

Ministerial Order
Land Use Objectives Regulation Order

Cranberry
Sustainable Resource Management Plan



**Ministry of Forests, Lands and Natural
Resource Operations**

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PROVINCE OF BRITISH COLUMBIA
Ministry of Forests, Lands and Natural Resource Operations

Ministerial Order

Land Use Objectives for the Cranberry Sustainable Resource Management Plan Area

Part 1 – General

1. Interpretation

- (1) Pursuant to Section 93.4 of the *Land Act*, the following objectives are established as land use objectives for the purposes of the *Forest and Range Practices Act*, and apply to the areas specified in each section as shown on Schedule A (Order Area) and contained in the datasets found on the BC Geographic Warehouse.
- (2) Where an objective refers to an area shown on a schedule and the area is also defined by a spatial dataset, the boundaries of the area as defined by the spatial dataset apply in the event of any inconsistency. The spatial datasets are located on the legal planning layer of the BC Geographic Warehouse.

2. Definitions

- (1) In this order:

“hydorr riparian zone” means the area that extends to the edge of the influence of water on land, or land on water, as defined by plant communities (including high bench or dry floodplain communities) or landforms, plus one and one-half site specific tree heights horizontal distance (*Hydorr riparian Planning Guide*, Coast Information Team, Jan. 30, 2004). Landforms include:

- The stream channel, lake or wetland and adjacent riparian ecosystem, where no floodplain exists,
- The full width of the floodplain for streams,
- Adjacent active fluvial units,
- Up to the top of the inner gorge or where slopes become less than 50% for reaches of streams that are gullied, or are in a ravine or canyon,
- Immediately adjacent unstable slopes (class IV and V terrain) where it is located such that a surcharge of sediment may be delivered to the stream, lake or wetland;

“major amendment to an Ecosystem Network” means that wherever identified as a major amendment to an Ecosystem Network in Schedule G1, forest licensees must follow the amendment procedures as described for Old Growth Management Areas.

“minor amendment to an Ecosystem Network” means that wherever identified as a minor amendment to an Ecosystem Network in Schedule G1, forest licensees can make amendments to the Ecosystem Network in the field, and then notify the applicable First Nation afterwards.

“proper hydrological functioning” means the ability of a stream, river, wetland or lake and its riparian area to:

- withstand normal peak flood events without experiencing accelerated soil loss, channel movement or bank movement;
- filter runoff; and
- store and safely release water.

It also means the ability of riparian habitat to:

- maintain an adequate root network or large woody debris supply;
- provide shade; and
- reduce bank microclimate change,

and having fish habitat in streams and riparian areas that are fully connected so that fish habitat is not lost or isolated as a result of some management activity.

- (2) Words and expressions not defined in this order have the meaning given to them in the *Forest and Range Practices Act*, the *Forest Act*, the *Range Act*, the *Heritage Conservation Act*, and the regulations made under those Acts, unless the context indicates otherwise.

Part 2 – Objectives

3. Objectives for Water

- (1) Maintain the hydrologic stability of watersheds so that the thresholds identified in Schedule B1 are not exceeded, except where a hydrologic assessment is completed by a qualified professional prior to any harvesting that would cause the thresholds to be exceeded and that subsequent activities are conducted in a manner that is consistent with the results of the assessment.
- (2) Maintain the ecological functioning of streams, rivers, wetland complexes and lakes, including those that do not support populations of fish.
- (3) Ensure that industrial forestry activity on all rivers and streams does not cause significant consequences for fish habitat or human water consumption from channel bank erosion, channel aggradation, degradation or dewatering, or change in channel morphology.
- (4) Maintain reserve zones and management zones around riparian features identified in Schedule C for all rivers, streams, lakes and wetlands.
- (5) Retain blowdown within riparian reserve zones and/or riparian management zones as large woody debris for all rivers, streams, lakes, and wetlands.
- (6) Maintain naturally deposited large woody debris in rivers and streams in riparian classes S1 to S4, except where necessary to satisfy safety considerations.

- (7) Ensure that when new roads and trails are built, ground water is allowed to reach natural ground water receiving sites.
- (8) Maintain the functional integrity of all floodplains and alluvial fans.

4. Objectives for Biodiversity

- (9) Maintain a landscape pattern of patchiness that, over the long term, reflects the natural disturbance pattern within the forested area of the Order area, as per Schedule D.
- (10) Maintain or recruit structural diversity in managed stands by retaining at least 3.5% of each proposed cutblock and at least 12% of proposed cutblocks aggregated on an annual basis, as wildlife tree retention areas, over the rotation.
- (11) Retain 100% of the area and basal area of red-listed ecological communities¹ as listed on Schedule M, except where:
 - a) required to access timber that otherwise would be isolated from harvest beyond the core area;
 - b) terrain conditions such as slope, gradient, or terrain stability constrain road locations and dictate that sections of road enter and leave red-listed ecological communities to access timber that otherwise would be isolated from harvest; or
 - c) no practicable alternative exists.
- (12) Retain a windfirm, forested buffer around the red-listed ecological communities¹ listed on Schedule M, as required to maintain the conditions of soil chemistry, moisture, temperature, and light that define and sustain the ecosystem except where:
 - a) required to access timber that otherwise would be isolated from harvest beyond the core area;
 - b) terrain conditions such as slope, gradient, or terrain stability constrain road locations and dictate that sections of road enter and leave red-listed ecological communities to access timber that otherwise would be isolated from harvest; or
 - c) no practicable alternative exists.
- (13) Retain at least 70% of the area or basal area of each blue-listed ecological community² within a cutblock, as listed on Schedule N.
- (14) Maintain a diversity of coniferous and deciduous species that represent the natural species composition at the landscape and stand levels by ensuring that all cutblocks at the free-growing stage will have a diversity of species ecologically appropriate to the site.
- (15) Maintain a diversity of coniferous and deciduous species that represent the natural species composition at the landscape and stand levels by ensuring that where an area larger than one contiguous hectare is harvested and it is composed of more than 50% deciduous trees by basal area, it will either be regenerated with a similar deciduous stand or will be replaced at a different

¹ The required minimum size of a red-listed ecological community is 0.25 ha. Where the community exists as the dominant component of a complex, the minimum size of the complex is 1 ha.

² The required minimum size of the blue-listed ecological community is 0.25 ha. Where the community exists as the dominant component of a complex, the minimum size of the complex is 1 ha

location on a similar site series by regenerating an existing coniferous stand with similar deciduous species.

- (16) Maintain a range of forest seral stages as per Schedule E.
- (17) Retain 100% of the forested area within Old Growth Management Areas as identified on Schedule F.
- (18) Retain 100% of the forested area of the hydriparian zone within the Ecosystem Network, as identified on Schedule G. Acceptable rationales for amending the Ecosystem Network are identified in Schedule G1.
- (19) Maintain structural connectivity in the Ecosystem Network, as identified on Schedule G except where:
 - a) required to access timber beyond the Ecosystem Network that would otherwise be isolated from harvest;
 - b) required to access timber that would otherwise be isolated from harvest due to terrain conditions such as slope, gradient or terrain stability that constrain road locations and dictate that sections of road enter and leave the Ecosystem Network; or
 - c) no practicable alternative exists.
- (20) Retain a 200-metre wide buffer around the Ecosystem Network as identified on Schedule G that meets the following forest conditions:
 - a) Continuous forest cover
 - b) Small discontinuous canopy gaps
 - c) ≥70% structure and function³ retained, including large, old trees, snags, and coarse woody debris
 - d) Multi-canopy levels, multi-aged forest
 - e) In conjunction with the forested core, maintain interior old forested conditions ≥200 metres in width
 - f) 0% permanent road access, except where, for ecological or economic reasons, no other alternative is possible.

5. Objectives for Pine Mushrooms (*Tricholoma magnivelare*)

- (21) Maintain at least 50% of the productive pine mushroom (*Tricholoma magnivelare*) sites, as identified in Schedule H, in forest ages ranging from 80 to 200 years⁴.

6. Objectives for Fur-bearers

- (22) Minimize impacts to known high value fisher and wolverine habitats.
- (23) Maintain known fisher and wolverine denning sites.

³ Any harvest unit within the buffer portions of the EN will, within the buffer, retain ≥70% of the naturally occurring mature and old-forest structure (live trees, range of diameter classes, snags, coarse woody debris, tree species etc.) of the harvest unit measured either as basal area (m²) or forest area (hectares). No further harvesting may occur within the harvest unit (within the EN buffer area) until such time as the harvested portion has returned to a mature or older condition (i.e. ICH 100 years, ESSF 120 years).

⁴ If future research shows that silviculture systems (other than clearcut harvesting) can perpetuate pine mushroom production, the areas having these silviculture systems will contribute to meeting the objective.

7. Objectives for Northern Goshawk (*Accipiter gentilis atricapillus*)

- (24) Maintain nesting and post-fledging habitats at known goshawk nest areas, in order to support continued use of and reproduction in those areas.
- (25) Maintain all known goshawk nest and post-fledging areas.
- (26) Between February 15 and August 15, around any active goshawk nest, maintain a 500-metre buffer in which there are no mechanized activities allowed. Mechanized activities means road construction and timber harvesting/mechanized silviculture activities.
- (27) Between February 15 and August 15, around any active goshawk nest, maintain a 200-metre buffer in which there are no forestry-related human activities allowed, unless no practicable alternative exists. Forestry-related human activities include log hauling and those activities not identified as mechanized activities.
- (28) Maintain foraging habitat around known goshawk nest and post-fledging areas.
- (29) Maintain at least 30% of the perimeter around known goshawk nests and post-fledging areas so that it is directly connected by mature or old forests to a comparable forest in the foraging area. A foraging area is the hunting territory typically used by a pair of goshawks. Where the perimeter is less than 30%, forests that are available will be used, and the most suitable adjacent forest will be allowed to mature over time to provide connectivity, as determined by a qualified professional.
- (30) Maintain $\geq 60\%$ mature and old forest structure and function within determined foraging areas around known goshawk nest and post-fledging areas. Where at least 60% does not currently exist, forests that are available will be used. Suitable forest areas adjacent to foraging areas must be maintained as recruitment areas to provide the mature and old structure and function over time.

8. Objectives for General Wildlife

- (31) Maintain effectiveness⁵ of riparian habitats adjacent to wetlands in polygons identified as Special Habitats for General Wildlife on Schedule J.
- (32) Retain 100% of the forested area of the hydriparian zone for each polygon identified as Special Habitats for General Wildlife on Schedule J, except where no practicable alternative access exists to access or harvest timber that is outside the hydriparian zone; to mitigate a safety concern; or where required to negate impacts on adjacent forest values from a compelling forest health issue.

9. Objectives for Fisheries

- (33) Maintain habitat for indigenous fish populations.
- (34) Maintain the functional integrity of fish-bearing streams, rivers and lakes.

10. Objectives for Cultural Heritage Resources

⁵ Effectiveness means the continued use of a habitat by the species that historically utilized it.

- (35) Preserve cultural heritage resources and cultural sites, including culturally modified trees, trails, cache pits, house pits, grave sites, fishing sites, pictograph sites, smoke houses, cabins, and camping sites.
- (36) Maintain the areas identified on Schedule K as a source of cedar for the applicable First Nation to practice their traditional, cultural and subsistence uses.

11. Objectives for Water Management Units

- (37) Ensure proper hydrological functioning of:
 - a) each stream, wetland and lake within a Water Management Unit identified on Schedule L; and
 - b) each local and downstream stream receiving water from a cutblock within a Water Management Unit identified on Schedule L.
- (38)
 - a) Retain 100% of the forested area of the hydriparian zone of each stream, wetland and lake within a Water Management Unit as shown on Schedule L, unless harvesting is required to address compelling forest health issues or as set out in b).
 - b) Cutblocks may overlap a Water Management Unit as shown on Schedule L by no more than 200 metres or 50% of any individual cutblock area, whichever is less, provided that the riparian management practice applicable to the forest land base outside a Water Management Unit is maintained.
- (39) To the extent practicable, maintain Water Management Units within the Order Area or restore them to a roadless state, including by:
 - a) deactivating existing roads following completion of harvesting and silviculture obligations; and
 - b) constructing no new roads for commercial forestry operations.

Part 3 – Transition

1. Application of this Order

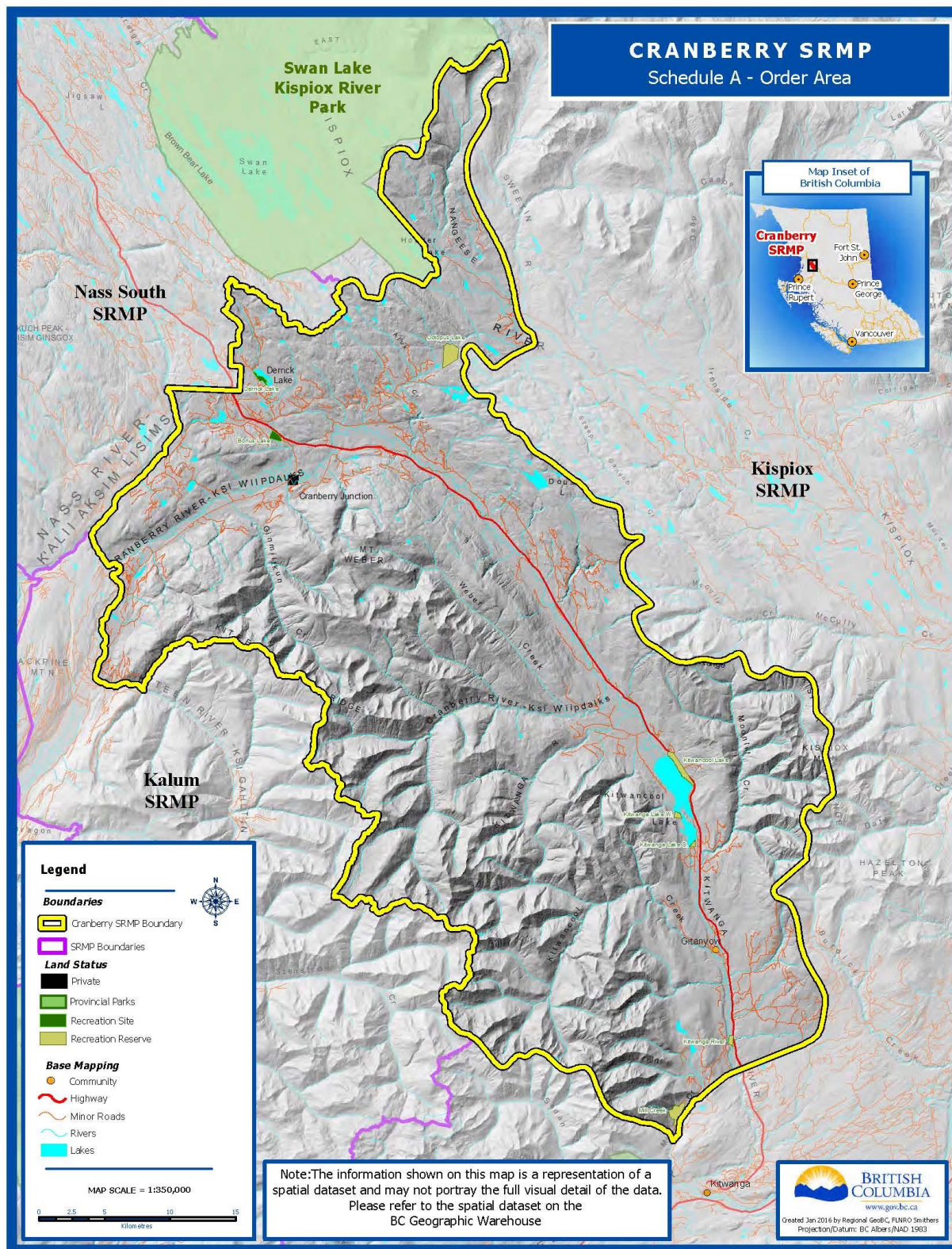
- 1) This order and the land use objectives in this order take effect on the date that notice of this order is published in the Gazette.
- 2) The applicable period under section 8(2)(b) of the *Forest and Range Practices Act* is one year, starting on the date this order comes into effect as specified in subsection (1).

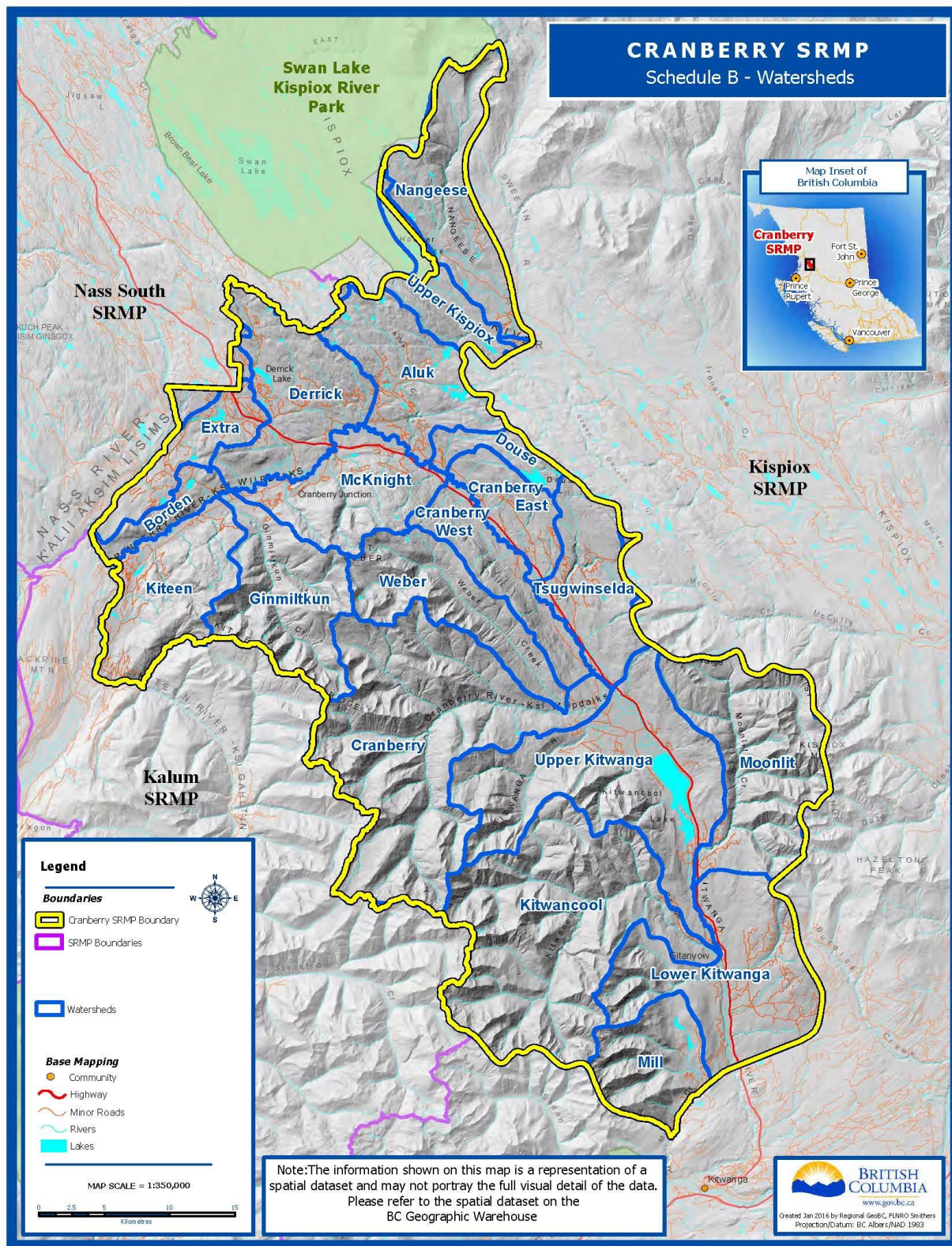


Eamon O'Donoghue, Regional Executive Director
Skeena Region
Ministry of Forests, Lands and Natural Resource Operations

March 3, 2016

Date





Schedule B1

Equivalent Clearcut Area Thresholds for Watersheds

Watershed	Equivalent Clearcut Area Threshold (%)
Aluk	26.2
Borden	21.7
Cranberry	27.1
Cranberry East	24.8
Cranberry West	24.9
Derrick	22.5
Douse	25.3
Extra	26.2
Ginmiltkun	28.5
Kiteen	27.6
Kitwancool	28.5
Lower Kitwanga	22.5
McKnight	27.3
Mill	25
Moonlit	26.5
Nangeese	26.7
Tsugwinselda	25
Upper Kitwanga	26.2
Upper Kispiox	28.1
Weber	28.3

Schedule C

Retention Targets in Riparian Reserve Zones (RRZ) and Riparian Management Zones (RMZ)

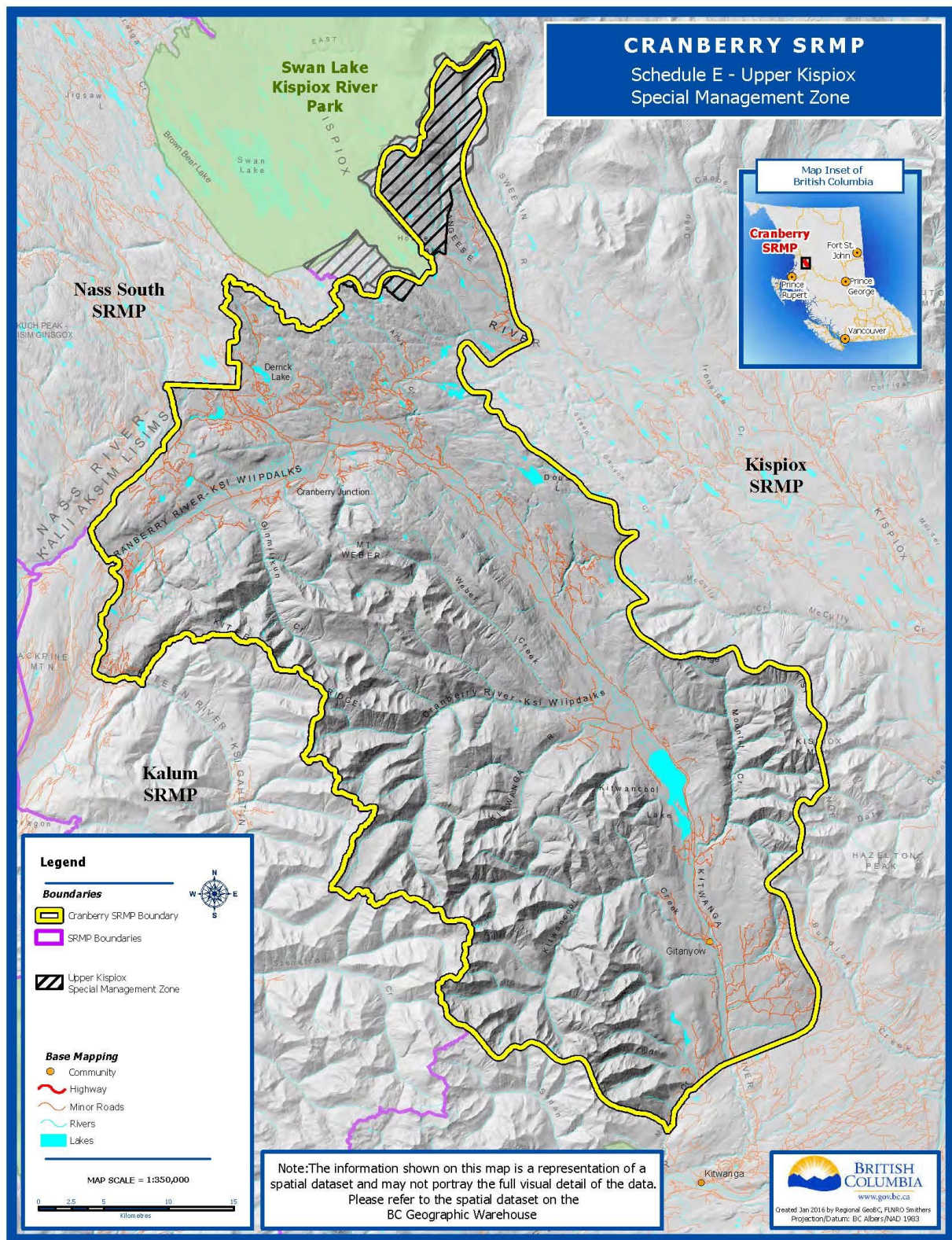
Riparian Class	Reserve Zone Width - Minimum (m)	Retention - Minimum (%)	Management Zone Width - Minimum (m)	Retention - Minimum (%)
<u>Streams:</u>				
S1 Large Rivers (≥ 100m width)	As per Objectives for Biodiversity regarding the Ecosystem Network			
S1 Specific Rivers	As per Objectives for Biodiversity regarding the Ecosystem Network. Specific Rivers are: Nass, Kitwanga, Cranberry, Kispiox, Nangeese and Kiteen.			
S1 (other than Large and Specific Rivers)	50	100	20	0
S2	30	100	20	0
S3	20	100	20	0
S4	0	n/a	30	0
S5	0	n/a	30	0
S6	0	n/a	20	0
<u>Wetlands:</u>				
W1	10	100	40	0
W2	Not applicable: no W2 in the plan area			
W3	0	n/a	30	0

Riparian Class	Reserve Zone Width - Minimum (m)	Retention - Minimum (%)	Management Zone Width - Minimum (m)	Retention - Minimum (%)
<u>Streams:</u>				
W4	Not applicable: no W4 in the plan area			
W5	10	100	40	0
<u>Lakes:</u>				
L1	10	100	20	0
L2	Not applicable: no L2 in the plan area			
L3	n/a	n/a	30	0
L4	Not applicable: no L4 in the plan area			
Note: RRZ and RMZ retention percentage means the percentage of naturally occurring pre-harvest forest basal area and structure of mature and old forest that occupies (or historically occupied) the site.				

Schedule D

Patch Size Distribution Targets

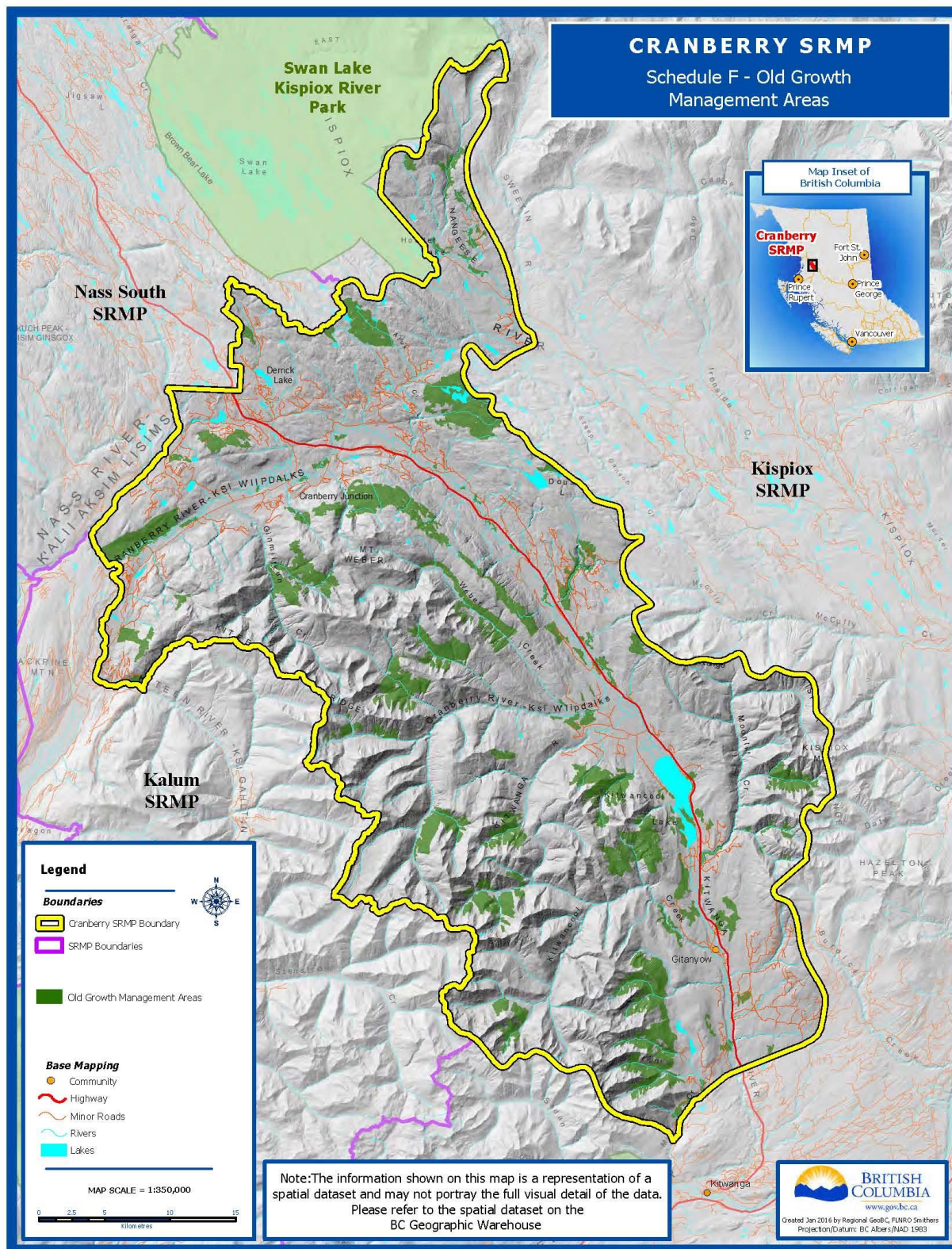
Natural Disturbance Type (NDT)	Biogeoclimatic (BEC) zone variant	Percentage of Forest Area within Cranberry SRMP Area		
		<i>Small patches</i> (<40 ha)	<i>Medium patches</i> (40 to 80 ha)	<i>Large patches</i> (81 to 250 ha)
NDT 1	MHmm2	30 to 40	30 to 40	20 to 40
	ESSFwv	30 to 40	30 to 40	20 to 40
NDT 2	CWHws2	30 to 40	30 to 40	20 to 40
	ICHmc2	30 to 40	30 to 40	20 to 40
	ICHmc1	30 to 40	30 to 40	20 to 40

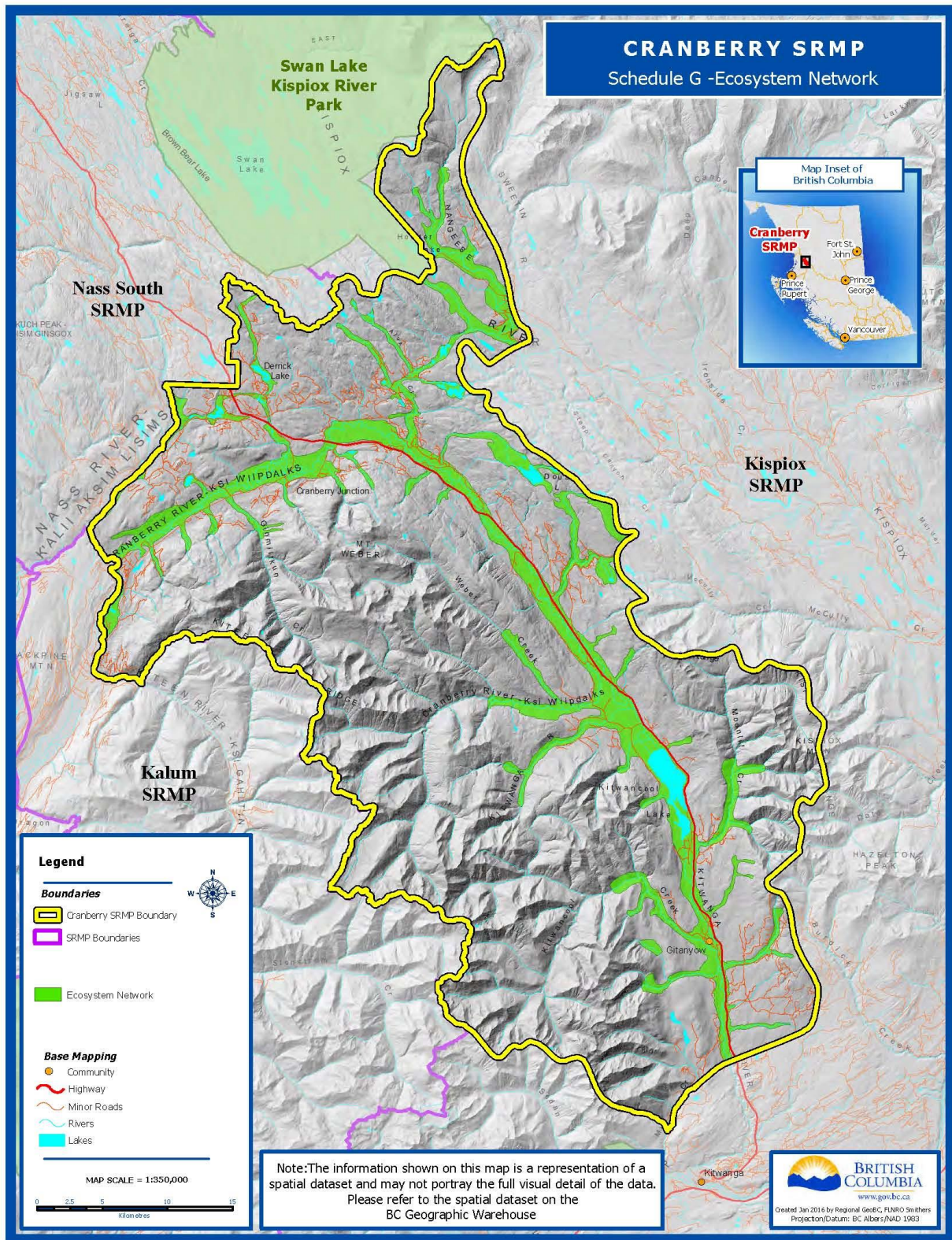


Schedule E1

Seral Stage Requirements

Management Unit	Biodiversity Emphasis Option	Biogeoclimatic Ecosystem Classification variant	Seral Stage	Age (yrs)	Forested Area (%)
Upper Kispiox Special Management Zone (as shown on Schedule E)	High	ESSFwv	Early	<40	<17
			Mature + Old	>120	>54
			Old	>250	>28
		ICHmc1	Early	<40	<27
			Mature + Old	>100	>46
			Old	>250	>13
All Other Areas	Intermediate	ESSFwv	Early	<40	<22
			Mature + Old	>120	>36
			Old	>250	>19
		MHmm2	Early	<40	<22
			Mature + Old	>120	>36
			Old	>250	>19
		CWHws2	Early	<40	<36
			Mature + Old	>80	>34
			Old	>250	>9
		ICHmc1	Early	<40	<36
			Mature + Old	>100	>31
			Old	>250	>9
		ICHmc2	Early	<40	<36
			Mature + Old	>100	>31
			Old	>250	>9

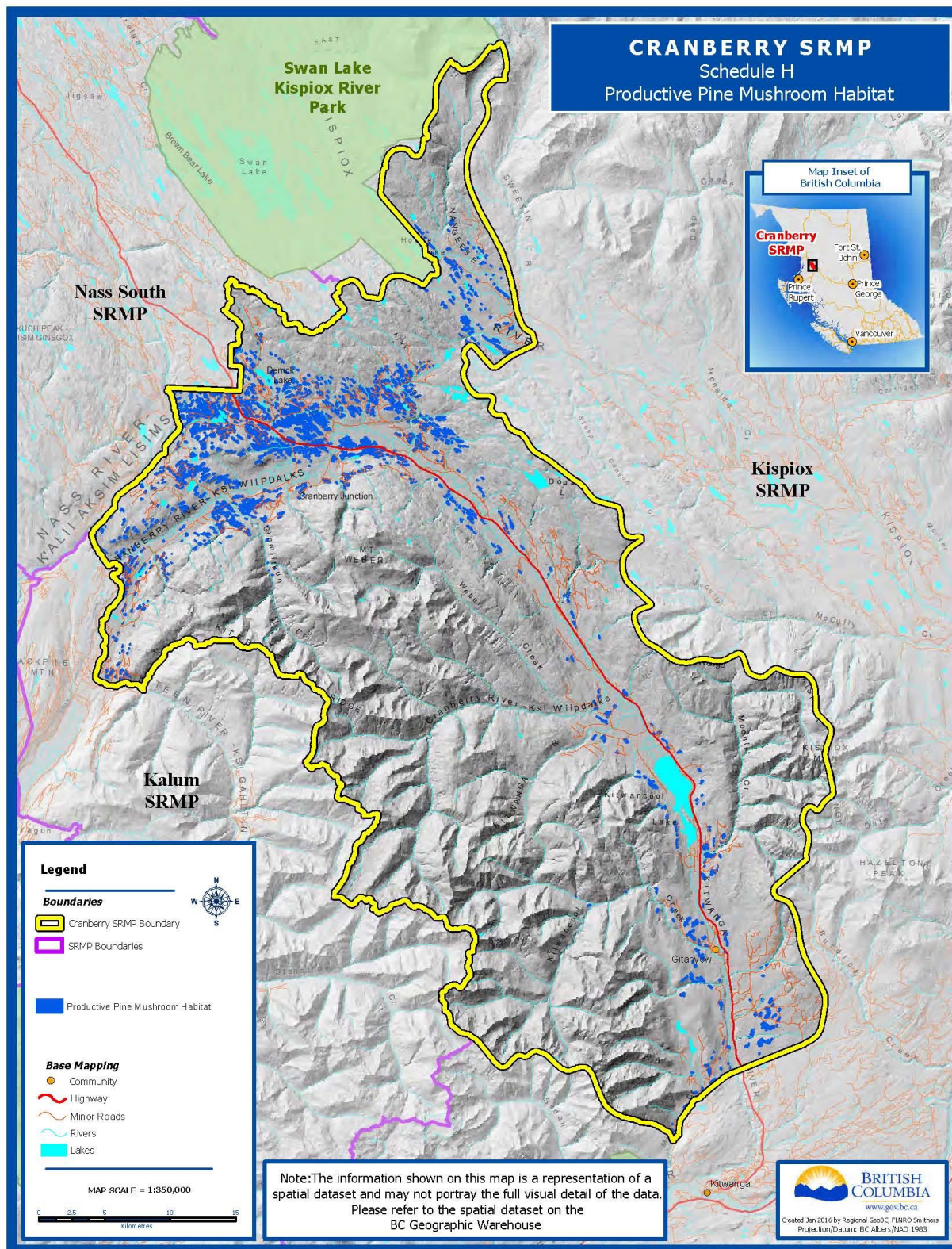


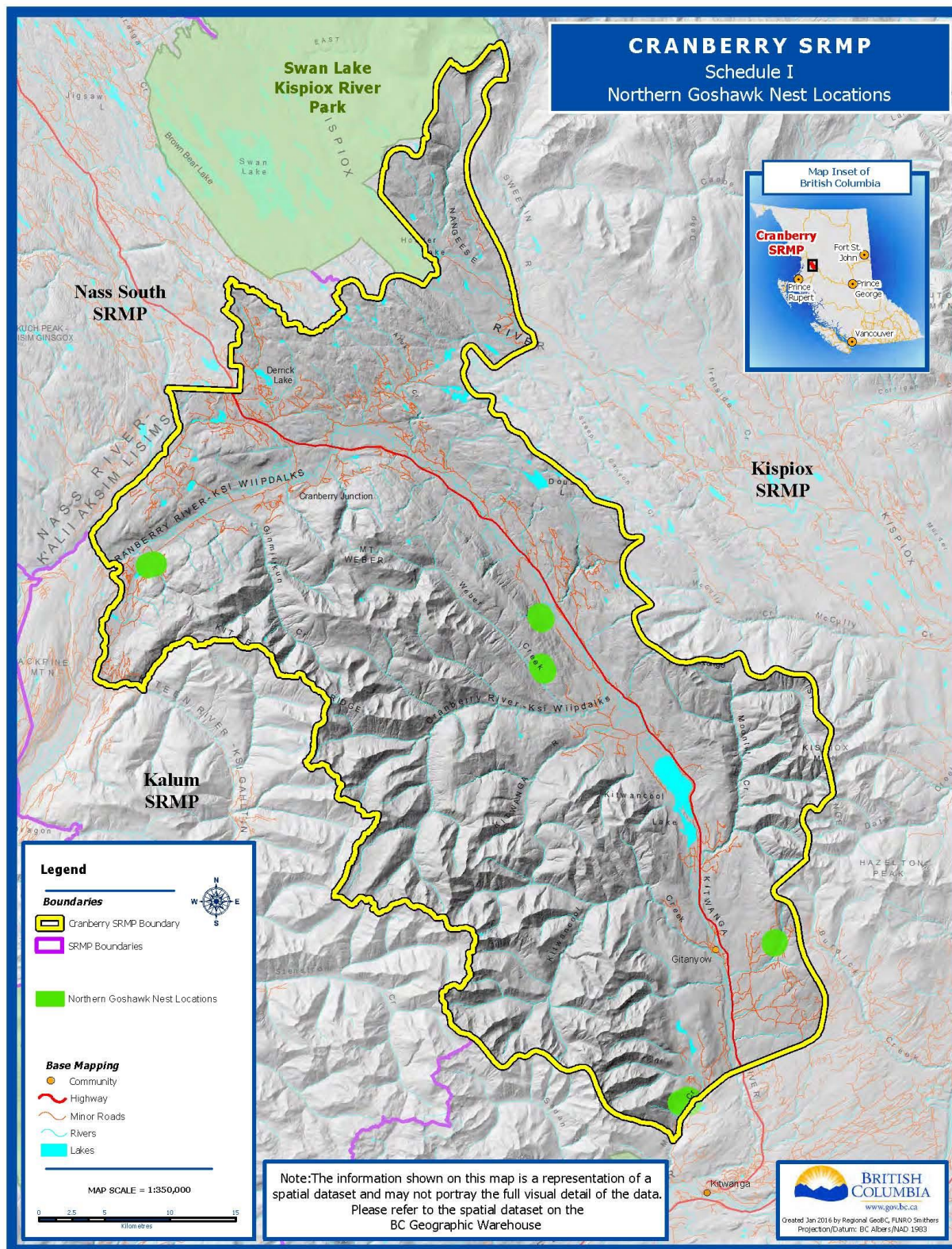


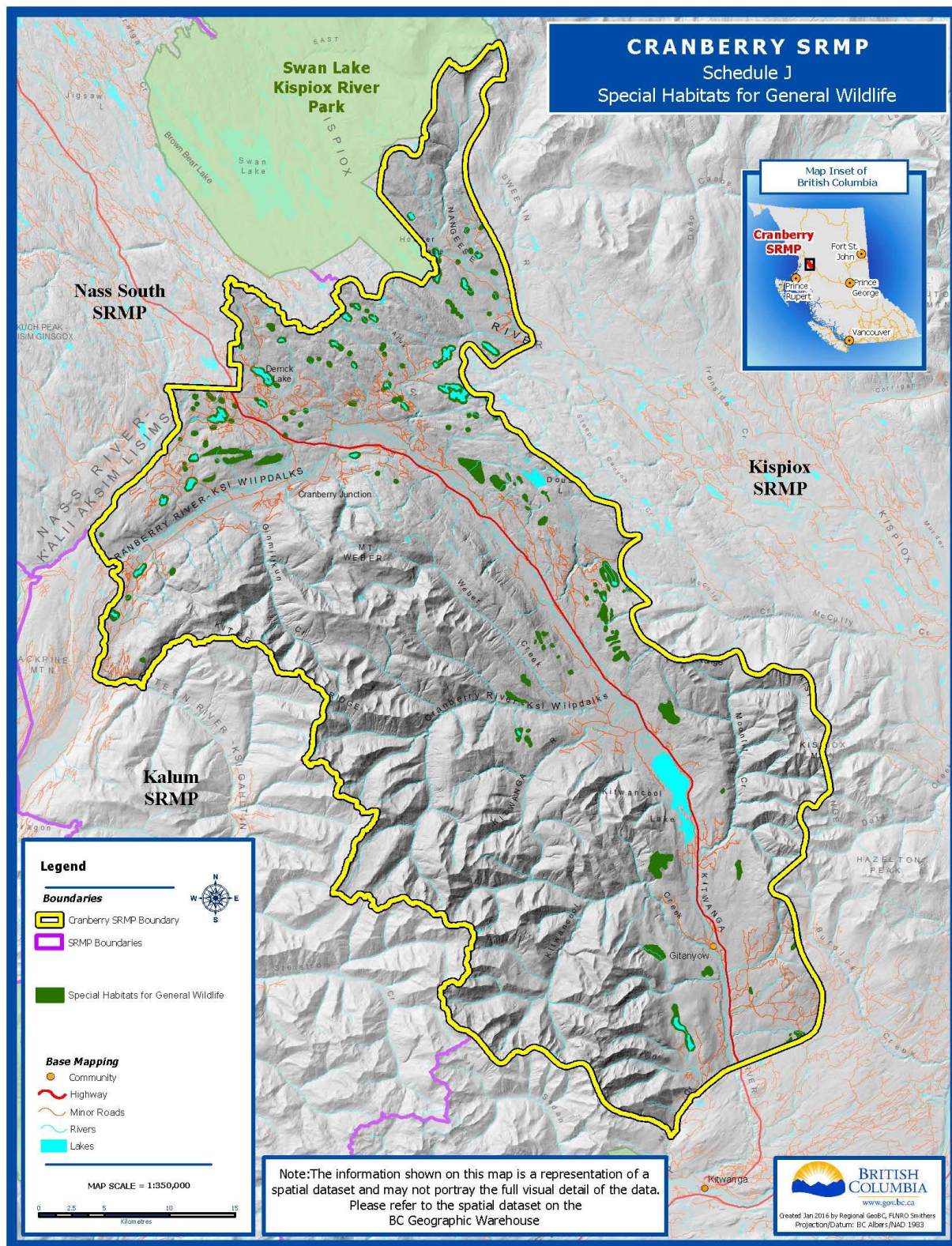
Schedule G1

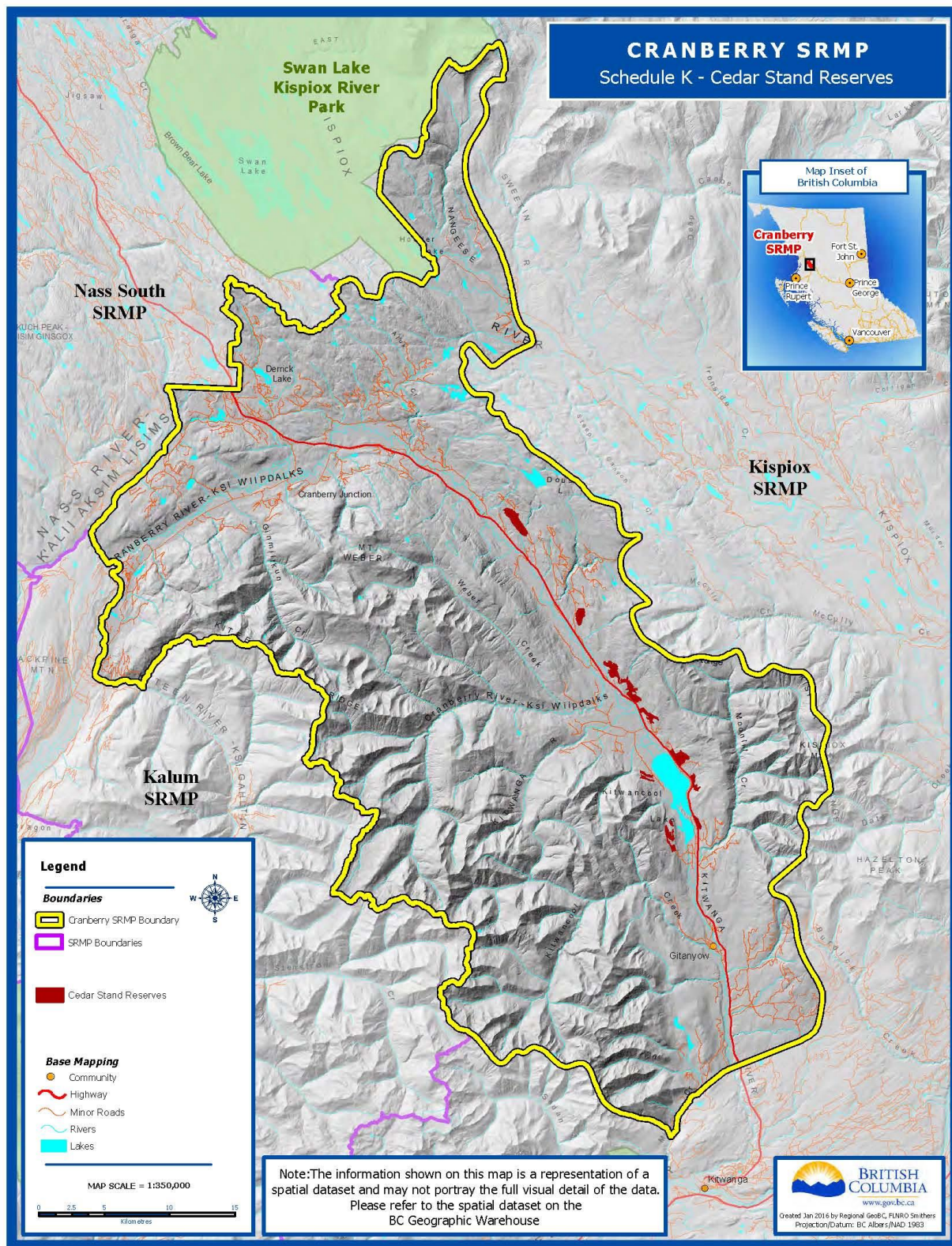
Rationale for Amending the Ecosystem Network

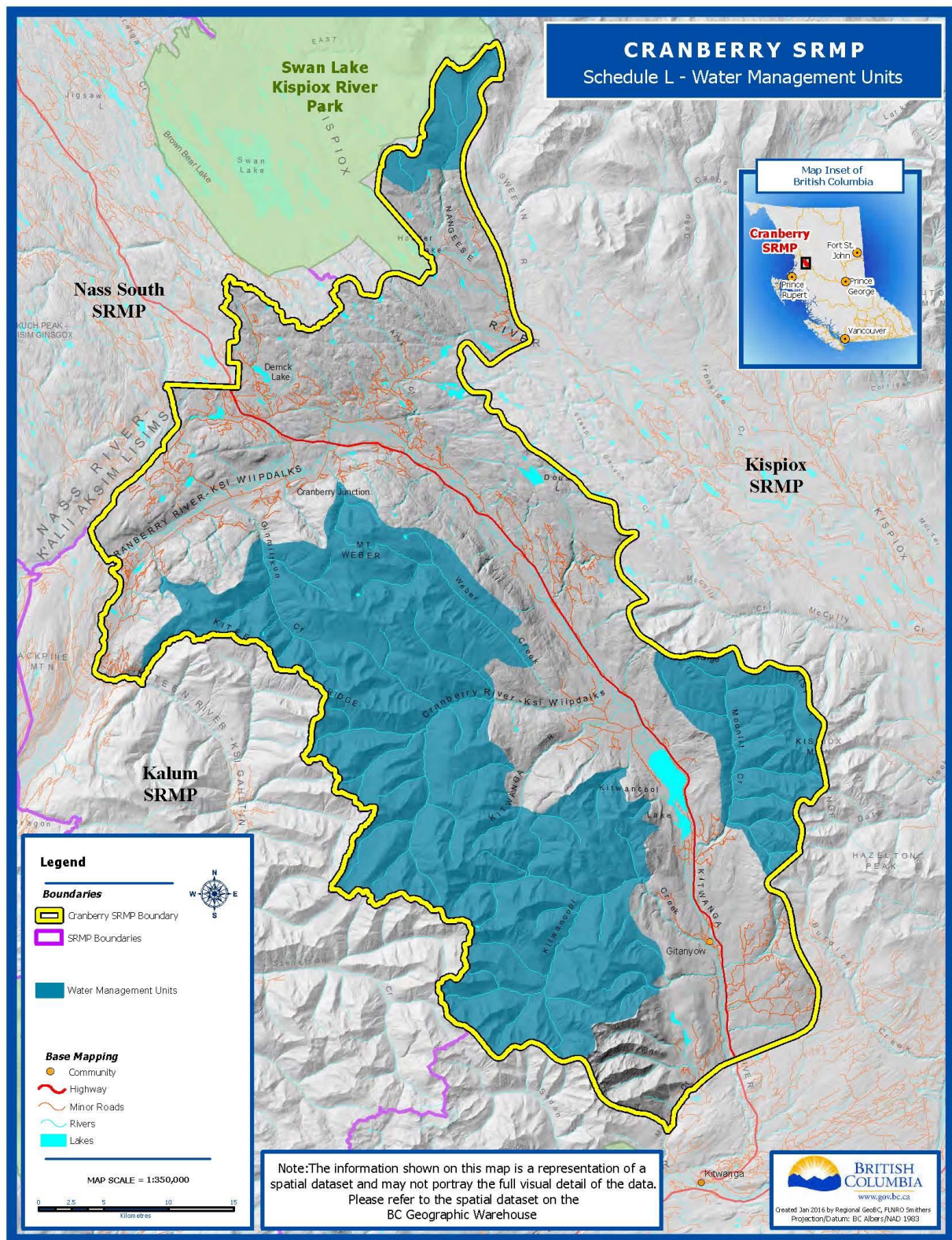
Acceptable Rationale for Amendment	Major or Minor Amendment (see Definitions Section)	Allowable Amendment
1. Access issues that were overlooked or unknown during the initial Ecosystem Network delineation, where no practicable alternative exists (refer to Objective 19).	Minor	<ul style="list-style-type: none"> To establish an appropriate road width through the Ecosystem Network.
2. To account for cut blocks in place prior to the establishment of the Ecosystem Network, including those: <ul style="list-style-type: none"> approved under section 196(1) of the <i>Forest and Range Practices Act</i>; as declared areas under section 14(4) of the <i>Forest Planning and Practices Regulation</i>; or that have a cutting permit in place 	Minor	<ul style="list-style-type: none"> To the edge of the cut block, temporarily, to allow timber harvest. Return to original location following completion of timber harvest and silvicultural responsibilities.
3. To address a compelling forest health issue (e.g. a forest pest or disease is established in the Ecosystem Network and spreads to the point where it threatens adjacent values and resources outside the Ecosystem Network).	Minor	<ul style="list-style-type: none"> To the extent necessary to eliminate the threat to the land and water adjacent to the Ecosystem Network.
4. New data and information such as ground truthing of the hydriparian zone, new resource inventories, First Nations cultural sites and updated wildlife mapping. Notwithstanding the exceptions detailed under items 1 to 3 above, in no case will the Ecosystem Network be smaller than the hydriparian zone.	Major for the following rivers and creeks: <ul style="list-style-type: none"> Nass River mainstream/ Beverly Creek Gitanyow Lake Moonlit Creek mainstream Kitwanga River mainstream Kitwancool Creek mainstream Cranberry River mainstream Tsugwinselda Creek Kispiox River mainstream Nangeese River mainstream Aluk Creek 	<ul style="list-style-type: none"> To improve the degree to which the Ecosystem Network captures values for First Nations, provides habitat for wildlife, or generally benefits biodiversity. To increase the accuracy of the Ecosystem Network in terms of how it maps the hydriparian zone.
	Minor for all other portions of the Ecosystem Network	











Schedule M

Red-Listed Ecological Communities

Scientific Name	English Name	Biogeoclimatic Unit
<i>Amelanchier alnifolia</i> / <i>Elymus trachycaulus</i>	saskatoon / slender wheatgrass	ESSFwv ICHmc1 ICHmc2
<i>Calamagrostis purpurascens</i> <i>Herbaceous Vegetation</i>	purple reedgrass Herbaceous Vegetation	BAFA CMA
<i>Carex sitchensis</i> / <i>Sphagnum spp.</i>	Sitka sedge / peat-mosses	CWHws2/Wf51
<i>Pinus contorta</i> / <i>Arctostaphylos uva-ursi</i>	lodgepole pine / kinnikinnick	CWHws2/02
<i>Populus spp. (balsamifera, trichocarpa)</i> - <i>Picea spp.</i> / <i>Cornus stolonifera</i>	(balsam poplar, black cottonwood) - spruces / red-osier dogwood	ICHmc2
<i>Tsuga heterophylla</i> / <i>Rubus chamaemorus</i> / <i>Sphagnum spp.</i>	western hemlock / cloudberry / peat-mosses	ICHmc2/Wb04

Schedule N

Blue-Listed Ecological Communities

Scientific Name	English Name	Biogeoclimatic Unit
<i>Abies amabilis</i> - <i>Thuja plicata</i> / <i>Gymnocarpium dryopteris</i>	amabilis fir - western redcedar / oak fern	CWHws2/04
<i>Alnus incana</i> / <i>Cornus stolonifera</i> / <i>Athyrium filix-femina</i>	mountain alder / red-osier dogwood / lady fern	ICHmc2/FI02
<i>Betula nana</i> / <i>Carex aquatilis</i>	scrub birch / water sedge	ICHmc2/Wf02
<i>Carex lasiocarpa</i> / <i>Drepanocladus aduncus</i>	slender sedge / common hook-moss	ICHmc1/Wf05 ICHmc2/Wf05
<i>Carex limosa</i> - <i>Menyanthes trifoliata</i> / <i>Sphagnum</i> spp.	shore sedge - buckbean / peat-mosses	CWHws2/Wb13 ICHmc1/Wb13
<i>Picea engelmannii</i> x <i>glauca</i> - <i>Betula papyrifera</i> / <i>Oplopanax horridus</i>	hybrid white spruce - paper birch / devil's club	ICHmc2/54
<i>Picea mariana</i> / <i>Lysichiton americanus</i> / <i>Sphagnum</i> spp.	black spruce / skunk cabbage / peat-mosses	ICHmc2/Ws09
<i>Picea mariana</i> / <i>Menyanthes trifoliata</i> / <i>Sphagnum</i> spp.	black spruce / buckbean / peat-mosses	ICHmc2/Wb11
<i>Picea sitchensis</i> / <i>Rubus spectabilis</i> Wet Submaritime 2	Sitka spruce / salmonberry Wet Submaritime 2	CWHws2/07
<i>Poa glauca</i> ssp. <i>rupicola</i> Herbaceous Vegetation	glaucous bluegrass Herbaceous Vegetation	BAFA
<i>Populus trichocarpa</i> - <i>Abies lasiocarpa</i> / <i>Oplopanax horridus</i>	black cottonwood - subalpine fir / devil's club	ICHmc1/Fm03 ICHmc2/Fm03
<i>Populus trichocarpa</i> - <i>Alnus rubra</i> / <i>Rubus spectabilis</i>	black cottonwood - red alder / salmonberry	CWHws2/08
<i>Scheuchzeria palustris</i> / <i>Sphagnum</i> spp.	scheuchzeria / peat-mosses	ICHmc2/Wb12
<i>Trichophorum cespitosum</i> / <i>Campylium stellatum</i>	tufted clubrush / golden star-moss	ICHmc2/Wf11
<i>Tsuga heterophylla</i> / <i>Arctostaphylos uva-ursi</i> / <i>Cladonia</i> spp.	western hemlock / kinnikinnick / clad lichens	ICHmc1/02 ICHmc2/02
<i>Tsuga heterophylla</i> - <i>Pinus contorta</i> / <i>Pleurozium schreberi</i>	western hemlock - lodgepole pine / red-stemmed feathermoss	CWHws2/03