Nevada Strategic Action Plan

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

Prepared by the Nevada Sagebrush Ecosystem Team

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Draft

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1. INTRODUCTION

The 2014 Nevada Greater Sage-Grouse Conservation Plan (2014 State Plan) sets the direction for management, uses, and restoration of sagebrush ecosystems. The guiding principles from the 2014 State Plan are to create a balanced foundation and vision for a coordinated management approach to conserve sage-grouse and the sagebrush ecosystems in Nevada. The following goals are taken from the 2014 State Plan:

> *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.*

This Strategic Action Plan[1] is a companion document to the 2014 State Plan that informs how the plan will be implemented in terms of:

1. Focus areas for conservation efforts.
2. Prioritized areas on public and private lands to implement a landscape scale restoration effort.
3. Identification of where the primary threats to sage-grouse habitat are located throughout the State.
4. Guidelines for where efforts can be prioritized in order to achieve landscape-scale conservation of sage-grouse and the sagebrush ecosystem based on localized threats and local area conditions including resistance and resilience regimes, and ecological state.
5. Funding sources for implementation of conservation treatments and projects.

[1] Note from 2014 Plan:

- The planning efforts of the Bi-State Distinct Population Segment Great Sage-grouse will serve as a general template for the SAP in terms of the level of specificity needed for project planning and commitment to funding (Bi-state Technical Advisory Committee Nevada and California 2012, Bi-State Executive Oversight Committee 2014).

2. DESIRED OUTCOMES OF THE STRATEGIC ACTION PLAN

Three general concepts were derived from the State Plan that frame the Strategic Action Plan.

1. Execute an MOU with the BLM and USFS to collaborate and cooperate on decisions and practices to prioritize conservation of sagebrush ecosystems for the benefit of greater sage-grouse and other species in accordance with the principles of sustainability, multiple use, and adaptive management. Include measures in the MOU that allow development of develop conservation credit projects on public land.
2. Engage all stakeholders to participate in site and local scale threat identification, specification of treatment alternatives to reduce threats to greater sage-grouse, monitoring, and adaptive management.
3. Empower local planning groups, such as CDs and LAWGs, to make informed decisions and science-based analyses of local conditions with the assistance of the SEP.

Adaptive Management

2014 Nevada Greater Sage-grouse Conservation Plan will be implemented through an adaptive management framework.

ADAPTIVE MANAGEMENT Strategy 1: Define a process of structured decision making, with an emphasis on uncertainty about resource responses to management actions and the value of reducing uncertainty to improve management *(DOI 2009).* Incorporate a process for maintaining current scientific findings and management implications

Action Monitoring 1-1: Work collaboratively with federal, state, tribal and local governments, and other stakeholders to predict outcomes of land use decisions based on the current state of knowledge; design specific monitoring protocols to inform success of actions and decisions; implement projects/actions; monitor responses to actions; assess and use the results to update the state of knowledge; and adjust actions as needed.

Still rough:

- Provide information and advice to persons, federal and state agencies and local governments concerning any strategy, system, program or project carried out under this State Plan;
- Provide direction to state agencies concerning any strategy, system, program or project carried out pursuant to this State Plan and resolve any conflict with any direction given by another state board, commission, or department jointly with that board, commission or department, as applicable;
- Establish policies for the identification and prioritization of landscape-scale enhancement,

restoration, fuel reduction, and mitigation projects based upon ecological site potential, state and transition models, and other data that will contribute to decision making informed by science to increase resiliency; and

The specific duties of the SETT include:

- Oversee the day-to-day implementation of the goals, objectives, and management actions established under this State Plan.
- Enter into an MOU with the BLM and USFS for agency coordination on sage-grouse management and administration of the CCS;
- Identify and prioritize landscape-scale enhancement, restoration, fuel reduction, and mitigation projects based upon ecological site potential, state and transition models, and other data that will contribute to decision making informed by science to increase resiliency following wildfire;
- Secure grants and other funding opportunities to implement habitat enhancement and restoration projects;
- Develop and oversee a monitoring and adaptive management program and provide recommendations to the SEC on how to update policies based on new information learned; and
- Establish a geographic database repository to maintain the inventory of development and mitigation projects, population data, and monitoring results.

Stakeholder Involvement

The Sagebrush Ecosystem Program and 2014 State Plan are based on a collaborative, multi-stakeholder approach. The 2014 State Plan instructs the SEP to carry out programs that conserve, restore, and enhance sagebrush ecosystems in the State of Nevada. Effective implementation of sage-grouse conservation actions will be conducted at both the state and local levels through a collaborative, interagency approach that engages private, non-governmental, local, state, Tribal, and federal stakeholders. It is suggested that the Directors and Administrators of participating agencies meet quarterly, or as needed to facilitate information sharing and agency updates, review and interpret monitoring data, develop annual work plans, make adaptive management decisions, and maintain accountability for implementation of the State Plan.

State Level Responsible Parties: BLM, USFS, USFWS, NRCS, USGS, NDOW, NDF, NDA, Nevada Congressional Delegation, Governor's Office, Cooperative Extension, Tribes, DOD, University of Nevada System.

Action SI-1: The SEP will participate in developing and executing a MOU between the appropriate state and federal stakeholders that allows for collaboration and cooperation in moving forward with implementation of the State Plan.

Action SI-2: To maximize conservation efforts in an efficient manner, the SEP will evaluate the potential for development of *Service First Agreement* as authorized by USC 43, Chapter 35, Subchapter I §1703 which allows the Secretaries of the Interior and Agriculture the authority to establish programs involving certain land management agencies to conduct activities jointly or on behalf of one another; make reciprocal delegations of their respective authorities, duties, and responsibilities; and transfer funds and reimburse funds on an annual basis, including transfers and reimbursements for multi-year projects. (See details in Attachment A and example from the Bi-State Executive Oversight Committee.)

Local Level Responsible Parties: SEP, Conservation Districts, Counties, Cooperative Extension, Tribes, Counties, Local Area Working Groups.

Action SI-3 The SEP will work to incentivize and empower Local Area Working Groups (LAWGs) and Conservation Districts with baseline data and guidelines to facilitate local involvement to develop and implement on-the-ground sage-grouse and sagebrush ecosystem conservation efforts that address site and local scale risks. Local plans will include detailed schedules, monitoring protocols, and adaptive management triggers specific to individual project areas.

Action SI-4 The SEP will provide local governments baseline data and guidelines to avoid conflicts with sage-grouse habitat such as urbanization, land subdivision, road construction, utilities, etc.

Local Area Planning Groups

The SEP is charged with working with Local Area Working Groups (LAWGs) and Conservation Districts (CDs) to help identify and implement on-the-ground sage-grouse and sagebrush ecosystem conservation efforts.

Action LAWG-1 The SETT will provide technical expertise to LAWGs and CDs to help identify and prioritize landscape-scale enhancement, restoration, fuel reduction, and mitigation projects based upon ecological site potential, state and transition models, resilience and resistance, and other data that will contribute to local decision making informed by science.

Action LAWG-2 The SETT will work with the LAWGs and CDs to develop and implement site-specific plans to accomplish habitat enhancement and restoration projects in areas that are identified by the SEP and the LAWGs as important areas for sage-grouse conservation.

Action LAWG-3 The SETT will assist LAWGs and CDs with pursuing grant and other funding opportunities for implementation and monitoring conservation and mitigation projects.

Research and Continuing Education

A fundamental component of the adaptive management process is to provide the public opportunities and a forum to provide suggestions and exchange information to expand the scientific knowledge of sagebrush ecosystems.

RESEARCH Strategy 1: Continue to refine our knowledge of rangeland ecology and conservation biology to provide the best available science for informing management and permitting decisions in sage-grouse habitat that will conserve sage-grouse in Nevada while maintaining the economic vitality of the State.

Responsible Parties: Cooperative Extension, University of Nevada CABNR, Tribes, BLM, USFS, Private Land Owners

---to be completed---

Education Strategy 1: Coordinate and facilitate discussions among private industry, federal and state agencies, and local governments concerning the maintenance of sagebrush ecosystems, the appropriate use of the conservation credit system, and the status of sage-grouse conservation.

Action Education 1: The SETT will create and deliver informational media and programs such as brochures, manuals, and group presentations to explain the CCS, the HQT, and the policies and assumptions used in the credit/debit calculations.

2. STATE-LEVEL STRATEGIES AND ACTIONS TO ADDRESS IDENTIFIED THREATS

Guidelines and actions to substantially reduce or eliminate potential risks to greater sage-grouse populations and habitat at the site and local levels.

Wildfire

The State Plan is consistent with and will prioritize actions to reduce the greatest risk to GRSG in accordance with the tenants of the *National Cohesive Wildland Fire Management Strategy* for collaboration among stakeholders across all landscapes, using best science to make meaningful progress toward 1) Resilient landscapes; 2) Fire adapted communities; and 3) Safe and effective wildfire response (Attachment 2).

Strategy FIRE 1. Coordinate with State and Federal fire agencies and local stakeholders to design, implement, and maintain effective fuel reduction treatments and fuel breaks based on best available science to protect sage-grouse habitat in Core and Priority Management Areas and other areas with low resistance and resilience. Require monitoring and reporting to inform future project planning and implementation.[Action 1.1.1c, 1.1.1d]

Responsible Parties: NDF, BLM, USFS, Cooperative Extension, ?

Attend annual meetings of .....and present updates on the CCS and status of State Plan implementation.

Action FIRE 1-1: The SEP will facilitate interagency agreement updates, wildfire workshops, demonstration projects, and public service announcements on wildfire and sage-grouse habitat to maintain and improve interagency wildfire prevention activities and education statewide. [1.1.2b]

Action FIRE 1-2: The SETT Provide input to fire agencies with clear definitions of the conditions and general locations where pre-planned burning should be allowed or avoided . **Education????** Encourage state and federal fire agencies to strategically use prescribed burning and beneficial fire use as an optional tool to accomplish resource management objectives when a detailed burn plan has been prepared by a certified ..xx.. that incorporates objectives for sage-grouse habitat improvement. [Action 1.1.2d]

Strategy FIRE 2: Maintain innovative, coordinated, and rapid fire suppression capabilities using a diversity of agencies, including federal, state, tribal, and local government and empower Fire Management Officers to incorporate habitat priorities for conservation into fire suppression strategies and plans.

Responsible Parties: NDF, BLM, USFS, Counties, Local Area Working Groups

Action Fire 2-1: Develop educational and informational apps for accessing current geographic information, maps, and shapefiles of Core and Priority Management Areas where suppression of wildland fire is a priority.

Action Fire 2-2: Create short training videos and U-tube flicks for transferring information on basic sage-grouse biology and habitat characteristics for National Fire Suppression Teams, Rural Fire Associations, Rural Fire Protection Districts, and Wildfire Support Groups. [1.1.2a]

Strategy FIRE 3: Consider the use of native plant materials for fire rehabilitation based on availability and probability of success. When native plant materials are not available or the probability of success is low, use non-native, adapted species that will best meet habitat functions. [Action 1.1.3f]

Responsible Parties: BLM, USFS, NDF, NRCS, Tribes

Action Fire 3-1: Pre-plan basic fire restoration treatments in Core, Priority, and General Management Areas where with low resilience vegetation communities have been documented. FIAT? Plans may be modified on a case-by-case basis as necessary to incorporate site specific conditions or in response to seed and plant material availability. [Action 1.1.3f]

Action Fire 3-2: Establish or update MOUs or other agreements to allow collaboration between federal, state, county and local agencies, tribes, and private land owners in developing and implementing timely fire rehabilitation plans to meet sage-grouse habitat objectives. [1.1.3f, 1.1.3e]

Invasives

xxxx.....xxxx

Strategy INVASIVE 1: Prioritize prevention of invasive plant establishment in sage-grouse habitat. Implement and document practices for detection, control, restoration, and monitoring across all land ownerships and jurisdictions using the best available science. [1.1.4a, 1.1.4e]

Responsible Parties: BLM, USFS, Private Land Owners, Conservation Districts, LAWGs, [All Stakeholders]

Action Invasive 1-1. Incorporate systematic and strategic detection surveys and mapping of invasive species into pre-project baseline surveys and other ongoing monitoring and survey efforts. Utilize the NDA EDDMaps database as a central repository to maintain all records of invasive plant occurrences and treatment records including herbicide names and rates, follow-up treatments, and treatment results.

Review maps and treatment results annually and distribute updated treatment recommendations to CWMAs, Counties, and .....[1.1.4a]

Action Invasive 1-2. Require all credit and debit projects to apply design features specified in Appendix A of the State Plan to permitted anthropogenic disturbances to minimize the disturbed surface area and prevent the spread of invasive plants. [Action 1.1.4b]

Action Invasive 1-3. Require project proponents of land disturbing activities to monitor for invasive plants annually and report all findings to the NV EDDMaps database. [1.1.4c]

Strategy INVASIVE 2: Maintain sagebrush ecosystems that are resistant to invasion of non-native species and resilient after disturbances such as wildfire. [Action 1.1.4g, Objective 2a]

Responsible Parties: BLM, USFS, NRCS, Private Land Owners, Stockmen, LAWGs

Action Invasive 2-1: Create and distribute maps that identify priority areas for restoration and/or resiliency enhancement om sage-grouse habitat using best science including ecological site descriptions with state and transition models to identify areas for resiliency enhancement or restoration. FIAT? Prioritize implementation of rehabilitation treatments in sage-grouse habitat where the risk of transition to an annual dominated plant community is greatest and the potential to meet or move toward desired habitat conditions is highest. [Action 1.1.4g]

Action Invasive 2-2: Use the concepts of resistance and resilience and the Fire and Invasives Assessment Tool (FIAT) to determine if post-fire restoration treatments are necessary to achieve sage-grouse habitat objectives. [Action 1.1.3c] – move to fire????

Pinyon-juniper encroachment

Encroachment of pinyon and/or juniper into sagebrush communities is ranked as the third greatest risk to greater sage-grouse in Nevada. The continuing expansion of trees contributes to the loss of important seasonal habitats. It also increases raptor presence and predation associated with coniferous trees (Commons 3t al. 1999). Several studies demonstrate that sage-grouse avoid areas encroached by PJ, show that p-J removal will increase sage-grouse habitat quality, and provide some evidence that sage-grouse will return to an area once P-J is removed.

Strategy PJ 1: Control and reverse expansion of P-J into sage-grouse habitat.

Responsible Parties: BLM, USFS, NDF, NRCS, Private Land Owners, Wood Products Industry

Action PJ 1-1: Inventory, map, and prioritize Phase I and Phase II PJ encroachment treatments based on ecological site potential within and contiguous to Core, Priority, and General Habitat Management Areas to achieve desired habitat conditions. [Action 1.1.1]

Action PJ 1-2: Implement Phase III encroachment treatments to reduce the threat of severe wildfire conditions and extreme fire behavior, to create movement corridors, or to provide habitat connectivity. Do not remove old growth trees on true woodland sites. [Action 1.1.2, Action 1.1.3, Action 1.1.10]

Strategy PJ 2: Support and incorporate other state initiatives such as the PJ Partnership that incentivize and assist with development of bio-fuels and other commercial uses of pinyon and juniper biomass from treatment projects to restore sagebrush ecosystems. [Action 1.1.7]

Responsible Parties: BLM, USFS

Action PJ 2-1. Authorize stewardship contracts for up to 20 years to increase the incentives for private industry investment in biomass removal, land restoration, and renewable energy development. [Action 1.1.8] What has to happen here to make this a reality?

Action PJ 2-2. Treat at least 100,000 acres of encroached habitat annually. Monitor, evaluate results, and adjust treatment acreage or methods as new science develops. [Action 1.1.9]

4. Local Plans for Biological Significant Units

Greater sage-grouse Population Management Units (PMU) were designated by the Nevada Department of Wildlife in 2001 based on sage-grouse distribution, available telemetry data, and personal knowledge of Nevada Biologists. Years later, in 2015, the Nevada Sagebrush Ecosystem Program combined PMUs into 16 distinct areas based upon further knowledge of how the birds interact with the landscape and with one another. These larger geographic management and planning units, known as *Biological Significant Units* (BSU), consolidate PMUs into for use by land managers, private land owners, and state resource management agencies. Risks, goals and objectives will be evaluated and proposed conservation actions will be prioritized for each for each BSU in Nevada. BSU plans can be down to the PMU level as needed to address specific circumstances.

The purpose of the BSU Strategic Action Plans is to provide spatial delineation and prioritization of goals, objectives and management actions (2014 State plan)

Insert Figure 1. Map showing 16- 18 BSUs

4.1 Black Rock BSU

Humboldt County: Lahontan Cutthroat Trout ISA, Summit Lake Indian Reservation

Approximately 420,570 acres

4.1.1 Brief General Description of BSU.

MLRA, WAFWA Management Zone, ecological sites, climate

4.1.2 Maps:

Land Ownership

4.1.3 Fire and Invasives

Insert Maps showing fire history, invasive annual grasses, noxious weeds, output of FIAT process.
Summary of level of this threat; information on factors contributing to that level of risk

4.1.4 Pinyon-Juniper

Maps showing PJ encroachment, output of FIAT process
Summary of level of this threat; information on factors contributing to that level of risk

Wild and Free Roaming Horses and burros

Maps showing AML and past/current population for HMA/WHBTs
Summary of level of this threat; information on factors contributing to that level of risk

Livestock Grazing

Maps showing permitted areas, land health monitoring history
Summary of level of this threat; information on factors contributing to that level of risk

Anthropogenic Disturbances

Maps of existing anthropogenic disturbances
Summary of level of this threat; information on factors contributing to that level of risk

A preliminary analysis of existing disturbance completed by the BLM ?? in January 2015 showed.....

Recreation

Maps of designated recreation areas (e.g., campgrounds, OHV areas)
Summary of level of this threat; information on factors contributing to that level of risk

Sage-grouse Populations. The Black Rock BSU encompasses three PMUs as shown in Figure 2 and described below. (trend leks, populations, population trends)

Black Rock PMU. Black Rock Range (2681 m)- Pahute Peak Wilderness Area, North Black Rock Range Wilderness Area, Battle Creek, North Fork Battle Creek, South Fork Battle Creek, West Branch Battle Creek, Bartlett Creek, South Fork Mahogany Creek, Mahogany Creek, Pole Creek, Center Creek, Paiute Creek, Deer Creek, Indian Creek, Pidgeon Spring Creek, Soldier Creek, Slumgullion Creek, Colman Creek.

Pine Forest PMU. Pine Forest Range (2864 m) - Blue Lakes Wilderness Area (2864 m), Alder Creek Study Area, Chicken Creek, Snow Creek, Sage Hen Creek, Leonard Creek, North Fork Leonard Creek, New York Canyon Creek, Big Creek, Trail Creek, North Fork Big Creek, North Fork Willow Creek, Boyd Creek, Little Alder Creek, South Fork Granite Creek, Alta Creek, Cow Creek, Knott Creek, Cove Creek, Snow Creek, North Fork Snow Creek, Corral Creek,

Jackson PMU. Jackson Mountains (2772 m) – North Jackson Mountains Wilderness Area, South Jackson Mountains Wilderness Area, Willow Creek, Big Creek, Boulder Creek, Burro Bills Creek, Bottle Creek, Little South Fork Bottle Creek, Big South Fork Bottle Creek, East Fork Happy Creek, West Fork Happy Creek, North Fork Jackson Creek, Trout Creek, Clover Creek, Louse Creek.

Recommendation for Local Area Plans

1. Focus areas for conservation efforts.
2. Prioritized areas on public and private lands to implement a landscape scale restoration effort.
3. Identification of where the primary threats to sage-grouse habitat are located throughout the BSU.
4. Guidelines for where efforts can be prioritized in order to achieve landscape-scale conservation of sage-grouse and the sagebrush ecosystem based on localized threats and local area conditions including resistance and resilience regimes, and ecological state.

4.2 Butte/Buck/White Pine BSU

West White Pine County, south central Elko County,

281,588 acres

Brief General Description of BSU. MLRA, WAFWA Management Zone, ecological sites, climate

Maps:

Land Ownership

Fire and invasives
Insert Maps showing fire history, invasive annual grasses, noxious weeds, output of FIAT process. Summary of level of this threat; information on factors contributing to that level of risk

Pinyon-juniper
Maps showing PJ encroachment, output of FIAT process
Summary of level of this threat; information on factors contributing to that level of risk

Wild and Free Roaming Horses and burros
Maps showing AML and past/current population for HMA/WHBTs
Summary of level of this threat; information on factors contributing to that level of risk

Livestock grazing
Maps showing permitted areas, land health monitoring history
Summary of level of this threat; information on factors contributing to that level of risk

Anthropogenic disturbances
Maps of existing anthropogenic disturbances
Summary of level of this threat; information on factors contributing to that level of risk

Recreation
Maps of designated recreation areas (e.g., campgrounds, OHV areas)
Summary of level of this threat; information on factors contributing to that level of risk

Sage-grouse Populations. The Butte/Buck/White Pine BSU encompasses one PMU as shown in Figure 2 and described below. (trend leks, populations, population trends)

Butte/Buck/White Pine PMU

Recommendations for Local Area Plans:

1. Focus areas for conservation efforts.
2. Prioritized areas on public and private lands to implement a landscape scale restoration effort.
3. Identification of where the primary threats to sage-grouse habitat are located throughout the BSU.
4. Guidelines for where efforts can be prioritized in order to achieve landscape-scale conservation of sage-grouse and the sagebrush ecosystem based on localized threats and local area conditions including resistance and resilience regimes, and ecological state.

4.3 Central Elko BSU

Elko County

Approximately 355,700 acres

Brief General Description of BSU. MLRA, WAFWA Management Zone, ecological sites, climate

Maps:

Land Ownership

Fire and invasives
Insert Maps showing fire history, invasive annual grasses, noxious weeds, output of FIAT process.
Summary of level of this threat; information on factors contributing to that level of risk

Pinyon-juniper
Maps showing PJ encroachment, output of FIAT process
Summary of level of this threat; information on factors contributing to that level of risk;

Wild and Free Roaming Horses and burros
Maps showing AML and past/current population for HMA/WHBTs
Summary of level of this threat; information on factors contributing to that level of risk

Livestock grazing
Maps showing permitted areas, land health monitoring history
Summary of level of this threat; information on factors contributing to that level of risk

Anthropogenic disturbances
Maps of existing anthropogenic disturbances
Summary of level of this threat; information on factors contributing to that level of risk

Recreation
Maps of designated recreation areas (e.g., campgrounds, OHV areas)
Summary of level of this threat; information on factors contributing to that level of risk

Sage-grouse Populations. The Central Elko BSU encompasses four PMUs as shown in Figure 2 and described below. (trend leks, populations, population trends)

North Fork PMU. Duck Valley Indian Reservation - Owyhee River, Granite Creek, Jones Creek, Cow Creek, Reed Creek, Fawn Creek, Summit Creek, Skull Creek, East For Skull Creek, North Fork skull Creek, Black Canyon Creek

Wild Horse Range – Owyhee River, Fourmile Creek, Delaware Creek, North Fork Humboldt River, South Fork Deep Creek, Middle Fork Deep Creek, North Fork Deep Creek, Clear Creek, Deep Creek, Crooked Creek, Beaver Creek, Rifle Creek, Badger Creek, Gravel Creek, Van Duzer Creek, South Wild Horse Creek, North Wild Horse Creek, Sheep Creek, Twin Creek, Alexander Creek, Hutch Creek, Trail Creek, Wood Gulch Creek, Springs Creek, Deer Creek, Haystack Creek, Lime Creek, Little Chicken Creek, Allegheny Creek, Cobb Creek, McCall Creek, Mill Creek, California Creek,

Copper Mountains ( ) – Murphy Wash, Red Bluff Wash, Young American Creek, Johns Creek, Wickiup Creek, Coon Creek, Little Coon Creek, Coon Creek, Miller Creek, Tennessee Creek, Little Copper Creek, Meadow Fork, Dead Horse Creek, Cornwall Creek, Fawn Creek, Copper Creek, West Fork Seventysix Creek, Seventysix Creek, Badger Creek, Bear Creek, Echo Creek, South Fork Annie Creek, Annie Creek, Dry Creek, Willow Creek, West Fork Willow Creek, Middle fork Willow Creek, Dolly Creek, Person Creek, East Fok Willow Creek, Dam Gulch Creek, Coyote Creekm Mason Creek, Stag Creek, Stud Creek, Summit Creek, Cabin Creek, Cottonwood Creek, Horse Creek, East Fork Beaver Creek, West Fork Beaver Creek, Beaver Creek, Indian Creek, Winter Creek, Spring Creek, Twin Springs Creek, North Fork Humboldt River, Smith Creek, Jackstone Creek, Sherman Creek, Sharman Creek, White Rock Creek, Kittridge Creek, Middle Susie Creek, Susi Creek, Maggie Creek,

Independence Mountains - Lone Mountain (2676 m), Swales Mountain (2459 m), Maggie Creek, Susie Creek, Cottonwood Creek, Simon Creek, Lynn Creek, Jack Creek, Little Jack Creek, Indian Creek, Spring Creek, Coyote Creek, Haskell Creek, North Haskell Creek, Little Beaver Creek, Beaver Creek, Lake Creek, South Creek, Dip Creek, Coon Creek, Lone Mountain Creek, Cold Creek, Singleton Creek, Blue Basin Creek, Chicken Creek, Taylor Creek, Swales Creek, Red House Creek, Louise Creek, Camp Creek,

Islands PMU. Salmon Creek, Little Salmon Creek, Little Cat Creek, Sheep Creek, Merritt Creek, Log Creek, Porcupine Creek, Little Log Creek, Sagehen Creek, Ditch Creek, Clover Creek, Walker Creek, Corral Springs Creek, Cowan Creek, Hicks Creek, McDonald Creek, Badger Creek, Deep Creek, Fawn Creek, Columbet Creek, Sanovia Creek, Buck Creek, West Fork Buck Creek, East For Buck Creek, Cow Creek, Corral Creek, Deer Creek, Jack Creek, Jenny Creek, Caudle Creek, Baker Creek, Sheep Creek, Flat Creek, Cherry Creek, Deadman Creek, Three Creek,

Jarbidge Mountains – Bear Creek, Bonanza Creek, Jarbidge River, Fox Creek, West Fork Pine Creek,

Fall Creek Research Natural Area – Fall Creek, Cougar Creek, Gods Packer Creek, Slide Creek, Jim Bob Creek, East Fork Jarbidge River, Robertson Creek,

O'Neil Basin PMU. Cold Springs Creek, Hawes Creek, North Creek, Lime Creek, Willow Creek, O'Neil Creek, Pole Creek, Canyon Creek, Middle Fork Canyon Creek, South Fork Canyon Creek, Goat Creek, North Fork Cottonwood Creek, Middle Fork Cottonwood Creek, Cottonwood Creek, Camp Creek, North Fork Camp Creek, South Fork Camp Creek, Sun Creek, West Marys River, East Fork Marys River, Basin Creek, Williams Creek, T Creek, Draw Creek, Wildcat Creek, Short Creek, Chimney Creek, Meadow Creek, Deep Canyon Creek, Hanks Creek, Conners Creek, South Fork Hanks Creek, Hot Springs Creek, Pole Creek, Gopher Creek, Humboldt River, Shack Creek, Shell Creek, willow Creek, Scott Creek, Monkey Creek, Devil Creek, Deer Creek, West Fork Deer Creek, Middle Fork Deer Creek, East fork Deer Creek,

Currant Creek, South Fork Currant Creek, Spring Creek, Tabor Creek, Stormy Creek, North Fork Burnt Creek, Pole Creek, Spring Creek, Trout Creek, Bishop Creek, Lower Bishop Creek, Town Creek, Cricket Creek, Willow Creek, Bishop Creek Reservoir, Johnson Creek,

Snake PMU. - Snake Mountains ( ) , Dry Fork Jakes Creek, North Fork Jakes Creek, Middle Fork Jakes Creek, south Fork Jakes Creek, Jakes Creek, Dead Bull Creek, Dry Creek, Bull Camp Creek, North Fork Willow Creek, South Fork Willow Creek, Willow Creek, Cold Springs Creek, spring Creek, Loomis Creek, Thousand Spring Creek, West Brush Creek, Brush Creek, Medicine Creek, Toano Draw, Deadman Creek, West Squaw Creek, Knoll Creek, Hanks Creek, Quilici Creek, Valder Creek,

Landscape Scale Recommendations for Local Area Plans:

1. Focus areas for conservation efforts.
2. Prioritized areas on public and private lands to implement a landscape scale restoration effort.
3. Identification of where the primary threats to sage-grouse habitat are located throughout the BSU.
4. Guidelines for where efforts can be prioritized in order to achieve landscape-scale conservation of sage-grouse and the sagebrush ecosystem based on localized threats and local area conditions including resistance and resilience regimes, and ecological state.

4.4 Central Great Basin BSU

The Central Great Basin BSU is located in Lander and Eureka Counties. --insert general description including list of CDs, BLM Districts, WAFWA Management Zone, WMA, NDF Region, NDOW region, etc.

-- insert description of sage-grouse management categories and land ownership for each.

Approximately 33 percent (1,322,542 acres) of the BSU is designated as xyz habitat by the State and as Priority Habitat Management Area (PHMA) by the BLM.

--insert brief description of existing environment – MLRA, ecological site, veg, elevation, climate

Central Great Basin is the largest BSU in Nevada. The Central Great Basin BSU lies within WAFWA Management Zone IV?? and encompasses 4,025,560 acres.[2]

Fire and invasives

Insert fire history, cheatgrass map?, noxious weeds, output of FIAT process.

2000-2013 Fire History

Fire Name	General Location	Year	Acres	PMU
Raven	Shoshone Range	2007	40,012	Toiyabe

[2] BLM 2015 Wildlife Habitat Spatial Lab, GRSG Monitoring Framework

			acres	
Antelope 2		2012	3589	Toiyabe
Hall		2006,	4673 acres	Toiyabe
Berndt		2000	2840	Toiyabe
Carico		2007	3283	Toiyabe
Elephant Head Fire		2007	40,012	Shoshone
Moon Valley 2		2006	2757	Shoshone
Elephant		2007	2188	Shoshone
Goat peak	Shoshone range	2013	1998	Shoshone
Indian Creek	Shoshone range	2012	2553	Shoshone
Bens Peak		2001	103	Shoshone
9th Street		2011	112	Shoshone
Fire Creek	Shoshone range	2011	1445	Shoshone
Saninena	Shoshone range	2007	29,034	Shoshone
Dunphy	reburned in 2007 Sansinena Fire	2005	3823	Cortex-Tuscarora
Beowawe		2000	1350	Cortez
Buckhorn		2001	754	Cortez
Linka		2000	2383	Cortez
BooHoo		2007	27,132	Cortez
Frenchie		2006	3020	Cortez
Well		2006	250	Cortez
Four Tanks		2012	1015	Cortez
Lynn		2013	232	Cortez
Closet		2007	963	Cortez
Dry Hill		2002	152	Cortez
Sheep Creek		2008	296	Cortez
Bob's Flat 3	(reburned in 2011 Griswald)	2007	13,457	Cortez
Griswald		2011	2051	Cortez
Bobs Flat		2001	581	Cortez
Barth		2007	10098	Cortez
Barth 1		2006	2214	Cortez
Chukar Canyon		2011	48,671	Cortez-Tuscarora, North Fork
Carlin		2005	4802	Cortez
Party		2007	4871	Cortez
Scapegoat		2005	2014	Cortez
Pallisade		2012	1435	Cortez
Grass Valley	Simpson Park	2010	1208	Three Bar
Tonkin Fire	Simpson PARK	2012	12091	Three Bar
JD		2006	210	Three Bar
JD Ranch		2007	658	Three Bar
Frasier	Roberts Mountain	2012	12091	Three Bar
Table		2006	627	Three Bar
Table		2005	175	Three Bar
Fluffy Flat		2008	181	Three Bar

Fergeson		2013	1092	Three Bar
Pinto		2012	2879	Diamond
Unidentified		2000	1603	Diamond
Diamond 2		2001	185	Diamond

Pinyon-juniper
Maps showing PJ encroachment, output of FIAT process
Summary of level of this threat

Wild and Free Roaming Horses and burros
Maps showing AML and past/current population for HMA/WHBTs
Summary of level of this threat

Livestock grazing
Maps showing allotments, Table showing seasons of use from Dept of Ag database
Summary of level of this threat

Anthropogenic disturbances
Maps of existing anthropogenic disturbances
Summary of level of this threat

Sage-grouse Populations. The Central Great Basin BSU encompasses five PMUs as shown in Figure 2 and described below. (trend leks, populations, population trends)

Three Bar PMU I

Toiyabe PMU: Toiyabe Range, Reese River Valley, , Simpson Park Mountains east boundary, Town of Austin, to Belmont Road in Monitor Valley

Shoshone PMU: Stone Cabin Basin, Carrico Lake Valley, Crescent Valley, across I-80

Cortez PMU north to I-80 at Carlin

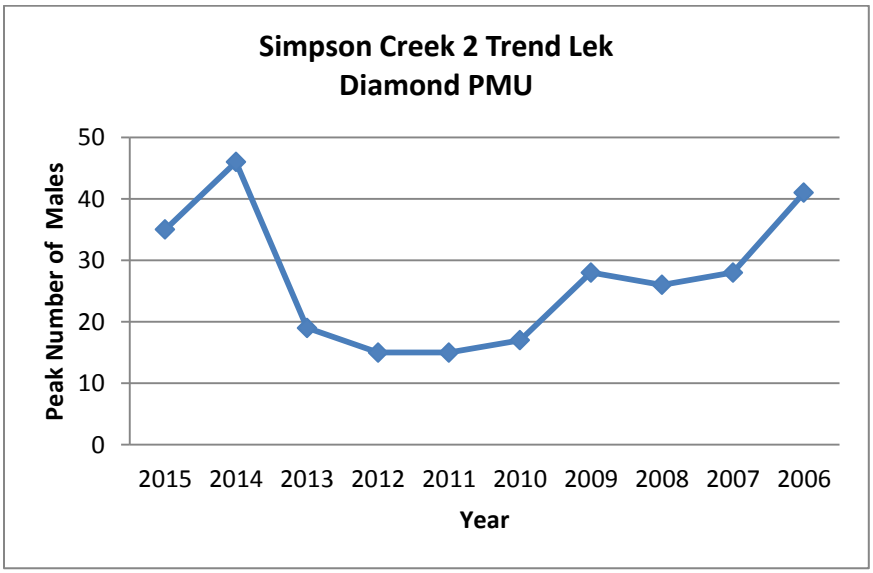
Diamond PMU Eureka, Fish Creek Valley.....

The Shoshone, Cortez, Three Bar, Diamond, and Toiyabe PMU are located within the NDOW South Central Planning Area. Toiyabe and Three Bar are among the largest sage-grouse population within the planning unit. Overall the trend lek attendance rate in the South Central planning area has exceeded the long term average of 28.3 males/lek in 8 out of 11 years between 1995 and 2014. The Three Bar and Toiyabe PMU (along with Monitor and Reese River in the xx BSU) have driven trends upward and do not seem to be as negatively affected by extended drought conditions as in other

portions of the state. The South Central and White Pine planning areas are the only ones to exhibit a positive population trend over the last 20 years (NDOW 20014). Trends for the five

The Diamond PMU has one trend lek, Simpson Creek 2, that has been monitored for more than 10 years.

---insert summary from federal aid report.



Landscape Scale Recommendation for Local Area Plans

1. Focus areas for conservation efforts.
2. Prioritized areas on public and private lands to implement a landscape scale restoration effort.
3. Identification of where the primary threats to sage-grouse habitat are located throughout the BSU.
4. Guidelines for where efforts can be prioritized in order to achieve landscape-scale conservation of sage-grouse and the sagebrush ecosystem based on localized threats and local area conditions including resistance and resilience regimes, and ecological state.

4.5 East High Desert BSU

Southeast Elko County, northeast White Pine County

282,991 acres

Brief General Description of BSU. MLRA, WAFWA Management Zone, ecological sites, climate

Maps:

Land Ownership

Fire and invasives
Insert Maps showing fire history, invasive annual grasses, noxious weeds, output of FIAT process.
Summary of level of this threat; information on factors contributing to that level of risk

Pinyon-juniper
Maps showing PJ encroachment, output of FIAT process
Summary of level of this threat; information on factors contributing to that level of risk

Wild and Free Roaming Horses and burros
Maps showing AML and past/current population for HMA/WHBTs
Summary of level of this threat; information on factors contributing to that level of risk

Livestock grazing
Maps showing permitted areas, land health monitoring history
Summary of level of this threat; information on factors contributing to that level of risk

Anthropogenic disturbances
Maps of existing anthropogenic disturbances
Summary of level of this threat; information on factors contributing to that level of risk

Recreation
Maps of designated recreation areas (e.g., campgrounds, OHV areas)
Summary of level of this threat; information on factors contributing to that level of risk

Sage-grouse Populations. The East High Desert BSU encompasses two PMUs as shown in Figure 2 and described below. (trend leks, populations, population trends)

East Valley PMU

Schell/ Antelope PMU

Recommendations for Local Plans:

1. Focus areas for conservation efforts.

2. Prioritized areas on public and private lands to implement a landscape scale restoration effort.
3. Identification of where the primary threats to sage-grouse habitat are located throughout the BSU.
4. Guidelines for where efforts can be prioritized in order to achieve landscape-scale conservation of sage-grouse and the sagebrush ecosystem based on localized threats and local area conditions including resistance and resilience regimes, and ecological state.

4.6 Lassen/South Washoe BSU

Washoe County, Nevada; Lassen County CA

216,297 acres

Brief General Description of BSU. MLRA, WAFWA Management Zone, ecological sites, climate

Maps:

Land Ownership

Fire and invasives
Insert Maps showing fire history, invasive annual grasses, noxious weeds, output of FIAT process.
Summary of level of this threat; information on factors contributing to that level of risk

Pinyon-juniper
Maps showing PJ encroachment, output of FIAT process
Summary of level of this threat; information on factors contributing to that level of risk

Wild and Free Roaming Horses and burros
Maps showing HMA/WHBTs, Table of AML current population estimates
Summary of level of this threat; information on factors contributing to that level of risk

Livestock grazing
Maps showing allotments,
Summary of level of this threat; information on factors contributing to that level of risk

Anthropogenic disturbances
Maps of existing anthropogenic disturbances: roads, major utility lines, cities, towns, mines, other
Summary of level of this threat; information on factors contributing to that level of risk

Recreation

Maps of designated recreation areas (e.g., campgrounds, OHV areas)
Summary of level of this threat; information on factors contributing to that level of risk

Sage-grouse Populations. The Lassen South Washoe BSU encompasses two PMUs as shown in Figure 2 and described below. (trend leks, populations, population trends)

Buffalo/Skedaddle PMU

Virginia /Pahrah PMU

Recommendations for Local Plans:

1. Focus areas for conservation efforts.
2. Prioritized areas on public and private lands to implement a landscape scale restoration effort.
3. Identification of where the primary threats to sage-grouse habitat are located throughout the BSU.
4. Guidelines for where efforts can be prioritized in order to achieve landscape-scale conservation of sage-grouse and the sagebrush ecosystem based on localized threats and local area conditions including resistance and resilience regimes, and ecological stateLone Willow (Approximately 480,125 acres)

4.7 Lone Willow BSU (PMU)

North Central Humboldt County; east and north of Highway 140 (old Winnemucca-Denio Road); Idaho/NV Stateline north boundary.

Brief General Description of BSU. MLRA, WAFWA Management Zone, ecological sites, climate

Bilk Creek Mountains ( )- Deep Creek, Bilk Creek, Shyster Creek, North Shyster Creek, South Shyster Creek, Little Sage Hen Creek, Sage Hen Creek, Mud Creek, Little Wilder Creek, Maggie Creek, North Branch Maggie Creek, South Branch Maggie Creek, South Fork Cottonwood Creek, Butte Creek, Log Cabin Creek, Raster Creek, Rodeo Creek, House Creek, Kings River, Dry Creek, Fivemile Creek,

The Granites (2592 m) – Disaster Peak Study Area, Cold Springs Creek, West Fork Granite Creek, Granite Creek, East fork Granite Creek, North Fork Flat Creek, South Fork Flat Creek, Flat Creek, Gold Hill Creek,

Long Ridge ( ) – Little Washburn Creek, Frances Creek, Washburn Creek, Wildcat Creek, Little Wildcat Creek, Jordan Meadow Creek.

Montana Mountains ( ) – Rock Creek, Pole Creek, Garden Creek, Thacker Creek,

Maps:

Land Ownership

Fire and invasives
Insert Maps showing fire history, invasive annual grasses, noxious weeds, output of FIAT process.
Summary of level of this threat; information on factors contributing to that level of risk

Pinyon-juniper
Maps showing PJ encroachment, output of FIAT process
Summary of level of this threat; information on factors contributing to that level of risk

Wild and Free Roaming Horses and Burros
Maps showing HMA/WHBTs, Table of AML current population estimates
Summary of level of this threat; information on factors contributing to that level of risk

Livestock grazing
Maps showing allotments,
Summary of level of this threat; information on factors contributing to that level of risk

Anthropogenic disturbances
Maps of existing anthropogenic disturbances: roads, major utility lines, cities, towns, mines, other
Summary of level of this threat; information on factors contributing to that level of risk

Recreation
Maps of designated recreation areas (e.g., campgrounds, OHV areas)
Summary of level of this threat; information on factors contributing to that level of risk

Sage-grouse Populations. The Lone Willow BSU encompasses one?? PMU as shown in Figure 2 and described below. (trend leks, populations, population trends)

(describe)

Recommendations for Local Plans:

1. Focus areas for conservation efforts.
2. Prioritized areas on public and private lands to implement a landscape scale restoration effort.
3. Identification of where the primary threats to sage-grouse habitat are located throughout the BSU.

4. Guidelines for where efforts can be prioritized in order to achieve landscape-scale conservation of sage-grouse and the sagebrush ecosystem based on localized threats and local area conditions including resistance and resilience regimes, and ecological stateLone Willow (Approximately 480,125 acres)

4.8 Monitor BSU

Northcentral Nye County, South Eureka County, South Lander County

360,131 acres

Maps:

Land Ownership

Fire and invasives
Insert Maps showing fire history, invasive annual grasses, noxious weeds, output of FIAT process.
Summary of level of this threat; information on factors contributing to that level of risk

Pinyon-juniper
Maps showing PJ encroachment, output of FIAT process
Summary of level of this threat; information on factors contributing to that level of risk

Wild and Free Roaming Horses and burros
Maps showing HMA/WHBTs, Table of AML current population estimates
Summary of level of this threat; information on factors contributing to that level of risk

Livestock grazing
Maps showing allotments,
Summary of level of this threat; information on factors contributing to that level of risk

Anthropogenic disturbances
Maps of existing anthropogenic disturbances: roads, major utility lines, cities, towns, mines, other
Summary of level of this threat; information on factors contributing to that level of risk

Recreation
Maps of designated recreation areas (e.g., campgrounds, OHV areas)
Summary of level of this threat; information on factors contributing to that level of risk

Sage-grouse Populations. The Monitor BSU encompasses one PMU as shown in Figure 2 and described below. (trend leks, populations, population trends)

Monitor PMU

Recommendations for Local Plans:

1. Focus areas for conservation efforts.
2. Prioritized areas on public and private lands to implement a landscape scale restoration effort.
3. Identification of where the primary threats to sage-grouse habitat are located throughout the BSU.
4. Guidelines for where efforts can be prioritized in order to achieve landscape-scale conservation of sage-grouse and the sagebrush ecosystem based on localized threats and local area conditions including resistance and resilience regimes, and ecological stateLone Willow (Approximately 480,125 acres)

4.9 Northeast Elko BSU

Northeast Elko County

944,705 acres

Maps:

Land Ownership

Fire and invasives
Insert Maps showing fire history, invasive annual grasses, noxious weeds, output of FIAT process.
Summary of level of this threat; information on factors contributing to that level of risk

Pinyon-juniper
Maps showing PJ encroachment, output of FIAT process
Summary of level of this threat; information on factors contributing to that level of risk

Wild and Free Roaming Horses and burros
Maps showing HMA/WHBTs, Table of AML current population estimates
Summary of level of this threat; information on factors contributing to that level of risk

Livestock grazing
Maps showing allotments,
Summary of level of this threat; information on factors contributing to that level of risk

Anthropogenic disturbances
Maps of existing anthropogenic disturbances: roads, major utility lines, cities, towns, mines, other
Summary of level of this threat; information on factors contributing to that level of risk

Recreation
Maps of designated recreation areas (e.g., campgrounds, OHV areas)
Summary of level of this threat; information on factors contributing to that level of risk

Sage-grouse Populations. The Northeast Elko BSU encompasses one PMUs as shown in Figure 2 and described below. (trend leks, populations, population trends)

Gollaher PMU

Recommendations for Local Plans:

1. Focus areas for conservation efforts.
2. Prioritized areas on public and private lands to implement a landscape scale restoration effort.
3. Identification of where the primary threats to sage-grouse habitat are located throughout the BSU.
4. Guidelines for where efforts can be prioritized in order to achieve landscape-scale conservation of sage-grouse and the sagebrush ecosystem based on localized threats and local area conditions including resistance and resilience regimes, and ecological stateLone Willow (Approximately 480,125 acres)

4.10 Northwest Great Basin BSU

North Washoe County, West Humboldt County. Granite Range (2493 m), Hog Mountain, Little High Rock Canyon, High Rock Canyon, Mahogany Mountain, Little Mahogany Mountain, , Fortynine Mountain (2303m), Hays Canyon Range (2412 m),

223,770 acres

Sheldon NWR – Badger Mountain (2190 m), Blowout Mountain, Fish Creek Mountain, Massacre Rim Study Area, Catnip Mountain (2223 m), Gooch Table, Fish Creek Table, North Rock Springs Table, Bald Mountain (2191 m), Virgin Creek, Big Spring Reservoir, Catnip Reservoir,

High Rock Lake,

Wall Canyon Study Area

Sand Creek, Mud Lake, Carter Reservoir, Crooks Creek, Sagebrush Creek, Virgin Creek, South Hell Creek, Hell Creek, Cottonwood Creek, North fork Cow Creek, Bull Creek, South Willow Creek, Willow Creek, Fortyninemile Creek (CA), Secret Creek, Cow Lake, Calcutta Lake, Massacre Creek, Massacre Lake, West

Lake, Hays Canyon, Boulder Creek, Wall Canyon, Bardwell Creek, Lost Creek, Red Mountain Creek, Rock Creek, Negro Creek, Cherry Creek, Grass Valley Creek,

Maps:

Land Ownership

Fire and invasives
Insert Maps showing fire history, invasive annual grasses, noxious weeds, output of FIAT process.
Summary of level of this threat; information on factors contributing to that level of risk

Pinyon-juniper
Maps showing PJ encroachment, output of FIAT process
Summary of level of this threat; information on factors contributing to that level of risk

Wild and Free Roaming Horses and burros
Maps showing HMA/WHBTs, Table of AML current population estimates
Summary of level of this threat; information on factors contributing to that level of risk

Livestock grazing
Maps showing allotments,
Summary of level of this threat; information on factors contributing to that level of risk

Anthropogenic disturbances
Maps of existing anthropogenic disturbances: roads, major utility lines, cities, towns, mines, other
Summary of level of this threat; information on factors contributing to that level of risk

Recreation
Maps of designated recreation areas (e.g., campgrounds, OHV areas)
Summary of level of this threat; information on factors contributing to that level of risk

Sage-grouse Populations. The Northwest Great Basin BSU encompasses three PMUs as shown in Figure 2 and described below. (trend leks, populations, population trends)

Vya PMU

Sheldon PMU

Massacre PMU

Recommendations for Local Plans:

1. Focus areas for conservation efforts.
2. Prioritized areas on public and private lands to implement a landscape scale restoration effort.
3. Identification of where the primary threats to sage-grouse habitat are located throughout the BSU.
4. Guidelines for where efforts can be prioritized in order to achieve landscape-scale conservation of sage-grouse and the sagebrush ecosystem based on localized threats and local area conditions including resistance and resilience regimes, and ecological stateLone Willow (Approximately 480,125 acres)

4.11 Northwest Interior BSU

West Lander County, Pershing County, South Humboldt County; south of Winnemucca East and South of I-80, Unionville; South of I-80 south of Golconda; west of Hwy 305, west of Battle Mountain(

138,094 acres

Humboldt Range (2998 m) - Willow Creek, Rochester Canon, Limerick Wash, Horse Canyon Creek, Indian Creek,

East Range (2566 m) –Dun Glen Creek, Raspberry Creek, White Horse Creek, Rose Creek, Gem Creek, Barbers Creek, Rock Hill Creek, Spauldings Creek, Marble Creek, Home Creek, Wilder Creek, Peavine Creek, Bartomes Creek, North Cinnabar Creek, Cinnabar Creek, Willow Creek,

Tobin Range (2695 m), Tobin Range Study Area (2979 m), Sonoma Range (2863 m) – Rock Creek, East Fork Pole Creek, Harmony Creek, Whites Creek, Ragan Creek, Jim Creek, Cow Creek, Gooseberry Creek, Cherry Creek, Elder Creek, Bushee Creek, Jersey Valley Wash, Indian Creek, North Indian Creek, Big Creek, Goldrun Creek.

Fish Creek Mountains (2634 m) – Mount Moses (2634 m) – Reese River, Daisy Creek, Cow Creek, Cottonwood Creek,

Battle Mountain (2602 m) – Elder Creek, North Fork Trout Creek, Trenton Creek, Mill Creek, Timber Creek, Rock Creek, Willow Creek, Licking Creek,

Maps:

Land Ownership

Fire and invasives
Insert Maps showing fire history, invasive annual grasses, noxious weeds, output of FIAT process. Summary of level of this threat; information on factors contributing to that level of risk

Pinyon-juniper
Maps showing PJ encroachment, output of FIAT process
Summary of level of this threat; information on factors contributing to that level of risk

Wild and Free Roaming Horses and burros
Maps showing HMA/WHBTs, Table of AML current population estimates
Summary of level of this threat; information on factors contributing to that level of risk

Livestock grazing
Maps showing allotments,
Summary of level of this threat; information on factors contributing to that level of risk

Anthropogenic disturbances
Maps of existing anthropogenic disturbances: roads, major utility lines, cities, towns, mines, other
Summary of level of this threat; information on factors contributing to that level of risk

Recreation
Maps of designated recreation areas (e.g., campgrounds, OHV areas)
Summary of level of this threat; information on factors contributing to that level of risk

Sage-grouse Populations. The Northwest Interior BSU encompasses five PMUs as shown in Figure 2 and described below. (trend leks, populations, population trends)

Fish Creek PMU

Battle Mountain PMU

Sonoma PMU

East Range PMU

Humboldt PMU

Recommendations for Local Plans:

1. Focus areas for conservation efforts.
2. Prioritized areas on public and private lands to implement a landscape scale restoration effort.
3. Identification of where the primary threats to sage-grouse habitat are located throughout the BSU.
4. Guidelines for where efforts can be prioritized in order to achieve landscape-scale conservation of sage-grouse and the sagebrush ecosystem based on localized threats and

local area conditions including resistance and resilience regimes, and ecological stateLone Willow (Approximately 480,125 acres)

4.12 Owyhee BSU

Northeast Humboldt County, Northwest Elko County, North Eureka County, North Lander County. North of Battle Mountain, north of I-80; East of Hwy 95, Nv/Id Border

Approximately 355,175 acres

Santa Rosa Range (Granite Peak 2966 m) – Piute Creek, Porcupine Creek, Chimney Creek, Andorno Creek, Austin Creek, Buffalo Creek, Pine Creek, Falls Canyon, Horse Canyon, Dog Creek, McConnell Creek, Wood Canyon Creek, Rebel Creek, Spring Canyon, Eagle Creek, Willow Creek, White Rock Canyon, Skull Creek, Flat Creek, Spring Creek, Indian Creek, Threemile Creek, Eightmile Creek, Twomile Creek, Jakes Creek, East Fork Quinn River, Laca Creek, Little Owyhee River, Goosey Lake Creek, Groundhog Creek, West Fork Groundhog Creek, North Fork Little Humboldt River, Duck Creek, Chicken Creek, Long Valley Creek, Stocks Creek, Martin Creek, Siard Creek, Spring Creek, Bradshaw Creek, Long Valley Creek, Dutch John Creek, Road Creek, Alkali Creek, Deep Creek, Lye Creek, South Fork Indian Creek, Coleman Creek, Indian Creek, Mullinix Creek, North fork Cabin Creek, Cabin Creek, North Fork Dutch John Creek, Middle Fork Dutch John Creek, South Fork Dutch John Creek, Dutch John Creek, Antelope Creek, Round Corral Creek, Middle Fork Round Corral Creek, Picket Corral Creek, Buttermilk Creek, spring City Creek, Wagon Wheel Creek, Martin Creek, Chimney Creek Reservoir, Little Humboldt River, Milligan Creek, Raven Creek, Calico Creek, Willow Creek

McDermitt Indian Reservation - East Fork Quinn River, Piccolo Creek, Mahogany Creek,

North Fork of Little Humboldt Study Area –

Owyhee Canyon Study Area – South Fork of Owyhee River, Peterson Table

Desert PMU. – Threemile Creek, Winters Creek, Chimney Creek, Lake Creek, Little Owyhee River, Raven Creek, Dry Creek, Winters Creek, Mitchell Creek, Wall Creek, Breakneck Creek, Silver Creek, Indian Creek, Storff Creek, Ranch Creek, Blue Jacket Creek, White Rock Creek, Columbia Creek, spring Creek, Edgemont Creek, Bull Run, Cottonwood Creek, Marsh Creek, Wilson Creek, Doby George Creek, North Fork Cap Winn Creek, South Fork Cap Winn Creek, Cap Winn Creek, IL Creek, Frost Creek, Sheep Creek, Ott Creek, Deep Creek, Chicken Creek, Warm Spring Creek, Skull Creek, Cottonwood Creek, Red Crow Creek, Amazon Creek, Chino Creek,

Duck Valley Indian Reservation – Sheep Creek, Owyhee River, Thacker Slough, Spring Creek,

Independence Mountains (2759 m) – Taylor Cabin Creek, Carlin Creek, Coal Creek, Schmidt Creek, Burns Creek, Dry Creek, Badger Creek, Snow Creek, China Creek, Marsh Creek, Boyd Creek, Schoonover Creek, Jack Creek, Chicken Creek, Mill Creek, Coffin Creek, South Fork East Fork Mill Creek, East for Mill Creek,

Mill Creek, Dorsey Creek, Harrington Creek, Hot Creek, Bull Creek, South Fork Owyhee River, Crooked Creek,

Tuscarora Mountains ( ) - McCann Creek, Berry Creek, Summit Creek, Rattlesnake Creek, Pleasant Valley Creek, Boulder Creek, Willow Creek, Soldier Creek, Boulder Creek, Bell Creek, Brush Creek, Sheep Creek, Hot Creek, China Creek, Cow Creek, Little Bull Camp Creek, Bull Camp Creek, Nelson Creek, Lewis Creek, Toe Jam Creek, Dry Creek, Pole Creek, Trout Creek

Squaw Valley – Willow Creek, Squaw Creek, Ivanhoe Creek, Midas Creek, Summit Creek, Spring Creek, Willow Creek Reservoir, Summit Creek, Clover Creek,

Santa Renia Mountains ( ) – Little Coyote Creek, Alkali Creek, North Antelope Creek,

Sheep Creek Range ( ) - Rock Creek, Blue House Slough, Boulder Creek, Rodeo Creek, Bell Creek,

Maps:

Land Ownership

Fire and invasives
Insert Maps showing fire history, invasive annual grasses, noxious weeds, output of FIAT process.
Summary of level of this threat; information on factors contributing to that level of risk

Pinyon-juniper
Maps showing PJ encroachment, output of FIAT process
Summary of level of this threat; information on factors contributing to that level of risk

Wild and Free Roaming Horses and burros
Maps showing HMA/WHBTs, Table of AML current population estimates
Summary of level of this threat; information on factors contributing to that level of risk

Livestock grazing
Maps showing allotments,
Summary of level of this threat; information on factors contributing to that level of risk

Anthropogenic disturbances
Maps of existing anthropogenic disturbances: roads, major utility lines, cities, towns, mines, other
Summary of level of this threat; information on factors contributing to that level of risk

Recreation
Maps of designated recreation areas (e.g., campgrounds, OHV areas)
Summary of level of this threat; information on factors contributing to that level of risk

Sage-grouse Populations. The Owyhee BSU encompasses three PMUs as shown in Figure 2 and described below. (trend leks, populations, population trends)

Santa Rosa PMU

Desert PMU

Tuscarora PMU – Indian Creek,

Recommendations for Local Plans:

1. Focus areas for conservation efforts.
2. Prioritized areas on public and private lands to implement a landscape scale restoration effort.
3. Identification of where the primary threats to sage-grouse habitat are located throughout the BSU.
4. Guidelines for where efforts can be prioritized in order to achieve landscape-scale conservation of sage-grouse and the sagebrush ecosystem based on localized threats and local area conditions including resistance and resilience regimes, and ecological stateLone Willow (Approximately 480,125 acres)

Pueblo Range BSU

(8,232 acres)

Maps:

Land Ownership

Fire and invasives
Insert Maps showing fire history, invasive annual grasses, noxious weeds, output of FIAT process.
Summary of level of this threat; information on factors contributing to that level of risk

Pinyon-juniper
Maps showing PJ encroachment, output of FIAT process
Summary of level of this threat; information on factors contributing to that level of risk

Wild and Free Roaming Horses and burros
Maps showing HMA/WHBTs, Table of AML current population estimates
Summary of level of this threat; information on factors contributing to that level of risk

Livestock grazing
Maps showing allotments,

Summary of level of this threat; information on factors contributing to that level of risk

Anthropogenic disturbances
Maps of existing anthropogenic disturbances: roads, major utility lines, cities, towns, mines, other
Summary of level of this threat; information on factors contributing to that level of risk

Recreation
Maps of designated recreation areas (e.g., campgrounds, OHV areas)
Summary of level of this threat; information on factors contributing to that level of risk

Sage-grouse Populations. The Pueblo Range BSU encompasses XPMUs as shown in Figure 2 and described below. (trend leks, populations, population trends)

Recommendations for Local Plans:

1. Focus areas for conservation efforts.
2. Prioritized areas on public and private lands to implement a landscape scale restoration effort.
3. Identification of where the primary threats to sage-grouse habitat are located throughout the BSU.
4. Guidelines for where efforts can be prioritized in order to achieve landscape-scale conservation of sage-grouse and the sagebrush ecosystem based on localized threats and local area conditions including resistance and resilience regimes, and ecological stateLone Willow (Approximately 480,125 acres)

4.13 Quinn BSU

East Nye county, West central Lincoln County

198,572 acres

Maps:

Land Ownership

Fire and invasives
Insert Maps showing fire history, invasive annual grasses, noxious weeds, output of FIAT process.
Summary of level of this threat; information on factors contributing to that level of risk

Pinyon-juniper
Maps showing PJ encroachment, output of FIAT process
Summary of level of this threat; information on factors contributing to that level of risk

Wild and Free Roaming Horses and burros
Maps showing HMA/WHBTs, Table of AML current population estimates
Summary of level of this threat; information on factors contributing to that level of risk

Livestock grazing
Maps showing allotments,
Summary of level of this threat; information on factors contributing to that level of risk

Anthropogenic disturbances
Maps of existing anthropogenic disturbances: roads, major utility lines, cities, towns, mines, other
Summary of level of this threat; information on factors contributing to that level of risk

Recreation
Maps of designated recreation areas (e.g., campgrounds, OHV areas)
Summary of level of this threat; information on factors contributing to that level of risk

Sage-grouse Populations. The Quinn BSU encompasses one PMU as shown in Figure 2 and described below. (trend leks, populations, population trends)

Quinn PMU.

Recommendations for Local Plans:

1. Focus areas for conservation efforts.
2. Prioritized areas on public and private lands to implement a landscape scale restoration effort.
3. Identification of where the primary threats to sage-grouse habitat are located throughout the BSU.
4. Guidelines for where efforts can be prioritized in order to achieve landscape-scale conservation of sage-grouse and the sagebrush ecosystem based on localized threats and local area conditions including resistance and resilience regimes, and ecological stateLone Willow (Approximately 480,125 acres)

4.14 Ruby BSU

South Elko County, northwest White Pine County

278,306 acres

Maps:

Land Ownership

Fire and invasives
Insert Maps showing fire history, invasive annual grasses, noxious weeds, output of FIAT process.
Summary of level of this threat; information on factors contributing to that level of risk

Pinyon-juniper
Maps showing PJ encroachment, output of FIAT process
Summary of level of this threat; information on factors contributing to that level of risk

Wild and Free Roaming Horses and burros
Maps showing HMA/WHBTs, Table of AML current population estimates
Summary of level of this threat; information on factors contributing to that level of risk

Livestock grazing
Maps showing allotments,
Summary of level of this threat; information on factors contributing to that level of risk

Anthropogenic disturbances
Maps of existing anthropogenic disturbances: roads, major utility lines, cities, towns, mines, other
Summary of level of this threat; information on factors contributing to that level of risk

Recreation
Maps of designated recreation areas (e.g., campgrounds, OHV areas)
Summary of level of this threat; information on factors contributing to that level of risk

Sage-grouse Populations. The Ruby BSU encompasses two PMUs as shown in Figure 2 and described below. (trend leks, populations, population trends)

Ruby Valley PMU

South Fork PMU

Recommendations for Local Plans:

1. Focus areas for conservation efforts.
2. Prioritized areas on public and private lands to implement a landscape scale restoration effort.

3. Identification of where the primary threats to sage-grouse habitat are located throughout the BSU.
4. Guidelines for where efforts can be prioritized in order to achieve landscape-scale conservation of sage-grouse and the sagebrush ecosystem based on localized threats and local area conditions including resistance and resilience regimes, and ecological stateLone Willow (Approximately 480,125 acres)

4.15 Smith/Reese BSU

East Churchill County, southwest Lander County, northwest Nye County

235,725 acres

Maps:

Land Ownership

Fire and invasives
Insert Maps showing fire history, invasive annual grasses, noxious weeds, output of FIAT process.
Summary of level of this threat; information on factors contributing to that level of risk

Pinyon-juniper
Maps showing PJ encroachment, output of FIAT process
Summary of level of this threat; information on factors contributing to that level of risk

Wild and Free Roaming Horses and burros
Maps showing HMA/WHBTs, Table of AML current population estimates
Summary of level of this threat; information on factors contributing to that level of risk

Livestock grazing
Maps showing allotments,
Summary of level of this threat; information on factors contributing to that level of risk

Anthropogenic disturbances
Maps of existing anthropogenic disturbances: roads, major utility lines, cities, towns, mines, other
Summary of level of this threat; information on factors contributing to that level of risk

Recreation
Maps of designated recreation areas (e.g., campgrounds, OHV areas)
Summary of level of this threat; information on factors contributing to that level of risk

Sage-grouse Populations. The Smith/Reese BSU encompasses three PMUs as shown in Figure 2 and described below. (trend leks, populations, population trends)

Clan Alpine PMU

Desatoya PMU

Reese River PMU

Recommendations for Local Plans.

1. Focus areas for conservation efforts.
2. Prioritized areas on public and private lands to implement a landscape scale restoration effort.
3. Identification of where the primary threats to sage-grouse habitat are located throughout the BSU.
4. Guidelines for where efforts can be prioritized in order to achieve landscape-scale conservation of sage-grouse and the sagebrush ecosystem based on localized threats and local area conditions including resistance and resilience regimes, and ecological stateLone Willow (Approximately 480,125 acres)

4.16 Southeastern Nevada BSU

North Lincoln County, southeast White Pine County

337,154 acres

Maps:

Land Ownership

Fire and invasives
Insert Maps showing fire history, invasive annual grasses, noxious weeds, output of FIAT process.
Summary of level of this threat; information on factors contributing to that level of risk

Pinyon-juniper
Maps showing PJ encroachment, output of FIAT process
Summary of level of this threat; information on factors contributing to that level of risk

Wild and Free Roaming Horses and burros
Maps showing HMA/WHBTs, Table of AML current population estimates
Summary of level of this threat; information on factors contributing to that level of risk

Livestock grazing
Maps showing allotments,
Summary of level of this threat; information on factors contributing to that level of risk

Anthropogenic disturbances
Maps of existing anthropogenic disturbances: roads, major utility lines, cities, towns, mines, other
Summary of level of this threat; information on factors contributing to that level of risk

Recreation
Maps of designated recreation areas (e.g., campgrounds, OHV areas)
Summary of level of this threat; information on factors contributing to that level of risk

Sage-grouse Populations. The Southeast Nevada BSU encompasses three PMUs as shown in Figure 2 and described below. (trend leks, populations, population trends)

Lincoln PMU

Steptoe/Cave PMU

Spring/Snake Valley PMU

Recommendations for Local Plans:

1. Focus areas for conservation efforts.
2. Prioritized areas on public and private lands to implement a landscape scale restoration effort.
3. Identification of where the primary threats to sage-grouse habitat are located throughout the BSU.
4. Guidelines for where efforts can be prioritized in order to achieve landscape-scale conservation of sage-grouse and the sagebrush ecosystem based on localized threats and local area conditions including resistance and resilience regimes, and ecological stateLone Willow (Approximately 480,125 acres)

4.17 Western Pershing BSU

Central Mineral County; north of Lovelock, north of Imlay, east of; west of Rye Patch Reservoir,

403,564 acres

Seven Troughs Range (2376 M), Majuba Mountains, Eugene Mountains (2310 m)

Central, Willow Creek, Granite Springs Wash, Cow Creek,

Maps:

Land Ownership

Fire and invasives
Insert Maps showing fire history, invasive annual grasses, noxious weeds, output of FIAT process.
Summary of level of this threat; information on factors contributing to that level of risk

Pinyon-juniper
Maps showing PJ encroachment, output of FIAT process
Summary of level of this threat; information on factors contributing to that level of risk

Wild and Free Roaming Horses and burros
Maps showing HMA/WHBTs, Table of AML current population estimates
Summary of level of this threat; information on factors contributing to that level of risk

Livestock grazing
Maps showing allotments,
Summary of level of this threat; information on factors contributing to that level of risk

Anthropogenic disturbances
Maps of existing anthropogenic disturbances: roads, major utility lines, cities, towns, mines, other
Summary of level of this threat; information on factors contributing to that level of risk

Recreation
Maps of designated recreation areas (e.g., campgrounds, OHV areas)
Summary of level of this threat; information on factors contributing to that level of risk

Sage-grouse Populations. The Western Pershing BSU encompasses five PMUs as shown in Figure 2 and described below. (trend leks, populations, population trends)

Eugenes PMU

Majuba1 PMU

Majuba 2 PM

Majuba 3 PMU

Trinity PMU

Recommendations for Local Plans:

1. Focus areas for conservation efforts.
2. Prioritized areas on public and private lands to implement a landscape scale restoration effort.
3. Identification of where the primary threats to sage-grouse habitat are located throughout the BSU.
4. Guidelines for where efforts can be prioritized in order to achieve landscape-scale conservation of sage-grouse and the sagebrush ecosystem based on localized threats and local area conditions including resistance and resilience regimes, and ecological stateLone Willow (Approximately 480,125 acres)

5. FUNDING

Funding Strategy Fund 1: Develop and provide sustainable , predictable federal, state, and local funding sources for pre-suppression activities (including maintenance) separate from funding for suppression and post-fire rehabilitation activities. [Action 1.1.1a, Action 1.2.1]

Responsible Parties: Congressional delegation; Governor's Office; NGO's, SETT, NDF, BLM, USFS,

Action Fund 1: Work with federal, tribal, and local governments to develop dedicated funding sources that allow for up to five years of post-fire restoration treatment, when necessary, to increase restoration success in important habitats, to improve initial attack for wildfire suppressions, and to commit to invasive species containment, . [Action 1.1.3a, Action 1.2.1]

Action Fund 2: Dedicate funding to plan and implement cost effective pre-suppression activities with an emphasis on strategic, scalable, cooperative projects informed by best available science; utilize cost efficient methods and tools; and follow up with effective, repeatable monitoring. [Action 1.1.1b]

Grants, LSR, RCPP, 319,

SGI

FWS Partners

NDOW

SEP

BSUs are organized alphabetically ~~by WAFWA Management Zone~~

1.1. Lone Willow BSU (WAFWA Management Zone V)

Map showing BSU location, Mgt Categories within, any relevant historic or current information. Population Trend

Over view of past ten years of lek count data

1.1.1. Telemetry Data

Short summary on any ongoing telemetry studies within BSU

1.1.2. Threat Assessment – for each threat, details on level that threat is present within the BSUs and information on factors contributing to that level of risk. Provide relevant maps for each threat if they exist.

Threat	**Risk Level**
Fire and invasives	High
Pinyon-juniper	Low
Predation	Unknown
Wildhorse and burro	High
Livestock grazing	Low
Anthropogenic disturbances	Moderate
Recreation	Moderate

Table summarizing Threat Assessment

1.1.3. Proposed and completed conservation actions for sage-grouse

Proposed is defined as funded actions

Map and summary

1.1.4. Key Conservation Strategies for BSU

Identify top issues of concern for BSU. Provide prioritized strategies based on Risk Assessment and identification of needed/potential Management Actions from the State Plan and other considerations.

Each BSU below will have the same sub-sections as 4.1 above

1.2. Black Rock BSU
1.3. Butte/Buck/White Pine BSU
1.4. Central Elko BSU
1.5. Central Great Basin BSU
1.6. East High Desert BSU
1.7. Lassen/South Washoe BSU
1.8. Monitor BSU

1.9. Northeast Elko BSU
1.10. Northwest Great Basin BSU
1.11. Northwest Interior BSU
1.12. Owyhee BSU
1.13. Pueblo Range BSU
1.14. Quinn BSU
1.15. Ruby BSU
1.16. Smith/Reese BSU
1.17. Southeastern Nevada BSU
1.18. Western Pershing BSU

2. Coordination
   (including tribal coordination)
3. Funding Sources
4. Monitoring and Adaptive Management
   This is described in the 2014 State Plan and annual monitoring and adaptive management report will be produced starting in late 2015.

Appendices or additional sections to SAP

-Overview on NDOW population monitoring

-Overview of FIAT process

-Overview of additional data sources relevant to sage-grouse conservation (e.g., eddmaps, BLM data, div of water resources, etc)