NEVADA CONSERVATION CREDIT SYSTEM

ADAPTIVE MANAGEMENT ANNUAL REPORT – 2020

The purpose of this Adaptive Management Response Team (AMRT) annual report is to provide a summary of the results of the adaptive management process as outlined by the Nevada Greater Sage Grouse Conservation Plan. The adaptive management process identifies habitat and population triggers reached within the State of Nevada across seven Conservation Planning Areas. Following identification of triggers, the local AMRT within each conservation planning area will identify causal factors and develop management recommendations to address habitat and population triggers.

Through the summer of 2020 the Sagebrush Ecosystem Technical Team worked with members of a Statewide Technical Team to collect data necessary to assign triggers to Population Management Units (PMU) which had habitat warnings consistent with the Nevada Greater Sage Grouse Conservation Plan adaptive management process. The Statewide Technical Team is comprised of representatives from Bureau of Land Management (BLM), U.S. Forest Service, U.S. Fish and Wildlife Service, Nevada Department of Wildlife (NDOW), Nevada Association of Counties, University of Nevada – Reno, U.S. Geological Survey, Nevada Division of Forestry. This team reviewed warnings and assigned triggers on October 6th, 2020. Limited local AMRT regional meetings occurred throughout the winter of 2020-2021 to address new triggers and to clarify and update previous management recommendations. These teams consisted of willing participants from stakeholder groups in a defined area such as local conservation groups, grazing permittees, other affected land users, and federal/State agencies. This process is intended to determine the potential reasons for population and habitat declines. In the case of habitat triggers where the trigger is self-evident (fire or anthropogenic impact), determining any appropriate management response will be the main effort. These triggers may be used in the prioritizing of funding for restoration efforts and management actions. This document outlines the results of the triggers reached by the Statewide Technical Team, the results of the causal factor analysis and management recommendations developed by the AMRTs, and clarifications and updates to previous recommendations made in 2019.

CONTENTS

I. ADAPTIVE MANAGEMENT STRATEGY OVERVIEW

This adaptive management strategy includes warnings, soft and hard triggers and responses. Triggers are not specific to any particular agency effort but identify GRSG population and habitat thresholds outside of natural fluctuations or variations (with the exception of wildfires). Triggers are based on the two key metrics that are being monitored; population status and habitat loss. Adaptive management, responding to specific triggers, can provide added confidence that management actions are robust and able to respond to a variety of conditions and circumstances to enable conservation of GRSG habitat and populations. Reaching a trigger will initiate a local-state-federal interagency dialogue in collaboration with affected authorized land users (e.g., grazing permittee) to evaluate causal factor(s) and recommend adjustments to implementation-level activities to reverse the trend. The State of Nevada will use a collaborative and consensus-based process with stakeholders, appropriate state and local agencies, and affected authorized land users when developing and implementing management responses when a trigger has been identified.

The scales used to analyze population triggers and apply management responses are at the individual lek, lek cluster, and BSU (Figure 1). Adaptive management responses will only apply to habitat management areas (HMAs), which includes PHMA, GHMA, OHMA, within these scales. Habitat adaptive management warnings and triggers will be analyzed only at the lek cluster scale. The boundaries of the BSU and lek clusters may be adjusted over time, based on the understanding of local GRSG population interactions, genetic sampling and climate variation. Population and habitat analyses used to identify warnings and triggers may be updated based on new science and advances in technology (e.g., integrated population models).

The hierarchy of GRSG population and habitat scales is as follows:

- Lek—Individual breeding display site where male and female GRSG congregate, with males performing courtship displays to gain mating opportunities with females.
- PMU (Lek cluster)—A group of leks in the same vicinity, among which GRSG may interchange over time and representing a group of closely related individuals.
- Biologically Significant Units (BSUs) —Represents nested lek clusters with similar climate and vegetation conditions.

Figure 1 below corresponds to lek clusters and BSUs that were defined by the USGS modeling analysis. They are different boundaries than the PMUs and BSUs that are defined by the State of Nevada, by NDOW. While USGS identifies population triggers according to their lek cluster and BSU spatial boundaries, for the purposes of this adaptive management strategy the SETT will be using the NDOW PMU and BSU boundaries to identify causal factors and management responses. USGS population triggers reached, such as individual lek or lek cluster triggers, will be applied to and identified with the NDOW PMU and BSUs. Habitat triggers as identified by the Statewide Technical Team will be based on the PMU or BSU spatial scale (i.e., Tuscarora PMU reached a habitat trigger due to fire within a large portion of that PMU).

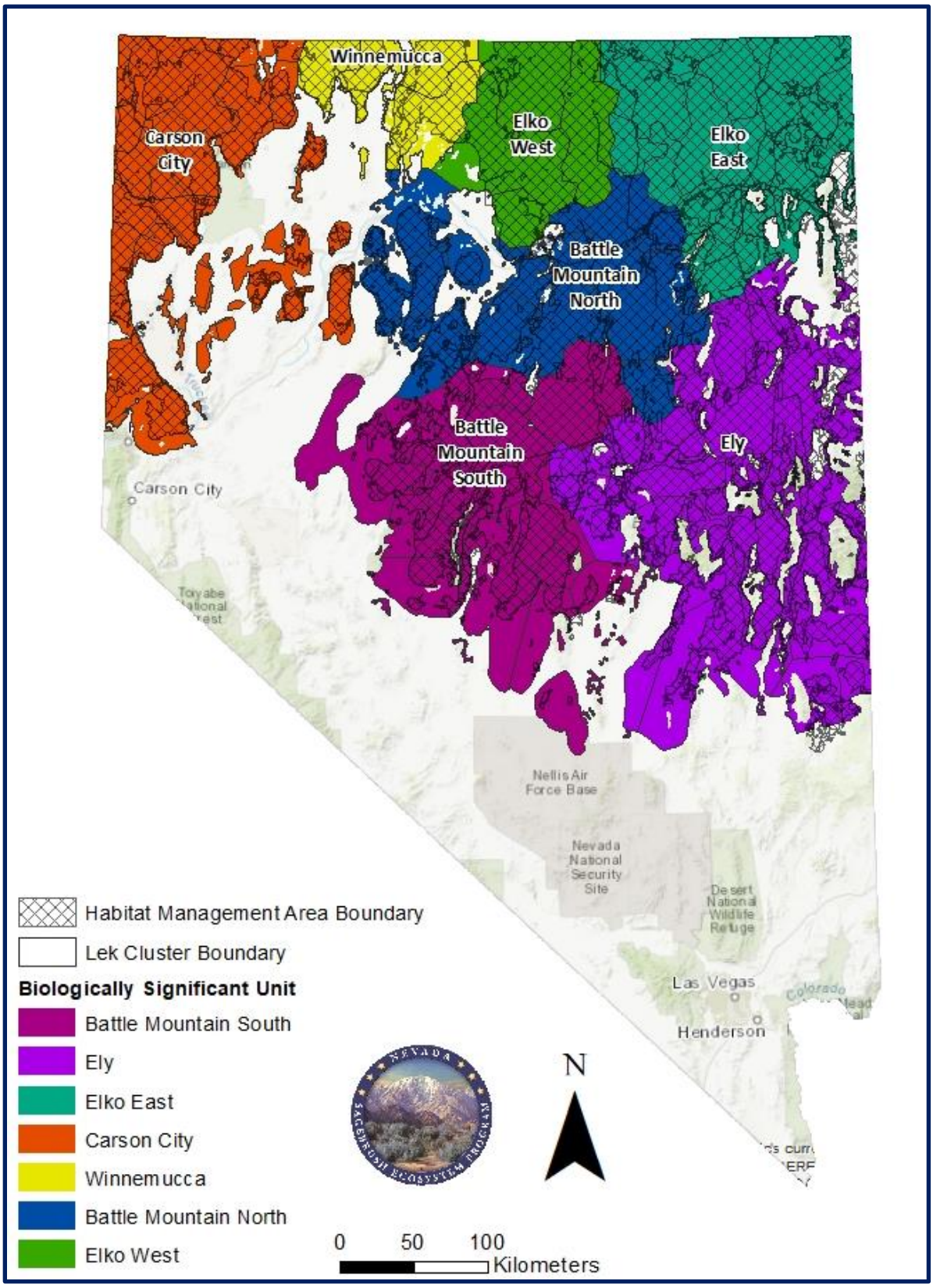

Figure 1. Adaptive management trigger analysis areas: USGS defined Biologically Significant Units and lek clusters (PMUs) for GRSG in Nevada.

II. POPULATION TRIGGERS – STATEWIDE OVERVIEW

Population trigger information was unavailable for 2020.

III. HABITAT TRIGGERS – STATEWIDE OVERVIEW

The Statewide Technical Team created a list of habitat warnings (wildfires, new anthropogenic disturbance, other events causing sagebrush habitat loss) over a three-year period. A process was developed to prioritize and rank warnings based on several data layers to inform importance of habitat that was impacted, which included proportion of leks affected, genetic connectivity, fire risk, resistance and resilience scores, and others. Professional opinion and judgement was used to help refine the initial rankings. Habitat triggers are only analyzed at the PMU and BSU scales. Three PMUs were identified as new habitat triggers, seven habitat triggers were continued from 2019 for a total of 10 habitat triggers (Figure 2).

IV. 2020 HABITAT TRIGGER PROCESS

Because no population data for 2020 was available, the adaptive management effort focused on new habitat triggers and quantifying progress made on certain 2019 management recommendations. Table one lists previous habitat triggers from 2019 with new habitat triggers identified in 2020.

Table 1.

	Year Identified	*PMU*	*Trigger*	*Conservation Planning Area*
1	2019	Lone Willow	Habitat Trigger	North Central
2	2019	Virginia/Pahrah	Habitat Trigger	Washoe/Modoc
3	2019	Desert	Habitat Trigger	Elko Stewardship
4	2019	Santa Rosa	Habitat Trigger	North Central
5	2019	Tuscarora	Habitat Trigger	Elko Stewardship/South Central
6	2019	North Fork	Habitat Trigger	Elko Stewardship
7	2020*	Shoshone	Habitat Trigger	South Central
8	2020	South Fork	Habitat Trigger	Elko Stewardship
9	2020	Buffalo/Skedaddle	Habitat Trigger	Washoe-Lassen-Modoc
10	2020*	Cortez	Habitat Trigger	South Central

* PMU was identified as a population trigger in 2019 and has existing management recommendations.

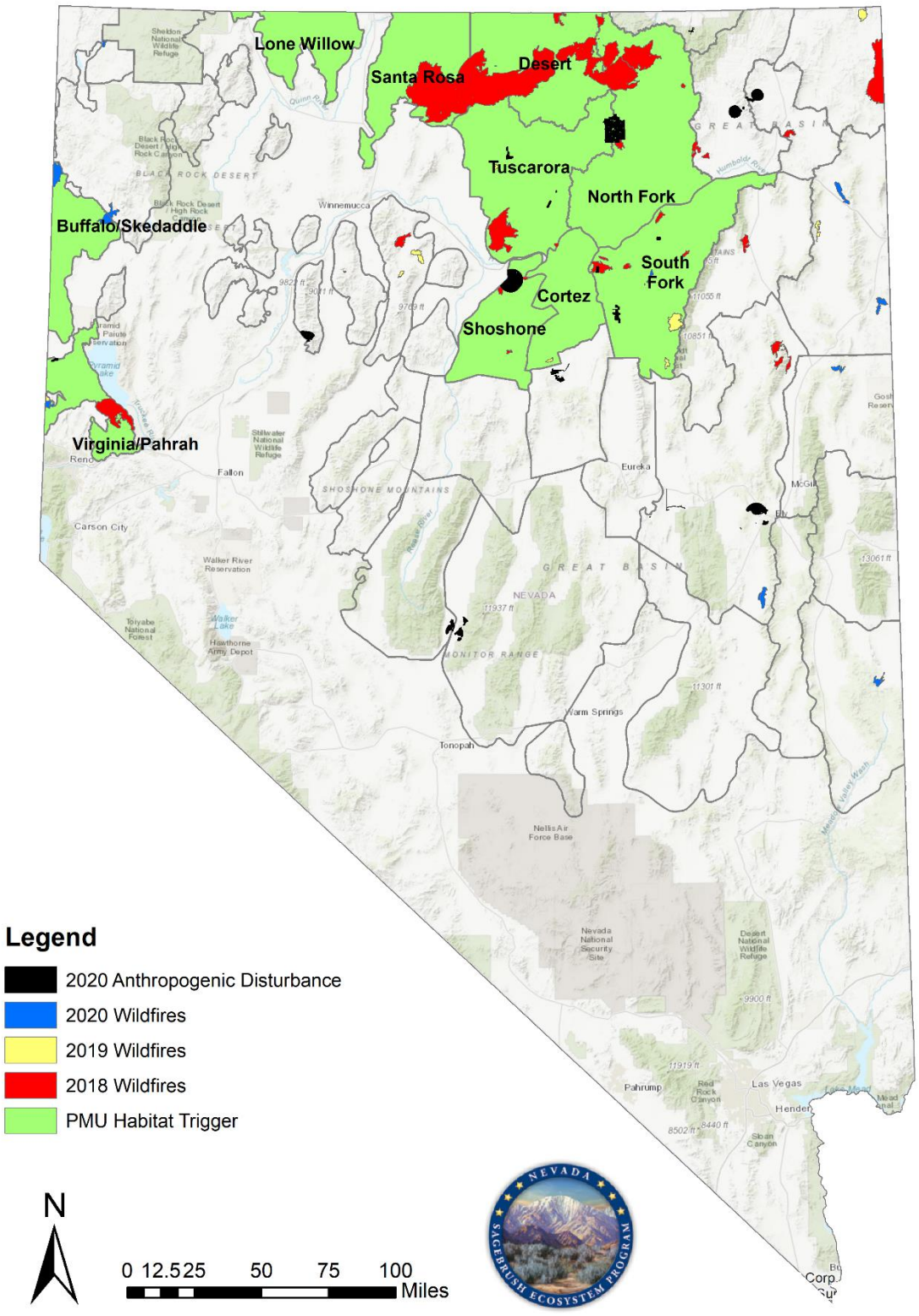

Figure 2. The ten PMUs that reached a habitat trigger. Wildfire and new anthropogenic disturbances are also mapped.