

Forms


The following forms with FS numbers are provided in a fillable format that can be downloaded from the Internet. The FS 693 Provincial Cruise Plan and FS 698 Provincial Comparative Cruise Checklist are the only forms that are available to the public. The FS 694 Provincial Cruise Plan and Map Check List, FS 695 Provincial Office Check of Field Cruise Data, FS 696 Provincial Field Check Cruise Summary, and FS 697 Provincial Compilation Check Form are available for in service only.

The sites are located under:

Internet <http://www.for.gov.bc.ca/pscripts/ISB/FORMS/forms.asp>

Intranet <http://wwwinternal.for.gov.bc.ca/iscrpts/ISB/FORMS/forms.asp>
(In Service)

FS 693 Provincial Cruise Plan

	PROVINCIAL CRUISE PLAN	TENURE: C.P.:	CRUISE BASE OR SCALE BASE		
		Base Map #			
A. ATTENTION:					
District Manager:		Cruise Area (ha):			
Licensee:		Contact:			
Geographic Location:					
TSA:	PSYU:	FIZ:	Inv. Reg. No:		
Coast:	Immature:	Mature:	Both:		
B. CRUISING AGENCY:		COMPILING AGENCY:			
Agency Name:		Name:			
Cruiser Names (if known):		Address:			
Address:					
C. TENTATIVE CRUISE DATES:					
From:		To:			
Proposed Years of Logging:		Access:			
D. HARVESTING SYSTEM:					
Harvesting System:					
Systematic Grid:					
1. Segregate silv. System (patch clearcut, seed tree, note avg. opening size).					
E. NUMBER OF PLOTS:					
Measure Plots:	Count Plots:	Estimated C.V.:	S.E. Waived (Y/N):		
Grid Spacing (in m)		by			
		200 x 200 m if cruise < 250 ha 250 x 250 m if cruise ≥ 250 ha			
PLOT TYPE: Prism/Relascope:		Fixed Area:	Plot Size (ha):		
F. MINIMUM DIAMETER LIMITS:		COAST		INTERIOR	
		Mature	Immature	Species (cm to)	Exemption (cm)
Field Tally					
Compilation - Appraisal (cm)					
Compilation - Cutting Permit (cm)					
G. MARKING		Ribbon Colour	Paint Colour	Axe Blaze	Other (tags)
Boundaries					
Baseline					
Strips					
Plot Centre					
Tie Points					
Non Forest Types					
Riparian Areas					
Wildlife Tree Patches					
Other					
H. OTHER:					
Comments:					
Note The original traverse notes must be provided to Ministry of Forests and Range Personnel upon request.:					
Signed:		RPF/RFT/ATC or ATE Number		Date:	
Authorized Licensee Representative					
Are block(s) in an approved Forest Stewardship or Forest Development Plan?					
Please submit the cruise plan form and map to the MOFR in digital format.					

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Figure F.1 FS 693 - Provincial Cruise Plan (Page 1 of 2).

SECTIONS J, K, L (TO BE FILLED OUT WHEN REQUIRED)

I. STRATIFIED SYSTEMATIC SAMPLING: (Calculate sampling requirements for each timber type)											
Type No.	Type Description	BEC Subzone /Variant	Plot/Prism size	Type Area (ha)	Average m ² /ha	Estimated Vol/Type m ³	Type Vol. % of Total Vol.	Estimated Type CV	Weighted Type CV	Total Plots/CP	Grid Spacing
1										Refer to Sections 2.4, 2.5 Provincial Cruising Manual	
2											
3											
4											
5											
6											
7											
Tot. Ha's					Tot. Vol.			Tot. Weighted CV			
EXPLANATION OF FORMULA											
$C = A \times B$			$D = \frac{C}{\text{Sum } C1...7} \times 100$			$E = \text{cruising manual, section 2.62}$					
Variable Plot $F = D \times E$		Fixed Plot $F = A \times E$		G = cruising manual section 2.4, 2.5			$H = \sqrt{\frac{\text{Total hectares} \times 10,000}{G \text{ (number of plots)}}$				
J. SOURCE OF CV ESTIMATES											
Type 1: _____											
Type 2: _____											
Type 3: _____											
Type 4: _____											
Type 5: _____											
Type 6: _____											
Type 7: _____											
K. INSTRUCTIONS FOR SECTIONS											
<p>A Enter district and tenure information.</p> <p>B Enter the name and address of the cruising and compiling agencies.</p> <p>C Enter the tentative start and completion dates of the field work.</p> <p>D Enter yes beside applicable headings.</p> <p>E Enter the number of plots and the grid spacing.</p> <p>F Enter the diameter limits measured and compiled to, and prism BAF.</p> <p>G Enter the colour(s) of paint and flagging used, and the type of blazing and plot tags.</p> <p>H Enter remarks if required. Signature and date are mandatory.</p> <p>I OPTIONAL. Enter data ONLY if stratified systematic sampling is used. Type description – include: species/ age class/ height class/ site quality.</p> <p>J OPTIONAL. Enter source of CV estimates.</p> <p>ATTACH: CRUISE PLAN MAP. Drawn to 1:5,000 or 1:10,000 scale, topography, (streams and roads), air photo numbers, strips and baselines, plot locations, boundaries, area in the merch and total by cut block, label the cut block (mature or immature). <u>MUST BE SUBMITTED WITH THIS FORM.</u></p> <p>AERIAL PHOTOGRAPH: Submit a copy with timber typing.</p>											

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Figure F.2 FS 693 - Provincial Cruise Plan (Page 2 of 2).

FS 694 Provincial Cruise Plan and Map Check List



PROVINCIAL CRUISE PLAN AND MAP CHECK LIST

TENURE:	___	___
C.P.:	___	___
CRUISE AREA (ha):	___	___
BASE MAP #:	___	___

A. TENURE and CRUISING AGENCY INFORMATION	YES	NO	N/A
1. Licensee's name shown?			
2. Tenure and Cutting Permit numbers shown?			
3. TSA, PSYU, FIZ, Region and Compartment Numbers indicated.			
4. Cruising and Compiling Agencies indicated.			
5. Timber Cruisers indicated?			
B. HARVESTING and SAMPLING SYSTEM INFORMATION			
6. Harvesting and sampling system acceptable? (Part D)			
7. Number of plots and plot type acceptable? (Part E)			
8. Diameter Limits acceptable? (Part F)			
9. Boundary marking acceptable? (Part G)			
C. CRUISE PLAN MAP and PLOT ESTABLISHMENT INFORMATION			
10. Tenure Information adequate? (i.e. Licence, CP, FIZ zone, UTM Grid No's, Reg. and Compt. No's...etc.)			
11. Acceptable map scale? (1:5 000; 1:10 000)			
12. Map area statement clearly shown? (Timber type descriptions and areas indicated?)			
13. Timber types on the cruise plan map and forest cover map of the cruise and surrounding area provided?			
14. Minimum of 2 plots per type?			
15. Sufficient number of plots per type or number of plots per hectare and SE waived?			
16. Consistent plot and/or strip spacing within each type? (Maximum grid - 200m if cruise < 250 ha or 250m if cruise ≥ 250 ha).			
17. Plots well distributed within each type?			
18. Prism and/or fixed area plot size consistent in each type?			
19. Cut block boundaries and forest types clearly delineated on map?			
20. Baseline established and tied to a well defined geographical feature or a legal survey mark if possible.			
21. P.O.C. established?			
22. Strips tied to cutblock boundaries?			
23. Plots and strips clearly marked?			

Note: There may be some exceptions to the above criteria. If in doubt check Chapters 2 and 3 of the *Cruising Manual*, or contact the Regional Cruising Coordinator.

Remarks: _____

Accepted:	Rejected:	Date:
Action:		
Signature:		
Approval/rejection letter sent by:	Date:	

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Figure F.3 FS 694 - Provincial Cruise Plan and Map Check List.

FS 695 Provincial Office Check of Field Cruise Data



**PROVINCIAL
OFFICE CHECK OF FIELD CRUISE DATA**

TENURE:	C.P.:
---------	-------

A. CRUISE PLAN and FINAL CRUISE MAP	YES	NO
1. Is Cruise Plan approved?		
2. Was the Cruise Plan followed?		
3. Is the FINAL Cruise Map acceptable		

B. PLOT CARDS	YES	NO
4. Are all of the plot cards submitted?		
5. Is each plot card properly filled out?		
6. Is each plot card SIGNED and DATED ? (<i>Cruising Manual</i> , Section 3.1.1)		
7. Is the prism (or fixed area plot) size consistent within each timber type?		
8. Do the plot locations by type, strip and outblock concur with the final cruise map?		
9. If count plots are used, indicate the count/measure ratio	COUNT	MEASURE

C. MERCHANTABLE STEM COUNT:								
PRISM CRUISES "Minimum" average of 5.0 merchantable trees per plot <small>(Cruising Manual, Section 2.1.2.1) Double the tree count in border and half plots. if SE 15% not achieved (does not include tree classes 4 and 6).</small>								
FIXED AREA CRUISES "Recommended" average tree count is not less than 10.0.								
	Type 1	Type 2	Type 3	Type 4	Type 5	Type 6	Type 7	TOTAL
10. Total Number of Plots								
11. Average Number of stems per plot.								
12. No. Plots with < than the recommended average stem no.								

D. AGES – TREE CLASSES	YES	NO
13. Are adequate age samples collected?		
14. Are age/height corrections done properly?		
15. Are 95% of all trees in the correct maturity class for loss factor deductions?		


Remarks: _____

Accepted:	Rejected:	Date:
Action:		
Signature:		
Approval/rejection letter sent by:	Date:	

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Figure F.4 FS 695 - Provincial Office Check of Field Cruise Data.

FS 696 Provincial Field Check Cruise Summary



**PROVINCIAL
FIELD CHECK CRUISE SUMMARY**

TENURE: _____ C.P.: _____

IS CHECK CRUISE REQUIRED? _____ (Note: If no, inform licensee.)

Cruised by: _____ Cruise Date: _____ # plots: _____

Checked by: _____ Check Date: _____ # plots: _____

A. PLOT ESTABLISHMENT & DISTANCE MEASUREMENT:	NUMBER (IF REQUIRED)	ACCEPTABLE (Y/N)	NOT CHECKED
1. Distance AND Bearings between plots			
2. Distance AND Bearings for Reference Trees			
3. Boundaries checked: (Indicate Yes, No or NOT Checked)			
B. SPECIES IDENTIFICATION: - (Section 3.6.3.1, 2)			
4. % of Stems incorrectly identified:			
C. NUMBER OF STEMS: - (Section 3.6.3.1, 1)			
5. Stem count difference for tree classes 1,2,3,5,7,9 (1 STEM IN 50 allowed)			
6. Live and dead useess stem count difference (1 in 50 allowed) - Interior			
D. BREAST HEIGHT: - (Section 3.6.3.1, 7)			
7. Total Number of Stems Checked:			
8. Number of Stems > 5% HIGH			
9. Number of Stems < 5% LOW			
10. Average Error of All Samples:			
E. DIAMETERS: - (Section 3.6.3.1, 7)			
11. Number of Diameters Checked			
12. % of Diameters in Error by > + 2%:			
13. Average Absolute Variation of all Diameters Checked:			
F. PATHOLOGICAL INDICATORS/DAMAGE CODES: - (Section 3.6.3.1, 4 and 5)			
14. Number of Trees with > 1 Risk Group Change			
15. % Risk Group changes --- all trees			
16. % trees checked with incorrect fire/blowdown/insect codes			
G. HEIGHT SAMPLES: - (Section 3.6.3.1, 3)			
17. Number of Heights Checked			
18. % Average Absolute Variation of all of Heights Checked			
H. AGES: - (Section 3.6.3.1, 6)			
19. 95% of ALL trees in correct maturity class for loss factor deductions			
I. QUALITY (Coast Immature Only): - (Section 3.6.3.2)			
20. i. % trees with path incorrectly coded in 1 st and 2 nd third			
ii. % of quality indicators ± 1 code change			
iii. Knots and knot indicators - # of 5 m log quarters > 2 quarters difference			
Note Spiral grain - code > 4 does not require checking			
J. PLOT SLOPE: - (Section 3.6.3.3)			
21. i. At least 90% plots within +/- 5 plot slope % (Y/N)			
ii. Average Variation of all check plots within +/- 5 slope % (Y/N)			
K. REMARKS: - (Section 3.6.2, 3.6.5)			

Accepted:	Rejected:	Date:
Action:		
Signature:	Forest District:	
Approval/rejection letter sent by:		Date:

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NOTE: ANY UNACCEPTABLE FINDINGS MAY BE GROUNDS FOR REJECTION.

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Figure F.5 FS 696 - Provincial Field Check Cruise Summary.

FS 697 Provincial Compilation Check Form



**PROVINCIAL
COMPILATION CHECK FORM**

TENURE: _____ C.P.: _____

A. CRUISE/TENURE INFORMATION	YES	NO
1. Was this cruise field checked?		
2. Licensee		
3. Forest District		
4. a) Forest Inventory Zone (FIZ)		
b) Forest Sustained Yield Unit (PSYU)		
c) Forest Inventory Region No.		
d) Forest Inventory Compartment No.		

B. MAP AREA STATEMENT	YES	NO
5. Net Merchantable Area agree with appraisal?		
6. a) Do the map merchantable areas agree with compilation and appraisal?		
b) Do the number and area of the Cutblocks on the map agree with the compilation and appraisal?		
c) Do the number and area of the Timber Types on map agree with compilation?		

COMPILATION DATA

C. COMPILATION VERSION	YES	NO
7. Is the compilation version correct?		

D. SAMPLE ERROR ACHIEVEMENT (Total Volume Compilation)	YES	NO
8. SE % ACHIEVED? (See Section 2.1.2 Cruising Manual)		
9. If SE % NOT ACHIEVED, have minimum number of trees/plot and 1 plot per hectare been achieved?		

E. FIR LRFs	YES	NO
10. a) Type of Compilation..... <u>WET</u> or <u>DRY</u> Belt Fir (see Chapter 7, Position 14 of the Cruising Manual)		
11. b) Proper Fir LRF's used? (<u>Wet Belt/Dry Belt</u>) - (see LRF Reports)		

F. PLOT SUMMARIES AND LOSS FACTORS	YES	NO
12. Have the correct Forest Inventory Loss Factors been used for each species? (Table 17 & Figure T.1 of Cruising Manual)		
13. Are the plots in the compilation and appraisal only from the harvest area?		

G. REDUCTION COMPILATIONS (Factored, Partial Cut, etc)	YES	NO
14. Total (Full) volume compilation submitted (NO REDUCTIONS)?		
15. Factored compilation consistent with source documentation?		

H. APPRAISAL DATA SHEET --- CRUISE DATA	YES	NO
16. Is the cruise data entered on the Appraisal Data Sheet the same as the compilation?		

REMARKS :

Accepted:	Rejected:	Date:
Action:		
Signature:		
Approval/rejection letter sent by:	Date:	

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Figure F.6 FS 697 - Provincial Compilation Check Form.

FS 698 Provincial Comparative Cruise Checklist



**PROVINCIAL
COMPARATIVE CRUISE CHECKLIST**

FOREST REGION _____

FOREST DISTRICT _____

NEW CUTTING AUTHORITY (NCA): _____ NEW C.P.: _____
 PARENT LICENCE _____ PARENT C.P.: _____

PARENT TIMBER TYPE(S) (1) _____ (2) _____ (3) _____
 NCA TIMBER TYPE(S) (1) _____ (2) _____ (3) _____

A. GEOGRAPHICAL INFORMATION and CRUISE MAP			ACCEPTABLE (Y/N)
1. Location map provided shows the proximity of parent and new cruises?			
2. Is the NCA Cruise Plan Map acceptable (- systematic grid?)			
<i>ZONE DATA ACCEPTABILITY</i>			
	<i>Parent Cutting Authority</i>	<i>New Cutting Authority (NCA)</i>	
3. Biogeoclimatic (BEC) Subzone			
4. PSYU			
5. Forest Inventory Zone (FIZ)			
6. Wet or Dry Belt			
B. FIELD DATA			ACCEPTABLE (Y/N)
7. PARENT TIMBER CRUISE FIELDWORK DATE <i>(Mature must be < 10 years / Immature < 5 years)</i>			
8. Does the parent cruise meet the <i>Cruising Manual</i> standards (SE % or 1 plot/hectare and 5.0 trees/plot)?			
9. Does number of plots/type in NCA meet or exceed the standards required in the comparative cruising matrix in Section 2.1.2.2?			
10. Is the data collected to the <i>Cruising Manual</i> standards?			
11. Is there an average of 5.0 trees per plot in the NCA cruise?			
12. Are at least 2 ages measured of co-dominant and dominant trees per plot in the new cruise?			
C. COMPILATION			ACCEPTABLE (Y/N)
13. Cruise compilation version - parent and NCA must be compiled on the most recent version?			
14. Are all summary pages submitted for the parent and new cruise?			
	<i>Parent Cutting Authority</i>	<i>New Cutting Authority (NCA)</i>	
15. Timber Merchantability Specifications			
16. Major Species Composition (\pm 5%)			
17. Minor Species Composition (\pm 10%)			
18. Merchantable Vol/ha (\pm 10% difference)			
19. Maturity Class			
20. % immature by TYPE			
21. Lumber Recovery Factors (\pm 5 LRF Points)			
22. Merchantable Vol/Tree (\pm 10%)			
23. If NCA cruise is LESS THAN 0.20 m ³ /tree, the parent cruise MUST BE LESS THAN 0.20 m ³ /tree. If NCA cruise is GREATER THAN 0.20 m ³ /tree, the parent cruise MUST BE GREATER THAN 0.20 m ³ /tree.			
24. Recompiled cruise Sampling Error(%)			

REMARKS:

Submitted by Licensee: (signature)	
Approved by District Manager: (signature)	
Approval/rejection letter sent by:	Date:

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Figure F.7 FS 698 – Provincial Comparative Cruise Checklist.

Acknowledgements

1. The colour photographs that are in Section A.4.4 were contributed by the Canadian Forest Service.
2. The Forms, Risk group rating tables and Interior Site Index Tables were compiled by the Kamloops Forest Region.
3. The Down Tree Matrix was provided by the Kamloops Forest District.

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