Cranberry SRMP
Data Package for Analysis of Timber Supply Impacts
Updated March 23, 2011

This document describes:

- criteria to define the timber harvesting land base
- management zones and objectives
- miscellaneous modeling assumptions

The first two of these items are subdivided into the 3 scenarios to be analyzed:

- FRPA benchmark – current legal requirements under FRPA
- Current Management – current management commitments in Forest Stewardship Plans that are incremental to the legal requirements of FRPA
- SRMP scenario – additional requirements from the Cranberry SRMP, incremental to Current Management

Criteria may be specified separately for the Cranberry and Kispiox TSAs. Where a TSA is not specified, the criteria apply to the whole plan area. Percent netdowns are specified only where there might be confusion, otherwise all netdowns are 100%.

Timber Harvesting Land Base Criteria

FRPA Benchmark

Category	Criteria	Notes
non-Crown	• tenure_type is not null and <> 'PARKS' • treat_lnds is not null • tsa is null • trans_line = 'Y'	• non-biodiversity ownerships • proposed treaty settlement areas • 3 ha has no TSA • transmission line
non-productive	• np_code <> 00 • • road_buff = 'Y'	• type identity is not available. Some np_code is null , but is vegetated. Also, this catches some non commercial. • current roads are NP
non-commercial	• fmlb = 'N' or fmlb is null or spec_cd_1 is null or site_index is null or 0	• type_identity is not available. All NCBR and NSR is in fmlb, assume it has all been reclassified with species, site index, etc.
Parks	• tenure_type = 'PARKS'	• ownerships contributing to biodiversity
fans and floodplains	• alluv_fans = 'Y' • pmgt_zn = 'R'	• fans • floodplain reserve zones
ESA	• esa_1 contains 'A' • esa_1 contains 'S' and slp_grp is not null • soil_eros is not null • stability ='V'	• Ea avalanche • Es1 on steep slopes only • soil erosion H and VH • TSM class V
inoperable	• git_op_sm is null	• Philpot operability - ignore HMM
low site	Cranberry: • hemlock or cedar leading and site_index < 9 • balsam leading and site_index < 8.8 • spruce leading and site_index < 10.0 • pine leading and site_index < 11.0 • deciduous leading and site_index < 18 Kispiox: • cedar leading and site_index < 9 • hemlock leading and site_index < 8 • balsam leading and site_index < 8 • spruce leading and site_index < 7.5 • pine leading and site_index < 7.5 • AC-coniferous (itg=35) and site_index < 6	• from 1997 Cranberry TSAR • from HMM criteria used in 2007 Kispiox TSR.
problem forest types	Cranberry: • non-pine coniferous leading and proj_age_1 > 140 and height < 19.5 • pine leading and proj_age_1 > 100 and proj_ht_1 < 19.5 • spec_cd_1 in ('AT','E','EP') and proj_age_1 > 40 Kispiox: • itg > 35 or au = 'X'	• ignore pine stocking problems (no stocking class attributes) • old deciduous, except AC • deciduous except AcConif
wildlife habitat	• mountain goat: goat_uwr = 'Y' • moose: no reductions • mule deer: no reductions	• ignore the goat buffer –> management scenario • grizzly bear habitat addressed under Current Management
rare & endangered plant communities	• phm_status = 'RED' 100% • phm_status = 'BLUE' 70%	• from Spatial Data Requirements

Timber Harvesting Land Base Criteria

Category	Criteria	Notes
specific geographic areas	• mill_sa like 'Cedar%' or "Reserve%' • nl_ogma is not null	• Mill Creek Sensitive Area – protection and reserve zones • Kispiox legal OGMAs and Cranberry non-legal OGMAs. Phase in-of old seral in Cranberry not required because all operable area is in Intermediate BEO LU.
riparian	• riparian is not null • 10 m RRZ on S4 streams in Nangeese watershed in Upper Kispiox SMZ	• RMZs converted to an equivalent RRZ. • RMZ for S4 represents effective width, not actual width, but can use an alternate approach.
WTP	Cranberry: 5.0% Kispiox: 10.3%	• Cranberry rationale (2.5+2.5) • Kispiox analysis report
future roads	Cranberry: 4.4% for proj_age_1 > 34 years Kispiox: 4.4% for proj_age_1 > 32 years	• adjusted from 20 years in 1997 • adjusted from 26 years in 2005

Current Management (incremental to FRPA Benchmark)

Category	Criteria	Notes
wildlife habitat	• grizzly bear: griz_frpa = 'YES'	• replaces management requirements in FRPA Benchmark

SRMP Scenario (incremental to Current Management)

Category	Criteria	Notes
watersheds	• git_10link = 'Y'	• 10 Link Creek expanded area
water mgmt units	• wmu_name in 'WMU#1', 'WMU#2', 'WMU#3' , 'WMU#4'	• do not remove ' WMU#3-Poss Oper'
core ecosystem network	• econet_fan = 'Y' 100% • ecobuff = 'Y' 70%	• core area • buffer
wildlife	• ghawk_nest = 'Y' • goat_buff = 'Y' • griz_hv <> 0 and griz_frpa is null • wild_patch is not null 100%	• goshawk nests • goat UWR buffers • high value GB habitat (class 1, 2,3) not in FRPA • wildlife habitat patches
cultural heritage features	• culttrail = 'Y' • kitcool = 'Y'	• grease trail • Kitwancool Lake reserve
riparian	• full retention of all RMZ in Upper Kispiox SMZ	• represents hydroriparian zone
WTP	• Cranberry: 6.0%	• assume half of SRMP target can be met outside THLB • Kispiox already 10.3

Management Zones and Objectives

FRPA Benchmark

Resource Objective	Target and Condition	Affected Land Base	Notes
Old seral	none		• use OGMAs as land base netdown
Mature+old and early seral stages	as specified in Kispiox data package for Kispiox TSA only	CFLB by BEC variant by LU within Kispiox TSA only	• No legal requirements for Cranberry. • Sliver LUs are ignored – all have < 20 ha in THLB: Kispiox, McCully, Skeena Crossing, Skeena West, <null>.
VQO	R: max 5% < 5 m PR: max 15% < 5 m M: max 25% < 5 m	CFLB by VQO type by LU	• 5 m height = 20 years
grizzly bear habitat	Cranberry: • min 10% > 100 years • max 30% < 20 years Kispiox • general 1% reduction	CFLB where grizz_hv in (1,2,3) and git_op_sm = 'Y'	• polygons with griz_frpa = 'YES' already netted out. • no legal requirements for Kispiox • implement as a volume reduction in the Woodstock outputs
Community watersheds	max 20.4% < 6 m	Ten Link Creek CFLB	• 6 m height = 30 years • might have to recalculate max% based on new CFLB
Pine mushroom habitat	Kispiox TSA: • min 60% > 80 years	CFLB where mshm_name is not null or ppine_hab2 = 'Y'	• Combine 2 sets of mapping. Target from TSR.
IRM	max 33% < 3 m	THLB by LU	• 3 m height = 10 years

Current Management (incremental to FRPA Benchmark)

Resource Objective	Target and Condition	Affected Land Base	Notes
mule deer winter range	min 6% > 150 years	CFLB in deer winter range	• only exists in Kispiox.
grizzly bear habitat			• remove management requirements from FRPA Benchmark and replace with land base reduction in Current Management

Management Zones and Objectives

SRMP Scenario (incremental to Current Management)

Resource Objective	Target and Condition	Affected Land Base	Notes
Old seral in Upper Kispiox SMZ	apply SRMP targets based on High BEO	CFLB by BEC variant in Upper Kispiox SMZ	• about 2/3 of Upper Kispiox SMZ is inoperable or in water management unit, so effect should be insignificant • OGMAs apply in rest of SRMP area
mature+old and early seral stages	Cranberry apply SRMP targets outside of Upper Kispiox SMZ. Upper Kispiox SMZ • apply SRMP targets based on high BEO	CFLB by BEC variant by LU outside Upper Kispiox SMZ CFLB by BEC variant in Upper Kispiox SMZ	• not required in FRPA base case. • only ICHmc2 has THLB
Pine mushroom habitat	apply everywhere and replace target with: • min 50% between 80 and 200 years	CFLB where mshm_name is not null or ppine_hab2 = 'Y'	•
Community watershed	None		• replace management requirements from FRPA Benchmark with land base removal in SRMP Scenario
Wildlife	• moose: min 30% mature or old	CFLB where moose_rate = high or moderate	• most winter range is in ICH which has mature+old age of 101+
Cedar management areas	even-flow volume harvest from this area	THLB where cedar is not null	proxy for even-flow cedar harvest volume

Miscellaneous Modelling Requirements

All Scenarios

Item	Approach	Notes
analysis units	Cranberry: use TSR analysis units Kispiox: aggregate TSR analysis units by leading species and site class to eliminate HMM component	• different analysis units for Cranberry and Kispiox • Kispiox - HMM data not available so combine AUs to remove HMM code. Russ Hendry did this work.
minimum harvestable ages	Cranberry AUs: use TSR MHA Kispiox aggregated AUs: average the TSR MHA by leading species and site class	• different MHA for Cranberry and Kispiox • MHA averaged for Kispiox AUs with same leading species and site class (i.e., no HMM code). See "yield tables" below.
unsalvaged losses	Prorate TSR values to current THLB of SRMP area. => 738 rounded to 750.	• THLB: Cranberry 17,898 ha; Kispiox 13,324 ha • Cranberry UL: 397 m3/year for 32,832 ha of THLB **=> 216** • Kispiox UL: 12,840 m^3/year for 327,837 ha of THLB **=> 522**
harvest flow	Maintain current AAC as long as possible, subject to rules below. => 99,672 rounded to 99,700 Maximum decline 10% per decade. Maximize long-term even-flow harvest level with stable growing stock for last 5 decades	• "Current AAC" is the sum of the current AAC prorated to the SRMP THLB for each TSA. • THLB: Cranberry 17,898 ha; Kispiox 13,324 ha • Cranberry AAC: 110,000 m3 for 32,832 ha of THLB, **=> 59,965** • Kispiox AAC: 977,000 m^3/year for 327,837 ha of THLB **=> 39,707**. • Kispiox partition not an issue.
NSR	No work required.	• VRI data set adjusted for all depletions and NSR
yield tables	Cranberry AUs: use TSR yield tables Kispiox aggregated AUs: average the TSR yield tables by leading species and site class	• accounts for utilization standards, deciduous volume exclusions, silviculture systems, and regeneration assumptions • 2 year regen delay is ignored for Cranberry because it is implemented differently in Woodstock than in FSSIM. • 2 year regen delay is included in Kispiox yield tables, which were built for Woodstock. • yield tables are averaged for Kispiox AUs with same leading species and site class (i.e., no HMM code). Russ Hendry did this work.
application of managed stand yield tables	Cranberry: age <= 34 years. Kispiox: age <= 32 years	• adapted from TSR consistent with future roads netdown • 1997 Cranberry 10-20 year • 2005 Kispiox 26 years
Dothistroma	Ignore	Dothistroma mapping not included in data set. Cannot implement AU adjustments. Should not significantly affect impact assessment.