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STATE OF NEVADA
Sagebrush Ecosystem Program

SAGEBRUSH ECOSYSTEM COUNCIL
STAFF REPORT
MEETING DATE: September 12, 2013

DATE: September 9, 2013
TO: Sagebrush Ecosystem Council Members
FROM: Sagebrush Ecosystem Technical Team
SUBJECT: Discussion of Council responses to proposed revisions to Section 3.0 Goals and Objectives of the State Plan.

SUMMARY

This item presents a discussion on Council comments and questions received regarding the revisions to Section 3.0 Goals and Objectives of the State Plan (hereafter 2013 Proposed State Plan Revision) presented to the Council at the July 30, 2013 meeting. The SETT had anticipated providing a response to comments and an updated 2013 Proposed State Plan Revision, however the comments and questions prepared by the Council presented a diverse range of opinion and there did not appear to be an overarching consensus among Council members as to the direction the revision of the State Plan should take. Therefore, the SETT would like to discuss with the Council several key decision points, as outlined below, and receive direction on how to proceed with further revisions to the State Plan.

PREVIOUS ACTION

March 27, 2013. The Council directed the SETT to meet with USFWS and NDOW staffs to discuss the USFWS comments on the Nevada State Plan and report back to the Council.

April 22, 2013. The Council directed the SETT to further develop the Nevada State Plan and the EIS Alternative to incorporate the concerns expressed by the USFWS.

July 30, 2013. The Council adopted the Sagebrush Ecosystem Strategic Detailed Timeline, which included revision of the State Plan/ EIS Alternative.

July 30, 2013. The Council assigned the SETT to address Council comments, questions, and concerns on the 2013 Proposed State Plan Revision for the following Council meeting.

BACKGROUND

The Strategic Plan for Conservation of Greater Sage-Grouse in Nevada (hereafter the 2012 State Plan) provided a set of recommendations to the Governor that were “intended to both guide state level action as well as serve as the basis for BLM to develop an alternative in the resource management planning process for Nevada that will ensure the conservation of sage-grouse and avoid the need to list the species.”

In September 2012 the USFWS provided informal draft comments requesting clarification and greater detail on several concepts in the 2012 State Plan, including:

- proposed regulatory mechanisms;
- specific triggers and thresholds for the “avoid, minimize, mitigate” policy;
- how cumulative impacts to habitat loss due to “Acts of God” would be accounted for in the “no net loss” objective; and
- mapping methods used.

As a result, the Council directed the SETT to further develop and strengthen the 2012 State Plan and EIS Alternative to incorporate USFWS’ concerns.

During the Cooperating Agency Review of the BLM’s EIS, the BLM provided feedback to the SETT on the State’s Alternative, specifically requesting that the SETT provide greater detail on:

- how the avoid, minimize, mitigate process would occur;
- how the SETT would determine when a disturbance was greater than or equal to five percent per 640 acres;
- Required Design Features or Best Management Practices proposed under the “minimize” policy; and
- the Conservation Credit System.

The BLM indicated that any updates provided to the State’s Alternative would be incorporated into and analyzed in the EIS between the draft and final, and would need to be submitted to the BLM by the end of the public Draft EIS review period (December 31, 2013).

On July 30, 2013 the SETT presented the Council the 2013 Proposed State Plan Revision, which incorporates additional detail as requested by USFWS and BLM. The purpose of the revisions were to strengthen the State Plan to 1) assure the USFWS that it will provide adequate regulatory mechanisms for the conservation of sage-grouse in order to preclude the need for listing, and, thus, 2) provide the greatest chance of the State Alternative being selected, at least in part, as the BLM’s preferred alternative in the EIS.

DISCUSSION

Following the July Council meeting, the Council and their constituents submitted numerous comments and questions to the SETT on the 2013 Proposed State Plan Revision that were thoughtful and raised valid concerns. The comments and questions presented a diverse range of opinions and there did not appear to be an overarching consensus among Council members as to the direction the revision of the State Plan should take. In order for the SETT to move forward with further revisions, the SETT requests clarity and direction from the Council on several key points that are central to the revision of the State Plan including, but not limited to, the following:

1. *What specific triggers and thresholds should be included in the “avoid, minimize, mitigate” policy in order to provide an adequate regulatory mechanism?*
 - *Avoid* – Should there be thresholds or triggers identified in the State Plan that would lead a proposed action to be defined, i.e. is there ever a point in which the State Plan would “say no” to a proposed action? A possible example would be mapped areas of specific land use restrictions identified based on current habitat condition and sage-grouse biology and population dynamics. If thresholds or triggers are not identified in the plan, would “avoid” be achieved through a market-based approach via the Conservation Credit System, i.e. can this system provide a mechanism in which it may be too costly for a project proponent to “say yes” to a proposed action?
 - *Minimize* – Who determines what if any Design Features (DF) would be required to minimize impacts and would this require consultation with the SETT? What process can assure the federal agencies that these DFs are being implemented and maintained?
 - *Mitigate* – This will be determined by the Conservation Credit System.
2. *Does the objective of “no net loss” of sage-grouse habitat apply to both anthropogenic disturbances and to “Acts of Nature”, such as fire and invasive species?*

If so, how will the State account and mitigate for loss of habitat due to Acts of Nature? If not, what will be the State’s objective for Acts of Nature?

3. *How should the State Plan account for cumulative impacts?*

A major USFWS criticism of the 2012 State Plan is that it does not account for cumulative impacts to sage-grouse habitat from all disturbances, both anthropogenic and Acts of Nature. The USFWS stated in their informal draft comments regarding the five percent per 640 acre disturbance policy that “to be clear, we anticipate all activities that would disturb sage grouse and their habitat (including from invasive species encroachment) would be included in this cap.”

Increased levels of human disturbance to a landscape result in negative impacts to sage-grouse (Knick and Connelly 2011, Leu and Hanser 2011, Knick et al 2013). Knick et al 2013 showed that in the western portion of sage-grouse range, 99% of active leks were found in landscapes that were less than 3% developed.

The mechanism that the SETT proposed to account for cumulative impacts is a Maximum Allowable Disturbance (MAD) threshold. This was proposed as a “soft cap” in which once the threshold is reached a higher mitigation rate would be assessed. Another option would be a “hard cap” in which future disturbance activities would not be permitted once the MAD threshold is met or exceeded.

If the State Plan sets a threshold to account for cumulative impacts, a consistent, quantitative method needs to be established to determine when the threshold is reached. The SETT proposed using Wyoming’s Density Disturbance Calculation Tool (DDCT) to calculate this. The DDCT is a GIS-based tool that can be adapted to calculate when any set percentage of

disturbance is reached in any set area, i.e. five percent per 640 acres as presented in the 2012 State Plan or any other threshold determined by the Council using best available science. The parameters of what counts as disturbance can be modified as well.

The SETT needs direction of the Council on how to manage the five percent per 640 acres. At this point there is not agreement on how to determine the 640 acre area to be evaluated. For example, is it a section of land within a township, or is the 640 acres equally distributed around a point where an activity is proposed to occur? Or is it something entirely different? These determinations need to be made for the SETT to move forward.

On the same issue, but a different perspective, Council needs to provide direction to the SETT on expectations regarding the tracking of these areas. From the responses received, there appears to be a question on whether this will be a SETT responsibility. If it is not, some other direction or entity should be determined.

4. *How should the State Plan account for indirect impacts to sage-grouse populations?*

The 2012 State Plan defined disturbance as “actions that will either remove or render sage-grouse habitat unusable, or human activities and presence that will cause a negative response from birds.” The former part of this statement is in essence direct impacts; the latter portion is indirect impacts. The 2013 Proposed State Plan Revision intended to clarify this definition, not add something new. Direct impacts include surface disturbance activities in sage-grouse habitat that may directly diminish the habitat suitability, while indirect impacts include activities that do not cause surface disturbance, but still effect sage-grouse behavior and as such diminish habitat suitability, such as noise and visual impacts.

The following provides a few example studies showing indirect impacts to sage-grouse from various human activities. This is not an exhaustive list.

Decreased attendance at leks and lek abandonment due to:

- Repeated disturbance by raptors perching on power lines near leks (Ellis 1984)
- Noise from vehicle traffic on nearby roads (Lyon and Anderson 2003)
- Noise and human activity associated with energy development during the breeding season (Remington and Braun 1991, Holloran 2005, Kaiser 2006, Blickley and Patricelli 2012)
- Noise from natural gas drilling and roads (Blickley et al 2012)

Increased risk of disease (West Nile Virus) due to:

- Artificial ponds created for mining and energy (Walker et al. 2004, Zou et al. 2006, Walker et al. 2007b)

Reduced carrying capacity of local breeding populations due to:

- Degradation of sagebrush habitat (Swenson et al. 1987, Braun 1998, Connelly et al. 2000a, 2000b, Crawford et al. 2004)

Avoid areas that are otherwise suitable as development increases due to:

- Increased density of roads, power lines, or energy development (Lyon and Anderson 2003, Holloran 2005, Kaiser 2006, Doherty et al. 2008, Carpenter et al. 2010)

To clarify, the 2013 Proposed State Plan Revision proposes analyzing projects within SGMAs for indirect impacts to sage-grouse, regardless if the project footprint is located in habitat or in non-habitat. This was a recommendation provided by the USFWS in their 2012 informal draft comments. *The 2013 Proposed State Plan Revision does not propose analyzing projects outside SGMAs for indirect impacts.*

FISCAL IMPACT

There is no fiscal impact at this time.

RECOMMENDATION

Staff recommends the Council provides direction on the key decision points outlined in the report and direct staff on how to proceed with revising the State Plan.

POSSIBLE MOTION

There is no recommended motion at this time.

Attachments:

- 1:** Council comments and questions received
- 2:** Revised Section 3.0 State of Nevada Goals and Strategies. SETT, July 2013
- 3:** Original Section 3.0 State of Nevada Goals and Strategies. Sage-grouse Advisory Committee, July 2012
- 4:** USFWS Informal Draft Comments on Nevada Strategic Plan for Conservation of Greater Sage-Grouse, September 14, 2012

mf: TR, JL

Literature Cited

Blickely, J.L. and G.L. Patricelli. 2012. Potential acoustic masking of greater sage-grouse display components by chronic industrial noise. *Ornithological Monographs*: 74(1) 23-35.

Blickley, J.L., D. Blackwood, and G.L. Patricelli. 2012. Experimental evidence for the effects of chronic anthropogenic noise on abundance of greater sage-grouse at leks. *Conservation Biology*: 26 (3) 461-471.

Braun, C.E. 1998. Sage grouse declines in western North America: What are the problems? *Proceedings of the Western Association of State Fish and Wildlife Agencies* 78:139-56. Braun, C. E., T. Britt, and R.O. Wallestad. 1977. Guidelines for maintenance of sage grouse habitats. *Wildlife Society Bulletin* 5:99-106.

Carpenter, J., C. Aldridge, and M.S. Boyce. 2010. Sage-grouse habitat selection during winter in Alberta. *Journal of Wildlife Management* 74:1806-1814.

Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000b. Guidelines to manage sage grouse populations and their habitats. *Wildlife Society Bulletin* 28:967-985.

Connelly, J.W., A.D. Apa, R. B. Smith, and K. P. Reese. 2000a. Effects of predation and hunting on adult sage grouse *Centrocercus urophasianus* in Idaho. *Wildlife Biology* 6:227-32.

Crawford, J.A., R.A. Olson, N.E. West, J.C. Mosley, M.A. Schroeder, T.D. Whitson, R.F. Miller, M.A. Gregg, and C.S. Boyd. 2004. Ecology and management of sage-grouse and sage-grouse habitat. *Journal of Range Management* 57: 2-19.

Doherty, K.E., D.E. Naugle, B.L. Walker, and J.M. Graham. 2008. Greater sage-grouse winter habitat selection and energy development. *Journal of Wildlife Management* 72:187-195.

Ellis, K.L. 1984. Behavior of lekking sage grouse in response to a perched golden eagle. *Western Birds* 15:37-8.

Holloran, M.J. 2005. Greater sage-grouse (*Centrocercus urophasianus*) population response to natural gas field development in western Wyoming. Dissertation, Department of Zoology and Physiology, University of Wyoming, Laramie, Wyoming.

Kaiser, R.C. 2006. Recruitment by greater sage-grouse in association with natural gas development in western Wyoming. Thesis, University of Wyoming, Laramie.

Knick ST, Hanser SE, Preston KL. 2013. Modeling ecological minimum requirements for distribution of greater sage-grouse leks: implications for population connectivity across their western range, U.S.A. *Ecology and Evolution*: 3(6) 1539-1551.

Knick, S. T., S. E. Hanser, R. F. Miller, D. A. Pyke, M. J. Wisdom, S. P. Finn, et al. 2011. Ecological influence and pathways of land use in sagebrush. Pp. 203–251 in S. T. Knick and J. W. Connelly, eds. *Greater sage-grouse: ecology and conservation of a landscape species and its habitats*. Studies in Avian Biol. Vol. 38. Univ. of California Press, Berkeley, CA.

Leu, M. and S.E. Hanser. 2011. Influences of the human footprint on the sagebrush landscape patterns: implications for sage-grouse conservation. Pp. 253-272 in S. T. Knick and J. W. Connelly, eds. *Greater sage-grouse: ecology and conservation of a landscape species and its habitats*. Studies in Avian Biol. Vol. 38. Univ. of California Press, Berkeley, CA.

Lyon, A.G. and S.H. Anderson. 2003. Potential gas development impacts on sage grouse nest initiation and movement. *Wildlife Society Bulletin* 31: 486-491.

Remington, T.E., and C.E. Braun. 1991. How surface coalmining affects sage grouse, North Park, Colorado. *Proceedings, Issues and Technology in the Management of Impacted Western Wildlife*. Thorne Ecological Institute 5:128-132.

Swenson, J.E., C.A. Simmons, and C.D. Eustace. 1987. Decrease of sage grouse *Centrocercus urophasianus* after ploughing of sagebrush steppe. *Biological Conservation* 41:125–32.

Walker, B.L., D.E. Naugle, K.E. Doherty, and T.E. Cornish. 2004. Outbreak of West Nile virus in greater sage-grouse and guidelines for monitoring, handling, and submitting dead birds. *Wildlife Society Bulletin* 32:1000–6.

Walker, B.L., D.E. Naugle, K.E. Doherty, and T.E. Cornish. 2007b. West Nile Virus and greater sage-grouse: estimating infection rate in a wild bird population. *Avian Diseases* 51:691-696.

Zou, L., S.N. Miller, and E.T. Schmidtman. 2006. Mosquito larval habitat mapping using remote sensing and GIS: Implications of coal bed methane development and West Nile virus. *Journal of Medical Entomology* 43:1034–41.