

Appendix V

Resource Inventory Summary





TFL 23 Resource Inventory Summary

Inventory type	Description	Map extent	Standards/ specifications	Data source	Data Format	Map scale	Status	Date	Authority	Future updates
Biodiversity	Connectivity	Nelson Region	KBLUP	Nelson Region	Arc/ Info		complete	3/1/02	MSRM	as required
Biodiversity	OGMAs -draft	Arrow District	KBLUP	P&T/ MSRM	Arc/ Info		draft	3/1/02	MSRM	as required
Biodiversity	OGMAs -draft	Columbia District	MAC	P&T/ MSRM	Arc/ Info		draft	7/1/02	MSRM	as required
Biogeoclimatic classification	BEC zones/ subzones/ variants/ NDT	Arrow District	KBLUP	MOF Arrow District	Arc/ Info	1:50,000	complete	3/1/02	MSRM	as required
Biogeoclimatic classification	BEC zones/ subzones/ variants/ NDT	Nelson Region	MSRM	Nelson Region	Arc/ Info	1:50,000	complete	8/31/00	MSRM	as required
Biogeoclimatic classification	Predictive ecosystem mapping (PEM) – BEC site series	TFL	RIC	JMJ Holdings	Arc/ Info		complete	5/10/01	MSRM	as required
Cultural heritage	Archaeological overview assessment	TFL	RIC	P&T	USTN	1:20,000	updated	2/5/01	MOF	as required
Environmentally sensitive areas	Ep only	TFL	RIC	P&T	Arc/ Info	1:20,000	complete	6/1/96	MOF	as required
Fisheries	Reconnaissance fish and fish habitat inventory	TFL	RIC	P&T/ MSRM	USTN		complete	3/31/02	MOF	as required
Fisheries	Fish stream breaks	TFL	FPC	Nova/ Seatons	Arc/ Info		complete	1/15/01	MOF	as required
Forest cover	Inventory	TFL	MSRM	P&T		1:20,000	complete	09/1990	MSRM	as required
Forest cover	Depletion, regeneration	TFL	MSRM	P&T	Arc/ Info	1:20,000	complete	1/1/02	MSRM	annual
Forest cover	VRI site index, volume	TFL	MSRM	P&T			complete	5/31/02	MSRM	as required
Forest management	Resource management zones	Nelson Region	KBLUP	MOF/MWLAP	Arc/ Info	1:50,000	complete	3/31/02	MOF	as required
Forest Health	Aerial Overview Survey	TFL	FPC	P&T	USTN		complete	7/1/02	MOF	bi-annual
Landscape Units	Landscape units and emphasis	Arrow District	KBLUP	MSRM	Arc/ Info		complete	3/1/02	MSRM	as required
Landscape Units	Landscape units and emphasis	Columbia District	MAC	MSRM	USTN		complete	8/31/00	MSRM	as required
Operability	1998 operability with revisions in Halfway LU, Hutchinson Cr., Turner Cr.	TFL	P&T	P&T	Arc/ Info	1:20,000	complete	3/1/02	MOF	as required



Inventory type	Description	Map extent	Standards/ specifications	Data source	Data Format	Map scale	Status	Date	Authority	Future updates
Other resource users	Guide/ outfitters	TFL	WLAP	Nelson Region	Arc/ Info	1:250,000	updated	6/1/96	MWLAP	as required
Other resource users	Trappers	TFL	WLAP	Timberline	Arc/ Info	1:20,000	updated	6/1/96	MWLAP	as required
Parks	Parks and protected areas	Nelson Region	WLAP	Nelson Region	Arc/ Info		updated	3/1/02	MWLAP	as required
Range	Range units and tenure holders	Arrow District	MOF	MOF	Arc/ Info		updated	3/1/02	MOF	as required
Recreation	Recreation features update	Arrow District	RIC	Arrow District	Arc/ Info		updated	3/1/02	MSRM	as required
Recreation	Recreation inventory	TFL	RIC	Timberline	Arc/ Info	1:50,000	complete	10/16/98	MSRM	as required
Riparian	Classification	TFL	FPC	P&T			updated	1/4/02	MOF	as required
Riparian	Lakes	Arrow District	FPC	Arrow District	Arc/ Info		complete	3/1/02	MOF	as required
Riparian	Wetlands	TFL	FPC	P&T	Arc/ Info		complete	1/20/01	MOF	as required
Roads	Roads and road structures	TFL	MOF	P&T			ongoing	4/20/01	MOF	as required
Terrain	Terrain hazard TSIL D	TFL		Terratech	Arc/ Info	1:20,000	complete	7/24/01	MOF	as required
Visual Landscape	Visual landscape areas	TFL	KBLUP	P&T			complete	7/1/02	MOF	as required
Watersheds	Community and domestic boundaries	Nelson Region	KBLUP	Nelson Region	Arc/ Info	1:20,000	complete	3/1/02	MWLAP	as required

Red and Blue Listed Species Management
within the Arrow Forest District,
Pope and Talbot Ltd. Operating Areas

*(Summarized list of Red and Blue Listed Species for TFL 23 from Jennifer Heron,
M.Sc., R.P.Bio., F.I.T original report)*

Red and Blue-listed Species of Possible Forestry Concern within Pope and Talbot's Arrow Operating Areas

The biodiversity within Pope and Talbot's Arrow Forest District operating areas includes the following red and blue listed species (see also attached lists of Conservation Data Centre):

- 25 vertebrate species,
 - 54 plant species,
 - 4 butterfly species,
 - 1 dragonfly/ damselfly species and
 - 2 plant communities
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- American Bittern, *Botaurus lentiginosus*
 - Bobolink *Dolichonyx oryzivorus*
 - Prairie falcon, *Falco mexicanus*
 - Short-eared owl *Asio flammeus*
 - White-throated Swift *Aeronautes saxatalis*

Fish

- Bull Trout, *Salvelinus confluentus*
- Cutthroat Trout, *lewis* subspecies *Oncorhynchus darki lewisi*
- Rocky Mountain Sculpin, *Cottus punctulatus*
- Shorthead Sculpin, *Cottus confusus*
- Umatilla Dace, *Rhinichthys Umatilla*
- White Sturgeon (Columbia River population) *Acipenser transmontanus* pop. 2

Amphibians and Reptiles

- Painted Turtle, *Chrysemys picta*

Vertebrate Species that are of possible forestry concern have met the above criteria and have a field identification card

Birds

- Canyon Wren *Catherpes mexicanus*
- Great Blue Heron *Ardea herodias herodias*
- Lewis's woodpecker *Melanerpes lewis*
- Western Screech-owl *macfarlanei* subspecies
- Williamson's sapsucker, *thyroideus* subspecies
include displacement from nest sites due to human disturbances, removal of suitable

Mammals

- Badger, *Taxidea taxus*
- Caribou (southern population) *Rangifer tarandus* pop. 1

- Fisher
- Grizzly bear
- Townsend's big-eared bat
- Wolverine, *luscus* subspecies

Amphibians and Reptiles

- Coeur d'Alene Salamander *Plethodon idahoensis*
- Racer

Vascular Plants

Vascular plant species that did not meet these criteria include:

- Alkali-marsh butterweed *Senecio hydrophilus* grows in swamps, meadows, berms, marshy areas and riverbanks in moist and sunny areas, and is tolerant of alkali conditions. (ICHdw, ICHxw)
- Bent-flowered milk vetch *Astragalus texilliflexus* var. *texilliflexus* grows in rocky, gravelly and open scree slopes and grassy areas in mesic to dry sites in the subalpine and alpine zones. (AT, ESSFdk, ESSFdkp, ESSFmv2, ICHmw2)
- Bigleaf sedge *Carex amplifolia* grows in moist to wet areas, adjacent to moist meadows, bogs, streambanks and swamps in the lowland to montane areas. (CWHdm, ICHdw, ICHmw2, ICHmw3, ICHwk1, IDFmw1, IDFxh1a)
- Blackened sedge *Carex opapillosa* grows in openings and meadows the upper subalpine to alpine zones. (ESSFdc1, ESSFxc1)
- Booth's willow *Salix boothii* grows in wet to moist streambanks, meadows, and openings, overflow channels, seeps and riparian areas in the montane and subalpine zones. (ICHmk1, ICHmw2, IDFdk1, IDFdk2, IDFdk3, IDFdm1, IDFun, IDFxh2, IDFxw, MSdk, MSdm1, MSxk)
- Brewer's monkey flower *Mimulus breweri* grows in open meadows, grasslands, slopes, and ridges on sandstone or limestone substrates in the montane zone. (BGxh1, IDFdk1, IDFdm1, IDFxh1, MSxk, PPdh1, PPxh1)
- Common clarkia *Clarkia rhomboidea* dry and open areas (ICHxw)
- Cup clover *Trifolium cyathiferum* grows in vernal wet seepage areas, meadows and mesic to moist open and often sandy sites in lowland, steppe and montane zones. (BGxh1, CDFmm, CWHmm2, CWHxm1, CWHxm2, ICHdw, ICHmw3, IDFdm1, IDFxh1, PPdh1)
- Dwarf hesperochiron *Hesperochiron pumilus* Meadows, open slopes are areas that are rocky and with seepage (ICHdw)
- Hairy owl clover *Castilleja tenuis* Meadows and moist to wet flats with seasonal pools (ICHdw)
- Harkness' linanthus *Linanthus harknessii* Grasslands (BGxh1)
- Heterocodon *Heterocodon rariflorum* Sunny, rocky slopes and fields. (CDFmm, CWHmm2, CWHxm1, CWHxm2, ICHdw, IDFdm1, IDFdm2, IDFxh1)
- Holboell's rockcress *Arabis holboellii* var. *pinetorum* Shrublands and grasslands with dry to mesic rocky slopes (BGxh1, BGxw1, ESSFwc4, IDFxm, SBSdk)

- Kellogg's knotweed *Polygonum polygaloides* ssp. *kelloggii* Seasonal pools, ditches, meadows and roadsides (ESSFwc4, ICHdw, ICHmk1, IDFdk1, IDFww, IDFxh1, IDFxm, MSdm2, MSxk)
- Lakeshore sedge *Carex lenticularis* var. *lenticularis* grows on the edges of marshes and sandy beaches, and meadows in wet areas in the lowlands to montane zone. (CWHms1, ESSFdk, ICHmk1, ICHmw2, IDFmw2)
- Narrow leaved skullcap *soutellaria angustifolia* Open talus slopes, rocky areas that are with dry southern exposures (ICHdw, ICHxw, PPdh2)
- Pale bulrush *Scirpus pallidus* Streambanks, ditches, lakeshores, springs, wet seepage areas, swamps and meadows (ICHdw, IDFdm2)
- Pink Agoseris *Agoseris ladeschewitzii* Meadows, grasslands and open areas in sandy dry soils and semi-shady environments (AT, ESSFmw, ESSFwc4, ESSFwcp2, ESSFxc, ICHmw2, ICHmw3, ICHwk1, IDFdk1, MSdm2)
- Pink fairies *Clarkia pulchella* grows in grasslands, often with sagebrush or rabbitbrush, in open areas in the steppe and montane zones. (BGxh1, ICHdw, ICHmk1, ICHmw2, ICHxw, IDFdm1, IDFmw1, IDFxh1, IDFun, MSxk, PPdh1)
- Pointed broom sedge *Carex scoparia* Wet lakeshores, meadows, springs, swamps, ditches and similar sites (BWBSmw1, CDFmm, CWHdm, CWHvh1, CWHxm1, ICHdw, ICHwk1, ICHxw, SBSvk)
- Prairie rocket *Erysimum asperum* dry disturbed sites, such as roadsides and ravelling slopes (ICHdw)
- Rocky mountain sedge *Carex saximontana* rocky slopes and meadows (BGxh1, BGxh3, BGxw2, CWHds, ESSFmw, ESSFxv, ICHdw, ICHxw, IDFdk3, IDFxh1, IDFxh2, IDFxm, MSdk, SBSdk, SBSdw2)
- Seep-spring arnica *Arnica longifolia* Seepages in openings and meadows (AT, ICHvk1)
- Small fruited willowherb *Epilobium leptocarpum* Gravelly and pebbly banks, seasonal seepages and rock bluffs (AT, CWHdm, CWHds1, CWHvm2, CWHwh1, CWHxm1, CWHxm2, ESSFmw, ESSFwc4, ESSFwk2, ESSFxv2, ICHmc1, ICHmc2, ICHmw3, ICHwk1, MSdk, SBSwk2, SWBmk)
- Spanish clover *Lotus unifoliolatus* var. *unifoliolatus* Open sites, meadows and disturbed sites such as roadsides (CDFmm, CWHxm2, ICHdw, ICHxw)
- Steer's head *Dicentra uniflora* grows near melting snow patches in meadows in the subalpine (ESSFmw, ESSFwc, ICHdw, ICHmk1, IDFdm1, IDFww, IDFxh1)
- Sutherland's larkspur *Delphinium sutherlandii* shrublands and brushlands, sometimes open forests (ESSFvc, AT)
- Western hawkbeard *Oreopsis occidentalis* ssp. *pumila* Shrublands, scrublands, grasslands, dry slopes (BGxh2, ESSFmw, ICHdw, ICHmw2)
- Western Jacob's ladder *Polemonium occidentale* ssp. *occidentale* Swamps, marshes, streambanks, seasonally wet areas and meadows (BGxh1, BWBSmw1, BWBSmw2, BWBSwk2, ESSFmv2, ESSFmw, ESSFwc4, ICHdw, ICHmc2, IDFdk2, IDFxh1, MSdm2, SBPSxc, SBSmc2, SWBun)
- Western St. John's wort *Hypericum scouleri* ssp. *nortoniae* Streamsides, marshes, swamps, open slopes, meadows and moist sites (CWHvh1, CWHvm1, CWHxm1, ESSFdk, ESSFwc4, ESSFwcp4, IDCdw, IDFdm2, IDFxh2, PPdh2)

Vascular plants that are of possible forestry concern and did meet the above criteria

The following 24 vascular plant species have been identified with a higher probability of being encountered during forest operations according to their habitat requirements, and thus a field identification card has been developed. Only brief habitat descriptions are provided below:

Common Name	Latin Name	Habitat
Atkinson's coreopsis	<i>Coreopsis tinctoria</i>	Grows in full sun with dry to moist soils. Habitats include riverbanks, prairies, savannas, open rocky woods and roadsides. (BGxh1, ICHdw)
Blunt-sepaled starwort	<i>Stellaria obtusa</i>	Grassy meadows, growing along rotting logs; in moist soil, under willows, North-facing slope near road; in aspen-fir forest; moist soil under trees; on edge of spruce grove on limestone ridge north of peak; montane forests. (ESSFdk, ESSFwc2, ESSFwc4, ESSFwcp2, ESSFwk1, ICHdw, IDFdm2, IDFww, IDFxh1a)
Columbia River locoweed	<i>Oxytropis campestris</i> var. <i>columbiana</i>	Dry to mesic sandy, gravelly or rocky sites, including river bars, terraces, rock outcrops, grassy slopes, meadows, clearings, roadsides, alpine tundra and heath, and open forests in the steppe, montane, subalpine and alpine zones (BGxh1, ICHmw2)
Crested wood fern	<i>Dryopteris cristata</i>	Thickets, marshes, swamps, open shrubby wetlands, sphagnum bogs, swampy woodlands and moist woods. (ICHdw, ICHmc1, ICHmw2, ICHmw3, ICHvk2, ICHwk1, ICHkw, IDFmw2, IDFxh1, SBPSmk)
False mermaid	<i>Floerkea proserpinacoides</i>	Wet open forests, streamsides, marshes, seepage slopes and other wet sites (ICHdw, ICHmk1, IDFdm1, MSxk)
Lace fern	<i>Cheilanthes gracillima</i>	Rocky cliffs and rock crevices, near timberline and growing in exposed sites. Possibly encountered during road building activities (CDFmm, CWHds1, ESSFmw, ESSFwc4, IDFww, MHImm1, MSdk, MSdm2)
Least bladderly milk-vetch	<i>Astragalus microcystis</i>	Open forests in sandy to gravelly soils, riverbanks, grassy and rocky hillsides and river shores. (ICHdw)

Least moonwort	<i>Botrychium simplex</i>	Coniferous and deciduous forest, wet to moist seepages and seasonal pools (BWBSmw1, CDFmm, CWHds1, CWHxm1, CWHxm2, ICHmw2, IDFxh1, MSdk, SBPSxc)
Long-leaved aster	<i>Aster ascenders</i>	Forest openings (ICHdw, IDFdm2, SBSmc2)
Mountain blue-curls	<i>Trichostema oblongum</i>	Seasonal seepages and pools in forest openings (ICHmw2)
Nettle-leaved giant-hyssop	<i>Agastache urticifolia</i>	Open slopes and forest openings in steppe to montane zones (BGxh1, ESSfdc1, ICHdw, ICHmk1, ICHmw2, IDFdm1, IDFxh1, MSxk, PPdh1, PPxh1a)
Northern linanthus	<i>Linanthus septentrionalis</i>	Forest openings (BGxh1, BGxh2, BGxw1, ESSfdk, ICHdw, ICHmk1, IDFdm1, IDFdm2, IDFxh1, IDFxh1a, IDFxh2a, MSdk, PPdh2)
Northern violet	<i>Viola septentrionalis</i>	Open forests (ICHdw, ICHmw2, IDFxh1)
Porcupingrass	<i>Hesperostipa spartea</i>	Open forests and grassy slopes (BGxh1, BGxh2, ICHdw, ICHmw2, IDFmw1, IDFxm)
Purple oniongrass	<i>Melica spectabilis</i>	Open forests and wet to dry meadows (BGxh2, ESSfdc2, ESSfdk, ESSfdkp, ESSfmw, ESSFwc4, ESSFxc, ICHdw, IDFmk1, IDFdk1, IDFdw, IDFun, MSdk, SBSmc2)
Smith's melic	<i>Melica smithii</i>	Cool moist deciduous and coniferous forests (CDFmm, CWHdm, CWHxm1, CWHxm2, ESSfdk, ICHdw, ICHmw2, ICHmw3, ICHwk3, IDFdm1, IDFmw2, IDFxh1, SBSdk, SBSdw1, SBSmk1, SBSwk1, SBSwk2)
Smooth goldenrod	<i>Solidago gigantea ssp. serotina</i>	Forest openings (ICHdw, ICHmk1, ICHmw2, IDFdk, IDFdm2, IDFxh1)

Common Name	Latin Name	Habitat
Smooth willowherb	<i>Epilobium glaberimum</i> <i>ssp. fastigiatum</i>	Moist open forests and streambanks (AT, CWHds1, CWHvh1, ESSFmw, ICHdw, ICHmw2, IDFun, IDFww, MSxk)
Snow bramble	<i>Rubus nivalis</i>	Forests (CDFmm, CWHmm2, CWHvh2, CWHvm1, CWHxm1, CWHxm2, ICHmw2, ICHmw3, MHmm1)
Spurless touch-me-not	<i>Impatiens ecalcarata</i>	Forests (ICHdw, ICHxw, IDFdm2)
Sweet-marsh butterweed	<i>Senecio hydrophiloides</i>	Forest openings (ESSFdk, ICHdw, ICHmk1, MSdk, PPDh1)
Tall bluebells	<i>Mertensia paniculata</i> var. <i>borealis</i>	Open forests, streambanks and meadows (ESSFwc4, ICHdw, ICHmw2, ICHxw)
Three-leaved lewisia	<i>Lewisia triphylla</i>	Open forests, gravely and sandy slopes and meadows (AT, ESSFdc2, ESSFwc4, ICHdw, IDFdm2)
Verticillate umbel- lovage	<i>Ligusticum verticillatum</i>	Streambanks, forest openings, marshes and meadows. (ESSFwc4)

Invertebrates

The CDC currently publishes two groups of invertebrates on the provincial red and blue lists: Lepidoptera (butterflies and moths) and Odonata (dragonflies and damselflies).

Butterflies and moths.

- Gillette's Checkerspot *Euphydryas gillettii*
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