



State of Nevada Sagebrush Ecosystem Program

STRATEGIC ACTION PLAN

July 2021

ROLES AND RESPONSIBILITIES

NRS 321.594 Powers and duties of Administrator and Division regarding programs to improve sagebrush ecosystems; Division authorized to make certain grants and enter into certain contracts and agreements; regulations.

1. The Administrator of the Division shall coordinate the establishment and carrying out of a program of projects to improve sagebrush ecosystems in this State. The Division shall cooperate, without limitation, with:

- (a) The Department of Wildlife;
- (b) The State Department of Agriculture; and
- (c) The Division of Forestry of the State Department of Conservation and Natural Resources.

2. In carrying out the program described in subsection 1, the Division, on behalf of the Director of the State Department of Conservation and Natural Resources, shall:

(a) Oversee and administer a program to mitigate damage to sagebrush ecosystems through a system that awards credits to persons, federal and state agencies, local governments and nonprofit organizations who take measures to protect, enhance or restore sagebrush ecosystems established by the Sagebrush Ecosystem Council created by NRS 232.162;

(b) Identify and, if necessary, prioritize any projects concerning the enhancement of the landscape, the restoration of habitat, the reduction of any nonnative grasses and plants and the mitigation of damage to or the expansion of scientific knowledge of sagebrush ecosystems;

(c) Coordinate activities with federal agencies;

(d) If requested, consult with persons proposing to conduct activities in any area which includes any habitat of the greater sage grouse (*Centrocercus urophasianus*) to suggest measures to avoid, minimize or mitigate the effect of the activities on any sagebrush ecosystem;

(e) Solicit grants and private contributions for projects to improve sagebrush ecosystems...

ROLES AND RESPONSIBILITIES

NRS 232.162 Sagebrush Ecosystem Council: Creation; members; terms; powers; duties; report to Governor.

7. The Council shall:

(a) Consider the best science available in its determinations regarding and conservation of the greater sage grouse (*Centrocercus urophasianus*) and sagebrush ecosystems in this State;

(b) Establish and carry out strategies for:

(1) The conservation of the greater sage grouse and sagebrush ecosystems in this State; and

(2) Managing land which includes those sagebrush ecosystems, taking into consideration the importance of those sagebrush ecosystems and the interests of the State;

(c) Establish and carry out a long-term system for carrying out strategies to manage sagebrush ecosystems in this State using an adaptive management framework and providing for input from interested persons and governmental entities;

(d) Oversee any team within the Division of State Lands of the Department which provides technical services concerning sagebrush ecosystems;

(e) Establish a program to mitigate damage to sagebrush ecosystems in this State by authorizing a system that award credits to persons, federal and state agencies, local governments and nonprofit organizations to protect, enhance or restore sagebrush ecosystems;

(f) Solicit suggestions and information and, if necessary, prioritize projects concerning the enhancement of the landscape, the restoration of habitat, the reduction of nonnative grasses and plants and the mitigation of damage to or the expansion of scientific knowledge of sagebrush ecosystems;

(g) If requested, provide advice for the resolution of any conflict concerning the management of the greater sage grouse or a sagebrush ecosystem in this State;

(h) Coordinate and facilitate discussion among persons, federal and state agencies and local governments concerning the maintenance of sagebrush ecosystems and the conservation of the greater sage grouse;

(i) Provide information and advice to persons, federal and state agencies and local governments concerning any strategy, system, program or project carried out pursuant to this section or NRS 321.592 or 321.594; and

(j) Provide direction to state agencies concerning any strategy, system, program or project carried out pursuant to this section or NRS 321.592 or 321.594 and resolve any conflict with any direction given by another state board, commission or department jointly with that board, commission or department, as applicable...

SEP SUCCESS



Nevada Strategic Action Plan 2016

For Implementation of the 2014 Nevada Greater Sage-grouse Conservation Plan

Prepared by the Nevada Sagebrush Ecosystem Team
November 10, 2016

2019 Nevada Greater Sage-grouse Conservation Plan

Sagebrush Ecosystem Program

Conservation Credit System USER'S GUIDE

Jan 2021

Version 1.6.21

State of Nevada

Conservation Credit System Manual

January 2021

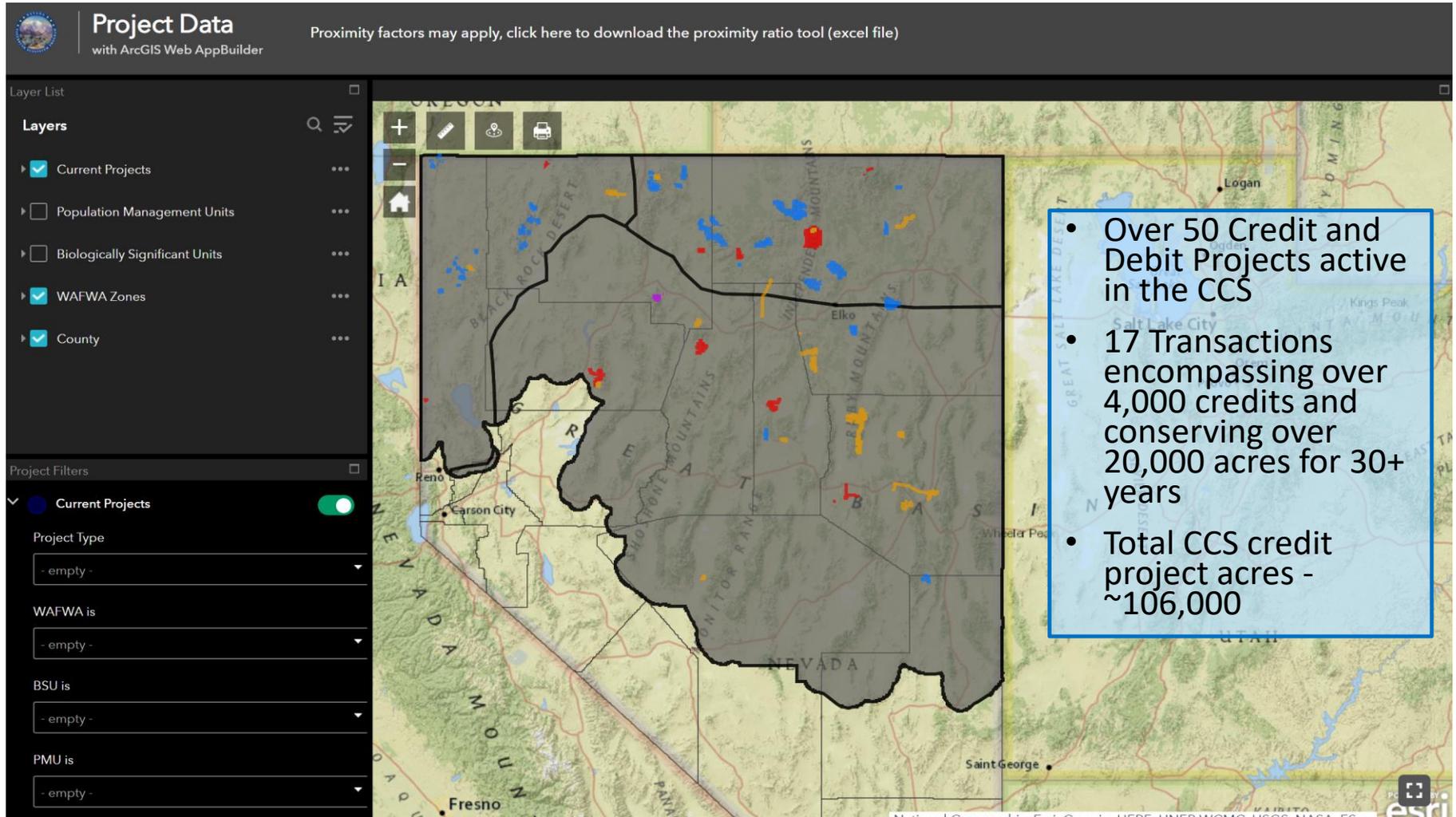
Version 1.6.21

Habitat Quantification Tool (HQT) SCIENTIFIC METHODS DOCUMENT

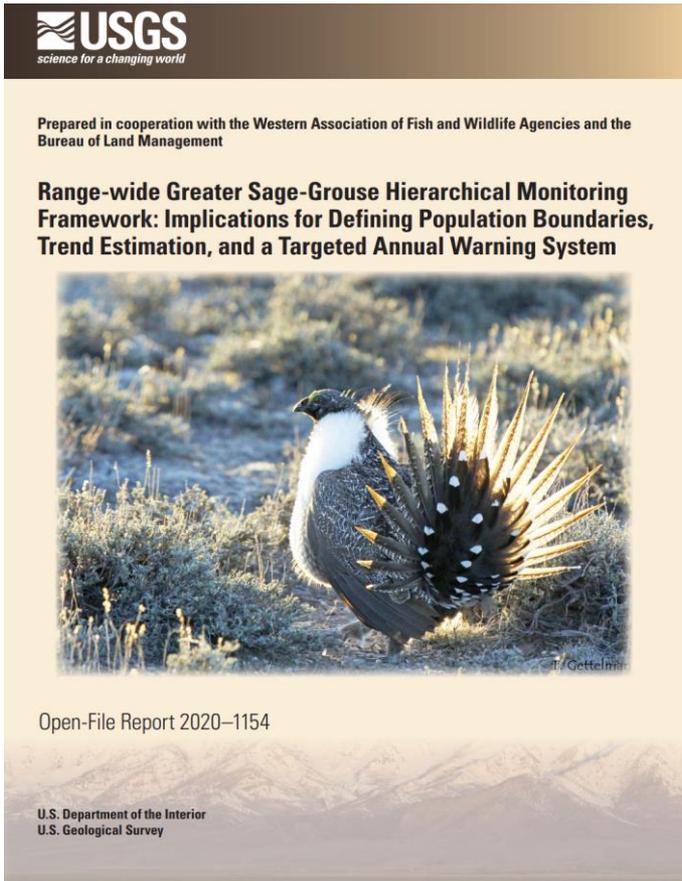
January 2020

Version 1.6

SEP SUCCESS – CCS MITIGATION



UPHILL BATTLE



Coates, P.S., Prochazka, B.G., O'Donnell, M.S., Aldridge, C.L., Edmunds, D.R., Monroe, A.P., Ricca, M.A., Wann, G.T., Hanser, S.E., Wiechman, L.A., and Chenaille, M.P., 2021, Range-wide greater sage-grouse hierarchical monitoring framework—Implications for defining population boundaries, trend estimation, and a targeted annual warning system: U.S. Geological Survey Open-File Report 2020-1154, 243 p., <https://doi.org/10.3133/ofr20201154>.

46 Range-wide Greater Sage-Grouse Hierarchical Monitoring Framework

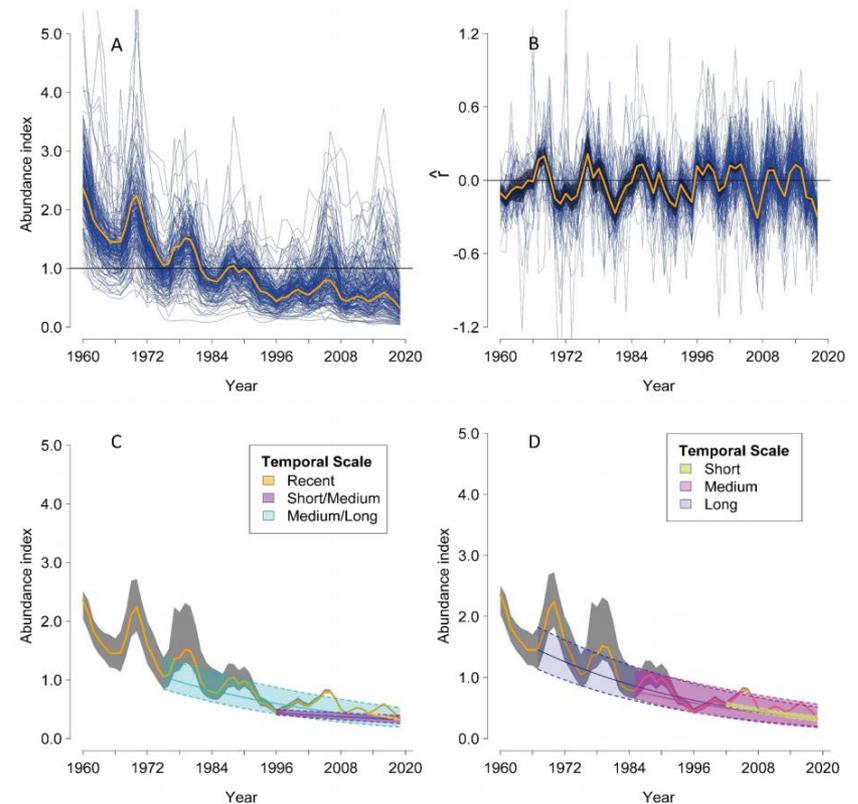
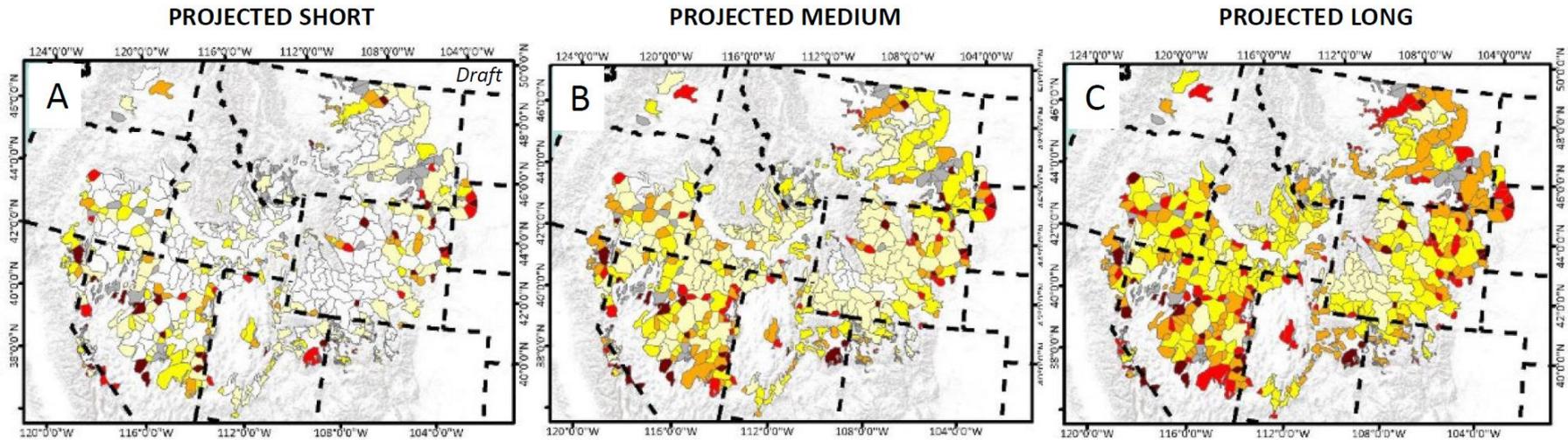


Figure 33. A, Abundance index (calculated as \hat{N} divided by 60-year mean of \hat{N}); B, intrinsic rate of population change (\hat{r}) of greater sage-grouse (*Centrocercus urophasianus*) within E (CC-E; Great Basin area) from lek observations used to model population trends during 1960–2019; C, Median estimate of abundance trend (colored lines) across temporal scales based on periods of oscillation: Recent (one period), Short/Medium (three periods), and Medium/Long (five periods); and D, Short (two periods), Medium (four periods), and Long (six periods), right to left. Yellow line represents median estimates and blue thin lines represent median values for neighborhood clusters (A and B). Horizontal thin black line represents (A) rescaled long-term mean and (B) neutral population growth. Colored areas represent 95-percent credible limits of trend estimates. Grey shaded areas represent 95-percent credible limits on abundance index (C and D) and \hat{r} (B).

UPHILL BATTLE



- - - State border

■ No data

Probability of extirpation

■ > 0 - 0.25

■ > 0.25 - 0.50

■ > 0.50 - 0.75

■ > 0.75 - 0.97

Percent of neighborhood clusters (NC) with >50% Probability of Extirpation

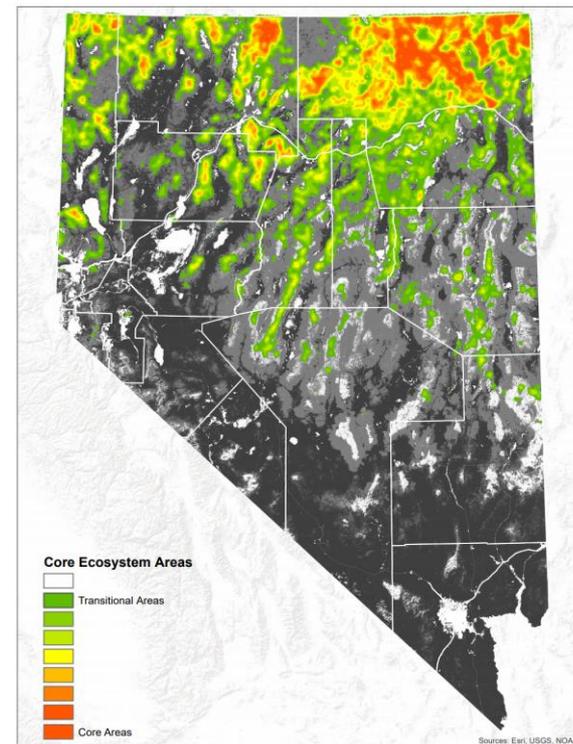
- 12.3% of NCs (Short; 19 years)
- 19.2% of NCs (Medium; 38 years)
- 29.6% of NCs (Long; 56 years)

MAPPING AND CONSERVATION PLANNING PRODUCTS

- Conservation Planning Tools by USGS
 - Fire – Indicates “best” areas for fire rehabilitation
 - PJ – Identifies areas of highest value for removal

Ricca, M.A., Coates, P.S., Gustafson, K.B., Brussee, B.E., Chambers, J.C., Espinosa, S.P., Gardner, S.C., Lisius, S., Ziegler, P., Delehanty, D.J. and Casazza, M.L. (2018), A conservation planning tool for Greater Sage-grouse using indices of species distribution, resilience, and resistance. *Ecol Appl*, 28: 878-896. <https://doi.org/10.1002/eap.1690>

- Annual Grass Tool by SETT
 - Assists in prioritization for treatments within HMAs

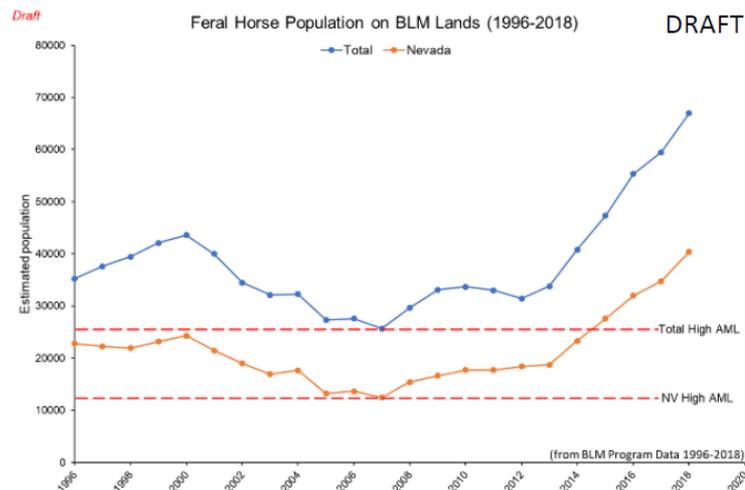


MAPPING AND CONSERVATION PLANNING PRODUCTS

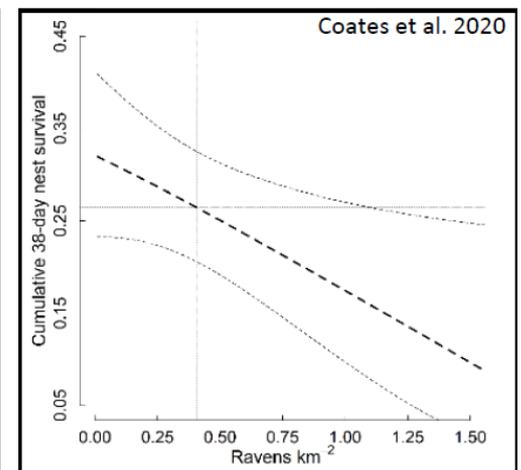
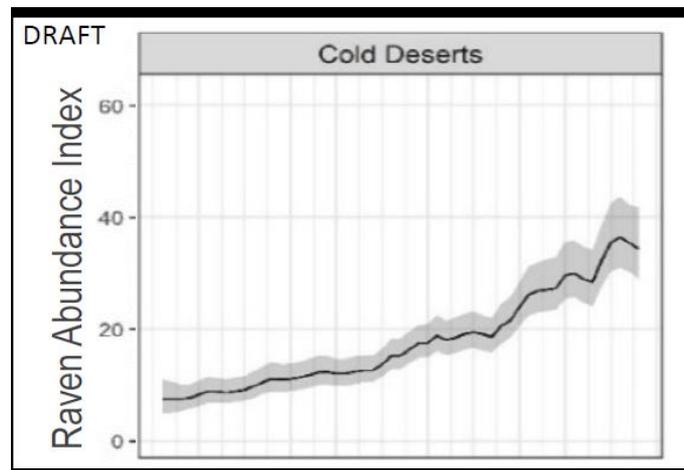
- Wild Horse and Burros
 - Population monitoring by the federal agencies
- Ravens
 - Population monitoring by the USFWS

Ravens have experienced population increases of ~350% since 1970s

Ecological threshold ~0.4 ravens km⁻²



Feral horse populations are currently >4 times over max AML in NV



Nevada Strategic Action Plan 2016

*For Implementation of the 2014 Nevada Greater Sage-grouse
Conservation Plan*

Prepared by the Nevada Sagebrush Ecosystem Technical Team
November 10, 2016

Admin Draft

CURRENT PRODUCT

In 2014 under the direction of the SEC, the SETT produced the Nevada Greater Sage-Grouse Conservation Plan (State Plan). The State Plan set a balanced foundation and vision for a coordinated management approach to conserve GRSG and sagebrush ecosystems in Nevada by defining the following goals:

- *Due to the broad reach of sage-grouse habitat, effective management and implementation of sage-grouse conservation actions must be conducted through a collaborative, interagency approach that engages private, non-governmental, local, state, Tribal, and federal stakeholders to achieve sufficient conservation of sage-grouse and their habitat.*
- *Monitoring and adaptive management will be employed at all levels of management in order to acknowledge potential uncertainty upfront and establish a sequential framework in which decision making will occur in order to learn from previous management actions.*

CURRENT PRODUCT

To achieve these goals of the Greater Sage-Grouse Conservation Plan the Sagebrush Ecosystem Program developed the Strategic Action Plan (SAP). Development of the SAP involved state and federal agencies, local governments, local conservation groups, tribal nations, private landowners, resource managers, and others.

This SAP is organized into the following Sections:

- *Section 2.0 Action Plan* – Outlines strategic actions that address each of the four strategic goals identified by the SEP.
- *Section 3.0 Project Toolbox* – Provides information on funding resources and project assessment tools to assist local entities and landowners with resources to fund and evaluate projects to maintain intact, functioning sagebrush ecosystems in Nevada.
- *Section 4.0 Planning Area Prioritization and Implementation Guidance* – Provides LAWGs, counties, landowners, and other local working or planning groups with specific information within the GRSG Planning Areas to use in combination with the Project Toolbox for project implementation.

FOCAL AREAS TO MORE FULLY DEVELOP AND IMPLEMENT

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4.0 PLANNING AREA PRIORITIZATION AND IMPLEMENTATION GUIDANCE

- Update the lek data in each region with the latest data from NDOW's Nevada Sage-Grouse Conservation Project Performance Report.
- Update maps and establish priority treatment areas
 - Land Ownership by BSU
 - Wildfire and Invasive Annual Grass by BSU
 - P-J by BSU
 - Wild Horse and Burro Herd Management Areas above high AML threshold by BSU
 - Anthropogenic Disturbance (Roads, Mines, Urban) by BSU

NEW ADDITIONS

- Ravens are not discussed in the document
 - Incorporate raven density tool developed by Dr. Coates' lab, when available.
- Identify priorities using existing tools and products
- Develop a priority ranking(s) matrix for defined regions
 - Core populations
 - Existing Threats
 - Trigger/Warning Areas (adaptive management)
 - Resilience and Resistance factors
 - Relevance to funding source or applicability
 - Etc.

VISION

- Should be adaptable and agile
- Part of a very large effort
- Inclusive of other species
- Justification for funding
- Provides guidance to local conservation groups
- Prepares agencies to develop funding proposals
- Allows for shovel ready funding if available
- Some assurance of effective results
- Collaborative process founded upon science-based products