Agenda Item 8

SCIENCE WORKING GROUP FOR LEK DISTURBANCE (Population Impacts)

04/08/2022

Excerpt from Section 3.0 of the 2019 Nevada Greater Sage-Grouse Conservation Plan; "The State's goal for the conservation of sage-grouse in the State of Nevada is to provide for the long-term conservation of sage-grouse by protecting the sagebrush ecosystem upon which the species depends. Redundant, representative, and resilient populations of sage-grouse will be maintained through amelioration of threats; conservation of key habitats; mitigation for loss of habitat due to anthropogenic disturbances; and restoration or rehabilitation of habitat degraded or lost due to Acts of Nature."

To date, mitigating for a direct impact on a lek has not been conducted through the CCS. In one case that presented a direct impact, the siting of the ancillary feature is proposed to be moved. However, new science is indicating that certain disturbances within relative proximity may also lead to lek disturbance, abandonment, and possible extirpation. We have several authorized anthropogenic disturbances that unfortunately demonstrate this occurrence. Another proposed project may have both direct impacts to leks as well as proximal disturbance to leks.

In some cases, as currently applied, avoidance may not be a realistic option and minimization measures may not effectively address or significantly reduce the impact. The Science Working Group convened to discuss options that may ameliorate these types of impacts using tools already employed within the CCS and review/discuss the most recent science that could assist or inform our consideration of options.

- 20 attendees from various federal, state, and NGO organizations
- Reviewed the options for distance to lek improvements in the CCS
    - Modifying distance to lek layer
    - Lek importance factor
    - Additional mitigation factor
- TNC reviewed their model and the variables that go into the BEA
    - Nest Site Selection, Chick Survival, Nest Success, and Female Survival = Lambda
- However, losing source leks can have effects across the entire metapopulation structure. If it's a lek sink, then population impacts are likely lessened. Without addressing this distinction, persistence of source leks may decline and lek sinks may increase due to vegetation transitions and anthropogenic disturbances.
- Pete Coates (USGS) presented on new models and science have been produced through the funding provided by various agencies, including the SEP.
    - Temporary fixes can be done but an update of the HQT may be most necessary.
    - Population based modeling vs current Habitat based modeling
        - Inclusion of population data would direct debit offsets to benefit source populations in real time
            - Maintain or increase Lambda
        - Rank areas according to how important the areas/leks are to sage-grouse populations
            - Source/Sink population data

    - Possibly need to update decay curves on anthropogenic features depending on what is decided
    - CCS tools and applicable science used within the CCS are to be updated every 5 years as applicable or necessary
    - Application on both the debit and credit side

Next steps:

- Smaller group to continue discussion, address questions and concerns, consider how incorporation could be achieved.
    - SETT, USFWS, NDOW, USGS, UNR, BLM, USFS, etc.
- Decide: Immediate fix or long-term improvement?
    - Long-term seems supported
    - Source/Sink maps and demographic response curves are available
    - Where can mitigation (credit development) be done?
        - Surface disturbance and tracking tool and apply response curve to those features to see where the mitigation can be implemented with the greatest likelihood of positively impacting both habitat and populations
- Would also likely assist in the SETT efforts to update the Strategic Action Plan
- Would have liked to have Pete Coates at SEC meeting to set the table with what is occurring out on the landscape with the new modeling, however, unable to attend
- SETT will provide another update at the June SEC meeting
- Expect Dr. Coates to present at the June SEC meeting

However, we should review and possibly revise the State's guidance for the mitigation hierarchy. Upon final adoption, if necessary, we should advocate for its inclusion in the federal land use planning processes for sage-grouse that are currently underway. While updates to the CCS model may be necessary to implement more strategic mitigation implementation, more emphasis should be placed on the avoidance and minimization of anthropogenic disturbances. Also, other means of protection that may negate the need for mitigation, in some instances, should also be considered.