

# Conservation Target Work Session

Questions Contact

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Summary of this Report Out: The work session included the participants of the Northwest Basin and Range Ecosystem Symposium. Over 100 people attended the event on February 15-16, 2017 in Lakeview, Oregon. The attendees were guided through a process, which included identifying action steps to address stressors identified for their table's conservation target. For instance, if the attendees chose the Aspen Woodlands conservation target they may have chosen an action step that would address the stressor – altered fire regime. Below is a comprehensive list of the outcomes of this session. We have chosen not to summarize people's words and instead write them down how they were written in the activity. These are what individuals wrote on their post-it notes in the activity.

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\*\* Stressors are underlined. Action steps are bulleted.

## Wetland, Seeps and Springs

### Surface Water and Ground Water Use

- Identify potential water savings, inefficiencies, in system management. Provide mechanisms to improve/repair. Screen off springs if possible.
- Key first step is to understand groundwater impacts on seeps and springs to get a better understanding of the spring/seep plumbing. Is variability in spring discharge due to natural or anthropogenic causes?
- Juniper removal to improve water availability (where conifers have encroached)
- Accurate metering of anthropogenic use of water
- Use water conservation techniques
- Floats on tanks
- Permit use
- Balance groundwater rights and development with need for maintained flows and wetland permanence – adjustable basins for wildlife on par with development.
- Create an incentive program to encourage water conservation to buffer against variable precipitation patterns.
- Restore hydrology in altered systems, to improve water delivery and water table recharge
- Focus on efficiencies of human and agricultural use
- Try to make grazing activities separate from natural use (i.e., Store Tanks)

- Fall trees along stream sides to discourage domestic (range animals) from stream banks

#### Overpopulation of wild horses and burros

- Actively manage HMAs, select for genetics, cull horses that don't meet HMA selection goals
- Provide alternate access to water away from spring and down gradient ecosystem. Water source could be diverted spring water. Fend off spring and ecosystem/restoration activities
- Streamline the horse gather process and return each HML to their AML
- -Livestock – change season of use
- Train employees in demolition, and expand spring/seeps using dynamite, which will provide more water for native flora and fauna, horses and cattle.
- Fence off if appropriate in Key and Vital areas, but keep grazing in system
- Exclusion fencing of wetlands seeps and springs
- Decrease wild horse herd size
- Use exclosures
- Use tanks for cattle, wild horses/burros
- Adjust timing of cattle grazing
- Add floats to stock tanks outside of seeps, rotational grazing
- Better distribute cattle by developing range improvements that will aid in more efficient use of pastures. These could include spring development and fencing.
- Livestock grazing – identify improper practices and focus on sanctions/incentives
- Make proper management more economically viable than practices
- Better management of birth control of feral horses – come up with better grazing policies and don't return them to the range
- Establish grazing limits for deciding when to remove (change the laws!)
- More partnerships to advocate for control of feral horse populations
- More options and funding to deal with feral horses
- Feral horses – sterilization study - monitor for results
- Livestock – develop a riparian pasture where timing and duration can be managed to avoid overuse during the hot season. This may include fencing and offsite water development.
- Build exclosure to manage/prevent overuse of sensitive spring/seep areas

#### Degradation of riparian area due to historic overuse

- Apply adaptive management and use out of the box ideas to change already degraded riparian

#### Non-natives

- Investigate control methods to eliminate or minimize non-native spp. impacts including mechanical control, bio-control and chemical control.
- Because non-native spp. use up water, remove juniper from site, and use cut juniper to build a shade structure over the seep to inhibit u.v. light rays that help to stimulate growth of non-natives
- Spray copious amounts of aquatic based herbicide on non-native plants
- Increase outreach and education to outdoor recreationists about aquatic invasives. Help stop the spread and support for management.
- Focus on conserving areas with high quality existing habitat. Prioritize conservation.
- Utilize best grazing practices to minimize impact to these meadow sites
- Improve collaborative approaches to invasive monitoring and management
- Monitoring
- Less limitations or regulations on controlling invasive spp.

- Identify and map invasive species and then focus conservation efforts on solving the spread of them and not allowing the populations to unify
- Nonnative stressor- more research on grazing at crucial growth stages to prevent further distribution
- Develop local seed bank (restoration plant spp. for respective ecological region (either Level III or IV))

#### Climate Change

- Re-vegetation along water sources to mitigate higher temperatures
- Utilize herbicides to address invasive plant species, particularly after disturbance events
- Increase buffer zones surrounding water sources for projects

#### General

- Engage partners outside of federal agencies to assist in on the ground efforts
- Volunteer etc.
- Map of Springs and Wet Meadows
- Describe Ecological sites for Riparian Systems

## Riverine/Riparian

#### Improperly Managed Livestock Grazing

- Create riparian pastures with approved grazing management plans
- Education, Retool ranchers
- Veganism
- Riparian fencing/exclosure – develop grazing plan that will facilitate riparian recovery
- Implement proper grazing systems
- Grazing: Season of use, riparian fencing, grazing management plan
- Education and Outreach
- improve landowner participation in incentive programs
- Any workshop needs to tie economics into improved grazing practices
- Participatory decision support to evaluate tradeoffs with domestic and feral livestock management alternatives
- Season of use flexibility and adjustment

#### Loss of Connectivity

- provide fish passage at irrigation diversions
- screen diversion ditches to prevent fish entrainment
- Watershed connectivity – passage/screening
- Bypass channels

#### Climate Change

- Map aquatic ecosystem services, climate vulnerability, and climate adaptation alternatives

#### Groundwater/Surface Water Use

- Monitor levels at key groundwater/surface water interaction locations (springs)
- Improve efficiency where available
- Adaptive management process for evaluating GW practices
- Irrigation efficiency

- No more use it or lose it

## Connectivity

### Energy Development

- Identify potential wind development area that also provides connectivity to sagebrush obligate species sensitive to tall structures and roads. Determine what actions would either avoid such development or provide incentives not to develop that potential applies to both towers and transmission lines
- Map high value habitats and highly intact areas, and areas of least conflict
- Identify over long term studies impact of renewable energy projects have on connectivity of big game species. To include connection to increased number of power lines
- Limit renewable energy project to areas that will minimize adverse effect to wildlife (especially regarding migration or corridor movement)

### Fragmentation

- Analysis on effects of development of renewable energy
- Look at areas where conifers are in a direct path for sage grouse movement from low to high elevation areas – work to remove conifers in those areas
- Juniper removal in core sage grouse habitat - prioritize at riparian areas/springs
- Juniper encroachment - focus on areas of water sources to increase water supply and “riparian” or wet meadow habitat for sage grouse and other species
- Juniper removal where sage grouse species are disconnected from habitat
- Inadequate ground cover for gallinaceous birds connecting foraging areas. Improve cover of proper heights for protection from predators
- Research studies and management of invasive plant species across the landscape
- Nonnatives – cheat grass and medusahead – caused by fire, soil disturbance and grazing
- Habitat degradation – invasive species
- Need to reconnect picture Rocks PAC to other sage grouse populations in Oregon
- Identify late summer habitat for sage grouse in Oregon – from location data identify any connectivity impediments or threats
- Enhance/develop new techniques to facilitate recovery of burned areas in warm-dry sagebrush areas
- Fir: Habitat mosaic that prevents spread of landscape scale wildfire. Improvement of native bunchgrass to increase resistance on the landscape

### Fencing

- Fencing - with increasing effect to change grazing rotations fencing an issue for many animal species. Work on fencing techniques to minimize input on wildlife
- With known data on antelope migrations, look at fence location and fence heights (bottom wires) to see if antelope have to avoid these areas
- Marking in priority areas
- Removal in priority areas
- Modification (e.g., adjust wire spacing and height)
- Outreach to landowners and corporations to communicate options for wildlife friendly fencing. - Identify areas where fencing can be removed
- Identify removal priority areas

- Consider migration movement when considering new fence construction and only install wildlife friendly fence

#### Habitat Degradation

- Remove wild horses and/or burros
- Continue to look at areas in need of bottomless culverts for fish movement – replace old culverts
- Improve meadow habitat degradation – Summer July – Aug., Juniper control, better grazing etc.

#### General

- Model connectivity –cross boundary, cross jurisdictional analysis of landscape connectivity at multiple scales
- Develop a land trust entity not constrained by state boundaries more focused on connected region
- Facilitate greater management and coordination across agencies (BLM, Fish, State agencies)
- Planning prioritization tool: Strategic application of restoration and conservation activities
- Expand resources needed to conduct on the ground restoration projects to maintain connectivity (e.g. partners for fish and wildlife, SGI) and integrate priorities among partners
- Develop and maintain partnerships to coordinate actions to foster a connected landscape especially across jurisdictions (e.g., states and agencies)
- Identify (map) key areas needed to maintain priority species at the landscape scale (e.g., seasonally important areas /habitats, migration routes, etc.) a conservation blueprint
- Promote regional focus on issues to transcend state boundaries and promote greater collaboration between community leaders for conservation (political, business, industry etc.)

## Sage-Steppe

#### Invasive Annual Grasses (IAG)

- Herbicide/Reseed/Seeding technology for IAG
  - Expand use of herbicides on annual grass on public lands
  - Herbicide and seeding
  - Reduce annual grasses cheatgrass and medusahead – prioritize primary weed vectors and isolated patches – move on to large monoculture patches with rehab species seeding
  - Invasive annual grasses: spray and reseed
  - Spray annual and plant grown out native seed
  - Spray and Reseed
  - Collect seed from remnant native in areas to be rehabbed - grow out for seed increases
  - Develop seeding (natives) strategies following fire
  - Invasive annual grass: Collect seed from remnant natives in areas to be rehabbed. Grow out for seed increases
  - Identify plant species that have a greater probability to germinate and establish in more limiting ecological sites. Success that can be established in untreated areas and species in treated
- Bio-control for IAG
  - Develop effective bio controls (ACKSS) for preventing spread of cheat grass

#### General

- Apply adaptive management to invasive annual grass infestation including targeted grazing, herbicide application and reseedling as tools across larger landscapes
- Limit expansion of noxious annual grasses
- Minimize disturbance by controlling feral horses
- Increase resilience to fire (increase PG, modify fuels)
- Restore AG invaded areas (control AG and reestablish perennial vegetation)
- Catch invasives at early stage and aggressively treat infest while eradication is possible
- Non-native plants being introduced for cattle, horses, humans, vehicles, stop cattle grazing and have all vehicles property washed before entering or leaving areas of invasion
- Long-term investment = multiple treatments for success. Example herbicide treatments and seeding perennial plant species that can establish and provide structure-function - processes
- Integrated pest management to work on disease pathogens
- IAG/Fire/Climate
- Develop successful restoration practices to restore degraded Wyo Bsb communities
- Increase PG density
- Return/Maintain historic hydrologic landscape
- Restore/maintain native vegetation
- Incentivize and reward ranchers and agencies for fewer and smaller fires in Wyoming Big Sage brush

#### Fire and Fuels

- Reduce woody fuels in patches lower/limit fire spread and intensity. This will keep fires smaller and lower the mortality on perennial grasses. I.e. fuel breaks or patches create variability on the landscape.
- Implement fire, fuel breaks (vegetative/roads)
- Implement more targeted grazing especially in fire prone areas
- Use grazing to reduce fine fuels to help reduce intensities of fires in altered fire regimes, possibly in combination with re-seeding bunchgrasses post fire
- Create more firebreaks to reduce size of wildfires
- Control wildfires
- Manage fuel loading
- Incentives to ranchers to reduce livestock grazing prior to drought years
- Prescribe fire to control juniper encroachment in MT. Big Sagebrush habitats
- Reduce Fire
- Increase Rx Fire
- Increased monitoring after initial attack
- Introduce fire in resilient MBS Communities
- Soil regeneration
  - Stop overgrazing
  - Reduce fire intensity
  - Increase rest rotation grazing
- Prescribed fire to create fire breaks and help control fuels
- Should fire occur, fire crews need to aggressively check gear prior to entry for seeds
- Native grass/sage restoration post fire

#### Overgrazing

- Horse Adoption program or start program to teach people to eat horse meat
- Reduce wild horses and maintain numbers to AML
- Manage wild horses

- Reduce juniper encroachment by cutting, burning or both
- A stressor – PJ – Action – mastication
- PJ removal – hand removal
- PJ - Burning

### Juniper Encroachment

- Hand treat phase 1 encroachment areas
- Lop and Scatter
- Pile brush
- Torch in place then fell skeleton
- Juniper removal cut hand pile, burn cut, and leave small trees, plant native seed and sagebrush
- Remove treat juniper at landscape scale
- Strategic Pinyon-Juniper removal to improve habitat in areas of important habitat for wildlife
- Juniper encroachment – cut junipers
- Develop landscape scale juniper removal project
- Mechanical treatments
- Rx fire
- Re-seeding with natives
- Remove thinning of juniper population below historically significant levels
- Juniper control by shearing, followed by a prescribed fire regime
- Cut them down
- Lack of monies, resources to manage property, look for funding, people to do the work

### General:

- Collaborate with appropriate partners to increase livestock producer flexibility to improve restoration success – Post-fire, pre-fire
- Limit habitat degradation fragmentation, impact by anthro...
- Altered fire regime
  - Suppress wildfires
  - Rx Fire
  - Mechanical Treatment (mowing)
- Decrease climate change
- Incorporate climate modeling into decision support tools for decision-making
- Cheat grass die-off restoration
- Annual grass – native plant restoration
- Carbon Tax
  - Fossil fuel extraction
    - Decrease wildlife impacts
    - Decrease invasive annuals
    - Decrease anthropogenic
    - Decrease fragmentation

## Aspen Woodlands

### Altered Fire Regime

- Rx Fire – stressor

- Higher elevation Rx – test impacts spring v. fall Rx on community, relative to specific conditions, water year, etc.
- Return fire interval that promotes offspring
- Increase knowledge of how fire impacts juniper – take actions to use managed fire in aspen stands

#### Overgrazing

- Exclosure fencing – action
- Fence
- Limit improperly managed livestock grazing

#### Juniper Encroachment

- Reduce invasive juniper encroachment in Aspen stands while restoring native plant understory
- Understory thinning for juniper encroachment
- Remove conifers
- Rx Fire
- Reduce fire suppression
- Cut-pile-burn juniper - re-seed burned area

#### Altered Moisture regime

- Management to promote H2O availability to area

#### Climate Change

- Study to better understand the impacts of climate change on aspen stands

#### General

- Use by wild ungulates
  - Return wild predators
  - Fencing
- Manage for habitat conditions in spring/streams – high cover shading etc. to reduce evap water losses maintain better water soil balance
- Problem: Lack of large diameter Aspen snags for sapsuckers and cavity nesters – Solution: Top large dead and dying aspen so they remain standing and don't fall so the birds can utilize them
- Manage recreation to reduce road cutting etc., in campgrounds/high use areas  
Use social engineering to direct use