

Sagebrush Ecosystem Program

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STATE OF NEVADA
Sagebrush Ecosystem Program

SAGEBRUSH ECOSYSTEM COUNCIL
STAFF REPORT
MEETING DATE: April 9, 2015

DATE: April 2, 2015
TO: Sagebrush Ecosystem Council Members
FROM: Sagebrush Ecosystem Technical Team
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SUBJECT: Update Process for BSUs, PMUs, Management Categories, and Sage-grouse Management Area

SUMMARY

The purpose of this agenda item is to develop an update process for mapping management tools used by the Sagebrush Ecosystem Program. The intent is to have a clear, streamline process that identifies how and when updates will occur to the Biologically Significant Units (BSUs), Population Management Units (PMUs), Nevada Management Categories, and the Sage-grouse Management Area so that internal State of Nevada staff and external stakeholders understand the process and have same expectations.

The Council should review attached drafted process and provide comments to the SETT, and possibly recommend for inclusion as an appendix to the 2014 State Plan.

PREVIOUS ACTION

April 22, 2013. The Council directed staff to proceed in development of the habitat suitability model, working with Dr. Peter Coates of the USGS.

October 10, 2013. The Council approved revisions to the “avoid process” within Section 3.0 with direction to develop definitions for management categories with the USGS and NDOW.

January 23, 2014. The Council adopted the proposed Management Categories and the 2014 SGMA.

June 23, 2014. The SETT provided to the Council a crosswalk and definitions for existing mapping terminology used in Nevada.

October 2, 2014. Direction from Governor Sandoval’s office to publically release August 2014 Management Categories Map and put into use for management decisions.

DISCUSSION

Over the past 2 years, the Sagebrush Ecosystem Program has worked to develop mapping products to assist in conservation of greater sage-grouse across Nevada, such as the Nevada Management Categories. Many of these products being used within the State management are also starting to be used by federal partners and also have implication on industry partners as well. Given that many of these products will be updated over time as new information is available and conditions on the ground change, the SETT felt it was pertinent to outline an explicit process for updating some of these tools, so that all partners will be on the same page with when and how updates will occur. To this end, the Draft Map Update Process was outlined. This update process is specific to spatial delineation (maps) of sage-grouse considerations within Nevada – BSUs, PMUs, Management Categories, and the Sage-grouse Management Area.

The Draft Map Update Process provides a definition for each of the spatial considerations, when it was last updated, the anticipated process for updating it, when then next revision is anticipated, and how often revisions will generally occur.

The SETT is currently engaging with the BLM and USFS to concur with this update process so that the state and the federal partners have the same set of maps and expectations moving forward.

The Council should review the Draft Map Update process, discuss and provide further direction to the SETT on adopting the process. In addition, the Council should provide direction to the SETT on incorporating this as an appendix to the 2014 Nevada Greater Sage-grouse Conservation Plan during the next revision (anticipated June/July 2015).

RECOMMENDATION

Staff recommends the SEC approve the proposed map update process or provide direction to the SETT on how to further revise the process. In addition, the Council may recommend this update process be included in revisions to the 2014 Nevada Greater Sage-grouse Conservation Plan as an appendix.

POSSIBLE MOTION

Should the Board agree with the staff recommendation, a possible motion would be, “Motion to approve the proposed map update process State Plan and include in revisions to the 2014 State Plan.”

or

“Motion to approve the proposed map update process State Plan and include in revisions to the 2014 State Plan, with additional amendments.”

Attachments:

1: Draft State Map Updating Process

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State mapping update process

- 1) BSUs and PMUs
- 2) Management Categories
- 3) Sage-grouse Management Area

The following outlines the process to be followed to update the above mentioned biological and management tools for greater sage-grouse in Nevada (excluding Bi-State Distinct Population Segment).

1) Biologically Significant Units (BSUs) and Population Management Units (PMUs)

Definition: General delineation of sage-grouse populations in Nevada (excluding Bi-State) at two scales.

Last update: PMUs were last updated in the 2004 State Plan. BSUs were last updated in January 2015.

Guidance for updating: Collaborative process with NDOW biologists and the SETT based on available spatial connectivity data and understanding. The USGS Rangewide Connectivity map (range-wide genetic study currently in progress) will likely give us a tool with which to modify the PMUs and BSUs – anticipated date 2016. Other “in-state” or “in-house” genetic work would be able to expand upon that as well. In addition, continued collection of telemetry locations will be able to assist in determining if there are movements of birds across BSU boundaries. If sage-grouse and leks are identified outside BSU or PMU boundaries, this will be incorporated into modification of BSUs and PMUs, as well. PMU boundaries and BSU boundaries would likely be reviewed together and modified as new science and field-level knowledge arises, but not more frequently than once per year. In general, the population delineations are anticipated to be fairly static as these are coarse scale population delineations.

Timeline of updates: At this point in time, there is no scheduled update for the BSUs and PMUs as there is no clear defined date for information to become available that would inform the changes. NDOW and the SETT will review the USGS Rangewide Connectivity Map when it becomes available (or other statewide genetic information that may be developed and telemetry and lek information) to determine if there is sufficient information that warrants BSU or PMU updates. If new telemetry data shows deviations from PMUs or BSUs, modifications may also be made to population delineations. When updates are completed, NDOW will make available maps and shapefiles.

2) Management Categories

Definition: State of Nevada landscape scale management prioritization of sage-grouse habitat.

Last update: The Management Categories were last updated in August 2014.

Process for updating: Below is a general schematic of the inputs and processes for the Management Categories. Red indicates areas for possible update.

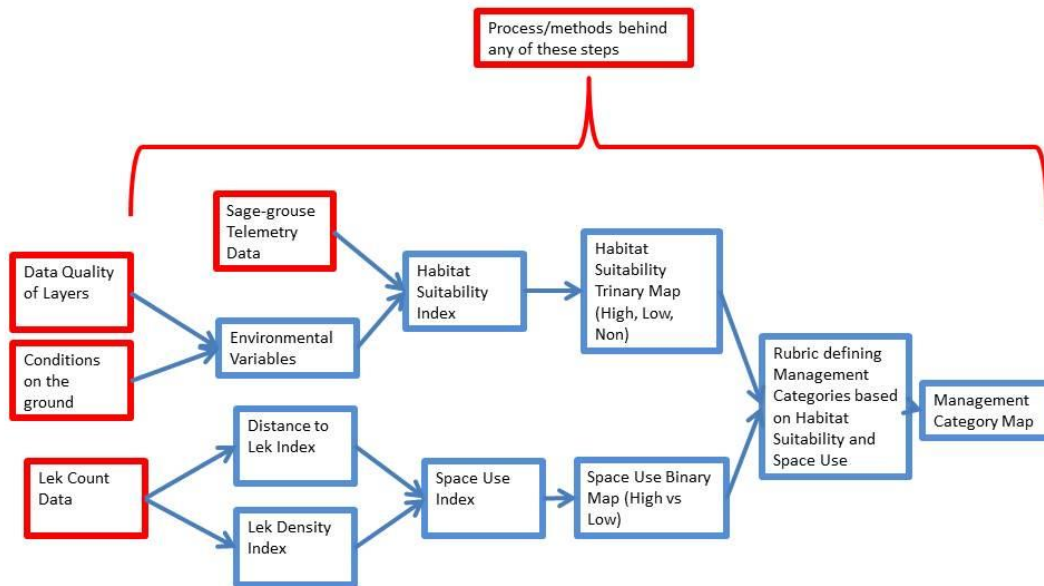


Table 4. Rubric for determining habitat management classes from habitat suitability and space use categories.

Region-wide RSF Category	Space Use Index Category	
	High Use Area	Low-to-No Use Areas
High Habitat Suitability	Core Area	Priority Area
Moderate Habitat Suitability	Core Area	General Area
Low Habitat Suitability	Core Area	General Area
Non-suitable Habitat	Priority Area	Non Habitat Area

Updates can come from

- 1) Process
 - a. Methods for development of management categories (rubric – table 4 above)
 - b. Methods behind HSI (including changes in the environmental variables selected)
 - c. Methods behind SUI.
- 2) Input information
 - a. Additional telemetry data
 - b. Improvement or updates of underlying layers to HSI
 - c. Change in conditions on landscape (most obvious being fire)
 - d. Yearly lek counts.

1a, 1b, and 1c – The methods and rubric outlined in Coates et al. (2014) are the methods for the updating process moving forward unless coordination team (SETT, NDOW, BLM, FS, FWS) agrees to changes in the methods. The methods used are anticipated to be fairly consistent; modifications to methods should consider best available science. Modifications to methods should generally occur on the 3-5 year update schedule, but only made when Team identifies new analytical tools and determine the current model no longer represents best available science.

2a and 2b – These will be updated every 3-5 years. New telemetry data will be collected yearly. New data products may become available. The updates to the HSI and HSI Map will be made every 5 years unless TEAM (TBD –SETT, NDOW, BLM, FS) decides there is sufficient new data to revise sooner, but not more frequently than once every 3 years.

2c. Fire is currently incorporated with a 10-year lag period – meaning fire <10 year ago are assumed to be pre-fire vegetation class as the post fire veg response is not know. While conditions change due to fire yearly, the process for updating this data in the HSI will be completed every 3-5 year. There will not be a yearly update for the following reasons: 1) sage-grouse may not respond immediately to fire, 2) current vegetation class input to the model is based on Synthmap data from ~2005, which means the map currently reflects the 10 year lag period, 3) it is too cumbersome to change the management map on a yearly basis. The next iteration of the model, 3-5 years out, will likely include an updated vegetation layer and, for post burn areas not appropriately captured in the new vegetation layer, will include either ground-truthing for fires that are 10+ years old or a sub-model that predicts post fire outcome based on resistance and resilience parameters (sub-model still to be developed and accuracy verified).

[[[[For 2c – other options considered but not selected: Option: Re-run the HSI every year to be able to update fires greater than 10 years old. This would involve site visit to fires that are 11 years old, determining their trajectory. Then modify the input veg layers to the HSI by changing pixel value for the extent of the fire and rerunning the HSI. This is extensive work on a yearly basis and hard to manage for.]]]]

2d. Leks that are categorized as active status or pending status are included in the SUI modeling. Lek status can change yearly, and 5-year averages can change yearly. This affects leks that show up in SUI and the size of high space use areas as it relates to lek size and density. While lek status can change yearly, the process for updating this data in the HSI will be completed every 3-5 year, but not more frequent than once every 3 years. There will not be a yearly update for the following reasons: 1) not many leks change status every year, 2) it takes 2-3 years of data for a lek to change status so having a 3-5 year period is generally acceptable, 3) from a management perspective, it is time intensive and costly to change maps with a greater frequency.

[[[[For 2d -other process considered but eliminated: Option a: Rerun the SUI every year and update the Mgt Cat Map. The Core Areas will “pulse” every year. Maintains the integrity of the process but pulsing core would be a challenge to manage for, but does acknowledge that yearly variability does occur.

Option b: Leks that change status will use a pre-determined buffer (perhaps 5 km) and mgt cats within that buffer will be changed according to the rubric on a yearly basis. This consideration takes away from the integrity of the greater process that has been established.]]]]

Timeline of updates:

The first update to the Management Categories is anticipated March 20, 2015 to update the SUI using the 2014 lek database. This will only update the space use portion of the map and is being conducted to ensure the most recent data is used in developing the map that will be provided in the Cooperating Agency review of the sub-regional EIS.

The second update is anticipated June 2015. This has been a scheduled revision since the contract development between the State and the USGS. This second update will include revisions to:

- Telemetry data
- Input variables (PJ layer, urban and recreational indices).
- If seasonal habitat maps are developed through this process, the rubric may need to be updated as well.

Subsequent revisions will occur every 3-5 years beginning in 2018, as determined by the Team (TBD – SETT, NDOW, BLM, FS). When updates are completed, SETT and NDOW will make available maps and shapefiles.

3) Sage-grouse Management Area

Definition: The extent of the SGMA triggers federal agency consultation with the SETT for anthropogenic disturbance projects.

Late update: The SGMA was last updated in 2014.

Guidance for update: Collaborative process with NDOW and the SETT based on the extent of population delineations and habitat delineations as defined above to encompass the broad scale at which impacts (direct and indirect) to sage-grouse are to be considered for management. In general, the SGMA is anticipated to be fairly static as these are coarse scale delineations.

The Sagebrush Ecosystem Council must approve revisions to the SGMA.

Timeline for update:

The SETT is considering the following modification to the 2014 SGMA. However, we are waiting on the June 2015 Management Category map update and will need SEC approval. The intent of this revision would be to update the SGMA to match with the updates to the BSUs and Management Categories and understanding that the SETT has gained over the last year, regarding management extent for sage-grouse in Nevada.

- Potential 2015 update: The 2015 SGMA would be the extent of the BSUs plus a 10 km buffer. This is to capture projects that have the potential to incur direct and indirect impacts to management areas within BSUs. This was the original intent of the extensive 2014 SGMA, but

we now realize, based on location of sage-grouse populations, that it was too extensive. This update will be considered following the June 2015 update to the Management Categories.

- Note that mitigation would be only required on impacts *within* BSUs (including indirect effects).

Following the potential 2015 revision, there is no anticipated revisions. NDOW and the SETT may identify the need down the road as the understanding and delineation of populations, habitat, and management categories are refined or as understanding of impacts from anthropogenic disturbances on sage-grouse evolves.

When updates are completed, SETT will make available maps and shapefiles.