McFall Allotment - # 0896
Harpold Canyon Allotment - # 0895
Southeast 80 - # 0805
Rangeland Health Standards Assessments (RHSA)

View from the high northeastern ridge of Bryant Mt. towards Langell Valley & Horsefly Mt.

Introduction/Background

The McFall, Harpold Canyon, and SE 80 allotments all lie in close proximity to one another, with the McFall and Harpold Canyon allotments bordering one another. Invariably, the closeness of these allotments leads to the overlapping of Ecological Site Inventory (ESI) information between them. In addition, the plant communities and ecological condition, grazing use, and other physical and ecological attributes of the allotments are very similar. Due to these similarities, all 3 of these allotments are considered together in this Assessment, though the allotment specific details are for the most part kept separate.

The **McFall Allotment (# 0896)** is located approximately 5 miles southeast of Bonanza, Oregon on the north end of Bryant Mountain. This allotment is comprised of two widely detached parcels and is listed in the Klamath Falls ROD/RMP as 600 acres in size; the ESI tallied acres in the GIS system indicated 576.6 acres. The allotment is part of a fragmented landscape of intermingled BLM and private lands along the north end of Bryant Mountain, much of which is unfenced. The smaller "north" parcel (T39S, R11E, S. 27, E½SW¼ & NW¼SE¼) consists of 120 acres. This parcel has not been grazed much in recent years, though it is fenced separately from neighboring BLM/private lands. The "south" parcel is an oddly shaped triangular area located in T39S, R11E, S. 35. It is much larger than the north parcel and is split (fenced) into two separate pastures with two leases. The south end

of the "south" parcel (S.2, SE¼) is not currently leased; the north end is the same lessee as the "north" pasture (Neil).

The **Harpold Canyon Allotment (# 0895)** is located approximately five to eight miles southeast of Bonanza, Oregon. The allotment is listed in the Klamath Falls ROD/RMP as 760 acres in size; the ESI tallied acres in the GIS system indicated 1086.3 acres. This is an extremely fragmented allotment that is totally intermingled with Jeld-Wen lands, and adjoins the SE 80 allotment along the extreme northeast end.

The **SE 80 Allotment (#0805)** is also located approximately 5 to 6 miles southeast of Bonanza, Oregon. The allotment is listed in the Klamath Falls ROD/RMP as 80 acres in size (thus the name). As with the McFall and Harpold Canyon allotments, SE80 is part of extremely fragmented BLM administered lands intermingled with private parcels of land.

The base property for the McFall allotment is owned by Douglas Neil. The oldest actual grazing lease in the grazing file dates back to August 9, 1992 to Douglas Neil. However, a Case File Investigation Report found in the permittee's file shows that the base property has been sold and grazing Animal Unit Months (AUM's) transferred several times since 1980.

The Harpold Canyon allotment recognized base property is owned by Jeld-Wen Timber and Ranches, and leased to Biaggi under a continuing series of 3 year base property leases. In 1994, the lease was transferred from James and Michael Hubbard to Biaggi (at that time Swan Lake Feeders).

The SE 80 allotment recognized base property is owned by Grant Weber, and was previously owned by Mark Mahan, and prior to that by James Hubbard. These recognized private base lands are immediately adjacent (north and west) of the BLM land and grazed in common. The SE 80 allotment was originally part of the McFall Allotment, but was established as a separate allotment in 1983.

One observation common to all of Bryant Mountain is that the area's vegetative composition is very jumbled and variable both naturally and artificially. The area is naturally a mix of different ecological sites due to the varying slopes, aspects, and soil depths which allow an array of different ecological sites to express themselves in fairly close proximity. It is also a fragmented landscape with lots of private lands intermingled with (and usually unfenced from) BLM lands. Another factor adding to the ecological complexity of the area is that much of it has been undergoing active juniper control over the past few years (apparently with more to come).

All three allotments are licensed and grazed each year. The grazing details are discussed by allotment below:

McFall: The current grazing lease for this allotment is for 25 cattle from 5/1 to 6/30 (50 AUM's). Douglas Neil is the permittee for this grazing lease. There is another 10 AUM's allocated for this allotment that was leased to MaryAnn Langlie in the past, but the base property for this lease has been sold, the new owner has never applied for the grazing lease (and likely has no livestock), and it is currently not in use.

Harpold Canyon: The current grazing lease for this allotment is for 15 cattle from 5/1 to 9/30 (75 AUM's). As mentioned previously, Biaggi leases from Jeld-Wen, who owns the recognized base property which are lands intermingled with the BLM.

SE 80: The current grazing lease for this allotment is for 1 cow from 5/1 to 10/31 (6 AUM's). This allotment was created from the McFall allotment in 1983, and the grazing lease is currently held by Grant Weber.

Due to their low priority status, these 3 allotments have had no rangeland monitoring information collected on them. Ecological Site Inventories (ESI) were completed on the allotments in 2005. This Assessment is largely based on an evaluation of the ESI information, supplemented with the limited other existing resource information, to determine if current livestock grazing management is meeting the Standards for Rangeland Health and LUP objectives.

The McFall, Harpold Canyon, and SE 80 allotments have no "Identified Resource Conflicts/Concerns" noted in the 1995 Klamath Falls ROD/RMP.

All 3 allotments were ranked as "C" category allotments. 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 where the probability of success is good. 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.)

1982 Ranking (**McFall**)

 # 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: Serious conflicts or controversy may exist ("I" ranking)
 # 4 – Economic Returns: No opportunity for positive economic returns or no developments proposed ("C" ranking)
 # 5 – Present Management: Satisfactory ("M" ranking)

1982 Ranking (**Harpold Canyon**)

 # 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: Opportunities may exist for positive economic returns ("M" ranking)
 # 5 – Present Management: Satisfactory or only logical practice ("C" ranking)

1982 Ranking (**SE 80**)*

 # 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: Serious conflicts or controversy may exist ("I" ranking)
 # 4 – Economic Returns: No opportunity for positive economic returns or no developments proposed ("C" ranking)
 # 5 – Present Management: Satisfactory ("M" ranking)
* In 1982, when these rankings were assigned, the SE 80 allotment was still a part of the McFall allotment. Hence, the ratings for SE 80 are the same as McFall.

The McFall allotment was ranked as an "I" category allotment in 1982 with the following comments on the ranking form: "Part of this allotment is in the deer critical range, the rest is adjacent to it. Allotment is placed in the "improve" category due to its importance for deer habitat. Should implement management on this allotment." However, objectively speaking the 1982 ranking criteria pointed much more towards an "M" ranking as 3 of the 5 categories were judged to be "M." It appears that the winter range issue was of less importance or the fragmented ownership problems of concern during the pre-RMP ranking discussions in the early 1990's and the allotment (including the part that was now the SE 80 allotment) was re-categorized as a "C" allotment.

Because of the continued lack of significant problems or resource concerns, and/or ability to effect real change, all 3 allotments were carried forward (or changed to) the "C" management category during the RMP process in the early 1990's and are so listed in the 1995 KFRA ROD/RMP.

Additional Assessment Process Notes

Bureau policy and direction articulates a preference that RHSA's be done at the watershed scale, unless "compelling" reasons dictate a different assessment boundary. Watershed analysis has been completed for the KFRA's Westside and recently for the entire Gerber Block. Since no other watershed analyses are currently planned for the remaining portions of the KFRA, the un-assessed allotments will be assessed individually. Since grazing management – and changes to such – must be effected physically at the allotment level and administratively at the permit/lease level, some type of evaluation and assessment at an allotment scale is appropriate and usually unavoidable. Typically, cattle use stops/begins at an allotment boundary fence. This assessment process is also in accordance with current direction and policy guidance, including the recently issued Rangeland Health Standards Handbook (H-4180-1).

Some of the information discussed under one Standard may be discussed under one (or more) of the other Standards. This is partially due to the same monitoring or observational information is discussed in the first Standard because the allotment is upland in nature and the first Standard on upland functionality makes a convenient location for most of the analysis.

The condition or degree of function of an area in relation to the Standards and its trend toward or away from and Standard is determined through the use of reliable and scientifically sound indicators – known as "Indicators of Rangeland Health". The H-4180-1

Handbook defines an "indicator" as: "*Components of a system whose Characteristics (presence or absence, quantity, distribution) are used as an index of an attribute (e.g. rangeland health attribute) that are too difficult, inconvenient, or expensive to measure*". Though the Handbook encourages the use of "…*dissimilar indicators*…" for each Standard, there is rarely enough information available to have unique indicators for each of the five Standards. Examples of indicators can include ecological condition ratings, plant cover and productivity, different erosional attributes, and many other potential ones. In this Assessment area there has been little historical grazing related information collected due to its low priority status. Thus, there are very few quantitative and qualitative indicators that can be used for the Standards assessment, outside of the recent ESI information. The indicators and studies used are explained in the assessment that follows. (Note: The brief description of the Standard in bold, is quoted from the approved *"Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands Administered by the Bureau of Land Management in the States of Oregon and Washington – August 12, 1997".*)

The "Guidelines for Livestock Grazing Management" comprise a set of concepts to consider when evaluating the current or proposed grazing management of an area against the five Standards. To quote the 4180 Handbook, a "guideline" is: "*A practice, method, or technique used to ensure that standards can be met or that significant progress can be made toward meeting the standard. Guidelines are tools such as grazing systems, vegetative treatments, or improvement projects that help managers achieve standards. Guidelines may be adapted or modified when monitoring or other information indicates the guideline is not effective, or a better means of achieving the applicable standard becomes appropriate.*" The actual Oregon/Washington Guidelines for Livestock Grazing Management are included with this assessment, for informational purposed, as Appendix 1.

* * *

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 the information from a recent Ecological Site Inventory and the general ESI related observations; miscellaneous information and 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, and 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 McFall, Harpold Canyon, and SE 80 Allotments together during the late summer/early fall of 2005 by Bill Lindsey. The details and observations of this survey were documented in notes entitled *North Bryant Mountain Allotments Ecological Site Inventory* dated *"Late Summer/Fall 2005"*. The ESI resulted in the preparation of an assortment of "Rangeland Inventory – Ecological Status Worksheets" covering about 22 different Site Write-up Areas or SWA's. A SWA is a distinct zone of vegetation that is relatively homogeneous within the SWA, but different than the other SWA's.

The following is a summary of the ESI information which is keyed to the SWA numbers on the ESI maps located in the McFall, Harpold Canyon, and SE80 ESI files. All of the referenced ecological sites are in MLRA (Major Land Resource Area) 021X – *Klamath and Shasta Valleys and Basins*. The pertinent ecological sites, which were created by and are administered by the NRCS, are found on-line at this URL: http://esis.sc.egov.usda.gov/Welcome/pgReportLocation.aspx A copy of a KFRA specific (slightly modified for our lands) 021X ecological site guide is located in the KFRA office in the "range" area. This modified guide is what was used to do the actual condition ratings. The site number is noted on the "*Rangeland Inventory – Ecological Status Worksheets*" found in the KFE Allotment/ESI file. (See the KFE's ESI / allotment file for more information).

McFall (0896) Allotment

SWA#	SWA%	Ecological Site Name	Worksheet #	Acres	Condition	Trend
MF1	30	*Juniper Claypan 16-20"*	BL-05-02	7.3	PNC	Upward
	70	*Shrubby Loam 16-20"*	BL-05-01	17.1	Late	Static
MF2	100	*Juniper Claypan 16-20"*	BL-05-02	50.5	PNC	Upward
MF3	100	*Shrubby Loam 16-20"*	BL-05-03	11.4	Early *	Up + or -
MF4	100	*Juniper Claypan 16-20"*	BL-05-04	34.3	Late	Upward

SWA's carried into **#0896** from neighboring allotments:

SWA#	SWA%	Ecological Site Name	Worksheet #	Acres	Condition	Trend
BH11 *	20	*Pine Sedge Fescue 16-24"*	BL-05-15	2.5	Mid	Upward
	30	*Pine Sedge Fescue 16-24"*	BL-05-17	3.8	Late	Upward
	50	*Mahogany Rockland 10-20"*	BL-05-11	6.4	Late	Static
HC5	100	*Juniper Claypan 16-20"*	BL-05-08	42.1	Late	N/A **
HC14	60	*Mahogany Rockland 10-20"*	BL-05-11	84.7	Late	Static
	40	*Shrubby Loam 16-20"*	BL-05-09	56.4	PNC***	Down
HC16	40	*Juniper Claypan 16-20"*	BL-05-02	104	PNC	Upward
	60	*Pine Mahogany Fescue 16-20"*	BL-05-14	156.1	Late	Upward

* Ex-farmed area that is still dominated by exotic species, but appears to exhibit a slow upward trend.

** Observed Apparent Trend was not determined because of the juniper treatment of some years ago, though would be considered upward due to the removal of the trees "releasing" the native vegetation even though there is currently a significant amount of annual grasses.

*** The Observed Apparent Trend for these areas was actually determined to be static/upward, though with the juniper invasion it must be considered as trending slowly downwards.

Harpold Canyon (0895) Allotment

SWA #	SWA %	Ecological Site Name	Worksheet #	Acres	Condition	Trend
HC1	100	*Juniper Claypan 16-20"*	BL-05-02	82.3	PNC	Upward
HC2	100	*Shrubby Loam 16-20"*	BL-05-09	73.3	PNC	Down *
HC3	100	*Pine Fescue Bottom 12-18"*	BL-05-10	28.6	Late	Static
HC4	100	*Mahogany Rockland 10-20"*	BL-05-11	18.7	Late	Static *
HC5	100	*Juniper Claypan 16-20"*	BL-05-08	180.6	Late	N/A **
HC6	100	*Shrubby Loam 16-20"*	BL-05-09	40.5	PNC	Down*
HC7	50	*Juniper Claypan 16-20"*	BL-05-04	20.5	Late	Upward
	50	*Shrubby Loam 16-20"*	BL-05-09	20.5	PNC	Down *
HC8	100	*Mahogany Rockland 10-20"*	BL-05-11	8.8	Late	Static
HC9	100	*Juniper Claypan 16-20"*	BL-05-02	31.1	PNC	Upward
HC10	100	*Pine Mahogany Fescue 16-20"*	BL-05-12	77.1	PNC	Down *
HC11	100	*Shrubby Loam 16-20"*	BL-05-09	25.3	PNC	Down *
HC12	100	*Juniper Claypan 16-20"*	BL-05-02	31.7	PNC	Upward
HC13	100	*Mahogany Rockland 10-20"*	BL-05-11	25.2	Late	Static
HC14	40	*Shrubby Loam 16-20"*	BL-05-09	86.3	PNC	Down *
	60	*Mahogany Rockland 10-20"*	BL-05-11	129.4	Late	Static
HC15	100	*Pine Mahogany Fescue 16-20"*	BL-05-13	70	Mid	Static
HC16	60	*Pine Mahogany Fescue 16-20"*	BL-05-14	81.8	PNC	Upward
	40	*Juniper Claypan 16-20"*	BL-05-02	54.6	PNC	Upward

* The observed apparent trend for these areas was actually determined to be static/upward, though with the juniper invasion it must be considered as trending slowly downwards.

** Observed Apparent Trend was not determined because of the juniper treatment of some years ago, though would be considered upward due to the removal of the trees "releasing" the native vegetation even though there is currently a significant amount of annual grasses.

SE 80 Allotment

SWA #	SWA %	Ecological Site Name	Worksheet #	Acres	Condition	Trend
SE 80-1	100	Juniper Claypan 16-20"	BL-05-08	80	Late	N/A *

* Observed Apparent Trend was not determined because of the juniper treatment of some years ago, though would be considered upward due to the removal of the trees "releasing" the native vegetation even though there is currently a significant amount of annual grasses.

The overall condition of the **McFall** allotment by condition class and weighted by acres (576.6 acres total) is summarized in the following table (Note: The ESI calculated acres were 576.6, which is less than the 600 listed in the RMP):

Condition	Acres	Percent of Allotment
PNC	**218.2**	**38 %**
Late Seral	**344.5**	**60%**
Mid Seral	**2.5**	**trace**
Early Seral	**11.4**	**2%**

Picture taken in the extreme SE corner of the eastern 40 acre parcel of the "north" McFall Allotment (section 27, NWSE ¼) showing a *Shrubby Loam 16-20"* ecological site in late seral condition. Picture taken 8/8/05.

The overall condition of the **Harpold Canyon** allotment by condition class and weighted by acres (1086.3 acres total) is summarized in the following table (Note: The ESI calculated acres were 1086.3, which is more than the 760 listed in the RMP):

Condition	Acres	Percent of Allotment
PNC	**604.5**	**56%**
Late Seral	**411.8**	**38%**
Mid Seral	**70.0**	**6%**
Early Seral	**0**	

Picture taken 8/25/05 in an excellent condition (mid-PNC) *Juniper Claypan 16-20"* ecological site area in section 10, NWSE, T40S, R12E; the northwestern portion of the Harpold Canyon (0895) allotment.

The overall condition of the **SE 80** allotment by condition class and weighted by acres (80 acres total) is summarized in the following table:

Condition	Acres	Percent of Allotment
PNC	**0**	
Late Seral	**80**	**100%**
Mid Seral	**0**	
Early Seral	**0**	

Picture taken in the center of the SE 80 allotment (road to the left of the picture) showing a *Juniper Claypan 16-20"* ecological site that has had virtually all of the juniper cut and pile burned several years ago and is currently in upper late seral condition (74% of PNC). Picture taken 8/8/05.

As the information in the tables above show, the area is in overall good to excellent condition with 98% of McFall, 94% of Harpold Canyon, and 100% of SE 80 classifying as late seral to PNC. The ESI process assesses the present conditions against other ecological site descriptions, or ecological reference areas. These areas exhibit ecological processes that are functioning within a normal range of variability and plant communities that possess adequate resistance to and resiliency from most disturbances. Bureau policy does not require a reference area to which you compare these sites to be pristine, or historically unused or relict areas. In other words, the areas are to allowed a small percentage of invasive/undesirable species, and still be considered functional.

The elevated conditions found on the large majority of all three allotments strongly indicate that the overall area is 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*. A proper vegetation management objective for both allotments would be to at least maintain the current conditions ratings in

the areas that are late seral or PNC. (See the "*Management Recommendations*" section later in this document.)

All of the recorded early/mid seral vegetation found within the allotments has been significantly disturbed by activities other than grazing sometime in the past. The only early seral area, located in the McFall Allotment, rated out as early due to being farmed many years ago, and re-seeded with exotic species. However, it appears to be slowly reverting back to native species. Another SWA that covered an area in both the McFall and Bryant-Horton Allotments rated as mid seral most likely as a result of being burned some time in the past. The only other area that rated as mid-seral is located in the Harpold Canyon Allotment, where juniper was treated (sheared, piled, and burned). The result of the juniper removal was a release of both annual and perennial grasses, with the annuals most abundant where the piles were burned. However, within the next 5-10 years, the annuals will diminish substantially with native perennial grasses replacing them.

One additional condition note is that extensive juniper control/reduction (sheared, piled, and burned) was completed several years ago on the SE 80 and Harpold Canyon allotments. The treated areas were primarily in the *Pine-Mahogany-Fescue 16-20"* ecological site represented by write-up BL-05-14 (SWA HC-16). Here is the brief description of this SWA from the fall 2005 ESI notes:

> **HC-16**: This SWA is a large area on top of the main ridge to the east of the transmission lines that also makes up portions of the McFall (most of the "south" pasture) and Bryant-Horton allotments. It is a complex of a juniper sheared *Pine-Mahogany-Fescue 16-20"* (BL-05-14) and *Juniper Claypan 16-20"*. Both appeared to be at least static to upwards (particularly in sheared areas) trending in condition. There is a fair amount of annuals – again particularly where burned – but not enough to impair the excellent condition rating…

This portion of Harpold Canyon is a mix of different ecological types, but only one relatively small area (70 acres, SWA HC-15) rated as mid-seral. The rest of the allotment rated late-seral to PNC. There were some areas that exhibited a "flush" of annual vegetation typical of recent juniper removal areas, though still dominated by native perennial grasses which will likely crowd out most of the annuals over time. This was a great area for juniper treatment, with an appropriate treatment applied (see photo below).

To the right is a 9/12/05 photo showing a *Pine-Mahogany-Fescue* ecological site (write-up BL-05-14) that received juniper treatment 3-4 years ago. This treatment area was complexed with *Juniper Claypan 16-20"* ecological site areas as SWA HC-16. The current flush of annual species apparent in the picture is being quickly displaced by native perennial grasses and forbs.

The downward trend ratings assigned to areas of

the Harpold Canyon allotment is due to the ever increasing amounts of juniper in those SWA's. The encroachment of juniper in these areas has led to a decrease in the shrub composition on these sites, as well as other native species like perennial bunchgrasses. These areas are in need of treatment if the downwards trends are to be reversed.

Other Monitoring/Observational Information

No other monitoring information has apparently ever been collected on these allotments due to their relatively low priority; thus the utility or even necessity of doing the ESI which was discussed above. During that survey, two additional resource condition observations are made at each write-up area – trend (Observed Apparent Trend or OAT) and soil erosion (Soil Surface Factor or SSF).

McFall Allotment: The OAT for the 10 pertinent worksheets indicated six upward trend areas, three static (or not apparent) areas, and 1 downward trend area. The significant amount of upward trending sites indicates that the area is improving in condition. The area of downward trend in this allotment carries over into the Harpold Canyon Allotment and is a result of juniper encroachment, even though the area had a condition class rating of late seral to PNC. These areas are in need of juniper treatment. Complimenting the condition ratings, the SSF ratings for McFall were all within the "stable" erosion condition class, with only one area (MF-1) in the "slight" erosion class.

Harpold Canyon Allotment: The OAT for the 9 pertinent worksheets indicated three upward trend areas, four static (or not apparent) trend areas, and two downward trend areas. One of the two downward trend readings was in an area with the same juniper encroachment problems as noted for McFall above and rated downwards for that reason. The other downward trend area did have another factor contributing to its rating: SWA HC-5 covers the power line swath, which has been extensively disturbed through the years, though the area still has abundant perennial grasses mixed in with a plentiful amount of annuals. This SWA has also been juniper sheared and the piles burned in the past 3-4 years, contributing to the fair amount of annual grasses in the area. Complimenting the condition ratings, the SSF ratings for Harpold Canyon were all within the "stable" erosion condition class.

SE 80 Allotment: The OAT for the one pertinent worksheet indicated that it was "not apparent," but was noted on the worksheet for the allotment as being upwards. The production on the allotment was good, with perennial grasses dominating, and the annual grass levels not being too high. This area is almost inevitably trending upwards with the removal of the juniper trees that has taken place. The SSF rating for this allotment was not recorded, or not applicable.

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 – Oregon Grazing District #1.) These section 15 lands were usually converted at the ratio of 7 to 10 acres equaling one AUM, e.g. a 100 acre lease of BLM land would be leased at 10-14 AUM's. 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 our area (13"-18" precipitation) and the vegetation communities that this precipitation can support, a rating of 7-10 acres per AUM can be an acceptable maximum allocation though in many areas a lower rating (more acres per AUM) is warranted if topography, condition, or other factors limit the availability or usability of forage. Unfortunately, no specific information on past forage capacities was found for any of these Assessment allotments.

McFall Allotment: Grazing history for this allotment is limited at best. The lessee's file (Douglas Neil) indicates that this allotment has had 60 AUM's licensed to it since 1987, and were likely used to some extent every year.

Utilization on this allotment as observed during ESI in 2005 indicates slight to light use in certain areas, to no utilization at all. Given the relatively high ecological condition rating and the generally upward apparent trend, it can be assumed that the current grazing practices are appropriate.

Harpold Canyon Allotment: Grazing history for this allotment is limited. The lessee's file indicates that this allotment has had 75 AUM's, or 15 cattle from 5/01-9/30, each year since 1993. The grazing lease is held by Jeld-Wen timber and ranches, who leases to Biaggi. (Note: Several hundred head of cattle are grazed in the area of which the Harpold Canyon allotment is a relatively small part of. These cattle are allowed via the larger private land grazing lease from Jeld-Wen and two additional fragmented BLM allotments (Warlow and Bryant-Taylor) south and east of Harpold Canyon which are also "attached" to the Jeld-Wen private lands.)

Utilization on this allotment as observed during the ESI in 2005 indicates slight to light use in areas of the allotment that were utilized (and much was not utilized). There were some spots of moderate use in portions of SWA HC-15. Given the relatively high ecological condition rating and the generally upward apparent trend, it can be assumed that the current grazing practices are appropriate.

SE 80 Allotment: Grazing history for this allotment is limited. The lessee's file indicates that this allotment has had 6 AUM's, or 1 cow from 5/1-10/31, each year since 1983. Prior to 1983, this allotment was part of the McFall allotment. Currently, the grazing lease is held by Grant Weber. Similar to the Harpold Canyon allotment, more than one cow is grazed in the area, but since it is used in conjunction with adjacent private lands, the use is widely disseminated. Most likely no more than a few dozen head are grazed during the spring and early summer, wandering back home to the private base property when the forage dries out (no cattle were noted during the ESI in early August of 2005). There is also no water on this small allotment and the cattle must water on the private lands further limiting the grazing use.

Utilization on this allotment was overall slight to maybe light in a few spots. Given the late seral condition rating assigned to the allotment and static to upward apparent trend, it can be assumed that the current grazing practices are appropriate.

Determination: ***This Standard is currently being met.***
Recent ESI and other observational information indicate that current conditions on the BLM administered lands are dominantly good to excellent and quite appropriate for fully meeting this Standard. The only current condition issues on these allotments are related to juniper encroachment, juniper density increases, or treatment of these juniper invaded areas. In the last few years, much of the Harpold Canyon allotment has been treated (i.e. sheared, piled, and burned). Although in the short term this disturbance results in an increase of annual grasses and forbs, in the long term the removal of the juniper should lead to better ecological conditions, which is evidenced in the general upward trend of the allotment. In some areas of the McFall and Harpold Canyon allotments, the juniper encroachment is hindering the ecological status by crowding out desirable species and increasing the amount of bare ground. Despite the fact that overall these allotments rated out as predominately late seral to PNC, they are in need of juniper treatment or inevitably the trend will shift downward. (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 those listed under Standard 1.

There are no significant riparian/wetland areas on BLM administered lands within any of these allotments in this Assessment. All of the water used by livestock in the use of these BLM areas is on private lands, mainly McFall Reservoir (which is on Jeld-Wen lands), and possibly Smith and Harpold Reservoirs, although these waters are located on neighboring allotments. There are also no well defined drainages on these allotments.

There are numerous ephemeral drainages in both allotments which have little in the way of riparian characteristics and only flow during late winter or early spring runoff for short periods. Both allotments appear to be functioning from a hydrological perspective as they should and there are no known present resource problem areas related to livestock grazing.

Determination: ***This Standard is currently being met (or is not applicable).***
Given the good to excellent ecological conditions and the general observation that there appears to be no riparian or wetland problem areas, this Standard must be 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 three allotments are upland in nature, the analysis and information previously listed under Standard 1 is the basis for the determination under this Standard. The 2005 ESI found that outside the recently juniper treated areas, areas with juniper encroachment, and a small area that was long ago farmed and seeded, these allotments classified as dominantly (94%+) late seral or PNC, and exhibited relatively low evidence of erosion. In the few areas with mid-early seral ratings (only 8% total out of all 3 allotments combined), the ecological conditions are generally good with predominantly stable to upward trends. These high ecological conditions are considered as reliable indicators of proper functionality for all the processes noted in the Standard description above.

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', have been experiencing varying degrees of the "juniper problem." This includes juniper encroachment into vegetation communities – particularly big sagebrush and bitterbrush – that previously had limited juniper and significant density increases in areas where juniper was and should be present, though in lesser quantity (see picture below). 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 to the point that the vegetation community is almost a juniper monoculture. This results in diminished habitat capabilities for most native wildlife species, dramatically reduced forage production for all grazing animals, and frequently an environment conducive to the invasion of undesirable exotic plants.

Picture taken 8/30/05 in section 22 (SWSW) of Harpold Canyon in Shrubby Loam 16-20" (or that is the best fit anyway) sites with great grass component, but ever increasing juniper. SWA HC-6.

On the Harpold Canyon allotment especially, and to a lesser extent on the McFall allotment, 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 *Shrubby Loam* 16-20", *Mahogany Rockland* 10-20", and *Pine Mahogany Fescue* 16-20" ecological sites. Fortunately, large portions of these areas have been treated (sheared, piled, and burned) over the past three to four years. Even though the BLM lands are currently in good to excellent ecological condition, many plant communities are nearing the stage where juniper will begin to crowd out the more desired understory species.

Determination: ***This Standard is currently being met.***
As with the determination for the first Standard, the current high ecological state of vegetation communities on the allotment strongly indicates that Standard 3 is fully met. See Standard 1 for the data, evaluation, and determination information that is pertinent to this Standard. The juniper encroachment issue looms as a future problem on the McFall and Harpold Canyon allotments, but is being aggressively pursued as a fuels reduction issue throughout the KFRA. Since these areas with the encroachment problem are in good ecological condition, if they are treated they should be able to recover and surpass pre-treatment conditions fairly quickly (as evidenced by areas in the allotments that have been sheared approximately three to four years ago, and are already recovering.) Livestock grazing at the currently permitted levels would be considered appropriate in maintaining current and predicted future conditions. (See the "*Management Recommendations*" section.)

STANDARD 4 – WATER QUALITY

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

There are no bodies of water or drainages in the McFall, Harpold Canyon, or SE 80 allotments. Cattle must water on neighboring private lands, or (rarely) at Smith or Harpold Reservoir which are located in neighboring allotments and covered in a separate RHSA.

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 is either not applicable or 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: Good to excellent vegetation conditions (Standard 1) indicate that habitat conditions for all present wildlife species are good. The recent juniper control activities will also enhance future conditions for all wildlife by restoring 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.

The juniper encroachment issue discussed under Standard 3 must be considered a wildlife habitat issue of ever increasing importance, and though it is not critical on these allotments at this time (not including the SE 80 allotment, which was recently treated) it is very close to being in certain areas, where the trend is downward due to the encroachment. A large portion of the Harpold Canyon and SE 80 allotments have already received treatment in the last few years, and this should improve wildlife habitat overall.

Special Status Species: There is an active bald eagle nest in the Harpold Canyon (#0895) Allotment, near McFall Reservoir.

Fisheries: Since there are no perennial surface waters within these allotments that can support fish, there are no habitats that contain listed (or any) fish.

Plants: The Harpold Canyon (#0895), Southeast 80 (#0805), and most of the McFall (#0896) allotments were systematically surveyed for botanical resources in 2005. Section 27 of the McFall Allotment was systematically surveyed for botanical resources in 2002.

Two populations of Baker's globe mallow (*Iliamna bakeri*), a Bureau sensitive species, were found in Section 35 and two populations were found in Section 2 of the McFall Allotment. Three more populations of Baker's globe mallow were found in Section 12 of the Harpold Canyon Allotment.

Noxious weed species documented during these surveys included leafy spurge (*Euphorbia esula*), musk thistle (*Carduus nutans*), Scotch thistle (*Onopordium acanthium*), and Canada thistle (*Cirsium arvense*). Dalmation toadflax (*Linaria genistifolia* spp.) was found on the side of the road just outside of BLM ownership in Section 27. Leafy spurge and musk thistle had numerous populations located within these allotments.

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

Standard 5 is considered fully met on all 3 allotments. See Standards 1, 2, and 3 for the data, evaluation, and determination information that is pertinent to this Standard. The primary indicators of proper wildlife/plant habitat functionality are the elevated ecological conditions, the limited grazing related problems, and the recent juniper control activities which will likely increase the ecological conditions of treated areas over the next 5-10 years and beyond. (See the "*Management Recommendations*" section.)

Management Recommendations:

The good to excellent (late seral/PNC) ecological conditions on the majority of these 3 allotments strongly indicate that livestock grazing – as currently permitted – is compatible

with resource conditions. The following specific management recommendations reflect the findings of this Assessment:

Management Common to all 3 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. It is recommended that all of the BLM administered lands in all three allotments be retained in public ownership, i.e. not sold or exchanged. Currently, all of the lands in the allotments are listed as Zone 1, which is retention. Given these lands' high values for wildlife and grazing, it is recommended that they remain classified as Zone 1 in the upcoming RMP revision scheduled for completion in 2008.

Allotment Specific Recommendations:

McFall Allotment: Grazing on this allotment is predominantly slight to light. The allotment is dominated (98%) by functional late seral/PNC vegetation communities. Given this, the allotment specific recommendations are limited to the following:

1. Due to the good conditions and relatively low priority status of the McFall 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 1 or 2 years during or just after the grazing use to ensure that no significant grazing related resource problems are occurring.

2. Plant community objectives for McFall:

- At least maintain indefinitely the current ecological condition rating for all of the different SWA's within the allotment (with the exception of SWA MF-3, which is the old farmed area that is slowly reverting back to it's original ecological state, which we would want to continue to improve over time), as listed under the ESI section in Standard 1.
- Reduce the young (<125 years old) juniper cover in areas where it is encroaching by at least 75% within the next 10-20 years. Specifically, SWA HC-14 has the potential for undesirable levels of juniper encroachment and should be treated. The portion of the allotment located in Section 27 is scheduled for juniper treatment in the near future.

Harpold Canyon Allotment: Grazing use of this allotment is relatively low and the condition of the allotment is dominated (94%) by late seral/PNC vegetation. Although the trend is largely upwards in most of the allotment, juniper encroachment most likely will

cause a downward trend if not controlled in the near future. Given this, the allotment specific recommendations are as follows:

1. Due to the good conditions and relatively low priority status of the Harpold Canyon 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 objective for Harpold Canyon:

- At least maintain the current ecological condition rating for all of the different SWA's within the allotment (with the exception of mid-seral SWA HC-14, which is located in the power line swath that runs through this allotment, and we would want to improve over time), as listed under the ESI section in Standard 1.
- Reduce the young (<125 years old) juniper cover in areas where it is encroaching by at least 75% within the next 10-20 years. Much of this allotment is juniper invaded, including SWA's HC-2, 4, 6, 7, 10, 11, 13, and 14. These areas are now experiencing or have the potential for undesirable levels of juniper encroachment and should be treated. A downward trend for much of the allotment will be inevitable if juniper levels are not controlled in the near future.

SE 80 Allotment: Grazing use of this allotment is also relatively low, and the condition of the allotment is 100% late seral. This allotment received juniper treatments a few years ago, and is estimated that in another three to five years, this area should be in a solid PNC class. Given this, the allotment specific recommendations are limited to the following:

1. Due to the good conditions and relatively low priority status of the SE 80 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 1 or 2 years during or just after the grazing use to ensure that no significant grazing related resource problems are occurring.

2. Plant community objectives for SE 80 are to at least maintain indefinitely the current ecological condition rating for the SWA completed for the allotment, as listed under the ESI section in Standard 1. This small allotment has already had the juniper removed several years ago and the expectation is that ecological conditions will rise (i.e. the condition rating increase) continuously over the next few decades.

* * *

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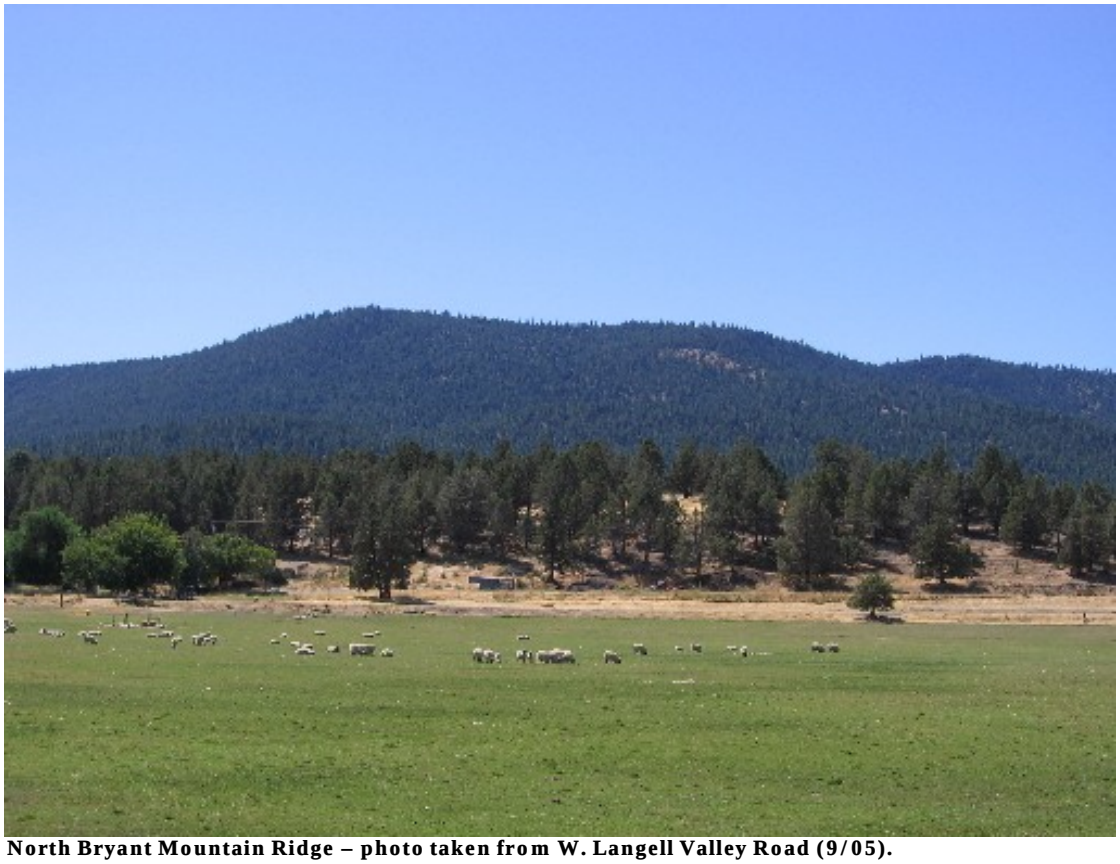
Determination

(X) Existing grazing management practices and/or levels of grazing use on the McFall (#0896), Harpold Canyon (#0895), and SE 80 (#0805) allotments promotes achievement or significant progress towards the Oregon Standards for Rangeland Health and conform with the Guidelines for Livestock Grazing Management (Appendix 1).

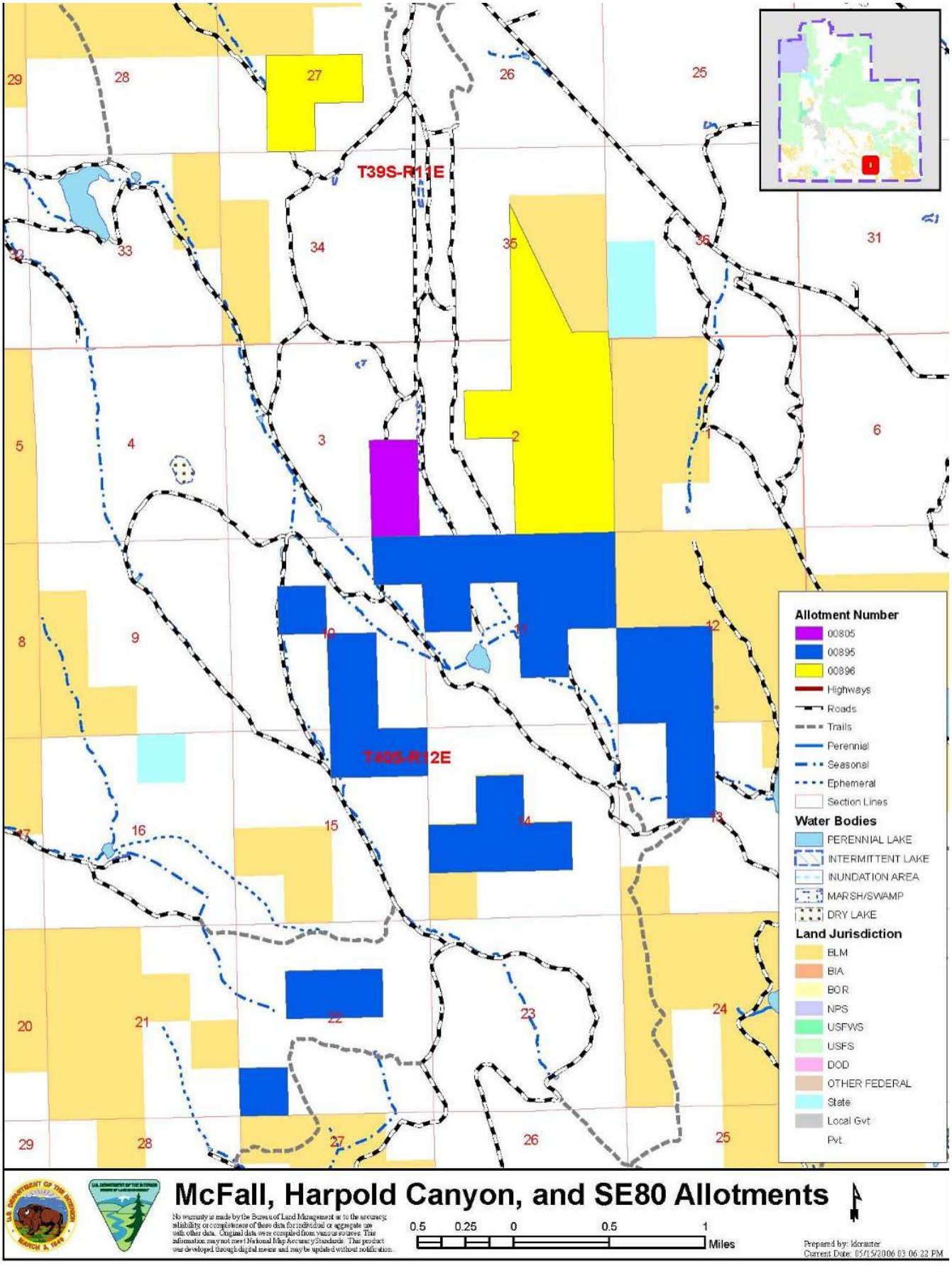
( ) Existing grazing management practices and/or levels of grazing use on the McFall (#0896), Harpold Canyon (#0895), and SE 80 (#0805) allotments will require modification or change prior to the next grazing season to promote achievement of the Oregon Standards for Rangeland Health and conform with the Guidelines for Livestock Grazing Management.

/s/ *Heather Bernier* (acting for) 7/20/06

Jon Raby, Field Manager, Klamath Falls Resource Area Date



North Bryant Mountain Ridge – photo taken from W. Langell Valley Road (9/05).


T39S-R11E
T40S-R12E
Allotment Number
00805
00895
00896
Highways
Roads
Trails
Perennial
Seasonal
Ephemeral
Section Lines
Water Bodies
PERENNIAL LAKE
INTERMITTENT LAKE
INUNDATION AREA
MARSH/SWAMP
DRY LAKE
Land Jurisdiction
BLM
BIA
BOR
NPS
USFWS
USFS
DOD
OTHER FEDERAL
State
Local Gvt
Pvt.
McFall, Harpold Canyon, and SE80 Allotments
0.5 0.25 0 0.5 1
Miles