CENTRAL OKANAGAN EXPANDED LEGEND – IDFxh1

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
AM	**At – Common snowberry – Mountain sweet-cicely**	**IDFxh1**	**00**

Typic unit occurs on gentle slopes with deep, medium textured soils (d, j and m are assumed modifiers).

This forest ecosystem is commonly associated with rich, gently sloping sites that are receiving seepage. This unit is often found on sites with fine textured soils (AMf). Forests are dominated by trembling aspen and are moderately closed. The understory is rich and shrubby, dominated by snowberry, Douglas maple, saskatoon and other shrubs and forbs. Due to the buildup of deciduous litter, mosses are uncommom on these sites. Trembling aspen has very thin bark and is very easily killed by fire. Historically, many of these sites may have had aspen as a shrub stage for long periods of time.

List of mapped units:	
AMg	fine-textured soils
AMk	cool-aspect; slope >25%

SITE INFORMATION

Common Terrain Types:

- gentle morainal slopes
-

Slope position:	middle
Slope (%):	
Aspect:	all
Soil Moisture Regime:	subhygric
Soil Nutrient Regime:	rich

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
AM	**At – Common snowberry – Mountain sweet-cicely**	**IDFxh1**	**00**

	Structural Stage	3	4	5	6	7	
Trees	*Populus tremuloides*	***	****	****	****	****	trembling aspen
Shrubs	*Mahonia aquifolium*	**	**	**	**	**	tall oregon-grape
	Symphoricarpos albus	***	***	***	***	***	common snowberry
	Prunus virginiana	****	***	***	***	***	choke cherry
	Amelanchier alnifolia	**	**	**	**	**	saskatoon
	Rosa sp.	***	**	**	**	**	rose
	Acer glabrum var. *douglasii*	***	**	**	**	**	Douglas maple
Grasses	*Elymus glaucus*	***	*	*	*	*	blue wildrye
	Smilacina stellata	***	**	**	**	**	star-flowered false Solomon's-seal
	Galium triflorum	**	*	*	*	*	northern bedstraw
	Osmorhiza berteroi	**	*	*	*	*	mountain sweet-cicely
	Aralia nudicaulis	**	*	*	*	*	sarsaparilla
PLOTS				COG22 COG45 COG71 COG86	COG26		

Highlighted species – indicate important forage plants for ungulates
* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites
***** >50% cover; occurs in 60% or more of sites

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
AO	**At – Mock orange – Choke cherry Riparian**	**IDFxh1**	**00**

Typic unit occurs on gentle slopes with deep, medium textured soils (d, j and m are assumed modifiers).

This forest ecosystem is commonly associated with moist streamside riparian sites in grassland areas. The overstory is trembling aspen and the understory is rich, shrubby and diverse. The moss layer is sparse but scattered moisture-indicating mosses such as leafy mosses do occur.

List of mapped units:

AOa	active floodplain
AOg	occurs in a gully
AOt	occurs on a fluvial terrace

SITE INFORMATION

Common Terrain Types:

- gentle and level fluvial sites

Slope position:	level, lower and toe
Slope (%):	0
Aspect:	none
Soil Moisture Regime:	subhygric - hygric
Soil Nutrient Regime:	rich

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
AO	At – Mock orange – Choke cherry Riparian	IDFxh1	00

	Structural Stage	3	4	5	6	7	
Trees	*Populus tremuloides*	***	****	****	****	****	trembling aspen
Shrubs	*Amelanchier alnifolia*	**	*	*	*	*	saskatoon
	Symphoricarpos albus	****	***	***	***	***	common snowberry
	Philadelphus lewisii	****	***	***	***	***	mock-orange
	Rosa nutkana	***	**	**	**	**	Nootka rose
	Betula occidentalis	*	*	*	*	*	water birch
	Acer glabrum var. *douglasii*	***	***	***	***	***	Douglas maple
	Salix bebbianna	**	*	*	*	*	Bebb's willow
	Cornus stolonifera	**	**	**	**	**	red-osier dogwood
Grasses	*Elymus glaucus*	*	*	*	*	*	blue wildrye
	Poa pratensis	*	*	*	*	*	Kentucky bluegrass
Herbs	*Cynoglossum officinale*	*	*	*	*	*	hound's tongue
	Arctium minus	*	*	*	*	*	burdock
	Smilacina stellata	*	*	*	*	*	star-flowered false Solomon's-seal
	Thalictrum occidentalis	*	*	*	*	*	western meadowrue
	Viola canadensis	**	**	**	**	**	Canada violet
	Urtica dioica	**	*	*	*	*	stinging nettle
Mosses	*Mnium* sp.	*	*	*	*	*	leafy moss
PLOTS				COG41	COG42 COG61		

Highlighted species – indicate important forage plants for ungulates
Species – non-native species
* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites
***** >50% cover; occurs in 60% or more of sites
Comments: the presence of stinging nettle is a good indicator for high nitrogen on these sites.

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
AS	**At – Snowberry – Kentucky bluegrass**	**IDFxh1**	**98**

Typic unit occurs on gentle slopes with deep, medium-textured soils (assumed modifiers are d, j, and m)

This forest ecosystem commonly occurs in large, broad depressions in grassland areas. These sites collect moisture from surrounding grassland areas. They have an overstory of trembling aspen and a shrubby understory dominated by snowberry and roses. This site unit was observed on the east side of the study area (Ellison) but no data was collected for it.

List of mapped units:

ASf	fine-textured soils	ASw	warm-aspect; slope >25%
ASk	cool-aspect; slope >25%		

SITE INFORMATION

Common Terrain Types:

- aeolian veneer over morainal or glaciofluvial blanket

Slope position:	lower, toe, depression
Slope (%):	0-15
Aspect:	none
Soil Moisture Regime:	subhygric
Soil Nutrient Regime:	rich

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
AS	**At – Snowberry – Kentucky bluegrass**	**IDFxh1**	**98**

	Structural Stage	3	4	5	6	7	
Trees	*Populus tremuloides*	***	****	****	****	****	trembling aspen
Shrubs	*Amelanchier alnifolia*	**	*	*	*	*	saskatoon
	Symphoricarpos albus	*****	****	****	****	****	common snowberry
	Rosa nutkana	***	**	**	**	**	Nootka rose
Grasses	*Elymus glaucus*	*	*	*	*	*	blue wildrye
	Poa pratensis	*	*	*	*	*	Kentucky bluegrass
Herbs	*Cynoglossum officinale*	*	*	*	*	*	hound's tongue
	Arctium minus	*	*	*	*	*	burdock
	Smilacina stellata	*	*	*	*	*	star-flowered false Solomon's-seal
	Thalictrum occidentalis	*	*	*	*	*	western meadowrue
Mosses	*Brachythecium* sp.	*	*	*	*	*	ragged moss
PLOTS							

Highlighted species – indicate important forage plants for ungulates
Species – non-native species
* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites
***** >50% cover; occurs in 60% or more of sites

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
BM	**Bulrush Marsh**	**IDFxh1**	**00**

Typic unit occurs on level sites with deep, fine-textured soils (assumed modifiers are d, f, and j)
This unit is equivalent to the *Great bulrush marsh* association in the provincial classification (MacKenzie and Shaw 2000)

This marsh wetland ecosystem commonly occurs on small ponds adjacent to shallow open water as a fringe along the shore-line. It sometimes occurs as a complex with Cattail marshes. Water depths are usually up to 1.5 m but water levels draw down significantly in the summer. These sites are most commonly dominated by soft-stemmed bulrush, with some floating aquatic plants (duckweed, bladderwort and water smartweed) and occasionally with a minor component of cattail. Vegetation species diversity is typically low on these sites. Soils are typically mineral, sometimes with a thin organic veneer.

SITE INFORMATION

Common Terrain Types:	
• lacustrine plains	
Slope position:	depression
Slope (%):	0
Aspect:	none
Soil Moisture Regime:	subhydric - hydric
Soil Nutrient Regime:	rich – very rich

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
BM	**Bulrush Marsh**	**IDFxh1**	**00**

	Structural Stage	**2b**	
Rushes	*Scirpus validus*	***	soft-stemmed bulrush
	Scirpus americanus	**	American bulrush
Herbs	*Utricularia macrorhiza*	**	greater bladderwort
	Polygonom amphibium	**	water smartweed
	Lemna sp.	**	duckweed
	Typha latifolia	*	common cattail
Liverworts	*Ricciocarpos natans*	**	
PLOTS		9802126 COV13 COV93	

* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites
***** >50% cover; occurs in 60% or more of sites

Comments: sites are usually only dominated by one bulrush species; soft-stemmed bulrush was more common in the study area

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
BN	**Kentucky bluegrass – Stiff needlegrass**	**IDFxh1**	**96**

Typic unit occurs on gentle slopes with deep, medium-textured soils (assumed modifiers are d, j, and m)

This ecosystem commonly occurs in moisture-collecting swales and depressions in grasslands and grassland openings. These sites are generally quite small and are dominated by grasses with scattered forbs. All sites observed were disturbed and dominated by Kentucky bluegrass.

List of mapped units:			
BNf	fine-textured soils	BNs	occurs on shallow soils (generally 50-100cm deep)
BNg	occurs in a gully	BNw	warm-aspect; slope >25%

SITE INFORMATION

Common Terrain Types:

- aeolian veneer over morainal or glaciofluvial blanket

Slope position:	toe, depression
Slope (%):	0
Aspect:	none
Soil Moisture Regime:	subhygric
Soil Nutrient Regime:	medium - rich

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
BN	**Kentucky bluegrass – Stiff needlegrass**	**IDFxh1**	**96**

	Stuctural Stage	**2b**	
Grasses	*Poa pratensis*	****	Kentucky bluegrass
	Stipa occidentalis	**	stiff needlegrass
Herbs	*Taraxacum officinale*	**	dandelion
	Potentilla gracilis	**	graceful cinquefoil
	Achillea millefolium	**	yarrow
	Ranunculus glaberrimus	*	sagebrush buttercup
	Dodecatheon pulchellum	**	few-flowered shooting star
PLOTS		COG75 COV80	

Species – non-native species
* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites
***** >50% cover; occurs in 60% or more of sites

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
BR	**Baltic Rush Marsh-Meadow**	**IDFxh1**	**00**

Typic unit occurs on level sites with deep, fine-textured soils (assumed modifiers are d, f, and j)
This unit is equivalent to the *Baltic rush – Field sedge marsh* association in the provincial classification (MacKenzie and Shaw 2000)

This marsh-meadow wetland ecosystem occurs in areas where water draws down below the soil surface most summers (seasonal flooding). These sites are dominated by baltic rushes or other rushes. Field sedge may also occur in slightly drier situations. Soils are typically mineral.

SITE INFORMATION

Common Terrain Types:

- lacustrine veneer over morainal or glaciofluvial blanket

Slope position:	depression, toe
Slope (%):	0
Aspect:	none
Soil Moisture Regime:	hygric – subhydric
Soil Nutrient Regime:	rich

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
BR	**Baltic Rush Marsh-Meadow**	**IDFxh1**	**00**

	Structural Stage	**2b**	
Rushes	*Juncus articulatus*	***	jointed rush
	Juncus balticus	***	baltic rush
Herbs	*Hippuris vulgaris*	**	common mare's tail
	Lemna minor	**	common duckweed
	Ranunculus sceleratus	**	celery-leaved buttercup
PLOTS		COG74	

* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites
***** >50% cover; occurs in 60% or more of sites

Comments: We only observed one jointed rush marsh but baltic rush is likely the more typical species in these marshes. Field sedge is also common in slightly drier situations.

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
CB	**Cutbank**	**IDFxh1**	**N/A**

Edge of a road cut that is upslope or downslope of a road and was created by the excavation of a hillside.

SITE INFORMATION

Common Terrain Types:

- anthropogenic

Slope position:	upper
Slope (%):	various
Aspect:	various
Soil Moisture Regime:	various
Soil Nutrient Regime:	various

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
CD	**ActFd –Common Snowberry – Red-osier Dogwood Riparian**	**IDFxh1**	**00**

Typic unit occurs on gentle slopes with deep, medium textured soils (d, j and m are assumed modifiers).

This forest ecosystem is commonly associated with active floodplains and fluvial terraces with subsurface water (CDa, CDac, CDct, CDt). This unit is also found as a fringe around ponds (CD) and along the Okanagan Lake foreshore (CDc, CD). Forests are often mixed black cottonwood with Douglas-fir, and mature and older forests are usually multi-layered. The understory is typically rich and shrubby, often dominated by. Forbs (star-flowered false Solomon's seal), grasses (blue wildrye) and ragged mosses are uncommon and scattered.

List of mapped units:

CDa	active floodplain	CDcs	coarse-texture, shallow (mostly likely 50-100cm) soils)
CDac	active floodplain, coarse-textured soils	CDct	coarse-textured soil, fluvial terrace
CDc	coarse-textured soils (commonly mapped on Okanagan Lake foreshore)	CDt	fluvial terrace
CDcn	fluvial fan, coarse-textured soils		

SITE INFORMATION

Common Terrain Types:

- gentle and level fluvial sites and active floodplains

Slope position:	level, lower and toe
Slope (%):	
Aspect:	none
Soil Moisture Regime:	subhygric – hygric
Soil Nutrient Regime:	rich

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
CD	ActFd –Common Snowberry – Red-osier Dogwood Riparian	IDFxh1	00

	Structural Stage	3	4	5	6	7	
Trees	*Pseudotsuga menziesii* var. *glauca*			*	**	**	Douglas-fir
	Populus balsamifera ssp. *trichocarpa*	****	***	***	***	***	black cottonwood
	Betula papyrifera		**	**	**	**	paper birch
Shrubs	*Amelanchier alnifolia*	***	**	**	**	**	saskatoon
	Mahonia aquifolium	***	**	**	**	**	tall oregon-grape
	Symphoricarpos albus	*****	****	****	****	****	common snowberry
	Rosa nutkana	***	**	**	**	**	Nootka rose
	Acer glabrum var. *douglasii*	****	***	***	***	***	Douglas maple
	Cornus stolonifera	**	*	*	*	*	red-osier dogwood
Grasses	*Elymus glaucus*			*	*	*	blue wildrye
	Poa pratensis			*	*	*	Kentucky bluegrass
Herbs	*Smilacina stellata*			*	*	*	star-flowered false Solomon's-seal
	Smilacina racemosa			*	*	*	false Solomon’s seal
	Disporum trachycaulum			*	*	*	rough-fruited fairybells
	Taraxacum officinale			*	*	*	dandelion
	Equisetum hyemale	**	*				scouring rush
Mosses	*Brachythecium* sp.				*	*	ragged moss
PLOTS		COG19		COG90	9802070 9802103 9802114 COG101 COG115 COG146 COV07	COG167	

Highlighted species – indicate important forage plants for ungulates
Species – non-native species
* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites
***** >50% cover; occurs in 60% or more of sites

Comments: some sites along the Okanagan Lake foreshore have low tree cover. Some pond fringes have higher Douglas-fir cover and may have tea-leaved willow and water birch as well on these sites.

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
CF	**Cultivated Field**	**IDFxh1**	**N/A**

These are agricultural fields with tilled soils and planted crops or ground cover.

List of mapped units:

CFt	terrace (fluvial or glaciofluvial)	CFw	warm aspect

SITE INFORMATION

Common Terrain Types:

- various

Slope position:	mostly level
Slope (%):	0-10 (25%+)
Aspect:	none
Soil Moisture Regime:	variable, mostly mesic and wetter
Soil Nutrient Regime:	variable

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
CL	**Cliff**	**IDFxh1**	**N/A**

These are steep, vertical or overhanging rock faces. Typically there are scattered plants such as cliff ferns occurring in pockets.

List of mapped units:

CLk	cool aspect	CLw	warm aspect
CLq	very steep (>100%) cool aspect	CLz	very steep (>100%) warm aspect

SITE INFORMATION

Common Terrain Types:

- rock

Slope position:	lower – upper
Slope (%):	100+
Aspect:	all
Soil Moisture Regime:	very xeric
Soil Nutrient Regime:	poor

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
CO	**Cultivated Orchard**	**IDFxh1**	**N/A**

Agricultural areas for growing fruit trees.

SITE INFORMATION

Common Terrain Types:

- various

Slope position:	mostly level
Slope (%):	0-10
Aspect:	none
Soil Moisture Regime:	variable, mostly mesic and wetter
Soil Nutrient Regime:	variable

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
CS	**Common Spikerush Marsh**	**IDFxh1**	**00**

Typic unit occurs on level sites with deep, fine textured soils (assumed modifiers are d, f, and j)
This unit is equivalent to the *Common spike-rush marsh* association in the provincial classification (MacKenzie and Shaw 2000)

These marsh wetland ecosystems occur in standing water as a fringe around ponds, shallow open water and other marshes. The water table often drops to the soil surface in late summer. These sites usually have shallower water than Bulrush marshes or Cattail marshes. They have a variable mixture of common spikerush, reed canary grass (probably due to disturbance) and some floating aquatic species. Soils are typically mineral, but may have a thin organic veneer on top.

SITE INFORMATION

Common Terrain Types:

- lacustrine

Slope position:	depression
Slope (%):	0
Aspect:	none
Soil Moisture Regime:	subhydric
Soil Nutrient Regime:	rich – very rich

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
CS	**Common Spikerush Marsh**	**IDFxh1**	**00**

	Structural Stage	**2b**	
Rushes Grasses Sedges	*Eleocharis palustris*	***	common spike-rush
	Juncus balticus	**	baltic rush
	Phalaris arundinacea	**	reed canarygrass
	Alopecurus aequalis	**	little meadow-foxtail
	Carex spp.	**	sedges
Herbs	*Polygonom amphibium*	**	water smartweed
	Lemna minor	**	common duckweed
	Ranunculus sceleratus	**	celery-leaved buttercup
PLOTS		9802112 COG159	

Highlighted species – indicate important forage plants for ungulates
* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites
***** >50% cover; occurs in 60% or more of sites

Comments: reed canarygrass probably only occurs in disturbed marshes

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
CT	**Cattail Marsh**	**IDFxh1**	**00**

Typic unit occurs on level sites with deep, medium-textured soils (assumed modifiers are d, j, m)
This unit is equivalent to the *Cattail marsh* association in the provincial classification (MacKenzie and Shaw 2000)

This marsh wetland ecosystem commonly occurs as a fringe on ponds or in depressions, often adjacent to open water. Water depths are typically up to 1 m in spring but draw down to the soil surface by late summer; soils remain saturated for most of the season. Some wetlands convert to cattail marshes when they are subject to nutrient loading. These sites are dominated by cattails with few other species. Soils are typically mineral, but may have a thin organic veneer on top.

SITE INFORMATION

Common Terrain Types:

- lacustrine veneer over morainal or glaciofluvial blanket

Slope position:	depression
Slope (%):	0
Aspect:	none
Soil Moisture Regime:	hygric - subhydric
Soil Nutrient Regime:	rich – very rich

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
CT	**Cattail Marsh**	**IDFxh1**	**00**

	Structural Stage	**2a**	
Herbs	*Typha latifolia*	****	common cattail
	Lemna minor	**	common duckweed
PLOTS		COV93	

* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites
***** >50% cover; occurs in 60% or more of sites

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
CW	**Choke cherry – Bluebunch wheatgrass rocky bluff**	**IDFxh1**	**00**

Typic unit occurs on gentle slopes with very shallow soils (assumed modifiers are j and v)

This ecosystem commonly occurs on bedrock bluffs where the bedrock is quite fractured. Shrubs are common, typically occurring in cracks in the rocks. Grasses, forbs, lichens and mosses occur in small soil pockets scattered in amongst the bedrock. These sites tend to occur more commonly in grassland areas. Because these sites tend to have quite a few cracks in the rocks, they are important sites for snakes. Historically, the lack of fuels on these sites meant that they would not have burned and would have been refugia for dry, fire-intolerant species such as Rocky Mountain juniper.

List of mapped units:	
CWk	cool-aspect; slope >25%
CWr	occurs on a ridge
CWw	warm-aspect; slope >25%

SITE INFORMATION

Common Terrain Types:

- rock and very thin colluvial and morainal and glaciofluvial veneers

Slope position:	crest, upper
Slope (%):	0-100
Aspect:	all
Soil Moisture Regime:	very xeric
Soil Nutrient Regime:	poor, medium

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
CW	Choke cherry – Bluebunch wheatgrass rocky bluff	IDFxh1	00

	Structural Stage	3	
Trees	*Pinus ponderosa*	*	ponderosa pine
Shrubs	*Amelanchier alnifolia*	**	saskatoon
	Symphoricarpos albus	**	common snowberry
	Philadelphus lewisii	***	mock-orange
	Prunus virginiana	**	choke cherry
	Juniperus scopulorum	*	Rocky Mountain juniper
	Ribes cereum	*	squaw currant
Grasses and Sedges	*Elymus spicatus*	**	bluebunch wheatgrass
	Bromus japonicus or tectorum	*	Japanese brome or cheatgrass
	Carex rossii	*	Ross' sedge
Herbs	*Selaginella densa or Selaginella wallacei*	**	compact selaginella Wallace's selaginella
	Woodsia scopulina	*	mountain cliff fern
	Balsamorhiza sagittata	*	arrowleaf balsamroot
Mosses and Lichens	*Cladonia* spp.	**	clad lichens
	Tortula ruralis	**	sidewalk moss
	Peltigera rufescens or *Peltigera ponojensis*	*	felt pelt felt pelt
PLOTS		9802113 COG79 COV148 COV172	

Highlighted species – indicate important forage plants for ungulates

Species – non-native species

* incidental cover (less than 1% cover); used as indicator species

** 1-5% cover; occurs in 60% or more of sites

*** 6-25% cover; occurs in 60% or more of sites

**** 26-50% cover; occurs in 60% or more of sites

***** >50% cover; occurs in 60% or more of sites

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
DP	**FdPy - Pinegrass**	**IDFxh1**	**01**

Typic unit occurs on gentle slopes with deep, medium textured soils (d, j and m are assumed modifiers).

This forest ecosystem is commonly associated with gently sloping sites that are neither receiving nor losing moisture (circumesic). Forests are moderately closed with mixed Douglas-fir and ponderosa pine overstories, although historically they would have been quite open. The understory is generally dominated by abundant pinegrass, often with rough fescue and scattered shrubs, forbs, mosses and lichens. Forbs are more abundant on more open sites that have been less subject to ingrowth (or have been thinned). This unit is also common on cool aspects (DPk) where there is usually more of a moss layer. This ecosystem also occurs on gentle glaciofluvial slopes (DP, DPc) or terraces (DPt, DPct) where Ponderosa pine is often more abundant than Douglas-fir but understories are very similar. Mature (structural stage 6) and old (structural stage 7) forests are uncommon because most of the large trees historically present on these sites have been logged. Because of fire exclusion, most sites have become ingrown with higher densities of smaller stems. Rough fescue is quite common and Idaho fescue is quite uncommon on these sites relative to those further south.

List of mapped units:

DPc	coarse-textured soils	DPks	cool aspect (usually NW to E), shallow soils (generally 50-100cm)
DPck	coarse-textured soils, cool aspect (usually north to north-east)	DPn	occurs on a fan
DPct	coarse-textured soils; terrace (usually glacio-fluvial)	DPs	shallow soils (generally 50-100cm)
DPcw	coarse-textured soils; warm aspect (usually SE or WNW; these sites likely have some compensating moisture or occur at upper edge of subzone)	DPsw	shallow soils (generally 50-100cm); warm aspect (usually NW or SE at upper edge of subzone or with some compensating moisture)
DPg	site occurs in a gully	DPt	occurs on a terrace (usually a glaciofluvial terrace)
DPgs	site occurs in a gully with shallow soils (generally 50-100cm)	DPw	warm aspect (usually SE or NW these sites have some compensating moisture or occur at the upper edge of the subzone)
DPgw	gully, warm aspect		
DPk	cool aspect (usually NW to E)		

SITE INFORMATION

Common Terrain Types:

- gentle morainal and glaciofluvial slopes
- moderate to steep cool aspect morainal and glaciofluvial slopes
- glaciofluvial terraces

Slope position:	level and middle (sometimes toe, lower and upper slopes)
Slope (%):	0-30; up to 70% on cool aspects
Aspect:	all
Soil Moisture Regime:	mesic – submesic
Soil Nutrient Regime:	medium (poor, rich)

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
DP	FdPy - Pinegrass	IDFxh1	01

	Structural Stage	3	4	5	6	7	
Trees	*Pseudotsuga menziesii* var. *glauca*	**	****	****	***	***	Douglas-fir
	Pinus ponderosa	**	***	***	***	***	ponderosa pine
Shrubs	*Ceanothus sanguineus*	****	*	*			redstem ceanothus
	Amelanchier alnifolia	**	*	*	*	*	saskatoon
	Mahonia aquifolium	**	*	*	*	*	tall oregon-grape
	Paxistima myrsinites	***	**	**	**	**	falsebox
	Spirea betulifolia	**	**	**	**	**	birch-leaved spirea
	Symphoricarpos albus	***	**	**	**	**	common snowberry
	Holodiscus discolor	**					ocean spray
	Rosa spp.	**	**	**			roses
Grasses and Sedges	*Carex concinnoides*	***	**	**	**	**	northwestern sedge
	Festuca campestris	**	**	**	***	***	rough fescue
	Calamagrostis rubescens	****	**	***	***	***	pinegrass
Herbs	*Balsamorhiza sagittata*	****	**	***	***	***	arrowleaf balsamroot
	Epilobium angustifolium	***					fireweed
	Antennaria neglecta	**	*	*	*	*	
	Fragaria virginiana	***					wild strawberry
	Arnica cordifolia	***	**	**	**	**	heart-leaved arnica
Mosses	*Tortula ruralis*	***	**	**	**	*	sidewalk moss
	Peltigera canina	*	*	*	*	*	dog pelt
	Dicranum sp.		*	*	*	*	
	Polytrichum juniperinum	*	*	*	*	*	juniper haircap moss
	Brachythecium sp.	*	*	*	*	*	ragged moss
PLOTS		COG106, COG111, COG131, COG134, COG135, COV169	9802070, COG49, COV143	COG03, COG04, COG06, COG103, COG114, COG121, COG133, COG150, COG20, COG21, COG25, COG34, COG40, COG55, COG59, COG88, COV109, COV124, COV184, COV211, COV36	COG01, COG05, COG107, COG125, COG31, COG52, COG68, COG69, COG85, COV35	COG78	

Highlighted species – indicate important forage plants for ungulates

* incidental cover (less than 1% cover); used as indicator species

** 1-5% cover; occurs in 60% or more of sites

*** 6-25% cover; occurs in 60% or more of sites

**** 26-50% cover; occurs in 60% or more of sites

***** >50% cover; occurs in 60% or more of sites

Comments: Fireweed seems to be common only after burning (as opposed to logging)

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
DS	**FdPy – Snowberry – Spirea**	**IDFxh1**	**07**

Typic unit occurs on gentle slopes with deep, medium textured soils (d, j and m are assumed modifiers).

This forest ecosystem is commonly associated with gently sloping sites that are receiving some moisture. It is also found on higher floodplain benches along creeks and rivers where there is some sub-surface moisture. These forests are typically have moderately closed Douglas-fir overstories with very shrubby understories dominated by snowberry with some Oregon-grape, Douglas maple, and saskatoon. Often there is scattered pinegrass and/or Kentucky bluegrass with some heart-leaved arnica and other scattered forbs. There is a minimal moss layer with scattered patches of ragged mosses. Because these sites are moist, they likely had a longer fire-return interval than adjacent mesic and drier forests. These sites also tend to recover more quickly after disturbance (such as logging) because they are moister and more productive.

Although these sites are productive and vegetation recovers relatively quickly following disturbances such as logging, the moist soils on these sites are sensitive to disturbance and are difficult to find places for septic fields. Alterations in subsurface water flow present a considerable risk.

List of mapped units:

DSa	occurs on an active floodplain (higher benches)	DSks	occurs on cool aspects (usually N or NE) with shallow soils (generally 50-100cm)
DSc	coarse-textured soils	DSn	occurs on a fan
DSck	coarse-textured soils, cool aspect (most commonly N or NE)	DSq	occurs on very steep cool aspects
DScw	coarse-textured soils, warm aspect (most commonly SE or NW, these sites likely have some compensating moisture)	DSs	occurs on shallow soils (generally 50-100cm; usually at upper edges of subzone, receiving sites)
DSg	site occurs in a gully	DSt	occurs on a terrace (usually fluvial)
DSgs	site occurs in a gully with shallow soils (generally 50-100 cm; usually at upper elevations of subzone; receiving sites)	DSw	warm aspect (usually SE or NW, usually only at higher elevations or sites with some compensating moisture)
DSk	cool aspects (most commonly N or NE)		

SITE INFORMATION

Common Terrain Types:

- gentle morainal and glaciofluvial slopes

Slope position:	level, lower, toe, middle, depression
Slope (%):	0-15% (sometimes steeper on cool aspects)
Aspect:	none, cool
Soil Moisture Regime:	subhygric
Soil Nutrient Regime:	medium – rich

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
DS	FdPy – Snowberry – Spirea	IDFxh1	07

	Structural Stage	3	4	5	6	7	
Trees	*Pseudotsuga menziesii* var. *glauca*	**	****	****	****	***	Douglas-fir
	Populus tremuloides	**	**	**	**	*	trembling aspen
	Betula paperifera	**	**	**	**	*	paper birch
Shrubs	*Ceanothus sanguineus*	****	**				redstem ceanothus
	Amelanchier alnifolia	**	**	**	**	**	saskatoon
	Mahonia aquifolium	**	**	**	**	**	tall oregon-grape
	Paxistima myrsinites	**	**	**	**	**	falsebox
	Acer glabrum	***	**	**	**	**	Douglas maple
	Spirea betulifolia	***	**	**	**	**	birch-leaved spirea
	Symphoricarpos albus	*****	****	****	****	****	common snowberry
	Rosa nutkana	**	**	**	**	**	Nootka rose
Grasses	*Calamagrostis rubescens*	***	**	**	**	**	pinegrass
	Elymus glaucus	**	*	*	*	*	blue wildrye
	Poa pratensis	**	**	**	**	**	Kentucky bluegrass
Herbs	*Arnica cordifolia*	***	**	**	**	**	heart-leaved arnica
Mosses	*Brachythecium* sp.	**	**	**	**	**	ragged moss
PLOTS		COG58 COG144 COV176		9802121 9802127 COG93 COG112 COG148 COG155 COG162 COV83	9802049 COG24 COG89 COG101 COG119 COG120 COG164		

Highlighted species – indicate important forage plants for ungulates
Species – non-native species
* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites
***** >50% cover; occurs in 60% or more of sites

Comments: Douglas maple is more common on slightly moister sites; mixed and deciduous sites usually have a more diverse shrub layer; star-flowered false Solomon's seal, mountain sweet-cicely, and western meadowrue are often present on these mixed/pure deciduous sites as well

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
DW	**FdPy – Bluebunch wheatgrass - Pinegrass**	**IDFxh1**	**03**

Typic unit occurs on moderate to steep warm aspects with deep, medium textured soils (d, m and w are assumed modifiers).

This forest ecosystem is common on moderate to steep warm aspects (excluding southeast and west aspects which are usually /04 sites). Sometimes occurs on cooler aspects were soils are shallower. Also occurs on ridges and crests where soils are not shallow enough to be the IDFxh1 /02 (PB). Forests are open and dominated by bunchgrasses, particularly bluebunch wheatgrass with scattered forbs (mostly balsamroot). Rough fescue commonly occurs, in contrast with the Idaho fescue that more commonly occurs on these sites further south. Mosses and lichens are scattered and uncommon.

List of mapped units:

DWc	coarse-textured soils (usually glaciofluvial)	DWks	cool aspect (generally NW or ESE), shallow soils (20-100cm)
DWck	coarse-textured soils (usually glaciofluvial), cool aspect (generally NW or ESE; usually only at lower elevations)	DWkv	cool aspect (generally NW or ESE), very shallow soils (<20cm)
DWcs	coarse-textured soils; shallow soils (20-100cm)	DWr	ridge
DWf	fine-textured soils	DWrs	ridge, shallow soils (20-100cm)
DWj	gentle slope		
DWjs	gentle slope, shallow soils (20-100cm)	DWs	shallow soils (20-100cm)
DWk	cool aspect (generally NW or ESE; usually only at lower elevations)	DWv	very shallow soils (<20cm; usually only at upper elevations)

SITE INFORMATION

Common Terrain Types:

- colluvial and morainal slopes (Cbk, Mbk)
- thin colluvial and morainal slopes (Cv, Mv)
- moderate glaciofluvial slopes (FGk)

Slope position:	middle and upper
Slope (%):	(30) 40 – 75%
Aspect:	south, southwest, west (also southeast on glaciofluvial slopes and shallow soils)
Soil Moisture Regime:	subxeric (xeric)
Soil Nutrient Regime:	poor – medium

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
DW	FdPy – Bluebunch wheatgrass - Pinegrass	IDFxh1	03

	Structural Stage	3	4	5	6	7	
Trees	*Pseudotsuga menziesii* var. *glauca*	**	***	***	***	***	Douglas-fir
	Pinus ponderosa	**	****	***	***	***	ponderosa pine
Shrubs	*Amelanchier alnifolia*	**	**	**	**	**	saskatoon
	Mahonia aquifolium	**					tall oregon-grape
	Spirea betulifolia	***	**	**	**	**	birch-leaved spirea
Grasses	*Elymus spicatus*	***	***	***	***	***	bluebunch wheatgrass
	Bromus tectorum	**	**	**	**	**	cheatgrass
	Koeleria macrantha	***	**	**	**	**	junegrass
	Poa fendleriana	***	**	**	**	**	Fendler's bluegrass
	Festuca campestris	***	**	**	**	***	rough fescue
Herbs	*Balsamorhiza sagittata*	***	**	**	**	**	arrowleaf balsamroot
	Antennaria microphylla or *Antennaria parviflora* or *Antennaria umbrinella*	**	*	*	*	*	white pussytoes Nuttall's pussytoes umber pussytoes
	Achillea millefolium	**	**	**	**	**	yarrow
Mosses and Lichens	*Cladonia spp.*	**	**	**	**	**	clad lichens
	Tortula ruralis	**	*	*	*	*	sidewalk moss
	Peltigera rufescens or *Peltigera ponojensis*	*	*	*	*	*	felt pelt felt pelt
	Brachythecium sp.	*	*	*	*	*	
PLOTS		COG141		COG108 COG138 COG163	COG09 COG104 COG109 COG117 COG126 COG130 COG166 COV14 COV27		

Highlighted species – indicate important forage plants for ungulates
Species – non-native species
* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites
***** >50% cover; occurs in 60% or more of sites

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
ES	**Exposed Soil**	**IDFxh1**	**N/A**

These are areas of exposed soils and typically include recent disturbances such as soil erosion.

List of mapped units:			
ESk	cool aspect	ESw	warm aspect

SITE INFORMATION

Common Terrain Types:

- various

Slope position:	lower – upper
Slope (%):	usually 60%+
Aspect:	all
Soil Moisture Regime:	very xeric
Soil Nutrient Regime:	poor

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
FO	**FdPy –Saskatoon – Mock orange**	**IDFxh1**	**00**

Typic unit occurs on moderate to steep slopes with deep, coarse-textured (rocky) soils (c, and d are assumed modifiers).

This forest ecosystem is commonly associated with steep colluvial sites with rocky soils. It occurs on both cool (FOk) and warm (FOw) aspects The soil matrix is a mixture of both angular rocks and sandy, silty material. The overstory is generally open and dominated by Douglas-fir with scattered ponderosa pine. Understories are often quite shrubby with snowberry, saskatoon and mock orange. There is usually scattered bluebunch wheatgrass. A large portion of the soil surface is dominated by small rocks.

List of mapped units:	
FOk	cool aspect
FOw	warm aspect

SITE INFORMATION

Common Terrain Types:

- moderate and steep colluvial slopes

Slope position:	lower to upper
Slope (%):	50-75%
Aspect:	all
Soil Moisture Regime:	submesic – subxeric
Soil Nutrient Regime:	medium, poor

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
FO	**FdPy –Saskatoon – Mock orange**	**IDFxh1**	**00**

	Structural Stage	3	4	5	6	7	
Trees	*Pseudotsuga menziesii* var. *glauca*	*	***	***	***	***	Douglas-fir
	Pinus ponderosa		**	**	**	**	ponderosa pine
Shrubs	*Amelanchier alnifolia*	***	***	***	***	***	saskatoon
	Spirea betulifolia	****	***	***	***	***	birch-leaved spirea
	Symphoricarpos albus	*****	****	****	****	****	common snowberry
	Paxistima myrsinites	**	*	*	*	*	falsebox
	Acer glabrum	**	**	**	**	**	Douglas maple
Grasses	*Elymus spicatus*	***	**	**	**	**	bluebunch wheatgrass
	Calamagrostis rubescens	***	**	**	**	**	pinegrass
Herbs	*Penstemon fruticosa*	*	*	*	*	*	shrubby penstemon
	Apocynum androsaemifolium	***	**	**	**	**	spreading dogbane
PLOTS				COG127 COV211	COG124 COG165		

Highlighted species – indicate important forage plants for ungulates

* incidental cover (less than 1% cover); used as indicator species

** 1-5% cover; occurs in 60% or more of sites

*** 6-25% cover; occurs in 60% or more of sites

**** 26-50% cover; occurs in 60% or more of sites

***** >50% cover; occurs in 60% or more of sites

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
FW	**Idaho fescue – Bluebunch wheatgrass**	**IDFxh1**	**91**

Typic unit occurs on gentle slopes with deep, medium-textured soils (assumed modifiers are d, j, m)

This grassland ecosystem commonly occurs on gentle warm aspects, levels sites, and cool aspects (unless they are forested). A mixture of rough fescue and bluebunch wheatgrass with balsamroot and other herbs dominates late seral sites. In contrast to sites further south, Idaho fescue was not observed on this site unit within the study area. Many sites have significant pocket gopher digging in them. Unfortunately, most of these sites are highly disturbed and have a significant component of weeds. Sites with more than 10% weeds are mapped as seral associations. These are described below.

FW:nb ***$Columbian needlegrass – Balsamroot seral association***

This seral association was only observed in the grasslands at the west end of Lambly (Bear Creek). It is a mid- to late-seral site.

FW:wk ***$Bluebunch wheatgrass – Knapweed seral association***

This is a mid- to late-seral seral association. On these sites there is still a reasonable component of bluebunch wheatgrass with either knapweed, and/or cheatgrass.

FW:kc ***$Knapweed - Cheatgrass seral association***

These are early and very early seral sites. There is little or no bluebunch wheatgrass remaining on these sites. They are dominated by non-native plants including knapweed, cheatgrass and sulphur cinquefoil.

List of mapped units:

FWc	coarse-textured soils (usually glaciofluvial)	FWrs	ridge, shallow soils (generally 50-100cm)
FWcs	coarse-textured soils, shallow soils (50-100cm)	FWs	shallow soils (50-100cm)
FWcw	coarse-textured soils, warm aspect; typically 25-35% slopes on SE or WNW aspects	FWsw	shallow soils (50-100cm), warm aspect; typically 25-35% slopes on SE or WNW aspects
FWk	cool aspect	FWt	terrace (glaciofluvial)
FWks	cool aspect, shallow soils (20-100cm)	FWw	warm aspect; typically 25-35% slopes on SE or WNW aspects

SITE INFORMATION

Common Terrain Types:

- aeolian veneers overlying morainal or glaciofluvial blankets

Slope position:	middle to upper
Slope (%):	0-35%
Aspect:	all
Soil Moisture Regime:	submesic – mesic
Soil Nutrient Regime:	medium – rich

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
FW	Idaho fescue – Bluebunch wheatgrass	IDFxh1	91

	Structural Stage Seral Association	2b FW	2b FW:nb	2b FW:wk	2b FW:kc	
Grasses	*Elymus spicatus*	****		***	*	bluebunch wheatgrass
	Bromus tectorum or *Bromus japonicus*	*	**	***	****	cheatgrass or Japanese brome
	Festuca campestris	***				rough fescue
	Koeleria macrantha	**	**	**		junegrass
	Stipa nelsonii		***			Columbian needlegrass
	Poa secunda		***			Sandberg's bluegrass
Herbs	*Artemisia frigida*	*	*	*		pasture sage
	Balsamorhiza sagittata	***	***	**		arrowleaf balsamroot
	Centaurea diffusa or *Centaurea biebersteinii*			***	****	diffuse knapweed or spotted knapweed
	Erigeron spp.	*	*	*		fleabanes and daisies
	Lupinus sericeus	**		**		silky lupine
	Eriogonum heracleoides	*	*	*		parsnip-flowered buckwheat
	Lithospermum ruderale	*	*	*		lemonweed
	Potentilla recta			***	***	sulphur cinquefoil
Mosses and Lichens	*Cladonia* spp.	**	**	*		clad lichens
	Tortula ruralis	**	**	*		sidewalk moss
	Peltigera rufescens or *Peltigera ponojensis*	*	*			felt pelt felt pelt
PLOTS		9802105 9802115 COV90 COV174	COG158	COV113 COV22	COV34 COV119 COV122 COV123	

Highlighted species – indicate important forage plants for ungulates
Species – non-native species
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** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites
***** >50% cover; occurs in 60% or more of sites

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
GB	**Gravel Bar**	**IDFxh1**	**N/A**

Areas of gravel and cobbles in rivers formed by waves and currents. These sites have less than 10% vegetation cover.

SITE INFORMATION

Common Terrain Types:	
• fluvial	
Slope position:	level
Slope (%):	0
Aspect:	none
Soil Moisture Regime:	hygric
Soil Nutrient Regime:	various

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
GP	**Gravel Pit**	**IDFxh1**	**N/A**

An area of exposed soil formed through the removal of sand and gravel

SITE INFORMATION

Common Terrain Types:	
• glaciofluvial	
Slope position:	various
Slope (%):	various
Aspect:	all
Soil Moisture Regime:	xeric
Soil Nutrient Regime:	poor

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
OW	**Shallow Open Water**	**IDFxh1**	**N/A**

These are areas of permanent open water that are less than 2m deep. There is less than 10% emergent vegetation but floating aquatics such as bladderwort may be present

SITE INFORMATION

Common Terrain Types:

- lacustrine

Slope position:	depression
Slope (%):	0
Aspect:	none
Soil Moisture Regime:	hygric
Soil Nutrient Regime:	variable

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
PB	**FdPy – Bluebunch wheatgrass – Balsamroot**	**IDFxh1**	**02**

Typic unit occurs on warm aspects with medium-textured shallow soils (m, s and w are assumed modifiers).

This forest ecosystem is commonly associated with shallow or very shallow soils and bedrock outcrops (PB, PBrv, PBv). Forests are very open with scattered large trees, often growing in bedrock fractures. The understory is variably depending on soil depth with more vegetation occurring on deeper soil pockets. Scattered shrubs and bunchgrasses (bluebunch wheatgrass and rough fescue) dominate the understory. A lichen and moss crust may be present on undisturbed sites. This ecosystem also occurs on steep glaciofluvial slopes with raveling, sandy surface soils (PBcd). Trees and other vegetation is usually widely spaced and scattered on these slopes.

List of mapped units:

PBc	coarse-textured soils	PBkv	cool aspect (usually SE or NW), very shallow soils (<20cm), exposed pockets of bedrock are usually present on-site
PBcd	deep, coarse-textured soils (occurs on steep, sandy glaciofluvial slopes, deep surface soils are often active raveling)	PBq	very steep cool aspect (>100%)
PBcv	coarse-textured soils; very shallow soils (<20cm)	PBr	ridge
PBd	deep soils (>100cm)	PBrv	ridge, very shallow soils, exposed pockets of bedrock are usually present on-site (this is the most common situation)
PBj	gentle slope (<25%)	PBv	very shallow soils (<20cm), exposed pockets of bedrock are usually present on-site
PBjv	gentle slope (<25%), very shallow soils (<20cm), exposed pockets of bedrock are usually present on-site		
PBk	cool aspect (usually SE or NW), usually only occurs at lower elevations		

SITE INFORMATION

Common Terrain Types:

- Thin (PB)and very thin (PBv) colluvial, morainal and glaciofluvial veneers
- Steep glaciofluvial slopes (PBcd)

Slope position:	upper and crest (and middle slopes on steep glaciofluvial sites)
Slope (%):	0-70% (50-75% only for PBcd)
Aspect:	none, south, southwest
Soil Moisture Regime:	xeric to subxeric
Soil Nutrient Regime:	poor (very poor, medium)

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
PB	**FdPy – Bluebunch wheatgrass – Balsamroot**	**IDFxh1**	**02**

	Structural Stage	3	4	5	6	7	
Trees	*Pseudotsuga menziesii* var. *glauca*	**	**	**	**	**	Douglas-fir
	Pinus ponderosa	**	***	***	***	***	ponderosa pine
Shrubs	*Penstemon fruiticosa*	*	*	*	*	*	shrubby penstemon
	Amelanchier alnifolia	**	*	**	**	**	saskatoon
	Mahonia aquifolium	*	*	*	*	*	tall oregon-grape
	Spirea betulifolia	**	*	**	**	**	birch-leaved spirea
	Symphoricarpos albus	**	*	**	**	**	common snowberry
Grasses and Sedges	*Elymus spicatus*	***	***	***	***	***	bluebunch wheatgrass
	Bromus japonicus or tectorum	*	*	*	*	*	Japanese brome or cheatgrass
	Festuca campestris	**	**	**	**	**	rough fescue
Herbs	*Selaginella densa or Selaginella wallacei*	*	*	*	*	*	compact selaginella Wallace's selaginella
	Woodsia scopulina	*	*	*	*	*	mountain cliff fern
	Balsamorhiza sagittata	**	**	**	**	**	arrowleaf balsamroot
	Heuchera cylindrica	*	*	*	*	*	round-leaved alumroot
	Lomatium spp.	*	*	*	*	*	parsleys
Mosses and Lichens	*Cladonia spp.*	**	**	**	**	**	clad lichens
	Tortula ruralis	**	**	**	**	**	sidewalk moss
	Peltigera rufescens or *Peltigera ponojensis*	*	*	*	*	*	felt pelt felt pelt
PLOTS		COG149 COG157 COV45			9802102 9802110 COG116 COG136 COG70 COG81 COG92		

Highlighted species – indicate important forage plants for ungulates
Species – non-native species
* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites
***** >50% cover; occurs in 60% or more of sites

Comments: cover of Japanese brome or cheatgrass will usually increase with disturbance, spreading dogbane is often present on steep glaciofluvial sites

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
PD	**Pond**	**IDFxh1**	**N/A**

These are small bodies of permanent water greater than 2m deep but less than 50ha in size.

SITE INFORMATION

Common Terrain Types:	
• lacustrine	
Slope position:	depression
Slope (%):	0
Aspect:	none
Soil Moisture Regime:	hydric
Soil Nutrient Regime:	variable

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
RE	**Resevoir**	**IDFxh1**	**N/A**

A man-made body of water created by impounding water behind a dam, berm, dyke, or wall.

SITE INFORMATION

Common Terrain Types:	
• lacustrine	
Slope position:	depression
Slope (%):	0
Aspect:	none
Soil Moisture Regime:	hydric
Soil Nutrient Regime:	various

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
RF	**Prairie Rose – Idaho fescue**	**IDFxh1**	**97**

Typic unit occurs on gentle slopes with deep, medium-textured soils (assumed modifiers are d, j, and m)

This shrubland ecosystem commonly occurs in moisture collecting depressions and swales in grassland areas. These sites are usually larger and moister than IDFxh1 /96 BN sites. They are dominated by shrubs, primarily snowberry and roses. Forbs and grasses are scattered in openings between shrubs. These sites are often less disturbed than the surrounding grasslands because they provide less forage for cattle.

List of mapped units:			
RFc	coarse-textured soils	RFk	cool aspect
RFg	occurs in a gully	RFw	warm aspect

SITE INFORMATION

Common Terrain Types:

- aeolian veneer over morainal or glaciofluvial blanket

Slope position:	lower, toe, depression
Slope (%):	0-15
Aspect:	none
Soil Moisture Regime:	subhygric
Soil Nutrient Regime:	medium – rich

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
RF	**Prairie Rose – Idaho fescue**	**IDFxh1**	**97**

	Structural stage	**3a**	**3b**	
Shrubs	*Symphoricarpos albus*	*****	****	common snowberry
	Rosa woodsii	***	***	prairie rose
	Rosa nutkana	***	***	Nootka rose
	Prunus virginiana		**	choke cherry
	Amelanchier alnifolia		**	saskatoon
Grasses	*Poa pratensis*	**	**	Kentucky bluegrass
Herbs	*Taraxacum officinale*	**		dandelion
	Cynoglossum officinale	*		hound's tongue
	Senecio integerrimus	*		western groundsel
PLOTS		9802111 COG160 COG43 COV33		

Highlighted species – indicate important forage plants for ungulates
Species – non-native species
* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites
***** >50% cover; occurs in 60% or more of sites

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
RI	**River**	**IDFxh1**	**N/A**

A permanent or intermittent watercourse that flows between banks.

SITE INFORMATION

Common Terrain Types:	
• fluvial	
Slope position:	level
Slope (%):	0
Aspect:	none
Soil Moisture Regime:	hygric
Soil Nutrient Regime:	variable

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
RO	**Rock Outcrop**	**IDFxh1**	**N/A**

These are areas of exposed bedrock with less than 10% vegetation cover. On sites with fractured bedrock, some plants may be growing out of rock cracks. Generally rock outcrops on the east side of the study area had more fractures than those on the west side of the study area.

List of mapped units:

ROk	cool aspect	ROr	ridge
ROq	very steep (>100%) cool aspect	ROw	warm aspect
		ROz	very steep (>100%) warm aspect

SITE INFORMATION

Common Terrain Types:	
• rock	
Slope position:	upper, crest
Slope (%):	variable
Aspect:	various
Soil Moisture Regime:	very xeric
Soil Nutrient Regime:	poor

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
RP	**Road Surface**	**IDFxh1**	**N/A**

A gravel or paved road used for vehicular travel.

SITE INFORMATION

Common Terrain Types:	
• anthropogenic	
Slope position:	various
Slope (%):	various
Aspect:	various
Soil Moisture Regime:	N/A
Soil Nutrient Regime:	N/A

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
RR	**Rural**	**IDFxh1**	**N/A**

Rural areas of development with scattered houses intermingled with native vegetation or cultivated areas.

SITE INFORMATION

Common Terrain Types:	
• various	
Slope position:	various
Slope (%):	various
Aspect:	various
Soil Moisture Regime:	various
Soil Nutrient Regime:	various

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
RS	**CwFd – False Solomon's Seal**	**IDFxh1**	**00**

Typic unit occurs on gentle slopes with deep, medium textured soils (d, j and m are assumed modifiers).

This forest ecosystem is commonly associated with fluvial sites (terraces, slopes) and gullies with the influence of cold air drainage. Forests are closed with mixed western red cedar, Douglas-fir and paper birch overstories. A diverse mixture of shrubs and forbs generally dominates the understory.

List of mapped units:

RSa	active floodplain	RSg	occurs in a gully
RSac	active floodplain; coarse-textured soils		

SITE INFORMATION

Common Terrain Types:

- fluvial plains and terraces

Slope position:	level, lower and toe
Slope (%):	
Aspect:	none
Soil Moisture Regime:	subhygric – hygric
Soil Nutrient Regime:	medium, rich

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
RS	**CwFd – False Solomon's Seal**	**IDFxh1**	**00**

	Structural Stage	3	4	5	6	7	
Trees	*Pseudotsuga menziesii* var. *glauca*	**	***	***	***	***	Douglas-fir
	Thuja plicata	***	****	****	****	****	western red cedar
	Populus balsamifera ssp. *trichocarpa*	***	**	**	**	*	black cottonwood
	Betula paperifera	**	*	*	*	*	paper birch
Shrubs	*Amelanchier alnifolia*	**	**	**	**	**	saskatoon
	Symphoricarpos albus	**	*	*	*	*	common snowberry
	Clematis occidentalis	*	*	*	*	*	Columbia bower
	Paxistima myrsinites	***	**	**	**	**	falsebox
	Rosa nutkana	**	*	*	*	*	Nootka rose
	Ribes lacustre	**	*	*	*	*	black gooseberry
	Acer glabrum var. *douglasii*	***	**	**	**	**	Douglas maple
	Cornus stolonifera	**	*	*	*	*	red-osier dogwood
Sedges	*Carex* spp.	***					sedges
Grasses	*Elymus glaucus*	***	*	*	*	*	blue wildrye
Herbs	*Smilacina racemosa*	***	*	*	*	*	false Solomon's-seal
	Osmorhiza berteroi	**	*	*	*	*	mountain sweet-cicely
	Aralia nudicaulis	**	**	**	**	**	sarsaparilla
	Viola canadensis	*	*	*	*	*	Canada violet
	Equisetum arvense	****	**	**	**	**	common horsetail
Mosses	*Brachythecium* sp.	*	*	*	*	*	ragged moss
	Mnium sp.	*	**	**	**	**	leafy moss
PLOTS				9802069 COG94 COG102	COG02 COG128 COV15		

Highlighted species – indicate important forage plants for ungulates
* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites
***** >50% cover; occurs in 60% or more of sites

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
SB	**Selaginella – Bluebunch wheatgrass rock outcrop**	**IDFxh1**	**00**

Typic unit occurs on gentle slopes with very shallow soils (assumed modifiers are j and v)

This grassland ecosystem commonly occurs on bedrock outcrops with low relief, generally unfractured bedrock. Selaginella and rusty steppe moss with some grasses and forbs dominate these sites. Shrubs are sometimes present but are quite uncommon. This unit is quite commonly scattered as small sites in a forested matrix. Some sites are very disturbed and dominated by weeds. This seral association is described below.

SB:cg *Cheatgrass seral association*
This seral association is dominated by cheatgrass.

List of mapped units:			
SBk	cool aspect	SBr	ridge
SBks	cool aspect (generally SE or NW), shallow soils (generally 20-50cm)	SBw	warm aspect

SITE INFORMATION

Common Terrain Types:
- rock, very thin morainal, glaciofluvial and colluvial veneers

Slope position:	crest, upper
Slope (%):	0-100
Aspect:	all
Soil Moisture Regime:	very xeric
Soil Nutrient Regime:	poor, medium

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
SB	**Selaginella – Bluebunch wheatgrass rock outcrop**	**IDFxh1**	**00**

	Structural Stage Seral stage	**2a SB**	**2a SB:cg**	
Trees	*Pinus ponderosa*	*	*	ponderosa pine
Shrubs	*Amelanchier alnifolia*	*	*	saskatoon
Grasses and Sedges	*Elymus spicatus*	**	*	bluebunch wheatgrass
	Festuca campestris	**		rough fescue
	Bromus japonicus or tectorum	*	***	Japanese brome or cheatgrass
	Poa secunda	*	*	Sandberg's bluegrass
Herbs	*Selaginella densa* or *Selaginella wallacei*	***	***	compact selaginella Wallace's selaginella
	Eriogonum heracleoides	*	*	parsnip-flowered buckwheat
	Achillea millefolium	*	*	yarrow
	Erigeron sp.	*	*	daisy or fleabane
	Geum triflorum	*		old man's whiskers
	Sedum stenopetalum	*	*	worm-leaved stonecrop
	Balsamorhiza sagittata	*	*	arrowleaf balsamroot
Mosses and Lichens	*Cladonia* spp.	**	*	clad lichens
	Tortula ruralis	**	*	sidewalk moss
	Peltigera rufescens or *Peltigera ponojensis*	*	*	felt pelt felt pelt
PLOTS		COG96 COG151 COV45 COV73 COV94 COV100 COV136 COV137 COV297	COV204	

Highlighted species – indicate important forage plants for ungulates
Species – non-native species
* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites
***** >50% cover; occurs in 60% or more of sites

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
SD	**SxwFd – Douglas maple – Dogwood**	**IDFxh1**	**08**

Typic unit occurs on gentle slopes with deep, medium textured soils (d, j and m are assumed modifiers).

This forest ecosystem is commonly associated with gullies with intermittent or permanent streams or subsurface water flow. These are diverse, rich sites with mixed coniferous (Douglas-fir) and deciduous (paper birch, aspen, black cottonwood) overstories. The understories are dominated by diverse mixture of shrubs. Forbs are diverse but not abundant and mosses are scattered on these sites. These sites are similar to 00 RS sites, but are apparently warmer, as western red cedar is relatively uncommon on these sites. These moist sites likely had a longer fire return interval than adjacent upland areas.

Although these sites are productive and vegetation recovers relatively quickly following disturbances such as logging, the moist soils on these sites are sensitive to disturbance and are difficult to find places for septic fields. Alterations in subsurface water flow present a considerable risk.

List of mapped units:

SDa	active floodplains	SDg	gullies, usually associated with permanent or intermittent creeks
SDac	active floodplains, coarse-textured soils	SDgk	gullies (usually with creeks), cool aspect
SDag	active floodplain in a gully	SDgw	occurs in gullies on warm aspects
SDcg	coarse-textured soils; occurs in a gully	SDk	occurs on cool aspects (with seepage)
SDf	fine-textured soils (glaciolacustrine)	SDt	occurs on fluvial terraces
SDfg	fine-textured soils; occurs in a gully		

SITE INFORMATION

Common Terrain Types:

- gentle fluvial and morainal sites
- occasionally found on moist glaciolacustrine sites

Slope position:	lower, toe (depression)
Slope (%):	0-15%
Aspect:	none
Soil Moisture Regime:	subhygric, hygric
Soil Nutrient Regime:	(medium) rich

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
SD	**SxwFd – Douglas maple – Dogwood**	**IDFxh1**	**08**

	Structural Stage	3	4	5	6	7	
Trees	*Pseudotsuga menziesii* var. *glauca*	*	***	***	***	***	Douglas-fir
	Populus tremuloides	**	***	***	***	*	trembling aspen
	Populus balsamifera ssp. *trichocarpa*	**	**	**	*	*	black cottonwood
	Betula paperifera	****	***	***	***	**	paper birch
Shrubs	*Symphoricarpos albus*	****	***	***	***	***	common snowberry
	Rosa nutkana	**	**	**	**	**	Nootka rose
	Ribes lacustre	**	*	*	*	*	black gooseberry
	Acer glabrum var. *douglasii*	****	***	***	***	***	Douglas maple
	Salix bebbianna	***	*				Bebb's willow
	Cornus stolonifera	***	**	**	**	**	red-osier dogwood
	Betula occidentalis	***	**	**	**	**	water birch
	Rubus parviflorus	***	**	**	**	**	thimbleberry
Grasses	*Carex* spp.	***					sedges
	Poa pratensis	**	**	**	**	**	Kentucky bluegrass
Herbs	*Aralia nudicaulis*	**	**	**	**	**	sarsaparilla
	Rubus pubescens	***	**	**	**	**	trailing raspberry
	Smilacina stellata	*	*	*	*	*	star-flowered false Solomon's-seal
	Osmorhiza berteroi	**	*	*	*	*	mountain sweet-cicely
	Viola canadensis	*	*	*	*	*	Canada violet
	Urtica dioica	*	*	*	*	*	stinging nettle
	Equisetum arvense	***	*	*	*	*	common horsetail
Mosses	*Mnium* sp.	*	*	*	*	*	leafy moss
PLOTS		COG132 COG152		COG32 COG86	COG51 COV18 COV30 COV38 COV54 COV86		

Highlighted species – indicate important forage plants for ungulates
Species – non-native species
* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites
***** >50% cover; occurs in 60% or more of sites

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
SM	**Sedge Marsh**	**IDFxh1**	**00**

Typic unit occurs on level sites with deep, fine-textured soils (assumed modifiers are d, f, and j)
This unit is equivalent to the *Woolly sedge marsh* and *Water sedge – Beaked sedge fen* units in the provincial classification (MacKenzie and Shaw 2000)

This ecosystem commonly occurs on the edges of larger wetlands (fens) or in depressions with water tables above or near the soil surface. These may be dominated by a variety of sedge species (often woolly sedge, beaked sedge or water sedge) depending on the site and disturbance. Our one sample was dominated by woolly sedge. Soils are typically mineral, but may sometimes have a thin organic veneer on top.

SITE INFORMATION

Common Terrain Types:

- lacustrine veneer over morainal or glaciofluvial blanket

Slope position:	depression
Slope (%):	0
Aspect:	none
Soil Moisture Regime:	hygric - subhydric
Soil Nutrient Regime:	rich

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
SM	**Sedge Marsh**	**IDFxh1**	**00**

	Structural Stage	**2b**	
Sedges	*Carex lanuginosa*	****	woolly sedge
Rushes	*Juncus balticus*	**	baltic rush
	Carex spp.	**	sedges
PLOTS		COG44	

Highlighted species – indicate important forage plants for ungulates
* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites
***** >50% cover; occurs in 60% or more of sites

Comments: Beaked sedge and water sedge probably also commonly occur

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
SO	**Saskatoon – Mock orange Talus**	**IDFxh1**	**00**

Typic unit occurs on both warm and cool steep slopes with deep, coarse textured soils (blocky) (c, and d are assumed modifiers).

This ecosystem is commonly associated with steep, blocky talus slopes with minimal soil in pockets between blocks. Scattered trees (Douglas-fir, ponderosa pine and/or aspen) and scattered shrubs (mock orange, snowberry, ocean spray) grow in soil pockets between blocks. Often cliff ferns (a very characteristic species) and scattered grasses are found growing in soils pockets. Vegetation cover is generally higher on sites with smaller blocks and more soil. Cool aspects more commonly have trees on them. Sites that are dominated by shrubs will not necessarily succeed into a forested structural stage. Historically, these sites would not have enough fuel to burn. Thus they would be have been a seed source for some dry refugia species that are fire intolerant such as Rocky Mountain juniper.

Forested structural stages may include sites with less than 10% tree cover (6-9%). These sites are included as forested structural stages because the tree cover is significant for wildlife interpretations.

List of mapped units:			
SOk	cool aspect	SOsw	shallow soils (20-100cm), warm aspect
SOks	cool aspect, shallow soils (20-100cm)	SOw	warm aspect

SITE INFORMATION

Common Terrain Types:

- rubbly colluvium

Slope position:	lower to upper
Slope (%):	50-75%
Aspect:	all
Soil Moisture Regime:	subxeric to very xeric
Soil Nutrient Regime:	poor to medium

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
SO	**Saskatoon – Mock orange Talus**	**IDFxh1**	**00**

	Structural Stage	3	4	5	6	7	
Trees	*Pseudotsuga menziesii* var. *glauca*	*	**	**	**	***	Douglas-fir
	Pinus ponderosa	*	**	**	**	**	ponderosa pine
	Populus tremuloides		**	**	**		trembling aspen
Shrubs	*Ceanothus sanguineus*	*	**	**	*	*	redstem ceanothus
	Amelanchier alnifolia	**	**	**	**	**	saskatoon
	Mahonia aquifolium	*	*	*	*	*	tall oregon-grape
	Spirea betulifolia	*	*	*	*	*	birch-leaved spirea
	Acer glabrum var. *douglasii*	**	**	**	**	**	Douglas maple
	Symphoricarpos albus	**	**	**	**	**	common snowberry
	Juniperus scopulorum	*	*	*	*	*	Rocky mountain juniper
	Philadelphus lewisii	***	**	**	**	**	mock-orange
	Prunus virginiana	*	*	*	*	*	choke cherry
Grasses	*Calamagrostis rubescens*	*	*	*	*	*	pinegrass
	Elymus spicatus	*	*	*	*	*	bluebunch wheatgrass
Herbs	*Woodsia* sp.	*	*	*	*	*	cliff fern
	Balsamorhiza sagittata	*	*	*	*	*	arrowleaf balsamroot
	Penstemon fruticosa	*	*	*	*	*	shrubby penstemon
PLOTS		9802117 COG83 COG105	COG46	COG50 COG87	COG84		

Highlighted species – indicate important forage plants for ungulates

* incidental cover (less than 1% cover); used as indicator species

** 1-5% cover; occurs in 60% or more of sites

*** 6-25% cover; occurs in 60% or more of sites

**** 26-50% cover; occurs in 60% or more of sites

***** >50% cover; occurs in 60% or more of sites

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
SP	**FdPy – Snowbrush – Pinegrass**	**IDFxh1**	**04**

Typic unit occurs on gentle slopes with deep, medium textured soils (d, j and m are assumed modifiers).

This forest ecosystem is commonly associated with moderate to steep slopes on slightly cool aspects (SPk west-northwest and east-southeast). It is also found on gently sloping sites with shallow soils (SPs). Occasionally it is found on warm aspects, but generally these are moderately sloping (25-35%) and/or on 'barely' warm aspects (west, southeast). The overstory is moderately closed, although historically frequent surface fires would have kept these stands very open. Understories are usually a mixture of pinegrass and bunchgrasses (bluebunch wheatgrass and rough fescue) with scattered shrubs, forbs and mosses. In contrast with sites further south, yellow-stem ceanothus is uncommon here and rough fescue is more common here.

List of mapped units:

SPc	coarse-textured soils	SPr	ridge
SPck	coarse-textured soils, cool aspect (usually ESE and NW)	SPrs	ridge, shallow soils (generally 50-100cm)
SPcr	coarse-textured soils, ridge	SPs	shallow soils
SPct	coarse-textured soils, terrace (glaciofluvial)	SPsw	shallow soils, warm aspect (usually SE or WNW or at higher elevations)
SPcw	coarse-textured soils, warm aspect (usually SE or WNW or occurs at higher elevations)	SPv	very shallow soils (<20cm)
SPk	cool aspect (usually ESE and NW aspects	SPvw	very shallow soils (<20cm); warm aspect (usually SE or WNW)
SPks	cool aspect (usually SE or WNW), shallow soils	SPw	warm aspect (usually SE or WNW or at higher elevations)
SPkv	cool aspect, very shallow soils		

SITE INFORMATION

Common Terrain Types:

- colluvial and morainal slopes
- thin colluvial and morainal slopes (SPs)

Slope position:	middle and upper
Slope (%):	30 – 75%
Aspect:	east-southeast, west-northwest
Soil Moisture Regime:	submesic
Soil Nutrient Regime:	poor – medium

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
SP	**FdPy – Snowbrush – Pinegrass**	**IDFxh1**	**04**

	Structural Stage	3	4	5	6	7	
Trees	*Pseudotsuga menziesii* var. *glauca*	**	***	***	***	***	Douglas-fir
	Pinus ponderosa	*	**	**	**	**	ponderosa pine
Shrubs	*Ceanothus sanguineus*	***					redstem ceanothus
	Amelanchier alnifolia	***	*	**	**	**	saskatoon
	Spirea betulifolia	***	**	**	**	**	birch-leaved spirea
	Symphoricarpos albus	***	**	**	**	**	common snowberry
Grasses	*Elymus spicatus*	***	*	**	**	**	bluebunch wheatgrass
	Festuca campestris	***	*	**	**	**	rough fescue
	Calamagrostis rubescens	****	***	***	***	***	pinegrass
Herbs	*Balsamorhiza sagittata*	**	*	**	**	**	arrowleaf balsamroot
Mosses and Lichens	*Cladonia* spp.	**	*	*	*	*	clad lichens
	Brachythecium sp.	*	*	*	*	*	ragged moss
PLOTS			COG123	9802116 COG118 COG33 COV107 COV240	COG113 COG129 COG137 COG153 COG156		

Highlighted species – indicate important forage plants for ungulates
* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
SS	**Saskatoon – Common snowberry**	**IDFxh1**	**00**

Typic unit occurs on gentle slopes with deep, medium-textured soils (assumed modifiers are d, j, and m)

This shrubland ecosystem commonly occurs in large, broad depressions in grassland areas. These sites are moister than /97 sites and likely receive some ground-water in addition to collecting run off moisture.

List of mapped units:	
SSf	fine-textured soils
SSw	warm aspect

SITE INFORMATION

Common Terrain Types:

-

Slope position:
Slope (%):
Aspect:
Soil Moisture Regime:
Soil Nutrient Regime:

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
SS	**Saskatoon – Common snowberry**	**IDFxh1**	**00**

	Structural stage	**3b**	
Shrubs	*Betula occidentalis*	****	water birch
	Cornus stolonifera	***	red-osier dogwood
	Salix bebbiana	**	Bebb's willow
	Symphoricarpos albus	****	common snowberry
	Rosa woodsii	**	prairie rose
	Rosa nutkana	**	Nootka rose
	Prunus virginiana	**	choke cherry
	Amelanchier alnifolia	**	saskatoon
Grasses	*Poa pratensis*	**	Kentucky bluegrass
Herbs	*Osmorhiza berteroi*	**	mountain sweet-cicely
	Viola canadensis	**	western groundsel
	Viola adunca	**	early blue violet
	Smilacina stellata	**	star-flowered false Solomon's seal
	Taraxacum officinale	**	dandelion
PLOTS		COG72 COV09	

Highlighted species – indicate important forage plants for ungulates
Species – non-native species
* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites
***** >50% cover; occurs in 60% or more of sites

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
TA	**Talus**	**IDFxh1**	**N/A**

Steep colluvial deposits of angular rock fragments that result from rockfall. These sites have less than 10% vegetation cover.

List of mapped units:			
TAk	cool aspect	TAw	warm aspect

SITE INFORMATION

Common Terrain Types:	
• colluvium	
Slope position:	middle, upper
Slope (%):	>50%
Aspect:	various
Soil Moisture Regime:	xeric
Soil Nutrient Regime:	poor

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
UR	**Urban/Suburban**	**IDFxh1**	**N/A**

Residential areas with concentrated developments that almost continuously cover the area.

SITE INFORMATION

Common Terrain Types:	
• anthropogenic	
Slope position:	various
Slope (%):	various
Aspect:	various
Soil Moisture Regime:	various
Soil Nutrient Regime:	various

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
WA	**Big sage – Bluebunch wheatgrass – Balsamroot**	**IDFxh1**	**92**

Typic unit occurs on warm aspects with deep, medium-textured soils (assumed modifiers are d, m, and w)

This grassland ecosystem occurs on drier ridges on warm aspects. It was very uncommon in the study area and was observed only on small, isolated sites. Observed sites were mid-seral and were lacking the bluebunch wheatgrass that is probably present on later seral sites. Additionally, no big sage was observed in the study area, including these sites.

List of mapped units:	
WArs	ridge, shallow soils (20-100cm)

SITE INFORMATION

Common Terrain Types:

- aeolian veneer over morainal or glaciofluvial blanket

Slope position:	upper, crest
Slope (%):	40-60%
Aspect:	south, southwest, west
Soil Moisture Regime:	xeric
Soil Nutrient Regime:	poor

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
WA	**Big sage – Bluebunch wheatgrass – Balsamroot**	**IDFxh1**	**92**

	Structural Stage	**2b**	
Grasses	*Sporobolus cryptandrus*	***	sand dropseed
	Stipa comata	**	needle-and-thread grass
	Bromus tectorum	***	cheatgrass
	Aristida longiseta	**	red three-awn
Herbs	*Balsamorhiza sagittata*	*	arrowleaf balsamroot
	Erigeron spp.	*	fleabanes and daisies
	Lupinus sericeus	*	silky lupine
	Eriogonum heracleoides	*	parsnip-flowered buckwheat
	Lithospermum ruderale	*	lemonweed
Mosses	*Cladonia* spp.	*	clad lichens
Lichens	*Tortula ruralis*	*	sidewalk moss
PLOTS		COV59	

Highlighted species – indicate important forage plants for ungulates

Species – non-native species

* incidental cover (less than 1% cover); used as indicator species

** 1-5% cover; occurs in 60% or more of sites

*** 6-25% cover; occurs in 60% or more of sites

**** 26-50% cover; occurs in 60% or more of sites

***** >50% cover; occurs in 60% or more of sites

Comments: Bluebunch wheatgrass is probably present on later seral sites however none was observed on these sites in the study area.

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
WB	**Bluebunch wheatgrass – Balsamroot**	**IDFxh1**	**93**

Typic unit occurs on warm aspects with deep, medium-textured soils (assumed modifiers are d, m, and w)

This grassland ecosystem commonly occurs on moderately steep to steep warm slopes. Often surface soils are actively ravelling. These sites are dominated by bluebunch wheatgrass and balsamroot. Bunchgrasses are more widely spaced than on gentler slopes. Many of these sites have been disturbed be grazing and have been invaded by weeds. Sites with more than 10% weeds are mapped as seral associations that are described below.

WB:wk *$Bluebunch wheatgrass – Knapweed seral association*

This is a mid- to late-seral seral association. On these sites there is still a reasonable component of bluebunch wheatgrass with either knapweed, and/or cheatgrass.

WB:kc *$Knapweed - Cheatgrass seral association*

These are early and very early seral sites. There is little or no bluebunch wheatgrass remaining on these sites. They are dominated by non-native plants including knapweed, cheatgrass and sulphur cinquefoil.These are (mid to late seral)

WB:nc *$Needle-and-thread grass – Cheatgrass seral association*

This is an early seral association that is dominated by native species such as needle-and-thread grass with some weeds. This is an uncommon seral association.

List of mapped units:

WBc	coarse-textured soils	WBks	cool aspect (NW or SE only, steep slopes); shallow soils (20-100cm deep)
WBcs	coarse-textured, shallow (20-100cm) soils	WBs	shallow soils (20-100cm)
WBk	cool aspect (NW or SE only, steep slopes)	WBv	very shallow soils (<20cm; no exposed bedrock present)

SITE INFORMATION

Common Terrain Types:

- morainal and glaciofluvial blankets

Slope position:	middle, upper
Slope (%):	35-65%
Aspect:	south, southwest, west
Soil Moisture Regime:	subxeric
Soil Nutrient Regime:	medium – poor

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
WB	**Bluebunch wheatgrass – Balsamroot**	**IDFxh1**	**93**

	Structural Stage Seral Association	2b WB	2b WB:wk	2b WB:kc	2b WB:nc	
Grasses and Sedges	*Elymus spicatus*	****	***	*	**	bluebunch wheatgrass
	Stipa comata				***	needle-and-thread grass
	Bromus tectorum or *Bromus japonicus*	*	***	***	****	cheatgrass or Japanese brome
	Koeleria macrantha	*	*			junegrass
	Poa secunda	*	**		*	Sandberg's bluegrass
Herbs	*Artemisia frigida*	*	*		*	pasture sage
	Balsamorhiza sagittata	**	**		**	arrowleaf balsamroot
	Centaurea diffusa or *Centaurea biebersteinii*	*	**	***	*	diffuse knapweed or spotted knapweed
	Lupinus sericeus	**	**	*	**	silky lupine
	Eriogonum heracleoides	*	*	*	*	parsnip-flowered buckwheat
	Lithospermum ruderale	*	*	*		lemonweed
	Potentilla recta		**	***	*	sulphur cinquefoil
Mosses Lichens	*Cladonia* spp.	*	*		*	clad lichens
	Tortula ruralis	**	*		*	sidewalk moss
PLOTS		COG67 COV171 COV77	COG100 COG154 COG161 COG23 COG73	COG147 COG82 COV117 COV121 COV295	COG91	

Highlighted species – indicate important forage plants for ungulates
Species – non-native species
* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites
***** >50% cover; occurs in 60% or more of sites
Comments: Rabbitbrush is sometimes present on glaciolactustrine materials

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
WS	**Willow – Sedge Wetland**	**IDFxh1**	**09**

Typic unit occurs on level sites with deep, medium-textured soils (assumed modifiers are d, j, and m)
This unit is equivalent to several swamp associations in the provincial classification (MacKenzie and Shaw 2000). Presently there is not enough data for correlation to provincial units.

This swamp wetland ecosystem commonly occurs at the edges of ponds and wetlands, forming a shrubby fringe on mineral soils. It is dominated by willows (mostly tea-leaved willow in the study area), usually with sedges where it occurs at the edge of a wetland. Our sites all occurred adjacent to ponds and did not have sedges as a significant component. One site was dominated by northern blackcurrant, an atypical species for these sites.

SITE INFORMATION

Common Terrain Types:

- lacustrine veneer over morainal or glaciofluvial blanket

Slope position:	level, depression
Slope (%):	0
Aspect:	none
Soil Moisture Regime:	subhygric – hygric
Soil Nutrient Regime:	medium, rich

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
WS	**Willow – Sedge Wetland**	**IDFxh1**	**09**

	Structural Stage	**3**	
Shrubs	*Salix planifolia*	*****	tea-leaved willow
	Cornus stolonifera	***	red-osier dogwood
	Ribes husonianum	**	northern blackcurrant
Sedges	*Carex* spp.	***	sedges
PLOTS		9802125 COG72	

Highlighted species – indicate important forage plants for ungulates
* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites
***** >50% cover; occurs in 60% or more of sites

Comments: sedges are probably more abundant on wetter sites

CENTRAL OKANAGAN EXPANDED LEGEND – PPxh1

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
AS	**At – Snowberry – Kentucky bluegrass**	**PPxh1**	**00**

Typic unit occurs on gentle slopes with deep, medium-textured soils (assumed modifiers are d, j, and m)

This ecosystem commonly occurs in large, broad depressions in grassland areas. These sites collect moisture from surrounding grassland areas. They have an overstory of trembling aspen and a shrubby understory dominated by snowberry and roses. This site unit was observed on the east side of the study area (Ellison) but no data was collected for it.

SITE INFORMATION

Common Terrain Types:

- aeolian veneer over morainal or glaciofluvial blankets

Slope position:	lower, toe, depression
Slope (%):	0-15
Aspect:	none
Soil Moisture Regime:	subhygric
Soil Nutrient Regime:	rich

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
AS	**At – Snowberry – Kentucky bluegrass**	**PPxh1**	**00**

	Structural Stage	3	4	5	6	7	
Trees	*Populus tremuloides*	***	****	****	****	****	trembling aspen
Shrubs	*Symphoricarpos albus*	*****	****	****	****	****	common snowberry
	Rosa nutkana	***	**	**	**	**	Nootka rose
	Prunus virginiana	***	**	**	**	**	choke cherry
	Amelanchier alnifolia	**	*	*	*	*	saskatoon
	Mahonia aquifolium	**	*	*	*	*	tall Oregon-grape
Grasses	*Elymus glaucus*	*	*	*	*	*	blue wildrye
	Poa pratensis	*	*	*	*	*	Kentucky bluegrass
Herbs	*Cynoglossum officinale*	*	*	*	*	*	hound's tongue
	Arctium minus	*	*	*	*	*	burdock
	Smilacina stellata	*	*	*	*	*	star-flowered false Solomon's-seal
Mosses	*Brachythecium* sp.	*	*	*	*	*	ragged moss
PLOTS		COV106					

Highlighted species – indicate important forage plants for ungulates
Species – non-native species
* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites
***** >50% cover; occurs in 60% or more of sites

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
BE	**Beach**	**PPxh1**	**N/A**
Sorted sediments formed by wave action at the edge of a waterbody; Okanagan Lake beaches			

SITE INFORMATION

Common Terrain Types:	
• lacustrine	
Slope position:	level
Slope (%):	none
Aspect:	none
Soil Moisture Regime:	hygric
Soil Nutrient Regime:	various

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
CB	**Cutbank**	**PPxh1**	**N/A**
Edge of a road cut that is upslope or downslope of a road and was created by the excavation of a hillside.			

List of mapped units:			
CBk	cool aspect	CBw	warm aspect

SITE INFORMATION

Common Terrain Types:	
• anthropogenic	
Slope position:	upper
Slope (%):	various
Aspect:	various
Soil Moisture Regime:	various
Soil Nutrient Regime:	various

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
CF	**Cultivated Field**	**PPxh1**	**N/A**
These are agricultural fields with tilled soils and planted crops or ground cover.			
List of mapped units:			
CFk	cool aspect		

SITE INFORMATION

Common Terrain Types:	
• various	
Slope position:	mostly level
Slope (%):	0-10 (25%+)
Aspect:	none
Soil Moisture Regime:	variable, mostly mesic and wetter
Soil Nutrient Regime:	variable

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
CL	**Cliff**	**PPxh1**	**N/A**
These are steep, vertical or overhanging rock faces. Typically there are scattered plants such as cliff ferns occurring in pockets.			
List of mapped units:			
CLq	very steep (>100%) cool aspect	CLz	very steep (>100%) warm aspect

SITE INFORMATION

Common Terrain Types:	
• rock	
Slope position:	lower – upper
Slope (%):	100+
Aspect:	all
Soil Moisture Regime:	very xeric
Soil Nutrient Regime:	poor

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
CO	**Cultivated Orchard**	**PPxh1**	**N/A**
Agricultural areas for growing fruit trees.			
List of mapped units:			
COk	cool aspect		

SITE INFORMATION

Common Terrain Types:	
• various	
Slope position:	mostly level
Slope (%):	0-10
Aspect:	none
Soil Moisture Regime:	variable, mostly mesic and wetter
Soil Nutrient Regime:	variable

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
CT	**Cattail Marsh**	**PPxh1**	**00**

Typic unit occurs on level sites with deep, medium-textured soils (assumed modifiers are d, j, m)
This unit is equivalent to the *Cattail marsh* association in the provincial classification (MacKenzie and Shaw 2000)

This ecosystem commonly occurs as a fringe on ponds or in depressions, often adjacent to open water. Water depths are typically up to 1 m in spring but draw down to the soil surface by late summer; soils remain saturated for most of the season. Some wetlands convert to cattail marshes when they are subject to nutrient loading. These sites are dominated by cattails with few other species.

SITE INFORMATION

Common Terrain Types:

- lacustrine veneer over morainal or glaciofluvial blanket

Slope position:	depression
Slope (%):	0
Aspect:	none
Soil Moisture Regime:	hygric - subhydric
Soil Nutrient Regime:	rich – very rich

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
CT	**Cattail Marsh**	**PPxh1**	**00**

	Structural Stage	**2a**	
Herbs	*Typha latifolia*	****	common cattail
	Lemna minor	**	common duckweed
PLOTS		COG67	

* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites
***** >50% cover; occurs in 60% or more of sites

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
CV	**Cultivated Vineyard**	**PPxh1**	**N/A**
Agricultural areas for growing grape vines.			

SITE INFORMATION

Common Terrain Types:	
• various	
Slope position:	mostly level
Slope (%):	0-10
Aspect:	none
Soil Moisture Regime:	variable, mostly mesic and wetter
Soil Nutrient Regime:	variable

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
DM	**Fd – Water birch - Douglas maple**	**PPxh1**	**08**

Typic unit occurs on gentle slopes with deep, medium textured soils (d, j and m are assumed modifiers).

This forest type is commonly associated with gullies with intermittent or permanent streams or subsurface water flow. These are diverse, rich sites with mixed coniferous (Douglas-fir) and deciduous (paper birch, aspen, black cottonwood) overstories. The understories are dominated by diverse mixture of shrubs. Forbs are diverse but not abundant and mosses are scattered on these sites. These moist sites likely had a longer fire return interval than adjacent upland areas.

Although these sites are productive and vegetation recovers relatively quickly following disturbances such as logging, the moist soils on these sites are sensitive to disturbance and are difficult to find places for septic fields. Alterations in subsurface water flow present a considerable risk.

List of mapped units:

DMa	active floodplains	DMg	gullies, usually associated with permanent or intermittent creeks
DMct	coarse-textured soils, fluvial terrace	DMt	fluvial terraces

SITE INFORMATION

Common Terrain Types:

- gentle fluvial and morainal sites
- occasionally found on moist glaciolacustrine sites

Slope position:	lower, toe (depression)
Slope (%):	0-15%
Aspect:	none
Soil Moisture Regime:	subhygric, hygric
Soil Nutrient Regime:	(medium) rich

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
DM	**Fd – Water birch - Douglas maple**	**PPxh1**	**08**

	Structural Stage	3	4	5	6	7	
Trees	*Pseudotsuga menziesii* var. *glauca*	*	**	**	**	**	Douglas-fir
	Populus tremuloides	**	***	***	***	*	trembling aspen
	Betula paperifera	****	***	***	***	**	paper birch
Shrubs	*Symphoricarpos albus*	***	***	***	***	***	common snowberry
	Acer glabrum var. *douglasii*	****	***	***	***	***	Douglas maple
	Mahonia aquifolium	**	**	**	**	**	tall oregon-grape
	Amelanchier alnifolia	**	**	**	**	**	saskatoon
	Philadelphus lewisii	**	**	**	**	**	mock-orange
	Salix bebbiana	***	*	*	*	*	Bebb's willow
	Rosa nutkana	**	*	*	*	*	Nootka rose
	Cornus stolonifera	**	*	*	*	*	red-osier dogwood
	Betula occidentalis	**	*	*	*	*	water birch
Sedges Grasses	*Carex* spp.	***					sedges
	Elymus glaucus	**	*	*	*	*	blue wildrye
Herbs	*Osmorhiza berteroi*	*	*	*	*	*	mountain sweet-cicely
	Galium triflorum	*	*	*	*	*	sweet-scented bedstraw
	Viola canadensis	*	*	*	*	*	Canada violet
	Equisetum spp.	***					horsetails
Mosses	*Brachythecium* sp.	*	*	*	*	*	ragged moss
	Mnium sp.	*	*	*	*	*	leafy moss
PLOTS		COG36 COG62 COG67 COV47		COG11	9802104 COG16 COV49		

Highlighted species – indicate important forage plants for ungulates

* incidental cover (less than 1% cover); used as indicator species

** 1-5% cover; occurs in 60% or more of sites

*** 6-25% cover; occurs in 60% or more of sites

**** 26-50% cover; occurs in 60% or more of sites

***** >50% cover; occurs in 60% or more of sites

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
DS	**FdPy – Snowberry – Spirea**	**PPxh1**	**07**

Typic unit occurs on gentle slopes with deep, medium textured soils (d, j and m are assumed modifiers).

This forest type is commonly associated with gently sloping sites that are receiving some moisture. It is also found on higher floodplain benches along creeks and rivers where there is some sub-surface moisture. These forests are typically have moderately closed Douglas-fir overstories with very shrubby understories dominated by snowberry with some Oregon-grape, birch-leaved spirea, and saskatoon. Often there is scattered pinegrass and/or Kentucky bluegrass with some heart-leaved arnica and other scattered forbs. There is a minimal moss layer with scattered patches of ragged mosses. Because these sites are moist, they likely had a longer fire-return interval than adjacent mesic and drier forests. These sites also tend to recover more quickly after disturbance (such as logging) because they are moister and more productive.

List of mapped units:

DSc	coarse-textured soils	DSk	cool aspects (most commonly north or north-east)
DSf	fine textured soils (usually glaciolacustrine)	DSw	warm aspects
DSg	gullied (usually associated with intermittent streams)		

SITE INFORMATION

Common Terrain Types:

- gentle morainal and glaciofluvial slopes

Slope position:	level, lower, toe, middle
Slope (%):	0-15% (sometimes steeper on cool aspects)
Aspect:	None
Soil Moisture Regime:	Subhygric
Soil Nutrient Regime:	Medium – rich

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
DS	**FdPy – Snowberry – Spirea**	**PPxh1**	**07**

	Structural Stage	3	4	5	6	7	
Trees	*Pseudotsuga menziesii* var. *glauca*	**	**	***	****	***	Douglas-fir
	Populus tremuloides	**	***	***	**		trembling aspen
Shrubs	*Symphoricarpos albus*	****	***	***	***	***	common snowberry
	Amelanchier alnifolia	**	**	**	**	**	saskatoon
	Mahonia aquifolium	**	**	**	**	**	tall oregon-grape
	Spirea betulifolia	***	**	**	**	**	birch-leaved spirea
	Ribes lacustre	**	*	*	*	*	black gooseberry
	Acer glabrum	**	*				Douglas maple
Grasses	*Elymus glaucus*	**	*	*	*	*	blue wildrye
	Carex spp.	**					sedges
Herbs	*Smilacina racemosa*	*	*	*	*	*	false solomon's-seal
	Smilacina stellata	*	*	*	*	*	star-flowered false solomon's-seal
	Osmorhiza berteroi	*	*	*	*	*	mountain sweet-cicely
	Viola canadensis	*	*	*	*	*	Canada violet
	Equisetum spp.	**					horsetails
Mosses	*Mnium* sp.	*	*	*	*	*	leafy moss
PLOTS					COG66		

Highlighted species – indicate important forage plants for ungulates
Species – non-native species
* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites

Comments: Douglas maple is more common on slightly moister sites; mixed and deciduous sites usually have a more diverse shrub layer; star-flowered false Solomon's seal, mountain sweet-cicely, and western meadowrue are often present on these mixed/pure deciduous sites as well

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
ES	**Exposed Soil**	**PPxh1**	**N/A**

These are areas of exposed soils and typically include recent disturbances such as soil erosion.

List of mapped units:			
ESk	cool aspect	ESw	warm aspect

SITE INFORMATION

Common Terrain Types:	
• various	
Slope position:	lower – upper
Slope (%):	usually 60%+
Aspect:	all
Soil Moisture Regime:	very xeric
Soil Nutrient Regime:	poor

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
FB	**Rough fescue – Bluebunch wheatgrass**	**PPxh1**	**00**

Typic unit occurs on gentle slopes with deep, medium-textured soils (assumed modifiers are d, j, m)

This ecosystem commonly occurs on gentle warm aspects, level sites, and cool aspects (when they are non-forested). A mixture of rough fescue and bluebunch wheatgrass with balsamroot and other herbs dominate late seral sites. In contrast to sites further south, Idaho fescue was not observed on this site unit within the study area. Many sites have significant pocket gopher digging in them. Unfortunately, most of these sites are highly disturbed and have a significant component of weeds. Sites with more than 10% weeds are mapped as seral associations. Only one early seral association has been mapped in the PPxh1, it is described below. Other late seral associations were mapped and described in the IDFxh1.

FB:kc *$Knapweed – Cheatgrass seral association*

This is an early seral unit. There is little or no bluebunch wheatgrass remaining on these sites. Non-native plants including knapweed, cheatgrass, and sulphur cinquefoil dominate these sites.

List of mapped units:

FBcw	coarse-textured soils, warm aspects	FBs	shallow soils
FBk	cool aspects, typically 25-35% slopes	FBw	warm aspects; typically 25-35% slopes (NW or SE aspects)
FBks	cool aspects, shallow soils		

SITE INFORMATION

Common Terrain Types:

- aeolian veneers overlying morainal or glaciofluvial blankets

Slope position:	Middle to upper
Slope (%):	0-35%
Aspect:	All
Soil Moisture Regime:	Submesic – mesic
Soil Nutrient Regime:	Medium – rich

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
FB	**Rough fescue – Bluebunch wheatgrass**	**PPxh1**	**00**

	Structural Stage Seral Association	**2b FB**	**2b FB:kc**	
Grasses	*Elymus spicatus*	****	*	bluebunch wheatgrass
	Bromus tectorum or *Bromus japonicus*	*	****	cheatgrass or Japanese brome
	Festuca campestris	***		rough fescue
	Koeleria macrantha	**		junegrass
	Poa secunda	*	*	Sandberg's bluegrass
Herbs	*Artemisia frigida*	*	*	pasture sage
	Balsamorhiza sagittata	***		arrowleaf balsamroot
	Centaurea diffusa or *Centaurea biebersteinii*		****	diffuse knapweed or spotted knapweed
	Lupinus sericeus	**	*	silky lupine
	Erigeron spp.	*		fleabanes and daisies
	Eriogonum heracleoides	*		parsnip-flowered buckwheat
	Lithospermum ruderale	*	*	lemonweed
	Potentilla recta		**	sulphur cinquefoil
Mosses and Lichens	*Cladonia* spp.	**	*	clad lichens
	Tortula ruralis	**	*	sidewalk moss
	Peltigera rufescens or *Peltigera ponojensis*	*		felt pelt felt pelt
PLOTS			COG28 COV01 COV10 COV20 COV31 COV32	

Highlighted species – indicate important forage plants for ungulates
Species – non-native species
* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites
***** >50% cover; occurs in 60% or more of sites

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
GC	**Golf Course**	**PPxh1**	**N/A**

Areas set aside for playing golf including grass-covered areas, and patches of trees or shrubs.

SITE INFORMATION

Common Terrain Types:	
• various	
Slope position:	level
Slope (%):	0-10%
Aspect:	none
Soil Moisture Regime:	mesic
Soil Nutrient Regime:	various

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
GP	**Gravel Pit**	**PPxh1**	**N/A**

An area of exposed soil formed through the removal of sand and gravel

SITE INFORMATION

Common Terrain Types:	
• glaciofluvial	
Slope position:	various
Slope (%):	various
Aspect:	all
Soil Moisture Regime:	xeric
Soil Nutrient Regime:	poor

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
GW	**Giant Wildrye grassland**	**PPxh1**	**00**

Typic unit occurs on gentle slopes with deep, medium-textured soils (assumed modifiers are d, j, and m)

This ecosystem commonly occurs in moisture-collecting swales and depressions that are likely alkaline. These sites are generally quite small and are dominated by large clumps of giant wildrye with scattered forbs and rabbit brush. This is ecosystem was only observed once in the study area.

List of mapped units:	
GWw	Warm aspects, typically 25-35% slopes

SITE INFORMATION

Common Terrain Types:

- aeolian veneer over morainal or glaciofluvial blanket

Slope position:	Lower, level, toe slopes
Slope (%):	0
Aspect:	None
Soil Moisture Regime:	Subhygric
Soil Nutrient Regime:	Rich (high alkalinity)

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
GW	**Giant Wildrye grassland**	**PPxh1**	**00**

	Stuctural Stage	**2b**	
Shrubs	*Ericameria nauseosus*	***	common rabbit-brush
Grasses	*Leymus cinereus*	***	giant wildrye
	Poa sp.	**	
	Bromus tectorum	**	cheatgrass
Herbs	*Comandra umbellata*	**	pale comandra
	Achillea millefolium	**	yarrow
PLOTS		9802075	

Highlighted species – indicate important forage plants for ungulates
Species – non-native species
* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites
***** >50% cover; occurs in 60% or more of sites

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
LA	**Lake**	**PPxh1**	**N/A**
A naturally occurring water body that is greater than 2m deep and is greater than 50ha in size.			

SITE INFORMATION

Common Terrain Types:	
• lacustrine	
Slope position:	depression
Slope (%):	0
Aspect:	none
Soil Moisture Regime:	hydric
Soil Nutrient Regime:	variable

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
OW	**Shallow Open Water**	**PPxh1**	**N/A**
These are areas of permanent open water that are less than 2m deep. There is less than 10% emergent vegetation but floating aquatics such as bladderwort may be present			

SITE INFORMATION

Common Terrain Types:	
• lacustrine	
Slope position:	depression
Slope (%):	0
Aspect:	none
Soil Moisture Regime:	hydric
Soil Nutrient Regime:	variable

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
PA	**PyAct – Snowberry Riparian**	**PPxh1**	**00**

Typic unit occurs on gentle slopes with deep, medium textured soils (d, j and m are assumed modifiers).

This forest type is commonly associated with active floodplains and fluvial terraces with subsurface water (PAa, PAac, PAt). This unit is also found as a fringe around ponds (PA) and along the Okanagan Lake foreshore (PAc, PA). Forests are often multi-layered with a mixture of black cottonwood, Douglas-fir, and Ponderosa pine. The understory is typically rich and shrubby, often dominated by snowberry and Douglas maple. Forbs (star-flowered false Solomon's seal), grasses (blue wildrye) and ragged mosses are uncommon and scattered.

List of mapped units:			
PAa	active floodplain	PAt	fluvial terrace
PAac	active floodplain, coarse-textured soils		

SITE INFORMATION

Common Terrain Types:

- gentle and level fluvial sites and active floodplains

Slope position:	level, lower and toe
Slope (%):	0-15%
Aspect:	None
Soil Moisture Regime:	Subhygric – hygric
Soil Nutrient Regime:	Rich

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
PA	**PyAct – Snowberry Riparian**	**PPxh1**	**00**

	Structural Stage	3	4	5	6	7	
Trees	*Populus balsamifera* ssp. *trichocarpa*	**	****	***	***	***	black cottonwood
	Betula papyrifera	*	**	**	**	**	paper birch
	Pinus ponderosa			*	**	**	ponderosa pine
	Pseudotsuga menziesii var. *glauca*			*	*	*	Douglas-fir
Shrubs	*Symphoricarpos albus*	*****	****	****	****	****	common snowberry
	Acer glabrum var. *douglasii*	****	***	***	***	***	Douglas maple
	Amelanchier alnifolia	***	**	**	**	**	saskatoon
	Mahonia aquifolium	***	**	**	**	**	tall oregon-grape
	Prunus virginiana	***	**	**	**	**	choke cherry
	Rosa nutkana	***	**	**	**	**	Nootka rose
	Cornus stolonifera	**	*	*	*	*	red-osier dogwood
Grasses	*Elymus glaucus*	**	*	*	*	*	blue wildrye
Herbs	*Equisetum hyemale*	**	*	*	*	*	scouring rush
	Disporum trachycaulum			**	**	**	rough-fruited fairybells
	Smilacina stellata			*	*	*	star-flowered false Solomon's-seal
	Smilacina racemosa			*	*	*	false Solomon’s seal
Mosses	*Brachythecium* sp.			*	*	*	ragged moss
PLOTS					9802109 COG27 COG64	9802101	

Highlighted species – indicate important forage plants for ungulates
* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites
***** >50% cover; occurs in 60% or more of sites

Comments: some sites along the Okanagan Lake foreshore have low tree cover. Some pond fringes have higher Douglas-fir cover and may have tea-leaved willow and water birch as well on these sites.

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
PC	**Py – Bluebunch wheatgrass – Cheatgrass**	**PPxh1**	**04**

Typic unit occurs on gentle slopes with deep, medium textured soils (d, j, and m are assumed modifiers).

This forest type is most common on moderate to steep warm aspects. It sometimes occurs on cooler aspects where soils are more shallow and/or coarse textured. Occasionally found on ridges and crests where soils are not shallow enough to be the PPxh1 /02 (PT). Forests are open and dominated by bunchgrasses, particularly bluebunch wheatgrass with scattered forbs. Rough fescue commonly occurs, in contrast with the Idaho fescue that more commonly occurs on these sites further south. Mosses and lichens are scattered and uncommon.

List of mapped units:

PCc	coarse-textured soils	PCkv	cool aspect, very shallow soils (<20cm)
PCck	coarse-textured soils, cool aspect (35-60% slopes, typically southeast)	PCr	ridge, crest
PCct	coarse-textured soils, terrace (typically glaciofluvial)	PCs	shallow soils
PCcw	coarse-textured soils, warm aspect (25-50% slopes)	PCsw	shallow soils, warm aspect (25-50% slopes)
PCk	cool aspect (35-60% slopes, typically southeast)	PCw	warm aspect (25-50% slopes)
PCks	cool aspect (35-60% slopes, typically southeast), shallow soils		

SITE INFORMATION

Common Terrain Types:

- colluvial and morainal blankets and veneers
- moderate to steep glaciofluvial slopes

Slope position:	middle and upper
Slope (%):	(30) 40 – 60%
Aspect:	south, southwest, west (also southeast on glaciofluvial slopes and shallow soils)
Soil Moisture Regime:	Subxeric – submesic
Soil Nutrient Regime:	Medium - rich

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
PC	**Py – Bluebunch wheatgrass - Cheatgrass**	**PPxh1**	**04**

	Structural Stage	**3**	**4**	**5**	**6**	**7**	
Trees	*Pinus ponderosa*	**	****	***	***	***	ponderosa pine
Shrubs	*Amelanchier alnifolia*	***	**	**	**	**	saskatoon
Grasses	*Elymus spicatus*	****	***	***	***	****	bluebunch wheatgrass
	Festuca campestris	***	**	**	**	**	rough fescue
Herbs	*Balsamorhiza sagittata*	***	**	**	**	**	arrowleaf balsamroot
	Antennaria dimorpha	**	*	*	*	*	Low pussytoes
	Achillea millefolium	**	*	*	*	*	yarrow
Mosses and Lichens	*Cladonia* spp.	**	**	**	**	**	clad lichens
	Tortula ruralis	**	**	**	**	**	sidewalk moss
	Brachythecium sp.	*	*	*	*	*	ragged moss
PLOTS				9802122 9802123	COV04 COV105		

Highlighted species – indicate important forage plants for ungulates
* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites
***** >50% cover; occurs in 60% or more of sites

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
PD	**Pond**	**PPxh1**	**N/A**
These are small bodies of permanent water greater than 2m deep but less than 50ha in size.			

SITE INFORMATION

Common Terrain Types:	
• lacustrine	
Slope position:	depression
Slope (%):	0
Aspect:	none
Soil Moisture Regime:	hygric
Soil Nutrient Regime:	variable

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
PF	**Py – Bluebunch wheatgrass – Rough fescue**	**PPxh1**	**05**

Typic unit occurs on gentle slopes with deep, medium textured soils (d, j and m are assumed modifiers).

This forest type is commonly associated with moderate to steep slopes on cool aspects (north, northeast, and east; PFck, PFk, PFks). It is also found on gently sloping sites with shallow soils (PFs). Occasionally it is found on warm aspects, but generally these are moderately sloping (25-35%) and/or on 'neutral' aspects (northwest, southeast; PFcw, PFw). The overstory is moderately closed, although historically frequent surface fires would have kept these stands very open. Understories are usually a mixture of bluebunch wheatgrass, rough fescue, and pinegrass with scattered shrubs, forbs and mosses. In contrast with sites further south, rough fescue is more common here than Idaho fescue.

List of mapped units:

PFc	coarse-textured soils	PFk	cool aspect (30-70% slopes, usually only includes north, northeast and east aspects)
PFck	coarse-textured soils, cool aspect (30-70% slopes, usually only includes north, northeast and east aspects)	PFks	cool aspect (30-70% slopes, usually only includes north, northeast, and east aspects), shallow soils
PFct	coarse-textured soils, terrace (usually glaciofluvial)	PFs	shallow soils
PFcw	coarse-textured soils, warm aspect (25-35%, usually mid-lower slopes on northwest and southeast aspects)	PFw	warm aspect (25-35%, usually mid-lower slopes on northwest and southeast aspects)

SITE INFORMATION

Common Terrain Types:

- colluvial and morainal blankets and veneers
- moderate to steep glaciofluvial slopes

Slope position:	middle and upper
Slope (%):	30 – 75%
Aspect:	(northwest) north, northwest, east
Soil Moisture Regime:	Mesic
Soil Nutrient Regime:	medium (poor, rich)

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
PF	**Py – Bluebunch wheatgrass – Rough fescue**	**PPxh1**	**05**

	Structural Stage	3	4	5	6	7	
Trees	*Pseudotsuga menziesii* var. *glauca*	**	***	***	***	***	Douglas-fir
	Pinus ponderosa	**	***	***	***	***	ponderosa pine
Shrubs	*Amelanchier alnifolia*	***	**	**	**	**	saskatoon
	Spirea betulifolia	***	**	**	**	**	birch-leaved spirea
	Symphoricarpos albus	***	**	**	**	**	common snowberry
	Mahonia aquilfolium	*	*	*	*	*	tall oregon grape
Grasses	*Elymus spicatus*	***	***	***	***	***	bluebunch wheatgrass
	Festuca campestris	***	**	**	**	**	rough fescue
	Calamagrostis rubescens	***	**	**	**	**	pinegrass
	Koeleria macrantha	*	*	*	*	*	junegrass
Herbs	*Balsamorhiza sagittata*	**	*	**	**	**	arrowleaf balsamroot
	Achillea millefolium	**	*	*	*	*	yarrow
	Antennaria spp.	**	*	*	*	*	pussytoes
	Lithophragma parviflorum	*	*	*	*	*	small-flowered woodland star
Mosses and Lichens	*Cladonia* spp.	**	*	*	*	*	clad lichens
	Tortula ruralis	*	*	*	*	*	rusty steppe moss
	Polytrichum juniperinum	*	*	*	*	*	juniper haircap moss
PLOTS				9802106 9802108 COG48 COV71 COV72	COG35 COG39 COG168		

Highlighted species – indicate important forage plants for ungulates
* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
PT	**Py – Red three-awn**	**PPxh1**	**02**

Typic unit occurs on warm aspects with deep, coarse-textured soils (c, d, and w are assumed modifiers).

This forest type most commonly occurs on moderate to steep warm aspects, with shallow or very shallow soils (PTs, PTv). It is also commonly found on moderate to steep cool aspects and ridge crests where the soils are extremely shallow (PTkv, PTrv, PTrs). Forests are very open with scattered large trees, often growing in bedrock fractures. The understory is variable depending on soil depth with more vegetation occurring on deeper soil pockets. Scattered shrubs and bunchgrasses (bluebunch wheatgrass and rough fescue) dominate the understory. A lichen and moss crust may be present on undisturbed sites. This ecosystem also occurs on steep glaciofluvial slopes with raveling, sandy surface soils (PT). Trees and other vegetation is usually widely spaced and scattered on these slopes.

List of mapped units:

PTjv	gentle slopes, very shallow soils	PTrv	ridge, very shallow soils, exposed pockets of bedrock are usually present on-site (this is the most common situation)
PTk	cool aspect	PTs	shallow soils
PTkv	cool aspect (35-70% slope), very shallow soils, exposed pockets of bedrock are usually present on-site	PTv	very shallow soils, exposed pockets of bedrock are usually present on-site
PTrs	ridge, shallow soils, exposed pockets of bedrock are often present on-site (this is quite common)		

SITE INFORMATION

Common Terrain Types:

- Thin and very thin colluvial, morainal and glaciofluvial veneers over bedrock
- Steep glaciofluvial slopes

Slope position:	upper and crest (and middle slopes on steep glaciofluvial sites)
Slope (%):	0-70%
Aspect:	None (crest), south, southwest
Soil Moisture Regime:	Very xeric to subxeric
Soil Nutrient Regime:	poor (very poor, medium)

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
PT	**Py – Red three-awn**	**PPxh1**	**02**

	Structural Stage	3	4	5	6	7	
Trees	*Pinus ponderosa*	**	***	***	***	***	ponderosa pine
	Pseudotsuga menziesii var. *glauca*			*	**	**	Douglas-fir
Shrubs	*Amelanchier alnifolia*	**	**	**	**	**	saskatoon
	Symphoricarpos albus	**	*	*	*	*	common snowberry
Grasses and Sedges	*Elymus spicatus*	***	***	***	***	***	bluebunch wheatgrass
	Bromus japonicus or tectorum	*	*	*	*	*	Japanese brome or cheatgrass
	Festuca campestris	*	*	*	*	*	rough fescue
Herbs	*Selaginella densa* or *Selaginella wallacei*	***	**	**	**	**	compact selaginella Wallace's selaginella
	Balsamorhiza sagittata	**	**	**	**	**	arrowleaf balsamroot
	Penstemon fruiticosa	**	**	**	**	**	shrubby penstemon
	Achillea millifolium	*	*	*	*	*	yarrow
	Lomatium spp.	*	*	*	*	*	parsleys
Mosses Lichens	*Cladonia* spp.	**	**	**	**	**	clad lichens
	Tortula ruralis	**	**	**	**	**	sidewalk moss
PLOTS		COG98		COG18 COG97 COV48	COG47 COV103		

Highlighted species – indicate important forage plants for ungulates

Species – non-native species

* incidental cover (less than 1% cover); used as indicator species

** 1-5% cover; occurs in 60% or more of sites

*** 6-25% cover; occurs in 60% or more of sites

**** 26-50% cover; occurs in 60% or more of sites

***** >50% cover; occurs in 60% or more of sites

Comments: cover of Japanese brome or cheatgrass will usually increase with disturbance, spreading dogbane is often present on steep glaciofluvial sites

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
PW	**Py – Bluebunch wheatgrass – Idaho fescue**	**PPxh1**	**01**

Typic unit occurs on gentle slopes with deep, medium-textured soils (d, j, and m are assumed modifiers).

This forest type is commonly associated with gently sloping glaciofluvial and morainal deposits, quite often coarse-textured (PWc, PWct). Occasionally found on shallow soils and both warm and cool aspects (PWw, PWk, PWs). The overstory is generally open and dominated by ponderosa pine. Historically these sites would have been kept extremely open by frequent low-severity surface fires. Saskatoon, bluebunch wheatgrass, rough fescue and arrow-leaved balsamroot are most common in the understory. This ecosystem type has a very limited distribution within the study area, as it has been heavily impacted through urban growth and development.

List of mapped units:

PWc	coarse-textured soils (typically glaciofluvial materials)	PWks	cool aspect (25-35% slopes, usually mid-upper slopes), shallow soils (generally 50-100cm deep)
PWck	coarse-textured soils, cool aspect (25-35% slopes, usually mid-upper slopes)	PWs	shallow soils (generally 50-100cm deep)
PWct	coarse-textured soils, terrace (usually glaciofluvial materials)	PWsw	shallow soils, warm aspect (25-35% slopes, most often mid-lower slopes)
PWcw	coarse-textured soils, warm aspect (25-35% slopes, most often mid-lower slopes)	PWw	warm aspect (25-35% slopes)
PWk	cool aspect (25-35% slopes, usually mid-upper slopes)		

SITE INFORMATION

Common Terrain Types:

- Gently sloping glaciofluvial and morainal slopes and terraces

Slope position:	Level, mid to upper
Slope (%):	0-15 (25)%
Aspect:	None
Soil Moisture Regime:	Submesic – mesic
Soil Nutrient Regime:	Poor - medium

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
PW	**Py – Bluebunch wheatgrass – Idaho fescue**	**PPxh1**	**01**

	Structural Stage	3	4	5	6	7	
Trees	*Pinus ponderosa*		**	***	**	**	ponderosa pine
Shrubs	*Amelanchier alnifolia*	**	**	*	*	*	saskatoon
	Rosa acicularis	**	*	*	*	*	prickly rose
	Ceanothus sanguineus	***	**				redstem ceanothus
Grasses	*Festuca campestris*	***	***	***	***	***	Rough fescue
	Elymus spicatus	**	**	**	**	**	bluebunch wheatgrass
	Bromus tectorum	*	*	*	*	*	cheatgrass
Herbs	*Balsamorhiza sagittata*	***	**	**	**	**	arrow-leaved balsamroot
	Antennaria spp.	**	**	**	**	**	pussytoes
	Achillea millefolium	*	*	*	*	*	yarrow
	Collinsia parviflora	*	*	*	*	*	small-flowered blue-eyed Mary
	Erigeron filifolius	*	*	*	*	*	thread-leaved fleabane
Mosses	*Brachythecium* sp.	*	*	*	*	*	ragged moss
	Tortula ruralis	*	*	*	*	*	sidewalk moss
PLOTS				COG12 COG15			

Highlighted species – indicate important forage plants for ungulates
Species – non-native species
* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites
***** >50% cover; occurs in 60% or more of sites

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
RE	**Resevoir**	**PPxh1**	**N/A**

A man-made body of water created by impounding water behind a dam, berm, dyke, or wall.

SITE INFORMATION

Common Terrain Types:	
• lacustrine	
Slope position:	depression
Slope (%):	0
Aspect:	none
Soil Moisture Regime:	hydric
Soil Nutrient Regime:	various

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
RO	**Rock Outcrop**	**PPxh1**	**N/A**

These are areas of exposed bedrock with less than 10% vegetation cover. On sites with fractured bedrock, some plants may be growing out of rock cracks. Generally rock outcrops on the east side of the study area had more fractures than those on the west side of the study area.

List of mapped units:

ROk	cool aspect	ROw	warm aspect
ROq	very steep (>100%) cool aspect	ROz	very steep (>100%) warm aspect
ROr	ridge		

SITE INFORMATION

Common Terrain Types:	
• rock	
Slope position:	upper, crest
Slope (%):	variable
Aspect:	various
Soil Moisture Regime:	very xeric
Soil Nutrient Regime:	poor

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
RP	**Road Surface**	**PPxh1**	**N/A**

A gravel or paved road used for vehicular travel.

SITE INFORMATION

Common Terrain Types:	
• anthropogenic	
Slope position:	various
Slope (%):	various
Aspect:	various
Soil Moisture Regime:	N/A
Soil Nutrient Regime:	N/A

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
RR	**Rural**	**PPxh1**	**N/A**

Rural areas of development with scattered houses intermingled with native vegetation or cultivated areas.

SITE INFORMATION

Common Terrain Types:	
• various	
Slope position:	various
Slope (%):	various
Aspect:	various
Soil Moisture Regime:	various
Soil Nutrient Regime:	various

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
SB	**Selaginella – Bluebunch wheatgrass rock outcrop**	**PPxh1**	**00**

Typic unit occurs on gentle slopes with very shallow soils (assumed modifiers are j and v)

This ecosystem commonly occurs on bedrock outcrops with low relief, generally unfractured bedrock. Selaginella and rusty steppe moss with some grasses and forbs dominate these sites. Shrubs are sometimes present but are quite uncommon due to the lack of fractures in the bedrock. This unit is quite commonly scattered as small sites in a forested matrix. Some sites are very disturbed and dominated by weeds (SB:cg). This seral association is described below.

SB:cg *Cheatgrass seral association*
This seral association is dominated by cheatgrass.

List of mapped units:			
SBk	cool aspect (25-70% slope)	SBw	warm aspect (25-70% slope)

SITE INFORMATION

Common Terrain Types:
- Rock
- Very thin morainal, glaciofluvial and colluvial veneers

Slope position:	crest, upper
Slope (%):	0-100
Aspect:	All
Soil Moisture Regime:	very xeric
Soil Nutrient Regime:	poor, medium

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
SB	**Selaginella – Bluebunch wheatgrass rock outcrop**	**PPxh1**	**00**

	Structural Stage Seral stage	**2a SB**	**2a SB:cg**	
Trees	*Pinus ponderosa*	*	*	ponderosa pine
Shrubs	*Amelanchier alnifolia*	*	*	saskatoon
Grasses	*Elymus spicatus*	**	*	bluebunch wheatgrass
	Bromus japonicus or tectorum	*	***	Japanese brome or cheatgrass
	Poa secunda	*	*	Sandberg's bluegrass
Herbs	*Selaginella densa or Selaginella wallacei*	***	***	compact selaginella Wallace's selaginella
	Eriogonum heracleoides	**	*	parsnip-flowered buckwheat
	Achillea millefolium	*	*	yarrow
	Erigeron sp.	*	*	daisy or fleabane
	Opuntia fragilis	*	*	brittle prickly-pear cactus
	Sedum stenopetalum	*	*	worm-leaved stonecrop
Mosses and Lichens	*Cladonia* spp.	**	*	clad lichens
	Tortula ruralis	**	*	sidewalk moss
	Peltigera rufescens or *Peltigera ponojensis*	*		felt pelt
PLOTS		COG139 COV150		

Highlighted species – indicate important forage plants for ungulates
Species – non-native species
* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites
***** >50% cover; occurs in 60% or more of sites

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
SO	**Saskatoon – Mock orange Talus**	**PPxh1**	**00**

Typic unit occurs on both warm and cool steep slopes with deep, coarse textured soils (blocky soils; c, and d are assumed modifiers).

This forest type is commonly associated with steep, blocky talus slopes with minimal soil in pockets between blocks. Scattered trees (Douglas-fir, ponderosa pine and/or aspen) and scattered shrubs (mock orange, snowberry, ocean spray) grow in soil pockets between blocks. Often cliff ferns (a very characteristic species) and scattered grasses are found growing in soil pockets. Vegetation cover is generally higher on sites with smaller blocks and more soil development, typically a mixture of both angular rocks and sandy, silty material. Cool aspects more commonly have trees on them. Sites that are dominated by shrubs will not necessarily succeed into a forested structural stage. Historically, these sites would not have enough fuel to burn. Thus they would be have been a seed source for some dry refugia species that are fire intolerant such as Rocky Mountain juniper.

Forested structural stages may include sites with less than 10% tree cover (6-9%). These sites are included as forested structural stages because the tree cover is significant for wildlife interpretations.

List of mapped units:			
SOk	cool aspect	SOw	warm aspect

SITE INFORMATION

Common Terrain Types:

- rubbly colluvium

Slope position:	Lower to upper
Slope (%):	50-75%
Aspect:	All
Soil Moisture Regime:	Subxeric to very xeric
Soil Nutrient Regime:	poor to medium

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
SO	**Saskatoon – Mock orange Talus**	**PPxh1**	**00**

	Structural Stage	3	4	5	6	7	
Trees	*Pseudotsuga menziesii* var. *glauca*	*	**	**	**	**	Douglas-fir
	Pinus ponderosa	*	**	**	**	**	ponderosa pine
	Populus tremuloides		**	**	**		trembling aspen
Shrubs	*Philadelphus lewisii*	***	**	**	**	**	mock-orange
	Amelanchier alnifolia	**	**	**	**	**	saskatoon
	Acer glabrum var. *douglasii*	**	**	**	**	**	Douglas maple
	Symphoricarpos albus	**	**	**	**	**	common snowberry
	Holodiscus discolor	**	*	*	*	*	ocean-spray
	Mahonia aquifolium	*	*	*	*	*	tall oregon-grape
	Juniperus scopulorum	*	*	*	*	*	Rocky mountain juniper
Grasses	*Elymus spicatus*	*	*	*	*	*	bluebunch wheatgrass
Herbs	*Woodsia* sp.	*	*	*	*	*	cliff fern
PLOTS		COV67					

Highlighted species – indicate important forage plants for ungulates
* incidental cover (less than 1% cover); used as indicator species
** 1-5% cover; occurs in 60% or more of sites
*** 6-25% cover; occurs in 60% or more of sites
**** 26-50% cover; occurs in 60% or more of sites
***** >50% cover; occurs in 60% or more of sites

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
SP	**FdPy – Snowberry - Pinegrass**	**PPxh1**	**06**

Typic unit occurs on gentle slopes with deep, medium textured soils (d, j and m are assumed modifiers).

This forest type is commonly associated with gentle lower slopes and moderate to steep cool aspects (SP, SPk) that are receiving some subsurface moisture. Common on the lower slopes of gullies (SPg), adjacent to the wetter /08 (DM) unit mapped along the creeks and streams. Forests are moderately closed with mixed Douglas-fir and ponderosa pine overstories, although historically they would have been quite open, as fire would have been a frequent disturbance. The understory is dominated by snowberry and pinegrass. Mosses are prominent in the moss and lichen layer, especially on the cool aspects. Forbs are more abundant on the open sites that have been less subject to ingrowth (or have been thinned). This ecosystem also occurs on gentle glaciofluvial slopes (SP, SPc) or terraces (SPt, SPct) where ponderosa pine is often more abundant than Douglas-fir but understories are very similar. Mature (structural stage 6) and old (structural stage 7) forests are uncommon because most of the large trees historically present on these sites have been logged. Because of fire exclusion, most sites have become ingrown with higher densities of smaller stems. Rough fescue is quite common and Idaho fescue is quite uncommon on these sites relative to those further south.

List of mapped units:

SPc	coarse-textured soils	SPg	gullied (usually along side slopes adjacent to intermittent creeks and streams)
SPck	coarse-textured soils, cool aspect (usually north to north-east)	SPk	cool aspect (usually north to north-east)
SPct	coarse-textured soils; terrace (usually glaciofluvial)	SPks	cool aspect (usually north to northeast), shallow soils
SPcw	coarse-textured soils, warm aspect (lower slopes, often south, southeast)	SPs	shallow soils
SPf	fine-textured soils	SPw	warm aspect (lower slopes, often south, southeast)

SITE INFORMATION

Common Terrain Types:

- gentle morainal and glaciofluvial slopes
- moderate to steep morainal and glaciofluvial slopes
- glaciofluvial terraces

Slope position:	Middle to lower
Slope (%):	0-30%; up to 70% on cool aspects
Aspect:	All
Soil Moisture Regime:	Mesic – subhygric
Soil Nutrient Regime:	Medium-rich

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
SP	**FdPy – Snowberry - Pinegrass**	**PPxh1**	**06**

	Structural Stage	3	4	5	6	7	
Trees	*Pseudotsuga menziesii* var. *glauca*	*	****	***	***	***	Douglas-fir
	Pinus ponderosa	*	**	**	**	**	ponderosa pine
Shrubs	*Symphoricarpos albus*	***	***	***	***	***	common snowberry
	Mahonia aquifolium	**	**	**	**	**	tall oregon-grape
	Spirea betulifolia	**	**	**	**	**	birch-leaved spirea
	Rosa spp.	**	**	**	*	*	roses
	Amelanchier alnifolia	**	*	*	*	*	saskatoon
	Ceanothus sanguineus	****	*	*			redstem ceanothus
Grasses	*Calamagrostis rubescens*	***	***	****	****	****	pinegrass
	Festuca campestris	***	**	**	**	**	rough fescue
	Elymus glaucus	**	*	*	*	*	blue wildrye
Herbs	*Arnica cordifolia*	***	**	**	**	**	heart-leaved arnica
	Aster conspicuus	**	*	*	*	*	showy aster
Mosses	*Tortula ruralis*	**	*	*	*	*	sidewalk moss
	Dicranum sp.		*	**	**	**	
	Pleurozium schreberi		*	*	*	*	red-stemmed feathermoss
	Rhytidiadelphus triquetris		*	*	*	*	electrified cat's tail moss
PLOTS		COG37 COV164	COG99	9802107, COG13, COG17, COG38, COG57, COG63, COG142, COV228	COG143		

Highlighted species – indicate important forage plants for ungulates
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***** >50% cover; occurs in 60% or more of sites

Comments: Fireweed seems to be common only after burning (as opposed to logging)

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
SR	**Snowberry – Rose – Kentucky Bluegrass**	**PPxh1**	**00**

Typic unit occurs on gentle slopes with deep, medium textured soils (d, j and m are assumed modifiers).

Typically moist shrub dominated depressions in grassland mosaics (equivalent to the IDFxh1 RF /97 unit). Sites are dominated by snowberry and Nootka rose, with some Kentucky bluegrass in openings between the shrubs. These depressions are typically much smaller than those sites with trembling aspen. This unit is uncommon due to the relative lack of natural grassland areas remaining within the PPxh1.

List of mapped units:

SRc	coarse-textured soils	SRw	warm aspect (typically warm aspect lower slopes, often south, southeast)
SRg	gullied (usually along side slopes adjacent to intermittent creeks and streams)		

SITE INFORMATION

Common Terrain Types:

- gentle and level fluvial sites

Slope position:	level, lower and toe
Slope (%):	0-15%
Aspect:	None
Soil Moisture Regime:	Subhygric - hygric
Soil Nutrient Regime:	Rich

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
SR	**Snowberry – Rose - Kentucky bluegrass**	**PPxh1**	**00**

	Structural Stage	**3**	
Shrubs	*Symphoricarpos albus*	*****	common snowberry
	Amelanchier alnifolia	**	saskatoon
	Rosa nutkana	****	Nootka rose
	Prunus virginiana	**	choke cherry
	Rosa acicularis	**	prickly rose
Grasses	*Poa pratensis*	**	Kentucky bluegrass
	Elymus glaucus	*	blue wildrye
PLOTS		COG29 COV06 COV09 COV156	

Highlighted species – indicate important forage plants for ungulates

Species – non-native species

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**** 26-50% cover; occurs in 60% or more of sites

***** >50% cover; occurs in 60% or more of sites

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
TA	**Talus**	**PPxh1**	**N/A**

Steep colluvial deposits of angular rock fragments that result from rockfall. These sites have less than 10% vegetation cover.

List of mapped units:			
TAk	cool aspect	TAw	warm aspect

SITE INFORMATION

Common Terrain Types:	
• colluvium	
Slope position:	middle, upper
Slope (%):	>50%
Aspect:	various
Soil Moisture Regime:	xeric
Soil Nutrient Regime:	poor

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
UR	**Urban/Suburban**	**PPxh1**	**N/A**

Residential areas with concentrated developments that almost continuously cover the area.

SITE INFORMATION

Common Terrain Types:	
• anthropogenic	
Slope position:	various
Slope (%):	various
Aspect:	various
Soil Moisture Regime:	various
Soil Nutrient Regime:	various

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
WB	**Bluebunch wheatgrass – Balsamroot**	**PPxh1**	**00**

Typic unit occurs on warm aspects with deep, medium-textured soils (assumed modifiers are d, w, and m)

This ecosystem commonly occurs on moderately steep to steep warm slopes. Often surface soils are actively ravelling. These sites are dominated by bluebunch wheatgrass and balsamroot. Bunchgrasses are more widely spaced than on more gentle slopes. Many of these sites have been disturbed by grazing and have been invaded by weeds. Sites with more than 10% weeds are mapped as seral associations. Only one early seral association has been mapped in the PPxh1, it is described below. Other seral associations were mapped and described in the IDFxh1.

WB:kw *$Knapweed – Cheatgrass – Bluebunch wheatgrass seral association*

This is an early to mid seral unit. There is some bluebunch wheatgrass remaining on these sites, however most sites are dominated by non-native plants including knapweed, cheatgrass, and sulphur cinquefoil.

List of mapped units:

WBc	coarse-textured soils	WBks	cool aspect, shallow soils
WBcs	coarse-textured, shallow soils	WBs	shallow soils
WBk	cool aspect	WBv	very shallow soils

SITE INFORMATION

Common Terrain Types:

- morainal and glaciofluvial blankets and veneers

Slope position:	middle, upper
Slope (%):	30-65%
Aspect:	South, southwest, west
Soil Moisture Regime:	subxeric
Soil Nutrient Regime:	medium – poor

Site Unit Symbol	Site Unit Name	BGC	Site Series Number
WB	**Bluebunch wheatgrass – Balsamroot**	**PPxh1**	**93**

	Structural Stage Seral Association	2b WB	2b WB:kw	
Grasses And Sedges	*Elymus spicatus*	****	**	bluebunch wheatgrass
	Bromus tectorum or *Bromus japonicus*	*	***	cheatgrass or Japanese brome
	Koeleria macrantha	*	*	junegrass
	Poa secunda	*	**	Sandberg's bluegrass
Herbs	*Balsamorhiza sagittata*	**	*	arrowleaf balsamroot
	Lupinus sericeus	**	*	silky lupine
	Artemisia frigida	*	*	pasture sage
	Eriogonum niveum	*	*	snow buckwheat
	Eriogonum heracleoides	*	*	parsnip-flowered buckwheat
	Lithospermum ruderale	*	*	lemonweed
	Centaurea diffusa or *Centaurea biebersteinii*	*	***	diffuse knapweed or spotted knapweed
	Vulpia octoflora		**	six-weeks fescue
	Potentilla recta		***	sulphur cinquefoil
Mosses Lichens	*Cladonia* spp.	**		clad lichens
	Tortula ruralis	**	*	sidewalk moss
PLOTS		COG07 COV154 COV157	COG14 COG10	

Highlighted species – indicate important forage plants for ungulates

Species – non-native species

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