

Results of Assessment/Establishment of Cause

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

Resource Area: CORA

Geographic Area of Assessment: Dry Soda Creek, Poison Creek and Schoolhouse Gulch and the surrounding uplands in the South Fork John Day River watershed. (See Map – Appendix B)

Allotment Areas Assessed: Soda Creek Allotment #4044

Period Assessment Conducted: August 20, 21 and 28, 2003

Assessment determination: Not Meeting Standards.

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

Anna Smith, Hydrologist	<u>Anna K Smith</u>	Date <u>9/30/03</u>
JoAnne Armson, NRT	<u>JoAnne Armson</u>	Date <u>9/30/03</u>
Rick Demmer, NRS	<u>Rick Demmer</u>	Date <u>9/30/03</u>
Ken Primrose, Rangeland Specialist	<u>Keneth Primrose</u>	Date <u>9/30/03</u>

Assessment Approval

Tina Welch, Field Manager	<u>Kristina M. Welch</u>	Date <u>9/30/03</u>
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Appendices:

- A Allotment Assessment Findings
- B Maps
- C Plant List
- D List of Lichens
- E Wildlife

Appendix A Allotment Assessment Findings

Notes:

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).

Soda Creek Allotment

Public Land Upland Acres: 1964

Public Land Riparian/Wetland Acres: 25

Public Land Stream Miles: .75

I. Standard 1 (Watershed Function - Uplands)

A. Determination

- Meeting the Standard
- Not Meeting the Standard; Making Significant Progress Toward
- 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: ___ on-site ___ off-site

C. Rationale/Evidence

Grazing by cattle and elk has left much of the ground bare [Poison Creek\P0003840.JPG](#) and eroded. Pedestals [Poison Creek\P0003862.JPG](#), terracettes [Poison Creek\P0003818.JPG](#), rills [Schoolhouse Creek\P0003999.JPG](#) and gullies [Schoolhouse Creek\P0003970.JPG](#) are common throughout the public lands within the allotment. Perennial bunchgrasses in the uplands were mostly grazed and seed heads were rare at the time of the evaluation.

Reproduction rates of the grasses, forbs and shrubs are lower than expected. The rate of death and decadence of plants, especially shrubs was higher than expected within the community. Juniper densities are at a higher level than would be expected in the allotment, especially west of Poison Creek. In some areas the juniper is very dense and includes many young trees. However, there are junipers that are 200+ years old along the ridgelines and occasionally on the slopes.

Evidence: Photos and lists of vascular vegetation, lichens and mosses.

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

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: ___ on-site; ___ off-site

C. Rationale/Evidence

Dry Soda Creek: The Dry Soda Creek channel runs through several meadow areas. A few of the lower meadows still have high water tables, and springs maintain riparian vegetation. Further upstream, however, the channel has gullied through the center of the valley and dried out the meadows. According to local residents, these valleys once supported willows and maintained higher water tables. These valleys probably crossed a threshold and downcut when the last of the willows were grazed out or when precipitation or snowmelt created a high energy runoff event, exacerbated by poor upland watershed conditions. The lack of bank stabilizing vegetation and sufficient roughness at the time of the high energy event probably resulted in the current gullies and dry meadows. Some of the drier areas have large numbers of young juniper Dry soda Creek\P0004024.JPG that should be removed. While the lower portions still have some riparian vegetation Dry soda Creek\P0004006.JPG, they are still susceptible to crossing the same threshold as upstream portions.

Several springs in the Dry Soda Creek watershed were examined in detail. The first was on public land in the lower flood plain Dry soda Creek\P0004021.JPG. At the time of the evaluation there were cattle grazing nearby and grass/sedge/rush plant community was grazed to a height of one to two inches Dry soda Creek\P0004002.JPG. There are also stands of willows in the area but these are severely hedged by cattle and elk grazing and are not reproducing Dry soda Creek\P0004022.JPG. The cattle have created trails/tunnels throughout the willow stands Dry soda Creek\P0004016.JPG.

In the upstream portion of public land there is a spring and a significant stand of aspen (trees up to 30" DBH) Dry soda Creek\P0004038.JPG and willow Dry soda Creek\P0004046.JPG. Within this stand small aspen suckers have mostly been browsed and many had few or no leaves suggesting that grazing has reduced reproduction. The flood plain in this area also showed signs of heavy grazing. Sedges, rushes and grasses in the riparian area were about one inch tall and there were cattle trails throughout. A spring was associated with this stand (no photo). The entire stand is threatened by a headcut approximately 10' deep Dry soda Creek\P0004112.JPG. This headcut although moving slowly at present, might expand and extend upstream in a 25 year flood event. The result of such an event would be to lower the water table below the stand of trees and willows. This would probably cause high mortality within the stand and practically eliminate that riparian area's ability to soothe and retain flood waters.

It is suggested that juniper intermingled with the aspen be cut, the aspen stand fenced and the headcut rehabilitated to protect this resource.

Another spring was found low on the Dry Soda Creek side of the ridge between Dry Soda and Poison Creeks Poison Creek\P0003847.JPG. This spring was flowing and had a small riparian area. The area was heavily grazed Poison Creek\P0003830.JPG and there were cattle trails on both sides of the drainage and across it in several locations Poison Creek\P0003836.JPG. Willows were present but were hedged and there was no indication of reproduction. The area around the spring and the downstream drainage also had a community of sedges, rushes and grasses. These were grazed to about 1" in height. Fresh cattle droppings indicated that grazing was currently taking place although we saw no cattle at that time. Much of the flow from the spring was diverted into a trough Poison Creek\P0003833.JPG that was well maintained and contained an escape ramp for small animals Poison Creek\P0003835.JPG.

It is advised that this spring be fenced with the trough outside to protect the riparian area from grazing.

Schoolhouse Gulch: There was no riparian community within Schoolhouse Gulch. Several deep gullies originate on Mahogany Mountain and below the ridgelines on either side of the gulch. These gullies intersect and cut deep in the valley bottom lowering the water table Schoolhouse Creek\P0003958.JPG. Although there is no riparian area, plants such as snowberry, basin wild rye, bitter cherry and silver sage were observed on the hillsides, suggesting that the soils hold moisture. It is probable that the gulch once contained some riparian vegetation in the bottom before the

gullies were present. It is unlikely that any mitigating action will result in a riparian community within the gulch bottom in the near future. Approximately 20 acres of BLM bottomland on are densely covered with white top and mustard [Schoolhouse Creek\P0003953.JPG](#) [Schoolhouse Creek\P0003903.JPG](#).

Evidence: Photos and lists of vascular vegetation, lichens and mosses.

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
- 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

Rationale/Evidence:

Years of grazing with no rest cycling in this allotment has lowered the reproductive capabilities of most perennial bunchgrasses and shrubs. Because of the length and season of use, seed heads and leaf blades are constantly being removed and hoof action has destroyed the biological soil crust that filled much of the plant interspace. Thus, the capability for photosynthesis of the vascular plants, mosses and lichens is reduced, reproduction by seeds, spores, rhizomes and vegetative propogules is reduced and litter, the primary raw material used by soil organisms to produce nutrients for recycling into plant biomass is reduced.

Energy flows from sun to plant to animal to soil microbes. Soil microbes use dead plant and animal matter along with trace elements from the soil to produce nutritive organic matter. This organic matter amounts to ecosystem capital in the form of stored energy. The reduction of plant, biological soil crust and litter cover on the Soda Creek Allotment has left the soil surface unprotected and resulted in the loss of this ecosystem capital through wind [Schoolhouse Creek\P0003951.JPG](#) and water [Poison Creek\P0003815.JPG](#) [Poison Creek\P0004127.JPG](#) erosion and has reduced the capability of the soil to support plant growth and the ability of the ecosystem to restore itself.

IV. Standard 4 (Water Quality)

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 (if applicable)

- 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

Rationale/Evidence:

Grazing on public lands in the allotment, directly affects water quality in the springs that occur in the Dry Soda

Creek and Poison Creek watersheds. Heavy grazing leaves water to be directly heated by the sun and can also contribute excess nutrients. The resulting explosive algal growth can reduce dissolved oxygen for macroinvertebrates and amphibians.

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
- 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

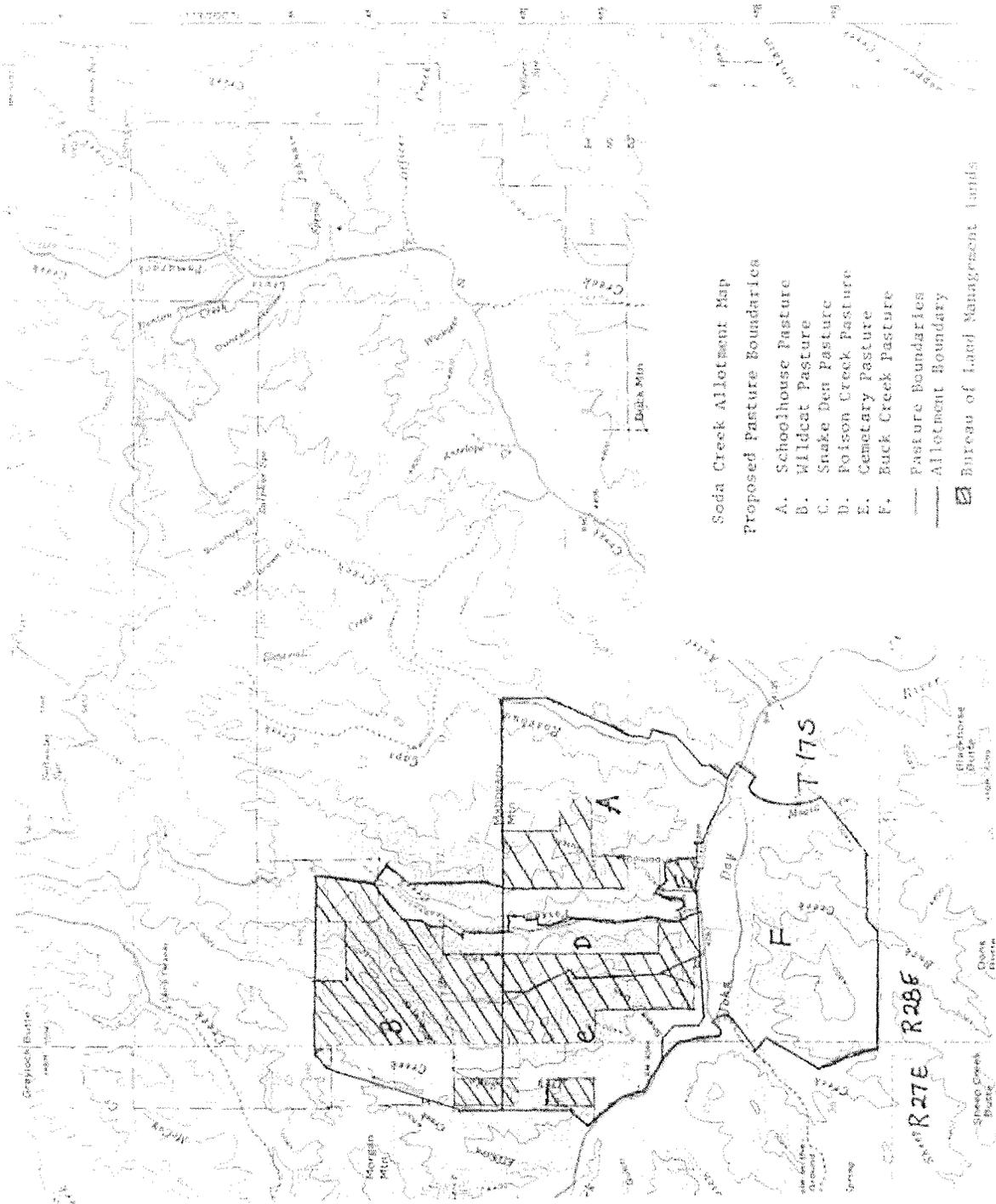
C. Rationale/Evidence

The elk population in this area has grown in recent years. The AUM's have not been adjusted to take this population change into account. A significant stand of quaking aspen (*Populus tremuloides*), chokecherry (*Prunus virginiana*), bog birch (*Betula glandulosa*), red-stem dogwood (*Cornus stolonifera*) and several species of current and willow are near a spring on the northern end of public lands on Dry Soda Creek. [Dry soda Creek\P0004038.JPG](#) [Dry soda Creek\P0004040.JPG](#) [Dry soda Creek\P0004045.JPG](#) This area needs to be protected not only from cattle but other ungulates as well. The young juniper should be cleared and a fence erected around the entire area including the spring. No known special status plants are located in this allotment; however quaking aspen are a locally important species.

VI. Guidelines for Livestock Grazing Management:

- Conforms with Guidelines for Livestock Grazing Management
- Does Not conform to Guidelines for Livestock Grazing Management, Guideline No(s) 1, 2, 3, 4 & 5.

Appendix B Maps



Appendix C
Plant List

Soda Creek Allotment
Field Dates: August 20, 21 and 28, 2003

Achillea millefolium
Agrostis sp.
Agropyron cristatum
Agropyron dasystachyum
Allium sp.
Alyssum alyssoides
Amelancier alnifolia
Amsinckia sp.
Antennaria dimorpha
Antennaria microphylla
Apocynum androsaemifolium
Arabis sp.
Artemisia cana
Artemisia tridentata
Aster sp.
Astragalus curvicaarpus
Astragalus filipes
Astragalus purshii
Astragalus sp.

Balsamorhiza sagittata
Betula glandulosa
Berberis repens
Bromus tectorum

Calochortus macrocarpus
Carex douglasii
Carex nebrascensis
Carex rossii
Carex sp.
Castilleja linariaefolia
Cercocarpus ledifolius
Chaenactis douglasii
Chenopodium sp.
Chrysothamnus nauseosus
Chrysothamnus viscidiflorus
Cirsium arvense
Cirsium undulatum
Cirsium vulgare
Clematis ligusticifolia

Collinsia sp.
Cornus stolonifera
Crepis sp.
Cryptantha sp.

Descurainia pinnata
Descurainia sophia
Draba verna

Elymus cinereus
Elymus elymoides
Epilobium sp.
Equesetium sp.
Erigeron filifolius
Erigeron sp.
Eriogonum heracleoides
Eriogonum spp.

Festuca idahoensis

Galium multiflorum
Galium aparine
Gallium sp.

Holosteum umbellatum
Hydrophyllum capitatum

Juncus balticus
Juncus ensifolius
Juncus sp.
Juniperus occidentalis

Koeleria cristata

Lactuca muralis
Lewisia rediviva
Lithospermum ruderale
Lomatium triternatum
Lomatium sp.
Lupinus sp.

Lygodesmia juncea
Lygodesmia spinosa

Machaeranthera canescens
Melilotus officinalis
Mentzelia laevicaulis

Oryzopsis hymenoides

Penstemon sp.
Phlox hoodii
Pinus ponderosa
Plantago major
Plectrtis macrocera
Poa bulbosa
Poa pratensis
Poa secunda
Polemonium micranthum
Populus tremuloides
Potentilla fruticosa
Prunus emarginata
Prunus virginiana
Pseudoroegneria spicata (AGSP)
Purshia tridentata

Ranunculus testiculatus

Ribes aureum
Ribes cereum
Ribes sp.
Rorippa nasturtium-aquaticum
Rosa nutkana
Rosa woodsii
Rosa sp.
Salix lasiandra
Salix spp.
Sambucus cerulea
Scirpus sp.
Sedum sp.
Senecio sp.
Silene sp.
Stipa thurberiana
Symphoricarpos sp.

Taraxacum officinale
Tetradymia canescens
Tragopogon dubius

Verbascum thapsus
Veronica anagallis-aquatica

Zigadenus sp.

Appendix D List of Lichens

LICHENS	COMMON NAME	SUBSTRATE
Crustose		
<i>Amandinea punctata</i>	Tiny button lichen	Juniper wood
<i>Buellia alboatra</i>	Button lichen	Juniper wood and chokecherry bark
<i>Caloplaca sp</i>	Firedot lichen	Rock
<i>Candelaria concolor</i>	Candleflame lichen	Juniper bark
<i>Candelariella aurella</i>	Hidden goldspeck lichen	Rock
<i>Candelariella terrigena</i>	Tundra goldspeck lichen	Soil and litter
<i>Candelariella vitellina</i>	Common goldspeck lichen	Rock, bone and bark
<i>Lecanora hagenii</i>	Hagen's rim-lichen	Tree and shrub twigs
<i>Lecanora muralis</i>	Stone wall rim-lichen	Rock
<i>Lecanora pacifica</i>	Multi-colored rim-lichen	Juniper wood
<i>Lecanora pulicaris</i>	Small black-eyed rim-lichen	Bark
<i>Lecanora sp</i>	Rim-lichen	Juniper wood
<i>Lecanora sp</i>	Rim-lichen	Bone
<i>Lecanora sp</i>	Rim-lichen	Ponderosa pine bark
<i>Megaspora verrucosa</i>	False sunken-disk lichen	Dead grass clumps
<i>Pleopsidium flavum</i>	Gold cobblestone lichen	Rock
Foliose		
<i>Melanelia elegantula</i>	Elegant camouflage lichen	Moss
<i>Melanelia exasperatula</i>	Lustrous camouflage lichen	Juniper bark
<i>Melanelia multispora</i>	Many-spored camouflage lichen	Chokecherry bark
<i>Parmelia sulcata</i>	Hammered shield lichen	Chokecherry bark
<i>Peltigera ponojensis</i>	Pale-bellied dog lichen	Moss and soil
<u>Poison Creek\P0003839.JPG</u>		
<i>Peltigera rufescens</i>	Field dog-lichen	Moss and soil
<i>Phaeophyscia orbicularis</i>	Mealy shadow lichen	Juniper bark
<i>Physcia adscendens</i>	Hooded rosette lichen	Chokecherry bark
<i>Physcia stellaris</i>	Star rosette lichen	Aspen bark
<i>Physconia enteroxantha</i>	Yellow-edged frost lichen	Aspen bark
<i>Umbilicaria hyperborea</i>	Blistered rock tripe	Rock
<i>Xanthoria elegans</i>	Elegant sunburst lichen	Rock
<i>Xanthoria fulva</i>	Bare-bottomed sunburst lichen	Juniper and chokecherry bark
Squamulose		
<i>Psora tuckermanii</i>	Brown-eyed scale	Soil and moss
Fruiticose		
<i>Alectoria sarmentosa</i>	Witch's hair	Ponderosa pine
<i>Aspicilia reptans</i>		Dead grass
<i>Bryoria fremontii</i>	Tree-hair lichen	Ponderosa pine bark
<i>Bryoria fuscescens</i>	Pale-footed horsehair lichen	Ponderosa pine

Cladonia fimriata
Evernia prunastri
Hypogymnia imshaugii
Kaernfeltia merrillii
Letharia columbiana
Letharia vulpina
Nodobryoria abbreviata
Usnea filipendula

Gelatinous

Leptogium lichenoides

Trumpet lichen
Oakmoss lichen
Forked tube lichen
Flattened thornbush lichen
Brown-eyed wolf lichen
Wolf lichen
Tufted foxtail lichen
Fishbone beard lichen

Tattered Jellyskin

Soil and moss
Chokecherry bark
Ponderosa pine bark
Ponderosa pine bark
Juniper bark
Juniper bark
Ponderosa pine bark
Ponderosa pine wood

Moss over rock

Appendix E Wildlife

This is only a partial list of species that would be expected in this allotment.

Mammals

Badger
Coyote
Black bear [Dry soda Creek\PO004117.JPG](#)
Elk
Mule deer
Desert cottontail rabbit
Black-tailed jackrabbit
Bushy-tailed woodrat
Chipmunk
Northern pocket gopher

Bird species seen in the vicinity around the time of the evaluation (not necessarily breeding in the area)

Red-tailed hawk
American kestrel
Prairie falcon
Turkey vulture
California quail
Chukar
Common snipe
Mourning dove
Lewis' woodpecker
Northern flicker
Red-naped sapsucker
Hairy woodpecker
Dusky flycatcher
Common Raven
Black-billed magpie
Stellar's Jay
Clark's nutcracker
American robin
Mountain bluebird
Townsend's solitaire
European starling
Western meadow lark
Horned lark
Mountain chickadee
Rock wren
Brewer's blackbird
Black-throated gray warbler
Green-tailed towhee
House finch
Brewer's sparrow
Song sparrow
Vesper sparrow

Oregon Breeding Bird Atlas Species List of known breeding the kind of habitat found in the South Fork John Day River area To see more information on habitats in the area control/click on the hyperlink, click on Oregon Breeding bird folder, then click on Atlas, then on Hex. Click on a hexagon in the NE corner of Crook county and find your way to the map hexagon 25743 [..\\..\\OR Breeding Birds](#) . It's easier than it sounds. If your computer is slow it might be better to access this program directly through the S: drive folder OR breeding birds

Reptiles (* Not observed but probably present within the Soda Creek Allotment.)

Gopher snake*
Racer*
Sagebrush lizard
Fence Lizard

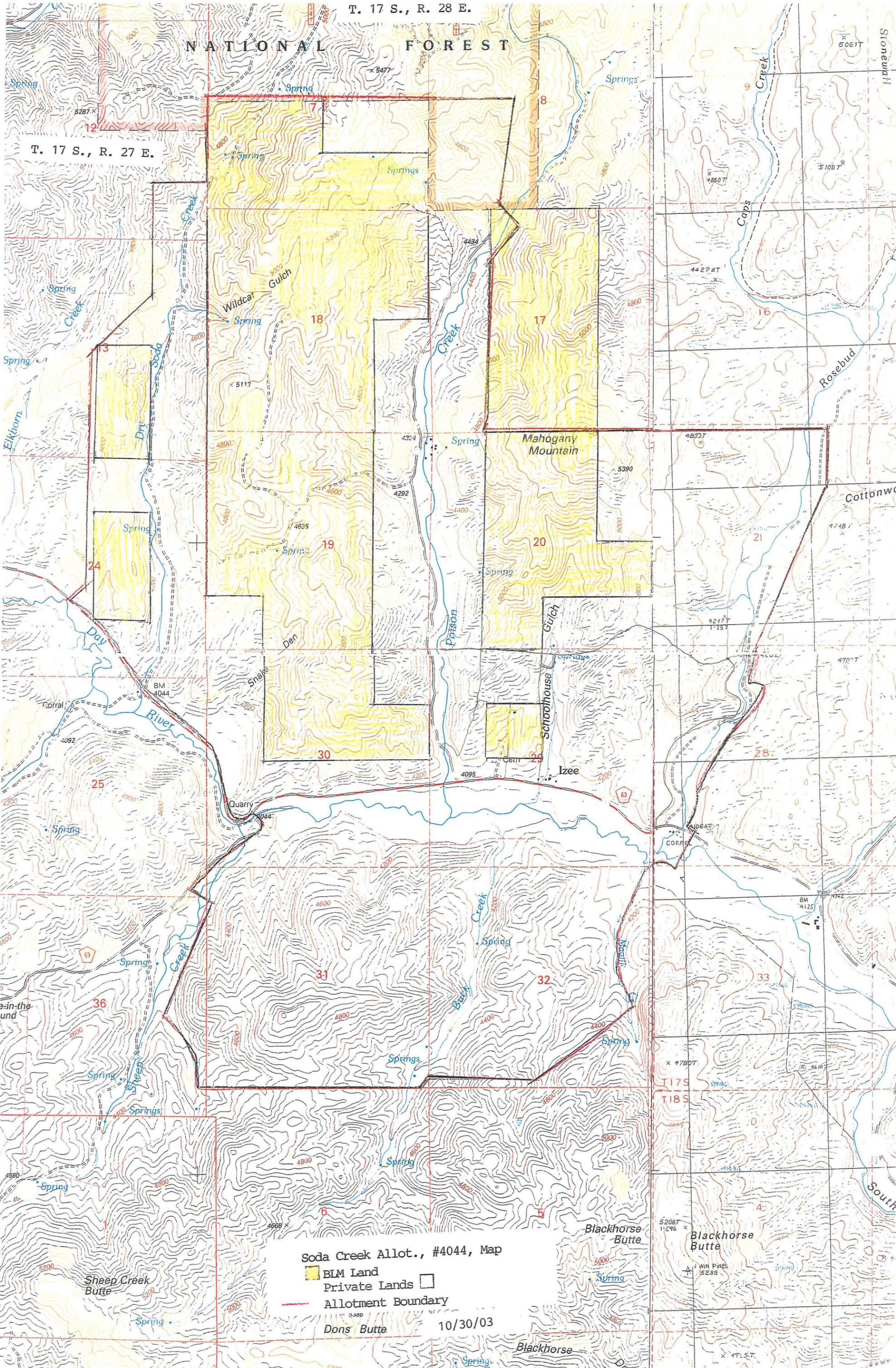
Amphibians (* Not observed but probably present within the Soda Creek Allotment.)

Pacific tree frog
Long-toed salamander*

T. 17 S., R. 28 E.

NATIONAL FOREST

T. 17 S., R. 27 E.



Soda Creek Allot., #4044, Map

- BLM Land
- Private Lands
- Allotment Boundary

Dons Butte 10/30/03

Rangeland Health Evaluation Summary Worksheet

Part 1. Area of Interest Documentation (Bold items require completion, other information is optional).

State Oregon Office Prineville Management Unit Soda Creek Allot.

Pasture/Watershed S. Fork John Day ID# 4044 Major Land Resource Area CORA

Location (description) _____

Legal T _____, R _____, Sec _____, _____ 1/4, _____ 1/4 or Lat _____, Long _____ or UTM Coord _____

Size of Evaluation Area _____ Photo(s) Taken Yes No _____

Observer(s) Demmer, Quinlan, D. Tippy, A. Smith Date 8/20, 21 + 28, 2003

Ecological Site _____ Soil Map Unit Name _____

Soil/Site Verification

Rangeland Ecological Site Description and/or Soil Survey	Area of Interest Determination
Surface Texture _____	Surface Texture _____
Depth: Very Shallow <input type="checkbox"/> Shallow <input type="checkbox"/> Moderate <input type="checkbox"/> Deep <input type="checkbox"/> ($<10''$) (10"-20") (20"-40") ($>40''$)	Depth: Very Shallow <input type="checkbox"/> Shallow <input type="checkbox"/> Moderate <input type="checkbox"/> Deep <input type="checkbox"/> ($<10''$) (10"-20") (20"-40") ($>40''$)
List diagnostic horizons in profile and depth	List diagnostic horizons in profile and depth
1 _____ 3 _____	1 _____ 3 _____
2 _____ 4 _____	2 _____ 4 _____

Parent Material _____ Slope _____ % Elevation _____ ft Topographic Position _____ Aspect _____

Avg Annual Precip _____ Recent Weather (last 2 years) Drought Normal _____ Wet _____

Describe wildlife and livestock use and recent disturbances Elk, deer

Describe offsite influences on area of interest _____

Part 2. Indicator Rating

Attribute	Indicators	Departure from Ecological Site Description/ Ecological Reference Area(s)				
		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S,H	1. Rills		X			
Comments:						
S,H	2. Water Flow Patterns		X			
Comments:						
S,H	3. Pedestals and/or Terracettes	X				
Comments:						
S,H	4. Bare Ground	X				
Comments:						
S,H	5. Gullies		X			
Comments:						
S	6. Wind-Scoured, Blowouts, and/or Deposition Areas			X		
Comments:						

Part 2. Indicator Rating (continued)

		Departure from Ecological Site Description/ Ecological Reference Area(s)				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
H	7. Litter Movement		X			
Comments:						
S,H,B	8. Soil Surface Resistance to Erosion	X				
Comments:						
S,H,B	9. Soil Surface Loss or Degradation		X			
Comments:						
H	10. Plant Community Composition and Distribution Relative to Infiltration and Runoff		X			
Comments:						
S,H,B	11. Compaction Layer				X	
Comments:						
B	12. Functional/Structural Groups		X			
Comments: <i>Biological soil crusts missing number of grasses reduced</i>						
B	13. Plant Mortality/Decadence		X			
Comments:						
H,B	14. Litter Amount		X			
Comments:						
B	15. Annual Production			X		
Comments:						
B	16. Invasive Plants				X	
Comments: <i>School House pasture ^{small} cheatgrass, Woolly Soda + Poison Oak, Dry Soda. thistle</i>						
B	17. Reproductive Capability of Perennial Plants			X		
Comments: <i>Perhaps 1% of potential seedheads are available for reproduction</i>						

Part 3. Summary

A. Indicator Summary

Departure from Ecological Site Description/
Ecological Reference Area(s)

Rangeland Health Attributes		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight	Σ
S	Soil/Site Stability (Indicators 1-6, 8, 9 & 11)	3	4	X -	X -	-	9
H	Hydrologic Function (Indicators 1-5, 7-11 & 14)	3	7	-	X -	-	11
B	Biotic Integrity (Indicators 8-9 & 11-17)	1	4	2	X 1	-	9

B. Attribute Summary - Check the category that best fits the "preponderance of evidence" for each of the three attributes relative to the distribution of indicator ratings in the preceding Indicator Summary table.

Attribute	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
Soil/Site Stability Rationale:		X			
Hydrologic Function Rationale:		X			
Biotic Integrity Rationale:		X			