RANGE USE PLAN FOR GRAZING

The Minister, pursuant to Section 37 of the *Forest and Range Practices Act*, has determined that this plan is consistent with the agreement, under the *Range Act* that pertains to the plan, and conforms to the *Forest and Range Practices Act*, the regulations and the standards

This range use plan is associated with the following range agreement(s)

FILE: <u>15700-20/Blue Goose Cattle Co. Ltd.</u> RANGE AGREEMENT #(S) : RAN <u>076693</u> STOCK RANGE: <u>Green Lake N Bonaparte</u> NAME: <u>Blue Goose Cattle Co. Ltd.</u> ADDRESS: <u>Box 23, Young Lake Road, 70 M</u> TELEPHONE: <u>(250) 456-2387</u>	RANGE UNIT (S): <u>C</u> EMAIL: s file House, BC, V0K 2 FAX: <u>(250) 456-2388</u>	<u>raham RU6304</u> 22 2 <u>K0</u>		
This plan was prepared by: <u>FRANK SCH</u> Print Name(s)	KUETER			
Agreement Holder Signature(s) THE BLVE GOOSE PV: T. CATTLE CO. CTD. <u>HANCH</u> Print Name * Or authorized signatory if agreement holder	SSG MGR. Sign is a corporation	June 14/201, Date 50 50 51 50 51	2011 JUN 20 FH 2: L4	POREST DISTRICT
This plan takes effect: JUNE 21, 2011				
This plan expires: DECEMBER 31, 2.	015			
Approved: Pat Byrne, District Manager 100 Mile House District	Date 2	<u>3</u> 2011		

Location and Site Description

The range use area covered by this plan is shown on the Schedule A map attached. The map shows:

- a) Range agreement boundaries
- b) Natural features (rock outcrops, wetlands, lakes, rivers, streams)
- c) Location of proposed developments
- d) Known resource features in areas of significance to rangeland existing range developments, snow course, recreation feature and facilities, wildlife habitat feature, research installations [range reference areas, permanent monitoring sites], known domestic water intakes, and cultural heritage resources [sites])
- e) Major vegetation types (of primary interest to grazing)

The range use plan area covers the Graham Unit of the Green Lake north Bonaparte Stock Range. Pressy Lake, private land and the Rayfield River from the north boundary. The Rayfield River and private land (south end) from the western boundary. The Bonaparte River and Young Lake for the south boundary. The eastern boundary consists of drift fences funning northward from Young Lake to Moose Lake and then northwesterly towards private land surrounding Pressy Lake.

Grazing Schedules

number	Class	Dates in/o	ut	Unit/ pasture	Days	Proportion	AUM's
60	Cow/calf	May-15	Jul-19	East Spring Range - Graham Unit	66	1	130
60	Cow/calf	Jul-20	Oct-31	West Spring Range - Graham Unit	104	1	205
3	Bull	Jul-20	Oct-31	East and West Spring Ranges- Graham Unit	104	1.5	15
360	Cow/calf	Jul-20	Sep-15	Yearling Pasture - Graham Unit	58	1	686
18	Bull	Jul-20	Sep-15	Yearling Pasture - Graham Unit	58	1.5	51
360	Cow/calf	Sep-16	Oct-31	Summer and Fall Range - Graham Unit	46	1	544
18	Bull	Sep-16	Oct-31	Summer and Fall Range - Graham Unit	46	1.5	41
144	Yearling	Jun-01	Oct-31	Summer and Fall Range - Graham Unit	153	0.7	507

2011, 2012, 2014, 2015 Graham Unit Schedules (RAN076693)

585 cattle in Graham Unit

Total AUMs: 2179

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2011, 2012, 2014, 2015 Rayfield Unit Schedules (RAN075544)

number	Class	Dates in/o	ut	Unit/ pasture	Days	Proportion	AUM's
360	Cow/calf	May-15	Jul-19	DL 1395 to Moose Lake, Rayfield Unit	66	1	781
30	Yearling	Jun-01	Oct-31	DL 1395 to Moose Lake, Rayfield Unit	153	0.7	106
000	1 D (111)	.				E. L.A. FERM.	000

390 cattle in Rayfield Unit

Total AUMs: 886

2013 Graham Unit Schedule (RAN076693)

number	Class	Dates in/o	ut	Unit/ pasture	Days	Proportion	AUM's
60	Cow/calf	May-15	Jul-19	West Spring Range - Graham Unit	66	1	130
60	Cow/calf	Jul-20	Oct-31	East Spring Range - Graham Unit	104	1	205
3	Bull	Jul-20	Oct-31	East and West Spring Ranges - Graham Unit	104	1.5	15
360	Cow/calf	Jun-01	Jul-19	Summer range - Graham Unit	49	1	580
360	Cow/calf	Jul-20	Sep-15	Yearling Pasture - Graham Unit	58	1	686
18	Bull	Jul-20	Sep-15	Yearling Pasture - Graham Unit	58	1.5	51
150	Vearling	hup 01	Oct.31	Summer and Fall Range - Graham	153	0.7	508
591 cattle	in Graham	u Unit	000-01	Unin	103 To	otal AUMs:	

2013 Rayfield Unit Schedule (RAN075544)

number	Class	Dates in/o	ut	Unit/ pasture	Days	Proportion	AUM's
360	Cow/calf	Sep-16	Oct-31	DL 1395 to Moose Lake, Rayfield Unit	46	1	<u> </u>
18	Bull	Sep-16	Oct-31	DL 1395 to Moose Lake, Rayfield Unit	46	1.5	41
88	Yearling	Jun-01	Oct-31	DL 1395 to Moose Lake, Rayfield Unit	153	0.7	310
466 cattle	in Rayfield Uni	t			T	otal AUMs:	894

466 cattle in Rayfield Unit

The dates in the grazing schedules are overridden by range readiness (Table 1) and stubble height criteria (Tables 2 and 3). If there are changes of more than a week we will submit an amendment to this range use plan to the 100 Mile District Range staff.

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Pasture moves will be complete within 5 to 7 days with no more than 10 % of the cattle remaining behind after a move, stragglers will be actively gathered

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80% of cattle will be off of the range by the fall removal date, and 95% will be off within a week after the removal date. Animals on the range after this date will not exceed 5% of the herd, and will be removed as soon as possible.

Grazing in the Yearling Pasture of the Graham Unit is set for July 20th, therefore much later than the historical date of May 16. This should allow forage to build up a greater degree of range readiness.

The Summer Range (Graham Unit) is grazed lighter, and for the most part much later than historical dates, because this is the area where most of the potentially fragile grasslands are located , which should contribute a benefit to the plant ecology there over the longer term.

Table 1: Range readiness as defined by leaf development for some common grass species

Common Name	Leaf Stage
Bluebunch Wheatgrass	4.0
Slender Wheatgrass	4.0
Pinegrass	2.25-2.5 at nodding

Table 2 Minimum Average Stubble Heights for Upland Species

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Species	Average stubble height	
	cm	inches
Bluegrasses	8	3.2
Needlegrasses	12	4.7
Pinegrass	15	6
Wheatgrass, bluebunch	15	6
Wheatgrass, slender	15	6

Table 3 Minimum Average Stubble Heights for Riparian Species

Species	Average stubble height		
	cm	inches	
Bluegrasses	10	4	
Canada reedgrass (Bluejoint)	12	4.7	
Sedges	20	8	

Ranch Management & Grazing Patterns

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The Blue Goose Cattle Co. manages its herd to calve later than most neighbouring operators. We have altered many of our operating practices to more closely mirror nature, i.e. our cows calve similar to when moose have their young as well, rather than calve early in cold weather and snow. Cow's greatest nutrient requirements occur 3 weeks post calving. This now coincides with spring forage growth, that is not grazed too early, but when the plant is well on its way. Also, we turn out to some areas where ample fall aftermath forage was deliberately left, which cattle can utilize in the following spring/early summer, together with the new growth of the same plant communities.

We try and operate with a philosophy of low impact, small footprint, relative to our Crown Range locations and rather extensive management.

Cattle are turned out from deeded calving parcels not in the conventional large bunches, but rather in bunches of 20 to 50 pairs at a time, spread over up to 60 days, to different Range locations.

Starting in late May/June, after observing spring growth and soil conditions, pairs are moved out from several different deeded parcels. Some are turned out from DL.1385 (Buck) or DL. 1394 (Canyon Ranch) to the Rayfield Unit, others from DL 4964 (Oxbow) to Spring Range, Graham Unit. In the instance of turnout to summer range in the Graham Unit, small bunches are also turned out southbound from the calving grounds at Home Lake, toward DL 3855 (Crease) and the southwestern part of Summer Range. These kinds of small turnouts over a long time allow forage growth to reach the desired plant stage well prior to grazing demand.

We try and alternate annual turn-outs to either East or West Spring Range, taking into consideration which way we went the previous year, how many cattle are being moved out, the level of the remaining aftermath forage from the past year, and depending on which area would benefit more from a longer rest. In addition to adhering to range readiness criteria we ensure that the soils will be dry to prevent soil damage such as compaction or hummocking prior to cattle moving into an area.

As the summer progresses, cattle are dispersed throughout the range area. Fences are checked and repaired. In the summer of 2009 for example, the log (snake) fence from Moose Lake toward the northwest all the way to near DL 5131 has received a complete re-build, of approximately 6.5 km. Another 1 km of new post/wire fence has been added in 2010 to extend and replace the old fence further toward Canyon Ranch.

Cattle on the Yearling Range are frequently headed to the eastern and northern portions to reduce usage in the southwest near the Oxbow.

Salting is done toward the lesser-preferred areas and salting locations are altered annually. The ranch uses salt containment tubs wherever possible; we hope to reduce salt leaching into bare soil spots. Salting will not occur within 400m of classifiable lakes, streams, wetlands and natural openings greater than 1 hectare in size. Salt will be placed away from these

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areas and located in less preferred and less sensitive areas. Salting and riding will be used to encourage livestock away from newly planted cutblocks (i.e. planted cutblocks less than 5 years old).

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Within the Summer Range we recognize spots such as the upland grasslands around Hunter-Bentley Run and Big Rock meadow areas to be a challenge for us. There we often go to significant efforts to move cattle away from old traditional loitering and bedding grounds. All salting is done to the West toward the Rayfield River, Whitestick Lake and Teakettle meadows. Other areas that have been affected by livestock in the past and require monitoring are the SW corner of the yearling pasture, and West Spring Pasture.

Sufficient range riding will occur to prevent cattle from loitering in riparian and preferred areas. Cattle will be distributed throughout the pastures and moved to prevent over grazing. The ranch employs full-time range riders with good local knowledge of the grazing patterns and are aware of the results we try to achieve.

Periodically, we encounter groups of ATV riders on the above grasslands, which are mostly weekend visitors to Young Lake. If possible, we try to engage them in a discussion about the fragile nature of the grasslands and to try and use only existing trails.

As fall progresses, cattle are moved toward the northern part of the Graham Unit, toward Pressy Lake and its north and west facing slopes. Several cut blocks south of DL 1479 have been logged off, with natural and some ranch re-seeding showing some good forage results.

The ranch has built good neighbour relationships with the permanent residents of the Pressy Lake, and Young Lake subdivisions in the hope to avoid un-necessary conflict. Sometimes cattle will enter into some recreational properties because of poor or no fencing.

The ranch will practice deferring the season of grazing or varying plant development stage at time of grazing to avoid grazing plants at same growth stage from year to year. (see revision of Grazing Schedule). Deferment of period of use allows for plant re-growth and seed set and promotes vigor in the plant community. Cattle are moved out in small bunches and dispersed. Division fence on spring range allows us to alternate use by pasture and will not exceed stubble height averages.

Continuous grazing near lakeshores and creek sides will not occur early in the grazing season. Cattle are held back on the ranch until adequate growth has occurred. Soils will be dry prior to turnout on areas to prevent soil damage such as compaction or hummocking. Areas will be managed so that concentrations (>20% of the surface affected by hoof prints) do not exceed 5% of the perimeter of classifiable wetlands, lakes or streams riparian areas. This is achieved by some fencing, monitoring, range riding/herding area specific salting patters, and delayed turnout on Crown Range. We will monitor lakesides, riparian areas and creeksides to ensure cattle do not loiter. Livestock will be moved from these areas if loitering is noticed. Preferred sites on the summer range are a known concern. The riders will consistently move cattle from these areas as is practical.

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It should be noted that the historical priority is for 2168 AUMs in the Graham Unit and 893 AUMs in the Rayfield Unit, in case the ranch desires to revert back to the previous grazing schedules at its option, as long as the legislated grazing objectives are met.

We try and assess grazing differences annually and react accordingly with adjusted cattle numbers or shortened grazing times if required, sooner moves to the next pastures or drives into those areas not traditionally well liked for better and more even forage utilization. The grazing schedule and objectives shall always supersede.

Amendments may be made with Range staff if necessary as we are experimenting with this modified schedule as opposed to season-long grazing in all pastures.

Brands and Identification

All Blue Goose cattle are branded.



Right Hip

Cows have green brisket tags; calves and yearlings carry green ear tags. The colour green has been used since 1993, and all neighbouring permitees should be familiar with the colour, to aid in identifying strays.

Issues Identified by District Manager

Campeau Creek drainage, Campeau Lake, SW Corner of Yearling Pasture, Hunter Bentley Run and West Spring Pasture have been identified as issues that require special management actions. The objective is to restore and maintain these areas in proper functioning condition. To do this we will turn out cattle only when range readiness criteria are met (Table 1) and adhere to stubble height criteria (Tables 2 and 3). We will salt at least 400 meters away from classifiable lakes, wetlands, streams and natural openings. We will disperse the herd throughout the range area by having full time range riding.

Invasive Plants

Staff is encouraged to identify and remove all invasive plants when located. They carry the Invasive Plant Identification booklets.

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Objectives and Strategies for Maintaining Identified Wildlife

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The Bonaparte and Rayfield River valleys and northwest corner of the unit have been identified as key riparian areas for ungulates specifically moose winter range. The Young Lake and Bonaparte River mule deer winter ranges occur over the spring range pasture and onto the summer range partially northward along the Rayfield River

The Rayfield and Bonaparte Rivers have been identified as high value fish streams.

A Mule Deer Winter Range exists on Spring Range along the Bonaparte River and along the south-facing slopes of Young Lake. Cattle will be managed so that sufficient forage, shrubs, and browse remains after the cattle have been removed from Spring Range. Our grazing pattern explains our options to alternate spring pastures and how we manage the resource.

As outlined in the grazing pattern section a full-time riding crew is employed to ensure cattle are well distributed throughout the range area and management of the cattle are achieved using stubble height and range readiness criteria as per Tables 1, 2, and 3.

To maintain an adequate supply of winter forage for moose, we will monitor that not more than ten (10) percent of the current year's shoots and twenty (20) percent of the current year's leaves, within any contiguous area greater than one hectare in size, will be removed by domestic livestock. As this may be difficult to monitor, livestock will be moved from the area when they are seen browsing on the area for an extended period of time.

Livestock use is controlled to ensure that over-grazing does not occur on riparian areas so small mammals, amphibian, waterfowl and small bird habitat is not impacted as is practical.

Recreation

The lakes and rivers throughout the range use plan area make Graham Unit a popular recreational area. The lakes have forestry recreational sites on them and are popular for fishing and camping. In the fall, hunters make high use of the area. Some snowmobiling use occurs in winter to access lakes for ice fishing as well as general trail riding.

Crater Lake is a unique geological feature located in the northwest corner of the Graham Unit.

In recent years, the Bonaparte River recreation site has drawn a lot of people with all- terrain vehicles. High off road vehicular use has been noted on riparian areas, open range grasslands, and hillsides. In addition, increased all-terrain vehicle use is impacting the plant community; particularly in sites used as "hill climbs". These activities result in loss of top layer native vegetation, particularly lichens. The loss of lichens causes an increase in soil erosion and colonization of invader weed species. Camping on critical open range sites is resulting in high-pressure use of the area (garbage, trampling, and new road creation). Driving on wet grasslands and riparian areas has resulted in rutting, loss of native vegetation and disturbance of nesting waterfowl.

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Livestock use will be discouraged in any recreational sites by ensuring that no salting occurs within 400m of the site and by moving livestock whenever they are found close by. We will continue engaging ATV users about the fragile nature and lasting detrimental effects of hot-rodding and hill climbing on open grasslands. We engage local trail riding operations (Siwash LK) about reducing impact from use of same campsites with multiple horses and resulting bare spots

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Forestry

We will actively maintain our working relationship with the timber licencees within the Range Use Plan area, by discussing cutblocks and their potential impacts on critical range areas.

Where roads and landings are constructed to accommodate logging practices, we will encourage the forest licensee to seed disturbed sites to prevent establishment or encroachment of invasive plants. If seeding is not done in a timely manner or is not successful, we will advise the forest company and/or the Ministry of Forests, Lands and Natural Resource Operations.

There is a silviculture research trial by the Canadian Forest Service, which is located across the road on the east side or Young Lake Road, this is an unfenced site. We will be able to prevent livestock concentration within this site, as much of the area encompasses thick stands of dense juvenile fir timber with little grazing opportunities.

Newly planted cutblocks are to be grazed only to a level that avoids trampling, browsing or rubbing to no more than 10% of the conifer regeneration.

Salting will not occur in newly planted cutblocks in order to prevent livestock from congregating.

There is a plantation in the SW Corner of the Yearling Pasture, Opening ID # 801 where there was possible livestock impact on the establishment of the plantation. We have examined the juvenile plantation and it appears to be growing well. We will frequently move loitering cattle and not salt on or near the site to minimize the potential for further impact.

<u>Cultural Heritage</u>

There are presently no known identified Cultural Heritage Sites within the Range Use Plan area. We feel that by managing our cattle to the standards and criteria outlined in this plan we will not negatively impact any unknown cultural values.

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Range Developments

Existing:

We strive to maintain the existing fences to better standard than we found it prior to talking over the Range Use Plan area. We employ full time personnel dedicated to fencing.

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Three sides of the Range Use Plan area have no perimeter fencing (north, west, and south) and rely on natural boundaries such as Pressy Lake, the Rayfield River canyon, Young Lake, and the Bonaparte River.

On the eastern boundary the ranch has constructed, at its own cost, new four-strand barb-wire fences from Young Lake North to Moose Lake. No help was received from the neighbouring permittee, financial or work effort.

From Moose Lake North and west to near DL . 5131 the log (snake) fence has been completely rebuilt in 2009 and 2010 at approx. 6.5km of length. In 2010 a new post and 4-strand barb-wire has been added westward to extend the snake fence.

The internal fences, Summer Pasture/Spring pasture, and Summer Pasture /Yearling Pasture are also maintained to aid in livestock management.

Proposed:

Construction of range cabin, north of Young Lake near the eastern unit boundary. The benefit would be the ability to improve management of the East Spring Range and thereby reducing the grazing demand upon the more challenging West Spring Pasture.

In the spring of 2008, we have constructed a fence along the north boundary of DL 1394. This will form part of the north boundary within the Pressy Unit.

The fence heading westward from DL 1379, for approximately one-half mile, is maintained by the ranch and will be extended as necessary westward to Komori cut-off road.

All new range development proposals will be referred to the Ministry of Forest, Lands and Natural Resource Operations for authorization prior to construction.

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Soil Description

Zonal ecosystems in the Interior Douglas- fir zone occur on well to moderately well drained upland sites on morainal deposits derived from basic volcanic bedrock. Soils are typically Orthic or Dark Gray Luvisols, and Eutric or Dystric Brunisols. Generally soils in the zone have medium to rich nutrient status, because of the predominance of base-rich bedrock and the low rates of leaching in the dry climates.

Lodgepole pine	Pinus contorta	
White spruce	Picea glauca	
Trembling aspen	Populus tremuloides	
Douglas Fir	Pseudotsuga mensiesii	
Willow	Salix app.	
Kinnickinnick	Arctostaphylos uva-ursi	
Soopolallie	Shepherdia Canadensis	
Rose	Rosa spp.	
Bunchberry	Cornus Canadensis	
Showy aster	Aster conspicuous	
Yellow rattlebox	Rhinanthus crista-galli	
Pinegrass	Calamagrostis rubescens	
Bluegrass	Poa pratensis	
Forest sedge	Carex spp.	
Indian ricegrass	Oryzopsis asperifolia	
Hairgrass	Agrostis spp.	
Lichens		
Red stemmed Feathermoss	Pleurozium schreberi	

Plant Community Number 1 - Sub-boreal Pine Spruce Moist Cool (SBPSmk) Forested Site

Transitional

Lodgepole pine	Pinus contorta
Willow	Salix spp.
Poplar	Populus tremuloides
Rose	Rosa spp.
Kinnickinnick	Arctostaphylos uva-ursi
Dandelion	Taraxacum officinale
Strawberry	Fragaria glauca
Clover	Trifolium spp.
Pinegrass	Calamagrostis rubescens
Bluegrass	Poa pratensis
Timothy	Phleum pratensis
Orchardgrass	Dactylis gomerata
Smooth brome	Bromus inermis
Indian rice grass	Oryzopsis asperifolia
Forest sedge	Cares spp.
Feathermoss	Pleurozium schreberi
Aspen Stands	

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Poplar	Populus tremuloides
Rose	Rosa spp.
Willow	Salix spp.
Black twinberry	Lonicera involucrate
Twin flower	Linnaea borealis
Spiraea	Spiraea betulifolia
Shower aster	Aster conspicuous
American vetch	Vicia Americana
Peavine	Lathyrus ochroleucus
Tiger lily	Lilium columbianum
Paint brush	Castilleja spp.
Lupine	Lupinus archcus

Forested Plant Community

Characterized by an overstory of pine, spruce, aspen, birch, and willow with an understory of low shrubs, grasses, sedges, and forbs. Some lower shrubs include rose, thimbleberry, and twinflower. Forbs include peavine, tiger lily, and aster. The introduced Kentucky bluegrass, brome, timothy, and orchard grass plus the native pinegrass are dominant species in open meadows, roadsides, and cutblocks.

Many of the cutblocks in this area are planted to pine or spruce in the wetter areas. There are some cutblocks naturally regenerating to lodgepole pine. The vegetation within cutblocks is dominated by pinegrass and fireweed. Timothy, clovers, brome, and some orchard grass are evident on the roads and landings as a result of seeding.

The wetlands vary in depth, width, and composition. Kentucky bluegrass and pinegrass dominate the adjacent grass meadows.

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<u>Forested</u>	
Pinegrass	Calamagrostis rubescens
Forest sedge	Carex richardsonii
Showy aster	Aster conspicuus
Kinnicinnick	Arctostaphylos uva-ursi
Soopalallie	Shepherdia Canadensis
Timber milkvetch	Astragalus miser
American vetch	Vicia Americana
Peavine	Lathyrus ochroleucus
Twinflower	Linnaea borealis
Spirea	S[oraea betulifolia
Saskatoon	Amelanchier alnifolia
Douglas fir	Pseudotsuga menziesii
Lodgepole pine	Pinus contorta
Popular	Populus tremuloides
Feathermoss	Pleurozium schreberi

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Transitional	
Pinegrass	Calamagrostis rubescens
Bluebunch wheatgrass	Agropyron spicatum
Forest sedge	Carex richardsonii
Smooth brome	Bromus inermis
Kentucky bluegrass	Poa pratensis
Orchardgrass	Dactylis glomerata
Clover	Trifolium sp.
Kinnickinnick	Arctostaphylos uva-ursi
Soopolallie	Shepherdia candensis
Poplar	Populus tremuloides
Lodgepole pine	Pinus contorta

Forested Plant Community

A dry upland forest characterized by an overstory of lodgepole pine and Douglas fir. Understory vegetation includes low shrubs, grasses, sedges, and forbs. Pinegrass is the dominant grass species. Kentucky bluegrass is evident around many of the riparian areas. On transitional sites roads and landings have been seeded to domestic forage species.

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