



State of Nevada Sagebrush Ecosystem Program

SEMI-ANNUAL REPORT

June 2019

**STATE OF NEVADA
SAGEBRUSH ECOSYSTEM PROGRAM**

The *Semi-Annual Report* is a 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.

**NEVADA DEPARTMENT OF CONSERVATION AND
NATURAL RESOURCES**

Bradley Crowell (Director)

Jim Lawrence (Deputy Director)

Charlie Donohue (Administrator, Nevada Division of State Lands)

SAGEBRUSH ECOSYSTEM TECHNICAL TEAM

Kelly McGowan (SEP Program Manager)

Katie Andrie (Nevada Department of Wildlife)

Dan Huser (Nevada Division of Forestry)

Ethan Mower (Nevada Department of Agriculture)

Kathleen Petter (Nevada Division of State Lands)



For more information, please contact the SETT at:

201 South Roop Street, Suite 101
Carson City, Nevada 89701-5247
(775) 684-8600

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

SAGEBRUSH ECOSYSTEM COUNCIL (SEC)

J.J. Goicoechea, Chair (Local Government)

Chris MacKenzie, Vice Chair (Board of Wildlife)

Allen Biaggi (Mining)

Steve Boies (Ranching)

Gerry Emm (Tribal Nations)

Starla Lacy (Energy)

Bevan Lister (Agriculture)

William Molini (Conservation and Environmental)

Sherman Swanson (General Public)

Ex-Officio Members

Justin Barrett (U.S. Fish & Wildlife Service)

Bradley Crowell (Nevada Department of Conservation and Natural Resources)

Ray Dotson (U.S.D.A. Natural Resources Conservation Service)

Bill Dunkelberger (U.S. Forest Service)

Jennifer Ott (Nevada Department of Agriculture)

Jon Raby (Bureau of Land Management)

Tony Wasley (Nevada Department of Wildlife)

Carolyn Swed (U.S. Fish & Wildlife Service)*

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

EARLY 2019 PROGRAM UPDATES

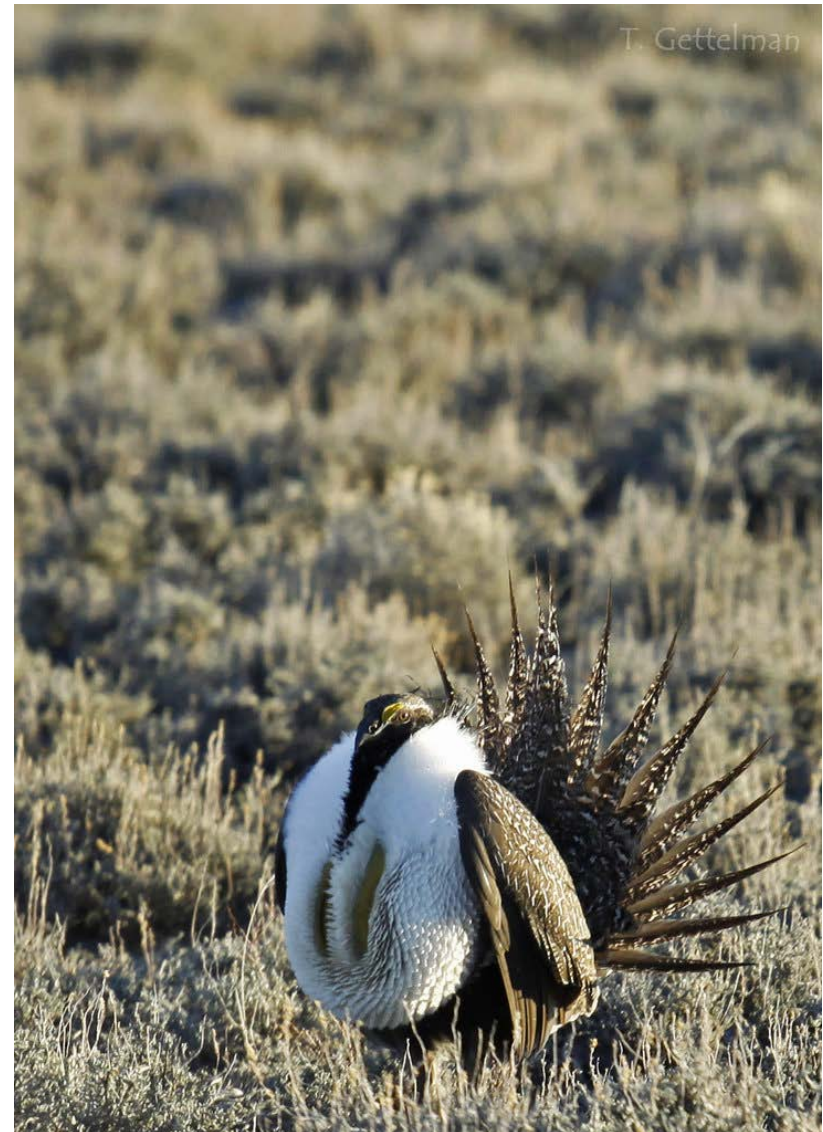
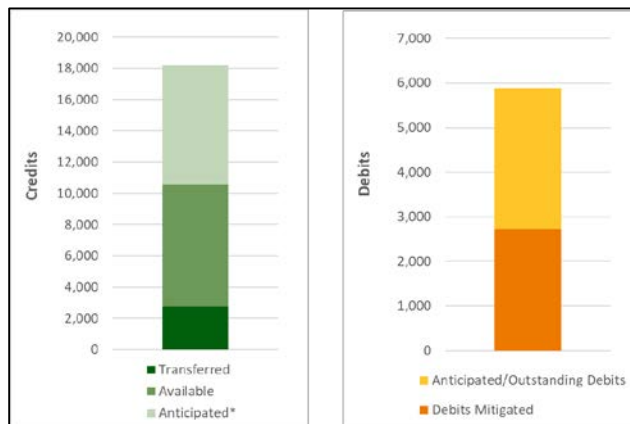


Nevada Conservation Credit System (CCS)	4
CCS Implementation & Improvements	
CCS Temporary Regulations	
Working with Federal Land Agencies	6
Federal & State Plans	
Federal Authorities Supporting State Regulations	
MOU AMONG BLM, DCNR, & NDOW	
Other Program Efforts	7
Adaptive Management	
Collaboration for Sagebrush Ecosystem Improvement	
GRSG & Sagebrush Ecosystem Status	8
GRSG Populations in Nevada and Western US	
Threats to Sagebrush Ecosystems & GRSG	
More on the Threat of Wildfire	
Plans for Upcoming Year	12

EARLY 2019 PROGRAM UPDATES • NV CONSERVATION CREDIT SYSTEM

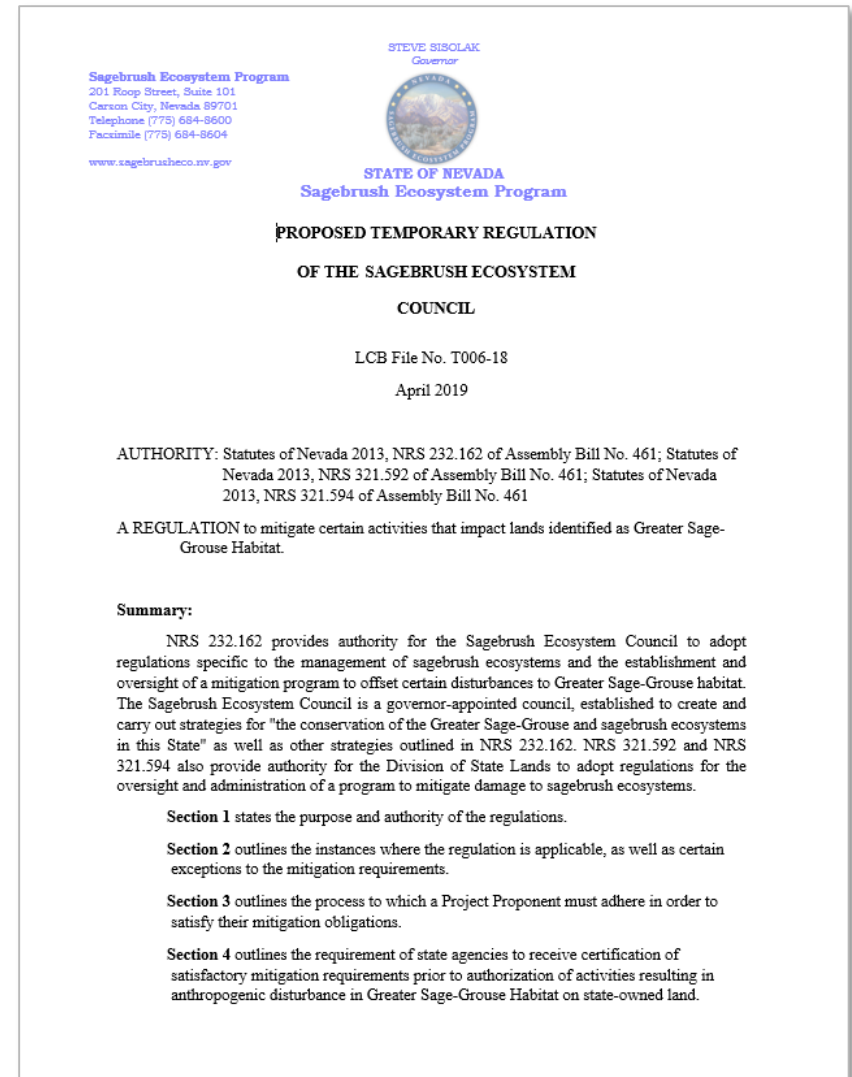
As of June 2019:

- In early 2019, CCS improvements were approved by the SEC and incorporated into the program documents and tools.
 - Adding Linear Rights-of-Way and Landfills as an anthropogenic disturbance requiring assessment and mitigation of impacts in the CCS.
 - Options for incentivizing conservation uplift in the CCS.
 - Changing credit site verification requirements to ensure intermittent verification is more comprehensive, reasonable, cost effective.
- In March of 2019, the SETT led the 4th Annual CCS Certified Verifier Training for 45 environmental consultants representing 23 Western organizations.
- Over 44,000 acres of stewardship and conservation activities, both self-funded and grant-funded, are enrolled in the program.
 - Conservation actions include weed and pinyon-juniper treatments; forb, perennial grass, and sagebrush establishment; and meadow improvements.
 - More than 7,800 credits are available to offset disturbances, with an additional 7,500 credits anticipated being available within a few months.
- Several proponents of projects impacting greater sage-grouse habitat are running the HQT this year, as mitigation using the CCS is now a requirement.
 - Two mitigation offsets have been completed in the CCS to date, in both cases the debit proponent used their private credits for the offset.



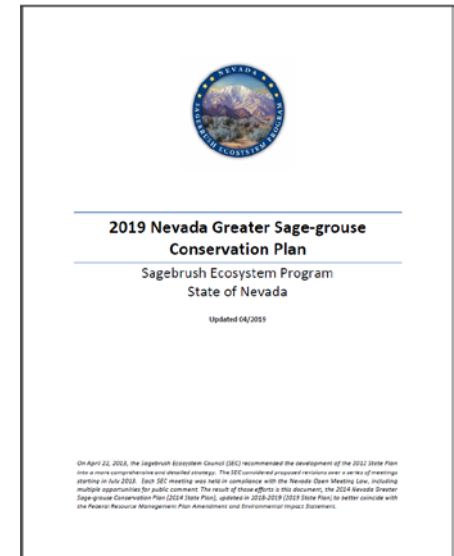
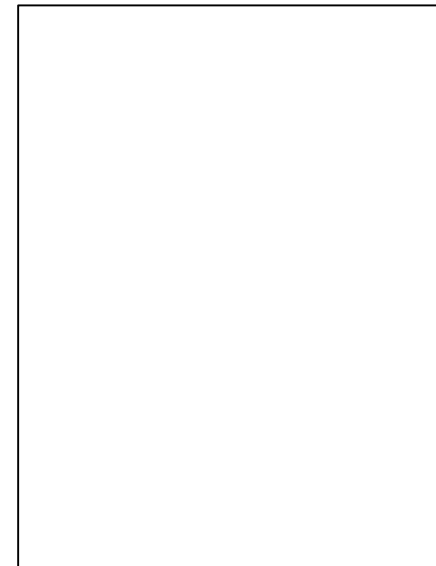
EARLY 2019 PROGRAM UPDATES • CCS TEMPORARY REGULATIONS

- December of 2018 began with an Executive Order by Governor Sandoval (December 7th) directing the Sagebrush Ecosystem Council (SEC) to adopt regulations requiring the Nevada Conservation Credit System (CCS) to be used for compensatory mitigation when anthropogenic disturbances impact greater sage-grouse habitat.
 - Two workshops and two hearings were held by the Sagebrush Ecosystem Program (SEP) following the Executive Order to promote discussion and allow for public comment.
 - The temporary regulation was adopted by the SEC on April 29, 2019. The regulation were filed with the Secretary of State on June 3rd. Permanent regulations will be developed prior to November 2019.
- The regulation outlined the requirements of mitigation for disturbances on both federal and state lands and the process required to fulfill mitigation obligations.
 - The regulations also listed exemptions, which limited the scope in which mitigation is required, and include:
 - Activities that are in compliance with authorized land uses that were signed prior to December 7, 2018,
 - Direct impacts of projects or actions located on privately owned lands,
 - Mineral exploration activities causing surface disturbance of five (5) acres or less,
 - And others.
- The SETT conducted 5 separate trainings for the BLM District Offices across the state to inform them about the regulations and work with them regarding implementation.



EARLY 2019 PROGRAM UPDATES • FEDERAL & STATE GRSG PLANS

- An abundance of time and effort was spent in 2018 by the SEC and SETT collaborating with the BLM on the Nevada and Northeastern California Greater Sage-Grouse Resource Management Plan Amendment and Environmental Impact Statement. In March of 2019, the Record of Decision (ROD) was signed. The Federal plan is now in greater alignment with the Nevada Greater Sage-Grouse Conservation Plan.
- The USFS sent the Greater Sage-Grouse Proposed Land Management Plan Amendments (LMPA) and Final Environmental Impact Statement (DEIS) for the Intermountain and Rocky Mountain Regions to Washington D.C. in December of 2018. A ROD is expected later this summer or early fall. The amended plan is also in better alignment with the Nevada Greater Sage-Grouse Conservation Plan.
- The Nevada Greater Sage-Grouse Conservation Plan was updated to coincide with these Federal Plan Amendments in an effort to make it current, include adaptive management components, add consistency where appropriate with the Federal plans, and details to incorporate the implementation of the temporary regulations.
- The BLM and USFS both cited specific authorities that will allow them to uphold state regulations to require proponents of disturbances on Federal lands to mitigate impacts through the CCS. This was a necessary component to ensure that compensatory mitigation will be applied uniformly as necessary across the State.
- An MOU between NDCNR, NDOW, and BLM has been developed and is expected to be signed in June or July 2019. This MOU will address the responsibilities of each agency to work with proponents to implement the adopted mitigation regulation.



EARLY 2019 PROGRAM UPDATES • OTHER PROGRAM EFFORTS

Other efforts of the Sagebrush Ecosystem Technical Team January-June 2019 included:

- Held 1st annual Adaptive Management meetings to assess areas most in need of GRSG conservation efforts.
- Continued collaborative efforts with federal and state agencies to improve GRSG habitat, coordinate conservation efforts, and work towards developing credits on public lands.
- Conducted outreach at various conferences, workshops, and other local meetings to encourage conservation of GRSG and their habitat in Nevada.
- Continued to take part in ROGER (Results Oriented Grazing for Ecological Resiliency) and Nevada Collaborative Conservation Network (NvCCN) meetings and workshops.
- Participated in a workshop and tour with invited media sources to garner greater attention related to fire and invasive annual grasses in the Great Basin and the need for additional resources to address what is usually viewed as insignificant due to the lack of urban impacts.
- Took part in various trainings related to wildfire and conservation efforts tracking.
- Assessed funding opportunities that may assist the program in meeting its overall objective of conserving sagebrush ecosystems.
- Assisted with GRSG trapping and attachment of radio transmitters to further inform conservation efforts.



GREATER SAGE-GROUSE • SAGEBRUSH ECOSYSTEM & GRSG STATUS

GREATER SAGE-GROUSE POPULATION OVERVIEW

Each year the Nevada Department of Wildlife (NDOW) surveys approximately 40% of the 1,981 known sage-grouse leks and approximately 75% of 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. An update for the 2019 lek data will be provided in the December report when all data have been compiled and analyzed.

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 been compiled and analyzed for 2018. Following the 2018 hunting season, 1,138 sage-grouse wings were collected, which represented an 11% decline from the 2017 season collection of 1,278 wings. Recruitment estimates for 2018 was 0.89 chicks per female, which was lower than the estimated 0.98 chicks per female in 2017 and 41% lower than the ten year average (2008–2017) production of 1.51 chicks per female. In order to maintain population growth rate (λ) at 1 (a stable population), the population needs to meet a production value of 1.56 chicks per hen. The last two seasons produced less than 1 chick per hen, which will likely result in lower lek attendance for the 2019 season.

NDOW has also observed two localized high mortality events during winter 2018-2019. Populations in the Sheldon National Wildlife Refuge and the Santa Rosa Population Management Unit experienced higher than normal winter mortality, averaging 30-40%. Winter mortality is typically low and within the 12-27% range. Sagebrush mortality events within the Sheldon NWR are thought to be a factor in reduced winter survival; however, this theory is currently being investigated. As a result of habitat loss due to wildfire, lower production rates, localized high mortality events, and long term lek attendance declines, NDOW has recommended to the Wildlife Commission to reduce the season length and bag limits for several sage-grouse hunting units, as well as closing one unit due to the Sugarloaf Fire.

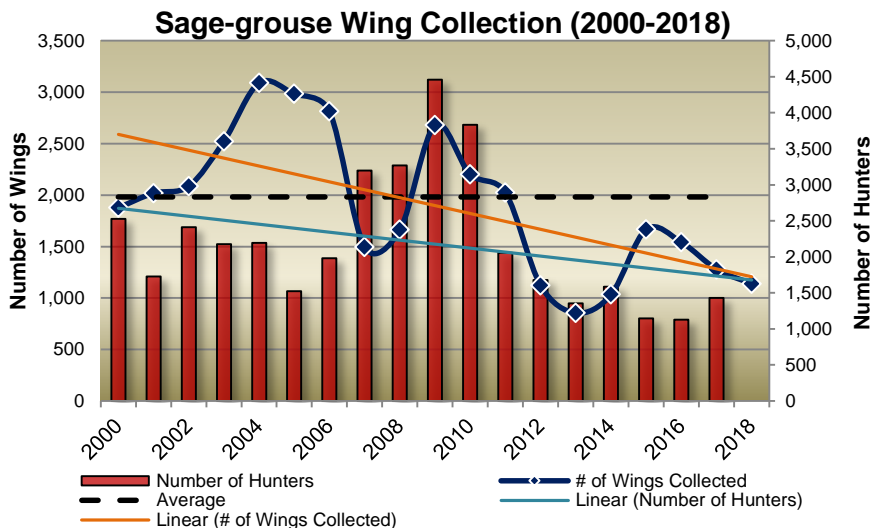


FIGURE 1. Sage-grouse wing data collection (2000–2018).

Sage-grouse Production and Lek Attendance in Nevada (2000-2018)

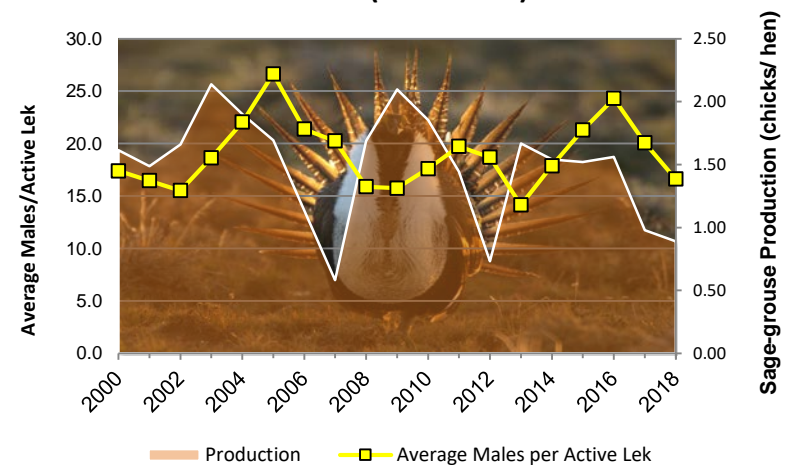


FIGURE 2. Sage-grouse production (chicks/hen) and lek attendance (2000-2018).

GREATER SAGE-GROUSE • POPULATION STATUS

GREATER SAGE-GROUSE POPULATION OVERVIEW

In addition to NDOW lek count data, U.S. Geological Survey (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 over the next several years and possibly for decades to come if significant restoration efforts are not implemented or successful.

USGS is currently completing an updated analysis that will include lek data through 2018. The information in this publication will be provided in the December 2019 report.

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.

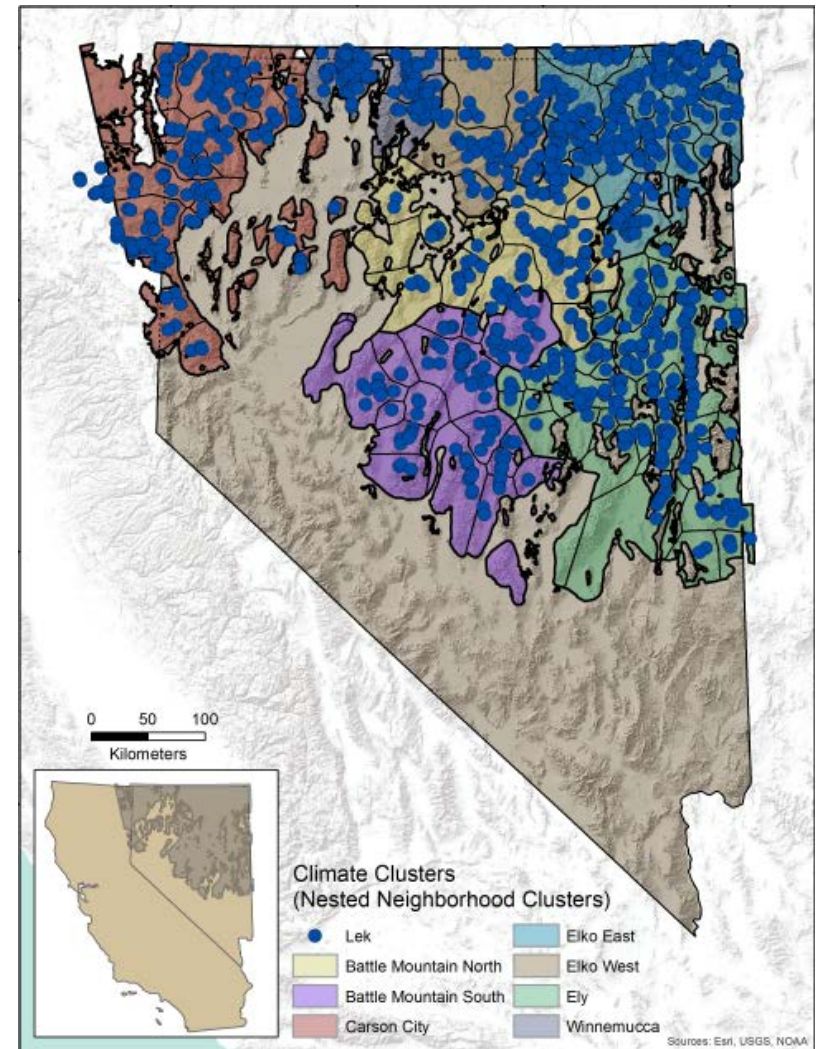


FIGURE 3. Leks, lek clusters, and BSUs within the USGS population monitoring framework (Coates et al. 2017).

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.

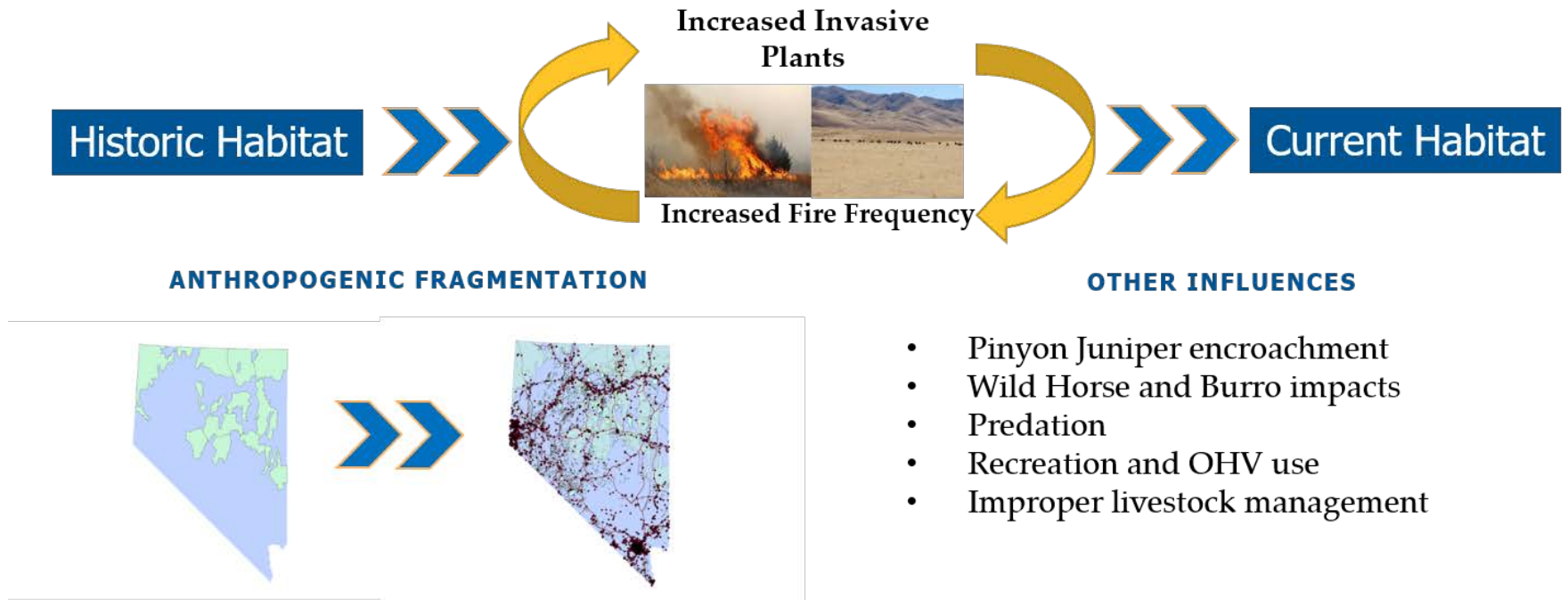


FIGURE 4: Threats to Sagebrush Ecosystems.

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.

GREATER SAGE-GROUSE • WILDFIRE AS THE GREATEST THREAT

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

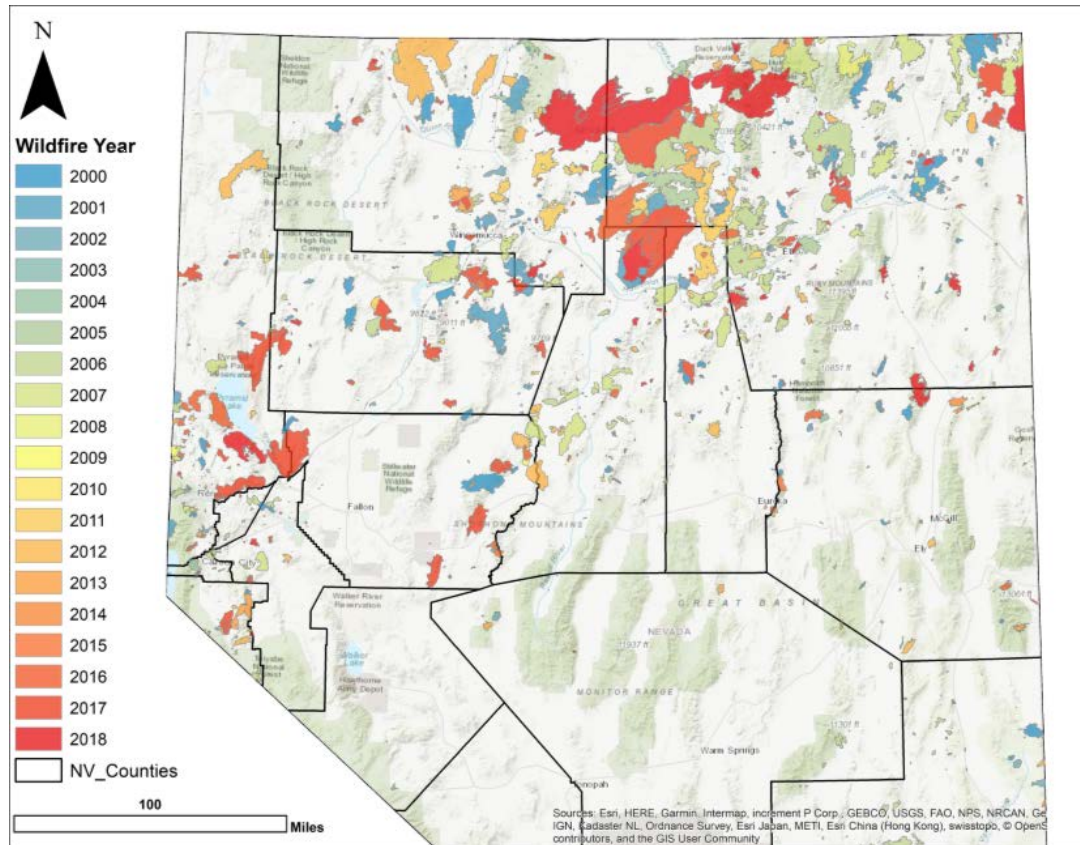


FIGURE 5. Wildfire footprints in Nevada since 2000.

Wildfire occurrence has changed toward the current paradigm where the proliferation of invasive or encroaching plants have led to longer wildfire seasons, more frequent fires, continuous fuels, and vastly larger wildfires. A lack of adaptation to fire especially in lower elevation habitats and limited precipitation to aid in wildfire recovery often leads to a failure of habitats to recover and into a vicious cycle of continually more invasive plants, wildfire, and greater loss of sagebrush habitats. Additionally, pre-suppression, fire fighting, and restoration resources have a history of being limited, which leads to exacerbation of the issues. For example, wildfire impacted more than 1 million acres in both 2017 & 2018, and significant precipitation this year will increase fine fuels. Another big fire year is likely to occur in the near future.

EARLY 2019 PROGRAM UPDATES • PLANS FOR THE COMING YEAR

- Implement the temporary regulation and begin the process for the adoption of permanent mitigation regulation.
- Conduct additional field office meetings with BLM, USFS, and NDOW staff to foster greater awareness of the CCS, the mitigation regulation and its implementation.
- Continue to implement the CCS and work with credit and debit project proponents navigating the CCS, assist verifiers to assess the planned disturbances and impacts of debit projects and the conservation values of credit projects, and implement mitigation offsets.
- Conduct another State-funded solicitation process to seed additional credit projects through enhancement and stewardship of meaningful greater sage-grouse habitats in late summer/early fall 2019.
- Develop recommendations for the SEC to more effectively incentivize the efficient application of habitat enhancement and restoration within the CCS.
- Continue to work towards implementing contracts through the Greater Outcomes for Greater Sage-Grouse RCPP projects statewide.
- Continue to implement the adaptive management process now defined in the Nevada Greater Sage-Grouse Conservation Plan, BLM, and USFS plans.
- Establish an annual sharing/learning meeting with other Western States involved in sagebrush ecosystem conservation and Greater Sage-Grouse mitigation.
- Prepare for greater sage-grouse 2020 assessment by Western Association of Fish Wildlife Agencies by sharing project data through the Conservation Efforts Database.
- With the assistance of the science work group, develop prioritized areas for conservation to aid in the implementation of mitigation on private and public lands.

