From: Wightman, Catherine
To: stiver@cableone.net; Pat Deibert; lief_wiechman@fws.gov
Subject: RE: GRSG Metrics Discussion
Date: Wednesday, November 06, 2013 4:27:27 PM
Attachments: Activity Types and Definitions_wightman.docx

As promised I took at look at this on the plane. Attached is mostly food for thought as you pull together elements of the database. Most of my comments are under sub-activities but there are a few others scattered about. As I mentioned when I was leaving the meeting, Montana is focusing more on protection and enhancement, less on restoration and mitigation. We are hoping we don't need to get to the latter as much. I do think USFWS will want to capture these activities in the assessment, as the value for Montana PACs might be relatively high (i.e., we don't need to be restoring, but we can certainly enhance what we have).

My 2-cents. Hope it helps!

Catherine

From: San Stiver [mailto:stiver@cableone.net]
Sent: Friday, November 01, 2013 4:14 PM
To: JasonRobinson@utah.gov; Aaron Robinson; Alicia Goddard; Bea Prieto; Wightman, Catherine; Chris Colt; Clinton McCarthy; Dave Budeau; David Naugle; Dawn Davis; Don Kemner; Jeremy Maestas; Jessica A Rubado; Joel Nicholson; Kathy Griffin; Kenneth Mayer; Martin Fitzpatrick PhD; Mike Schroeder; 'Pat Deibert'; Robin Sell; Rod Hamilton; Scott Gardner; Seth Gallagher; Shawn Espinosa; Tim Griffiths; Tom Christiansen; Tom Remington; Tom Rinkes; Travis Runia Sr.; Virgil Moore
Subject: FW: GRSG Metrics Discussion

Folks,

Background and discussion points for the conservation metric discussion next week.

San

From: Wiechman, Lief [mailto:lief_wiechman@fws.gov]
Sent: Friday, November 1, 2013 2:52 PM
To: stiver@cableone.net
Cc: Pat Deibert; Nicole Alt; Jesse DElia
Subject: GRSG Metrics Discussion

Hi San,

Attached are 3 documents for next week's Metrics discussion. The 1st is the 'narrative' version of the Metrics Framework the Task Force has been working on. It is structured in a (Conservation Goal - Cons. Action. - Metric) format. The 2nd document is the 'tabular' version of the same list. Not all of the narrative has been incorporated into the table. The 3rd document is the definitions of the 'activities' listed in the Table.

We'll primarily be using the table for our discussion and the other 2 as supplemental information as well as a background on how we've got to this point.

Take care, see you next week.

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	ACTIVITY TYPES:	SUBACTIVITY TYPES:
1	Research	Genetic Analysis Identify Seasonal Habitats Identify Limiting Habitats Identify Connectivity Corridors Movement Patterns Site Descriptions / State and Transition Models Weather Augmentation – what is this? Grazing management
2	Regulatory Mechanisms	Development Siting State Conservation Plans Rehabilitation Plans Mine Reclamation Conservation Strategy Harvest Regulations and Monitoring Avoidance Minimization/ BMPs Compensatory Mitigation – Conservation Banking/ Credit Systems
3	Sagebrush & Habitat Protection	Development Siting ~~State Conservation Plans~~ seems to me you could delete this here and just include under regulatory mechanisms. Elements from the plans/strategies will be captured under specific activities ~~Conservation Strategy~~ Conservation Easement Conservation Leases Grazing management Development of state funding source for habitat conservation projects Land Purchase Incentives Urban Zoning Surface Disturbance Area / Seasonal Closure(s) Vegetation Management Fuel Breaks / Fuel Management Development and use of ACK-55
4	Livestock & Rangeland Management	Area / Seasonal Closure(s)

		Vegetation Management Grazing management plans (ideally whole ranch, cross-jurisdicational) Avoidance Site Descriptions / State and Transition Models Meadow Irrigation
5	Fire: Presuppression	Area / Seasonal Closure(s) Vegetation Management Preposition Resources Fuel Breaks / Fuel Management
6	Fire: Suppression	Area / Seasonal Closure(s) Vegetation Management Preposition Resources Fuel Breaks / Fuel Management Cross-jurisdictional Agreements
7	Fire: Post-fire Restoration	Area / Seasonal Closure(s) Vegetation Management Fuel Breaks / Fuel Management Restoration Monitoring Aerial seeding Drill seeding Plantings Burn Severity Assessments
8	Habitat Restoration / Mitigation	Area / Seasonal Closure(s) Vegetation Management Seedings/ Plantings
9	Habitat / Veg Treatment	Area / Seasonal Closure(s) Vegetation Management Preposition Resources Fuel Breaks / Fuel Management Rehabilitation Plans Aerial seeding Drill seeding Plantings
10	Conifer Removal	Fuel Breaks / Fuel Management Mechanical Conifer Removal (Stage 1&2) Mechanical Conifer Removal (Stage 3)

		Prescribed Fire (Stage 3) Natural Fire (Stage 3)
11	Wild Equid Management	Population control Grazing management Horse Gather
12	Infrastructure Construction, Removal, and Modification	Development Siting Fence Modification Fence Marking Fence Removal Structure Removal Power line Removal Power line Retrofitting Avoidance Minimization/ BMPs Compensatory Mitigation – Conservation Banking/ Credit Systems
13	Recreation Management	Area / Seasonal Closure(s) Mapping Enforcement
14	Population Augmentation	Translocations
15	Predator Control	Predator control programs Eliminate/ Reduce nesting/ perching sites Eliminate external food sources (e.g cover landfills, road kill)

ACTIVITY DEFINITIONS	
Conifer Removal	Removal of conifers that are encroaching into GRSG habitat
Fire: Presuppression	Aid in presupression actions, preparation.
Fire: Suppression	Wildlife suppression with GRSG conservation in mind.
Fire: Post-fire Restoration	Related to restoration and rehabilitation of habitat lost due to wildfire.
Habitat Restoration / Mitigation	Habitat restoration efforts and action outside of post-fire restoration and conifer removal. Typically the actions that take place on the way to recovery.
Habitat / Veg Treatment	Treatment efforts to remove non-habitat, improve or create new habitat, enhance existing habitat, and restore previously occupied habitat to a functional state.(As written this doesn't clearly capture enhancements. For example, a subactivity might be application of ACK-55 or planting of native species to reduce the prevalence/potential spread of annual invasive species. In my mind, these are not necessarily restoration activities but are designed to prevent the need to restore in the future.)
Infrastructure Construction, Removal, etc.	Actions related to the modification, removal, or siting of any man-made infrastructure on the landscape. Typically associated with energy development, and vertical structure that remove and fragment habitat, as well as increase likelihood of predators.
Livestock & Rangeland Management	Related to livestock management and grazing operations. On-the-ground actions include activities that benefit GRSG and their associated habitats.
Population Augmentation	Activities involving translocation or similar activities to bolster GRSG populations. Specific to the threat of 'Small and isolated populations.'
Predator Control	Activities that address impacts predators may have on GRSG survival and reproductive efforts. Specific to the threat of 'Small and isolated populations.'
Recreation Management	Related to management recreation activities (including but not limited to hunting, OHV use, hiking, camping) in GRSG habitat.
Regulatory Mechanisms, etc.	Activities that relates to state- and federal-level planning efforts. These regulatory mechanisms can influence any threat are the 'how-to' and dedicated plans to conserve GRSG, NOT on-the-ground actions
Research	Related to research in which identified gaps in information or population level information are achieved through research-related actions.
Sagebrush & Habitat Protection	Assist in protecting sagebrush and other sage-grouse habitat through many on-the-ground conservation actions.
Wild Equid Management	Management of free-roaming equids that benefit GRSG habitat. Specific to the threat of 'Free-Roaming Equids' on the landscape.

SUBACTIVITY DEFINITIONS / EXAMPLES (not all-inclusive)	
Aerial seeding	Activities where aerial seeding is employed. May be conducted in vegetation treatments, restoration efforts, etc.
Area Closure(s)	Closing of access, areas, roads to general public for a period of time to preserve GRSG and associated habitats seasonally, annually, or in case of high fire risk, spread of invasives, etc.
Seasonal Closure(s)	Closing of access, areas, roads to general public for a period of time to preserve GRSG and associated habitats seasonally, annually, or in case of high fire risk, spread of invasives, etc.
Avoidance	A measure of how development-related actions (often energy development) are prohibited or moved out of GRSG habitat because of conservation plans in place.
Burn Severity Assessments	
Conservation Easement	Metrics = acres in permanent easement, acres in 30-year easement
Conservation Leases	Metric = acres leased on private lands to prevent ag conversion (30 yr, 15 yr, 10 yr)
Conservation Strategy/State plan	One of the metrics here might be creation of dedicated state funding source for habitat conservation projects – typically easements or (Y or N) and amount/year. Value might be an average number of acres that are/can be conserved with this pot.
Cross-jurisdictional Agreements	
Development and use of ACK-55	
Development Siting	Metrics=# of well pads outside of state recommended NSO, value based in part on what that NSO is; % of power lines, pipelines, linear features miles that are within a state recommended distance of leks, value is based in part on what distance is [this might be hard for some states to quantify but in a perfect world will be a relatively simple GIS exercise]
[Minimize] Disruptive activities (related to development/servicing power lines, etc.)	e.g., seasonal restrictions on certain activities near leks; metric=are state recommendations for seasonal restrictions being implemented (Y or N)? value would be based in part on distance from lek or acres protected (measured as area covered by radius from lek x # of leks potentially affected) [at some point this will ideally become regulatory and perhaps get captured under state strategies but in the meantime states would like to receive credit for voluntary adherence to recommendations]
Drill seeding	
Enforcement of what?	Need more specificity
Fence Marking	Metric = miles of high risk fence marked in PAC (as modeled by Stevens et al.)
Fence Modification	
Fence Removal	
Fuel Breaks / Fuel Management	
Genetic Analysis	
Grazing management	Metric=acres enrolled in grazing management plans; local research projects may provide some

	information on value via demographic data, however, all grazing management in all areas may not yield same results so some caution is needed here to take this to the next level;
Harvest Regulations and Monitoring	Activities that address harvest and the impact on GRSG. Specific to the threat of 'Small and isolated populations.' Metric = open or closed by population (not PAC as by nature some small pops were not included as PAC because they already contain a relatively small number of birds)
Horse Gathers	
Identify Connectivity Corridors	
Identify Seasonal Habitats	
Incentives for what?	Need more specificity
Land Purchase	
Mapping	Consider deleting; mapping is an important step in conservation but value of mapping if it isn't tied to another activity is limited.
Meadow Irrigation	
Mechanical Conifer Removal (Stage 1&2)	
Mechanical Conifer Removal (Stage 3)	
Mine Reclamation	
[Identify] Movement Patterns	-Consider deleting; like mapping, this can inform where seasonal, connectivity habitat is located but unless it is taken to the next step of using it to implement action, value is limited.
Natural Fire (Stage 3)	
Planting plugs	
Population control do you mean predator population control?	
Power line Removal	
Power line Retrofitting	
Preposition Resources	
Prescribed Fire (Stage 3)	
Rehabilitation Plans	
Restoration Monitoring	
Site Descriptions / State and Transition Models	
~~State Conservation Plans~~ put state plans/strategies together	
Structure Removal	
Surface Disturbance	
Translocations	Metric = percent of birds successfully recruited in to new population after translocation/# of birds translocated

Urban Zoning	Actions that may reduce the development of GRSG habitat for urban development.
Vegetation Management	
Weather Augmentation **??? what does this mean?**	