

Sagebrush Ecosystem Program

Progress Report: July 2014



Sagebrush Ecosystem Council

State of Nevada

201 South Roop Street, Suite 101

Carson City, Nevada 89701-5247



The Sagebrush Ecosystem Council's mission is to maintain and restore a functional and resilient sagebrush ecosystem to benefit all species while allowing for various land uses. This will be accomplished by working through a diverse coalition of public and private stakeholders.

sagebrusheco.nv.gov



Sagebrush Ecosystem Program

201 Roop Street, Suite 101
Carson City, Nevada 89701
Telephone (775) 684-8600
Facsimile (775) 684-8604

www.sagebrusheco.nv.gov

BRIAN SANDOVAL
Governor



Tim Rubald, Program Manager
John Copeland, Forestry/Wildland Fire
Melissa Faigeles, State Lands
Kelly McGowan, Agriculture
Lara Niell, Wildlife

STATE OF NEVADA
Sagebrush Ecosystem Program

Dear Governor Sandoval:

For more than a decade Nevadans have worked proactively to identify the threats to the sagebrush habitat and mitigate the challenges to preserving the environment. I am proud to continue this effort as a member of the Sagebrush Ecosystem Council (SEC), an inclusive, broad-based coalition of stakeholders who are committed to preserving, conserving, and restoring the sagebrush habitat.

The SEC has made many key decisions designed to provide a strategic vision to pilot the Sagebrush Ecosystem Program through the U.S. Fish and Wildlife Service's listing decision of the Greater Sage-grouse in September 2015.


In this essential planning phase, the SEC developed a detailed program schedule in April 2013 to manage staff workload and deliver the corresponding SEC policy decisions and products to be completed by September 2014, when the USFWS begins a 12-month findings process.

The SEC is working to strike a thoughtful balance in its stewardship of the sagebrush ecosystem by applying the newest innovations in science, technology, and conservation without impeding traditional Nevada industries such as mining, agriculture and renewable energy, or denying citizen access to enjoy the recreational bounty of Nevada public lands.

We have consistently maintained transparency and elicited input from representatives of all levels of government, science, conservation, ranching, energy development, Tribal nations, private business, and the public at large.

The Nevada Legislature underscored the State commitment by formalizing the effort within statute. As required by statute, I respectfully submit this report on behalf of the SEC. This report is intended to provide a comprehensive overview of the strategies and innovative programming completed during the past 18-month planning phase.

Sincerely,


J.J. Goicoechea, Chairman
Sagebrush Ecosystem Council



Nevada Sagebrush Ecosystem Council

BRIAN SANDOVAL

Governor

State of Nevada

J. J. GOICOECHEA

Chairman

Sagebrush Ecosystem Council



NRS 232.162 § 8—On or before June 30 and December 31 of each year, the Council shall submit a written report to the Governor.



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TIM RUBALD

Program Manager

Sagebrush Ecosystem Program

201 South Roop Street, Suite 101

Carson City, Nevada 89701-5247

775.684.8600

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Transparency Statement

Nevada's Sagebrush Ecosystem Program is a model for open, consistent engagement of multiple stakeholders.

Since its inception, the Sagebrush Ecosystem Council has operated in a transparent manner following the Nevada Open Meeting Law as prescribed in NRS 241.

- Written notice of the meetings are prepared including the time, place, and location of the meeting, a statement regarding assistance and accommodations for physically handicapped people, and an agenda of the meeting.
- The notices are posted no later than 9 a.m. on the third working day prior to the meeting on the Nevada Public Notice and Sagebrush Ecosystem Program (SEP) websites.
- The agenda for all meetings includes a complete statement of the topics to be considered during the meeting with items requiring action clearly denoted. It includes two periods devoted to public comment with a statement that no action may be taken upon a matter raised under the public comment period unless the matter itself has been specifically included on an agenda as an action item.
- Agenda support material is available online on the SEP website prior to the meeting. Past meeting documents are retained in date order and are available online.
- Documents received relating to public comment are also posted on the SEP website, and when reasonable in size provided to the Council in hard copy.
- Audio and written minutes for each meeting of SEC and its subcommittees are available on the website within the mandated 30 working days after the adjournment of the meeting, and normally much earlier.

The SEP maintains a Listserv, which is an electronic mailing list. Registrants receive all meeting notices and supporting documents. Interested parties are encouraged to sign up and may do so from the home page of the program's website.



Sagebrush Ecosystem Program
Nevada Public Notices
MP3 Audio of Meeting

<http://sagebrusheco.nv.gov>

<https://notice.nv.gov>

<http://ndep.nv.gov/sage/index.htm>

Background

With the issuance of Executive Order 2012-09 on April 3, 2012, Governor Brian Sandoval created the Greater Sage-grouse Advisory Committee and tasked its members with planning a course of action providing sufficient measures to preclude the need for the U.S. Fish and Wildlife Service (USFWS) to list the Greater Sage-grouse under the Endangered Species Act (ESA).



According to the USFWS, primary threats to the sagebrush ecosystem include wildland fires, invasive species, pinyon-juniper encroachment, predation, wild horse and burro management, mineral development, recreation and off-highway vehicle use, and renewable and other energy production, transmission, and distribution.

In Nevada, 86% of the state is owned by the federal government, necessitating a coordinated effort among local, State, and federal agencies to ensure the successful implementation of prudent land management policy.

Because sustainable, effective change can only occur through transparent public discourse, the committee developed recommendations over the course of ten meetings and nearly 80 hours of expert testimony, discussion, deliberation, and public comment. Meetings were held in Carson City in compliance with Nevada Open Meeting Law with simultaneous videoconferencing to Winnemucca, Elko, and Ely. The committee presented its final report to Governor Sandoval on July 31, 2012.

In November 2012, recognizing the critical importance of this expansive landscape to the citizens and natural resources of the Silver State, Governor Sandoval issued Executive Order 2012-19 establishing the Nevada Sagebrush Ecosystem Council (SEC). In 2013, Nevada legislators underscored this commitment by formalizing it within statute.

Today, the Nevada Sagebrush Ecosystem Program (SEP) is an integrated, multi-disciplinary, inter-agency effort with a shared goal of addressing the threats and challenges to this critical ecosystem for today and into the future. The Nevada SEP is recognized for its open, consistent engagement among State, federal, and local government agencies, ranchers, businesses, conservation groups, non-profits, and universities in a multi-pronged effort to avoid, minimize, and mitigate impacts to the habitat.

Accomplishments

Organizational Highlights

2012, October	The Nevada Legislative Interim Finance Committee and Board of Examiners approve initial funding to hire and create the Sagebrush Ecosystem Technical Team (SETT).
2012, November	Governor Sandoval issues Executive Order 2012-19 establishing the Sagebrush Ecosystem Council.
2012, December	Nevada submits State Alternative (E) providing the BLM with geographic information data depicting their preferred management areas, conservation measures that should be applied to these areas, and rationale as to why their measures deviate from those outlined in the NTT Report.
2013, January	Governor Sandoval appointed nine members to the Sagebrush Ecosystem Council (SEC) created through Executive Order 2012-19. To date the SEC has held 20 working meetings in accordance with Nevada Open Meeting Laws.
2013, February	Sagebrush Ecosystem Technical Team began work as staff to the SEC.
2013, March	Nevada Assembly Bill 461, to formalize the Sagebrush Ecosystem Program and effort within statute, is introduced in the Nevada Legislature.
2013, June	Governor Sandoval signs AB 461 making Nevada the first state, and still the only, to formalize its commitment within statute. The bill added the key leadership and decision-making capacity of State agency directors representing Wildlife, Conservation & Natural Resources, and Agriculture to the Council. It also provided permanent ex-officio seats on the Council to three of the state heads of key federal agencies involved with land management in Nevada.

Major Focus Area Accomplishments

Nevada State Plan and Strategic Action Plan

- Completed revisions to six sections of the State Plan, providing definitions, thresholds and greater specificity of sage-grouse habitat objectives including: livestock grazing; wild horse and burro management; predation; adoption of site-specific, consultation-based design features; and mitigation.
- Established the Science Work Group (SWG), a collaborative work group of scientific experts and resource managers, as advisors on the best available science. The SWG has met 10 times, in open meetings, and provided input on numerous topics pertinent to updating the State Plan and State Alternative (E).
- Developed a fundamental hierarchical decision-making policy of “avoid, minimize, and mitigate” with regard to sagebrush habitat.

- Revised conservation goals and strategies by setting an overarching goal of “no net loss” in the sagebrush habitat categories within the sagebrush ecosystem for activities that can be controlled such as planned disturbance or development.

BLM Draft Environmental Impact Statement (DEIS) and the State Alternative

- The SETT reviewed the DEIS focusing on the representation of the State’s Alternative, consolidated comments provided by all of the cooperating state agencies (DCNR, NDOW, and NDOT), and submitted a unified set of comments from the State of Nevada.
- Formed a coordinating working group to facilitate communications between state and federal agencies.
- Updated many of the state standards and management actions, incorporating thresholds and triggers.

USGS Habitat Suitability Modeling

- Secured funding from multiple sources to contract with U.S. Geological Survey to build a sage-grouse habitat suitability model for the State of Nevada.
- Approved the first draft of the Habitat Suitability Map. As part of this process the SEC has also adopted new habitat area categories (occupied, suitable, and potential).
- Intersected habitat suitability classes with space use categories (core, priority, general, and non-habitat) for implementation in the State Plan.

Conservation Credit System (CCS)

- Secured grant funding to contract for the development of the Nevada Conservation Credit System (CCS). Environmental Incentives was the successful bidder.
- Created and approved the foundation of the CCS, including drafts of the CCS Manual and Habitat Quantification Tool (HQT) Scientific Methods Document.
- Submitted draft documents to the BLM/FS for inclusion in the Draft Sub-Regional Environmental Impact Statement. This participation in the BLM’s 90-day public comment period, allowed the State of Nevada to propose preferences, suggested changes, and methodologies such as the CCS for consideration as part of the decision-making process.

Responding to U.S. Fish and Wildlife Service Data Call

- Began information collection related to planned and completed habitat projects in Nevada since 2010 in preparation for response to the USFWS data call.
- Worked closely with other states and through Western Governors Association to help design the standards for the data call. This work is ongoing.

Strategic Visioning

Created to provide a strategic vision to guide the Sagebrush Ecosystem Program (SEP), the Sagebrush Ecosystem Council (SEC) adopted a detailed program timeline in April 2013 to manage staff workload and the corresponding Council policy decisions.

The current five focus areas are: revising the “2012 Strategic Plan for Conservation of Greater Sage-grouse in Nevada;” and amending the state’s submission for the USFWS/BLM EIS/State Alternative; developing a statewide sage-grouse habitat suitability mapping model; establishing a Conservation Credit System; and, responding to the USFWS Data Call.



Priority was given to these five areas based upon federal timelines and the tasks to be completed by September 2014, when the USFWS begins its 12-month findings process. The prioritized focus areas are not mutually exclusive of each other.

Each dovetails in addressing the identified threats to the Greater Sage-grouse and the sagebrush ecosystem. Unless listed under the Endangered Species Act, management of the sage-grouse is the responsibility of the State of Nevada. Therefore, it is essential to propose a management strategy that the state can enact and maintain in conjunction with federal land managers.

Racing against an expiring executive order, the Sage-grouse Advisory Committee submitted an initial Nevada State Plan to Governor Sandoval in July 2012. Due to the time constraints placed upon the committee, this plan was very broad in scope with little detail. The SEC, with the assistance of the Sagebrush Ecosystem Technical Team (SETT), has revised, added specificity, thresholds, triggers, and definitions to the Nevada State Plan.

It was the desire and goal of the SEC that this would allow the state to be involved with the federal plan, work with federal land managers throughout the state, to develop conservation principles benefitting the sage-grouse and the sagebrush ecosystem.

These principles include: “no net loss;” “avoid, minimize, and mitigate;” and implementation of the Nevada Conservation Credit System (CCS).

After completing the sections required for this process, the SETT is now working on revisions to the State Plan, and presenting them to the SEC for approval. From the broad goals, objectives, and management actions being developed in the State Plan, a Strategic Action Plan will be created. This separate document will go into much greater detail and identification of areas to target landscape management efforts, and include specifics of the CCS.

Identified in the State Plan, the CCS is the primary mechanism for conservation of sage-grouse in Nevada. The key is to achieve no net unmitigated loss of sage-grouse habitat due to human disturbances.

The statewide sage-grouse habitat suitability model is a core component to each of the focus areas. Habitat modeling outputs provide information on areas in Nevada where the sage-grouse are finding and using habitat, as well as areas that have potential for improvement and increased use by the bird.

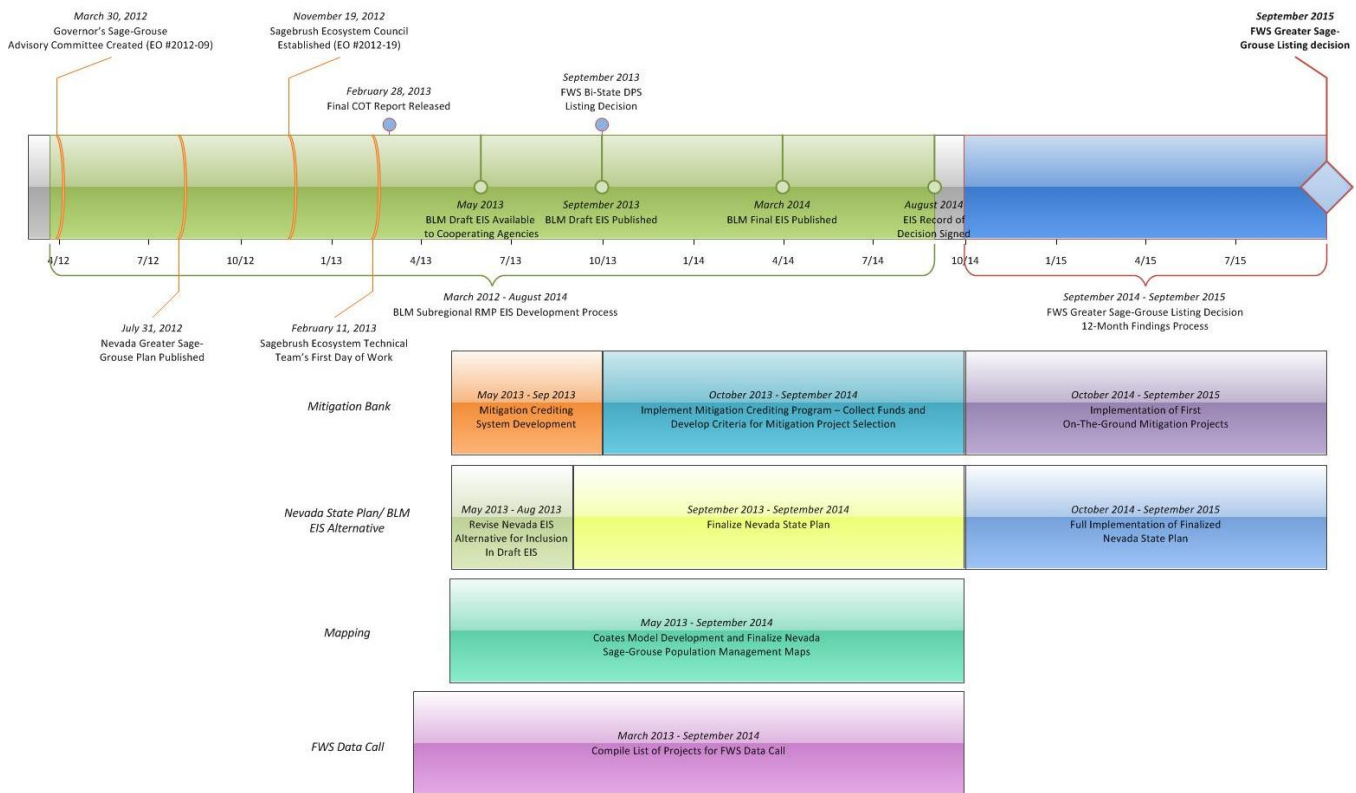
The last, but no less important, focus area is responding to the USFWS Data Call. This request requires a compilation and analysis of the planned and completed sage-grouse habitat conservation projects since the March 2010. The analysis and report will put the projects into context as requested by the USFWS. The SETT is currently awaiting the release of standards and formatting to be used for this report from the USFWS.

Timeline

The Sagebrush Ecosystem Council (SEC) adopted detailed program timelines in April 2013 to manage staff workload and the corresponding Council policy decisions for the major focus areas.

The timeline below provides a visual roadmap of the federal listing process and how the SEC activities correspond to those milestones. The timelines for the five major focus areas are included separately in the Activities section of this report.

Greater Sage-Grouse Listing Decision Proposed Timeline



Nevada State Plan and Strategic Action Plan

The Sagebrush Ecosystem Council (SEC) identified the augmentation of the “2012 Strategic Plan for Conservation of Greater Sage-grouse in Nevada” (Nevada State Plan) as a key starting point in developing content for inclusion in the Bureau of Land Management’s Environmental Impact Statement (BLM EIS). Revisions to the State Plan must be completed by September 2014, for consideration during the U.S. Fish and Wildlife Service’s (USFWS) 12-month findings process for the listing decision.

The State of Nevada has been actively addressing the USFWS Informal Draft Comments, dated September 14, 2012, since early April 2013. At its March 27, 2013 meeting, the SEC directed the Sagebrush Ecosystem Technical Team (SETT) to meet with USFWS and the Nevada Department of Wildlife to discuss the USFWS comments on the State Plan and report back to the SEC.

The USFWS staff requested clarification and greater detail on several key concepts of the State Plan, including:

- Proposed regulatory mechanisms;
- specific triggers and thresholds for the “avoid, minimize, and mitigate” policy;
- how cumulative impacts to habitat loss due to “Acts of Nature” would be accounted for in the “no net loss” objective; and,
- mapping methods used.

On April 22, 2013, the SEC directed the SETT to further develop the State Plan and corresponding State Alternative for the Bureau of Land Management’s (BLM) Sub-regional Resource Management Plan (RMP) and Environmental Impact Statement (EIS) to incorporate the concerns expressed by the USFWS. Since that time, it has been the SETT’s top priority to update and strengthen the State Plan and State Alternative to address USFWS’ concerns and to provide sufficient detail and specificity for the BLM to analyze the State Alternative.

At the July 30, 2013 SEC meeting, the SETT submitted proposed revisions to Section 3.0 of the State Plan to the SEC for approval. Due to the complex and technical nature of the proposed policy recommendations, the SEC continued discussing and taking action on specific key policy decisions at the subsequent (September 12 and October 10, 2013) meetings.

The key policy decisions that the SEC has approved and/or given direction to the SETT to develop in greater detail include:

- Approval of a definition and process for “avoid”;
- direction to develop specific best management practices for inclusion in the “minimize” policy;
- approval of the policy that any proposed anthropogenic disturbance within sage-grouse management areas (SGMA) will trigger SETT consultation for implementation of the “avoid, minimize, mitigate” policies;
- approval of conservation objectives, policies, and adaptive management strategies for “acts of nature,” including fire and invasive species;

- direction to work with the Science Work Group to develop science-based policy recommendations for cumulative impacts to sage-grouse; and
- approval of the revisions to the State Plan to account for indirect impacts (e.g. noise produced from operations, vehicle traffic on associated roads, and predation enhanced by high-visual perches such as pinyon-junipers and power lines) to sage-grouse resulting from disturbances occurring in habitat and non-habitat within SGMAs.

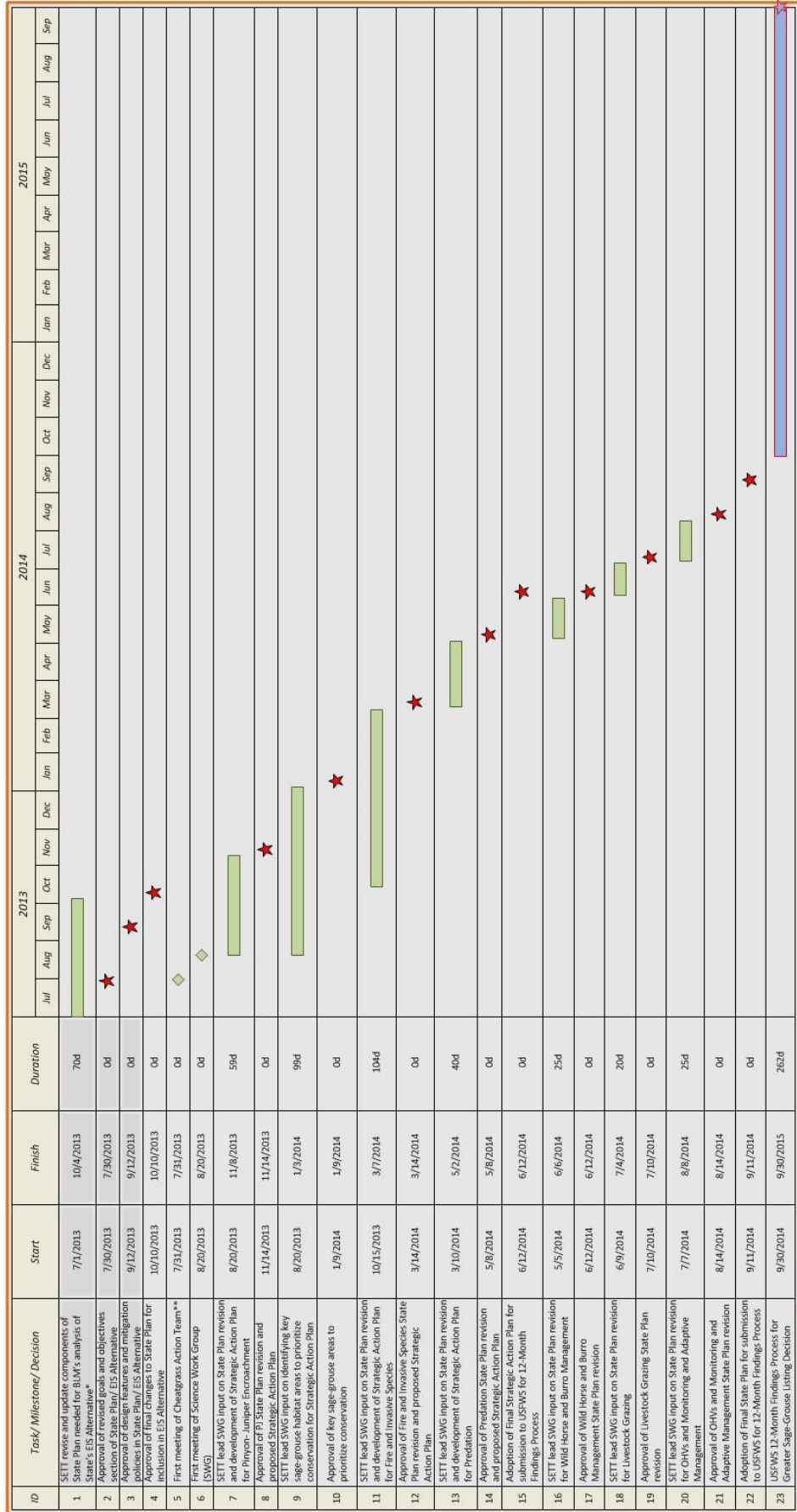
Once these policies are finalized, the SETT will develop a Strategic Action Plan. This part of the overall state plan is intended to be a separate document from, and in addition to, the State Plan. While the State Plan provides broad goals, objectives, and management actions, the Strategic Action Plan will add greater detail and identify areas to target mitigation efforts as part of the Conservation Credit System. The Strategic Action Plan will identify key sage-grouse habitat for conservation where the primary threats to sage-grouse habitat are located spatially and provide specific guidance on how to ameliorate these threats based on local area conditions. The Strategic Action Plan will guide and help prioritize where mitigation efforts will be targeted in Nevada in order to achieve landscape-scale conservation of sage-grouse habitat.

Revisions to the State Plan and the development of the Strategic Action Plan have and will continue to be developed with the Science Work Group. The Science Work Group, which meets whenever expertise is needed, is a collaborative working group of scientists and resource managers that advises the SETT on the best available science and how it can be applied to the management of the sagebrush ecosystem.

Key Council Decisions and SETT Activities

2013, March	SEC directs the SETT to meet with USFWS and Nevada Department of Wildlife.
2013, April	SEC directed the SETT to further develop the State Plan and corresponding BLM RMP and EIS to incorporate the concerns expressed by the USFWS.
2013, July	SETT submitted proposed revisions to Section 3.0 of the State Plan to the SEC for approval. Due to the complex and technical nature of the proposed policy recommendations, the SEC has continued discussing and taking action on specific key policy decisions at the subsequent (September 12 and October 10, 2013) meetings.
2013, November	Council approves proposed revisions to Section 3.0 of the State Plan.
2014, January	Council withdrew Section 7.0 De Minimus Activities section of the 2012 State Plan/EIS Alternative which provided a 13-item list of land use activities that did not require state agency review. The revised section focuses on threat assessment, outlines goals and objectives, and provides management actions based upon the best available science that will contribute to the habitat and species recovery.

Sagebrush Ecosystem Program Timeline: Revision of The State Plan/Development of Strategic Action Plan - Science Work Group



*Task ongoing since May, 2012
 ** TBD how this group will fit into this process
 Sagebrush Ecosystem Technical Team Task
 USFWS Task
 Sagebrush Ecosystem Council Decision
 USEWFS Decision

BLM Draft EIS and the State Alternative

The Nevada Alternative—submitted to the Bureau of Land Management (BLM) by the State of Nevada for inclusion in the “Draft Environmental Impact Statement for the Northeast California/Nevada Sub Region” is a strategy submitted to the BLM that, when fully implemented, will adequately manage the sagebrush ecosystem, and protect the Greater Sage-grouse habitat.

The BLM is well underway in their development process for the Greater Sage-grouse Land Use Plan Amendment (LUPA) and Environmental Impact Statement (EIS). The BLM recently completed their Cooperating Agency (CA) review period of the Final Administrative Draft of the EIS (FADEIS).

The SETT reviewed the draft ADEIS focusing on the representation of the State’s Alternative. The SETT and BLM have worked together to ensure that the State’s Alternative has enough specificity for analysis. The BLM is continuing to analyze the State’s Alternative as the EIS process moves forward and SEP products are developed.

Key Council Decisions and SETT Activities

2013, September	DEIS became available for a 90-day public review period.
2013, October	Council initial discussion on DEIS. Council approves final revised State Alternative for submission to the BLM. Interim section revisions will be brought to the Council for approval before the final.
2013, November	Council approves DEIS comment letter to BLM.

USGS Habitat Suitability Modeling

Habitat suitability modeling (HSM) is a statistical method for ascertaining the suitability of habitat for a given species. The model analyzes various values, and calculates an index of habitat quality based upon meeting the greatest number of the species' needs. Then, using a geographic information system (GIS), these indexed values can be mapped to show habitat. It is important to note that modeling results do not show the actual existence of a species. Radio and GIS is used to monitor sage-grouse, then that data is imported into the model.

The State of Nevada, with the assistance of the BLM, is working with the U.S. Geological Survey to develop a habitat suitability model for sage-grouse in Nevada. The model uses sage-grouse telemetry location data and extensive environmental data (vegetation, topographic indices, elevation, water resources, and human activity factors) as inputs to predict suitability. The habitat suitability index will be used to develop habitat maps, management maps and support conservation planning decisions. These tools will be used for management of sage-grouse in Nevada at the state and federal level.

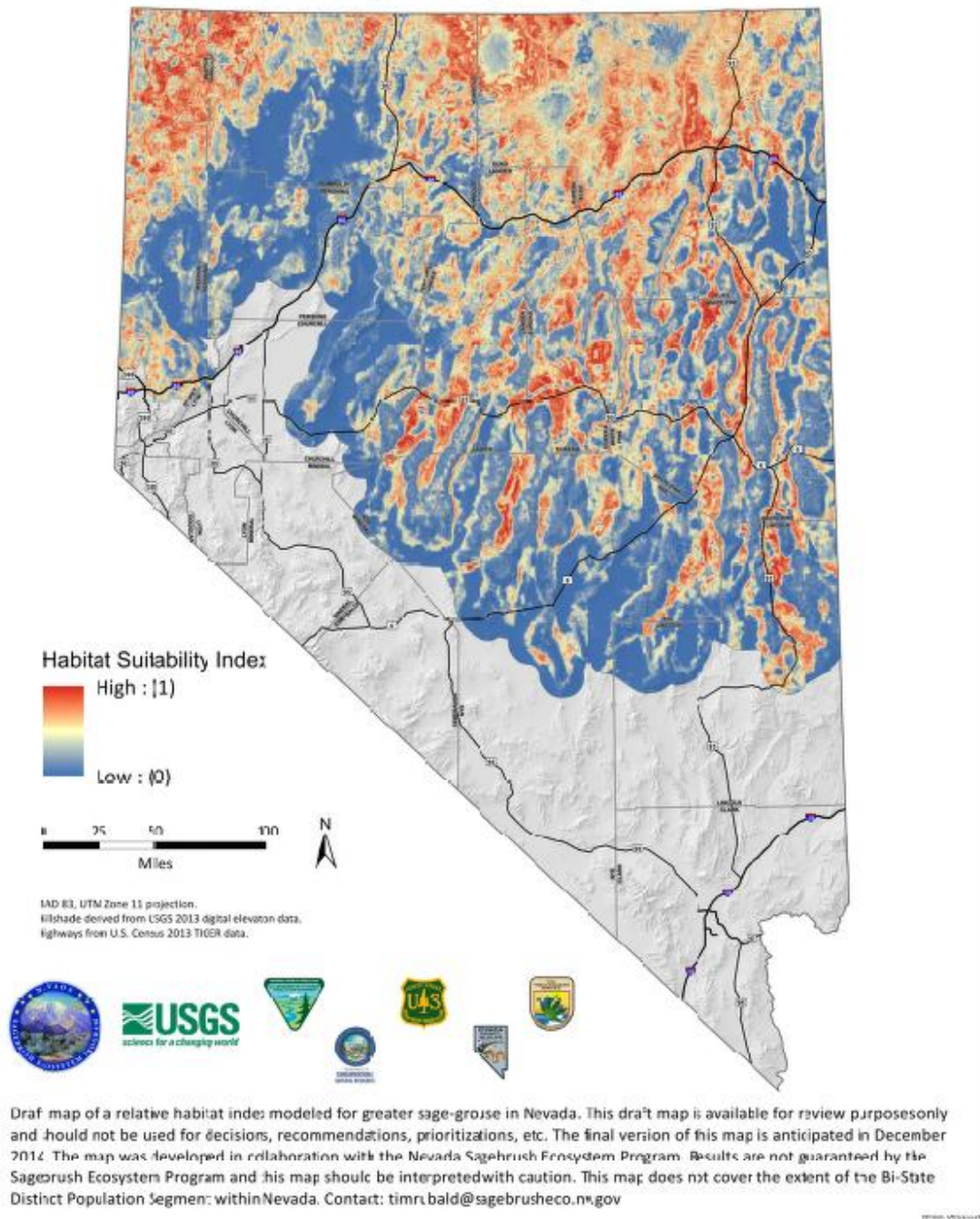
HSM is a main element of the Nevada State Plan and the Conservation Credit System. Although maps have been produced by various agencies that generally identify Greater Sage-grouse habitat, these maps are on a large scale and do not provide specific locational information as to the relative suitability of the habitat for sage-grouse occupancy. In addition, the products of the HSM will be valuable to decision makers in determining where the best opportunities for conservation projects are located. For example, if a public agency has funding to carry out a watershed restoration project, the agency could utilize the HSM to determine the locations most likely to provide the greatest habitat suitability for sage-grouse.

The Council hired the USGS, led by Dr. Peter Coates, to develop a state-wide sage-grouse habitat suitability model. The SEP has worked to obtain funding from several sources and navigate a protracted contracting process. Work by the USGS is currently underway and will be completed in two phases. Though the final products will not be complete by September 2014, the start of the 12-month findings process, a draft habitat suitability map, adopted by the SEC in February 2014, will be available to the USFWS for consideration during their listing decision. It is anticipated that the final habitat suitability model will be completed by January 2015.

Key Council Decisions and SETT Activities

2013, April	NDOW and DCNR commit funds to project.
2013, May	Completion of initial project planning, and progress update to Council.
2013, June	Funding is secured, to realize significant indirect cost savings BLM to act as the fiscal agency for the project.
2013, August	Project management “kick-off” meeting.
2013, October	USGS project presentation made to the Council.
2014, January	Draft habitat suitability map completed.
2014, February	Council reviewed draft habitat suitability map and discussed how to use the final map product, habitat categories, and SGMAs.

DRAFT Habitat Suitability Index for Greater Sage-grouse in Nevada (February 2014)



Conservation Credit System

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

The CCS is a market-based mechanism that quantifies conservation outcomes (credits) and impacts from anthropogenic disturbances (debits), defines standards for market transactions, and reports the overall progress from implementation of conservation actions throughout the sage-grouse range within Nevada.

The CCS is intended to provide regulatory certainty for industries, and credit developers, by addressing compensatory mitigation needs whether or not the species is listed under the Endangered Species Act.

The goal of the CCS is to achieve no net unmitigated loss of sage-grouse habitat due to anthropogenic disturbances within the sage-grouse management areas (SGMA), in order to stop the decline of sage-grouse populations and habitat. Proposed anthropogenic disturbances, as defined in Section 3.0 of the State Plan, must seek to avoid, minimize, and mitigate impacts to sage-grouse habitat. After all reasonable possibilities to avoid and minimize impacts to sage-grouse habitat have been exhausted, mitigation of residual adverse impacts are required to be offset by mitigation requirements as determined through the CCS.

Anthropogenic disturbances occurring on BLM and USFS lands within the SGMAs require consultation with the SETT. Private landowners are not required to mitigate anthropogenic disturbances on their land, but are welcome to voluntarily generate, sell, or purchase credits in the CCS.

Credits are the currency of the CCS. A credit represents a verified “*functional acre*” that meets the durability criteria defined by the CCS, such as committing to a Customized Management Plan that outlines actions to maintain habitat performance and to limit risks from future impact for the duration of the project. A functional acre is based on habitat quality (“function”) relative to optimal conditions, and quantity (acres). Debits are similar to credits, but are the quantified and verified units of functional acres lost due to an anthropogenic disturbance.

Credit and debit projects are verified to ensure that calculations represent a true and accurate account of on-the-ground implementation and habitat function and assurances that projects are maintained over time.

A Habitat Quantification Tool (HQT) is used estimate habitat quality and quantify debits and credits. The HQT uses a set of metrics, applied at multiple spatial scales, to evaluate vegetation and environmental conditions related to sage-grouse habitat quality and quantity. The HQT enables the CCS to create incentives to generate credits on the most beneficial locations for the sage-grouse, and to minimize impacts to existing high quality habitat.

The CCS uses performance assurances on private and public lands to ensure the durability of credits generated throughout the life of the credit project. Performance assurances are implemented through contract terms and financial instruments. The durability of projects on public lands is

safeguarded using land protection mechanisms (e.g. right-of-ways), financial instruments (e.g. contract performance bonds) and the Reserve Account.

The DCNR Division of State Lands holds ultimate authority over CCS design, operations, and management. The SEC oversees CCS operations and approves changes to the program. The Administrator of the system will manage the CCS's day-to-day operations and ongoing program improvements, facilitate transactions, and report programmatic results. CCS operations are also informed by Resource Managers (e.g. NDOW, CDs, BLM, USFS, USFWS) and a Science Committee will be set up to ensure it functions with the best available science.

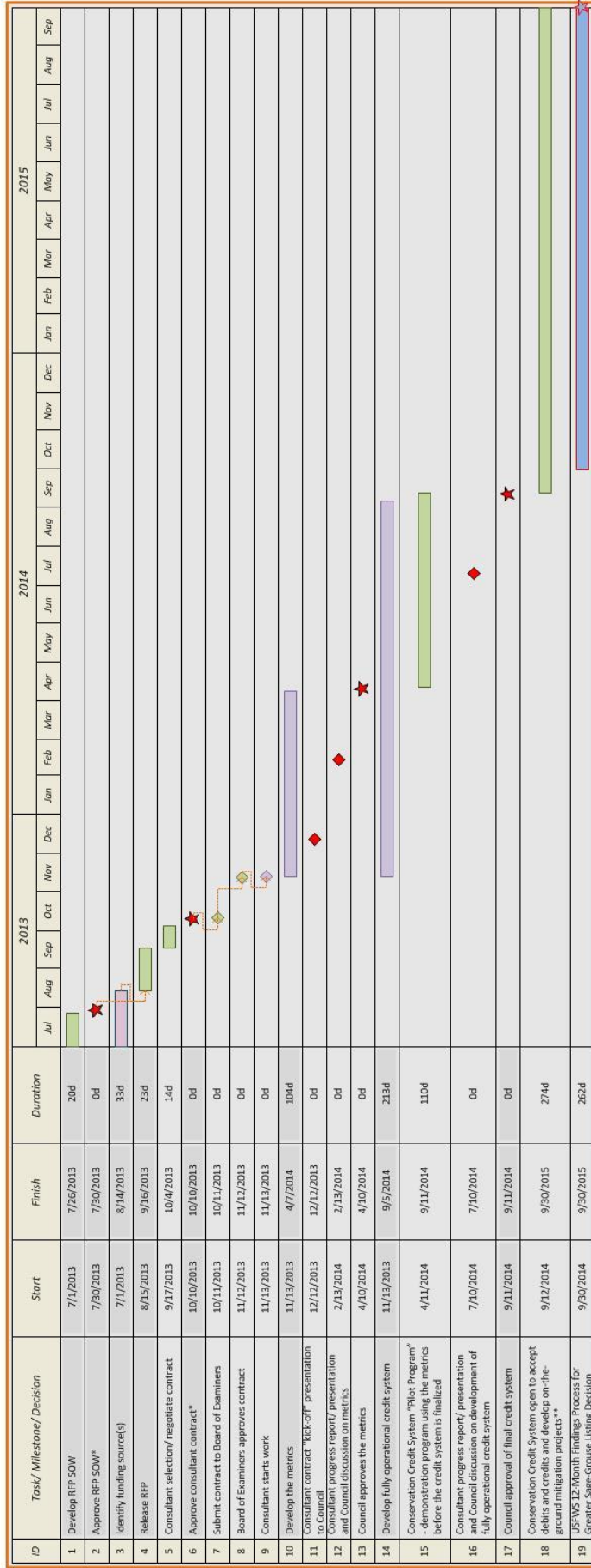
Key Council Decisions and SETT Activities

2013, May	Council heard presentations from four respondents to the RFI issued May, 15, 2013, for the development of a Conservation Credit System.
2013, July	Council approved the Scope of Work (SOW) for the RFP.
2013, September	Submittal of Question 1 Grant Application for \$500,000.
2013, October	Following approval and securing of funds, State Purchasing released the RFP with a closing date of November 6, 2013.
2013, November	Council selected/approved consultant.
2013, December	Board of Examiners approved contract with Environmental Incentives.

Project Milestones

2014, July	Phase I of contract, development of the metric will be complete.
2015, January	Phase II of contract, development of a fully operational credit system will be complete.
2015, February	Council approves the final Conservation Credit System. “Debits” and “credits” can begin to be accepted and on-the-ground projects can begin to be planned and implemented.

Sagebrush Ecosystem Program Timeline: Conservation Credit System



*Decision on this date effects successive timeline items
 **Task continues indefinitely
 Legend:
 Sagebrush Ecosystem Technical Team Task (light blue bar)
 Governor's Office Task (orange bar)
 Selected Consultant Task (pink bar)
 USFWS Task (green bar)
 Task/milestone/ decision dependent on previous decision/ task/ milestone (dashed line)
 Sagebrush Ecosystem Council Decision (red star)
 USFWS Decision (purple diamond)
 Sagebrush Ecosystem Technical Team Milestone (green diamond)
 Selected Consultant Milestone (blue diamond)

USFWS Data Call

The US Fish and Wildlife Service (USFWS) will issue a data call requesting information on all planned and completed habitat projects. The data call is a component of the information being provided for the USFWS' consideration in its September 2015 listing decision.



The Sagebrush Ecosystem Technical Team (SETT) is compiling a list of projects and will analyze the data, then write a report to put the projects into context, once the USFWS provides the format for the 2014 data call submissions.

The SETT is currently working with NDOW staff to collaborate on a database that is already underway as part of the Nevada Partners in Conservation and Development Program (PCD). The Nevada PCD is a unique partnership of several natural resource oriented agencies and organizations committed to providing solutions to conservation issues.

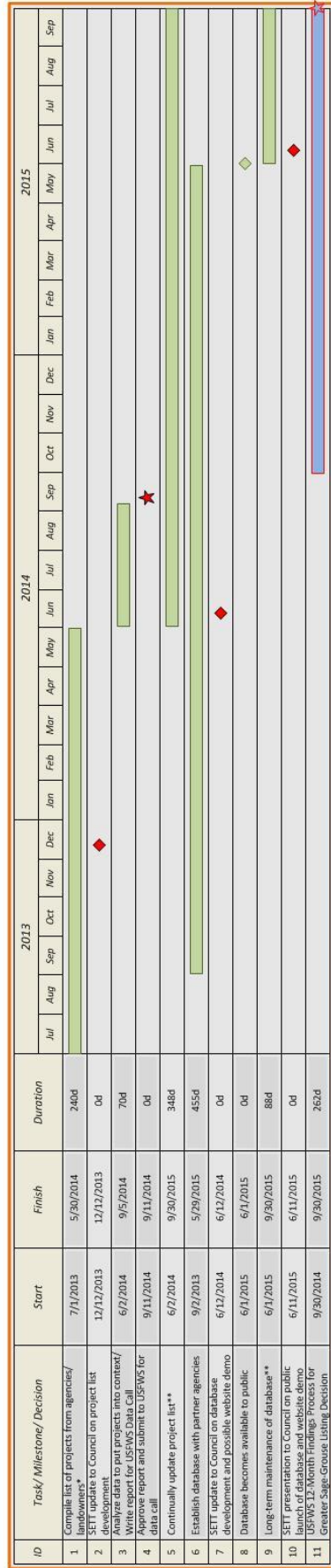
The SETT is coordinating with Environmental Incentives to include projects from the Conservation Credit System. The desired database will track conservation projects and activities throughout the estimated 20+ million acres of habitat in Nevada and will be accessible to the public.

Key Council Decisions and SETT Activities

2013, March

SETT began compilation of habitat projects in preparation for data analysis and reporting to the USFWS.

Sagebrush Ecosystem Program Timeline: USFWS Data Call/ Project Database



*Work ongoing since March 2013
**Task continues indefinitely

- Sagebrush Ecosystem Technical Team Task
- USFWS Task
- Sagebrush Ecosystem Council Decision
- USFWS Decision
- Sagebrush Ecosystem Technical Team Milestone
- Sagebrush Ecosystem Council Milestone

Sagebrush Ecosystem Council Members

Established by Executive Order 2012-19 under Governor Brian Sandoval, and confirmed in statute during the 2013 Legislative Session, the Sagebrush Ecosystem Council (SEC) is comprised of a chairman and nine appointed members representing agriculture, conservation and environmental organizations, energy development, local government, mining, ranching, the Board of Wildlife, Tribal Nations, and the general public. Mirroring the diversity of the Greater Sage-Grouse Advisory Committee, the SEC continues the blending of diverse constituencies and encourages public discourse at every juncture.



J.J. Goicoechea, Chair

Local Government Representative

As a Eureka County Commissioner, J.J. Goicoechea brings his understanding of public lands to the Sagebrush Ecosystem Council. He currently serves on the NACO Public Lands Task Force, and is past president of the Cattlemen's Association. He is a veterinarian specializing in large-animal care and is a fourth generation rancher in Nevada's Newark Valley. Goicoechea attended the University of Nevada, Reno, where he studied Veterinary Sciences, and received his D.V.M. from Colorado State University.



Jeremy Drew, Vice-Chair

Board of Wildlife Representative

Jeremy Drew, with Resource Concepts Inc., since 2005, has a unique background that combines civil engineering, wildlife management, and public land policy. His education and experience has afforded him the skills to effectively communicate from both technical and public outreach standpoints. Drew holds a degree in Civil Engineering and Environmental Resource Science.



Allen Biaggi

Mining Representative

Allen Biaggi is a third generation Nevadan. He is a consultant with more than 30 years of experience in conservation and natural resources. Biaggi served on the Bi-State Fire Commission in the wake of the Angora Fire. Biaggi is a graduate of the University of Nevada, Reno with degrees in Hydrology and Architectural Engineering Design.



Steve Boies
Ranching Representative

A native Nevadan, Steve Boies is a rancher and cattleman with operations near Wells in the northeastern corner of the state. Boies understands the issues family-run cattle ranches face today. In addition to representing ranching on the Sagebrush Ecosystem Council, he serves as N-1 and Central Committee Chair for the State Grazing Board. He has been an active participant in industry and resource issues during the past several decades. Boies attended the University of Nevada, Reno, where he studied Agricultural Science.



Gerry Emm
Tribal Nations Representative

Gerry Emm is the Fisheries Director for the Walker River Paiute Tribe in Shurz, Nevada. He has more than 20 years of experience working with various Tribes in western Nevada in agriculture, environmental, resource and economic development areas. Emm has worked on water, resource, and land issues in western and central Nevada. Emm holds a Bachelor's degree in Agriculture from the University of Nevada, Reno.



Starla Lacy
Energy Representative

Starla Lacy leads NV Energy's Environmental and Safety Department. She has more than 20 years of experience working in the environmental field. Lacy joined NV Energy in 2006 from Dynegy, an independent power generation company based in Houston, Texas. Lacy holds a Master's degree in Environmental Management and an undergraduate degree in Economics.



Bevan Lister
Agriculture Representative

Bevan Lister manages his family's farming operations raising Alfalfa hay and beef cattle. Lister is an experienced well driller and contractor. He has served on several boards and commissions dealing with natural resources, including 11 years as volunteer leader with the Farm Bureau. Lister holds a Bachelor's degree in Biological and Irrigation Engineering from Utah State University.



Tina Nappe

Conservation and Environmental Representative

Tina Nappe worked for the Foresta Institute for Ocean and Mountain Studies on Nevada's endangered species (1967-1971). She has served on the State Board of Wildlife Commissioners (1979-1994), several BLM Advisory Boards, the State Water Planning Advisory Board, the Nevada Land Trust, and the Nature Conservancy. Nappe holds a Master's degree in Public Policy from the University of Nevada, Reno.



Sherm Swanson

General Public

Dr. Sherm Swanson is a range and riparian specialist for the University of Nevada Cooperative Extension Service and associate professor in the Department of Natural Resources and Environmental Science at the University of Nevada, Reno. Swanson holds a Bachelor's degree in Wildlife Resources from the University of Idaho, and earned his Master's and Ph.D. in Resource Geography and Rangeland Resources from Oregon State University.

Ex-Officio Members

The Sagebrush Ecosystem Council also includes ex-officio members representing the three primary federal land management agencies—U.S. Forest Service, U.S. Fish and Wildlife Service, and the Bureau of Land Management as well as three of the State’s key agency directors from Nevada Department of Conservation and Natural Resources, Nevada Department of Agriculture, and the Nevada Department of Wildlife. The inclusion of the three directors reinforces the multi-disciplinary, multi-agency dynamics of the SEP.

Unless listed under the ESA, management of the Greater Sage-grouse is the responsibility of the State of Nevada. Therefore, it is essential to propose a management strategy that the state can enact.



Bill Dunkelberger

Humboldt-Toiyabe Forest Supervisor, U.S. Forest Service

Bill Dunkelberger serves as the Forest Supervisor for the Humboldt-Toiyabe National Forest, U.S. Forest Service. He brings extensive experience in building relationships between the Forest Service, other federal land management agencies and communities dependent upon the National Forests. Dunkelberger holds a Bachelor’s degree in Recreation and Park Administration from Washington State University.



Ted Koch

State Supervisor, U.S. Fish & Wildlife Service

Ted Koch is the State Supervisor for the Nevada Fish and Wildlife Office of the U.S. Fish and Wildlife Service. He has more than 20 years of experience with the Service and in wildlife conservation. Koch has published several articles on a variety of conservation and policy subjects and holds a Bachelor’s degree in Environmental Biology from Southern Connecticut State University and a Master’s degree in Zoology from Idaho State University.



Amy Leuders

State Director, Bureau of Land Management

Amy Lueders is the Nevada State Office Director for the U. S. Bureau of Land Management. She served as BLM’s Nevada Associate Director from 2004 to 2010. Prior to coming to BLM-Nevada, Lueders served as the BLM’s field manager in Las Cruces, N.M. Amy holds a Bachelor’s degree in Economics from Duke University.



Jim Barbee

Director, Nevada Department of Agriculture

Jim Barbee was appointed to head the Nevada Department of Agriculture in 2011. He holds a certificate as a Certified Public Manager (CPM). Barbee served on the National FFA Board of Directors and Foundation Board of Trustees. He holds a Master's degree in Agriculture Science, Agriculture Education from Cal Poly at San Luis Obispo and a Bachelor's degree in Animal Science from California State University, Chico.



Leo Drozdoff

Director, Nevada Department of Conservation & Natural Resources

Leo Drozdoff has been the Director at the Department of Conservation and Natural Resources since 2004. He served as NDEP's Administrator, Bureau Chief of Mining Regulations, Bureau Chief of Water Pollution Control and as Deputy Administrator for NDEP's water programs. Drozdoff holds a Bachelor's degree in Civil Engineering from Bucknell University and earned his Master's degree in Business Administration from the University of Nevada, Reno.



Tony Wasley

Director, Nevada Department of Wildlife

Tony Wasley was appointed to head the Nevada Department of Wildlife in 2013. He has managed statewide programs, worked as an area biologist, participated in research, restoration, enhancement and protection projects for species such as the sage-grouse, mule deer, elk and bighorn sheep. Tony holds a Bachelor's degree in Biological Sciences and Wildlife Management from California State University and earned his Master's in Biology from Idaho State University.

Sagebrush Ecosystem Technical Team

The Sagebrush Ecosystem Technical Team (SETT) draws scientific expertise from state and local entities to administer a well-defined, consistent and transparent process for permitting, prioritizing and managing activities in sage-grouse management areas. The full-time, multi-disciplinary team includes a program manager and representatives from the Nevada Department of Agriculture, the Nevada Department of Conservation and Natural Resources, Divisions of Forestry and State Lands and the Nevada Department of Wildlife. The team works with representatives from the state's Conservation Districts, the Nevada Association of Counties, the BLM Nevada State Office, the Humboldt-Toiyabe National Forest Supervisor's Office, the USFWS, the Nevada Natural Heritage Program and the Natural Resource Conservation Service.

"I am very pleased that members for the Sagebrush Ecosystem Team have been appointed. The Council this team will assist was created by my executive order and preventing the listing of the Greater Sage-grouse is an on-going effort of the utmost importance. I am confident that the collaborative nature of this team – bringing scientists and range managers together under one roof – will help address this critical issue and make this effort stronger." – Governor Brian Sandoval

Tim Rubald

Program Manager

Rubald previously served as the program manager for the State Conservation Districts Program, where he was staff to the State Conservation Commission and assisted the state's 28 conservation districts and district elected officials. In addition to program development and management, Rubald led collaborative efforts to strengthen the Conservation Districts Program in the state. Before leading the conservation districts effort, Rubald served as a consultant on various projects including working with rural communities to develop a "Main Street" program in Nevada similar to one he led as executive director of the Laramie Downtown Development Authority in Laramie, Wyoming. Rubald's prior State of Nevada service includes more than 10 years with the Nevada Commission on Economic Development, where he served first as the Commission's Director of Research and Development and later as its Executive Director.

Lara Niell—Wildlife

Technical Team

Named as Wildlife Staff Specialist representing the Nevada Department of Wildlife, Niell holds an M.S. in Biology from the University of Nevada, Reno and has extensive experience with wildlife and environmental issues in the Great Basin and Sierra Nevada, including a strong background related to the National Environmental Policy Act (NEPA). Niell worked since mid-2007 as a biologist for Tetra Tech Inc., in Reno. At Tetra Tech Niell worked on a myriad of projects requiring data collection and field work, preparation of technical reports, review of environmental documents, development of remediation efforts, geographic information system analysis, studies and monitoring, as well as project management. Niell has also served as a research assistant for the University of Nevada and as a field technician for the U.S. Forest Service in Nevada. Her B.A. is in Environmental Studies from Dartmouth College.

Melissa Faigeles—State Lands/Watershed Restoration

Technical Team

Prior to being named the Environmental Scientist III and Watershed Restoration Specialist representing the Nevada Division of State Lands, Faigeles served as Environmental Manager for the Reno-Sparks Indian Colony, where she administered permits and oversaw the NEPA process for projects on tribal lands, as well as monitored, inventoried and prepared plans to manage tribal natural resources in the sagebrush steppe. She also managed staff, contractors, work plans, and organized

and directed environmental projects including air and water quality monitoring. She previously worked as an environmental scientist for the California Tahoe Conservancy, designing, monitoring and assisting with large-scale river restoration projects for the Nature Conservancy in Bend, Oregon, working with multi-stakeholder groups on issues and projects in the sagebrush steppe habitat for the Washoe County/Truckee River Flood Management Authority and the University of Wisconsin. Faigeles has a B.S. in Ecology from the University of Pittsburgh.

Kelly McGowan—Agriculture

Technical Team

Prior to being named as the Conservation Staff Specialist II representing the Nevada Department of Agriculture, McGowan served as an environmental scientist for the Nevada Division of Environmental Protection (NDEP) in its Safe Drinking Water Bureau. In that position he worked with drinking water operators throughout the state and reviewed operator certification, as well as conducted meetings of the Nevada Drinking Water and Wastewater Operators Forum. Prior to joining NDEP, McGowan served for more than eight years on the staff for the Nevada Division of Conservation Districts, where he provided technical, environmental and administrative assistance to the state's 28 conservation districts. For seven years prior to working with the state program, McGowan was the district manager for the Mason and Smith Valley Conservation Districts. McGowan has a B.S. in Geography (Land Forms and Climatology) and is a Certified Public Manager.

John Copeland—Forestry/Wildland Fire

Technical Team

Prior to being named as the Forester III representing the Nevada Division of Forestry, Copeland served as a Resource Management Officer for the Division of Forestry, a position he held for more than three years. In total, Copeland has worked 19 years in Forestry in a variety of capacities, including Fire Protection Officer, Stewardship Forester, Conservation Crew Supervisor and Assistant Conservation Camp Supervisor. He has designed and implemented fuels management projects, fuel breaks and fire rehabilitation efforts, as well as prescription fire plans. Copeland brings a full range of experience in wildland fire and range health including fire prevention, suppression and rehabilitation. His work has included public outreach and multi-stakeholder project coordination, as well as supervision of crews performing conservation projects and fighting wildland fire. He has also worked as an arborist in the private sector. Copeland has a B.S. in Agriculture (Range Option) from California State University, Chico.

SEC Committees

The SEC members are interested in, and actively engaged with, the facilitation of the five current focus areas. The Council has established two committees—one to support the establishment of the Conservation Credit System, and a second to assist in the development of Monitoring protocols statewide and to provide detailed input on development of the related section of the State Plan.

Conservation Credit System Committee

The Conservation Credit System Committee has held two meetings. It is chaired by Jeremy Drew and includes Allen Biaggi, Starla Lacy, and Tina Nappe. The committee members are working with Environmental Incentives to develop the guidelines for the program.

Monitoring Committee

The Monitoring Committee, chaired by Sherm Swanson, is comprised of Steve Boies, Bevan Lister, and Tina Nappe. The committee is tasked with assessing current activity and developing methods to show and track ongoing monitoring efforts across the state. The committee is addressing the possibility of developing self-assessed grazing monitoring protocols that would be acceptable to the federal agencies. The subcommittee has held two meetings to date.

Working Groups

Science Work Group

This group identifies the best available science to advise the SETT in expanding the narrative of the Nevada State Plan and works in assisting the SETT with the development of the scientific aspects of the Alternative E. They have assisted the SETT on many issues, always looking to bring the best available science to bear in Nevada. The group has held 10 meetings.

Nevada Cheatgrass Action Team

This team is comprised of multiple stakeholders and coordinated by the SETT. Its goal is to develop a strategic framework for the landscape scale control of cheatgrass by utilizing the best available science. The forward action is to get projects going on the ground, put together a list of projects on each property, prioritize the projects, decide what the treatment is going to be, make management changes if warranted, apply the treatment, monitor and apply adaptive management. The team has held six meetings including visits to private lands in Central Nevada, and White Pine, and Elko counties.

The committee and working group activities are posted for public viewing and materials are available on the SEP website, <http://sagebrusheco.nv.gov>.

Conservation Districts Program

The Conservation Districts Program (CDP) provides administrative support to the State Conservation Commission, which develops policy and regulations for Nevada's 28 locally elected conservation districts.

Conservation districts work for the conservation and proper development of the state's natural resources by taking available technical, financial and educational resources, and coordinating them to meet the needs of landowners and land users.

Locally elected, they often work in cooperation with counties, the USDA Natural Resources Conservation Service (NRCS), as well as other public and private agencies for the conservation of soil, water and related natural resources.

The Conservation Districts Program is housed within the Director's Office of the Department of Conservation and Natural Resources, and works closely with the SETT.

The implementers of SEP projects on the range will be, among others, the Conservation Districts. Assistance on a daily basis will be provided through three conservation specialists based in Winnemucca, Elko, and Ely. All of the specialists are housed at the respective NRCS office demonstrating a real partnership, and work closely with the SETT.

Local Area Working Groups (LAWG)

The LAWGs provide all stakeholders with an opportunity to work together in actively managing and restoring landscapes across boundaries. Even with collaboration there is a realization that to be successful there is a need for more investment from all sources to achieve sage-grouse habitat conservation objectives.

These LAWGs are different than the local Conservation District work groups that coordinate with NRCS for planning and input to the NRCS processes. Those are equally important, but the LAWGs are specifically for planning sagebrush ecosystem restoration and activities.

The LAWGs are referenced in the Nevada State Plan, and involve the Conservation Districts and the Program staff. The SEP works with the LAWGs to: 1) develop and implement site-specific plans to accomplish enhancement and restoration projects in areas that are identified by the SEP as important areas for sage-grouse conservation; 2) monitor and adaptively manage conservation actions; 3) identify potential habitat enhancement and restoration projects; and 4) provide local, site-specific expertise on a variety of issues.

LAWG membership includes representation from private land owners, tribes, federal land management agencies, state and local governments, non-government organizations, sportsmen, mining, energy, off-highway vehicle users, as well as agricultural and environmental groups.

There are currently LAWGs in Elko, White Pine, Lincoln, and Washoe Counties addressing Greater Sage-grouse issues. There is also a very active LAWG in the Bi-state Sage-grouse area in Nevada that has been instrumental in development of the plan being used there.

Budget

Existing state laws require the Department of Conservation and Natural Resources' Division of State Lands to acquire and hold all lands and interests in land owned or acquired by the State of Nevada. Assembly Bill 461 expanded NRS 321 to include the coordination of carrying out a program of projects to improve sagebrush ecosystems in the state.

As a result, the Sagebrush Ecosystem Program's budget can be found in the Nevada Department of Conservation and Natural Resources, Director's Office budget. However, not all funds transfer through Budget Account 4150.

The participating state agencies, funding sources, and FTE are reflected in the chart below. For this report, Budget 4150 will be discussed, as it represents the operating costs for the Sagebrush Ecosystem Program and the Sagebrush Ecosystem Council. Expenditures for fiscal year 2014 were respectively \$232,357 and \$26,595.

Contracts

To support the activities related to this effort, two contractors have been retained. The contracts are funded from various sources. The vendors work directly with members of the SETT ensuring that the deliverables meet program milestones. The fiscal administration of these contracts is handled through partnering agencies.

Environmental Incentives

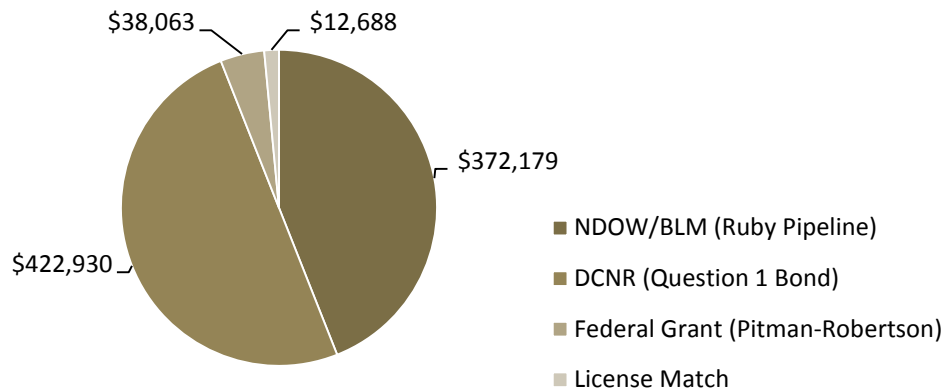
Environmental Incentives (EI) is the third party contractor retained for the Conservation Credit System (CCS). A \$500,000 State Question 1 Grant was awarded to the Nevada Natural Heritage Program to fund this project. The contract was awarded through an open competitive Request for Proposal process, and the resulting contract is managed by the Nevada Natural Heritage Program.

The foundation of the CCS has been created and approved by the SEC, including drafts of the CCS Manual and Habitat Quantification Tool (HQT) Scientific Methods Document. These have been submitted to BLM for inclusion in the federal EIS the SETT is continuing to work with EI on creating the system, which is anticipated to be completed by September 2014 (for the USFWS data call).

U.S. Geological Survey

A core component of the project is habitat mapping. The U.S. Geological Survey was retained to build a sage-grouse habitat suitability model for the State of Nevada to provide information, on areas in the Silver State where sage-grouse are finding and using habitat, as well as areas that have the potential for improvement and increased use by the bird. The total project cost is estimated to be \$845,861. Funding for this was secured through various sources.

U.S. Geological Survey Project Funding Sources



The SEC has completed and approved the first draft of the Habitat Suitability Map. As part of this process the SEC has also adopted new Management Categories and Sage-grouse Management Area Maps. The modeling process and adoption of the finalized maps is anticipated for January 2015.

Glossary of Acronyms

The glossary below contains many of the terms utilized by the Sagebrush Ecosystem Council and the Sagebrush Ecosystem Technical Team in describing its activities.

Acronym	Term
BLM	U.S. Bureau of Land Management
BLM ADEIS	BLM Administrative Draft Environmental Impact Statement (provided to CAs)
BLM DEIS	BLM Draft Environmental Impact Statement
BLM EIS	BLM Environmental Impact Statement
BLM SRMP	BLM Sub-Regional Management Plan
CA	Cooperating Agency
CCS	Nevada Conservation Credit System
DCNR	Nevada Department of Conservation and Natural Resources
ESA	Endangered Species Act
GIS	Geographic Information System
GSG	Greater Sage-grouse
GSGAC	Governor's Sage-grouse Advisory Committee
HSM	Habitat Suitability Modeling
LAWG	Local Area Working Groups
LUP	Land Use Plan
MOU	Memorandum of Understanding
NDA	Nevada Department of Agriculture
NDOT	Nevada Department of Transportation
NDOW	Nevada Department of Wildlife
NEPA	National Environmental Policy Act
SEC	Sagebrush Ecosystem Council
SEP	Sagebrush Ecosystem Program
SETT	Sagebrush Ecosystem Technical Team
SGMA	Sage-grouse Management Areas
SWG	Science Work Group
USFS	U.S. Forest Service
USFWS	U.S. Fish & Wildlife Service
USGS	U.S. Geological Survey

Habitat and Population

Why do we care about the sage-grouse and the sagebrush ecosystem?

Nevada is known as the Sagebrush State. Its sagebrush ecosystem supports many animals from sage-grouse and pygmy rabbits to mule deer and antelope. For Nevada, the potential listing of the sage-grouse as threatened or endangered would greatly impact the management of lands. It would limit back-country tourism which is a mainstay for many rural Nevada communities and other industries such as ranching, mining, and renewable energy development.

Where does sagebrush grow?

Sagebrush dominates much of western North America, with approximately 165 million acres of potential habitat. Early settlers traveling by wagon train called it the sagebrush sea. Despite its prevalence and amazing resilience to climatic extremes, it is an ecosystem that is being challenged by a combination of forces. Years of drought conditions and wildfire have accelerated the decline of the sagebrush habitat.



How are conditions impacting the sagebrush growth?

While the sagebrush is seemingly hearty with two kinds of root systems and depends on winds for pollination, it does not regenerate well after wildfire. Once this important vegetation is lost, the terrain is more susceptible to invasive or opportunistic species such as cheat grass and other invasive plants.

Why is there so much attention given to protecting the sage-grouse?

Sage-grouse can be found in the 11 Western states and Canada. They live at elevations ranging from 4,000 to 9,000 feet and depend on sagebrush for food and cover. The sage-grouse populations are considered a harbinger of the overall health of the sagebrush ecosystem.



Sage-grouse male lek attendance in Nevada in 2011 (19.7 males per active lek) was slightly above the preceding 10 year average (19.1 males per active lek) across the state. Sage-grouse male lek attendance in 2012 (18.7) and 2013 (14.1) were below the preceding 10 year averages (19.1 and 19.3, respectively). The drop in male attendance was expected due to two consecutive years of poor production and recruitment. Some areas experienced more drastic decreases than others, and, in a few cases, some areas exhibited a more stable trend.

(Information compiled from the 2011, 2012, and 2013 Nevada Department of Wildlife Nevada Sage-grouse Conservation Project Final Performance Reports; 2014 data is not yet available).

What does a sage-grouse look like?

Females are mottled brown, black, and white. Males are larger and, in spring, have a white ruff around their necks, a yellow eye comb, and bright yellow air sacks on their breasts. Males have a black throat. The feathers on the back, wings, and tail are mostly brown, with some white and black spots. Both sexes have white bellies outlined in black. It is a large round-winged, ground-dwelling

bird. The greater sage-grouse can grow up to 30 inches long and two feet tall, weighing from 2.5 to 7 pounds.

What do they eat?

Sage-grouse eat sagebrush leaves, wildflowers, and insects. In winter, sage-grouse can live on a 100 percent sagebrush diet. Chicks must have a high quality insect diet for the first several weeks after hatching.



Sagebrush Ecosystem Council

State of Nevada

201 South Roop Street, Suite 101

Carson City, Nevada 89701-5247

775.684.8600

<http://sagebrusheco.nv.gov/>