

Results of Assessment/Establishment of Cause

Achieving Standards For Rangeland Health Conforming with Guidelines for Livestock Grazing Management

Resource Area: Deschutes

Geographic Area of Assessment: Lower Bear Creek, Lower Crooked River Watershed

Allotment Areas Assessed: North Stearns (#5132)

Period Assessment Conducted: May, 2002 through December, 2003

Assessment Benchmark: Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands in Oregon and Washington. Approved August 12, 1997 by the Secretary of the Interior.

Assessment Objectives:

Per USDI/USDA Tech Reference 1734-6 of 2000: Provide preliminary assessment of soil/site stability, hydrologic function, biological integrity. Help land managers identify areas that are potentially at risk for degradation. Provide early warnings of potential problems and opportunities. Provide capability to communicate fundamental ecological concepts to a variety of audiences. Improve communications among interest groups. Provide capability to select monitoring sites for future monitoring programs. Help understand and communicate rangeland health issues.

Per BLM, Oregon State Office IB No. OR-98-315 of 7/24/98: Assess rangeland condition relative to Rangeland Health Standards; determine cause in those cases where standards are not being met; and take action that will result in progress toward standards attainment where these are not being met.

Assessment Preparers

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Assessment Approval

Robert Towne, Field Manager Robert Towne Date: 9/1/04

North Stearns Allotment

Public Land Upland Acres: 8,867 shown in the range files.

Public Land Riparian/Wetland Acres: 9.0

Public Land Stream Miles: 5.0 ephemeral (estimated)

North Stearns Allotment		8,867 Classified Public acres				
1978 Soil / Range Site Classification	Old / Current Range Site Classification	New Range Site Name (Change needed)	% of Allotment	Dominant Vegetation & Condition Class	Est Public Acres	Range Site %
116 – 105E, Droughty Juniper Sand Hills and Juniper Lavalands	*Pumice Flat 8-10 010XA027OR and Lava Blisters 8-10 010XA022OR	Pumice Flat 10-12 PZ 010XA009OR and Lava Blisters 10-12 PZ 010XA023OR (Northwest pasture)	26%	Juoc/Artrv/Feid/Stco4 Mid Seral = Fair	1,480	71.2%
				Juoc/Chiv8/Brte Early Seral = Poor	500	24%
				Juoc/Artrv/Feid/Stco4 Early Seral = Poor	100	4.8%
116 – 105E, Droughty Juniper Sand Hills and Juniper Lavalands	*Pumice Flat 8-10 010XA027OR and Lava Blisters 8-10 010XA022OR	Guzzler and North Big (Sleepy Hollow pastures)	62%	Juoc/Artrt/Feid/Stco4 Juoc/Chiv8/Brte Early Seral = Poor	4,965	100%
105E Juniper Lavalands	Lava Blisters 10-12 PZ 010XA022OR	Ridge top of Swartz Canyon ***	6.4%	Arar8/Feid Early Seral = poor	510	100%
133F, Juniper Rolling Hills	Pumice Flat 08-10, 010XA083OR	Sandy North 10-12 PZ 010XA083OR	4.4%	Juoc/Putr2/Artrv/Feid/ Pssps Mid Seral = fair	350	100%
133F Juniper Rolling Hills s	South 10-12 PZ, 010XA007OR	Unit is on south slopes	0.7%	Juoc/Chiv8/Brte Early seral = poor	60	100%
185E Droughty Juniper Sand Hills	Pumice Flat 08-10, 010XA027OR **	Unit is in basins and Juoc is less	0.5%	Juoc/Artrt/Stco4/Feid/ Chiv8/Agda Early Seral = poor	40	100%
Additional Notes	Current classifications indicate an adjustment to the late 1970s SVIM classification and subsequent 1980s correlation and 1990 update of NRCS Range Sites. There was no attempt made in 2002 to map any variation in condition class or new range sites identified. There is significant variability in the potential of different sites associated with relatively minor differences in aspect, slope rockiness and changes in soil depth especially in the juniper sites.					

* 010XA009OR / 010XA023OR has inclusions of 010XA027OR and 010XA022OR the further south and west one travels.

Also this unit consists of two soil units and two range sites

** This unit also occurs as 185E/126E as small (typically <100 acres) within the 116 – 105E Pumice Flat 08-10 Range Site.

*** This unit also has a small area of stiff sage/cheatgrass not mapped as a separate unit and would be JD Very Shallow 12 – 16 PZ (010XB032OR).

General:

1. This information applies only to BLM-administered lands within the allotment
2. Where Allotment Monitoring Sites are referenced, information from these sites will include photographs, vegetation data, trend rating forms, cover worksheets, and/or Rangeland Health Evaluation Summary Worksheets (all located in the respective allotment's monitoring files).
3. The information presented here is not intended to be all-encompassing. Rather, the intent is to focus on documenting the rationale and evidence that supports the determinations and, where applicable, the findings of cause.

RMP Goals: Maintain or improve habitat for mule deer and/or antelope and increase availability of livestock forage. This is an "I" (improve) allotment and has general management direction as noted on p. 75 in the Brothers/LaPine Resource Management Plan (ROD July 1989), which states "Grazing management in the Brothers portion will continue so as to maintain or improve ecological status on all grazing allotments as shown on Map 16. Vegetative condition is managed for a goal of mid seral: (40% of vegetation potential) to the lower end of late seral (60% percent of potential)."

Rangeland Health Standards: Functioning healthy range land.

I. Standard 1 (Watershed Function - Uplands)

A. Determination

- Meeting the Standard
- Not Meeting the Standard; Making Significant Progress Toward Standard
- Not Meeting the Standard; Not Making Significant Progress Toward Standard

B. Establishment of Cause

- Livestock are significantly contributing to the failure to meet the standard
- Livestock are not significant contributors to the failure to meet the standard
- Failure to meet the standard is related to other uses or conditions: X on-site; ___ off-site

Plateaus and flats are currently meeting the standard. Hillslopes, ephemeral draws, and ravines are not meeting the standard.

C. Rationale/Evidence

1. Plateaus and Flats

On the plateaus and flats, preponderance of field evidence points to “none to slight” or “slight to moderate” soil/site stability, hydrologic function departure from that expected for these sites (although bare soil interspace appears moderately higher than expected in some sites). Coarse textured soils and flat terrain preclude major risks for watershed dysfunction.

Evidence: Allotment Monitoring Sites T-1, PP-9, 10, 11, 13; PP-134A, E and F

2. Hillslopes, Ephemeral Draws, and Ravines

Within predominantly juniper-occupied sites there are moving soil and other risks to upland watershed function. Within juniper thinnings, soil cover has increased and apparently erosion risks decreased.

The amount of vehicle hillclimbing/cross country travel in Schwartz Canyon appears to be increasing and since 1996, has been a matter of public concern. These vehicle routes are currently sources of clearly accelerated soil erosion and displacement.

Evidence: Allotment Monitoring Sites PP-10 and 11; PP-ERA. Manager Advisory Note dated 9/4/96.

II. Standard 2 (Watershed Function - Riparian/Wetland Areas)

A. Determination

- Meeting the Standard
- Not Meeting the Standard; Making Significant Progress Toward Standard
- Not Meeting the Standard; Not Making Significant Progress Toward Standard
- Standard Does Not Apply

B. Establishment of Cause

- Livestock are significantly contributing to the failure to meet the standard
- Livestock are not significant contributors to the failure to meet the standard
- Failure to meet the standard is related to other uses or conditions: X on-site; X off-site
- Not Applicable

C. Rationale/Evidence

Ephemeral stream channels and Schwartz Canyon have excessive overland flow and erosion, and are unstable. Probable causes include historic livestock grazing practices, juniper dominated uplands, and OHV use in channel bottoms and northern sandy slopes in the upper portion of Schwartz Canyon.

A segment of the Crooked River parallels the east allotment boundary and is located outside of the allotment. This segment of river is in Proper Functioning Condition and is Meeting Standard. Given the capability of the river with the effects of Bowman Dam and Hwy. 27, river geometry, vegetation and bank stability are good. However, without regulated dam flows, the assessment for this river segment would likely be Functioning At Risk with an upward trend. This is due to the narrow fringe of riparian vegetation along the riverbanks that would've provided inadequate bank protection with unregulated flows. In addition, the river could benefit from more woody vegetation (primarily willow and possibly cottonwood). Noxious weeds and juniper occupation pose a risk to riparian

vegetation recovery.

Evidence: 2002 Proper Functioning Condition Assessment

III. Standard 3 (Ecological Processes)

A. Determination

- Meeting the Standard
- Not Meeting the Standard; Making Significant Progress Toward
- Not Meeting the Standard; Not Making Significant Progress Toward

B. Establishment of Cause

- Livestock are significantly contributing to the failure to meet the standard
- Livestock are not significant contributors to the failure to meet the standard
- Failure to meet the standard is related to other uses or conditions: X on-site; ___ off-site

Rational for livestock not significantly contributing: Not meeting the standard and is making significant progress in some places and in other places it is not making significant progress. Livestock are contributing to the failure to meet standard in small corridors, pockets and flat basins, which constitute a small percentage of the public lands within the allotment. In other areas the failure to meet is related to other uses or conditions.

The pumice 8 – 10 range site, which has lava blister inclusions, show improving trend. However, these sites have higher than desired juniper occupation and are not expected to continue to improve due to juniper densities. In pumice flat 8 – 10 flat basins and road and powerline corridors, standards are not being met and cattle are a contributing factor. Failure to meet standard in the stiff sage, portions of the pumice flat 8 – 10 and lava blisters, and northern portion of the allotment is primarily due to historic grazing practices, juniper occupation, OHV use, and heavy equipment disturbance...\\Finalized ROAs\Support_files\N Stearns\NStearns_use.jpg

The Brothers/La Pine RMP goal for range vegetative condition is for mid seral: (40% of vegetation potential) to the lower end of late seral (60% percent of potential). Currently the sites with higher use are being maintained in an early seral condition with higher than desired levels of annual grasses.

In 1978, SVIM results documented cheatgrass and rabbitbrush as primary understory vegetative components; 2002 vegetation transects indicate that this is no longer the case. However, there are multiple sites which display indications of little to no movement towards desired conditions. The following provide indications that livestock are not a significant causal factor:

1. Section VI Guidelines for grazing management on pages 8-10 indicates limited livestock foot print on the allotment. It also indicates limited risks for current livestock grazing management as a significant causal factor.
2. If livestock grazing was a significant causal factor we would not expect conditions to have apparently changed since 1978.
3. Trend ratings determined in 2002 provide indications that ingredients for site recovery are in place. Trend ratings were typically upward during the 2002 assessments.
4. As state in the Brothers/La Pine RMP, projected livestock concentration areas would occur around water and in some valley bottoms. These exist here. At two such sites (around Antelope Flat water set and at the south corner of the allotment next to Millican Rd.) the conditions at these sites, although consistent with RMP direction appear clearly linked to livestock concentrations and use. The total of these areas is less than 20 acres.
5. Outside of these concentration sites there is no evidence linking current livestock forage use levels, distribution, or other parameters to not meeting or moving toward standard.
6. There are multiple activities and situations in this allotment. These include: powerline corridor maintenance, fire exclusion, road construction and maintenance, firewood cutting, bough collecting, sewage dumping, livestock use, and multiple recreation uses. The consequences of these activities have not been segregated and it is not known which of these specifically are significant causal factors.

A. The Northern portion of Antelope Flat pasture, Northwest pasture, small BLM inclusions in the Home pasture, Sandy North 10-12 PZ Range Site. These areas typically have steeper slope and bitterbrush potential.

In these areas bunchgrass cover is near the low end of range site potential with representative species compositions. Current conditions are primarily due to fire exclusion, historic livestock grazing practices, extensive road development, and juniper occupation. Increasing OHV use and juniper occupation may reduce the quality of these sites if not addressed. OHV use is not

a concern at this time on isolated BLM parcels east of the river. Bitterbrush expression is higher in juniper cuts and steep slopes. In areas where juniper occupation is high bitterbrush and sagebrush are either dead or decadent. Bitterbrush use is highest in the power line corridor and the northeast portion of the Northwest pasture.

- B. Within Sleepy Hollow, Southern portion of Antelope Flat, and Guzzler pastures, there are significant inclusions of deeper sandy soils (185E or 126E soil types) within the Pumice flats 8-10 and Lava Blisters 8-10 Range Sites. These small enclosed basins typically have less juniper and no rock component.

SVIM data collected in 1978 indicates predominantly mapped as poor/early seral condition. These areas were included in the larger mapping units that indicated the primary vegetation as juniper, rabbitbrush, and cheatgrass. These sites with sandy soils without juniper were probably in poorer condition than other areas of the allotment where more rock existed. These sites currently vary in their composition of higher seral species, cheatgrass, and rabbitbrush. Some sites contain more bunchgrasses and sagebrush than others.

- C. Areas mapped as Pumice flat 8-10 Range Sites that have juniper and rocky soil components. These areas are typically juniper dominated with sagebrush and mix of perennial grasses. They also have varying degrees of cheatgrass and rabbit brush. These sites generally have higher levels of native bunchgrasses and sagebrush. They are not currently meeting standard primarily due to higher juniper canopies and in some cases sagebrush. Sagebrush populations are declining in some areas due to lack of disturbance and competition. High levels of decadence are reducing overall sagebrush densities.

Juniper treatments in old growth juniper sites pose a risk for rabbitbrush and cheatgrass invasion. Retention of old growth trees in treatment areas will help maintain native bunchgrasses due to the micro-climate and other factors created by these trees.

- D. Power line, roads, water set, and OHV corridors

Cheatgrass and rabbitbrush is almost always prominent and in some cases dominant. Areas with less past disturbance tend to have a higher component of sagebrush and native grasses. Road access has facilitated use of these areas for temporary water sets and salting areas. Cattle also use these corridors because of reduced juniper densities and ease of travel to and from water, salt, and forage. Wood cutting and Right-of-Way maintenance (grading, bulldozing, and burning) along the Millican Road and within the powerline corridor perpetuate disturbance in these areas.

Levels of vehicle hill climbing/cross country travel in Schwartz Canyon appear to be increasing and since 1996, have been a matter of public concern. In the Guzzler pasture, OHV traffic created additional trails adjacent to designated trails. This activity is removing vegetation, increasing area susceptible to invasion by non-native species, and reducing total production capability.

In areas where continued vehicle or other mechanical disturbance are not being perpetuated and where livestock concentrations are not lengthy or repetitive, static or slight upward trends are indicated.

It is estimated that on average 50% of the roads in the Guzzler, and Sleepy Hollow pastures have rabbitbrush and cheatgrass prominent within 150 feet of the road center line. Within the powerline and highway corridors, these conditions occur up to 600 and 100 feet from the center line, respectively. These areas often reflect a static to slight downward trend. Similar conditions occur approximately 1,320 feet from the Antelope Flat water trap. Total area affected is approximately 1,267 acres composing 25% of these two pastures. Water sets were moved from location to location in all pastures prior to 1999. Subsequent heavy utilization around these sites increased the area impacted above the 25% reflected over the past ten years. Since this time the use associated with water sets has been associated primarily with the Antelope Flat permanent water set.

Old growth juniper trees are expected to occur either in contiguous patches or as scattered isolates throughout the allotment. They are currently missing or only marginally present within the primary highway and utility corridors.

- E. Stiff Sage in Antelope Flat pasture (Inclusion of Unit 105E). ..\\Finalized_ROAs\\Support_files\\N Stearns\\stiffsage.jpg

This area has high levels of sagebrush decadence. Although cheatgrass was more dominant in the western portion of this range site it is present throughout. In the western portion, the primary native grass is bottlebrush squirreltail. The higher elevation area near the eastern allotment boundary fence appears to have more native bunchgrasses and less cheatgrass. There is an old road that runs east-west through this site and another along the eastern allotment boundary fence.

This area burned in the 1950s and probably had subsequent improved grazing methods. Conditions on the western portion are probably due to this area being used as a salting location, equipment staging, or some other high intensity activity. Currently there are no monitoring points associated with this site.

- F. Noxious Weeds

Russian thistle occurs along Millican Road within the allotment. Over the last five years the road corridor has been widened and disturbed repeatedly. This has increased the amount and distribution of Russian thistle along Millican road. Other species such as diffuse knapweed, Russian knapweed, spotted knapweed, whitetop and Canada thistle occur within the adjacent Wild and

Scenic River Corridor/Prineville Reservoir area. These pose risks for biotic and hydrologic integrity within and surrounding the North Stearns Allotment area. In 1999 hay was fed in the allotment. There is currently no certification for weed free hay. Feeding and hauling hay through the allotment may increase the risk of new species and populations of noxious weeds becoming established. OHV users coming from all areas of the country and traveling off trail have potential for introducing new and spreading additional species of noxious weeds. This is especially true adjacent to the Millican road and OHV trails.

Evidence: Prineville BLM Noxious Weed Data Base

IV. Standard 4 (Water Quality)

A. Determination

- Meeting the Standard
- Not Meeting the Standard; Making Significant Progress Toward
- Not Meeting the Standard; Not Making Significant Progress Toward
- Standard Does Not Apply

B. Establishment of Cause

- Livestock are significantly contributing to the failure to meet the standard
- Livestock are not significant contributors to the failure to meet the standard
- Failure to meet the standard is related to other uses or conditions: ___ on-site; ___ off-site
- Not Applicable

C. Rationale/Evidence

All streams located within the allotment are ephemeral in nature. Therefore, no streams within the allotment are not listed as water quality limited by DEQ and do not appear on the 303(d) list.

The Crooked River parallels the east allotment boundary and approximately ¼ of a mile of the west bank is public land within the allotment. As influenced by agency actions, this Wild and Scenic River segment complies with State water quality standards. However, it is listed as water quality limited by the Oregon Dept. of Environmental Quality for Total Dissolved Gasses due to the release of water from Bowman Dam.

Evidence: Prineville BLM District Water Quality Records and ODEQ Records

V. Standard 5 (Habitat for Native, T&E and Locally Important Species)

A. Determination

- Meeting the Standard
- Not Meeting the Standard; Making Significant Progress Toward
- Not Meeting the Standard; Not Making Significant Progress Toward

B. Establishment of Cause

- Livestock are significantly contributing to the failure to meet the standard
- Livestock are not significant contributors to the failure to meet the standard
- Failure to meet the standard is related to other uses or conditions: X on-site; ___ off-site

C. Rationale/Evidence

1. Season of Cattle Use

This allotment does not have current BLM designation as winter range (December 1 through March 30) for big game. ODF&W has designated this area as winter range for deer and antelope and the majority of current alternatives for the Draft Urban Interface RMP designate this area as winter range. The Brothers La Pine RMP calls for improving winter forage for deer and antelope and summer forage for antelope. Winter use by cattle occurred in the Guzzler pasture 92, 98, and 99; Northwest pasture 96; and Sleepy Hollow pasture 92, 96, 97, and 99.

An experiment done at the Starky Research Center determined that cattle can exclude use by deer and elk when they are present. When wintering areas are limited, big game can be forced to utilize areas cattle are currently using. This can vary based on winter weather intensity, big game populations, and cattle use patterns. Deer and elk have been observed grazing with cattle in some instances and being displaced in others. Administrative use can result in more than one vehicle trip per month. One vehicle trip per

month is the standard for determining if a road affects big game habitat use.

2. Road Densities

Road densities are well above those desired for wintering or summer habitats. OHV use has created numerous new trails and hill climbs. Road densities were calculated based on previously mapped roads. Field review in 2003 indicates that this data under represents the number of roads actually on the ground. Increased road densities allow higher levels of disturbance, remove land from producing additional forage or cover, increase flow volumes and speeds which degrade riparian habitats, and allow for activities like garbage dumping and poaching. Excessive garbage dumping and vandalism is occurring particularly in the northern portions of this allotment.

Evidence: Allotment Monitoring Site PP-11; Manager Advisory Note dated 8/22/96

3. Stubble Heights

Within Sleepy Hollow, Southern portion of Antelope Flat, and Guzzler pastures, there are significant inclusions of deeper sandy soils (185E or 126E soil types) within the Pumice flats 8-10 and Lava Blisters 8-10 Range Sites. In 2003 areas along roads, near water, and along the power lines, had higher levels of utilization than Pumice flat 8-10 sites away from roads, water, salting, and powerlines. In 2003 stubble height measurements were taken in one 185E flat (average stubble remaining of native species was 3 1/3 inches) and in the Pumice flat areas with juniper (average stubble remaining of native species was 6 1/2 inches with the majority of plants being ungrazed). Additional areas (along Millican road and within a small portion of 185E) were not measured because the residual stubble was so short and the amount of native species so few that measurements didn't appear practical.

Utilization levels documented in the range files stating moderate to heavy, heavy, and severe are areas where stubble height would have been below 3". The break between moderate and heavy use is typically 2" or less on average but may vary by species, site, or moisture conditions. This level of stubble remaining would not have provided ground nesting birds habitat for nesting or concealment. Additionally this level of use reduces the amount of seed source available for small mammals and birds for forage.

Evidence: ..\Finalized ROAs\Support files\N Stearns\grass_decadence.JPG ..\Finalized ROAs\Support files\NStearns_use.jpg

4. Shrub Composition

The following Ecological Sites have shrub compositions below desired levels: 010XA007OR and 010XA018OR based on course scale vegetative data (ERDOS). Of the four fourth order Hydrologic Units (HUCs) that were reviewed using course scale vegetation analysis only one had sufficient land mass dominated by sagebrush species.

As specified in Standard 3 bitterbrush densities and vigor are well below site potential. Sagebrush is above potential, typically in Pumice flat 8-10 Range Sites that have juniper and rocky soil components (described in Standard 3 section C). Sagebrush populations are declining in some areas due to lack of disturbance and competition. In many areas although cover densities exceed site potential the level of decadence is reducing live cover to within or below. In the Pumice flat 8-10 Range Site with the 185E soils typically are well below site potential. The stiff sage site has high levels of decadence and dead plants.

The combination of competition from juniper, lack of appropriate disturbance, historic livestock grazing practices, and current use by big game and cattle has created the current conditions for bitterbrush and sagebrush. Lower bitterbrush population densities has resulted in heavy use and hedging of the existing plants. This area is utilized by deer, elk, and antelope for wintering habitat.

6. Fragmentation/Other

Portions of this allotment are disjoint from the rest of the allotment due to private lands. The Millican Hwy is on the west side a major power line corridor intersect the allotment. With the remainder of Millican Highway being paved the amount and speed of traffic through this allotment is expected to increase. The numerous roads and trails serve to further fragment this already overly fragmented habitat. There were several flats that had been converted from sage sites to rabbit brush. Increased juniper occupation has altered the habitat function of some of the sagebrush bunchgrass sites and creates fragmentation of larger tracts of open sagebrush sites. There are old fences that are in need of replacement, down fence that should be removed, and fences with wire spaces not induce of wildlife movement (See wildlife report for details). All stock tanks are supposed to have wildlife escape ramps according to the Brothers/La Pine RMP. There are no wildlife escape ramps currently installed in any of the stock watering facilities.

VI. Guidelines for Livestock Grazing Management:

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management, Guideline No(s) _____

A. Appropriate Stocking Levels

The active grazing preference is 403 AUM's. Average annual stocking during 1993-2002 for public lands, including rest years, has been 176 AUM's. Average annual stocking during years when the allotment was stocked was 272 AUM's over the last 10 years. The

Northwest pasture has been rested for 7; Sleepy Hollow 4; Antelope Flat 9; and Guzzler 6 of the past 10 years.

Evidence: North Stearns Actual Use Records

B. Forage Use Distribution:

In recent years, livestock have tended to concentrate on the Highway corridor within Guzzler Pasture. The road ROW is annually/semi-annually bladed/ditched, and sustains a cheatgrass/Russian thistle/annual forb plant community. The livestock appear to seek out these species, and use is typically heavy or extreme on these annual species in this corridor.

During utilization studies conducted since 1972, recorded average pasture graminoid utilization exceeded 50% only in 1990 (in the area which is now the Guzzler and Antelope Flat Pastures). Pasture level utilization averages indicate light to moderate use with years of no use occurring. This value reflects averaging of areas of no use with areas of heavy use.

Lighter use is typically found in the Pumice flat 8-10 range site where juniper and rocky soils (with Lava Blisters 8 -10 included) exist. Moderate to heavy use on annual and native perennials has been documented in areas as defined in Standard 3 Items B and D. When stocked the majority of livestock use occurs in these areas. As stated in Standard 3, Section F, Paragraph 4 as much as 25% or more of the Guzzler and Sleepy Hollow pastures fit the above condition. The amount of heavily disturbed areas is greater than desired due to lack of livestock distribution. This does not infer that heavy to excessive utilization occurs in any one of these locations every year, but is impacting site recovery rates.

Past and present bitterbrush utilization can be inferred by the current growth form. In the eastern portion of the NW Pasture some plants had escaped the browse line while others were being heavily hedged. ..AFinalized ROAs\Support files\NStearns\NStearns_PUTR.JPG The vigor of these plants appeared to be lower than plants found in the power line corridor. The lower vigor in the eastern portion of the allotment is thought to be due to the older plants and the amount of juniper competition. These growth forms would indicate that browsing is reducing total canopy cover and a combination of competition and browsing may be causing high levels of decadence. Records indicate that although there are occasional sage plants that are heavily browsed, sagebrush browsing is/has been absent or light. Some breakage of big sage by livestock was observed in 2003 field reviews.

Evidence: Allotment Monitoring Site PP-13; Utilization Studies U-1 through 14.

C. Grazing Management Practice Coordination with other Resources/Uses:

The Stearns AMP was written in 1970. Since this time the Brothers/La Pine RMP (1989) has been used as the guiding document for this allotment. Coordination measures have been institutionalized in the Brothers/La Pine RMP and actions are governed accordingly. Since 1989 coordination with other resources has been:

- Range improvements have considered multiple use objectives as specified in the RMP and coordinated with internal specialists prior to implementation.
- Range Conservationist on a yearly basis reviews the grazing permittees grazing application for consistency with the goals and objectives of the RMP, and will coordinate with internal or external interests if there is an issue identified.
- Grazing renewal or transfers have been reviewed by an interdisciplinary team.

Problems with stocking the Antelope Flat pasture occurred in 2002 and 2003 due to sewage dumping on private land within the allotment. Additionally, Crook County is proposing to pull all cattleguards. To address livestock management issues they are proposing to either install painted cattleguards or fence both sides of the Millican road. Fence construction may provide administrative opportunities for allotment and pasture boundary realignment.

Evidence: Annual Use Authorizations; Grazing Permit; Compliance Records; Utilization Studies U-1 through U-14.

D. Historical vs. Current Livestock Grazing Practices:

Historical notes and records suggest that, at least through the 1930's, livestock grazing strategies in this area were exploitative in nature. The Stearns Allotment Management Plan (covers area which is now known as the North Stearns and South Stearns Allotments) was completed in 1970. This AMP states: "The 1964 range condition survey shows the entire allotment as being in poor condition except for 2,000 acres in the Church Flat pasture. The range condition has not changed since because of drought and continued spring use". Actions subsequently taken in the North Stearns block included grazing permit adjudication (55% reduction in the active grazing preference/stocking level); institution of a deferred-rotation grazing system; fence and water development; and a monitoring program.

Current grazing practices are now driven by the RMP, and markedly differ from those practiced in the past. The deferred-rotation grazing system has evolved over time into more of a rest-rotation system. The analysis contained in this S&G assessment is based on the past ten years of stocking levels which is below grazing permit allocation.

Evidence: Bear Creek Watershed Plan; Permit/Allotment Files; Allotment Management Plan; George Peterson Historical Note.

E. Promotion of Plant Vigor, Reproduction, and Productivity

Season long rest coupled with deferred season of use has limited repetitive season of use and limited regrazing. Deferring grazing until after seed set provides seed source for potential reproduction.

Average vigor ratings obtained from photo monitoring sites in 2002 (drought conditions) indicate a vigor rating of slightly above moderate (desirable grasses, forbs, shrubs have moderate vigor. They are medium size with fair color and producing moderate amounts of herbage, some seed stalks and seed heads are present).

Since 1978 condition class has improved over most of these areas, but it is felt that they are not yet to the high/fair to low/good of potential natural condition. In areas described above in Standard 3, Items B and D, where most of the utilization is occurring, vigor, reproduction, and site productivity have been reduced in some areas and are being maintained at a reduced level in others.

Allotment files contain records of decadent graminoid plants. Webster's Third International Dictionary – 1986 defines decadence as: "Marked by decay or decline as from an earlier condition of excellence or vitality, tending to regress." The current Range Conservationist generally uses the following indicators to classify a graminoid plant as decadent: approximately 90% or more of leaves dead, limited or no seed head production, root crown covered with dead material, no evidence of lateral basal leaf production, and these conditions persist through moist years. [..\Finalized ROAs\Support_files\N Stearns\grass_shrub_decadence.JPG](#)

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Decadent graminoid plants occur naturally. There is no data to indicate that current levels are above what is typical for these sites. Decadent graminoid plants provide above ground vegetative matter that assist with capture and holding snow, provide ground cover for watershed protection, provide ground nesting opportunities for birds, and provides litter. These plants may be broken down by heavy snow or hoof action or may die. Decadent graminoid plants can preclude the availability of livestock forage and thus effect distribution, result in some areas being unused and other areas over utilized. There needs to be additional research/study into decadence levels, are these areas beyond desired/natural levels, are in some way limiting the allotments ability to meet objectives, and what the causal factors are. Decadent plants may produce less green material, have lower vigor, and produce less seed.

Bitterbrush Presence/Production: Bitterbrush expression in the Northwest Pasture and a portion of the Antelope Flat Pasture clearly indicates deterioration of and risks for bitterbrush vigor, reproduction and productivity continuing to decline particularly in the areas where juniper is above site potential.

Sagebrush: High levels of decadence have been observed in some areas, particularly where juniper is well above site potential and portions of the stiff sage site west of Cotton Butte.

Evidence: Allotment Monitoring Site PP-13, TS-1; Utilization Studies U-1 through 14; Actual Use Records.

Objectives

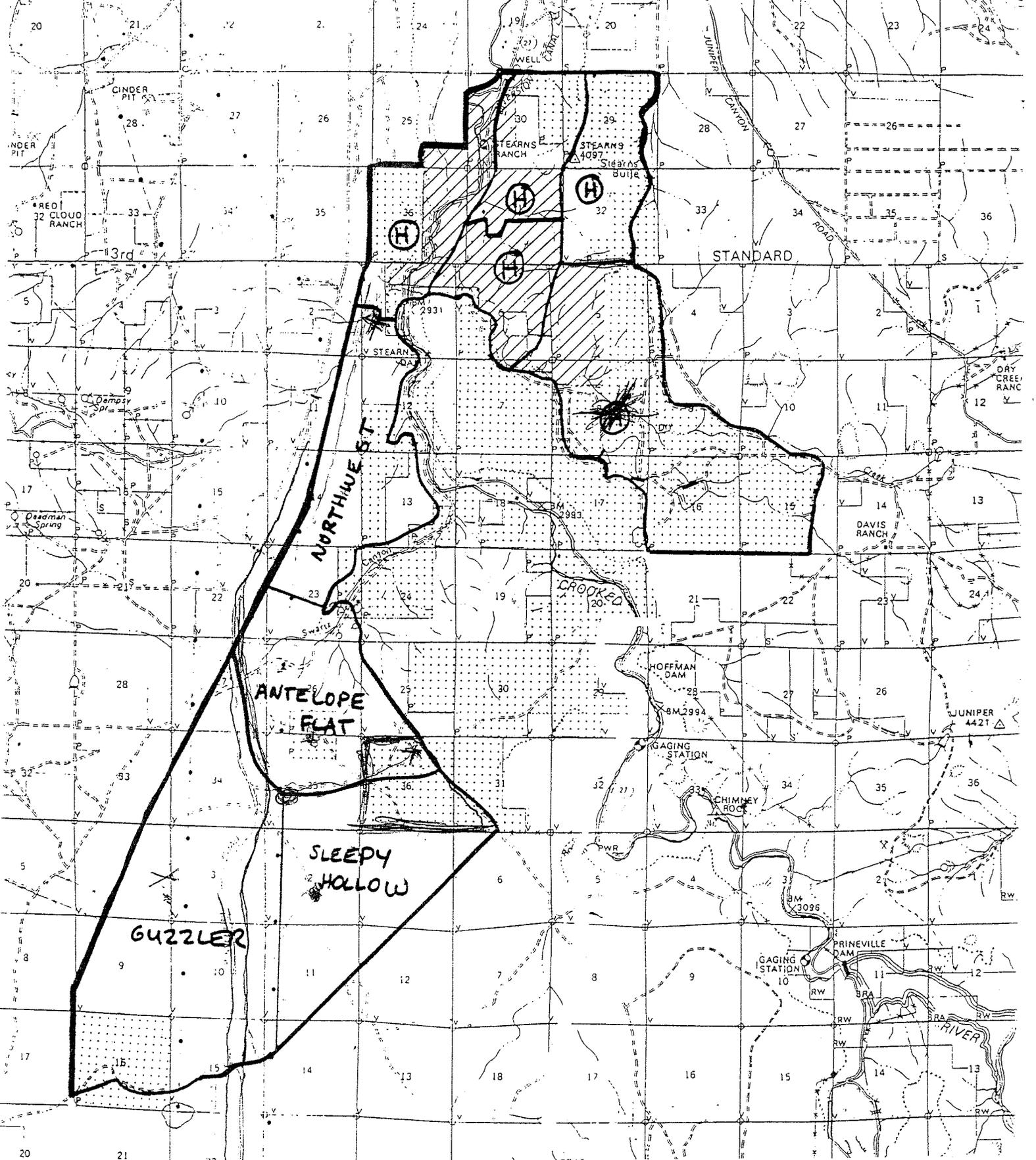
Promote plant health so that we can achieve bio-physical function and site resiliency. Vegetative condition of mid seral: (40% of vegetation potential) to the lower end of late seral (60% percent of potential).

AMP: Maintain winter range for deer, improve winter and summer range for antelope, and improve palatability of forage for livestock and wildlife.

Recommendations for all public lands within all pastures:

- Grazing modifications recommended will be implemented the first grazing season after this document is signed.
- Ensure that livestock feeding, salting, or watering do not occur on the stiff sage site in the Antelope Flat pasture.
- Establish trend monitoring in the Antelope Flat pasture stiff sage site.
- Implement fence replacement, reconstruction, modifications, removal, or repairs and wildlife escape ramp— see list in wildlife report.
- Study/research decadent plants and associated factors.
- Interdisciplinary team review prior to stocking the allotment at levels higher than the average annual stocking rate that has occurred over the last ten years when stocked (272 AUM's).
- Bitterbrush Utilization: Standardize a district approach to measuring utilization and long term monitoring. In addition establish a methodology for involving the permittee and other interested parties. Once methodology is approved bitterbrush monitoring will be done in areas identified by the ID team.
- Non-designated roads would be closed or rehabilitated consistent with the Upper Deschutes RMP (priority being given to the hill climb area in the Antelope Flat Pasture and Northwest Pasture).
- Salt will not be placed within the open pumice areas. Will place salt at the water set and monitor annually for effects to distribution and utilization.
- Use of hay as a supplemental feed will involve ID team review and NEPA documentation(as needed) prior to implementation.
- Vegetative treatments ie. juniper thinning is recommended throughout the allotment with priority toward the Antelope Flat and Northwest Pastures.
 - If juniper treatments are done on the Pumice 8-10, old growth juniper trees should not be cut. These sites have potential to go to rabbit brush and cheatgrass. Post treatment grazing should be addressed by an ID team to target a grazing strategy that will not impede the site moving toward standards in a timely manner.

If the two pastures (North West and Guzzler) are used temporary water will need to be employed until a permanent water set can be established. If temporary water sets are used locations will be approved by an ID team with specific requirements timing and use levels associated with use. If these or other pastures are not scheduled for use in a particular year annual stocking for other pastures scheduled for use needs to be commensurate with appropriate forage availability (210 AUMs for Antelope Flat and Sleepy Hollow pastures). This will be done until such point as the AMP is revised or permanent watersets are established in these other pastures.



NORTH STEARN'S ALLOTMENT.

(H) = HOME PASTURES

#5132

SWANSON 1/5/96