

Enhanced Reclamation Options in the Pinedale Anticline Project Area

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Background

- **In 2010, annual mule deer population monitoring efforts detected a decline in the mule deer population on the Mesa of greater than 15% compared to the reference year 2005**
- **This decline exceeded a Wildlife Monitoring and Mitigation matrix (WMMM) threshold and triggered a mitigation response required by the 2008 Supplemental Environmental Impact Statement (SEIS) Record of Decision (ROD)**
- **As a follow up to the 2010 Wildlife Annual Planning Meeting, a public meeting was held in February 2011. Based on public comments and recommendations, a series of actionable items were developed to address the mule deer population decline**
- **Several action items focused on using enhanced reclamation as a method to provide higher quality forage and browse for wintering mule deer**



Background

The BLM formally requested comment from the Wyoming Game and Fish Department (WGFD):

- *We request you review the current reclamation seed mix and provide BLM with a list of reclamation species which could be added or substituted for existing seeding mix for reclamation of disturbance on the Anticline.*
- *We would like to receive recommendations and rationale from your office regarding where priority emphasis for enhanced reclamation (i.e. direct planting of container raised browse species, and other measures you think may speed recovery of or enhance use of habitat) or other treatments targeting the preservation of key late winter sagebrush habitats could be instituted on the Anticline to benefit wintering mule deer.*

A follow up meeting was held between WGFD and BLM to discuss comments and recommendations and the plausibility of initiating enhanced reclamation on the Pinedale Anticline Project Area (PAPA)



Enhanced Reclamation

Proposed Techniques

- **Use of Non-native Seed**
- **Container Planting**
- **Use of Soil Amendments**
- **Alternate Seeding Methods/Sources**
- **Define a “seeding failed/do over” Timeframe**



Non-native Seed

WGFD provided list of potential non-native species that have potential to increase diversity/palatability

Benefits

- Disturbed patches represent a small area and natural regeneration is likely in the long term so non-natives with a higher relative nutritional value and resilient to disturbance could provide short term benefits
- Earlier successional species could result in a quicker response
- Abundant seed source more readily available and cost effective
- Competition with invasive/noxious plant species
- Beneficial for interim reclamation



Non-native Seed

Detriments

- Focus on a single species to the detriment of others (Sage-grouse)
- non-natives present risk for expansion/escape and competition
- Unknown growth response and nutritional benefit in this environment
- Likelihood of local wildlife utilization
- Use of uncertified seed can result in noxious weed infestation

Before use of non-native seed a local consensus must be reached involving federal, state, and county agencies



Container Planting

Benefits

- Represent a near immediate benefit to wildlife
- Planting used in conjunction with treatments to expand mixed shrub sites
- Accelerate restoration
- Most beneficial in final reclamation stage



Container Planting

Detriments

- Cost of obtaining and planting
- Source location and availability
- Low density of plantings
- Success of container raised sage-brush in other locations was about 30%
- Diversity of shrubs is key for deer but should not focus on a single species to the detriment of others (Sage-grouse)



Soil Amendments

Benefits

- Increase the productivity and effectiveness of reclamation efforts
- Some operators currently employ soil amendments and reclamation response is typically more positive
 - Organic additives to improve soil structure, water retention, microbial activity
- Could be beneficial for interim reclamation



Soil Amendments

Detriments

- Additional cost
- Type and intensity varied by soil type, topography, vegetation, wildlife restrictions, etc.
- Not currently required in reclamation standards



Alternate Seeding/Seed Source

Variable response in reclamation likely due to seed source, sowing method, or site conditions

Benefits

- Local seed adapted to local conditions has potential to increase palatability/nutrition/response of reclamation
- Identify local seed sources for collection and propagation of the Bonneville sage brush hybrid which may be more palatable
- Monitoring to identify local species that are consistently productive to guide the selection of seed mix components
- Consistent mixing and/or spacing of seed application to prevent clumping
- Identify and remove sources that provide contaminated seed
- Remove seed from heavy mix for each new species added
- Earlier successional species could result in quicker response



Alternate Seeding/Seed Source

Detriments

- Commercial seed source for local varieties typically less abundant making difficult to obtain adequate quantities
- Cost effectiveness
- Response time of natives could be slower than non-native species



Define a “seeding failed/do over” Time frame

**How long to wait before determining success or failure
and the subsequent action**

- Point of diminishing returns with bare ground reducing the likelihood of success
- Increased probability of invasive/noxious establishment
- Loss of soil quality through lack of stability and nutrient cycling



Define a “seeding failed/do over” Time frame

**Certain number of attempts to get native species back;
if fails, other species added to get cover and stability
and leave it to natural succession to bring back natives**

- Reduced chance of invasive/noxious establishment
- Vegetation would retain soil stability and nutrient cycling with soil
- If the BLM specifies a method outside of reclamation standards supported in the Record of Decision then, BLM would assume the liability of results
- If the BLM specifies a required outcome of reclamation efforts then operators are liable



Request of PAWG

Additional advice regarding proposals:

- **Good or Bad Idea**
- **Additional Benefits or Detriments**
- **Location Recommendations**
- **Strategy to Proceed**
- **Additional Proposals**

