State of Nevada
Sagebrush Ecosystem Program

SEMI-ANNUAL REPORT

December 2018

STATE OF NEVADA
SAGEBRUSH ECOSYSTEM PROGRAM

The *Semi-Annual Report* is an annual product of the Nevada Sagebrush Ecosystem Program (SEP). The Sagebrush Ecosystem Technical Team (SETT) and Sagebrush Ecosystem Council (SEC) submit this document biennially to report on the status of greater sage-grouse and the sagebrush ecosystem in Nevada, the Progress of the Nevada Conservation Credit System (CCS), as well as other strategies, programs, or projects carried out in pursuant of NRS 321.592 and NRS 321.594.

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*Denotes former SEC and SETT members involved in the SEP during the timeline of this report.

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

LATE 2018 PROGRAM UPDATES

LATE 2018 PROGRAM UPDATES • NV CONSERVATION CREDIT SYSTEM

As of December 2018:

- The Nevada Conservation Credit System saw its 2nd mitigation offset occur with Newmont Mining for the Greater Phoenix Mine and its Philadelphia Canyon Expansion. The West IL Ranch committed to manage and maintain 248 credits to offset the disturbance for the mine. Wildfire has recently impacted the West IL ranch and plans are underway to restore lost habitat values and restore conservation credits not associated with the recent transaction.
- More than 7,800 credits are available to offset disturbances. We anticipate an additional 7,500 credits being available in early 2019. These credit projects account for 44,000 acres of stewardship and conservation activities such as weed management, forb & perennial grass seeding, sagebrush plantings, pinyon-juniper treatments, and meadow improvements. Some projects were agency funded and others are self-funded.
- Many industrial projects (mines) have had their proposed disturbance (debits) assessed using the CCS. Several proponents plan to avoid using the CCS for their mitigation entirely. When considering this and BLMs IM 2018-093, the need for a requirement for debit project proponents to use the CCS is quite apparent.
- A powerline project on USFS land was assessed using the CCS. The results further encouraged the proponent to bury the powerline which negated the need for mitigation and also reduced a known threat to sage-grouse.
- Other recent positive impacts of the CCS include more consistent analyzation of anthropogenic disturbances; further attention on indirect disturbances, minimization, & avoidance; & the appearance of greater conservation efforts with proponent-driven mitigation to more closely parallel the conservation achieved in the CCS.

CCS improvements recommended for 2018-2019 include establishment of further impacts in need of HQT assessment in the CCS, new processes for uplift assessment, & 3rd party habitat verification.

The 2018 CCS Annual Performance Report includes more details on CCS operations in 2018.

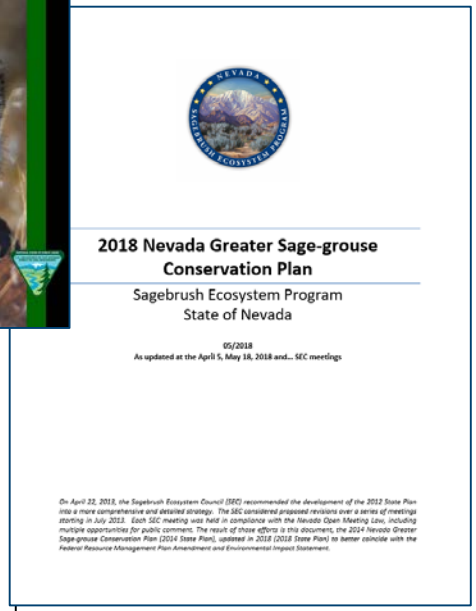
LATE 2018 PROGRAM UPDATES • FEDERAL & STATE GRSG PLANS

During the latter half of 2018, the BLM came out with the Draft and Final Environmental Impact Statements for the Proposed Nevada and Northeastern California Greater Sage-Grouse Resource Management Plan Amendments, which had been undergoing the NEPA process to remove Sagebrush Focal Areas (SFAs) allow habitat map updates, and better align with the Nevada Greater Sage-Grouse Conservation Plan.

This amendment process gave the Sagebrush Ecosystem Program a chance to further adapt and update its own plan to ensure as many components as possible could be integrated into the BLM plan. As a result, an adaptive management process was created and adopted into the Nevada Greater Sage-Grouse Conservation Plan. After considerable effort to refine the process and debate over its direction, it was ultimately adopted by the Sagebrush Ecosystem Council as a vast improvement over the previous iteration, with ultimately more local and state stakeholder input over decisions.

While this component of the Nevada Greater Sage-Grouse Conservation Plan has been finalized, the updated plan has yet to be finalized in its entirety. The Record of Decision on the BLM plan has not yet been signed, although the new adaptive management process created by the SETT and adopted by the SEC was included in the FEIS and is still anticipated to be adopted by the BLM. The BLM also added the CCS Habitat Quantification Tool to assess disturbance, although IM 2018-093 & 2019-018 have been blunt about mitigation being outside the BLM's scope of interest except when a requirement of the State.

The USFS is also undergoing NEPA and issued the Greater Sage-Grouse Proposed Land Management Plan Amendments (LMPA) and Draft Environmental Impact Statement (DEIS) for the Intermountain and Rocky Mountain Regions in October of 2018. The SETT has submitted comments on the document and has also participated in discussions with the USFS to develop new methods to determine grazing thresholds.



LATE 2018 PROGRAM UPDATES • COUNCIL MEETING HIGHLIGHTS

Highlights from Sagebrush Ecosystem Council meetings in the 2nd half of 2018 included the following:

- A tour of the Martin Fire as part of the late August 2018 council meeting agenda (depicted in the pictures to the left).
- The proposal of adopting regulations at the October council meeting to require use of the CCS by debit project proponents.
    - Regulations are currently in draft form with a workshop scheduled for December 11, 2018.
- The request for an Executive Order (EO) by Governor Sandoval to require use of the CCS by debit project proponents.
- Several Local Area Working Groups (LAWGs) reported on their efforts within Nevada at the August 2018 SEC meeting. These updates are scheduled semi-annually and are intended to ensure that efforts are maximized and funding is leveraged as well as informing the representative members on the SEC and Sagebrush Ecosystem Technical Team (SETT), the Conservation Districts Program, LAWGS, & Local Working Groups (LWGs).

LATE 2018 PROGRAM UPDATES • OTHER PROGRAM EFFORTS

Other efforts of the Sagebrush Ecosystem Technical Team under the SEP in late 2018 included:

- Training in various aspects of rangeland and riparian monitoring and other Great Basin-related efforts.
- Conducting extensive monitoring of sagebrush & greater sage-grouse habitat in North Washoe County.
- Contributing to USGS efforts to plant sagebrush to add a local nesting habitat component in recently burned areas of Spanish Flats of the Virginia Mountains in Washoe County (photos below).
- Further planning & marketing the Greater Outcomes for Greater Sage-Grouse Regional Conservation Partnership Program (RCPP) project with USDA Natural Resources Conservation Service (NRCS) now prioritized for wildfire restoration assistance. Extensive marketing efforts including direct marketing via mail & various announcements & presentations about the opportunity, multiple applicants signed up for the program.
- Conducting outreach at various conferences, workshops, and other local meetings to encourage conservation of GRSG and their habitat in Nevada.
- Continued efforts with state and federal agencies to improve GRSG habitat and coordinate conservation efforts.

GREATER SAGE-GROUSE POPULATION OVERVIEW

Each year NDOW surveys approximately 40% of the 1,981 known sage-grouse leks and approximately 75% trend leks identified within the state. Trend leks are a subset of total leks in Nevada that are monitored several times each year to enable a better trend estimate for sage-grouse populations in Nevada. During the 2018 breeding season, 961 leks (48% of known lek locations) were surveyed, of which 542 were considered active. Of the active leks, peak male attendance was 9,011 individuals that represented an average of 16.6 males per lek. This is a 17.4% decline from the previous year's average of 20.1 and was 15.3% lower than the 2003–2017 average of 19.6 males per lek.

Average male attendance from 161 trend leks surveyed (of the total 197) in 2018 was 20.5 males per lek, which indicated a 20% decrease from 2017 and 23% decrease compared to the long term average of 26.6. Trend lek data collected from 1997–2018 is shown in Figure 1, which indicates a 20 year declining trend when a logarithmic trend is applied to the annual means.

In addition to lek monitoring, NDOW collects hunter harvested sage-grouse wings to conduct a demographic analysis to estimate recruitment into the population. Wings have not been compiled and analyzed for the 2018 season but estimates for 2017 are available. Following the 2017 hunting season, 1,278 sage-grouse wings were collected, which represented a 17% decline from the 2016 season collection of 1,541 wings. Recruitment estimates for 2017 was 0.98 chicks per female, which was substantially lower than the estimated 1.56 chicks per female in 2016 and 33% lower than the ten year average (2007–2016) production that was 1.47 chicks per female.

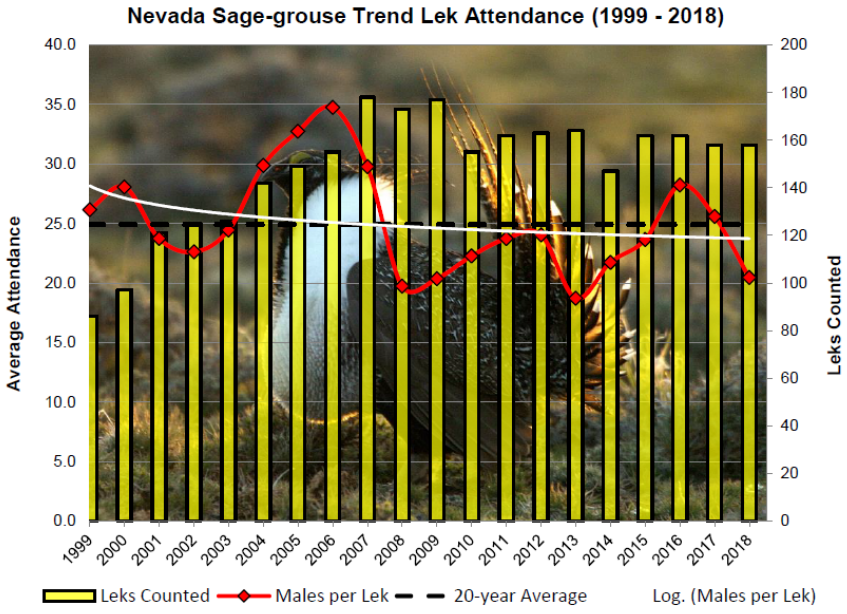


FIGURE 1. Average male lek attendance per year during 1997–2018.

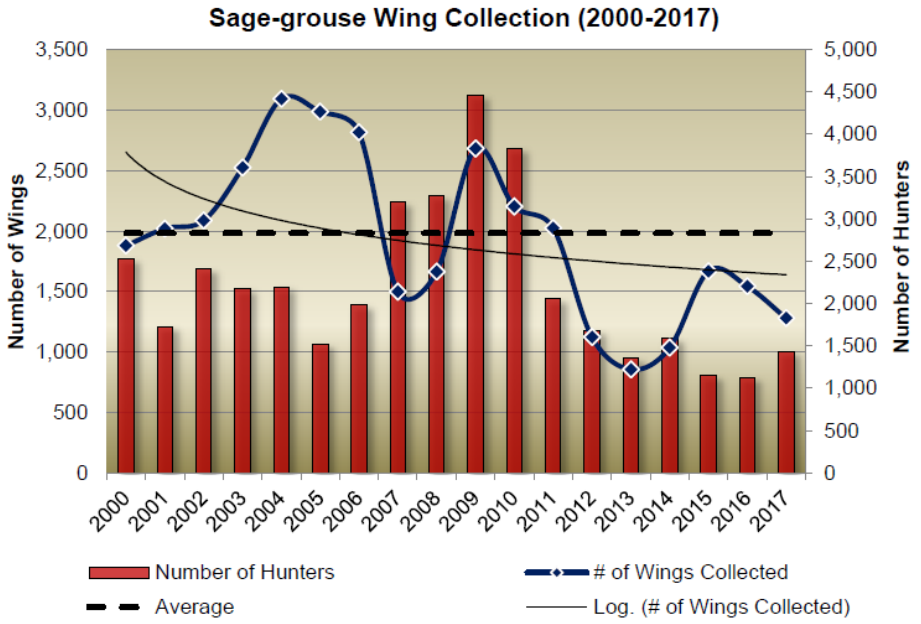


FIGURE 2. Average male lek attendance by decade in Nevada.

GREATER SAGE-GROUSE • POPULATION STATUS

GREATER SAGE-GROUSE POPULATION OVERVIEW

In addition to NDOW lek count data, USGS is analyzing population trends at several spatial scales to indicate whether leks, lek clusters, or biologically significant units (BSUs) are in need of management action by identifying population warnings, soft and hard triggers at the respective spatial scale (Coates et al. 2017). Figure 3 displays individual leks and spatial boundaries of lek clusters and BSUs. In 2016, the USGS analysis indicated that 17 leks and 7 lek clusters reached a soft trigger, and 5 leks reached a hard trigger. The analysis analyzed population data from Nevada and California over a 17 year period and estimated an average decline of 3.86%/year during this time frame. This population modeling will be conducted annually to track warnings and triggers that can be used to better manage sage-grouse populations in Nevada.

Wildfires during the 2018 season in Nevada burned approximately 1 million acres, much of which was sage-grouse habitat. The Martin fire was the most devastating, burning 435,569 acres of predominantly contiguous, intact sagebrush, and considered some of the most pristine and untouched sage-grouse habitat left in Nevada. The Martin fire burned 39 active or pending active leks. The Sugarloaf fire (233,462 acres) was another major fire in prime sage-grouse habitat that burned 6 active or pending active leks, in addition to important habitat for recently translocated sharp-tailed grouse.

With the average annual decline of sage-grouse populations during the previous 17 year time frame estimated by USGS, wildfires will continue to threaten sage-grouse habitat and negatively impact population growth across the State if significant restoration efforts are not implemented or successful.

To the extent that lek information can be ascertained, an update to the populations affected by these fires will be provided in the June 2019 semi-annual report. It is expected that lek attendance will indicate significant declines within the fire affected areas over the next several years and possibly for decades to come.

Coates, P.S., Prochazka, B.P., Ricca, M.A., Wann, G.T., Aldridge, C.L., Hanser, S.E., Doherty, K.E., O'Donnell, M.S., Edmunds, D.R., and Espinosa, S.P. 2017. Hierarchical population monitoring of greater sage-grouse (*Centrocercus urophasianus*) in Nevada and California – Identifying populations for management at the appropriate spatial scale: U.S. Geological Survey Open-File Report 2017-1089, 49p.

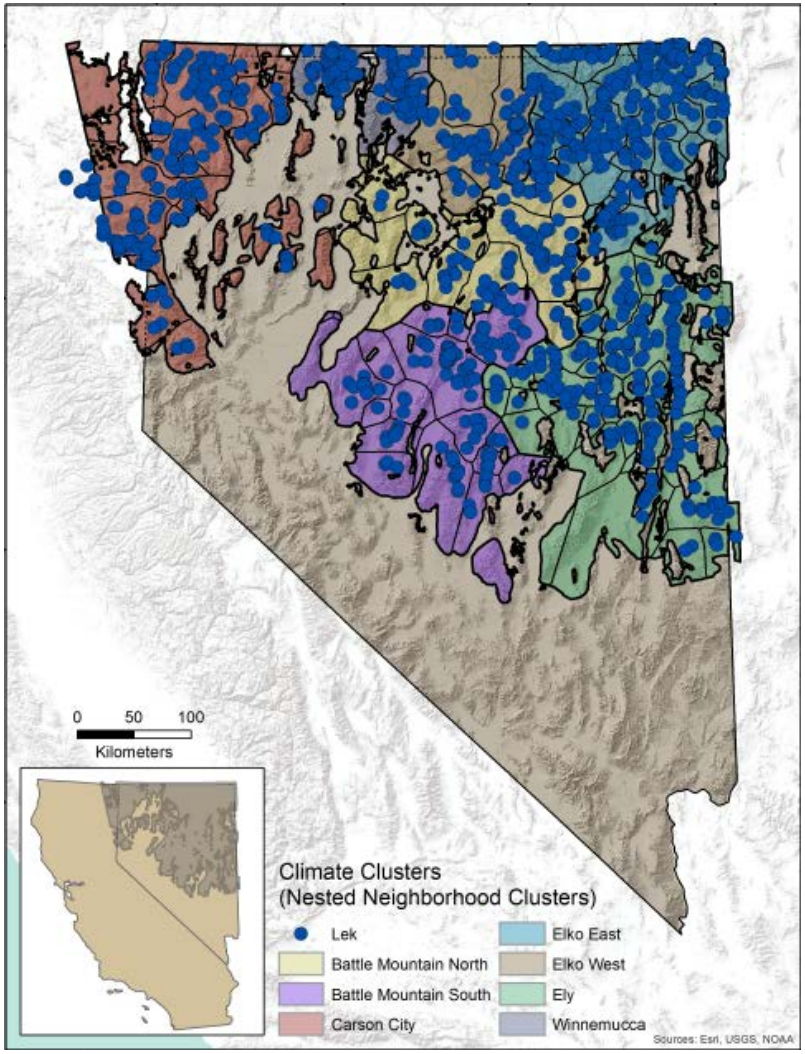


FIGURE 3. Leks, lek clusters, and BSUs within the USGS population monitoring framework (Coates et al. 2017).

GREATER SAGE-GROUSE • THREATS

THREATS TO THE SAGEBRUSH ECOSYSTEM AND THE GREATER SAGE-GROUSE

Threats to the greater sage-grouse are numerous but can be placed into several categories that all affect the grouse's habitat. Direct habitat loss from wildfire and invasive species and habitat fragmentation are the greatest contributing factors to the declining grouse population.

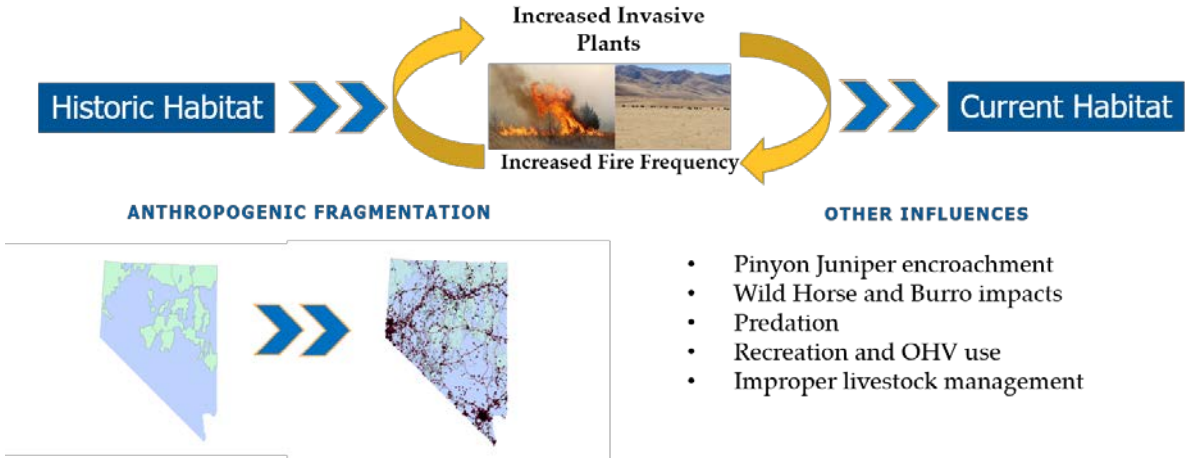


FIGURE 4: Threats to Sagebrush Ecosystems

WILDFIRE IS THE GREATEST THREAT TO THE NEVADA SAGEBRUSH ECOSYSTEM & GREATER SAGE-GROUSE

TABLE 1. Wildfire in Nevada has impacted more than 1 million acres in both 2017 & 2018. This represents over 6% of all greater sage-grouse habitat. Restoration within much of this habitat will be incredibly difficult with many areas likely to be dominated by invasive annual grasses rather than native grass, forbs, and shrubs.

YEAR	PHMA Acres Burned (Priority habitat)	GHMA Acres Burned (General habitat)	OHMA Acres Burned (Other habitat)	Total GRSG Habitat Burned (Total PHMA, OHMA, GHMA)
2017	226,575 (1.87% of PHMA)	251,796 (3.16% of GHMA)	225,601 (3.69% of OHMA)	703,972 (2.68% of Total)
2018	641,715 (5.29% of PHMA)	228,799 (2.87% of GHMA)	91,797 (1.5% of OHMA)	962,312 (3.67% of Total)

As habitat loss from wildfire and cheatgrass continue along with fragmentation, post-fire restoration and pre-suppression actions to reduce wildfire frequency as well as appropriate mitigation of other impacts and preservation of intact landscapes become even more important to conservation of Nevada's sagebrush ecosystems and greater sage-grouse habitats.

LATE 2018 PROGRAM UPDATES • PLANS FOR THE UPCOMING YEAR

- Follow through on the process to adopt a temporary regulation to require use of the CCS for mitigation in Nevada.
- Implement executive order, if signed as requested, to require use of the CCS for mitigation in Nevada.
- Finalize updates on Nevada Greater Sage-Grouse Conservation Plan, which may have more importance if a temporary regulation and EO are realized.
- Continue to conduct outreach to the mining industry and other potential debit project proponents to inform them on the CCS.
- Consider another funding process to either seed credit projects or fund CCS habitat enhancement or restoration pilot projects, potentially on public lands.
- Work to add components of the CCS to better achieve habitat enhancement and restoration.
- Update various CCS documents and again hold verifier training to ensure consultants operating as certified verifiers collect the high quality data integral to the CCS process.
- Continue to implement the CCS and work with certified verifiers to assess the planned disturbances debit projects, the conservation values of credit projects, and help implement mitigation offsets.
- Work with verifiers on HQT quantification in the field to assist in determining habitat values for credit projects.
- Continue to implement the Greater Outcomes for Greater RCPP project to improve wildfire-impacted greater sage-grouse habitats in the state.
- Implement the adaptive management process now defined in the Nevada Greater Sage-Grouse Conservation Plan and soon to be formally adopted by the BLM when the Record of Decision on the BLM plan is signed.