

Suspended

Trend Study 2-37-96

Study site name: Rock Creek Riparian.

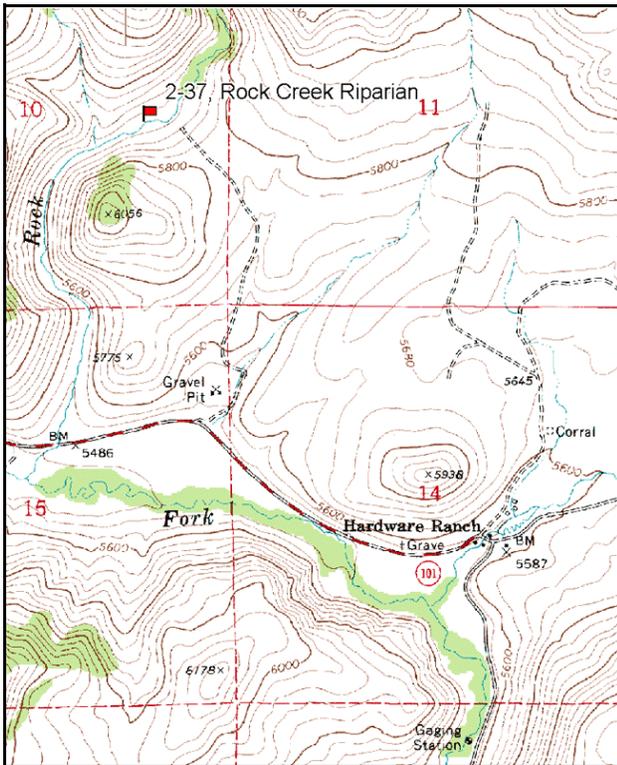
Vegetation type: Riparian.

Compass bearing: frequency baseline 20 degrees magnetic.

Frequency belt placement: line 1 (11ft), line 2 (71ft), line 3 (34ft), line 4 (read along baseline), line 5 (95ft).

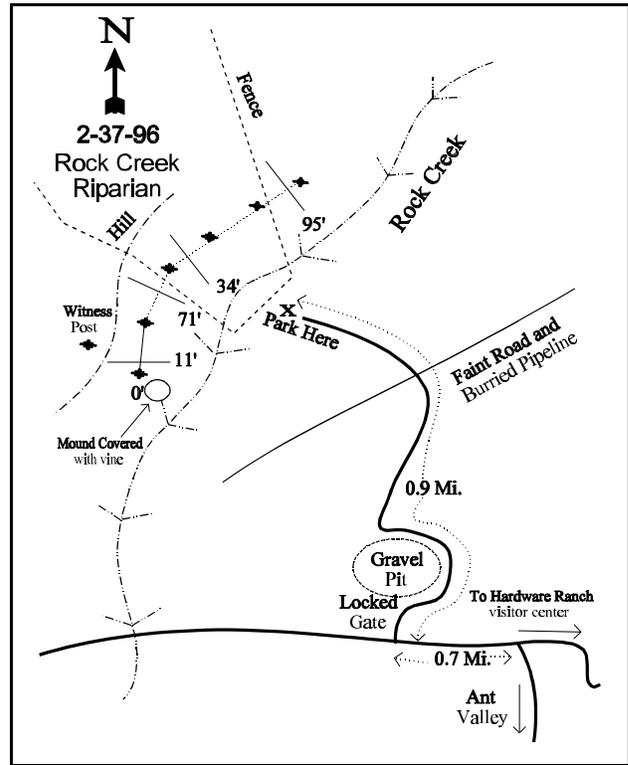
LOCATION DESCRIPTION

From the corner of the ant hill road turnoff, travel down Blacksmith Fork Canyon 0.7 miles and turn right. Go through a locked gate (you'll need a WRP key to open the gate), around a gravel pit, and travel 0.9 miles to a stopping point. Cross the creek and look for a witness post on the hill side 200 feet across the fence. From the witness post to the 0-foot stake, take a bearing of 122 degrees magnetic and pace 8 paces. The baseline doglegs along the river in the riparian area. The 100-line runs 20 degrees magnetic. The 200-foot line runs 36 degrees magnetic and the belt is centered on the 25 foot mark. The 300-foot baseline runs 55 degrees magnetic and the belt is centered on the 15 foot mark. The 400-foot baseline runs 69 degrees magnetic and the quadrats are read along the baseline. The 500-foot baseline runs 61 degrees magnetic.



Map Name: Hardware Ranch

Township 10N, Range 3E, Section 10



Diagrammatic Sketch

UTM 4607376 N, 451297 E

DISCUSSION

Trend Study No. 2-37

*** **SUSPENDED** - This site was suspended in 2001 and will be reevaluated in 2006. The regular range trend methods are not suitable to adequately sample this study and need to be replaced with a riparian monitoring method such as the greenline. Photographs and a pellet group transect were completed in 2001, but the vegetation was not sampled. The site narrative and data tables are included from the 1996 report.

The Rock Creek Riparian study was established in 1996 to monitor a degraded (perceived) riparian community. Slope is nearly level with a slight south aspect. Elevation is about 5,900 feet. Water is available in Rock Creek which is a perennial stream running parallel to the study baseline. The baseline zig-zags next to the creek in order to stay within the narrow riparian corridor. The baseline transects three different fenced pastures, which apparently are on different grazing schedules. Photo points were also established on willows closest to each baseline stake to record utilization visually. This area is grazed by cattle and receives some use by horses and elk. In 2001, pellet group transect data estimated 54 cow days use/acre (134 cdu/ha), while no deer or elk pellet groups were encountered. Most of the cattle use occurred in the middle pasture.

Soil on the site is deep, dark colored with a clay loam texture. Organic matter is high with a neutral soil reaction (pH of 7.3). Effective rooting depth (see methods) is greater than 28 inches along the first two hundred feet of the baseline, then averages 20 inches along the last 300 feet of the baseline which is also much drier. Rock is rare both on the surface and within the profile. Little bare ground occurs on the site, and erosion appears minimal.

Browse is limited on the site and accounts for only 2% of the total vegetative cover. Mountain big sagebrush is the most abundant shrub with an estimated density of 440 plants/acre. Most mountain big sagebrush plants occur along the ecotone of the narrow riparian corridor and the drier upland type. These plants are mostly mature and appear to not be utilized. The only shrubs in the area which likely receive summer use are the coyote willows (*Salix exigua exigua*). The willows were not abundant enough to properly sample them in the shrub density strips. The only relative measure of utilization available is photo point comparisons on the closest individual willow to each baseline stake. Some of the willows are tall and partly unavailable to browsing. Several individuals have been highlined in the past, but current use appears light. Other browse occurring on the site in small numbers include narrowleaf low rabbitbrush, broom snakeweed, Oregon grape, wax current, and Woods rose.

Herbaceous plants dominate the site. Perennial grasses are abundant and diverse. Slender wheatgrass is the most common species along with big mountain brome, Kentucky bluegrass, and orchard grass. Grasses were heavily utilized and trampled making identification difficult. As a result, all perennial and annual grasses were lumped into their respective categories. Sedges and rushes were identified to the genus level. Perennial grasses contributed 53% of the herbaceous cover. Forbs are abundant and diverse with 33 annual and perennial species encountered. Unfortunately, Canada thistle contributed 59% of the forb cover. Other weedy forbs commonly include western yarrow, pacific aster, houndstongue, horsetail, prickly lettuce, and tarweed.

1996 APPARENT TREND ASSESSMENT

The soil trend appears stable. Vegetative cover is abundant and little bare soil is exposed. Browse is not an important aspect of this summer range. The only species which receives much use is coyote willow. Future comparisons of photo points on willow will be needed to determine relative utilization and condition. Currently, these willows appear to be lightly utilized with many growing out of reach. The herbaceous

understory is abundant but contains several weedy, invasive forbs. Trend will have to be determined by comparing the composition and abundance of these forbs on future readings.

HERBACEOUS TRENDS --

Herd unit 02 , Study no: 37

T y p e	Species	Nested Frequency	Quadrat Frequency	Average Cover %
		'96	'96	'96
G	Carex spp.	30	12	.80
G	Juncus spp.	90	22	10.28
G	Unknown grass - annual (a)	62	18	1.25
G	Unknown grass - perennial	436	94	41.40
Total for Annual Grasses		62	18	1.25
Total for Perennial Grasses		556	128	52.49
Total for Grasses		618	146	53.74
F	Achillea millefolium	75	27	1.54
F	Alyssum alyssoides (a)	3	2	.01
F	Ambrosia psilostachya	1	1	.00
F	Artemisia ludoviciana	17	6	.27
F	Astragalus ceramicus	5	2	.06
F	Aster chilensis	14	5	.36
F	Cirsium arvense	235	78	14.17
F	Collomia linearis (a)	1	1	.00
F	Collinsia parviflora (a)	3	1	.00
F	Cynoglossum officinale	82	37	1.47
F	Epilobium brachycarpum (a)	21	7	.16
F	Equisetum spp.	136	46	.83
F	Erodium cicutarium (a)	4	1	.03
F	Erigeron spp.	2	1	.00
F	Fragaria virginiana	2	1	.03
F	Hackelia patens	1	1	.00
F	Isatis tinctoria	4	2	.03
F	Lactuca serriola	51	20	.25
F	Madia glomerata (a)	19	9	.17
F	Medicago sativa	4	1	.00
F	Polygonum douglasii (a)	15	6	.10
F	Potentilla gracilis	11	3	.12
F	Ranunculus testiculatus (a)	27	9	.09
F	Rumex crispus	3	2	.06
F	Rudbeckia occidentalis	6	3	.39

T y p e	Species	Nested Frequency	Quadrat Frequency	Average Cover %
		'96	'96	'96
F	<i>Smilacina stellata</i>	61	18	2.11
F	<i>Solidago missouriensis</i>	26	10	1.18
F	<i>Taraxacum officinale</i>	13	5	.10
F	<i>Tragopogon dubius</i>	19	10	.11
F	<i>Trifolium gymnocarpon</i>	3	2	.01
F	<i>Urtica dioica</i>	3	1	.00
F	<i>Verbascum thapsus</i>	10	5	.39
Total for Annual Forbs		93	36	0.57
Total for Perennial Forbs		784	287	23.57
Total for Forbs		877	323	24.15

BROWSE TRENDS --

Herd unit 02 , Study no: 37

T y p e	Species	Strip Frequency	Average Cover %
		'96	'96
B	<i>Artemisia tridentata vaseyana</i>	12	1.01
B	<i>Chrysothamnus viscidiflorus stenophyllus</i>	2	.03
B	<i>Gutierrezia sarothrae</i>	1	.03
B	<i>Mahonia repens</i>	5	.03
B	<i>Ribes aureum</i>	2	.03
B	<i>Rosa woodsii</i>	4	.18
B	<i>Salix exigua exigua</i>	0	.03
Total for Browse		26	1.34

BASIC COVER --

Herd unit 02 , Study no: 37

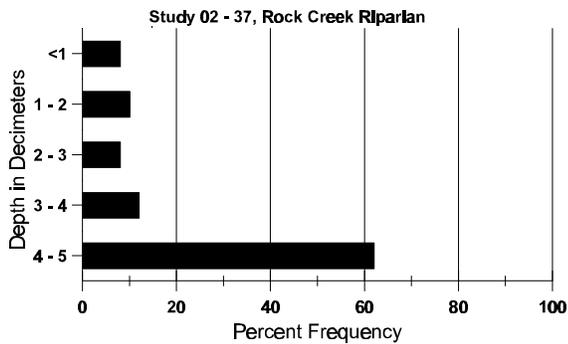
Cover Type	Nested Frequency	Average Cover %
	'96	'96
Vegetation	498	78.00
Rock	63	.97
Pavement	50	.20
Litter	471	44.50
Cryptogams	2	.03
Bare Ground	123	3.07

SOIL ANALYSIS DATA --

Herd Unit 02, Study no: 37, Rock Creek Riparian

Effective rooting depth (in)	Temp °F (depth)	PH	%sand	%silt	%clay	%0M	PPM P	PPM K	dS/m
23.0	50.0 (18.1)	7.3	42.2	31.4	26.4	4.8	31.0	243.2	1.7

Stoniness Index



PELLET GROUP FREQUENCY --

Herd unit 02 , Study no: 37

Type	Quadrat Frequency
	'96
Horse	3
Elk	2
Cattle	5

BROWSE CHARACTERISTICS --

Herd unit 02 , Study no: 37

A G R E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4				
<i>Artemisia tridentata vaseyana</i>																		
Y	96	5	-	-	-	-	-	-	-	-	5	-	-	-	100		5	
M	96	17	-	-	-	-	-	-	-	-	17	-	-	-	340	21	32	17
% Plants Showing '96		<u>Moderate Use</u> 00%			<u>Heavy Use</u> 00%			<u>Poor Vigor</u> 00%			<u>%Change</u>							
Total Plants/Acre (excluding Dead & Seedlings)														'96	440	Dec:	-	
<i>Chrysothamnus viscidiflorus stenophyllus</i>																		
M	96	6	-	-	-	-	-	-	-	-	6	-	-	-	120	17	21	6
% Plants Showing '96		<u>Moderate Use</u> 00%			<u>Heavy Use</u> 00%			<u>Poor Vigor</u> 00%			<u>%Change</u>							
Total Plants/Acre (excluding Dead & Seedlings)														'96	120	Dec:	-	
<i>Gutierrezia sarothrae</i>																		
M	96	1	-	-	-	-	-	-	-	-	1	-	-	-	20	11	7	1
% Plants Showing '96		<u>Moderate Use</u> 00%			<u>Heavy Use</u> 00%			<u>Poor Vigor</u> 00%			<u>%Change</u>							
Total Plants/Acre (excluding Dead & Seedlings)														'96	20	Dec:	-	
<i>Mahonia repens</i>																		
S	96	1	-	-	-	-	-	-	-	-	1	-	-	-	20			1
Y	96	7	-	-	-	-	-	-	-	-	7	-	-	-	140			7
M	96	10	-	-	-	-	-	-	-	-	10	-	-	-	200	6	5	10
% Plants Showing '96		<u>Moderate Use</u> 00%			<u>Heavy Use</u> 00%			<u>Poor Vigor</u> 00%			<u>%Change</u>							
Total Plants/Acre (excluding Dead & Seedlings)														'96	340	Dec:	-	
<i>Ribes aureum</i>																		
Y	96	2	-	-	-	-	-	-	-	-	2	-	-	-	40			2
M	96	-	-	-	1	-	-	-	-	-	1	-	-	-	20	-	-	1
% Plants Showing '96		<u>Moderate Use</u> 00%			<u>Heavy Use</u> 00%			<u>Poor Vigor</u> 00%			<u>%Change</u>							
Total Plants/Acre (excluding Dead & Seedlings)														'96	60	Dec:	-	

A G E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.	Total
		1	2	3	4	5	6	7	8	9	1	2	3	4			
Rosa woodsii																	
Y	96	4	-	-	-	-	-	-	-	-	4	-	-	-	80		4
M	96	5	-	-	-	-	-	-	-	2	-	3	-	100	13	13	5
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>						
'96		00%			00%			33%									
Total Plants/Acre (excluding Dead & Seedlings)												'96	180	Dec:	-		