W506 Using Science-Based Solutions in Conservation of Threatened and Endangered Species: Sage-Grouse Case Study
Annual Meeting
January 17-18, 2017
Tucson, AZ

AGENGA

Project Objectives
1. To develop a process for scientist collaboration on assessing the best available science related to threatened and endangered species. This includes our ability:
   a. To understand the existing process for submitting science to the USFWS.
   b. To understand how land-grant universities are currently engaged in the process of ESA determinations.
   c. To find how land-grant universities can better engage in the process.
   d. To recommend how the process can be improved.
2. To document the process for scientist collaboration on assessing the best available science related to threatened and endangered species.
3. To integrate ecological, biological, economic, and social information to inform decision-makers.

Meeting Objectives
1. Approve Park City minutes
2. Finalize recommendations to Western Region directors
3. Establish LGU data priorities for improvement
4. Create a process to incorporate social and economic information with biological/ecological information in conservation/management decision making
5. Begin the process of creating a final report for Western Region Directors and a publishable paper

Tuesday, January 17, 2017
7:30 AM   Breakfast provided

8:00 AM   Welcome, introductions, review meeting objectives and agenda   Sarah

Sarah Lupis, WAAESD
John Tanaka, UWyo
Terry Messmer, USU
Jeff Beck, UWyo
Pat Diebert, USFWS
Jim Sidenger, UNR
Kevin Doherty, USFWS
Christian Hagan, OSU

Sam Smalidge, NMSU
Jay
Dave Dahlgren, USU
Eric Thacker, USU
Jim Sprinkle, UI
John Ritten, UWyo

Group agreed to use members not present to vet recommendations, review reports/manuscripts.

8:30 AM   Review of Park City meeting and outcomes   John, Terry, & Sarah
              Outcome: Approve Park City minutes/report.
- John Tanaka gave an overview of the history of this committee.
- There was some discussion about how multistate work is funded and general support for this kind of work.
- The minutes from the 2016 Annual Meeting were unanimously approved.

9:00 AM   Review and approve recommendations to AES & CES Directors   John
              Outcome: Approve list of recommendations
- John Tanaka demonstrated the UWyo database of all AES research. www.wyagresearch.org. Some information is pulled from REEPort.
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10:00 AM   Networking break

10:20 AM   WAFWA Sage-Grouse Strategy   Pat Diebert, USFWS
              Presentation. Future of sage-grouse conservation/management according to WAFWA.

11:30 AM   Lunch provided

12:30 PM   USFWS data collection/use & the actual/potential role of LGU's
                                        Pat Diebert & Kevin Doherty, USFWS
              Panel Discussion: USFWS response to WAFWA strategy and discussion of how they get the data they use…criteria for quality, etc.
              Facilitated Discussion. How can USFWS-LGU interactions be more effective.
- List potential & actual roles for LGUs in SAGR conservation/management
  - Provide Clarity in questions in the Species Status Assessment process—biological planning, conservation design.
  - Monitor effects of management actions on populations
  - PhD project: Assess current status→limiting factors→apply models describing population-habitat relationships→develop species habitat decision support tools
  - Sociologists & Economists: How do human decisions affect limiting factors? How much does it cost to implement programs? What is the buy-in for habitat programs at the local level?

     o Synthesis documents—what we know, don't know, should do about all that (similar to Policy Analysis Center for Western Public Lands)

- Prioritize roles to improve in next 5 years

2:00 PM   Economic, and social information: Role in conservation/management and best practices for integrating and applying socioeconomic
Moderated Discussion: How to integrate socioeconomic information from different sources and perspectives for conservation/management. When is this information useful? To whom?

- SSI needs to incorporate human uses of sagebrush ecosystem
- Successful case studies
- Understand human behavior in the context of listing (e.g., regulation, voluntary conservation, and how does regulatory framework drive motivation to participate in voluntary conservation)
- What incentives motivate landowners, what are the unintended consequences of incentives, what happens when incentives go away?
- Values related to rangelands
- Short term conservation vs. long term easements—what are landowners more motivated to participate in and what is the population response
- Industry willingness to participate in conservation actions; assurances
- Time, scale, risk for economic impacts
- Tying practice outcomes to population responses (ROI)
- Game theory in conservation to test decision making
- Potential economic impact of conservation strategy on community/state (e.g., core area policy in WY)
- Effect of listing on unemployment rate—study by OK-State.
- Dakota Skipper case study—habitat conversion rates
- Fear of living with listed species vs. actually living with listed species (real vs imagined)
- Changing demographics/knowledge of ranchers/producers and how this influences decision-making
- Differences between individual values and decisions and aggregate political positions

When is information useful
- Certainty of conservation actions ($$, plans)
- Program→limiting factor risk to determine potential success of programs
- Develop realistic scenarios for habitat loss, cost for recovery, etc.

Who is this useful to?
- Information will be used differently by various stakeholders, depending on perspective.
- USFWS, NRCS, states

3:00 PM   Networking break

3:20 PM   The scientific basis for different management decisions and LGU best process
Moderated Discussion: How are management decisions made? How is best available science implemented in that process. What are the critical unanswered management questions (e.g., spring stubble height, predation impact, site→landscape scaling up, impact of noise)?

- Livestock grazing impacts, use as a weed/invasive species management tool
- Population level impact (lek persistence) of wet meadow/mesic areas; can we manage/restore them and how big an impact does that have (risk response, ROI)
- Interaction between anthropogenic activities and predation
- Climate change on population persistence (projections) and habitat
- Impacts of plan implementation—did we move the needle
- Thresholds at the landscape scale
- Understanding how local-scale vegetation impacts survival rates and how this scales up to the rangewide variation of habitat and its impact on population variability, response to disturbance
- Effectiveness of conservation constructs and critical assumptions (core areas)
- Effectiveness of translocations in population conservation—does it work, how will genetics change, impact on ability to respond to climate change, etc.
- Can cheatgrass be stopped with bunches of native bunchgrasses
- LOOK AT ACTIONABLE SCIENCE PLAN, Secretarial Order 3336
- Ecosystem level: relationships between sage-grouse needs and needs of other obligates; what are the priority species interactions to understand
- Effective approach to fire management/suppression, conifer encroachment, cheatgrass, fire stripping/green breaks

Best available science in management decision making
- BAS=Best Defensible Science—what are the criteria for "defensible" ?
- How is peer review defined? Better than no review.
- Accumulation of science as a consensus builder
- Sound, reliable, credible, popular/unpopular—unfortunate sociopolitical components of science in decision-making
- When is it appropriate to turn research results into policy recommendations?
- Metanalysis: What issues/questions/topics can LGUs come together on?
  - Literature reviews that start tying things together (all thesis/dissertation chapter 1)
  - Variation across the range
  - Working groups (via WAFWA, WGA, MRF, etc.)
  - "Fabulous Fridays"

- USFWS-generated questions, priorities
  - Livestock grazing in the sagebrush ecosystem: What is it we know?
  - Powerlines across species
  - Nesting microhabitat across management zones
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- Communicating your science

5:00 PM   Adjourn for the day; dinner on your own or as a group

Wednesday, January 18, 2017

7:30 AM   Breakfast provided

8:00 AM   Welcome and review objectives/agenda for Day 2

8:30 AM   Review information from "scientific basis for different management decisions and LGU best process" discussion; continue discussion

10:00 AM   Networking break

10:20 AM   Establish writing teams for the following:
- The W506 summary report & synthesis paper for publication
- Economic, and social information: Role in conservation/management and best practices for integrating and applying socioeconomic – a synthesis and review paper

11:00 AM   W506 Continued? Forming a Western Region Research Committee.
Moderated Discussion: What is involved in creating and running one? What would objectives for next 5 years be? Next steps.

12:00 PM   Lunch provided

1:00 PM   Breakout Session: Writing Teams
Outcome: Outlines for an integrated paper on what we know, what we think we know, and what we would like to know

2:30 PM   Break

3:00 PM   Writing Teams Report Back: outlines, assignments, deadlines, group input

4:30 PM   Closing thoughts

5:00 PM   Adjourn. Dinner on your own or as a group or begin travel home

June: NCTC, $1000/person for SSA training—waiting list only. This group should make a request to partner and get our own course out west somewhere. Tailor the course toward our needs. Janice Engle (Janice_engle@fws.gov), Frank Muth (frank_muth@fws.gov) .