

Bly Area Allotments

Swede Cabin (#0847), *7C* (#0853) & *North Horsefly* (#0821 & #0823) **Rangeland Health Standards Assessment (RHSA)**



The picture above is a view shot looking southeast from the north central portion of the 7C Allotment in SWA SC-1 showing a *Stony Claypan 14-20* ecological site in essentially “perfect” ecological condition (i.e. 97% of PNC). (T37S, R15E, Section 4) Picture taken August 16, 2006.

Introduction/Background

All four of the allotments assessed in this document - **North Horsefly** (#0821 & #0823 - two separate though adjacent allotments of the same name), **Swede Cabin** (#0847), and **7C** (#0853) - are located within a few miles of Bly, Oregon in east central Klamath County about 50 miles northeast of Klamath Falls. The two North Horsefly allotments are located immediately south and west of the town of Bly; Swede Cabin and 7C are located 3-5 miles east to northeast of Bly in the Campbell Reservoir area.

Since these allotments are all very close to each other, the Ecological Site Inventory (ESI) information for all was collected more or less together during the late summer and fall of 2006. More specifically, the ESI information for the two North Horsefly allotments was combined (the site write-up areas - or SWA's – run from one to the other) and the Swede Cabin and 7C allotments more discretely collected with some overlap (see ESI analysis under Standard #1). In addition, the plant communities, ecological conditions, grazing use, and other physical and ecological attributes of all these allotments are very similar, including the recent juniper control projects which have entailed substantial yarding utilization activities (discussed later). Due to these similarities all four allotments are considered together in this RHSA, though allotment specific details are usually kept separate. All

four allotments are typically licensed and grazed every year more or less according to their respective grazing leases. The following is an allotment specific overview of each of the four allotments:

Swede Cabin Allotment (#0847): This allotment lies immediately around Campbell Reservoir; in fact, about 1/3 of that reservoir is on BLM. This allotment is a fragmented 3+ sections (T36S, R15E, Sections 28, 30 & 32; T36S, R14E, Section 36 [small portion]) of BLM land included within a pasture that includes larger parcels of unfenced private and Fremont NF lands. The area is managed, in part, by the USFS (Bly Ranger District) via a larger grazing plan of which the Swede Cabin Allotment is the late spring use pasture. This allotment is listed in the Klamath Falls ROD/RMP as having 1,921 BLM acres though the ESI tallied (planimeter) acres total 1,884 acres. (Note: This allotment was named “Owens” [after the primary lessee in the 1970s] until about 1981 when it was renamed upon transfer.)

Swede Cabin is leased via a Section 15 (of the *Taylor Grazing Act* of 1934) grazing lease for up to 500 head of cattle from May 1st through June 15th (108 AUMs). The high livestock numbers (500) versus the relatively low AUM figure (108) is due to the BLM being licensed at a rate of 14% Federal land, reflecting the proportion of the larger pasture that is actually BLM administration. The pasture is generally used each year during the time period noted, though frequently the cattle come on a week or two late (mid May) and stay on a week or two late (late June).

7C Allotment

(#0853): This allotment largely lies just south of Swede Cabin and 1-2 miles south of Campbell Reservoir, though there is an additional 40 acre parcel to the southwest of Swede Cabin. There exists division fencing between these two allotments that is old but functional and largely effective. (Portions - though not all - of the fence was



walked during the 2006 ESI so there could be bad portions that were not observed.) This allotment is comprised of one full section (T36S, R15E, Section 4) and another 40 acres (T36S, R14E, Section 36, SENE) of BLM administered lands included in with about four sections of largely unfenced private lands. This allotment is listed in the Klamath Falls ROD/RMP as having 688 BLM acres and had ESI tallied (planimeter) acres totaling about 680 acres. (Note: 7C was the name of an early lessee for this allotment.)

The 7C allotment is leased via a Section 15 grazing lease for a maximum of 52 head of cattle from

May 1st through June 30^h (104 AUMs). Observations made during the 2006 ESI indicate that little grazing use has occurred on 7C in recent years even though the allotment continues to be licensed and paid every year. Most likely the allotment is licensed primarily as buffer for the occasional cow that wanders off the private lands to the south and west. There is little livestock water on the BLM lands; just a few very ephemeral dugouts, although the extreme southeastern corner of this allotment does just barely touch the South Fork of the Sprague River. This small portion of the river (maybe 50 to 100 yards) lies in a steep canyon with little access and appears – like the rest of the allotment - to receive little to no cattle use. The previous picture is of this small portion of the allotment looking down from above.

North Horsefly Allotments (#0821 & #0823): These two same-named allotments are located very close to the town of Bly beginning about ½ mile west and south of the Bly School. They are located in all or part of T37S, R14E, Sections 4, 9 & 10. Each allotment is roughly a section and a half in size, i.e., #0821 is 988 acres and #0823 is 920 acres according to the KFRA ROD/RMP. The ESI (planimeter) tallied acres totaled 1,840 acres for both allotments combined. These allotments are not fenced separately from each other, even though they have different grazing lessees and seasons-of-use. They are also not fenced separately from some of the surrounding private and/or USFS lands though they appear to be fenced away from Bly by various private land boundary fences.

Both North Horsefly allotments are leased via Section 15 grazing leases as follows: 45 head of cattle from May 1st through June 15th (68 AUMs) for allotment #0821 and 39 head of cattle from June 16th through August 1st (60 AUMs) for allotment #0823. Both allotments are licensed regularly each year. Various field checks over the years indicate that both allotments receive most of their grazing use from the lessee that grazes the northernmost North Horsefly Allotment (#0821 – currently Les Barlow) and less from the other lessee (Circle 5). The latter lessee has a large grazing area on the Fremont N.F. to the south though apparently the cattle infrequently roam as far north as Bly. Allotment #0823 (southernmost N. Horsefly Allotment) also contains the Bly “dump” (now a transfer station) just off the Barnes Valley Road which dissects the eastern portion of the allotment. However, due to the proximity to Bly both BLM allotments have been used extensively for illegal dumping of rubbish, which from the evidence noted during the ESI, continues to this day.

The vegetation on these allotments falls primarily within two related (i.e. semi-arid) categories. The rocky and/or thinner soil ecological site areas are dominated by two species of sagebrush (low & mountain big sagebrush), bitterbrush, and various native bunch grasses. In the deeper soil areas, ponderosa pine defined ecological sites on the drier end of the “real tree” spectrum are found. These areas also include bitterbrush, mountain mahogany, various other shrubs as well as a host of native bunchgrass species similar to those found in the sagebrush areas. All of the ecological sites, with the exception of the thinnest soil low sagebrush/bunchgrass areas, have varying degrees of juniper present – some true “old growth” juniper and some juniper of a more invasive nature. All four allotments have some variable evidence of past wildfires (including one in 2006 right near Bly in Allotment #0821) and some limited prescribed burning. All of the allotments, excluding 7C, have received various juniper control activities of recent including much in 2006 which included yarding utilization. (The vegetation communities - including the juniper control - are discussed more comprehensively under Standard 1.)

Monitoring and grazing use observations have been very limited on these allotments in the past due to their long term low priority status. Because of this dearth of information, an ESI (vegetation portion) was completed for all four allotments during the late summer and fall of 2006 in

preparation for assessment. This Assessment is largely based on an evaluation of that ESI information - supplemented with what allotment specific information could be found - to determine if current livestock grazing management is meeting the Standards for Rangeland Health and LUP objectives.

The two North Horsefly allotments had no “Identified Resource Conflicts/Concerns” noted in the ROD/RMP (Appendix H, pages H-24 & 26). The Swede Cabin and 7C allotments each had the same single “Identified Resource Conflict/Concern” (pages H-38 & H-42) which will be addressed at least implicitly by one or more of the 5 Standards in this Assessment. The one conflict/concern and related “Management Objective” is as follows:

Identified Resources Conflicts/Concerns	Management Objectives
Special status species and/or habitat exists within the allotment.	Prevent significant risk to well-being of special status species and/or habitat from BLM-authorized actions.

It is not precisely known what “*special status species and/or habitat exists within...*” these two allotments, though this conflict/concern is most likely related to the possible presence of Bull trout in Campbell Reservoir (Swede Cabin) and/or the endangered suckers in the Sprague River and/or Campbell Reservoir (both allotments). These possibilities are discussed under “Standard 5 – Native, T&E, and Locally Important Species.”



Categorization of grazing allotments has been required by Bureau policy since the early 1980's in order to direct limited manpower and funding to resource problem areas that are most in need of it and the probability of success is reasonably likely. A brief summary of the allotment specific categorization efforts follows as it is indicative of the relative resource concerns on this allotment - past and

present. (“I” or “Improve” allotments have the highest priority resource concerns, “M” or “Maintain” allotments are moderate to low priority; and “C” or “Custodial” allotments are the lowest resource priority, usually due to small size and/or lack of ability to make significant change. See the ROD/RMP Appendix H, pages H-69-70 for further information on the allotment categorization - “Selective Management” - process.)

Swede Cabin: The following is the 1982 ranking breakdown by the five categories that contribute to the final overall ranking (the image above is of some of the great rangeland ecological conditions

found on this allotment):

- #1 - Range Condition: Satisfactory (“M” ranking).
- #2 - Forage Production Potential: Potential is moderate to high & present production near potential. (“M” ranking)
- #3 - Resource Use Conflicts: Limited conflicts or controversy may exist. (“C” ranking)
- #4 – Economic Returns: No opportunities for positive economic return or no developments proposed. (“C” ranking)
- #5 - Present Management: Satisfactory or is only logical practice. (“C” ranking)

The 1982 ranking form also noted that the “*allotment managed by USFS in a FS management plan*” which is partially true, though the grazing on the BLM portions of this management plan (just Swede Cabin) continues to be licensed and supervised by the BLM. The Swede Cabin Allotment was ranked overall in the “C” category in 1982, carried forward in that category during the RMP process in the early 1990’s and is so listed in the 1995 KFRA ROD/RMP.

7C: The same five category rankings as Swede Cabin above. The 1982 ranking form also noted that the “*allotment intended to go to the F.S. in BLM-FS land adjustment program*” an allusion to the BLM/USFS land interchange proposals of the era; proposals that were never finalized or acted upon. The 7C Allotment was ranked overall in the “C” category in 1982, carried forward in that category during the RMP process in the early 1990’s and is so listed in the 1995 KFRA ROD/RMP.

North Horsefly (#0821): This allotment also had the same five category rankings as Swede Cabin. The 1982 ranking form also noted that the allotment was “*under range management by USFS*” which is not true today (see next paragraph). This North Horsefly Allotment (#0821) was ranked overall in the “C” category in 1982, carried forward in that category during the RMP process in the early 1990’s and is so listed in the 1995 KFRA ROD/RMP.

North Horsefly (#0823): This allotment also had the same category rankings as Swede Cabin, except for #2 (“Forage Production Potential”) which received an “I” ranking, as follows: #2 - *Forage Production Potential: Potential is moderate to high & present production low to moderate (“I” ranking)*. The 1982 ranking form also noted that the “*Allotment (was) placed in C category since it is small with little opportunity for intensive management. Under range management by USFS.*” Neither of the North Horsefly allotments is now managed by the USFS in any way, although the cattle which make use of #0823 – and actually owned by the lessees’ - come off the nearby permitted Fremont NF lands. The North Horsefly (#0823) Allotment was ranked overall in the “C” category in 1982, carried forward in that category during the RMP process in the early 1990’s and is so listed in the 1995 KFRA ROD/RMP.

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STANDARD 1 - WATERSHED FUNCTION - UPLANDS

(Upland soils exhibit infiltration and permeability rates, moisture storage and stability that are appropriate to soil, climate and land form.)

The primary information to be used in evaluating this Standard is that collected during the recent Ecological Site Inventory (ESI) including the general ESI related observations with some limited observational notes from the grazing files and the professional judgment of BLM personnel who have worked in the area for many years. The indicators that this information helps address are: plant

cover, litter, composition, production, age class and community structure; level of erosion and overland flow; apparent trend. Some of these indicators are implicitly addressed with the ecological condition rating and others with the variety of ESI related observations (e.g. SSF, OAT).

Ecological Site Inventory (ESI):

An ESI was completed for the four Bly area allotments during the late summer and early fall of 2006 personally by the author of this RHSA. The details and observations of this survey were documented in notes to the allotment files entitled “*Bly Area Grazing Allotments: Ecological Site Inventory - Notes*” dated “*Late Summer/Fall 2006.*” This ESI resulted in the preparation of a large assortment of “*Rangeland Inventory - Ecological Status Worksheets*” covering many different “Site Write-up Areas” or SWA’s for all four allotments. A SWA is a distinct zone of vegetation that is relatively homogeneous within the SWA (though may be made up of several ecological sites) but different than other area SWA’s. Many of the SWA’s continued from one allotment to the adjacent one with the same SWA # used; these are noted in the tables that follow.

The following is a summary of the ESI information which is keyed to the SWA numbers on the ESI maps located in the “Bly Area ESI - 2006” file (in the allotment file cabinet). Hopefully, the information will also be entered into ArcView (GIS), but that had not been done prior to the completion of this Assessment (acres were hand tallied with a planimeter). All of the noted ecological sites are in the Major Land Resource Area (MLRA) 021X - *Klamath and Shasta Valleys and Basins* which is the MLRA that covers the entire KFRA. The pertinent ecological site descriptions, which were created and administered by the NRCS, are found on-line at this URL: <http://esis.sc.egov.usda.gov/Welcome/pgReportLocation.aspx> A copy of the KFRA specific (slightly modified for our lands) 021X ecological site guide is located in the KFRA office in the “range” area. The modified guide is what was used to do the actual condition ratings.

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Swede Cabin (#0847)

SWA#	SWA%	Ecological Site Name	Worksheet #	Acres	Condition	Trend
SC-1	70%	<i>Stony Claypan 14-20</i>	BL-06-10	624	PNC	Up
	30%	<i>Shallow Stony 10-20</i>	BL-06-13	268	PNC	Up
SC-2	40%	<i>Shallow Stony 10-20</i>	BL-06-13	252	PNC	Up
	25%	<i>Stony Claypan 14-20</i>	BL-06-12	157	Late	Static*
	35%	<i>Juniper Claypan 16-20</i>	BL-06-11	221	PNC	Up***
SC-3	100%	<i>Dry Meadow</i>	BL-06-14	10	Late	Static
SC-4	25%	<i>Shallow Stony 10-20</i>	BL-06-13	10	PNC	Up
	25%	<i>Stony Claypan 14-20</i>	BL-06-12	10	Late	Static*
	50%	<i>Juniper Claypan 16-20</i>	BL-06-11	20	PNC	Up
SC-5	35%	<i>Pine-Mahogany-Fescue**</i>		88	**	Down
	35%	<i>Shrubby Loam 16-20***</i>		88	**	Down
	25%	<i>Stony Claypan 14-20***</i>		63	**	Down
	5%	<i>Cinder pit**</i>		13	**	Down
Campbell Reservoir – water and/or non-vegetated lakebed				60		

*The *Stony Claypan* in SWA SC-2 was very similar to write-up BL-06-12 except more annual grasses & forbs (45-50% total instead of about 30-32%) at the expense of the Idaho fescue (15-20% here versus 35% in BL-06-12).

**This area was not classified via ESI as it was being sheared/piled (with fairly high disturbance from the machines) during the survey and thought to still be a candidate for yarding utilization. Since the vegetation was soon to change significantly, there was thought no point of doing ESI. See the discussion that follows these tables.

***Some of this SWA - in the southwest portion of Section 30 (west of Campbell Reservoir) – was juniper sheared, piled, and burned several years ago. These areas have the typical “flush” of exotic annuals, though overall conditions were still late seral and this “flush” is expected to dissipate with time.

SWA's carried into #0853 from neighboring allotments

7C-2	100%	<i>Stony Claypan 14-20"</i>	BL-06-12	75	Late	Static
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7C (#0853)

SWA#	SWA%	Ecological Site Name	Worksheet #	Acres	Condition	Trend
7C-1	100%	<i>Juniper Claypan 16-20"</i>	BL-06-11	37	PNC	Up
7C-2	100%	<i>Stony Claypan 14-20"</i>	BL-06-12	153	Late	Static

SWA's carried into #0853 from neighboring allotments

SC-1	70%	<i>Stony Claypan 14-20"</i>	BL-06-10	315	PNC	Up
	30%	<i>Shallow Stony 10-20"</i>	BL-06-13	135	PNC	Up
SC-4	25%	<i>Shallow Stony 10-20"</i>	BL-06-13	10	PNC	Up
	25%	<i>Stony Claypan 14-20"</i>	BL-06-12	10	Late	Static*
	50%	<i>Juniper Claypan 16-20"</i>	BL-06-11	20	PNC	Up

North Horsefly (#0821 & #0823) ***

SWA#	SWA%	Ecological Site Name	Worksheet #	Acres	Condition	Trend
NH-1	50%	<i>Shallow Stony 10-20"</i>	BL-06-15	293	PNC	Up
	50%	<i>Loamy 14-18"</i>	BL-06-16	293	Late	Up
NH-2	65%	<i>Pine-Mahogany-Fescue 16-20"</i>	BL-06-17	418	PNC	Up
	25%	<i>Loamy 14-18"</i>	BL-06-16	161	Late	Up
	10%	<i>Shallow Stony 10-20"</i>	BL-06-15	64	PNC	Up
NH-3	45%	<i>Pine-Mahogany-Fescue 16-20"</i>	BL-06-17	216	PNC	Down****
	25%	<i>Loamy 14-18"</i>	BL-06-16	120	Late	Down****
	30%	<i>Shallow Stony 10-20"</i>	BL-06-15	144	PNC	Static****
NH-4	55%	<i>Shallow Stony 10-20"</i>	BL-06-15	58	PNC	Up
	40%	<i>Loamy 14-18"</i>	BL-06-16	42	Late	Up
	5%	<i>Pine-Mahogany-Fescue 16-20"</i>	BL-06-17	5	PNC	Up
Bly Dump area (all in #0823)				9		
Gravel pits (all in #0821)				17		

***Both allotments were considered together since they are immediately adjacent to each other, have the same name, are both quite small, and are not fenced separately from each other. See the ESI narrative notes for the North Horsefly allotments which does differentiate the SWA's more.

**** NH-3 is the area that was recently (spring/summer 2006) juniper sheared and yarded/utilized. It was very similar to NH-2 in regards to the ecological sites except that it differed slightly in relative percentages of the three ecological sites and, of course, parts of it were severely disturbed by the yarding. All of the shearing/yarding/utilization (to date) was within allotment #0823; none in #0821. See the narrative for more details on this area and the estimated amounts of disturbance.



This photo shows a relatively typical late seral to PNC condition *Pine-Mahogany-Fescue 16-20"* ecological site area in SWA NH-2 within the North Horsefly (#0821) Allotment with an abundance of understory native bunchgrasses and scattered shrubs (some areas have more native shrubs). This area, of course, was not sheared and yarded like this site in SWA NH-3.

The overall condition of the **Swede Cabin Allotment** by condition class and weighted by acres (1572 acres, not including Campbell Reservoir or the “unclassified” acres*) is summarized in the following table:

PNC	1395 acres	88.7%
Late Seral	177 acres	11.3%
Mid Seral	0 acres	0%
Early Seral	0 acres	0%
Unclassified*	252 acres*	NA
Water/lakebed (Campbell)	60 acres	NA

* This is all of SWA SC-5 which received extensive juniper shearing and yarding utilization in 2006 just prior to and during the ESI survey. Due to the extensive ground disturbance of these activities the utility of doing ESI at this point in time is negated; this is discussed below.

The overall condition of the **7C Allotment** by condition class and weighted by acres (680 acres total) is summarized in the following table:

PNC	517 acres	76%
Late Seral	163 acres	24%
Mid Seral	0 acres	0%
Early Seral	0 acres	0%

The overall condition of the **North Horsefly Allotments** (both #0821 & #0823 combined) by condition class and weighted by acres (1814 acres total minus the Bly dump [#0823] and gravel pit

[#0823] areas) is summarized in the following table:

PNC	1198 acres**	66%
Late Seral	616 acres**	34%
Mid Seral	0 acres	0%
Early Seral	0 acres	0%

** These acres/percentages do include the recently juniper sheared and yarding utilized area in Allotment #0823 delineated by SWA NH-3. ESI was nominally completed on this area as it had somewhat less spatial area damaged than the yarding noted for Swede Cabin; this is discussed below.

* * *

The information presented above shows that the area has good ecological diversity for its size (6 different ecological sites) and dominant good to excellent conditions with 100% (excluding a few noted “special situation” areas discussed below) of all four allotments classifying as late seral and PNC. The elevated ecological conditions found on these allotments strongly indicate that the BLM lands are within appropriate ecological site description parameters for functionality relative to the three major attributes of rangeland health - *Soil/Site Stability*, *Hydrologic Function*, and *Integrity of the Biotic Community*. In fact, some of the vegetation communities in the area (i.e., *Stony Claypan 14-20* [BL-06-10], *Shallow Stony 10-20* [BL-06-13], and *Pine-Mabogany-Fescue 16-20* [BL-06-17]) have such good ecological conditions that they could be considered as ecological reference areas (i.e. excellent condition areas to compare other similar areas against). A proper vegetation management objective for all of the allotments would be to at least maintain the current condition ratings. (See the “*Management Recommendations*” section later in this document.)

The exceptions to the above are largely related to the recent juniper control and utilization yarding activities which took place on the Swede Cabin and the “south” North Horsefly (#0823) allotments this past year. Both are discussed separately below by the site write-up areas (SWA) that encompass the yarding areas. The one non-yarding related condition concern area (SWA 7C-2) is discussed last.

Swede Cabin - SWA SC-5:

This SWA is about 252 acres in size (13% of the allotment) and encompasses all of the juniper control and yarding utilization area within the allotment. The following is from the fall 2006 ESI notes for this SWA:

This SWA is located around the short cinder cone just to the northeast of Campbell Reservoir. The majority of the SWA is currently most of the way through an aggressive juniper reduction campaign that is to also involve yarding and biomass utilization in the near future, though it didn't appear that any removal of materials had occurred as yet (fire season shut-down?).





Given the fact that the shearing & piling activity to date was relatively disturbing of the soil and vegetation (extensive drag trails with many tire/track ruts that were up to a foot deep) - and the actual yarding & utilization will disturb it more - the area was not worth doing ESI on since it will be an annual dominated for the foreseeable future. The potential vegetation was classified as a mix of 35% Shrubby Loam 16-20" (the most disturbed site as it had the most juniper), 35% Pine-Mahogany-Fescue (moderate disturbance), and 25% Stony Claypan 14-20" (least disturbed since it had the least juniper).

Also, maybe 5% of the area is a cinder pit and totally disturbed.

As noted, the area was scheduled for utilization yarding which would have distinctly increased the disturbance beyond that observed during the ESI and shown in the two previous pictures. (Note: The author returned to the area in February 2007 and found that the yarding/utilization of cut material apparently occurred only in the patchy pine areas on the east side of the SWA; the areas pictured above did not have yarding though some of the juniper piles had been burned recently.) The actual juniper shearing and piling activities without utilization resulted in an relatively high (for a shearing project) level of observable soil surface and vegetation disturbance for this type activity due to a combination of wet, loose soils and machine operation methods. (This area also has somewhat atypical soils for this area in that they are sandier than our typical clay dominated soil types.)

Given this disturbance, the ecological trend of this SWA is considered downwards as a relatively persistent "flush" of annual grasses and forbs will dominate the area within the next couple growth seasons and likely continuing for at least 10-15 and maybe 20+ years, based on observations in other similar areas of disturbance. The treatment activities in total have set back the rangeland ecological conditions from upper late seral/PNC to an average of mid-seral within the SWA, with early seral in the skid trails and landings. The one redeeming aspect from a range condition/management perspective is that this SWA is a minority (13%) of the allotment and would not conceivably impact future grazing allocations, of which none are recommended here.

North Horsefly (#0823) – SWA NH-3: This SWA is approximately 480 acres in size and lies entirely within the "south" North Horsefly Allotment, though is 52% of that allotment. The following excerpt and images are from the fall 2006 ESI notes for this SWA:

This SWA is where the juniper shearing and yarding/utilization occurred earlier this year. It is almost identical to the un-sheared portions in NH-2 with a bit different mix of the three ecological sites, as listed in the tables at the end. In my estimate after walking a look around the entire area, about 15-20% of the total SWA area is heavily disturbed by the shearing & yarding activities. However, the disturbance is variable depending on what ecological site. More specifically, the Pine-Mahogany-Fescue and Loamy sites had 30-40% ground disturbance and the Shallow Stony had less than 10% surface disturbance, which makes sense since these areas are rocky and have very

limited scattered juniper and not economical for dragging.



The point of discussing the yarding utilization impacts here is that they are impacts to the rangeland health of the areas, the determination of which is the point of these Rangeland Health Standards Assessments. It is also important to document that the inevitable moderate to long term ecological condition decreases that will occur on these allotments – particularly #0823 - are not due to livestock grazing. Instead, the condition impairments are fully a function of the yarding utilization setting back the

ecological conditions from the existing upper late seral/PNC to mid-seral overall, with early seral dominating the actual skid trails and landings (as shown in the various pictures). Future management actions relative to the livestock grazing actions should factor this in to account if contemplating grazing reductions as these impacts were all consciously induced by the BLM, not the grazing permittees.

It should also be noted that if the levels of impacts induced by the noted utilization yarding were attributable to livestock grazing, the BLM would be obligated under the regulations (43 CFR 4180 and others) and current policy (including the *Healthy Rangelands Initiative* related guidance) to take action and alter the grazing use to facilitate recovery. Since these impacts are not attributable to livestock grazing, actions against the grazing authorizations are not appropriate and outside the scope of the current Assessment process.



7C/Swede Cabin - SWA 7C-2: This SWA is located on the lower elevation ends (south) of both the 7C and Swede Cabin allotments and comprises a total of about 228 acres. The following

information (and image) was taken directly from the 2006 ESI notes for the area:

7C-2: *This SWA is the high medusa infested areas along the southwest facing slope on the lower edges of both this allotment and part of the Swede Cabin allotment to the northwest. The picture...shows a portion of this area in the 7C allotment and the SWA is represented by write-up BL-06-12. I have observed this medusa area along the Campbell Reservoir Road going up into the Fremont NF for years. The break between this area and the higher seral state areas along that road in the Swede Cabin allotment (section 32) is obvious and has been like this for the 15 seasons I've been here. This break closely follows the 4600' elevation line almost perfectly. This SWA was called a 100% Stony Claypan 14-20" ecological site though it likely includes some inclusions of Shallow Stony too. The SWA did rate out as late seral due to the relatively high amounts of residual (or re-establishing) fescue, bluegrass, and oatgrass which make up 53% total of composition. Given that annual grasses & forbs make up about 30% of the production and it is hard to think of the area as "good." I estimate that the trend is slightly and slowly moving upward, though the OAT rated out as "static."*

Why the high amounts of annuals? Hard to say though I think it is like noted for 7C-1 - a combination of past grazing use and maybe past wildfires although it has not burned in the time I've been here. It is, however, a southwest facing slope that likely received a long season of heavy use (early and late in the season) back in the bad old days of pre-Taylor Grazing Act unregulated "get-the-forage-before-someone-else-does" grazing use. This SWA has received little or no grazing use in recent years in the 7C allotment and limited use in Swede Cabin.



As noted, even with the abundant annuals the condition rating is still "good" (67% of PNC – late seral) and the trend likely upwards. Given the condition and the limited grazing use, the area is not a resource concern. It is very likely that the medusa infestation is here to stay, though as long as the perennial grass species remains as a high proportion of the plant composition, this SWA could still be considered "functional."

Other Monitoring/Observational Information:

Very limited rangeland monitoring data has been collected on these allotments due to their long term low priority status; thus the need for doing the ESI discussed above. However, during the ESI, two additional resource condition observations were made at each write-up area – trend (Observed Apparent Trend or OAT) and soil erosion (Soil Surface Factor or SSF).

Swede Cabin & 7C Allotments: The OAT for the 5 pertinent worksheets indicated 3 upward

trend areas and 2 static (or not apparent) trend areas. As noted above, SWA SC-5 in the Swede Cabin Allotment was not ESI recorded due to the disturbance from the juniper treatment and utilization yarding activities making it currently meaningless. However, that area must be considered as having a distinct downward trend due to the disturbances and diminishment of the native perennial understory species. Complimenting these trend readings, the recorded SSF ratings for these allotments were all within the “Stable” erosion condition class primarily due to the ample ground cover. SWA SC-5 would be considered in the moderate to critical erosion class due to the noted soil surface disturbance and reduced perennial ground cover. (See pictures on pages 9 & 10.)

Unlike the other three allotments, the Swede Cabin Allotment did have some limited monitoring data collected on it, specifically utilization pattern mapping conducted by the author of this Assessment in 2001. The notes to the grazing files (dated August 7, 2001) documenting this monitoring indicated that the utilization was generally slight to light with only one small area of moderate use; all appropriate levels. That monitoring also noted that the ecological conditions were dominated by the late seral to PNC classes on the allotment; a fact reaffirmed by the ESI in 2006.

North Horsefly Allotments: The OAT for the 3 pertinent worksheets for the non-yarded areas indicated all had upward trends. These are appropriate and indicating that conditions are generally at least stable. As with the Swede Cabin Allotment, the yarding utilization area in #0823 (SWA NH-3) – although not specifically recorded (little point in this due to the extensive recent disturbance) - must be considered to have a distinctly downward condition trend with a much higher erosion condition class than the adjacent undisturbed areas.

Forage Allocation & Use History:

Based on a review of the older grazing files, the Section 15 grazing lands in the old Lost River Resource Area (which is now a large part of the current KFRA) were converted from acres based to AUM based leasing in 1968-1970. (The Section 15 lands are essentially all the KFRA administered lands outside of the Gerber Block.) The Section 15 lands were typically converted at the ratio of about 10 acres equaling one AUM, e.g. a 100 acre lease of BLM land would be leased at 10 AUMs, although the figure was sometimes higher or lower. These conversions were not based on any type of specific range survey or monitoring information, but were instead converted based on allotment acreage and an estimate of the forage capabilities of the area. Given the elevation and climatic regime of the BLM lands in our area (13"-18" precipitation) and the vegetation communities that this precipitation can support, a rating of around 10 acres per AUM can be an acceptable allocation though in many areas a higher (fewer acres per AUM) or lower rating is warranted based on site specific topography, condition, or other factors which limit/enhance the availability or usability of forage. Unfortunately, the only information on past forage capacity allocations found was for the Swede Cabin Allotment; information which was based on a simple estimate of potential production.

Swede Cabin Allotment: The current grazing lease for this allotment allows for a maximum of 108 AUMs which is a relatively conservative rating (for our area) of 17-18 acres per AUM. (As a comparison, the Gerber Block averages roughly 13-14 acres/AUM.) Grazing use (or at least the licensing) has varied somewhat on the allotment over the time noted in the available case files which go back to 1970. From (and likely before) 1970 to 1975, 126 to 128 AUMs of use was licensed for an unknown season-of-use, though it was likely from May through December (though undoubtedly the cattle were moved or drifted home long before the end of this period due to weather). May through December was the period specified from 1976 until 1981 when the season-of-use was changed to May and June. A June 1970 “Section 15 Grazing Lease Data Worksheet” was found in an old grazing file (William Owens) which rated the allotment at 15 acres/AUM - the apparent basis

for the 128 AUM grazing capacity. However, this worksheet was later adjusted by someone to 18 acres/AUM estimating the allotment capacity at about 108 acres/AUM. From 1976 until today the maximum AUMs have been 108 and the allotment licensed at a 14% federal range ratio which takes into account its highly intermingled nature. Since 1970 there have been at least 10 different operators using this allotment - some the actual owners of the base property and some lessees like the current user.

Utilization observations made during 1998, 2001, and 2005 use checks and the ESI in 2006 indicated slight to light use dominates the allotment with the exception of a few scattered areas of moderate use near the few known waterholes and Campbell Reservoir. The one exception is that the strip along the Deming Creek Diversion ditch/drainage (which feeds into Campbell Reservoir) does receive heavy use frequently; this is discussed further



under Standard 2. Given the dominant excellent ecological conditions and overall light grazing use the current grazing use is deemed appropriate for the allotment. (Note: The photograph above was taken 8/21/06 in SWA SC-1 [Swede Cabin Allotment] and is of an excellent condition [PNC] *Shallow Stony 10-20"* ecological site.)

7C Allotment: The current grazing lease for this allotment allows up to 104 AUMs which is a fairly generous stocking rate of 6.6 acres per AUM. This has been the grazing preference since 1969 when a specific figure was assigned. The season of use (May and June) was first specified in 1975 and remains the same today. Generally speaking, 6.6 acres/AUM in typical condition would be considered a bit high for the ecological sites present on the allotment. However, the condition of much of the allotment is exceptional with upward trends (excluding SWA 7C-2 which is 22% of the allotment area), relatively high production, and the area appears to have received very little grazing use in recent years.

As an example, the picture at the beginning of this Assessment is of the dominant ecological site on 7C (76% of the allotment) and the best condition *Stony Claypan 14-20"* ecological site ever recorded within the KFRA (SWA SC-1). This SWA had ESI estimated perennial native grass production in the 600-800 lbs/acre range which at 50% use is 300-400 lbs/acre or 2.5 to 3 acres/AUM. Like with the Swede Cabin Allotment, the good ecological conditions of 7C in hand with the very limited grazing utilization indicates that the current grazing lease and season of use is appropriate at this time and having no significant impact on conditions. The annual grass infestation within SWA 7C-2 appears to be a function of historical grazing use and/or wildfire, though the area still rates out as late seral and is thus considered "functional."



North Horsefly

(#0821): The current grazing lease for the “north” North Horsefly Allotment is 68 AUMs which is relatively conservative 14.5 acres per AUM. This has been the grazing preference since at least the late 1980s; files prior to that time were unavailable. The season-of-use for the entire period to date was and remains 5/1 to 6/15. The lease has been used most years since the late

1980s, with the exception of 1990 to 1992 when non-use was taken due to drought conditions.

The photo above was taken within SWA NH-2 and is of an excellent (upper later seral to low PNC) condition *Pine-Mahogany-Fescue* ecological site area where the junipers were girdled 4-5 years ago and are finally dying in some quantity. However, the mountain mahogany largely “collapsed” many years ago (dead branches in middle of image) due to the juniper encroachment, though the demise of the juniper should now pave the way for a significant mahogany restoration. Since the condition of #0821 is dominated by late seral and PNC vegetation communities, the utilization noted during the ESI in 2006 was slight to light (i.e. 15-25%), and the vegetation communities obviously “functional,” the allotment stocking level and season-of-use are considered very appropriate.

North Horsefly (#0823): The current lease for the “south” North Horsefly Allotment is for 60 AUMs which is also a relatively conservative 15+ acres/AUM. This has been the grazing preference since at least 1989 when available records indicate that the Circle 5 Ranch first used the allotment; files prior to that time are unavailable. The season-of-use for this entire period to date was and remains 6/16 to 8/1. The lease has been paid every year since the late 1980s though it is not certain that the area is used by the lessee every year. Since this allotment is not fenced separately from the neighboring allotment (#0821) nor from the neighboring USFS lands (grazed by the #0823 lessee), cattle from both North Horsefly allotments likely have and continue to commonly graze both allotments.

As noted earlier, this allotment received all of the juniper shearing and yarding utilization activities in 2006 within SWA NH-3. More to the point, it is estimated that of the 480 acres within this SWA (about half of Allotment #0823), somewhere between 100-125 acres were distinctly surface disturbed by the utilization activities and likely to be annual infested for a significant future time period (discussed in the ESI section). This amounts to about 15% of the allotment and though significant, it is unlikely to affect the forage production enough to necessitate any changes in livestock management. In addition, although rest from grazing may assist natural rehabilitation to

some degree, the lack of fencing to control livestock precludes any easy action on that front. In any event, the disturbance was not the “fault” of the grazing permittee and as indicated previously, they should not be negatively affected by the damage that the BLM allowed.

Determination: *This Standard is currently being met.*

The recent ESI and the other more limited observational information indicate that the BLM administered lands in all four allotments are largely dominated by good to excellent (late seral to PNC) ecological conditions appropriate for meeting this Standard. Recent juniper treatments have enhanced conditions in those areas that were suffering from excessive juniper encroachment and related understory and ecological impairment. There will, however, be a post-treatment temporary increase in annual species – especially in the areas within Swede Cabin and North Horsefly (#0823) that experienced the post-shearing yarding utilization of juniper in 2006. It is likely that some of the most disturbed areas (e.g., skid trails, landings) will experience a permanent exotic annual species component due to this disturbance and never fully restore. (See the “*Management Recommendations*” section.)

STANDARD 2 - WATERSHED FUNCTION - RIPARIAN/WETLAND AREAS

(Riparian-wetland areas are in properly functioning physical condition appropriate to soil, climate, and land form.)

The primary information, monitoring, and indicators to be used in evaluating this Standard are the same as those listed under Standard 1.

There are a few limited riparian/wetland areas within these allotments which are worth noted; the following is an overview of them:

Swede Cabin Allotment: This allotment has the most areas of note, as follows:

Campbell Reservoir – Approximately 1/3rd of Campbell Reservoir is on BLM administered lands with the remainder on private lands owned by the recognized base property owner (Deming Creek Ranch). The edges of the reservoir have some limited riparian characteristics (largely a very narrow strip of mat muhly just below the high water line in places) though it is artificial in nature, i.e., a function of this artificial water body. However, the reservoir is not within the control of the BLM as the water rights are completely private and thus no management that could be applied selectively to just the BLM’s physical portion of the reservoir if deemed desirable (and no management changes are thought necessary at this point anyway).

Deming Creek diversion ditch – This natural drainage runs into the southeast corner of Campbell Reservoir though has an unnatural water flow regime which is controlled on private lands (Deming Creek Ranch) north of the BLM. Like the reservoir, the BLM has no water rights on this water either. Approximately 3/4th mile of the drainage is on BLM administered lands with the remainder of the creek to the north (1½+ mile), to its diversion point on Deming Creek, on private land. The water diverted (or overflowing) into this drainage is the source for Campbell Reservoir. It is also a major livestock watering source within a much larger USFS/private allotment that contains the 3 sections of BLM lands that comprise the Swede Cabin Allotment. A “Proper Functioning Condition” (PFC) determination was made on the drainage in 1997 which, not surprisingly given the

above facts, was found to be “non-functional.” Given its status as largely a “ditch” for uncontrollable (by the BLM) water movement the significance of this rating is muted.

Field observations made over the past 10 years have indicated that this drainage does get periodic heavy use though most of it is well armored (rock) and fairly stable with substantial re-growth occurring to the riparian species post-grazing (after mid to late June). In 2005, the drainage was field checked by several KFRA specialists prior to the juniper shearing and yarding to ascertain if different management was necessary and/or possible. They noted that the area was too unwieldy and high maintenance to fence, but did make the following recommendations:

- Increase use supervision to ensure the season-of-use is followed more closely; lingering post-season use having been a past problem. (This is being done via several post-grazing field checks occurring in 2006 and planned for the future as diminished personnel time allows.)
- Monitor the drainage to see what does happen to conditions/trends over time. (3 photo points were established in 2005 and will be re-photographed in 2008/2009 if our diminished personnel time allows.)
- When shearing the juniper in the area, drop many/most of the trees close to the drainage or into the drainage itself to inhibit cattle access. (This was done in 2006 and recent inspection indicates that the drainage does have significantly inhibited bovine access because of it. In particular, the cattle trail that used to parallel the drainage is not functional anymore.)

SWA SC-3 – This is a small (10 acres on BLM) seasonally wet *Dry Meadow* ecological site area about one-half mile west of Campbell Reservoir. Some of the small BLM area is pictured to the right though most of this ecological type is on adjacent unfenced private lands. This BLM area is very close to a dugout water hole (just off the left side of the picture) and has undoubtedly received comparatively heavy use over time given the location and lack of slope. This was evidenced by the relatively sparse understory of Nevada bluegrass



(tawny grass in the picture which was estimated at 475 lbs/acre versus a site typical 700-900 lbs/acre), the high percentage of silver sagebrush (35% of composition versus a site typical 15%), and the estimated overall production significantly lower than it should be, i.e., 850 lbs/acre versus the site normal 1275 lbs/acre. The ecological condition ranked as upper late seral (70% of PNC) and the exotic annual vegetation was relatively sparse (<10% of the composition) so the condition is considered adequate (“functional”) though not perfect.

7C Allotment: This allotment just touches the South Fork of the Sprague River (see image on page 2) for maybe 100 yards. The following is from the 2006 *“Bly Area Grazing Allotments: Ecological Site Inventory - Notes”*:

Of some interest...is that a very small piece of the South Fork of the Sprague River is within this allotment. The picture (on page 2)...shows this small stretch (maybe 100 yards or so) looking from the rim above into the steep canyon; a bit of the Sprague shows in the middle of the picture. There was no evidence of cattle use in the canyon and it is apparently fenced or topographically separate from the private lands in the vicinity limiting access. There was a rim fence behind where I took this picture which keeps cattle from entering the canyon from the 7C allotment to the north. Due to the very small size of this area I did not do a separate write-up; it is included in SWA 7C-1.

It appears this section of the river is as noted – fenced and little if at all grazed by cattle – although the actual access to the canyon from downstream was not specifically checked as it is on private lands. The cattle that graze the 7C Allotment have no access to the canyon due to the very steep canyon walls. The vegetation along the likely BLM segment (GPS readings are close but not precise) appears in adequate shape though it is a very rocky area with limited riparian vegetation. In short, there are no apparent resource problems related to the BLM grazing and this section of the river. Other than the above, the 7C Allotment has only a few shallow dugout water holes scattered around the uplands that have nothing in the way of riparian/wetland vegetation.

North Horsefly Allotments: There are several more or less permanent waters on these two allotments which are addressed together since they are essentially grazed together:

Unnamed Spring – This spring (exclosure/meadow pictured below) is in the “north” North Horsefly Allotment (#0821) and described as follows – from the 2006 ESI notes:

The picture...is of the unnamed spring (I'm sure it has a name but I don't know it and it isn't on the topo maps) that is the primary water facility for #0821 and located in the SW corner of section 4. As the pictures shows, the spring source is buried and fenced effectively from livestock use. It typically has water during the season of use (late spring) but dries up by late summer each year in my experience; it was dry the day I took the photo...(10/3/06). Judging from the tracks in the meadow below, the area was wet when used this year also, but with plenty of time for ample re-growth after the cattle were removed (probably on time which is June 15th or so).

As noted, the spring source is buried, much of this meadow (probably a *Semi-Wet Meadow* ecological site) around the source fenced, and the water piped to a trough a ways below the exclosure. The meadow - both in and out of the exclosure - is in adequate condition with good ground cover and a healthy native perennial grass/sedge community. The fence is maintained periodically by the BLM and is doing its job.



Gravel Pit “waterholes” –

There are two gravel pit holes that are both perennial (they have always had water to the author's observations) with at least the smaller pit pictured below being accessible to cattle for watering.



Both are in the western portion of the “south” North Horsefly Allotment (#0821) in Section 9 along the main road. The pictured pit has some decent riparian vegetation around it including healthy willows. The cattle use has had little effect on the vegetation since most of the bank is too steep for cattle to negotiate; they water here by using the old narrow access road cut that is behind the willow clump on the right side of the photo. The other larger gravel pit south of the road (several hundred yards southeast of the

pictured pit) is apparently a newer (still used?) pit that has no significant riparian vegetation though appears to also hold water all year (not used?).

There are also a limited number of ephemeral drainages in these allotments (they are dominated by gentle topography) all of which have limited or no riparian characteristics and flow only during late winter or early spring runoff period for short time. Overall, all four of the allotments appear to be functioning properly from a hydrological perspective and there are no present resource problem areas attributable to livestock grazing that are not being properly addressed at this point.

Determination: *This Standard is currently being met.*

Given the dominant good to excellent overall ecological conditions of the uplands (excluding the recent non-livestock related juniper yarding areas) and the limited meadow and riparian areas, which are either in adequate condition (7C and both North Horsefly allotments) or making progress towards appropriate conditions (Swede Cabin Allotment), this Standard is considered met.

STANDARD 3 - ECOLOGICAL PROCESSES

(Healthy, productive and diverse plant and animal populations and communities appropriate to soil, climate and land form are supported by ecological processes of nutrient cycling, energy flow and the hydrologic cycle.)

The primary information, monitoring, and indicators to be used in evaluating this Standard are those listed under Standard 1.

Since all four allotments are upland in nature (excluding the very limited areas discussed under Standard 2 above) the analysis and information previously listed under Standard 1 is the basis for the determination under this Standard. The information presented in that Standards discussion shows that the area has good ecological diversity for its size (6 different ecological sites) and dominant good to excellent conditions with 100% (excluding the few noted “special situations” discussed earlier) of all four allotments classifying as late seral and PNC. The higher ecological conditions

found on these allotments strongly indicate that the BLM lands are within appropriate ecological site description parameters for functionality relative to the three major attributes of rangeland health - *Soil/ Site Stability*, *Hydrologic Function*, and *Integrity of the Biotic Community*. In fact, some of the vegetation communities in the area (i.e., *Stony Claypan 14-20*" [write-up BL-06-10], *Shallow Stony 10-20*" [BL-06-13], and *Pine-Mahogany-Fescue 16-20*" [BL-06-17]) have excellent enough ecological conditions to be considered as ecological reference areas, i.e., excellent condition areas to compare other similar areas against. A proper vegetation management objective for all of the allotments would be to at least maintain the current condition ratings. (See the "*Management Recommendations*" section later in this document.)

One further ecological issue needs some discussion: western juniper (*Juniperus occidentalis*) and its place in the ecosystem of this area. Most portions of the Klamath Basin, above the valley floor and below about 5500' (though aspect dependent), have been experiencing varying degrees of the "juniper problem." This includes juniper encroachment into vegetation communities - particularly those with



big sagebrush, mountain mahogany, and bitterbrush - that previously had limited juniper and significant density increases in areas where juniper was and should be present, though in lesser quantity. Though a native plant, in the absence of fire (a function of increased suppression and grazing related fine fuels reduction) and with the catalyst of heavy livestock grazing in the past reducing shrub and grass competition, juniper can increase in density enough to move the vegetation community towards a juniper monoculture. This results in diminished habitat capabilities for most native wildlife species, dramatically reduced forage production for all grazing animals, increased probability of soil erosion, and frequently an environment conducive to the invasion of undesirable exotic plants.

To varying degrees on all four allotments juniper encroachment has been an ever increasing problem with many areas having juniper densities well in excess of historic levels as defined by the ecological site descriptions. This is particularly true in the *Loamy 14-18*" (photo above; SWA's NH-1, 2 & 4; SC-5), *Pine-Mahogany-Fescue 16-20*" (pictured on page 15; SWA NH-2), and to a much lesser degree in this area the *Juniper Claypan 16-20*" ecological sites (SWA's SC-4; 7C-1 & 4). In recent years, many areas on all but the 7C Allotment have been juniper treated, including hand girdling of almost all the juniper on both North Horsefly allotments about 5 years ago (which has had a slow but moderate success; images on page 15 and the next page) and more recently, shearing and piling with the residual material disposed of by either burning (some) or yarding "biomass" utilization (most).

Determination: *This Standard is currently being met.*

As with the determination for the first Standard, the current good to excellent ecological conditions of the vegetation communities on the majority of all four allotments strongly indicates that Standard 3 is met. (See Standard 1 for the data, evaluation, and determination information that is pertinent to this Standard.)



The juniper encroachment issue has been aggressively pursued as primarily a fuels reduction issue throughout the KFRA including recently in the Bly area. There is still some juniper reduction that would be useful in most of the “north” North Horsefly Allotment and the extreme east side of “south” North Horsefly on the trees that are not (quickly) succumbing to the girdling. (Picture above of a girdled tree area with a mix of dead, dying, and surviving trees; see the “*Management Recommendations*” section.) The only notable issue of ecological concern within these allotments was the disturbance induced by the yarding (dragging) utilization of the juniper within the Swede Cabin and western and central parts of the “south” North Horsefly allotments; whether or not this is a long term resource issue is unknown.

STANDARD 4 - WATER QUALITY

(Surface water and groundwater quality, influenced by agency actions, complies with State water quality standards.)

There are only a few permanent surface waters located within these allotments (discussed under Standard 2) and no listed quality impaired waters within or closely adjacent to these allotments. Since the vegetation communities on the BLM administered lands are functional, the grazing of the allotments is thought to be a non-issue in the overall water quality concerns of the area.

Determination: *This Standard is currently being met (or is not applicable).*

There are no listed water bodies in these allotments and the current grazing management on BLM administered lands is not contributing to off-site water quality problems. Given the dominant good to excellent overall ecological conditions and the lack of significant riparian or wetland areas this standard must be considered met.

STANDARD 5 - NATIVE, T&E, and LOCALLY IMPORTANT SPECIES

(Habitats support healthy, productive and diverse populations and communities of native plants and animals (including special status species and species of local importance) appropriate to soil, climate and land form.)

The primary information, monitoring, and indicators to be used in evaluating this Standard are those listed under Standard 1.

Animals: There is a bald eagle nest near the “Bly dump” area of the North Horsefly allotment (#0823) adjacent to the Bly transfer station. All of the BLM administered lands around Campbell Reservoir and Bly are considered deer winter range in our current KFRA RMP/ROD which continues as such in the pending Western Oregon Plan Revision (WOPR) – the replacement for the 1995 KFRA RMP/ROD. There is also an historic sage grouse lek site that was active in the early 80's in the Swede Cabin allotment (T36S R15E Sec 32 SESE).

Overall, the dominant good to excellent vegetation ecological conditions (Standard 1) indicate strongly that habitat conditions for all native wildlife species are likely good also. The recent (and possibly pending) juniper control activities (excluding the yarding utilization areas) will also enhance future conditions for all wildlife by restoring or maintaining more “correct” ecological conditions over the next few decades, though of course, juniper will again begin to make inroads at some point in the future. The importance of the BLM lands in this area is due to their positioning as “islands” of wild lands in and adjacent to a “sea” of variably developed and altered private lands.

Plants: Sections 28 and 30 of the Swede Cabin Allotment (#0847) was surveyed for botanical resources in 2001. Sections 32 and 36 of the Swede Cabin Allotment and sections 4 and 36 of the 7C Allotment (#0853) have not been systematically surveyed for botanical resources. Both North Horsefly Allotments (#0821 and #0823) were surveyed for botanical resources in 2001.

Two populations of musk thistle (*Carduus nutans*) - a noxious weed species - were documented in section 28 of the Swede Cabin Allotment. One site is at the edge of Campbell Reservoir in the SWSW and the other site is on a disturbed site adjacent to where a gravel road crosses Deming Creek in the NWNE. Three sites of disappearing monkey-flower (*Mimulus evanescens*), a Bureau sensitive species, were found along Deming Creek in section 28, the largest of which is near where the creek enters the reservoir. One population of fringed campion (*Silene nuda* ssp. *insectivora*), a Bureau tracking species, was found along Deming Creek near the northern boundary of BLM ownership in section 28.

Two populations of musk thistle were found in section 9 of the North Horsefly Allotments, one of which is relatively large at about 30 acres in the NE quarter. One population of Scotch thistle (*Onopordum acanthium*) - a noxious weed - was found in section 10 along with two more musk thistle sites. Another Scotch thistle site was mapped just outside BLM ownership near the NE corner of the section. One population of fringed campion was found along one of the ephemeral drainages in the SESE of section 4.

Determination: ***This Standard is currently being met.***

Standard 5 is considered fully met on both allotments. See Standards 1, 2, and 3 for the data, evaluation, and determination information that is pertinent to this Standard. However, the primary indicators of proper wildlife/plant habitat functionality are the still dominant elevated ecological conditions, the lack of notable grazing related problems, and the recently completed and proposed juniper control activities (excluding the yarding utilization) which will likely enhance the ecological conditions of many areas over the next 5-10 years and beyond. As noted numerous times in this Assessment, the only notable issue of ecological – and thus wildlife - concern within these allotments was the disturbance induced by the yarding (dragging) utilization of the juniper within the Swede Cabin and western and central parts of the “south” North Horsefly allotments; whether this

is a long term resource issue or not is not known. (See the “*Management Recommendations*” section).

Management Recommendations

The good to excellent (late seral/PNC) ecological conditions dominating these allotments strongly indicate that livestock grazing as currently authorized is appropriate and no specific changes in livestock management or the current leases are needed. The following specific management recommendations reflect the findings of this Assessment, though the implementation is totally dependent on future funding and manpower which is expected to diminish:

Management Common to all 4 Allotments

1. The Klamath Falls Resource Area has a very proactive weed program which includes inventories and site treatments that consist of biological, chemical, and manual treatments. The treatment efforts are to contain weed sites, reduce population size, and eradicate weed sites where possible. This effort will continue to be pursued on these and all grazing allotments in the KFRA.
2. No specific recommendations – from a grazing perspective - are suggested as to the disposition of the lands in any of the four allotments, which currently are all listed as Zone 3 (possible disposal) in the current KFRA ROD/RMP.
3. It is recommended that the current lease defined grazing seasons-of-use and stocking level (i.e., AUMs) continue as is on all four allotments.
4. It is recommended that no more juniper yarding (dragging) of cut material be allowed on these allotments due to the high level of disturbance already induced by such and the high ecological potential to be dominated by exotic annual vegetation after dragging/yarding.

Allotment Specific Recommendations

Swede Cabin Allotment: Grazing on this allotment is predominantly slight to light excluding the areas at the edge of Campbell Reservoir and along the Deming diversion drainage, both of which can be heavy in some years. The allotment is dominated by functional late seral/PNC vegetation communities with the exception of the recently sheared and utilization yarded area just east of Campbell Reservoir on and around the cinder cone. These latter areas are considered a mix of mid to late seral - outside of the actual skidding areas - to early seral within the skid trails and landings. On the positive side is that juniper encroachment has ceased to be an issue on the allotment as virtually all of the encroachment areas have been treated. Given this, the allotment specific recommendations are as follows:

1. Due to the overall good conditions of most lands and relatively low priority status of the Swede Cabin Allotment, additional rangeland monitoring studies are not necessary in the foreseeable future, with a couple exceptions:
 - The recently established riparian photo points in the Deming Creek diversion ditch/drainage should be re-photographed every 2-3 years to determine what ecological changes are occurring here catalyzed by the juniper removal.
 - The allotment should receive use supervision checks every year for the next 3 years during and/or just after the grazing use to ensure that no significant grazing related resource problems are occurring. If no resource problems are noted, supervision every 2 or 3 years would suffice.

2. Plant community objectives for Swede Cabin:

- At a minimum, indefinitely maintain the current ecological condition rating for all of the different SWA's (except as noted for SC-5 below) within the allotment as listed under the ESI section in Standard 1. This includes SWA 7C-2 where the extensive (27% of composition) exotic annual infestation (primarily medusahead) was noted. Fortunately, this area has a high compliment (50-60%) of native perennial grasses and is considered at least functional. It is most likely that the native grasses are slowly crowding out the exotics (i.e., upward trend) in this SWA, though it is also possible that the opposite is occurring.
- Improve the condition of the recently sheared/used upland areas (SWA SC-5) significantly over the next 15-20 years. Specifics are not recommended as the area did not have the ESI completed as the juniper work was being done during the 2006 ESI survey. Generally speaking, there should be a distinct increase in perennial grasses and native shrubs and a decrease in exotic annuals species over that time period. Cattle will likely concentrate grazing use on the disturbed areas in the near term (next 5-7 years) as is their habit, though as time proceeds this will become lessened and the condition of this area should improve gradually as it has better than average response potential (for BLM lands).
- The recent juniper removal (shearing and by hand) along the Deming Creek diversion drainage and the leaving of some of the sheared trees more or less in place (to inhibit cattle access) is expected to result in condition improvement. Like the above objective, no specifics are noted here except that increases in native perennial grass and shrub species would be expected now that the competing juniper is dead and down and/or removed.

7C Allotment: Grazing use of this allotment is limited and the vegetation is dominated by late seral/PNC vegetation. The trends of the allotment are static to upwards; juniper encroachment is not an issue as most of the allotment is apparently naturally non-juniper potential. Given this, the allotment specific recommendations are as follows:

1. Due to the dominant good conditions, limited grazing use, and low priority status of the 7C Allotment, the establishment of formal rangeland monitoring studies is not necessary in the foreseeable future. It is recommended that the allotment receive use supervision every two or three years to ensure that no significant grazing related resource problems are occurring.

2. Plant community objective for 7C:

- At a minimum, indefinitely maintain the current ecological condition rating for all of the different SWA's within the allotment as listed under the ESI section in Standard 1. This includes SWA 7C-2 where the extensive (27% of composition) exotic annual infestation (primarily medusahead) was noted. Fortunately, this area has a high compliment (50-60%) of native perennial grasses and is considered at least functional. It is most likely that the native grasses are slowly crowding out the exotics in this SWA (i.e., upwards trend), though it is also possible that the opposite is occurring.

North Horsefly Allotments (both): Grazing use of these allotments is also relatively low with ecological conditions dominated by late seral/PNC vegetation. Juniper encroachment will likely bring about a downward trend on the still untreated areas if it is not controlled in the relatively near future. Given this, the allotment specific recommendations are as follows:

1. Due to the good conditions and relatively low priority status of the North Horsefly Allotment, the establishment of formal rangeland monitoring studies is not necessary in the foreseeable future. It is

recommended that the allotment receive use supervision every one or two years during or just after the grazing use to ensure that no significant grazing related resource problems are occurring.

2. Plant community objectives for North Horsefly:

- At least maintain the current ecological condition rating for all of the different SWA's within the allotment as listed under the ESI section in Standard 1.
- Improve the condition of the recently sheared/utilized area (SWA NH-3) significantly over the next 15-20 years. Actual specifics are not listed though generally speaking, there should be a distinct increase in perennial grasses and native shrubs and a decrease in exotic annuals species over that time period. Cattle will likely concentrate grazing use on the disturbed (sheared/yarded) areas in the near term (next 5-7 years) as is their habit, though as time proceeds this will become lessened and the condition of this area should improve gradually as it has better than average (for BLM lands) response potential.
- Reduce the young (<125 years old) juniper cover - in areas where encroaching - by at least 75% (or preferably, 100%) in the next 10-15 years. In particular, juniper is still a variable issue in all of the "north" North Horsefly Allotment and the northwestern and far eastern portions of the "south" allotment which were not sheared recently (i.e., SWA's NH-1, NH-2 and NH-4). These areas are now experiencing (or have the potential for) undesirable levels of juniper encroachment and should be treated. A downward trend for these areas will be inevitable if juniper levels are not controlled in the near future.

<u>Contributors/Reviewers</u>	*	*	*
<u>Contributors/Reviewers</u>	<u>Title</u>		
Bill Lindsey	Rangeland Management Specialist/author		
Dana Eckard	Rangeland Management Specialist		
Steve Hayner	Wildlife Biologist		
Kathy Lindsey	Writer/Editor		
Lou Whiteaker	Botanist		
Elizabeth Berger	Hydrologist		
Heather Bernier	Assistant Field Manager		

Determination

- (X) Existing grazing management practices and/or levels of grazing use on the Swede Cabin (#0847), 7C (#0853), and North Horsefly (#0821 & #0823) Allotments promotes achievement or significant progress towards the Oregon Standards for Rangeland Health and conform with the Guidelines for Livestock Grazing Management (Appendix 1).
- () Existing grazing management practices and/or levels of grazing use on the Swede Cabin (#0847), 7C (#0853), and North Horsefly (#0821 & #0823) Allotments will require modification or change prior to the next grazing season to promote achievement of the Oregon Standards for Rangeland Health and conform with the Guidelines for Livestock Grazing Management.

/s/ Donald J. Holmstrom
Field Manager, Klamath Falls Resource Area

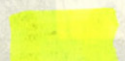
11-9-07
Date



Juniper Claypan 16-20" ecological site (SWA 7C-1) in the extreme southeast corner of the 7C Allotment in Potential Natural Community condition, though there is some significant infestations of medusahead mixed in with the still dominant native perennial grasses.

Picture taken August 16th, 2006.

ANGER



SWEDE CABIN



7C



NORTH HORSEFLY (0821)



NORTH HORSEFLY (0823)

DISTRICT

FOREST



GEARHART

MOUNTAIN

WILDERNESS

KLAMATH CO
LAKE 80

The Don

Haystack Rock

Swede Cabin

Swede Cabin

Swede Cabin

Swede Cabin

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