

# JONAH FIELD RECLAMATION CRITERIA PUBLIC COMMENTS

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No.	Page	Para	Line	COMMENT	COMMENT FOLLOW-UP	COMMENTOR
1				C. 10 Numerous comments on recommended plant list.	This list has been deleted from reclamation criteria and is available on the JIO website.	Alma Winward
2				C. 5 It is critical that sagebrush reclamation be initiated fully at the beginning of reclamation efforts, and that operators be required to irrigate and monitor its growth, replacing failed sagebrush.	See FEIS DP-B-4.2 Reclamation Timing. Requiring the operators to irrigate is out of scope. The operators are required to monitor vegetation growth and submit monitoring reports to the BLM annually. See DP-B-5.1 Monitoring Responsibilities.	Suzanne Lewis, Biodiversity Conservation Alliance (BCA)
3				C. 6 Operators should not be released from their bonds until all reclamation goals are fully met, including the pre-disturbance level of mature sagebrush.	The operators will not be released from their bonds until all reclamation goals are fully met.	Suzanne Lewis, BCA
4				C. 10 There is a requirement of restoring the JIDPA to its pre-disturbance condition; reclamation to any other standard or level is unacceptable and unauthorized.	See reclamation objectives in Record of Decision page A-7 paragraph 4.	Suzanne Lewis, BCA
5				C. 13 The criteria proposed are arbitrary, are unsupported by valid scientific analysis or literature, and violate the Record of Decision, NEPA, and FLPMA. We request that these criteria be withdrawn and the JIO propose criteria which adhere to the mandates of the Record of Decision.	See Record of Decision, Appendix B, Subappendix DP-B, page DP-B-3, Section DP-B-2.2, as modified by the Errata.	Suzanne Lewis, BCA
6				C. 1 The draft criteria are not in compliance with the Record of Decision. The JIDP area is to be reclaimed to pre-disturbance levels.	See Record of Decision, Appendix B, Subappendix DP-B, page DP-B-3, Section DP-B-2.2, as modified by the Errata.	Suzanne Lewis, BCA
7				C. 8 There is no indication on how a site will be stabilized.	See FEIS Volume 2, DP-B-4.5.2 Reclamation-Phase Erosion Control	Bill Laycock, PhD
8				C. 9 One or a series of good, well thought out state-and-transition diagrams describing the various seral stages (both produced by just letting a site recover naturally after disturbance and those produced by seeding after a disturbance) would be extremely helpful.	The introduction and background is not part of the reclamation criteria, rather its purpose was to provide the reader with a frame of reference on how the criteria were developed. Actual reclamation criteria does not include this information.	Bill Laycock, PhD
9				C. 10 This plan is too vague. The seral stages that will be produced by disturbance and subsequent succession or produced by seeding are never described. No time frames for achieving "functioning ecosystems" are given or any indication of what the term really means.	The introduction and background is not part of the reclamation criteria, rather its purpose was to provide the reader with a frame of reference on how the criteria were developed. Actual reclamation criteria does not include this information.	Bill Laycock, PhD
10				C. 2 The Record of Decision did not authorize the role to create ideal landscapes for the JIO and we strongly object to the JIO assuming that role.	See Record of Decision, Appendix B, Subappendix DP-B, page DP-B-3, Section DP-B-2.2, as modified by the Errata.	Suzanne Lewis, BCA
11				C. 1 Mule deer and Sage Grouse need to be addressed in the plan.	The purpose of the reclamation criteria is intended for reclamation success. Wildlife issues are mitigated separately.	Bob Laybourn
12				C. 2 6000 Acres is too many acres for supporting development. 2000 acres should be adequate. 14000 acres allowed for disturbance is too much, 7000 is adequate.	This is out of the purview of the JIO. See the JIDPA Record of Decision.	Bob Laybourn
13				C. 3 Add that the final reclamation will meet or exceed Wyoming Standards for Healthy Rangelands.	When criteria are met, Wyoming Standards for Healthy Rangelands are achieved.	Dennis Doncaster, BLM
14				C. 1 Please provide a Glossary for all of the technical terms and/or phrases used in this document.	A glossary will be incorporated.	Dick Loper, WSGA
15				C. 3 JIO should use a process called, " Joint/Cooperative Monitoring", JCM, as the process to develop the monitoring guidelines.	See Record of Decision, BLM Monitoring/Enforcement Capabilities, page 8, paragraph 1. The purpose of monitoring reclaimed sites is to monitor reclamation success. Therefore, specific scientifically supported monitoring methods will be used. These methods can be found in Sampling Vegetation Attributes Interagency Technical Reference. The "Joint/Cooperative Monitoring" is addressed in the Livestock monitoring.	Dick Loper, WSGA
16				C. 7 The way it is written is too subjective. I suggest requiring a Soil Surface Factor (SSF) of between 1-20%, which equates to a Erosion Condition Class of 'stable'.	See Monitoring Plan released by JIO.	KC Harvey, LLC
17				C. 6 Diversity of Forbs, Shrubs and Grasses: Species (at least to genus, e.g. phlox spp.) must be obtained to accurately evaluate species diversity. The same species may look different given the time of year and its phenology, and consequently incorrectly recorded has different species; if only species 1, species 2, etc., is collected, an artificially higher diversity could be recorded than is actually present.	Any monitoring regime is only as good as the data that is collected. It is expected that operators collect accurate data. Data will be confirmed by a BLM authorized officer at the time of roll-over and final release.	KC Harvey, LLC
18				C. 1 The criteria provide little or no opportunity for roll-over credit of existing reclaimed sites. The standards for forb and shrub establishment may be extremely difficult to meet as they have proven difficult to establish. The standards could be reduced while maintaining a successional trajectory toward a diverse sagebrush dominated community that starts with healthy native perennial grassland. For roll-over, the grass standards are adequate; however, we recommend forb density be 50% of the reference site and forb diversity 75% of the reference site. For shrubs, we recommend the density be 35% of the reference site, continuing to note that seedlings do not count. For final criteria, we recommend the forb density to be 75% of the reference site with diversity a minimum of 75% of the reference site. The shrub standards for final bond release are adequate.	Submitted data on existing reclaimed sites has been analyzed and suggests that the criteria are well within reach.	KC Harvey, LLC
19				C. 4 With respect to Plant Vigor & Ecological Function, there needs to be measurable attributes, along with a confidence interval developed on the native sites, to evaluate whether plant vigor is successful.	In order to achieve a rapid assessment, these specific attributes will be determined at the discretion of the authorized officer.	KC Harvey, LLC

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No.	Page	Para	Line	COMMENT	COMMENT FOLLOW-UP	COMMENTOR
20				C. 7 Determining roll-over/final criteria is too subjective; different people could reach different conclusions. The criteria needs to be written such that subjectivity is reduced and final decision can be justified.	Any monitoring regime is only as good as the data that is collected. It is expected that operators collect accurate data. Data will be confirmed by a BLM authorized officer at the time of roll-over and final release.	Ronnie Wilcock
21				C. 5 Diversity of Forbs, Shrubs and Grasses: Species (at least to genus, e.g. phlox spp.) must be obtained to accurately evaluate species diversity. The same species may look different given the time of year and its phenology, and consequently incorrectly recorded has different species; if only species 1, species 2, etc., is collected, an artificially higher diversity could be recorded than is actually present.	Any monitoring regime is only as good as the data that is collected. It is expected that operators collect accurate data. Data will be confirmed by a BLM authorized officer at the time of roll-over and final release.	Ronnie Wilcock
22				C. 8 It would be helpful to have a glossary, or some sort of definition of certain terms. For example, "mosaic", "vegetative diversity", "functioning ecosystem" and "plant resilience", are terms which need further definition than just their use in this context.	A glossary will be incorporated. "Mosaic" and "vegetative diversity" are terms used in the introduction and background and is not part of the reclamation criteria, rather its purpose was to provide the reader with a frame of reference on how the criteria were developed. Actual reclamation criteria does not include this information.	Stephen Reynolds
23				C. 9 The draft criteria, as presented here, need more effort in order to assure the public that success can be measured.	See Monitoring Plan released by JIO.	Stephen Reynolds
24				C. 6 There is no discussion about the use of locally adapted species in the text of this document. This should be discussed.	A recommended plant list was supplied. This reference will be located on the JIO website. See FEIS Volume 2 DP-B-12, DP-B-13, and DP-B-14 for BLM Seed Mixtures.	Tom Rinkes, BLM
25				C. 8 I would suggest that you indicate what you mean by 10% total shrub composition. Is this by weight, canopy cover, or foliar cover?	This statement has been clarified as follows: "...rabbitbrush cannot account for more than 10% density or frequency of total shrub composition. At least 25% density or frequency of the shrub component must be the dominant species from the reference site."	Tom Rinkes, BLM
26	1	1	4	C. 1 It would be helpful if a bibliography of sources, lists of sites and studies and any other pertinent information supporting the "exhaustive review" were included in the document.	The introduction and background is not part of the reclamation criteria, rather its purpose was to provide the reader with a frame of reference on how the criteria were developed. However, references will be made available on the JIO website.	Stephen Reynolds
27	1	3	16	C. 1 Please provide a definition of "functioning ecosystem" (glossary) for the reader or describe what is meant by "functioning ecosystem" in text of the document.	A glossary will be incorporated.	Tom Rinkes, BLM
28	1	5	24	C. 2 It would be helpful to let the public know how that process worked. Was it through internal discussions or did it include input from stakeholders or interested parties?	The introduction and background is not part of the reclamation criteria, rather its purpose was to provide the reader with a frame of reference on how the criteria were developed. Actual reclamation criteria does not include this information.	Stephen Reynolds
29	1	6	28	C. 2 Please replace the words "research and baseline data" with inventory data. The word baseline is OK but research data is research and not baseline or inventory data.	The introduction and background is not part of the reclamation criteria, rather its purpose was to provide the reader with a frame of reference on how the criteria were developed. Actual reclamation criteria does not include this information.	Tom Rinkes, BLM
30	1	6	30	C. 3 For the issue regarding the current ecological status of the Jonah Field numerous sources are referenced, but only the NRCS data is mentioned in detail. Again, it would be helpful is details of the other sources were listed somewhere in the document.	The introduction and background is not part of the reclamation criteria, rather its purpose was to provide the reader with a frame of reference on how the criteria were developed. Actual reclamation criteria does not include this information.	Stephen Reynolds
31	1	6	31, 32	C. 3 Late seral stage does not imply old plant community in ecological terms. Late seral stage plant communities have many young plants in the community but the species composition and amount of each species may be different than those of a early seral stage plant community. I would suggest that the words "old plant community" are removed from the text and you provide a definition of late seral stage be provided in a glossary or you describe the definition in the text.	The introduction and background is not part of the reclamation criteria, rather its purpose was to provide the reader with a frame of reference on how the criteria were developed. Actual reclamation criteria does not include this information.	Tom Rinkes, BLM
32	1	7		C. 4 Is there precedent in any other BLM history of reclamation strategy which includes this broad perspective of landscape. Are operators comfortable with the concept of the mosaic approach to the field?	The introduction and background is not part of the reclamation criteria, rather its purpose was to provide the reader with a frame of reference on how the criteria were developed. Actual reclamation criteria does not include this information.	Stephen Reynolds
33	1		27	C. 3 In the absence of quantifiable data increased vegetative diversity, by any definition, cannot be objectively discerned. Given current seed availability, the objective would be most easily met by bringing plants from other regions. This action, while achieving the objective, could be detrimental to the biota that requires sage steppe.	To measure diversity, a reclaimed site will be compared to a reference site and not historical data. All seedings must use native species. Non-native species are not allowed to be seeded on the Jonah Field.	David Brown, BP
34	2	1	7	C. 3 We disagree with this statement and request that the JIO provide the scientific literature and analysis upon which they based these statements.	The introduction and background is not part of the reclamation criteria, rather its purpose was to provide the reader with a frame of reference on how the criteria were developed. Actual reclamation criteria does not include this information.	Suzanne Lewis, BCA
35	2	1		C. 7 What probable seral states or stages would develop in this ecosystem after disturbance or the actual pathways of natural succession.	The introduction and background is not part of the reclamation criteria, rather its purpose was to provide the reader with a frame of reference on how the criteria were developed. Actual reclamation criteria does not include this information.	Bill Laycock, PhD
36	2	3	20	C. 5 Regarding achieving the criteria, "ground truthing" and "analysis of current monitoring data" are purported to "indicate that meeting these criteria is well within reason." Since this is the claim to justify these criteria, it is essential that these are more than mentioned in the document. Details and specifics are needed here.	The introduction and background is not part of the reclamation criteria, rather its purpose was to provide the reader with a frame of reference on how the criteria were developed. Actual reclamation criteria does not include this information.	Stephen Reynolds

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37	2	4	25	C. 2 A return to "ecological potential" should not be the objective for restored range sites. The objective should be a specific "desired plant community" developed in direct consultation with the livestock permittee and the BLM that meets multiple use objectives and is economically feasible to achieve within the parameters of the potential of the site(s).	See reclamation objectives in Record of Decision page A-7 paragraph 4.	Dick Loper, WSGA
38	2	5	28	C. 3 It is somewhat unclear how the monitoring data for determining revegetation performance and compliance with the criteria will be measured.	See Monitoring Plan released by JIO.	KC Harvey, LLC
39	2	5	28	C. 6 It is stated that "JIO is also in the process of developing the monitoring guidelines...to determine if criteria have been met". If this is the case can you claim, as you do in the preceding paragraph that "analysis of current monitoring data indicate that meeting these criteria is well within reason"?	Submitted data on existing reclaimed sites has been analyzed and suggests that the criteria are well within reach. See Monitoring Plan released by JIO.	Stephen Reynolds
40	3	1		C. 7 Is the information in Appendix DP-B, Reclamation Plan relevant to these criteria?	Yes, with errata changes as noted in Record of Decision. Stated in the Record of Decision, Page 1, "The BLM adopts the Preferred Alternative (with modifications) for infill drilling of the JIDPA, as described in the FEIS."	Stephen Reynolds
41	3	1		C. 11 There is no discussion about BLM's policy concerning certified weed free (blue tag) seed in the reclamation criteria. Certified weed free seed will be used or the seed will be tested to ensure that it is free of noxious weeds. A reference to this policy is warranted at least as a reference to a manual or handbook. It is much easier to control or eliminate a noxious weed infestation by prevention rather than having to utilize herbicides or other control measures.	See FEIS DP-B-4.4.4 Revegetation.	Tom Rinkes, BLM
42	3	3	13	C. 1 The Jonah field is predominantly a single plant community – sage steppe. The biota of the area reflect this and species of concern in the area are species that require sage steppe. We recommend rewording the intent of these statements.	Sage steppe is an ecosystem characterized by large, dry, open areas with few trees (steppe), and consists of plant communities dominated by sagebrush with a mixture of other shrubs, forbs and grasses in the understory. Plant communities are assemblage of plant species which interact among themselves and with their environment within a time-space boundary. Plant communities are determined by many things, including climate and soil, geology and topography.	David Brown, BP
43	3	3	16	C. 3 The term "functioning ecosystem" is never defined nor are any criteria for such a system provided.	A glossary will be incorporated.	Bill Laycock, PhD
44	3	5	28	C. 2 We are uncertain about what standard and what index will be used for measurement? If the simplest index i.e. species number were to be utilized achieving the objective, this would require introduction of species to the field. This is especially a concern when coupled with the fact that most of the forb species present in the field are not commercially developed such that seed is commercially available.	See Monitoring Plan released by JIO. A recommended seed list is available on the JIO website as well as BLM recommendations.	David Brown, BP
45	3	5	29	C. 1 Change to read, "...landscape with increased vegetative diversity in both the overstory and understory".	Paragraph was deleted.	Alma Winward
46	3	5	29	C. 1 What is the meaning of "diversity" in the present document and how will it be measured?	See glossary and Monitoring Plan released by JIO.	Bill Laycock, PhD
47	3	6	33	C. 2 Change "same ecological location" to "general geographic location".	This paragraph was rephrased.	Alma Winward
48	3	6	34	C. 8 We strongly object to the spread of +/- 5% within which reclamation can be considered completed. Five percent of 20,334 acres would be over 1,000 acres which could be left unreclaimed. This is unacceptable. All lands that are disturbed must be fully and completely reclaimed and to allow anything less violates the Record of Decision.	In recognition that vegetative composition is naturally sporadic, criteria may be met if data falls within ± 5% of the requirement. This requirement is regarding data and not acreage.	Suzanne Lewis, BCA
49	3	6	34	C. 2 Decisions may be difficult to defend. Results should have a confidence interval (at the 95 % level) as determined from the reference sites. The reference sites should be analyzed and the confidence level determined as a function of the naturally occurring variation. Using an arbitrary +/- 5% opens the door for argument. At what point are the disturbed plots significantly different from the reference plot? This can only be answered through statistical analysis.	At this time, the BLM believes the existing data collection and monitoring requirements are adequate to determine reclamation success. If improved methods are identified in the future, this requirement may be revised.	KC Harvey, LLC
50	3	6	34	C. 1 It would be better if this would be within the confidence interval (at the 95% level) as determined from the reference sites. There are difference vegetative types within the Jonah, due to soil and other variables. These reference sites should be analyzed and the confidence level determined as a function of the naturally occurring variation. Using an arbitrary 5% opens the door for argument.	At this time, the BLM believes the existing data collection and monitoring requirements are adequate to determine reclamation success. If improved methods are identified in the future, this requirement may be revised.	Ronnie Wilcock
51	3	7	35	C. 9 It is unclear how many reclamation sites the JIO expects to consider.	All of them.	Suzanne Lewis, BCA

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52	3	7	35	C. 4 How large will each site be? Will baseline diversity be based on these sites or on biotic potential or some other metric?	Depending on topography, size of ecological site, and size of well pad, the reference area will vary in size. Diversity will be based on the reference site each year, not a baseline (this reduces vegetation change due to climate). See the glossary for definitions.	David Brown, BP
53	3	7	35	C. 4 We question whether or not a "Reference Area should come from an "undisturbed" site" given that most of the undisturbed sagebrush sites in the Jonah area are in an unhealthy, stagnant, condition? Our preferred alternative is to pick existing sites on which the BLM and permittee agree are sites producing a desired plant community, and use that site as the "reference site(s)".	There are no records indicating that "most of the undisturbed sagebrush sites within the Jonah [Infill] area are in an "unhealthy, stagnant, condition". Certain perennial bunchgrasses may be lacking in association with proximity to water developments within the Stud Horse Butte Common allotment; and the rangeland standards for upland vegetation species and wildlife were met within the Sand Draw Common allotment. We consider the vegetation communities adjacent to disturbed areas as adequate reference sources for the purpose of determining if reclamation requirements are met.	Dick Loper, WSGA
54	3	7	36	C. 5 Undisturbed is a term that needs to be defined. No plant community exists in the absence of disturbance. Is utilizing an "undisturbed" reference, that will most likely be an over-mature sagebrush community, be a fair metric with which to measure achieving goals within "a mosaic landscape" as is stated on page one.	The reference site is the closest resemblance of what the disturbed site would be any given year. Based off of scientific literature, the criteria recommended assumes that the reclaimed site would resemble the reference site in an earlier seral stage. These criteria are achievable as evidenced by current monitoring data and support the goal of creating a mosaic landscape.	David Brown, BP
55	4	3	7	C. 3 Change "stable state" to "stable condition".	Incorporated the change.	Alma Winward
56	4	3	7	C. 6 Bare ground is part of natural arid environments. Bare ground is a stable part of what we measure and is natural. It is more realistic to specify that no obvious erosive features will exist, and delete the percentage of bare ground requirement.	The reclamation criteria support an ecosystem with an increased herbaceous layer and decreased woody composition, thus resulting in less bare ground. Bare ground has a direct correlation to erosion potential.	David Brown, BP
57	4	3	7	C. 1 There is no discussion of using the proper subspecies of a plant. This is critical for the proper re-establishment and functionality of sagebrush and sagebrush ecosystems.	These issues are addressed in the Record of Decision. See B-15 134, 135, A-7 7, and B-5 34.	Dennis Doncaster, BLM
58	4	3		C. 6 The way it is written is too subjective. I suggest requiring a Soil Surface Factor (SSF) of between 1-20%, which equates to a Erosion Condition Class of 'stable'.	See Monitoring Plan released by JIO.	Ronnie Wilcock
59	4	4	10	C. 2 Density and frequency are different measures of a plant population. Which will be used and how will it be determined?	Because innovative reclamation techniques are being implemented in the Jonah field, the operator is given the option of choosing which method to be used. Both methods indicate abundance of plants.	Bill Laycock, PhD
60	4	4	11	C. 2 b. 75% of forbs and 50% of shrubs is an arbitrary number; it should be based on quantifiable data.	These numbers were chosen based on professional judgment of reasonable expectations, desired vegetative composition, and objectives as stated in the Record of Decision page A-7 paragraph 4.	Ronnie Wilcock
61	4	4		C. 7 Frequency is easily and quickly measured. Density is a more complex situation. Therefore we recommend that consideration be given to deleting density or specifying the method with which to measure	Because innovative reclamation techniques are being implemented in the Jonah field, the operator is given the option of choosing which method to be used. Both methods indicate abundance of plants. See Monitoring Plan released by JIO.	David Brown, BP
62	4	4		C. 8 If the goal is to create a "mosaic landscape consisting of plant communities of various age classes..." and the reference sites will be "undisturbed" and chosen from an area "heavily dominated by older aged sagebrush". The reference sites will not be representative of the young plant community of early seral sagebrush steppe.	The reference site will be representative of a mature plant community (which may or may not be heavily dominated by older aged sagebrush). The reclaimed site will be representative of the same plant community in an earlier seral stage. Together they create a mosaic.	David Brown, BP
63	4	5	13	C. 4 A frequency measurement does not work well on shrubs. Density or canopy cover are better.	Because innovative reclamation techniques are being implemented in the Jonah field, the operator is given the option of choosing which method to be used. Both methods indicate abundance of plants.	Alma Winward
64	4	5	16	C. 7 What is the justification of 10% total shrub composition for rabbitbrush? I would suggest that you review NRCS range site guides to determine the recommended amount of rabbitbrush based on each range site for the area. Ten percent appears to be very high and generally if you have more than 5% rabbitbrush in a stand it is an indicator that the area has undergone a disturbance in the past. The presence of rabbitbrush does not necessarily indicate a functioning sagebrush ecosystem.	Steve Monsen and Alma Winward, renown sagebrush experts, were consulted on the matter. Research shows that rabbitbrush may assist the establishment of sagebrush. It was agreed that 10% is a large amount of rabbitbrush, yet 90% of the other shrub component must consist of other desirable shrubs. This also supports increased diversity.	Tom Rinkes, BLM
65	4	5	18	C. 1 The requirement does not achieve the goal of ensuring that reclaimed sites are trending towards a healthy and desired plant community. It is a measure of sustainability and would be better suited in for Final criteria.	This criteria indicates that plants are resistant enough to survive environmental conditions and continue the trend that is anticipated.	Dessa Dale, EnCana
66	4	5	18	C. 2 The criteria exceeds the purpose of objective stated in the Record of Decision, item 4, page A-7.	The objective states that plants must be "Viable". The definition of viable is "Capable of existence and development as an independent unit or having a reasonable chance of succeeding". Sagebrush ecologists consulted (Steve Monsen & Alma Winward) agreed that a sagebrush plant may not be strong enough to survive until age 3 and there are no known measurable characteristics that ensure viability.	Dessa Dale, EnCana
67	4	5	18	C. 3 A 3 year time limit from initial seeding slows the adaptive management process.	The operators have the responsibilities to monitor annually and implement remedial actions if success standards are not being met. See FEIS DP-B-5.1.	Dessa Dale, EnCana
68	4	5	18	C. 4 The drilling phase is expected to last appx. 5 yrs and sites seeded after 2008 could not meet rollover. This reduces the incentive for quick reclamation.	See Record of Decision BLM Preferred Alternative, page 14, paragraph 2. The drilling phase is expected to last 13 years. See FEIS DP-B-5.0 Reclamation Success Monitoring. The operators are committed to implement quick reclamation regardless of incentives.	Dessa Dale, EnCana

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69	4	5	18	C. 5 Climatic conditions may preclude germination of shrubs and push reclamation sites out of the drilling phase timeline and would slow down adaptive management possibilities.	The operators have the responsibility to monitor annually and implement remedial actions if success standards are not being met. See FEIS DP-B-5.1. Rollover reclamation success standards must be met regardless of climatic conditions.	Dessa Dale, EnCana
70	4	5	18	C. 6 Requirement is more stringent than final reclamation requirements on coal mining companies for shrubs.	Out of scope. Oil and Gas reclamation is a different scale than Coal Mine reclamation.	Dessa Dale, EnCana
71	4	5	18	C. 1 Does this mean that a shrub will not count for rollover until it is at least 3 years old?	Yes. We have consulted with sagebrush experts and the consensus is a shrub can withstand drought and grazing pressure at this age.	Karen Clause, NRCS
72	4	5		C. 9 Rabbitbrush is an early seral community dominant post fire disturbance in many sage steppe systems that declines in frequency of occurrence as the system matures. It is also entirely possible that within the "mosaic landscape" sites comprised wholly of native plants could exist without any shrub component and be intermediate seral states on the path to mature sage steppe. The shrub criteria above conflicts with biological considerations and should be modified or eliminated.	In many plant communities, rabbitbrush can dominate a site to a point that the potential of the site can not ever be reached due to competitive factors. These sites are generally considered degraded. Reclaimed sites must also support wildlife and therefore the criteria reflect the habitat needs of wildlife in the area.	David Brown, BP
73	4	6	26	C. 2 Could list examples such as prostrate knotweed, Russian thistle, and lambsquarter.	The sentence was deleted.	Karen Clause, NRCS
74	4	7	24	C. 4 How will cheatgrass be dealt with? Removed (chemically or otherwise) or waiting enough time for the cheatgrass to disappear (which can be a very long time or never)? Will other noxious weeds be treated chemically?	See FEIS DP-B-4.6 Weed Control.	Bill Laycock, PhD
75	4	7	25, 26	C. 5 All plant species compete for moisture, nutrients and space. Further explanation is needed to describe your idea.	The sentence was deleted.	Tom Rinkes, BLM
76	4	8	3	C. 10 To include fences in the same category as irrigation and mat pads does not seem appropriate. Fences exclude livestock grazing pressure in a manner that any site can appear to not demonstrate flowers and seed heads. The phrase "and in a "young" age class at a minimum (e.g. not comprised of seedlings that may not survive until the following year)" is recommended to be modified to read: "Shrubs should be well established" along with a description of what is a well established shrub.	Livestock and wildlife typically graze the leaf component of plants. Although some seedheads may be grazed, it is believed that many will not. In order to achieve a rapid assessment, plant vigor will be determined at the discretion of the authorized officer.	David Brown, BP
77	4	8	31-33	C. 3 One growing season is not enough.	There are innovative approaches to reducing surface disturbance and improving reclamation being employed in Jonah. The "minimum one growing season" is intended to take this into account, but it should be noted that <i>all</i> requirements must be met.	Karen Clause, NRCS
78	4	8		C. 5 The term "resilience" in not well defined. What species are these measures to be applied to? How are you going to determine "well-developed root systems"? How do you measure sustainability of root systems, for example. Define "sustainable" and "resilient".	A vegetative community which is resilient, is one that contains diversity and is established, with adequate ground cover and plant vigor. These attributes would also provide for the "sustainability" of that vegetative community. The measurable attributes include those listed in the criteria, including densities or frequencies of shrubs and forbs, established grasses, percentage of bare ground, and erosion control features. See the associated monitoring guidelines accompanying the reclamation criteria for further explanation.	Bill Laycock, PhD
79	4	8		C. 3 There needs to measurable attributes, along with a confidence interval developed on the native sites, to evaluate whether plant vigor is successful. The way it is currently stated, different people to could have different conclusions.	In order to achieve a rapid assessment, these specific attributes will be determined at the discretion of the BLM authorized officer.	Ronnie Wilcock
80	4			C. 11 We object that the site must only be stable, when the Record of Decision requires that it be wind and water resistant to erosion.	A stable site is wind and water resistant to erosion. See Monitoring Plan released by JIO.	Suzanne Lewis, BCA
81	5	1	3	C. 2 Add erosion control criteria from roll-over.	Final release addresses erosion control in 1. Ground Cover & Ecological Function.	Dennis Doncaster, BLM
82	5	2	6	C. 5 Add perennial before forbs.	Changed all headings to "Native". Some annual forbs are desirable for wildlife.	Alma Winward
83	5	3	11	C. 6 Increase rabbitbrush to 20% allowable.	Only 10% rabbitbrush will count towards criteria. More than 10% rabbitbrush is allowable on the site.	Alma Winward
84	5	3	13	C. 4 Change "roll-over" to "final"	Error. Incorporated the change.	Karen Clause, NRCS
85	5	3	14	C. 7 Change "dominant species" to "dominant sagebrush taxa...".	The dominant sagebrush taxa may not have an available seed source.	Alma Winward
86	5	4	15	C. 8 Expecting reclaimed sites to produce equal to or greater pounds of production per acre is a high expectation vs. 70-80%.	Because plants that produce more vegetation are encouraged to be planted, meeting this requirement should not be a problem.	Alma Winward
87	5	4	15	C. 1 How are current pounds per acre calculated?	They will be calculated using the double sampling method. See monitoring guidelines.	Renee Dana, BLM
88	5	4		C. 5 Plant production needs to be quantified, on both native and reclaimed sites, so that statistically significant differences between the two sites can be evaluated.	At this time, the BLM believes the existing data collection and monitoring requirements are adequate to determine reclamation success. If improved methods are identified in the future, this requirement may be revised. Grass production will be quantified by using the double sampling method.	KC Harvey, LLC
89	5	4		C. 4 Measurements of production need to be quantified, on both native and reclaimed sites, so that statistically significant differences between the two sites can be evaluated.	At this time, the BLM believes the existing data collection and monitoring requirements are adequate to determine reclamation success. If improved methods are identified in the future, this requirement may be revised. Grass production will be quantified by using the double sampling method.	Ronnie Wilcock
90	5	5	14	C. 4 We oppose any initial decrease in the shrub complex, as proposed in the criteria.	It is unreasonable to expect 100% replacement of sagebrush density in the time frame of consideration.	Suzanne Lewis, BCA

**JONAH FIELD RECLAMATION CRITERIA  
PUBLIC COMMENTS**

As of: 1/4/2007, 9:56 AM

No.	Page	Para	Line	COMMENT	COMMENT FOLLOW-UP	COMMENTOR
91	5	7	27	C. 9 Change "incorporated" to "available for incorporation". If it is incorporated, it is organic matter.	This phrase has been reworded to: "vegetative litter must be decomposing". The presence of organic matter is desirable.	Alma Winward
92	5	7		C. 4 This description does not address functionality for native animal (wildlife) species which is also an important aspect of a functioning ecosystem. I strongly suggest that this is included in any description of this process. This aspect applies to plant community structure and its ability to support native animal communities (not just birds and mammals).	Outside of scope.	Tom Rinkes, BLM
93	5			C. 12 There is no definition for "stable condition"	See Monitoring Plan released by JIO.	Suzanne Lewis, BCA
94	6		26	C. 9 Why have you described this as "very high cost"? Depending upon the availability in any one year many of these species may have a very high cost depending upon availability. I would recommend that you remove the wording.	The sentence was deleted.	Tom Rinkes, BLM
95	7	7	29	C. 5 Ground cover is addressed in 1. Ground Cover	Combined the two paragraphs.	Karen Clause, NRCS
96	7	18		C. 7 We urge the JIO to approve only native species for reclamation and to be particularly vigilant in monitoring for noxious and non-native species	See FEIS Volume 2, DP-B-4.6 Weed Control	Suzanne Lewis, BCA
97	7		18-26	C. 7 Species considered inappropriate for Jonah Field due to precipitation and all non-native forbs.	Incorporated the change.	Karen Clause, NRCS
98	7		23,26	C. 6 Species considered invasive to our area: prickly lettuce, dandelion.	Species deleted from list	Karen Clause, NRCS
99	8	2	5	C. 7 Change to "Jonah sits on the ppt zone transition between 7-9 and 10-14"	Incorporated the change.	Karen Clause, NRCS
100	8	2		C. 10 Although Alan and Kerry are experts in the field of sage-grouse and have knowledge of forb species used by sage-grouse, they are not experts on forbs used by sage-grouse in western Wyoming. I would suggest that you discuss this topic with Dr. Matt Holloran who conducted research on sage-grouse in the Jonah Field for a number of years to ensure there species that may not have been identified by Alan and Kerry.	Refer to links on JIO web-site for suggested seed list.	Tom Rinkes, BLM
101	8		7	C. 2 Change heading to "Native" Shrubs	Changed all headings to "Native".	Renee Dana, BLM
102	10		7	C. 6 The majority of species on this list have no relevance to Wyoming.	Refer to links on JIO web-site for suggested seed list.	Bill Laycock, PhD
103	6-13			C. 8 Order by Genus to reduce duplication	Incorporated the change.	Karen Clause, NRCS