



**State of Nevada  
Sagebrush Ecosystem Program**

**SEMI-ANNUAL REPORT**

**December 2024**



**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 semi-annually 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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*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.*

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# FROM THE SAGEBRUSH ECOSYSTEM TECHNICAL TEAM

The Semi-Annual CCS Report provides a summary of the program's mitigation achievements each year. In addition to informing the SEC and all stakeholders on the achievements of the SEP relevant to mitigation and the CCS, the report highlights the continued commitment of the Sagebrush Ecosystem Program (SEP) to function transparently and implement mitigation uniformly.

In 2019, the Sagebrush Ecosystem Council (SEC) adopted a permanent mitigation regulation that was subsequently passed by the Legislative Commission. This regulation requires compensatory mitigation for greater sage-grouse using the Nevada Conservation Credit System (CCS). Mitigation is required for certain man-made disturbances on public lands as defined within the Nevada Greater Sage Grouse Conservation Plan. The CCS was intended to ensure consistent and durable mitigation in Nevada.

Due to the regulation, the Sagebrush Ecosystem Program (SEP) has seen a significant increase in the number of Debit Projects entering the CCS. The the total number of active debit projects in the CCS is currently 97. An additional 19 mitigation transactions occurred in 2024, totaling 2,237 credits. These transactions achieved net conservation gain encompassing 6,722 acres of greater sage-grouse habitat in Nevada, bringing the total number of acres conserved to just over 41,000.

Three new credit projects were entered into the CCS this year, accounting for nearly 15,000 new credits. This brings the total number of credit projects in the CCS to 27 (with one withdrawal). The total number of available or anticipated credits is approximately 56,000. The Sagebrush Ecosystem Technical Team (SETT) also conducted 5-year qualitative assessments on two credit projects. This allowed the SETT to meet with project proponents on a more personal level, discuss the challenges and opportunities within the projects, and answer questions from the landowners. These meetings also allowed the families to provide input into management, maintenance, and additional conservation opportunities. The SETT also held meetings with prospective credit project proponents to address questions and opportunities in consideration of their private land entry into the CCS.

One significant science update was adopted into the CCS in 2024, updating the GRSG Habitat Management Category Map to the most recent version released by USGS.

We express our sincere gratitude and appreciation for the many partners who provided assistance, guidance, and support of the implementation of the CCS and the conservation of Nevada's sagebrush ecosystem.

**Kathleen Steele**

Program Manager

Sagebrush Ecosystem Program



- The SEP was legislatively established in 2013. Work to develop a system for mitigating authorized adverse impacts (disturbances) to sagebrush ecosystems in the State promptly began, and the Conservation Credit System was adopted in December 2014.
- A primary goal expressed by all stakeholders was to ensure, based on best available science, that the system could be applied consistently to quantify authorized adverse impacts to Greater Sage-grouse habitat (debits), and preservation and restoration projects (credits). To achieve this goal, the Habitat Quantification Tool (HQT) was developed and approved by the Council.
- The 2015 Legislature appropriated funds to be used for grants to “kick start” credit projects. Funding was awarded initially in 2016, but several landowners began credit projects on their own without any state funding.
- The transfer of credits began in 2017. However, transfers stalled upon the issuance of Instructional Memorandum (IM) 2019-018 by the Department of Interior on December 6, 2018 directing that the Bureau of Land Management (BLM) could only require mitigation on federal lands if there was a state regulation requiring it.
- Because most disturbances occur on lands managed by the BLM, Nevada became more at risk of having the Greater Sage-grouse listed as threatened or endangered species due to lack of regulatory mechanisms to mitigate disturbances.
- In response, the Sagebrush Ecosystem Council immediately began work on a regulation requiring mitigation on public lands. A permanent regulation was passed in 2019 – NAC 232.400-232.480.
- A combination of continuous program engagement and the adoption of the regulation has resulted in a significant increase in credit project development and CCS mitigation transactions.
- Nevada began development of the mitigation program after many other western states with Sage-grouse habitat had begun development of their systems. Nevada is considered a regional leader in the implementation of a conservation credit system or habitat exchange, being one of the first to have finalized several transactions.

## SEMI-ANNUAL REPORT

The CCS's *Semi-annual Report* provides a summary of the program's achievements over the past year and includes key outcomes from credit and debit projects as well as the program in general.

## CREDIT SYSTEM OVERVIEW & GOVERNANCE

The CCS is a market-based compensatory mitigation program that aligns the objectives of landowners, industry, and the State of Nevada. The CCS ensures that negative impacts to greater sage-grouse habitat from anthropogenic disturbances (*debts*) are fully offset by long-term habitat enhancement and protection (*credits*) that results in a net benefit for Greater Sage-grouse in the State of Nevada.

The CCS preserves the state's ecological, cultural and economic integrity by providing important contributions to the conservation of the sagebrush ecosystem. The CCS also provides regulatory certainty to industry and provides an opportunity for landowners to fund additional stewardship of their land and diversify their incomes. The program is designed to accommodate many regulatory mechanisms. The figure below illustrates the use of the CCS by key participants – resource managers, mitigation buyers and credit developers.

The CCS uses a governance structure, which includes

- **Oversight Committee** – Sagebrush Ecosystem Council
- **Administrator** – Sagebrush Ecosystem Technical Team
- **Science Committee** – Scientists and experts with critical knowledge of the sagebrush ecosystem in the State of Nevada

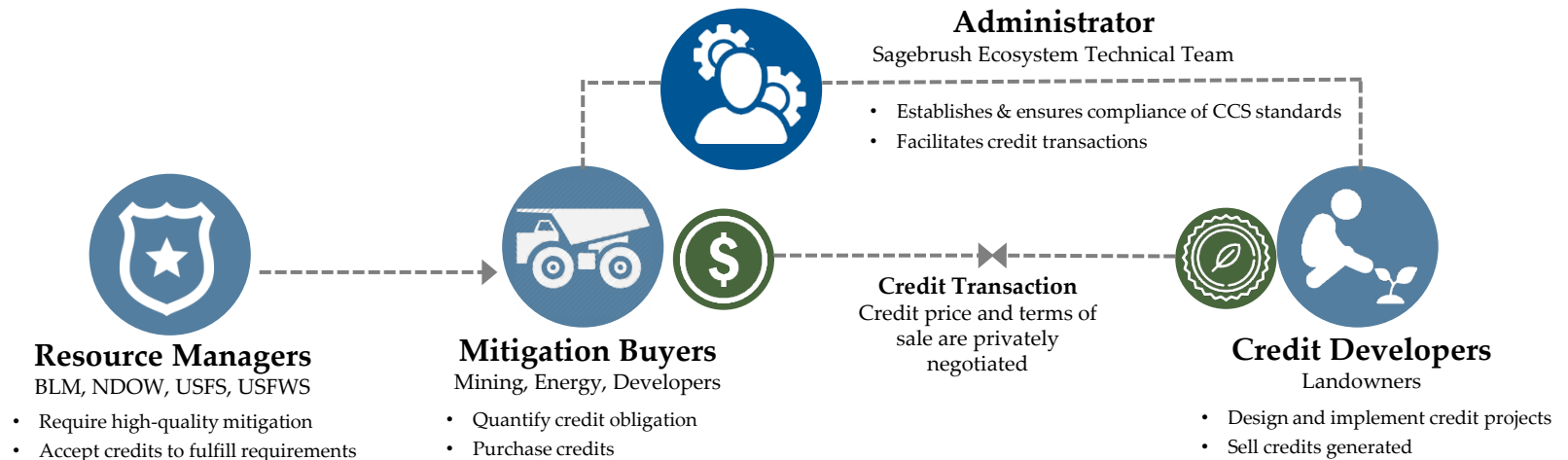


Figure 1. CCS structure



HABITAT ASSESSMENT & DURABILITY STANDARDS

The Credit System defines standards to ensure mitigation achieves net conservation gain, provides business certainty to industry and landowners, and streamlines administrative operations. The standards include consistent ways to measure habitat loss and gain, as well as clearly defined provisions to ensure durability of credits through time. Figure 2 depicts the primary elements of a credit.

For additional background and details on the CCS, please see the latest version of the [CCS Manual](#) and [HQT Methods Document](#) on the [CCS website](#).

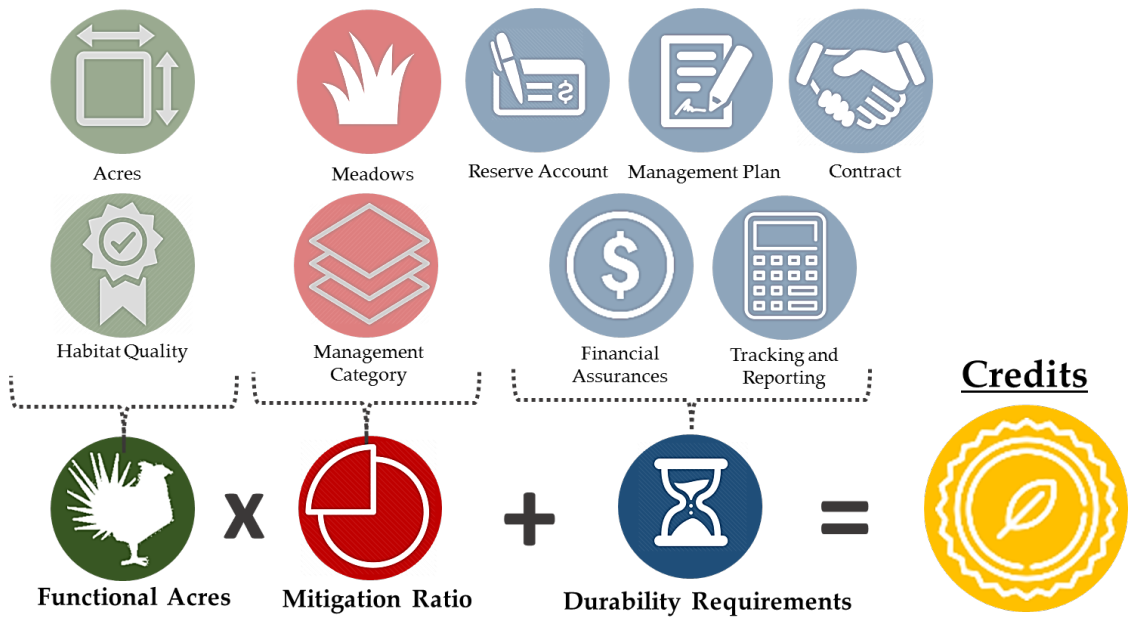


Figure 2. Composition of a CCS Credit

CONTINUAL IMPROVEMENT

Making continual improvements to the CCS is crucial to ensure the Credit System fulfills participant needs and achieves program objectives over time. The CCS uses a transparent, structured continual improvement approach to identify important opportunities for program improvement and implement approved improvements every year.



Figure 3. CCS Continual Improvement Process

The goal of the CCS is to offset impacts from certain anthropogenic (man-made) disturbances with habitat enhancements and protections resulting in a net benefit for Greater Sage-grouse habitats in the State of Nevada.

The CCS ensures net benefit to Greater Sage-grouse habitat in multiple ways. The CCS uses a scientifically rigorous Habitat Quantification Tool (HQT) to assess both debit (degradation of habitat) and credit (conservation of habitat) projects. Mitigation ratios applied to the three habitat management zones (Priority, General, and Other) and a five percent factor added to debit projects occurring within any management zone ensures more functional-acres are gained than lost, and standards are used to ensure habitat quality remains for the planned life of credit projects.

In addition to the mitigation ratio, the proximity ratio is multiplied to the final debit score to account for how far the offsetting credit project is located from the disturbance. The proximity ratio can increase the credit obligation (i.e., debits) from 0% to 15%. The purpose of the proximity ratio is to encourage mitigation to occur near to where habitat is being displaced or impacted.

The combination of mitigation and proximity ratios results in a net benefit for sage-grouse habitat in Nevada.

Standards that Ensure Net Benefit	
✓	<b>Consistent metrics</b> are used to measure both credits and debits
✓	<b>A mitigation ratio</b> ensures that functional-acres gained are greater than functional-acres lost
✓	<b>A reserve account</b> contribution of 5-14% of credits in excess of the amount needed to offset any disturbance is required at the time of sale/transfer within the CCS. Reserve account credits are maintained to ensure that credits lost (e.g. acts of nature) can be replaced as necessary, and provide durability as well as continued net benefits
✓	<b>Advanced mitigation</b> is required to replace habitat before impacts occur
✓	<b>Additionality provisions</b> that ensure credits are based on habitat enhancement and protection that were not funded by public sector investments



## STATE OF NEVADA SEED FUNDING OF CREDIT PROJECTS

The SEP has facilitated successful solicitations for credit project development in 2016, 2017, and 2019 that attracted nearly 40 applications and resulted in seed funding to 13 credit project proponents totaling approximately \$2M. The funding was or will be used to quantify habitat quality, develop management plans, and implement on-the-ground habitat improvements.

The SEP utilized a Pay for Performance procurement strategy to solicit and provide seed funding to credit projects in 2016, 2017, and 2019. The seed funding contracts defined payments associated with key milestones, rather than reimbursement of costs as typically seen in traditional grants. Reimbursement of state funds by landowners using the funds follows each sale of credits per their funding agreement. The procurement strategy illustrated below incentivized credit developers to maximize credit generation at the lowest cost, allowed the SEP to fund the projects expected to generate the greatest number of credits per dollar of state funds awarded, and minimized financial risk and uncertainty for the state. This procurement strategy also allows for a revolving fund which will continue to fund new projects.

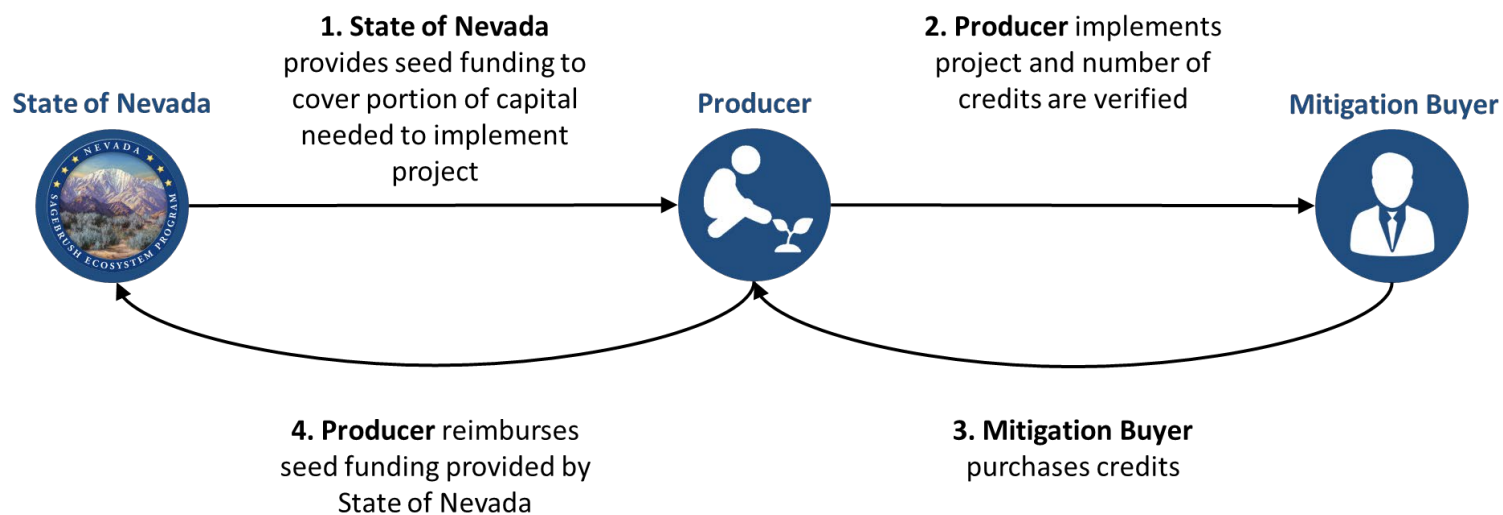


Figure 4. Illustration of the Pay for Performance procurement strategy utilized by the State of Nevada







## BACKGROUND

Credit development involves quantification of habitat values (credits), enhancement or restoration of habitat, development of a management plan, securing of financial assurances and signing a participant contract. After available credits are determined, the sale price of credits is based on market value and determined through a private negotiation between landowners with credits available and debit project proponents needing credits to offset a disturbance. When credits are sold, the purchaser fulfills a mitigation obligation, and the credit seller commits to maintaining performance standards for the term of the contract. Landowners can continue agricultural and livestock operations compatible with Greater Sage-grouse habitat needs throughout the contract term.

## CREDIT TYPES

### TRANSFERRED CREDITS

Transferred credits refers to those credits that have been sold or transferred to a debit producer to satisfy their mitigation obligation.

### AVAILABLE CREDITS

Available credits are based on verified habitat quantifications and have an approved management plan. These credits are “available” for transaction.

### ANTICIPATED CREDITS

Anticipated credits are those credit projects in the initial stages of development that have not finalized a management plan. These credits are not “available” for transaction, yet.

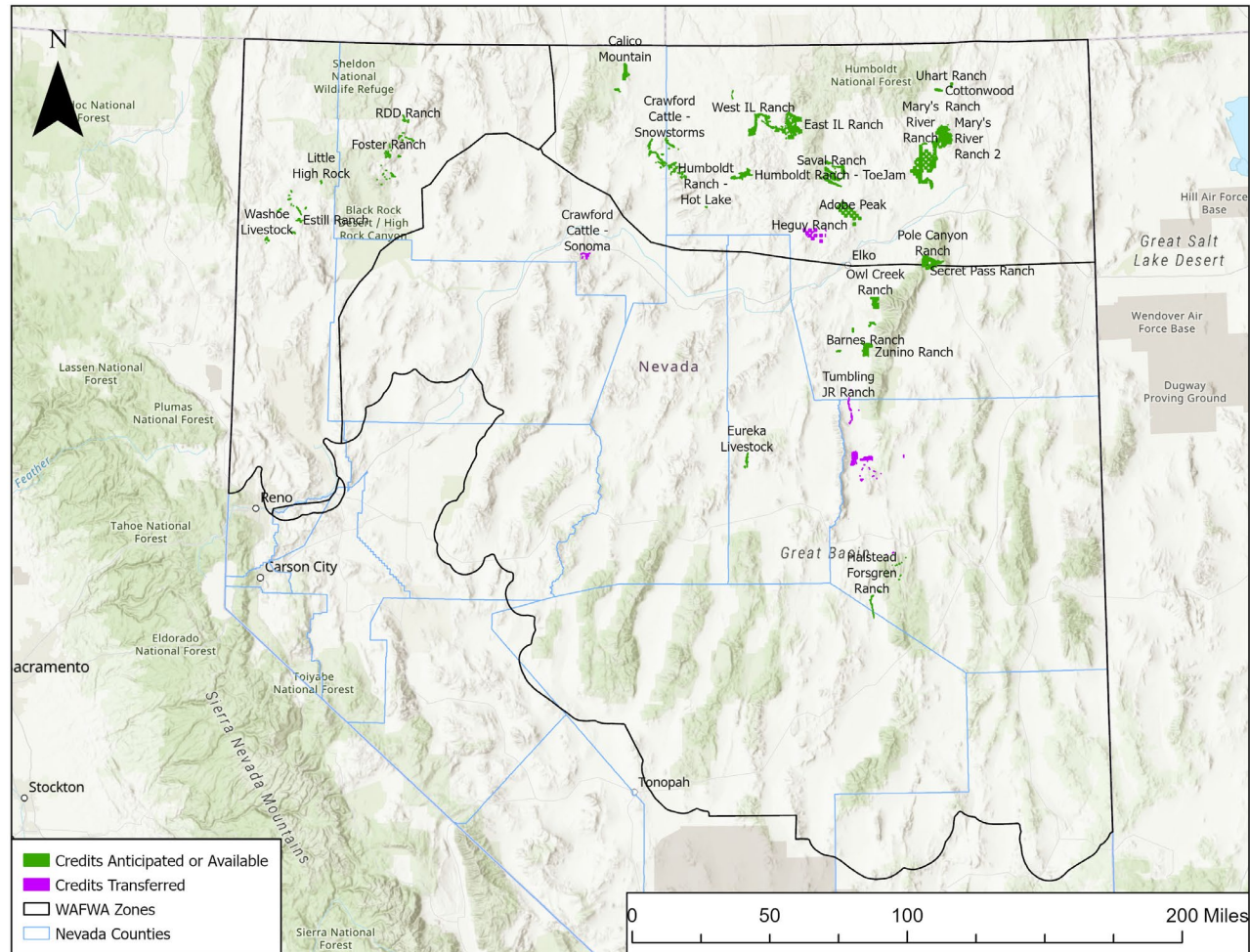


Figure 5. Current credit projects enrolled in the CCS

# 2024 PROGRAM RESULTS

# TRANSACTIONS

DEBIT PROJECT	CREDITS TRANSFERRED OR SOLD	CREDIT PROJECT	ACRES CONSERVED**	WAFWA MGMT. ZONE
<b>Transactions*</b>				
Bald Mountain Mine	2,514	Tumbling JR Ranch	9,717	III
Greater Phoenix Mine	243	West IL Ranch	6,279	IV
Greater Phoenix Mine - Philadelphia Canyon	5	West IL Ranch	Acres Included in other Transaction	IV
Coeur Rochester Mine	467	Crawford Cattle - Sonoma	1,498	III
Coeur Rochester Mine	186	Crawford Cattle - Snowstorms	1,313	IV
Baltazor Geothermal	292	Crawford Cattle - Snowstorms	1,033	IV
Midas Exploration	22	Estill Ranch	346	V
Avocado Exploration	44	Crawford Cattle - Snowstorms	254	IV
Newcrest Exploration Phase I	3	Cottonwood Ranch	13	IV
Fish Springs Solar	59	Heguy Ranch	26	IV
Western Oil Exploration	5	Crawford Cattle - Snowstorms	Acres Included in other Transaction	IV
Jerritt Canyon Exploration	45	Cottonwood Ranch	103	IV
Snow Canyon Mine Closure	2	Cottonwood Ranch	Acres Included in other Transaction	IV
Twin Creeks Mine - Sage Tailings	35	West IL Ranch	Acres Included in other Transaction	IV
Tungsten Mountain Solar	5	Crawford Cattle - Snowstorms	1,332	IV
Dixie Meadows Geothermal	102	Crawford Cattle - Snowstorms	Acres Included in other Transaction	IV
South Railroad Exploration	9	Heguy Ranch	Acres Included in other Transaction	IV
Peterson Mountains Mine	1	Heguy Ranch	Acres Included in other Transaction	IV
White Pine Hydropower Pump Exploration	9	Secret Pass Ranch	226	III, IV
Cherry Creek Tower	3	Secret Pass Ranch	Acres Included in other Transaction	III, IV
Round Springs Tower	3	Secret Pass Ranch	Acres Included in other Transaction	III, IV
Lincoln Hill Exploration	9	Heguy Ranch	Acres Included in other Transaction	IV
Round Mountain Mine	45	Tumbling JR Ranch	Acres Included in other Transaction	III
SW Energy Road	13	Cottonwood Ranch	Acres Included in other Transaction	IV
Big Ledge - Dry Creek Mine Closure	310	Mary's River Ranch	463	IV
Western Lithium Mine	550	Estill Ranch	1,901	V
Baker Ranch Powerline	1	Cottonwood Ranch	Acres Included in other Transaction	IV
Gold Bar South Mine	662	Heguy Ranch	3,397	IV
South Railroad Exploration	24	Heguy Ranch	Acres Included in other Transaction	IV
Beehive Telephone Fiber Optic	2	Heguy Ranch	Acres Included in other Transaction	IV
<b>TOTAL</b>	<b>5,670</b>		<b>27,901</b>	

\* Reserve account contributions associated with transfers are excluded from this table. Proximity factors associated with the transactions are included.

\*\* "Acres Included in other Transaction" refers to acres already accounted for in a previous transaction, as all credits within a Credit Project map unit are required to be managed in their entirety, regardless of the number of credits transferred within.

# 2024 PROGRAM RESULTS

# TRANSACTIONS CONTINUED

DEBIT PROJECT	CREDITS TRANSFERRED OR SOLD	CREDIT PROJECT	ACRES CONSERVED**	WAFWA MGMT. ZONE
<b>Transactions*</b>				
Gold Bar South Mine	127	Cottonwood Ranch	306	IV
White Pine Hydropower Pump Exploration	6	Secret Pass Ranch	Acres Included in other Transaction	III, IV
Bald Mountain Mine	462	Tumbling JR Ranch	Acres Included in other Transaction	III
Robinson Mine	201	Owl Creek Ranch	631	III
Marigold - Valmy Mine	59	Owl Creek Ranch	Acres Included in other Transaction	III
Great Basin Diamond 1-27 APD Exploration	5	Owl Creek Ranch	Acres Included in other Transaction	III
Crescent Valley Exploration	5	Crawford Cattle - Snowstorms	Acres Included in other Transaction	IV
Robertson Exploration One	7	West IL Ranch	Acres Included in other Transaction	IV
Goldrush Mine	2,037	West IL Ranch	Acres Included in other Transaction	IV
Goldrush Exploration	26	West IL Ranch	Acres Included in other Transaction	IV
Goldrush Mine	601	East IL Ranch	486	IV
Marigold - Valmy Mine	332	Owl Creek Ranch	607	III
Green Springs Exploration	13	Owl Creek Ranch	Acres Included in other Transaction	III
Golden Lake Exploration	6	Owl Creek Ranch	Acres Included in other Transaction	III
Prospect Mine - Gullsil Expansion	12	Owl Creek Ranch	Acres Included in other Transaction	III
North Peak Exploration	1	Owl Creek Ranch	Acres Included in other Transaction	III
Reno to Las Vegas Fiber Optic	24	Zunino Ranch	338	III
Murdock Mountain Phosphate Exploration	1	Zunino Ranch	Acres Included in other Transaction	III
Big Ledge - Dry Creek Mine Closure	2	Mary's River Ranch	Acres Included in other Transaction	IV
Big Ledge - Dry Creek Mine Closure	3	Mary's River Ranch	Acres Included in other Transaction	IV
Dodge Flat II Solar	1	Owl Creek Ranch	Acres Included in other Transaction	III
Pony Creek Exploration	44	Zunino Ranch	Included in other Transaction	III
Bald Mountain Mine	1,143	Tumbling JR Ranch	Included in other Transaction	III
Bald Mountain Mine	93	Adobe Peak	4,175	IV
Ruth Water Pipeline LROW	2	Owl Creek Ranch	Included in other Transaction	III
Whirlwind Geothermal Exploration	2	Crawford Cattle - Snowstorms	Included in other Transaction	IV
North Ranch Tower	207	Zunino Ranch	Included in other Transaction	III
Argus Mineral Exploration	1	Cottonwood Ranch	Included in other Transaction	IV
Bald Mountain Mine	480	Adobe Peak	Included in other Transaction	IV
Jackpot to Wells Fiber Optic LROW	47	Zunino Ranch	Included in other Transaction	III
<b>TOTAL</b>	<b>5,950</b>		<b>6,543</b>	

\* Reserve account contributions associated with transfers are excluded from this table. Proximity factors associated with the transactions are included.

\*\* "Acres Included in other Transaction" refers to acres already accounted for in a previous transaction, as all credits within a Credit Project map unit are required to be managed in their entirety, regardless of the number of credits transferred within.



DEBIT PROJECT	CREDITS TRANSFERRED OR SOLD	CREDIT PROJECT	ACRES CONSERVED**	WAFWA MGMT. ZONE
<b>Transactions*</b>				
Jerritt Canyon Exploration	14	Cottonwood Ranch	Included in other Transaction	IV
Bald Mountain Mine	539	Adobe Peak	Included in other Transaction	IV
Robertson Mine	15	East IL Ranch	Included in other Transaction	IV
Robertson Mine	758	East IL Ranch	5,855	IV
Robertson Mine Exploration	41	East IL Ranch	237	IV
Cedar Gate to Halligan Mesa LROW	32	Secret Pass Ranch	293	III
Wildcat Exploration	24	Secret Pass Ranch	Included in other Transaction	III
<b>TOTAL</b>	<b>1,423</b>		<b>6,385</b>	
<b>ALL TRANSACTIONS TOTAL</b>	<b>13,043</b>		<b>40,829</b>	

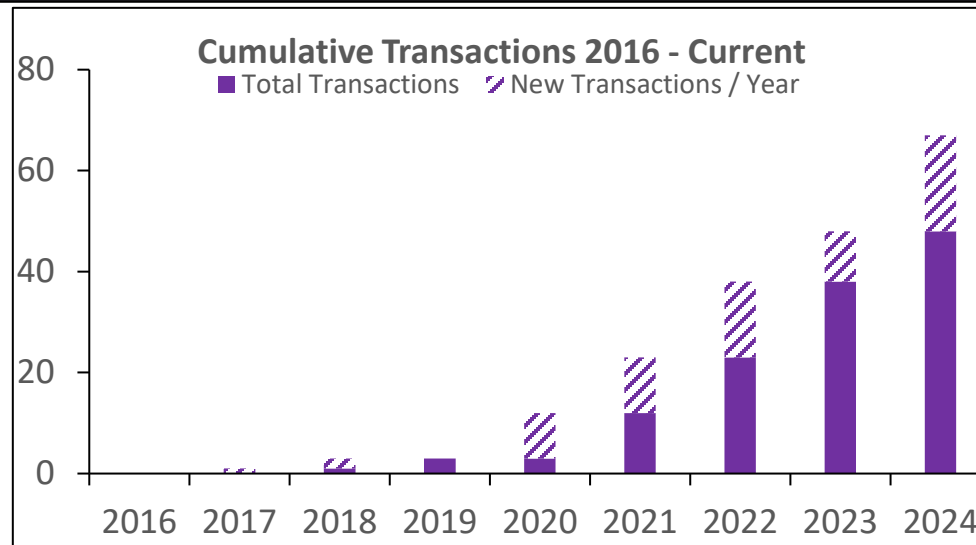


Figure 6. Cumulative transactions to date.

- **Sixty-seven mitigation transactions have been finalized using the CCS since its inception**
  - **13,043 credits have been transferred or sold**
  - **Approximately 41,000 acres have been conserved for at least a 30-year term**

\* Reserve account contributions associated with transfers are excluded from this table. Proximity factors associated with the transactions are included.

\*\* "Acres Included in other Transaction" refers to acres already accounted for in a previous transaction, as all credits within a Credit Project map unit are required to be managed in their entirety, regardless of the number of credits transferred within.

# 2024 PROGRAM RESULTS

# ANTICIPATED AND AVAILABLE CREDITS

Three new credit projects conducted fieldwork in 2024. All ranches fall primarily in Priority and General Habitat Management Areas and can potentially conserve over 15,000 acres for sage-grouse. Preliminary estimates indicate these projects can add an estimated 4,500 credits to the System. The tables below show anticipated and available credits. Projects that have transferred their entire balance are not included.

PROJECT NAME	CREDITS	COUNTY	AVAILABLE ACRES	WAFWA MGMT. ZONE	STATE SEED FUNDED***
<b>ANTICIPATED CREDITS*</b>					
East IL Ranch	TBD	Elko	0 additional (PJ removal)	IV	Privately Funded
Calico Mountain	TBD	Humboldt	5,120	IV	State Seed Funded
Little High Rock	TBD	Washoe	322	V	Privately Funded
Barnes Ranch	TBD	Elko	4,981	III	Privately Funded
Mary's River Ranch 2	TBD	Elko	54,833	IV	Privately Funded
Uhart Ranch	TBD	Elko	690	IV	Privately Funded
Halstead Forsgren Ranch	TBD	Nye/White Pine	2,437	III	Privately Funded
Saval Ranch	TBD	Elko	12,189	IV	Privately Funded
<b>TOTAL</b>	<b>~26,000</b>		<b>80,573</b>		

PROJECT NAME	CREDITS	COUNTY	AVAILABLE ACRES	WAFWA MGMT. ZONE	STATE SEED FUNDED***
<b>AVAILABLE CREDITS*</b>					
Cottonwood Ranch	637	Elko	685	IV	State Seed Funded
West IL Ranch	539	Elko	All Acres Conserved	IV	Privately Funded
Crawford Cattle - Snowstorms	1,234	Humboldt, Elko	6,598	IV	State Seed Funded
Estill Ranch	68	Washoe	804	V	Privately Funded
Eureka Livestock	1,742	Eureka	1,623	III	State Seed Funded
Adobe Peak	2,506	Elko	6,726	IV	Privately Funded
Humboldt Ranch - Hot Lake	694	Elko	198	IV	Privately Funded
Washoe Livestock	141	Washoe	797	V	Privately Funded
Humboldt Ranch – Toe Jam	1,920	Elko	5,330	IV	Privately Funded
East IL Ranch	7,458	Elko	17,143	IV	Privately Funded
Secret Pass Ranch	3,565	Elko	9,750	III, IV	State Seed Funded
Owl Creek Ranch	2,297	Elko	4,125	III	State Seed Funded
Foster Ranch	1,624	Humboldt	6,170	V	State Seed Funded
Pole Canyon Ranch	435	Elko	2,070	IV	Privately Funded
Mary's River Ranch	1,436	Elko	2,236	IV	Privately Funded
Zunino Ranch	2,771	Elko	2,879	III	Privately Funded
RDD Ranch	740	Humboldt	1,099	V	State Seed Funded
<b>TOTAL</b>	<b>29,807</b>		<b>68,234</b>		

\* Anticipated credits are estimated, but not finalized or eligible for transfer/sale.  
 \*\* Available Credits are finalized and eligible for transfer/sale to mitigate for anthropogenic disturbances.  
 \*\*\* Projects receiving state seed funding also included varying amounts of matching funds from the landowners.

A primary responsibility of the SETT is to manage the reserve account. The reserve account serves as an insurance mechanism for CCS transactions and ensures there are always more credits than debits in the CCS in the event of credit project failure due to intentional or unintentional reversals.

A percentage of credits generated by each credit project are transferred into the reserve account at the time that credits are transferred to a credit buyer’s account. Credits in the reserve account may be used by the SETT to temporarily offset invalidated credits until they can be replaced through corrective actions or using credit developer financial assurance funds to purchase replacement credits for the remaining term. Credits can be invalidated either intentionally or unintentionally, such as a willful destruction or acts of nature. The process of generating and using reserve credits is depicted in Figure 7.

Below are the deposits, withdrawals and balance of the reserve account as of December 2024. A positive balance (column 4) confirms there are more credits than debits in the CCS. As of December 2024, no credits have been withdrawn from the reserve account.

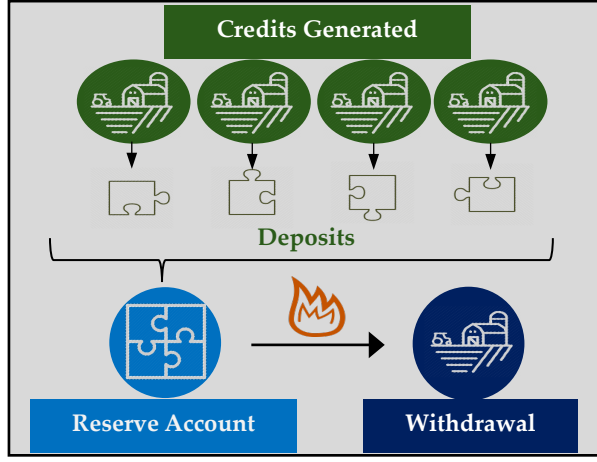


Figure 7. Reserve Account generation and use

CREDIT PROJECT NAME	RESERVE ACCOUNT DEPOSIT	RESERVE ACCOUNT WITHDRAWAL	RESERVE ACCOUNT BALANCE	REASON FOR INVALIDATED CREDITS (WITHDRAWALS ONLY)	INVALIDATED CREDITS REMEDIAL ACTION PLAN (WITHDRAWALS ONLY)
Adobe Peak	137	N/A	137	N/A	N/A
Cottonwood Ranch	19	N/A	19	N/A	N/A
Crawford Cattle - Snowstorms	79	N/A	79	N/A	N/A
Crawford Cattle - Sonoma	58	N/A	58	N/A	N/A
East IL Ranch	155	N/A	155	N/A	N/A
Estill Ranch	71	N/A	71	N/A	N/A
Heguy Ranch	87	N/A	87	N/A	N/A
Mary's River Ranch	31	N/A	31	N/A	N/A
Owl Creek Ranch	67	N/A	67	N/A	N/A
Secret Pass Ranch	10	N/A	10	N/A	N/A
Tumbling JR Ranch	412	N/A	412	N/A	N/A
West IL Ranch	357	N/A	357	N/A	N/A
Zunino Ranch	29	N/A	29	N/A	N/A
<b>TOTAL</b>	<b>1,512</b>	<b>N/A</b>	<b>1,512</b>	<b>N/A</b>	<b>N/A</b>







The CCS is a mitigation tool used to offset impacts to Greater Sage-grouse from certain anthropogenic (i.e., man-made) disturbances, such as mines, geothermal facilities, energy development, transmission lines, and other temporary or permanent infrastructures which directly or indirectly impact Greater Sage-grouse habitat. Ranching and farming activities are not considered impacts and can contribute to conservation objectives.

## MITIGATION HIERARCHY

The CCS uses a mitigation hierarchy (Avoid, Minimize, Mitigate) within or near sage-grouse habitat management areas. Impacts from proposed anthropogenic disturbances are analyzed for potential avoidance first. If avoidance is not possible, then opportunities are examined to aid in minimizing impacts, and finally any residual unavoidable impacts (*debits*) are mitigated using the CCS. The CCS also applies financial incentives that support avoidance and minimization.

## FEDERAL AGENCY COLLABORATION

The State of Nevada, BLM, and USFS have signed a memorandum of understanding detailing the collaborative implementation of the CCS. Project proponents seek authority to conduct business on federal lands. Once approved, they use the CCS to fulfill their mitigation obligation, if applicable. Project proponents can use the CCS to verify mitigation (*credits*) that they generate themselves or they can acquire credits from other credit developers in Nevada.

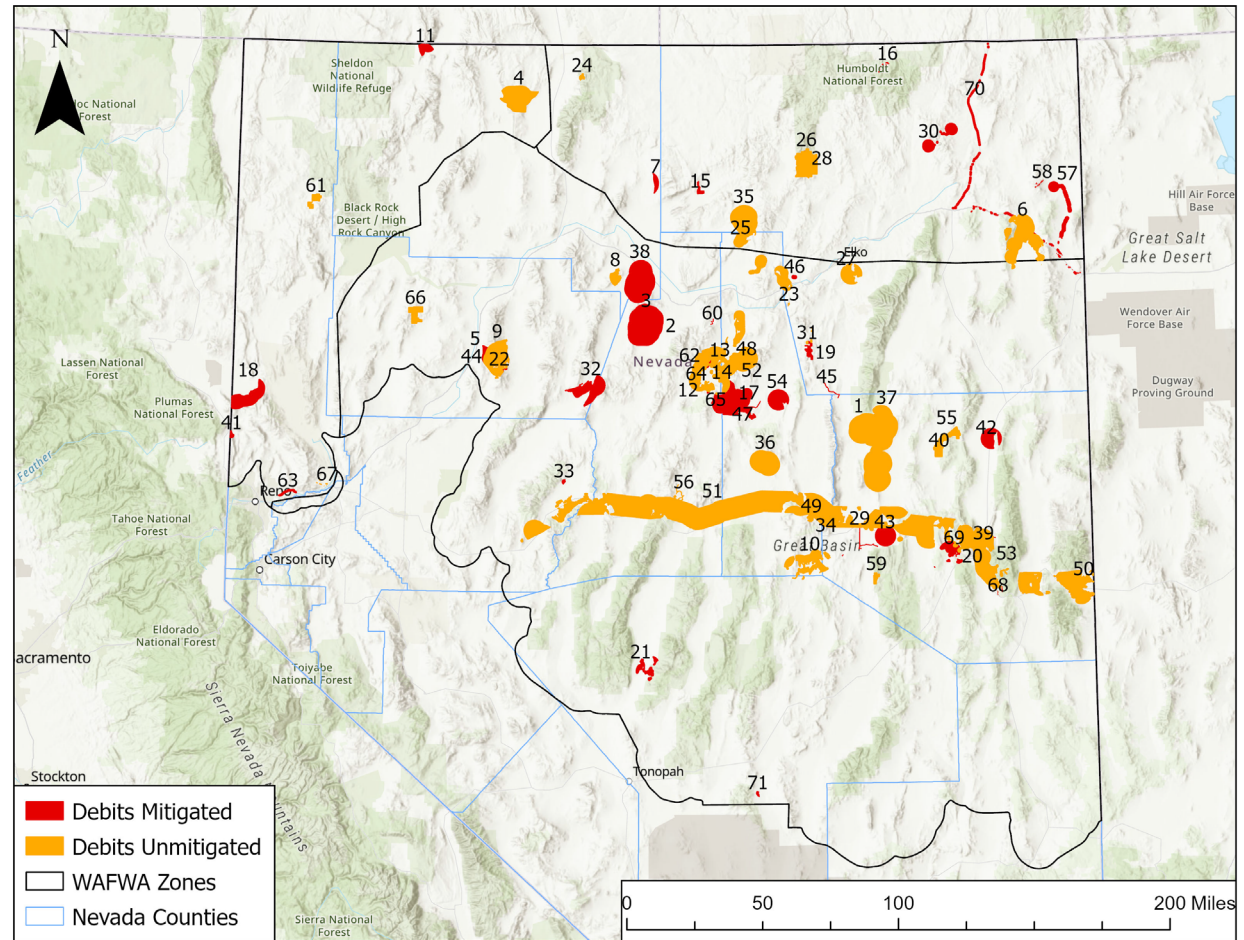


Figure 8. Current debit projects enrolled in the CCS and in the advanced stages of NEPA planning (key on next page)

Number	Project Name
1	Bald Mountain Mine
2	Greater Phoenix Mine
3	Greater Phoenix Mine - Philadelphia Canyon
4	Thacker Pass Mine
5	Coeur Rochester Mine
6	Long Canyon Mine- Phase 2
7	Twin Creeks Mine - Sage Tailings
8	Lone Tree Mine - Buffalo Mountain
9	Spring Valley Mine
10	Gibellini Mine
11	Baltazor Geothermal
12	Robertson Mine
13	Robertson Mine Exploration
14	Goldrush Mine
15	Midas Exploration
16	Newcrest Exploration Phase I
17	Avocado Exploration
18	Fish Springs Solar
19	Pony Creek Exploration
20	Robinson North Tripp Mine
21	Round Mountain Mine
22	Relief Canyon Mine
23	Carlin Vanadium Exploration
24	National Exploration
25	TSPP Pipeline
26	Jerritt Canyon Exploration
27	Ruby Vista Road
28	Snow Canyon Mine Closure
29	Western Oil Exploration
30	Big Ledge - Dry Creek Mine Closure
31	South Railroad Exploration
32	Dixie Meadows Geothermal
33	Tungsten Mountain Solar
34	Prospect Mine - Gullsil Expansion
35	Rossi Mine
36	Gold Bar South Mine

Number	Project Name
37	Juniper Mine Expansion
38	Marigold - Valmy Mine
39	White Pine Hydropower Pump Exploration
40	Selena Exploration
41	Peterson Mountains Mine
42	Cherry Creek Telecommunications Tower
43	Round Springs Telecommunications Tower
44	Lincoln Hill Exploration
45	Great Basin Diamond 1-27 APD Exploration
46	SW Energy Road
47	Goldrush Exploration
48	Crescent Valley Geothermal Exploration
49	Golden Lake Exploration
50	Baker Ranch Powerline
51	Greenlink North Powerline
52	NGM Ore Railroad
53	Cross-Tie Powerline
54	North Ranch Tower
55	Limo Butte Exploration
56	McGinness Hills Opt Solar & Geothermal Exploration
57	Beehive Telephone Fiber Optic LROW
58	Murdock Mountain Phosphate Exploration
59	Green Springs Exploration
60	Whirlwind Geothermal Exploration
61	Hog Mountain Exploration
62	Robertson Exploration One
63	Reno to Las Vegas Fiber Optic LROW
64	Crescent Valley Geothermal
65	NW Deeps Mine Expansion
66	Wildcat Exploration
67	Dodge Flat II Solar Exploration
68	Argus Mineral Exploration
69	Ruth Water Pipeline LROW
70	Jackpot to Wells Fiber Optic LROW
71	Cedar Gate to Halligan Mesa LROW



PROJECT NAME	DEBITS*	COUNTY	ACRES OF DIRECT IMPACT**	WAFWA MGMT. ZONE
<b>ANTICIPATED DEBITS***</b>				
Bald Mountain Mine	246	White Pine	5734	III
Thacker Pass Mine	1375	Humboldt	5169.14	V
Long Canyon Mine- Phase 2	1676	Elko	814.69	III, IV
Lone Tree Mine - Buffalo Mountain	271	Humboldt	4.17	III
Spring Valley Mine	TBD	Humboldt	2483	III
Gibellini Mine	1961	Eureka, Nye, White Pine	327.97	III
Robertson Mine	1341	Lander	2643.3	III
Relief Canyon Mine	33	Pershing	0	III
Carlin Vanadium Exploration	TBD	Elko	85.4	III
National Exploration	28	Humboldt	37.27	IV
Jerritt Canyon Exploration	26	Elko	384.3	IV
Ruby Vista Road	2	Elko	1.68	III
South Railroad Exploration	41	Elko	125.5	III
Prospect Mine - Gullsil Expansion	20	Eureka	28.14	III
Rossi Mine	286	Elko	427.42	IV
Gold Bar South Mine	1372	Eureka	209.91	III
Juniper Mine Expansion	869	Elko, White Pine	2300.02	III
Selena Exploration	128	White Pine	200	III
Greenlink North Powerline	TBD	Churchill, White Pine, Eureka	15189.95	III
NGM Ore Railroad	2926	Eureka, Lander, Elko	1755	III, IV
Cross-Tie Powerline	TBD	White Pine	2911.5	III
Limo Butte Exploration	26	White Pine	200	III
McGinness Hills Opt Solar & Geothermal Exploration	13	Lander	235.08	III
Green Springs Exploration	62	White Pine	137	III
Hog Mountain Exploration	90	Washoe	186.7	V
Crescent Valley Geothermal	1056	Eureka, Lander	150.63	III
NW Deeps Mine Expansion	TBD	Eureka, Lander	155.8665	III
<b>TOTAL</b>	<b>&gt;13,848</b>		<b>41,898</b>	

\* Debits listed are the total of both term and permanent debits

\*\* Direct impact refers to the disturbance footprint associated with a project. It does not account for the indirect impacts to Greater Sage-grouse habitats

\*\*\* Anticipated debits only reflect projects that are in an advanced state of project planning

PROJECT NAME	DEBITS*	COUNTY	ACRES OF DIRECT IMPACT**	WAFWA MGMT. ZONE
<b>ANTICIPATED DEBITS***</b>				
Wildcat Exploration	128	Pershing	400	III
Dodge Flat II Solar Exploration	2	Washoe	8.9	V
<b>TOTAL</b>	<b>130</b>		<b>409</b>	
<b>ANTICIPATED DEBITS TOTAL</b>	<b>&gt;13,978</b>		<b>42,307</b>	

### 2024 Summary:

- Several debit projects, representing various industries, gathered field data for quantification of debits this year, with some submissions from previous years now going through the SETT's quality assessment process.
- The SETT finalized debit estimates for eight projects that conducted field verification or 100% desktop verification.
  - There are currently 14 debit project QAs in-progress that have not been finalized (either because they are still completing revisions, or they have not finalized NEPA)
- There are currently 13,978 debits in the CCS that have been finalized but have not yet been mitigated by proponents.
  - The total unmitigated debit amount is expected to substantially increase (several-fold) as project proponents finalize their NEPA documents and the SETT finalizes debit estimates (e.g., those with TBD as their current debit estimate).

\* Debits listed are the total of both term and permanent debits

\*\* Direct impact refers to the disturbance footprint associated with a project. It does not account for the indirect impacts to Greater Sage-grouse habitats

\*\*\* Anticipated debits only reflect projects that are in an advanced state of project planning

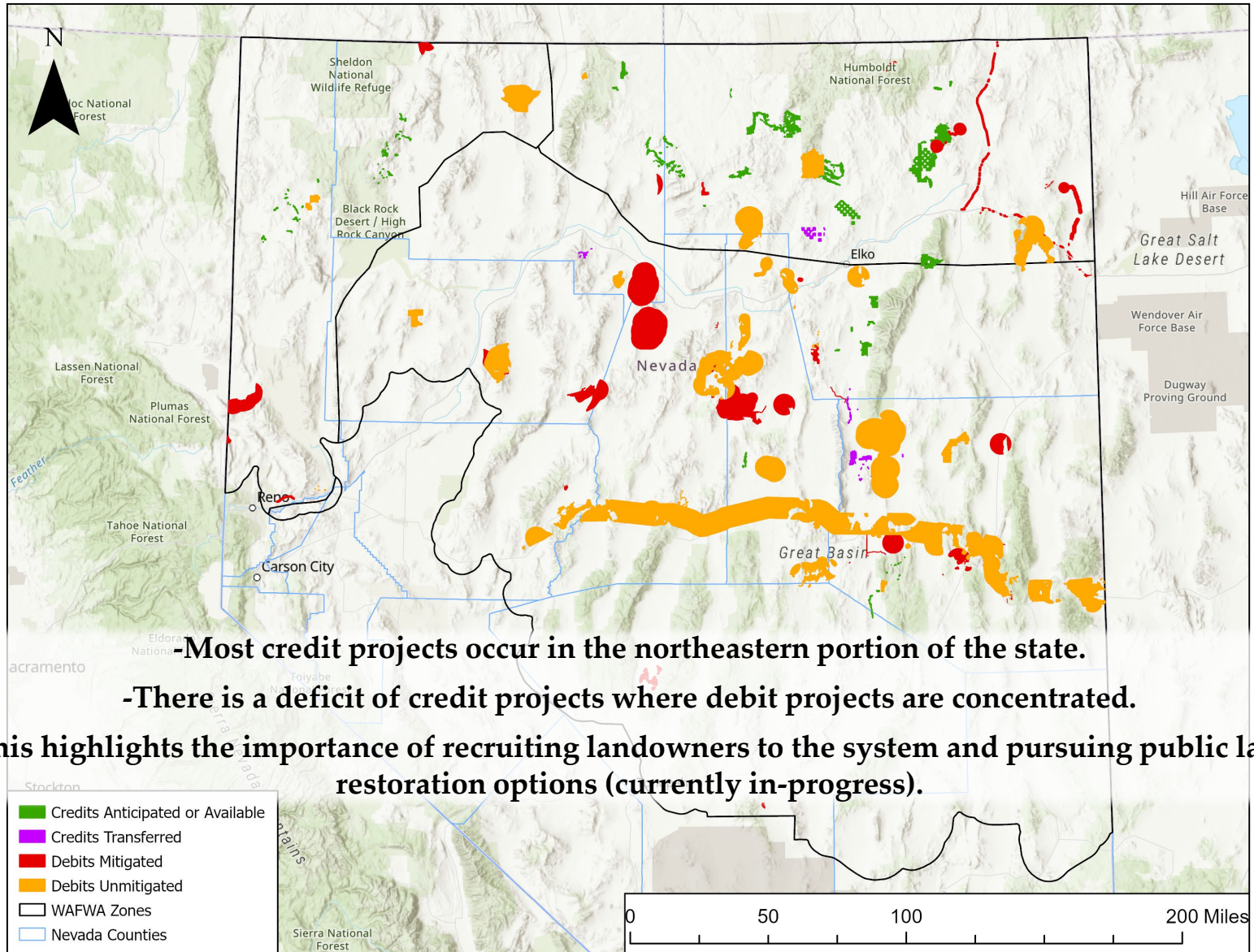


Figure 9. Current credit and debit projects enrolled in the CCS (and in the advanced stages of NEPA planning)



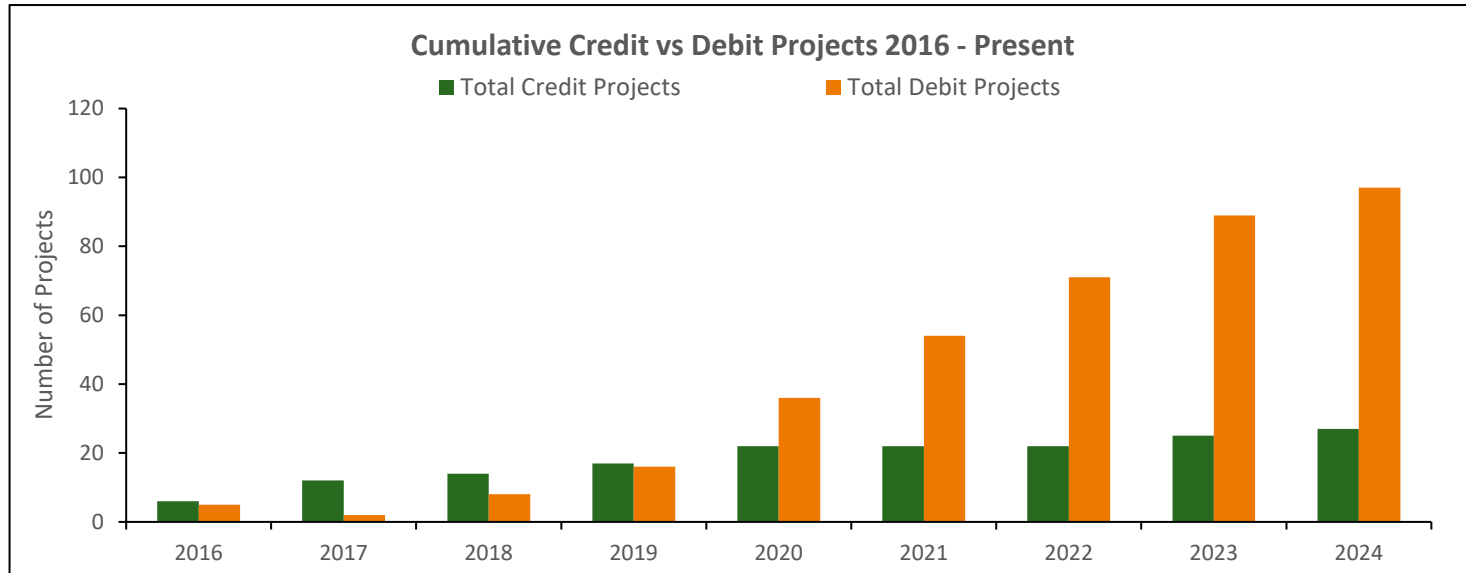


Figure 10. Cumulative credit and debit projects enrolled in the CCS (and in the advanced stages of NEPA planning) since inception

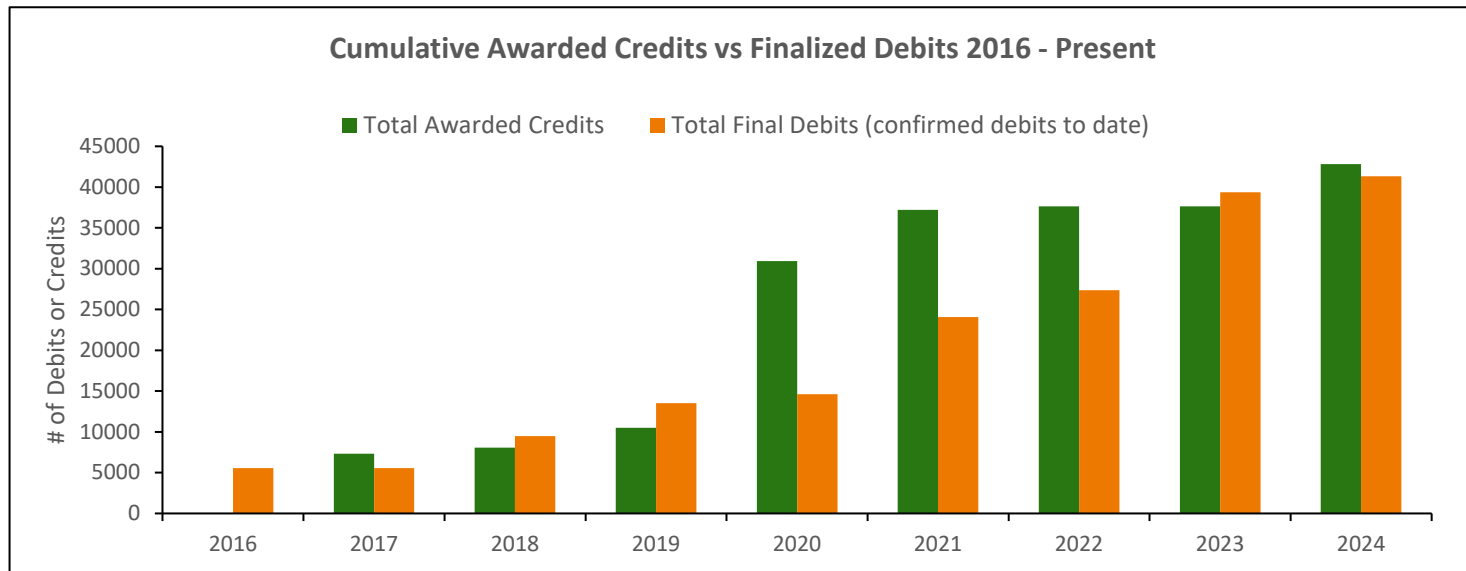


Figure 11. Cumulative awarded credits and finalized debits (includes mitigated and unmitigated) since CCS inception

# STATUS OF GREATER SAGE-GROUSE AND THE SAGEBRUSH ECOSYSTEM





# STATUS OF GREATER SAGE-GROUSE AND THE SAGEBRUSH ECOSYSTEM

## GREATER SAGE-GROUSE POPULATION OVERVIEW

The Nevada Department of Wildlife, along with federal partners such as the Bureau of Land Management (BLM), the U.S. Forest Service (USFS), the U.S. Geological Survey (USGS), and the U.S. Fish and Wildlife Service (USFWS), along with volunteers and environmental consultants, conducts annual sage-grouse lek counts and surveys. Monitoring methods for leks include traditional ground surveys following established protocols and aerial surveys conducted with rotary or fixed-wing aircraft. Some fixed-wing surveys are equipped with infrared camera technology (thermal imaging) that has telephoto capabilities and are flown at altitudes that minimize or eliminate bird disturbance.

In 2024, 846 leks were surveyed, representing approximately 37% of the 2,320 known leks in Nevada. Of those surveyed, 434 were classified as active (having two or more males). The peak male count for 2024 was 9,021, resulting in an average attendance rate of 20.1 males per active lek, which represents a 38% increase over the 2023 attendance rate of 14.6 males per active lek. The 2023 attendance rate was the lowest recorded from 2003 to 2023, compared to the maximum observed in 2005, which was 26.1 males per active lek. Furthermore, the 2024 attendance rate was 10% higher than the previous 20-year average of 18.3 males per active lek. A summary of the lek counts from 2003 to 2023 is provided in Table 1.

Table 1. Total leks surveyed and averages over a twenty-two-year period.

Year	No. of Males	Leks Surveyed	Active Leks	AVG/active lek
2002	5,093	652	321	15.9
2003	5,010	402	271	18.5
2004	7,472	505	321	23.3
2005	10,144	760	389	26.1
2006	11,229	737	433	25.9
2007	11,317	947	525	21.6
2008	7,550	786	438	17.2
2009	7,398	860	442	16.7
2010	7,395	751	410	18
2011	8,571	810	438	19.6
2012	9,953	935	523	19
2013	7,394	820	454	16.3
2014	9,063	934	512	17.7
2015	12,551	1,003	606	20.7
2016	13,366	1,048	586	22.8
2017	11,030	954	553	19.9
2018	9,200	973	554	16.6
2019	7,140	854	466	15.3
2020	2,456	422	196	12.5
2021	5,095	1,021	420	12.1
2022	5,597	1,072	427	13.1
2023	5,723	889	396	14.6
2024	9,102	846	434	20.1
<b>2002-2024 AVG.</b>	<b>8,211</b>	<b>825</b>	<b>440</b>	<b>18.3</b>



# STATUS OF GREATER SAGE-GROUSE AND THE SAGEBRUSH ECOSYSTEM

## GREATER SAGE-GROUSE POPULATION OVERVIEW

### TREND LEKS

In 2024, a total of 143 trend leks were surveyed. Trend leks are a specific subset of total leks in Nevada that are monitored multiple times each year to provide a more accurate estimate of sage-grouse populations in the state. During the 2024 spring breeding season, the average male attendance was 19.5 males per trend lek. This represents a significant increase compared to the 2023 attendance rate of 12.4 males per trend lek. However, the 2024 attendance remains 20 percent below the 20-year average of 23.9 males per trend lek.

The data collected from the 2024 leks indicates substantial population increases, a trend not seen since 2015 to 2017. This improvement can be attributed to two historically above-average winters, coinciding with the sage-grouse population's natural 8-to-10-year oscillation cycle, which is currently on an upward trajectory. The 2024 lek data reflects unusually high-quality habitat conditions, along with increased bird production and recruitment that have not been observed in recent years.

The previous population declines were primarily due to several factors, including extreme drought, large-scale wildfires and their resulting impact on GRSg habitat, and extensive human disturbances during this period. These disturbances include mine expansions, the development of new mines, geothermal facilities, transmission lines, renewable energy projects, and the associated road construction.

Nevada Sage-grouse Trend Lek Attendance (2000 - 2024)

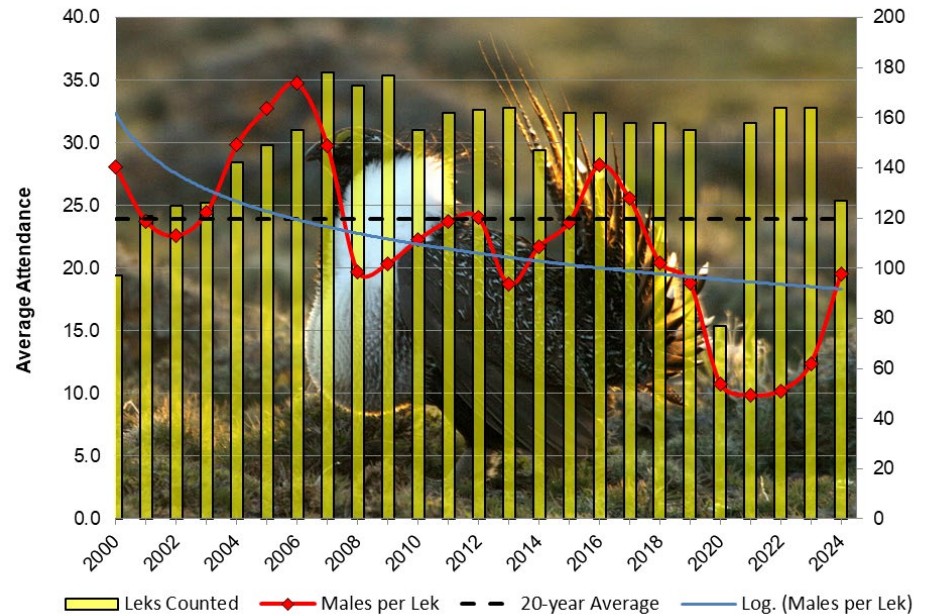
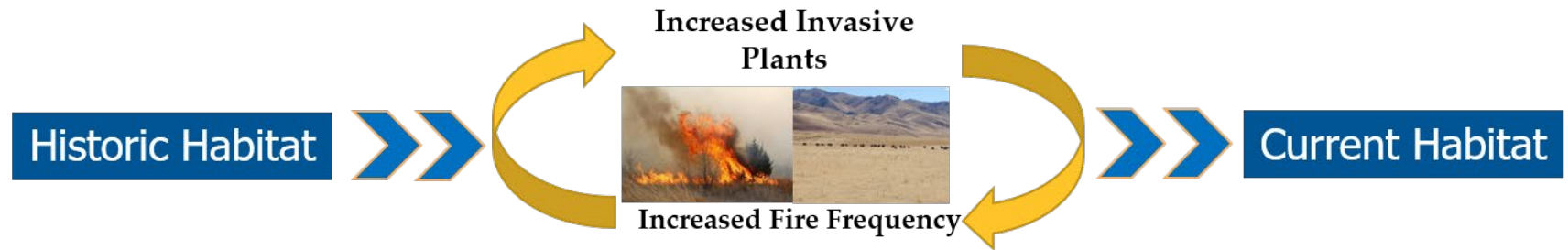


Figure 12. Male sage-grouse lek attendance rates at trend leks from 2000 through 2024.

# THREATS TO GREATER SAGE-GROUSE AND THE SAGEBRUSH ECOSYSTEM

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.



## ANTHROPOGENIC FRAGMENTATION



## OTHER INFLUENCES

- Pinyon Juniper encroachment
- Wild Horse and Burro impacts
- Predation
- Recreation and OHV use
- Improper livestock management

Figure 13. Schematic of threats to sagebrush ecosystems.

Wildfire, cheatgrass invasion, and landscape fragmentation will continue to degrade the sagebrush ecosystem. Proactive measures to prevent catastrophic wildfires, post-fire restoration activities, and the avoid-minimize-mitigate hierarchy will become even more important for reducing threats to Nevada's sagebrush ecosystem and greater sage-grouse habitat.

# THREATS TO GREATER SAGE-GROUSE

**2024\* Wildfires:**

**82,344 acres of wildfire in NV\*\***

**37,820 acres of GRSG habitat**

**46% of acres lost fell within GRSG habitat**

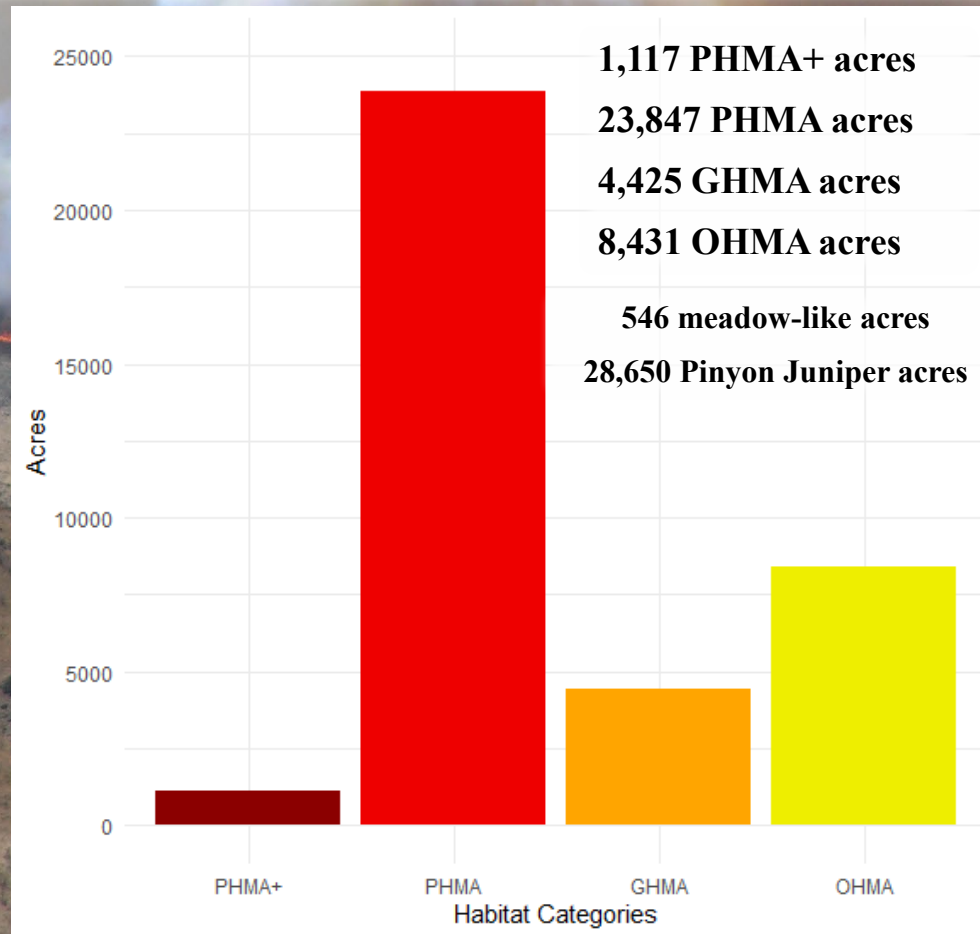


Figure 14. Acres burned in GRSG Habitat in 2024

\* 2024 data are preliminary

\*\*Fires smaller than 50 acres are not included in plots displaying acreages



# THREATS TO GREATER SAGE-GROUSE

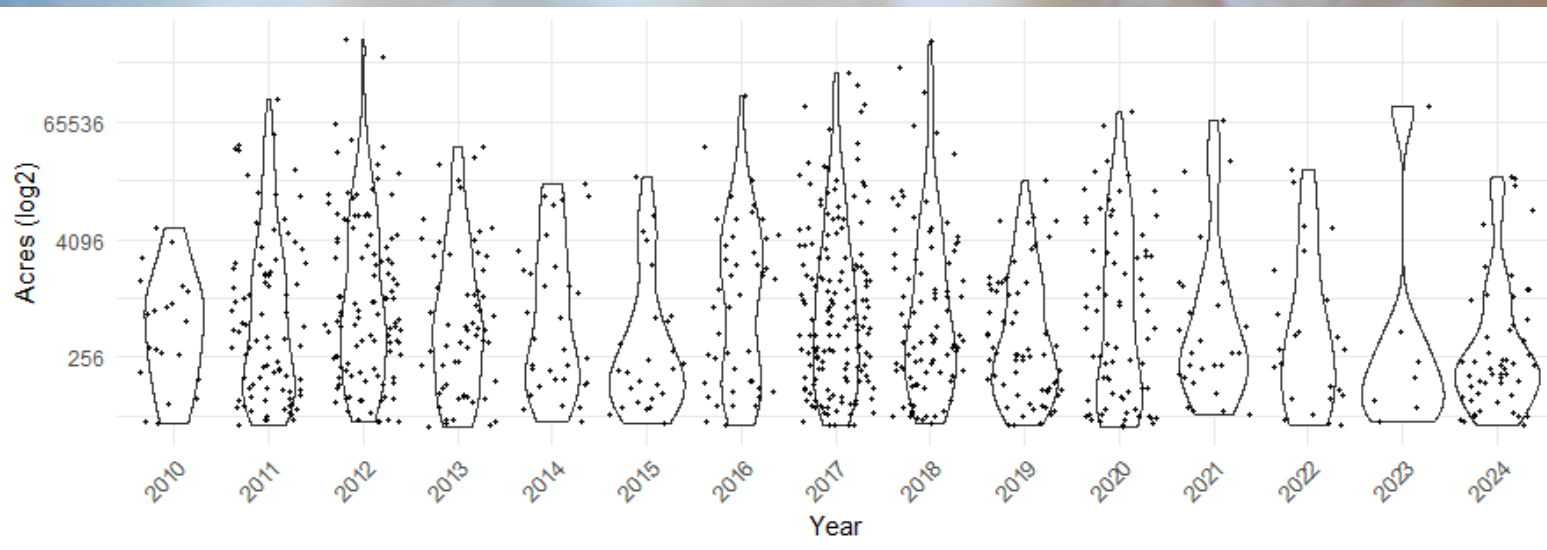


Figure 15. Acreage of fire incidents each year in Nevada from 2010 - 2024

In 2024\*, the mean fire size was 1,565 acres with the largest fire at approx. 18,000 acres. Fire occurrence and size were greater in 2024 than 2022 and 2023.\*\*

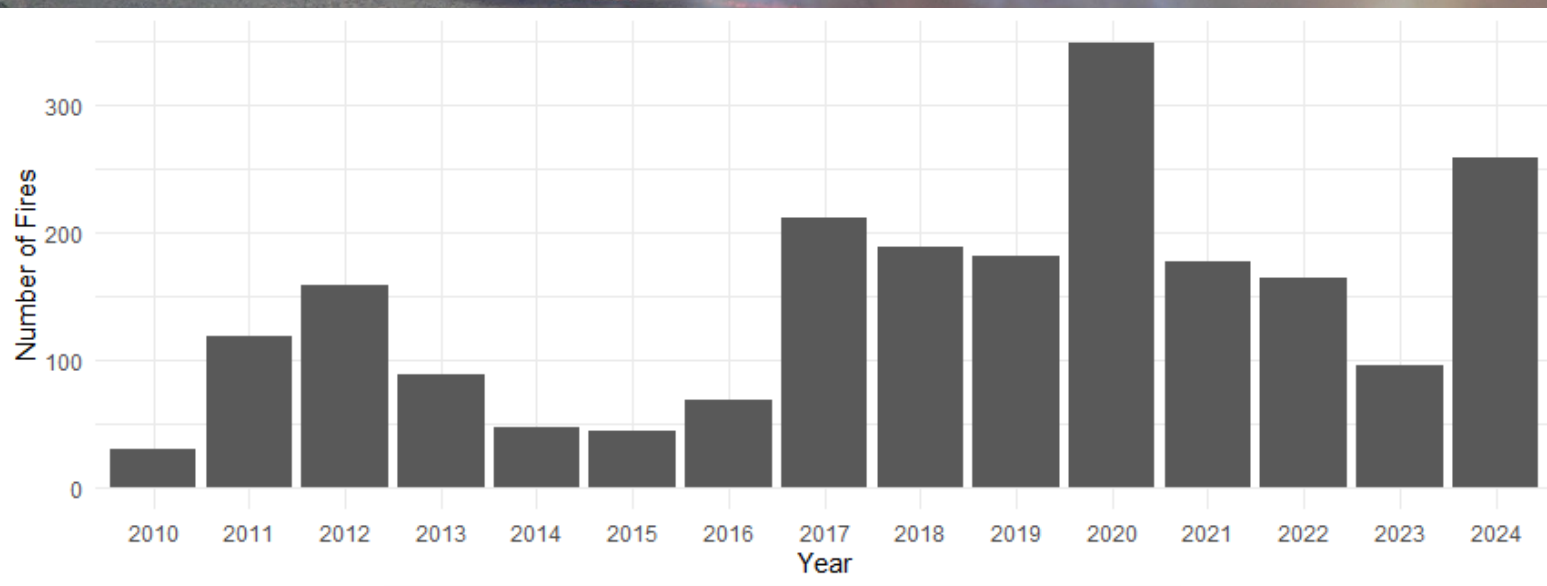


Figure 16. Total number of fires each year in Nevada from 2010 - 2024

In 2024\*, there was an increase in the number of fires compared to the previous three years.

\* 2024 data are preliminary

\*\* Fires smaller than 50 acres are not included in plots displaying acreages

# 2024 PROGRAM OPERATIONS ADMINISTRATION OVERVIEW

As the administrator of the CCS, the SETT is responsible for day-to-day operations of the CCS, as well as the many other responsibilities and initiatives of the Sagebrush Ecosystem Program. Key SETT responsibilities related to the CCS include the following.

## PROGRAM ADMINISTRATION & COMPLIANCE

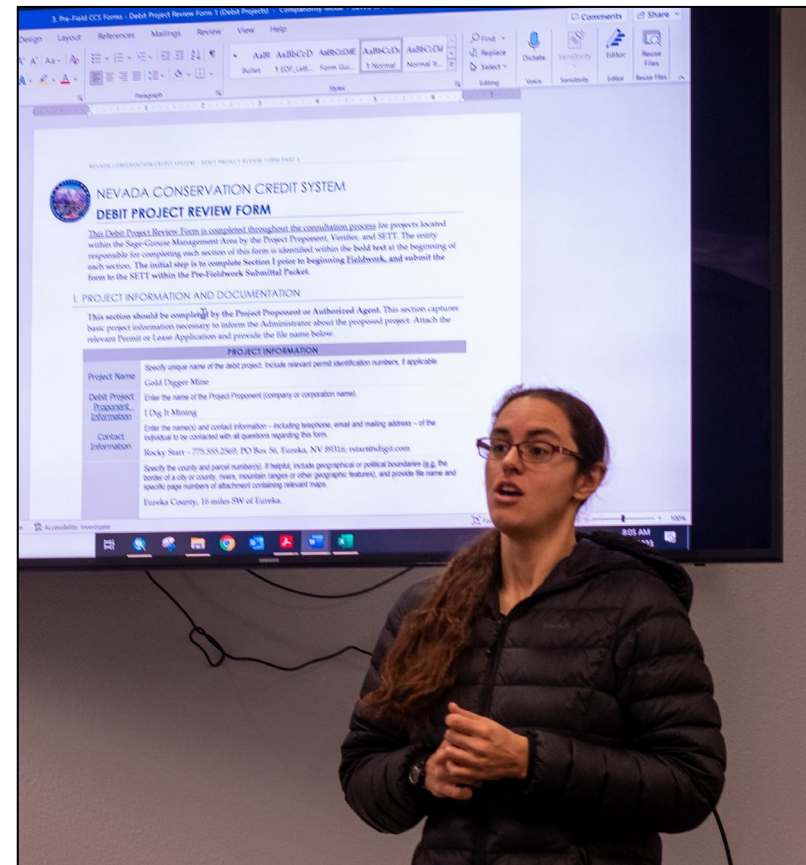
- Continue to provide information to the SEC as requested, and to serve as staff to assist them in fulfilling the statutory and regulatory obligations
- Ensure consistent and accurate application of CCS policies and tools
- Award credits, verify debits, and track credit transfers between credit and debit accounts
- Ensure long-term stewardship and periodic verification of credit projects
- Enforce contract compliance, work with credit developers to implement corrective actions as necessary, and manage the reserve account
- Maintain agreements and coordinate with implementing partners

## CONTINUAL IMPROVEMENT & REPORTING

- Identify opportunities to improve the CCS based on new science findings, operational experience and changing policy context
- Develop improvement recommendations through analyzing alternatives and engaging science community
- Publish improvement recommendations with supporting rationale, and facilitate review and approval by the Sagebrush Ecosystem Council
- Publish program results in the Semi-annual Report

## PARTICIPANT SUPPORT & OUTREACH

- Support Credit Buyers and Credit Developers through credit generation and debit verification
- Educate stakeholders, and encourage Credit Buyer and Credit Developer participation
- Train Verifiers (59 individuals were certified in 2024)
- Continued participation in collaborative, multi-jurisdictional meetings statewide



Verifier Training 2023







# 2024 PROGRAM OPERATIONS TECHNICAL TEAM ACTIVITIES

- Held the 9<sup>th</sup> annual CCS Certified Verifier Training in January with 74 attendees, 59 of which were certified.
- Attended the Society for Range Management’s annual meeting in January and co-hosted a booth with the Nevada Conservation Districts Program at the trade show.
- Visited multiple ranches to maintain and foster relationships with landowners involved in the CCS.
  - Conducted two Five-Year Qualitative Assessments of credit projects.
  - Assisted one credit proponent with their annual monitoring report and photographs.
  - Visited two of the three newly enrolled credit projects.
  - Held several meetings with one credit producer to assist in addressing degradation of their meadow system, upon which GRSG in the area rely. In collaboration with the county, the SETT will help implement a variety of restoration strategies that range from low-cost/low-tech methods to more high-tech methods involving the use of heavy-machinery. Additionally, the SETT will assist in writing grants that will alleviate the financial burden on the landowner.
- Updated the CCS Manual, User’s Guide, and Scientific methods documents to enhance clarity for proponents and verifiers and improve the program.
- Attended the ROGER Tour at the Baker Ranch, which included many State and Federal agencies, along with landowners.
- Reinitiated the Adaptive Management Statewide Technical Team to address priority PMUs for 2025.



*Campsite during five-year assessment*



*Assessment of meadow degradation*



*Humboldt Ranch – Toe Jam*

## Other efforts of the Sagebrush Ecosystem Technical Team during 2024 included:

- Assisted in the annual Nevada Youth Range Camp in June, teaching plant identification to high-schoolers.
- Attended a field tour hosted by the Shoesole Resource Management Group in NE Nevada.
- Attended a field tour hosted by one of our debit project proponents to view results of reclamation activities.
- Held six Sagebrush Ecosystem Council Meetings.
- Held two SEC subcommittee meetings, one workshop, and one hearing for proposed NAC changes that will clarify the SEP's verifier certification and decertification processes.
- Managed subgrant for USGS.
- Continued working on Sagebrush Ecosystem Program Strategic Action Plan update.
- Collaborated with federal and state agencies to enhance planning and conservation efforts.
- Served as cooperating agency in various stages of NEPA processes for large-scale disturbances.
- Attended Greater Sage-Grouse, wildfire, conservation efforts and tracking, mining, and restoration meetings.
- Worked with the Nevada Creeks and Communities Team to implement, and attend, the May 2024 Riparian Proper Functioning Condition (PFC) workshop, and plan the 2025 workshops.
- Assisted NDOW with several sage-grouse lek surveys.



*North River Fork Ranch – site of May 2024 PFC training*

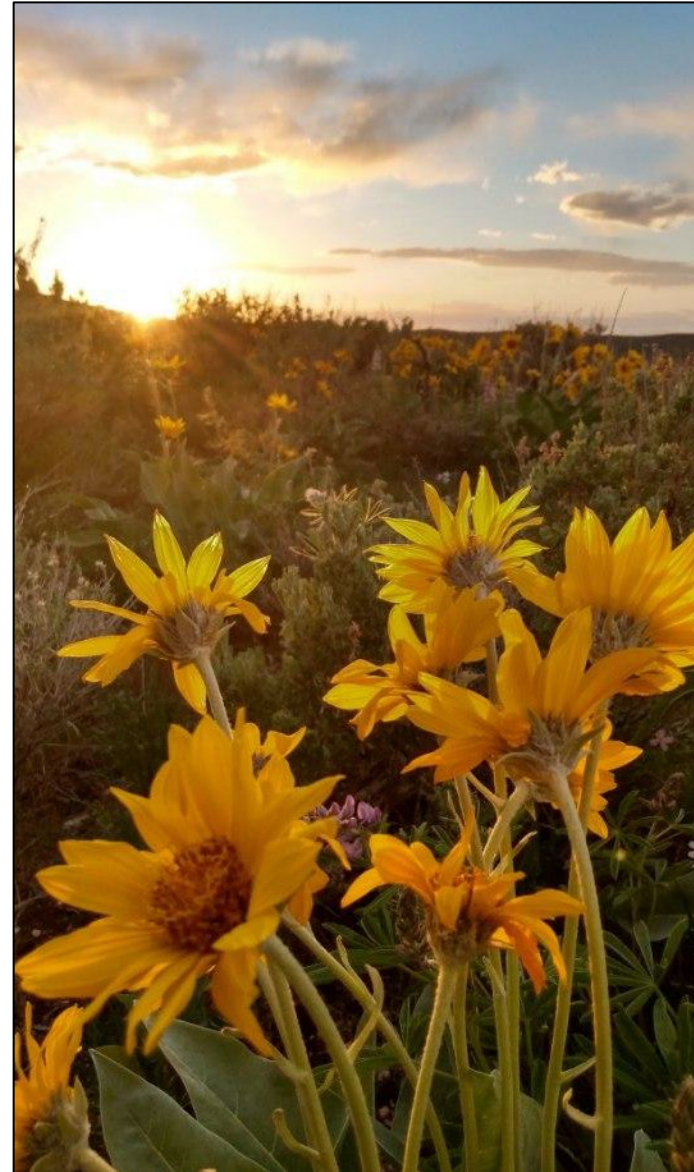


*Mine reclamation site*



# PLANS FOR THE FUTURE

- Continue to:
  - Implement the CCS and the avoid-minimize-mitigate hierarchy.
  - Work with credit & debit project proponents to help navigate the CCS, address project issues, and maintain productive relationships.
  - Train & assist verifiers in assessing debit project impacts and credit project conservation values.
  - Ensure credit projects that were awarded State seed-funding continue moving forward with ecosystem improvements & management planning.
  - Maintain/improve MOU that allows continued partnership among DCNR, BLM, and NDOW.
  - Participate in meetings with BLM, USFS, USFWS and NDOW staff to foster awareness of the CCS, its legal requirement, and its implementation.
  - Update the SEP Strategic Action Plan as necessary.
  - Take part in land management agency plan amendments.
  - Establish annual meetings in collaboration with other western states to exchange knowledge on sagebrush ecosystem conservation and Greater Sage-Grouse mitigation.
  - Integrate new science/tools into the CCS to achieve more effective mitigation for the Greater Sage-Grouse and its habitats.
  - Increase the level of detail covered during annual verifier training.
- Convene Local Area Working Groups to refine the priorities for the 2025 Adaptive Management Process.
- Finalize CCS Pocket Guide for distribution to potential future credit proponents.



*Balsamorhiza*



The Sagebrush Ecosystem Program is grateful for the agency partnerships and support that are critical for program implementation and long-term success of the CCS.

