

Ecological Site Description

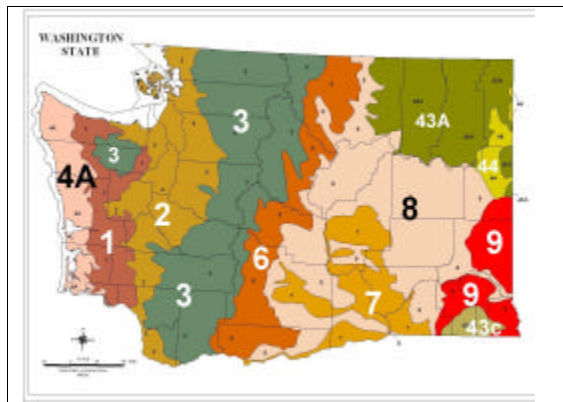
Site Type: Rangeland

Site Name: Stony 9-15 PZ

Site ID: R008XY202WA

Major Land Resource Area: B008X

Columbia Plateau



Physiographic Features

This site usually occurs as a complex of soils, slope, direction of slope, and general topography along foot slopes of mountains, the side slopes of hill, and on benches. The landscape is characterized by low hills, ridges, fans or footslopes. Aspect is variable.

Land Form:	(1) hillslope	(2) hillslope
Aspect	Not Applicable	Not Applicable
	<u>MINIMUM</u>	<u>AVERAGE</u>
Elevation (feet):	755	2011
Slope (percent):	1	24
Runoff Class:	None Selected	None Selected
<hr/>		
Water Table Depth (inches)	0	0
Flooding	Frequency: None	None
	Duration: None	None
<hr/>		
Ponding	Depth: 0	0
	Frequency: None	None
	Duration: None	None

This ecological site has been documented as occurring on the following geomorphic features:

incised drainageways	benches in the channeled scablands	between mounds on plateaus
between mounds on terraces	canyon sideslopes	footslopes and benches of canyon walls
glaciofluvial plains and terrace escarpments	glaciofluvial plains and terraces	basalt plateaus
hummocky uplands and terraces	uplands	mounded areas of glaciofluvial terraces
narrow ridgetops, knobs and south-facing hillslopes	north-facing canyon sideslopes	ridges, shoulders of hills and mountains
river terraces	terraces	terraces and glaciofluvial plains
hillslopes		

Ecological Site Number	Ecological Site Name	Below	Normal	Above
R008XY202WA	Stony 9-15 PZ	pounds/acre/year: 300	600	750

Climatic Features

Growing Season

National CRA		Minimum	Average	Maximum
8.1	Frost-free period (days):	134	170	188
	Freeze-free period (days):	166	209	234
8.2	Frost-free period (days):	88	125	150
	Freeze-free period (days):	130	160	182
8.4	Frost-free period (days):	138	189	223
	Freeze-free period (days):	166	227	262
8.5	Frost-free period (days):	139	139	139
	Freeze-free period (days):	171	171	171
8.7	Frost-free period (days):	108	158	188
	Freeze-free period (days):	142	194	232

Average Monthly Precipitation (inches) and Temperature (degrees Fahrenheit)							Avg. Snow(in.)
Month	Min. Temp.	Avg. Temp.	Max. Temp	Min. Ppt.	Avg. Ppt.	Max. Ppt.	
October	59.4	49.4	42.1	0.6	0.7	0.9	0.1
November	41.5	37.4	35.7	1.0	1.7	2.2	2.9
December	32.2	29.1	24.9	1.2	1.8	2.5	7.4
January	29.0	27.9	28.7	0.9	1.6	2.5	7.7
February	38.5	34.2	32.2	0.8	1.2	1.6	3.5
March	47.2	41.2	35.9	0.8	1.1	1.4	1.3
April	54.6	48.2	40.9	0.6	0.8	1.1	0.2
May	63.2	55.8	47.7	0.4	0.8	1.2	0.0
June	72.5	63.6	54.7	0.3	0.7	0.9	0.0
July	80.8	69.7	59.5	0.1	0.4	0.6	0.0
August	80.8	69.3	59.3	0.3	0.5	0.8	0.0
September	71.0	60.6	51.2	0.4	0.5	0.6	0.0
Annual Totals:					11.7		23.1

Representative Climate Station

National CRA Numbe	Station	record from	record to
8.1	RITZVILLE	1961	1990
8.2	CONNELL 1 W	1961	1990
8.2	HARRINGTON 4 ENE	1962	1990
8.2	LA CROSSE	1961	1990
8.2	ODESSA	1961	1990
8.4	DALLESPORT FCWOS AP	1961	1990
8.5	BICKLETON 3 ESE	1961	1990
8.7	CHIEF JOSEPH DAM	1961	1990
8.7	WINTHROP 1 WSW	1961	1990

For local climate stations that may be more representative, refer to <http://www.wcc.nrcs.usda.gov>

Representative Soil Features

The soils correlated to this site have the following general characteristics:

- Cobbly silt loam surface layer 10 inches thick. The subsoil is very cobbly silt loam to a depth of 20 inches. The substratum is extremely gravelly loamy coarse sand to a depth of 60 inches or more.

- Cobbly silt loam surface layer 11 inches thick. The subsoil is gravelly silt loam 17 inches thick over basalt bedrock at a depth of 28 inches. Depth to basalt bedrock ranges from 20 to 40 inches.

- Silt loam surface layer 10 inches thick. The subsoil is calcareous silt loam to a depth of 22 inches. Lime and silica cemented duripan occurs at 15 to 24 inches. Duripan fragments are common throughout the profile.

- Stony silt loam surface layer 8 inches thick. The subsoil is very cobbly silt loam 15 inches thick over calcareous very cobbly loam to a depth of 60 inches or more.

- Very cobbly silt loam surface layer 10 inches thick. The subsoil is gravelly silt loam 6 inches thick. The substratum is very gravelly loam 10 inches thick over extremely gravelly loamy sand. Depth to sand and gravel ranges from 20 to 40 inches.

REPRESENTATIVE SOIL FEATURES

Shallow soils with a loamy surface texture or moderately deep to deep soils with a loamy surface texture and coarse fragment modifiers in the control section of the soil series description. This includes soils that are shallow to an indurated hardpan. Usually on the more mesic aspects and topographic positions. These soils are characterized by the following soil surface horizon textures: very fine sandy loam, loam, silt loam, silt, silty clay loam, sandy loam, fine sandy loam. In addition, the Control Section (0-20 inches) modifier is (Includes very and extremely classes): stony , bouldery , cobbly, gravelly ,flaggy , channery; or Shallow to varied bedrock or restrictions.

	FROM		TO
surface fragments > 3 in.	<input type="text" value="0"/>		<input type="text" value="43"/>
drainage class	<input type="text" value="Well drained"/>		<input type="text" value="Somewhat excessively drained"/>
permeability class	<input type="text" value="None selected"/>		<input type="text" value="None selected"/>
frost action class	<input type="text" value="High"/>		<input type="text" value="Low"/>

	MINIMUM	AVERAGE	MAXIMUM
soil depth (inches)	12	23	40
organic matter %	0.8	1.8	3.5
electrical conductivity	0	0	2
sar	0	0	4
ph	6.5	7.1	8.8
available water capacity	1	2	4
caco3	0	0	10

Characteristic Soils

Refer to specific soil survey reports and databases for soil mapping units that include the following series. Major soils series that have been correlated to this site include:

AARUP	Alpowa	ARGIXEROLLS
BADGE	BADGERMONT	Benco
Benge	CHEVIOT	CLERF
COLOCKUM	Conconully	CORBALEY
COULEEDAM	Disautel	DURIXEROLLS
ELVEDERE	ENTIAT	EWALL
FARRELL	GOODNOE	GRINROD
HEYTOU	Kartar	Kuhl
Lickskillet	Limekiln	Limekiln variant
MILLHOUSE	PESHASTIN	POGUE
RALLS	REESER	Risbeck
Roloff	ROOSEVELT	Schuelke
SILICO	SKETTER	SOAPLAKE
Starbuck	STRAT	STRATFORD
STUBBLEFIELD	STUBBLEFIELD, EXTREMELY BOULDERY	SWAKANE
TERLAN	TRONSEN	WHISKEYDICK
WHITEYE	Willis variant	WIPPLE
ZEEMAL		

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Influencing Water Features

Plant Communities

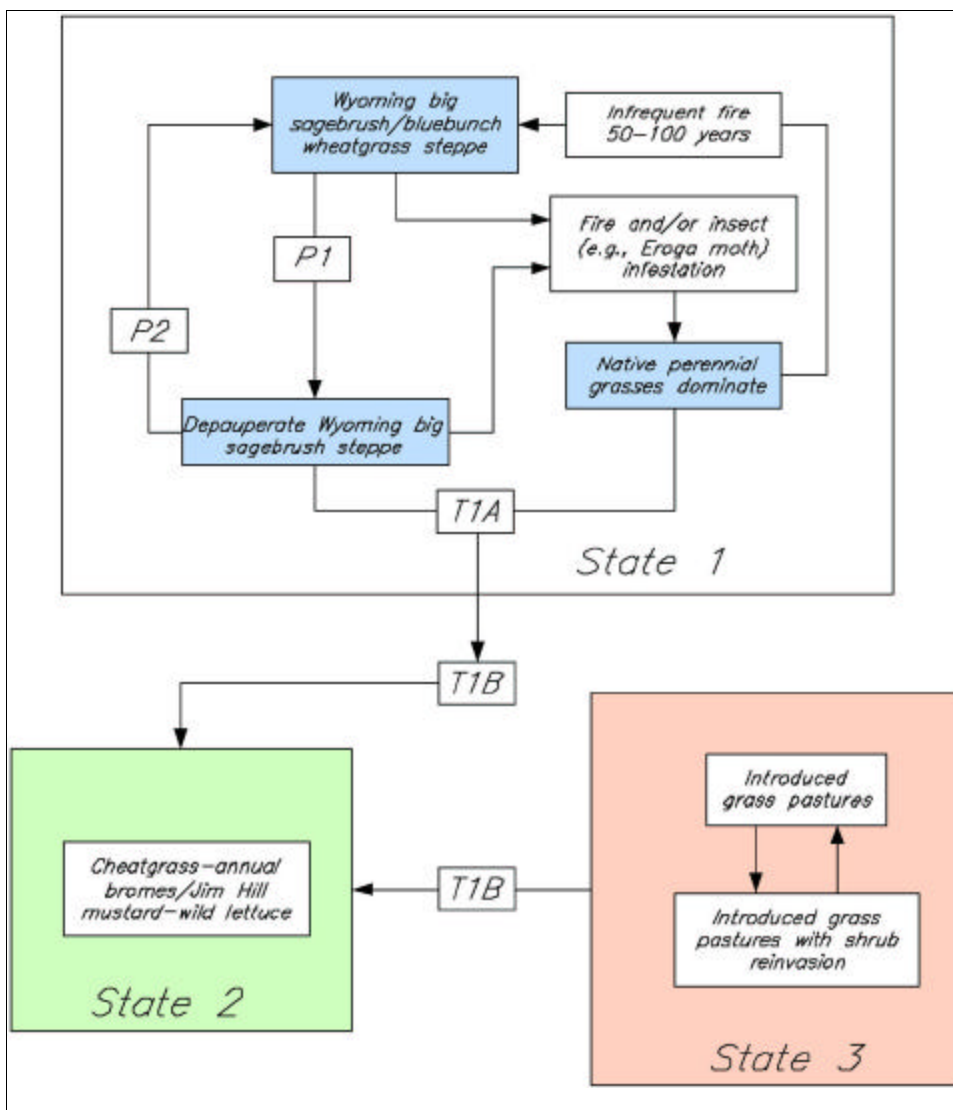
Ecological Dynamics of the Site

State-Transition Model

The historic climax plant community (description follows the State-Transition diagram) has been determined by study of rangeland relic areas, areas protected from excessive disturbance and historical accounts. The following diagram illustrates the common plant communities that can occur on the site and the transition pathways (arrows among communities). Bold lines surrounding each State represent ecological thresholds. The predominant plant communities within State 1 are sustainable plant communities in terms of soil stability, watershed function and biologic integrity. P1 is poor grazing practices such as overutilization and/or poor timing of grazing (during the critical period of the desired grasses).

P2 is prescribed grazing that meets the needs of the desired grasses.

T1A and T1B is the expression of (P1) poor grazing practices that are pushed by drought, poorly designed brush management or wildfire into State 2 that is dominated by cheatgrass, medusahead and other annual grasses and forbs. State 2 is characterized by excessive litter accumulations, reduced watershed function, and low biologic integrity.



Historical Climax Plant Community

Plant Group Type

Perennial Cool Season Mid-Grass Decreasers **pound**

Count Each Listed Species up to the listed pounds for the Species

PSSP6	bluebunch wheatgrass	405	68%
FEID	Idaho fescue	30	5%
ACNE	Nelson needlegrass	6	1%
POCU3	Cusick's bluegrass	6	1%

Perennial Cool Season Mid-Grass Increasers **pound**

Count Each Listed Species up to the listed pounds for the Species

POSE	Sandberg bluegrass	68	11%
ACTH7	Thurber needlegrass	30	5%
HECOC	needleandthread	8	1%
KOMA	prairie Junegrass	6	1%
ELEL5	bottlebrush squirreltail	6	1%

Perennial Cool Season Tall-Grass **pound**

Count Each Listed Species up to the listed pounds for the Species

LECI4	basin wildrye	6	1%
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Annual Grasses **pound**

Count Each Listed Species up to the listed pounds for the Species

VUOC	sixweeks fescue	6	1%
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Perennial Grasslike-Tufted **pound**

Count Each Listed Species up to the listed pounds for the Species

CAFI	threadleaf sedge	6	1%
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Shrubs/Deep Rooted/Non-Sprouters **22 pound 4%**

Count any Listed Species Up to the Listed Pounds for the Group

ARTRW	Wyoming big sagebrush
ARTR2	big sagebrush
ARTRT	basin big sagebrush

Shrubs/Deep Rooted/Sprouters **6 pound 1%**

Count any Listed Species Up to the Listed Pounds for the Group

TECA2	spineless horsebrush
ERNAN	rubber rabbitbrush
CHRY	rabbitbrush
SADOI	purple sage
CHVI8	green rabbitbrush
PRVI	common chokecherry

Plant Group Type

Perennial Forbs/Fibrous-rooted **6 pound 1%**

Count any Listed Species Up to the Listed Pounds for the Group

LIRU4	western gromwell
PHLI	threadleaf phacelia
ERPU2	shaggy fleabane
RAGL	sagebrush buttercup
HECY2	roundleaf alumroot
CLPU	pinkfairies
ARCA7	mountain sandwort
EREA	low fleabane
ERCO5	longleaf fleabane
GAAR	common gaillardia
CYFR2	brittle bladderfern
ARCO5	ballhead sandwort

Perennial Forbs/tap-rooted **6 pound 1%**

Count any Listed Species Up to the Listed Pounds for the Group

SEST2	wormleaf stonecrop
FRALA	whitestem elkweed
NOTR2	weevil microseris
PEDI5	twoleaf beardtongue
PHHO	spiny phlox
PHGRG	slender phlox
CRAT	slender hawksbeard
PHSP	showy phlox
PHLOX	phlox
PENST	penstemon
DENU2	Nuttal's larkspur
COLI2	narrowleaf mountain trumpet
PHLO2	longleaf phlox
CRAC2	longleaf hawksbeard
PEFRS	littleleaf bush penstemon
SEIN2	lambstongue groundsel
ARHO2	Holboell's rockcress
HIERA	hawkweed
CREPI	hawksbeard

Plant Group Type

Shrubs/Shallow Rooted/Sprouters 8 **pound** 1%

Count any Listed Species Up to the Listed Pounds for the Group

- ARTR4 threetip sagebrush
- AMAL2 Saskatoon serviceberry

Shrubs/Shallow Rooted/Non-Sprouters 6 **pound** 1%

Count any Listed Species Up to the Listed Pounds for the Group

- PHLE4 Lewis' mockorange

Shrubs/N-fixers 8 **pound** 1%

Count any Listed Species Up to the Listed Pounds for the Group

- PUTR2 antelope bitterbrush
- CEVE snowbrush ceanothus

Shrubs/Succulent Stem 6 **pound** 1%

Count any Listed Species Up to the Listed Pounds for the Group

- OPUNT pricklypear

Shrubs/Rhizomatous 6 **pound** 1%

Count any Listed Species Up to the Listed Pounds for the Group

- SPBE2 white spirea
- ROSA5 rose
- RIBES currant
- SYAL common snowberry

Half Shrub 8 **pound** 1%

Count any Listed Species Up to the Listed Pounds for the Group

- ERMI4 Weyth buckwheat
- ERNI2 snow buckwheat
- ERSP7 rock buckwheat
- ERHE2 parsnipflower buckwheat
- ERIOG buckwheat
- GUSA2 broom snakeweed

Plant Group Type

Perennial Forbs/thickened taproot 8 **pound** 1%

Count any Listed Species Up to the Listed Pounds for the Group

- BACA3 Carey's balsamroot
- BALSA balsamroot
- BASA3 arrowleaf balsamroot
- LOTR2 nineleaf biscuitroot
- LOMAT lomatium
- BAHO Hooker's balsamroot
- LODI fernleaf buscuitroot

Perennial Forbs/N-fixers 8 **pound** 1%

Count any Listed Species Up to the Listed Pounds for the Group

- LUSE4 silky lupine
- LUPIN lupine
- ASPU9 woollypod milkvetch
- ASMI9 weedy milkvetch
- LUSU5 sulphur lupine
- ASTRA milkvetch
- ASPUG gravel milkvetch
- OXYTR crazyweed

Spring bulbs & Ephemerals 6 **pound** 1%

Count any Listed Species Up to the Listed Pounds for the Group

- TRGR7 wild hyacinth
- CALOC Mariposa lily
- ZIPA2 foothill deathcamas
- BRODI clusterlilly
- LIGL2 bulbous woodlandstar
- DOCO Bonneville shootingstar

Perennial Forbs-parasitic to semi-parasitic 6 **pound** 1%

Count any Listed Species Up to the Listed Pounds for the Group

- CATH4 Thompson's Indian paintbrush
- CASTI2 Indian paintbrush

Perennial Forbs-rhizomatous 6 **pound** 1%

Count any Listed Species Up to the Listed Pounds for the Group

- ARLO6 spearleaf arnica

biennial 6 **pound** 1%

Count any Listed Species Up to the Listed Pounds for the Group

- CHDO Douglas' dustymaiden

Plant Group Type

Annual Forbs	6	pound	1%
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Count any Listed Species Up to the Listed Pounds for the Group
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- EPILO willowweed
- COPA3 smallflower blue eyed Mary
- EPMI small willowweed
- MICRO microseris
- ERIGE2 fleabane
- ERLI desert yellow fleabane
- CRYPT cryptantha

Perennial Forbs- Stoloniferous	6	pound	1%
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Count any Listed Species Up to the Listed Pounds for the Group
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- ANTEN pussytoes
- AND12 low pussytoes
- ANMI3 littleleaf pussytoes

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Ground cover and structure

Ground Cover

VEGETATION %	LITTER %	ROCK %	BARE %	MULCH (pounds/acre)
58	12	25	5	5384

Structure of Canopy Cover

This section is in the data collection phase and under construction.

Ecological Site Interpretations

Animal Community:

Wildlife Interpretations

Animal Preferences

Quarter:	Cattle				Sheep				Horses				Deer				Elk			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
big sagebrush	U	N	U	U	D	U	U	D	U	N	U	U	P	U	D	P	D	U	U	P
biscuitroot	U	D	U	U	U	D	D	U	U	D	U	U	U	D	D	U	U	D	D	U
bluebunch wheatgrass	U	P	D	D	P	P	P	P	U	P	D	D	D	D	D	D	U	P	D	D
bottlebrush squirreltail	U	D	U	U	N	D	U	N	U	D	U	U	N	D	U	N	U	D	U	N
cactus	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Columbia needlegrass	U	P	U	D	N	P	N	P	U	P	U	D	N	P	N	P	U	P	U	P
Cusick bluegrass	U	D	U	D	N	D	N	U	U	D	U	D	N	D	N	U	U	D	U	U
fringed sagewort	U	U	U	U	U	U	U	U	U	U	U	U	U	D	D	U	U	U	U	U
Hoods phlox	U	D	U	U	U	P	P	U	U	D	U	U	U	P	P	U	U	P	P	U
Idaho fescue	U	P	D	D	P	P	P	P	U	P	D	D	D	D	D	D	U	P	D	D
Indian ricegrass	U	D	U	D	N	D	N	U	U	D	U	D	N	D	N	U	U	D	U	U
Louisiana sage	U	U	U	U	U	U	D	U	U	U	U	U	U	U	D	U	U	U	D	U
milkvetch	U	U	U	U	U	D	U	U	U	U	U	U	U	D	U	U	U	D	U	U
needleandthread	U	D	U	D	N	D	N	U	U	D	U	D	N	D	N	U	U	D	U	U
Nuttalls violet	U	D	U	U	U	P	P	U	U	D	U	U	U	P	P	U	U	P	P	U
prairie junegrass	U	D	U	D	N	D	N	U	U	D	U	D	N	D	N	U	U	D	U	U
prairie smoke	U	U	U	U	N	U	U	N	U	U	U	U	N	U	U	N	N	U	U	N
rose	U	D	D	U	U	D	D	U	U	D	D	U	U	D	D	U	U	D	D	U
rose pussytoes	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
rubber rabbitbrush	N	N	N	N	D	U	U	D	N	N	N	N	D	U	U	D	D	U	U	D
rush skeletonweed	U	U	U	U	N	N	N	N	U	U	U	U	N	N	N	N	N	N	N	N
sand dropseed	N	U	N	N	N	U	N	N	N	U	N	N	N	U	N	N	N	U	N	N
Sandberg bluegrass	N	U	N	N	N	D	N	N	N	U	N	N	N	D	N	N	N	U	N	N
scarlet globemallow	U	U	D	U	U	D	D	U	U	U	D	U	U	D	D	U	U	D	D	U
scurfpea	U	U	U	U	N	U	U	N	U	U	U	U	N	U	U	N	N	U	U	N
sedge	U	D	U	D	U	P	N	D	U	D	U	D	U	D	U	D	U	D	U	D
sticky cinquefoil	U	U	U	U	U	U	D	U	U	U	U	U	U	U	D	U	U	U	D	U
tapertip hawksbeard	U	U	D	U	N	D	U	N	U	U	D	U	N	D	U	N	N	D	U	N
thickspike wheatgrass	U	D	D	U	N	D	N	N	U	D	D	U	N	D	N	N	U	D	D	N
thistle	U	U	U	U	N	N	N	N	U	U	U	U	N	N	N	N	N	N	N	N
threeawn	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
wild buckwheat	U	U	D	U	U	U	U	U	U	U	D	U	U	U	U	U	U	U	U	U
wild onion	U	D	U	U	U	D	D	U	U	D	U	U	U	D	D	U	U	D	D	U
woolly Indianwheat	U	U	U	U	N	U	U	N	U	U	U	U	N	U	U	N	N	U	U	N
yarrow	U	U	U	U	N	U	U	N	U	U	U	U	N	U	U	N	N	U	U	N

NC=not consumed; U=undesireable; D=desireable; P= preferred; T=toxic

Quarters: 1-Jan., Feb., Mar.; 2-Apr., May, Jun.; 3-Jul., Aug., Sep.; 4-Oct., Nov., Dec.

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Grazing Interpretations

Guide to Suggested Initial Stocking Rate: Carrying capacity is highly dependent on plant community, specific site characteristics (elevation, aspect, slope, etc.) and management practices (the type of grazing system planned or being applied, water developments, fences, etc.). Because of this, a field visit is recommended, in all cases, to document plant composition and production and to inventory supporting practices. More valuable carrying capacity estimates are developed using specific site characteristics in conjunction with an evaluation of past stocking rates and resultant utilization.

Grazing by domestic livestock is one of the major income-producing industries in the area. Rangeland in this area provide forage under prescribed grazing for cattle, sheep, horses and other herbivores.

CName	Beginning of Critical Management Period	End of Critical Management Period	CRA
bluebunch wheatgrass	4/26/1900	6/13/1900	8.7
bluebunch wheatgrass	4/30/1900	6/20/1900	8.2

Grazing systems need to be designed to meet the needs of jointed grasses (see NRCS-WA Range Technical Notes 34 & 35 during the critical period of plant growth. The above values are averages for the Common Resource Area listed. Choose the appropriate value for the location being evaluated in the Major Land Resource Area.

Specific dates depend on aspect, elevation, and growing season. Specific information for each supported climate station is available from the NRCS-WA technical note system on the web.

Plant Community Growth Curves - % by month

<i>growth curve description</i>	<i>jan</i>	<i>feb</i>	<i>mar</i>	<i>apr</i>	<i>may</i>	<i>jun</i>	<i>jul</i>	<i>aug</i>	<i>sep</i>	<i>oct</i>	<i>nov</i>	<i>dec</i>
HCPC	0	1	16	43	35	5	0	0	0	0	0	0
PG-Shrub	0	1	13	38	30	10	3	2	0	3	0	0
Annuals	0	2	31	55	11	1	0	0	0	0	0	0
AG-Shrubs	0	1	26	43	15	8	3	2	0	2	0	0

Hydrologic Interpretations:

The runoff curve numbers are determined by field investigations using hydraulic cover conditions and hydrologic soil groupings

Hydrologic Group From	Hydrologic Group To
A	D

Recreational Uses:

This site provides hunting, hiking, photography, bird watching and other opportunities. Recreation potential is limited largely by the cool, wet winters and spring. This site provides hunting opportunities for upland game species. The wide varieties of plants, which bloom in the spring, have an esthetic value that appeals to visitors. Photography and bird watching can be worthwhile, especially during migration seasons. Suitability for camping and picnicking is fair.

Wood Products:

No appreciable wood products are present on the site.

Other Products:

Seed harvest of native plant species can provide additional income on this site.

Other Information:

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Supporting Information

Associated Sites:

Similar Sites:

State Correlation:

Inventory Data References:

Type Locality:

Relationship to Other Established Classifications:

Other References:

Site Description Approval

Gerald Rouse _____ 6/10/2004 _____

Author _____ **Date** _____

INTERIM-for use and comment for one year _____ 6/10/2004 _____

State Range Management Specialist _____ **Date** _____

Site Description Revision

 _____ **Author** _____ **Date** _____

 _____ **State Range Management Specialist** _____ **Date** _____

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R008XY202WA		Stony 9-15 PZ			pounds/acre/year:	300	600	750
1	Rills	Rill formation is severe and well defined throughout most of the area.	Rill formation is moderately active and well defined throughout most of the area.	Active rill formation is slight at infrequent intervals, mostly in exposed areas.	No recent formation of rills; old rills have blunted or muted features.	None		
2	Water Flow Patterns	Extensive and numerous; unstable with active erosion; usually connected.	More numerous than expected; deposition and cut areas common; occasionally connected.	Nearly matches what is expected for the site; erosion is minor with some instability and deposition.	Matches what is expected for the site; some evidence of minor erosion. Flow patterns are stable and short.	Short and discontinuous (< 1 meter) flow patterns		
3	Pedestals and/or Terracettes	Abundant active pedestalling and numerous terracettes. Many rocks and plants are pedestalled; exposed plant roots are common.	Moderate active pedestalling; terracettes common. Some rocks and plants are pedestalled with occasional exposed roots.	Slight active pedestalling; most pedestals are in flow paths and interspaces and/ or on exposed slopes. Occasional terracettes present.	Active pedestalling or terracette formation is rare; some evidence of past pedestal formation, especially in water flow patterns and/or on exposed slopes.	None		
4	Bare Ground	Much higher than expected for the site. Bare areas are large and generally connected.	Moderately higher than expected for the site. Bare areas are of moderate size and sporadically connected.	Slightly to moderately higher than expected for the site. Bare areas are small and rarely connected.	Amount and size of bare areas nearly to totally match that expected for the site.	4 % bare ground; bare patches should be less than 16-20 inch diameter. Larger patches are usually associated with rodent disturbance.		
5	Gullies	Common with indications of active erosion and downcutting; vegetation is infrequent on slopes and/or bed. Nickpoints and headcuts are numerous and active.	Moderate to common with indications of active erosion; vegetation is intermittent on slopes and/or bed. Headcuts are active; downcutting is not apparent.	Moderate in number with indications of active erosion; vegetation is intermittent on slopes and/or bed. Occasional headcuts maybe present.	Uncommon with vegetation stabilizing the bed and slopes; no signs of active headcuts, nickpoints, or bed erosion.	None		
6	Wind Scoured, Blowouts and/or Deposition Areas	Extensive.	Common.	Occasionally present.	Infrequent and few.	None		
7	Litter Movement	Extreme; concentrated around obstructions. Most size classes of litter have been displaced.	Moderate to extreme; loosely concentrated near obstructions. Moderate to small size classes of litter have been displaced.	Moderate movement of smaller size classes in scattered concentrations around obstructions and in depressions.	Slightly to moderately more than expected for the site with only small size classes of litter being displaced.	Minimal & Short, associated with water flow patterns		
8	Soil Surface Resistance to Erosion	Extremely reduced throughout the site. Biological stabilization agents including organic matter and biological crusts virtually absent.	Significantly reduced in most plant canopy interspaces and moderately reduced beneath plant canopies. Stabilizing agents present only in isolated patches.	Significantly reduced in at least half of the plant canopy interspaces, or moderately reduced throughout the site.	Some reduction in soil surface stability in plant interspaces or slight reduction throughout the site. Stabilizing agents reduced below expected.	Stability class (Herrick et al. 2001) anticipated to be 5-6 at surface and subsurface under vegetation and 4-5 at surface and subsurface in the interspaces.		
9	Soil Surface Loss or Degradation	Soil surface horizon absent. Soil structure near surface is similar to, or more degraded than, that in subsurface horizons. No distinguishable difference in subsurface organic matter content.	Soil loss or degradation severe throughout site. Minimal differences in soil organic matter content and structure of surface and subsurface layers.	Moderate soil loss or degradation in plant interspaces with some degradation beneath plant canopies. Soil structure is degraded and soil organic matter content is significantly reduced.	Some soil loss has occurred and/or soil structure shows signs of degradation, especially in plant interspaces.	7 inch very dark brown A horizon with medium granular structure.		

Ecological Site Number	Ecological Site Name	Below Normal Above				
		pounds/acre/year:	300	600	750	
R008XY202WA	Stony 9-15 PZ					
10	Plant Community Composition & Distribution Relative to Infiltration & Runoff -	Infiltration is severely decreased due to adverse changes in plant community composition and/ or distribution. Adverse plant cover changes have occurred.	Infiltration is greatly decreased due to adverse changes in plant community composition and/ or distribution. Detrimental plant cover changes have occurred.	Infiltration is moderately reduced due to adverse changes in plant community composition and/ or distribution. Plant cover changes negatively affect infiltration.	Infiltration is slightly to moderately affected by minor changes in plant community composition and/ or distribution.	405-506 pounds/acre of the dominant functional/structural group (see Indicator #12)-in combination with 58 % vegetative canopy cover and 12 % litter cover in interspaces should provide sufficient soil quality for optimal infiltration.
11	Compaction Layer	Extensive; severely restricts water movement and root penetration.	Widespread; greatly restricts water movement and root penetration.	Moderately widespread; moderately restricts water movement and root penetration.	Rarely present or is thin and weakly restrictive to water movement and root penetration.	None
12	Function/Structural Groups	Number of F/S groups greatly reduced; and/ or relative dominance of F/S groups has been dramatically altered; and/or number of species within F/S groups dramatically reduced.	Number of F/S groups reduced; and/ or one dominant group and/ or one or more subdominant groups replaced by F/S groups not expected for the site; and/ or number of species within F/S groups significantly reduced.	Number of F/S groups moderately reduced; and/ or one or more subdominant F/S groups replaced by F/S groups not expected for the site; and/ or number of species within F/S groups moderately reduced.	Number of F/S groups slightly reduced; and/ or relative dominance of F/S groups has been modified from that expected for the site; and/ or number of species within F/S groups slightly reduced.	Perennial Cool Season >40% Mid-Grass Decreasers Perennial Cool Season >10% & Mid-Grass Increases <40% Shrubs/Deep >3% & Rooted/Non-Sprouters <10%
13	Plant Mortality/Decadence	Dead and/ or decadent plants are common.	Dead and/ or decadent plants are somewhat common.	Some dead and/ or decadent plants are present.	Slight plant mortality and/ or decadence.	Grasses will nearly always show some mortality and decadence
14	Litter Amount	Largely absent or dominant relative to site potential and weather.	Greatly reduced or increased relative to site potential and weather.	Moderately more or less relative to site potential and weather.	Slightly more or less relative to site potential and weather.	12 % litter cover associated with bunchgrasses. The litter is decomposing in place and in contact with the soil surface.
15	Annual Aboveground Production	Less than 20% of potential production.	20-40% of potential production.	40-60% of potential production.	60-80% of potential production.	300-750 pounds/acre.
16	Invasive Plants	Dominate the site.	Common throughout the site.	Scattered throughout the site.	Present primarily on disturbed sites.	Absent
17	Reproductive Capability of Perennial Plants	Capability to produce seed or vegetative tillers is severely reduced relative to recent climatic conditions.	Capability to produce seed or vegetative tillers is greatly reduced relative to recent climatic conditions.	Capability to produce seed or vegetative tillers is somewhat limited relative to recent climatic conditions.	Capability to produce seed or vegetative tillers is only slightly limited relative to recent climatic conditions.	All species are free of insect, disease, fungal impairments; display high vigor; and are producing abundant seed or multiple replacement tillers