



HQT Update: Measuring impacts to population

- The SETT is investigating an update to the HQT that more accurately reflects the population loss from surface development impacts to leks.
- Current HQT version uses a Distance to Lek (Dist_lek) layer to measure impacts within a given distance to leks.
 - Accounts for loss of habitat functionality but does not account for population loss when leks are impacted.
 - Does not consider lek size, configuration, or population demographics.





HQT Update: Proposed Change

- May update Dist_lek layer with a Resource Selection Function (RSF) based isopleth map (i.e., intensity of space use) layer.
 - RSF accounts for space use and abundance.
 - Isopleth maps would be derived from actual sage-grouse use around leks and then extrapolated for remaining leks without space use data.
 - Isopleth Maps will more appropriately account for impacts where heavy space use occurs in relation to the lek(s).
- Proposed layer would take into account:
 - Exponential decay curve of impact the farther away from a lek.
 - Lek configuration and size to other leks to account for movement.
 - Lek trend: increasing leks have a greater importance than decreasing leks.





HQT Update: Considerations

- Determining:
 - Isopleth buffers vs continuous space use raster.
 - Distance of impact, e.g., 1 km, 2 km, 3km, etc.
 - Habitat functionality relation to percentage of use.
 - How isopleths align with current habitat management areas.
 - Whether the function is under-estimated in areas with the highest space use and abundance
 - If a multiplier is needed when direct impacts to leks occur.
 - Consideration on how a similar concept might be integrated on the Credit side.

