Prineville Sage-grouse Local Implementation Team Remote Meeting
13 March 2020 from 10:00am – 12:00pm

Attendance: Julie Unfriend (LIT Coordinator), Kellie Roussos (BLM), Stephanie McKinney (BLM), Peter DeJongh (BLM), Larry Ashton (BLM), Amanda Roberts (BLM), Stephen Roth (landowner), Emily Weidner (USFWS), Robin Vora (Deschutes SWCD), Monty Gregg (USFS - Ochoco NF), Robbie Piehl (USFS - Ochoco NF) , Jade Cooper (ZX Ranch), Stu Garrett (ECAS), Tim Deboodt (Crook County), Corey Heath (ODFW), Greg Jackle (ODFW), Angela Sitz (USFWS), Monica Tomosy, Lauri Turner (USFS - Deschutes NF), Nathan Hovekamp (Central Oregon LandWatch), Jeremy Austin (ONDA), Jim Greer (ECAS), Dallas Defrees (Baker County – LIT Coordinator), Mike Schmeiske (DSL), ***others?***

Meeting Objectives:

- Finalize LIT timeline
- Establish understanding of baseline information from BLM, WNv studies, and previously identified threats for LIT to build from.

Draft proposal for LIT timeline with benchmark objectives and finalize

- Benchmark 1 – Compile and analyze existing resource data
- Benchmark 2 – Develop LIT Plan
- Benchmark 3 – Procure funding for project implementation
- Goals for a strategic plan by September 2021 (based on timelines from similar collaborative groups)
- The timeline should not restrict the LIT from pursuing other opportunities for project funding and collaboration
- A discussion revolved around weather the proposed timeline is too long; however, BLM, USFWS, and FS employees chimed in that the timeline looks appropriate given federal planning limitations associated with NEPA. Acknowledging that the timeline is a living document, the group agreed to stick with the proposed timeline. The timeline is a projection and will likely evolve as the LIT develops.

BLM presentation

- **Planned, ongoing, existing projects**
    - Raven surveys completed in 2018, 2019. Potentially 2020 surveys
    - WNv studies in 2017 and 2018, at least 4 sites planned for 2020
    - Lek surveys starting next week (3/16)
    - 2 years of data of vehicle occurrences
    - Moffit fence pull – removed exclosure 2019
    - Maintained 47 guzzlers in 2017, 46 in 2018, 33 in 2019, is maintenance funded for 2020
    - Fine scale GRSG habitat mapping in review
    - 4,544 acres of jackpot burns in Brothers/N. Wagontire PHMA, Pile burning in Powell Mtn in the Paulina/12 Mile/Misery Flat PHMA
    - Flight diverters 2019: 34 miles made, 2020 Heart of Oregon Installation on high collision fences
    - Playa project – pumped out water, leveled, seeded, fencing. Second seeding this spring
        - Project proposals requesting funds for additional work
        - Monitoring with Line-Point Intercept (LPI) and Assessment Inventory and Monitoring (AIM)
    - High Desert Shrub Steppe DNA – thinning and fuels work to improve habitat in both Brothers and Paulina PAC areas is partially completed

- **GRSG Adaptive Management Triggers - 2019**
    - Brothers PAC tripped a population "Hard Trigger Threshold" in 2019, when a 16.18% drop in annual population set us below trigger threshold of 126 males
        - GRSG may be moving further into Lake County outside of PAC –Jade Cooper made comment. Corey Heath to follow up.
            - ODFW flights will look for GRSG outside of PACs. 2019 flights in the area were completed with systematic transects and observers. 2020 flights are planned with 2 fixed wing planes with FLIR technology. Targeting areas with largest decline to see if

birds are moving to new areas. Starting week of 3/23 and surveying approx. 500,000 acres.
        - CFA report in progress.
    - Paulina/12 Miles/ Misery Flat did not reach a threshold for population or habitat, had -19.2% change but due to higher population the level of males did not hit a hard or soft trigger threshold.

- **Habitat Assessment Framework (HAF)**
    - Habitat evaluation tool to consistently assess habitat at multiple scales and consistently organize and report data. Used at essentially all BLM offices with GRSG habitat.
    - Assesses habitat on 4 Orders of Habitat:
        - First Order: Broad-scale (species range) – Completed by BLM National Operations using extent of sagebrush landcover and extent of GRSG populations
        - Second Order: Mid-scale (population), - Completed by State office and District/ Field Office Wildlife Biologists using metrics on Habitat Availability, Patch Size and number, Patch Connectivity, Linkage Area Characteristics, Landscape Metric and Edge Effect, Anthropogenic Disturbances
        - Third Order: Fine-scale (home range) – Completed by district/ field office biologists. Analyzes Seasonal Habitat Availability, Season Use Area Connectivity, Anthropogenic Disturbances. Completed for Brothers, Paulina/12 mile in progress.
        - Fourth Order: Site-scale (Nesting habitat) – Site specific analysis using 200+ AIM plots, 200+ Landscape Monitoring Framework plots from NRCS, 6 required forms.
    - HAF reports are submitted to BLM OR/WA State office and National Operations Center (NOC). Available to the public once completed. Enables BLM to infer condition of habitat and identify areas in need of restoration, but is not a decision document

West Nile Virus (WNv) presentations

- **WNv findings presented by Stu Garrett** – East Cascade Audubon Society (ECAS)
    - First GRSG deaths in OR in Malheur County in 2006
    - Effective larvicide Bacillus thuringensis v israelensis (BT I) can be added to standing water for ingestion by mosquito larvae
        - Long timeline and planning considerations for BLM or USFS lands
        - BLM doesn't have NEPA or Pesticide Use Plan for this, nor are there data to suggest the need for this at this time. BLM needs to consider other wildlife species in the process as well.

- **USFWS presentation on WNv study in Brothers PAC presented by Emily Weidner (collaborative effort with BLM, ECAS, ODFW, USFS, and USFWS)**

  WNv background
    - A reemerging infections disease (same genus as dengue, yellow fever, and zika)
    - An arbovirus (ARthropod-BOrne virus) - birds serve as primary reservoir
        - American robin thought to be responsible for maintenance and transmission of WNv across the landscape
    - WNv has been isolated from more than 40 species of mosquitoes although many consider *Culex* species to be the primary vectors. Key species in US include *Cx. tarsalis*, *Cx. pipiens*.
        - *Culex* overwinter underground and emerge when temperatures during the day approach 50 degrees for a consistent period of time. Females lay their eggs in rafts on water in suitable habitat such as puddles, pools, ditches, storage tanks, and even buckets. Mosquito season varies by region but generally in Oregon, late April is the time you start seeing them emerge.

  WNv in sage-grouse
    - WNv in sage-grouse was first documented in 2003 in Alberta, Montana, and Wyoming
    - Oregon's first WNv-caused mortalities in sage-grouse occurred in Malheur county in 2006 and again in 2010

- Sage-grouse deaths usually occur July through September
- They exhibit variable mortality and low resistance to infection
  - Experimentally infected, non-vaccinated birds had 100% mortality
  - Estimates of mortality in wild birds are more conservative and range from 2 to 29%

Premise of Brothers/N. Wagontire study

- Goals: establish a baseline for West Nile presence or absence
- Threat assessment: key part of management, we don't know if or to what extent it impacts sage-grouse in the Brothers PAC.
  - Issues with treating a potential stressor rather than known stressor.
    - Large scale treatments may not be effective. WNv is temporally and spatially patchy. What may be an issue in one year/place might not in another.
    - Inherent risks and unintended consequences with doing mosquito control without a real understanding of what's happening. Often the concept seems straightforward but successful broad-scale application can be difficult to achieve and hard to maintain.
    - Mosquitoes are a food source for bat species, sage-grouse, and other wildlife.
- Sampling mosquitoes instead of grouse
  - Actually detecting disease in wildlife is difficult (especially in the numbers you need).
    - Animals move on large scales, they're cryptic, field work is very time intensive, and you have to have diseased animals.
  - We opted to start with mosquito-based monitoring. Mosquito-based monitoring is a small step but also has some advantages. It's an integral component of many vector management programs, has quick turnaround results, and is active rather than passive monitoring.
  - The premise is to start small and then scale up if needed.

Sampling results/discussion

- Survey in Brothers PAC in 2017 and 2018 had no WNv present in captured mosquitoes (16 traps each season)
  - 2017
    - Mosquitoes caught: 363
    - Pools tested: 62
  - 2018
    - Mosquitoes caught: 777
    - Pools tested: 90
  - All pools tested negative for WNv
- Lack of detection doesn't mean lack of presence.
  - Many other studies required months of intense trapping in order to detect WNv in mosquito populations.
  - Importance of long-term monitoring to establish a baseline, two years does not constitute long-term.
- Relatively low numbers of captured mosquitoes coupled with an arid landscape may make this a low-risk area for grouse compared to areas further east

Takeaways and future direction

- While WNv may be a contributing factor to sage-grouse population declines in the Brothers PAC, the current data (e.g., lek attendance survey data; mosquito trap survey data) are correlational only and inadequate to suggest WNv is the primary cause for population declines. There are myriad other factors at play that may have caused those declines. Certainly, WNv could be a part of that, but we would most likely see a lagged effect across the landscape if it was only WNv. Additionally, male lek attendance data might not be the most effective metric to use when looking at impacts to populations.
- 2020: 4 traps planned in Brothers PAC at guzzlers separated by a buffer of maximum mosquito dispersal distance

        - Potential to use gravid traps in the future. Gravid traps have a higher potential of trapping females that have had a blood meal.
    - Expand to areas with substantially higher risk
        - Baker piloted the project in 2019 and will continue trapping in 2020 and 2021.
    - Assess sage-grouse habitat use in water-limited areas with trail cams (previously collected data and new efforts).

Logistics for next meeting and future meetings

- Under current circumstances surrounding COVID-19, the group will continue to meet virtually.
- Discussed establishing a working group for each PAC (Paulina and Brothers) in the future when the need arises – for now, we will continue to meet as one group.
- The group may consider meeting only on a quarterly bases in the future but participants agreed that meeting every other month for the time being will allow us to maintain momentum until we're ready for more long-term planning.
- Members agreed to meet on a routine, recurring basis in an effort that Julie can spend more time helping develop the LIT and less time on the logistics associated with scheduling meetings. Email will be sent to gather information for recurring meeting schedule. Next meeting hopefully in May.

Agenda items for Next meeting

- Identify threats based on past and current information and start to determine which threats the LIT is capable of addressing
- Megan Cretuzburg presentation on interactive mapping tools and discussion on how the LIT can utilize them

Action Items to be Completed Before Next Meeting

- **JULIE –** Meet with steering committee to develop next LIT agenda
- **JULIE –** Distribute survey to LIT members to determine best day and time to schedule recurring meetings. Meetings will likely take place either at Crook County Library or BLM office, depending on availability
- **ALL –** Review the list of identified threats developed by the steering committee and come prepared to discuss at the next meeting.
- LIT information will soon be on ODFW website. ***Please send photos of sage-grouse, landscape, field work, collaboration, etc. to Julie to be shared on the website (photo credit will be given)***.