

RESILIENT MANAGEMENT SYSTEMS FOR TACKLING PERSISTENT ECOSYSTEM PROBLEMS: A CASE STUDY OF THE HARNEY COUNTY, OREGON CCAA FOR GREATER SAGE-GROUSE

Location: Society for Range Management 71st Annual Meeting (<http://annualmeeting.rangelands.org/>), The Nugget Casino Resort, Sparks, NV

Time: Tuesday, January 30, Cascade rooms 4 and 5

Moderators/Organizers: Chad Boyd, Dustin Johnson, and Angela Sitz

Synopsis

Typically speaking, the concept of resilience is often used as a modifier for describing the capacity of an ecological entity to recover from disturbance factors. The notion of resilience, however, is not inexorably tied to ecology, but is instead, a system level concept that is independent of subject, and can be molded across space and time. Following that logic, we can use resilience as a construct for measuring the capacity of natural resource management systems to be successful within dynamic social, ecological, and political contexts. Having resilient management systems can be the difference between thoughtful and purposeful management plans that promote iterative improvement balanced with consistent direction, and management planning efforts that are in relatively constant flux depending on variable ecological, social, political, and regulatory factors. In sagebrush steppe ecosystems, the need for resilient natural resources management systems has increased dramatically in recent decades, and will likely continue to increase into the foreseeable future. This is due to the fact that major management issues, such as exotic annual grass invasion and altered fire regimes, represent problems that are both persistent and complex. Addressing persistent and complex ecosystem problems is predicated on having management systems that are sustained for a duration sufficient to 1) address problems that persist over time, and 2) create adaptive feedback necessary to make progress in dealing with complex problems. Purposefully building resilient management systems is a complex undertaking with many dimensions. While such an endeavor is daunting, we suggest that a good starting point would be to explore existing efforts to design long-term natural resources management systems. In this symposium, we will examine important social, ecological, and regulatory elements of one such effort in southeast Oregon, the Harney County Candidate Conservation Agreement with Assurances for greater sage-grouse. We will use this case study to illustrate critical elements necessary for resilient management systems. Our aim is not to be prescriptive, but instead to suggest an experienced-based operational framework that can be generalized for use in a variety of sociological and ecological contexts.

Agenda

- 1:00PM: Persistent Ecosystem Problems and the Need for Resilient Management Systems (Chad Boyd, Agricultural Research Service)
- 1:20PM: Applying Threat-Based Mental Models to Greater Sage-Grouse Conservation (Dustin Johnson, Oregon State University)
- 1:40PM: Implementation of the Endangered Species Act in Western Rangelands: Finding Common Ground Through Common Sense (Paul Henson, US Fish and Wildlife Service)
- 2:00PM: Challenges of Creating Win-Win Conservation for Sage-Grouse and Landowners at a Local Scale (Angela Sitz, US Fish and Wildlife Service)
- 2:20PM: Landowner Trust, and the Role of Soil and Water Conservation Districts in Enabling and Implementing Greater Sage-Grouse Habitat Conservation (Marty Suter-Gould, Harney County Soil and Water Conservation District)
- 2:40PM: A Private Lands Perspective on the Harney County Greater Sage-Grouse CCAA (Andrew Shields, Wildlife biologist, Roaring Springs Ranch).
- 3:00PM: Break
- 3:20PM: Collaboration: What is it and how do you make it work? (Brenda Smith, High Desert Partnership)
- 3:40PM: Putting it all Together: Critical Elements for Success of the Oregon Sage-Grouse CCAA (Jay Kerby, The Nature Conservancy)
- 4:00PM: Five minute summary with moderated panel (all speakers) Q&A.

Abstracts

Chad Boyd

Title: Persistent Ecosystem Problems and the Need for Resilient Management Systems

Text: The concept of resilience is often used as a modifier for describing the capacity of an ecological entity to recover from disturbance factors. The notion of resilience, however, is not inexorably tied to ecology, but is instead, a system level concept that is independent of subject, and can be molded across space and time. Following that logic, we can use resilience as a construct for measuring the capacity of natural resource management systems to be successful within dynamic social, ecological, and political contexts. In sagebrush steppe ecosystems, the need for resilient natural resources management systems has increased dramatically in recent decades, and will likely continue to increase into the foreseeable future. This is due to the fact that major management issues, such as exotic annual grass invasion and altered fire regimes, represent problems that are both persistent and complex. Purposefully building resilient

management systems is a complex undertaking with many dimensions. While such an endeavor is daunting, we suggest that a good starting point would be to explore existing efforts to design long-term natural resources management systems. In this symposium, we will examine important social, ecological, and regulatory elements of one such effort in southeast Oregon, the Harney County Candidate Conservation Agreement with Assurances for Greater Sage-Grouse. CCAAs are long-term, voluntary agreements between the US Fish and Wildlife Service and landowners to beneficially manage habitat of a candidate wildlife species in exchange for a reduced regulatory burden should the species be listed under provisions of the Endangered Species Act. We will use this case study to illustrate critical elements necessary for resilient management systems. Our aim is not to be prescriptive, but instead to suggest an experienced-based operational framework that can be generalized for use in a variety of sociological and ecological contexts.

Dustin Johnson

Title: Applying Threat-Based Mental Models to Greater Sage-Grouse Conservation

Text: The western portion of the sagebrush steppe is characterized by complex landownership patterns with mixes of federal, private, and to a lesser extent state-owned lands. Conservation of greater sage-grouse habitat within this region requires engagement and agreement on strategy from a diversity of stakeholders, given the large areas of intact habitat needed to support viable populations of this species. Habitat conservation must also play out in sagebrush landscapes that face complex and persistent ecosystem threats such as wildfire, invasive annual grasses, and conifer encroachment, which further highlight the importance of effective collaboration and resiliency of conservation effort among a diverse set of stakeholders. Such ecosystem-based conservation efforts can be challenging because stakeholders are likely to have widely varying opinions and values associated with both the nature of habitat and the environmental and management factors which influence change. Therefore, these efforts require a common and foundational understanding of habitat properties and ecological drivers of change that stakeholders can use to build a conservation vision of current conditions, desired conditions, and a strategy for achieving desired conditions. As such, we have found the importance of simple mental models that possess these qualities increases for issues such as ecosystem-based wildlife conservation. Mental models allow us to understand, communicate, structure, and simplify highly complex reality. We found that when people have a common point of reference for understanding a problem it is much easier to productively discuss and ultimately agree upon options for dealing with the problem.

Paul Henson

Title: Implementation of the Endangered Species Act in Western Rangelands: Finding Common Ground Through Common Sense

Text: The Endangered Species Act of 1973 (ESA) is once again the subject of heated political debate. Critics call it a failure because it has not led to the recovery of very many listed species. Proponents claim the opposite, noting that the ESA has prevented the extinction of 99 percent of listed species. My view, based on many years of implementing the ESA as a field biologist working throughout the West, is squarely in the middle: the ESA continues to enable some of the most important and positive conservation outcomes in the U.S., but implementation could be improved to accomplish more conservation with less unintended consequences. There are significant areas where the ESA falls short of its potential and where its effectiveness could be improved. For example, the ESA can create perverse disincentives to conservation for large segments of the American public. It sometimes alienates or antagonizes important constituencies who would otherwise support its goals and intent and who are critical to conservation, such as many family farmers and ranchers. The question is: can the ESA be strategically tailored to these circumstances, or is America's most powerful environmental statute mostly a blunt regulatory instrument? We used the inherent flexibility in the ESA during the greater sage grouse (GSG) listing process to reduce conservation disincentives within the ranching community of eastern Oregon and to support nonregulatory alternatives to an ESA listing of the GSG. Our guiding principles included: (1) maximize positive net conservation outcomes for GSG, (2) keeping ranchers ranching is good for longterm, landscape-level conservation, and (3) help landowners view the GSG on their ranches as an *asset* rather than a *liability*. This paper describes the rationale, process, and outcomes of this strategy, and how this approach may be applied to other conservation challenges where the ESA interfaces with private landowners.

Angela Sitz

Title: Challenges of Creating Win-Win Conservation for Greater Sage-Grouse and Landowners at a Local Scale

Text: In 2011 the Fish and Wildlife Service (Service) was approached by a diverse group of stakeholders to discuss the development of a Candidate Conservation Agreement (CCA) with Assurances for greater sage-grouse in Harney County, Oregon. Over the next 3 years the Service participated in a unique collaborative process and overcame many obstacles to develop a CCA that was immediately replicated and adopted by the other sage-grouse counties in Oregon. During these negotiations there were often points of disagreement, these disagreements were overcome by finding common ground and compromising on the decision. Some of these disagreements included the type and level of inventory and monitoring that would be required in the agreement, issues surrounding predation, and simply having a common understanding the primary threats to sage-grouse. This collaborative effort not only

led to the development of six similar agreements it also built relationships between a unique set of partners that has resulted in many other successful conservation and research efforts.

Marty Suter-Goold

Title: Landowner Trust, and the Role of the Soil and Water Conservation Districts in Enabling and Implementing Greater Sage-Grouse Habitat Conservation

Text: Management of threatened or imperiled species on private land is a complex subject. Successful management of these species requires establishing and maintaining trust with private landowners. Trust is a combination of an emotional and logical act, and requires time and patience to create. The Soil & Water Conservation Districts (SCWDs) in Oregon developed relationships and trust between private landowners and federal agencies to establish 30-year Candidate Conservation Agreements with Assurances (CCAA) for greater sage grouse (GSG) conservation. In addition to decreasing the likelihood of a GSG listing, CCAA management plans were developed to address impediments to practical implementation and to ensure that western rangelands and generational ranches maintained ecological and economic viability. The process utilized in Oregon may have application to GSG across western rangelands. In this presentation, I will guide the audience through the complexities of landowner engagement and trust, and the roles and responsibilities of the parties involved in enabling and implementing GSG agreements.

Andrew Shields

Title: A Private Lands Perspective on the Harney County Greater Sage-Grouse CCAA

Text: Roaring Springs Ranch is a cow-calf operation in southeast Oregon operating on over 1 million acres. The ranch works toward maintaining healthy wildlife populations and range conditions while utilizing excess forage for beef production. The ranch has a strong history of active management, implementing projects including landscape-scale juniper cutting and prescribed burning, riparian restoration, collaboration with the scientific community on many range and wildlife research projects, and participation in candidate conservation agreements with assurances (CCAA). Enrolling in a CCAA gives private landowners opportunities to be proactive in conservation work and to receive benefits for good stewardship. However, tradeoffs include privacy concerns and potential financial costs. The ranch enrolled in the Harney County Sage-Grouse CCAA in 2015 despite potential tradeoffs. Realized benefits, examples of conservation actions taken, and long term goals relating to this CCAA will be discussed. The ranch's enrollment in this CCAA has thus far been beneficial for the ranch and for the conservation of sage-grouse in this area.

Brenda Smith

Title: Collaboration: What is it and How do you Make it Work?

Text: Addressing persistent and complex ecosystems problems to restore landscape resilience requires good science but must also consider the complexities of management and the people involved in decision-making. Collaboration is a word that is used generously and defined loosely in recent years but is recognized as a growing trend. Agencies, including regulatory agencies, conservation groups, landowners and communities continue to seek out a participatory approach to solving complex issues. Collaboration comes with a host of expectations that include reducing delays in restoring ecosystem health, shoring-up rural economies and communities. The promise of collaboration has funders increasingly interested in funding partnerships that are high-performing and address landscape scale issues that cross management boundaries. In our experiences, we believe engaging in a collaborative, solutions-oriented process with relevant stakeholders is the only viable and lasting means to address contemporary natural resource, social and economic issues facing communities.

It is difficult to put criteria around what makes partnerships high-performing but one key is effective collaboration. Collaborative partnerships require substantial upfront social capital to build relationships. Additionally, resources are needed to support the process such as building relationships, facilitation and communications. The High Desert Partnership is an organization that has pioneered successful collaborative initiatives in Harney County for over 10 years by advocating for a process where solutions are economically, socially, and ecologically sound and are developed by all stakeholders. We have found there is no one recipe to make a collaboration work. However, there are some guiding principles that have emerged across several very different collaborative efforts in our region. Principles include, neutral party guiding the process, groups must be empowered to make decisions and shared understanding of the problem. As collaboration continues to expand as a process to solve natural resource issues there is interest in understanding the shared qualities that ensure success.

Jay Kerby

Title: Putting it all together: Critical elements for success of the Oregon Sage-Grouse CCAA

Text: Successful development and implementation and persistence of the Oregon Sage-Grouse CCAA program depended on numerous sociological and ecological factors, as will persistence of the program into the future. The pending decision on whether to grant threatened or endangered status to the Greater Sage-Grouse in 2015 stimulating a critical mass of diverse stakeholders, including local, state and federal officials and scientists, private landowners, and non-governmental organizations, to engage proactively in advance of the listing decision. Commitment to participate, despite very high uncertainty about the eventual outcomes, did not wane throughout a >3-year development phase, as public employees were empowered to participate by their supervisors and private individuals donated thousands of hours of time and travel. This diverse coalition forced participants to wrestle with critical questions necessary to

advance, such as how to integrate rigorous science necessary to grapple with complex ecological questions into a management framework that addresses sage-grouse habitat needs and facilitates communication and trust with wary landowners. Initial implementation of the Oregon CCAA management framework was empowered by several policy actions, adequate agency funding and staff support, and high landowner participation in enrollment. The framework is also being bolstered by adoption into related programs, such as the State of Oregon's Habitat Quantification Calculator for planning and mitigation in Sage-Grouse habitat and use by BLM for project prioritization and planning in several districts. Additional programmatic needs for persistence include continuing education for new participants as principle authors retire or relocate and collaborative processes for unforeseen and potential disputes. Successful adaptive management, as some initial on-the-ground actions to address complex ecological threats, such as invasive annual grasses, fail will be paramount and most effective if the diverse coalition that built this management framework continue to be fully engaged.