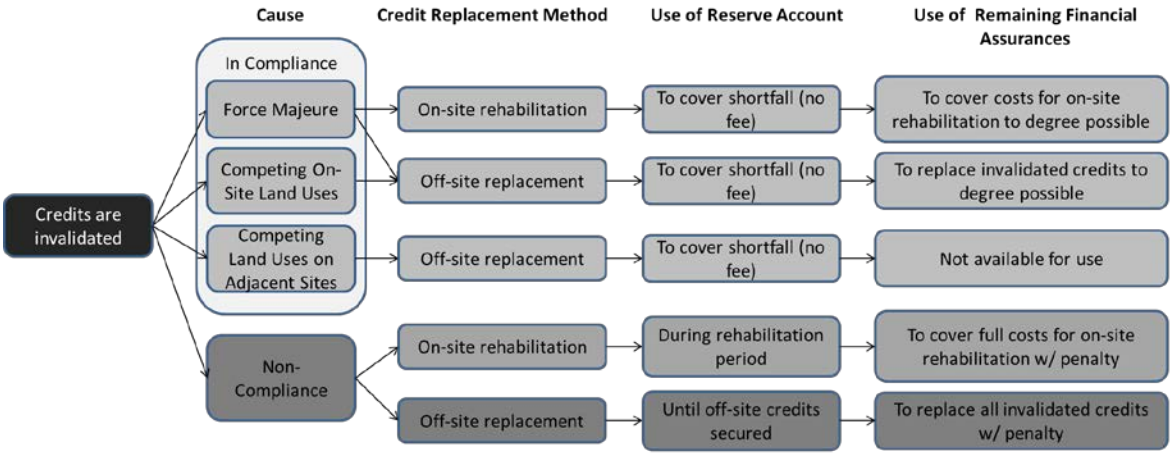

Figure 3.3: Credit invalidation and replacement process

REVERSALS OF CREDIT PROJECTS OTHERWISE IN COMPLIANCE

Force Majeure

In the case of a reversal from force majeure events, the Exchange Administrator withdraws credits from the reserve account to cover the invalidated credits at no cost to the Credit Developer. In cases where the credit project 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 Exchange Administrator. In this situation, contract payment terms or financial instruments are used to pay for activities included in the remedial action plan. If only a portion of the credits are recovered following the force majeure event, then payments are reduced according to the amount of credits actually being generated on the ground, if applicable. The Exchange Administrator may use the remaining amount in the project's financial assurances to purchase credits elsewhere. In cases where the credit project cannot be recovered within a reasonable amount of time and cost, the Credit Developer and the Exchange Administrator can agree to cancel the contract without penalties. The Credit Developer can choose to re-enroll the project at a later time, but must re-enroll under terms similar to their original contract. If the contract is cancelled, payments to the Credit Developer cease immediately if applicable and the Exchange Administrator uses the remaining amount in the project's financial assurances to purchase credits from a different credit project.

Competing On-Site Land Use Out of the Credit Developer's Control

In the case of a reversal due to competing land uses on site out of the Credit Developer's control, such as split-estate minerals development or right-of-way condemnation, the Exchange Administrator will withdraw credits from the reserve account to cover the invalidated credits at no additional cost to the Credit Developer. Similar to the policies described for force majeure events, if the impact of the competing land use reduces credit generation from a credit project, payments are reduced according to the amount of credits actually being generated, if applicable. The Exchange Administrator uses the remaining funds in the project's financial instrument to purchase credits elsewhere to cover the

remainder of the contract to the extent feasible. If the impact of the competing land use results in the credit project not being able to generate credits as expected, the contract can be canceled without penalties.

Competing Land Use on Adjacent Sites

There may be cases where verification shows that competing land uses on sites adjacent to an enrolled credit project may be impairing the ability of the enrolled credit project to generate benefit for the species in a way that was not anticipated when the Participant Contract and Management Plan for the project were developed. For example, a neighboring site may be developed for minerals or residential housing. These occurrences are out of the direct control of the Credit Developer. Therefore in cases of reversals due to competing land uses on adjacent sites, the Exchange Administrator will withdraw credits from the reserve account to cover the invalidated credits at no cost to the Credit Developer. In these cases, the Exchange Administrator and the Credit Developer will agree whether to continue the project or to use the remaining financial assurances for the credit project to purchase replacement credits.

REVERSALS OF CREDIT PROJECTS DUE TO NONCOMPLIANCE

In the case of a reversal that results from noncompliance, such as not implementing management actions and failing to achieve habitat quality as defined in the Management Plan, or mineral development undertaken by Credit Developer or the landowner, all payments to the Credit Developer immediately cease, if applicable. The Credit Developer and Exchange Administrator determine if a remedial action plan can be developed or if credits must be replaced off-site. The Credit Developer is responsible to the Exchange Administrator for the entire cost of purchasing replacement credits from a different credit project, any associated legal fees, and an additional 10% administrative fee (i.e., contract penalty). Further, the Exchange Administrator may access the project's financial assurances if the Credit Developer fails to fulfill his or her responsibilities. If there is a time lag between the reversal due to noncompliance and the recovery of the site, or a time lag between the reversal and when the Exchange Administrator secures new credit contracts, the Exchange Administrator will withdraw from the reserve account for a limited duration to prevent any gaps in coverage for credits that have been sold. The credit withdrawal from the reserve account ceases as credits are acquired to cover the remainder of the contract.

The reserve account may also be used to bridge gaps in coverage between subsequent contracts under a Dynamic Permanent or Dynamic Term Offset agreement. An administrative fee of 10% of the current replacement cost of credits will be assessed for each year of use of the reserve account. If a suitable contract is not acquired within 3 years, the Credit Developer is responsible to the Exchange Administrator for the entire cost of purchasing replacement credits from a different credit project and any associated legal fees. Contracts for replacement credits must be of a duration that covers the entire remaining life of the debit project being offset.

2.19 CREDIT & PAYMENT STACKING

"Stacking" is when a Credit Developer receives multiple conservation payments from the same unit of land for the same or different types of ecosystem services (e.g., wildlife habitat, hydrologic function). Credit projects should provide benefits additional to those that would have occurred without the credit project. This section describes how credit projects meet the Exchange's additionality requirements related to stacking of multiple credit types, compatibility with public funds, and integration with existing federal tools to provide conservation for candidate species.

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

STACKING MULTIPLE CREDIT TYPES

Credit Developers are able to generate and sell credits for different species or ecosystem services on the same area of land, such as greater sage-grouse and mule deer habitat credits, or greater sage-grouse and water quality credits if they demonstrate additionality of conservation outcomes. HQTs will be developed to provide habitat function scores for multiple ecosystem services (i.e., greater sage-grouse, mule deer and hydrologic function) on a single project site. For properties participating in multiple ecosystem service markets (e.g., carbon, wetland mitigation), the Exchange Administrator will consider how participation in those markets may affect the additionality of the credit project.

STACKING PAYMENTS WITH FEDERAL CONSERVATION PROGRAMS

Payments from federal conservation programs, such as the USDA Conservation Reserve Program (CRP) or Environmental Quality Incentives Program (EQIP), may be paired with payments from the Exchange for different services on the same land or as part of a cost share arrangement for the same service. Stacking credits from the Exchange with federal programs has the potential to benefit conservation if the enrollment of the property in the Exchange would further enhance habitat function as measured by the HQT or if it would enable a producer to participate in cost share programs that might otherwise be cost prohibitive.

Inside of an Existing Federal Contract

Conservation efforts not required under new or existing agreements that enhance conservation benefit for greater sage-grouse could be allocated credits based on the value of that additional benefit as quantified by the HQT. Provisions may be defined to allow credits to be generated for creating and maintaining habitat function that is greater than the minimum habitat function expected from implementation of the practices that have already been paid for through a federal program.

If a property is currently enrolled in an existing federal contract, or enrolls concurrently with enrollment in the Exchange, the allocation of credits on enrolled acreage will be proportionate to the non-federal contribution to the conservation benefit. For example, acreage capable of producing ten credits, but with a fifty percent (50%) federal cost-share, will be allocated five credits. This rule only applies to the portion of the benefit on a particular property that can be attributed to federal funds. The rest of the property and benefit is fully creditable.

Outside of a Previous Federal Contract

A Credit Developer may receive full credit for term or permanent credits following expiration of an existing federally-funded contract. Similar to the state-financed long-term contract extensions and permanent conservation easements offered in the Illinois Conservation Reserve Enhancement Program, these long-term contract extensions and permanent conservation agreements could be entered into contemporaneously with execution of the underlying contract or thereafter, but these provisions (and Exchange credits) would not take effect until after the expiration of the underlying contract.

PREVIOUSLY CONSERVED LANDS

The Exchange allows for credits to be generated on lands already under permanent conservation restrictions (i.e., existing conservation easements) for mitigation purposes if the proposed credit project would add additional benefit above and beyond what would be achieved under the existing land designation or restriction. Land which is already under a conservation easement or similar legal restriction that requires preservation of habitat is not at risk of certain types of habitat impacts. Protected lands are able to meet additionality requirements of the Exchange if the Credit Developer can demonstrate that verifiable benefit using the HQT can be attained through an eligible credit project, and that durability can be provided for the duration of the credit project.

INTEGRATION WITH CCA/CCAAS

Credit Developers enrolled in Candidate Conservation Agreements (CCAs) or Candidate Conservation Agreement with Assurances (CCAAs) can enroll in the Exchange and generate credits if the benefits generated or commitments are additional to those required by the CCA or CCAA. Credit projects previously enrolled in a CCA or CCAA must work with the Exchange Administrator to determine appropriate project qualifications considering the existing CCA or CCAA.

2.20 FEDERAL & STATE LANDS

Federal and state agencies, including the BLM, the U.S. Forest Service (USFS) and the OSLI, manage millions of acres of greater sage-grouse habitat in Wyoming. The Exchange seeks to encourage improved management of lands for greater sage-grouse by allowing credit projects on federal- and state-owned and managed lands. Credit projects on state and federal lands will route additional funding derived from compensatory mitigation markets to these lands for implementing projects that improve habitat quality. As with all credit projects, improved habitat quality will be verified using the HQT. To be eligible, credit projects on federal and state lands must meet minimum criteria regarding additionality and durability. Recognizing the complexities associated with credit development on federal and state lands, this section will be further developed in coordination with the agencies and tested through pilot projects before wide-scale adoption in the Exchange.

ADDITIONALITY

The Exchange allows for credits to be generated on federal and state lands for mitigation purposes if the proposed credit project would add additional benefit above and beyond what would be achieved under the existing land designation or restriction. Federal and state lands are able to meet additionality requirements of the Exchange if the Credit Developer can demonstrate that verifiable benefit using the HQT can be attained through an eligible credit project. Additionality requirements may be difficult to meet on areas such as National Wildlife Refuges or Wilderness Areas. However, BLM Areas of Critical Environmental Concern and other similar public lands may be more aligned with these additionality and durability requirements. Mitigation on BLM lands will be conducted in accordance with BLM guidance on mitigation including the Regional Mitigation policy (MS-1794) and forthcoming handbook.

DURABILITY

Credit projects on federal and state lands must be able to provide documentation of site protection for the duration of the proposed credit project. Federal and state lands likely cannot be secured for a perpetual duration because of the laws and complexities governing use of public lands; however, it is entirely possible to manage these lands for conservation for a meaningful duration. Development of lands for uses such as mineral development may be incompatible with habitat and therefore restrict the use of these sites for credit production in the Exchange. However, federal and state lands may be able to meet requirements for the durability of conservation for term credit projects if certain mechanisms are in place.

Durability on BLM & USFS Lands

To ensure sufficient site protection, BLM and USFS credit sites must meet at least one of the two following requirements:

Designated in a land-use or resource management plan, or similar classification for uses compatible with habitat: The credit project is specified as an area within a land use or resource management plan (i.e., Area of Critical Environmental Concern (ACEC), Right of Way Exclusion Area, and other similar classifications) that is managed for greater sage-grouse habitat, or that is managed for resources compatible with greater sage-grouse habitat. The credit project site also meets additionality and other credit site eligibility requirements, and contributes to the reserve account to

cover the risk of split-estate development if mineral rights cannot be limited for the duration of the project. See Section 2.17 - *Reserve Account* for more information.

Designated under an alternative mechanism for uses compatible with habitat: Additional tools are currently being explored for BLM- and USFS-managed lands to help ensure site protection and limit incompatible land uses. These tools may include, but are not limited to: '2920' leases, conservation rights-of-way, resource withdrawals, conservation easements, cooperative agreements, and Recreation and Public Purposes Act leases. If the proposed credit project has one of these tools in place, the project has fulfilled the site protection requirements for the life of the agreement. In addition, with one of these tools in place, the Credit Developer may be able to more fully limit competing land uses and therefore may be subject to an exemption from the portion of the reserve account contribution that covers the risk of split-estate development. See Section 2.17 - *Reserve Account* for more information.

Durability on State Lands

Agreements on Wyoming state trust lands are limited to 75 years in length. Lease agreements may be an appropriate way to create durability on state trust lands, in combination with other mechanisms including financial assurances. The value of the lease may be based on the revenue lost from excluding incompatible uses, such as mineral development. The Exchange will work with the OSLI to define the agreements and mechanisms necessary to create durability on state lands.

PROJECT REQUIREMENTS

All credit projects on federal and state lands must meet the credit project requirements (Section 2.12 – *Credit Project Requirements*) of the Exchange. In addition to contributing to the reserve account, credit projects on public lands must meet the provisions to ensure financial protection of the credit project site. This includes establishing a Participant Contract that includes contract terms such as financial penalties for reversals due to noncompliance. This also includes establishing financial instruments to ensure management, maintenance, monitoring and other activities defined in the Management Plan throughout the contracted duration of the project. See Section 2.16 - *Financial Assurances* for additional information.

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SECTION 3 EXCHANGE OPERATIONS

This section outlines the Exchange operations, along with associated tools, forms and templates, used to quantify, track, transfer and report on habitat credits generated through the Exchange. The Exchange operations are described in the following three sections:

Table 3.1: Overview of the Exchange Operations Sections

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

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

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

3.1 GENERATING CREDITS UNDER THE EXCHANGE

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 anticipated 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 3.2 provide an overview of the steps of credit generation and the different participants engaged at each step.

Figure 3.1: Credit Generation Overview

Effective conservation projects result in improved habitat function. 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 conservation 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.

QUESTIONS ANSWERED

- How does a Credit Developer estimate expected credits from planned conservation, enhancement or restoration practices?
- How are monitoring and verification results used to determine the amount of credit issued?
- How does a Credit Developer and the Exchange Administrator resolve issues and questions, and agree to final credit estimates and release schedules?

Table 3.2: Overview of Roles, Tools & Products to Estimate, Verify, Issue and Track Credits from Projects

Process Step	Credit Developer[1]	Exchange Administrator	Buyer	Relevant Tools, Forms & Templates	Completed Products
D1. Select & Validate Site	■	■	□	▪ Project Information Worksheet ▪ Validation Checklist Form	▪ List of Conservation Opportunities ▪ Notice of Validation
D2. Implement & Calculate Credit	■	■		▪ Habitat Quantification Tools (HQTs) ▪ Management Plan ▪ Participant Contract ▪ Verification Contract	▪ Pre-project draft Management Plan ▪ Management Plan
D3. Verify Conditions	■	■		▪ Conflict of Interest Form ▪ Agency Certification Form	▪ Verification Report ▪ Self-Monitoring Report
D4. Register & Issue	■	■		▪ Registry Account Registration Form	▪ 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 Exchange Administrator validates that the site is eligible to produce credits through the Exchange.

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 Exchange. The Credit Developer is introduced to the Exchange 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 Exchange Administrator by email or phone to provide basic information, such as name, area of interest and contact information. The Exchange 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

D1.2 SELECT PROJECT SITE

The Credit Developer considers 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 assist Credit Developers with these considerations.

[1] Any reference to steps undertaken by Credit Developers may actually be implemented by technical support providers or aggregators.

D1.3 SUBMIT PROJECT VALIDATION CHECKLIST

The Credit Developer evaluates the eligibility of a project site, 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 Form. 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. The Credit Developer submits Validation Checklist Form.

Product ■ Completed Validation Checklist Form

D1.4 VALIDATE & IDENTIFY CONSERVATION OPPORTUNITY

The Exchange Administrator reviews the Validation Checklist Form. If all validation criteria are met, the Exchange 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 described in Step D3.

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

The Exchange Administrator maintains a list of projects seeking funding for implementation while respecting confidentiality rules outlined by the Exchange. The Exchange Administrator may include the conservation project on its List of Conservation Opportunities, if desired by the Credit Developer.

Product ■ Notice of Validation
Product ■ List of Conservation Opportunities

D2 IMPLEMENT PROJECT & CALCULATE CREDIT

Figure 3.3: Implement & Calculate Credit

Typically, a technical support provider or aggregator assists the Credit Developer in designing the stewardship, enhancement or restoration project, drafting the Management Plan, and estimating the expected credit amount using the HQTs. Credit calculation must be done by a person or entity qualified to do so and well-versed in the HQTs. The Credit Developer has the option to check the design calculations with the Exchange 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 Exchange Administrator before initiating conservation project implementation.

D2.1 DEFINE PRE-PROJECT CONDITIONS

The Credit Developer follows the process defined in the HQTs to define the conservation project boundaries and determine the pre-project conditions. The Credit Developer fills in the pre-project data results from the field inventory, completes any necessary calculations using the HQTs, and provides the completed field datasheets to the Exchange Administrator.

Product ■ Pre-project HQT Results with Associated Forms

D2.2 DEFINE & SUBMIT PROJECT DESIGN INFORMATION

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

Delineate Project Boundaries & Estimate Projected Credits

The Credit Developer follows the process defined in the HQTs to define the conservation project boundaries and estimate expected post-project conditions,[2] based on site design. Guidance for selecting the appropriate duration of a conservation project is included in the HQTs and the Management Plan template. Project boundaries, planned management actions, including ongoing maintenance and monitoring, project duration, and expected post-project conditions for the site are documented in the pre-project draft management plan.

Product ■ Draft Management Plan

[2] 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 HQTs, may change between pre- and post-project calculations.

Submit Draft Management Plant to Exchange Administrator for Pre-Approval

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

Product ■ Draft Management Plan

Secure Project Implementation Funding (If Applicable)

The Credit Developer secures any necessary funding to implement the project, as needed. For restoration projects, the Exchange Administrator may require proof of financial assurances for the active phase (implementation of the project through achievement of specified success criteria). The full set of financial assurances is not required until step D2.3 when all materials are submitted to the Exchange Administrator to signal readiness for verification.

Product ■ Proof of Active Phase Financial Assurances (if applicable)

D2.3 IMPLEMENT PROJECT, REFINE CALCULATIONS & SUBMIT

Implement Project

The Credit Developer implements the project with the understanding that final credit amounts will be based on actual 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 ■ Completed Conservation Project

Confirm or Refine Credit Calculations

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

Product ■ Revised draft Management Plan

Refine Management Plan & Credit Release Schedule

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

Product ■ Management Plan

Secure Financial Assurances

The Credit Developer must secure necessary financial assurances if required by the Exchange – see Section 2.16 - *Financial Assurances* for additional guidance. Financial assurances ensure that funds are available to cover credit shortfalls and support long-term management of individual project sites, as specified in the Management Plan.

Product ■ Management Plan – Proof of Secured Financial Assurances

Submit Post-Project Calculations & Documentation

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

Product ■ Signed Participant Contract
Product ■ Final Management Plan

Establish Verification Contract

The Credit Developer completes a contract with the Exchange Administrator for verification services. A sample contract is available on the Exchange website.

Product ■ Completed 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. The purpose of verification is to provide confidence to all Exchange participants that credit calculations represent a faithful, true and fair account of impacts and benefits – free of material misstatement and conforming to accounting and credit generation standards. Ongoing verification ensures the project is maintained over time and supports the expected level of credit reflected in calculations. The required frequency of verification is defined in Section 2.15 – *Credit & Debit Verification*.

Project verification is completed for the conservation project before credits are issued, and periodically over the life of the project as defined in Section 2.15 – *Credit & Debit Verification*. Self-monitoring reports must be completed in non-verification years to confirm that conditions are maintained according to the specifications in the Management Plan.

D3.1 SELECT VERIFIER

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

Verifiers must be accredited by the Exchange Administrator before they are eligible to conduct verification activities. The independence of verification is important. Verifiers acting on behalf of the Exchange 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

Becoming an Accredited Verifier

The Exchange Administrator will accredit Verifiers to review one or more types of credits. Verifiers will act as subcontractors to the Exchange Administrator. Verifiers bear no liability for project implementation or project habitat function. Interested Verifiers must complete the following steps:

- Attend a Verification Training Session
- Keep the Exchange Administrator informed of any changes affecting the accreditation (i.e., potential conflicts of interest)

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 Exchange Administrator before verification can proceed.

Product ■ Completed Conflict of Interest Form
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 Management Plan. Depending on the implemented conservation practices, project conditions may appropriately degrade throughout the year. Before project monitoring is finalized, the Credit Developer maintains the project as necessary to ensure that actual, on-the-ground conditions support the credits calculated in Step D2 and documented in the Management Plan. In years when an on-site verification is not required, the Credit Developer submits a Self-Monitoring Report to the Exchange Administrator in accordance with the requirements defined in Section 2.15 – *Credit & Debit Verification* and the specifics in the Management Plan.

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

D3.3 PROJECT VERIFICATION

The Verifier confirms that:

- The Exchange Manual was followed completely and accurately.
- Appropriate documentation is in place (i.e., 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 habitat function 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[3]. The Verification Report is completed with information gathered during the site visit using the Exchange User Manual. An example Verification Report and the Exchange User Manual are available on the Exchange website.

Credit calculations must be found to be free of material misstatements and meet the habitat function criteria defined in the Management Plan. If habitat function criteria are not met, the Verifier discusses the issues with the Credit Developer and Exchange Administrator. The Verifier, Credit Developer and Exchange Administrator 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 by engaging the Board of Directors as needed.

Dispute Resolution Process

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

- First attempt to resolve the dispute through direct conversation.
- Second, engage the Exchange Administrator or agency staff to facilitate resolution.
- Third, employ the Board of Directors dispute resolution process defined in the Exchange Management System.

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

Submit Project Verification Report

Once successful verification is complete, the Verifier submits their Verification Report to the Exchange 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 Exchange Administrator through the Habitat Exchange Agreement. The need for project certification is defined in the Section 2.2 – *Federal Regulatory Predictability* and Section 2.3 – *Integration with State Policy* as it relates to federal policies and state policies separately.

When project certification is needed, public agencies, or their designated proxy, review verified credit estimates. The Exchange 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 Exchange 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 CREATE A REGISTRY ACCOUNT

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

Product ■ Registry Account

D4.2 REGISTER PROJECT

The Credit Developer can register a project site as soon as a project is validated (Step D1), and a project must be registered before credits can be released or transferred to Buyers. Registering a project does not indicate a release of credits into the user or project account on the registry (see step D24.3 below). The Credit Developer begins a new project on the registry, and uploads all required documentation as specified by the Exchange Administrator.

Exchange Administrator Review

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

Product ■ Registered Project

D4.3 ISSUE CREDITS

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

Product ■ Issued Credits

D5 TRACK & TRANSFER CREDITS

Figure 3.6: Track & Transfer Credits

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

D5.1 ALLOCATE CREDITS TO RESERVE ACCOUNTS

Reserve account allocation requirements are defined in Section 2.17 – *Reserve Account* and identified for the specific project in Step D2.3. The Exchange Administrator allocates the appropriate amount of credits to the reserve account upon transfer to a Buyer. Credits allocated to the reserve account are not available for sale.

Product ■ Notice of Transfer From

D5.2 SELL AND TRANSFER OR RETIRE CREDITS

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

All listed credits can be sold or otherwise transferred between accounts until they are retired (i.e., no longer available to be transferred to another Buyer). An example of credit retirement is a credit that is used to offset a permanent impact or debit and therefore cannot be transferred to another Buyer. Once credits are retired, the registry moves them into a retirement account that can be reported on but not accessed for transfer.

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

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

D5.3 REPORT OF ACCOMPLISHMENTS (OPTIONAL)

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

Product ■ Accomplishments Report (optional)

3.2 ACQUIRING CREDITS FROM THE EXCHANGE

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 Purchase 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 Exchange 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 purchase 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	Exchange Administrator	Buyer	Relevant Forms & Templates	Completed Products
B1. Indicate interest		☐	■	▪ Sample Contract	▪ List of Identified Credit Developers & Buyers
B2. Determine Credit Need		■	■	▪ Credit Obligation & Project Design Form ▪ Verification Contract	▪ Credit Need Specifications ▪ Project Baseline Assessment ▪ Verification Report ▪ Estimated Credit Obligation
B3. Purchase & Acquire Credits	☐	■	■	▪ Registry Account Registration Form	▪ 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 Exchange. The Buyer is introduced to the Exchange through outreach materials or word of mouth, and learns about the potential benefits of participating. The Buyer or the Buyer's representative contacts the Exchange 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 Section 2.2 – *Federal Regulatory Predictability* and Section 2.3 – *Integration with State Policy* with specific requirements in permits and regulatory instruments. The Exchange 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 Identified Credit Developers & Buyers

B2 DETERMINE CREDIT NEED

Figure 3.9: Determine Credit Need

Buyers work with the Exchange Administrator to 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 and guidance provided in Section 2.7 - *Transaction Strategies*. Section 2.11 - *Service Areas* defines the applicable geographic scope of the Exchange and specific service areas with unique characteristics, as well as limitations for trading credits and debits across service areas. Regulatory requirements typically require or encourage credits to be sourced from within the same service area where impacts occur, so Buyers must meet all requirements of specifications of regulatory documents and permits, if applicable. Buyers may also choose to focus investment within a specific geographic area to achieve unique investment goals.

The Buyer must also consider the duration or term to purchase credits. Projects produce credits for specific durations of time, including some projects which produce credits perpetually. Section 2.13 – *Credit & Debit Project Duration* 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 Section 2.13 – *Credit & Debit Project Duration*.

The Buyer may also be interested in other characteristics that would focus investment on specific project types or Credit Developers. For instance, the 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 CREDIT AMOUNT (REGULATORY OFFSET BUYERS ONLY)

Each Buyer, with the approval of the relevant regulatory authority, defines their needed or desired amount of credit. If the Buyer is not in a regulatory context, skip ahead to Step B2.3.

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 habitat 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 Step D2 of Section 3.1 (Implement Project and Calculate Credits) for additional detail.

Define & Submit Baseline Assessment

For debits, baseline is generally defined as pre-condition of the site prior to any development action. See Section 2.9 - *Credit & Debit Baseline* for more information. Debit sites require a field assessment to determine pre-project conditions. The Buyer, along with a technical support person familiar with the habitat or ecosystem service impacted, conducts an assessment of the project area and applies the applicable HQTs to calculate the baseline site habitat function. Field and data collection forms are used to run the HQTs and generate a habitat function score. The project baseline information, photo point documentation and HQT scores are submitted to the Exchange Administrator.

The Exchange Administrator reviews the baseline information and confirms all calculations are complete and consistent with relevant regulatory guidance, and allows the project to proceed to the next step. Science staff from any relevant regulatory agencies will be given the opportunity to review pre-project condition through documentation and site visits before an impact occurs.

Product ■ Completed Baseline Assessment

Determine Credit Obligation

Debits are the difference between the habitat function of the baseline and post-project conditions. For some development activities, the post-project condition (the condition following completion of the development action) is assumed to have zero habitat function. In these cases, the debit quantity is equal to the habitat function of the baseline condition. In other cases, as outlined in Section 2.15 – *Credit & Debit Verification*, the Buyer applies functional assessments of the post-project 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-project data sets are created by modifying the baseline data sets to reflect projected post-project conditions. These data sets are entered in the HQTs, which produce habitat function scores, and are submitted to the Exchange Administrator.

The credit obligation is the amount of credit required to meet regulatory requirements. Section 2.10 - *Mitigation Ratios*, along with the specific debit project permit, defines if a mitigation ratio is applied to determine the credit obligation. If a mitigation ratio is applied, the debit amount is multiplied by the mitigation ratio to determine the credit obligation.

Product ■ Estimated Credit Obligation

Acquire Agency Approval (If Necessary)

Consult Section 2.3 - *Integration with State Policy* 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 Exchange Administrator for verification services. A sample contract is available on the Exchange Website.

Product ■ Completed 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, the Exchange 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 project has been implemented.

The Buyer's estimate must be found to be accurate. Resolving differences between estimates and dispute resolution is handled as described in Step D3.3 in Section 3.1 (Project Verification).

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

Product ■ Verification Report

Post-Project Verification (If Necessary)

Consult Section 2.15 – *Credit & Debit Verification* and specific permit requirements to determine if post-project verification is required to ensure that the amount of debit is not greater than what was estimated during project design.

B3 ACQUIRE CREDITS

Figure 3.10: Acquire Credits

B3.1 CREATE A BUYER ACCOUNT

To acquire and track credits, the Buyer first creates an account on the registry. The Buyer can use their account to transfer and manage listed credits from all projects. All information included on the registry is subject to the confidentiality provisions described in Section 2.6 - *Participant Confidentiality*. The Buyer may contact the Exchange Administrator for help in opening a Buyer account.

Product ■ Active Registry Account

B3.2 PURCHASE CREDITS

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

Product ■ Notice of Transfer

B4 TRACK & TRANSFER CREDITS

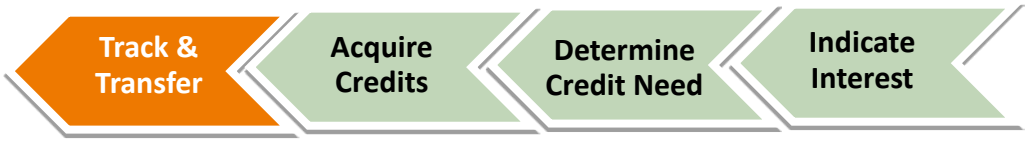

Figure 3.11: Track & Transfer Credits

Credits listed on the registry are assigned unique serial numbers that identify the source of each credit, the HQT and version used to estimate credits, and the current owner. All registered projects are listed on the registry website and available for the public to search, subject to confidentiality provisions defined in Section 2.6 - *Participant Confidentiality*. The terms of payments and sales are completed external to any of the registry or Exchange Administrator processes.

B4.1 TRANSFER CREDITS

Upon receiving a Notice of Transfer, the Exchange Administrator transfers credits between accounts. Credits used to meet permanent mitigation requirements are retired and not available for resale. Other credits held by a Buyer may be available for resale or transfer according to the credit purchase requirements of the Exchange. Even after transfer, the Credit Developer is responsible for meeting the monitoring, reporting and verification requirements of each project for the duration of the project, as described in Verification (Step D3.3 in Section 3.1 (Project Verification) and Section 2.15 – *Credit & Debit Verification*).

Product ■ Transfer of Credits between Accounts

B4.2 REPORT ON ACCOMPLISHMENTS (OPTIONAL)

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

Product ■ Accomplishments Reports

3.3 MANAGING THE EXCHANGE

The Exchange Management System is defined as a formal, structured programmatic adaptive management approach to deal with uncertainty in natural resources management, and use 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 Exchange. The Exchange 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 Exchange improvements. A systematic and transparent decision making process ensures that improvements to the Exchange do not cause uncertainty for participants. Figure 3.12 and Table 3.4 provide an overview of the Exchange Management System steps and the different participants that may be engaged at each step[4] .

The Exchange Administrator performs the day-to-day functions to manage the Exchange. The Exchange Administrator is accountable to the Board of Directors, which approves all changes to the Exchange Manual and HQTs. The composition of the Board of Directors and the relationship between the Board of Directors, Exchange Administrator and Exchange participants, and the administrative funding structure are defined in Section 2.1 - *Governance*.

QUESTIONS ANSWERED

- How is the Exchange 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 Exchange?
- How is Exchange improvement recommendations developed and used to inform annual Exchange improvement decisions?

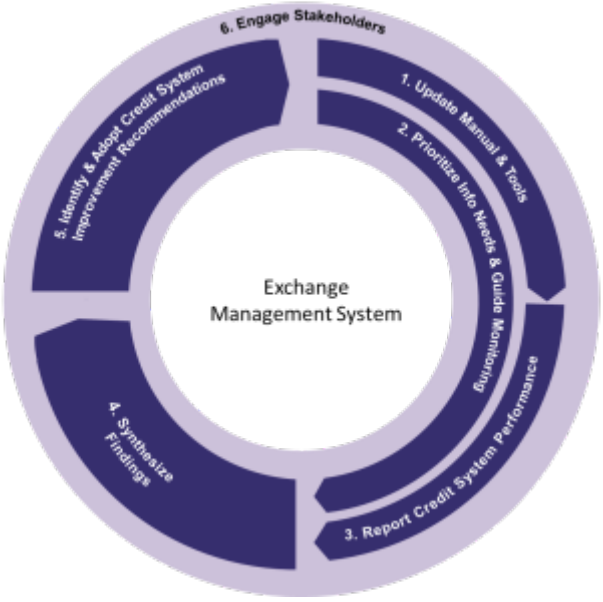

Figure 3.12: Overview of Exchange Management System Steps

[4] 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.

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

Process Step	Credit Developer	Exchange Administrator	Board of Directors	Buyer & Stakeholders	Relevant Forms & Templates	Completed Products
A1. Update Protocol & Tools	☐	■	☐	☐	▪ Exchange Improvement Recommendation Form	▪ Exchange Improvements List ▪ New & Updated Quantification Tools
A2. Prioritize Information Needs & Guide Monitoring	☐	■	☐	☐	▪ Research & Monitoring Contract Templates	▪ List of Research Needs
A3. Report Exchange Performance	☐	■	☐	☐	▪ Performance Report Template	▪ Annual Performance Report
A4. Synthesize Findings	■	■	■	☐	▪ Input Request Template	▪ Synthesis of Findings Report
A5. Identify & Adopt Exchange Improvement Recommendations	☐	■	☐	☐	▪ Exchange Improvement Recommendation Form	▪ Exchange 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

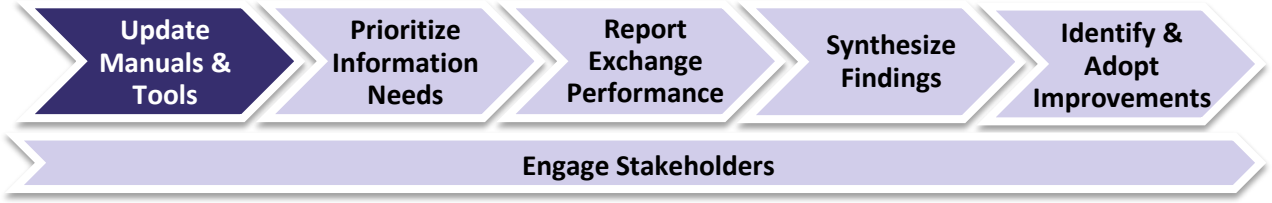

Figure 3.13: Update Manual & Tools

This Exchange Manual and associated tools, templates and forms provide guidance for the Exchange to consistently track and report benefits and impacts. Updating the Exchange 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 Exchange to review and update guidance documents, policies and tools.

A1.1 UPDATE EXCHANGE IMPROVEMENTS LIST

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

Product ■ Exchange Improvements List

Review & Sort Improvement Suggestions

The Exchange Administrator reviews the Exchange 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 Exchange 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 Board of Directors before they are implemented. The process for Board of Directors review and adoption is defined in Step A5: Identify & Adopt Exchange Improvement Recommendations. When in doubt, the Exchange Administrator assigns the recommendation to Category 2. Upon review by the Board of Directors, 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 Board of Directors 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 Exchange Administrator, with guidance from the Board of Directors, to prioritize available funding to implement the most important improvements which can be successfully completed using available resources. The Exchange Administrator provides a prioritized Exchange Improvements List to the Board of Directors, which includes Category 1 improvements implemented so that they can be reviewed and confirmed by the Board of Directors. The Board of Directors decides which improvement recommendations are to be implemented, at the periodic meetings described in Step A5: Identify & Adopt Exchange Improvement Recommendations. For improvements that require additional time or resources to implement, the Exchange Administrator develops a brief implementation plan that is approved by the Board of Directors.

Product ■ Updated Exchange Improvements List

A1.2 UPDATE EXISTING HQTS, FORMS AND TEMPLATES

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

Product ■ Updated Documents, Guidance & Tools

A1.3 INTEGRATE NEW QUANTIFICATION TOOLS

The Exchange Manual is built to easily integrate new credit types and quantification tools. Once a new credit type or quantification tool is identified as needed, the Exchange 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 Exchange Administrator presents the proposed new quantification tool, with supporting materials that define the use of any new credit types, to the Board of Directors for review and approval (as described in Step A5: Identify & Adopt Exchange Improvement Recommendations).

Product ■ New Quantification Tools

A2 PRIORITIZE INFORMATION NEEDS & GUIDE MONITORING

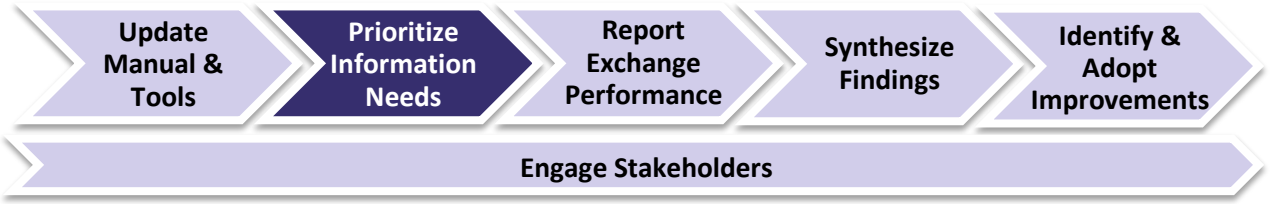

Figure 3.14: Prioritize Information Needs & Guide Monitoring

Monitoring and research are necessary to check that the ecosystem benefits projected by the HQTs result in the anticipated improvements for the environmental attributes of concern. The Exchange may collaborate with monitoring initiatives led by other active programs in the region or initiate its own research with approval from the Board of Directors.

A2.1 DEVELOP & ADJUST LIST OF AREAS FOR INVESTIGATION

The Exchange 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 HQTs, better understand the effectiveness of conservation practices, and follow the status and trend of environmental attributes of concern.

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.

The Exchange 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 HQTs and improve their accuracy. HQTs estimate the amount of credit expected from conservation 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 HQTs and associated field methods accordingly.

Product ■ List of Research Needs

A2.2 PROVIDE INPUT TO RESEARCH & MONITORING FUNDING PROCESSES

The Exchange 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 Exchange funded through transaction fees or conducted through partnerships with existing monitoring programs.

Product ■ Research & Monitoring Contracts and Results

A3 REPORT EXCHANGE PERFORMANCE

Routine reporting of accomplishments is essential to ensure transparency and drive accountability. The annual Exchange Performance Report (Performance Report) reports all credits tracked by the Exchange and informs interested parties of recent changes to the Exchange. 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 Exchange 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 Exchange, 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 Exchange Administrator uses outputs from the registry, such as the number of credits created during the year, to generate the quantitative information for the Performance Report. The Performance Report includes a ledger of all credits and debits generated cumulatively and each year to demonstrate net benefit for the species. Credits are summed across geographic locations and for each specific area of interest. Additionally, information related to non-habitat accomplishments may also be highlighted, such as administrative improvements. The Performance Report is posted online and submitted to any relevant regulatory agencies.

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

Product ■ Exchange Performance Report

A4 SYNTHESIZE FINDINGS

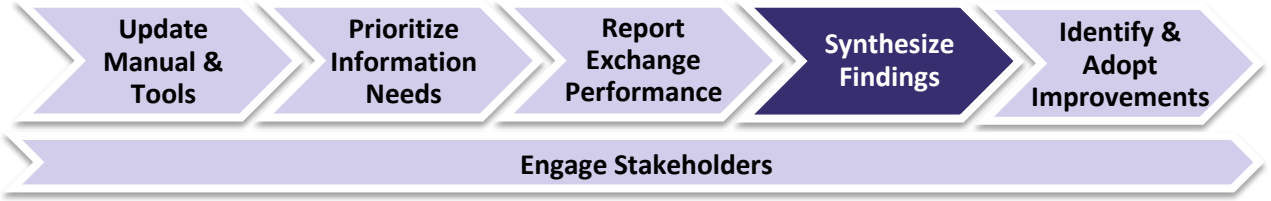

Figure 3.15: Synthesize Findings

Synthesizing findings into information that is directly related to the operations of the Exchange is essential to inform management decisions. The Synthesis of Findings Report bridges the gaps between the Board of Directors, Exchange participants, engaged scientists, and agency staff, by synthesizing learning from experience implementing the Exchange 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 Exchange.

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

A4.1 COMPILE FINDINGS & DEVELOP SYNTHESIS OF FINDINGS REPORT

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

Product ■ Synthesis of Findings Report

A5 IDENTIFY & ADOPT EXCHANGE IMPROVEMENT RECOMMENDATIONS

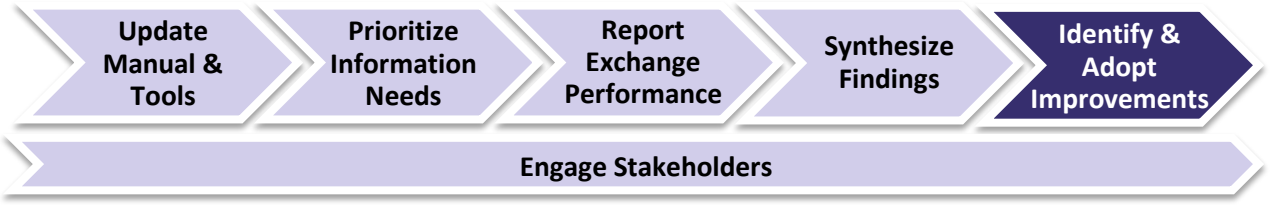

Figure 3.16: Identify & Adopt Exchange Improvement Recommendations

Creating and transparently adopting clear recommendations to improve the Exchange is the most critical step in the annual Exchange 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 EXCHANGE IMPROVEMENT RECOMMENDATIONS

The process for maintaining and prioritizing the Exchange Improvements List is described in Step A1: Update Exchange Improvements List. The Exchange Improvement List and the Synthesis of Findings

Report are the most critical inputs for the Exchange Administrator to consider when identifying Exchange Improvement Recommendations.

Develop Exchange Improvement Recommendations

The Exchange Administrator reviews the Exchange Improvements List and identifies priority improvements to recommend to the Board of Directors for implementation. The Exchange 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 HQTs 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 Exchange.
- 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 Exchange Administrator during the year are documented and may be reviewed by the Board of Directors to confirm that changes are acceptable.

Product ■ Draft Exchange Improvement Recommendations

Develop Final Recommendations

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

Product ■ Final Exchange Improvement Recommendations

A5.2 ADOPT EXCHANGE IMPROVEMENTS

The Board of Directors meets, discusses and considers adopting Exchange Improvement Recommendations at least twice 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 Board of Directors 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 EXCHANGE OPERATIONS

Annually, the Board of Directors conducts or designates an independent entity to conduct a third-party audit of Exchange 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 Exchange 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 Board of Directors and discussed at a subsequent Board of Directors meeting. The final Audit Report, less information identified as confidential, is posted to the Exchange website.

Product ■ Audit Report

A5.4 RESOLVE OUTSTANDING DISPUTES

As defined in the dispute resolution process defined in Step D3.3 in Section 3.1 (Project Verification), the Board of Directors or a subcommittee of the Board of Directors resolves disputes between Exchange participants that cannot be resolve independently or in consultation with the Exchange Administrator. If the dispute is in reference to regulatory requirements, the regulatory agency has the final decision-making authority.

A6 ENGAGE STAKEHOLDERS

Figure 3.17: Engage Stakeholders

Consistent stakeholder engagement is necessary to ensure the Exchange 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 EXCHANGE WEBSITE

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

Product ■ Updated Exchange Website

A6.2 DISTRIBUTE UPDATE EMAILS

The Exchange Administrator maintains an ongoing list of interested stakeholders and their email contact information. The Exchange Administrator disseminates a periodic email update to interested stakeholders to provide information about Exchange 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 Exchange 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 Exchange and understand how they may be able to participate.

Product ■ Community Presentations

A6.4 CONDUCT TRAININGS

The Exchange Administrator or experienced technical support provider periodically conducts trainings to teach potential Exchange participants how to efficiently use the Exchange, 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 Exchange Administrator annually convenes an open meeting for stakeholders. This meeting is an opportunity to highlight accomplishments and identify areas for improvement with participants and interested stakeholders. The meeting is held after the annual Performance Report is posted to the Exchange website for review, and before final Program Improvement Recommendations are considered by the Board of Directors (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 Exchange 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 Exchange 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 Exchange (i.e., daily, seasonally, or annually).

Additionality: The concept that calls for credited ecosystem improvements to represent an overall increase in, or avoided reduction of, ecosystem services, relative to those services that would have existed without creating the credits.

Administrator: See definition for ***Exchange Administrator.***

Aggregator: A person or institution that works with multiple landowners to implement credit projects, secure financial 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.

Board of Directors: Formal, representative stakeholder group, which is responsible for overseeing the operations of the Exchange and making Exchange management decisions.

Buyer: An entity that purchases credits for a range of reasons including general conservation purposes or offsetting an environmental impact.

Candidate Conservation Agreement (CCA): An agreement between the USFWS and other entities (generally other federal agencies and states) to voluntarily undertake conservation measures that are likely to remove or reduce threats to the habitat of a species, with the goal of eliminating the need to list the species in the future.

Candidate Conservation Agreement with Assurances (CCAA): An agreement similar to a CCA but between USFWS and private landowners that provides signatories with assurances that if they undertake the conservation activities specified in the CCAA and the species of interest later becomes listed, they will not subsequently be required to undertake additional conservation activities to protect the species.

Condition: The extent to which a given site departs from full ecological integrity or health. Specifically, 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.

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 species' or habitat's conservation value which serves as the currency in the Exchange.

Credit Developer: Landowners or managers who produce, register, or sell credits in the Exchange.

Credit Obligation: The number of credits a Buyer must purchase to meet their permit requirements. This may be the same as the number of debits associated with the project, or may differ based on applicable mitigation ratios and the stipulations of the permit.

Credit Project: Projects that generate credits under the Exchange.

Credit Release: An award of credits made available for transfer by the Exchange Administrator to a Credit Developer upon meeting specified management or habitat function criteria.

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

Credit Variability: Fluctuations in the functional acres calculated by the HQT on a project site that are due solely to factors that are outside the control of the participants, such as sampling error and climatic effects.

Debit: A quantifiable unit of loss to conservation value from an impact, that is based on the same methods and HQTs used to calculate credits.

Dynamic Permanent Offset: 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.

Dynamic Term Offset: When a stream of term credits are used to cover a temporary debit.

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: the manipulation of characteristics of a resource to heighten, intensify, or improve specific functions.

Enhancement Project: Credit projects where enhancement of habitat or resource function is the primary objective. Credit projects may involve a mix of restoration, enhancement and stewardship efforts.

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

Exchange Agreement: The signed agreement with USFWS authorizing the use of Exchange credits for mitigation purposes.

Exchange Management System: 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.

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

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.

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 projects.

Habitat Conservation Plan (HCP): Document that defines the process and requirements for Buyers to calculate debits and meet incidental take permit requirements in situations where the species is listed as threatened or endangered by the USFWS.

Habitat Quantification Tool: A set of metrics applied at multiple spatial scales that evaluate current conditions and changes in conditions indicative of habitat or other resource quality to inform the amount of credit and debit resulting from conservation and development impacts. Currently the Exchange has a quantification tool for greater sage-grouse.

Mitigation Ratios: Multiplier used in combination with the difference between functional acres and credit or debit baseline, as determined by the HQT, to calculate the total credits, debits or credit obligation of the Credit Developer or Buyer needed to meet regulatory obligations.

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

Offset: An offset is an action to address an adverse environmental impact of resource use, a discharge, emission or other activity at another location to deliver net environmental benefit (from Australian EPA discussion paper Publication 1202.3, June 2008).

Participant: General term for all entities participating in the Exchange, with the exception of the Exchange Administrator and the Board of Directors. 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 Exchange management process, while not revealing identifying information of participants.

Permanent: Projects that are in perpetuity.

Project Duration: The amount of time that the Exchange recognizes a credit or debit before requiring that the project be renewed using current HQTs and protocols.

Registry: A managed database that is run by the Exchange Administrator of listed projects, their associated benefits, and supporting documentation. The registry helps the Exchange Administrator account for the flow of Credits and Debits over time.

Regulatory Assurances: Mechanisms created to ensure that efforts taken to preserve a candidate species will be recognized in the event that the species is later designated as threatened or endangered.

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

Reserve Account: A pool of credits, funded by a percentage of the credits transferred in each transaction, that is used to cover shortfalls when credits that have been generated and sold are invalidated due to a lack of habitat function, 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 Exchange.

Restoration: The rehabilitation of natural or historic functions to a degraded resource, resulting in a gain in function but not a gain in resource area; or the reestablishment of natural or historic functions to a former resource, rebuilding the former resource and resulting in a gain in resource function and area.

Restoration Projects: Credit projects where restoration of habitats or resource functions is the primary objective. Credit projects may involve a mix of restoration, enhancement and stewardship efforts.

Service Area: Mapped geographic sub-regions with unique ecological or political significance where credits are tracked and reported.

Science Advisory Committee: Group that develops and manages environmental standards for the natural resources, and makes technical recommendations to the Exchange Administrator and Board of Directors.

Stacking Credits & Payments: 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 Offset: Mitigation achieved by the use of credits produced in perpetuity on a participating credit project.

Static Term Offset: Mitigation achieved by the use of a term credit arrangement to cover a term debit project, where the credit term is equal to, or greater than, the debit term.

Stewardship: The protection of habitat or other ecosystem resources through the implementation of appropriate legal and physical mechanisms, including ongoing management of the habitat or other resource function.

Stewardship Projects: Credit projects where maintenance of existing high-quality habitat is the primary objective. Credit projects may involve a mix of restoration, enhancement and stewardship efforts.

Technical Advisory Committee: An advisory group which provides expertise and guidance to the Board of Directors and Exchange Administrator regarding Exchange operations.

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

Third-party Verifier: *see definition for* ***Verifier****.*

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 Exchange. The purpose of verification is to provide confidence to all participants, including the Exchange 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 Exchange Administrator and must meet qualifications established by the Board of Directors.

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APPENDIX B: FORMS, TEMPLATES & TOOLS

The following forms, templates, and tools are referenced in the Exchange Manual to support ongoing operations of the Wyoming Conservation Exchange (Exchange). Once initiated and in place, the Exchange Administrator will develop a series of forms as needed from the list outlined in the table below, in order to ensure streamlined and efficient operations.

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

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

- **Name**: Name of the document for participant use in the Exchange.
- **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 Exchange Operations (Sections 3.1-3.3)
- **Responsible Party**: Specifies which party is responsible for managing a tool, filling out a form, or creating a product.

#	NAME & VERSION	TYPE	DESCRIPTION	RELATED STEP(S)	RESPONSIBLE PARTY
1	VALIDATION CHECKLIST	Form	Basic information to provide an initial screen of a credit project's eligibility to participate in the Exchange.	D1.4	Credit Developer
2	CREDIT DEVELOPERS & BUYERS LIST	Template	List of projects seeking funding and Buyers interested in purchasing Credits.	D1.5/ B1.2	Exchange Administrator

#	NAME & VERSION	TYPE	DESCRIPTION	RELATED STEP(S)	RESPONSIBLE PARTY
3	HABITAT QUANTIFICATION TOOL (HQT)	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.	D2.2	Exchange Administrator
4	MANAGEMENT PLAN	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.	D2.2/ D2.3	Credit Developer
5	VERIFICATION CONTRACT	Form	A Credit Developer or Buyer signs a contract with the Exchange Administrator for third-party verification based on a template.	D3.1/ B2.2	Credit Developer, Buyer
6	CONFLICT OF INTEREST FORM	Form	Submitted by a verifier to the Exchange Administrator about any pre-existing conflicts of interest for verification.	D3.1/ B2.2	Verifier
7	VERIFICATION REPORT	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.	D3.3/ B2.2	Verifier
8	SELF-MONITORING REPORT	Template	Report submitted by Credit Developers in non-verification years that specifications of the Management Plan have been fulfilled.	D3.3/ B2.2	Credit Developer
9	VERIFICATION PROTOCOL	Tool	A description of the verification process for verifiers to use as guidance.	D3.3	Exchange Administrator
10	PARTICIPANT CONTRACT	Template	Template to be filled out between the Credit Developer and the Exchange Administrator laying out the terms of participation in the Exchange.	D5	Credit Developer, Exchange Administrator
11	NOTICE OF TRANSFER	Form	Notice from the Credit Developer or Buyer to direct the Exchange Administrator to transfer credits between accounts.	D5.2/ B3.2	Credit Developer, Buyer
12	ACCOMPLISHMENT REPORTS	Template	Reports provided by the Exchange Administrator to Credit Developers and Buyers outlining project accomplishments.	D5.3 /B4.2	Exchange Administrator
13	EXCHANGE IMPROVEMENTS LIST	Template	Suggestions for improving the Exchange collected throughout the year and maintained by the Exchange Administrator.	A1.1	Exchange Administrator
14	LIST OF RESEARCH NEEDS	Template	Catalogs and prioritizes research and monitoring needs identified by participants.	A2.1	Exchange Administrator

#	NAME & VERSION	TYPE	DESCRIPTION	RELATED STEP(S)	RESPONSIBLE PARTY
15	EXCHANGE PERFORMANCE REPORT	Template	The Exchange Administrator uses registry outputs to generate quantitative information to show Exchange accomplishments with respect to overall goals.	A3.1	Exchange Administrator
16	SYNTHESIS OF FINDINGS REPORT	Template	Synthesizes learning from experience implementing the Exchange and from new monitoring and research findings	A4.1	Exchange Administrator
17	EXCHANGE IMPROVEMENT RECOMMENDATIONS MEMO	Template	Recommendations of priority Exchange improvements for approval by the Board of Directors	A5.1	Exchange Administrator
18	RECORD OF DECISIONS	Template	Defines the agreed-to changes, rationale, the party responsible for implementing changes, and the date changes go into effect.	A5.2	Exchange Administrator
19	AUDIT REPORT	Template	Independent audit of the Exchange operations by the Board of Directors or third party.	A5.3	Board of Directors

APPENDIX C: DYNAMIC OFFSETS CONSIDERATIONS

INTRODUCTION

The concept of dynamic offsets (both permanent and term) deserves careful consideration when used in the Wyoming Conservation Exchange (Exchange). The purpose of this memo is to:

1. Clarify the concept of dynamic offsets,
2. Highlight some of the potential ecological considerations related to the concept, and
3. Initiate a conversation between the Advisory Group, Science Team, and the US Fish and Wildlife Service to consider the issue so that Exchange Manual language can be finalized and approved.

Dynamic offsets are defined as a series of strategically located, term-based agreements that, when sequentially aggregated, meet or exceed the timeframe and size of the impact. For example, one 40-year impact could be offset with a series of four, sequential, 10-year term agreements (i.e., "dynamic term"). The core principle behind dynamic offsets is that the habitat benefits of the offsets would shift in location across the landscape over the timeframe of the impact, rather than being stationary.

Dynamic offsets are made possible by the programmatic nature of the Exchange through which the Exchange Administrator can track and manage the program to maintain a net positive balance of offsets to impacts at any given point in time. Dynamic offsets would require the same financial assurances as other types of offsets plus additional financial assurances needed to develop new term contracts as other term contracts in the series expire.

ECOLOGICAL CONSIDERATIONS

Permanent protection in fixed locations has long been viewed as the only legitimate way to provide long-term habitat conservation (see Rayfield et al. 2008). However, restricting species protection to static locations in an increasingly changing and dynamic ecosystem may not be the only or best strategy to achieve landscape-scale conservation benefits, especially for species that are responsive and adapted to dynamic environmental conditions or inhabit changing environments (Nicholson et al. 2009), or which depend upon climax habitats that are vulnerable to wildfire, disease, or pest outbreaks. On the contrary, a sole reliance on static protections could result in a net loss of habitat, if protected areas no longer provide the intended habitat benefits as a result of ecological changes like habitat succession, climate change, wildfire, drought, geomorphological changes that render substrate unsuitable for breeding, population dynamics or land/water use and development patterns beyond a landowner's control render a site wholly unsuitable as habitat. Dynamic offsets could provide a means to better accommodate natural shifts in habitat value across the landscape at any given time, increase connectivity in a fragmented landscape, and provide insurance against getting locked in to static agreements that no longer benefit the species.

The concept of dynamic habitat offsets was introduced by Bull et al. (2013) as a way to deliver conservation for "moving targets," such as migratory species or landscapes subject to regular environmental fluctuations. It could also be applied in the case of species that face major habitat shifts as a result of climate change (Poiani et al. 2011). Dynamic offsets create "mobile" protected areas that at any given point in time guarantee habitat availability across large, dynamic landscapes.

There are some ecological circumstances under which dynamic offsets might be appropriate and worth careful consideration. These include systems that are intrinsically dynamic (e.g., large river floodplains), landscapes undergoing widespread environmental change (e.g., climate change or large-scale development), and climax ecosystems prone to large-scale stochastic events in which target species

would be displaced (e.g., wildfire, pests or disease outbreaks). Offsets that shift in location over time could be appropriate for species that are highly mobile and adapted to seeking out resources in dynamic systems. In addition, dynamic offsets could serve as an additional means of filling the gaps in otherwise fragmented landscapes, facilitating species movements across the landscape and reconnecting isolated habitat fragments and populations.

Recent studies show observed or expected species range shifts in response to climate change, sometimes in directions that weren't predicted. As a result, it cannot be assumed that a favorable location at the time of signing a conservation agreement will remain favorable several decades later. This may be especially true on the edge of a species range or in highly fragmented landscapes. Dynamic offsets might be a method for building flexibility into landscape scale conservation that allows for greater resilience over the long term by intentionally shifting conservation locations as environmental conditions change. While climate change provides a useful example of the utility of dynamic offsets, it does not mean that they are applicable in all locations.

There are some circumstances under which dynamic offsets may not be appropriate; for example, for highly specialized species with very restricted ranges, or sedentary species with limited mobility or dispersal abilities. BenDor and Woodruff (2014) argue that conservation plans using dynamic offsets should carefully consider life histories of target species, behavioral strategies, and restoration lag times and could be detrimental in systems where restoration response time is slow or in species with high site-fidelity. For example, highly degraded sagebrush ecosystems might respond more or less slowly to restoration efforts, depending on site conditions that foster resilience vs. resistance (Chambers et al. 2014). Short-term agreements might not be of sufficient time frame to rehabilitate the habitat to a usable level and attract and sustain greater sage-grouse on sites where conditions do not favor resilience. Under these circumstances, the timeframe of the offset might not match the timeframe of usability for the bird. If greater sage-grouse are attracted to the site and the agreement ends, then those habitat benefits and financial investments might be lost if a landowner chooses not to re-enroll and discontinues ecological management or, in the worst case scenario, converts the site to another land use.

Another key question is whether dynamic offsets are appropriate for animals that exhibit high site-fidelity like greater sage-grouse. The risk to a bird is that if it is attracted to the improvements of a temporary offset during the timeframe of the agreement, it may lose this habitat once the agreement ends if the landowner chooses to discontinue ecological management and the surrounding landscape doesn't provide adequate supporting habitat. Under these circumstances, the temporary offsets may have created habitat "sinks" for the birds. On the other hand, a habitat parcel that provided connectivity for a decade or more that might not have otherwise existed, could still have yielded enduring demographic and population genetics benefits.

ECONOMIC, LEGAL AND POLICY CONSIDERATIONS

There are also economic, legal and policy reasons that dynamic offsets could yield long-term conservation benefits. One issue to consider is how existing water, property and mineral laws might undermine the conservation benefits of permanent, static conservation agreements. Dynamic offsets provide the flexibility to address some of these negative effects. If conservation agreements are limited to properties where the surface, mineral and water rights are owned by the same entity, this could disqualify large areas of the western United States. Take for example the Powder River Basin of Wyoming, which supports an important regional population of greater sage-grouse, but where ownership is split between mainly privately-owned surface (85%) and federally-owned minerals (75%) (Naugle et al. 2011). Dynamic offsets would allow for the inclusion of lands where permanent agreements are not possible, but where benefit may be gained by durable agreements. If the site is disturbed or fragmented beyond the ability of the habitat to recover, dynamic offsets would enable the conservation benefits to be shifted to more beneficial locations throughout time.

Since term agreements are typically more popular with private landowners than permanent easements, dynamic offsets might also encourage more landowners to engage in beneficial management across the landscape, accelerating conservation efforts across much larger areas than are currently being managed for habitat today, and improving landscape conditions in ways that are more ecologically beneficial than relying solely on static conservation commitments in fixed locations. Allowing for a suite of shorter-term conservation agreements through dynamic offsets provides landowners with the flexibility to dynamically weigh the cost-benefit of maintaining habitat value without compromising their long-term ability to respond to changing agricultural markets. It may also appeal to landowners concerned with generational transfer that do not want to dictate land management conditions for future generations.

Furthermore, dynamic offsets offer the opportunity for the biological re-evaluation of the term agreements when they expire. Landowners will be incentivized to re-enroll at the end of a term only if their property maintains or increases in habitat value. Having a series of shorter-term agreements will allow the Exchange flexibility to evaluate and re-focus conservation action as needed across the landscape to maximize conservation value, rather than being locked into entirely static agreements in fixed locations.

APPLICATION OF DYNAMIC OFFSETS IN THE WYOMING CONSERVATION EXCHANGE

The Wyoming Conservation Exchange is designed to achieve a net benefit for the species. Dynamic offsets offer a flexible but insured means of providing enduring conservation benefit across large landscapes, and more opportunity for private landowners to participate in habitat conservation. There is a strong ecological as well as economic, legal and policy case to be made for further exploring, researching and pilot-testing dynamic offsets in sagebrush ecosystems. The key questions are where the conditions are most suitable for testing this concept and how to address the considerations raised in this memo in the context of the Wyoming Conservation Exchange.

This memo provides a starting point for a more informed conversation between the Advisory Group, Science Team, and the US Fish and Wildlife Service and other interested parties to explore and resolve these issues before the Exchange Manual is finalized.

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