WLGML Users Manual

Ver 4.0

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Federation of B.C. Woodlot Associations

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1. Introduction 1
1.1 The Basics 1
1.2 What Does WLGML Do? 2
1.3 Feedback 2
2. Limitations 4
3. Clarification - What e-System Am I Trying to Use? 5
4. e-FM Access Permissions 7
4.1 I May Have Submitter Status - But I'm Not Sure 7
4.2 Getting FTA Submitter Authority 9
4.3 Getting RESULTS Submitter Authority and The Test 12
4.3.1 The Test 12
4.3.2 Actually Getting RESULTS Access 15
5. Installation 19
6. General Work Procedures 20
6.1 Saving Your Work 20
6.2 Text Editor 20
6.3 Data Entry Tips 21
6.4 Add a Comment 22
6.5 Add a Rationale 24
6.6 Add an Attachment 26
6.7 Browser Compatibility / Compatibility View 26
6.8 Free GIS - QGIS 31
7. 1 CP FTA Submissions 33
7.1 Introduction 33
7.2 Text Editor 33
7.3 1 CP - How To 33
7.4 Cutting Permit Information 35
7.5 Cut Block Spatial Data 38
7.5.1 Introduction 38
7.5.2 Data Entry 39
7.6 Generate Submission 43

7.7 Upload Submission 53
7.8 Real World Follow-Up 59
8. Conventional CP with Cutblock Submission to FTA 61
8.1 Reference Material 61
8.2 Getting Started 61
8.3 Cutting Permit Information 63
8.4 Cut Block Spatial Data 67
8.4.1 Introduction 67
8.4.2 Block Area 67
8.4.3 Shape Files 101 68
8.4.4 What Are We Mapping Here? 68
8.4.5 Adding Spatial Data 69
8.5 Cut Block Text Information 72
8.6 Generate Submission 75
8.7 Upload Submission 76
8.8 Real World Follow-Up 76
9. Road Permit Submission to FTA 77
9.1 Reference Material 77
9.2 What are Road Tenures a Map Of? 77
9.3 Multiple or Single Roads in Submission 78
9.4 Adding Length/Extending a RP Road 79
9.5 Road Permit Information 81
9.6 Add Road Spatial Data 86
9.6.1 Introduction 86
9.6.2 Shape Files 101 86
9.6.3 What Are We Mapping Here? 86
9.6.4 Adding Spatial Data 89
9.6.5 Adding Road Attribute Data 95
9.7 Generate Submission 98
9.8 Upload Submission 100
9.9 Real World Follow-Up 100
10. RESULTS Overview and Things You Need to Know 101
10.1 Introduction 101
10.2 Code Admin or FRPA Admin - VERY IMPORTANT 101
10.2.1 Block is Not Yet Reported to RESULTS 102
10.2.2 Block Has Been Reported to RESULTS 103
10.2.3 Why Care? 105
10.2.3.1 Stocking Standards 105

10.2.3.2 Amendment Process 106
10.3 "Site Plan means FRPA" 106
10.4 What is Legally Binding 107
10.5 Undeclare to Fix A Mistake? 107
10.5.1 Attribute Error in RESULTS 107
10.5.2 Spatial Data Error 108
10.6 When Is Spatial Data Required? 108
10.7 On-Line Forest Cover Updates 110
10.8 Append Exhibit A Spatial 110
10.9 Do RESULTS and FTA Have to Agree on Conventional CPs? 111
10.10 Reference Materials / Other Information Sources You Need 111
11. RESULTS Opening and Standards Unit Submissions 113
11.1 Introduction 113
11.2 PAS and Road Tubes 113
11.3 Save the Existing Data Before You Start 114
11.4 Create XML Submission in WLGML 115
11.4.1 Submitter Information 115
11.4.2 Opening Key - Opening Identification 117
11.4.3 Submission Action Code 118
11.4.4 Special Case - Minor Amendment to Code Era Block 121
11.4.5 Adding Opening and SU Spatial Data 122
11.4.5.1 Introduction 122
11.4.5.2 Unit Areas 122
11.4.5.3 Shape Files 101 123
11.4.5.4 What Are We Mapping What to include in an Opening or SU 123
11.4.5.5 Wildlife Tree Areas 124
11.4.5.6 Adding Opening and SU Spatial Data 125
11.4.6 Attribute Data Entry for New Opening 130
11.4.7 Attribute Data Entry for New Standards Unit 135
11.4.8 Generate Submission 138
11.5 Upload to RESULTS 140
11.6 Fix /Revise Opening and SU Spatial of Code Block 140
11.7 Fix / Revise Opening and SU Spatial of FRPA Block 142
12. New Openings to RESULTS - Add Disturbance 144
12.1 Introduction 144
12.2 Instructions to Add Disturbance Record through Web Interface 144
13. Code Era Stocking Standards Input 151
13.1 How to Vaporize Your Stocking Standards 152

13.2 Instructions to Add Code Era Stocking Standards to a Code Block 152
13.3 Instructions to Add Code Era Stocking Standards to a "FRPA Block" 164
13.4 Amending Code Era Stocking Standards in a Code Admin Block 166
13.5 Amending Code Era Stocking Standards in a "FRPA Block" 170
14. RESULTS Forest Cover Submission 172
14.1 Introduction 172
14.2 Opening and SU Information 172
14.3 Forest Cover Data Entry 173
14.3.1 What Are We Mapping Here? 174
14.3.2 Add Spatial 174
14.3.3 Forest Cover Polygon - Main Screen Data Entry 179
14.3.4 Forest Cover Polygon - Layer Entry 185
14.3.4.1 What Are Layers? 185
14.3.4.2 Zero, not Blank 187
14.3.4.3 Inventory Layer Entry - Retained Overstory 188
14.3.4.4 Inventory Layer Entry - Regeneration 190
14.3.4.5 Silviculture Layer Entry - Regeneration 193
14.3.5 Forest Cover Polygon - Tree Species Entry 196
14.3.6 Reporting Reserves 197
14.3.7 Polygon 2 - Non Forest Polygon 199
14.3.8 Generate Submission 200
14.4 Upload to RESULTS 202
14.4.1 First Try 202
14.4.2 Second Try 204
14.4.3 Third Try 207
15. Reporting Partial Cuts to RESULTS 211
15.1 What is a Reportable Opening 211
15.2 Reporting Different Types of Group Selection 214
15.2.1 Group Selection with All Groups < 0.25 ha 214
15.2.2 Group Selection with All Groups > 0.25 ha 215
15.2.3 Group Selection with Mixed Group Sizes 216
15.3 Uniform Partial Cuts - Intermediate Cuts with No Regeneration Obligation 217
15.3.1 What is an Intermediate Cut - FRPA Era 217
15.3.2 What is an Intermediate Cut - Code Era 219
15.3.2.1 Leg and Reg 219
15.3.2.2 Code Era Common Issues 220
15.3.3 Surveys 221
15.3.4 Minimum Opening Size 221

15.3.5 Intermediate Cut Stocking Standards under FRPA 222
15.3.6 Reserve Areas in a Intermediate Cut 223
15.3.7 Proposing a FRPA Intermediate Cut Stocking Standard 224
15.3.8 Reporting an Intermediate Cut to RESULTS – FRPA Era 227
15.3.9 RESULTS Reporting - Intermediate Cut - Code Era 229
15.3.10 RESULTS Reporting - Int Cut Forest Cover 229
15.4 Uniform Partial Cuts - Uneven Aged Multi Layered Management 231
15.4.1 RESULTS Reporting - Uniform Partial Cut - FRPA era 232
15.4.2 RESULTS Reporting - Uniform Partial Cut - Code Era 242
16. Milestone Reporting 244
16.1 Post Harvest 245
16.1.1 Overview and Discussion 245
16.1.2 Post Harvest Under FRPA 246
16.1.3 Post Harvest Under The Code 247
16.1.4 How To Do It 247
16.2 Regeneration Milestone 250
16.2.1 Overview and Discussion 250
16.2.2 Code Era 250
16.2.3 FRPA Era 251
16.2.4 How To Do It 252
16.3 Free Growing Milestone 252
16.3.1 Overview and Discussion 252
16.3.2 Sample Free Growing Declaration 253
16.3.3 How To Do It 254
16.4 No Regeneration Milestone 254
16.4.1 Overview and Discussion 254
17. The End 256
Appendix 1: Spatial Tool Documentation 1
Appendix 2: Capturing Spatial Data from MapView 1
Appendix 3: Adding Custom FRPA Era Stocking Standards 1
Appendix 4: Shape Files 101 1
Appendix 5: Creating a 1 CP Triangle from Nothing 1
Appendix 6: Lookup What Has Been Reported to RESULTS and FTA Already 1
Appendix 7: Looking up Stocking Standards Using RESULTS Search 1
Appendix 8: Editing Forest Cover Attributes in On-Line RESULTS Interface 1

WLGML Users Manual Ver 4.0

1. Introduction

1.1 The Basics

Time flies. The last full update to the WLGML manual was in 2016. Here we are 4+ years later.

Want to make a 1 CP submission to FTA?

Go to page 33.

Want to make an Conventional Cutblock submission to FTA?

Go to page 61.

Want to make an Road Permit submission to FTA?

Go to page 77.

Want to make a RESULTS submission?

Starts on page 101.

Why is this infernal manual 300+ pages long?

The Manual covers a lot of ground. It assumes you know little about the world of e-FM, and tries to get you up and running with FTA and RESULTS submissions. Background info and step by step instructions are provided, and lots of illustrations. I could have made it shorter, but it would not be as helpful for a beginner.

Code Code Code. The Code is gone. Why does this Manual go on and on about The Code?

The Code blocks are coming up to Free Growing. A lot of the old RESULTS reporting done on those Code blocks was "flawed". As you try to report meeting your free growing obligations, or try to remove the private land from a WL, you can find yourself deep into the minutiae of Code era RESULTS reporting. There are a good few years left before all the Code stuff is done and dusted.

Credits:

The development of WLGML started as an interesting side project on a volunteer basis by a talented MoFR (as it was known then) data management professional and programmer. In the end, funding was provided by the MoFR to facilitate refinement and testing of the initial versions, and by the Federation of BC Woodlot Associations to fund the writing of this users manual.

MoFLNRO Disclaimer:

The MoFLNRO wishes to be clear that their financial support was a one-time-only event, and does not imply a long term commitment to fund maintenance of this program as systems requirements, policy and regulation change over time.

Federation Disclaimer:

The Federation of BC Woodlot Associations wishes to be clear that their financial contribution to date does not imply a long term commitment to fund maintenance of this program as systems requirements, policy and regulation change over time.

1.2 What Does WLGML Do?

This program is designed to carry out four key e-FM tasks for Woodlot Licensees:

1. Prepare XML/GML submissions of cutblock boundaries to be uploaded to FTA through the ESF system. This electronic submission is required to obtain harvest authority outside of the 1 CP regime.
2. Prepare XML/GML submissions of proposed Road Permit road locations to be uploaded to FTA through the ESF system. This electronic submission is required to obtain authority to construct a road outside of a cutting permit.
3. Prepare XML/GML submissions of openings and standards units to be uploaded to RESULTS. This electronic submission is required to set up the reporting of activities and milestones in harvest areas.
4. Prepare XML/GML submissions of forest cover polygons to be uploaded to RESULTS. This electronic submission can be required to set up the reporting of vegetation cover in harvest areas.

The program allows a user to select spatial data (mapped things) in shape file format to map the block/road/SU/polygon in question.

The program then allows the user to enter the attribute data (names, dates, block numbers, etc) associated with the mapped feature that is required for the e-FM submission.

Once the spatial (mapped) and the attribute (text) data inputs are complete, the program generates an XML/GML submission that can be uploaded to the ESF website as required.

The data for partially completed submission can be saved on your local computer. If you hit a snag and have to stop for the day or are called away mid task, you can Save and will not loose all your work.

The final XML/GML submission is quite compact, and is feasible to send to the ESF website over a dial-up connection.

The program is freeware for BC Woodlot Licensees. e-FM submissions prepared for other Licence types using this software will not be accepted by the e-FM system.

1.3 Feedback

Please inform me of factual errors, typos, and indecipherable bits so I can make improvements. Sending a rewritten paragraph with the required changes already made is very much appreciated!

Contact Info:

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tomb@netidea.com

2. Limitations

The program is freeware for BC Woodlot Licensees.

This software addresses key "spatial data input" needs for the FTA and RESULTS e-FM systems for Woodlots.

The intended user groups for the WLGML program are a) Woodlot Licensees who want to do their own e-FM submissions and b) small consultants who want to provide mapping and e-FM services to woodlots.

The software assumes that many RESULTS entries will continue to be made using the RESULTS on-line attribute entry capabilities, through a web browser. (Meaning classic Microsoft Internet Explorer.)

WLGML does not replace industrial grade e-FM submission software, and will not do many of the tasks that a full su8bmission package such as eziLink can do. However, between WLGML and on-line RESULTS, you can do all the e-FM submission a WL typically needs.

WLGML is intended to make fairly straightforward submissions, as are usually found on Woodlots. Complex submissions and/or dealing with previous erroneous submissions may require the services of a competent service provider equipped with industrial grade e-FM submission and mapping software.

3. Clarification - What e-System Am I Trying to Use?

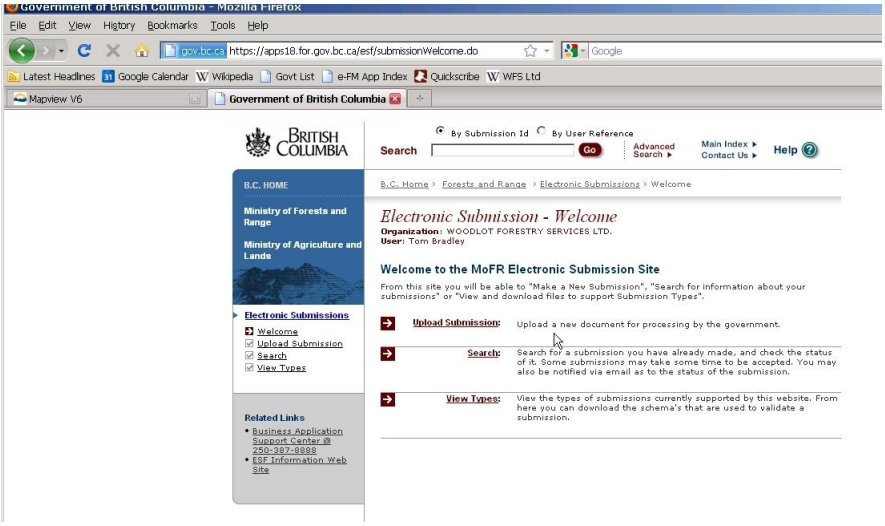
You likely have already experienced it. You ask an knowledgeable person for a smidgen of advice about this e-Whatever stuff and they start spouting gibberish using terms like ESF, e-FM, net interface, FTA, RESULTS, XML and on and on.

Within 2 sentences, you have no idea what is being talked about.

This short section will try to help.

e-FM is an omnibus term that refers to the entire Electronic Forest (Information) Management system. It includes *everything* to do with digital data, forests and the government.

ESF is the Electronic Submission Framework. The working bit it is a website that you upload submissions through. You use the ESF website to put information into FTA and RESULTS.



FTA is the Forest Tenures Administration. The in-house system the Ministry uses to manage information on who has the legal authorization to cut trees and build roads where.

WL use FTA to get authorization to harvest. FTA is the place we upload Cutting Permit and Road Permit submissions to. We upload to FTA through the ESF website noted above.

We can put info into FTA, but only FLNR can edit, review or delete information in FTA.

Then only (flawed) window a non-govt person has into FTA is though iMap or MapView.

RESULTS. Um, right, RESULTS. Man, what a complicated beastie. Best to just quote the official website:

> The RESULTS (Reporting Silviculture Updates and Land status Tracking System) application tracks silviculture information by managing the submission of Openings, Disturbances, Silviculture activities and Obligation declarations as required by the Forest and Range Practices legislation.

We have lots of post-harvest reporting obligations. They are fulfilled through RESULTS.

We use 2 flavors of RESULTS:

1. XML Submission. Uploading spatial and tabular data through the ESF website. WLGML, the program this manual is for, creates XML submissions. This is how we tell RESULTS the spatial extent of an opening, standards unit, or forest cover polygon.[1]
2. On-line interface. There is a Web browser based interface to enter attribute data about openings that are already "in" RESULTS. Things like activities (logging, planting, surveys) and milestones (regen achieved, free growing achieved).

iMap. A useful web tool that lets those with high speed internet look at the spatial and tabular information that is on file for their Woodlot, and lots of other stuff too.

We started with MapView 1, a fabulous tool. It was replaced by MapView 2, then by iMap. iMap was designed by folk with blazing fast internet. You know how that goes for us residents of “the heartland”.

iMap does not work on dial up, and does not work well on rural medium-speed internet.

If it works for you, iMap is a useful tool to view what The System has been told about your operations. And it is our only window into FTA data.

You can also capture existing spatial data from iMap or Mapview as a shape file and feed it back into WLGML. See Appendix 2.

MapView. The predecessor to IMap, and a far superior program for WL use. It was dead for many months, but as of writing, it is back. Mysterious. Does the same thing as iMap - shows you spatial data from govt files - but has vastly superior search capabilities.

Waste. The Waste and Residue system has its own stand alone reporting e-System. A How To Manual is available from http://www.woodfor.com/WLGML/ Contrary to popular belief, we do not report waste to RESULTS.

---

[1] Harvest areas that a) are not under 1 CP, b) where the boundary of the planned cutblock coincides perfectly with the boundary of the actual harvest, and c) where the harvest area contains one single Standards Unit can also use the Copy Exhibit A from FTA function in RESULTS to input spatial information (the block outline, in English) to RESULTS.

4. e-FM Access Permissions

Official permission is required to upload e-FM submissions to FTA.

A separate authorization is required to upload to RESULTS.

You will need a valid BCeID to do any of this work. One BCeID and password can be used to access all systems for all licenses that you hold, but you need a specific individual access *permission* to access either system for each individual licence.

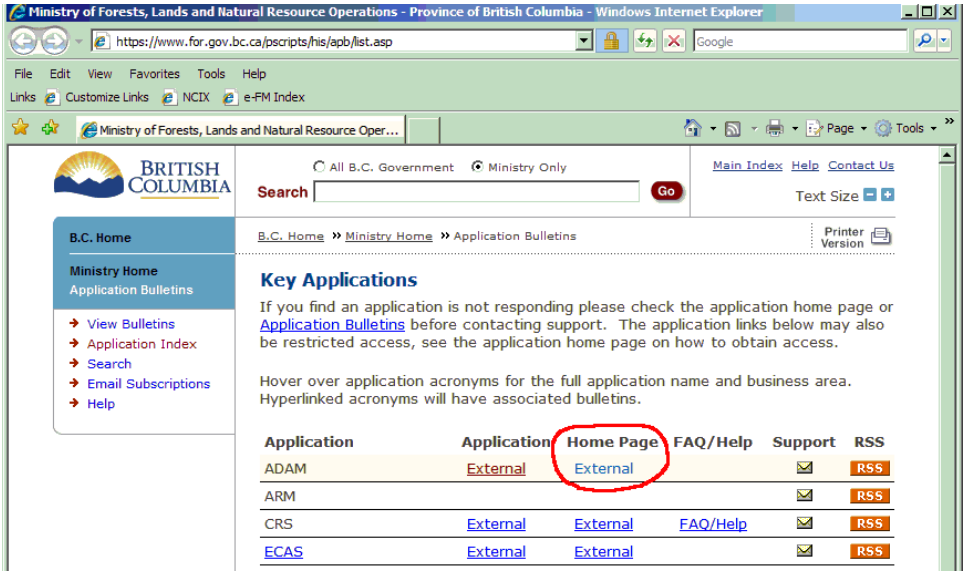
RESULTS submitter permission expires every 24 months. This means you will have to re-apply for permission to use RESULTS every 2 years. You also have to write an online test each time to show you understand RESULTS well enough to be allowed to enter and edit RESULTS data.

Any woodlot Licensee can have "view only" access to RESULTS for their woodlot(s). Contact RESULTSAccess@gov.bc.ca to request view only access for your WL.

4.1 I May Have Submitter Status - But I'm Not Sure

As the years go by, it is easy to forget what permissions you've applied for, and if they remain active. To check, go to the ADAM application. Not biblical, stands for Authority Delegation and Management.

There is an ADAM listing in The eFM Index, as shown below, but it does not work. The 2017 govt web “improvement” killed it.



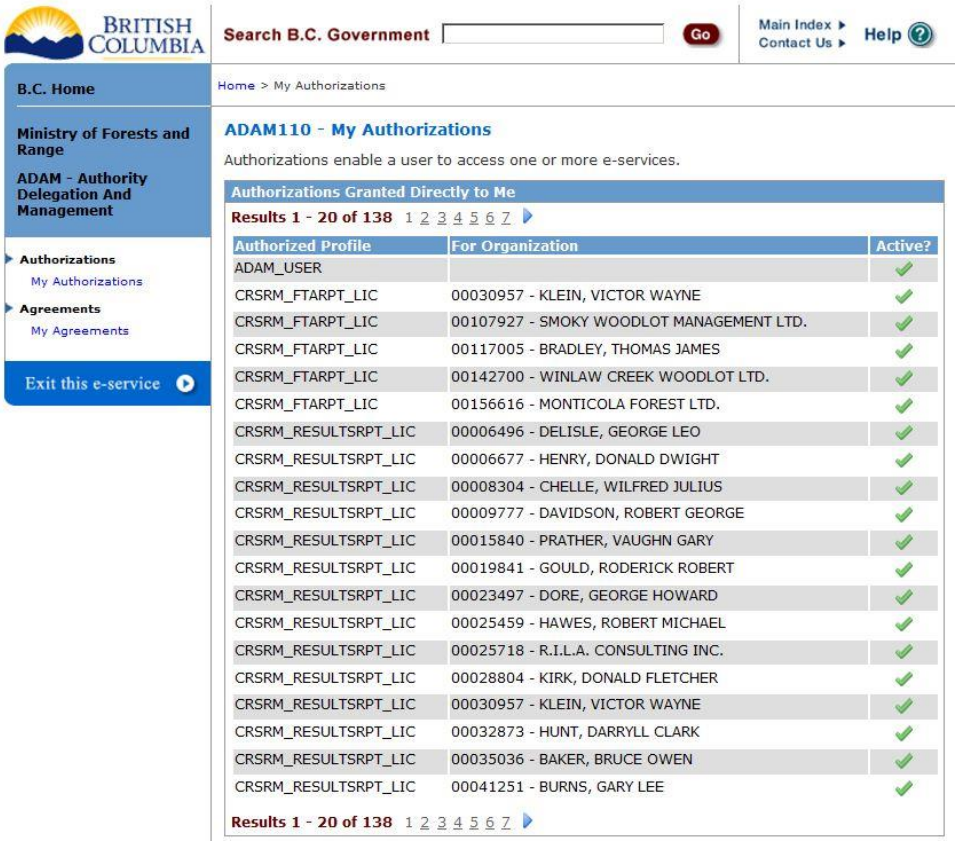
So use this link:

https://apps.nrs.gov.bc.ca/ext/adam-for/welcome.do

Brings up a New Look login page. (So glad they improved the govt web! Who cares if it works? Most important thing is it looks moderne…)

I supply credentials, click Continue and:

I have been at this long enough to be undeterred. Of course it does not work! Click My Authorizations anyway. And a list of what you have authorization to do appears.



Note: The entries are not in random order. They are sorted by type of activity, in code, under Authorized Profile, then by Client Number. Knowing the Client Number of the Licensee you wish to determine your access status for is very useful.

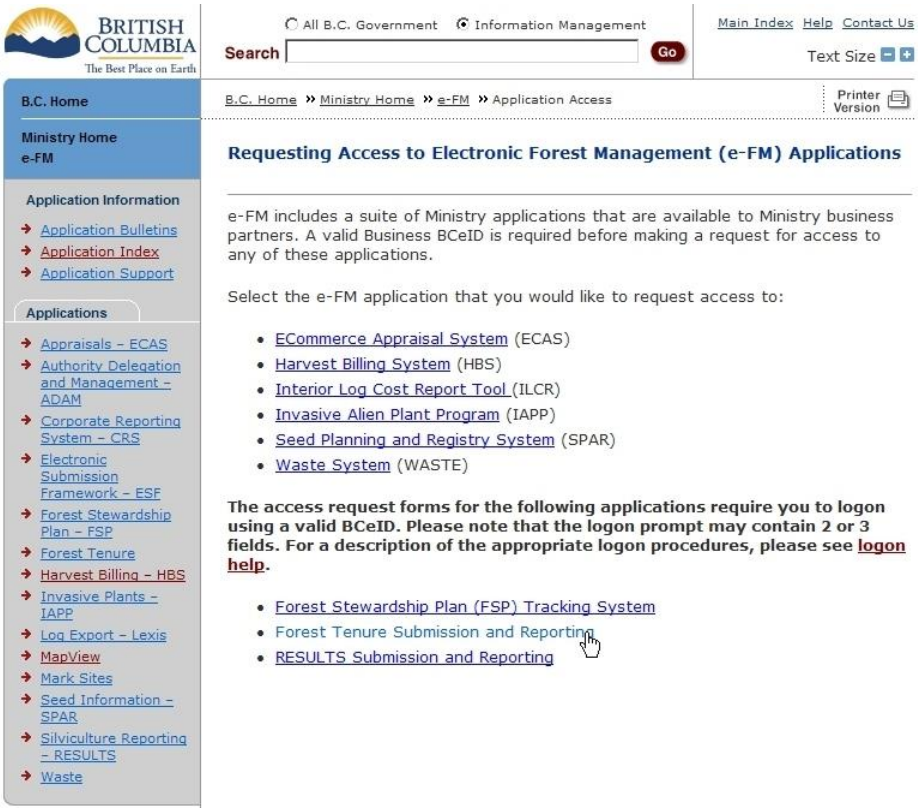
4.2 Getting FTA Submitter Authority

Whoever is doing the actual electronic submission for a CP or RP needs FTA Submitter Authority for a woodlot before they can send a CP or RP submission to FTA (through ESF) for that woodlot. There is no "blanket authority", you need a permission for each woodlot. Permission is easy to get, but it may take 2 hours to several days for the virtual paper to process.

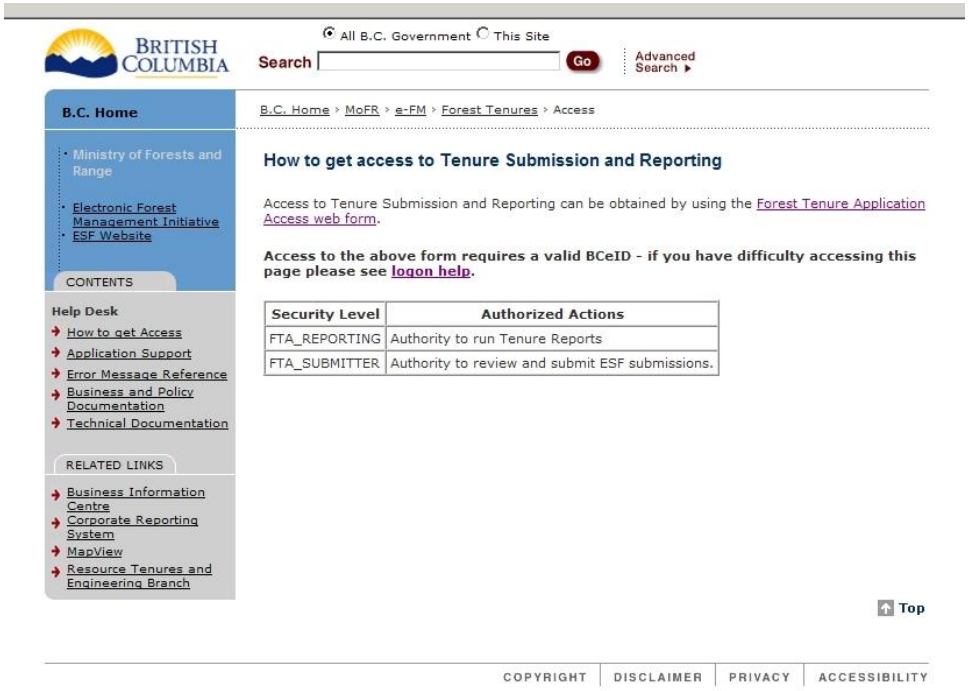
Request access to Forest Tenure Submission and Reporting at:

http://www.for.gov.bc.ca/his/efm/access.htm

Which bring up the following. You want to apply for Forest Tenure Submission and Reporting access:



Another form appears. You want Forest Tenure Application Access web form.



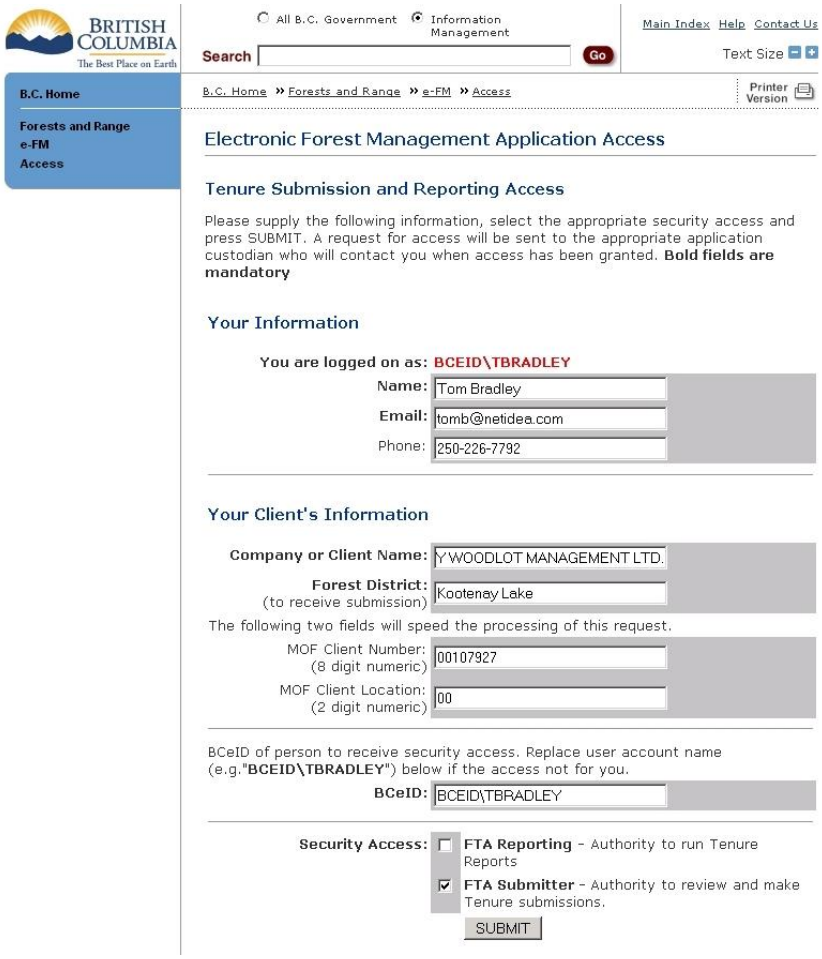
Which brings up a trick form:

The trick is that you have to prefix your BCeID username with:

bceid\

This is explained elsewhere on the website, but has been known to tie the uninitiated in knots.

Finally, we get to a nice simple little form, shown below. Fill it out, submit it, and wait for approval. Do this well in advance. Do not be a dolt like some and forget until Dec 21 to ask for urgently required submitter authority (Yes, I did that).



4.3 Getting RESULTS Submitter Authority and The Test

Whoever is doing the actual electronic submission to RESULTS needs RESULTS Submitter Authority for each woodlot before they can send information to RESULTS for that woodlot. There is no "blanket authority", you need a permission for each woodlot.

4.3.1 The Test

The Ministry requires that you know what you are doing before they let you near their RESULTS database. To quote the RESULTS Access Policy web page:

> **User Training**
>
> RESULTS users must complete RESULTS training. On January 1, 2008, applicants will be granted access to RESULTS after completion of RESULTS training or by demonstrating competency through on-line testing.
>
> The particular modules that each user must complete depends on their specific job function. For example, users with Update or Declaration access may or may not submit stocking standards. If they do, then they should complete the Stocking Standards module. Each user should read the descriptions of the training modules to determine which ones cover topic areas in the users' job functions with respect to RESULTS usage.
>
> RESULTS training programs are subject to revision. Applicants who request access during periods where training is not scheduled, should contact RESULTSAccess@gov.bc.ca for information on the MFR's procedures for demonstrating competency prior to being granted access.

This is not an irrational request. RESULTS is a very complicated data set used to report achievement of legal obligations, and once authorized you get to mess with it directly.

RESULTS Update or Declare access is only granted to those who pass a skill testing exam of 8 questions to get access to RESULTS. In other words, you have to pass the test to submit information that you are legally required to submit and/or make declarations.

More than one person has observed that (a) legally requiring us to send info and then (b) potentially preventing us from doing so is not rational.

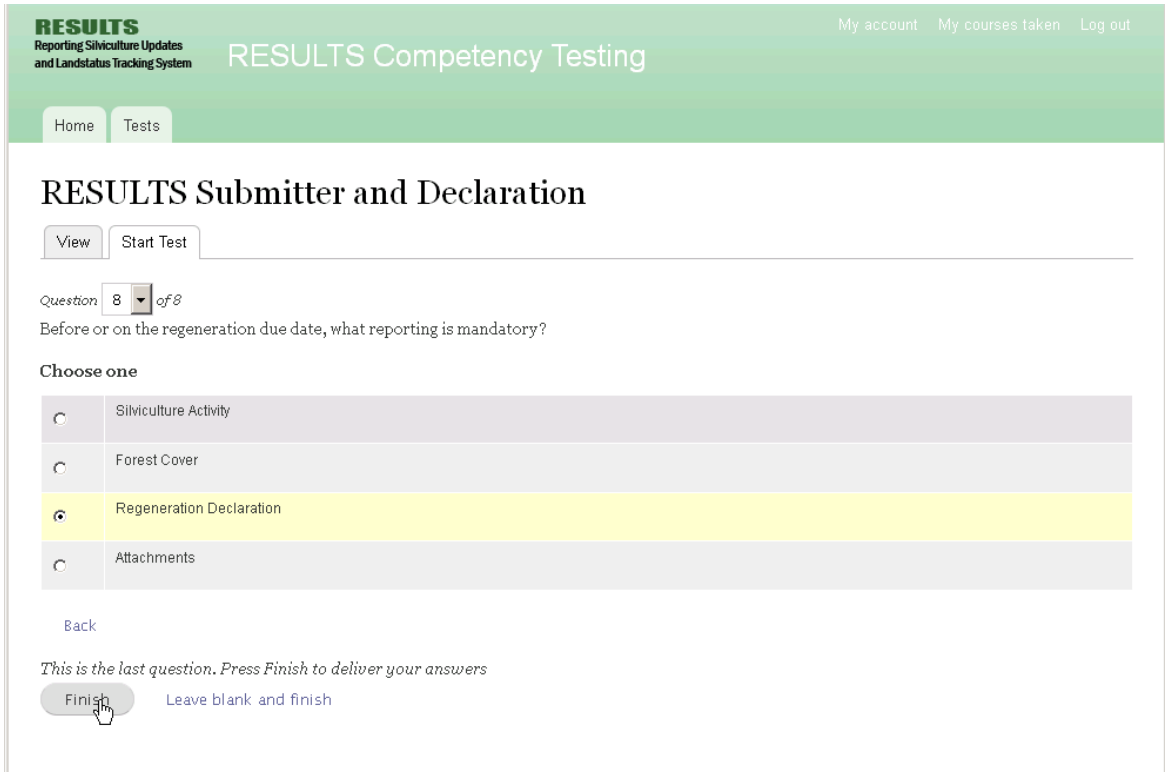
The test appears to select questions at random from a pool. The questions are not necessarily easy./ More importantly, the questions are based on FPPR and FSPs, not WLPPR and WLPs. Sometimes the "correct" answer to pass the test requires that you answer incorrectly from a woodlot perspective. For example:

If you know your WL administration, you know WL had government approved Site Plans under the Forest Practices Code and government approved Silviculture Prescriptions before the Code. FLNR approval is required to make *any* change in either of these operational plans. So for a WL, both Site Plan Amendment and Silviculture Prescription Amendment (Major) should be checked. But is says "Choose one".

???

Remember, for the Majors/FPPR, Site Plans came in with FRPA and do not require govt approval to amend. So the correct answer to pass the test is to tell The System the answer for FPPR. Yes, the answer is NOT correct for WL. So you have to provide an answer you know is untrue for WL to pass the test, to get access to do WL reporting. Life is not fair.

In the same theme:



WL have no legal requirement to report anything on Regen Due Date, but “I’m a WL, I don’t have to.” is not on the list.

So, if I am a Major, the RISS guide for Majors and FPPR 86(3)(d) state that forest cover must be reported when the regeneration date "has passed". No mention of Declarations, just forest cover. So, forest cover. (Choosing Regeneration Declaration above was incorrect.)

You get the vibe. Good luck!

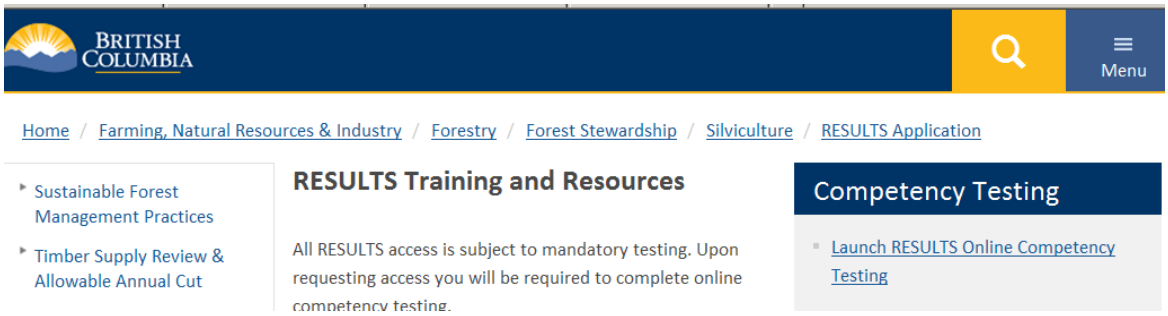
Sadly, The Test does not tell you which questions you got right and which you got wrong. So if you score 7/10 (Fail) you get no helpful info to direct you to what you do not know. Experience indicates you can re-write immediately, however.

For more enjoyment, The Test is now hard to find. The new style govt web link is:

https://www2.gov.bc.ca/gov/content/industry/forestry/managing-our-forest-resources/silviculture/silviculture-reporting-results/training-and-resources

Or, Google RESULTS Training

Depending on how you have your browser window zoomed, the Competency Testing link to test will show up at bottom or top of page:



And it goes on. To take the test, you have to create an account. You are not supposed to use your BCeID user name and password, because that will reveal sensitive info (your password) to the RESULTS team, who are not in charge of BCeID. So you should create another user name and password for this account, and store them somewhere where you can find them in 2 years time when you have to re-write the test.

More than one user has been tied in knots by this username/password complexity + passage of time. Contact the nice people at App Help to get it straightened out if you need it.

Thankfully, the Branch has agreed that all Woodlot Licensees can have "RESULTS view" access for their woodlot without taking the test. This will enable an interested Licensee with a BCeID to check what has been reported to RESULTS for their WL. Knowing what govt has been told about your activities, and when your FG due dates are, is a good thing. Contact RESULTSAccess@gov.bc.ca to request view only access for your WL.

4.3.2 Actually Getting RESULTS Access

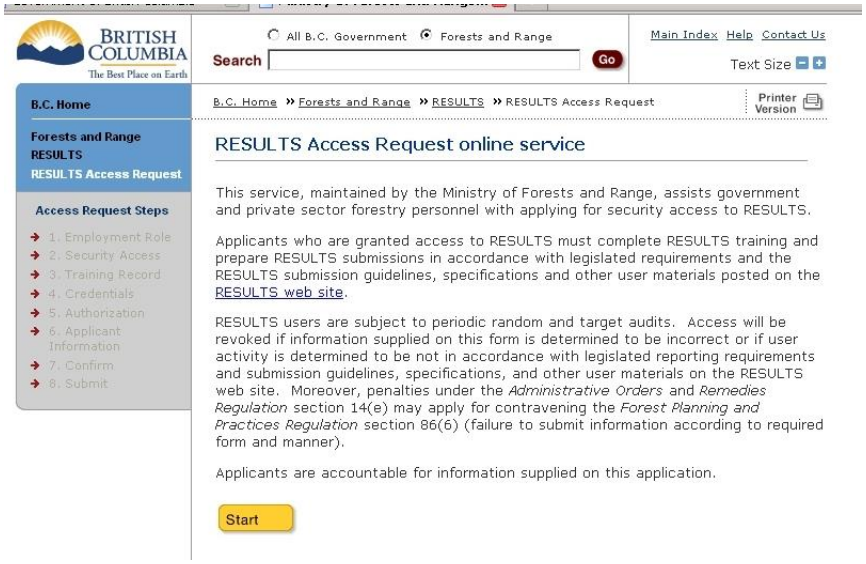
Request access to RESULTS at:

https://extranet.for.gov.bc.ca/escripts/efm/access/results/access.asp

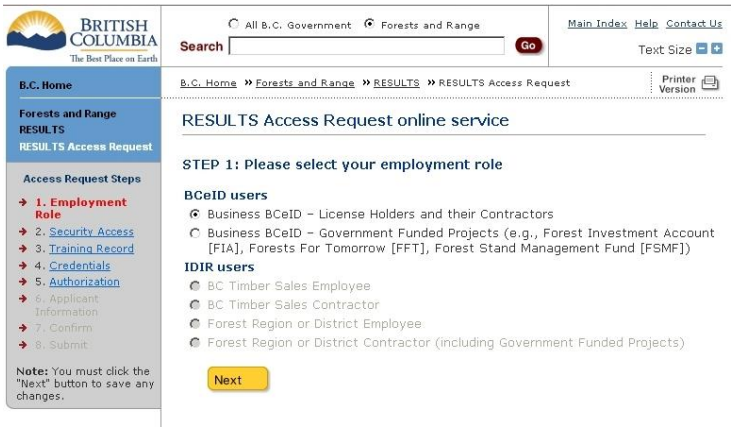
This starts a fairly complicated process. Sets the correct tone for what is to come, actually.

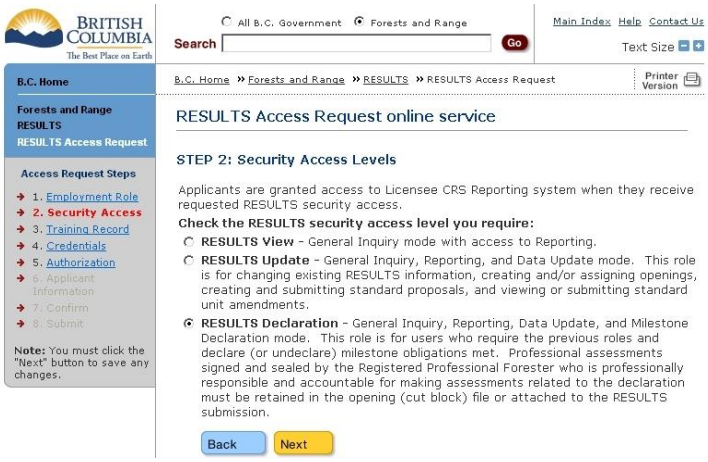
OK, first form:

Pretty simple: your BCeID and password. **With your username preceded by bceid\ or it will not work.** Which opens:



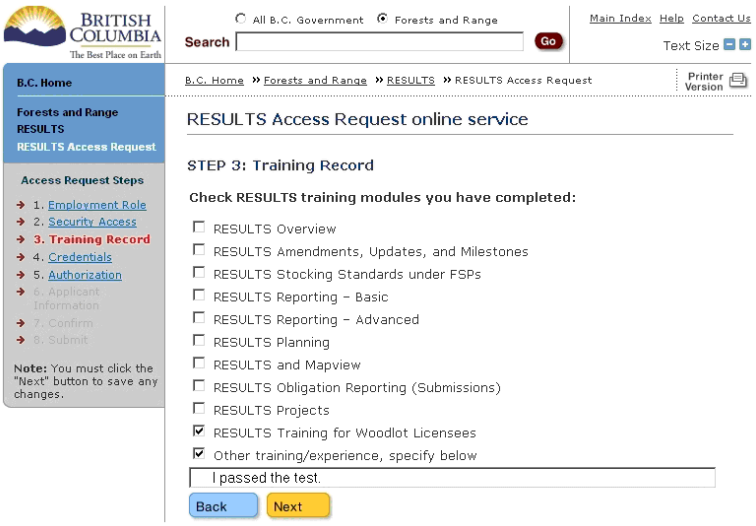
And away we go:



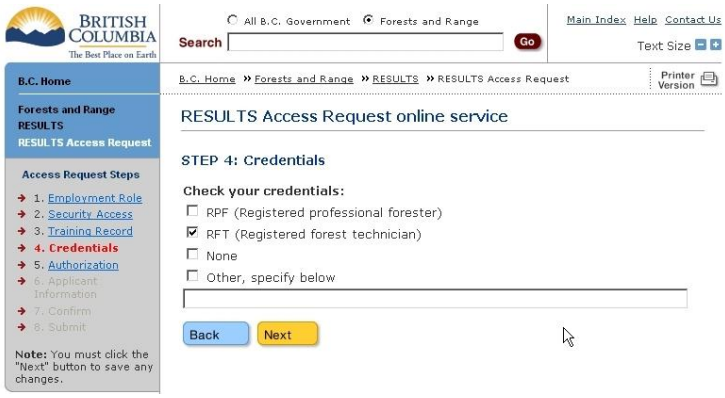


I went for Declaration authority for this WL. You may decide that Update is more in line with your needs.

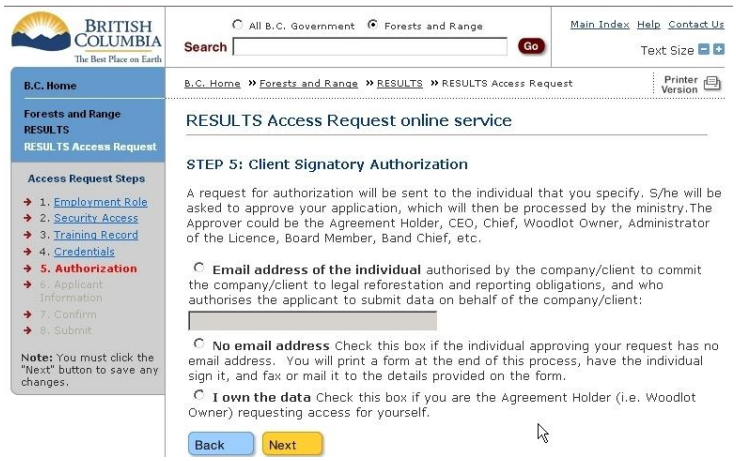
Next, you explain your credentials:



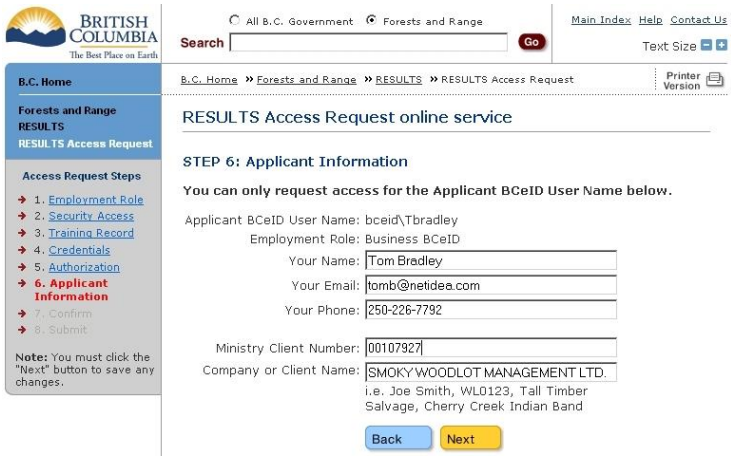
Note the "I passed the test" entry at bottom. I have been told that this is where we report successful completion of The Test. So, I put it in.

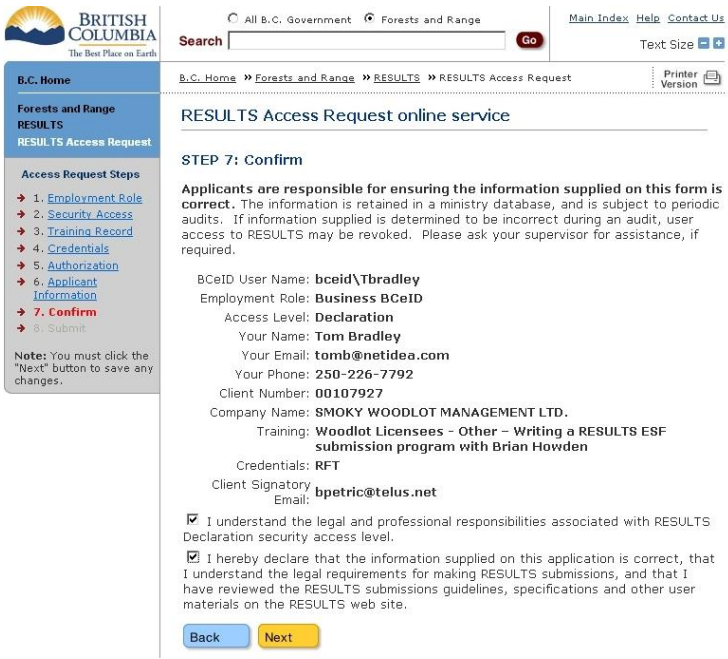


If it is your Woodlot, you own the data. If it someone else's woodlot, you provide their e-mail address so they can verify that you may act on their behalf.



More stuff to fill in: your name (you'd think they would know that from your BCeID, but no sense arguing) and the client number and name of the Woodlot you are going to upload RESULTS information for.





Some of you will have observed that FTA access request was one short form and RESULTS access request seems to go on for page after page.

Yep.

5. Installation

WLGML (aka the Woodlot ESF Tool) is a windows program written by largely volunteer effort using the Microsoft Visual Studio development environment.

Minimum operating system is Windows XP. The program has been tested and runs properly with XP and Vista 32 bit systems and Windows 7, 8 and 10.

WLGML installs just like any other Windows program.

Testing shows that under Win 10, WLGML installs and runs without the first two steps/updates. So if you use Win 10, ignore Steps 1 and 2 below, and just run SQLSysClrTypes.msi and SETUP.msi.

On older versions of Windows, the user has to add a specific set of Microsoft components that WLGML needs "on call" in the background to run. This requires few extra install steps for the user to create the required computer environment.

All of the software packages mentioned below can be obtained from the internet at large, or from:

http://www.woodfor.com/WLGML/

Step 1: Install vcredist_x86.exe .

This will install a specific Microsoft C++ component on your computer. Multiple C++ components can exist on one computer, but some specific parts of this one are needed for WLGML

Step 2: Install dotnetfx35setup.exe .

This will install the .NET environment Version 3.5 on your computer.

Step 2 is not required on computers with Windows 7 and later computers. The .NET configuration on these machines provides the necessary components.

Step 3: Install SQLSysClrTypes.msi .

This file adds some SQL server spatial types to your Windows components.

Step 4: Install the SETUP.msi file.

This will install the actual WLGML program.

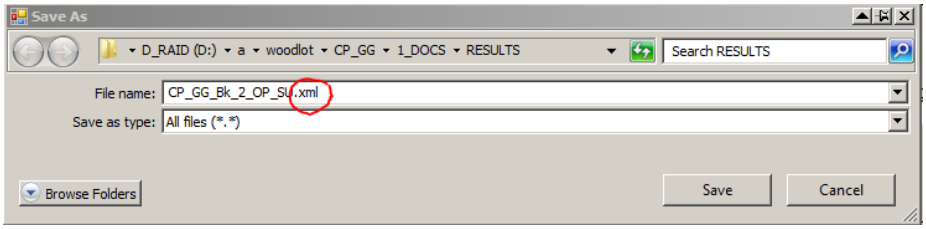
Why so complicated? Well, a "boxed software" product would bundle all this together, tell the custom install program to look after it all, and charge. We don't have that kind of budget, so we charge you $0 but make you do a bit of extra work.

6. General Work Procedures

6.1 Saving Your Work

- WLGML does not have a <Save> button. It saves many of your entries as defaults as you make them. However, all of your input is saved when you Generate a submission and save the submission. The saved submission can be re-opened again at a later date. So if you need to quit work and are partly done, or just heard a thunder roll near by and figure your power will be gone in a few minutes, Generate and Save. WLGML may issue lots of error messages re: missing info, but just keep clicking OK and it will eventually Generate. Then you <Save>.
- Where do you store things? It is a very good plan to make a folder or folders on your computer that you can easily find again to store the shape files, XML submissions, and general stuff associated with each cutting permit.

  You can use C:\Documents and Settings\MyComputerName\My Documents\etc\and\so\on\and\on if you really want to. Best of luck ever finding something you want in there! I have always found that C:\W1234\CP_C is a lot easier to locate in a week or 5 years from now. And much easier to transfer to a new computer at a later date.
- When you save, you have to add the ".xml" extension on the end of the filename. It does not do it itself. Files without the .xml extension will not automatically show up as a choice to reopen in the program, and will be rejected by the ESF system.



6.2 Text Editor

ESF submissions are text files. They may have an .XML file extension, but they are text files.

A text file is s very simple beast, that contains only letters, numbers and hidden carriage return/line feed symbols. (The ghosts of typewriters past haunt us still.)

You will need a "text editor" to view and edit an XML submission, should you wish to. If you are getting mystery errors, you probably will "wish to". If you wish to make a 1 CP FTA submission, you need to.

Dedicated XML editors are fine, but they tend to be much more complicated than what is actually necessary for our tasks.

A word processor is not a text editor. Word processors add drifts of hidden-to-you information to a simple text document. Information about fonts, indents, spacing, soft returns, etc. etc. that will gag the ESF system.

Having said that, Word will open, edit and save a pure text file, if you know how. It will constantly try to make the text file into a more exotic document file, and will whine incessantly that "Some features may not be compatible with this format." etc. If you can get it to sit down and shut up, it will do the job. But the problem is that it is just so easy to miscue once, click <Save> by instinct, and inadvertently fill your former text document with word processor gibberish.

All Windows machines have Notepad, which is a usable text editor. You may never have heard of it, but it is in there.

If you still have a <Start> icon on your lower left screen, click it, and select <Run> from the popup box. Type notepad in the entry field and hit <Enter>. Notepad should open.

Or in Win 10, just search for Notepad. Click and open.

Be sure to turn on <View> <Status Bar> in Notepad! This provides a very helpful Line and Column reference in the lower right screen.

I use a lovely text editor from 1996 called WinEdit that works flawlessly. It has no "helpful" features at all. (Helpful = disaster. See "Vista") They have "improved" it since then, but I of course prefer the simple old one. Other geeks have other favourites. You can Google "text editor freeware" and get a stack of options if you like, or just visit:

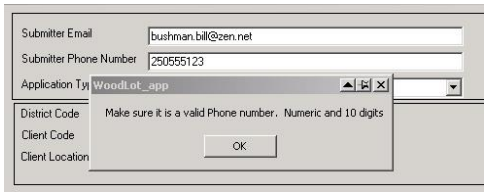
http://www.woodfor.com/WLGML/WinEdit/

6.3 Data Entry Tips

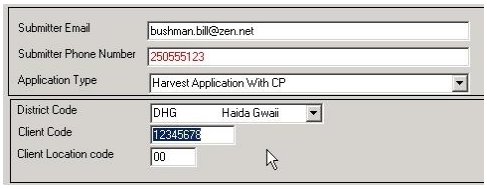
- You can use TAB or a mouse click to move between entry fields in WLGML. TAB has a huge advantage: it highlights the active field and any leading spaces in the entry blank die with the first character you type.
- Drop down lists are provided in many situations to help choose from the list of appropriate codes.
- Be careful not to leave extra trailing or leading spaces in any entry fields. If your Client Number is "11223344", do not enter " 11223344" or "11223344 " by mistake. The ESF system will baulk at the extra spaces. Using TAB to move between fields helps in a big way.
- Do not use exotic characters like < (less than), > (greater than), ‘ (single quote), “ (double quote), & (ampersand), ~ (tilde), \ (back slash) or / (forward slash) in your block names or descriptors. These characters can translate to computer language control codes, and will cause rejection of your submission.
- If you inadvertently fill an entry field that you should have left blank, highlight the offending entry with the mouse and press <Delete>. This will clear the field and reset it to blank.
- Standardize. If you are most comfortable describing a harvest area as CP A Blk 1, that is fine. But stick with that spacing and capitalization. Avoid free form

variations like CP C Block 1 or Cutting Permit D BLK 2. They are not “illegal”, but the variations are highly likely to cause <u>you</u> confusion at a later date.

- As much error checking as was feasible is built into the program. When you make an identifiable mistake, the program nags you about the situation. If you choose not to correct, the program will color the item it questions red, and you are allowed to carry on and the generate a submission if you so desire.



Nag.



Red

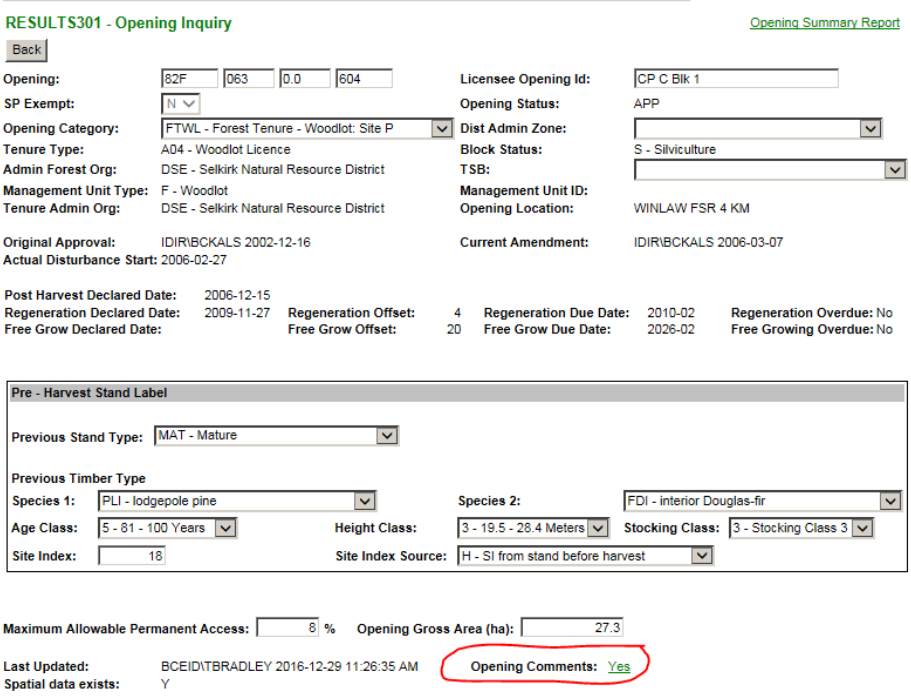
Given the complexity of e-FM and tenures in general, there are many more potential mistakes that a user can make than we can identify.

- WTP, WTRA, WTMA. As we like changing terminology and acronyms, the name for a bunch of trees reserved from harvest to maintain wildlife habitat varies over time and between documents. WTP (Wildlife Tree Patch), WTRA (Wildlife Tree Retention Area) and WTMA (Wildlife Tree Management Area) all mean pretty much the same thing.

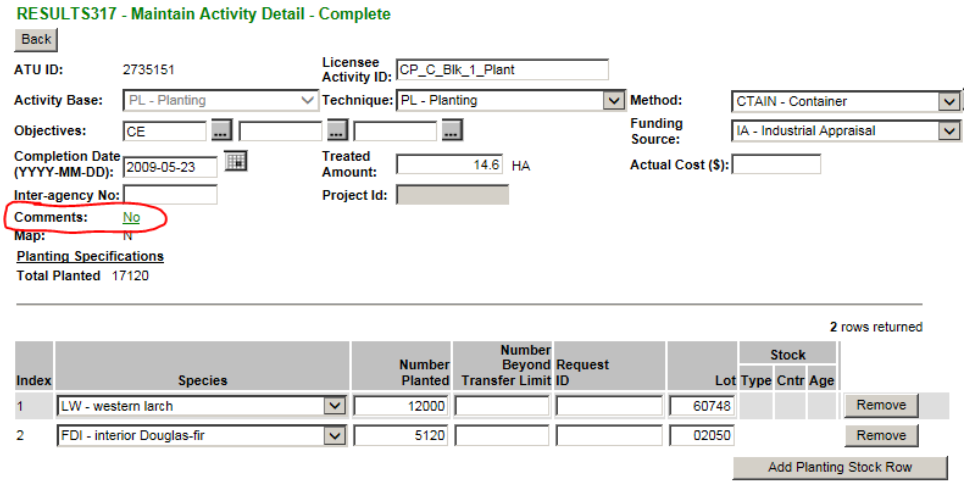
6.4 Add a Comment

This manual repeatedly suggests you "add a comment" to explain yourself in some of the more complicated situations.

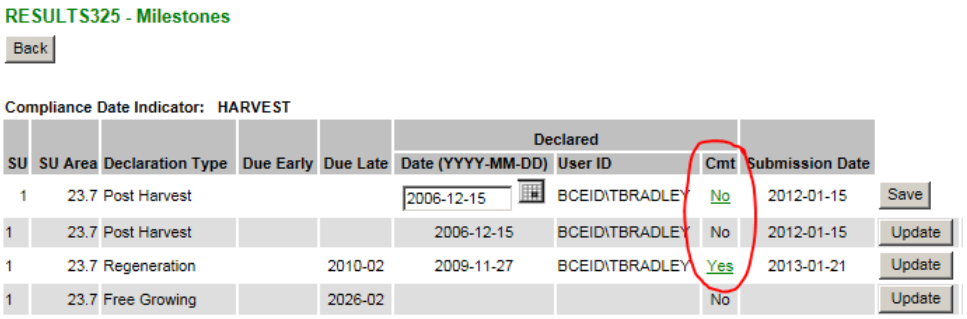
RESULTS is full of "comment input" toggles. RESULTS 301 has one:



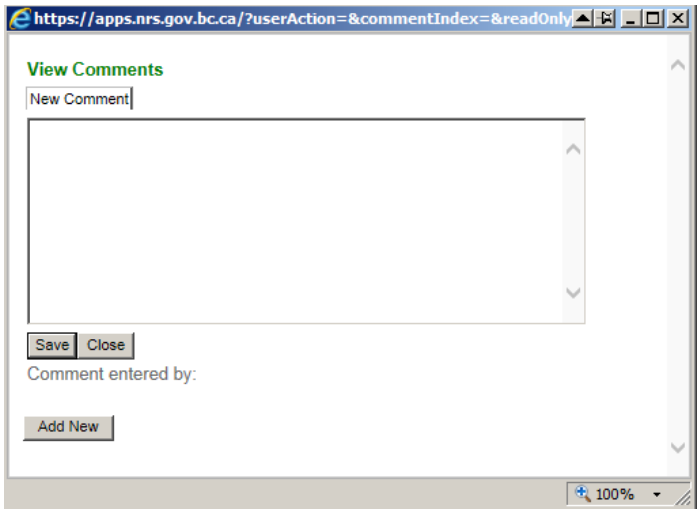
So does RESULTS 317:



RESULTS 325:



Etc etc. When you click the green "link" text, either a comment entry box appears,



OR

RESULTS drops you into the main comment interface.

RESULTS130 - Comment Summary

Org Unit: DSE - Selkirk Natural Resource District
Client Number: 00142700 **Locn:** 00 **Name:** WINLAW CREEK WOODLOT LTD.
Opening ID: 1063509 **Opening:** 82F 063 0.0 604
Licence No: W1832 **Cutting Permit:** C **Cut Block:** 1
Open Category: FTWL **Status:** Approved
Location: WINLAW FSR 4 KM

Back

	Comment Type		Comment Type
Yes	General Comments	No	SX Trial Comment
No	Access to Opening	No	Forest Cover
No	Ecology	No	Ex-Tenure comment
No	Post Free-growing	No	Feedback
No	Licence Cross Reference	No	Other Forest Values
No	Stocking Rationale	No	Wildlife
No	Fire Protection	No	Regeneration
No	Harvest Plan	No	Recreation
No	Soil Conservation	No	Range Actions
No	Stand Tending	No	Fisheries
No	Brushing	No	Landscape
No	Forest Health Actions	No	Management Objectives
No	History Record Conversion	No	Site Preparation
No	Watershed		

I used to try hard to pick the right subject for my comments, now I tend to save my energy and use "General Comments".

RESULTS pro's know to look at the comments before they try to figure out what in heck is going on.

It is dumb to put a comment relating to Stocking Standards in "Site Preparation", but they will see it anyway if you do.

6.5 Add a Rationale

A rationale is a particular species of comment, associated with a Stocking Standards, Correction, Amendment, or Approved Variation. Stocking Standards are legally binding standards. Saves time for everyone if you provide a rationale when you change them.

If the rationale is short, such as:

"Correcting standards in RESULTS to match approved paper site plan, which is attached to file."

Just enter it right in the box in the page that comes up when you activate Correction, Amendment, or Approved Variation from within the stocking standards main page:

RESULTS310 - Stocking Standards 1 of 1

Back

SU:	1	**Net Area To Be Reforested (ha):**	23.7	**Max Soil Disturbance:**	10%
Comment:	Y	**Attachment:**	N		
Amendment #:	1	SU History			

BGC Zone	BGC Subzone	Variant	Phase	Site Series	Site Phase	Seral
ICH	dw			01	a	

Standards Regime
Standards ID: **Standards Name:** **Expiry Date:**
FSP ID:

	Regen Delay	Free Growing Early	Free Growing Late
Regen Obligations:	4		20

No Regen Obligations:
Additional Standards: No

	Species Ht(m)		Well Spaced Trees (st/ha)					Post Spacing Density(st/ha)			
Layer	Preferred	Acceptable	Target	Min	Min Pref	Min Hz(m)	Basal Area	Min	Max	Max Conif (st/ha)	Ht To Comp
	PLI/2, FDI/1.4, LW/2	PW/2, HW/1, BG/1, CW/1, SX/1	1200	700	600	1.5			2000	10000	150%

Correction | Minor Amendment | Amendment

Leads to:

Preferred Species	Min Height		
		Save	Cancel
PLI - LODGEPOLE PINE	2	Update	Delete
FDI - INTERIOR DOUGLAS-FIR	1.4	Update	Delete
LW - WESTERN LARCH	2	Update	Delete

Acceptable Species	Min Height		
		Save	Cancel
PW - WESTERN WHITE PINE	2	Update	Delete
HW - WESTERN HEMLOCK	1	Update	Delete
BG - GRAND FIR	1	Update	Delete
CW - WESTERN REDCEDAR	1	Update	Delete
SX - SPRUCE HYBRID	1	Update	Delete

Correction Rationale:

Correcting standards in RESULTS to match approved paper site plan, which is attached to file.

Save Comment

If the rationale is large, or requires a professional signature / diagrams / etc, go with "Rationale is attached to file as <My Rationale Name>".

And attach it to the RESULTS file. Next Section.

6.6 Add an Attachment

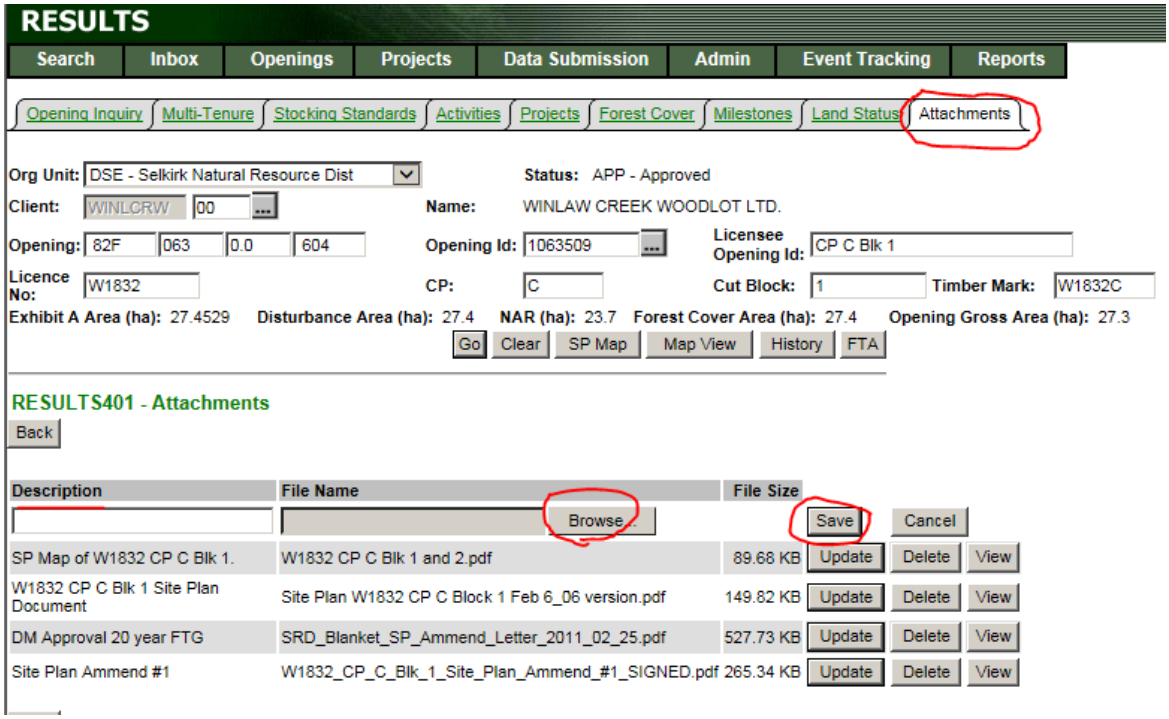
Adding attachments to RESULTS is a great way to (a) provide info to other persons who may be reviewing the file, such as FLNRO or another licensee or consultant who takes over after you leave the scene, and (b) to store info in a safe place.

Max attachment size is about 3 mb.

I upload my XML submission files, zipped shape files, georeffed PDF of the spatial data reported, etc as Attachments. Why? Observation indicates I will die. Some other poor SOB will be trying to report free growing 20 years from now. I am giving them the basic tools to do the job. Assuming RESULTS outlives me!

I also attach rationales, old Site Plans, relevant historical data, regen and FG survey summaries, the works. Office burns down? Well there is a skeleton of the data need to get the unit to FG and declare in RESULTS. Not a cure for no home/office, but one less headache.

Rather unsurprisingly, you add attachments on the Attachments screen, accessible thru the Attachments tab.

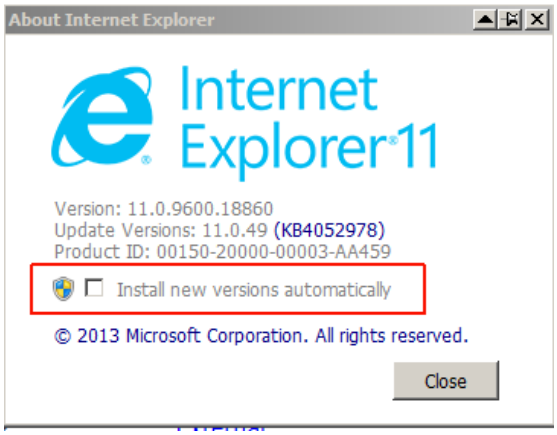


Add a description, browse to the file local on your hard drive, and <Save>.

6.7 Browser Compatibility / Compatibility View

You have to use Internet Explorer (IE) with the ESF system. Not Firefox. Not Chrome. Not Edge. Not Safari. All of these "kind of work" to a point. But eventually you will find a corner of RESULTS that they do not handle properly, and it takes most of us many minutes to figure out that the baffling problem is just browser incompatibility. Whatever your feelings about IE, just use it.

I used to curate a collection of IE 7 installations, but I currently have IE 11 installed on all the computers I use for e-FM work. I do not use if for anything else, but I need it for this job.



Note that I DO NOT want the darn thing updating itself! I have trust issues.

And there are compatibility issues with IE *version*, as well. As Scott Akerley wrote in 2014:

Question: Since March 2013. I can not see the activities list in Results.
I can not report new activities in existing openings.

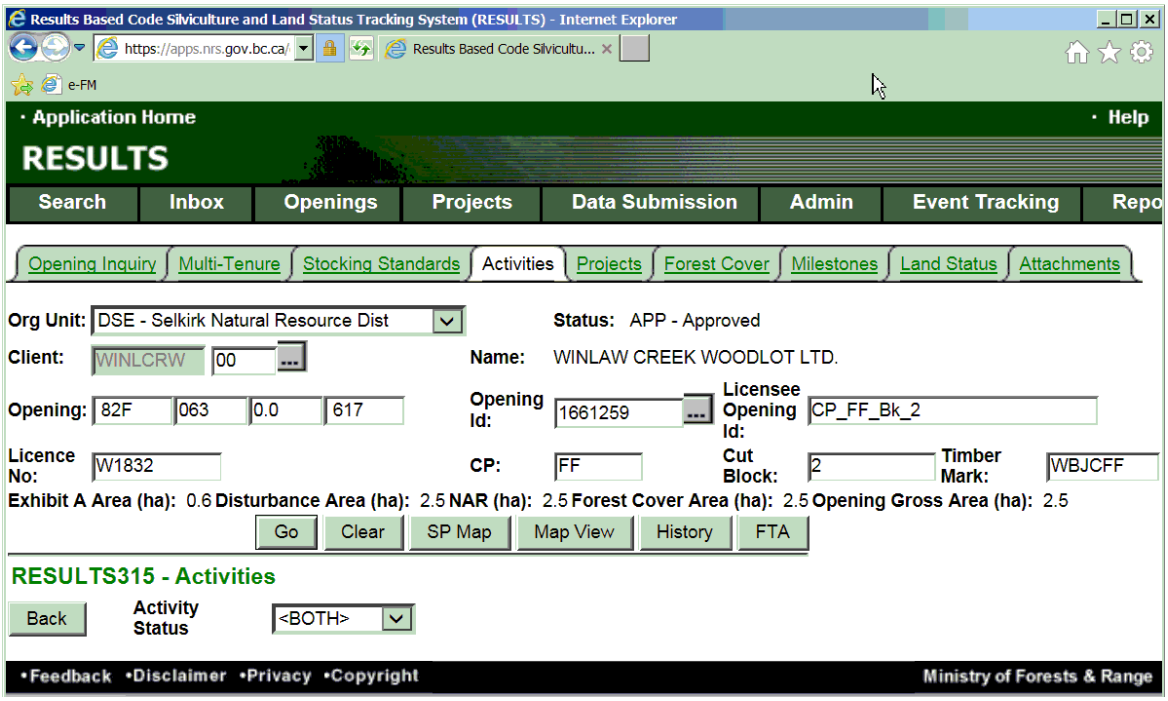
Jan 14, 2014 - Scott Akerley -

This is most likely your Internet Browser. The BC Forestry applications are based on Internet Explorer 7. If you could see them before and cannot now you most likely have been upgraded to IE 10 or 11. If that is the case then go to TOOLS - Compatibility View settings - add gov.bc.ca to the list of sites to use compatibility mode for and you should be good when you refresh the information.

It is not recommended to use Firefox or Google Chrome.

This still works / is required in 2020. I do not know exactly what version of IE RESULTS etc is compatible with in 2020, but it is not current out-of-the-box IE.

Here is a typical browser compatibility problem in RESULTS:

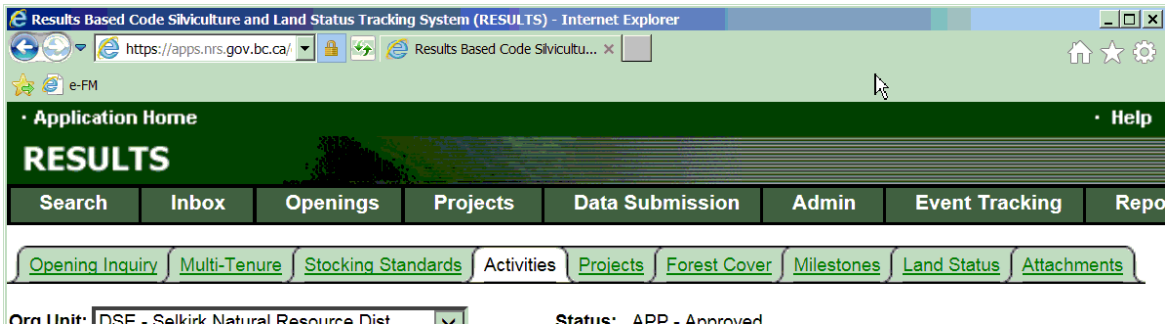


There should be a line of buttons across bottom of screen to <Copy Regime> <Add Activity> <Add Disturbance>. They are not there. Cannot do reporting without them.

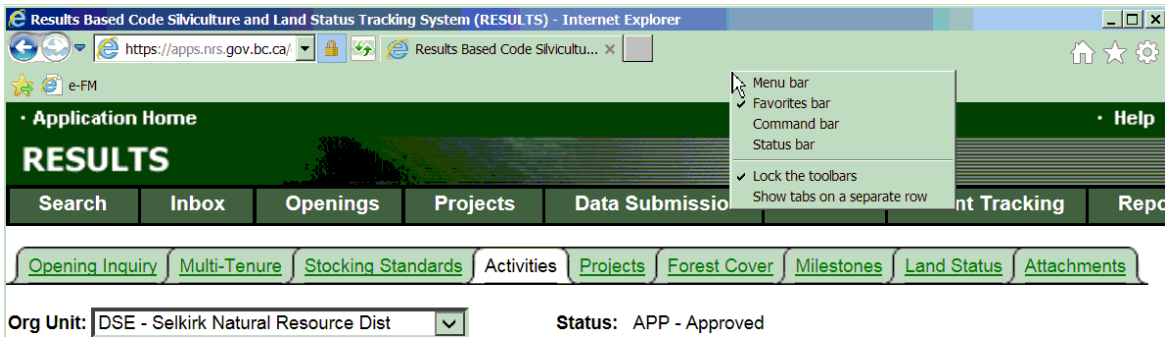
You need to enable Compatibility View to bring them back. (Or find a working Vista box with IE 7 still installed!)

To turn on Compatibility View:

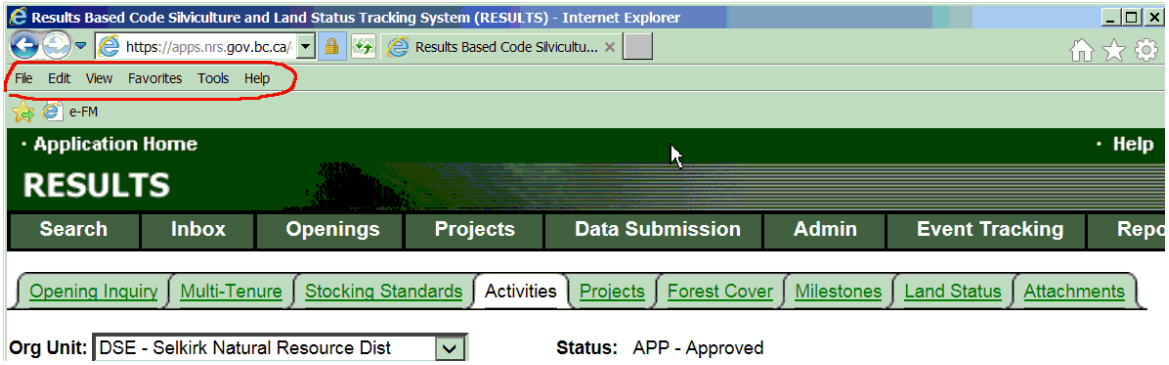
1. Make sure you can see the "Menu Bar" in IE. If the top of your IE display looks like:



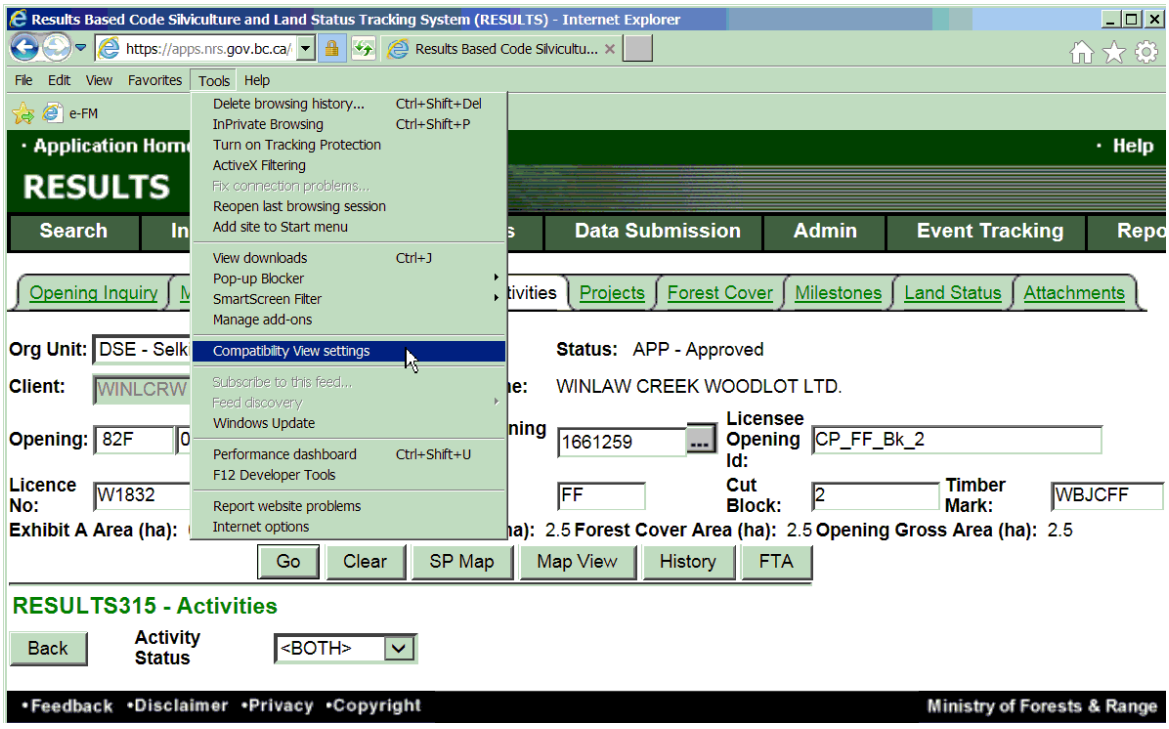
   Alternate Click in the top blank space to bring up the menu and enable the Menu Bar:



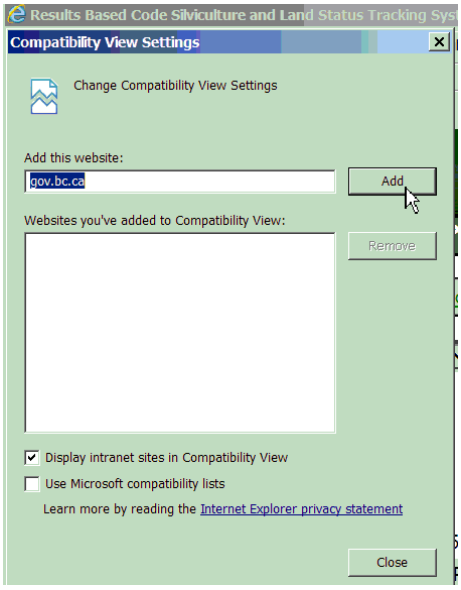
To get:



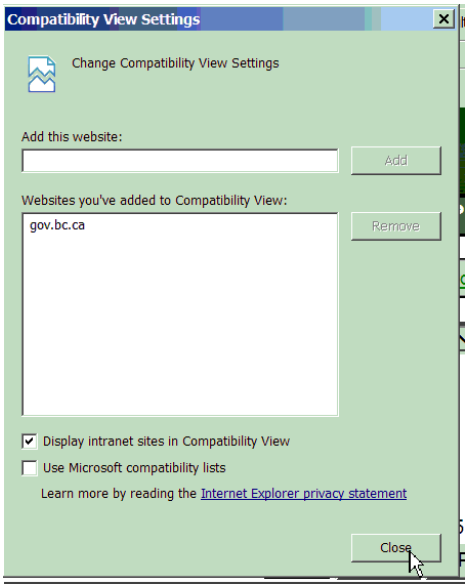
2. Drop down the Tools menu and select Compatibility View settings:



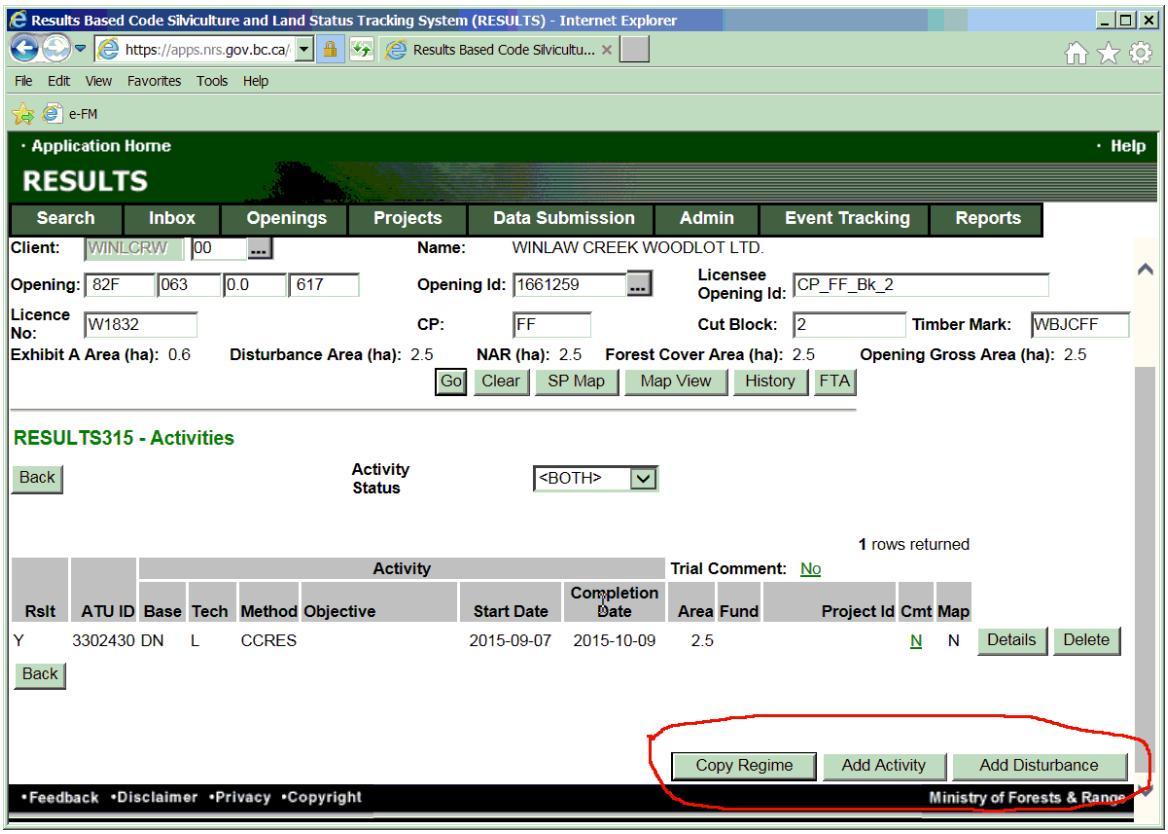
3. Add gov.bc.ca



4. And Close



5. Yes!!

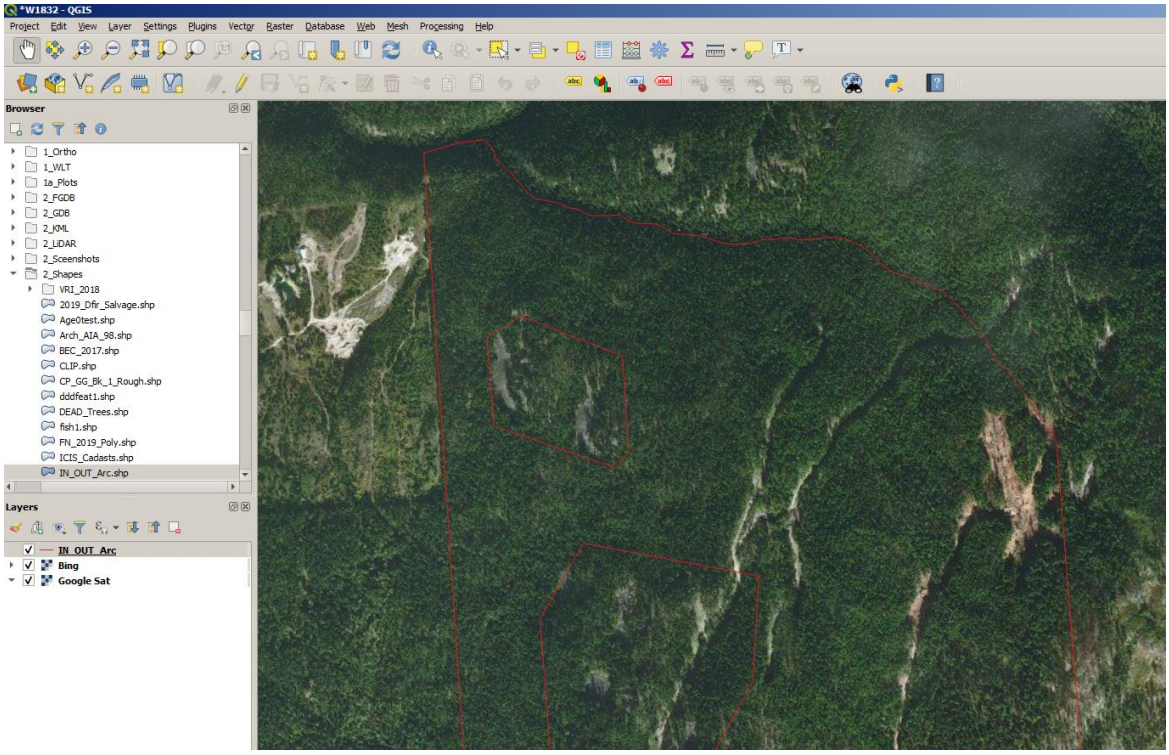


Carry on reporting.

6.8 Free GIS - QGIS

Let's start with the basic: QGIS is not free. You can use it no charge, but the people who work hard on developing it ask that you think of them and send money if you find their product useful.

Is it useful? You bet it is.



Q has a crazy good ortho image interface that can toggle between Bing and Google Imagery or your own imagery (think drone). Q loads shape files, and is an effective tool for creating new shape files.

QGIS is GIS software. You can create the spatial data you need for RESULTS submissions in QGIS. QGIS does not cost any money to install, learn and use.

The learning curve is steep - it is GIS! - but once you know how to make it do basic tricks like "create shape files of my block opening, standards units, and forest cover polygons", you know how to do it.

Q is hard for me to use because I have ESRI ArcMap controls, tools and language burned into my cortex. Everything is in a different menu location in Q, so the air is lovely shade of blue when I use it for much. But I deeply respect it and the people who built it, and highly recommend it.

7. 1 CP FTA Submissions

7.1 Introduction

WLGML does not "do" 1 CP submissions because our volunteer programmer was not in favour of the 1 CP approach. He feels it impacts the FTA data integrity which he spent his career maintaining. Volunteers got rights, and it is his right to not "build it in".

However, a small amount of XML monkey wrenching enables one to prepare a successful 1 CP ESF submission using WLGML.

Now, lets be honest: the following many pages of blather look deadly complicated.

It is not. You paste three things into the text file generated by WLGML. Done

I just did a 1 CP application in 7 minutes, start to finish, to test out the instructions. I did have the shape file of a triangle on hand, which helps, but the rest of the enter and copy and pasta and edit stuff took 7 minutes.

Yes, I do know what I am doing to some extent by now, but it is a simple process. Just follow the cookbook and it will work for you.

7.2 Text Editor

ESF submissions are text files. They may have an .XML file extension, but they are text files.

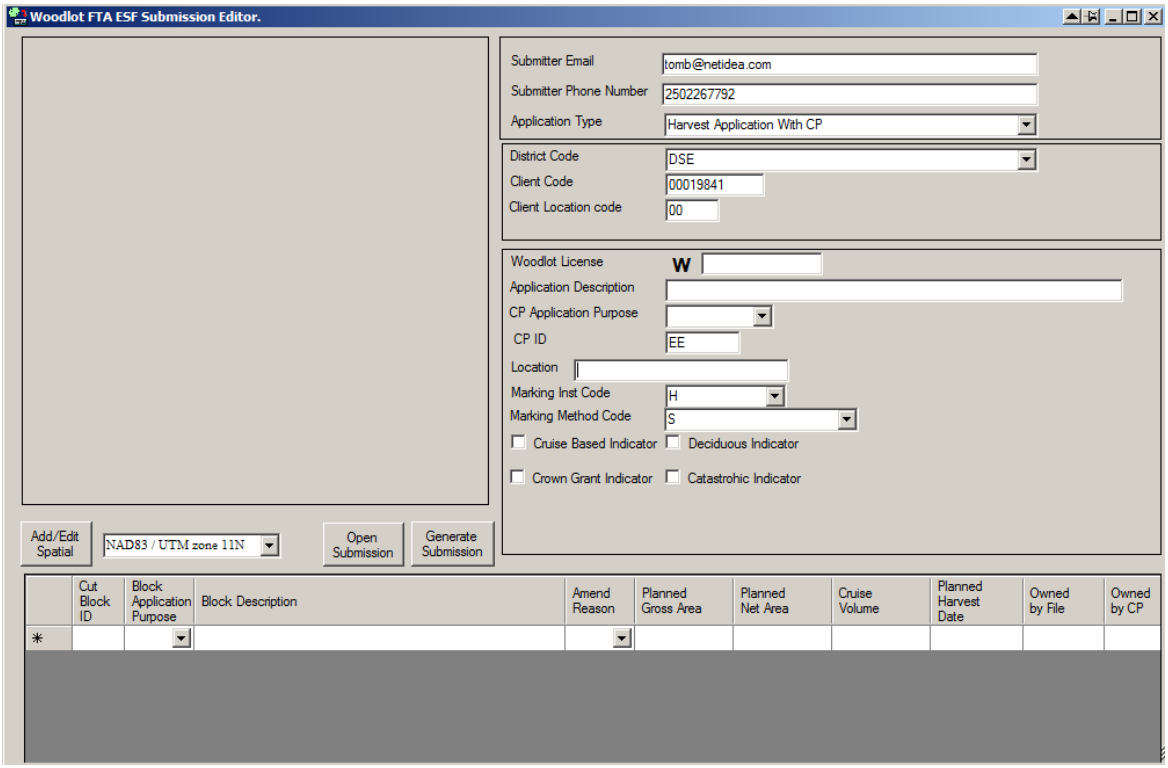
You need a text editor to edit the XML file to make a 1 CP submission. A word processor is **not** a text editor.

See Section 6.2 for suggestions.

7.3 1 CP - How To

The following process is compliant with the One Cutting Permit Administration Manual for Community Forest Agreements and Woodlot Licences - July 2019 manual.

1. Open WLGML and select “FTA CP” from the starting menu.
2. The screen shown below will open. Use TAB or a mouse click to move between the fields, entering the required information.



The information in many fields must be formatted in specific ways, and/or must use a set of predefined codes. These requirements are explained below. There are 3 classes of data fields:

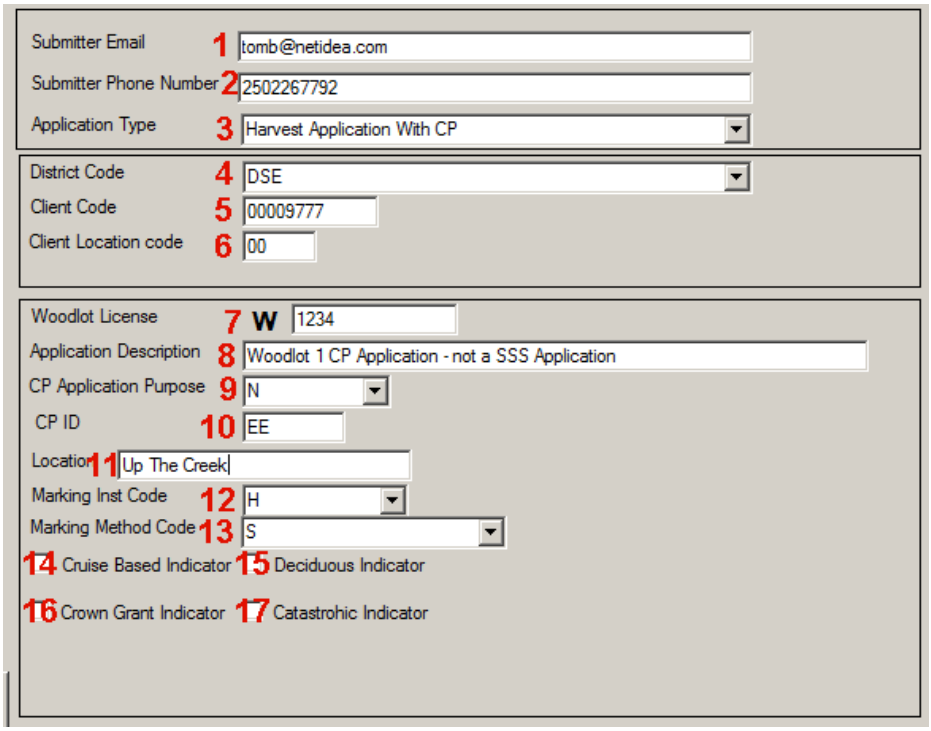
- Mandatory. Information must be input or the submission will fail.
- Conditional. Input is mandatory in some situations, but not in others.
- Optional. Input is not required, but you can enter information if you want.

The status requirements of data entry field are noted in the discussion below. Where there is only one logical approach or there is a required approach for a 1 CP submission, the discussion of conditionality is omitted.

Where feasible, error checking is built into WLGML. Inputs that appear illogical or missing inputs are brought to users attention by error messages. The affected input blank is also turned red. The program will generate a submission with identified errors highlighted on the screen, but the submission is highly unlikely to be acceptable to the ESF website.

7.4 Cutting Permit Information

This section explains how to fill out the general CP information part of the input form.



Cutting permit information input screen.

1. **Submitter Email.**

   Enter an email address, such as YourName@yourisp.com

   @ symbol is required, no spaces allowed

   If you do not have an e-mail address, leave the entry blank. The submission will be accepted by the ESF computer system.

   However, having no email address will make it impossible for the automated system to notify you of progress or failure, and more challenging for the people involved in processing your harvest application to contact you if there are questions or problems.

2. **Submitter Phone Number**.

   Mandatory entry.

   Enter a daytime phone number where you can be reached or where a message can be left for you.

   The phone number must be ten digits, no spaces, no hyphens.

   2505551234 is a valid phone number format.

   250-555-1234 or 555-1243 are not valid formats, and will cause your submission to be rejected by the ESF computer system.

3. **Application Type.**

   Set to Harvest Application with CP.

4. **District Code.**

   Mandatory entry.

   Select the Resource Management District the Woodlot in question lies within from the drop down list.

5. **Client Code.**

   Mandatory entry.

   Enter the FLNR eight digit client code number for the Woodlot in question. For example, 12345678

   Entry must be 8 digits, no spaces. If you Client Code is 00123456, enter 00123456, not 123456.

   The Client Code can be found on stumpage notices issued by FLNR and forest companies, in old RESULTS entries, and in iMap.

   You can also look up a Client Code online at https://a100.gov.bc.ca/pub/hbs/ using the Timber Mark Information query near the bottom of the page. Tell it a valid timber mark for the Woodlot, it will tell you the Client Number.

6. **Client Location Code.**

   Mandatory entry.

   A location code assigned by FLNR. Identifies licence location when clients have more than one licence.

   Entry must be two digits. Default value is 00. This means “one location”.

   If there is any question, The Client Location Code can be looked up online at https://a100.gov.bc.ca/pub/hbs/ using the Timber Mark Information query near the bottom of the page. Tell it a valid timber mark for the Woodlot, it will tell you the Client Location Code.

7. **Woodlot License.**

   Mandatory entry. Enter the Woodlot License number. WLGML adds the "W" for you.

   Entry must be four digits. If you are Woodlot 433, enter 0433.

8. **Application Description.**

   Mandatory entry.

   Application description is specified by 1 CP Business process and shall be

   Woodlot 1 CP Application - not a SSS Application

   Exactly like that, case sensitive, no alternative versions wanted.

9. **CP Application Purpose.**

   Mandatory entry.

   As this is a 1 CP application, use N = New application.

10. **CP ID.**

    Mandatory entry.

    Enter name of the cutting permit. Can be letters and/or numbers.

Woodlot CP names are now required to be two characters long.

Cutting permit naming order is not set by regulation, but should be rationale and orderly.

Generally best to use an alpha system and logical name order, such as AA, then BB then CC, etc. Alternately, AA, AB, AC, AD etc.

11. **Location.**

    Optional entry. Can be left blank.

    Enter description of geographic location of the Block. Up to 50 characters.

    There is no specified "Location" entry for a 1 CP application, but an entry like

    W1234 1 CP

    seems sensible.

12. **Marking Inst Code.**

    Mandatory entry.

    Choose method you will you use to mark the timber mark on the shipped timber from drop down list.

    - B = Paint and/or crayon
    - C = Crayon only
    - H = Hammer
    - P = Paint only
    - T = Tag

    The requirements for timber marking are set out in the *Timber Marking and Transport Regulation*. At the time of writing, this Regulation was obtainable at http://www.bclaws.ca/Recon/document/ID/freeside/37_253_97

    The reg has marking specs for a variety of specific situations, but every Interior 1 CP I have ever submitted used H = Hammer.

13. **Marking Method Code.**

    Mandatory entry.

    Choose marking scheme to be used on the shipped timber from drop down list.

    - 0 - 100% Marking
    - 1 - 100% One End
    - 2 - 2 Marks Front, 2 on Sides
    - 3 - 2 Marks Front, 2 on Sides to Site; 100% at Site
    - 4 - Four Corner Marking
    - 5 - 4 Corner Marking to Site; 100% at Site
    - 8 - Eight Corner Marking
    - A - 35% With Mark Painted Orange on Each Side of Load
    - B - 35% With Mark Painted Blue on Each Side of Load
    - C - 20% With 16 Log Minimum
    - D - Bottom Tier Front and Back on Area, 100% at Scale Site

- E - Exempt From Marking
- S - Full, Standard Marking

The requirements for timber marking are set out in the *Timber Marking and Transport Regulation*. At the time of writing, this Regulation was obtainable at http://www.bclaws.ca/Recon/document/ID/freeside/37_253_97

The reg has marking specs for a variety of specific situations, but every Interior 1 CP I have ever submitted used S = Full, Standard Marking.

14. **Cruise Based Indicator.**

    Mandatory.

    A blank box is an answer, and means "Harvested timber will be scaled.".

    For 1 CP and Tab Rates, leave blank.

15. **Deciduous Indicator.**

    Mandatory.

    A blank box is an answer, and means "Coniferous permit."

    Check the box if the permit is primarily for harvesting deciduous species.

    Utility not clear for 1 CP submission. How would you know at this point?

    I always leave blank.

16. **Crown Grant Indicator.**

    Mandatory.

    A blank box is an answer, and means "Crown Land".

    Check the box if the land that the Cutting Permit and the timber mark the wood will be shipped under pertain to Private Land within Woodlot.

17. **Catastrophic Indicator.**

    Mandatory.

    A blank box is an answer, and means "Endemic.".

    We are unsure as to what, if any, utility the catastrophic/endemic setting has. It is a legacy field related to pre-2006 interior log grades and is scheduled to be removed from FTA when budgets allow.

    Catastrophic is defined by FLNR as: "Damage to timber from fire, windfall, insects, or disease that inflicts losses well above the norm reflected in the forest inventory for the locality or region. "

    Could be that if your WL was burned, you should tick this box. I would discuss with Distinct first.

7.5 Cut Block Spatial Data

7.5.1 Introduction

WLGML uses spatial data in shape file format to create the GML spatial data needed to make an FTA CP submission.

The basic drill is:

1. you set the projection in WLGML to match your data,
2. you open the Add/Edit Spatial window,
3. you track down the shape file of your block on your hard drive and select it,
4. the program ingests the spatial data contained in the shapefile, and
5. the program creates a new entry line for you to add Block Details.

A 1 CP submission is a unique case. The spatial data is required to be an 0.6 ha isosceles triangle (118 m a side), located inside the WL boundaries.

Why a triangle? So no one should confuse the extent of your Block 1 shown in FTA with the real extent of your Block 1 when it is harvested and reported to RESULTS. And to help tag the permit visually as a 1 CP permit.

Back in 2009, we also agreed verbally that the triangle should not overlap an existing obligation, such as a harvested block that is not yet free growing. I do not know if that is really a business requirement, but I follow it.

If you have the ability to create or acquire a shape file of an 0.6 ha isosceles triangle in your woodlot, great: do it and use it. It makes things simpler.

Is anyone checking? If you use QGIS or a Garmin program to create a triangle shapefile by hand with sides of 126, 115, and 110 meters, are the e-FM police coming to get you? As far as I know, no. No one is checking for Triangle Compliance. I have seen some crazy triangles and even a octagon in there….

If a triangle shapefile is outside your means, don't worry. Creating a triangle shape file is not required to make this work in the end. We have ways….. (See Appendix 5.)

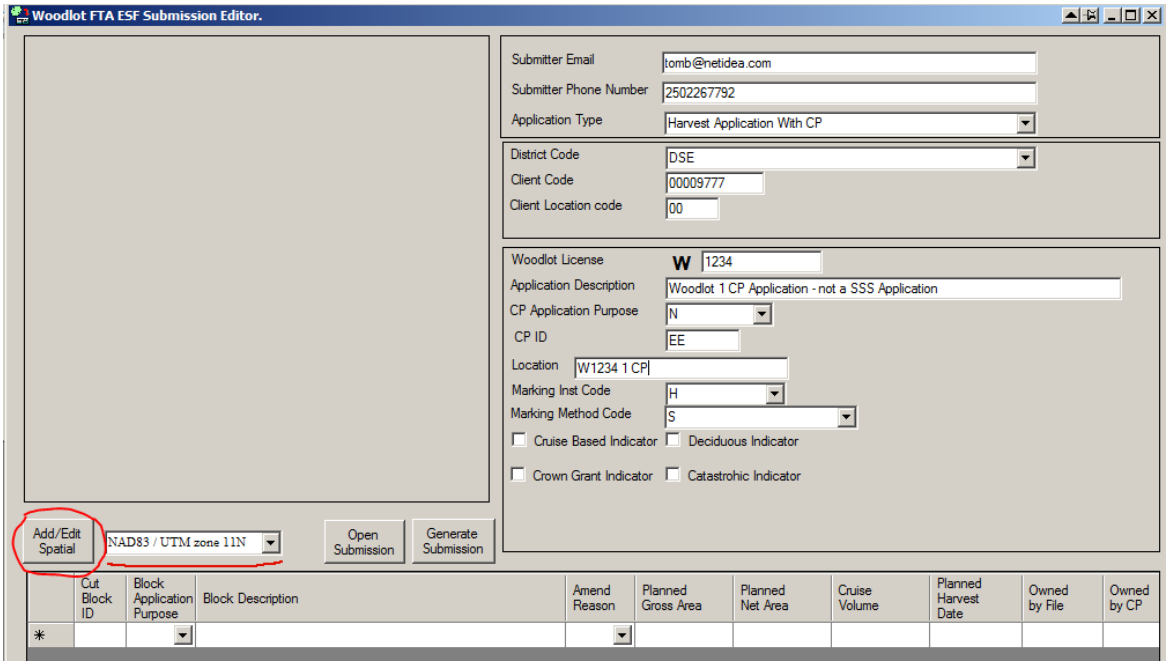
If you do not input a shapefile of a triangle, you will amend the XML/GML spatial data later with the coordinates of a triangle. The shape you use right now can just be a placeholder. Any single polygon shape file from within your woodlot will do to proceed, although a simple/small polygon is easier to work with in later text editing steps than a large, very complex polygon.

Knowing the projection of your shapefile is important. Review Appendix 4 if that is greek to you. Either a UTM or an Albers shape will work fine. You just have to know which you are using.

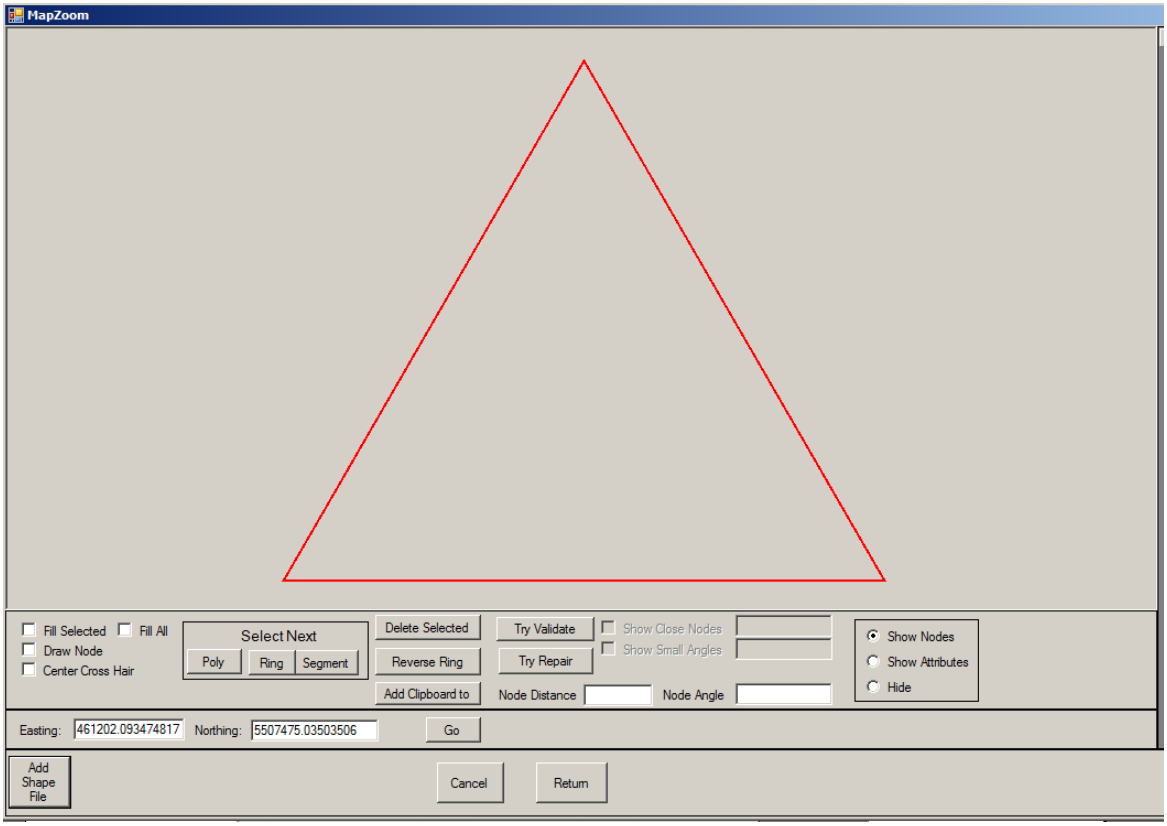
7.5.2 Data Entry

So, back to work.

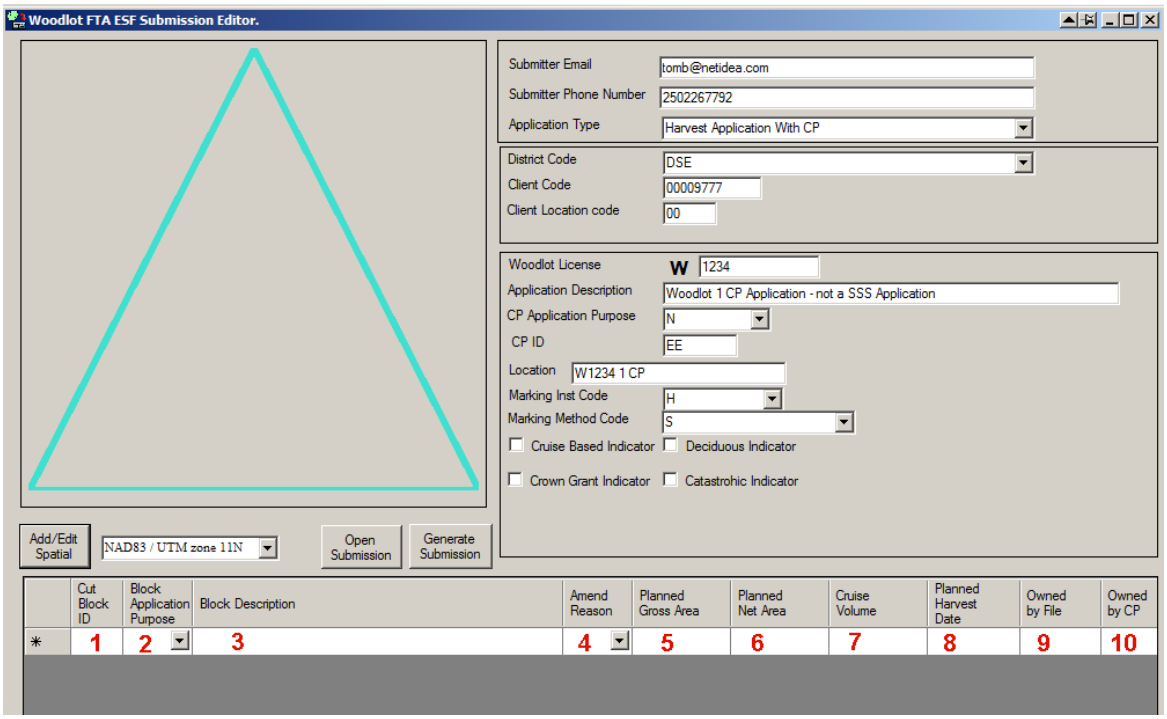
1. Be sure that WLGML is set to use the correct projection of the shape file you are about to add to it, then tell WLGML you wish to Add/Edit Spatial



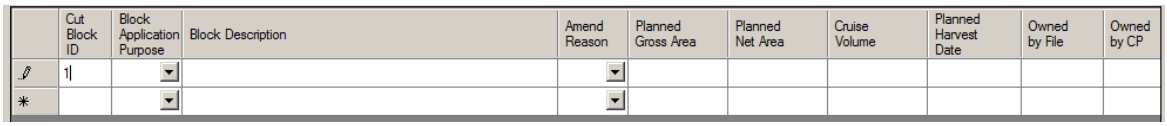
2. Track down and Add your shape file. An 0.6 ha isosceles triangle within the WL is the easiest, but you can use any shape from within WL and edit the XML file later. (See Appendix 5.).



3. Once the shape file import has triggered the lower input screen to come to life, add more attributes.



Note that as soon as you start filling in information, the program adds a blank line beneath your data. Don't be alarmed - it just does that. The blank line is to remain blank and will not affect your success.



1. **Cut Block ID.**

   This is a 1 CP application. Enter a Cut Block ID of 1 .

   You could legally call it Blk 1, or Bk_1 , or Block 1, or CPGGBK1, but don't. Creative names will confuse everyone involved for 12 to 20 years.

   Just call it: 1

2. **Application Purpose**.

   This is a 1 CP. I can not think of a situation where there would be a block amendment in a 1 CP submission. Go with:

   - N - New block

3. **Block Description.**

   For a crown land (Schedule B land) application, Block Description is:

   SSS indicates WL 1 CP CL

   For a private land in woodlot (Schedule A land) application, Block Description is:

   SSS indicates WL 1 CP PL

   Exactly like that, case sensitive, no alternative versions wanted.

(Why so uptight? " No alternative versions wanted." Goal is to be able to use this text field to filter govt data to just 1 CP permits. Computers are very literal and see "SSS indicates WL 1 CP CL" and "SSS - WL 1 CP CL" as different.)

4. **Amend(ment) Reason.**

   A 1 CP application is not an Amendment, so leave blank.

5. **Planned Gross Area.**

   0.6 ha

6. **Planned Net Area.**

   0.6 ha

7. **Cruise Volume.**

   Allegedly an optional entry, but past experience has shown that an entry is required for successful validation of submission by FTA. So I enter a number.

   I use 999. You could go with 666 or 420 if that is more your style.

8. **Planned Harvest Date**

   The estimated date you plan to start harvesting.

   Enter date in YYYY-MM-DD format.

   My District asks for "Date by which you need CP" on their CP application form, so I put the same date here and on that form.

9. **Owned by File**

   Conditional entry.

   Required if the block in question is on private land (Schedule A) portion of a woodlot licence. Otherwise, left blank.

   If this is a 1 CP submission for the private land in woodlot (Schedule A land), you would enter the private land timber mark in the Owned by File entry field and tick the Crown Grant Indicator in the upper screen. (Ticking Crown Grant Indicator means "Private Land".)

   If there is currently no private land timber mark, obtain one prior to creating the ESF submission.

   If the WL has more than one private land timber mark, which should equate to more than one private land parcel[2], you will need to create a submission with more than one "block" entry line at the bottom of the WLGML screen. This is accomplished by importing a single shape file with two+ polygons in it. That can be two+ triangles in the correct place(s) inside the private land boundaries, or two+ placeholder polygons in random places, to be fixed up later. But that <u>is two or more polygons in one shape file</u>, not two ore more shape files with one polygon each.

[2] One private land mark can apply to more than one parcel of private land in a WL, but a single parcel should not have two timber marks.

FLNRO has requested that we submit all the private land 1 CP submissions for a single WL in one XML file.

Either concoct a shape with two discrete polygons, get a mapping person to do it, or bolt together two separate shapes as described in Page 4 Appendix 1.

10. **Owned by CP**

    A function for the field is described in the technical specifications, but I believe that the specifications are in error and this field is never used in submissions for woodlot licences. If you know better, please tell me!

Here is what you should see for a crown land 1 CP:

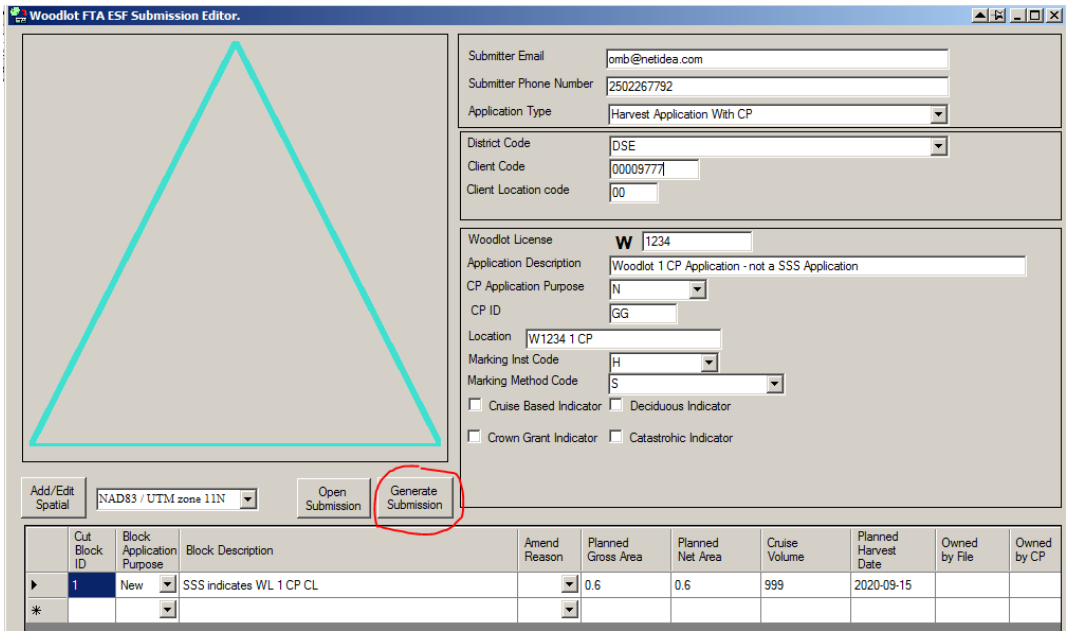
	Cut Block ID	Block Application Purpose	Block Description	Amend Reason	Planned Gross Area	Planned Net Area	Cruise Volume	Planned Harvest Date	Owned by File	Owned by CP
	1	New	SSS indicates WL 1 CP CL		0.6	0.6	999	2020-05-01		
*										

And for a simple, single timber mark, private land 1 CP:

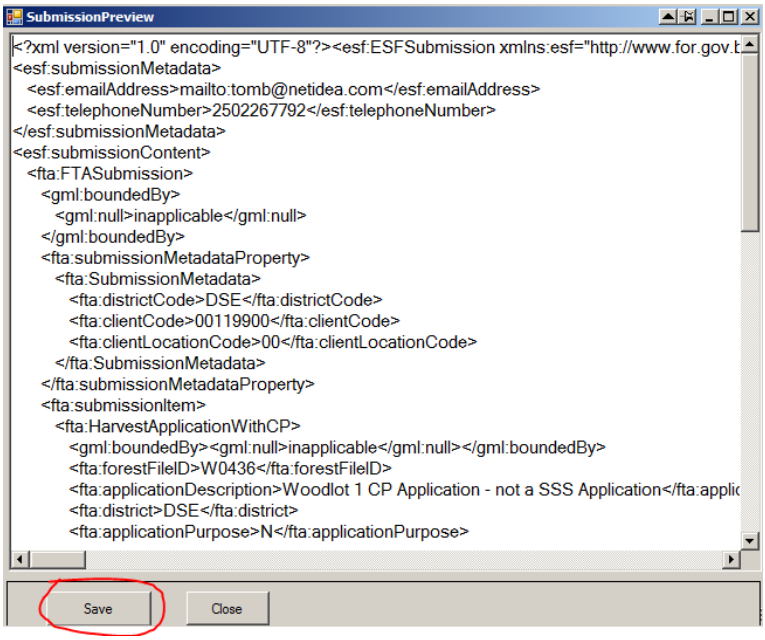
	Cut Block ID	Block Application Purpose	Block Description	Amend Reason	Planned Gross Area	Planned Net Area	Cruise Volume	Planned Harvest Date	Owned by File	Owned by CP
	1	New	SSS indicates WL 1 CP PL		0.6	0.6	999	2020-05-01	BG543C	
*										

7.6 Generate Submission

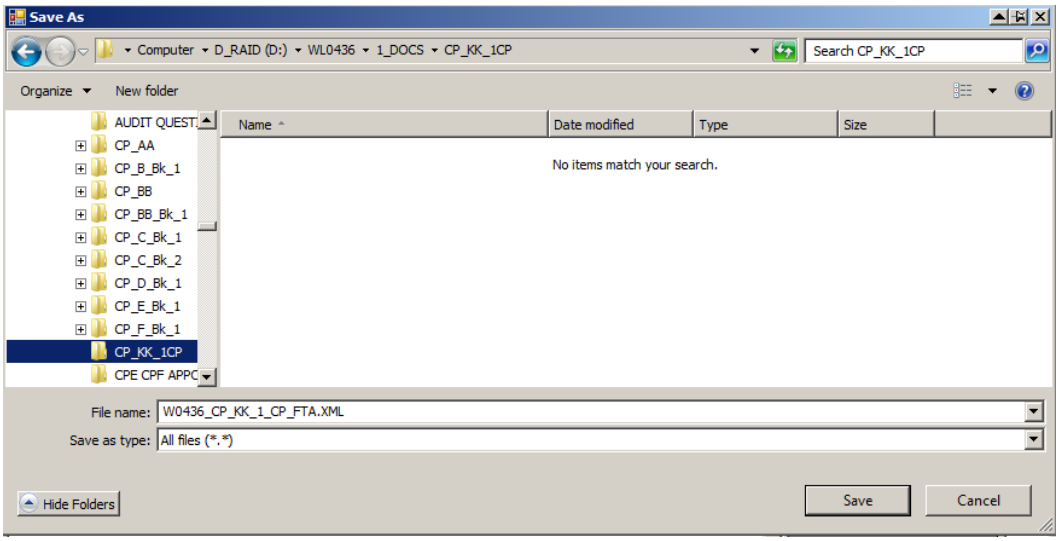
1. Everything is filled in as it should be? Or you think it is, anyway. Hit <Generate Submission>.



2. A strange new window opens, filled with Grade A Computer Gibberish. This is the XML/GML file that the ESF system wants to see.



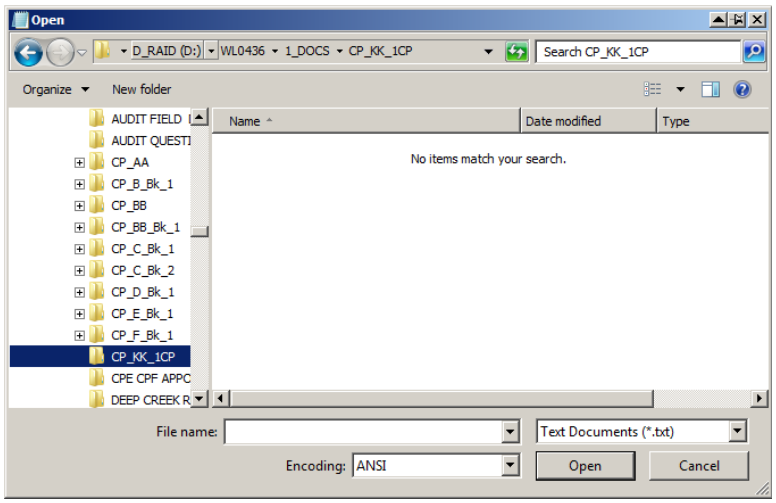
3. Click on **<Save>.** A standard Windows Save File box opens up. Put your submission somewhere where you can find it later, and give it a name that makes sense to you. **Be sure to add the .xml extension on the file name!**



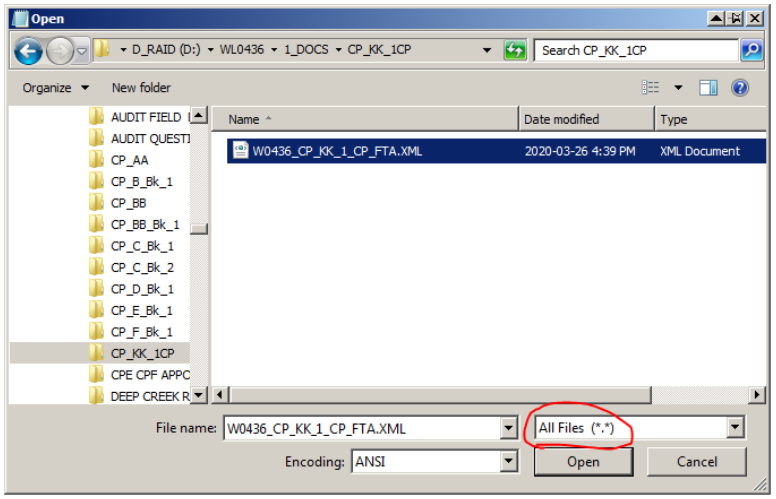
(Note: This process is also used to save partially done submissions for later completion.)

4. Open NotePad or the text editor of your choice.

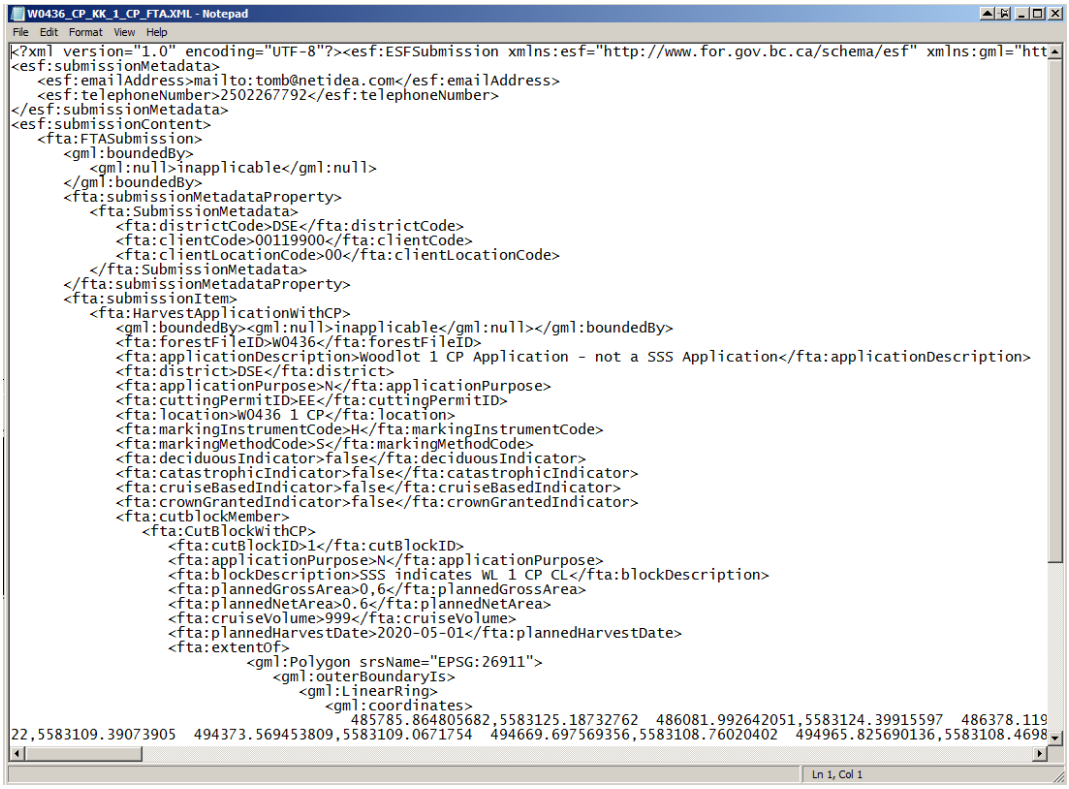
   Initiate the File Open sequence. 10 to 1 it opens in C:\Windows or something like that. OK. Beat on it till it goes to the folder where you saved your XML a minute ago, and…. It finds nothing.



Why? It is looking for *.txt files. We want it to open an XML file. Simple solution: tell it to look for all file types. Files will appear. Hunt down that XML:



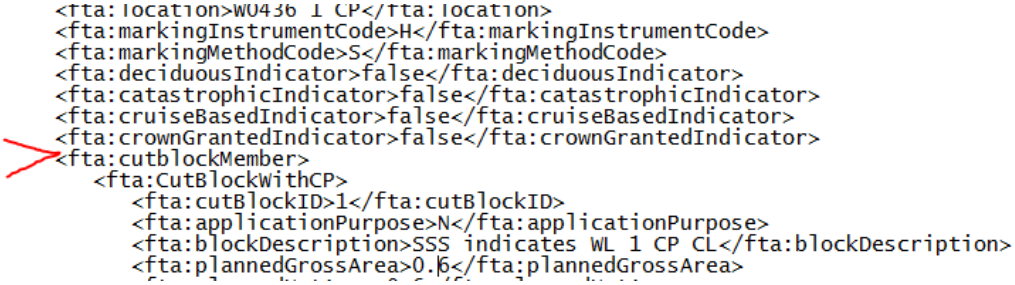
After it opens, you should see something like:



Yes, it is gibberish, but it is a snap to edit.

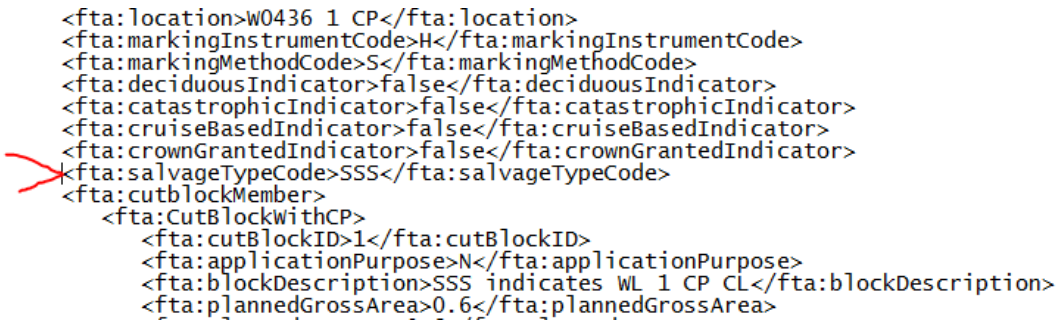
5. Go 2/3 down the screen.

   Right below </fta:crownGrantedIndicator>and right above <fta:cutblockMember>.



   Add a line with the text string:

   <fta:salvageTypeCode>SSS</fta:salvageTypeCode>



6. **If you fed WLGML a shape of an 0.6 ha isosceles triangle in your woodlot when you created the XML, skip to Step 9. You do not have to do Steps 6 and 7.**

A bit lower down, you will see a section like:

<gml:coordinates>

485785.86,5583125.18 486081.99,5583124.39 etc etc etc etc

</gml:coordinates>

If you did not have a triangle shape, see Appendix 5 for guidance on how to create an appropriate coordinates list.

Once you have the coordinates list for a 0.6 ha isosceles triangle in your woodlot, copy and paste the coordinates into the XML document.

OK, from the top:

Find the right place in the XML file:

```
                <fta:cruiseVolume>999</fta:cruiseVolume>
                <fta:plannedHarvestDate>2020-05-01</fta:plannedHarvestDate>
                <fta:extentOf>
                        <gml:Polygon srsName="EPSG:26911">
                           <gml:outerBoundaryIs>
                              <gml:LinearRing>
                                 <gml:coordinates>
                                    485785.864805682,5583125.18732762  486081.992642051,5583124.39915597  486378.11978142,
22,5583109.39073905  494373.569453809,5583109.0671754  494669.697569356,5583108.76020402  494965.825690136,5583108.46982572
07722278  499999.999999995,5578009.78034552  499999.999999998,5577546.48269011  499999.999999998,5577083.18536846  499999.999
9.06660572  494955.241630675,5571989.34056937  494658.490917117,5571989.63113759  494361.740208736,5571989.93830972  494064.9
349.480492823,5572004.50823662  486052.73075774,5572005.28031788  485755.98032395,5572006.06900502  485757.224638089,5572469.
                                 </gml:coordinates>
                              </gml:LinearRing>
                           </gml:outerBoundaryIs>
                        </gml:Polygon>
                </fta:extentOf>
             </fta:CutBlockWithCP>
          </fta:cutblockMember>
       </fta:HarvestApplicationWithCP>
    </fta:submissionItem>
```

Highlight the block of X,Y coordinates that are in there, and delete them. You may have to bash on it for awhile, cause they can hide off screen, but clean them all out.

```
                <fta:plannedGrossArea>0.6</fta:plannedGrossArea>
                <fta:plannedNetArea>0.6</fta:plannedNetArea>
                <fta:cruiseVolume>999</fta:cruiseVolume>
                <fta:plannedHarvestDate>2020-05-01</fta:plannedHarvestDate>
                <fta:extentOf>
                        <gml:Polygon srsName="EPSG:26911">
                           <gml:outerBoundaryIs>
                              <gml:LinearRing>
                                 <gml:coordinates>
                                    485785.864805682,5583125.18732762  486081.992642051,5583124.39915597  486378.11978142,
22,5583109.39073905  494373.569453809,5583109.0671754  494669.697569356,5583108.76020402  494965.825690136,5583108.46982572
07722278  499999.999999995,5578009.78034552  499999.999999998,5577546.48269011  499999.999999998,5577083.18536846  499999.999
9.06660572  494955.241630675,5571989.34056937  494658.490917117,5571989.63113759  494361.740208736,5571989.93830972  494064.9
349.480492823,5572004.50823662  486052.73075774,5572005.28031788  485755.98032395,5572006.06900502  485757.224638089,5572469.
                                 </gml:coordinates>
                              </gml:LinearRing>
                           </gml:outerBoundaryIs>
                        </gml:Polygon>
                </fta:extentOf>
             </fta:CutBlockWithCP>
```

Go get the 0.6 ha isosceles triangle coordinate list from the spreadsheet (Adx 5) or wherever you are getting it from. Copy the coordinates, and then place the cursor in the text editor over that blank space between <gml:coordinates> and </gml:coordinates>.

```
                <fta:cruiseVolume>999</fta:cruiseVolume>
                <fta:plannedHarvestDate>2020-05-01</fta:plannedHarvestDate>
                <fta:extentOf>
                        <gml:Polygon srsName="EPSG:26911">
                           <gml:outerBoundaryIs>
                              <gml:LinearRing>
                                 <gml:coordinates>
                                 |
                                 </gml:coordinates>
                              </gml:LinearRing>
                           </gml:outerBoundaryIs>
                        </gml:Polygon>
                </fta:extentOf>
             </fta:CutBlockWithCP>
```

<Control><V> to paste.

```
<fta:cruiseVolume>999</fta:cruiseVolume>
<fta:plannedHarvestDate>2020-05-01</fta:plannedHarvestDate>
<fta:extentOf>
        <gml:Polygon srsName="EPSG:26911">
           <gml:outerBoundaryIs>
              <gml:LinearRing>
                 <gml:coordinates>
                  | 5578300,494850  5578418,494850  5578359,494952  5578300,494850
                  </gml:coordinates>
              </gml:LinearRing>
           </gml:outerBoundaryIs>
        </gml:Polygon>
</fta:extentOf>
```

You may have to fiddle with spacing and returns to get it just right, but again, it is not a problem. XML does not actually care much about extra white space, but it just *looks* better when it is neat and tidy.

If you are doing a private land 1 CP submission for a WL with 2 or more discrete parcels of private land, there will be several <gml:coordinates> blocks in the XML file, because you used a shape file with more than one polygon as your input spatial data. Replace each block of <gml:coordinates> with the coordinates of the triangle that fits inside that parcel. You might want to code the blocks by harvest date (2020-05-01 in one unit, 2020-05-02 in another, etc) to keep it straight-ish which <gml:coordinates> block refers to which private land unit.

7. Save.

8. In a standard CP application, we are not required to supply the "outer boundary" of the CP extent any more. We had to once, but it was made redundant. For reasons not clear to me, we still have to do this for a 1 CP application.

   Whatever.

   (Note: These instructions are for a crown land CP or a single private land timber mark / parcel of private land CP. If you have multiple private land parcels and multiple private land timber marks, go to the end of this section - Point 10 - for your special instructions.)

   Find the brick of XML code hat defines the CP area as X,Y coordinates. It runs from <fta:extentOf> to </fta:extentOf>:

```
<fta:extentOf>
    <gml:Polygon srsName="EPSG:26911">
      <gml:outerBoundaryIs>
          <gml:LinearRing>
            <gml:coordinates>
                 5578300,494850  5578418,494850  5578359,494952  5578300,494850
            </gml:coordinates>
          </gml:LinearRing>
      </gml:outerBoundaryIs>
    </gml:Polygon>
</fta:extentOf>
```

   We need to copy that brick of text to another place in the file, right under the <fta:salvageTypeCode>SSS</fta:salvageTypeCode> line you added.

First, add a blank line right under
<fta:salvageTypeCode>SSS</fta:salvageTypeCode>

```
<fta:deciduousIndicator>false</fta:deciduousIndicator>
<fta:catastrophicIndicator>false</fta:catastrophicIndicator>
<fta:cruiseBasedIndicator>false</fta:cruiseBasedIndicator>
<fta:crownGrantedIndicator>false</fta:crownGrantedIndicator>
<fta:salvageTypeCode>SSS</fta:salvageTypeCode>

<fta:cutblockMember>
   <fta:CutBlockWithCP>
      <fta:cutBlockID>1</fta:cutBlockID>
      <fta:applicationPurpose>N</fta:applicationPurpose>
      <fta:blockDescription>SSS indicates WL 1 CP CL</fta:blockDescription>
```

Next, Highlight the code block from and including <fta:extentOf> to </fta:extentOf>
and copy it:

```
<fta:markingInstrumentCode>H</fta:markingInstrumentCode>
<fta:markingMethodCode>S</fta:markingMethodCode>
<fta:deciduousIndicator>false</fta:deciduousIndicator>
<fta:catastrophicIndicator>false</fta:catastrophicIndicator>
<fta:cruiseBasedIndicator>false</fta:cruiseBasedIndicator>
<fta:crownGrantedIndicator>false</fta:crownGrantedIndicator>
<fta:salvageTypeCode>SSS</fta:salvageTypeCode>

<fta:cutblockMember>
   <fta:CutBlockWithCP>
      <fta:cutBlockID>1</fta:cutBlockID>
      <fta:applicationPurpose>N</fta:applicationPurpose>
      <fta:blockDescription>SSS indicates WL 1 CP CL</fta:blockDescription>
      <fta:plannedGrossArea>0.6</fta:plannedGrossArea>
      <fta:plannedNetArea>0.6</fta:plannedNetArea>
      <fta:cruiseVolume>999</fta:cruiseVolume>
      <fta:plannedHarvestDate>2020-05-01</fta:plannedHarvestDate>
      <fta:extentOf>
            <gml:Polygon srsName="EPSG:26911">
               <gml:outerBoundaryIs>
                  <gml:LinearRing>
                     <gml:coordinates>
                      5578300,494850  5578418,494850  5578359,494952  5578300,494850
                     </gml:coordinates>
                  </gml:LinearRing>
               </gml:outerBoundaryIs>
            </gml:Polygon>
      </fta:extentOf>
   </fta:CutBlockWithCP>
</fta:cutblockMember>
</fta:HarvestApplicationWithCP>
```

Place the cursor in the blank line you just added below
<fta:salvageTypeCode>SSS</fta:salvageTypeCode> and paste in the GML code block.

```
<fta:catastrophicIndicator>false</fta:catastrophicIndicator>
<fta:cruiseBasedIndicator>false</fta:cruiseBasedIndicator>
<fta:crownGrantedIndicator>false</fta:crownGrantedIndicator>
<fta:salvageTypeCode>SSS</fta:salvageTypeCode>
       <fta:extentOf>
               <gml:Polygon srsName="EPSG:26911">
                  <gml:outerBoundaryIs>
                     <gml:LinearRing>
                        <gml:coordinates>
                         5578300,494850  5578418,494850  5578359,494952  5578300,494850
                        </gml:coordinates>
                     </gml:LinearRing>
                  </gml:outerBoundaryIs>
               </gml:Polygon>
      </fta:extentOf>
<fta:cutblockMember>
   <fta:CutBlockWithCP>
      <fta:cutBlockID>1</fta:cutBlockID>
      <fta:applicationPurpose>N</fta:applicationPurpose>
      <fta:blockDescription>SSS indicates WL 1 CP CL</fta:blockDescription>
      <fta:plannedGrossArea>0.6</fta:plannedGrossArea>
      <fta:plannedNetArea>0.6</fta:plannedNetArea>
      <fta:cruiseVolume>999</fta:cruiseVolume>
      <fta:plannedHarvestDate>2020-05-01</fta:plannedHarvestDate>
      <fta:extentOf>
               <gml:Polygon srsName="EPSG:26911">
                  <gml:outerBoundaryIs>
                     <gml:LinearRing>
                        <gml:coordinates>
                         5578300,494850  5578418,494850  5578359,494952  5578300,494850
                        </gml:coordinates>
                     </gml:LinearRing>
                  </gml:outerBoundaryIs>
               </gml:Polygon>
      </fta:extentOf>
   </fta:CutBlockWithCP>
```

Save!

9. Crown land permits and single mark private land permits: Done! Go to the ESF web site and fire it in.

10. You have more than one private land timber mark / private land parcel? Lucky you! . You win extra work.

    The XML/GML code for the 1 CP wrapper polygon is special in your case, as it has to combine multiple triangles in one "polygon" for The System.

    OK, back at the "Owned by File" discussion, you were told that you needed one shape file with 2 discrete polygons, one for each timber mark / private land parcel.

    Now, you have to make a multipart[3] shape of those same polygons pretending to be one single polygon to create the GML code for the CP wrapper.

    Yes, this is a pain. It is much easier if you have a multi-part shape that lies within your woodlot to start with.

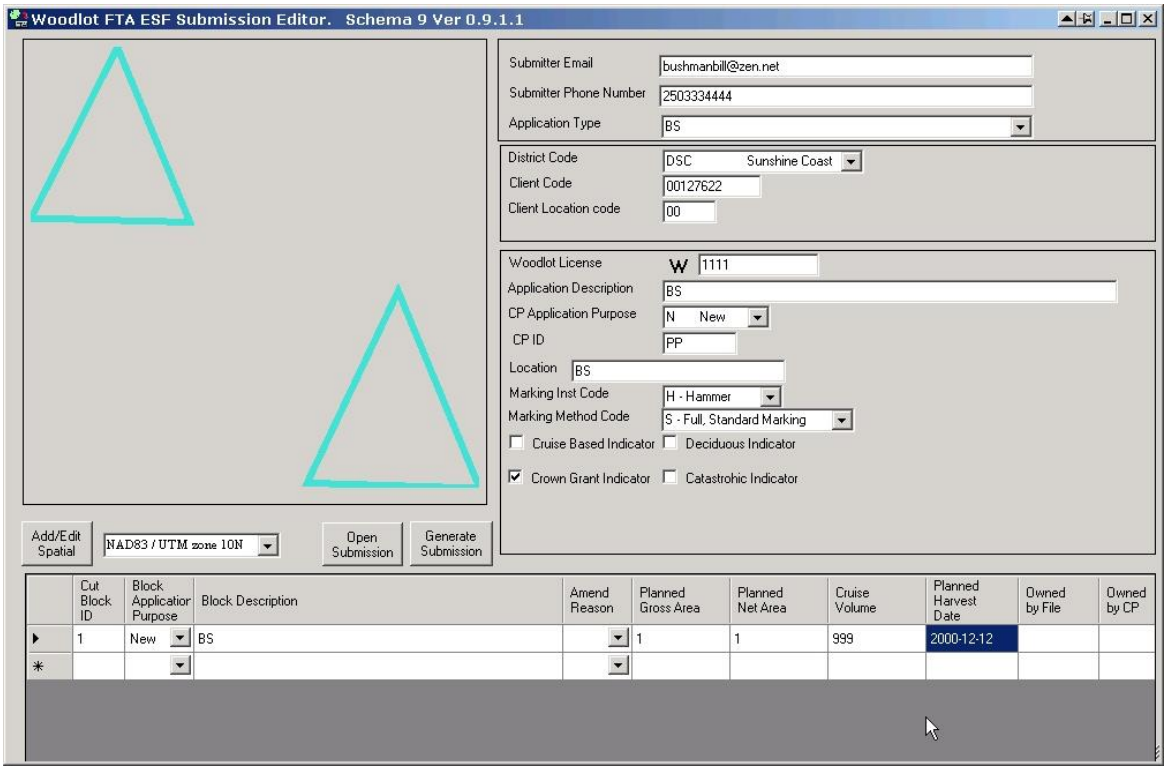
    It is extra easy if the shapes are triangles located in correct place within WL, and you have both single part and multi part versions from a mapping service provider. Just saying.

    If you choose to, you can create a multipart shape from 2 individual shapes using the instructions on Page 3 Appendix 1

    The entire goal here is to import this multipart shape into WLGML just to create the small bit of XML code for the 1 CP wrapper polygon.

    What you want to see in WLGML is this:

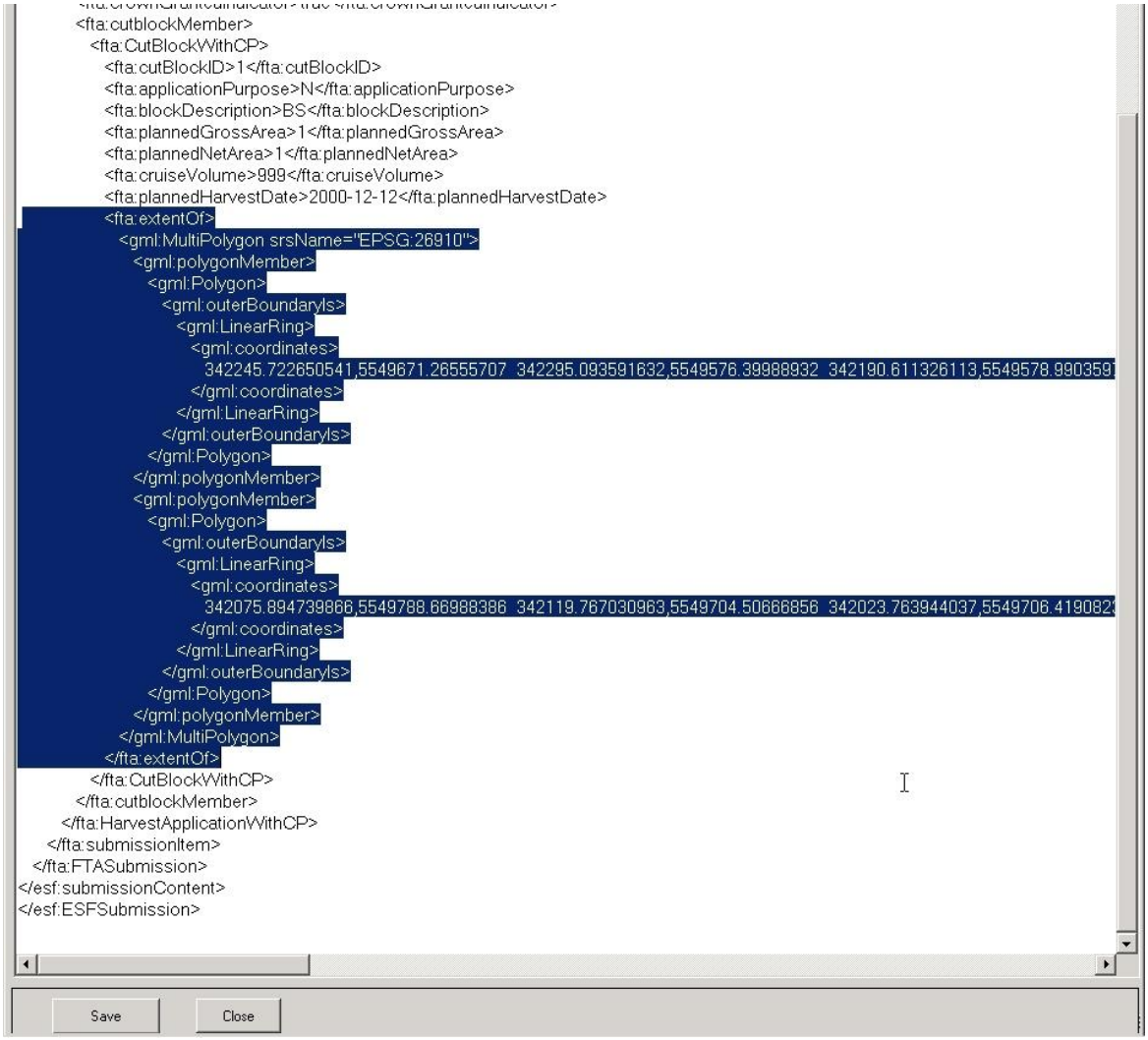
[3] See Section 8.4.3 point 5 for "explanation" of multipart shapes.



Two polygons, but only one attribute entry line.

This is not a real submission - it is not getting sent anywhere. All we are after is the GML code to describe "2 polygons" (or more, if you have 3 timber marks/parcels) as a single multipart polygon shape for that darn wrapper.

So we Generate and see:



I have highlighted the text we want - the <fta:extentOf> block. It is a multipolygon, just what we want.

Copy.

Go to your 1 CP private land submission in the text editor. That blank line right under <fta:salvageTypeCode>SSS</fta:salvageTypeCode> - remember it? - you want to past this <fta:extentOf> block in there.

So from:

```
<fta:applicationPurpose>N</fta:applicationPurpose>
<fta:cuttingPermitID>PP</fta:cuttingPermitID>
<fta:location>W1897 Schedule A Quadra Island</fta:location>
<fta:markingInstrumentCode>H</fta:markingInstrumentCode>
<fta:markingMethodCode>O</fta:markingMethodCode>
<fta:deciduousIndicator>false</fta:deciduousIndicator>
<fta:catastrophicIndicator>false</fta:catastrophicIndicator>
<fta:cruiseBasedIndicator>false</fta:cruiseBasedIndicator>
<fta:crownGrantedIndicator>true</fta:crownGrantedIndicator>
<fta:salvageTypeCode>SSS</fta:salvageTypeCode>

<fta:cutblockMember>
   <fta:CutBlockWithCP>
      <fta:cutBlockID>Lot 1</fta:cutBlockID>
      <fta:applicationPurpose>N</fta:applicationPurpose>
      <fta:blockDescription>SSS indicates WL 1 CP PL</fta:blockDescription>
      <fta:plannedGrossArea>0.4</fta:plannedGrossArea>
      <fta:plannedNetArea>0.4</fta:plannedNetArea>
      <fta:cruiseVolume>999</fta:cruiseVolume>
      <fta:plannedHarvestDate>2013-01-15</fta:plannedHarvestDate>
      <fta:ownedByFile>EBOPB</fta:ownedByFile>
      <fta:extentOf>
               <gml:Polygon srsName="EPSG:26910">
                  <gml:outerBoundaryIs>
                     <gml:LinearRing>
                        <gml:coordinates>
                          342023.763944037,5549706.41908231  342075.894739865,5549788.66988386  342119.767030963,5549704.5066685
                        </gml:coordinates>
                     </gml:LinearRing>
                  </gml:outerBoundaryIs>
               </gml:Polygon>
```

to:

```
<fta:location>W1897 Schedule A Quadra Island</fta:location>
<fta:markingInstrumentCode>H</fta:markingInstrumentCode>
<fta:markingMethodCode>O</fta:markingMethodCode>
<fta:deciduousIndicator>false</fta:deciduousIndicator>
<fta:catastrophicIndicator>false</fta:catastrophicIndicator>
<fta:cruiseBasedIndicator>false</fta:cruiseBasedIndicator>
<fta:crownGrantedIndicator>true</fta:crownGrantedIndicator>
<fta:salvageTypeCode>SSS</fta:salvageTypeCode>
 <fta:extentOf>
        <gml:MultiPolygon srsName="EPSG:26910">
            <gml:polygonMember>
               <gml:Polygon>
                  <gml:outerBoundaryIs>
                     <gml:LinearRing>
                        <gml:coordinates>
                          342245.722650541,5549671.26555707  342295.093591632,5549576.39988932  342190.611326113,5549578.9903597  342245.722650541,5
                        </gml:coordinates>
                     </gml:LinearRing>
                  </gml:outerBoundaryIs>
               </gml:Polygon>
            </gml:polygonMember>
            <gml:polygonMember>
               <gml:Polygon>
                  <gml:outerBoundaryIs>
                     <gml:LinearRing>
                        <gml:coordinates>
                          342075.894739866,5549788.66988386  342119.767030963,5549704.50666856  342023.763944037,5549706.41908231  342075.894739866,
                        </gml:coordinates>
                     </gml:LinearRing>
                  </gml:outerBoundaryIs>
               </gml:Polygon>
            </gml:polygonMember>
         </gml:MultiPolygon>
   </fta:extentOf>
<fta:cutblockMember>
   <fta:CutBlockWithCP>
      <fta:cutBlockID>Lot 1</fta:cutBlockID>
      <fta:applicationPurpose>N</fta:applicationPurpose>
      <fta:blockDescription>SSS indicates WL 1 CP PL</fta:blockDescription>
      <fta:plannedGrossArea>0.4</fta:plannedGrossArea>
      <fta:plannedNetArea>0.4</fta:plannedNetArea>
      <fta:cruiseVolume>999</fta:cruiseVolume>
      <fta:plannedHarvestDate>2013-01-15</fta:plannedHarvestDate>
```

You will note I used triangles, because I had them.

You could have used any shape and replaced the X,Y data for that shape with triangle X,Y data by cutting and pasting from the X,Y from individual block triangles you have already created.

The point of this exercise was to get the XML/GML coding for a multi-part polygon wrapper in place. The X,Y data is still just those silly triangles.

7.7 Upload Submission

The final step! Upload your CP submission to FTA through the e-FM website.

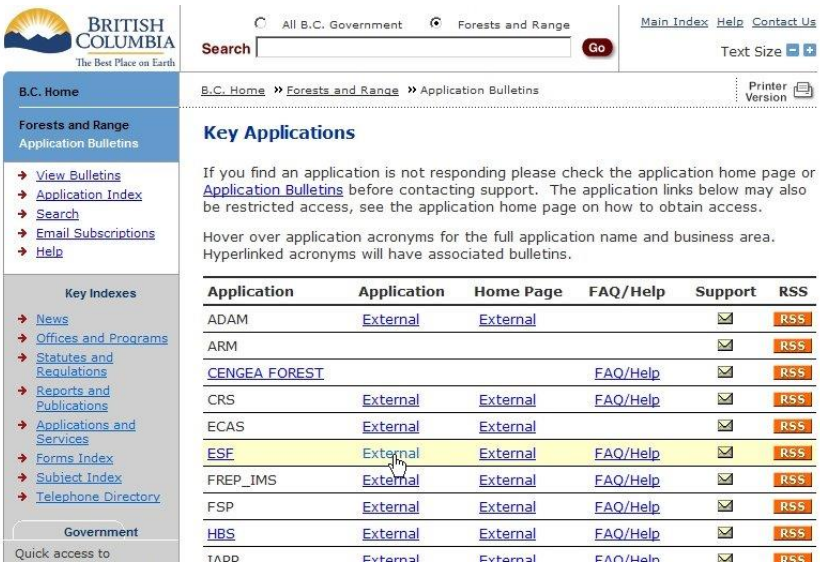
A suggestion: My favorite e-FM web site is the Application Index.

http://www.for.gov.bc.ca/pscripts/his/apb/list.asp

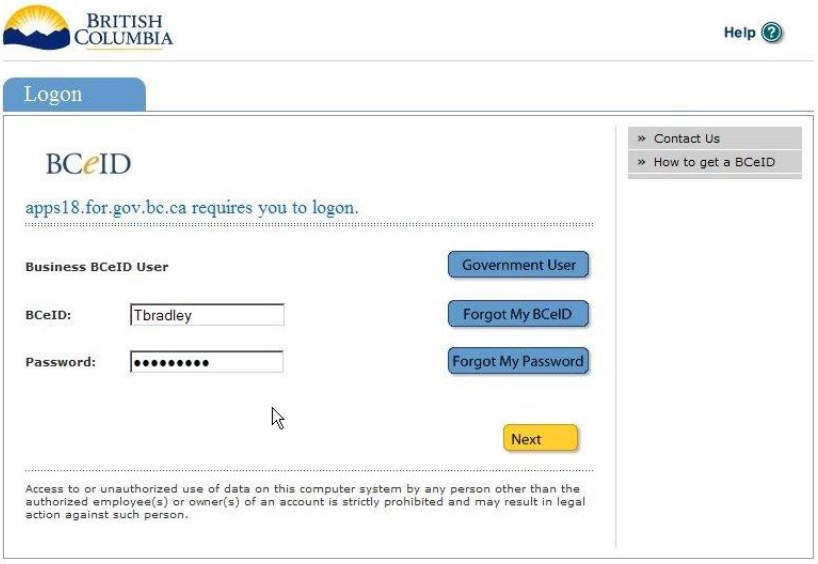
It lists all the varied e-FM applications and access points in one place, although it is developing broken links and dead ends because apparently govt does not care about it any more.

Another note: I am a dedicated Firefox user. I have a serious dislike for Internet Explorer, which in 2020 is just about dead anyway. However, I switch to Internet Explorer to interact with the ESF system. It is the only browser that is stable with ESF. When you are using a different browser and things don't go well, you can never tell if a) you are making a mistake, b) the system is broken, or c) you are a victim of browser incompatibility. And speaking of incompatibility, the ESF system is only fully compatible with IE 7. To tweak IE 8 9 10 11 whatever to work, see Section 6.4

1. Go to the Application Index at http://www.for.gov.bc.ca/pscripts/his/apb/list.asp . Select ESF - External Application.

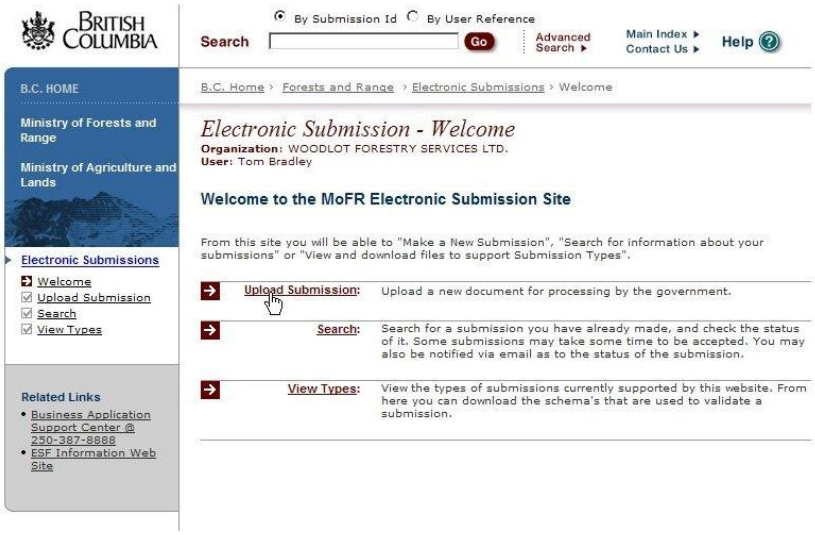


2. It asks for your BCeID, of course. You must have a BCeID and authorization to file FTA material on behalf of the licence in question. This is discussed in Section 2.

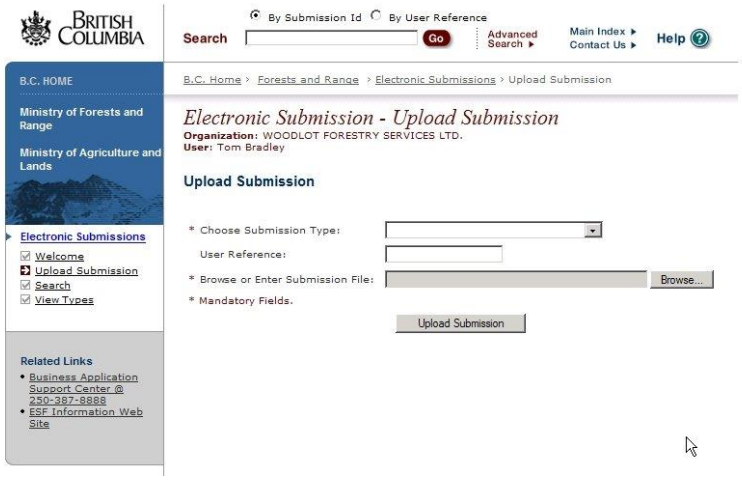


3. You get to the ESF welcome screen. You want to Upload a Submission - the point of this whole adventure.

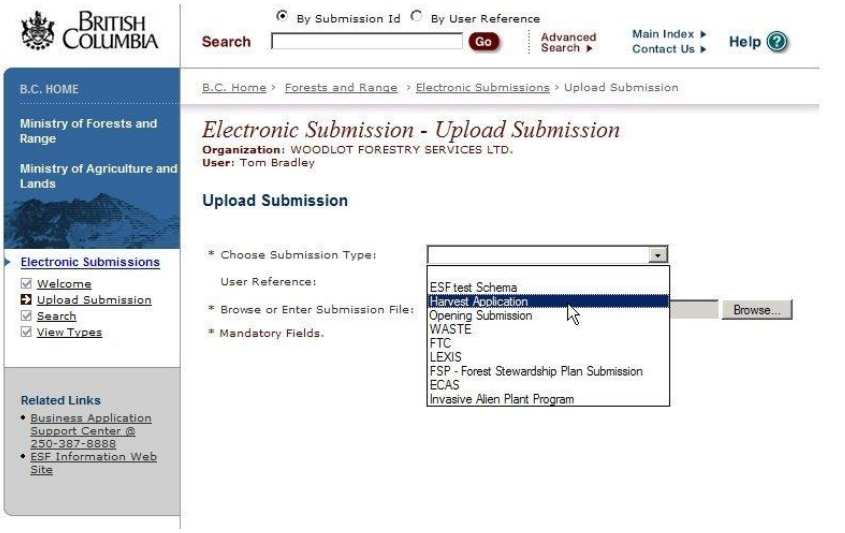
   You will use this same screen to access the search functions to find your submission later to see how things are going.



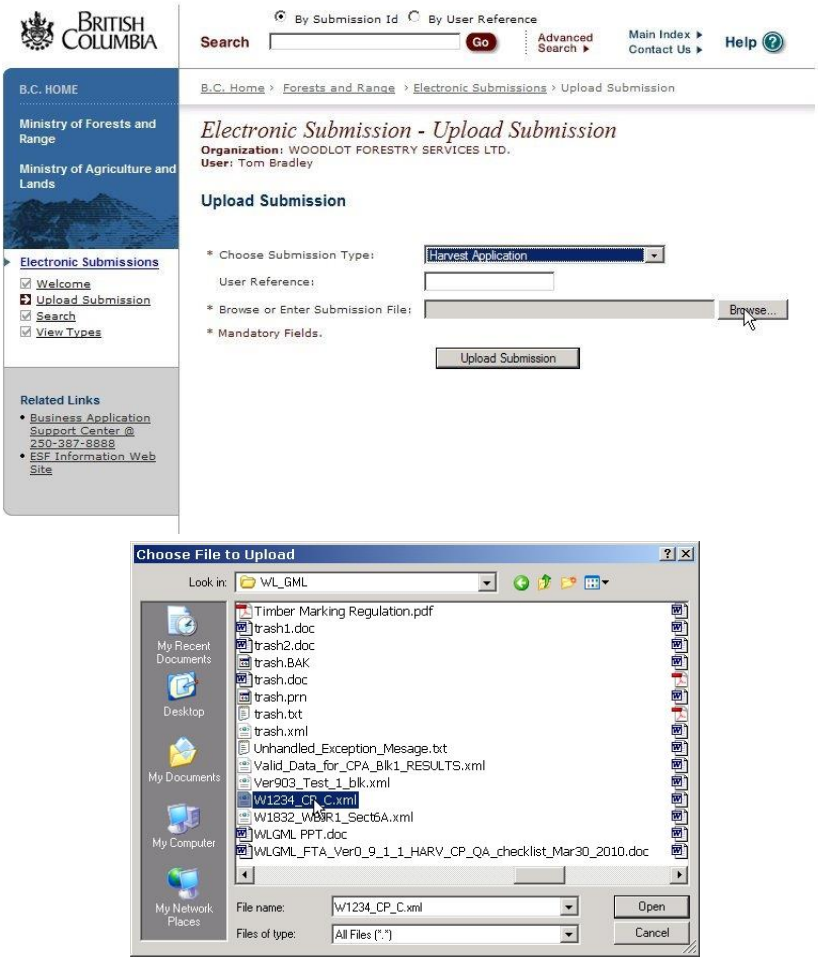
4. The Upload Submission screen. Three simple fields.



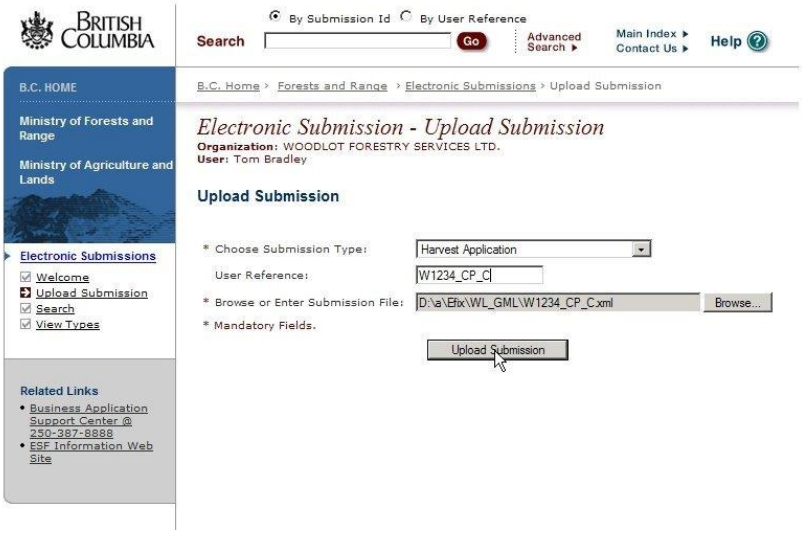
5. You need to choose a submission type. It has a drop-down list. Unsurprisingly, you are making a Harvest Application.



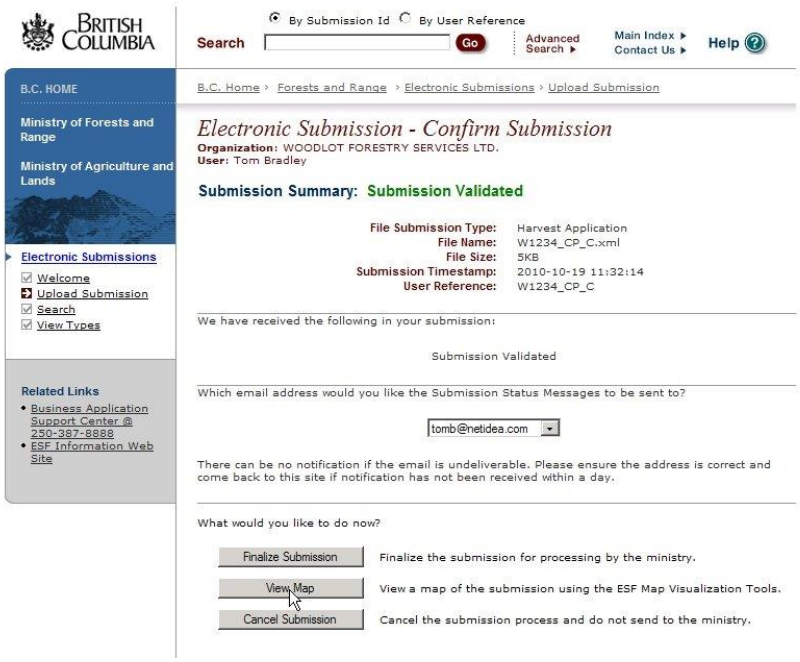
6. You then Browse for that XML/GML file you created back in Section 8.6 (You remember where you put it, right? Windows search can be useful if you realize that it is not where you thought it is.)



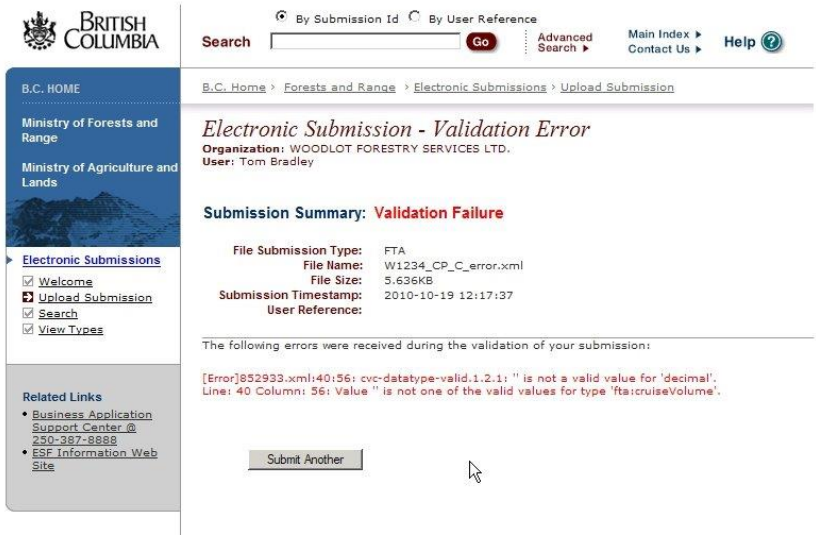
7. Type in the optional user reference if you want. As you can see below, I tend to stick with very simple names. And hit <Upload Submission>.



8. And you move to a new screen. We sure hope it looks like the one below one, with the lovely text that says **Submission Validated**.



If, sadly, you are greeted by the unhappy **Validation Failure** screen, well, try and figure out what went wrong.



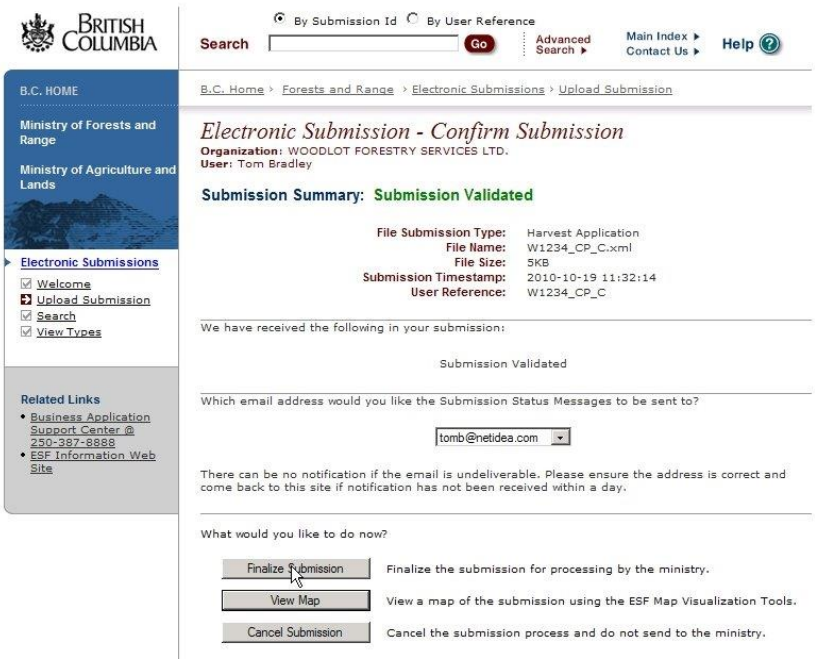
You can see there is some red micro-text on the screen that goes on and on about indecipherable stuff, but ends with a "cruiseVolume". First logical place to check would be that legacy cruise volume blank in the cut block details. In this case, sure enough, it had nothing entered, and the submission failed. It needs *some* number, and it will work. See Section 8.5

Fix, retry, repeat as needed. If you finally end up stuck, contact me and I will help. Always send along the faulty XML - I will ask for it first thing if you do not.

Contact Info:

Tom Bradley
250-226-7792
tomb@netidea.com

9. To complete the job hit <Finalize Submission>.



Submission of cut block to FTA in ESF system is done!

The system will produce a Complete Submission screen, like the one below.

Make a PDF and/or Print it if you can. At the least, write down the Submission ID number for future reference.

7.8 Real World Follow-Up

- Your District probably has a written policy of CP application steps/requirements required after the FTA submission. Get it and follow it.

- If no written policy, suggest sending your woodlot forester an e-mail telling him or her that you have filed an FTA submission for your new CP with the Submission ID provided by ESF above.
- You will still have to file a rate request to activate your tab rate stumpage. 1 CP is only available to WL on tab rates.
- You will receive an email at the address you provided in the Submitter Email blank of the form when the status of your CP application changes.

8. Conventional CP with Cutblock Submission to FTA

8.1 Reference Material

You will want a copy of the Cutting Permit and Road Tenure Administration Manual. It addresses all sorts of questions about data format and CP niceties, such as WTRA in or out, what a CP does and does not do, how CP amendments work, how CP postponement works, etc.. You do not need this manual to file a conventional CP application for 1 or 2 blocks, but every time I open it to try to solve something I learn new interesting-to-a-FTA-user things.

Access at:

http://www.woodfor.com/WLGML/CP-RP-Admin-Manual_Ver_5_2018.pdf

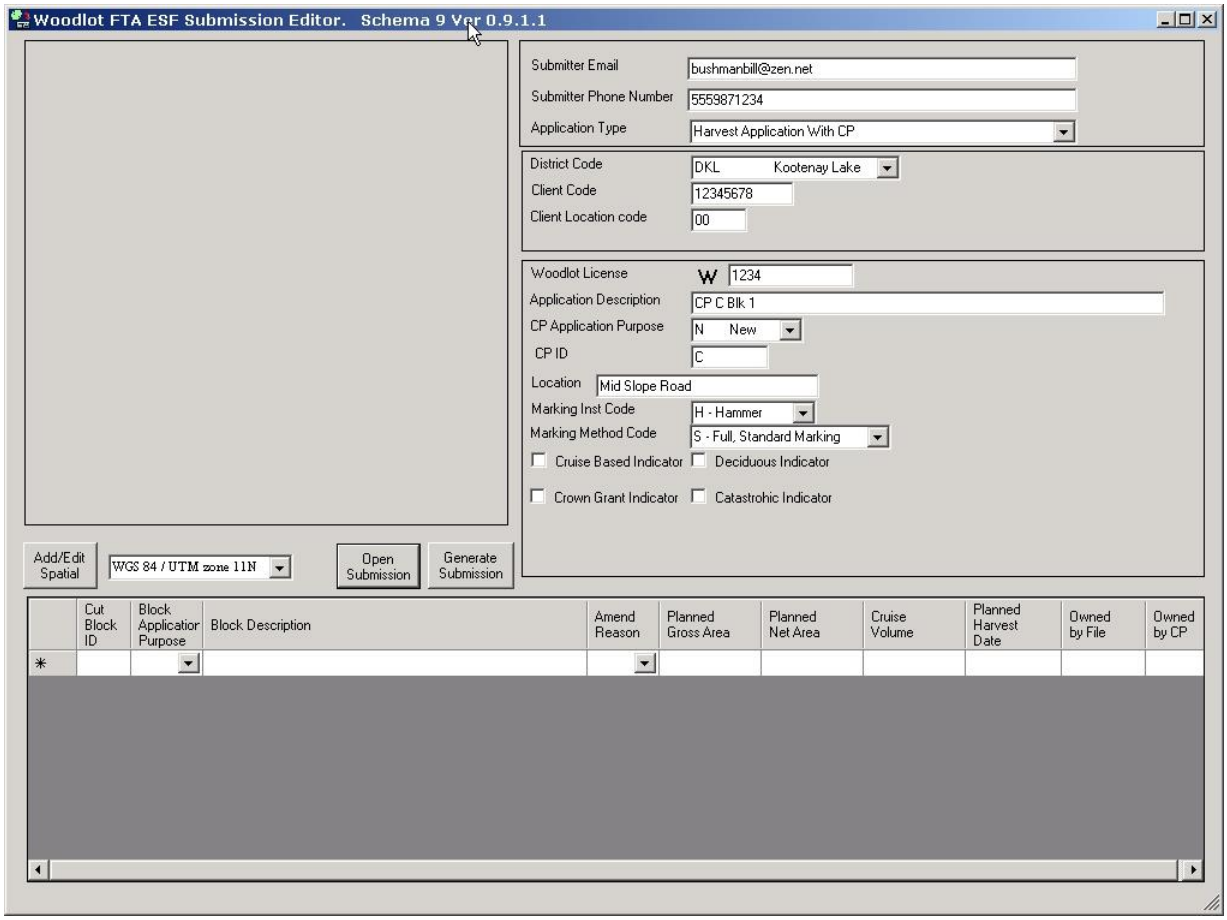
Pages 12 through 20 of the Forest Industry Guide to the Preparation and Submission of Forest Tenure and Permit Documents via the Electronic Submission Framework (ESF) (February 2, 2009 V1.4) is also highly relevant to this work and should be consulted if you are puzzling about attribute field contents or unusual spatial data issues.

Access at:

http://www.woodfor.com/WLGML/ESF_Industry_Guide_to_Submission.pdf

8.2 Getting Started

1. Open WLGML and select “FTA CP” from the starting menu.
2. The screen shown below will open. Use TAB or a mouse click to move between the fields, entering the required information.



The information to be entered in many input fields must be formatted in specific ways, and/or must use a set of predefined codes. These requirements are explained below. There are 3 classes of data fields:

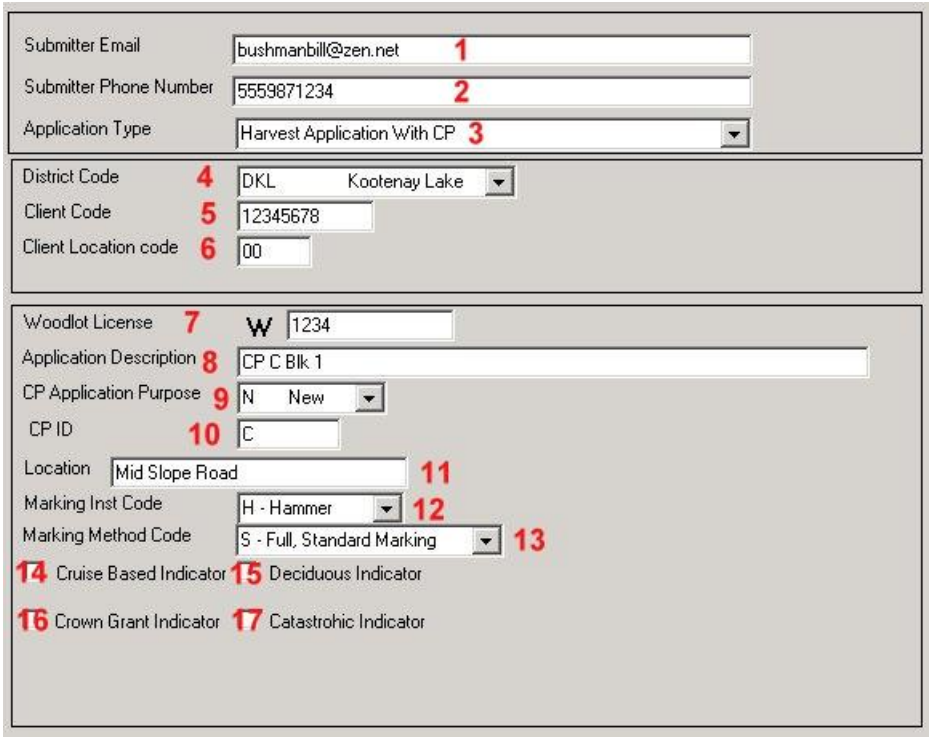
- Mandatory. Information must be input or the submission will fail.
- Conditional. Input is mandatory in some situations, but not in others.
- Optional. Input is not required, but you can enter information if you want.

The status requirements for each data entry field are noted in the discussion below

Where feasible, error checking is built into the program. Inputs that appear illogical or missing inputs are brought to users attention by error messages. The affected input blank is also turned red. The program will generate a submission with identified errors highlighted on the screen, but the submission is highly unlikely to be acceptable to the ESF website.

8.3 Cutting Permit Information

This section explains how to fill out the part of the input form that includes information about the Cutting Permit as a whole.



Cutting permit information input screen.

1. **Submitter Email.**

   Officially a Mandatory entry, but submissions without an e-mail address will process.

   Enter a your email address, such as YourName@yourisp.com

   @ symbol required, no spaces allowed

   If you do not have an e-mail address, leave the entry blank. The submission will be accepted by the ESF computer system.

   However, having no email address will make it impossible for the automated system to notify you of progress or failure, and more challenging for the people involved in processing your harvest application to contact you if there are questions or problems.

2. **Submitter Phone Number**.

   Mandatory entry.

   Enter a daytime phone number where you can be reached or where a message can be left for you.

   The phone number must be ten digits, no spaces, no hyphens.

   2505551234 is a valid phone number format.

   250-555-1234 or 555-1243 are not valid formats, and will cause your submission to be rejected by the ESF computer system.

3. **Application Type.**

   Mandatory entry.

   Set to Harvest Application with CP.

4. **District Code.**

   Mandatory entry.

   Select the FLNR District the Woodlot in question lies within from the drop down list.

5. **Client Code.**

   Mandatory entry.

   Enter the FLNR eight digit client code number for the Woodlot in question. For example, 12345678

   Entry must be 8 digits, no spaces. If you Client Code is 00123456, enter 00123456, not 123456.

   The Client Code is found on all stumpage notices issued by FLNR and forest companies.

   You can also look up a Client Code online at https://a100.gov.bc.ca/pub/hbs/ using the Timber Mark Information query near the bottom of the page. Tell it a valid timber mark for the Woodlot, it will tell you the Client Number.

6. **Client Location Code.**

   Mandatory entry.

   A location code assigned by the MFR. Identifies licence location when clients have more than one licence. May be required in situations where a Licensee holds 2 Woodlot Licences.

   Entry must be two digits. Default value is 00. This means “one location”.

   If there is any question, The Client Location Code can be looked up online at https://a100.gov.bc.ca/pub/hbs/ using the Timber Mark Information query near the bottom of the page. Tell it a valid timber mark for the Woodlot, it will tell you the Client Location Code.

7. **Woodlot License.**

   Mandatory entry.

   Entry must be four digits. If you are Woodlot 433, enter 0433.

   Enter the Woodlot License number.

8. **Application Description.**

   Mandatory entry, but content is not specified.

   Up to 255 characters.

   Enter description for the cutting permit application.

   You are free to use any description that makes sense to you, but what generally works best is a simple description like W1234 CP B .

9. **CP Application Purpose.**

Mandatory entry.

Must use one of two codes selected from drop down menu.

A = Amend an existing application.

N = New application

10. **CP ID.**

    Mandatory entry.

    Enter name of the cutting permit. Can be letters and/or numbers, up to three characters.

    Cutting permit naming scheme is not set by regulation, but should be rationale and orderly.

    Woodlot CP names are now required to be two characters long.

    Generally best to use an alpha system and logical name order, such as AA, then BB then CC, etc Alternately, AA, AB, AC, AD etc.

11. **Location.**

    Optional entry. Can be left blank.

    Enter description of geographic location of the Block. Up to 50 characters.

    E.g. Pedro Creek, Moose Mountain, etc.

12. **Marking Inst Code.**

    Mandatory entry.

    Choose method you will you use to mark the timber mark on the shipped timber from drop down list.

    - B = Paint and/or crayon
    - C = Crayon only
    - H = Hammer
    - P = Paint only
    - T = Tag

    The requirements for timber marking are set out in the *Timber Marking and Transport Regulation*. At the time of writing, this Regulation was obtainable at http://www.bclaws.ca/Recon/document/ID/freeside/37_253_97

13. **Marking Method Code.**

    Mandatory entry.

    Choose marking scheme to be used on the shipped timber from drop down list.

    - 0 - 100% Marking
    - 1 - 100% One End
    - 2 - 2 Marks Front, 2 on Sides
    - 3 - 2 Marks Front, 2 on Sides to Site; 100% at Site
    - 4 - Four Corner Marking
    - 5 - 4 Corner Marking to Site; 100% at Site

- 8 - Eight Corner Marking
- A - 35% With Mark Painted Orange on Each Side of Load
- B - 35% With Mark Painted Blue on Each Side of Load
- C - 20% With 16 Log Minimum
- D - Bottom Tier Front and Back on Area, 100% at Scale Site
- E - Exempt From Marking
- S - Full, Standard Marking

The requirements for timber marking are set out in the *Timber Marking and Transport Regulation*. At the time of writing, this Regulation was obtainable at http://www.bclaws.ca/Recon/document/ID/freeside/37_253_97.

14. **Cruise Based Indicator.**

    Conditional entry. Mandatory for new applications, not required for amendments.

    Check the box if a cruise was used for billing purposes. This does not mean "Are you still under the appraisal system?" It means "Will you pay stumpage based on cruise volume, not on weigh scale or hand scale volume?"

    A blank box is an answer, and means "Harvested timber will be scaled.".

15. **Deciduous Indicator.**

    Conditional entry. Mandatory for new applications, not required for amendments.

    Check the box if the permit is primarily for harvesting deciduous species.

    A blank box is an answer, and means "Coniferous permit.".

16. **Crown Grant Indicator.**

    Conditional entry. Mandatory for new applications, not required for amendments.

    Check box if the land that the Cutting Permit is on and that the timber mark it will use pertains to Private Land within Woodlot.

    A blank box is an answer, and means "Crown Land.".

17. **Catastrophic Indicator.**

    Conditional entry. Mandatory for new applications, not required for amendments.

    At this time, we are unsure as to what, if any, impact the catastrophic/endemic setting has. It is a legacy field related to pre-2006 interior log grades and is scheduled to be removed from FTA when budgets allow.

    Catastrophic is defined by FLNR as: "Damage to timber from fire, windfall, insects, or disease that inflicts losses well above the norm reflected in the forest inventory for the locality or region. "

    A blank box is an answer, and means "Endemic.".

I always lave this box blank. If your permit is in an area with catastrophic losses, I recommend you ask district for guidance.

8.4 Cut Block Spatial Data

8.4.1 Introduction

WLGML works with spatial data in shape file format to create the spatial data needed to make a CP submission.

You feed it shape file data and it will write the GML data required by the ESF system. It is also able to delete and combine shapes.

The basic drill is:

1. you select the projection that matches your data,
2. you open the Add/Edit Spatial window,
3. you track down the shape file of your block on your hard drive and select it,
4. the program ingests the spatial data contained in the shapefile, and
5. the program creates a new entry line for you to add Block Details.

Be aware that "any old shapefile" may not be good enough for ESF. The shape file(s) for a CP submission must be a closed polygon or polygons, and the boundary of each polygon must be a line string that does not cross itself.

However, with a bit of editing, just about "any old shapefile" can be beat into a shapefile that meets these specifications.

Information on some of the finer points of editing of shape files in WLGML is contained in Appendix 1.

8.4.2 Block Area

You need to tell the system the gross and net area in hectares of your harvest units, block by block.

Gross area is the area encompassed by the outer boundary of each block.

Net area is the estimated net area to be reforested, after deductions for landings, permanent access, natural NP, and reserves.

FTA asserts that it has the ability to calculate gross area from the spatial data you supply, if you tell it an incorrect gross area. However, there is no way it can determine the net area for you.

The net area must be less than or equal to the gross area. The Net Area info request links back to Code era and to stumpage appraisal. This data entry is an **estimate**! Provide a reasonable estimate as the info is required, but remember that the real net area will be reported to RESULTS after harvest.

If you do not know your Gross Area, you may be able to determine it from the shape file. The *.dbf file associated with every polygonal shape contains an Area field, and can be

viewed in Excel. The area in most shape files is listed in square meters. You divide the area in square meters by 10,000 to get area in hectares.

If the listed polygon area in the DBF is irrational, your shape area did not get updated after it was created. This is a simple fix if you have ESRI GIS software or are willing to download QGIS and learn how to use it. If not, you will have to go back to whatever process or person created the shape and get the area fixed.

8.4.3 Shape Files 101

The explanation of Shape Files and projections has been moved to Appendix 4 to streamline this manual.

8.4.4 What Are We Mapping Here?

We are preparing a submission to the Forest Tenures Administration e-FM system. What FTA wants to see is the outer boundary of your harvest unit(s). FTA does not want to know anything specific about Standards Units, reserves, wildlife tree areas, or riparian management areas in your block. That stuff is for you and RESULTS to work out. Some possible situations:

- You have one block to put in your CP. Very simple. Just get/make a polygonal shapefile of the block, and add it using the WLGML edit/add spatial function.
- You have a set of 2 separate blocks to put into one conventional CP application. You will need either 1) a single shape file that shows/contains both blocks or 2) two shape files of the separate blocks to bolt together in the WLGML "Add/Edit Spatial" window. See Appendix 1.
- You have a 3 or more separate blocks to put into a conventional CP. You will need a single shape file that shows/contains all the blocks.
- Include wildlife tree patches in the block or on the edge of the block in the gross block area. The WTRAs are not reported to or recorded in FTA, all FTA wants to know about is the outer boundary of your block. You will clarify that the WTRA areas are WTRAs after harvest, when you report the harvest area and the WTRA area to RESULTS.

  Including a WTRA in the FTA submission gross area is not a management commitment to make said area a WTRA or to log it. But if things go not-as-planned and the WTRA proves to be impractical, or blows over, you have Harvest Authorization in place for all or any part of the WTRA area. You would not have that harvest authorization if the WTRA was excluded from FTA gross area submission. Including the WTRA in gross area can avoid the headache of a CP amendment to address unforeseen circumstances.
- Your block is partially on crown land (Schedule B) and partially on private land in the Woodlot (Schedule A)? You must divide the block into two blocks: one on the Sched A portion and one on the Sched B portion.

- Your block completely surrounds an earlier harvest unit? FTA cannot have overlaps.[4] You must create a donut polygon with the earlier harvest unit cut out. See Appendix 1.
- Your block is sliced into 2 or more parts by a pre-existing road permit. ESF central tells us in Ref# 824103242:

  > Since both the RP and CP have the right to harvest timber under their respective tenures and the RP was issued first, the "prior rights" of the RP must be protected. The words "Save and excepting thereout the prior rights of RP 12345" should be used on the Ex A for the CP. We do not have to physically remove the road permit from the CP spatially. The rights of the 2 tenures are compatible but the rights of the first need to be acknowledged by the second.

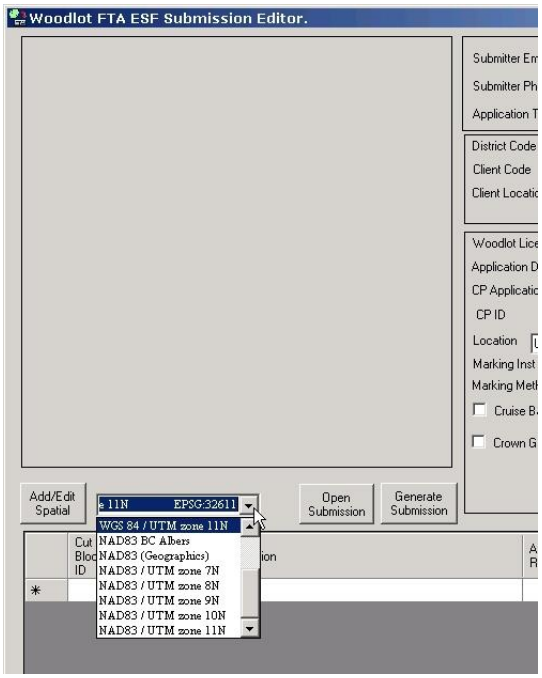
  The key part of this answer to us is "do not have to remove the road permit from the CP spatially". A block outline that overlaps the RP will suffice.
- Your block is sliced into two or more separate parts by a completely different tenure, such as a transportation or utility right of way. You must create a multi-part shape of the two or more block parts for submission. See Appendix 1 and 4.

8.4.5 Adding Spatial Data

And now to the actual task at hand.

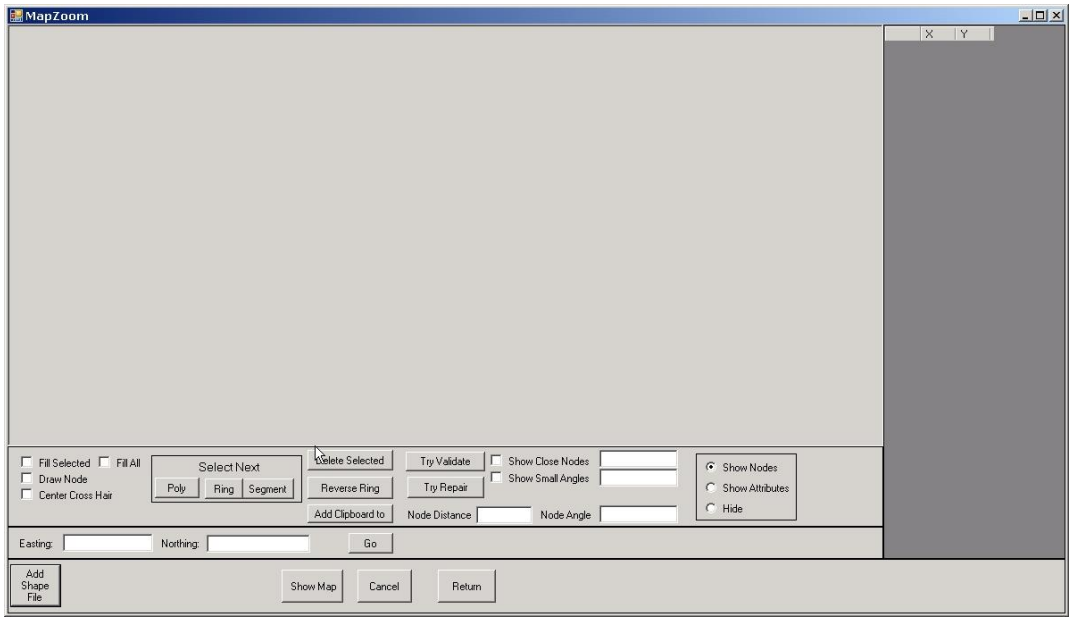
1. Select the correct projection for your submission, based on the projection of your shape files.

[4] This is not the same as situations where current harvest applications are rejected because they overlap with a previous, badly mapped cutting permit or boundary. i.e. The new application is correct, the thing it overlaps is wrong. This new right / old wrong overlap can be resolved by the District staff issuing an "override" to tell the system the new information is correct and shall be accepted. This is the correct procedure in these situations. **Do not revise new, good data to follow old, incorrect lines**.

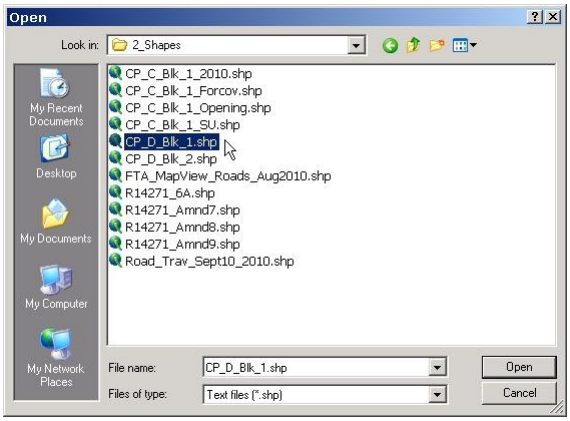


See Appendix 4 if you skipped to here and are wondering what this "projection" stuff is.

2. Click the Add/Edit Spatial button. The screen shown below will open.

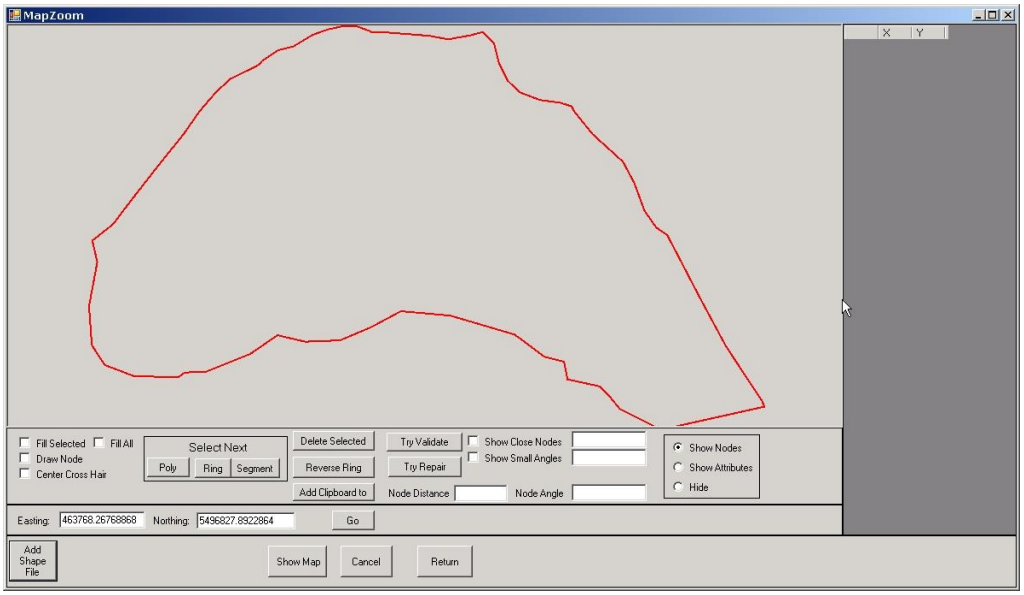


3. Click Add Shape File (Who would have thunk it?) A standard windows Browse for File box opens and you go and find the shape file that contains a polygon of your new CP block.



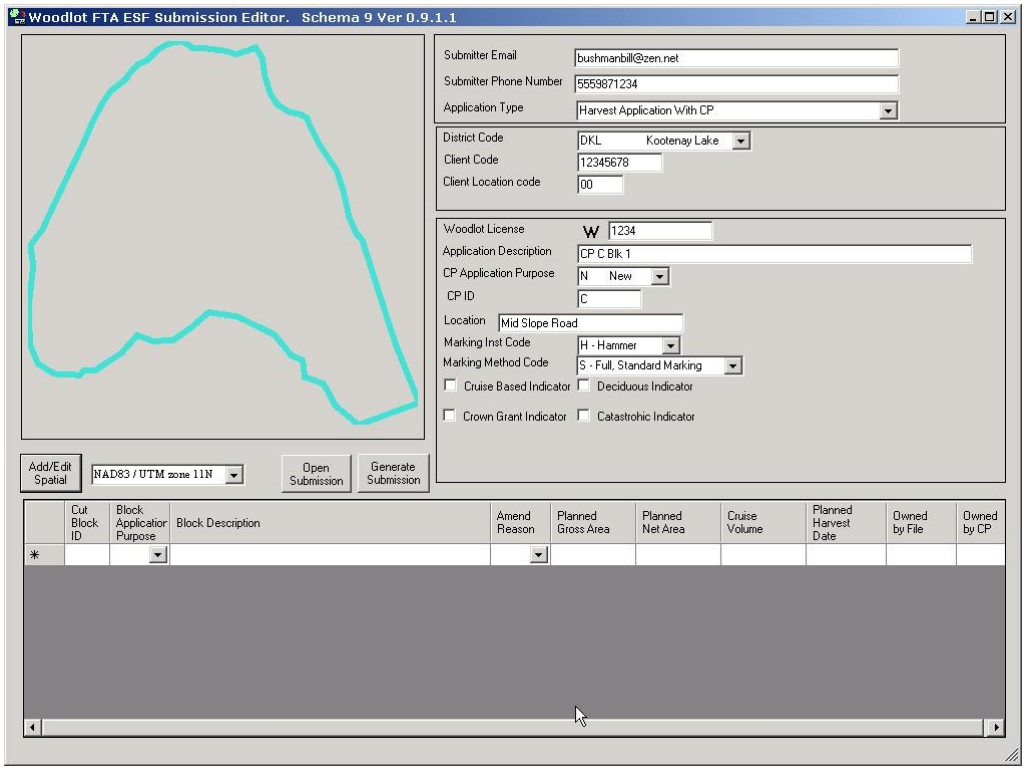
As previously mentioned, you select the component of the shape file with the *.shp extension.

4. You are dropped back into the main spatial window, but with your spatial data shown.



Wonders can be achieved by the Advanced Class using the tools in the Edit/Add Spatial window to clean flawed shapes or to create multi-part shapes from a set of single part shapes. This is discussed in Appendix 1. For the time being, we will just proceed with our nice, simple, single part polygon shape

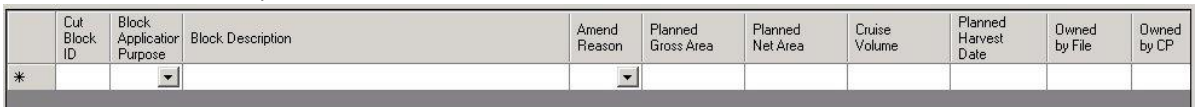
5. Hit <Return> to return to the WLGML FTA module with your spatial data in tow.



8.5 Cut Block Text Information

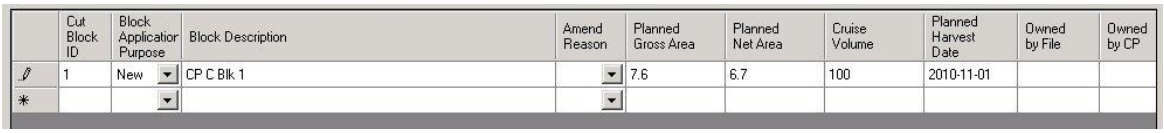
This section explains how to fill out the part of the input form that includes information about each individual cut block.

This information is input on that horizontal line of entries in the lower part of the form. We have one block, so we have one line. 2 blocks? 2 lines. Etc.



Cut Block information input screen.

Note that as soon as you start filling in information, it adds a blank line beneath your data. Don't be alarmed - it just does that. The blank line will remain blank and will not affect your success.



1. **Cut Block ID.**

   Mandatory entry.

   Enter a sensible block ID. There are no explicit specifications, but rational block naming is expected. i.e. 1, 2, 3 or A, B ,C

Can be up to 10 characters long.

2. **Application Purpose**.

   Mandatory entry.

   Purpose/status of block selected from drop down pick list:

   - N - New block
   - A - Amendment to existing block.

   If N then cutblock must not exist in Harvest Billing system. (I think this should be FTA system, but the web site says HB system.)

   If A then cutblock must exist in system.

3. **Block Description.**

   Optional entry.

   Can be left blank, but having it filled with a clear, simple label can be useful at a later date.

   A text string up to 120 characters long that describes the block.

   As previously mentioned, it is simpler in the long run to use dull descriptions like CP C Blk 1 in a uniform format that works for you. There is no right and wrong, but over time, a medley of various block description formats gets rather confusing.

   Do not use characters that may be a computer language control code, such as:

   < (less than)
   > (greater than)
   ‘ (single quote)
   “ (double quote)
   & (ampersand)
   / (forward slash)
   \ (back slash)
   ~ (tilde)

4. **Amend(ment) Reason.**

   Conditional entry:

   - Mandatory if Application Purpose = Amendment.
   - Leave blank if Application Purpose = New Block.

   The reason for amending a block, selected from drop down pick list:

   - E - Engineering
   - F - Forest service initiated
   - S - Salvage
   - A - Access Additional Cut Blocks

5. **Planned Gross Area.**

   Mandatory entry.

The planned gross area of your block. Includes any WTRA (WTP), man made NP areas and/or natural NP areas that are included in the block outline.

FTA can calculate this from the spatial data, but it is simpler for error checking purposes to enter the area.

6. **Planned Net Area.**

   Mandatory entry.

   The planned net area of your block, also known as the Net Area to be Reforested. The Gross area less any WTRA (WTP), man made NP that will not be rehabilitated, and/or natural NP areas that are surrounded by the block.

   This is a reasonable **estimate** based on what you know at this time. The real net area after harvesting and road building will be reported to RESULTS. RESULTS and FTA do not have to agree!

   Must be less than or equal to the Planned Gross Area.

7. **Cruise Volume.**

   Allegedly an optional entry, but at this time an entry is required to allow validation of submission by FTA.

   Enter the cruise volume reported for the block if you are still on MPS and have cruised.

   A legacy field for those on tab rates, but a zero entry will not be accepted by FTA. If you are on tab rates, enter a simple and obviously wrong number like 999 or 100.

8. **Planned Harvest Date**

   Mandatory Entry.

   The estimated date you plan to start harvesting.

   Enter date in YYYY-MM-DD format.

9. **Owned by File**

   Conditional entry. Mandatory if the block in question is on private land (Schedule A) portion of a woodlot licence. Otherwise, left blank.

   If the harvest unit being submitted to FTA is on the private land (Schedule A) portion of a woodlot licence, fill this field with the applicable private land timber mark. This private land timber mark "owns" the block.

   If there is currently no private land timber mark, obtain one before ESF submission and enter number here.

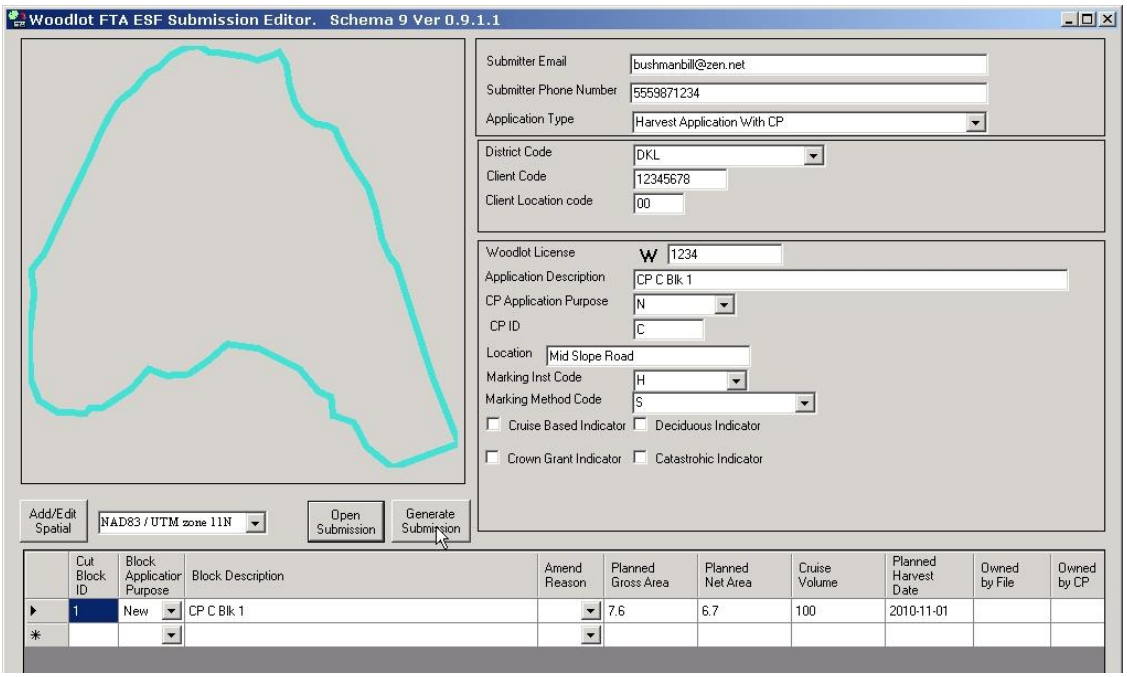
10. **Owned by CP**

    Suspect that this field has no use.

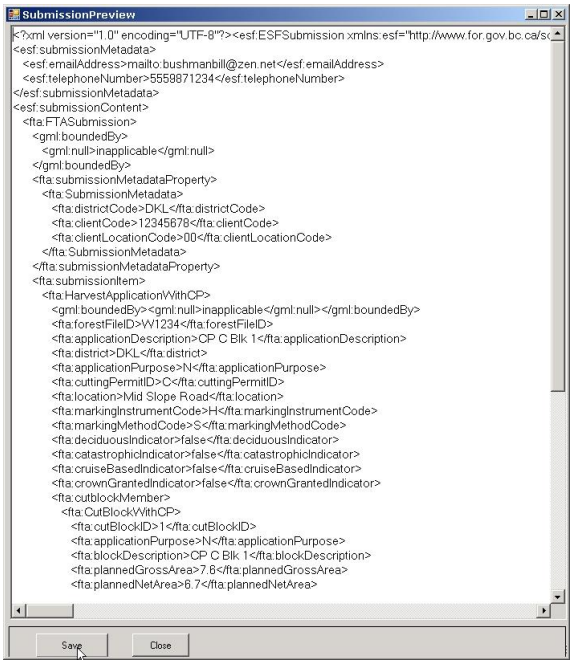
    A function for it is described in the technical specifications, but now believe that the specifications are in error and this field is never used in submissions for woodlot licences. If you know better, please tell me!

8.6 Generate Submission

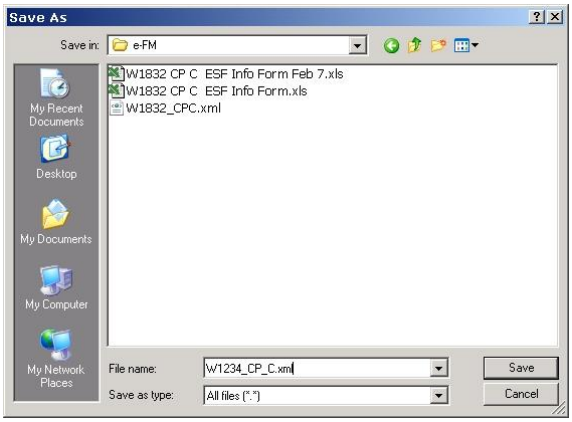
Everything is filled in as it should be? Or you think it is, anyway. Hit <Generate Submission>.



Zip! A strange new window opens, filled with Grade A Computer Gibberish. You do not have to know much about this stuff - it is the XML/GML file that the ESF system wants to see. However, if you want to take a quick look you'll quickly see things you recognize, like your telephone number and name. Whatever. **<Save>**



A standard Windows Save File box opens up. Put your submission somewhere where you can find it later, and give it a name that makes sense to you. **Be sure to add the .xml extension on your file name!**



(Note: This process is also used to save partially done submissions for later completion.)

8.7 Upload Submission

Upload through ESF process is identical to that discussed for 1 CP submissions.

See Section 7.7 .

8.8 Real World Follow-Up

- Your District probably has a written policy of CP application steps/requirements required after the FTA submission. Get it and follow it.
- If no written policy, we suggest sending your woodlot forester an e-mail telling him or her that you have filed an FTA submission for your new CP with the Submission ID provided by ESF above.
- You will still have to file a rate request to activate your tab rate stumpage, or a full appraisal if you remain under the appraisal system.
- You will receive an email at the address you provided in the Submitter Email blank of the form when the status of your RP application changes.

9. Road Permit Submission to FTA

9.1 Reference Material

You will want a copy of the Cutting Permit and Road Tenure Administration Manual. It addresses all sorts of questions about road permits, such as what a road tenure does and does not do, other forms of road tenure and their uses, how RP amendments work, how to manage road tenures that pass over multiple tenures or over private land, etc etc.

You do not need to read this manual to file a single spur road addition amendment for a road permit, but it is a valuable resource that will help avoid errors that create extra work and re-do's for you and FLNRO.

At time of writing, the current version was from Sept 2020, and can be found by searching for

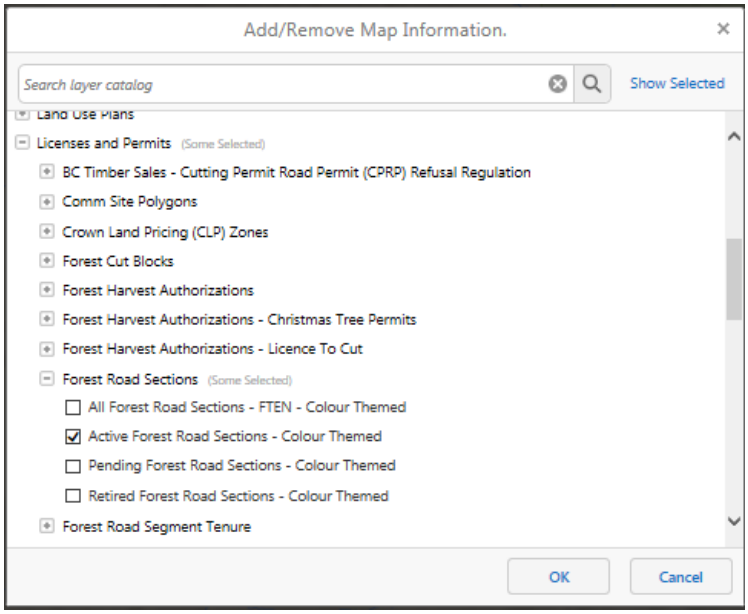
Cutting Permit and Road Tenure Administration Manual

on the web, or can be accessed at:

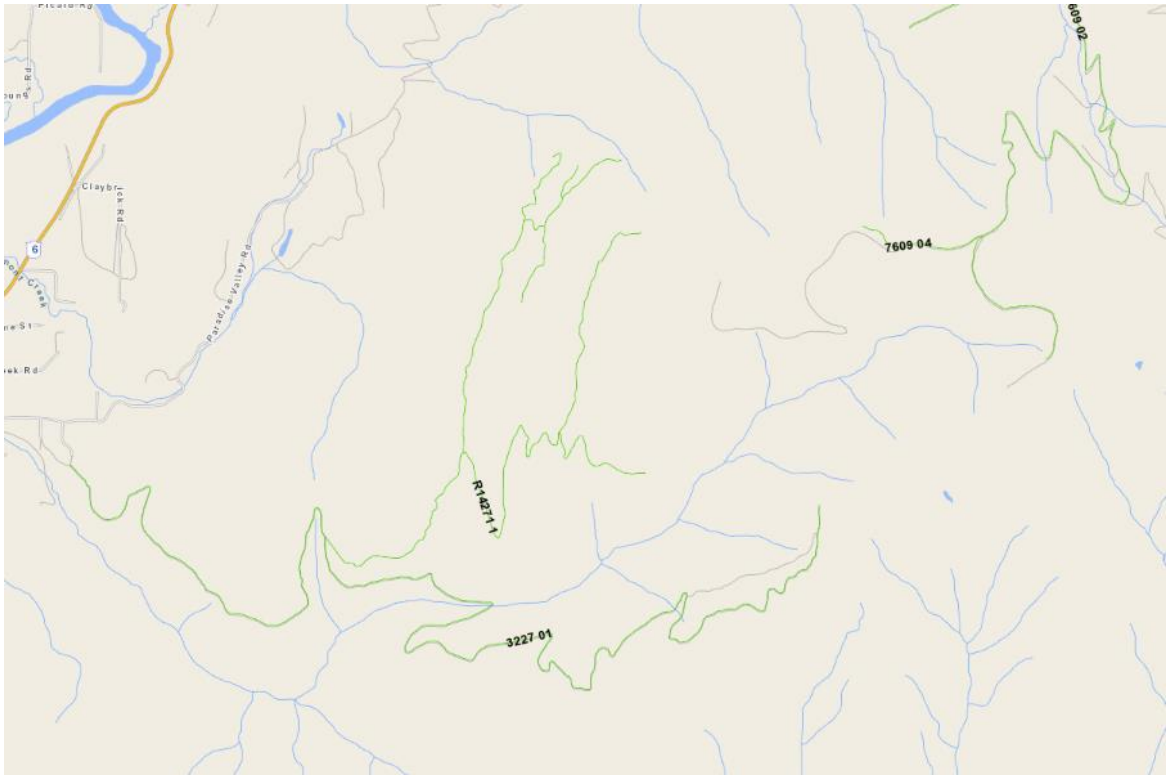
http://www.woodfor.com/WLGML/CP-RP-Admin-Manual_Ver_6_2020.pdf

9.2 What are Road Tenures a Map Of?

The Road Tenures spatial data set in FTA is a bunch of lines. You can see it in iMap, if you load the Active Forest Road Sections data from the Provincial Layers data.



Outcome shown below.



The road tenures data looks just like a map of roads. It is <u>not</u>.

The road tenures data shows the center line of **road tenures** that were issued to someone at some time in the past. The tenures authorize construction and industrial use of a road. Did a road get built there? Sometimes. But no one but the tenure holder actually knows. If a road was built, does the "as built road" follow the center line of the tenure? Don't know. The legal requirement is that the as built road[5] must be within the road tenure, which is generally 32.5 m on both sides of tenure center line. IF a road was built, is it within the RP tenure? Don't know.

The road tenures layer shows best laid plans, which often coincide with actual roads. But actual roads are actually mapped in the Digital Road Atlas, not in the road tenures data set.

Does this really matter? Probably not, but it seemed best to clear up any confusion about what road tenures mapping shows.

9.3 <u>Multiple or Single Roads in Submission</u>

WLGML can generate a submission for a single road or a submission for multiple discrete roads. However, all of the road sections to be submitted have to be contained in one shape file to load into the software.

If you have 2+ roads in 2+ different shapefiles that you want to submit, your choices are:

[5] Road surface, road prism, road right of way clearing, and road associated landings, borrow pits and waste areas must all be within 32.5 m of the tenure center line. This can be a very tight fit!

1. use GIS software or freeware (QGIS) to combine the roads into one shapefile,
2. get a mapping consultant to combine the shapefiles for you, or
3. make 2+ ESF submissions, one for each road.

All the options work.

Option 3 creates extra work for FLNR staff. They have to "status" each individual road tenure submission application separately. If you are applying for more than one road segment, they **greatly** prefer to have all the road segments in one application so they only have to do the statusing once.

Note that terminology "multiple discrete roads". A single road spatial data set made up of several discrete line segments joined end to end is not a valid submission.

You can of course extend a road by adding to it off the end, but the CP/RP Manual page 71 makes it clear that you are to re-submit the entire road length from current/original road POC each time, not just “add a bit to the end”.

Also note that each line segment representing a road has an implied direction. According to the computer, the line starts at one end and goes to the other. The ESF System wants that digital starting point at the start of the road, where it joins an existing Road Permit Road, FSR, or public road. If your line is reversed, your submission will not work. More on this later.

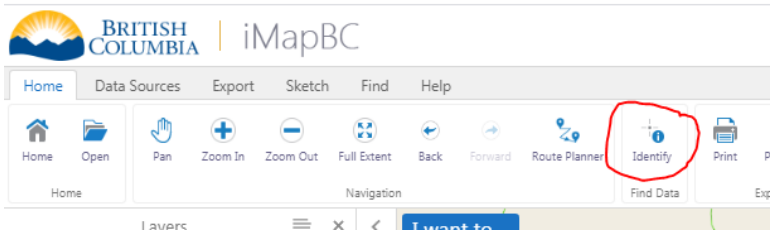
9.4 Adding Length/Extending a RP Road

Adding more road permit road to the end of an existing road permit road is a special case.

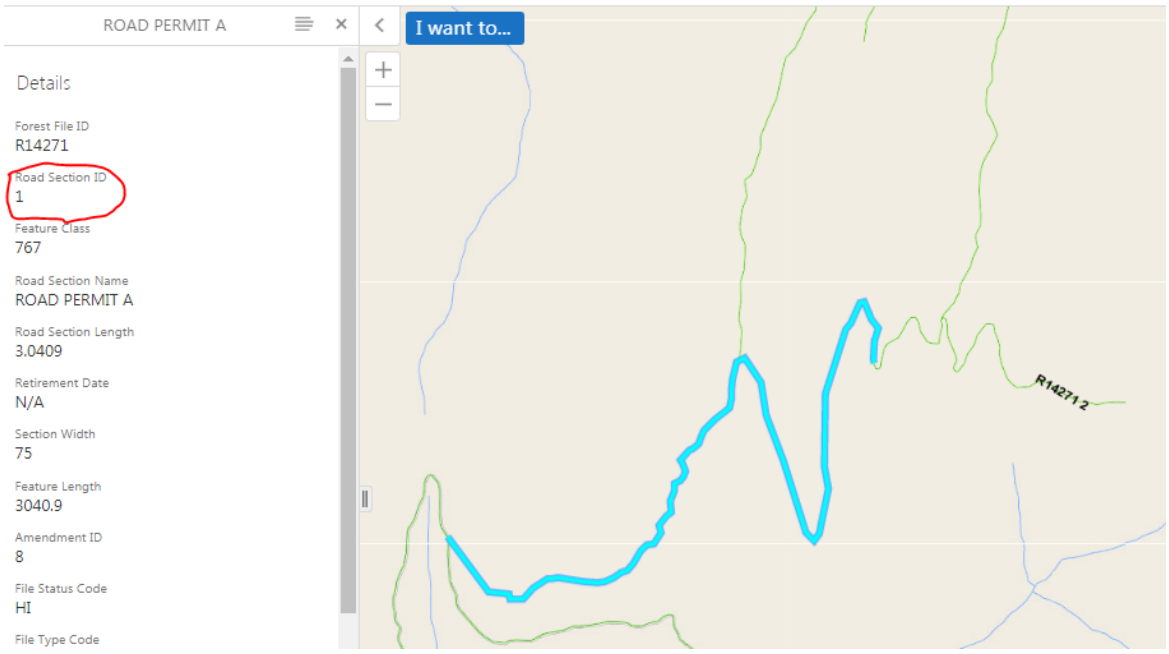
This is not a spur or branch off an existing RP tenure, it is adding more meters of road starting at the end of a current RP road section and extending the road further.

In this case, the process is to replace the spatial data for the road section being extended with new spatial that starts at the original road POC, but which goes further / includes the road length you want to add.

The original / existing road section identifier must be used for the entire new road. The road section identifier can be obtained in iMap from the Active Forest Tenure Road Sections layer previously mentioned. Use the Identity tool to query a road tenure section.

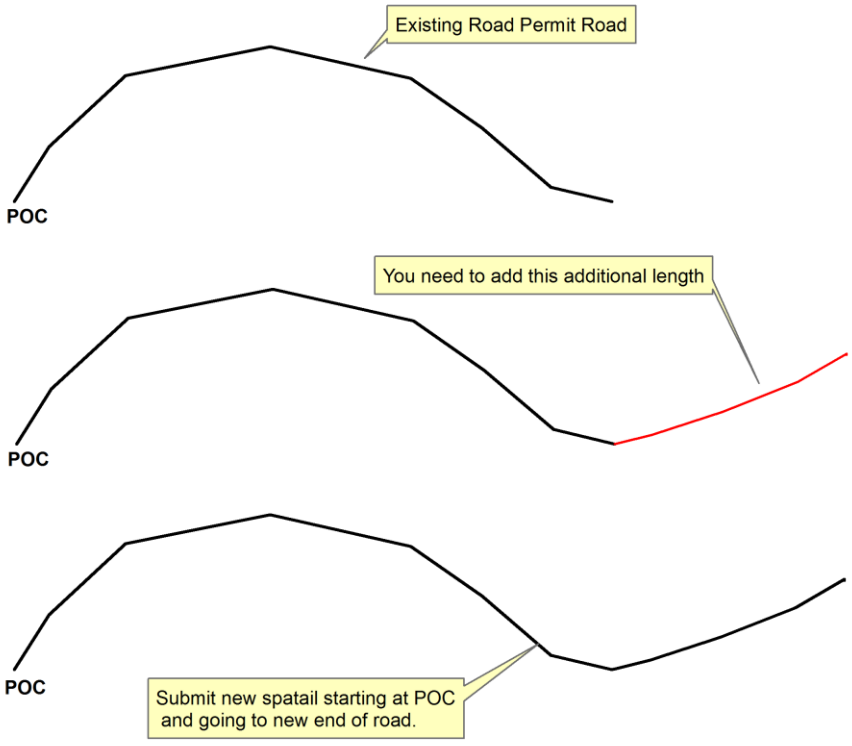


Road Section ID is in the list.



(And many bonus points for anyone who observed "Hold on. You just said 'No extension off end'. That Section 2 is an extension off the end of Section 1!". Indeed it is. We botched it, and the MoF approved it. Was 15+ years ago when we were just learning the trade.)

Anyway, back to how-to-do-it-right. Here is schematic of what is to be done.

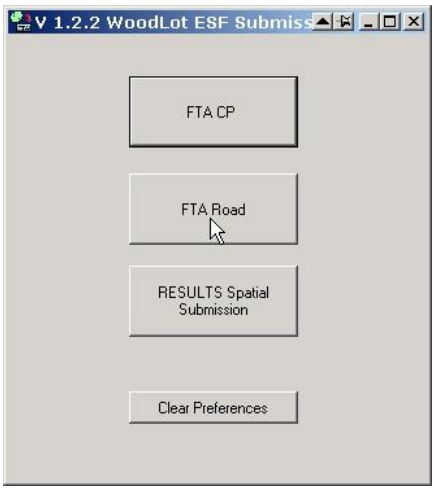


I have used the process of resubmitting the entire road length to both add the new bit at the end and to clean up old and rather inaccurate road permit center line mapping. The old mapping was from heaven knows what source, the new mapping is from LiDAR and very accurate. Is this required? No. It is only a map of a road tenure, not a map of a road. But most mappers and some foresters are borderline OCD (at best), so remapping the old road properly made everyone happy.

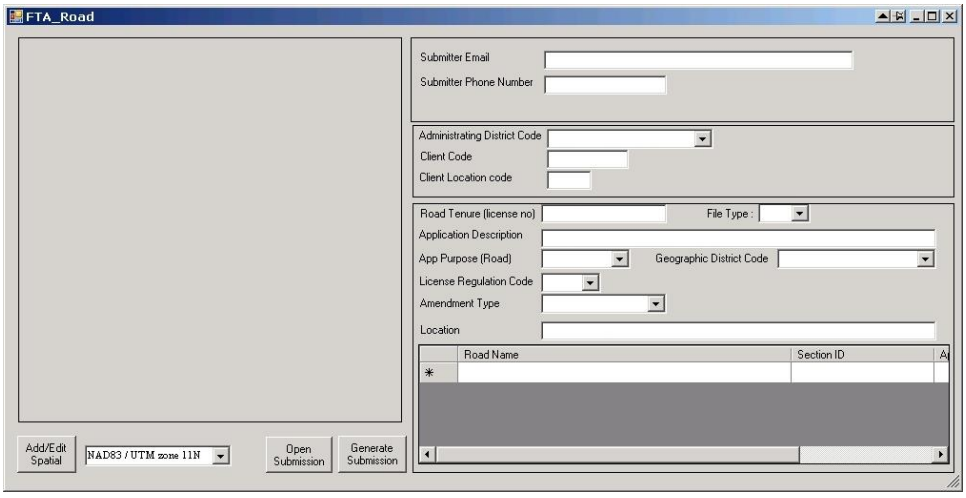
9.5 Road Permit Information

This section explains how to fill out the part of the input form that includes information about the Road Permit.

1. Open program and select FTA Road from the starting menu.



2. The screen shown below will open. Use TAB or a mouse click to move between the fields, entering the required information.



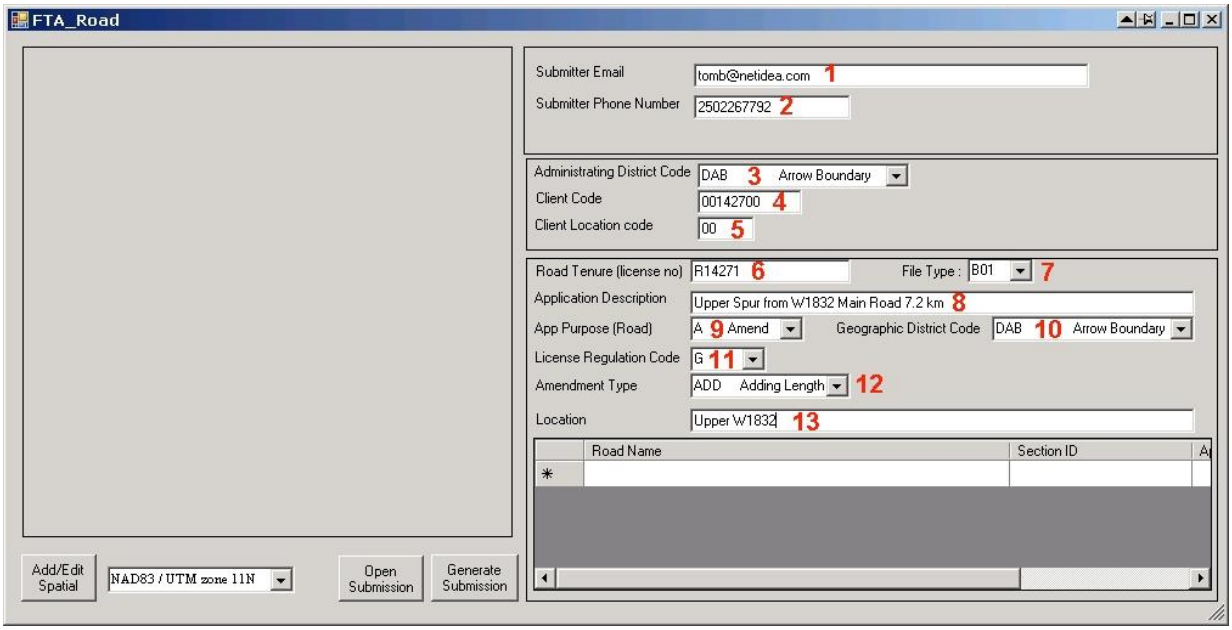
The information to be entered in many input fields must be formatted in specific ways, and/or must use a set of predefined codes. These specs are explained in the attribute discussion following. There are 3 classes of data fields:

- Mandatory. Information must be input or the submission will fail.
- Conditional. Input is mandatory in some situations, but not in others.

- Optional. Input is not required, but you can enter information if you want.

The status requirements for each data entry field are noted in the attribute discussion following.

Where feasible, error checking is built into the program. Inputs that appear illogical or missing inputs are brought to users attention by error messages. The affected input blank is also turned red. The program will generate a submission with identified errors highlighted on the screen, but the submission is highly unlikely to be acceptable to the ESF website.



Road permit information input screen.

Read the instructions below carefully! In retrospect, some of our WLGML entry field names were not well chosen. The instructions make it clear(er).

1. **Submitter Email.**

   Officially a Mandatory entry, but submissions without an e-mail address will process.

   Enter your email address, such as Your.Name@yourisp.com

   @ symbol required, no spaces allowed

   If you do not have an e-mail address, leave the entry blank. The submission will be accepted by the ESF computer system.

   Having no email address will make it challenging for the automated systems and people involved in processing your harvest application to contact you if there are questions or problems.

2. **Submitter Phone Number**.

   Mandatory entry.

Enter a daytime phone number where you can be reached or where a message can be left for you.

The phone number must be ten digits, no spaces, no hyphens.

2505551234 is a valid phone number format.

250-555-1234 or 555-1243 are not valid formats, and will cause your submission to be rejected.

3. **Administering District Code.**

   Mandatory entry.

   Select the FLNR District that will administer the Road Permit from the drop down list.

   We expect this entry will always be the same as the Geographic District Code (Entry 10) for WL, but FTA allows administering and geographic District to differ.

4. **Client Code.**

   Mandatory entry.

   Enter the FLNR eight digit client code number for the Woodlot in question. For example, 12345678

   Entry must be 8 digits, no spaces. If you Client Code is 00123456, enter 00123456, not 123456.

   The Client Code is found on all stumpage notices issued by FLNR and forest companies.

   You can also look up a Client Code online at https://www2.for.gov.bc.ca/hbs/ using the Timber Mark Information query near the bottom of the page. Tell it a valid timber mark for the Woodlot, it will tell you the Client Number.

5. **Client Location Code.**

   Mandatory entry.

   A location code assigned by the MFR. Identifies licence location when clients have more than one licence. May be required in situations where a Licensee holds 2 Woodlot Licences.

   Entry must be two digits. Default value is 00. This means “one location”.

   If there is any question, The Client Location Code can be looked up online at https://www2.for.gov.bc.ca/hbs/ using the Timber Mark Information query near the bottom of the page. Tell it a valid timber mark for the Woodlot, it will tell you the Client Location Code.

6. **Road Tenure.**

   The tenure the road will be constructed and managed under.

   Conditional Entry:

   - Mandatory for Amendment to existing Road Permit
   - Must be blank for creation of a new Road Permit
   - Mandatory for a new Forest Service Road.

- Must be blank for a Special Use Permit Road[6]

Alpha-numeric string of up to 10 characters.

The most common entry in this field is an existing Road Permit number.

Many Woodlot Licences have an existing Road Permit. Additional roads to be build under the Road Permit are submitted as Amendments to the existing permit.

Some confusion has arisen because the Timber Marks for road permits were changed in 2007 under the Timber Mark Designate program. For example, the timber mark for a long standing road permit R00935 was changed to WUAUR1. Additional roads can still be added to R00935, the only change is that any timber harvested during right of way clearing will be billed under mark WUAUR1. The required entry here is the Road Permit number, in this case R00935, not the new timber mark number.

7. **File Type.**

   Conditional. Required for new road permit submission.

   Alphanumeric entry selected from list.

   Identifies the type of road tenure being applied for.

   - B01 for Road Permit
   - B40 for Forest Service Road (FSR)
   - S01, S02 for Special Use Permit (SUP) Roads

   At this time, WLGML requires an entry in this field for amendments as well. This does not cause problems with ESF system.

   I am not aware of a business case where a WL submits a FSR tenure application to FTA. However, if one occurs, the program can do it.

8. **Application Description.**

   Mandatory entry, but content is not specified.

   Up to 255 characters.

   Enter description for the road submission.

   You are free to use any description that makes sense to you, but what generally works best is a simple description like R12345 Amend 4 or R12345 Amend 2020

9. **Application Purpose (Road).**

   Mandatory entry.

   The field name really should be "Purpose of Tenure Submission". This is not about the **road**, it is about the **tenure**.

   Must use one of two codes selected from drop down menu.

   A = Amend an existing road tenure. (I.e. Add more road to an existing Road Permit.)

[6] Technical specifications are not completely clear re: Special Use Permit roads. Suggested that you seek clarification from District on what entry is required prior to submitting a special use road to ESF.

N = Apply for a new road tenure (new Road Permit).

10. **Geographic District Code.**

    Mandatory entry.

    Select the FLNR District that the road tenure lies within from the drop down list.

    We expect this will almost always be the same as the Administrative District (Entry 3), but FTA allows administering and geographic district to differ.

11. **Licence Regulation Code.**

    Optional entry.

    Single character selected from list.

    A code defining the regulation the timber on the road is to be harvested under.

    - F for Fort St. John
    - G for Forest and Range Practices Act

    We believe that Fort St. John indicates Fort St. John Pilot Project. The FTA technical specifications are not clear.

    This is an "optional" entry in the sense that if you deliberately leave it blank, the ESF system will assign the value G for FRPA to the submission.

12. **Amendment Type**

    Conditional entry. Mandatory for Amendments. Ignored for retirements

    Character string selected from list.

    - ADD - for adding length
    - REM - for deactivating or removing length
    - REN - for re-aligning the road

    At this time, WLGML insists that you must have an application type entry, although it is not strictly required for a new road section. The ESF system accepts submissions for new road sections with Application Type ADD, so it easiest by far to simply say you are ADDing length when you create a submission for a NEW road section.

    (When I submit revised road center line mapping for an existing road with some added new road length on the end, I use Application Type ADD, not REN. It is all one road section to ESF, cannot have two Amendment Types apply to one road section.)

13. **Location.**

    Optional entry. Can be left blank.

    Enter a description of geographic location of the harvest area the road serves.

    Up to 50 characters.

    E.g. Pedro Creek, Moose Mountain, W1243 Unit 1 Midslope, etc.

9.6 Add Road Spatial Data

9.6.1 Introduction

WLGML works with spatial data in shape file format to create the spatial data needed to make a RP submission.

You feed it shape file data and it will write the GML data required by the ESF system. It is also able to delete and combine shapes.

The basic drill is:

1. you make sure the correct projection is set,
2. you open the Add/Edit Spatial window,
3. you track down the shape file of your road tenure location center line on your hard drive and select it,
4. the program ingests the spatial data contained in the shapefile, and
5. the program write the spatial data to GML format when required.

There are many required data standards for that shapefile of road tenure center line. More discussion below.

9.6.2 Shape Files 101

Please see Appendix 4 for a quick introduction to shape files, map projections, etc if desired.

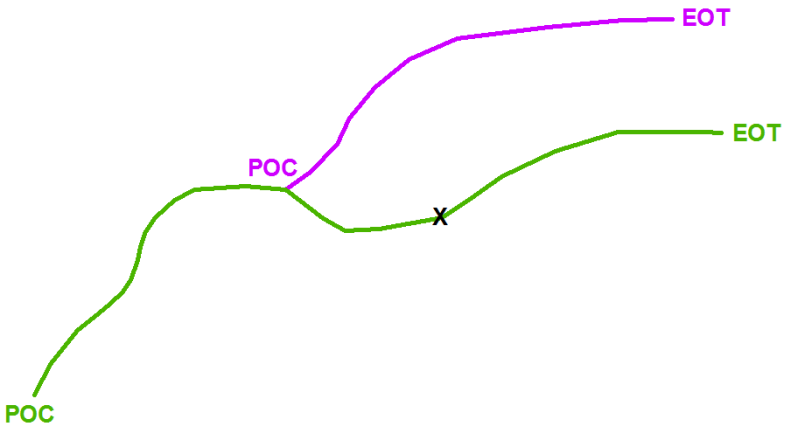
9.6.3 What Are We Mapping Here?

We are preparing a submission for a road tenure to the Forest Tenures Administration e-FM system. Once issued, FTA will record that you have a corridor of tenure to build and/or use your road within, generally 32.5 m each side of the road center line you submitted to FTA.

What FTA wants to see is the center line of the proposed tenure, which is in real world more or less the center line of the planned or existing road. Some possible situations:

- You want to add one road spur to an existing road permit road. Very simple. Just get/make a vector shapefile of the road center line, and add it using the WLGML edit/add spatial function.
- You want to add two or more separate road spurs to existing road(s) that are under your road permit. Get/make a single vector shapefile of the center line of the 2 or more roads, and add the shapefile using the WLGML edit/add spatial function OR make a separate ESF submission for each road. (Separate submission for each road frowned on as it increases FLNRO workload significantly.)
- You want to add more road permit road to the end of an existing road permit road. You need to get/make a vector shapefile of the existing RP road with your planned extension attached to the end. This needs to be one line segment, starting at existing road tenure POC and running to new road end point.

- You want to add some new road length off the end of an existing road permit road and a spur road off the existing road permit road. Rocket science. Well, not quite, but this leads to use of multipart lines in a shape and submission.



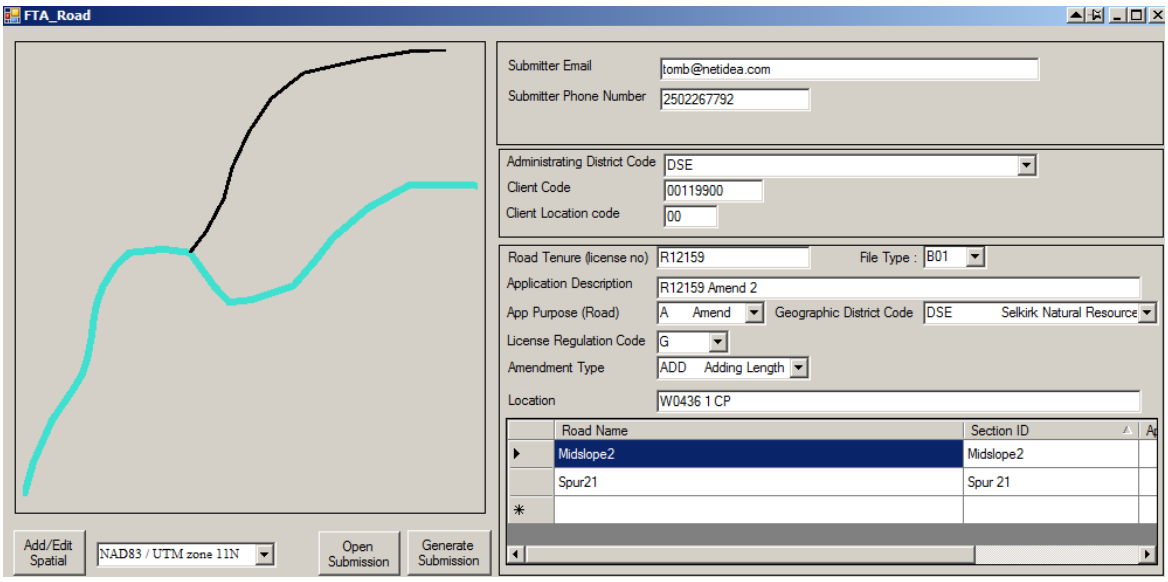
Say your existing RP road runs from **POC** to the **X**. You wish to add more length past **X** to reach **EOT**. This is done with a submission of a line that runs from **POC** to **EOT**.

The line from **POC** to **EOT** starts off split into two pieces by that junction at **POC**, but we tell the GIS to combine the two pieces (**POC** to **POC** and **POC** to **EOT)** into a single multipart line, ignoring the junction at **POC**. So as far as WLGML and FTA are concerned, there is "one line" that runs from **POC** to **EOT** with no interruptions and a second line that runs from **POC** to **EOT** .

And that **POC** is coincident with a point on the **POC** to **EOT** line - there are no gaps in tenure. This is important! A submission made with spatial of a line from **POC** to **EOT** and spatial a line from **POC** to **EOT** that starts "really close" to **POC** to **EOT** should be rejected. Really close is not "coincident" in geometry.

The CP/RP Admin Manual Page 75 makes it clear that this approach is required.

Here is what you see in WLGML when it is working:



One road line and one entry line for **POC** to **EOT,** and a second for **POC** to **EOT.**

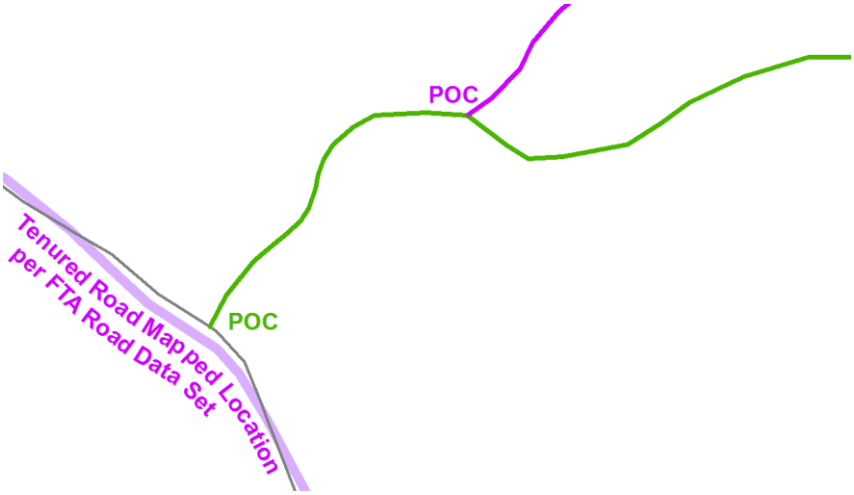
More Stipulations:

- The shape file for each road being submitted to FTA must be a single line string that does not cross itself.
- Lines in a shape file and a road permit application have an explicit direction. They go from "the start" to "the end". ESF demands that your road line start at the POC of road and go to the EOT, not vice versa. How do you tell? It is discussed in Section 9.6.4 below.
- A road tenure submission must start from an existing forest road tenure (RP or FSR) or public road. A road permit road cannot commence at the end of a road built under Cutting Permit authority or a non-status road. If required to meet this spatial continuity rule, a length of an existing road that is not under Road Permit must be added to the current road permit application.

  "Getting a road permit" for an already built road is an accepted admin practice. However, by doing so you take legal responsibility for the other road. If that existing road is structurally unsound, you have legally adopted a problem. You may be well advised to seek professional advice to review your specific situation and specific existing road.

  Situations occur where the mapping of existing road tenures in FTA is less than accurate. For example, you are using good quality GPS data and LiDAR, and you know that your new road traverse starts at the edge of the real built road. But the existing road permit mapping in FTA places[7] the tenure center line for said built road 20 meters further west across the hillside.

[7] Where do you get this "existing road permit mapping"? Go to the BC Data Catalogue and search for "road permit lines" to locate the Forest Tenure Road Section Lines data set.



In these situations, your choices are (a) to correct the mapping of the existing road in FTA by submitting an Amendment to Realign or (b) to extent your new road so it touches the mapped center line of the other road tenure (which is not where the road is). Your road tenure submission HAS to touch the other road tenure, no gaps are allowed.

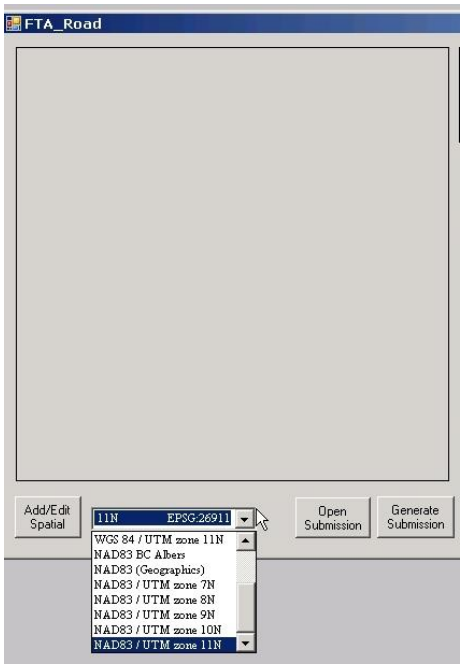
As this is tenures mapping, not as built road mapping, simply extending your road permit application center line to touch the other center line is an acceptable and practical choice.

You can amend the "incorrectly mapped" road if it is under a road permit issued to you and you want to. You cannot amend if it is other another parties road tenure - you do not have access to change their data.

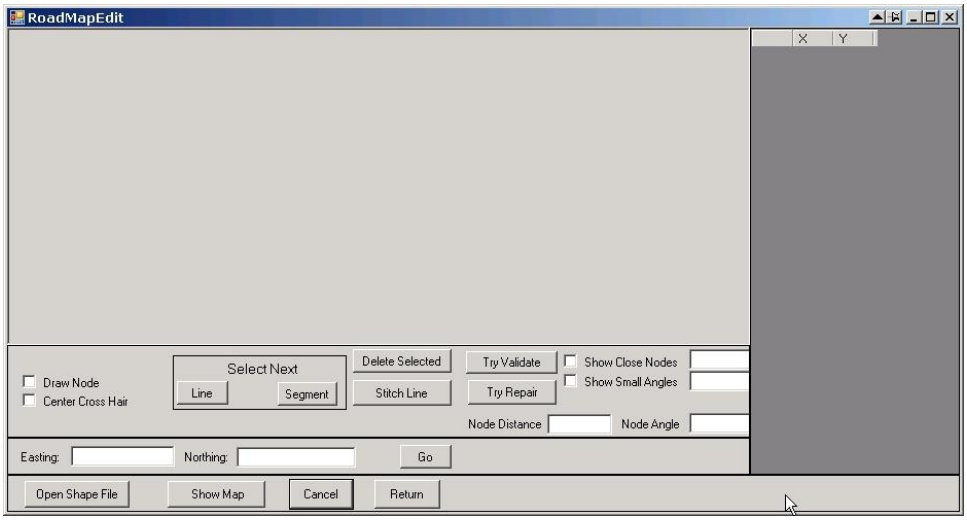
9.6.4 Adding Spatial Data

And now to the actual task at hand.

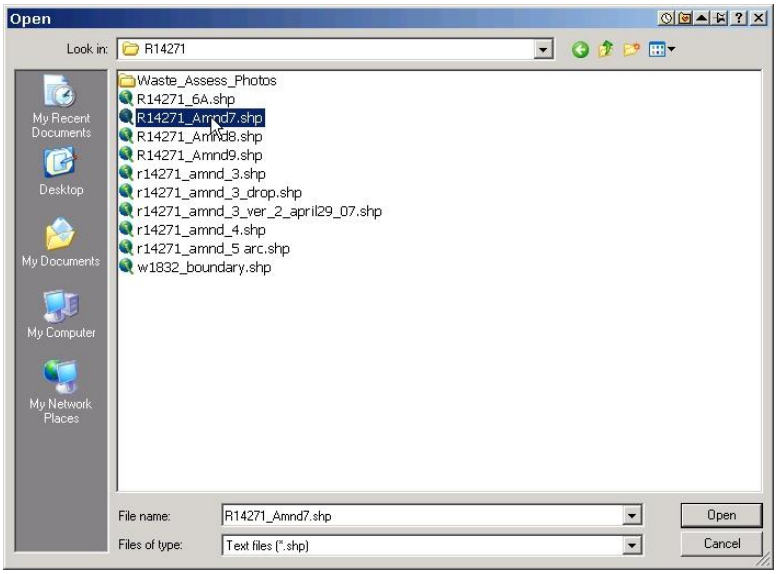
1. Select the correct projection for your submission in WLGML, based on the projection of your shape file. See Appendix 4 if you skipped to here and are wondering what this "projection" stuff is.



2. Click the Add/Edit Spatial button. The screen shown below will open.



3. Click Open Shape File (Who would have thunk it?) A standard windows Browse for File box opens and you go and find the shape file that contains your road center line(s).

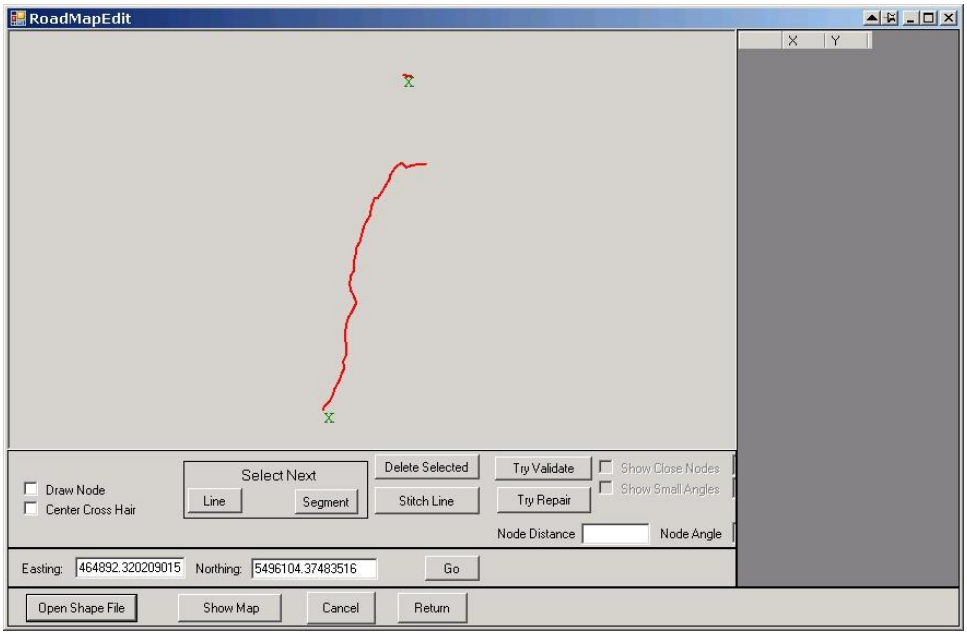


You select the component of the shape file with the *.shp extension.

4. You are dropped back into the main spatial window, but with your spatial data shown.

The **X** in this view marks the POC, the start, of the road line. This is discussed more below.

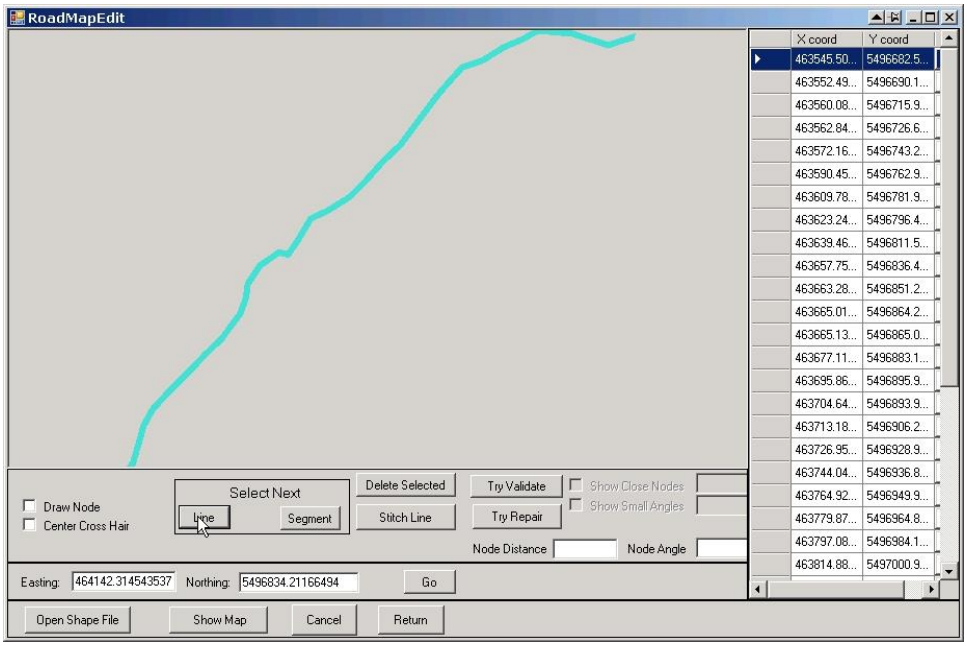
And here is what it looks like if you loaded spatial with two discrete roads:



Yeah, my second road is a bit short, I know. It is just a wee spur off an existing RP road to bring a road leading out of the WL to a nearby CFA harvest block under WL RP tenure.

5. You can only generate a submission if your road(s) is/are mapped a single line segment(s), running from POC to EOT of each road.

   First we will check for "single line". Click <Select Next> <Line> . You will hopefully see a single blue line:

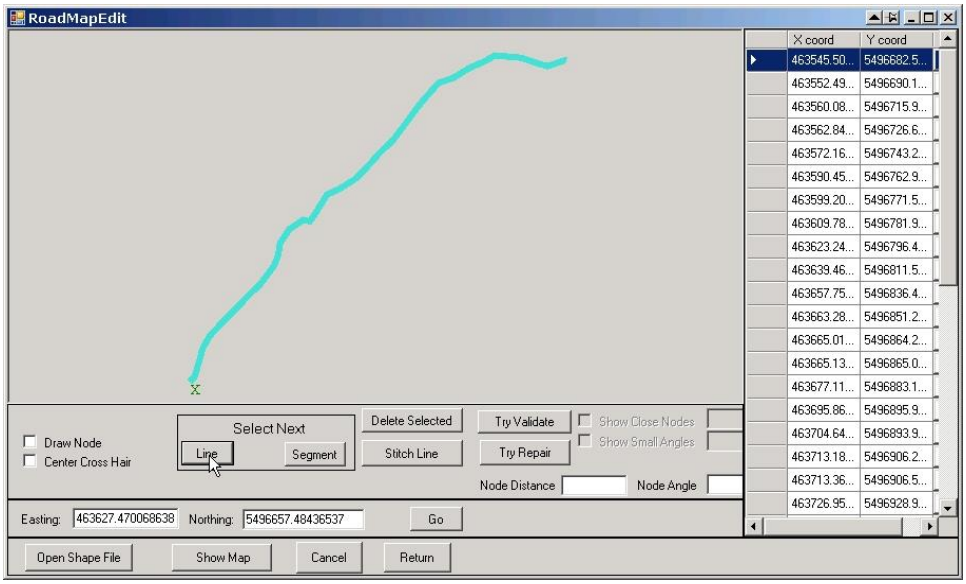


Click it again, and you will hopefully see a single red line, as it cycles between selecting and de-selecting your one line.

If, however, if you see a red line with multiple green **X** s when you add your shape file, and a partial blue line when you click <Select Next> <Line>, as shown below, you have a set of lines that join at the ends, and you need to fix it.

Fortunately, the fix is simple. Just click <Select Next> <Line> until the line goes back to all red. Then click <Stitch Line>.

Presto! One line segment. But just to alarm you, the screen does not refresh instantly after the repair. It looks like nothing happened! However, click <Select Next> <Line> again to trigger a refresh and you should see:

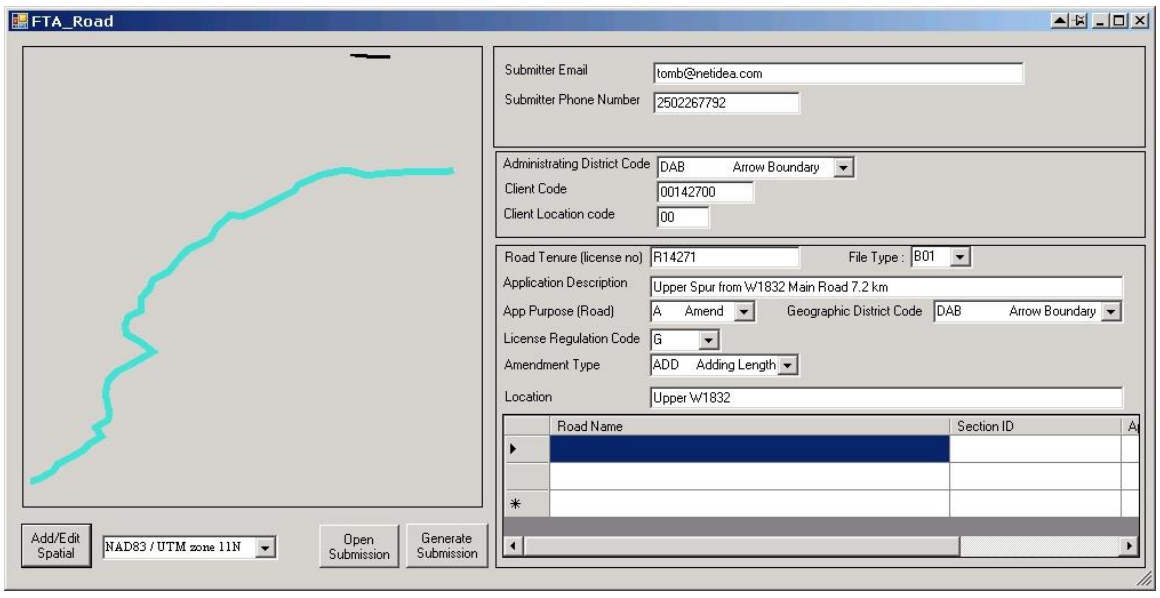


6. As previously mentioned, you also need to be sure that the road(s) is/are mapped from the start (POC) to the end (EOT), not the inverse. The green X above shows the start of the road. Sometimes it is not quite visible. If no X can be seen, just drag a screen corner to make to make the view larger and an X will show up at one end of the road or the other. As well, standard Mouse Click zooms in, Alternate Click zooms out.

   If your road is backwards, you need to fix the shapefile you used for input in the software that you made it with. WLGML unfortunately has no ability to reverse line direction at this time.

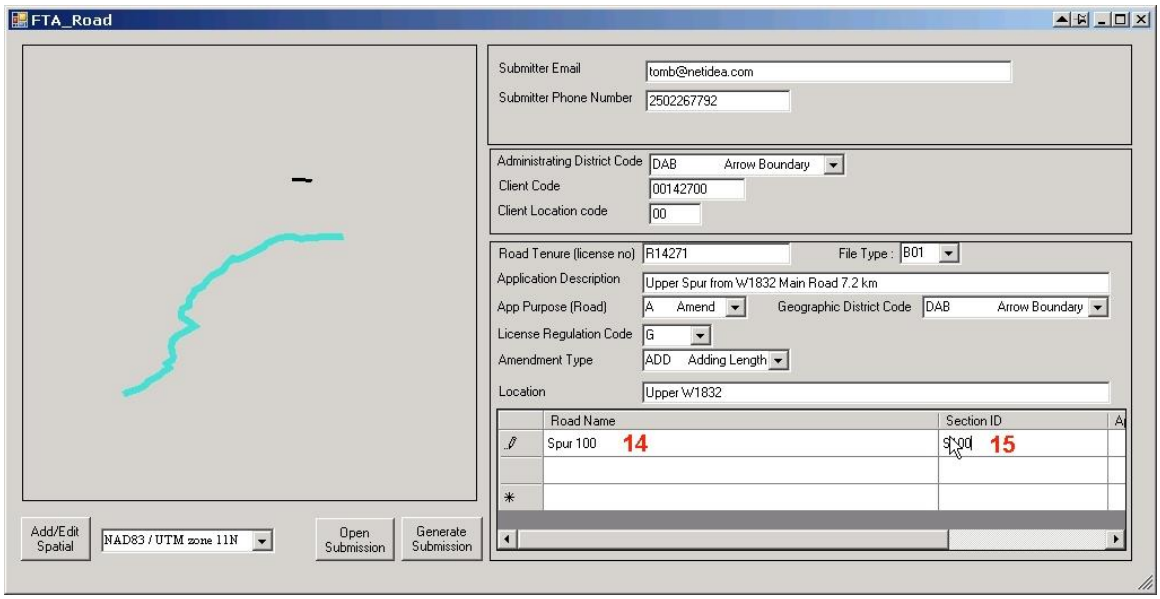
7. Click <Return> to return to the WLGML FTA module with your spatial data in tow.

   The following discussion addresses a 2 road submission. A single road submission is identical, except you only have one line of text to enter.



9.6.5 Adding Road Attribute Data

The graphic display is a bit hard to see, so I <alternate click> to zoom out and them drag the view around a little…. I want to be able to see my 2 roads.



You will have noticed that I have 2 roads and 3 entry lines. Ignore the third, blank line. It is added automatically by WLGML. It does no harm and does not appear in the ESF submission.

When you click on the top/first entry line, one of the road segments turns blue, to show you which road you are entering data for. Enter the required info:

14. **Road Name.**

    Optional entry.

    Up to 20 characters.

    A descriptive name for the road, selected by the applicant.

    You are free to use whatever name you wish. However, boring, factual descriptive names may be easier to recall and understand at a later date than poetic names.

    I prefer a description like W1234 CP B Access or, if you have a WL road numbering system, your road number like Spur 080.01.

    It is perfectly acceptable to provide identical Road Name and Road Section ID entries.

    Note that this name will show up in MapView as the name of your road section, so brevity can be an asset.

15. **Road Section ID.**

    Mandatory entry.

    Up to 30 characters, but must not contain:

    < (less than)

    > (greater than)

‘ (single quote)
“ (double quote)
& (ampersand)
/ (forward slash)

Note: Road section ID's that start with SEC or Sec will be rejected by the system.

A unique identifier for a branch or section of road assigned by applicant.

My preferred Section ID format is 1, 2 ,3, 4, 5 etc. Some prefer A, B, C, D etc. Keep It Simple is a sound policy.

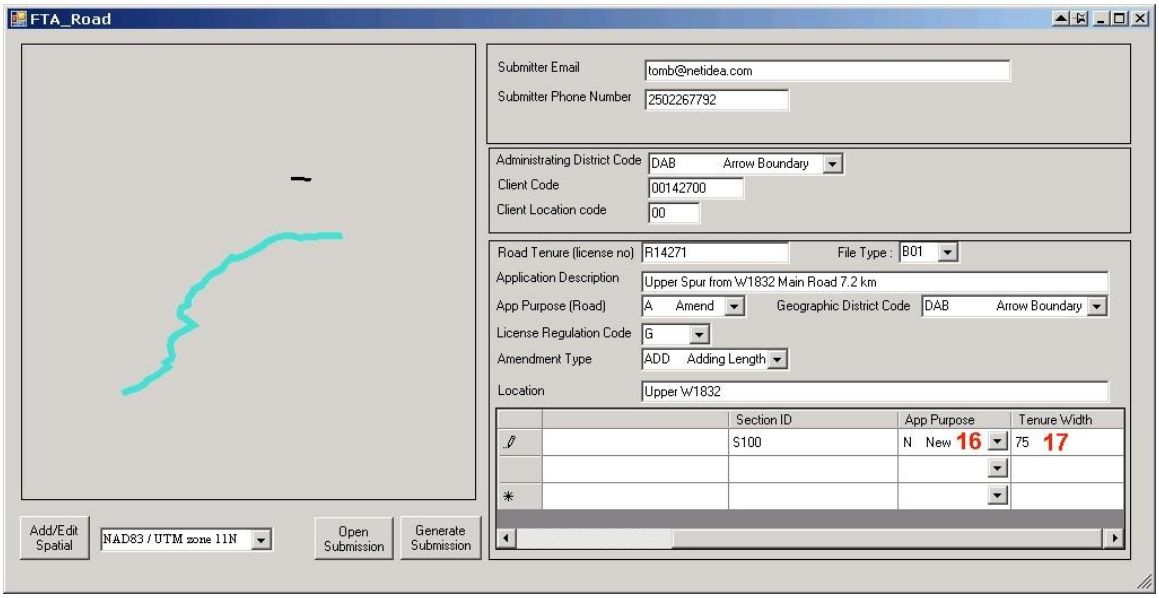
It is perfectly acceptable to use the selected Road Section ID as the Road Name, above.

There can not be duplicate roadSectionID entries in the Road Permit.

This can cause challenges in complex road permits with many road sections. I have more than once downloaded the Forest Tenure Road Section Lines data set from the Geodata Warehouse (Link to Data) to get accurate info on how many sections are in a RP and what their ID's are, so I know what to call "the new road". Because I like order, I want to know that Section ID's 1 through 9 are in use, and thus my new road should be Section ID 10.

If you are adding length to an existing road section, you must re-use the same Road Section ID in the new submission as was used for the existing road. Process to verify existing Section ID discussed back in Section 9.4 .

Now, use the bottom slider bar to sidle to the right and find the last 2 entry spaces for the first segment:



16. **App Purpose**

    Mandatory entry.

    Application **Purpose** for this Road Section

    Character selected from list.

    What is the purpose of the tenure submission for the road section described in this line?

    - N - for new road section
    - A - for amendment of an existing road section
    - R - for a retirement of an existing road section

    App Purpose cannot be A (Amend) if Application Purpose (Road) in upper form = N (new).

    Adding length off the end of an existing RP tenure is an A - Amendment.

    Retirement means that you are applying to have the road permit retired. The road has been deactivated to applicable standards, and you want to be relieved of responsibility for the road. No one has tested this feature of WLGML yet, so we have not verified that it works properly.

17. **Tenure Width.**

    The FTA technical specification for this entry are not clear. It is called an optional entry, but is described like a conditional entry.

    Whatever.

    The purpose of this entry is to allow the user to specify the road tenure width in meters. This is total width of the tenure, it will be split by the road centre line.

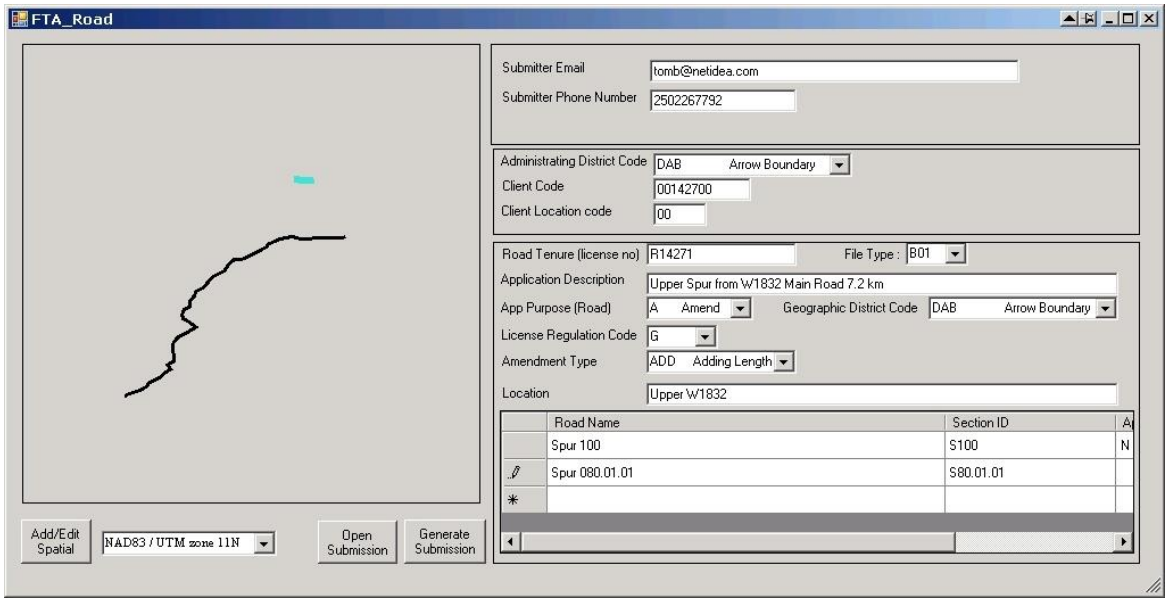
    Tenure width for FSR's and Road Permit roads will be 75m. It does not appear to be technically necessary to specify 75 meter tenure width for FSR and Road Permit roads, but the ESF system does not reject applications that do specify.

    Special Use Permit roads are different. The minimum tenure width of an SUP road is 20m. The SUP tenure width will be the greater of the value submitted as Tenure Width and 20m.

    Summary:

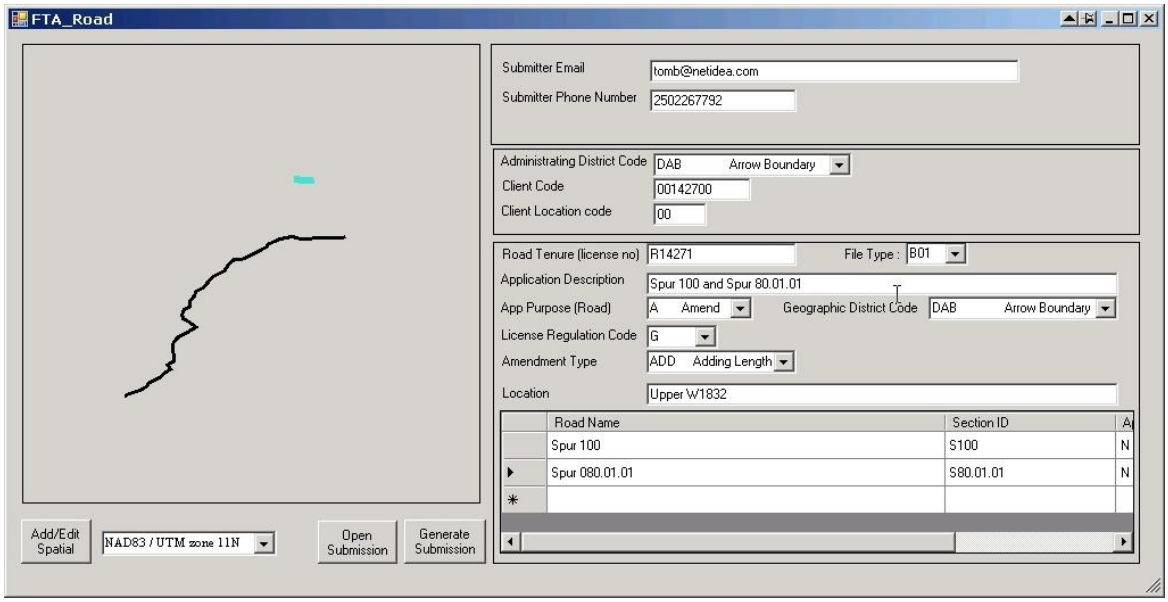
    - If you are submitting for a Special Use Permit road, specify the tenure width.
    - If you are submitting for a FSR or a Road Permit Road, specify 75 meters or a blank.

If you have more than one road in your application, repeat the process for the next road segment. Click on the second data entry line, and the next road section if highlighted in the little map, and you enter the info that section:



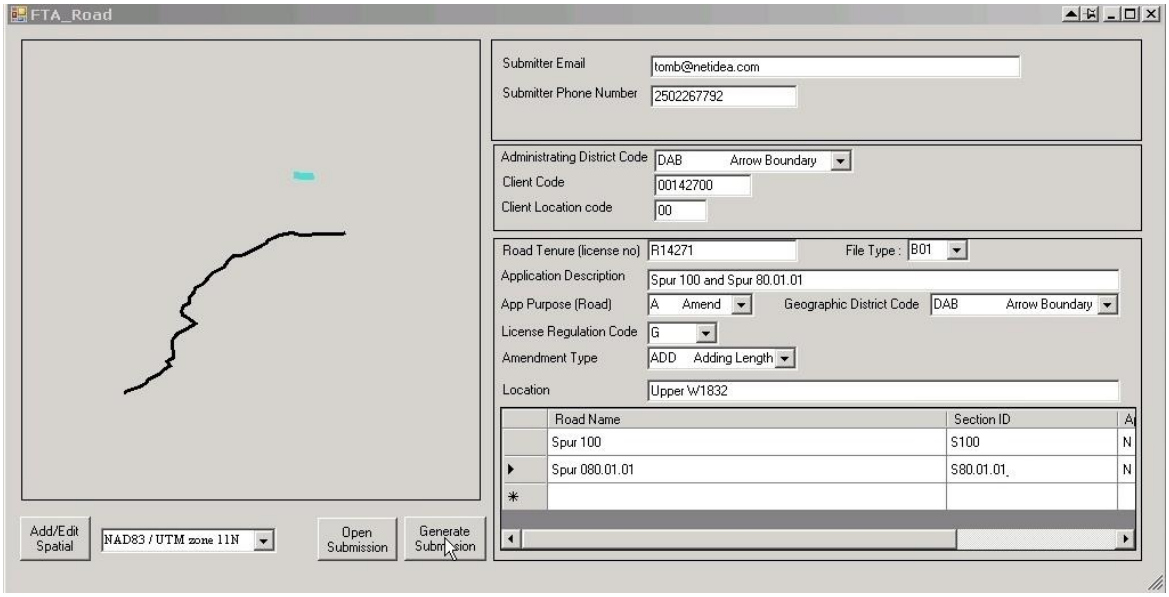
When you are done, check it!!

When I reviewed this submission, I realized that I had left the description "Upper Spur …. 7.2 km" in there. Well, this is 2 roads, one at 7.2 km and the other in another place. Upon reflection, I changed it to:

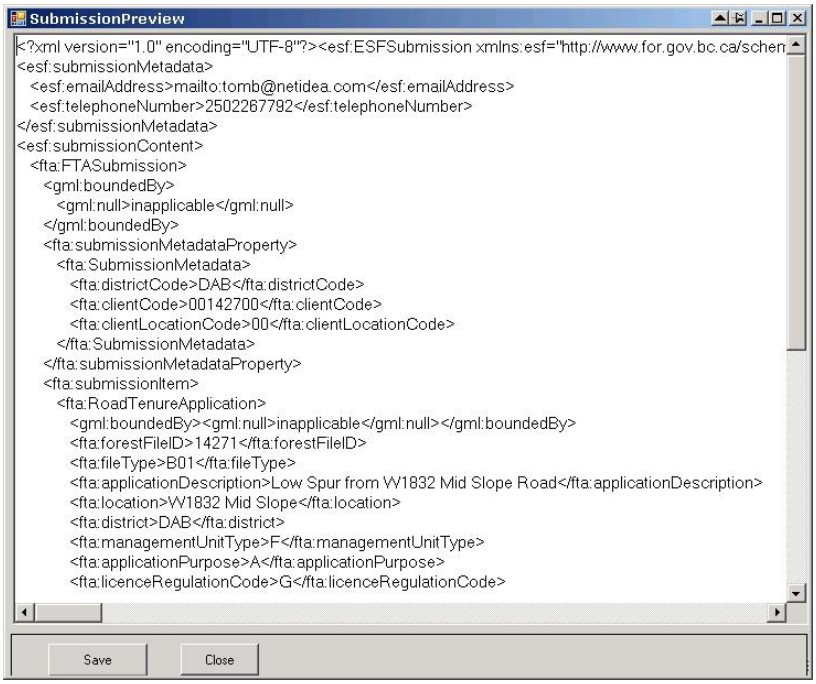


9.7 Generate Submission

Everything is filled in as it should be? Or you think it is, anyway? Click <Generate Submission>.

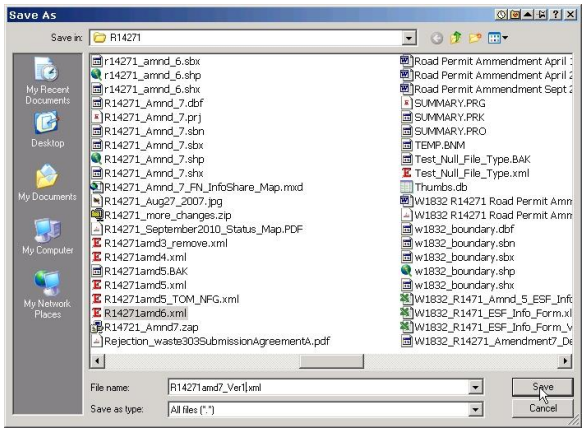


A new window opens, filled with Grade A Computer Gibberish. You do not have to know much about this stuff - it is the XML/GML file that the ESF system wants to see. However, if you want to take a quick look you'll quickly see things you recognize, like your telephone number and email address. Whatever. <Save>



A standard Windows Save File box opens up. Put your submission somewhere where you can find it, and give it a name that makes sense to you.

Add the .xml extension on your file name!



(Note: This process is also used to save partially done submissions for later completion.)

9.8 Upload Submission

Upload through ESF process is identical to that discussed for 1 CP submissions.

See Section 7.7 .

9.9 Real World Follow-Up

- Your District likely has a Road Permit Application process. What you have done is do the ESF work. You still need to do "the process", whatever that may be.
- If no District process, send your woodlot forester an e-mail telling him or her that you have filed an FTA submission for a road permit amendment or new road with the Submission ID provided by ESF above.
- You have to file a rate request to activate the tab rate stumpage for the RP or the road permit stumpage rate if you are still on the appraisal system.
- You will receive an email at the address you provided in the Submitter Email blank of the form when the status of your RP application changes.

10. RESULTS Overview and Things You Need to Know

10.1 Introduction

Welcome to the big league - RESULTS.

RESULTS Central informs us that:

> The RESULTS (Reporting Silviculture Updates and Land status Tracking System) application tracks silviculture information by managing the submission of Openings, Disturbances, Silviculture activities and Obligation declarations as required by the Forest and Range Practices legislation.
>
> Data submitted under the Electronic Submission Framework (ESF) is explicitly linked to associated spatial information, thereby ensuring consistency in the geographic information.

Fair enough. Is RESULTS simple, straightforward, or "easy to use"? Nope. Not a bit. Complex, obtuse and darn difficult is more like it.

But if you are a smart enough character to figure out how to design and run an economically viable harvesting operation in these times, you can most likely figure out how to shove information into RESULTS.

RESULTS is easiest when you have a simple clearcut with one SU. The more SU's you add, the more detailed your mapping of NP and WTRA's, and especially the more you move to multilayered stands and partial cutting, the more complex it gets. If your "first block to report" has 3 SUs and is a multi-layered partial cut, you might want to just engage a service provider.

RESULTS is a sprawling database that can be accessed on line through a web browser. Meaning “through Microsoft Internet Explorer with correct compatibility settings”. See Section 6.4

This overview section is large. Sorry. But there are many things you need to know before working with RESULTS, and most of the info here reflects mistakes I have made. So save yourself some time on hair pulling and error fixes, and skim through the overview.

10.2 Code Admin or FRPA Admin - VERY IMPORTANT

Key legal obligations and RESULTS processes change based on whether a harvest unit was authorized under The Code or under FRPA/WLPPR/WLP. There are three options:

(a) harvest was authorized **before** the **Forest Practices Code**,

(b) harvest was authorized **under** the **Forest Practices Code** or

(c) harvest was authorized **under** the **Forest and Range Practices Act** (FRPA).

The majors and many RESULTS professionals look at WL in amazement when this comes up. All of their Code blocks got moved to FRPA administration using provisions in FPPR. No such provisions are available to WL, so all of our Code blocks stay under Code

administration until they are free growing. So WL are a small island of Code administration in the RESULTS sea.

So how do you determine what admin system a block was authorized under? That can be complicated.

10.2.1 Block is Not Yet Reported to RESULTS

Given that FRPA/WLPPR have been in force for 16 years, I hope that none of us are still digging out Code era blocks that were never reported to RESULTS. If you are reporting new openings, and unless you are doing cleanup on a WL with missing reporting from a decade ago, you are most likely looking at harvesting authorized under FRPA. But anything is possible.

The basic field marks are:

Pre-Code blocks:

- Were generally under a Forest Development Plan.
- Performance standards / obligations were set in a Stand Management Prescription that was approved by the MoF.

Code blocks:

- Were generally under a Forest Development Plan.
- The activities were to comply with the Woodlot Licence Forest Management Regulation (WLFMR).
- Performance standards / obligations were set in a paper Site Plan that was approved by the MoF.
- Beetle salvage activities may not have any of these field marks.

FRPA blocks:

- Were under a Woodlot Licence Plan.
- The activities were to comply with the Woodlot Licence Planning and Practices Regulation (WLPPR).
- Do not require a site plan.
- If a Site Plan was prepared, it was an internal document and was **not** submitted to / approved by FLNRO.

Date is relevant but not perfectly diagnostic. And at this remove, date of harvest can be a tricky target to nail down. I have used HBS to estimate date of harvest, based on when wood from a CP was shipped.

If the block was harvested before the first version of WLPPR came out in 2004, it is not feasible that a Licensee had a WLP in place and logged a FRPA administered block. But the inverse is not true. Harvests authorized under Code and pre-Code admin continued for years after FRPA/WLPPR was in place. Some folks were still logging Code blocks in 2018.

Even the existence of an approved WLP on the date of harvest is not definitive. Code blocks already fully approved when a WLP was approved could have been logged after the WLP was approved.

I always ask the Licensee for the CP document and the Site Plan (SP) or Silv Prescription (SP) (if they exist). The CP is not going to tell you if the block is Code or FRPA, but at least you can verify that it was authorized and find out the exact CP and block number that were submitted to FTA.

If there is a paper SP, signed by the District Manager of the day, it is almost certainly a Code block[8].

Note the "signed". During FRPA transition, some licensees paid to have "Site Plans" prepared, even though the site plan was no longer was a legal requirement and had no legal standing. Licensee may pull a document called Site Plan out of a file, but if no DM signature, you have some paper, not an approved operational plan[9].

If no one knows, and records cannot be found, contact the District and ask them for help.

10.2.2 Block Has Been Reported to RESULTS

At fist glance, super easy. Then reality sets in.

Let's do "super easy" first.

Go to the RESULTS info for the reported opening, and open the Stocking Standards tab. Look at bottom of page. Code and Pre-Code blocks should have a display like this:

	Regen Delay	Free Growing Early	Free Growing Late
Regen Obligations: ◉	7	7	20
No Regen Obligations: ○			
Additional Standards: No			

	Species Ht(m)		Well Spaced Trees (st/ha)					Post Spacing Density(st/ha)			
Layer	Preferred	Acceptable	Target	Min	Min Pref	Min Hz(m)	Basal Area	Min	Max	Max Conif (st/ha)	Ht To Comp
	PLI/2, FDI/1.4, LW/2	PW/2, HW/1, BG/1, CW/1.1, SXW/1	1200	700	600	1.5			2000	10000	150%

Correction | Minor Amendment | Amendment

FRPA era blocks should have a display like this:

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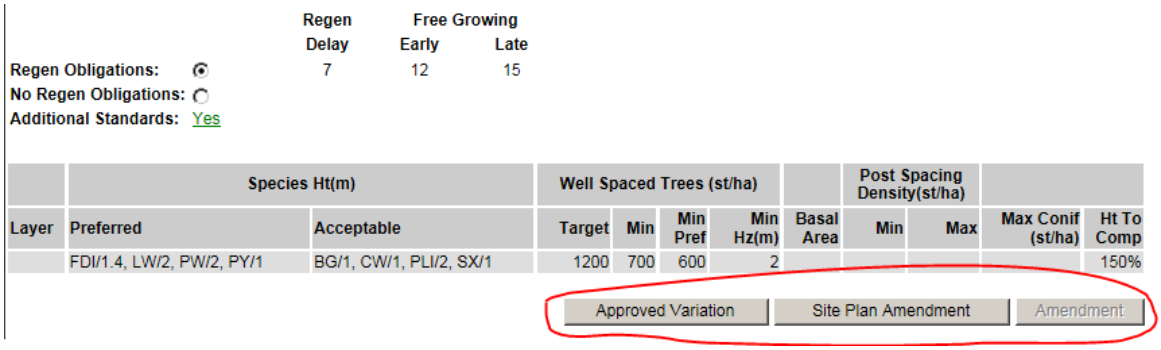
[8] "Almost certainly a Code block"? I did see one where an SP was prepared and approved by FLNRO under the Code, but then the licensee got a WLP and a new CP and logged the block under FRPA admin. The existence of the MoF approved Site Plan was not indicative. That one took some figuring out! But that level of admin mystery is not common.

[9] This can get really hairy if the internal "Site Plan" lists different stocking standards than those approved in the WLP. The Licensee may be managing towards an incorrect goal. I have seen this confusion multiple times from blocks initiated in the transition years, but thankfully have never seen the mistake result in actual material issues re: achieving legal stocking targets.



	Regen Delay	Free Growing Early	Free Growing Late
Regen Obligations: ◉	7	12	15
No Regen Obligations: ○			
Additional Standards: Yes			

	Species Ht(m)		Well Spaced Trees (st/ha)					Post Spacing Density(st/ha)			
Layer	Preferred	Acceptable	Target	Min	Min Pref	Min Hz(m)	Basal Area	Min	Max	Max Conif (st/ha)	Ht To Comp
	FDI/1.4, LW/2, PW/2, PY/1	BG/1, CW/1, PLI/2, SX/1	1200	700	600	2					150%

Approved Variation | Site Plan Amendment | Amendment

Totally different array of buttons across lower screen. Super easy. Except:

Exception 1

In the early days of RESULTS, MoF staff were doing WL RESULTS reporting. Forest Practices Branch created a library of default Code era stocking standards based on WLFMR Schedule A that were/are referenced by SSID. The MoF staff were instructed to report the stocking standards applicable to a WL Code block using the correct SSID from the library of Code defaults wherever possible. Some service providers followed the same directive.

As soon as you report an SSID for a Code era block, it changes it to FRPA era admin in RESULTS. The block is still legally administered under the Code, not FRPA, but it **looks** like a FRPA block in RESULTS.

There is no "Undo" or ability for user to change back to Code era. The "fix" was:

- Contact your District and ask for written (email) agreement that the block is under Code administration
- Contact the Service Desk (nrsenquiries@gov.bc.ca at time of writing) with a copy of your District approval and ask for a data fix to change the opening from FRPA regime to Code regime.
- Wait 3 to 12 months. It takes a while.
- Put a General Comment in RESULTS noting what you did, the date, and explaining you are waiting for a data fix to complete reporting repairs.

The "fix" was completely impractical. In 2018, RESULTS Central told us:

1. Stop trying to do this. There are no resources to fix all the WL Code-block-as-FRPA-block mistakes.
2. Leave the block as "FRPA admin". Carry on reporting until free growing, at which time the admin regime becomes irrelevant.
3. Bear in mind that block is under Code, not FRPA. Paper SP remains the legally binding document. Licensee is obligated to get FLNRO approval for any changes to approved SP for the unit. DO NOT use ability imparted by the FRPA admin Site Plan Amendment button to change stocking standards in RESULTS with no approval.

4. If stocking standards in RESULTS are incorrect/do not match paper Site Plan, change standards in RESULTS to match paper plan using Approved Variation[10] and explain what you are doing in a comment.

Exception 2

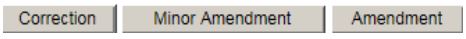
An associate needed to submit a recent FRPA block to report some govt funded fuel management activity per Price Waterhouse Coopers specs. He was not doing the complete post harvest reporting yet, so he left the SSID blank. The system created the unit as a Code block, of course.

So if another user chose to leave out SSID or forgot to enter it when reporting a current FRPA admin block, it will look like a Code block in the system.

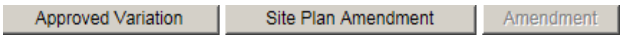
Fix is easy in this direction: Add an SSID through web interface or through a XML submission with Action Code "Update" and it turns into a FRPA admin block.

I have seen exactly one case of this, so it is not common, but it can be done.

So back to the alleged subject at hand: even the super easy, ultra diagnostic appearance of the stocking standards screen cannot be fully trusted.

If it says 

and is from older harvesting, I am happy it is a Code block and I am moving on.

But if it says 

and is from older harvesting, it could be a Code block that had an SSID applied to it or it could be a FRPA block. More research is required.

10.2.3 Why Care?

Why on earth do I care? RESULTS Central said "Never mind.". I care because of (a) stocking standards and (b) amendment process.

10.2.3.1 Stocking Standards

The stocking standards that define legal reforestation obligations are contained in either:

- FRPA era: Woodlot Licence Plan. We get at the standards for reporting purposes using the on-line stocking standards library, referenced by SSID,

  or

- Code or Pre-Code: The paper Site Plan or Silviculture Prescription.

I have seen many incorrectly reported Code era blocks where the stocking standards shown in RESULTS are just wrong - they do not match the standards in paper site plan. The person doing the reporting did not review the Site Plan. They input the defaults and did not capture any unique/alternative standards in the approved Site Plan, which is the legally binding operational plan.

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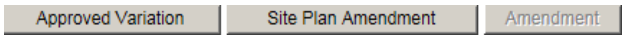
[10] This is not the intended use of Approved Variation. But Approved Variation is the only practical tool to do the job in a Code-block-in-FRPA-admin situation. Ergo, add that comment explaining what you are dong!

It is, to say the least, important that the correct Preferred and Acceptable, intertree distance, and TSS etc are used to survey for and report achievement of obligations. Your RESULTS reporting work is a place to check if this was so, to advise others if there appears to be a discrepancy, and to correct the standards input to RESULTS to match the paper Site Plan if needed.

10.2.3.2 Amendment Process

This refers the process used to address things such as "New forester says unit is not the 01 site association, it is the 04 site association. Old forester made a mistake, we now want to correct."

Under FRPA, you can submit an Opening and SU XML file using Action Code 'Major Amendment' to change the BEC site association and the applicable SSID. 'Major Amendment' is called Site Plan Amendment in the on-line RESULTS FRPA block interface.



Professional rationale for change is kept on file and can be (should be, in my opinion) uploaded to RESULTS as an attachment. Done.

Under the Code, you use the amendment button in

to open a screen where you very carefully enter the changes required. You then press a <Submit> button on the amendment screen to trigger FLNRO review and approval. You also upload a Site Plan Amendment form signed by RPF and Licensee to the Attachments page in RESULTS. This provides the rationale for the proposed amendment. I also send a polite note to my stewardship forester telling them that we are seeking a Site Plan amendment on OpeningID _____. FLNRO either approves or rejects that amendment. If reject, discussion may follow.

Gold star for you if you already said "Hold on, how do I amend a Code Block that is marooned in FRPA admin in RESULTS? You said not to try to change it back to Code admin." There is no approved business process, because this is not supposed to be a thing. But it **is** a thing. See Section 10.2.2, Exception 1 discussion for instructions.

So, to close, it is important to know which admin regime the opening is in so you can manage info and make changes correctly.

10.3 "Site Plan means FRPA"

When FPPR came into force in 2002, it established that the holder of a Forest Stewardship Plan had to prepare a Site Plan for all harvest units.

Sadly, from a WL perspective, the people working on RESULTS documentation and training seized on that requirement as **The Tool** to determine if a harvest unit was under Code or FRPA administration.

Block has a Site Plan? FRPA! No Site Plan? Code!

Of course, the WL world is 180°opposite. WL had legally required SitePlans under WLFMR under the Code. FRPA/WLPPR removed that requirement. So for us, Site Plan = Code, no Site Plan = FRPA.

Thus for WL, RESULTS documentation and training has to be filtered through the uncertain haze of "They probably mean the opposite." whenever "site plan" is mentioned. And it is mentioned a lot.

Yes, we complained. Muchly. No real changes in content seen, relationships being strained, Code receding into past, gave it up. And wrote own Manual, which you are reading.

10.4 What is Legally Binding

We are all happiest and confusion is lowest when RESULTS lists stocking standards and other targets that align with actual legal obligations.

However, if RESULTS says one thing and an approved operational plan says another, the legal obligation is the statement/target in the approved plan.

I often see Code Era reporting where the stocking standards, soil disturbance limits and/or permanent access limits in RESULTS do not accurately reflect the approved Site Plan. The Approved Site Plan is correct, and sets the legal obligations.

This is less common under FRPA, but can also occur.

My recommendation: If you find a mistake in the standards entered in RESULTS, double check to be sure it IS a mistake, check again, and then fix it if you can.

10.5 Undeclare to Fix A Mistake?

Many things in RESULTS cannot be changed once a standards unit has been declared free growing. The declaration says that the Licensee has met all of the obligations listed in the good 'ol Reporting Silviculture Updates and Land status Tracking System. Changing what those obligations are after you said you met them is not allowed.

Only way to do it is to Undeclare free growing, and this is NOT recommended general practice.

10.5.1 Attribute Error in RESULTS

If you find an error in a unit that has not been declared free growing, general policy is to (a) verify that it is indeed an error and (b) fix it.

So say that one day you note that (a) FG was declared based on a survey carried out with Py as a preferred species, (b) the approved stocking standards contain Py as a preferred, but (c) stocking standards in RESULTS say Py is an acceptable species.

Well, that is awkward. The real world forestry is completely correct, but the RESULTS reporting makes it look like an error was made. What do you do?

Generally, Nothing. Do nothing.

You would have to "Undeclare" free growing to change the mistake in the stocking standards reported to RESULTS, that is, to make Py a preferred species. The Undeclare and Redeclare restarts the 15 month period under which FLNRO may review the declaration. (FRPA 107(4) /WLPPR 84(4)) If the declaration is already through the 15 month period or close to it, you will be exposing the Licensee to a repeat of a review process that has already finished.

In general, do not reopen openings that have been declared free growing to fix data entry mistakes. They are over. Leave them alone.

Now, if it was your data entry mistake made a few days ago that is the issue, grit your teeth, Undeclare, fix your mistake, add a comment/rational saying "Fixing mistake - entered Py as acceptable not preferred on <date>", Redeclare, and carry on.

10.5.2 Spatial Data Error

So say that one day you note that the spatial data used to report the opening, SU1 and the forest cover submitted at free growing declaration was wrong. There is 1.5 ha more area in the real harvest block than are shown! (Old mapping vs new ortho imagery or LiDAR is a common source of this situation.)

Well, that is awkward to say the least . What do you do?

You would have to "Undeclare" free growing to change the Opening and SU spatial data. The Undeclare and Redeclare restarts the 15 month period under which FLNRO may review the declaration. (FRPA 107(4) /WLPPR 84(4)) If the declaration is already through the 15 month period or close to it, you will be exposing the Licensee to a repeat of a review process that has already finished. Do not do this. In general, do not reopen declared openings to fix data entry mistakes. They are over. Leave them alone.

However, you may add new, correct forest cover spatial and attribute data that shows the 1.5 ha as part of the harvest unit. The declaration of Free Growing does not prevent forest cover updates. This will result in the opening and SU spatial not aligning with the forest cover spatial. Not desirable, but allowed.

Why would you do this? It does feel like waving a red flag. The reason to do this is that the VRI mapping for the province, and likely for the WL, is updated from the forest cover spatial data for free growing blocks that has been input to RESULTS. The goal of this fix is to have the VRI data set show the spatial extent of young forest / harvest unit accurately. Will likely take 1 to 2 years for the correction to show up in the VRI.

Now, if it was your mapping mistake made a few days ago that caused the issue, grit your teeth, Undeclare, fix your mistake, add a comment/rational saying "Fixing mapping mistake made on <date>", Redeclare, and carry on.

10.6 When Is Spatial Data Required?

Many RESULTS entries are "attribute only" or "text based", meaning the entry does not require a map. You can just enter the required information online. The information will be associated with an existing map of a cut block (an "opening") by the RESULTS system.

You do not have to upload a map to add the information, or as we say, "make the submission".

Three key RESULTS submissions **do** require a map.

Or "spatial data" to be more precise. The data we send in is not a map, it is a bunch of X,Y coordinates that define the boundaries of a discrete area or areas.

The three submissions that require spatial data are:

- Opening Submission
- Standards Unit Submission
- Forest Cover Submission

A key point is that the Free Growing milestone declaration also legally requires a map. A WL can choose whether or not to report free growing milestone, but if they choose to, WLPPR 84(3) requires a “forest cover inventory” with a FG declaration. WLPPR 76(2) notes that “The chief forester may specify the form of, and the information to be included in, an annual report”. The Chief Forester has specified that annual reporting of silviculture activities and declarations shall be through the RESULTS system. The FLNRO guide to RESULTS, the *RESULTS INFORMATION SUBMISSION SPECIFICATIONS Form and Manner of Reporting (Woodlot Licencee Submissions),* conveys the Chief Forester’s specifications, and states that a forest cover submission shall contain spatial data. Ergo, FG declaration requires spatial data. If you fail to do supply spatial data, you fail to meet your reporting obligations and are non-compliant.

(Subtlety: RESULTS uses an internal data link to associate the forest cover attribute data (species, age, ht stems/ha, etc) and the forest cover spatial data. It is possible to break that link by mistake. If the link is broken, the spatial data is no longer associated with the attribute data, just as if it was never entered. Reporting is non-compliant. WL have used the web-based forest cover editing interface incorrectly to create a large legacy of non-compliant forest cover reports with broken links to spatial data. See Section 10.7 Also see Appendix 8 for "How to identify broken link error.")

Of course, the RESULTS Free Growing declaration interface does not have an "insert map here" box. The simplest way to meet your legal reporting obligation is by submitting an updated forest cover submission with spatial data at the same time as your FG declaration. ("Other" way discussed in next section.)

WLPPR 75 does not require that WL survey for and report to minister on the achievement of regeneration targets. However, if you choose to report the Regeneration milestone for a WL FRPA block, WLPPR 84(3) requires you to submit forest cover inventory, which includes spatial data.

Code and Pre-Code blocks do convey a legal obligation to survey for and report forest cover at regeneration date. This leads to same place: must have map = must have forest cover spatial data submission.

WLGML has the ability to generate XML/GML for the tabular and spatial data components required for these three submission types.

10.7 On-Line Forest Cover Updates

There is a way to recycle existing forest cover spatial data in RESULTS, add new attributes, and meet your legal obligation to submit forest cover attribute and spatial data.

One word of advice: **Don't.**

The process is tetchy. There is no interim <Save> ability. RESULTS times out after you have worked for half an hour? Too bad. All gone. Start over.

And most importantly, the WL track record of using this process is abysmal. Over my years of working on getting WL RESULTS errors fixed, over half of all significant WL errors at all times have been caused by mistakes in the use of the on-line forest cover update. I still find and fix them.

If you are reading this, you probably have WLGML installed already. I strongly suggest you use it and make an XML/GML forest cover submission to update forest cover.

If you really must, instructions on using the on-line forest cover update interface correctly are contained in Appendix 8.

If you have already used the RESULTS on-line interface to edit forest cover attributes, and are starting to wonder "Did I do it right?", see Appendix 8 for "how to tell".

10.8 Append Exhibit A Spatial

For a number of years, Woodlot Licensees have had the ability to avoid making spatial data submissions to RESULTS by simply "copying over" an existing block outline from the FTA system by "appending the Exhibit A spatial" and then keyboarding in the required RESULTS information online. This process can be used to create forest cover spatial data, with limitations:

- The append Exhibit A spatial method only works if:
  - Harvest was carried out under a conventional cutting permit.
  - The outer block boundary, the single standards unit boundary, and the eventual single forest cover type share one identical boundary.
  - The final actual harvest boundary mirrors the planned harvest boundary that was input into FTA.
- Any harvest units with more than one standards unit, more than one forest cover polygon, mappable NP areas, or mappable reserves in harvest areas do not qualify for copying Exhibit A.

Some comments:

- We have moved to a One CP Over Woodlot environment. There are no FTA Exhibit A's of block boundaries to copy over. FTA thinks your harvest area is a stupid triangle. Actual harvest area outlines are input using RESULTS. WLGML provides a low cost option to accomplish this legal obligation.
- Using on-line RESULTS to input information realistically requires a high speed internet connection. Dial up or even standard satellite just will not suffice.

WLGML allows a user to create a forest cover submission on their desktop, and then upload it to the ESF system, which is a much lower bandwidth proposition.

- We have reports that a SU created with Append Exhibit A will not accept a SSID from on line data entry and is locked in Code block administration format. I have no way to test this problem report. If you have seen it in the wild, please contact me.

10.9 Do RESULTS and FTA Have to Agree on Conventional CPs?

No, they do not have to agree.

Up until 1 CP, we always told FTA where our blocks would be. We were supposed to be accurate.

We then went forth and logged, hopefully to the boundaries we told FTA about.

A reasonable person would expect that the block boundary in FTA and any subsequent mapping of harvest area would agree. In real world, they sometimes do not. Compass and chain traverses, miscommunications with GPS surveyors, wee mistakes reading ribbons while harvesting - they all can cause harvest outcomes to differ from mapped pre-harvest boundaries.

At some point, often when you get a new ortho image of your woodlot or view your harvest areas in Google Earth, it become apparent that what you told FTA differs from what happened on the ground. However, the rules clearly say "tell RESULTS where the opening really is", not "tell RESULTS whatever you told FTA". (Note limitations discussed in Section 10.5.2 above re: revising spatial for units that have been declared free growing.)

So give RESULTS accurate maps that show the opening boundary, SUs and forest cover.

At this point, a lot of people think "I better update FTA as well!".

No. Do not do it. Leave FTA alone. Do not file Cutting Permit Amendment to "fix things".

FTA and RESULTS do not have to agree. An opening must *exist* within FTA to be reported to RESULTS, but the mapped outlines do not have to align. Give RESULTS your best map of actual harvest outcomes, and carry on.

Now, if you decided to add 5 ha to a block without any permitting process, you likely do have a problem, especially if the stumpage was determined under the appraisal system. But we assume that no one has done anything of that nature.

10.10 Reference Materials / Other Information Sources You Need

This manual explains how to use the WLGML software to make RESULTS submissions. While doing that, we will cover how to fill in the required RESULTS entry fields, what to map for which entry, the basic stuff.

Will we cover off every possible permutation? Not a chance.

If you have a block with a bit of permanent road and a landing in it, and maybe a reserve patch, you will likely be able to create a successful submission using just this manual. It

is worth a try. After all, pretty much the worst that can happen is that you get a **Validation Failure** message from the ESF system or a follow up email telling you your submission was rejected due to errors.

But if you are puzzling over some thing that Is not covered here, sources of more info are:

- RISS-wl (aka *RESULTS INFORMATION SUBMISSION SPECIFICATIONS Form and Manner of Reporting (Woodlot Licencee Submissions)*) RISS-wl is a lot shorter. I pronounce it riss-wool. RISS-wl is the official technical manual for Woodlot submission. It is not a users manual. It assumes you know a lot about RESULTS and reporting, and tries to answer some specific technical questions.

  Get it from http://www.woodfor.com/WLGML/RISS-wl_Feb_24_2016.pdf

  It is of course on the Govt web too.
- RISS-ls (aka *RESULTS INFORMATION SUBMISSION SPECIFICATIONS Form and Manner of Reporting (Licensee Submissions)*) I pronounce it riss-liss. RISS-ls contains a good review of "how to do it" that covers a lot of the more challenging situations faced in RESULTS mapping and reporting. Sections 5.4.4, 5.74 and 6 address how to prepare spatial data for various submission and are very informative.

  Get it from http://www.woodfor.com/WLGML/RISS_ls_4_ed_Feb_26_2016.pdf

  or from the govt web.
- *SUBMITTING FOREST COVER TO RESULTS FOR OPENINGS WITH TREED RETENTION*. No catchy abbreviation for this one. Maybe SFCTRFOWTR, but you try to pronounce that. If you are trying to report partial cuts or complex reserve patterns, you need to study this publication. Get it from:

  http://www.woodfor.com/WLGML/Forest_Cover_Retention_Submissions_May_5_2016.pdf

  or from the govt web.

  By the way, we do take a run at the reporting partial cut issues which have tied some Licensees in knots in Section 14.4.3
- RESULTS online. RESULTS online has an extensive help section. Going to the data entry you are puzzled by in the online screens and clicking Help can often reveal helpful and detailed information.
- APP HELP. 250.952.6801 Their job it to try to help us make this all work. Nice people. Very tolerant.

11. RESULTS Opening and Standards Unit Submissions

11.1 Introduction

This section of the manual covers the Opening and Standards Unit submissions. These two submissions are done together: RESULTS does not accept just an opening submission or just a SU submission, it wants both together at one time.

Why are there two? Because the spatial data can vary considerably between the two.

The Opening spatial data is the outer perimeter of the block, including harvest areas, roads, landings, natural non-productive, and reserves.

The SU spatial data shows the area within that Opening where you have a legal obligation to reforest. The Net Area to be Reforested, the NAR. As WLPPR S1 states:

> "net area to be reforested" means, for the purpose of section 29 (3) [free growing stands] of the Act, the portion of a cutblock in which harvesting has occurred that is not occupied by permanent access structures.

The SU spatial excludes mappable natural non-productive in the block, and mapped reserve areas that were not logged. As well, differing ecological conditions, harvest approaches and/or management objectives can result in differing reforestation obligations and standards in different parts of a single block, ergo, multiple SUs in a block.

We report the net area of each SU to RESULTS:

- The net area is the SU polygon area minus any unmapped permanent access structures or non-productive areas.
- We do not explain why gross area of SU polygon and reported net area of SU are different in the SU reporting, they just can be.
- We do explain any difference between gross and net areas in the forest cover reporting, later on.

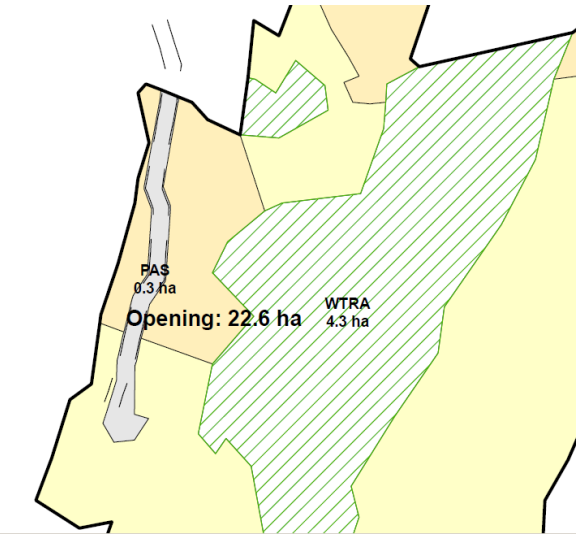
Yes, technical and fussy, but it works well once you get used to it.

11.2 PAS and Road Tubes - Road Tubes Out of Favour

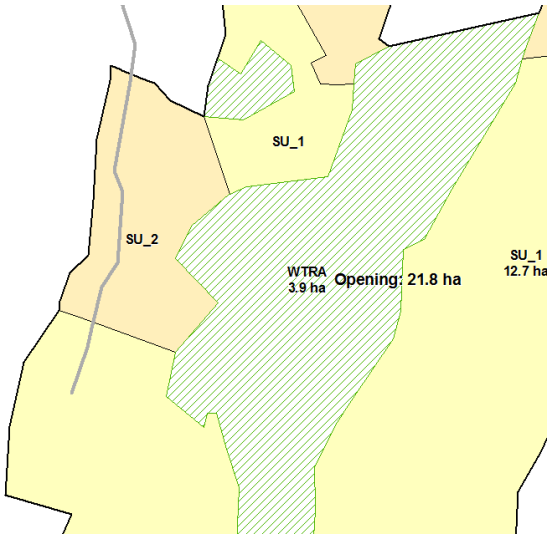
" The net area is the SU polygon area minus any unmapped permanent access structures or non-productive areas."

??? We don't map roads?

No, we still do map and report the area of permanent roads, landings and skid trials within harvest units, aka Permanent Access Structures or PAS. We just don't show them explicitly in the polygon spatial data uploaded to RESULTS. We used to upload SU spatial cut up by "road tubes". Now we upload the same SU spatial outlines, but with no road tubes. The permanent access structures are accounted for by being deducted from the net area of the SU polygon they lie within.



Old. Used road tubes to map PAS.
No longer done.



New. No road tubes.
PAS accounted for by SU net area

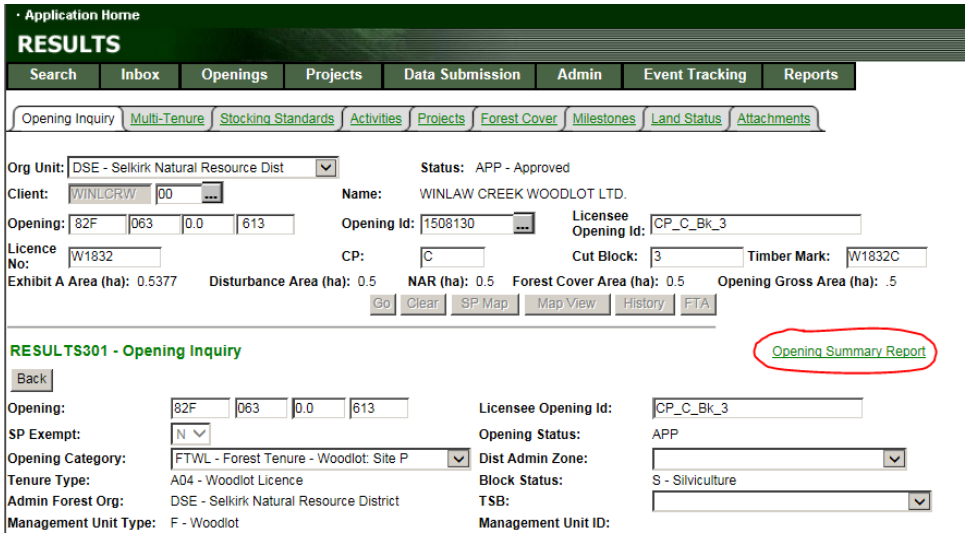
Pages 19 to 21 of RISS-wl provide examples and discussion. SFCTRFOWTR also provides guidance for partial cuts, discussed more in Section 15.

11.3 Save the Existing Data Before You Start

If you are about to work on an existing RESULTS opening that you did not create, make a copy of the RESULTS data as you found it before you start work.

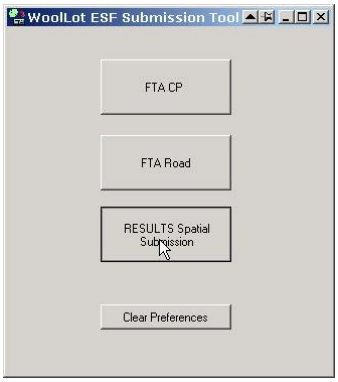
This enables a clear reporting of what you changed and what you did not change, should questions be asked. And if you accidentally cause data loss, you will have the info at hand to fix your mistake.

Just click the Opening Summary Report link on the RESUTLS301 screen and save the PDF. My hard drive contains many PDFs called, for example, W1234_CP_C_Bk_3_RESULTS_Data_Dump_2019-10-05.PDF.

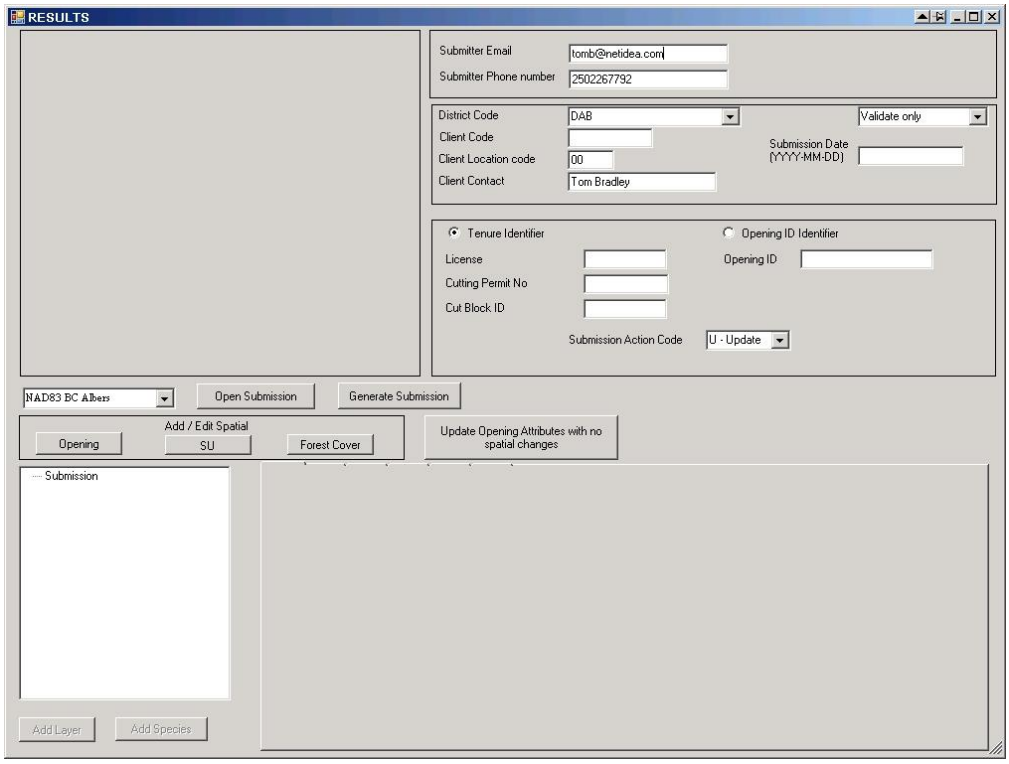


11.4 Create XML Submission in WLGML

One starts in WLGML the usual way, and selects RESULTS Spatial Submission:

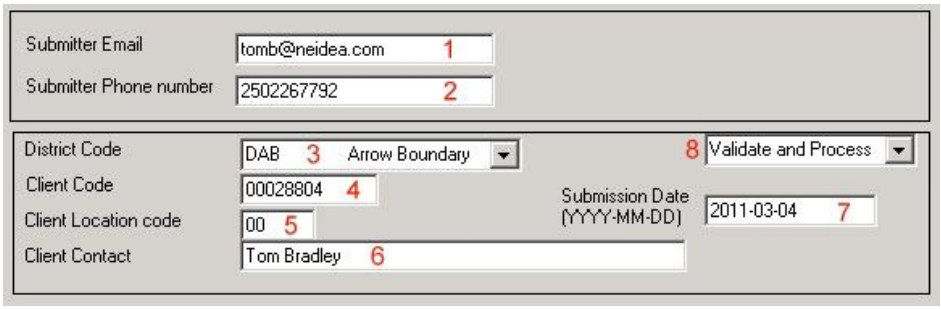


Which brings up:



11.4.1 Submitter Information

Lets start with the basic information in the top right box:



1. **Submitter Email.**

   Officially a Mandatory entry, but submissions without an e-mail address will process.

   Enter a your email address, such as Your.Name@yourisp.com

   @ symbol required, no spaces allowed

   If you do not have an e-mail address, leave the entry blank. The submission will be accepted by the ESF computer system.

   Having no email address will make it challenging for the automated systems to notify you of success or failure.

2. **Submitter Phone Number**.

   Mandatory entry.

   Enter a daytime phone number where you can be reached or where a message can be left for you.

   The phone number must be ten digits, no spaces, no hyphens.

   2505551234 is a valid phone number format.

   250-555-1234 or 555-1243 are not valid formats, and will cause your submission to be rejected by the ESF computer system.

3. **Administering District Code.**

   Mandatory entry.

   Select the FLNR District that your block lies within from the drop down list.

4. **Client Code.**

   Mandatory entry.

   Enter the FLNR eight digit client code number for the Woodlot in question. For example, 12345678

   Entry must be 8 digits, no spaces. If you Client Code is 00123456, enter 00123456, not 123456.

   The Client Code is found on all stumpage notices issued by FLNR and forest companies.

   You can also look up a Client Code online at https://a100.gov.bc.ca/pub/hbs/ using the Timber Mark Information query near the bottom of the page. Tell it a valid timber mark for the Woodlot, it will tell you the Client Number.

5. **Client Location Code.**

Mandatory entry.

A location code assigned by the MFR. Identifies licence location when clients have more than one licence. May be required in situations where a Licensee holds 2 Woodlot Licences.

Entry must be two digits. Default value is 00. This means “one location”.

If there is any question, The Client Location Code can be looked up online at https://a100.gov.bc.ca/pub/hbs/ using the Timber Mark Information query near the bottom of the page. Tell it a valid timber mark for the Woodlot, it will tell you the Client Location Code.

6. **Client Contact.**

   You, most likely.

7. **Submission Date**

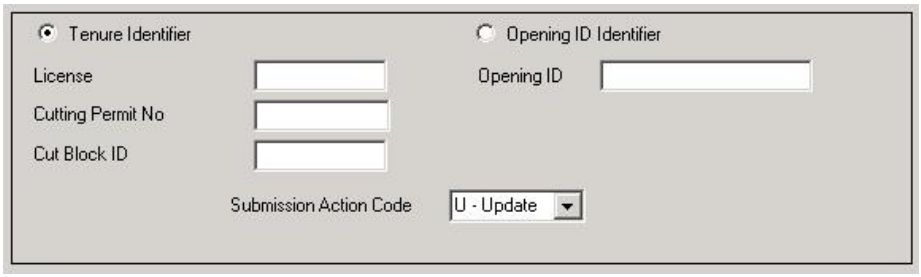
   The date you will send in the e-FM submission.

8. **Action Code.**

   Select Validate and Process. Validate Only does not work. With hindsight we should have not offered the choice.

11.4.2 Opening Key - Opening Identification

Now, some tougher questions:



RESULTS uses descriptors called "keys" to identify each unique cut block.

WLGML can use two of the RESULTS keys: TenureID key and OpeningID key.

- TenureID Key: Licence Number, Cutting Permit Name, Cut Block number.

  You **must** use the Tenure key for a first submission to RESULTS, i.e. to tell RESULTS about a block it has not heard of before.

  The Licence Number, Cutting Permit Name, Cut Block number must be known to FTA, or RESULTS will not create a new entry.

  You have to exactly match what FTA believes a block is called. One character different is not an exact match.

  Data entry over time in FTA has not been consistent. For example, a woodlot can be called W0666 on one CP entry in FTA, and WL666 on another. You have to know and use the right one. I recommend checking the Tenure ID key info for the CP in FTA using iMap before using Tenure ID key, just to verify that you and the ESF system agree.

See Appendix 6 for instructions on how to look up conventional CP and 1-CP first block names in FTA using iMap.

- OpeningID Key: the Opening Number assigned by RESULTS

  Opening Number is assigned when a block is first entered in RESULTS.

  After that first entry, I always use the OpeningID Key for subsequent updates.

  I find it wise to check the Opening Number for known-to-RESULTS blocks in online RESULTS before using the OpeningID key.

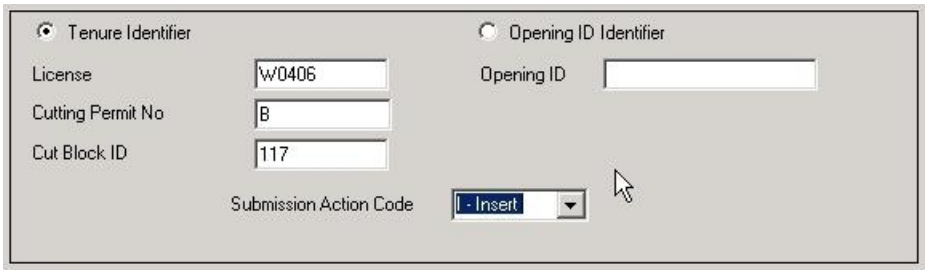
  Blocks not yet in RESULTS have no OpeningID as they "don't exist" as far as RESULTS is concerned. You have to use the Tenure key.

It is, to say the least, **very important** to get the key right. If you typo, your RESULTS submission will fail. It is unlikely that you will accidentally change someone else's reporting as you will almost certainly not have submitter authority for the opening that the typoed Opening ID Key points to. But should you accidentally put the Opening ID Key for one of your own openings in a submission, you can certainly can trash your own RESULTS reporting and cause extra work.

You do not *have* to use OpeningID key for existing openings. You can use the TenureID Key for an opening that already exists in RESULTS if you want. But in my opinion, OpeningID key is a clearer-to-the-human link to the existing RESULTS data.

11.4.3 Submission Action Code

Remember this?



The Submission Action Code is a Mandatory Entry.

It tells RESULTS what you are trying to do, in a broad-brush way. Various potential actions are allowed or not allowed under various Submission Action Codes.

Most of the time your work is simple: You are wither **Insert**ing a new block, or **Updat**ing information about a block that already exists in RESULTS.

I want to enter the RESULTS Opening and SU data for a block that RESULTS has never heard of. So I use the Tenure Identifier. And a Submission Action Code of Insert.

If the block had already been reported to RESULTS, I would use Opening ID Identifier and the Submission Action Code would be Update.

There are several other potential Submission Action Codes. And the meaning of the Submission Action Code, and technical specs pertaining to its use, vary depending on

whether the harvesting activity was authorized under The Code or under FRPA/WLPPR/WLP. See Section 10.2 for how to tell Code and FRPA apart.

Select the appropriate Submission Action Code from the pick list:

I – Insert.

I - Code Era and FRPA Era

- For new Opening and SU definitions submitted for the first time.

U – Update.

U - Code Era

- Type 1:
  - No new SU's submitted, updates to BEC, NAR and spatial data only.
  - Submission may include only those SU's being updated.
  - Any SU's omitted from the submission will NOT be deleted.
  - If you add any additional information or new SU's to the submission, the submission will be considered a Type 2.
- Type 2
  - If the Update includes information other than BEC, NAR and spatial, or a new SU is submitted, the submission is considered a Correction.
  - Any SU's omitted from the submission will be deleted and any new SU's submitted will be added.
  - SSID and Max Soil Disturbance are not updateable.
- Type 1 is preferable as the Code era stocking standards, which someone entered by hand from the approved paper Site Plan or Silv Prescription, will survive the update. If the SU dies, those standards die and you get to reenter them again in online RESULTS. You prefer not to.

  I actually generally use **M** to accomplish this sort of Update work.

  This is an example of why you should create a report of the RESULTS data as you found it before starting work on existing openings - one mistake here and the stocking standards are gone. See Section 11.3 .

U - FRPA Era

- Update submissions may include only those SU's being updated.
- Any SU's omitted from the submission will NOT be deleted.
- SU's may not be added through this action.
- Include all data in the SU submission.

O – Opening Amalgamation. For proposing amalgamations. Above my pay grade.

V – Variation.

V is in the picklist, but does not apply, as WLGML does not do stocking standards submissions. This function is accomplished through on-line RESULTS.

V - Code Era

- Does not apply.

V - FRPA Era

- For applying a stocking standards variation previously approved in a WLP to a stocking standard regime associated with an SU. The variation is approved in the WLP and may be applied in specific circumstances, for example "Minimum intertree may be 1.5 meters on rocky sites."
- Variation submissions may include only those SU's being updated.
- Any SU's omitted from the submission will NOT be deleted.
- SU's may not be added through this action.
- Include all data for the SU the variation applies to in the SU submission.

A – Amendment (Major)

A - Code Era

- For amendments to Code era silviculture prescriptions and Woodlot site plans.
- All Major Amendments to Code Era units require FLNRO approval.
- SU's may be added or deleted through a Major Amendment.
- Major Amendment submissions must include all SU's. Any SU's omitted from the submission will be deleted when the Amendment is approved. .

A - FRPA Era

- Used to add, remove or edit Standards Units from existing FRPA/WLPPR/WLP era reporting. Called a "Site Plan Amendment" in FRPAese, although WL Site Plans were Code Era docs. You just have to live with the terminological inconsistencies.
- Does not require FLNRO approval.
- Submissions for a Site Plan Amendment must include all SU's. Any SU's omitted from the submission will be deleted immediately upon successful submission and any new SU's submitted will be added.
- SSID must be specified for all SU's and the existing SSID cannot be changed if the SU has been declared Free Growing.

M – Amendment (Minor)

M - Code Era

- For minor amendments (per FPCBCA 42.1, and OSPR 7.1) to silviculture prescriptions and Woodlot Site Plans that do not require MFR approval.

- Minor amendment submissions may include only those SU's being updated. Any SU's omitted from the submission will NOT be deleted.
- SU's may not be added through this action.
- Only BEC, NAR and spatial information will be updated; any other SU information will be ignored.

M - FRPA Era

- Does not apply.

WLGML does **I, U, A and M**.

It may do **O**, but I have had no way to test it.

V is in the picklist, but does not apply, as WLGML does not do stocking standards submissions. This function is accomplished through on-line RESULTS.

A can be used to change opening or SU spatial in Code era blocks. Note that the submission will erase all hand entered Code era stocking standards. All SU's must be resubmitted as all SU's currently in the system will be erased. We normally use **A** when we are proposing adding or deleting a Code era SU. After submission, the opening will be locked until FLNR accepts or rejects the amendment.

M is very useful. It allows you to insert changed spatial data for a Code era harvest without erasing the existing stocking standards in RESULTS and having to re-enter them. Technically, you only need to submit info for SU's you wish to change, but a change in an SU boundary frequently affects other SU's and/or the opening itself.

The amendments change, delete or replace opening definition and stocking standards data, but things like Activity Reports are not impacted. This is very nice if you need to go back in time to fix an incorrect spatial or add a missing spatial to a existing RESULTS data set. You do not loose all the previous work on things like activity reports.

11.4.4 Special Case - Minor Amendment to Code Era Block

A Minor Amendment to existing RESULTS data for a Code era block allows you to change NAR and/or spatial data without erasing your hand entered Code era stocking standards already in RESULTS, which were transcribed from the Code era Site Plan.

Here is the scenario: GPS technology or imagery have shown that the hand compass and nylon chain traverse used to map good ol' CP A Block 1 was less than perfectly accurate. You would like to replace the map (spatial data) for Opening and SUs for CP A Blk 1 in RESULTS with more accurate info before you report Free Growing. That way your Opening, SU and forest cover spatial will align.

You will need to generate a standards Opening and SU submission, as per instructions in following pages. It is also possible to generate a submission with abbreviated attribute contents (less work) and get the spatial update done. See Section 11.6 .

If you were to use Submission Action Code **U**, and accidentally or on purpose trigger a **U Type 2** response, the upload of your new map/spatial will erase the stocking standards

that are already entered in RESULTS. These are always a job to re-enter, and a big job if they were multilayered standards.

If you were to use Submission Action Code **M** (Minor Amendment), the upload of your new map/spatial will NOT erase the stocking standards that are already entered in RESULTS.

"NOT" is better.

You will have to also follow up with a revised forest cover spatial - your block shape has changed, after all - but saving those stocking standards is a plus.

Note that you cannot delete an existing SU using this approach. That would be a Major Amendment, not a minor.

11.4.5 Adding Opening and SU Spatial Data

11.4.5.1 Introduction

WLGML uses spatial data in shape file format to create the GML spatial data needed to make an RESULTS submission.

The basic drill is:

1. you select the correct map projection to match your data,
2. you open the Add/Edit Spatial window,
3. you track down the shape files of your Opening and SU(s) on your hard drive and select them,
4. the program ingests the spatial data contained in the shapefiles, and
5. the program creates a new entry tabs for you to add Opening and SU details.

Be aware that “any old shapefile” may not be good enough for ESF. The shape file(s) for a RESULTS submission must be a closed polygon or polygons, and the boundary of each polygon must be a line string that does not cross itself.

However, with a bit of editing, just about “any old shapefile” can be beat into a shapefile that meets these specifications.

Information on some of the finer points of editing of shape files in WLGML is contained in Appendix 1.

11.4.5.2 Unit Areas

You need to tell the system the gross area in hectares of your Opening and the area of all SUs.

Hopefully whoever created your shape files knew to tell you the various polygon areas.

If no, the *.dbf file associated with polygonal shapes often contains an Area field, and can be viewed in Excel. The area in most shape files is listed in square meters. You divide the area in square meters by 10,000 to get area in hectares.

If the listed polygon area in the DBF is irrational, your shape area did not get updated after it was created. This is a simple fix if you have ESRI GIS software or are willing to download QGIS and learn how to use it. If not, you will have to go back to whatever process or person created the shape and get the area fixed.

11.4.5.3 Shape Files 101

See Appendix 4

11.4.5.4 What Are We Mapping What to include in an Opening or SU

We are preparing an Opening and Standards Units submission to the RESULTS system.

For the **Opening**, RISS-ls 2015 observes that

> The opening boundary defines the location of the opening inclusive of roads, reserves, productive, and non-productive areas.

This is a change from RISS-ls 2011. Previously, we were instructed to exclude areas managed under a Road Permit from the opening spatial. This logically created ribbons of spatial exclusion through many blocks. RESULTS Central and the FLNRO VRI update team have decided this is not desirable, and the instructions to exclude Road Permit tenures have vanished from the RISS manuals.

RISS-ls 2011 also had details about roads on block edges, half road widths, NP areas, etc. All gone.

The upshot is this: RESULTS Central found that the more explicit and detailed their instructions got, the more interpretive minutiae arose. Their viewpoint now is that determining the extent of the harvest authorization being reported on is a professional responsibility, so present a professional quality definition of the spatial extent of your opening.

Pages 18 to 20 of RISS-wl present examples of Opening mapping for some guidance.

Standards Units can be more complicated. The SU maps the Net Area Reforestable. You need a SU shape that maps the harvested area on which the Licensee has a legal obligation to achieve reforestation.

This could be the exact same shape as the opening outline, if the SU perfectly matches your opening.

In many cases, you will need to slice out areas like natural NP and mapped reserves, which are not part of the NAR. Licensee is not responsible for reforesting these areas.

Note that small areas of NP < 0.25 ha in size do not have to be mapped. Several small areas < 0.25 can add up to more than 0.25 ha "unmappable". They can be addressed as a non-mapped netdown to the NAR within a SU. For example, let's say the gross area of your SU is 5 ha and you have 0.2 ha of non-rehabilitatable spur road and landing in that SU. You submit the 5 ha polygon as your SU spatial, but you report the SU Net Area as 4.8 ha. This clarifies the size of the NAR, but it does not specify where or what the 0.2 ha that is not NAR is. You use the subsequent Forest Cover report for the opening to specify

what is those 0.2 ha area. In the end, the system never knows exactly where the 0.2 ha is, but it knows the 0.2 ha of not-NAR exists and what the land cover status is. This is perfectly acceptable.

You will need a shape with multiple SUs mapped if there is more than one SU in your block.

SU Shapes for group selection blocks can get *real* complicated.

RISS-wl pages 18 to 20 provides examples and diagrams.

And finally, at the request of licensee, I made the following illustration of the Base Case:

It is a simple opening, but you need three different shape files:

1. The Opening shape, the outer extent wrapper.
2. The SU shape. The SU outline shows the gross NAR area, but you report the **net** NAR to RESULTS. That is the gross NAR less any unmapped NP within the SU polygon. In this case, the road and landing.
3. The Forest Cover shape. Total area of forest cover polygons is the same as total area of the opening. Forest cover explicitly shows the different Veg cover types: harvested NSR and reserve. The unmapped NP area is accounted for as a text entry of un-mapped non-productive in the forest cover reporting for the harvested area.

11.4.5.5 Wildlife Tree Areas

Wildlife Tree Areas can be reported in two ways.

The legal wildlife tree retention obligation for a WL is to meet the wildlife tree retention targets set out in the approved Woodlot License Plan. This is accomplished through a set of identified wildlife tree areas and/or individual wildlife trees in the WL; whatever the WLP requires.

The Licensee should have a map and any other required documentation on file that shows how the wildlife tree retention targets have been / are being met.

I prefer to keep my Wildlife Tree reporting and record keeping out of RESULTS, as I see managing one thing in two different records systems as a recipe for trouble. So, still working with example above, I report the reserve to RESULTS as a Reserve for Biodiversity, and keep a notation in my internal WL wildlife tree records that there is a 0.3 ha of WTP in this block.

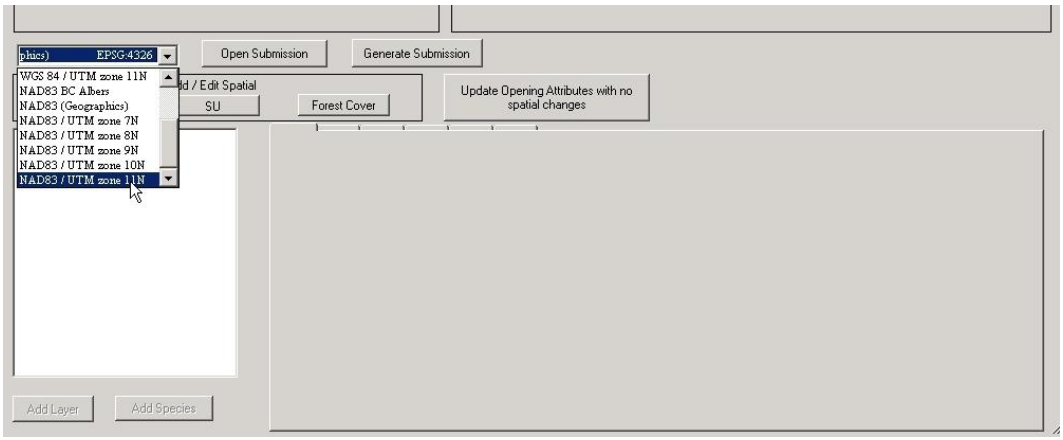
You can report the area to RESULTS as a Reserve for Wildlife Trees if you prefer. Just bear in mind that RESULTS is not the required wildlife tree record keeping system for a Woodlot License. And that FLNRO tracks the outcome of WTRA retention reported to RESULTS.

And yes, in Section 8.4.4 I recommended that you include all WTRA in the total block area reported to FTA for a conventional permit, and now I am saying that I report them to RESULTS as Reserves for Biodiversity. That is what I meant. Different systems, different objectives, and different implications.

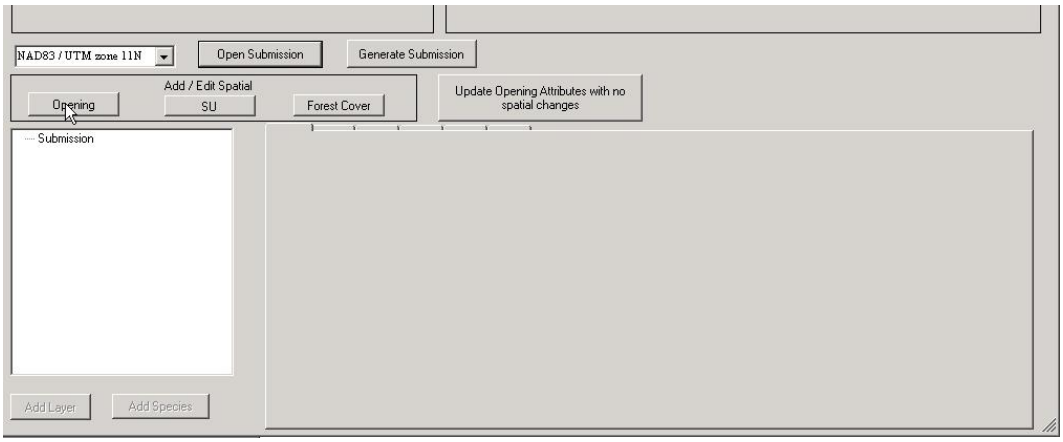
11.4.5.6 Adding Opening and SU Spatial Data

And now to the actual task at hand.

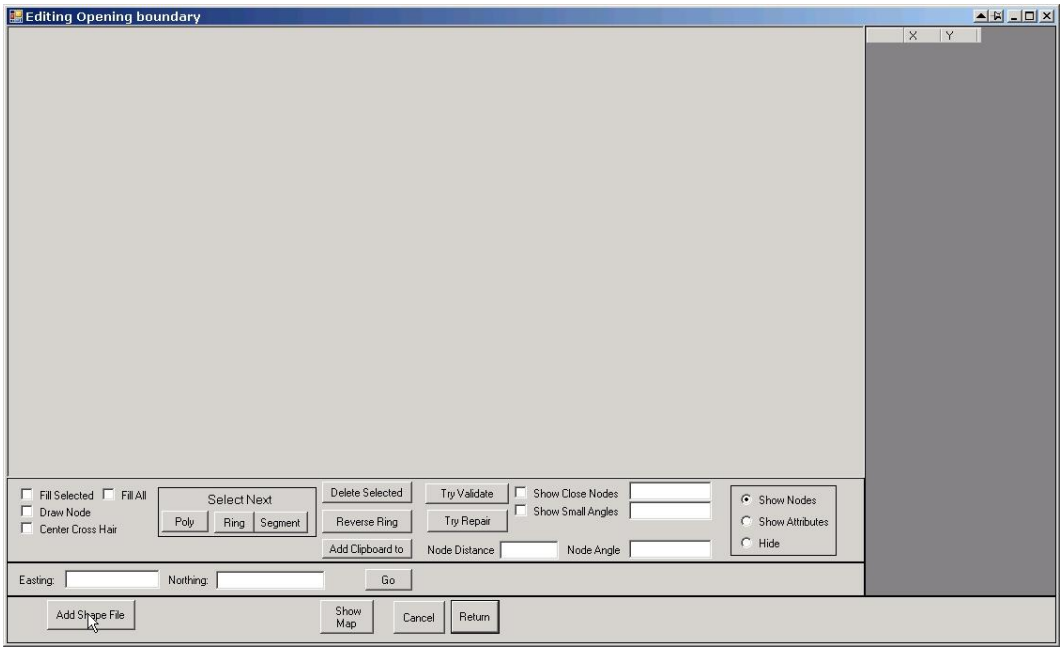
1. Select the correct projection for your submission, based on the projection of your shape files. See Appendix 4 if you skipped to here and are wondering what this "projection" stuff is.



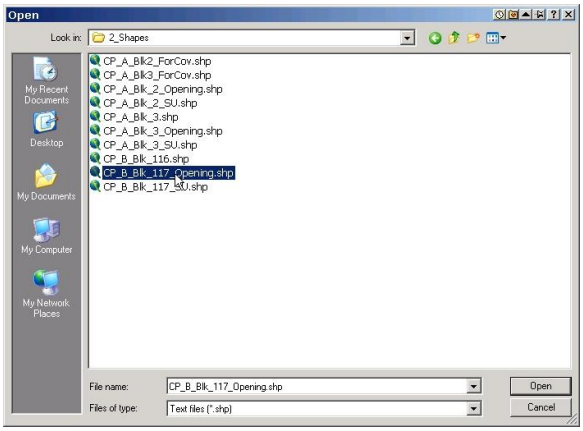
2. Click the Add/Edit Spatial Opening button.



The screen shown below will open

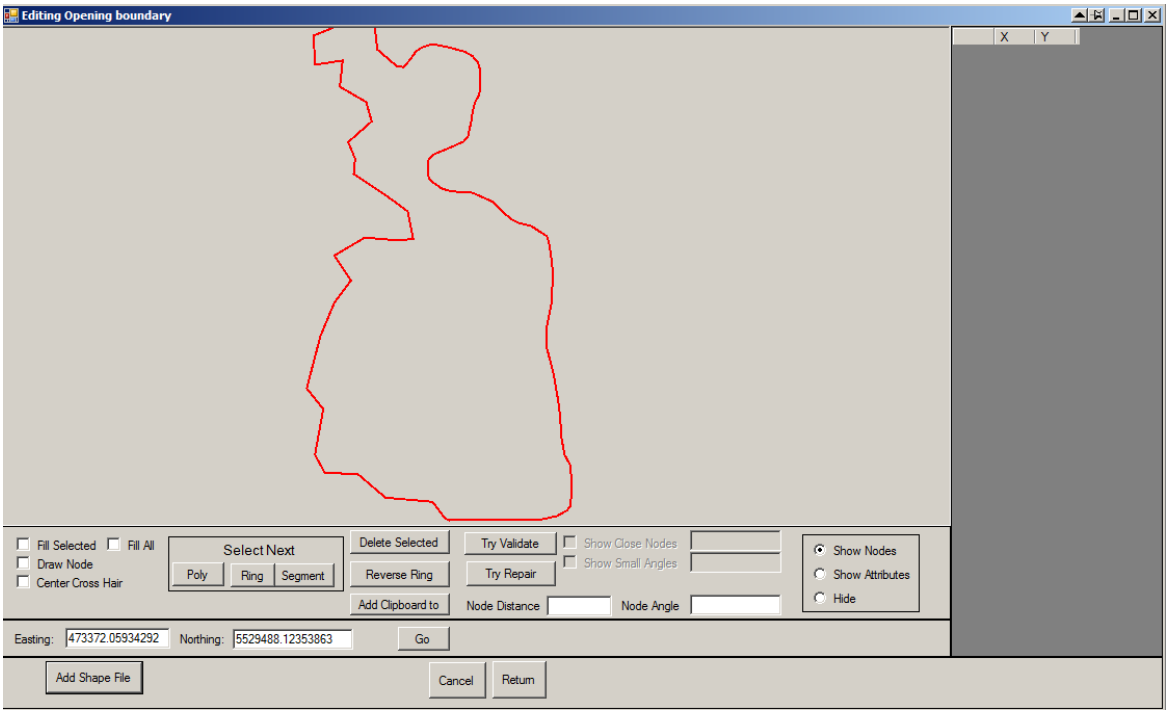


3. Click Add Shape File A standard windows Browse for File box opens and you go and find the shape file that contains a polygon of your Opening.



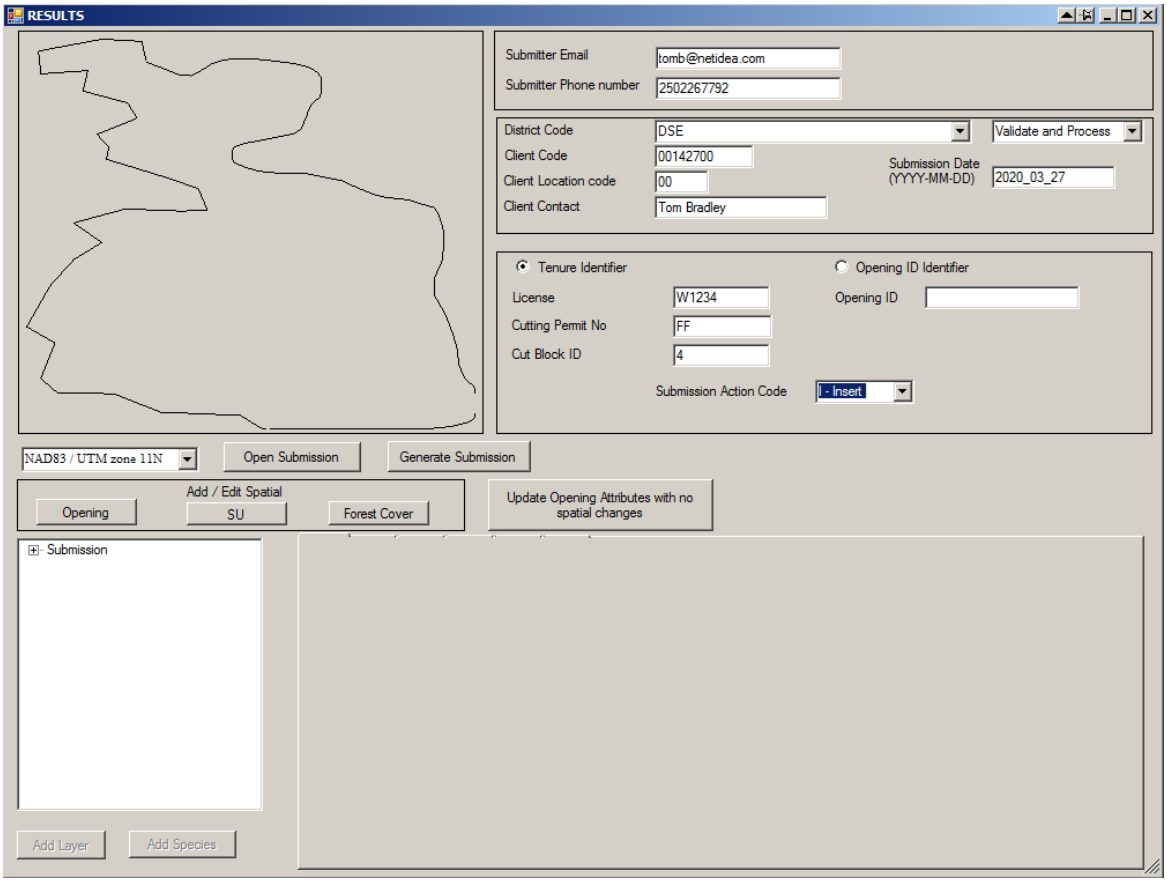
As previously mentioned, you select the component of the shape file with the *.shp extension.

4. You are dropped back into the main spatial window, but with your spatial data shown.

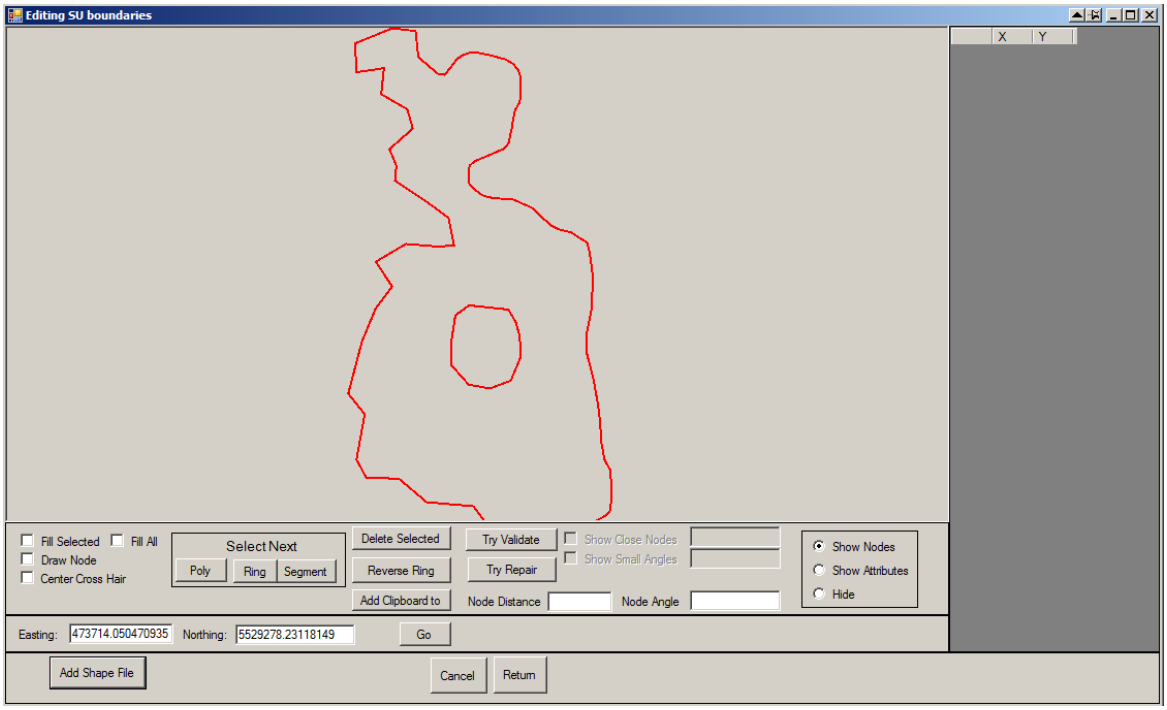


Wonders can be achieved by the Advanced Class using the tools in the Edit/Add Spatial window to clean flawed shapes or to create multi-part shapes from a set of single part shapes. This is discussed in Appendix 1. For the time being, we will just proceed with our nice, simple, single part polygon shape

5. Click <Return> to return to the RESULTS module with your spatial data in tow.



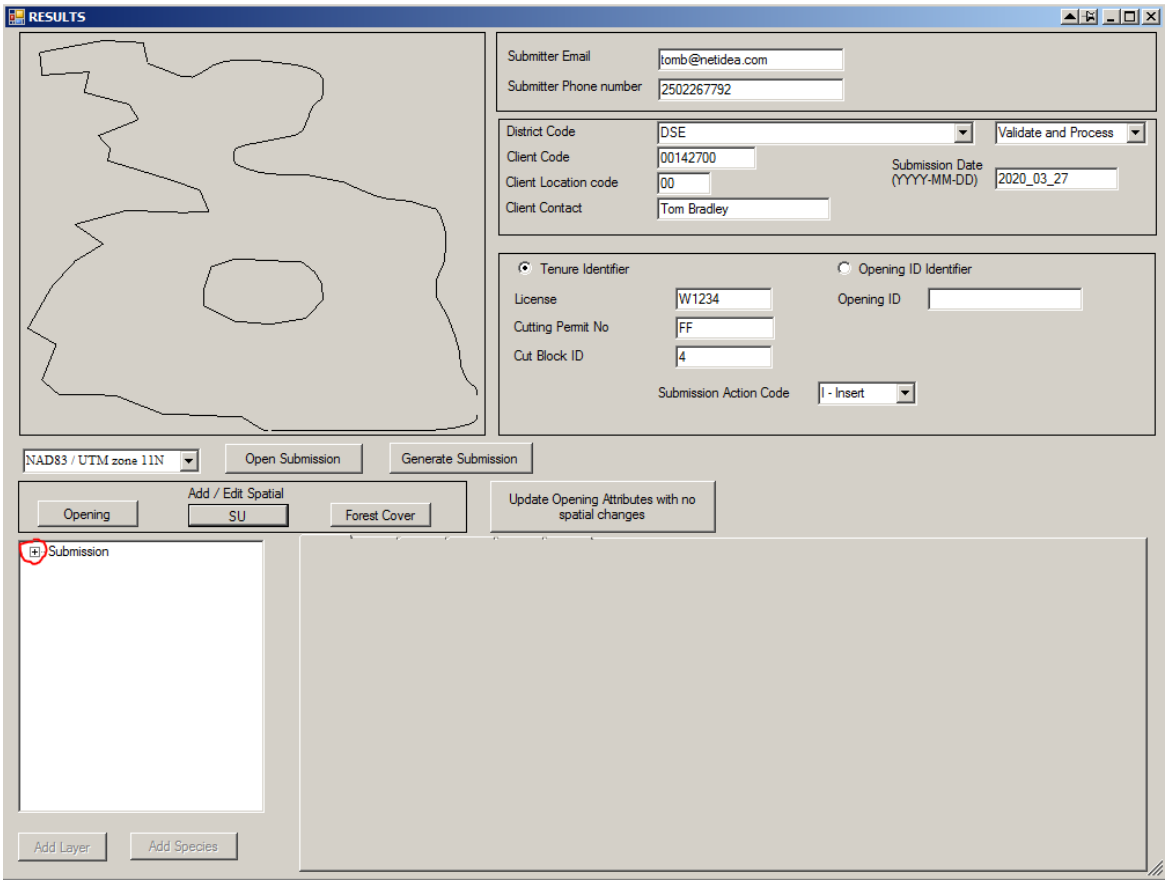
6. Now, click the Add/Edit Spatial SU button, as per above, to do the SU spatial.



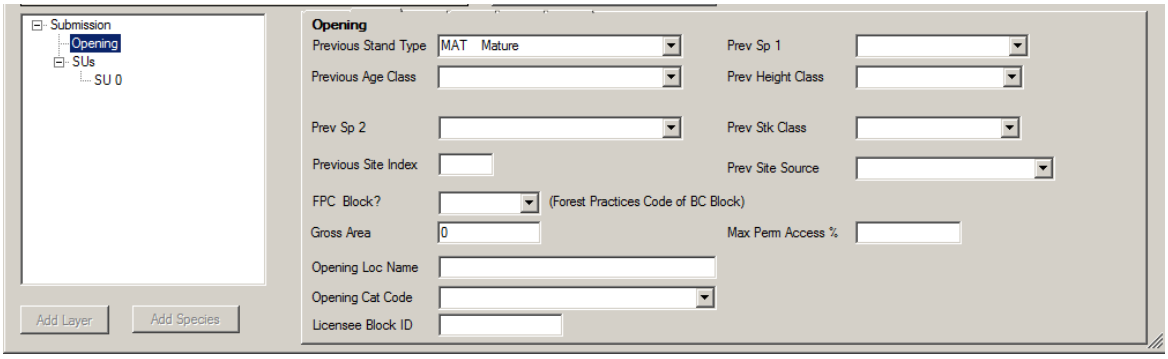
Same process - add your shape, click Return.

You'll notice how the SU shape above looks like the block outline, but it has reserve area cut out of it.

7. When you return to the main RESULTS screen, you will note that your SU spatial is in the little map window, but nothing else has changed. Bit disappointing. However, if you now click on the little expand this box beside Submission in the lower window:



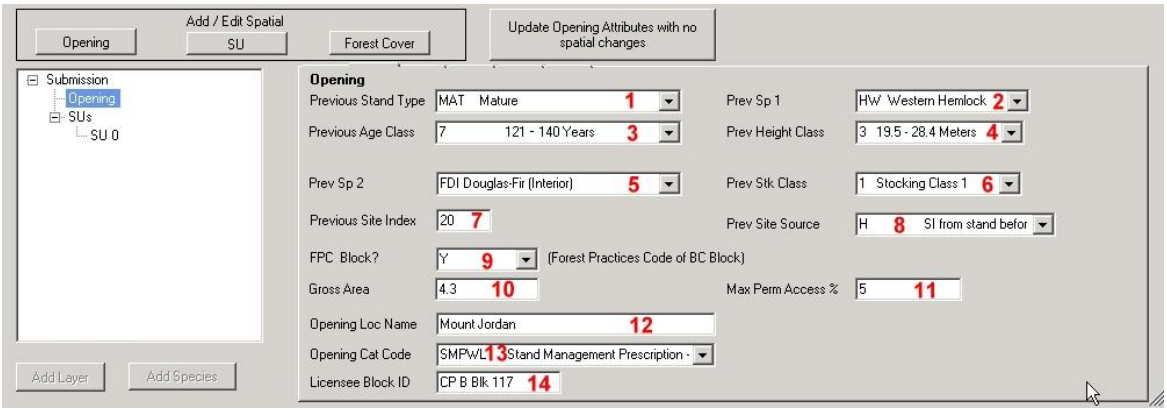
you will get *options*:



Because you have imported spatial for the Opening and the SU, there are now active data entry screen for the Opening and the SU.

We will fill in the Opening screen, then the SU screen.

11.4.6 Attribute Data Entry for New Opening



We are going to start by telling the system what the stand was like before we logged it, using old forest cover codes that have mostly vanished from the new VRI data standard.

This requirement was greeted with a loud "WHY?" by WL Licensees in 2007, but it is still there as a requirement, so regardless of personal viewpoint, fill in the blanks.[11]

Or more accurately, select appropriate item from drop down lists, as all of these entries are filled from a set of specified codes.

Previous Stand info is defined as the pre-harvest forest inventory data for the area within the harvested opening. Harvest opening overlaps more than one pre-harvest forcov poly? Report on the polygon that occupied the largest proportion of the harvest area. Hard to tell cause everything is oddly shaped? Pick one. Provide some data. Move on.

What you are entering is data from the pre-harvest forest cover inventory label.

1. **Previous Stand Type**. Code that identifies the previous stand type, per old forest cover codes.

   The drop down list contains a fascinating array of choices, but as you logged it, the most likely choices by far are MAT - Mature Forest and IMM - Immature Forest.

   That is maturity judged by the old forest cover standards:

	All deciduous species; *Pl* ; *Po*	All coniferous species except *Pl* and *Po*
Immature	1-80 yrs.	1-120 yrs.
Mature	≥81 yrs.	≥121 yrs.

   According to that, all of what I log is "Immature". Oh well.
2. **Previous Species 1**. Leading species in previous stand type. Select from list. There are 3 letter codes for some species, like Fdi. Where 3 letter codes exist, use of the 3 letter codes is required.
3. **Previous Age Class**. Self explanatory.
4. **Previous Height Class**. Self explanatory.

[11] Reason is to enable a comparison of what got logged vs what got reforested. Are species shifts occurring? Real world problem is that the RESULTS reporting of pre-harvest stand is too unreliable for comparison to work well.

5. **Previous Species 2**. Second major species in previous stand type. Major species make up >= 20% of stand volume. As per Previous Species 1.

   If there was no second major species, there is a blank at the top of the drop down list you can use.

6. **Previous Stocking Class**. Old school forest cover stocking class.

STOCKING CLASS CODES

CODE		APPLIES TO	LIMITS No. of trees/hectare, d.b.h. limits
0		all immature *	N.A.
1		all mature *	≥76/ ha, 27.5 cm+ d.b.h.
2		all mature	<76/ ha, 27.5 cm+ d.b.h.
Subdivision of 2	3	mature, with leading species Pl	≥311/ ha, 17.5 cm+ d.b.h. and ≥50% of stems 7.5 cm+ d.b.h. are ≥12.5 cm d.b.h.
	4		<311/ ha, 17.5 cm+ d.b.h., or ≥311/ ha, 17.5 cm+ d.b.h. and <50% of stems 7.5 cm+ d.b.h. are ≥12.5 cm d.b.h.
R		immature; mature	stands disturbed 26-75% by area or volume

   The official RESULTS codes for this entry are:

   0 Immature Stands
   1 Stocking Class 1
   2 Stocking Class 2
   3 Stocking Class 3
   4 Stocking Class 4
   5 Stocking Class 5
   R Mature Residual

   I have never heard of Stocking Class 5 in any other context, and can find no other reference to it.

7. **Previous Site Index**. The SI50 of the previous stand.

   RISS-ls defines this as " the projected average height, in meters, of the leading species of the forest cover label at 50 years after the stand achieves breast height (1.3 m)"

   The Site Index manual specifies that it is the average height at BHA 50 of Site Trees, which are the fattest, nicest, undamaged trees in a stand, not just the leading species population.

   Whatever.

   We trust that you know the SI of your site, especially if it was included in a Site Plan or SMP for the harvest area. However, as Site Plans are no longer required, you may have to read it from your woodlot veg cover mapping.

8. **Previous Site Index Source**. Where did your SI50 data come from? Choices are:

   A Site index from adjacent stand
   C SI from site index curve
   E SI from BEC
   H SI from stand before harvest
   I SI from growth intercept
   M SI from G,M,P,L Site Class Conversion
   O SI from provincial SIBEC rollover
   S SI assigned by District Silv. Section

H is a good answer if you are not clear on the fine details of GMPL Site Class Conversion vs site index curve vs SIBEC.

9. **FPC Block? - Code or FRPA Administration**

   Was the block permitted:

   (a) before the Forest Practices Code,

   (b) under the Forest Practices Code, or

   (c) under the Forest and Range Practices Act (FRPA)?

   Ticking the box on means "Block was authorized under Forest Practices Code or Pre-Code.". Leaving the tick box blank means "Block was authorized under FRPA.".

   It is 2020. I have not seen or heard of a new Code block for several years. If you are reporting new openings, and unless you are doing cleanup on a WL with missing reporting from a decade+ ago, you are most likely looking at harvesting authorized under FRPA.

   Adding info for existing RESULTS openings? Well, the existing reporting in RESULTS gives you clues, but is not definitive. See Section 10.2 for "How to tell".

   You *have* to know. <u>It determines how we manage stocking standards</u>.

   Option 1 - Code and Pre-Code

   WL either (a) created a SMP or a Site Plan with stocking standards for the SU that the MoF approved, or (b) agreed to the default stocking standards in WLFMR 22.02 to facilitate a beetle salvage harvest.

   Either way, a set of stocking standards were agreed to by the MoF and the Licencee.

   You enter your already approved stocking standards in RESULTS by hand using the web interface, or you pay a service provider to do it. See Section13. .

   You do not use a Stocking Standards ID Number (SSID) to access already - entered stocking standards. Even though there are stocking standards in the system plainly labelled “WLFMR under FPC”, <u>do not use them</u>. They were created in error.

   Option 2 - FRPA / WLPPR

   The WL is either (a) using the Provincial or District default stocking standards (FRPA version) or (b) WL created a custom stocking standard that can be used in this SU in the applicable Woodlot Licence Plan.

   Either way, you will reference the correct stocking standard by telling RESULTS the correct SSID number.

   Option 3 - Code and Pre-Code Block in RESULTS as FRPA Admin

   You know it is a Code block, but it is already in RESULTS as a FRPA admin block with a SSID. We mere users cannot change the block/SU back to Code admin.

   We used to follow a long process to get these blocks changed back to Code, but RESULTS central has asked us to stop. In this situation, just assign the same SSID

to the SU that was used incorrectly the first time. Add a comment using the Web interface that it is a Code era block, but instructions from Resource Practices Branch are to leave it as a FRPA era block until FG is reached. See Section 13.3 for what to do ff the stocking standards for the SU that were loaded using that SSID are not correct.

Some possibly irrelevant info for history buffs:

The actual data field we are filling here is called SPExempt, and is a heritage field from Forest Practices Code days.

The original intent was to identify areas which were exempt from silvicultural obligations under Sec. 30 of the Forest Practices Code, such as cut blocks under one hectare, or where the intended future use of the land would be incompatible with the establishment of a free growing stand (grazing area, rec site, gravel pit). These concepts are still with us, in WLPPR s. 34:

However …

The SP exempt field in RESULTS has taken on a new meaning.

It now indicates whether the opening in question is managed under the Forest Practices Code or under FRPA, and thus how we input Stocking Standards.

SP Exempt = '**N**' means FRPA / WLPPR / WLP.

SP Exempt = '**Y**' means Code / WLFMR / FDP.

Yes, WL had to have a Site Plan under code so this make NO sense to us. But RESULTS and 90% of the supporting docs are written for Majors under FPPR, and this reflects how Site Plans work for them.

In 2012 or so, the SP Exempt field was made read only. You can not get at it in On-Line RESULTS. It displays, but you can not change the value it displays.

10. **Gross Area.** The total, gross, wall to wall area of your opening. So you tell it the area in hectares, one decimal point, of your opening.

    And yes, you are working here to provide accurate Opening outline spatial data to a powerful government computer that could then calculate the area of the Opening and fill in this data in a millisecond. But RESULTS wants you to do it instead.

11. **Maximum Permanent Access**. The maximum percentage of the gross area of the opening that can be occupied by permanent access structures, such as roads, landings, gravel pits, borrow pits, and permanent skid trails.

    This info is from:

    - the Site Plan or Silviculture Prescription in Code era,
    - WLP in FRPA era. Your WLP will have chosen to either accept the default FRPA/WLPPR value of 7% in blocks >= 5 ha and 10% in blocks < 5 ha, or received approval for a different standard.

    Enter the percentage as an integer.

    That is, 7% is entered as 7, not as 0.07.

12. **Opening Location Name**.

    Optional entry.

Up to 30 characters chosen by the Licensee that describe the geographic location of the opening.

Any of Mount Jordan, NW Corner W0406 or CP A Blk 117, or any other term that makes sense to you, is acceptable.

Do not use characters that may be a computer language control code, such as:

< (less than)
> (greater than)
‘ (single quote)
“ (double quote)
& (ampersand)
/ (forward slash)
\ (back slash)
$ (dollars)
~ (tilde)

13. **Opening Category Code**. A code indicating who holds the obligations and the extent and nature of the obligations pertaining to the opening. Possible woodlot choices include:

BLWL	Backlog SP Area - Woodlot License
FG	Opening that has achieved Free Growing
FTWL	Forest Tenure - Woodlot: Site Plan
NDWL	Natural Disturbance - Woodlot License
NREQ	Areas where SP/SMP's are not required by law
P87	Pre-87 areas that is either NSR, or stocked but not FG
SMPEX	Areas where exemptions to SP's apply
SMPWL	Stand Management Prescription - Woodlot License
SPEX	Areas where exemptions to SP's apply
UHWL	Unauthorized Harvesting - Woodlot License

These are the official definitions. Few of the official definitions are free from typos or ambiguity. E.g.: SMPEX is defined as Areas where exemptions to SP's apply. Careful reading suggests that that should be Areas where exemptions to S**M**P's apply.

The fact is, of course, that "Site Plans" are no longer required on Woodlots under FRPA. These definitions do not reflect that. They were written for FPPR users a decade ago and govt is not real interested in updating them.

General harvesting under FRPA/WLPPR would be FTWL.

Intermediate cuts, etc with no regen / free growing obligations per WLPPR s. 34(2) should also be classed as FTWL.

14. **Licencee ID**.

Optional entry.

Up to 30 characters chosen by the Licensee to identify the opening and/or cross reference to Licensee records.

If supplied, must be unique for the client number.

The equivalent of CP A Blk 117 is recommended, but you can use any term that makes sense to you.

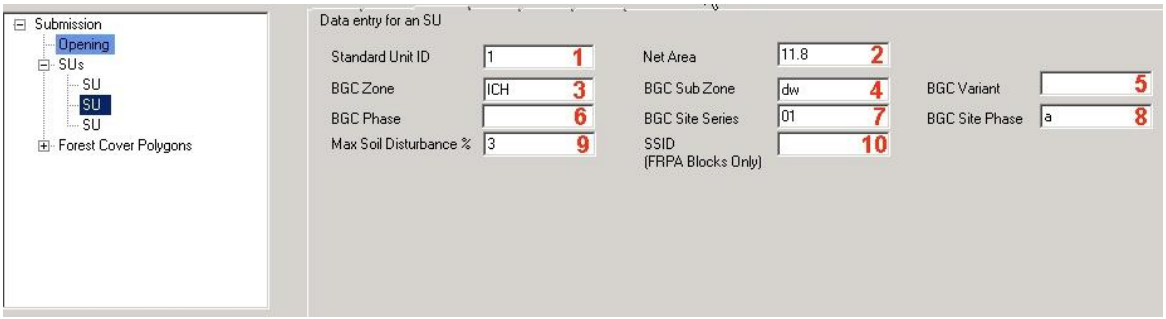
Do not use characters that may be a computer language control code, such as:

< (less than)
> (greater than)
‘ (single quote)
“ (double quote)
& (ampersand)
/ (forward slash)
\ (back slash)
$ (dollars)
~ (tilde)

11.4.7 Attribute Data Entry for New Standards Unit

You click on the items beneath SU's in the tree to open the SU data entry tab for as many SU's as you delineated in your spatial data.

If you have more than one SU, monitor the little map display as you click on the various SU entries. The map will show which spatial area each SU entry form applies to. **There is no guarantee that your "SU 1" will be the first SU the program pulled from the shape file**, so keep an eye on the map display and carefully figure out which entry field correlates to which SU of yours. Then enter the right data in each.



1. **Standard Unit ID**. From your Site Plan (Code) or Pre-Harvest Map (FRPA). What did you call this SU in there? Call it the same thing here.

   Up to 4 characters long. E.g. 1, 2, A, B, Z

   Must be unique within this opening.

2. **Net Area.** The Net Area to be Reforested in this SU, one decimal point.

   The starting point is the gross area of the SU polygon.

   The NAR may be 100% of your SU gross area, i.e., NAR may equal Gross in some situations.

   However, the NAR will be less than the area of the SU polygon that you used to create your SU entry when unmapped netdowns apply.

From RESULTS help:

> The Net Area excludes reserves, roads, landings, and bladed skid roads that will not be reforested, any non-commercial brush (NCC) if indicated in the site plan as being excluded for the net are to be reforested.

You may know of areas within the SU that are too small to map (<0.25 ha) that should be deduced from the NAR. Also, check any regen surveys you have had done. Regen surveyors often note non-mapped netdowns to NAR in their reports.

Do the math and report your total NAR in this SU here.

If you are declaring a NAR that is less than the SU polygon area, you will explain the discrepancy using the Non Mappable Areas netdowns in the forest cover entry in Section 0. So take notes! There will be a test!

Note that Temporary Access Structures that will be rehabilitated and will grow trees in the future are NOT netted out of the SU net area: they are part of the NAR. For a deep, and potentially disconcerting, dive into TAS vs PAS, forest manage, and legal obligations, see FREP Extension Note 28.

3. **BGC Zone.** Biogeoclimatic information. Read it from your site plan or pre-harvest map. The block being reported was in the ICH dw Site Series 01. The ICH part goes in this blank.

   The ecologists are continually messing with, er, improving, the Biogeoclimatic mapping of the province. Many/most WLP contain text that commits the WL to the BEC and stocking standards in effect when harvesting commenced. In this case, you enter the BEC information that correctly described your area when harvesting commenced, not what they may have changed it to since. Review WLP to see what Stocking Standards section says on this matter.
4. **BGC Sub Zone**. The subzone modifier - dw, mw, cw, mc, whatever - goes in this blank.
5. **BGC Variant**. If your BEC subzone has variants - usually described as 1 or 2 - enter it here. If not, leave it blank.
6. **BGC Phase**. If your BEC subzone has phases, enter it here. If not, leave it blank.
7. **BGC Site Series**. You will have a site series listed in your Site Plan or pre-harvest map. Enter it here. In olden times, two numbers, like 01 or 04. Now moving to three numbers, like 101 or 104

   Sometimes, the authors of a site plan or makers of a pre-harvest map enter something like 01/02. This was generally thought of as OK if there are no stocking density or management differences between the two site series in question. They are just saying that it varies back and forth between the two over the unit.

   Well, now there is a wee problem because RESULTS does not *do* 01/02. Pick the right one/best one/a one and enter it.
8. **BGC Site Phase**. If you have a site series that has a phase, enter it here. If not, leave it blank. These were more common in Olden BEC.
9. **Max Soil Disturbance.**

Mandatory entry.

The maximum percentage of the soil surface in the NAR in this SU which can be disturbed by harvesting or silviculture activities.

In Code and pre-Code, was specified in Site Plan or Silv Prescription.

In FRPA era, you will have accepted the WLPPR Section 25(1) default of 8% or proposed an alternate figure in your WLP.

Enter the appropriate value here.

Enter the percentage as an integer.

That is, 8% is entered as 8, not as 0.08.

For a deep, and potentially disconcerting, dive into TAS and soil disturbance and legal obligations, see FREP Extension Note 28.

10. SSID (FRPA Only)

Ahh, now for some real fun. Finding out which Stocking Standards ID to use! Also know as SSID.

This SSID stuff does not apply to old blocks from FPC / WLFMR / FDP regime, aka The Code Era, and earlier. For these types of blocks, you will enter your stocking standards by hand in online RESULTS. See Section 13.

If a SSID is entered for a Code block, the block will be classed as FRPA admin regime in RESULTS and you cannot get it back to Code admin without permission from District and help from the Service Desk and a 3 month minimum wait. Longer actually - think "eternity" - as there are no funds allocated to this fix activity. Reality is that a Code block accidentally moved to FRPA admin is stuck in FRPA admin in RESULTS, though not in real life, until it is free growing. See Section 10.2.2 .

If this is a pre-FRPA (i.e. Code or Pre-Code) block:

- Leave the Standards Regime ID entry field blank,
- Be sure you set FPC Block? to "Y" back in the Opening screen, and
- Move on to next SU or skip to Section 11.4.8 and Generate a submission.
- Yes, there is a library of SSID accessible stocking standards in the system plainly labeled “WLFMR under FPC”. **Do not use them.** They were created in error.

FRPA block? Continue…

SSIDs reference a library of stocking standards that you may use for FRPA blocks in woodlots. The stocking standards that apply to any woodlot at any time are set by the approved WLP that applies at that time. So, you need to see a copy of the WLP to find out what standards apply.

WLPPR 35(1)(b) gives WL the option to use the standards in the Reference Guide for Forest Development Plan Stocking Standards, as amended from time to time, as the stocking standards for harvest areas. Many licensees do so. The standards

in Reference Guide for Forest Development Plan Stocking Standards are often called "the provincial defaults".

Other WLP have committed to their Forest District default standards. My situation is a mix, as the District encourages us to commit to the Columbia Default standards in WLP, but the Columbia Default standards are contained in Reference Guide for Forest Development Plan Stocking Standards. If you are getting a mental image of "tripping over", I'd say you are close.

If you are using default standards for your biogeoclimatic subzone and site series, it is expected that you will tell RESULTS the SSID number of the appropriate default standards. You will not re-enter them in the system, to get a new SSID for just your WL. That way, you don't have to enter the stocking standard details, the RESULTS does not get bloated with multiple of versions of the same information.

(WL do not have to use default standards. If you choose, you can propose and hopefully receive FLNRO approval for alternative stocking standard(s) in your WLP or in an amendment to your WLP. If you have custom stocking standards approved in your WLP, see Appendix 3 for how to enter them in the system.)

But how do you know what SSID number to use?

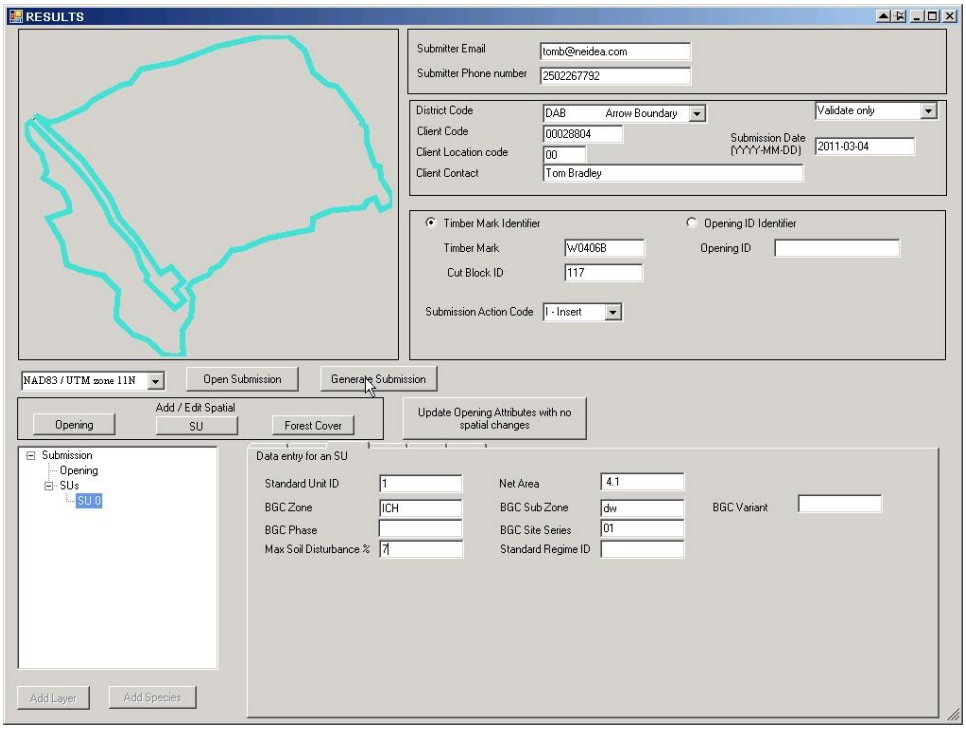
- SSID is required to be shown on the pre-harvest map for the unit (WLPPR 33). I still check any SSID from a Pre-Harv map to be sure it is a rational choice.
- Download the Reference Guide for Forest Development Plan Stocking Standards and review it. At time of writing, the guide was at a link near the top of the Govt Stocking Standards web page, but the govt redesigns their web every few years and breaks all links. Any web search for Reference Guide for Forest Development Plan Stocking Standards will turn it up.
- You can use a search function in RESULTS to look up the correct default SSID. See Appendix 7.

11.4.8 Generate Submission

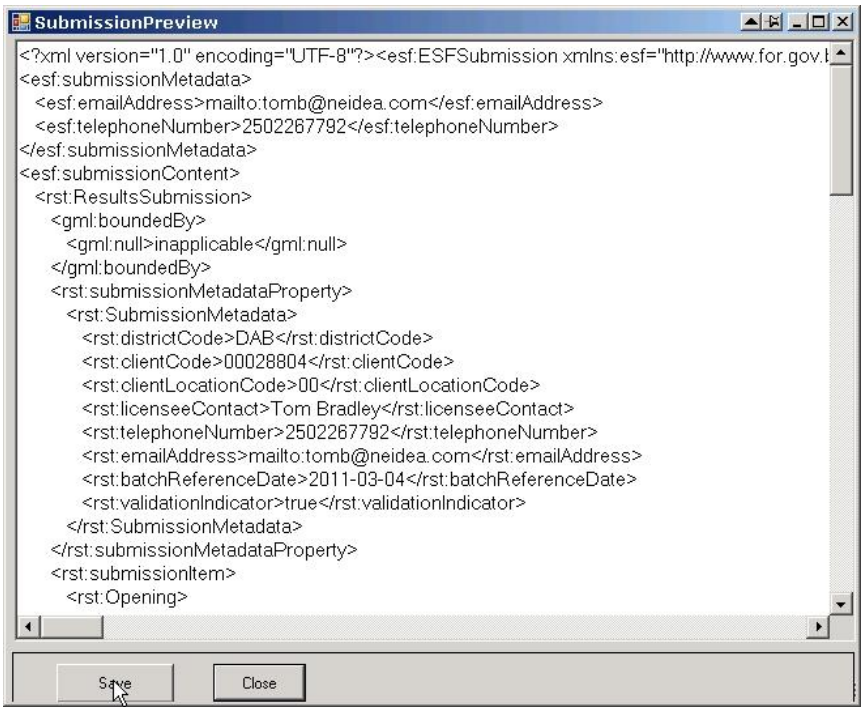
In WLGML Save = Generate. When the program Generates, it creates a text file on your hard drive that you can either send to RESULTS or reload into WLGML at a later date to finish or revise.

It is easy to do.

First, you click Generate Submission



Zip! A new box of complete gibberish opens.



Well, maybe not complete gibberish. You can see lots of things in there that we entered in the input screen, except they are all surrounded by <rst:clientCode> and </rst:clientCode>, etc etc. Those things in <> are XML tags - they identify the text between as named data items.

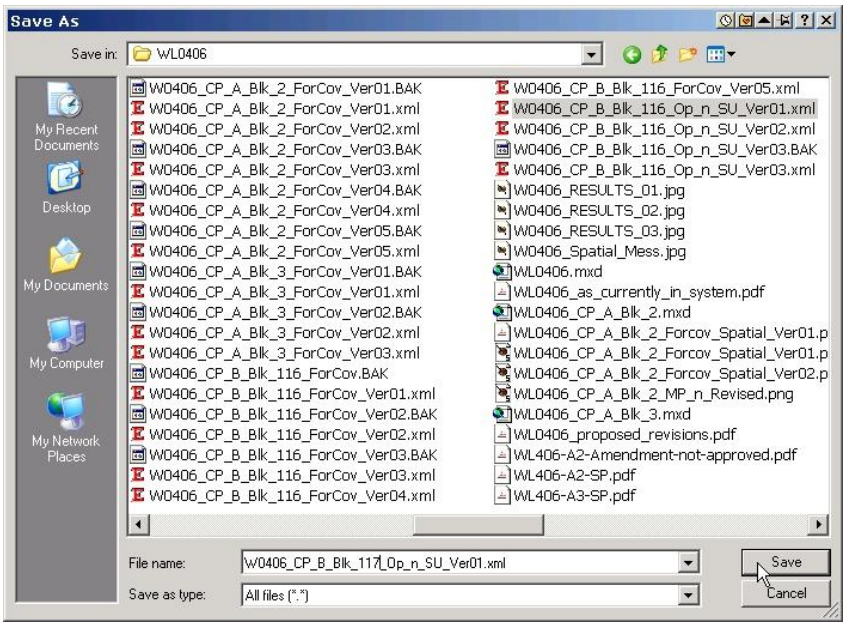
Whatever.

You need to save this file.

You should have a predefined folder on your hard drive that you will save to. The Desktop just does not cut it, and anything put in C:\Documents and Settings\MyComputerName\My Documents\etc\and\so\on\and\on is not likely to be seen again.

I have always found that C:\W1234\CP_C\RESULTS is a lot easier to locate in a week or 5 years from now. And much easier to transfer to a new computer at a later date.

So you click Save and peck your way through to where you keep your records. This file is going in D:\WL0406 on my computer, where I keep the XML I make for that WL:



You can see I give it a very long but clear and descriptive name, underbars not spaces, and with Ver_01 in the title. Yes, sometimes there is more than one version if RESULTS sends me terse emails about my shortcomings as a Submitter.

Add the .XML extension to the file name!

That's it, you have saved your work.

You can shut down WLGML if desired.

11.5 Upload to RESULTS

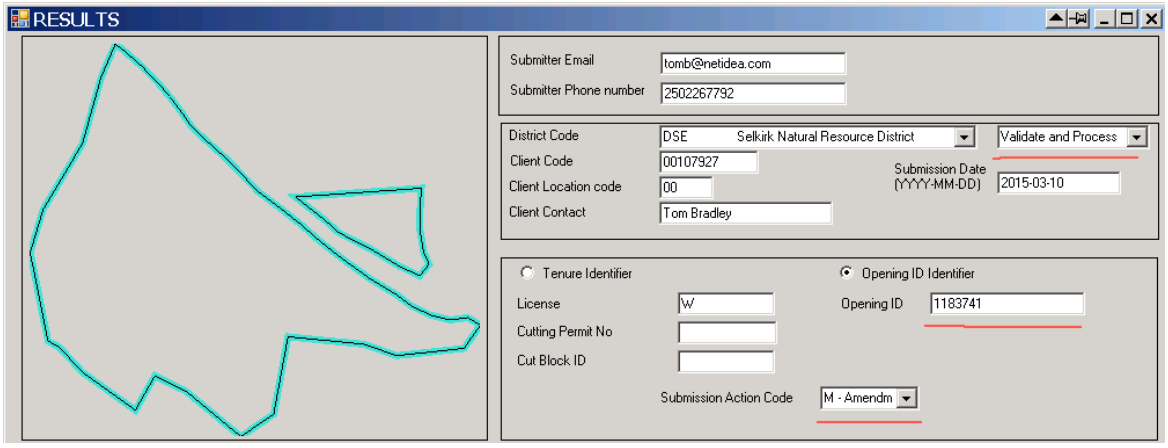
See Section 14.4

11.6 Fix /Revise Opening and SU Spatial of Code Block

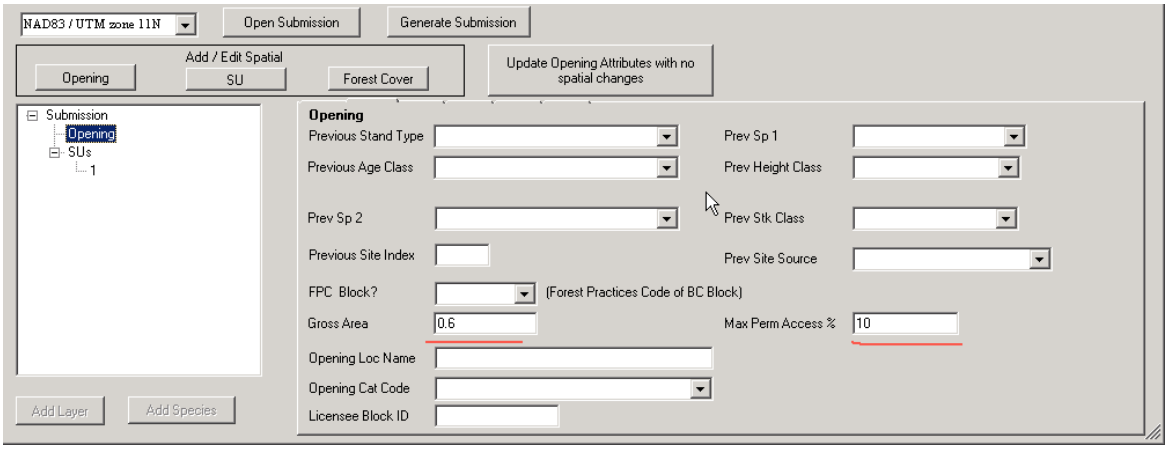
You can change the Opening and SU spatial of a Code era block without having to re-enter most of the existing attribute information in RESULTS, and without having to re-enter the Code era stocking standards.

This approach is valid if you are amending spatial to reflect changes in mapping data and technology since the block was first mapped/entered in RESULTS. That is legit. Same block, same SP applies, it just had mapping errors attributable to pre-digital technology.

1. First load the revised spatial (shape file) for the Opening and all SUs into WLGML
2. Make sure that you have Validate and Process selected, supply the correct Opening Number key, and select Submission Action Code of M - Amendment (Minor) .



3. In the WLGML Opening Information screen, tell it the new Gross Area and be sure to include the correct Max Permanent Access percent. (RESULTS will overwrite the existing Max Permanent Access entry with 0 if no Perm Access figure is supplied.)

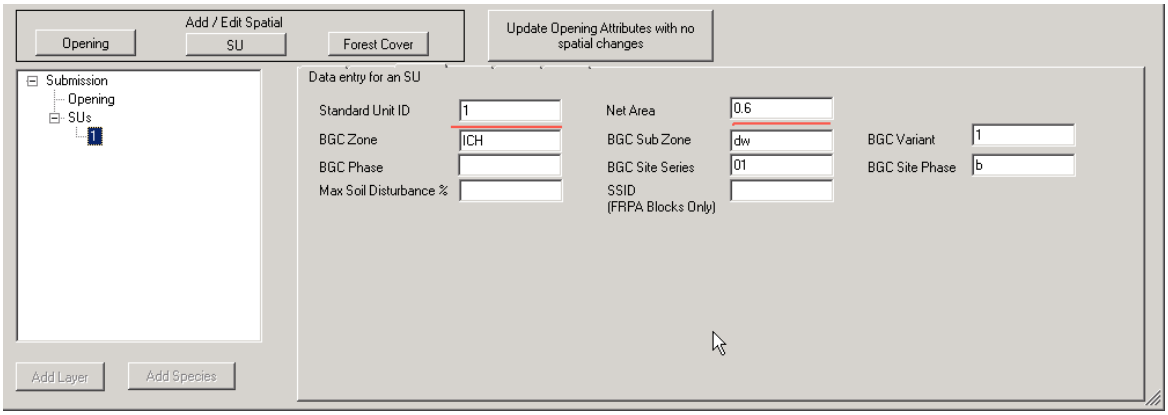


(Yes, we really are fussing over an 0.6 ha Code block. Sadly, it needs RESULTS work)

4. In the WLGML Standards Unit Information screen, enter Standards Unit ID, new Net Area, and full BEC information.

   Oddly enough, it does not require you to repeat the Max Soil Disturbance figure - RESULTS does not overwrite this if it is left blank.

   As I am revising a Code block, a SSID is not entered. Submit a SSID and you will make it into a FRPA block, which is wrong and requires a data fix process to switch back. In real world, is actually not correctible.



5. Generate the XML and submit. RESULTS tech specs and my testing indicates that the Opening and SU spatial are updated, and the rest of the existing info in RESULTS is left untouched.

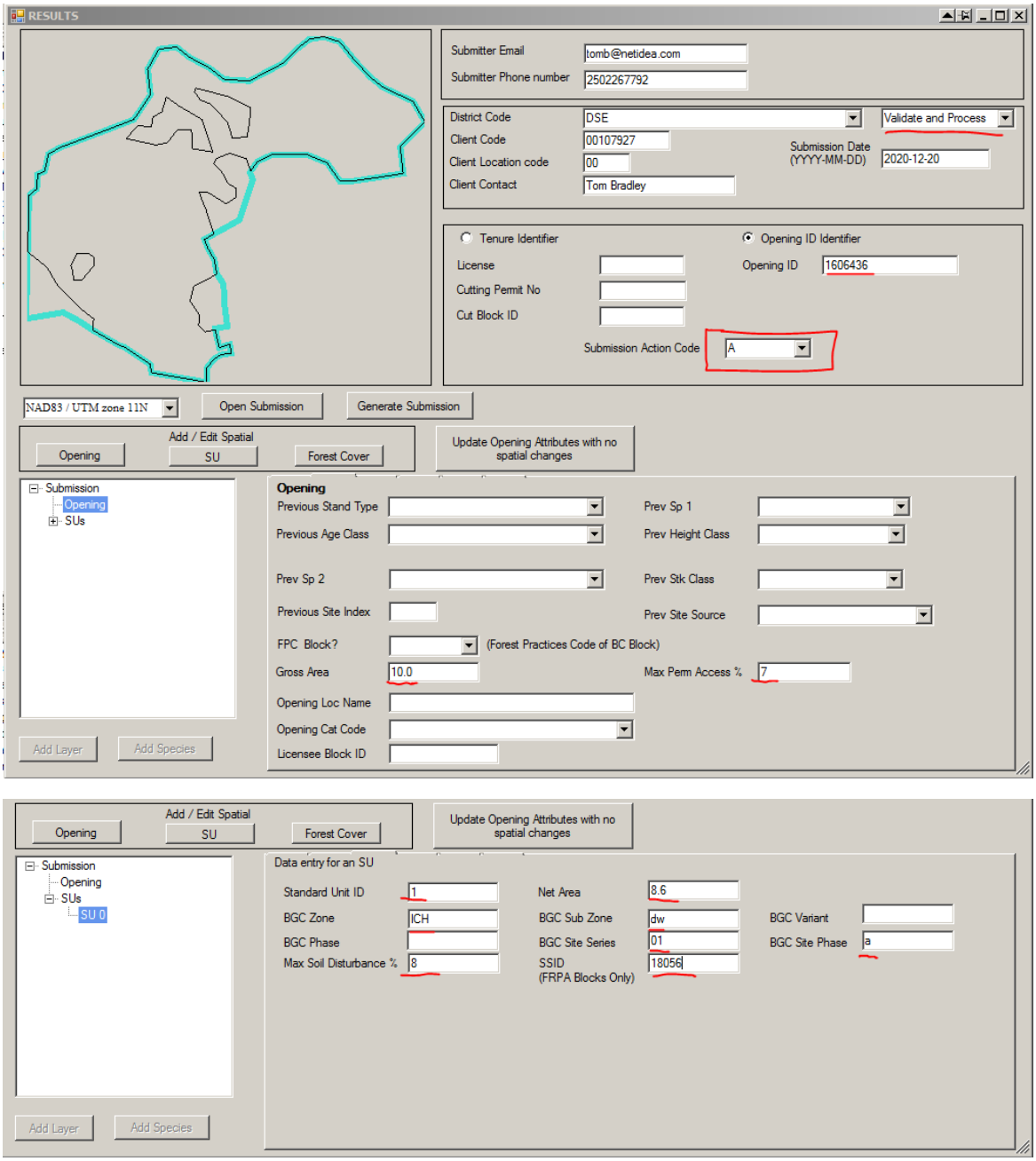
Note that you cannot DELETE an existing SU using this approach. This is a Code block, so adding or removing SU's is a Major Amendment to a SP which requires FLNRO approval.

11.7 Fix / Revise Opening and SU Spatial of FRPA Block

You want to amend the spatial for a FRPA block? This is accomplished using Major Amendment (aka Site Plan Amendment). A Major Amendment to a FRPA block does **not** require FLNRO approval.

Same process as for Code block, directly above, except:

1. You do enter the correct SSID.
2. You do enter the correct Max Soil Disturbance.
3. You use Submission Action Code A (Major Amendment).



At end of upload and system validation, new spatial is in place and all other info previously in RESULTS is unchanged.

You can do a lot more than this with Major Amendment to a FRPA block, but this info was placed here as it is the corollary of the spatial revise to Code Block with Minor Amendment.

12. New Openings to RESULTS - Add Disturbance

12.1 Introduction

This section is lurking here between Opening/SU reporting and Forest Cover reporting for a reason.

A RESULTS business rule states:

An opening must have a valid disturbance entry before forest cover data can be entered.

So if you report new-to-RESULTS Opening, SU, and Forest Cover info generated with WLGML in one XML file, it will fail because RESULTS has no Disturbance record for the opening. We use the web-based RESULTS interface to create "a valid disturbance entry" between the Opening/SU and Forest Cover submissions.

First, create a new-to-RESULTS opening and SU submission per Section 11. Upload it to RESULTS. Wait for it to validate. Sometimes takes as little as 5 minutes.

Second, use the web based RESULTS interface to add the required disturbance information, per instructions below.

And possibly your stocking standards, if it is a Code era harvest block. See Section 13.

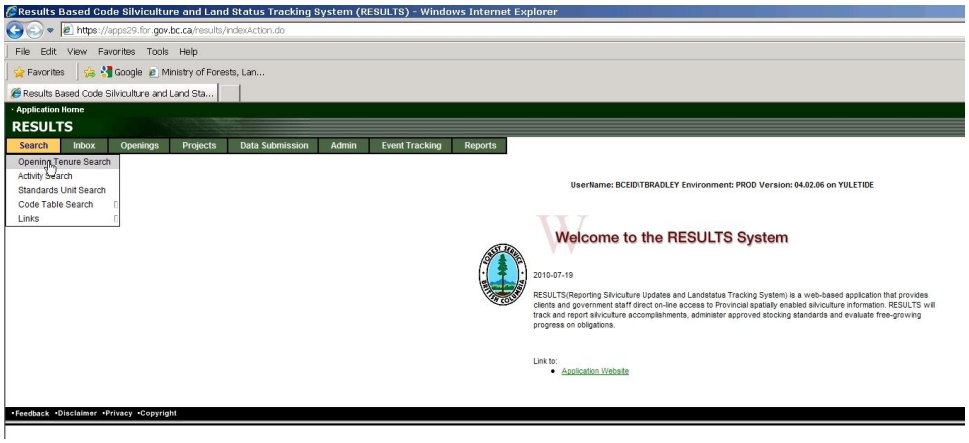
Third, create your forest cover submission per Section 14. and upload that.

This process only applies to new-to-RESULTS openings. Once the opening exists in RESULTS and has a disturbance code, you can upload forest cover updates as required without fiddling with Opening, SU, Disturbance or Stocking Standards.

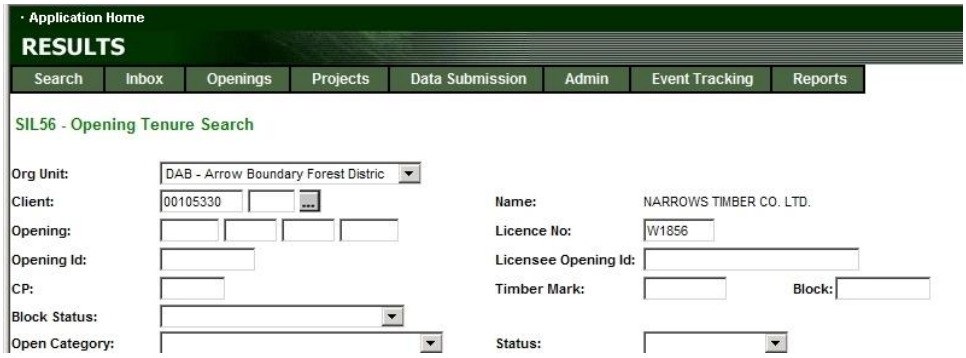
12.2 Instructions to Add Disturbance Record through Web Interface

Open RESULTS.

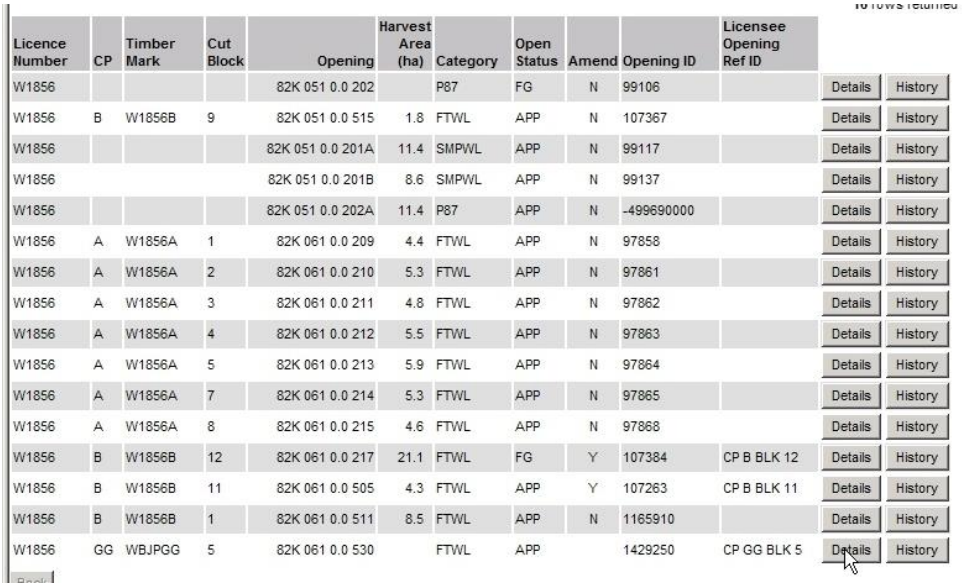
Search / Opening Tenure is a good place to start.



It brings up a search screen. Give it Org Unit (i.e. Forest District) and Licence Number and hit <Search>. You get:



You should end up with a listing of openings for the Woodlot in question.



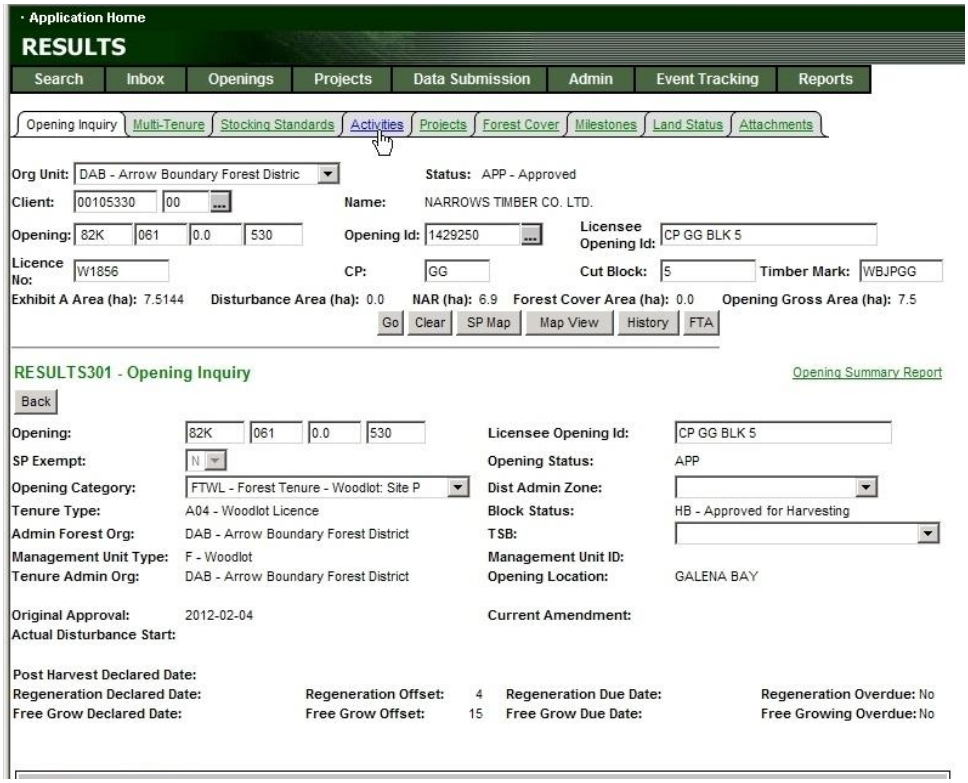
Licence Number	CP	Timber Mark	Cut Block	Opening	Harvest Area (ha)	Category	Open Status	Amend	Opening ID	Licensee Opening Ref ID		
W1856				82K 051 0.0 202		P87	FG	N	99106		Details	History
W1856	B	W1856B	9	82K 051 0.0 515	1.8	FTWL	APP	N	107367		Details	History
W1856				82K 051 0.0 201A	11.4	SMPWL	APP	N	99117		Details	History
W1856				82K 051 0.0 201B	8.6	SMPWL	APP	N	99137		Details	History
W1856				82K 051 0.0 202A	11.4	P87	APP	N	-499690000		Details	History
W1856	A	W1856A	1	82K 061 0.0 209	4.4	FTWL	APP	N	97858		Details	History
W1856	A	W1856A	2	82K 061 0.0 210	5.3	FTWL	APP	N	97861		Details	History
W1856	A	W1856A	3	82K 061 0.0 211	4.8	FTWL	APP	N	97862		Details	History
W1856	A	W1856A	4	82K 061 0.0 212	5.5	FTWL	APP	N	97863		Details	History
W1856	A	W1856A	5	82K 061 0.0 213	5.9	FTWL	APP	N	97864		Details	History
W1856	A	W1856A	7	82K 061 0.0 214	5.3	FTWL	APP	N	97865		Details	History
W1856	A	W1856A	8	82K 061 0.0 215	4.6	FTWL	APP	N	97868		Details	History
W1856	B	W1856B	12	82K 061 0.0 217	21.1	FTWL	FG	Y	107384	CP B BLK 12	Details	History
W1856	B	W1856B	11	82K 061 0.0 505	4.3	FTWL	APP	Y	107263	CP B BLK 11	Details	History
W1856	B	W1856B	1	82K 061 0.0 511	8.5	FTWL	APP	N	1165910		Details	History
W1856	GG	WBJPGG	5	82K 061 0.0 530		FTWL	APP		1429250	CP GG BLK 5	Details	History

The block I want is the last one on the list - I just uploaded it a few minutes ago. If you just uploaded a new opening and it is not in the list, try again in half an hour or the next day - it may be held up in processing. Also, check your email - you may be getting one of those "You blew it." emails from The System.

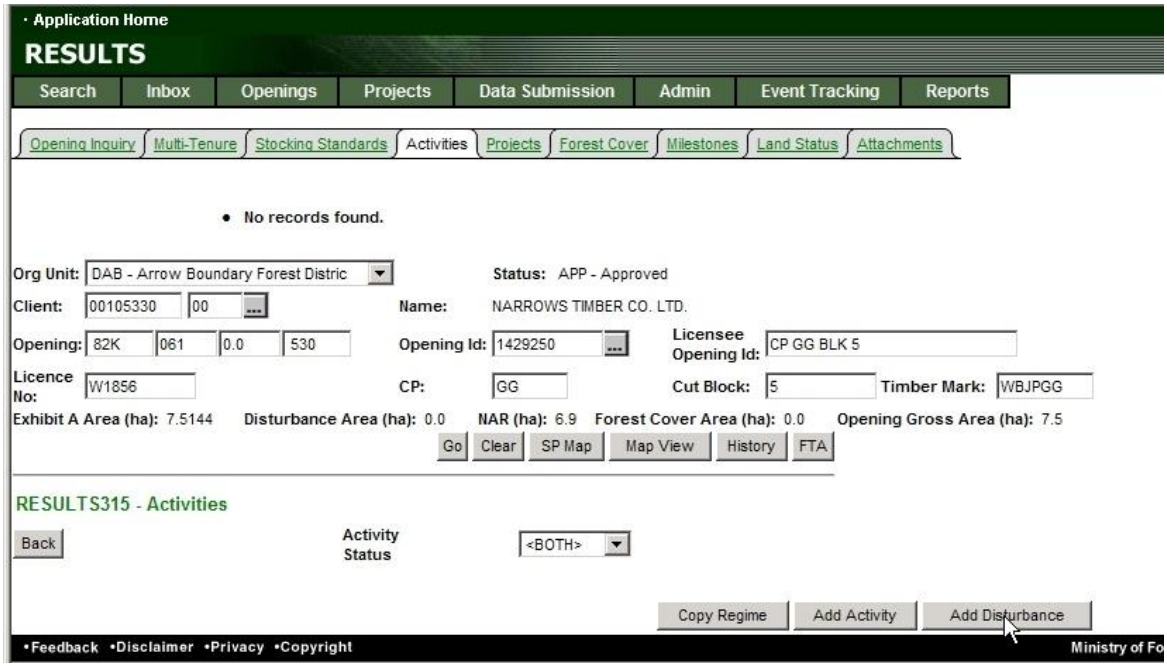
You click <Details>, and a new screen opens.

With lots and lots of stuff. You may recognize it - you likely just created it and uploaded it! You can take a minute to admire your handy-work / check for errors if you want.

But what we are actually after here is the Activities tab. We want to add an activity - logging - so click Activities.



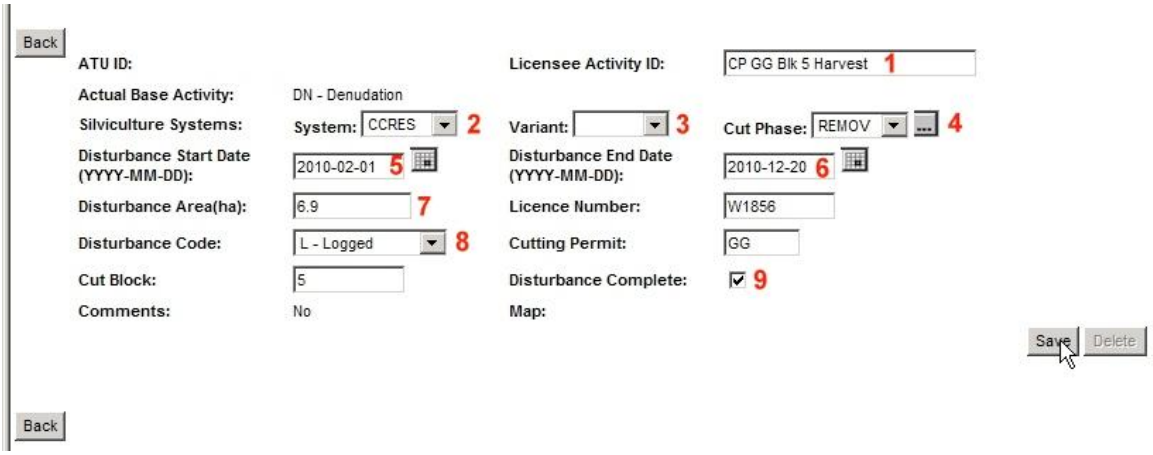
As always, a new screen!



The important bits are:

1. No activities are listed. If there were it would strongly suggest mistakes were being made. This is supposed to be a brand new entry.
2. We want the <Add Disturbance> button on the bottom right. Not <Add Activity>, <Add Disturbance>.

Which of course, opens a new screen:



1. **Licensee Activity ID.** Optional Entry. Might as well give your disturbance a name you can recognize. Whatever format you choose to use, standardize it and stick with it.
2. **Silvicultural System**
3. **Silvicultural System Variant**
4. **Silviculture Cut Phase**

   These three are related entries. The valid values for Silvicultural System are:

Code	Description
CCRES	Clear cut with reserves
CLEAR	Clear Cut
COPPI	Coppice
IMCUT	Intermediate cut
PATCT	Patch cut
RETEN	Retention
SEEDT	Seed tree
SELEC	Selection
SHELT	Shelter wood

   The valid values for Silvicultural System Variant are:

Code	Description
CTN	Commercial thin
GRP	Group
IRR	Irregular
NAT	Natural
NUR	Nurse
POL	Pole removal
SIN	Single
STR	Strip
UNI	Uniform

The valid values for phase are:

Code	Description
ESTAB	Establishment Cut
PREPC	Preparatory Cut
RECRU	Recruitment
REMOV	Removal
SALVF	Salvage - Fire
SALVO	Salvage - Other
SALVP	Salvage - Pest
SALVW	Salvage - Wind

And now for the real fun: only *some* combinations are valid. The largish table below supplies the details.

System	Variant	Phase
CCRES		REMOV
CCRES		SALVF
CCRES		SALVO
CCRES		SALVP
CCRES		SALVW
CLEAR		REMOV
CLEAR		SALVF
CLEAR		SALVO
CLEAR		SALVP
CLEAR		SALVW
COPPI		REMOV
COPPI		SALVF
COPPI		SALVO
COPPI		SALVP
COPPI		SALVW
IMCUT		REMOV
IMCUT		SALVF
IMCUT		SALVO
IMCUT		SALVP
IMCUT		SALVW
IMCUT	CTN	REMOV
IMCUT	CTN	SALVF
IMCUT	CTN	SALVO
IMCUT	CTN	SALVP
IMCUT	CTN	SALVW
IMCUT	POL	REMOV
IMCUT	POL	SALVF
IMCUT	POL	SALVO
IMCUT	POL	SALVP
IMCUT	POL	SALVW
PATCT		REMOV
PATCT		SALVF
PATCT		SALVO
PATCT		SALVP
PATCT		SALVW
RETEN		REMOV
RETEN		SALVF
RETEN		SALVO
RETEN		SALVP
RETEN		SALVW
SEEDT	GRP	ESTAB
SEEDT	GRP	PREPC
SEEDT	GRP	REMOV
SEEDT	GRP	SALVF
SEEDT	GRP	SALVO
SEEDT	GRP	SALVP
SEEDT	GRP	SALVW
SEEDT	UNI	ESTAB
SEEDT	UNI	PREPC
SEEDT	UNI	REMOV
SEEDT	UNI	SALVF
SELEC	GRP	SALVF
SELEC	GRP	SALVO
SELEC	GRP	SALVP
SELEC	GRP	SALVW
SELEC	SIN	RECRU
SELEC	SIN	REMOV
SELEC	SIN	SALVF
SELEC	SIN	SALVO
SELEC	SIN	SALVP
SELEC	SIN	SALVW
SHELT	GRP	ESTAB
SHELT	GRP	PREPC
SHELT	GRP	REMOV
SHELT	GRP	SALVF
SHELT	GRP	SALVO
SHELT	GRP	SALVP
SHELT	GRP	SALVW
SHELT	IRR	ESTAB
SHELT	IRR	PREPC
SHELT	IRR	REMOV
SHELT	IRR	SALVF
SHELT	IRR	SALVO
SHELT	IRR	SALVP
SHELT	IRR	SALVW
SHELT	NAT	ESTAB
SHELT	NAT	PREPC
SHELT	NAT	REMOV
SHELT	NAT	SALVF
SHELT	NAT	SALVO
SHELT	NAT	SALVP
SHELT	NAT	SALVW
SHELT	NUR	ESTAB
SHELT	NUR	PREPC
SHELT	NUR	REMOV
SHELT	NUR	SALVF
SHELT	NUR	SALVO
SHELT	NUR	SALVP
SHELT	NUR	SALVW
SHELT	STR	ESTAB
SHELT	STR	PREPC
SHELT	STR	REMOV
SHELT	STR	SALVF
SHELT	STR	SALVO
SHELT	STR	SALVP
SHELT	STR	SALVW
SHELT	UNI	ESTAB
SHELT	UNI	PREPC
SHELT	UNI	REMOV
SHELT	UNI	SALVF
SHELT	UNI	SALVO
SHELT	UNI	SALVP
SHELT	UNI	SALVW

Hugh, being a sensible fellow, has done a clearcut with reserves. I can figure out how to enter that! CCRES / blank / REMOV

5. **Disturbance Start Date**
6. **Disturbance End Date**

Very straightforward entries. But get it right - it determines milestone dates in future.

You may want to check what was put on Notice of Commencement and on waste reporting to avoid "confusion". The NOC is not legally binding in any way, but if it says 2019 startup and Licensee says 2020 startup, you'll want to ask, in case the info you have been provided has a typo. And I like to have my RESULTS reporting and Waste reporting on the same page. Why hand C&E a non-compliance?

7. **Disturbance Area**. How many hectares got logged? Or, more specifically:

   The area of the opening that was disturbed by the present activity.

   Includes:

   - NAR.
   - newly created roads.
   - other unnatural non-productive features (gravel pits, landings) that got crated by harvesting activity but are too small to map.
   - natural non-productive sites (rocky outcrops, small swamps) that are too small to map.

   Does not include

   - retained (undisturbed) areas such as WTP or other reserves of mature or immature timber.
   - previously existing roads.
   - mapped natural non-productive areas (rock, swamps).
   - mapped non-commercial cover (NCC – brush) identified on the site plan or pre-harvest map.

   "Too small to map" is a judgment call. There are not many things too small to map on a good drone ortho.

   Guidance is do not map features < 0.1 ha, mapping of features 0.1 to 0.25 ha is optional, features > 0.25 ha should be mapped. But the bottom line is that this is a professional judgment call.

   The actual question is "Is spatially locating this feature meaningful in terms of forest management and tracking obligations?" If no, report NP areas, etc as unmapped features.

   The people who do the RESULTS to VRI updates also have a request: "Do not map road tubes, regardless of area." They have take them out of the spatial data, by hand, before it goes into VRI, so mapping a road tube just creates extra work.

8. **Disturbance Code**. A selection list. Logged. Ya think?
9. **Disturbance Complete**. Unless you are here to enter a partially complete disturbance, you check this box. (And do not report partially complete disturbances. Report to RESULTS when units are complete.)

   Ticking this check box allows the District to change the Block Status in FTA to LC (logging complete) or S (silviculture). When all cutblocks under this CP are LC or S, the District can close the CP.

10. **<SAVE>**

Done!

You can quit RESULTS, go back to WLGML, and get back to work to create a forest cover data submission for this opening, and submit it.

Unless you are reporting a Code era or pre-Code block, in which case you need to input your Stocking Standards in on-line RESULTS. See Section 13.

13. Code Era Stocking Standards Input

We enter our already approved stocking standards for Code and pre-Code blocks in RESULTS by hand using the web interface. Those standards were approved when the MoF approved our paper Site Plan or SMP in olden days. To review:

Option 1 - Code and Pre-Code

WL either (a) created a SMP or a Site Plan with stocking standards for the SU that the MoF approved, or (b) agreed to the default stocking standards in WLFMR 22.02 to facilitate a beetle salvage harvest.

Either way, a set of stocking standards were agreed to by the MoF and the Licencee.

You enter your already approved stocking standards in RESULTS by hand using the web interface, or you pay a service provider to do it.

You do not use a Stocking Standards ID Number (SSID) to access already - entered stocking standards. Even though there are stocking standards in the system plainly labelled "WLFMR under FPC", do not use them. They were created in error.

Option 2 - FRPA / WLPPR

The WL is either (a) using the Provincial or District default stocking standards (FRPA version) or (b) WL created a custom stocking standard that can be used in this SU in the applicable Woodlot Licence Plan.

Either way, you will reference the correct stocking standard by telling RESULTS the correct SSID number.

Option 3 - Code and Pre-Code Block in RESULTS as FRPA Admin

You know it is a Code block, but it is already in RESULTS as a FRPA admin block with a SSID. We mere users cannot change the block/SU back to Code admin.

We used to follow a long process to get these blocks changed back to Code, but RESULTS central has asked us to stop. In this situation, just assign the same SSID to the SU that was used incorrectly the first time. Add a comment using the Web interface that it is a Code era block, but instructions from Resource Practices Branch are to leave it as a FRPA era block until FG is reached. See Section 13.3 for what to do ff the stocking standards for the SU that were loaded using that SSID are not correct.

This section is about Option 1 - Code blocks.

If you block was permitted under FRPA / WLPPR / Woodlot Licence Plan, you do not do this stuff, you use an SSID.

You need copies of the approved Site Plan and WLFMR at your fingertips while you are doing this work on a Code block.

Old site plans frequently contain some interesting Preferred and Acceptable species choices, intertree spacing, max density, species specific commitments, and/or unique soil

disturbance levels. Those old plans are legal documents, and you need to accurately transcribe what they say into RESULTS.

Most Site Plans also contain commitments to some WLFMR defaults, and you now have to enter the WLFMR default standards that were committed to into RESULTS.

No one knows where the site plan from 1998 has gone? Contact your District. They will have a copy on file.

You lost your paper copy of WLFMR years ago? The 1998 original WLFMR in word format is at:

http://www.woodfor.com/WLGML/WLFMR_1998.DOC

This manual also quotes the relevant sections from WLFMR 1998 in the instructions below. The 2002 amendments to WLFMR made some significant changes, but fortunately the 2002 amendments state "THERE WERE NO AMENDMENTS TO TABLE A OR TABLE B OF SCHEDULE A.", i.e. no changes to stems/ha and minimum FG height. And a comparative review of the stocking standards specs (mean intertree distance, max stems, FG tree to brush ratio, etc) between 1998 and 2002 also shows no differences.

If you need a copy of WLFMR 2002 to look up default WLFMR 22.02 standards, there is one posted at:

http://www.woodfor.com/WLGML/WLFMR_Feb_21_2002.pdf

13.1 How to Vaporize Your Stocking Standards

If you upload new/revised SU spatial to RESULTS as an Update, the existing stocking standards for the SU(s) are eradicated.

The System figures New SU = New Stocking Standards.

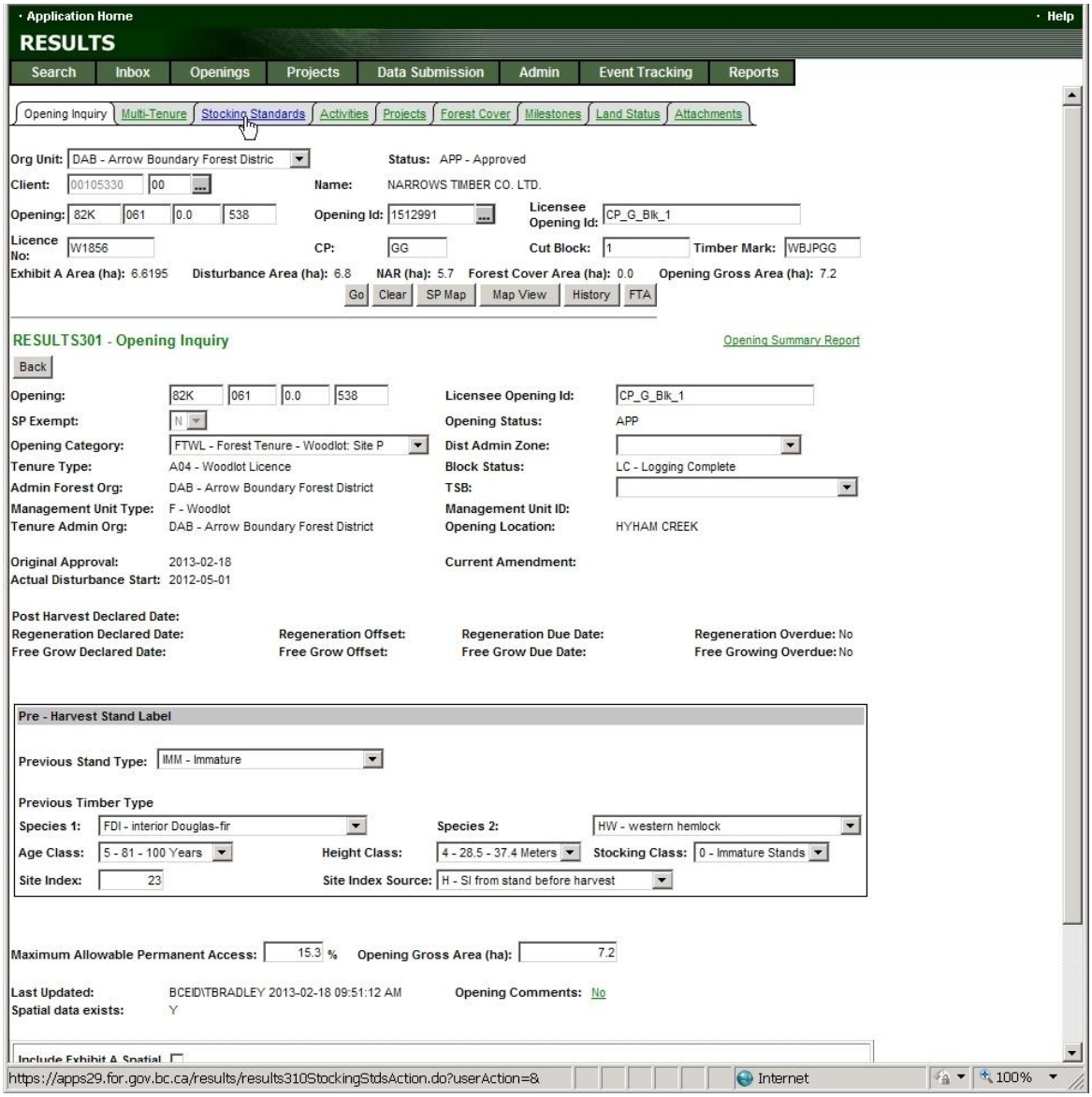
For FRPA era blocks, where stocking standards are referenced from a library using SSID, this is not even noticeable.

For Code era blocks, where you enter the stocking standards by hand, this is highly noticeable. Much stronger words than "noticeable" can be appropriate. Having entered the standards for some multi-layered partial cut SUs 3 times in my younger / stupider days, I can vouch that you want to avoid this fate.

If you need to revise Opening or SU spatial after you have typed in Code era stocking standards, use the Minor Amendment process discussed in Section 11.4.4

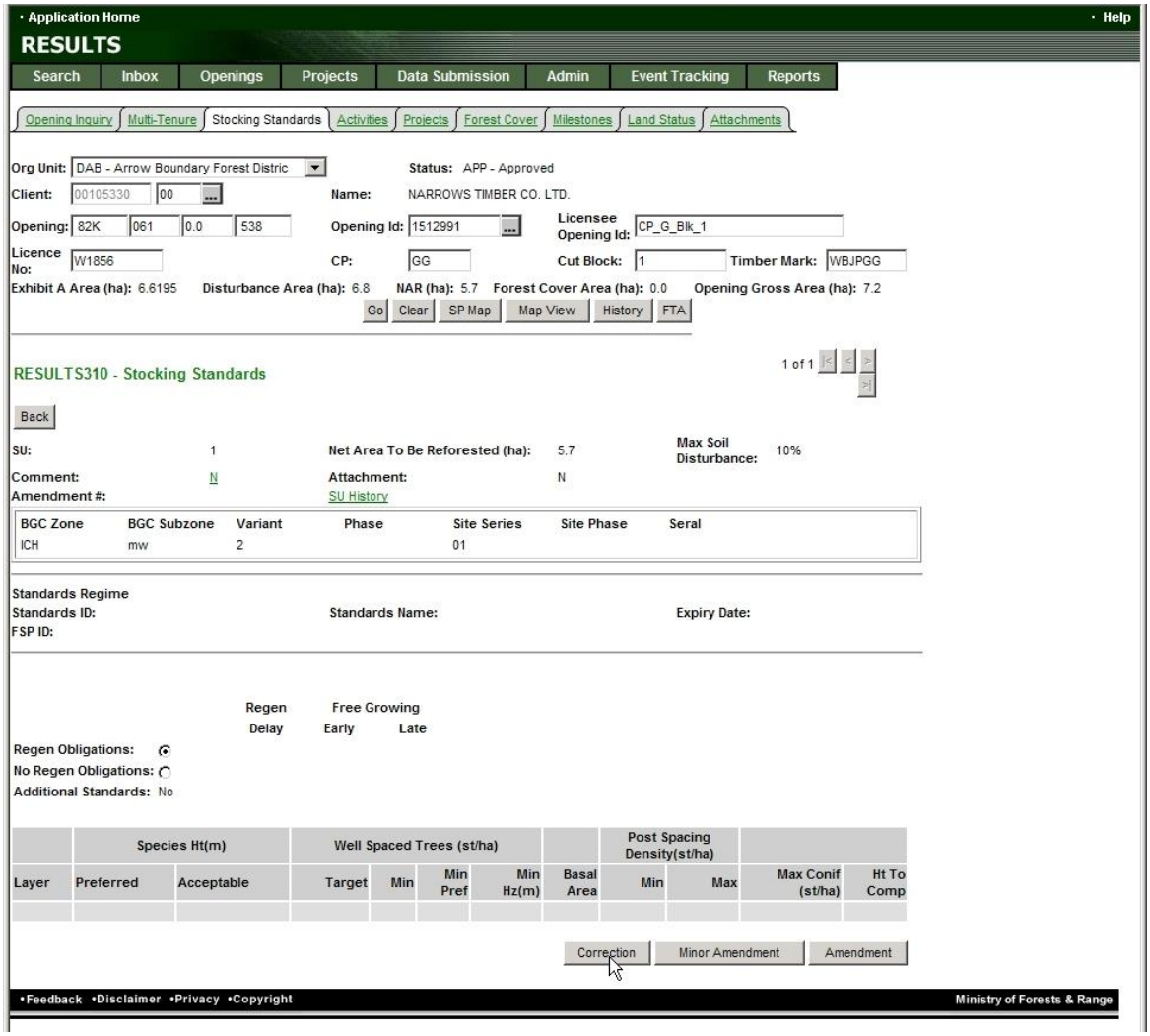
13.2 Instructions to Add Code Era Stocking Standards to a Code Block

Go to your opening using the RESULTS web interface.



You will note that the SP Exempt fields is grayed out and set to "N". This is a little alarming, as we are trying to do a Code Block submission here, and SP Exempt = 'N' means FRPA. And I just uploaded this Opening submission with FPC Block? (aka SP Exempt) set to "Y". What we are told is that the displayed info does not update, but the data field in the background that you cannot see does update.

But what we are actually after here is the Stocking Standards tab, as we want to enter Code era stocking standards. So click Stocking Standards.



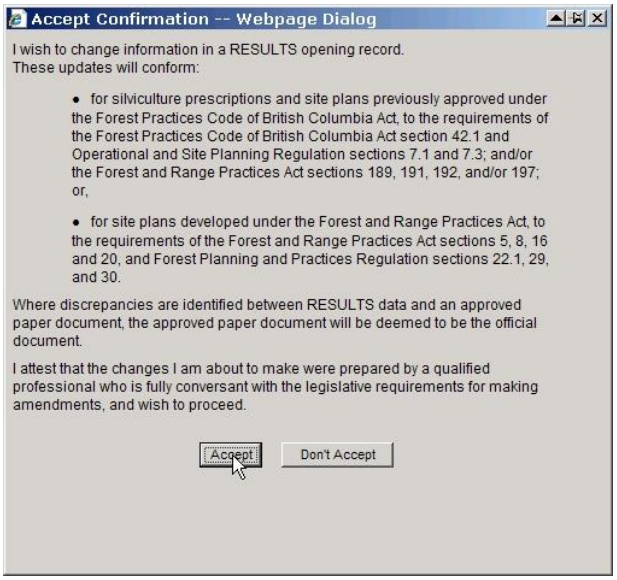
We are winning! That row of buttons along the bottom right - Correction - Minor Amendment - Amendment - those only show up in Code blocks. It knows it is a Code block.

If those buttons do not show up, and instead you see - Approved Variation - Site Plan Amendment - Amendment - the System thinks this is a FRPA block. If you are holding a paper Site Plan with a District Manager signature on it for this unit, it is almost certainly a Code Block, not a FRPA block. Verify that it is indeed Code as best you can, and if it is, go to Section 13.3 .

Anyway, assuming you see - Correction - Minor Amendment - Amendment:

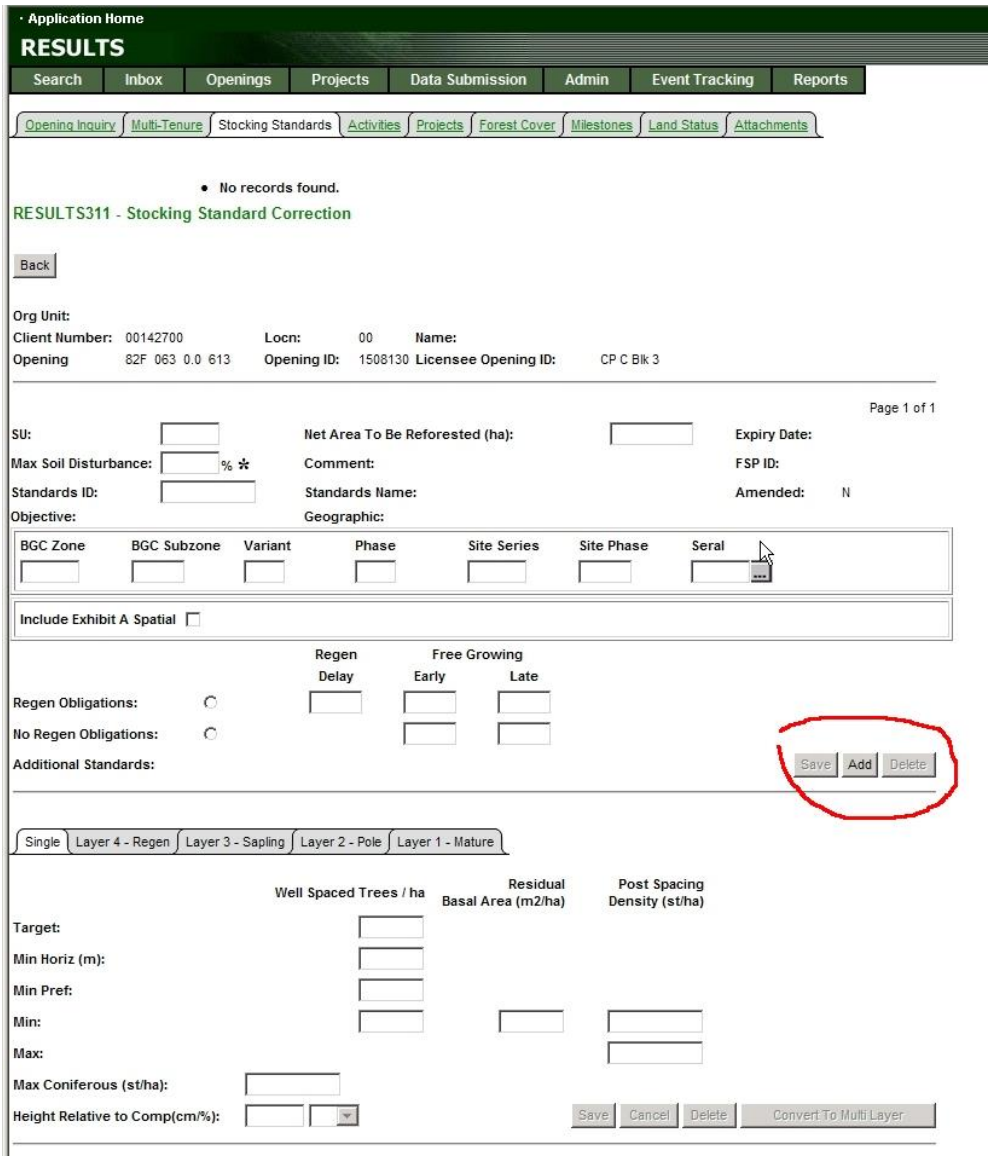
Click on Correction.

A thoroughly daunting legalese screen appears:

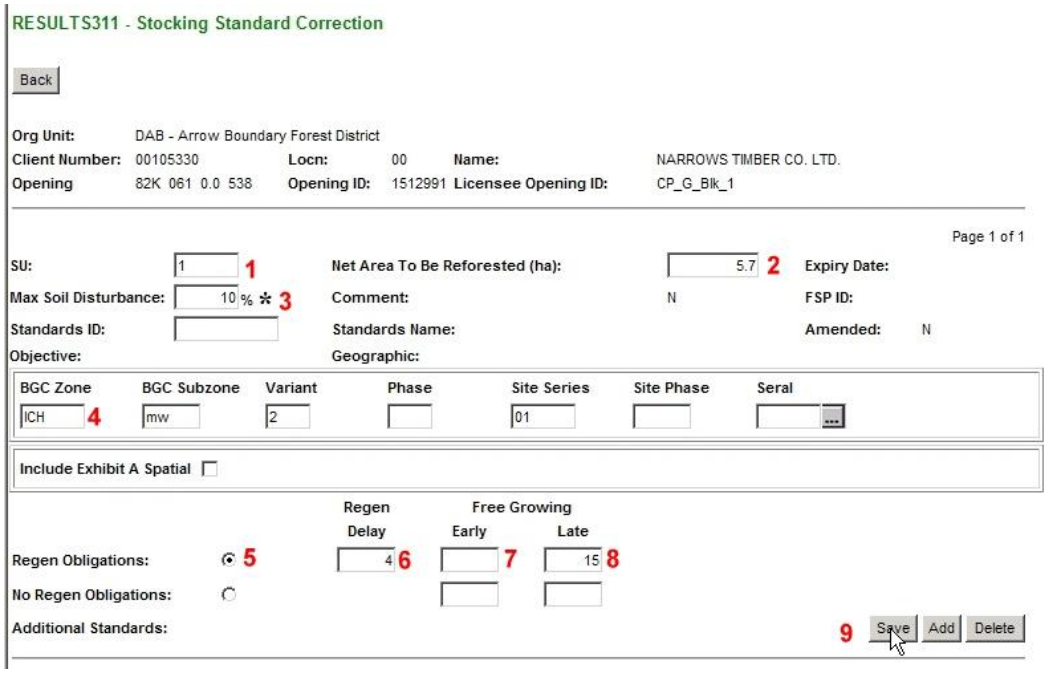


Nothing there about Woodlots and WLFMR. But by now I hope you are used to that - RESULTS does not usually acknowledge that we exist. Well, we do want to "change information", as in replacing blanks with real information. And the changes were approved by the professional(s) who signed the Site Plan. And there are no other options. We Accept. And we get an input screen to peck in our stocking standards from our approved Site Plan and/or from the WLFMR defaults.

The only active button in the whole screen is Add. So we go with the flow and Add a record.



The Screen goes active, and you input information.



1. **SU**. Whatever you called this SU in your site plan and in your Opening and SU submission to RESULTS. All those SU names are supposed to agree.
2. **NAR**. From your site plan, or from your SU submission to RESULTS and your post harvest mapping. Old site plans often used chain and compass traverses, and new orthophoto or GPS based traverses often come up with slightly different numbers. As well, a SU can contain non-mapped natural Non Productive found after harvest that can reduce the NAR to an area less than the total SU area.
3. **Max Soil Disturbance**. From your Site Plan. Section 38 of WLFMR 1998 sets out the defaults:

> 38 (1) The maximum proportion of any standards unit within the net area to be reforested that may be occupied by soil disturbance is
>
> (a) the amount specified in a forest development plan or site plan, if an assessment of the following hazards has been carried out and documented in the plan:
>
> (i) soil compaction hazard;
>
> (ii) soil erosion hazard;
>
> (iii)soil displacement hazard, or
>
> (b) 5%, if the requirements of paragraph (a) have not been met.
>
> (2) If mechanized ground based stand tending treatments employing heavy machinery are carried out under a stand management prescription, the maximum proportion of the area to be treated that may be occupied by soil disturbance is
>
> (a) the amount specified in the prescription, or
>
> (b) 5% if the amount is not specified in the prescription.
>
> (3) A holder of a woodlot licence must not exceed the limit for soil disturbance specified in subsection (1) or (2).
>
> (4) If the limit for soil disturbance specified in subsection (1) or (2) or in a silviculture prescription is exceeded, the holder of the woodlot licence must

(a) promptly notify the district manager, and
(b) carry out any site rehabilitation measures required by the district manager.

An asterisk appears beside the entry field when you specify a number other than 5%.

4. **Biogeoclimatic classification**. From your Site Plan. BEC has been revised over the years. I enter the BEC as specified in the Site Plan, regardless of possible changes since the Site Plan was written.
5. **Regen Obligations**.

   This discussion assumes you have regen obligations, that is, the harvest area being reported is not an intermediate cut or an area that will not be reforested after harvest. If either of those apply, see Section 15.

   Toggle the Regen Obligations radio button.
6. **Regen Delay**. Enter the Regen Delay from your Site Plan or from WLFMR. WLFMR 1998 says:

   77 (1) When establishing a free growing stand under section 76, the holder of a woodlot licence must establish a stand that meets the stocking requirements of this section, by
   (a) the end of the regeneration date specified in an operational plan for the area, or
   (b) if the regeneration date is not specified in an operational plan, the end of the regeneration date that is,
      (i) for BG, BWBS, ESSF, ICH, IDF, MH, MS, PP, SBPS, and SBS biogeoclimatic zones,
         (A) 4 years for areas where planting is specified in an operational plan, and
         (B) 7 years for areas where natural regeneration is specified in an operational plan, and
      (ii) for CDF and CWH biogeoclimatic zones,
         (A) 3 years for areas where planting is specified in an operational plan, and
         (B) 6 years for areas where natural regeneration is specified in an operational plan.
7. **Early Free Growing.** Early FG date from your Site Plan or from WLFMR. WLFMR 1998 states:

   78 (6) For healthy, well spaced trees of a preferred or acceptable species to be considered free growing, they must have been growing on the area for at least 5 years from the commencement of harvesting, unless the district manager specifies, in writing, another period.
8. **Late Free Growing**. From your Site Plan or from WLFMR. WLFMR 1998 states:

   78 (1) When establishing a free growing stand under section 76, the holder of a woodlot licence must establish a free growing stand that meets the requirements of this section by the free growing date
   (a) specified in an operational plan for the area, or
   (b) if not specified in an operational plan for the area,
      (i) 15 years for the BG, BWBS, ESSF, ICH, IDF, MH, MS, PP, SBPS, and SBS biogeoclimatic zones, and
      (ii) 12 years for the CDF and CWH biogeoclimatic zones.

(2) The period of years referred to in subsection (1) begins

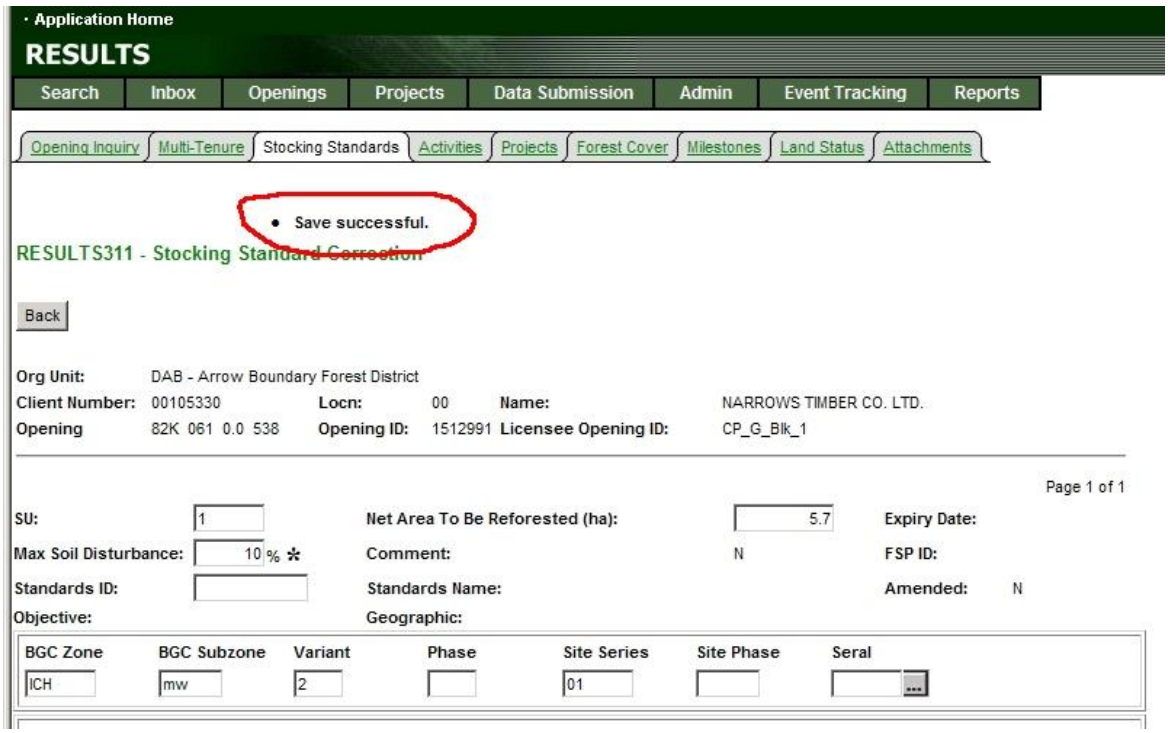
(a) for cutblocks harvested after the coming into force of this regulation, on the date when harvesting, excluding road and landing construction, begins on the cutblock;

(b) for areas where the timber was harvested by the holder of the woodlot licence in contravention of section 96 of the Act, on the date when the contravention occurred.

9. **SAVE**!

You have to save each subsection of this entry page. If you fill in everything you can find on the whole large page then save, it will eradicate information and you will have to re-enter it.

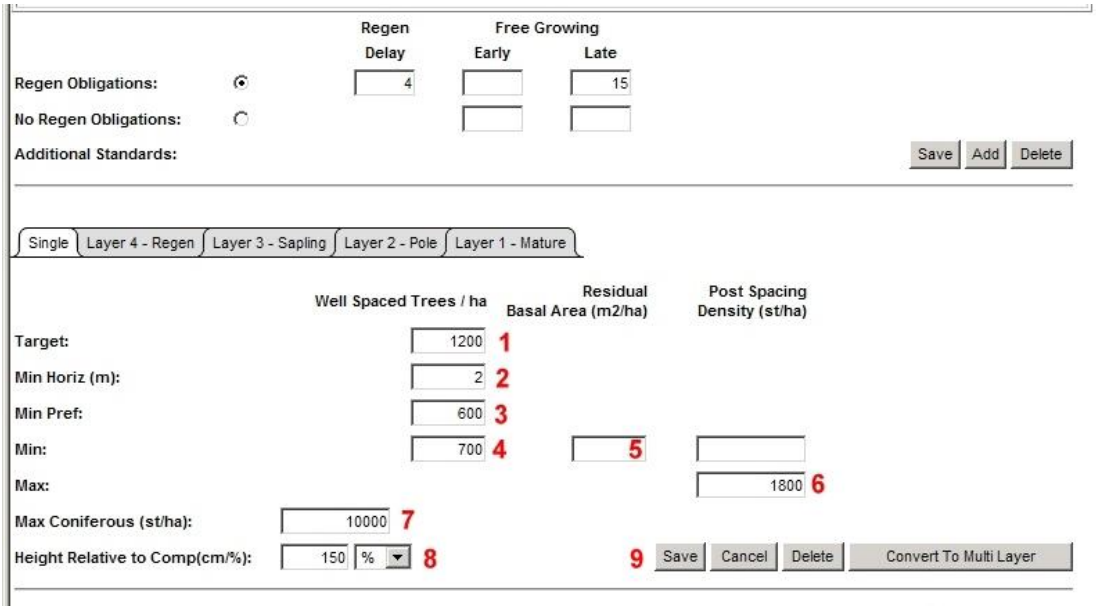
After you click Save, a little Save Successful message appears at the top of the screen, in an area that will be "off screen" a fair amount of the time.



Onwards to the Layer Definition.

The discussion below assumes you are entering an single layer even aged management stocking standard.

If you are doing layered stand stocking standards, see Section 15.4 .



1. **Target Stocking Standard**. From your Site Plan, or from Table A of WLFMR.
2. **Min Horiz**. Meaning Minimum Intertree Distance. From your Site Plan, or from WLFMR. WLFMR 1998 states:

   "well spaced" means

   (a) for other than a mature layer in single tree selection silvicultural systems, trees that are at least the following minimum distance apart:

   (i) the distance specified in an operational plan for the area, or

   (ii) if there is no distance specified in an operational plan for the area,

   (A) for the BG, BWBS, ESSF, ICH, IDF, MS, PP, SBPS, and SBS biogeoclimatic zones,

   (I) 1.5 m for planted areas, and

   (II) 2.0 m for naturally regenerated areas, and

   (B) for the CDF, CWH and MH biogeoclimatic zones, 2.0 m, and

   (b) for the mature layer in single tree selection silvicultural systems, any distance apart.
3. **Minimum Preferred Species**. As in minimum stems/ha of preferred species. From your Site Plan, or from Table A of WLFMR.
4. **Minimum Stocking**. As in minimum stems/ha to make stocking. From your Site Plan, or from Table A of WLFMR.
5. **Residual Basal Area**. If your Site Plan specified a minimum basal area to be retained in this SU, enter it here.
6. **Post Spacing Density**. From your Site Plan, or from WLFMR. WLFMR does not discuss Minimum Post Spacing Density. It does discuss Max Post Spacing Density. WLFMR 1998 states:

   Sec 78 (8) If a spacing treatment is required under section 79 the number of coniferous trees per hectare that remain after the spacing treatment must not exceed

   (a) the maximum number specified in an operational plan for the area, or

   (b) if there is no number specified in an operational plan for the area, then

(i) if a silvicultural system other than single tree selection is approved for the area

(A) 2 000 coniferous trees per hectare for the BG, BWBS, ESSF, ICH, IDF, MS, PP, SBPS, and SBS biogeoclimatic zones, or

(B) 1 500 coniferous trees per hectare for the CDF, CWH and MH biogeoclimatic zones, and

(ii) if single tree selection is approved for the area, 1 500 coniferous trees per hectare in the sapling layer.

7. **Max Coniferous**. How many stems are allowed before you are legally committed to spacing? From your Site Plan or WLFMR. WLFMR 1998 states:

(7) The maximum number of coniferous trees allowed per hectare before a spacing treatment is required under section 79 is

(a) a number established

(i) by the district manager, in writing, in accordance with the chief forester's policies and procedures, or

(ii) in an operational plan for the area, if a number has not been established under subparagraph (i), or

(b) 10 000 trees per hectare if a number has not been established under paragraph (a).

8. **Height Relative to Competition**. What constitutes a free growing tree? From your Site Plan or WLFMR. WLFMR 1998 states:

Stocking requirements at free growing date

78 (5) Healthy, well spaced trees of a preferred or acceptable species, referred to in subsection (3) or (4), must have achieved

(a) the minimum height for their species as specified in an operational plan for the area, or if not specified in an operational plan for the area, as determined in accordance with Schedule A, and

(b) the height, relative to competing vegetation within a 1 m radius of the tree trunk,

(i) specified in an operational plan for the area, or

(ii) if there is no amount specified in an operational plan for the area,

(A) 125% for the ESSF, IDF, MS, MH, PP and BG biogeoclimatic zones, and

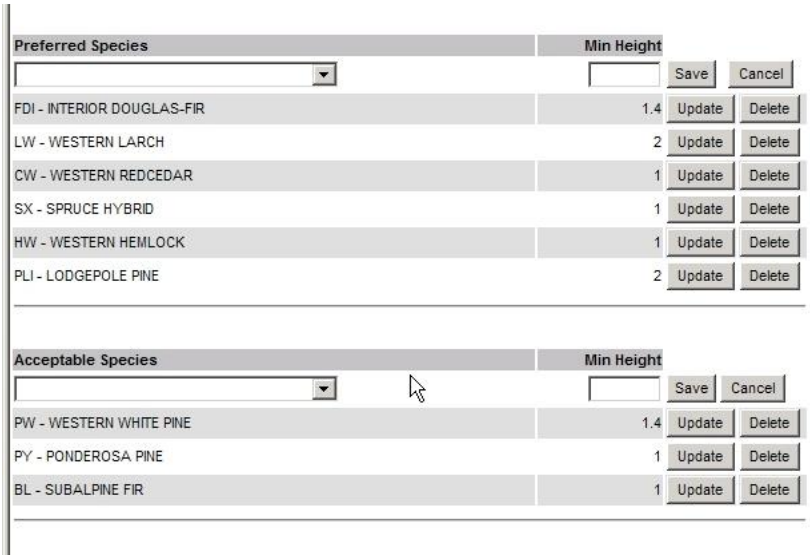
(B) 150% for the CDF, CWH, BWBS, ICH, SBPS and SBS biogeoclimatic zones.

9. **SAVE**!

You have to save each subsection of this entry form. If you fill in everything and then save, it will eradicate information and you will have to re-enter it.

After you click Save, a little Save Successful message appears at the top of the screen, in an area that will be "off screen" a fair amount of the time.

And now, Acceptable and Preferred Species and FG Height.



You peck them in, one at a time.

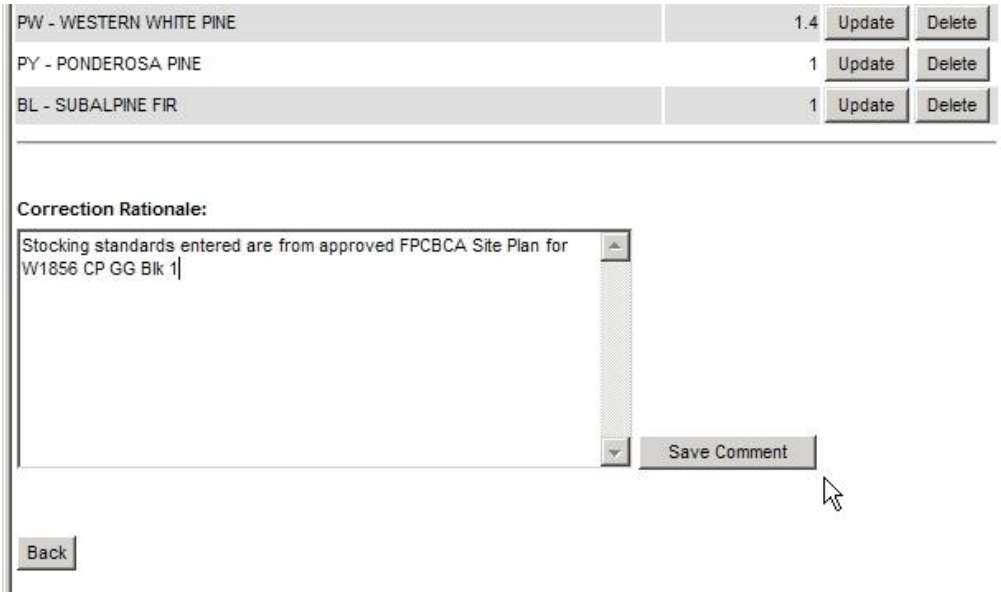
The Preferred and Acceptable species come form your Site Plan.

The Min Height for a Free Growing Tree cold be listed in your Site Plan, but likely will come from Table A of WLFMR, per Section 78 (5) cited above.

After you enter each species, you click the Save button beside the entry field and it saves the entry.

And finally, at the bottom of the screen, the Comment blank.

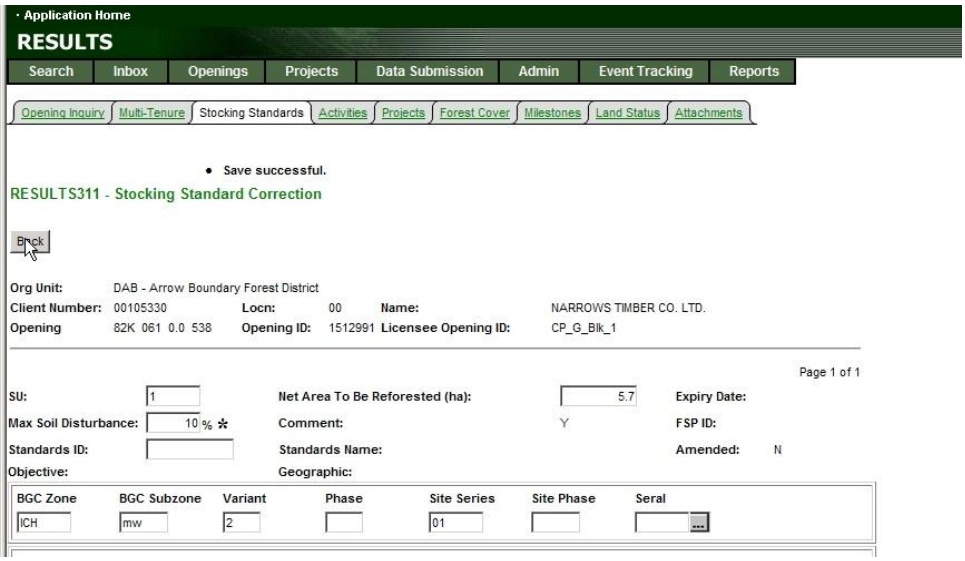
It is good practice to explain what you have just done:



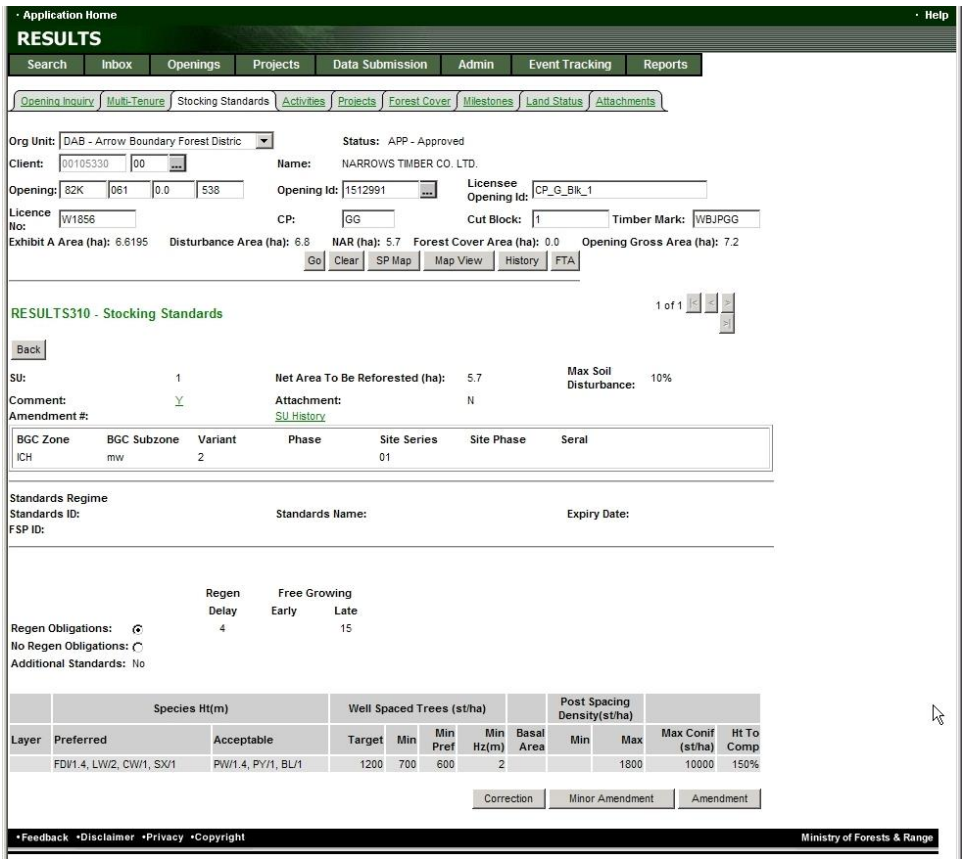
Obviously, save the comment.

Check things out. All data entered? All correct? You do not want to do this again.

When you are satisfied it is all there and all good, use the Back button way up at the top of the screen to go back.



And, you will see that you now have stocking standards.



And finally, here is a quick reference table on Code standards prepared by Cortex Consultants back in 2002 or so:

Summary of Woodlot Licence Forest Management Regulation (WLFMR) default values for stocking requirements

Requirement		Where to Find Information				WLFMR Section Reference
Preferred species		specified in the operational plan				n/a
Acceptable species		specified in the operational plan				n/a
Minimum intertree distance		Interior BEC zones (BG, BWBS, ESSF, ICH, IDF, MS, PP, SBPS, SBS) planted: 1.5 m natural: 2.0 m		Coast BEC zones (CDF, CWH, MH) 2.0 m		S74 (definition of *well-spaced*)
Regeneration date		Interior BEC zones (BG, BWBS, ESSF, ICH, IDF, MS, PP, SBPS, SBS) + MH		Coast BEC zones (CDF, CWH)		
regen method from operational plan		planted	natural	planted	natural	
years since harvesting commenced		4 yr	7 yr	3 yr	6 yr	S77 (1) b
MSSpa **MSSp**		WLFMR Schedule A				S77(2), (3)
Free growing date years since harvesting commenced		Interior BEC zones + MH 15 yr		Coast BEC zones (CDF, CWH) 12 yr		S78 (1) b
Free growing—MSSpa, MSSp		WLFMR Schedule A				S78 (3), (4)
Free growing—minimum height	absolute	WLFMR Schedule A				S78 (5) a
	relative to competition	*ESSF, IDF, MS, MH, PP, BG* 125%		*CDF, CWH, BWBS, ICH, SBPS, SBS* 150%		S78 (5) b (ii)
Free growing—minimum time trees have been on site		5 yr since harvesting began		5 yr since harvesting began		S78 (6)
Maximum density (countable conifers)		10,000 sph *		10,000 sph *		S78 (7) b
Post-spacing density (countable conifers)	not single-tree selection	Interior BEC zones (BG, BWBS, ESSF, ICH, IDF, MS, PP, SBPS, SBS) 2000 sph		Coast BEC zones (CDF, CWH, MH) 1500 sph		S78 (8) b (i)
	single-tree selection (sapling layer)	1500 sph		1500 sph		S78 (8) b (ii)
Target stocking standard (TSS)		WLFMR Schedule A				S80 (1)

* or the localized maximum density established in writing by the District Manager in accordance with the Chief Forester's policy

13.3 Instructions to Add Code Era Stocking Standards to a "FRPA Block"

If you are looking at the heading above and saying "WTF?!?", congrats, you are getting it! That heading makes NO sense. Except in our odd e-World, it does.

Here is the case: Somebody went and referenced stocking standards from the library of standards, using an SSID, when reporting a Code block. This sets the RESULTS admin regime for the reported block to FRPA.

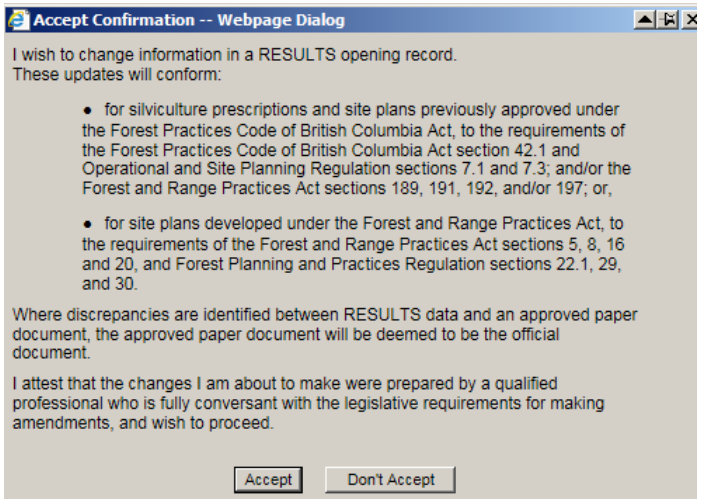
I used to ask FLNRO to change the admin regime back to Code, but they have asked us (me) to cease and desist, and just get the units to FG, at which time the admin approach in RESULTS ceases to matter. Discussed in Section 10.2.3.1.

Whatever. Unless you are looking at a Code block (a) that has mistakenly been moved to FRPA admin and (b) that has entered stocking standards that are incorrect. The legal standards are in the paper plan - the incorrect RESULTS content does not affect legal obligations. But it is inconvenient having the wrong standards in RESULTS. Confusion can result.

You can not get to the Correction | Minor Amendment | Amendment selection bar to Correct the data entry mistake, because the bar is not there.

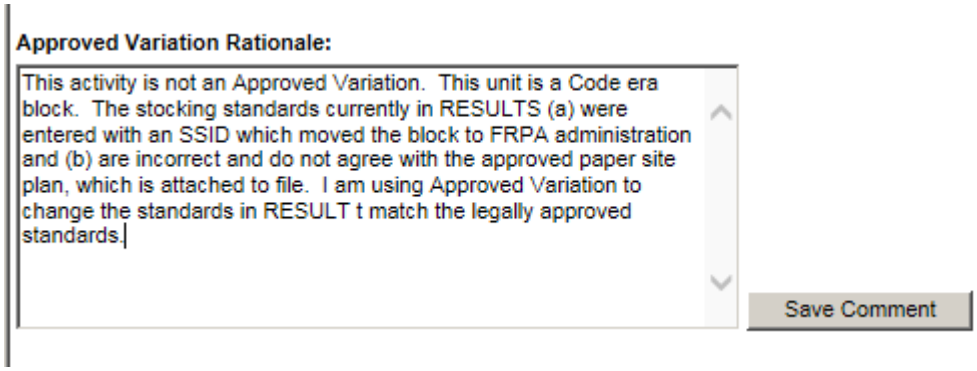
What you do have access to is Approved Variation | Site Plan Amendment | Amendment. I use "Approved Variation". What I am about to do is not an Approved Variation, but it sure as _____ is not a Site Plan Amendment. So I pick my poison.

So I click Approved Variation, which brings up the Legal box:



You know, what I am about to do may actually fit within the legal boilerplate. No mention of WL or WLPPR in there, but "approved paper documents" and "prepared by qualified professional" do come up, and they are very relevant. But whatever, it is not like I have a lot of options. I Accept.

The Approved Variation screen opens. First things first. Go to bottom of screen, where you will find Rationale box. Tell your sad story.



Seems clear to me, except for my obligatory typos. Do not know if the Forest Practices Board would agree. One day we will find out.

Why rationale first? Well, you do not want to make the changes, hit Save, quit and then say "Oh ___! The rationale!!" I have done that far too many times. Rationale first!

After that, do unto the stocking standards in RESULTS as required to make them identical to the approved paper Site Plan and WLFMR default standards, per Sectio13.2 above .

13.4 Amending Code Era Stocking Standards in a Code Admin Block

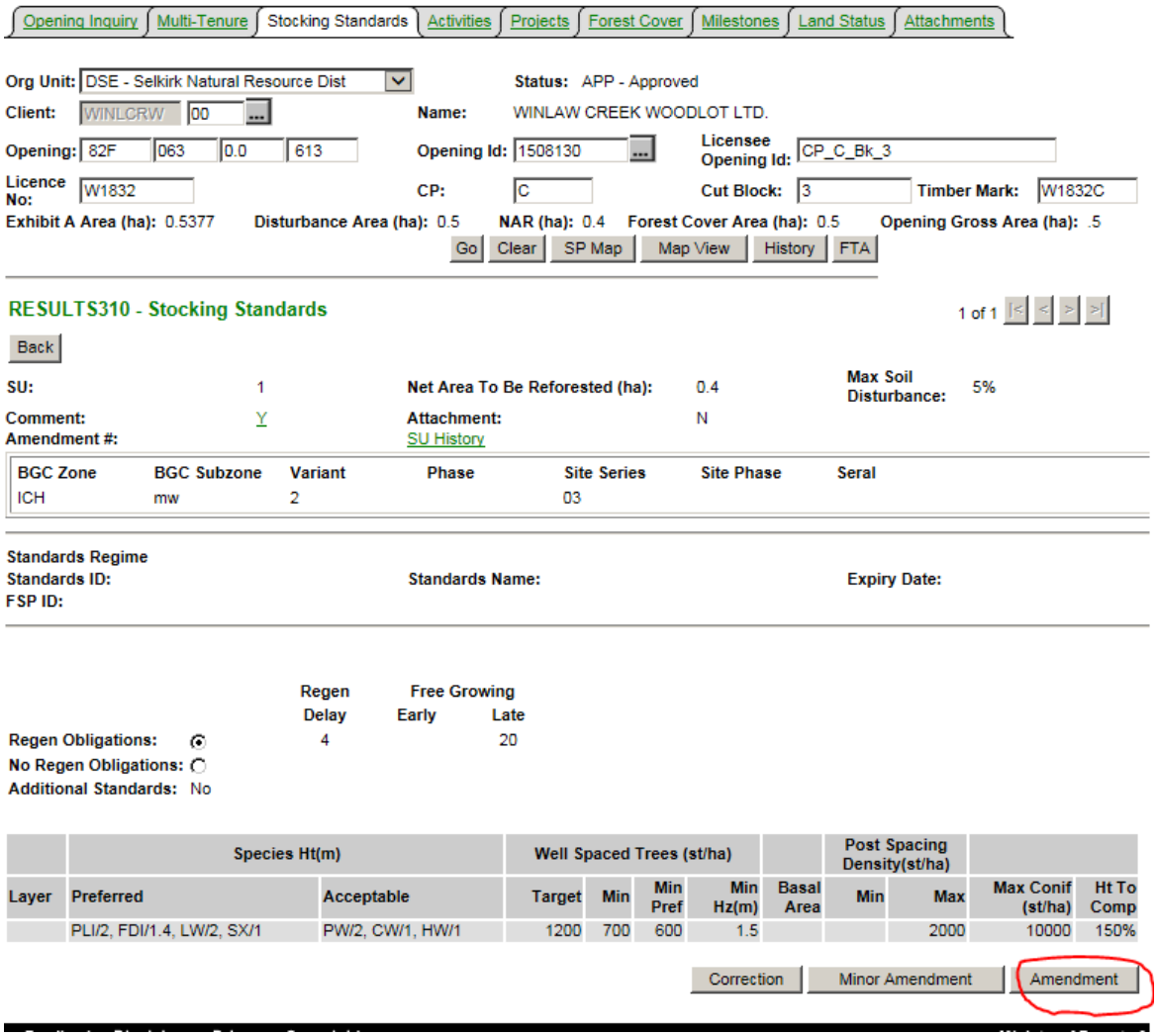
Under the Code, the legally binding stocking standards and other practice requirements were set in a paper Site Plan that was approved by the MoF.

Any/all changes[12] to the requirements set in the paper Site Plan must be approved by FLNRO. A proposed amendment form with a rationale and with professional and licensee signatures is submitted. I have a classic old form from the Code days that I recycle as needed. Available from WLGML web site in "Manuals" section. We no longer submit the changes as paper, however, we do it through RESULTS.

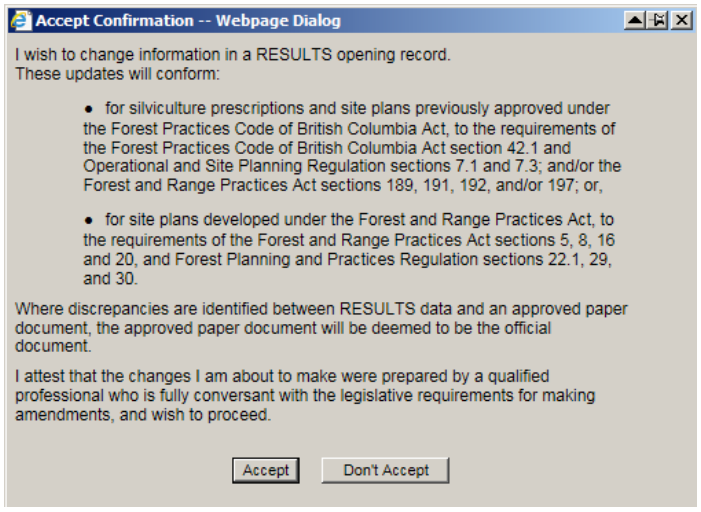
That said, most practitioners prefer to have a short discussion with FLNRO WL Forester or Stewardship Forester early in process, to establish if the proposed amendment can be approved, in their opinion, and/or to identify alternate approaches.

You use the amendment button in the FS310 screen to start the process:

[12] You can "change" the info in RESULTS to match the approved paper site plan as a Correction. We are talking about changing the content of the paper Site Plan here. That is an Amendment.



The system asks if a professional prepared the amendment:



Accept leads to a screen where you <u>very carefully</u> enter the changes required.

Opening Inquiry | Multi-Tenure | Stocking Standards | Activities | Projects | Forest Cover | Milestones | Land Status | Attachments

RESULTS312 - Stocking Standard Amendment Request

Printer Version

Back | History

Org Unit: DSE - Selkirk Natural Resource District
Client Number: 00142700 **Locn:** 00 **Name:** WINLAW CREEK WOODLOT LTD.
Opening 82F 063 0.0 605 **Opening ID:** 1063510 **Licensee Opening ID:** CP C Blk 2

1 of 1

SU: 1 **Net Area To Be Reforested (ha):** 2.6 **Expiry Date:**
Max Soil Disturbance: 5 % * **Comment:** Y **FSP ID:**
Standards ID: ... **Standards Name:** **Amended:** Y
Objective: **Geographic:**

BGC Zone	BGC Subzone	Variant	Phase	Site Series	Site Phase	Seral
ICH	dw			01		...

Include Exhibit A Spatial ☐

		Regen Delay	Free Growing Early	Free Growing Late
Regen Obligations:	◉	7	7	20
No Regen Obligations:	○			

Additional Standards: Save | Add | Delete

Single | Layer 4 - Regen | Layer 3 - Sapling | Layer 2 - Pole | Layer 1 - Mature

	Well Spaced Trees / ha	Residual Basal Area (m2/ha)	Post Spacing Density (st/ha)
Target:	1200		
Min Horiz (m):	1.5		
Min Pref:	600		
Min:	700		
Max:			2000

Max Coniferous (st/ha): 10000
Height Relative to Comp(cm/%): 150 %

Save | Cancel | Delete | Convert To Multi Layer

Preferred Species	Min Height	
		Save Cancel
PLI - LODGEPOLE PINE	2	Update Delete
FDI - INTERIOR DOUGLAS-FIR	1.4	Update Delete
LW - WESTERN LARCH	2	Update Delete

Acceptable Species	Min Height	
		Save Cancel
PW - WESTERN WHITE PINE	2	Update Delete
HW - WESTERN HEMLOCK	1	Update Delete
BG - GRAND FIR	1	Update Delete
CW - WESTERN REDCEDAR	1.1	Update Delete
SXW - ENGELMANN X WHITE	1	Update Delete

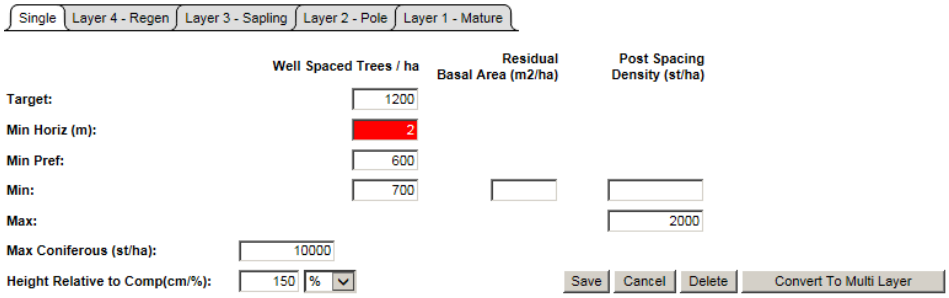
Amendment Rationale:

Save

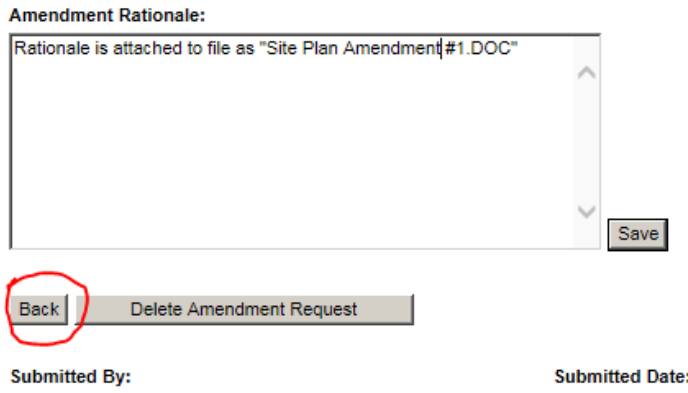
Back | Delete Amendment Request

Note that the screen above has multiple save buttons. Different buttons save different entry areas. You have to save multiple times inmost amendment cases. As previously mentioned, start by filling in the "Rationale" box at the bottom. If the rationale is short, you could enter it in box. But as amendments generally require professional and licensee signatures, it is more common to state that the rational is attached to file and attach a scan of the proper, signed form to the RESULTS file.

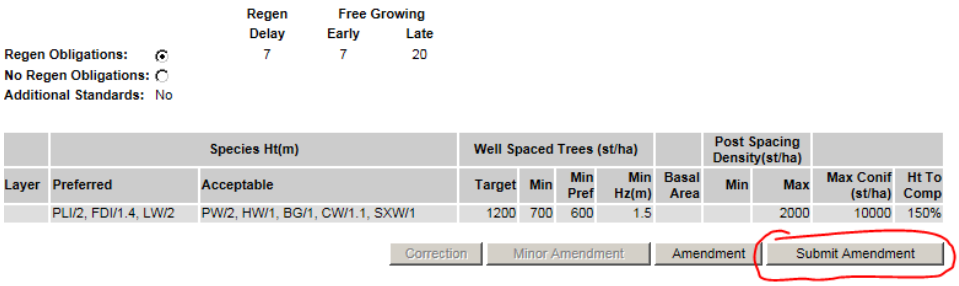
Enter the relevant changes. After you enter and press a <Save>, your change is highlighted red.



Once you are done entering the changes that the written Site Plan Amendment calls for, and have saved, go <Back>



Then re-open your amendment using the Amendment button to be sure that (a) you entered things properly and (b) you did not miss a <Save>, which causes your info to vanish. Once you are sure you have it right, <Submit Amendment>.



Why so stressed about "getting it right"? Well, after you press <Submit Amendment>, you are locked out of the Amendment screen. If you realize you forgot to change some item, you have to call up FLNRO and ask them to please reject your Amendment so that you can fix your mistake. We all prefer to avoid that step.

As long as the amendment is not submitted, you have option of going back into it using the <Amendment> button, and then using <Delete Amendment Request> to get rid of it.

Not that all the footprints are gone! Your activity is tracked in History. ALL activity is tracked in History. History sees all and knows all……

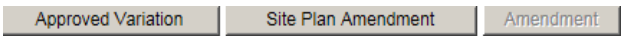
Amend.	Event Date/Time	User	Event	Description
2	2020-07-01 04:45PM	BCEID\TBRADLEY	Deleted	Proposed Amendment Deleted.
2	2020-07-01 04:30PM	BCEID\TBRADLEY	Amended	Opening Amended.
	2016-12-29 11:29AM	BCEID\TBRADLEY	Correction	Correction
	2016-12-29 11:29AM	BCEID\TBRADLEY	Milestone	Milestone was modified.

Finally, you also attach the signed Site Plan Amendment form to the RESULTS file. I also send a polite note to my stewardship forester telling them that we are seeking a Site Plan amendment on OpeningID _____. FLNRO either approves or rejects the amendment. If reject, discussion may follow.

13.5 Amending Code Era Stocking Standards in a "FRPA Block"

Back to the scenario where harvesting authorized under the Code is entered in RESULTS as FRPA administration by error. This time to examine how to carry out an Amendment to the Code era stocking standards.

The process that should be followed is outlined above. But this is not possible as the <Amendment> button in FRPA admin is grayed-out, and <Site Plan Amendment> has a different function than the Amendment button.



Rather than drop you into a process that accepts input and locks the file until FLNRO approves the amendment, <Site Plan Amendment> just lets you change things. Attractive, yes. Legal, no.

There is no official business process as the situation is not supposed to exist. But what we do know is there is no way to get the block back into Code admin, so we have to invent *something*.

My suggested business process is:

1. Explain the admin situation (Code block trapped in FRPA admin) to your WL forester and/or stewardship forester. Cannot do through standard business process.
2. Send them the prepared Site Plan Amendment form. Ask for a note back indicating approval, if they approve.
3. Make the required change(s) using an XML file with Action Code 'Major Amendment' or in the web interface.

4. Add a comment to the file saying that the Amendment filed on <date> is approved by _____ and that the amendment rationale is attached to file.
5. Attach the scan of the signed Site Plan Amendment form and the written approval note from FLNRO to the RESULTS file.

14. RESULTS Forest Cover Submission

14.1 Introduction

Reporting forest cover is more than a little complicated at first glance, but once you get used to it, it is not so bad.

The general principle is that you need to tell RESULTS about all the different vegetation types found within the Opening you have defined. The table below illustrates some common spatial relationships.

<table>
<tr><td colspan="5">Opening</td></tr>
<tr><td colspan="2">SU 1</td><td>SU 2</td><td rowspan="3">Forcov:
NP-Man Made Landing</td><td rowspan="3">Forcov:
Reserve Patch WTRA</td></tr>
<tr><td>Forcov: Part of SU 1 that is Pl Leading</td><td rowspan="2">Forcov: Part of SU 1 that is Sx Leading</td><td rowspan="2">Forcov:
Sx Leading on Moist Site</td></tr>
<tr><td>Contains non-mappable NP rock outcrops.</td></tr>
</table>

- You will report forest cover for each SU based on survey outcomes. The forest cover will be NSR for the period before regeneration.
- A SU (such as SU 1 above) can contain more than one forest cover polygon if differing regeneration outcomes have occurred.
- Any forest cover polygon can have an estimated percentage of non-mappable non-forest area. These are:
  - NP areas that are too small and/or too dispersed to map effectively, and
  - Most permanent roads. We used to map discrete "road tube" polygons to show road NP areas. The FLNRO dept that updates the VRI data has asked that we please stop doing that, as them have to remove all those road tubes, by hand, when they transfer our block information to the VRI data set at Free Growing. So please deal with road area as an Unmapped Netdown.

  These non-mappable non-forest areas should also have been deducted from the gross SU area to derive Net SU area, or Net Area Reforestable, back when you made the SU submission.
- Mappable areas (> 0.25 ha in general) of reserves, non-forested land or non-productive land within an opening are reported as forest cover polygons. They may have no "forest" cover, but they are reported here, in forest cover.
- Total area of Forest Cover polygons must equal total area of Opening.

14.2 Opening and SU Information

RESULTS requires that Opening and SU submissions exist before your can input forest cover. And that there be a Activity: Disturbance entry. (See Section 12.2)

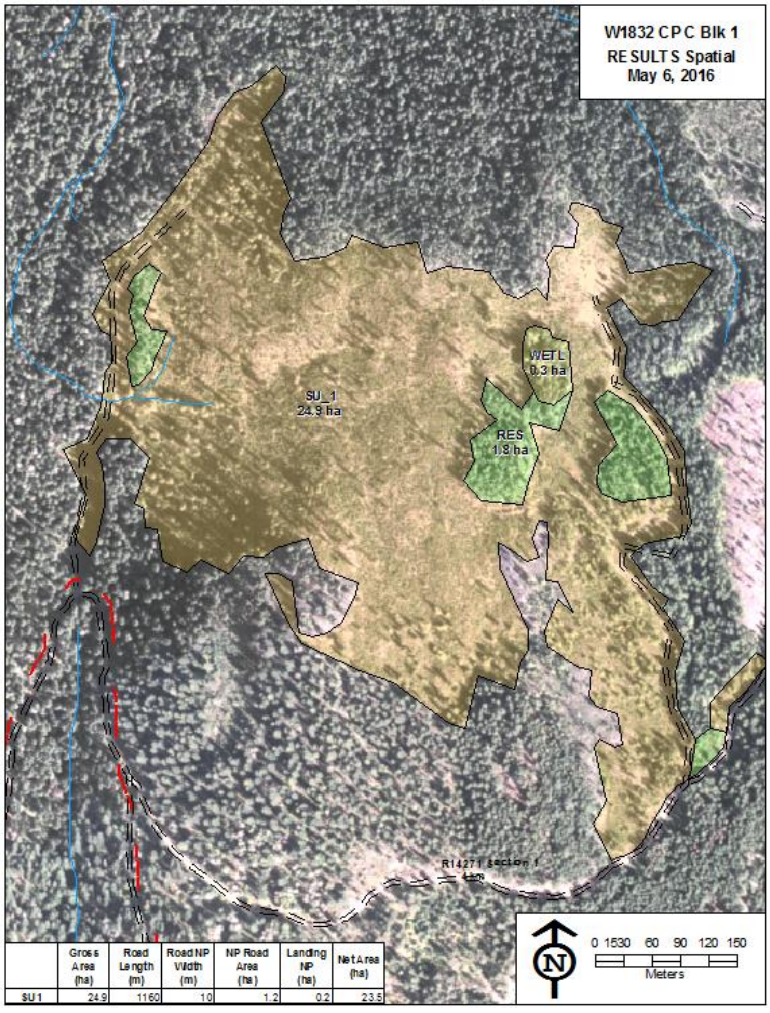
Once you have completed those tasks, you can proceed to create a Forest Cover submission in WLGML and upload it.

If you are just trying to update existing forest cover, then these tasks (SU and Opening, Disturbance report) must have already been done to get the opening reported to RESULTS the first time. But you should check that:

- that Total Area of Disturbance reported is >= NAR area,
- Disturbance Complete has been checked off, and
- that Total area of Disturbance correlates with the Forest Cover area for SU NAR + man-made NP.

14.3 Forest Cover Data Entry

Here is a map of the example block I am reporting.



Area is subject to even aged stocking standards, with significant overstory retention in places. Panhandles to enclose the access roads, rather than a road permit. (It was olden times. The District said "Use a panhandle, not a Road Permit." We did.)

To create a forest cover submission, we need to add:

- Forest cover polygons (spatial data) that fill the Opening. Can be just one polygon or many polygons, depending on veg cover and circumstances.
- Inventory and silviculture layer information for each forcov polygon in the NAR, and tree species information for each layer added.
- You can choose to enter inventory layer data for forested areas outside of NAR (WTRA, natural NP forest), or can add no layers at all. If you choose not to add layer data, the System will populate the forest cover in the "blank" areas from existing VRI data on file. If this is not desirable, and you have better info, enter inventory data for the reserve(s). Remember however that forest inventory is within scope of professional forestry, and information to support the forest cover attributes entered is likely required.
- Basic info for any mapped non-forested polygons (wetlands, rock outcrops, etc.)

14.3.1 What Are We Mapping Here?

No news here. Shape files and how to represent your data have been covered extensively previously.

What you need is a shape file that contains polygons for the various vegetation cover units you wish to report on.

The total area of your forest cover polygons must equal the opening area.

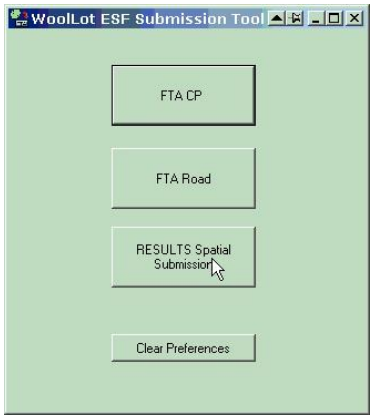
Forest cover polygons often mirror SU polygons, but an SU can be subdivided into different forest cover polygons if regeneration outcomes are different. Forest cover polygons may not cross SU boundaries, however.

Forest cover polygons also may be created for natural NP areas, man-made NP areas and reserve patches, where these things are large enough and contiguous enough to map. Such features can also be dealt with as non-mappable areas within a forest cover polygon. RISS-wl states that the preferred minimum size is 0.25 ha, but notes that RESULTS can cope with polygons down to 0.1 ha in size (RISS-wl page 34, footnote 17).

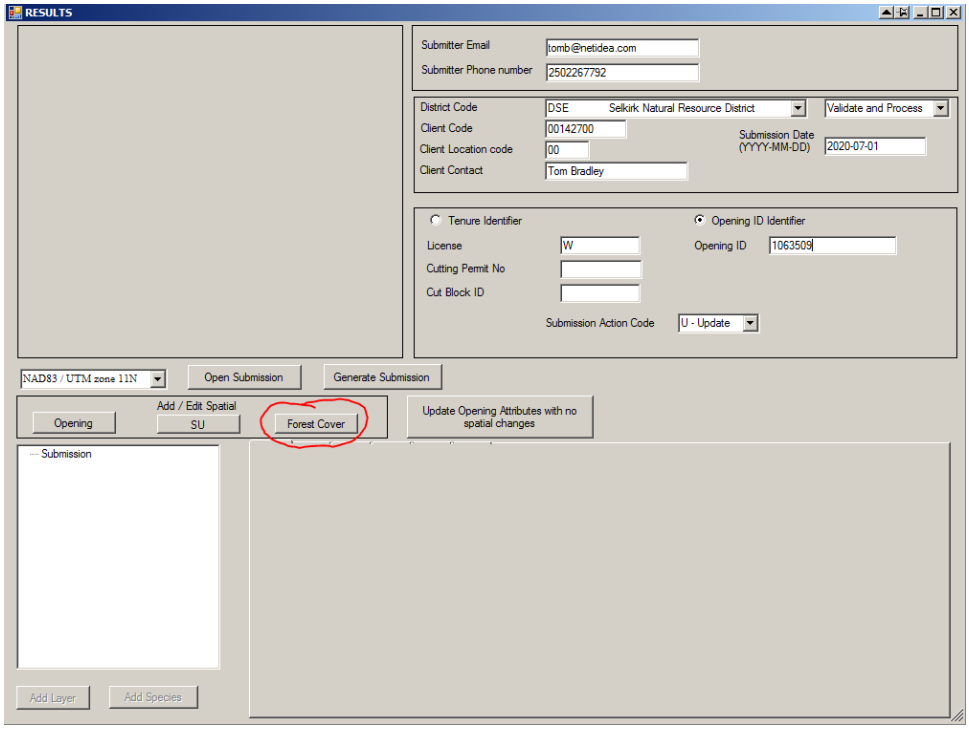
RISS-ls pages 34 to 40 and RISS-wl pages 36 to 41 address what to map and how to do it. You really should review those sections of the RISS in case something in there applies to your situation.

14.3.2 Add Spatial

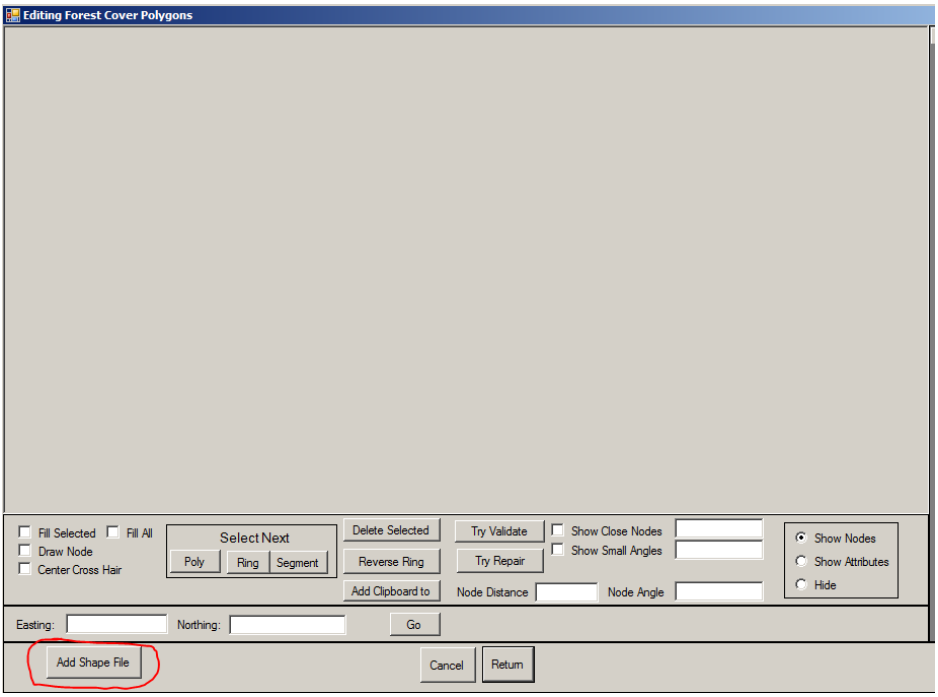
As always, we open up WLGML, and select RESULTS:



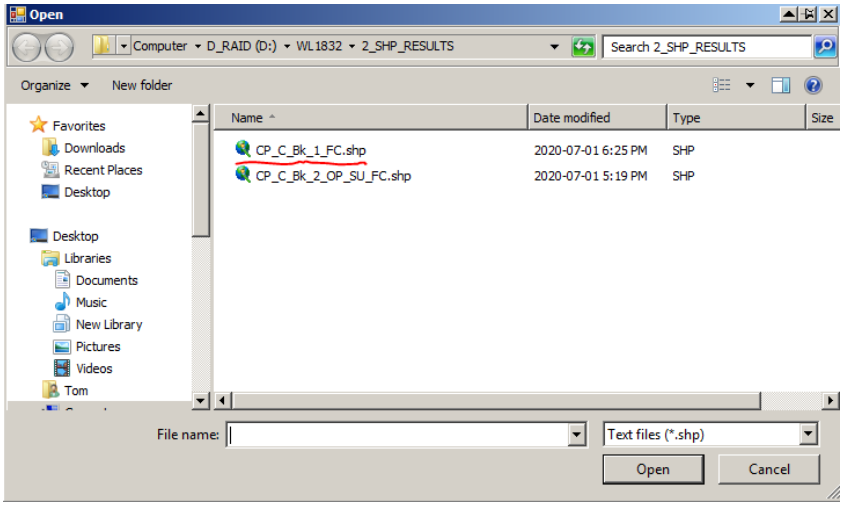
Now, verify that the Projection is set appropriately (see Appendix 4) and then click on Forest Cover under Add Spatial to add the forest cover spatial data:



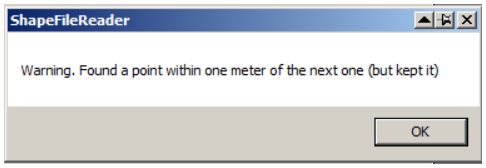
The usual screen appears. Click on Add Shape File:



Which opens the usual Windows browse for File menu box, and you go track down your forest cover shape file. Mine is cleverly named CP_C_Blk_1_ForCov_Ver_1.shp. Probably should have used W1832_CP_C_Blk_1_ForCov_Ver_1.shp, but I forgot.



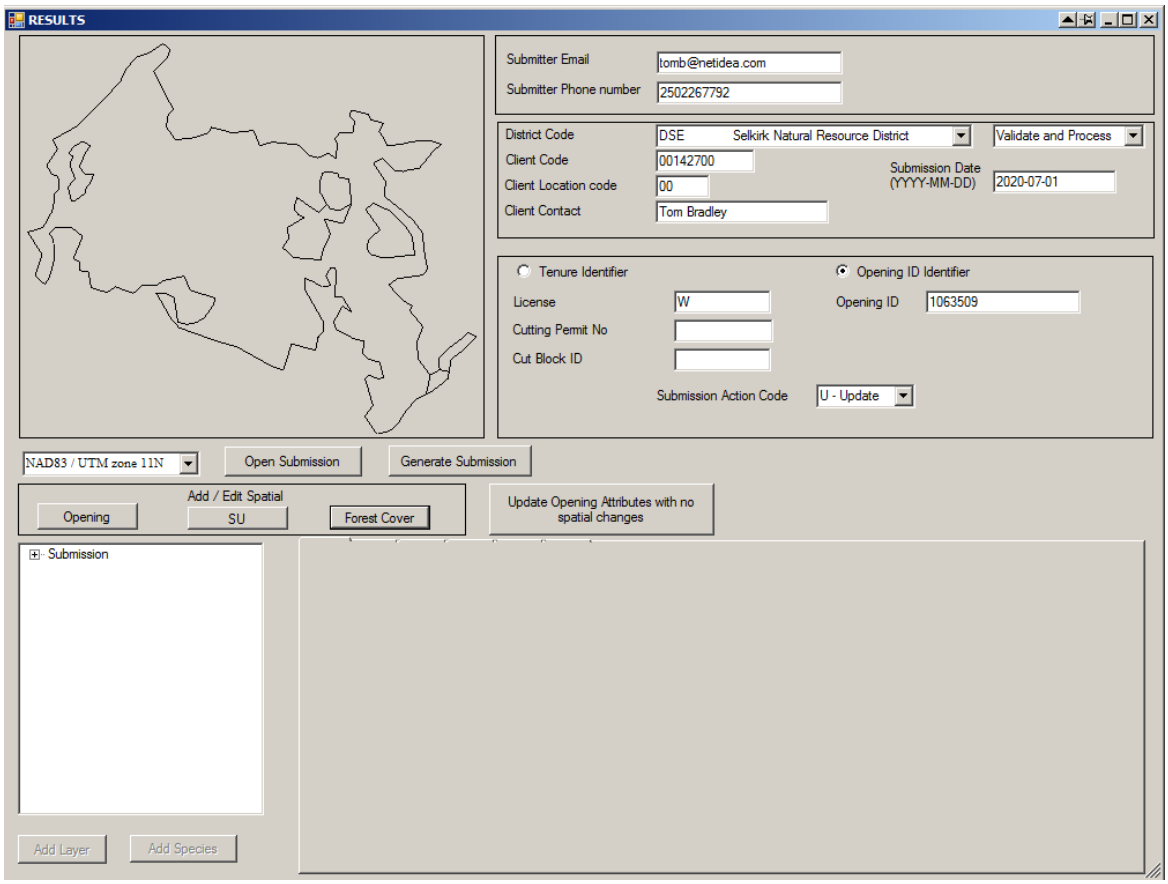
Now this time when I click Open I get a nag screen:



Plainly, my standards of cartography are slipping, and I have a point in my Forcov outline that is close to another point. I could go back and fix it, but the nag screen is not saying "You Are Rejected", so I'm going to let it slide. And as RISS-ls page 50 points out, the

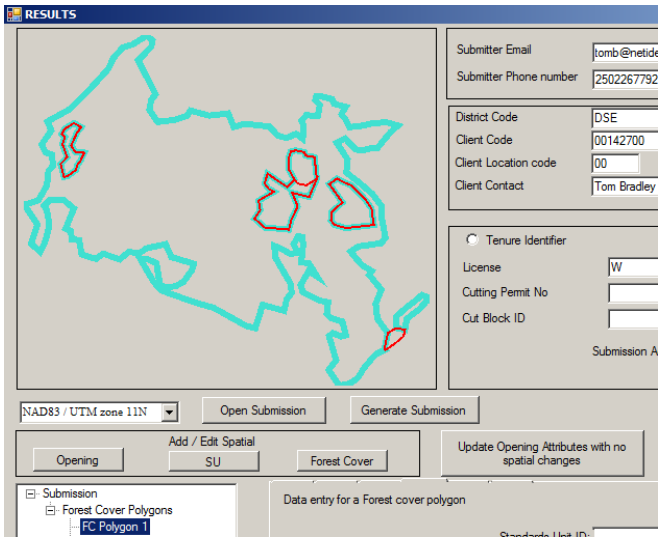
RESULTS system will clean this up anyway. If I have 5 of them, I'd go back and clean up - too large an auto-fix can lead to unexpected results.

Nothing bad happens, and we end up back in WLGML looking at:

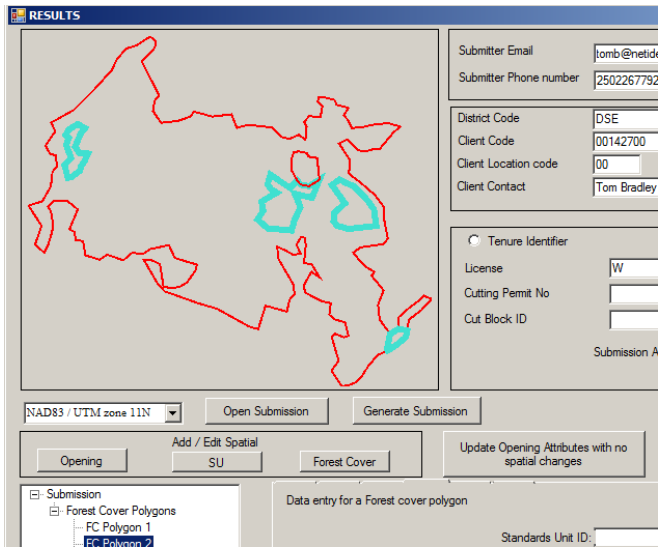


At this point, you want to expand the Forest Cover Polygon tab and figure out which polygon number applies to which forest cover polygon.

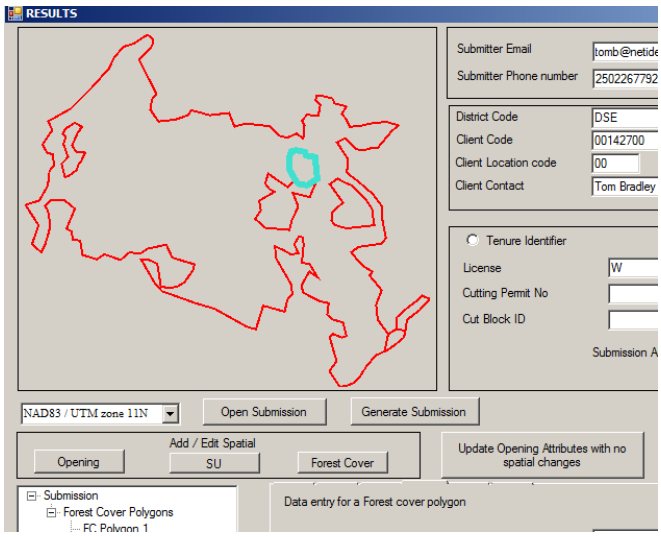
Click on the various FC Polygon entries. The map will show which spatial area each forcov entry form applies to. **There is no guarantee that your "Forest Cover Poly 1" will be the first forcov polygon the program pulled from the shape file**, so keep an eye on the map display and carefully figure out which entry field correlates to which forcov poly. Then enter the right data in each.



FC Polygon 1 is SU 1, the harvest area.



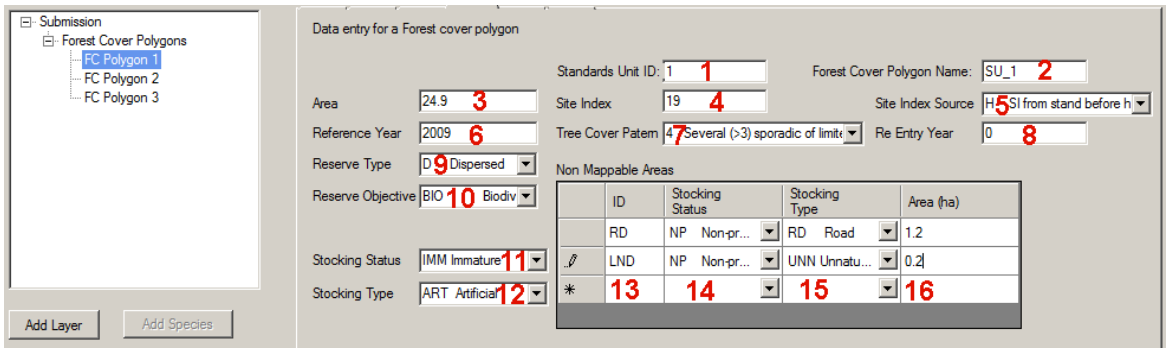
FC Polygon 2 is a set of reserves.



FC Polygon 3 is a small wetland.

14.3.3 Forest Cover Polygon - Main Screen Data Entry

We will start with the SU 1 forest cover polygon. The first step is to fill in the main data field for the polygon.



1. **SU ID**. Conditional entry. Is the forest cover polygon within a Standards Unit?

   If yes, provide the Standard Unit ID. What did you call this SU in the Standard Unit ID field on the SU submission? Call it exactly the same thing here.

   If not in NAR, leave blank.

   When used, this entry links this forest cover polygon with the Stocking Standards entered for the Standards Unit. Obviously, important to get it right.

2. **Licencee ID**. Mandatory entry. A unique identifier for the forest cover polygon assigned by the licensee.

   In RESULTS web site, this field is referred to as Polygon ID.

   No duplicates permitted. Can be up to 30 characters long, but short is better. e.g., 1, 2, 3; or X, Y, Z.

   This label shows up in MapView as the polygon descriptor.

   Do not use exotic characters like < (less than), > (greater than), ‘ (single quote), “ (double quote), & (ampersand) or / (forward slash) in your entry.

   I use IDs like SU_1, NP_Road, Wetl .

3. **Area**. The gross area in hectares, one decimal pace, of the forest cover polygon.

4. **Site Index**. Conditional entry. Required if tree species are entered in this polygon. i.e. if this is a forested area.

   SI 50 standards. Integer, 2 characters. (i.e. 22, not 21.7)

   Specifications not clear on conditionality for NSR areas, but it seems logical to enter for NSR that will be forested in future.

   For multi-storey stands, the SI is for the layer with the highest volume or next due for harvest (the layer with the greatest site occupancy; e.g., mature, pole, or sapling layer).

   For reserves, the SI may be based on previous stand information applied to the mature layer, or to the layer with the greatest site occupancy.

5. **Site Index Source**. Conditional entry. Must be filled if Site Index is filled, must be blank is Site Index is blank. Select from dropdown list.

   Where did your SI 50 data come from?

   Choices are:

   A Site index from adjacent stand
   C SI from site index curve
   E SI from BEC
   H SI from stand before harvest
   I SI from growth intercept
   M SI from G,M,P,L Site Class Conversion
   O SI from provincial SIBEC rollover
   S SI assigned by District Silv. Section

   This should be part of any regen survey or Free Growing survey report.

6. **Reference Year**. Mandatory entry. Integer, 4 characters. e.g. 2010

   Must not be greater than current year.

   The year the forest cover polygon data was collected. Typically the year of the survey.

   For roads and other man-made NP areas, the reference year will be the date the road was built or the NP patch was created.

   For reserve areas that I intend to let the system loom up VRI forest cover for, I drop into the VRI and look up the Ref Year for the applicable VRI polygon. I am pretty sure that logged year will do fine if you prefer.

7. **Tree Cover Pattern**. Conditional. Integer, 1 character. Select from dropdown list

   Applies to polygons, including reserves, in which overstory trees are retained as part of the silvicultural system or disturbance characteristic. Leave blank if no overstory.

   The example polygon does have some dispersed mature retention, so this value is filled in.

   This code describes the spatial arrangement of residual patches of overstory in Layer 1. In the chart of choices below, gray represents forested and white represents not forested. I almost never see a choice that I think matches my leave pattern exactly, but whatever, choose the least wrong one and move on.

1. Single to very few (<4) occurrences of limited extent, circular to irregular shape.
2. Single to very few (<4) occurrences of limited extent, linear or elongated shape.
3. Several (>3) sporadic occurrences of limited extent, circular to irregular shape.
4. Several (>3) sporadic occurrences of limited extent, linear or elongated shape.
5. Intimately intermixed units, often with gradational transitions from one to the other.
6. Discontinuous but extensive occurrences, parallel to sub-parallel elongated in shape.
7. Limited continuous occurrence with few inclusions.
8. Continuous occurrence with several inclusions.
9. Continuous occurrence with very few inclusions.

8. **Re-Entry Year**. Conditional entry. Integer, 4 characters. e.g. 2045

   The year the next harvest entry is expected to occur in the polygon.

   Applies to partial-cut silvicultural systems in which a subsequent harvest entry is planned prior to the end of the rotational planning cycle. (You plan on coming back to cut more wood before today's regen grows to merch size.)

   Required where Reserve Objective = TIM (timber).

   If there will not be a harvest "planned prior to the end of the rotational planning cycle", leave this field blank.

   A 0 value will not be accepted, as it means year 0 which does not compute.

9. **Reserve Type**. Conditional entry. 1 character. Select from dropdown list.

   "Required if a reserve or a retention area is associated with the forest cover polygon." This means required if the polygon itself is a reserve, like a wildlife tree patch, or if the polygon contains reserved timber, like dispersed seed trees or timber that will be cut in a later harvest.

   Valid codes are:

D	Dispersed
G	Group
N	No Reserve

Null	No Reserves

A reserved patch is a Group reserve.

"Retained live or standing dead trees that are pole size or larger for purposes other than regeneration" is a Dispersed reserve. (Those dead trees better not be for regeneration!).

Retained small groups of trees dispersed around a harvest unit is a… you better read the manuals. Please review RISS-wl pages 35-36 and *Submitting Forest Cover To Results For Openings With Treed Retention*[13] if you are unsure about how to classify your reserves.

Classifying and coding Reserves has been a challenge for RESULTS users. There used to be more reserve codes, but they were recently right-sized in an attempt to get greater consistency.

10. **Reserve Objective**. Conditional. 3 characters. Select from dropdown list.

    Required if Reserve Type = G or D.

    A code that identifies the reason for leaving the reserve.

    A reserve, dispersed or grouped, that will be harvested before the next rotation is coded as TIM for timber.

    If a reserve will remain standing until the next rotation, select the code which best defines the primary reserve purpose from the list.

    Valid codes are:

BIO	Biodiversity
BOT	Botanical Forest Products
CHR	Cultural Heritage Resource
CWD	Coarse Woody Debris
FH	Forest health
FUE	Fuel Management
MSM	MSMA Treated Area
OTH	Other
REC	Recreation
RMA	Riparian Management Area
SEN	Sensitive Site
TER	Terrain Stability
TIM	Timber management
VIS	Visual
WTR	Wildlife Tree Retention Goals
Null	No Reserves

11. **Stocking Status**. Mandatory entry. 3 characters. Select from dropdown list.

    A code indicating the growing space occupancy according to the latest silviculture survey.

[13] http://www.woodfor.com/WLGML/Submitting_Forest_Cover_to_Results_for_Openings_with_Treed_Retention.pdf

Stocking status of areas in the net area to be reforested is described as not satisfactorily restocked (NSR), immature (IMM) or mature (MAT). Note that Immature/Mature is judged by the old forest cover standards:

*	All deciduous species; *Pl* ; *Pa*	All coniferous species except *Pl* and *Pa*
Immature	1-80 yrs.	1-120 yrs.
Mature	≥81 yrs.	≥121 yrs.

In a multi-storied stand, select the code which describes the stocking status of the next layer to be harvested, the layer with the highest site occupancy.

Stocking status is also used to describe non-forested and non-productive polygons.

Valid codes are:

A	Alpine
AF	Alpine Forest
C	Cultivated
G	Gravel Bar
IMM	Immature
L	Lake
M	Meadow
MAT	Mature
NC	Non-commercial
NF	Non-forest
NP	Non-productive
NSR	Not Satisfactorily Restocked
OR	Open Range
R	Rock
RES	Residual
S	Swamp
U	Urban

12. **Stocking Type**. Mandatory entry. 3 characters. Select from dropdown list.

    Code to add more information on stocking status.

    In a multi-storied stand, select the code which describes the stocking type of the next layer to be harvested, the layer with the highest site occupancy.

    Valid codes are:

Null	No stocking type required
ART	Artificial
BR	Brush
FOR	Forested
NAT	Natural
NPL	Non-plantable
PL	Plantable
RD	Road
UNN	Unnatural

    Note that there are only some allowed Stocking Status / Stocking Type combinations. The allowed combinations are shown in the table below.

Stocking Status	Stocking Type
A	NAT
AF	FOR
C	UNN
G	NAT
IMM	ART
IMM	NAT
L	NAT
M	NAT
MAT	ART
MAT	NAT
NC	BR
NC	FOR
NF	NAT
NP	FOR
NP	NAT
NP	RD
NP	RHR
NP	UNN
NSR	NAT
NSR	NPL
NSR	PL
OR	NAT
R	NAT
RES	NAT
S	NAT
U	UNN

13. **Non-Mapped Areas - ID**. Conditional entry. Required if non-mapped areas defined. 3 characters.

    If you told RESULTS that the Net Area (NAR) of your SU was less than the actual SU polygon area, you use these Non-Mapped entries in the Forest Cover to explain what you netted out of NAR. The math has to work!!!

    (Forest Cover area in the SU) - (Non-Mapped Areas in SU) = SU NAR.

    Non-Mapped areas are used to account for:

    (a) inclusions of NP Areas (e.g., rock or swamp) that are too small or too dispersed to map but which should be deducted from the Net Area to be Reforested, and

    (b) the area occupied by permanent access structures, such as roads and/or un-rehabilitated landings.

    The Non-Mapped Area ID is an identifier for the non-mapped component defined by the licensee. ID must be unique within the forest cover polygon.

    SU 1 in the example block has two types of non-mapped areas, roads (RD) and landings (LND). The math was done before starting reporting and added to the map of RESULTS spatial as a table.

	Gross Area (ha)	Road Length (m)	Road NP Width (m)	NP Road Area (ha)	Landing NP (ha)	Net Area (ha)
SU 1	24.9	1160	10	1.2	0.2	23.5

14. **Non-Mapped Areas - Stocking Status.** Conditional entry. Required if non-mapped areas defined. 3 characters. Select from dropdown list.

    The same data requirements as discussed under 11. Stocking Status above, except entry cannot be IMM or MAT, as the non-mapped areas are by definition NP areas.

    NSR would seem to be unsuitable as well, but this is not specifically mentioned in the literature.

15. **Non-Mapped Areas - Stocking Type.** Conditional entry. Required if non-mapped areas defined. 3 characters. Select from dropdown list.

    The same data requirements as discussed under 12. Stocking Type above, with same constraints on Stocking Status / Stocking Type combinations.

16. **Area.** Conditional entry. Required if non-mapped areas defined. Area in hectares of the non-mapped component. One decimal place.

14.3.4 Forest Cover Polygon - Layer Entry

Having completed the main forest cover entry screen for FC Polygon 1, which has tree cover, we need to add Layers.

14.3.4.1 What Are Layers?

A Layer holds information about the trees in a polygon. Layers are vertically stratified:

- Layer 1 - Mature
- Layer 2 - Pole
- Layer 3 - Sapling
- Layer 4 - Regen

The table below provides the layer specs. As you will note, we are allegedly dividing the forest into height classes using stem diameter classes to 1/100th of a centimeter, but that's the way we are told to do it.

Layer Code	Description	Notes
[blank]	Inventory - even-aged	Blank only valid for even-aged stand
S	Silviculture - even-aged stand	Silviculture label for even-aged stand. Cannot have without corresponding inventory layer.
1	Inventory Mature Layer - uneven-aged	Trees>12.5 cm dbh - based on all commercial trees.
1S	Silviculture Mature Layer - uneven-aged	Trees>12.5 cm dbh - based on all well-spaced trees of acc species and form. (Note that many stocking standards specify there is no minimum intertree for layer

		1, in which case there is no "well spaced" consideration.)
2	Inventory Pole Layer - uneven-aged	Trees 7.5 to 12.49 dbh - based on all commercial trees.
2S	Silviculture Pole Layer - uneven-aged	Trees 7.5 to 12.49 dbh - based on all well-spaced trees of acc species and form.
3	Inventory Sapling Layer - uneven-aged	Trees 1.3 to 7.49 dbh - based on all commercial trees.
3S	Silviculture Sapling Layer - uneven-aged	Trees 1.3 to 7.49 dbh - based on all well-spaced trees of acc species and form..
4	Inventory Regeneration Layer - uneven-aged	Trees <1.3 dbh - based on all commercial trees.
4S	Regeneration Layer - uneven-aged	Trees <1.3 dbh - based on all well-spaced trees of acc species and form..

The table above is a direct copy from the RESULTS on-line help. It illustrates a common problem - the Help can be wrong, and no one ever fixes it. You have to "interpret" it, with no authorization, to deduce what is *should* be saying. In this case, what I believe it is trying to say for Layers 3 and 4 is:

3	Inventory Sapling Layer - uneven-aged	Trees > 1.3 m tall and < 7.5 dbh - based on all commercial trees.
3S	Silviculture Sapling Layer - uneven-aged	Trees > 1.3 m tall and < 7.5 dbh - based on all well-spaced trees of acc species and form..
4	Inventory Regeneration Layer - uneven-aged	Trees < 1.3 m tall - based on all commercial trees.
4S	Regeneration Layer - uneven-aged	Trees < 1.3 m tall - based on all well-spaced trees of acc species and form..

Onwards.

In 2015, FLNR added the requirement that any retained forest cover with > 5 m^2/ha of basal area be reported to RESULTS. This means in practice that retained overstory with > 5 m^2/ha is reported as a Layer 1. If the trees are permanent retention and there are no silvicultural objectives associated with the retained stems, only a Layer 1 Inventory layer is reported and the retained trees do not contribute to stocking.

If the retained trees are for future harvest, you are managing multiple stand layers and Inventory and Silviculture data is required for all layers.

You can choose to report dispersed retained overstory with < 5m2/ha of basal area - optional activity. But you are *required* to report dispersed retained overstory with >= 5 m2/ha of basal area

Generally, layers are already determined by the silvicultural surveyor who assessed your block. The only common exception is the one in our example block: a dispersed overstory of retained mature trees, that the surveyor ignored as they have no relevance to future harvest.

Some stands have all 4 layers, some have only 1.

If our example FC Polygon 1 was NSR and had no residual stocking, or was not forested, we would not add layers. However, as it does have little trees, we need to add *at least* an even aged Inventory layer and an even-aged Silviculture layer. You may need to add other layers to describe the forest cover in your harvested area properly.

Why are there Inventory and Silviculture layers? Because Inventory wants to track what is growing on the site at all times. But Silviculture wants to track what the future crop trees are and how they are doing. In theory, the two should coincide in managed forests once we are past free growing.

Inventory information is required for all forested polygons within an opening, inside and outside of SUs/NAR.

Silviculture information is required for polygons that are inside SUs, that are part of NAR. The silviculture entries track information that is used for monitoring legal reforestation obligations. A polygon with a silviculture entry must also have an inventory entry.

A fundamental divide in the layer structure is between Even-Aged and Un-Even Aged management. You can not mix uneven-aged and even aged layers in a single polygon.

This can be a bit clunky. If there are >= 5 m^2/ha of retained basal area retained in a harvest unit, or if your Code era Site Plan established dispersed retention objectives, you will report the retained large stems in an Un-Even Aged Inventory Layer 1, which forces you to report your very even-aged plantation of young trees as an Un-Even Aged Inventory Layer 4 / Uneven Aged Silviculture Layer 4S as well. It is how it is.

The simplest layer situation is, of course, a full on clearcut. The overstory is gone, the only growing stock is young planted trees. Add an Even Aged Inventory layer and an Even Aged Silviculture layer and you are done.

In the example block, there is about 2 m^2/ha of retained mature forest cover, per a Code era Site Plan. So I will choose[14] to add:

- a Layer 1 - Inv Mature, uneven aged layer for the overstory,
- a Layer 4 - Inv Regen, uneven aged layer for the regeneration, and
- a Layer 4S Silviculture Layer uneven aged for the regeneration.

The retained overstory has nothing to do with long term Silviculture and crop trees, so we do not enter a Silviculture layer for it.

While it is tempting to use the even-aged silviculture layer S, as the silvicultural component of the stand will be managed on an even aged basis, this is not the correct approach, as we have defined more than one reportable Inventory layer.

14.3.4.2 Zero, not Blank

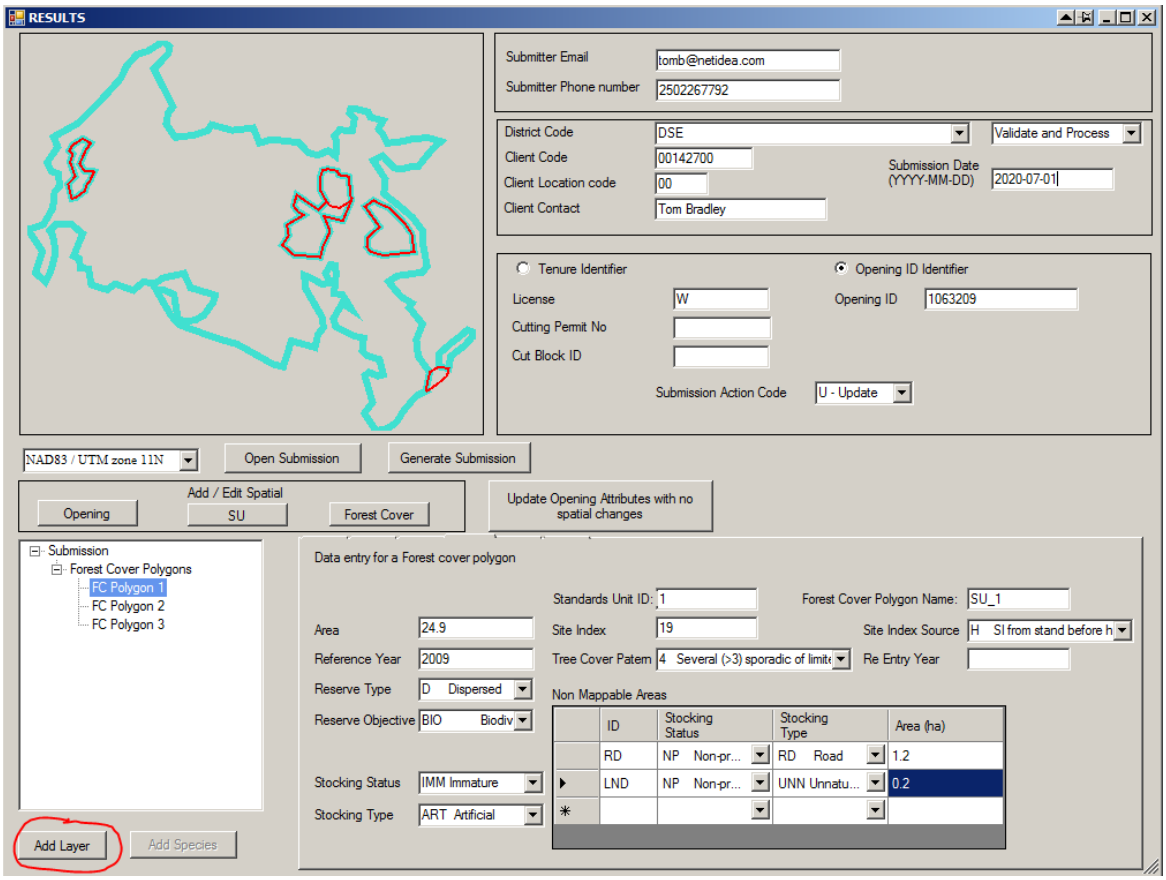
The Layer screens contain a variety of entries that are used in some layers but not in others, such as Basal Area, Total Well Spaced, Free Growing and others.

[14] "Choose to" because retained basal area < 5 m2/ha. You *must* report if retained basal area > 5 m2/ha.

If a layer entry field is not used, but loads with a 0 (numeral zero) filled by default, leave it with the 0 (numeral zero) entry. A blank, no value entry will often cause validation failure when you submit.

14.3.4.3 Inventory Layer Entry - Retained Overstory

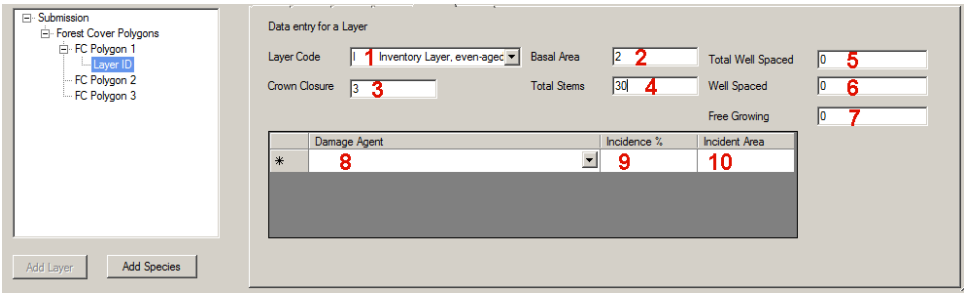
Having completed the FC Polygon data entry, click Add Layer.



Because FC Polygon 1 was highlighted when Add Layer was clicked, a Layer is added to FC Polygon 1. It is not a specific type of layer yet, just "a layer". We will enter data to define the type of layer.

There is not a required layer order in RESULTS, but an orderly approach is easiest for the human to understand. Enter the tallest layer first, followed by shorter layers, if any.

The tallest layer in the example block is the residual mature overstory with no silvicultural future. So this first layer will be an Inventory Layer, uneven-aged for large trees.



Important: The layer entry screen is a "one size fits all" screen. It contains all the possible entry blanks for all types of layers. Only a subset of the available entries is used for any particular layer.

We are filling in an Inventory Layer with overstory trees. The fields shown filled in above, and explained below, are used.

1. **Layer Code**. What layer are we reporting?

   Conditional entry, required if you have tree species growing on a site.

   2 character code selected from drop down list.

   Valid codes are:

I	Inventory Layer, even-aged stand
S	Silviculture Layer, even-aged stand
1	Inv Mature, uneven aged
1S	Silviculture Layer 1, uneven aged
2	Inv Pole, uneven aged
2S	Silviculture Layer 2, uneven aged
3	Inv Sapling, uneven aged
3S	Silviculture Layer 3, uneven aged
4	Inv Regen, uneven aged
4S	Silviculture Layer 4, uneven aged

   Technically speaking, the I code is supposed to be a <Blank>, but the program converts it to a <Blank> in the submission.

   The drop down list also contains a V Veteran code. This code has been retired and should not be used. Veterans are now described as an overstory layer, like the one we are discussing here.

2. **Basal Area**. Basal area per hectare of overstory trees.

   Conditional entry.

   Required for Inventory Layer 1 in openings where basal area is > 5 m^2/ha or is part of a stocking or retention standard.

   Required for Layer 1S where basal area is part of a stocking standard.

   Integer, 3 characters, no decimals. e.g.: 2

   Not used in layers 2, 2S, 3, 3S, 4, 4S.

   For inventory layer, basal area of all stems > 12.5 cm DBH.

   For silviculture label, basal area of well spaced preferred and acceptable stems > 12.5 cm DBH.

In the example block, the site plan specified that there would be an average of 6 m^2/ha retained basal area, with a range of 0 to 14 m^2/ha[15]. So we report our result: 2 m^2/ha. (We underachieved due to a windthrow event.)

3. **Crown Closure**. The percentage of ground area covered by the vertically projected crowns of the tree cover in the layer.

   Conditional. Required if trees are entered for layer.[16]

   Integer, 3 characters, no decimals. e.g.: 25

   In multi layer stands crown closure describes the crown closure of each stand layer, submitted separately for each separate stand layer.

   Crown closure is very interesting parameter that is almost never "measured", it is estimated. And those estimates can very a lot between people. Give it your best shot.

4. **Total Stems**. Stems per hectare in the inventory layer being reported.

   Integer, 6 characters, no decimals. e.g.: 125, 1850, etc

5. **Total Well Spaced**. Does not apply to an inventory layer. Leave as 0.
6. **Well Spaced**. Does not apply to an inventory layer. Leave as 0.
7. **Free Growing**. Does not apply to an inventory layer. Leave as 0.
8. **Damage Agent**. Insect, disease, or other factor that has caused tree damage in the layer.

   Conditional entry. Required where damage agent is present within the layer.

   3 characters. Select from dropdown list.

   Different layers can have the same damage agent code.

9. **Incidence %**. The percent of host species within the layer impacted by the damage agent.

   Conditional entry. Required where damage agent is present within the layer.

   Integer, 3 characters, no decimals. e.g.: 25 meaning 25%.

10. **Incident Area**. Number of hectares affected by the damage agent.

    Conditional entry. Required where damage agent is present within the layer.

    Number, 5 characters, 1 decimal. e.g.: 4.2

14.3.4.4 Inventory Layer Entry - Regeneration

Onwards to the next layer. In this example block, the layer describing the Inventory-Regeneration layer is next.

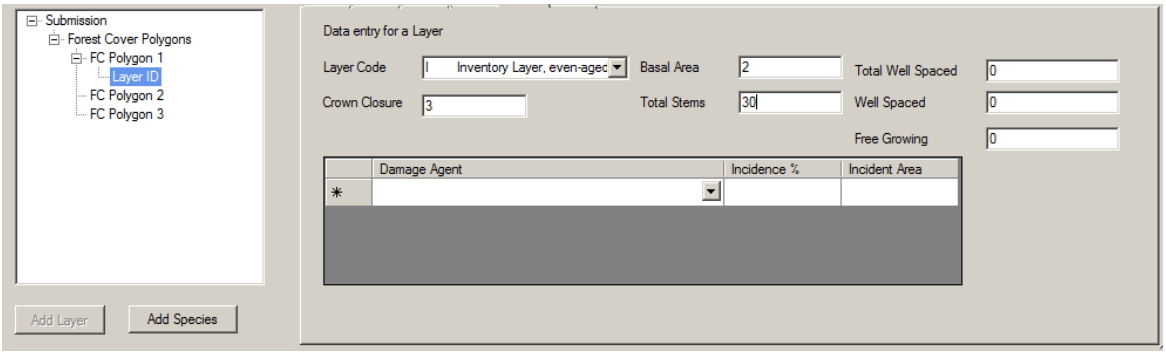
---

[15] Purest Code blather! "Average of 6 m2/ha retained basal area, with a range of 0 to 14 m^2/ha." What is the performance standard? 0? 6? Other? No one knows. We wrote it like we thought we were supposed to and the MoF approved it.

[16] Yes, that is a roundabout way of saying mandatory, as we would not even *be* here if there were no trees growing. I'm just quoting the manuals!

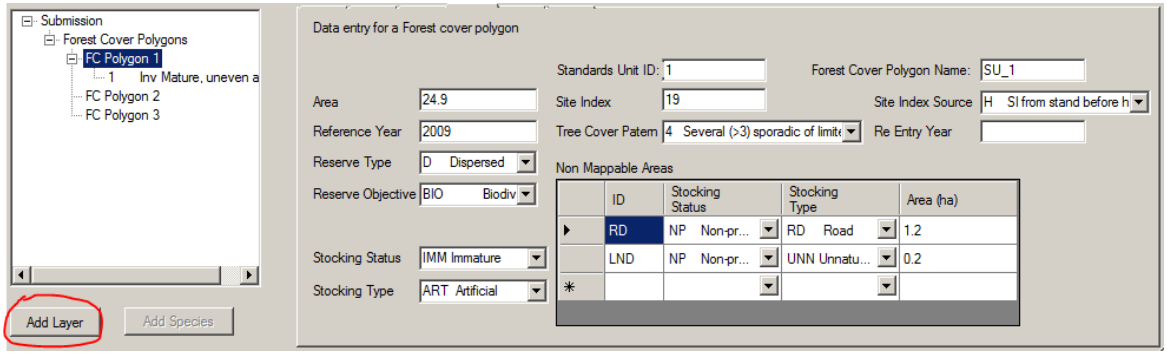
Remember, if this was a simple clearcut, we would not have multiple layers, just an even-aged inventory layer and an even-aged silviculture layer. But we had to report that retained overstory as it was mentioned in the Site Plan (or if it was > 5m²/ha BA), so we got pushed into using multiple layers in a clearcut.

Where we left off was:

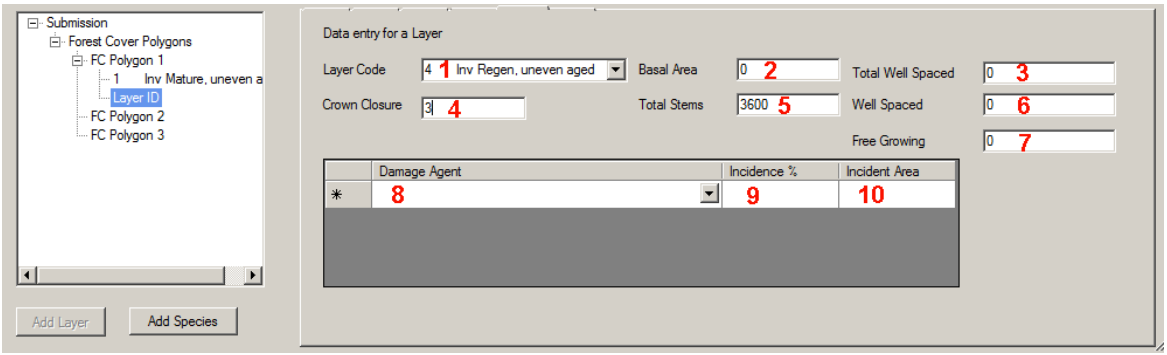


Challenge: Add Layer is grayed out. That means it will not work. But we need to add more layers to FC Polygon 1 to report the little trees.

Solution: Click on FC Polygon 1. This activates Polygon 1 and enables Add Layers. Layers are added to polygons, not other layers.



After clicking Add Layer, the layer entry screen will appear, to add the second layer for this polygon, the Inv Regen uneven aged.



Important: The layer entry screen is a "one size fits all" screen. It contains all the possible entry blanks for all types of layers. Only a subset of the available entries is used for any particular layer.

We are filling in an Inventory Layer with information on regeneration from a regen survey. The fields shown filled in above, and explained below, are used.

1. **Layer Code**. What layer are we reporting?

   Conditional entry, required if you have tree species growing on a site.

   2 character code selected from drop down list.

   We have used 4 Inv Regen, uneven aged because a) we are using uneven-aged stand layers because we have to report the presence of a retained overstory component, and b) this layer contains regeneration.
2. **Basal Area**. Does not apply to regeneration. Leave as 0.
3. **Total Well Spaced**. Does not apply to an inventory layer. Leave as 0.
4. **Crown Closure**. The percentage of ground area covered by the vertically projected crowns of the tree cover in the layer.

   Conditional. Required if trees are entered for layer.

   Integer, 3 characters, no decimals. e.g.: 25

   In multi layer stands crown closure describes the crown closure of each stand layer, submitted separately for each separate stand layer.

   Crown closure is very interesting parameter that is almost never "measured", it is estimated. And those estimates can very a lot between people. Give it your best shot.
5. **Total Stems**. Stems per hectare in the inventory layer being reported.

   Integer, 6 characters, no decimals. e.g.: 125 or 1850
6. **Well Spaced**. Does not apply to an inventory layer. Leave as 0.
7. **Free Growing**. Does not apply to an inventory layer. Leave as 0.
8. **Damage Agent**. Insect, disease, or other factor that has caused tree damage in the layer.

   Conditional entry. Required where damage agent is present within the layer.

   3 characters. Select from dropdown list.

   Different stand layers can have the same damage agent code.

   See the FS 747 form for a guide to potential damage factors and name codes if you do not feel like hunting through a drop down list.
9. **Incidence %**. The percent of host species within the layer impacted by the damage agent.

   Conditional entry. Required where damage agent is present within the layer.

   Integer, 3 characters, no decimals. e.g.: 25 meaning 25%.

   I find Damage Incidence percent can be perturbing. RISS-wl specifies that it is to be entered for both the Inventory and Silviculture entries for each layer. Inv Layer: "Insect, disease, or other factor that has caused tree damage within the polygon." Silv Layer: "Insect, disease, or other factor that has caused tree damage exceeding the free-growing damage criteria within the polygon." Similar specs, but slightly different.

Silv Surveys manual specifies that "The Free Growing Damage Criteria does not apply to the regeneration delay survey, however it is highly recommended that it be used during the regen delay surveys and stocking surveys. This makes sense as damage agents that affect well-spaced trees at the regeneration stage will likely affect the same trees at the free growing stage. (A tree with damage exceeding specs) should not be accepted as well-spaced during the stocking survey. This same tree must not be accepted in the free growing survey."

This all makes sense, BUT in most work I do the surveyor provides one number. Lets say you have a report of "3% frost damage on Sx". Is that 3% of the 2200 Sx stems/ha in the Inv layer, or 3% of the 720 Sx stems/ha in the Silv layer? Silv Manual and logic says the any severely frost damaged stems should not counted in Silv layer. So maybe Silv layer is damage free? How can "3%" describe the situation in both layers?

Either contact the surveyor for clarification, or enter the info, if any, and move on.

10. **Incident Area**. Number of hectares affected by the damage agent.

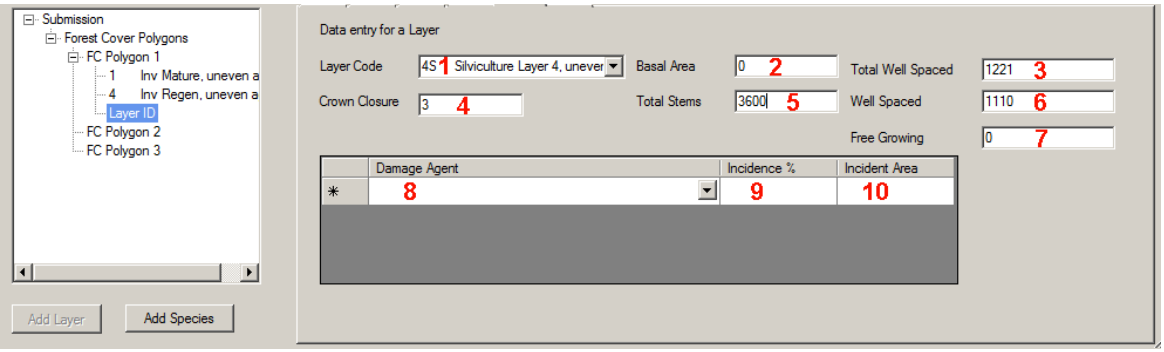
    Conditional entry. Required where damage agent is present within the layer.

    Number, 5 characters, 1 decimals. e.g.: 4.2

14.3.4.5 Silviculture Layer Entry - Regeneration

Onwards to the silviculture layer. There is only one layer of trees that are silviculturally relevant in this block, the regeneration. So we have only one Silviculture layer.

Once again, click FC Polygon 1 to activate the polygon and enable the Add Layer button, then add a layer.



Important: The layer entry screen is a "one size fits all" screen. It contains all the possible entry blanks for all types of layers. Only a subset of the available entries is used for any particular layer.

We are filling in a Silviculture Layer with regeneration. The fields shown filled in above, and explained below, are used.

1. **Layer Code**. What layer are we reporting?

   Conditional entry, required if you have tree species growing on a site.

   2 character code selected from drop down list.

We have used 4S Silviculture Layer 4, uneven aged because a) we are using uneven-aged layers to report the presence of a retained overstory component, and b) this layer contains the Silvicultural information on the regeneration layer.

2. **Basal Area**. Does not apply to regeneration.

   Leave as 0.

3. **Total Well Spaced**. The total well spaced stems per hectare in silviculture layer, **disregarding** the M-value[17]. From the regen survey summary report.

   Integer, 6 characters, no decimals. e.g.: 1221

   Conditional entry: Required for all polygons within an SU where well-spaced stems/ha are a specified regeneration target.

   Trees are healthy, preferred, or acceptable species, and well-spaced using the minimum inter-tree distance in the stocking standards

   The total well spaced trees must be <= the total stems reported in the corresponding inventory layer.

4. **Crown Closure**. Not required for Silviculture layers.

5. **Total Stems**. Total stems is allegedly not required in silviculture layers, but submissions fail without it, so we'll put it in.

   The value to enter is the Stems per hectare in the Inventory Layer that is paired with this Silviculture Layer. In this case, 3600.

   Integer, 6 characters, no decimals. e.g.: 125 or 1850

6. **Well Spaced**. The total well spaced stems per hectare in silviculture layer, **considering** the M-value. From the regen survey summary report.

   Integer, 6 characters, no decimals. e.g.: 1100

   Conditional entry: Required for all polygons within an SU where well-spaced stems/ha are a specified regeneration target.

   Trees are healthy, preferred, or acceptable species, and well-spaced using the minimum inter-tree distance in the stocking standards

   The total well spaced trees must be <= the total stems reported in the corresponding inventory layer.

7. **Free Growing**. The number of free-growing stems per hectare in this silviculture layer based on the M-value.

   Conditional entry: Required for all polygons within an SU where well-spaced stems/ha are a specified regeneration target and there are free growing stems to report.

   Integer, 6 characters, no decimals. e.g.: 1025

[17] The M-value has to do with the maximum number of well spaced trees per plot that can count towards restocking. It is used to ensure that areas with dense stocking cannot compensate for / obscure the presence of areas with very thin stocking. See discussion on pages 51 and 52 of *Silviculture Survey Procedures Manual - May 1, 2020.*

Must be <= Total Stems reported in total stems reported in the corresponding inventory layer.

Must be > = the minimum stocking standard if SU is declared free-growing

Does not apply to an inventory layer.

If zero or does not apply, enter a 0 not a blank.

11. **Damage Agent**. Insect, disease, or other factor that has caused tree damage in the layer.

    Conditional entry. Required where damage agent is present within the layer.

    3 characters. Select from dropdown list.

    Different stand layers can have the same damage agent code.

    See the FS747 form for a guide to potential damage factors and name codes if you do not feel like hunting through a drop down list.

12. **Incidence %**. The percent of host species within the layer impacted by the damage agent.

    Conditional entry. Required where damage agent is present within the layer.

    Integer, 3 characters, no decimals. e.g.: 25 meaning 25%.

    I find Damage Incidence percent can be perturbing. RISS-wl specifies that it is to be entered for both the Inventory and Silviculture entries for each layer. Inv Layer: "Insect, disease, or other factor that has caused tree damage within the polygon." Silv Layer: "Insect, disease, or other factor that has caused tree damage exceeding the free-growing damage criteria within the polygon." Similar specs, but slightly different.

    Silv Surveys manual specifies that "The Free Growing Damage Criteria does not apply to the regeneration delay survey, however it is highly recommended that it be used during the regen delay surveys and stocking surveys. This makes sense as damage agents that affect well-spaced trees at the regeneration stage will likely affect the same trees at the free growing stage. (A tree with damage exceeding specs) should not be accepted as well-spaced during the stocking survey. This same tree must not be accepted in the free growing survey."

    This all makes sense, BUT in most surveys I see the surveyor provides one number. Lets say you have a report of "3% frost damage on Sx". Is that 3% of the 2200 Sx stems/ha in the Inv layer, or 3% of the 720 Sx stems/ha in the Silv layer? Silv Manual and logic says the any severely frost damaged stems should not counted in Silv layer. So maybe Silv layer is damage free? How can "3%" describe the situation in both layers?

    Either contact the surveyor for clarification, or enter the info, if any, and move on.

13. **Incident Area**. Number of hectares affected by the damage agent.

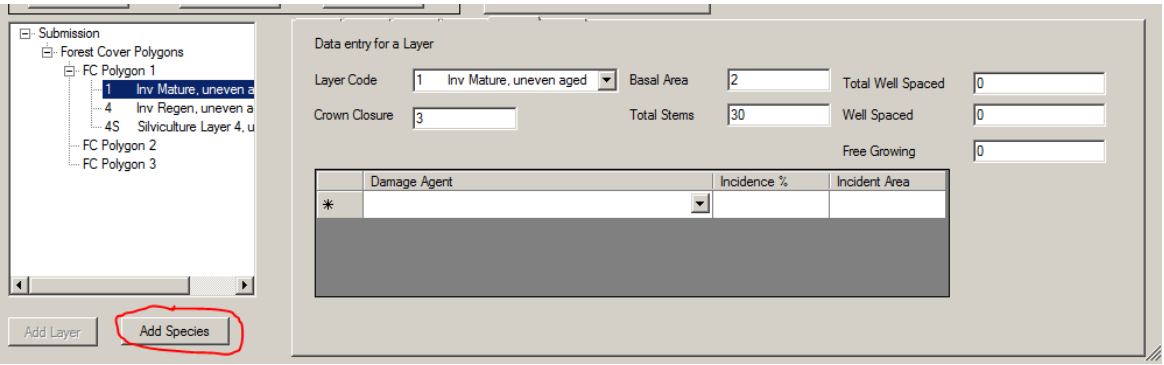
    Conditional entry. Required where damage agent is present within the layer.

    Number, 5 characters, 1 decimals. e.g.: 4.2

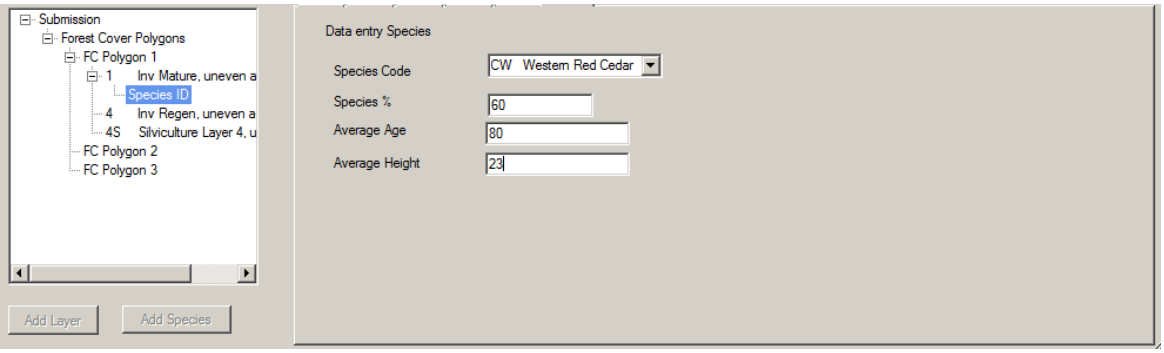
14.3.5 Forest Cover Polygon - Tree Species Entry

Having established the Layer structure within Polygon 1, you now populate the layers with tree species cover data.

Click on a layer in FC Polygon 1 to activate it, then click Add Species.



Unsurprisingly, an entry screen to add species information opens up.



Exactly what one would expect for forest cover entry:

- Select the species from the drop down list. Enter species with highest percent composition in layer first; descending order. Percent composition based on gross volume in Layers 1 and 2, stem count in Layers 3 and 4.
- Enter the percent of the layer that the species makes up. Integer, no decimals. 80 means 80%. Generally, a straight transcription from the regen survey.

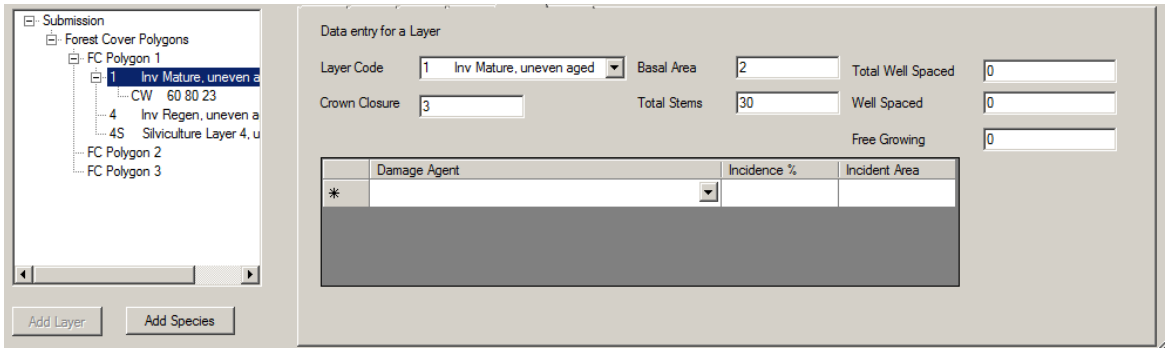
  Total of the percent composition of al species in layer must = 100%.
- Enter average age of this species in this layer. Integer, age in years.

  Ages are entered for the leading 2 species in Inventory layers, leading species only in Silviculture layers.
- Enter average height in meters of this species in this layer. Number, one decimal.

  Heights are entered for the leading 2 species in Inventory layers, leading species only in Silviculture layers.

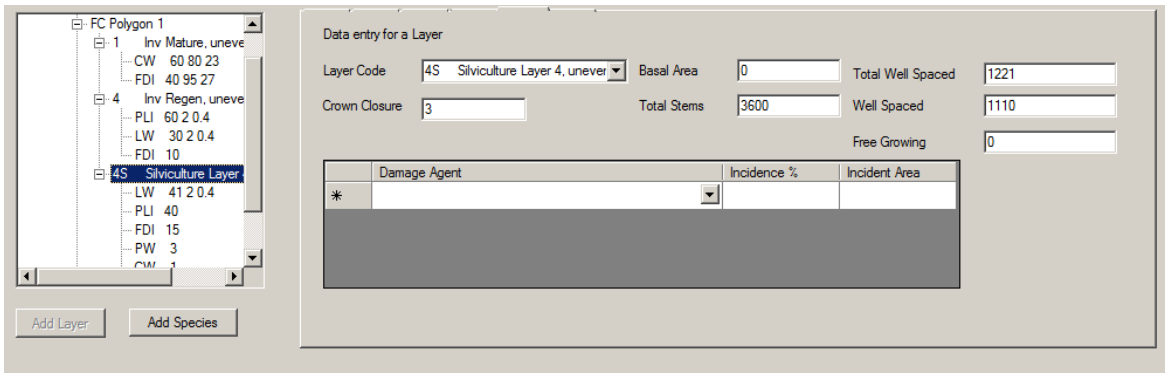
I am describing the retained overstory layer here, so the age and height are quite large.

As with Add Layer previously, Add Species is now grayed out and not functional. To add more species, click on the layer again to activate it, which bring s the Add Species button back to life.



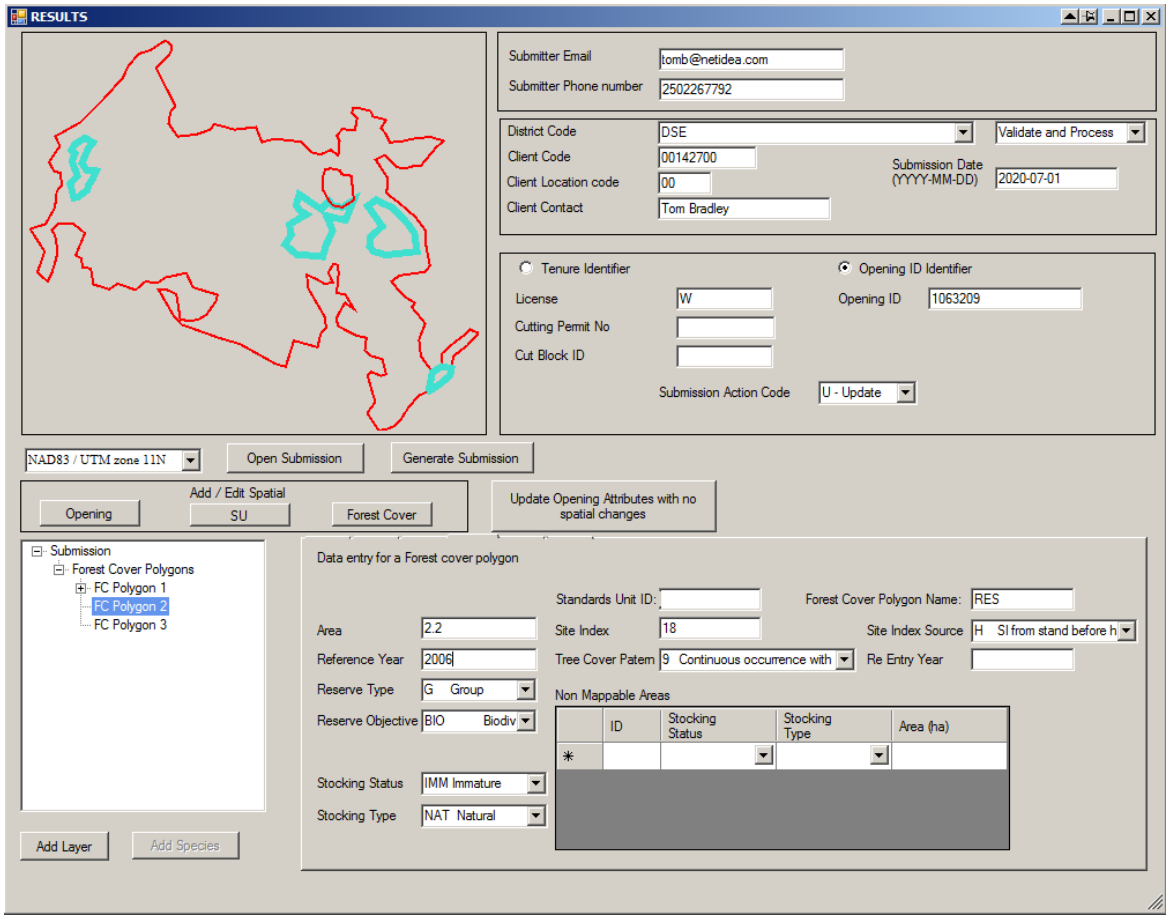
And repeat the process adding species information for this layer.

Once you have finished adding the species for a layer, click a different layer to activate it and repeat the steps until each layer has the appropriate species list.



14.3.6 Reporting Reserves

FC Polygon 2 in the example is a set of reserves throughout the harvest block.



No real surprises. The field contents have all been discussed previously. A few notes:

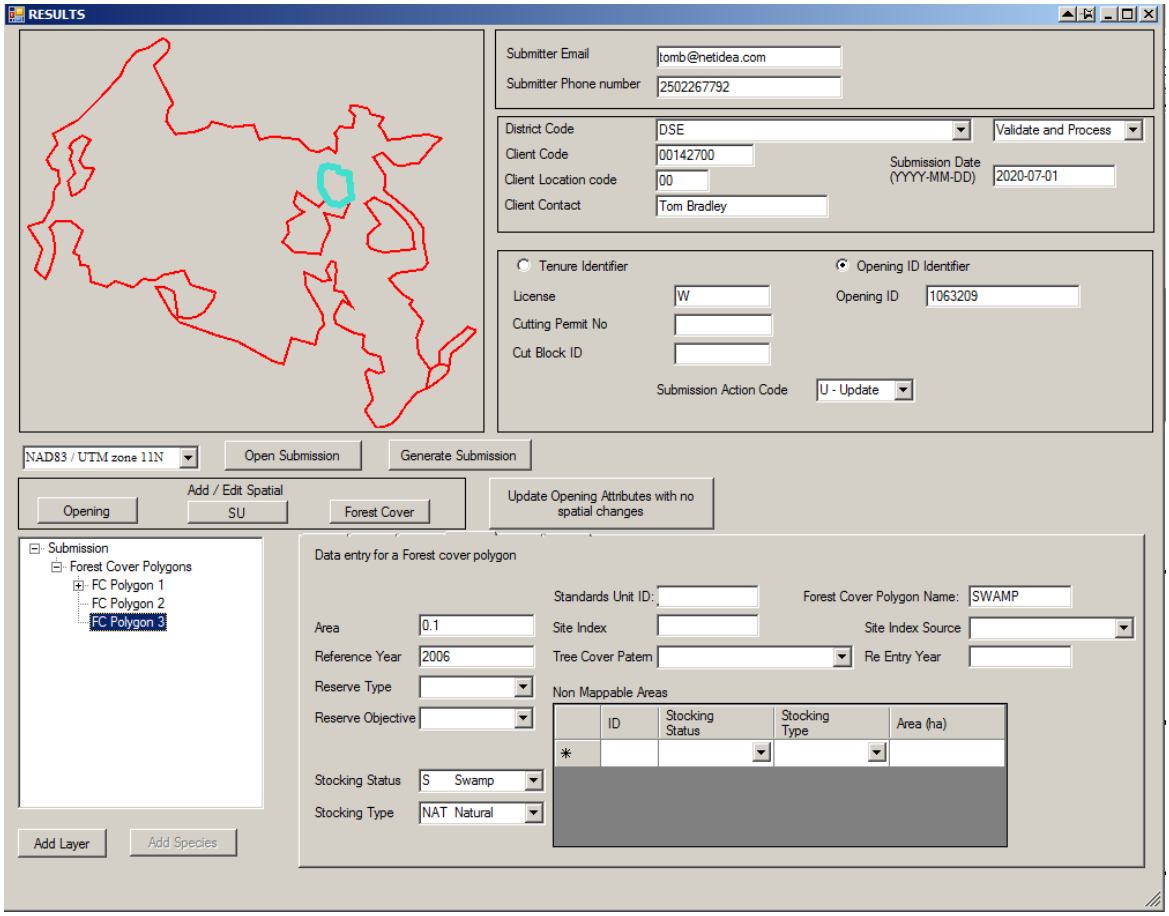
- The Reference Year is 2006 not 2009 because the reserves were located and mapped in 2006. It would be a stretch to assert we only found them in the 2009 regen survey.
- There is no SU ID because the reserves are not part of the Net Area to be Reforested, so are thus not in a Standards Unit.
- There is no re-entry year as we do not plan on logging these areas during the next rotation.
- Stocking Status is Immature because the forest in this area is LwFd leading and 95 years old. While eminently merchantable, it is still "Immature" per RESULTS specifications.
- Because this is a forested polygon, we can also report the forest cover in an Inventory layer. A silviculture layer is not required for a group reserve that does not have a TIMber reserve objective.
- You can also not report forest cover attributes - not add Layer(s) and trees species. In that case, The System will populate your Reserve(s) with the last forest cover it has on file for the area. If this is acceptable to you, leave the info out and let it do it.

I am choosing the easy way out - no forest cover reported. The forest cover in the 4 patches is actually quite different, and I am not willing to spend the time and $$ to survey each wee patch to professional standards and develop an inventory label. These reserves will thus not have particularly accurate forest cover attributes (if the VRI update crew even decides to include such small polygons the provincial VRI data). At this time, I am OK with that.

14.3.7 Polygon 2 - Non Forest Polygon

Remember FC Polygon 3? It is a small wetland.

It is only 0.1 ha in area, so I could report it as an unmapped NP area within FC Polygon 1. I am being obsessive and reporting it as a mapped polygon.



The only fields required are:

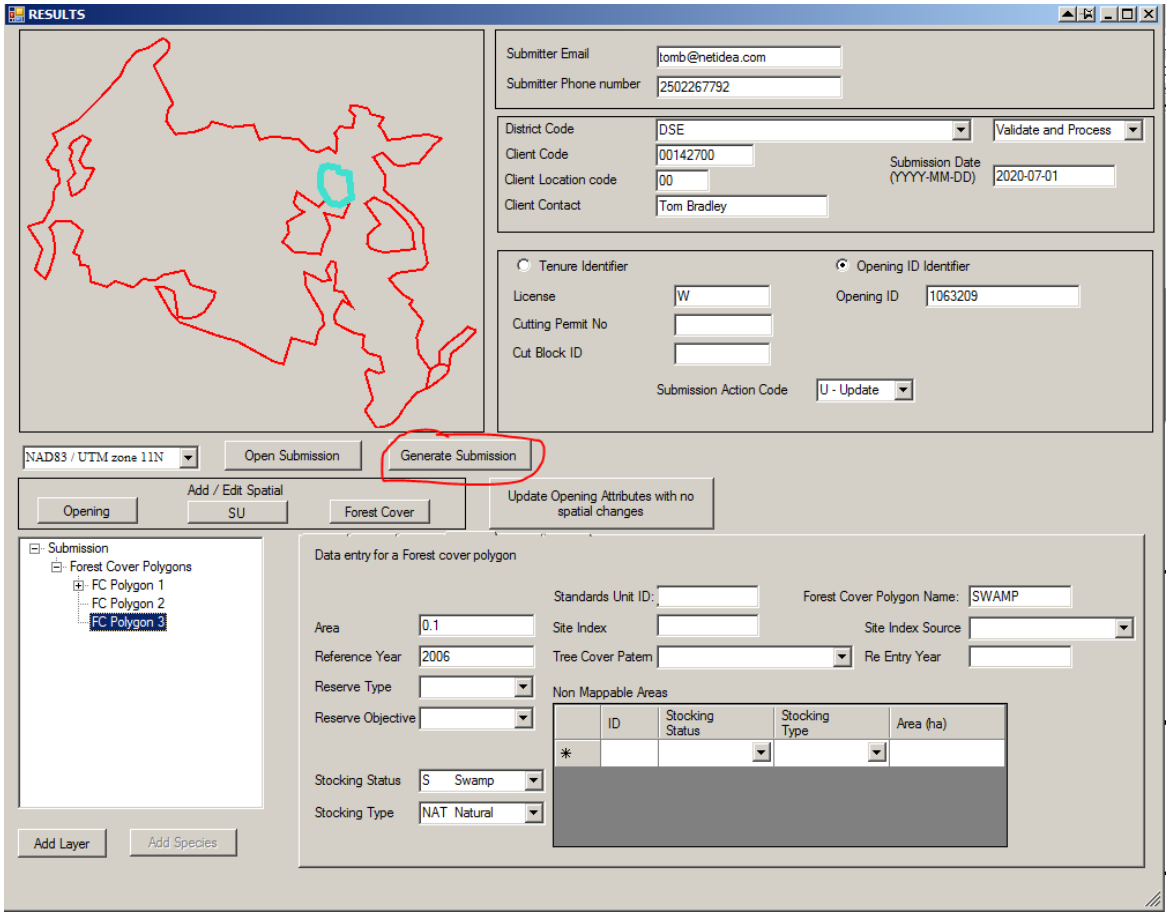
- Forest Cover Polygon Name
- Area
- Reference Year
- Stocking Status
- Stocking Type

These fields have all been discussed previously. A few notes:

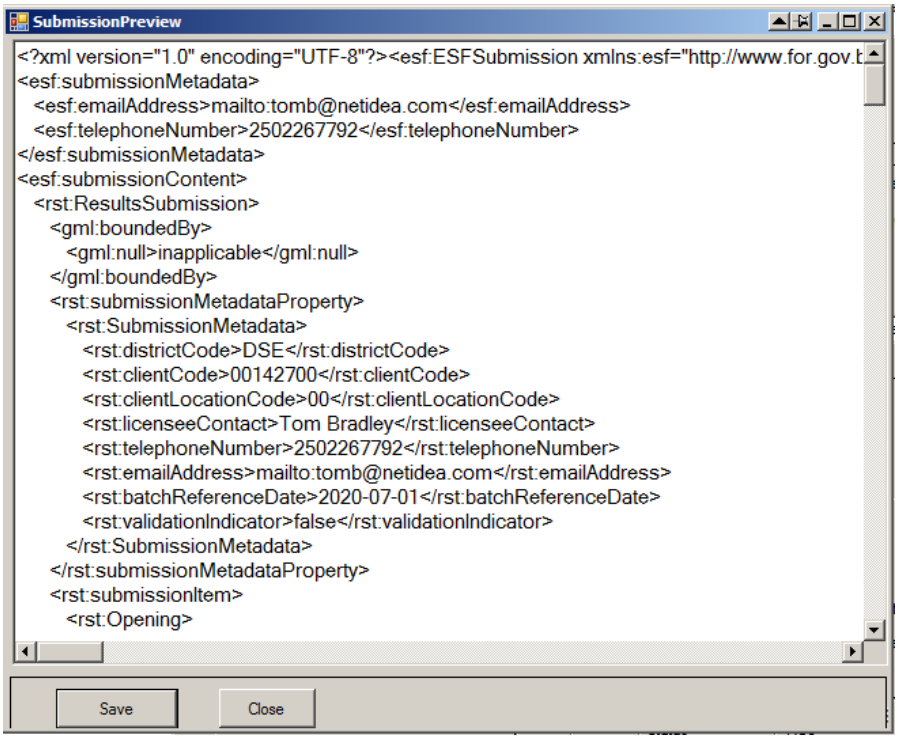
- The Reference Year is 2006 not 2009 because the was there and was identified in 2006.
- There is no SU ID because the swamp is not part of the Net Area to be Reforested, so it is not in a Standards Unit.
- The other blank fields all apply to vegetation or reserves, and this is a non-vegetated area and is not a reserve.

14.3.8 Generate Submission

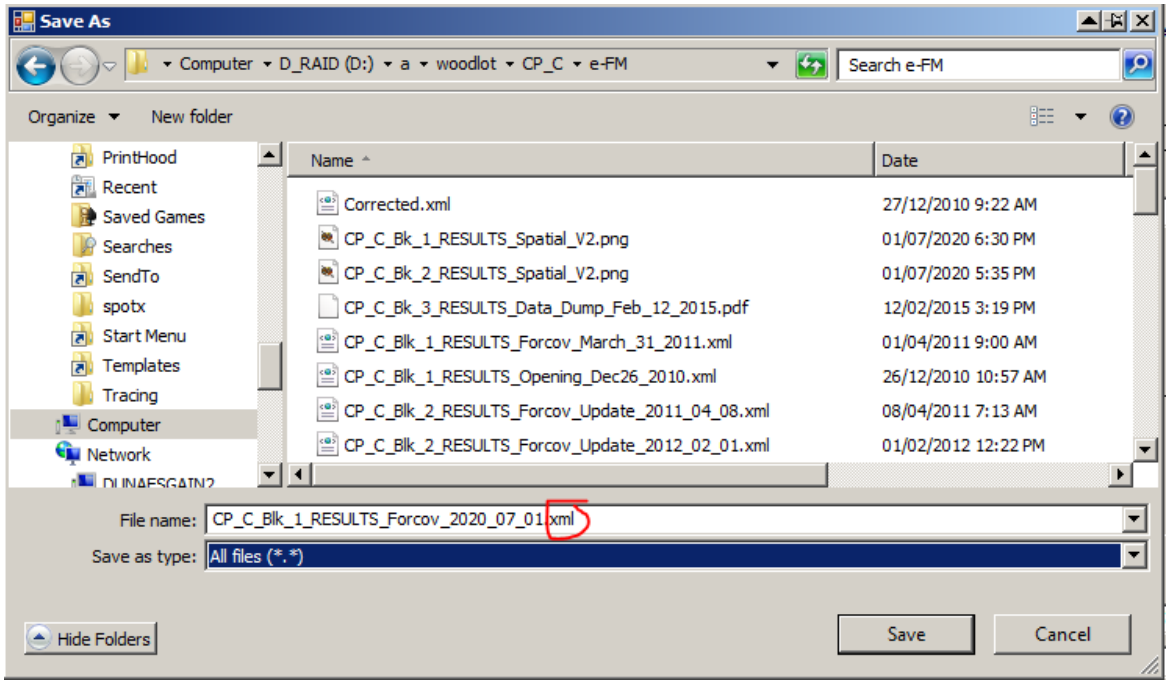
Everything entered? As per usual: Click Generate Submission.



Then the expected screen of XML pops up:



As previously, Save it to a directory where you will be able to find it later, using a file name that describes the XML submission. Be sure to add the .XML extension to the end of the file name:



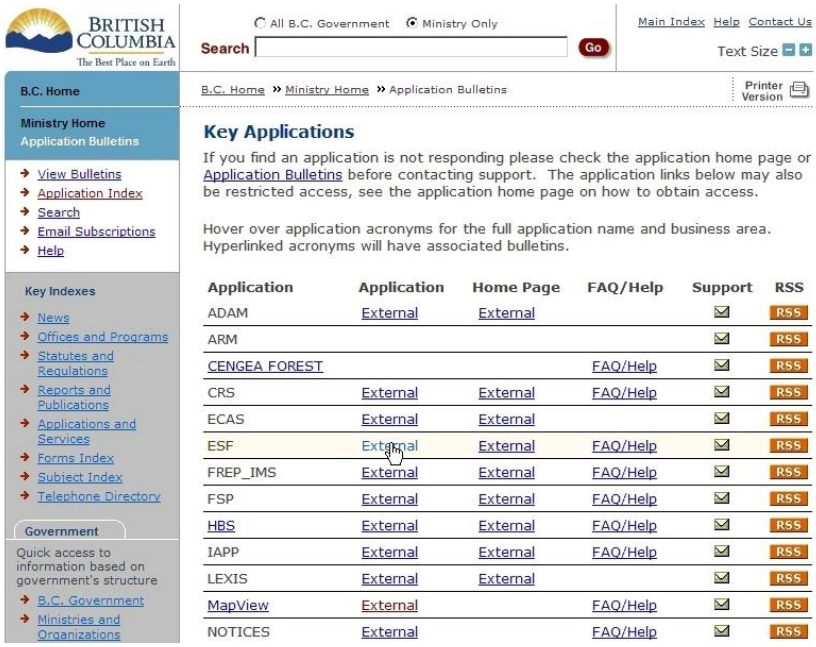
And off to the ESF web site to submit.

14.4 Upload to RESULTS

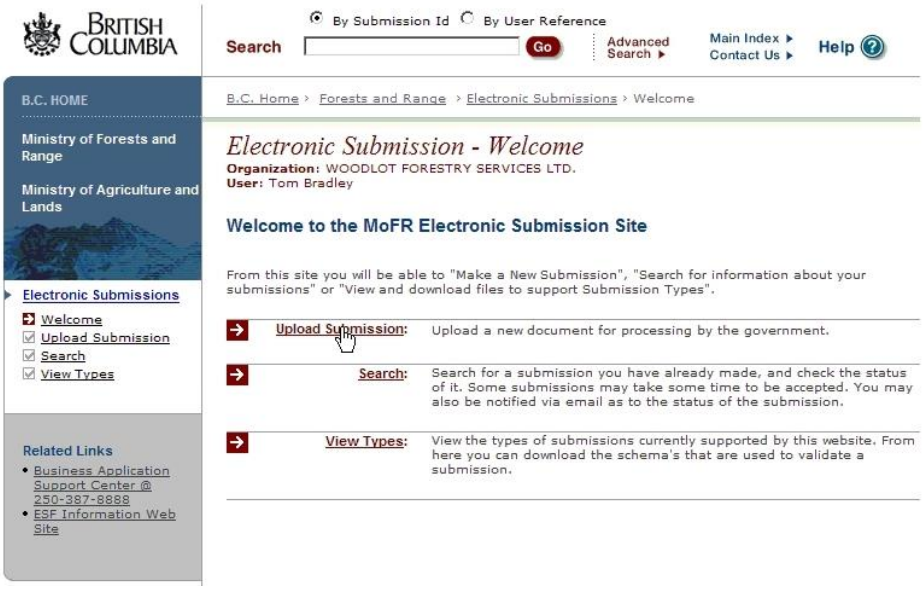
14.4.1 First Try

Having produced an XML submission, one now uploads it to the RESULTS system through the ESF web site.

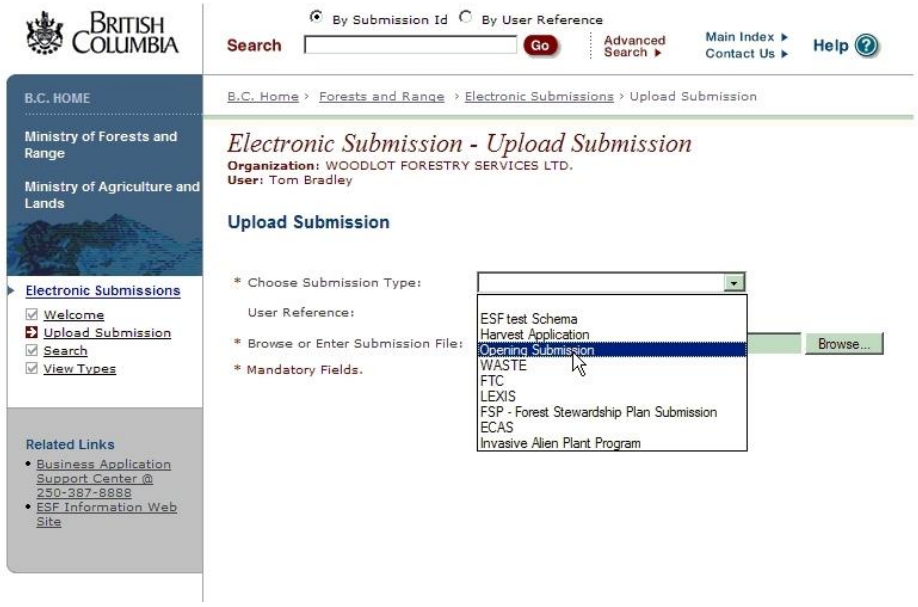
First to the e-FM application index:



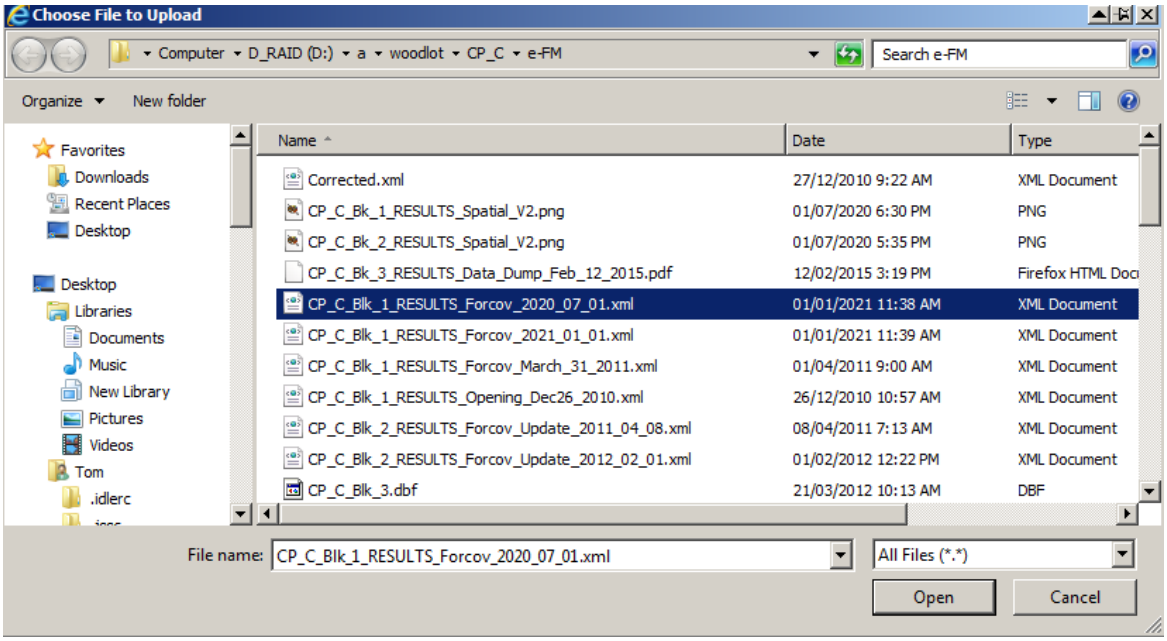
And then to the ESF submission site, where we want to Upload Submission:



An Opening Submission, to be precise, as this is a RESULTS submission about an opening.



And the usual drill: find your saved XML file that you want to submit.



And then click Upload Submission:

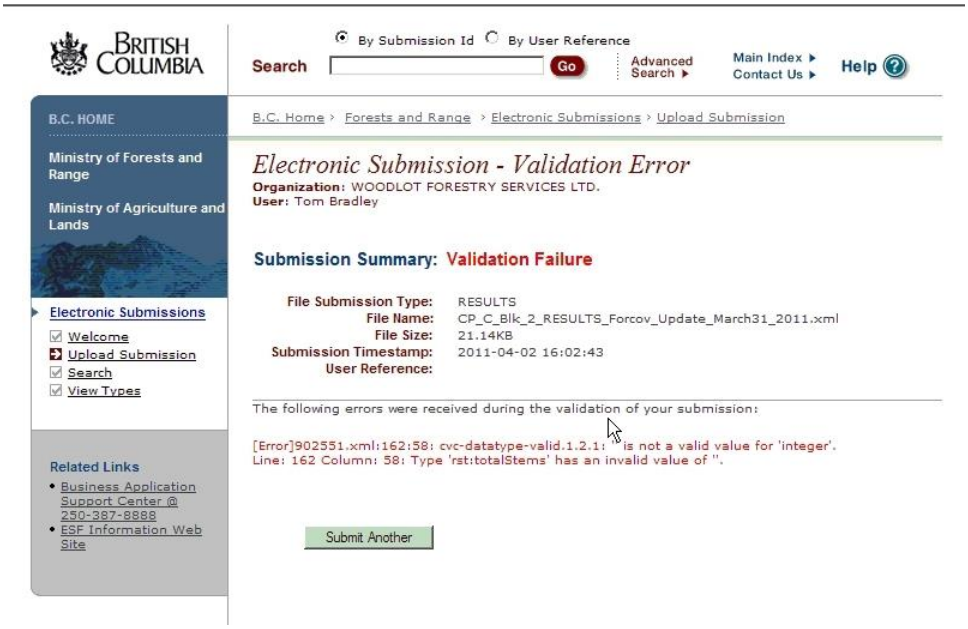
Of course, what we all want to see now is:

Your click Finalize Submission and you are done this step.

If you do realize later that you made a mistake, you can just submit another, corrected file to fix it. Correct first time is better, but you are allowed to (are required to, actually) fix a mistake.

14.4.2 Second Try

Of course, if the force is not with you, you may see:

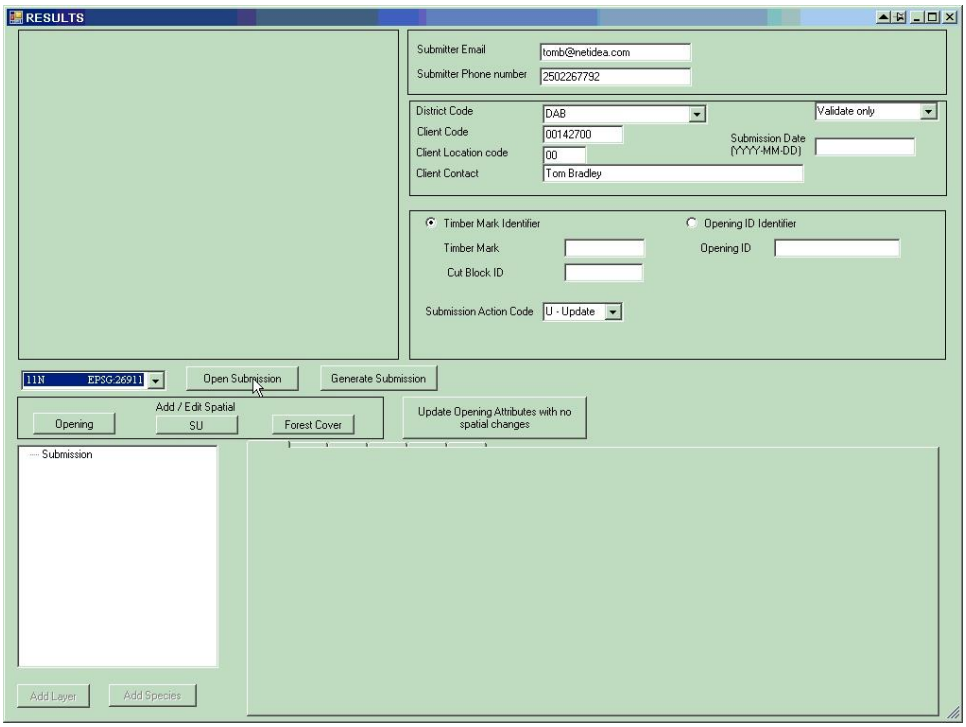


Aargh! Validation Failure!

But after the usual interval for self expression, read the screen, specifically the red micro-text about Line 162 Column 58. It says something about totalStems has an invalid value.

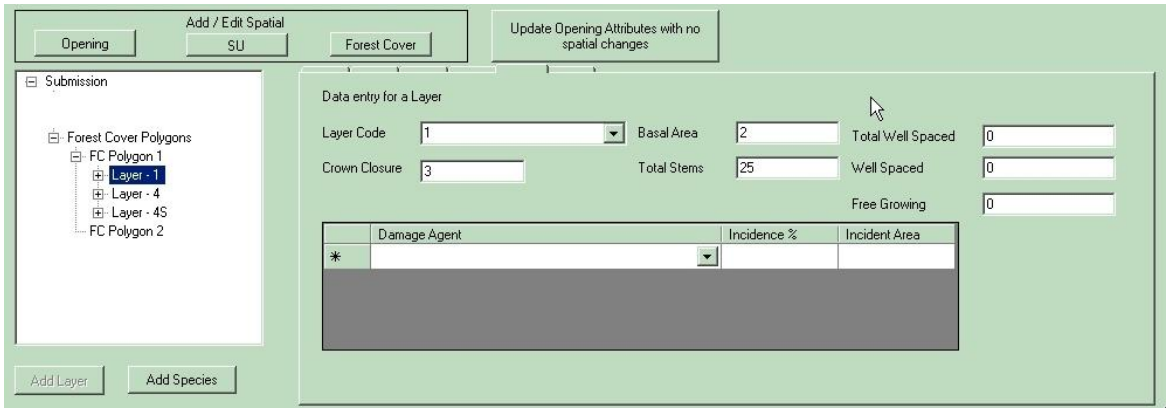
You could open up a text or XML editor and look at Line 162 Column 58 of your XML, but most of us would just take the totalStems as a hint. There *is* a field called total stems in every Forest Cover Polygon Layer entry field. Check there first!

So load your XML back into WLGML using the Open Submission button if you have closed out of WLGML:

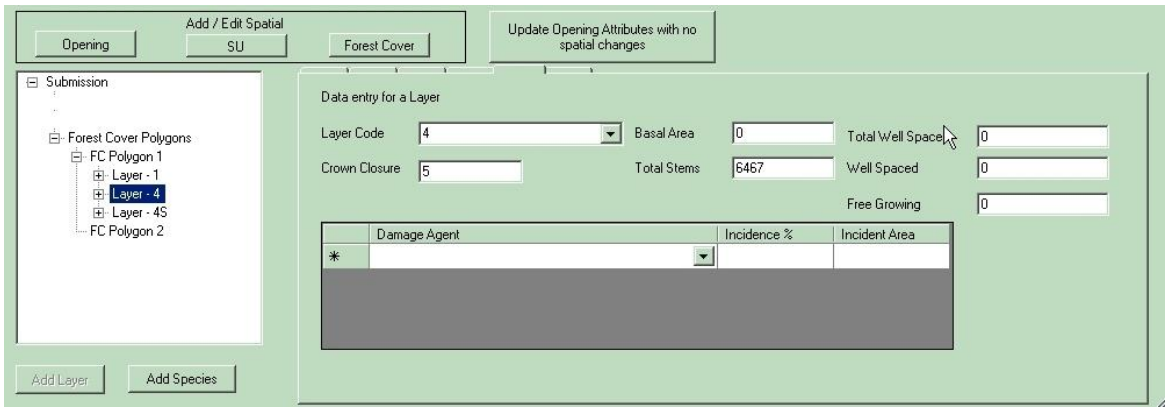


And then go to the various Layer entry screens to review.

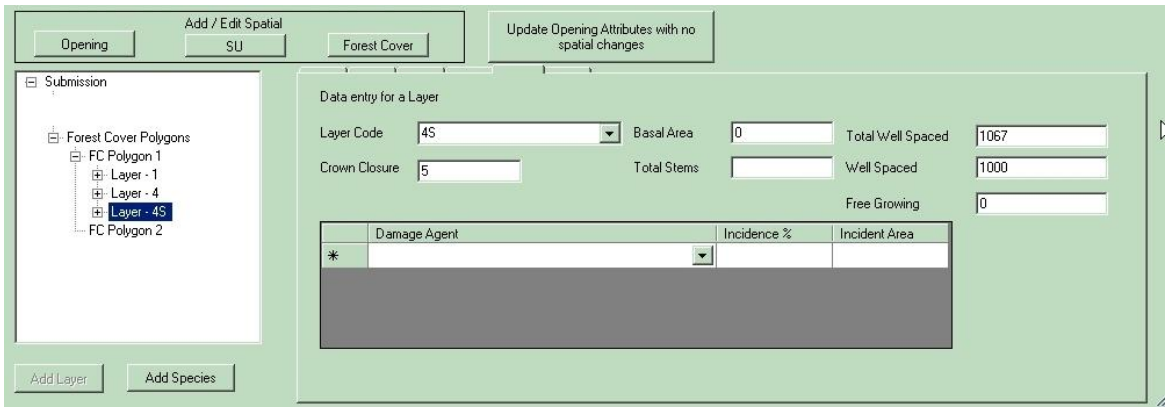
Layer 1: Has a Total Stems entry.



Layer 4: Has a Total Stems entry.



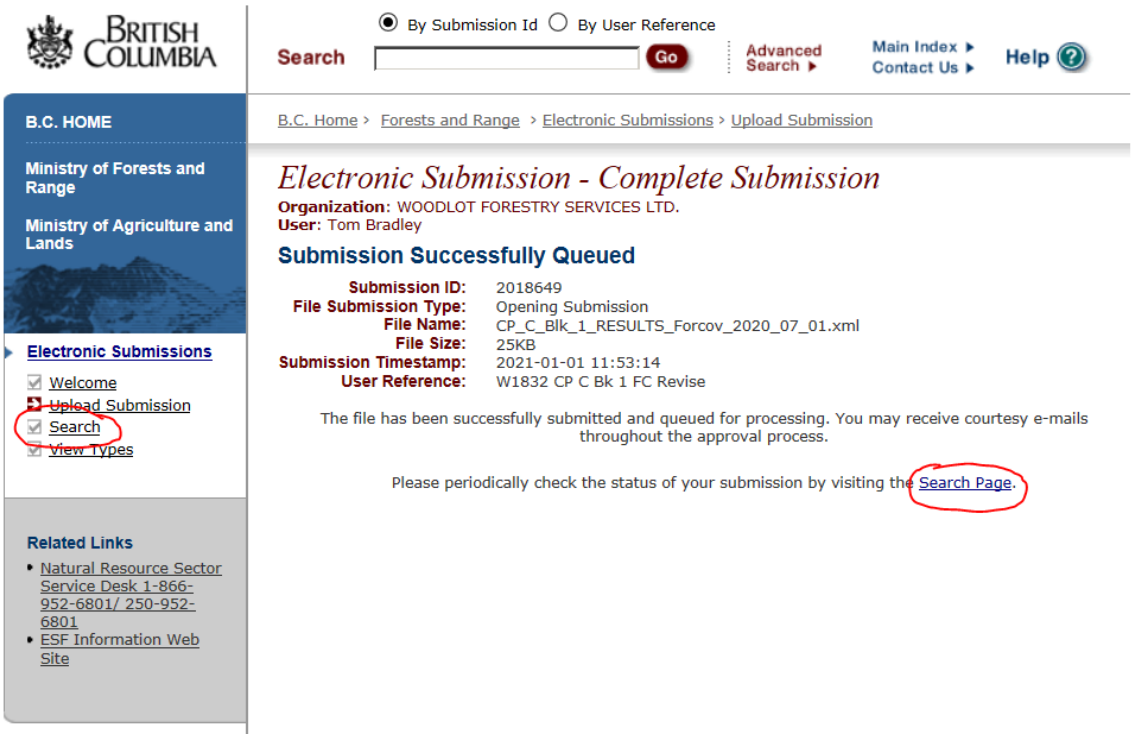
Layer 4S: Has a *blank*. Right, we have to report total stems for Silviculture Layers, even though some sources say we don't.



So fill in the correct Total Stems number, Generate the submission again, Save it, and try the upload again. In this case, you will receive the lovely Submission Validated notice, because the blank in 4S was the problem.

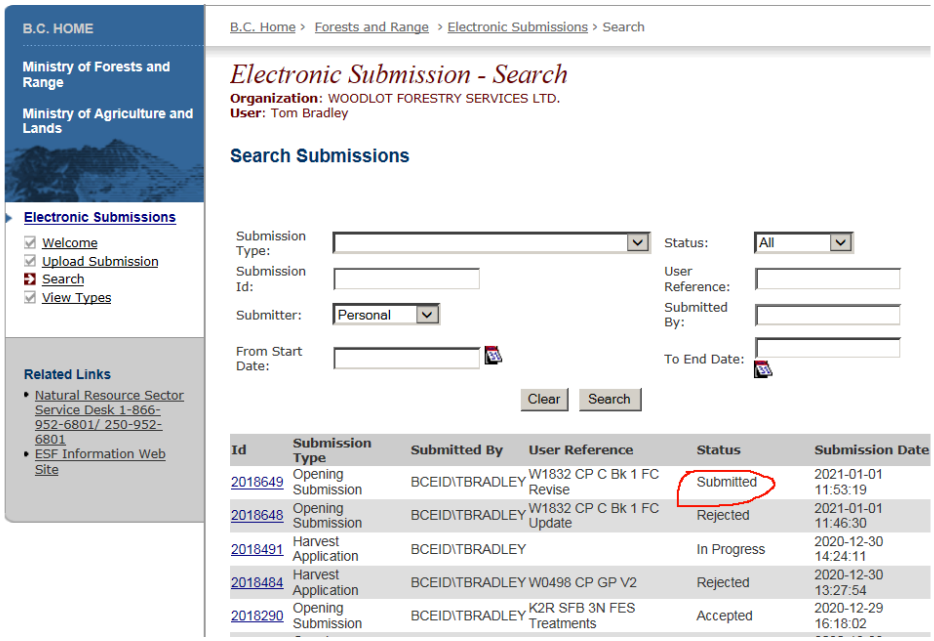
14.4.3 Third Try

It is a good idea to haunt the ESF Search page for while, until your submission is accepted or is rejected. Here are two links that lead there:

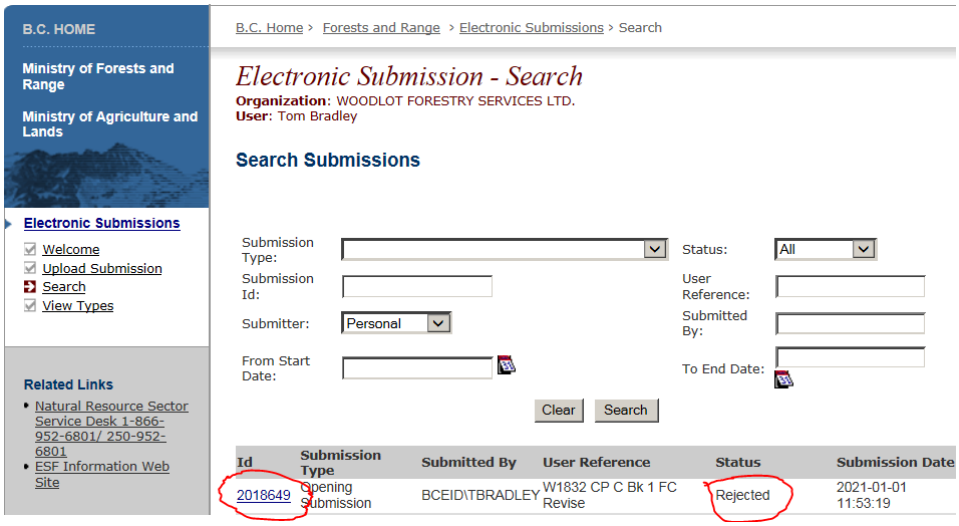


You need to <Search>. No parameters needed for most of us, it will just shows all your submissions in chronological order from newest to oldest.

Outcome: It is still thinking.



Hit <Search> again in a few minutes:



Oh, the shame! REJECTED! Actually, it happens to everyone who does this, regularly. I screwed something up. Click on the blue 2018649 link to get more info.

Submissions Details

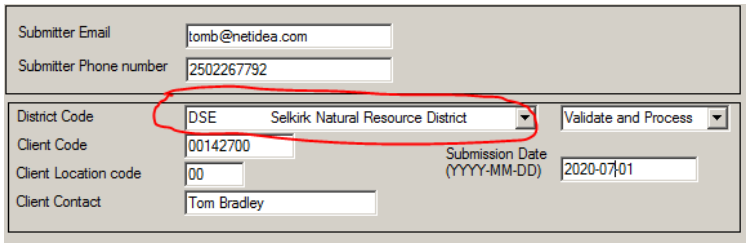
Submission ID: 2018649
Submission Type: Opening Submission
Submission Timestamp: 2021-01-01 11:53:19
File Name: CP_C_Blk_1_RESULTS_Forcov_2020_07_01.xml
User Reference: W1832 CP C Bk 1 FC Revise
Status: Rejected
Submitter: BCEID\TBRADLEY
Attachments:

Back to Search

Message	Date
Outcome of submission: 2018649: Opening ID: 1063209 / OPN #: / Lic: CP: Blk: / TM: Blk: has failed due to processing errors. Please talk to your system administrator and re-submit. [245] Org Unit specified does not match Opening Org Unit. Value: Opening Org: DCR Submitted Org: DSE More Info	2021-01-01 11:54:17

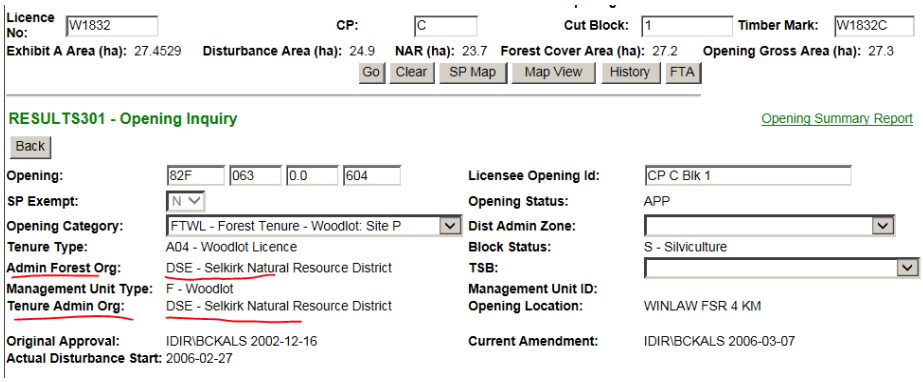
You do not have to fully understand the message at this point or do research. It provides clues: It is not happy about "Org Unit". DCR vs DSE. Cariboo vs Selkirk. Well, my WL is in Selkirk Resource District, so I will go and check to be sure my forest cover submission in fact says DSE, not DCR.

It does.

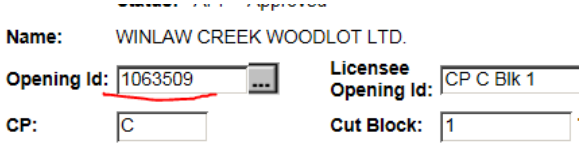


Good heavens, did I move my block to DCR in a SU update??? Look in RESULTS.

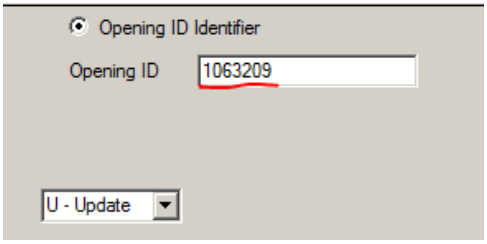
Nope, block seems to be firmly in SRD:



??? It says something is in DCR. Hold it, what Opening ID did I provide in my Key? Did I tell it to update a block in the Caribou by mistake?



My existing Block in RESULTS



My Submission

Oh my heavens! Typo. I entered Opening ID key incorrectly! To quote Section 11.4.2:

> It is, to say the least, **very important** to get the key right. If you typo, your RESULTS submission will fail. It is unlikely that you will accidentally change someone else's reporting as you will almost certainly not have submitter authority for the opening that the typoed Opening ID Key points to.

Yes indeed. Should follow my own advice. I then entered the key correctly, resubmitted, all good.

I actually almost always copy the Opening ID key in on-line RESULTS and paste it into WLGML. This time I got lazy and just typed it in. And cost myself half an hour of wasted time. I am pretty sure there is a proverb about that…..

I included this silliness to illustrate a key thing: We all make mistakes, and a big part of this RESULTS reporting job is figuring out what you did wrong this time and fixing the error.

15. Reporting Partial Cuts to RESULTS

Reporting partial cuts to RESULTS has been a challenge for many Licensees, especially in dry Douglas-fir forests in Cariboo and Boundary areas. This section of the manual will attempt to provide some guidance.

First, a LARGE disclaimer:

> I have been working on this subject for over 8 years. I know a lot of things about it, but I can not claim to know the "right answer" on all aspects. Partial cutting is outside mainstream forestry, and WL have issues for which satisfactory resolution has thus far not been found. The instructions following reflect my best understanding in 2020. There are likely to be further changes and amendments to these instructions from lessons learned as we report partial cuts to RESULTS, and as other parties review this manual and submit corrections.

The MoF publication *SUBMITTING FOREST COVER TO RESULTS FOR OPENINGS WITH TREED RETENTION* is cited frequently below, and is identified with the acronym SFCWTR. This guide is available from the MoF website and the WLGML website. Google treed retention RESULTS to find it.

Now, to work.

15.1 What is a Reportable Opening

Whether an "opening"[18] must be reported to RESULTS is determined largely by opening size.

- Openings from logging that are > 0.25 ha in size must be reported to RESULTS. (An apparently simple rule that gets complicated in beetle salvage intermediate cuts.)
- Openings from logging 0.1 ha to 0.25 ha in size can be reported if the Licensee wants to.
- Openings < 0.1 ha are too small to report.
- Openings > 0.1 ha from natural disturbance can be reported if Licensee wants to, but such reporting is currently not required.

It sounds simple enough at first glance. And it is at larger scales. A 5 ha harvest patch is "an opening". So is a 1 ha harvest. But at smaller scales, things start to get fuzzy. Quantum forestry takes over.

0.25 ha is not very big. The width/length in meters pairs below all make a .25 ha opening.

[18] An area where forest cover has been removed or significantly altered by harvesting or other disturbance. Insignificant alteration is partially defined in WLPPR Sec 75(6)(b) as a location where " the extent of harvesting does not significantly change the inventory label." RISS-wl Section 7.4 adds further parameters to define "significant" forest cover change.

Wide	Long
20	125
25	100
30	83
35	71
40	63
45	56
50	50
55	45
60	42
65	38
70	36
75	33
80	31

Now for some more fuzziness:

RISS-wl Page 37, footnote 14 states:

> Suggested definition of “mappable”; a polygon greater than 20 meters throughout its length. Areas that do not meet stocking obligations less than 20 m from the nearest NSR or not free-growing area are considered contiguous units.

So, the "suggestion" (not clear on the legal status of that) is that (a) disturbed areas that are < 20 m apart are in same polygon and (b) an opening should be > 20 meters across to exist.

Seems possible that a slightly irregular 25x100 "opening" would have portions < 20 meters wide that, if the "narrow neck" was > 20 long, could chop the "opening" into 2 of <0.25 ha openings that are not reportable.

If C&E agreed, of course.

To add further murk, Intermediate Cuttings are an approved silvicultural system. Intermediate Cut harvests do not have a reforestation obligation, but they must be reported to RESULTS to record harvest activity and changes in forest cover from the harvest. WLPPR Section 1 defines Intermediate Cut as:

> "intermediate cuttings" means
>
> (a) the harvesting of timber if
>
> (i) the harvesting takes place before the final harvest or regeneration cut, and
>
> (ii) the majority of the pre-harvest stand volume is not removed, or
>
> (b) the harvesting of bark beetle infested timber by harvesting scattered trees, small clumps of trees or for access trails required to harvest the timber;

In 2016, Resource Practices Branch and the Federation discussed and came to agreement on aspects of Intermediate Cut reporting. An Intermediate Cut is a harvest system that is applied to an area. The entire Int Cut area is the reporting unit. We agreed that intermediate cuts may contain openings that are >0.25 ha without incurring a responsibility to report said small opening as a separate, even aged harvest unit. The small opening can be included in the overall intermediate cut. To quote:

> WLPPR does not specify the opening size within an Intermediate Cut area above which the obligation to establish a free-growing stand exists. Identifying the

> extent of harvest openings, choosing how to report them, and creating inventory and silviculture type labels is the practice of professional forestry. At some size threshold a harvested patch does cease to be part of an intermediate cut and becomes a discrete even aged management. However, this threshold is best judged by the forest professionals carrying out the post harvest surveying and reporting work, with due consideration of patch size, patch shape, number of occurrences, and regeneration environment, and with due consideration of the Silviculture Survey Procedures Manual, RISS-wl, and Submitting Forest Cover to RESULTS for Openings With Treed Retention .

In short, we agreed that the RESULTS reporting objective is not for Licensees to go out and look for / traverse openings in an intermediate cut that may exceed 0.25 ha after every salvage season.

This agreement with Resource Practices Branch in Victoria, custodians of RESULTS and authors of the Silviculture Surveys Procedures manual, is not necessarily the opinion of Forest District staff, who may assert that the hunt for > 0.25 ha openings is important and required.

And more Quantum Forestry mystery: How does one measure a small opening? To the boles of the standing trees around it? Seems wrong. There is no available growing space 1 m from a large standing Douglas-fir. Measuring to the drip line of the canopy of the trees around the opening seems more reasonable. The *Silviculture Survey Manual* suggests this approach when it notes:

> plot locations can end up in the field as being too close to timber edges (under drip lines)

and

> Generally a drip-line rule is applied for layer one stems, i.e. spots are not considered plantable or preparable under the crown of a layer one tree.

However, I am not aware of a definitive FLNRO statement on how to measure opening areas.

The point is that a 50 m x50 m, opening, measured to the boles of the surrounding trees, would be reportable. If we were to measure to the canopy drip line, the opening would shrink to at least 45 m x 45 m, likely smaller, and not be reportable.

In summary, the area of an opening or openings at or near the 0.25 ha cutoff seems to be the sort of thing several RPFs could spent the entire afternoon in the field discussing, possibly without resolution. An undesirable situation for most of us.

Is there a solution? In the future, outside of intermediate cuts, plan to be clearly under or over 0.25 ha. If you have a lot of borderline openings in past work, your reporting situation may be interesting[19] for a while.

[19] Per alleged ancient curse: "May you live in interesting times."

15.2 Reporting Different Types of Group Selection

15.2.1 Group Selection with All Groups < 0.25 ha

Group selection is a form of partial cutting in which small gaps are cut in the canopy. Depending on the shape of the groups created and pre-harvest stand conditions, it can be hard to distinguish from dispersed partial cutting.

A specific reference in SFCWTR to this flavour of partial cutting is in Section 4.2.4:

> A group tree selection system is an uneven-aged system that promotes small even-aged groups of trees distributed across the stand. It consists of regular harvest entries of small groups of trees until the end of the rotational planning cycle. The locations of the small openings are tracked, either as mappable units (if they exceed 0.25 ha) or as unmappable forest cover attributes.

SFCWTR Section 4.2.1, Single Tree Selection also provides some information:

> A single tree selection system is an uneven-aged system and consists of regular harvest entries of individual or small groups of trees until the end of the rotational planning cycle. The locations of the individual trees are not mapped; rather it is the polygons within the SUs from which the trees are harvested that are mapped. The forest cover for the residuals may remain similar to the original cover after the first harvest entry, taking into account any changes to the species, height, BA, or age structure as a result of the first entry.

This is somewhat clarified in a figure caption on the next page:

> The specific locations of residuals and denuded portions of the disturbance area are not mapped. The stand profiles are represented in the multi-layer forest cover attribute reports. (Layers 1, 1S, 2, 2S, and/or 3 and 3S represent the Mature, Pole and Sapling residuals; Layers 4 and 4S represent the Regen layer in the denuded portions).

There are unfortunately inherent contradictions between the above citations.

The first citation says when openings are < 0.25 ha, report the harvested area as an unmapped, logged component of the overall forest cover polygon. This makes sense, except that (to my knowledge) RESULTS is not set up to accept vegetation cover data and milestone declarations for unmapped areas. I do not see how you would actually do the reporting. The second citation says "the polygons within the SUs from which the trees are harvested that are mapped", which I read as "map the harvest polygons". This can not be accurate as the harvest polygons we are discussing are <0.25 ha.

The third citation says do not map harvest areas, report on the whole polygon, and use multi-layered stocking standards. This is completely feasible.

Finally, the type of harvesting described could well be an intermediate cut, if it meets all the clauses in the Int Cut definition (a) or (b):

> "intermediate cuttings" means
>
> (a) the harvesting of timber if

(i) the harvesting takes place before the final harvest or regeneration cut, and

(ii) the majority of the pre-harvest stand volume is not removed, or

(b) the harvesting of bark beetle infested timber by harvesting scattered trees, small clumps of trees or for access trails required to harvest the timber;

This appears to leave two options open when harvesting has created openings < 0.25 ha in size. However, if the area in discussion is a Code era block, you have already committed to *something* in your Site Plan. You cannot just "choose" how report, you have to report based on what your approved Site Plan says you will do. Or, amend the Site Plan.

Option 1

If you removed less than half the standing volume in the forest, you could opt to report an intermediate cut. More discussion in Section 15.3 below.

Option 2

Report harvest like a single tree selection harvest. Do not report the spatial extent of the individual small openings. Report on the forest conditions within the whole polygon impacted by the harvesting. Use multi-layered stocking standards. See Section 15.4

A survey will be required to document the meeting of the free growing milestone.

Note that you will not be able to carry out further harvesting within the overall harvest area reported until you have declared it free growing. If the applicable stocking standard has an early free growing date that prevents you from declaring free growing before *x* years, this could be a problem. Note that WLPPR S 75(5) and 75(6) specifically allow an earlier free growing reporting date. A footnote to the SSID series 96000 single tree selection standards does as well:

> * Maximum regeneration delay is seven years. For a seven-year regeneration delay, the early free growing is 12 years and the late free growing is 15 years. Regeneration delay can be met immediately following harvest if the residual stand has no significant damage or pest problems and meets minimum stocking standards. If regeneration is achieved immediately following harvest, earliest free growing date is 12 months after completion of harvest and the latest date is 24 months after completion of harvest.

15.2.2 Group Selection with All Groups > 0.25 ha

Bearing in mind the issues with measuring the size of small openings discussed in Section 15.1 , if your harvesting created a set of small openings >0.25 ha in size, you have a bunch of wee cut blocks to report to RESULTS.

Openings > 0.25 ha are reportable, and they are all reported in a similar way. 30 ha or 0.3 ha, it is an opening.

SFCWTR Section 4.2.4 discusses reporting group selection with openings > 0.25 ha, as does RISS-wl Figure 6 and Figure 11.

This can get expensive.

We are required to have an accurate traverse of openings. (RISS-ls Section 6). The cost of traversing many small openings may not balance to the value of the timber removed. However, the specs are clear: we are to accurately report the spatial extent of openings.

If you are fortunate, recent aerial imagery, drone imagery, high -res Google Earth imagery or LiDAR may be available to help you map those little openings without multiple days of GPS surveys.

Sets of openings that have the same stocking standard and the same reforestation results can be grouped together and reported together. The technical term is that we create a multi-part polygon of them, the upshot is that we combine several discrete openings and link them to one data entry. This is *required* for RESULTS reporting of small openings in a single harvest unit that have the same stocking standards and reforestation outcomes.

Concern has been expressed that the free growing survey intensity required for these small openings is 5 plots per opening. I am not a silvicultural surveyor, but I note that the *Silviculture Survey Procedures Manual – May 1, 2020* provides a great deal of flexibility on survey intensity. The Manual does state:

> 8.1.1.5 Statistical Analysis
>
> The statistical calculation MUST be done in the field to determine the need for additional plots.
>
> There is no statistical analysis required for preferred species alone, only for the combination of preferred and acceptable species.
>
> Where plots have been established, a minimum of five plots per stratum is required. More plots, may be required to meet the 90 % low confidence interval (LCI) ….. The MoFLNRORD has determined that 1.5 plots per hectare is the maximum required.

While it is the prerogative of the forest professional involved to decide, as a Licensee I would identify the possibility that individual openings that had the same stocking standard and the same reforestation results, and were to be grouped into a multi-part polygon to report to RESULTS, could be surveyed as a single stratum, requiring a minimum of 5 plots per stratum.

15.2.3 Group Selection with Mixed Group Sizes

You have logged to meet ungulate winter range standards, and created openings ranging in size from 0.1 to 0.4 ha.

That is good management. You will now pay the price in complexity.

The openings >0.25 ha must be reported as openings, per Section 15.2.2. GPS traverse, mapping, pray for good ortho coverage or buy a drone, etc.

If you have a lot of openings in the 0.1 to 0.25 size range, you could elect to identify a wrapper polygon that encompasses the entire harvest area and report the forest cover in the wrapper polygon (outside of the openings > 0.25 ha) per Section 15.2 .

However, note that you will not be able to carry out further harvesting in the wrapper polygon area until you have surveyed and declared it free growing. If your stocking standard has an early free growing date that prevents you from declaring free growing before *x* years, this could be a problem.

Note that that the Provincial default standards for single tree selection on woodlots state in the footnote "If regeneration is achieved immediately following harvest, earliest free growing date is 12 months after completion of harvest and the latest date is 24 months after completion of harvest." The 24 months does not jive with WLPPR 75(5) which specifies 36 months, but the intent is clear: you can declare FG after 12 months. This is just the provincial default standard, what really matters is what standard *applies* to your harvest per your WLP or Code era site plan.

If the "waiting for FTG" situation is an issue, or if you have just a few openings <0.25 ha, you may find it more efficient to simply traverse them as well and report them as harvested openings. This solves the no further harvest till free growing issue, and getting rid of the wrapper polygon and associated reporting eliminates a surveying and reporting task, but at the cost of adding more small openings to survey and report on.

The "multi-part polygon" discussion Section 15.2.2applies here as well. Getting it straight with your District that the required survey intensity is 5 plots per stratum, not 5 plots per opening, would be a good business/reporting planning choice.

The summary is that this situation is complex and you have several reporting options to consider. The challenge is to identify and select an option that balances reporting and surveying costs, compliance with regulations, and freedom to operate as needed.

15.3 Uniform Partial Cuts - Intermediate Cuts with No Regeneration Obligation

Partial cutting which removes less than half of the volume of a stand can be declared an Intermediate Cut, and thus be exempt from free growing obligations.

Our woodlot success level in properly permitting, surveying and reporting these harvests has been variable. This section attempts to set out the ground rules.

15.3.1 What is an Intermediate Cut - FRPA Era

Intermediate cuts in woodlots under FRPA regime are governed by WLPPR:

> WLPPR Section 1 - Definitions
> "Intermediate Cuttings" means
> (a) the harvesting of timber if
> (i) the harvesting takes place before the final harvest or regeneration cut, and
> (ii) the majority of the pre-harvest stand volume is not removed, or
> (b) the harvesting of bark beetle infested timber by harvesting scattered trees, small clumps of trees or for access trails required to harvest the timber;
>
> WLPPR Section 34 - Free growing stands
> (2) A woodlot licence holder is exempt from the requirements of section 29 (3) [free growing stands] of the Act in respect of an area if timber harvesting is limited to one or more of the following:

(a) harvesting timber to eliminate a safety hazard;

(b) harvesting timber to facilitate the collection of seed, leaving an opening not greater than 1 ha;

(c) removing felled trees from landings and road rights of way;

(d) commercial thinning, removal of individual trees, or a similar type of intermediate cutting;

(e) harvesting special forest products.

(3) A woodlot licence holder who harvests timber for the reasons referred to in subsection (2) (d) or (e) must ensure that, for a period of 12 months after completion of harvest, the area on which timber harvesting was carried out conforms to the stocking standards specified in section 12 [stocking information for specified areas] for the area.

WLPPR Section 12 - Stocking information for specified areas

A woodlot licence holder must specify in the holder's woodlot licence plan stocking standards for areas referred to in section 34 (3) [free growing stands].

WLPPR Section 75 - Surveys

(5) A woodlot licence holder who has carried out intermediate cuttings must carry out a survey, between 1 and 3 years after the completion of harvesting on the area, that identifies

(a) the area,

(b) the forest cover inventory, and

(c) damage to trees by insects, disease or other factors affecting forest health.

(6) Despite subsection (5), the minister may exempt a woodlot licence holder from the requirement to carry out a survey on an area of intermediate cuttings if

(a) the area is too small to warrant the survey, or

(b) the extent of harvesting does not significantly change the inventory label.

(7) A woodlot licence holder must

(a) carry out other surveys and assessments according to the direction of the minister,

(b) amend any survey or assessment prepared under this section, if required by the minister,

(c) keep a record of each survey or assessment prepared under this section, and

(d) provide a copy of the records under paragraph (c) to the minister when submitting the annual report for the year in which the survey or assessment was carried out, unless the minister requires the copy at a different time.

The WLPPR Section 34 reference to WLPPR Section 12 which in turn references WLPPR Section 34 (above) can be baffling at first glance. The point of the exercise is to commit you to defined stocking standards for your intermediate cut.

Intermediate cut stocking standards specify the basal area or stems/ha to be retained, the species of acceptable leave trees, and maximum acceptable stem damage criteria.

To translate, if you cut less that half the stand volume in a thinning operation, and the stand you leave behind meets the intermediate cut stocking standards approved by your Woodlot Licence Plan, you may assert you are doing an Intermediate Cut. You have no regeneration or free growing obligations, but you must do a survey from 1 to 3 years

after harvest completion to verify that the stand is really there and meets those targets. You must report your survey results to RESULTS.

15.3.2 What is an Intermediate Cut - Code Era

15.3.2.1 Leg and Reg

Intermediate cuts in woodlots under the Code regime were governed by WLFMR Sec 76 (1) and 88 (4).

> Part 1 - Definitions
> "intermediate cuttings" means
> (a) the harvesting of timber if
> (i) the harvesting takes place before the final harvest or regeneration cut, and does not result in a requirement to establish a free growing stand on the area, and
> (ii) the majority of the pre-harvest stand volume is not removed, or
> (b) the harvesting of bark beetle infested timber by harvesting scattered trees, small clumps of trees or for access trails required to harvest the timber if, in the opinion of the district manager, the area harvested is too small to require the establishment of a free growing stand;
>
> 76(1) A holder of a woodlot licence must establish, in accordance with sections 77 to 80, a free growing stand on
> (a) the net area to be reforested, except on areas of intermediate cuttings,
>
> 88(4) A holder of a woodlot licence who has carried out intermediate cuttings must carry out a survey, between 1 and 3 years after the completion of harvesting on the area, that identifies
> (a) the area,
> (b) the inventory label including species component, age, height, density and site index, and
> (c) the incidence of damage by forest health factors affecting trees.
>
> (4.1) Despite subsection (4), the district manager may exempt the holder of a woodlot licence from the requirement to carry out a survey on an area of intermediate cuttings if
> (a) the area is too small to warrant the survey, or
> (b) the extent of harvesting does not significantly change the inventory label.

A Code era intermediate cut also had no regen or free growing obligations. You must do a survey from 1 to 3 years after harvest completion, and you must report your survey results, which now means to RESULTS.

Your govt approved Site Plan should specify that the harvest is an intermediate cut, the target retention levels, and likely the leave tree quality characteristics and acceptable damage levels. This provides what you need to enter the post harvest targets into RESULTS as a stocking standard, survey, and report.

Some Code era beetle salvage intermediate cuts were permitted without a site plan, under WLFMR provisions. These areas would also be reported as intermediate cuts without regeneration obligations, unless in the end the harvest activity grew to a level

that the intermediate cut provisions no longer apply, i.e., even aged management occurred.

15.3.2.2 Code Era Common Issues

1. You think you did an "Intermediate Cut", but your Site Plan called it Single Tree Selection and committed you to the WLFMR multi-layered stocking standards.

   You did not do an intermediate cut. No matter what it looks like on the ground, you are committed to an admin regime with regen and free growing obligations and dates, with required surveys and reports.

   You can apply to FLNR to amend the Site Plan to make it clear that the intent and execution were an intermediate cut, but this may be more of a challenge than it is worth. Completing the required multi-layered surveys and reports, reaching free growing, and moving on may be the most cost effective choice.

   Unless you need to get back in there but now are blocked by an the early free growing date.

   You cannot go back into the stand for additional harvest until the early FG date has passed, you have surveyed, and you have reported your success. WLFMR 78(6) says the early FG date is 5 years or whatever was stated in your operational plan, aka Site Plan. If you need to get back into a stand to which Code era multi-layered stocking standards apply prior to the early FG date, you need to amend the Site Plan to alter that date, at the least.

   Site plan amendments require a rationale and an RPF signature. FLNR will review the proposed amendment, and may approve or reject it. The proposed amendment, review and decision must be made with consideration of the Forest Practices Code and WLFMR standards and requirements, not FRPA/WLPPR standards. See Section 10.2.3.2

2. I have seen many Code era Intermediate Cut Site Plans that clearly communicate the intent to carry out intermediate cutting, include an Intermediate Cutting section, and identify basal area retention standards and leave tree quality standards, but which also contain a statement like:

   > The free growing stand in SU 1 will be established in accordance with the stocking specifications in the Woodlot Licence Forest Management Regulation (November, 1998) Division 2 of Part 6 and Table B of Schedule A.

   That clause commits the block to having a regen and free growing obligations per the WLFMR multi-layered stocking standards. Multi-layered is not intermediate cut. A site plan that says it is for an intermediate cut and contains the " Division 2 of Part 6 etc" reference should not have been approved, but they were. If you are in this situation, you likely should amend that Site Plan to make it clear that your management regime is either intermediate cut or multi-layered stand.

   Site plan amendments require a rationale and an RPF signature. FLNR will review the proposed amendment, and may approve or reject it. The proposed amendment, review and decision must be made with consideration of the Forest

Practices Code and WLFMR standards and requirements, not FRPA/WLPPR standards. See Section 10.2.3.2

3. Ranges. For reasons I no longer recall, we were hooked on ranges in the Code days. We'd never say the basal area retention target was 18 m2/ha, we'd say 16 to 22 m2/ha. Likewise for many other self imposed performance standards.

   The problem is: What is your performance standard? The low end? The high end? The middle? No one really knows. I think that in the case above, if you have 16.0 m2/ha (you are in the 16 to 20 range) you pass. If amending a site plan with ranges, propose a single target using the low end of the range to reduce uncertainty.

15.3.3 Surveys

Section 9.3.2 of the *Silviculture Survey Procedures Manual – May 1, 2020* discusses post intermediate cut surveys procedures (briefly). The final paragraph in the section notes:

> Where an experienced surveyor is confident during the walk-through that there are no concerns present, the visual assessment survey method may be a suitable alternative to the formal plot establishment process.

Of course, forest cover inventory and silviculture labels are required to report the post harvest forest cover to RESULTS, so some survey activity is likely required. Stems/ha, basal area, site index, and average age and height for first two leading species will be needed. See Section 15.3.10.

The Submitting Forest Cover To Results For Openings With Treed Retention manual Section 4.2.3 says that the reporting of intermediate cuts is based on Layer 1 stems - retained overstory - only. Ergo, surveys of intermediate cuts should be surveys of Layer 1 only.

Most Int Cut standards. WLFMR 88(4)(c) and WLPPR 75(5)(c) require that stem damage levels be assessed during the survey.

Above all, be sure the surveyor has the correct applicable stocking standard, Code or FRPA, in hand prior to survey.

15.3.4 Minimum Opening Size

As discussed earlier, we have achieved agreement with Resource Practices Branch that intermediate cuts may contain openings that are >0.25 ha without incurring a responsibility to report said small opening as a separate, even aged harvest unit. The small opening can be included in the overall intermediate cut. To quote:

> WLPPR does not specify the opening size within an Intermediate Cut area above which the obligation to establish a free-growing stand exists. Identifying the extent of harvest openings, choosing how to report them, and creating inventory and silviculture type labels is the practice of professional forestry. At some size threshold a harvested patch does cease to be part of an intermediate cut and becomes a discrete even aged management. However, this threshold is best judged by the forest professionals carrying out the post harvest surveying and

reporting work, with due consideration of patch size, patch shape, number of occurrences, and regeneration environment, and with due consideration of the Silviculture Survey Procedures Manual, RISS-wl, and Submitting Forest Cover to RESULTS for Openings With Treed Retention.

15.3.5 Intermediate Cut Stocking Standards under FRPA

An approved stocking standard is required to report Intermediate Cuts carried out under the FRPA regime (WLPPR / Woodlot Licence Plan) to RESULTS. The standard is identified by SSID number.

The usual first reaction to this is "There are no regeneration obligations. Why do I need a stocking standard?". Answer: WLPPR stipulates there are no FG obligations on an Int Cut, but it also establishes that there must be FLNRO approved performance standards applicable to said harvest. It is not "Licensee choice". Those standards are housed in a Stocking Standard.

An intermediate cut stocking standard will define the minimum retention level, and likely some leave tree characteristics, such as acceptable species and maximum acceptable stems damage parameters. Retention level can be expressed in either stems/ha or basal area, but most standards specify basal area as it is much easier to measure.

Many Woodlots committed to using the Provincial or District default stocking standards when they wrote their Woodlot Licence Plan. However, there are no Provincial default intermediate cut standards, and some Districts also do not have default intermediate cut standards. In these cases, you will have to create your own standard and get it approved.

If there are District default intermediate cut standards that apply, they can be quite difficult to find. Contact your stewardship forester and ask for help if you are uncertain.

Also carefully read your Woodlot Licence Plan to see what you committed to re: Intermediate Cuts. The 2007 WLP Template contains the suggested clause:

> For the purposes of section 12 and 34(3) of the WLPPR the Uneven-aged Stocking standards for single-tree selection, as found in the MFR publication “Reference Guide for FDP Stocking Standards”, are adopted. A copy of these stocking standards are included in Appendix I

The 2018 WLP Template is almost identical.

In my opinion, this suggestion is a poor choice. This clause commits you to use multilayered stocking standards with FG obligations and stems/hectare targets to assess an Intermediate Cut. An Int Cut is required by WLPPR to “retain more than half of the pre-harvest volume”, with consideration given to retained stem condition. Does the minimum target set by the FDP Ref Guide Uneven-aged Stocking standards for single-tree selection equate to 51% of pre-harvest stand volume? It could, by chance, but it seems unlikely.

The FDP Ref Guide uneven-aged stocking standards allow you to report free growing 12 months after harvest[20], which is suitable for an Int Cut.

But they commit you to a stems/ha assessment, using fixed area plots with a maximum count M value. There is a risk that the survey will find you are under minimum stems/ha because only some of the stems in a retained natural clump can be counted in a fixed area plot. A basal area target is more flexible than a stems/ha target, and counts all the trees in a clump. You may wish to propose a basal area-based Intermediate Cut standard for your WLP and get it approved before you harvest.

Above all, **do this research before you harvest**! You need to know what you have committed to before you harvest, and endeavor to get a better standard in place if you do not like what you have committed to upon "sober second thought".

15.3.6 Reserve Areas in a Intermediate Cut

An int cut is a harvest pass that takes place before the regeneration cut. The residual stand is parked for a few decades until you or your successor come back and plan a final harvest and stand regeneration.

Why would you need designated reserves within the harvestable landbase? Long term retention will be figured out in full at a later date. If you want something left now, just leave it.

Here's why: meeting intermediate cut stocking standards. Say you have a discrete patch with high percent deciduous stocking. Great for wildlife, nice place. You leave it in your Int Cut harvest unit, maybe take 2 trees out of the edge of it.

After harvest, a survey plot falls in the decid patch. FLNRO is loath to include deciduous as countable leave trees in Int Cut stocking standards. You get 0 countable trees on that fully stocked plot. That goose egg plot pushes your post harvest retention outcome a tiny bit under the retention target you must reach. Your harvest area is no longer an Int Cut: It did not meet the retention standards because you could not "count" come of the retained trees. You now have reforestation obligations that you cannot meet because there is no open growing space at ground level to plant trees.

If you identify the decid patch as a Reserve and do not go into it, it is not in surveyed area, no 0 count plot, all ends well.

In summary, if there are discrete areas within your Int Cut that have few to no "countable" trees per the applicable Int Cut Stocking Standard, seriously consider making them into reserves. The reserve can be designated before harvest, or during harvest.

---

[20] The Reference Guide for FDP Stocking Standards single-tree selection standards for woodlots state in the footnote "If regeneration is achieved immediately following harvest, earliest free growing date is 12 months after completion of harvest and the latest date is 24 months after completion of harvest." The 24 months does not jive with WLPPR 75(5) which specifies 36 months, but the intent is clear: you can declare FTG after 12 months. This is the provincial default standard, but what really matters of course is what standard applies to *your* harvest.

The reserve(s) need to be mapped and reported to RESULTS, after which they are not part of area with retention obligations.

Note: I recommend you do not call your reserve a Wildlife Tee Patch. Call it a Reserve. Wildlife Tree areas have legal status. Creating WTRA and entering them in RESULTS reduces future options. You still must meet the WTRA targets set in the WLP, but that can be done outside the RESULTS system. See Section 11.4.5.5.

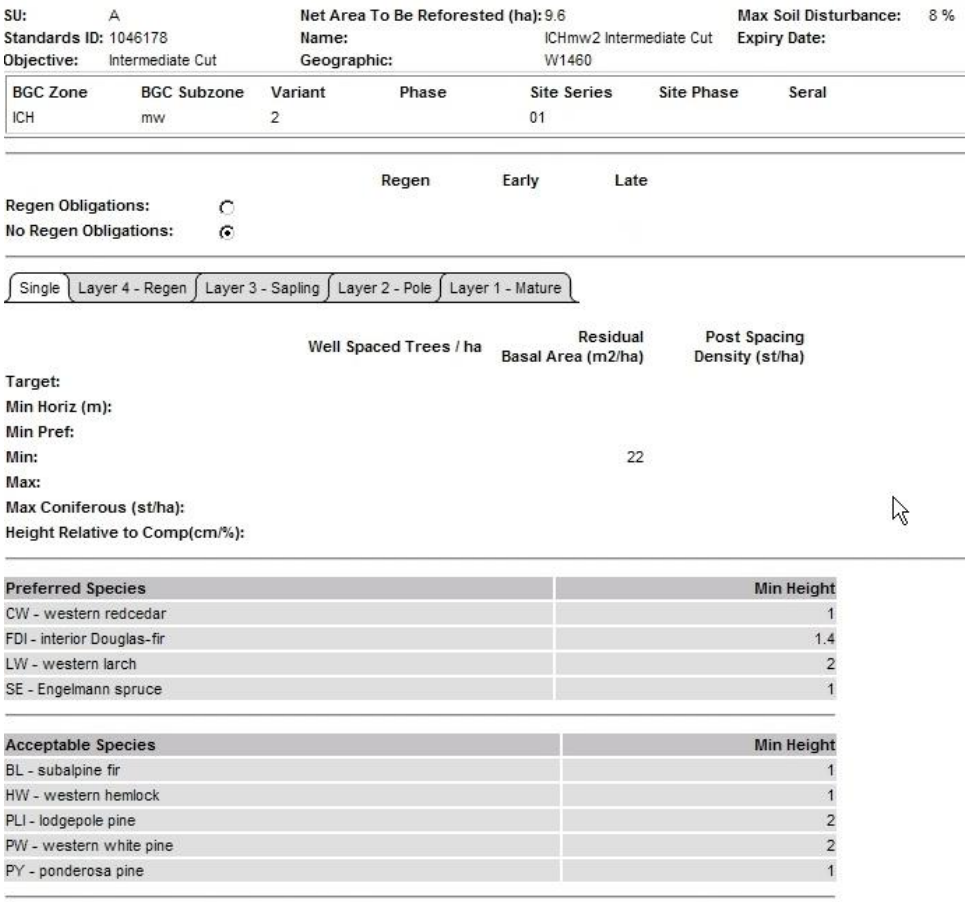
15.3.7 Proposing a FRPA Intermediate Cut Stocking Standard

If you have no applicable Int Cut standards or you do not like what you agreed to in your WLP, you will need to propose an intermediate cut stocking standard for approval. The mechanics of this are discussed in Appendix 3.

WLPPR Schedule 1 requires:

> The following factors apply to developing stocking standards under section 12:
>
> (a) the types of commercially valuable and ecologically suitable species that should be retained on the area;
>
> (b) the characteristics, quantity and distribution of retained trees of a species referred to in paragraph (a) that are required to ensure the area will remain adequately stocked.

Section 12 is of course the Section we are working under here. A typical FRPA intermediate cut stocking standard looks somewhat like the screen below in RESULTS:



SU: A
Net Area To Be Reforested (ha): 9.6
Max Soil Disturbance: 8 %
Standards ID: 1046178
Name: ICHmw2 Intermediate Cut
Expiry Date:
Objective: Intermediate Cut
Geographic: W1460

BGC Zone	BGC Subzone	Variant	Phase	Site Series	Site Phase	Seral
ICH	mw	2		01		

Regen Early Late

Regen Obligations: ○
No Regen Obligations: ◉

Single | Layer 4 - Regen | Layer 3 - Sapling | Layer 2 - Pole | Layer 1 - Mature

	Well Spaced Trees / ha	Residual Basal Area (m2/ha)	Post Spacing Density (st/ha)
Target:			
Min Horiz (m):			
Min Pref:			
Min:		22	
Max:			
Max Coniferous (st/ha):			
Height Relative to Comp(cm/%):			

Preferred Species	Min Height
CW - western redcedar	1
FDI - interior Douglas-fir	1.4
LW - western larch	2
SE - Engelmann spruce	1

Acceptable Species	Min Height
BL - subalpine fir	1
HW - western hemlock	1
PLI - lodgepole pine	2
PW - western white pine	2
PY - ponderosa pine	1

Key factors are:

- No regeneration
- A residual basal area target is set.
- Name and Objective contain Intermediate Cut - makes it easier to find in the SSID Library
- Species list

Oddities:

- Minimum heights. On 25 meter and taller layer 1 trees. At the time this screen shot was taken, Min Height was a required entry. That has been fixed and Min Height can now be left blank, which would be correct.

What is not shown in the above is the Leave Tree specifications. These are entered as a comment in the standard in RESULTS. Some intermediate cut standards have no specifications, other have incredibly detailed specifications. I prefer less detail.

I have been discussing Intermediate Cut stocking standards with Resource Practices Branch for many months. We quickly reached agreement that the Reference Guide for FDP Stocking Standards single-tree selection standards were not a good choice for Intermediate Cut stocking standards. After the, not so much agreement. RPB wants standards with very strict Acceptable Tree standards. They want to prevent

Intermediate Cutting being used as a "take the good, leave the trash" tool. I agree in principle, but also am mindful that we manage an area based tenure for multiple resources, that Intermediate Cutting includes beetle salvage activities, and that deciduous stems and trees with defects provide biodiversity and wildlife habitat. We are trying to figure out a middle ground.

Should a set of provincial default intermediate cutting stocking standards for WL be agreed to, the news will be published in the Almanac and this sections of the manual will be revised.

Typical int cut leave tree specifications in my area include:

> Leave trees will have the following characteristics:
>
> 1) Be a preferred or acceptable tree species per the even aged stocking standards applicable to this biogeoclimatic site association per the Woodlot Licence Plan.
>
> 2) Have a healthy crown capable of future growth.
>
> 3) Have no obvious signs of mistletoe on Lw or above ground signs of Armillaria on Fd.
>
> 4) Free of Douglas Fir bark beetle at time of harvest.
>
> 5) The minimum DBH of preferred and acceptable trees that will count towards the residual basal area is 17.5 cm.
>
> 6) Mechanical damage is not to exceed 400 cm2 on any one tree. Mechanical damage as a result of log skidding/yarding is defined as scarring caused by penetrating down to sapwood.

These are NOT requirements, they are suggestions to give you something to start from if you are creating an intermediate cut stocking standard. I note that clause 2 is not quantifiable, and leads to professional judgment. It is there to prevent someone claiming that a tree with a broken off top that still has a few live branches is a countable retained stem. Clause 5 removes a lot of Layer 1 trees from contention - you should be sure this works for you prior to proposing it. You may want to count some deciduous. You may have no Douglas-fir or Larch. Etcetera.

You may want to be more precise on the "damage" aspects. A current source of damage criteria to consider is Table 26 in the FS 660 Silviculture Survey Reference Guide.

RPB currently advocates:

> Provide a list of Preferred and Acceptable species. Greater than 50% of the contributing retained basal area must be a preferred tree species, if it existed on site prior to harvest;
>
> Trees contributing to the retained basal area must meet tree acceptability as specified in the Resource Practices Branch Silviculture Survey Procedures Manual and comply with the attributes defined in FS 660 -Free growing damage criteria for multi-storey conifer stands.

In my opinion, the "full FS 660" damage criteria are too restrictive. For example, any tree with a fork in lower 2/3 of stem, a frost crack, or a scar is out. Saying you cannot count "less than perfect" trees when a bark beetle is driving your salvage logging cut/leave choices is not realistic, and could take Int Cut off the table as a realistic option. That is contrary to regulatory intent, in my opinion. But some of the FS 660 specs are potentially very useful.

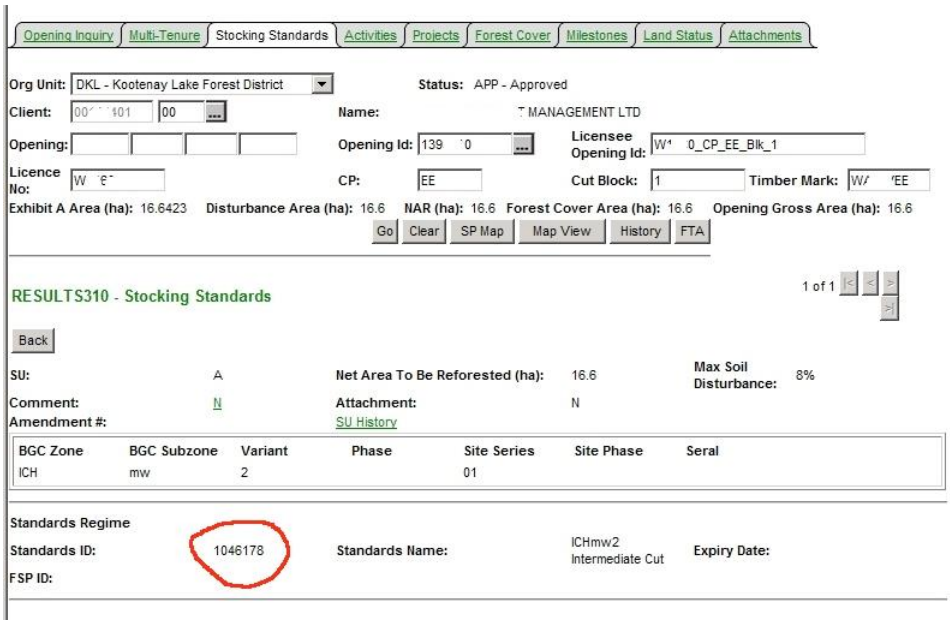
The real world process is you put together a standard that will work for you with your forest professional. Then you need to get the District Manager to agree to amend it into your Woodlot Licence Plan.

You should reach agreement on concepts with WL forester and/or Stewardship forester, submit the standard to The System per Appendix 3, notify District it is submitted via an email, and wait for approval or further discussion.

15.3.8 Reporting an Intermediate Cut to RESULTS – FRPA Era

So how do you report an Intermediate Cut with no regeneration obligations?

You report the existence of the Opening and the SU as per usual after harvest. You reference your approved Intermediate Cut stocking standard using the SSID. You expect to see something like the following in the Stocking Standards tab in on-line RESULTS after you submit your Opening and SU.



Note that you must report the “Net Area Reforestable”, even though there is no reforestation obligation. The title of the entry blank implies a legal obligation that does not exist because RESULTS is "one size fits all". The area to be reported is the net area within the opening your Int Cut stocking standards apply to. The opening could also contain NP areas or reserves, these would be deducted from gross opening area to get net area.

And you want to see the No Regen Obligations box in the SU screen checked, as shown below. If you did your stocking standard creation properly, this will be the default setting. If "No Regen" is not checked, you have a mistake in your stocking standard.

You need to report Activities in on-line RESULTS. Note that there is an Imcut class of harvest.

What about forest cover? All other RESULTS guidance stresses that you must report forest cover when you create the harvested opening entry in RESULTS.

RISS-wl Section 7.2 specifies:

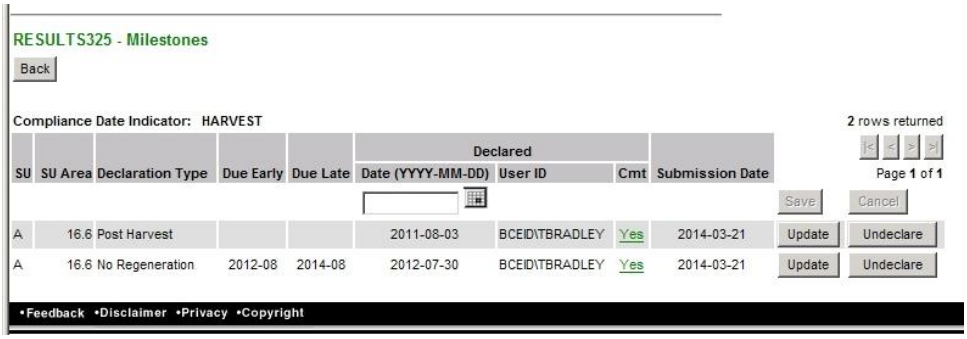
> Forest cover information required per WLPPR s 75(5) for intermediate or partial cut areas subject to WLPPR s 34(2)(d) or (e) is submitted at least 12 months and not more than 36 months from the completion of harvesting.

So I do NOT try to report forest cover at this time. I have no info to report, anyway, as I am sure the unit is not NSR but I cannot survey the unit for reporting purposes for at least 12 months. And I am not paying to survey it twice.

I do include a Forest Cover Comment that says:

> This is a intermediate cut harvest area.
>
> Forest cover will be reported for the harvest area between 1 and 3 years after the completion of harvesting on the area per WLPPR 75(5).

After a year has passed, and I have the stand survey in hand, and a signed declaration from a forest professional that the area meets the applicable Intermediate Cut standards, I file the No Regeneration milestone in on-line RESULTS:


RESULTS325 - Milestones

Back

Compliance Date Indicator: HARVEST

2 rows returned

Page 1 of 1

SU	SU Area	Declaration Type	Due Early	Due Late	Declared Date (YYYY-MM-DD)	Declared User ID	Declared Cmt	Submission Date		
									Save	Cancel
A	16.6	Post Harvest			2011-08-03	BCEID\TBRADLEY	Yes	2014-03-21	Update	Undeclare
A	16.6	No Regeneration	2012-08	2014-08	2012-07-30	BCEID\TBRADLEY	Yes	2014-03-21	Update	Undeclare

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I attach a scan of the declaration to the RESULTS page for my opening as well.

And, of course, at that time I report the forest cover information. See Section 15.3.10 below.

15.3.9 RESULTS Reporting - Intermediate Cut - Code Era

Very similar to FRPA process.

Except you do not use the SSID for an existing Int Cut stocking standard or propose a new stocking standard.

You report the existence of the Opening and the SU(s) as per usual after harvest, as an Opening and SU submission.

Then you get out the approved paper site plan, verify that you are not caught by the snafus discussed in Section 15.3.2, and then enter the approved intermediate cut stocking standards from the paper site plan directly into RESULTS as a stocking standard Correction.

Many intermediate cut site plans from the Code are a tad wordy. If yours is like that, you will want to keyboard the leave tree characteristics into a word processor and then copy and paste them into on-line RESULTS, rather than try and type them in on-line.

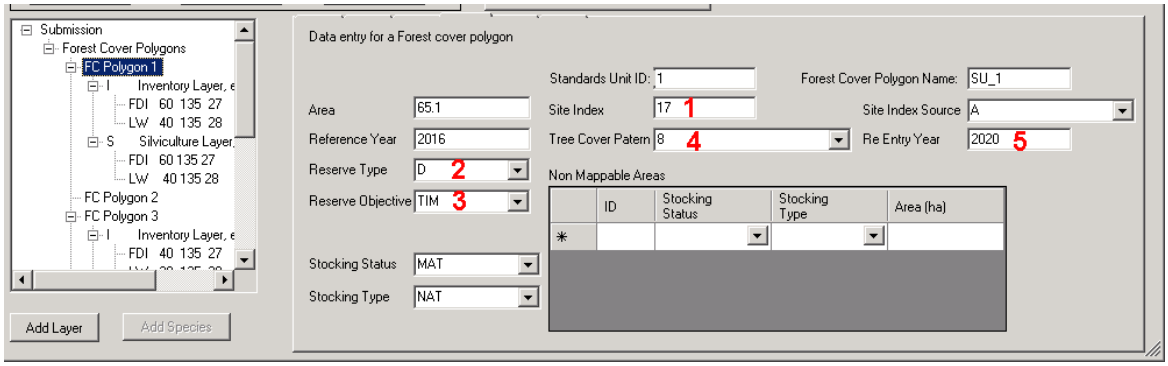
Either amend the Site Plan to get rid of the infernal Code era ranges (e.g.: Will retain 18 to 22 m2/ha of basal area), or enter the low end of the range (in this case, 18 m2/ha.) as the retention target.

Once you have Opening, SU and stocking standards entered, the remaining RESULTS reporting process is identical to the FRPA era process.

15.3.10 RESULTS Reporting - Int Cut Forest Cover

Procedures for reporting forest cover in intermediate cuts are set out in *Submitting Forest Cover To Results For Openings With Treed Retention 1.3*, Section 4.2.3. The SFCWTR manual notes that the forest cover report is required to document that the requirements in the intermediate cut stocking standards have been met.

A typical Int Cut polygon data set is shown below.

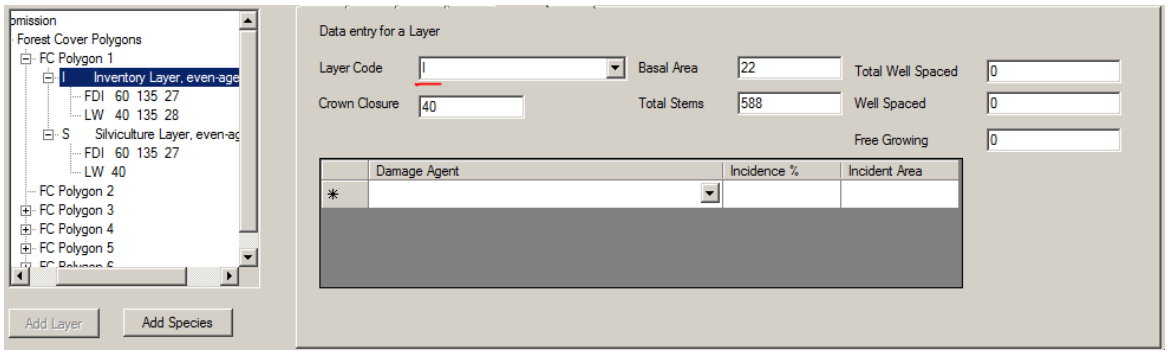


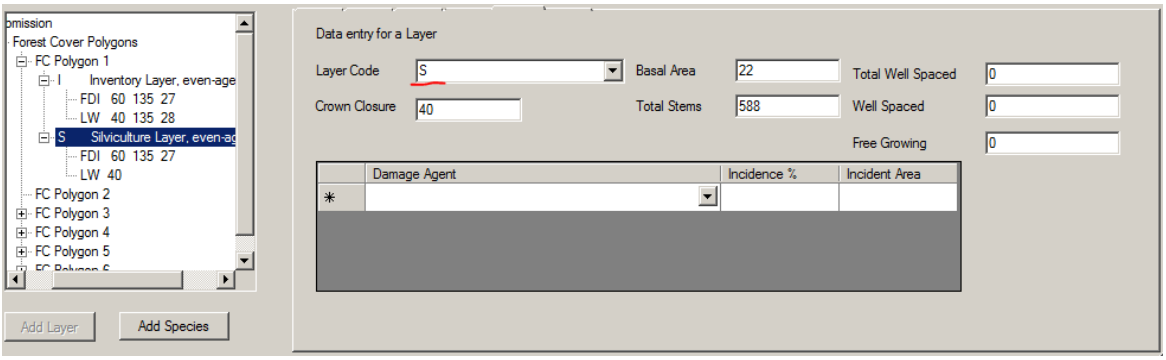
Very standard stuff. Some comments.

1. You need Site Index. Plan to measure that during your survey. Obviously, did not get done in this survey and we are reporting based on Source: Adjacent Stand.
2. Reserve Type will be Dispersed.
3. Reserve Objective will be T for Timber. You are coming back to cut them down later.
4. Tree Cover Pattern. SFCWTR says "Use 9". I do not agree. I look at the pattern in the stand and make a choice.
5. ReEntry Year. Make a scientific guess as to when you will be back to log more.

The forcov is to be reported as an even aged stand with both Inventory and Silviculture layers. This seems a bit odd, as the Silv layer generally contains data about total well spaced, well spaced considering m-value, and free growing trees. We do not survey an Int Cut for these factors, so how do we report them? Turns out RESULTS will accept a Silv submission with no well spaced / free growing info, so just leave them at 0 in the Silv submission.

The Inv and Silv data input can in fact be identical. However, there may be trees present that do not meet pref/acc species or stem damage criteria. The trees count in inventory data, but not in silviculture data. So the two layers could have different basal areas and stems/ha.





Average height and age for the two leading species in each polygon are required for the Inv layer, only for first species in Silv layer.

Basal Area is generally required, as Int Cut stocking standards generally have a basal area target. In fact, SFCWTR says that we can report the forest cover composition based on a basal area survey. This is great, could reduce survey costs.

However, RESULTS requires a total stems/ha value for the Inv layer. Submissions without total/stems/ha do not validate.

The following errors were received during the validation of your submission:

[Error]2018668.xml:334:58: cvc-datatype-valid.1.2.1: '' is not a valid value for 'integer'.
Line: 334 Column: 58: Type 'rst:totalStems' has an invalid value of ''.

So you have to use some method during your prism sweep basal area survey to measure total stems/ha. A simple approach is to also run a quick circular plot and count all layer 1 stems that are "in". Another other option is to measure the diameter of all tallied stems and do math to calculate stems/ha from prism BAF and stem diameter.

Yes, this is very frustrating and frankly expensive. The intention is good (Prism sweep survey!) but the reality is compromised by a RESULTS data validation check that has no relevance to what is being reported.

15.4 Uniform Partial Cuts - Uneven Aged Multi Layered Management

You harvested by removing individual trees and small groups of trees throughout an area, and:

1. did not create openings > 0.25 ha, and
2. cut more than half the volume in a stand, and
3. some of the smaller trees in the stand are crop trees that will grow to maturity and be harvested,

   or
4. you are unable to reach agreement with FLNRO on a viable Intermediate Cutting stocking standard under FRPA, or
5. your Code era site plan committed you to partial cut with multi-layered stocking standards.

You report using the Single Tree Selection methods.

Single tree selection is addressed in SFCWTR Section 4.2.1, which states:

> A single tree selection system is an uneven-aged system and consists of regular harvest entries of individual or small groups of trees until the end of the rotational planning cycle. The locations of the individual trees are not mapped; rather it is the polygons within the SUs from which the trees are harvested that are mapped. The forest cover for the residuals may remain similar to the original cover after the first harvest entry, taking into account any changes to the species, height, BA, or age structure as a result of the first entry.

This is somewhat clarified in a figure caption on the next page:

> The specific locations of residuals and denuded portions of the disturbance area are not mapped. The stand profiles are represented in the multi-layer forest cover attribute reports. (Layers 1, 1S, 2, 2S, and/or 3 and 3S represent the Mature, Pole and Sapling residuals; Layers 4 and 4S represent the Regen layer in the denuded portions).

You will be reporting on the forest conditions within the whole polygon impacted by the harvesting. This may be a single polygon, or several polygons if the harvest intensity or pre-existing stand result in significantly different post-harvest forest cover. RISS-wl Section 7.4 defines standards for determining when a forest cover change has occurred.

You have a free growing obligation, and a survey will be required to document the meeting of the free growing milestone, and to describe free growing forest cover. Surveys and assessments will use multi-layered stocking standards.

Note that you will not be able to carry out further harvesting within the overall harvest area after your CP has expired and before you have declared free growing. If your stocking standard (FRPA) or Site Plan (Code) has an early free growing date that prevents you from declaring free growing before you wish to re-enter the stand, this could be a problem.

The Reference Guide for FDP Stocking Standards single-tree selection standards for woodlots (which oddly enough apply to WL FRPA partial cuts) state in the footnote “If regeneration is achieved immediately following harvest, earliest free growing date is 12 months after completion of harvest and the latest date is 24 months after completion of harvest.” The 24 months does not jive with WLPPR 75(5) which specifies 36 months, but the intent is clear: you can declare FG after 12 months. This is the provincial default standard, but what really matters of course is what standard applies to *your* harvest.

If you have reason to want to re-enter the area before the early FG date is reached, you can propose a stocking standard (FRPA) or Site Plan (Code) amendment. Discuss with your forester.

15.4.1 RESULTS Reporting - Uniform Partial Cut - FRPA era

If the applicable Woodlot Licence Plan contains suitable multi-layered stocking standards, use those standards by referencing their SSID.

Many woodlots committed to use the Provincial default standards for Single Tree Selection contained in the Reference Guide for FDP Stocking Standards, as shown below:

Reference Guide for FDP Stocking Standards

Single Tree Selection
All British Columbia

Interior Douglas-fir (IDF) Uneven-aged Stocking Standards* -- Single-tree selectior

These stocking standards have been developed for IDF subzones and are only recommended for use in the IDF and for woodlots.

Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 1	Col. 2	Col. 3	Col. 4	Col. 5
Target from Table A standards	**Layer****	**Stocking*** **			**Target from Table A standards**	**Layer****	**Stocking*** **		
		Target pa	MIN pa	MIN p			Target pa	MIN pa	MIN p
(stems/ha)		(well-spaced/ha)			(stems/ha)		(well-spaced/ha)		
1200	1	600	300	250	**800**	1	300	150	150
ID 86000 (all layers)	2	800	400	300	**ID 86003 (all layers)**	2	400	200	200
	3	1000	500	400		3	600	300	300
	4	1200	700	600		4	800	400	400
1000	1	400	200	200	**600**	1	300	150	150
ID 86001 (all layers)	2	600	300	250	**ID 86004 (all layers)**	2	400	200	200
	3	800	400	300		3	500	300	300
	4	1000	500	400		4	600	400	400
900	1	400	200	200	**400**	1	200	100	100
ID 86002 (all layers)	2	500	300	250	**ID 86005 (all layers)**	2	300	125	125
	3	700	400	300		3	300	150	150
	4	900	500	400		4	400	200	200

MIN - minimum

* Maximum regeneration delay is seven years. For a seven-year regeneration delay, the early free growing is 12 years and the late free growing is 15 years. Regeneration delay can be met immediately following harvest if the residual stand has no significant damage or pest problems and meets minimum stocking standards. If regeneration is achieved immediately following harvest, earliest free growing date is 12 months after completion of harvest and the latest date is 24 months after completion of harvest.

****Stand Layer Definition***

Layer 1	Mature	trees >= 12.5 cm dbh
Layer 2	Pole	trees 7.5 cm to 12.4 cm dbh
Layer 3	Sapling	trees >= 1.3 m height to 7.4 cm dbh
Layer 4	Regeneration	trees < 1.3 m height

*** pa - preferred and acceptable species p - preferred species

Preferred and acceptable species and "Target from Table A standards' are as specified in Table A by biogeoclimatic ecosystem classification (BEC) site series.

Yes, it says "FDP", or Code era, but we use them under FRPA because WLPPR s 35 specifically references them.

Note the footnote: If your multilayered harvest can be declared regenerated immediately after harvest, you can declare FG 12 months after harvest.

Note that there is no clear statement above on tree damage. WLPPR 75(5)(c) says "identify damage", provincial defaults say "has no significant damage". Many of us are less than comfortable with such loose deliverables. What if C&E thinks damage is "significant" after you log? Bit late to find out.

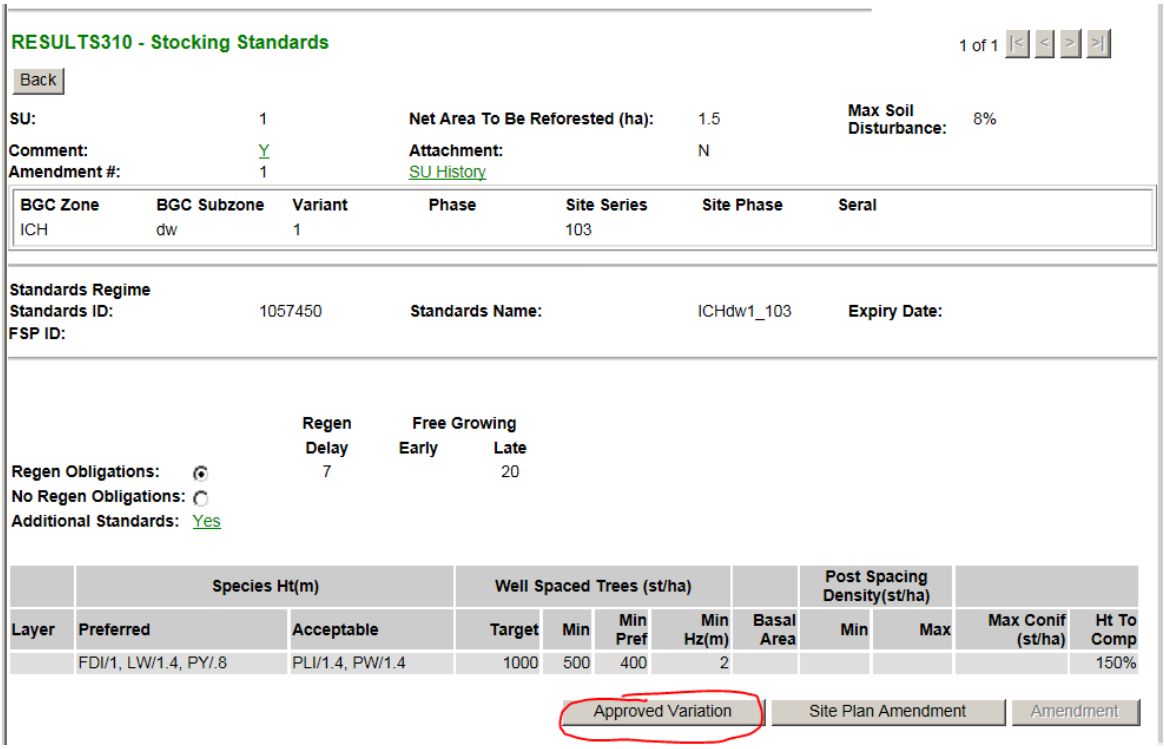
A possible approach is to add multi-layered stocking standards to your WLP that define clear and measurable damage criteria before you harvest. A current source of damage criteria to consider is Table 26 in the FS 660 Silviculture Survey Reference Guide.

Whatever. Harvesting has occurred and we are here to report it. Onwards.

To report to a multi-layered management unit to RESULTS, you report the existence of the Opening and the SU(s) as per usual.

We are discussing FRPA era reporting. When reporting the SU, report the SSID of the even aged management stocking standard that is approved in the applicable WLP for the applicable BEC Site Series. Once the Opening and SU have been accepted by RESULTS, you use the RESULTS on-line interface to change these even aged standards to Uneven aged standards.

Here is a typical RESULTS 301 screen after the initial submission of Opening and SU, with even aged standards. You use the <Approved Variation> button to modify the standards, as the 86000 series of standards are an Approved Variation for WL.



RESULTS310 - Stocking Standards

1 of 1

Back

SU:	1	**Net Area To Be Reforested (ha):**	1.5	**Max Soil Disturbance:**	8%	
Comment:	Y	**Attachment:**	N			
Amendment #:	1	SU History				

BGC Zone	BGC Subzone	Variant	Phase	Site Series	Site Phase	Seral
ICH	dw	1		103		

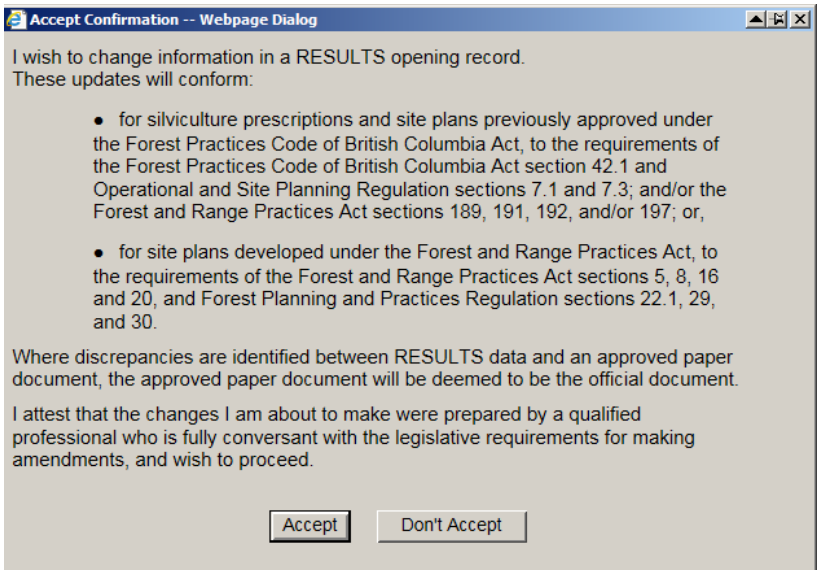
Standards Regime
Standards ID: 1057450 **Standards Name:** ICHdw1_103 **Expiry Date:**
FSP ID:

	Regen Delay	Free Growing Early	Free Growing Late
Regen Obligations:	7		20
No Regen Obligations:			
Additional Standards:	Yes		

	Species Ht(m)		Well Spaced Trees (st/ha)					Post Spacing Density(st/ha)			
Layer	**Preferred**	**Acceptable**	**Target**	**Min**	**Min Pref**	**Min Hz(m)**	**Basal Area**	**Min**	**Max**	**Max Conif (st/ha)**	**Ht To Comp**
	FDI/1, LW/1.4, PY/.8	PLI/1.4, PW/1.4	1000	500	400	2					150%

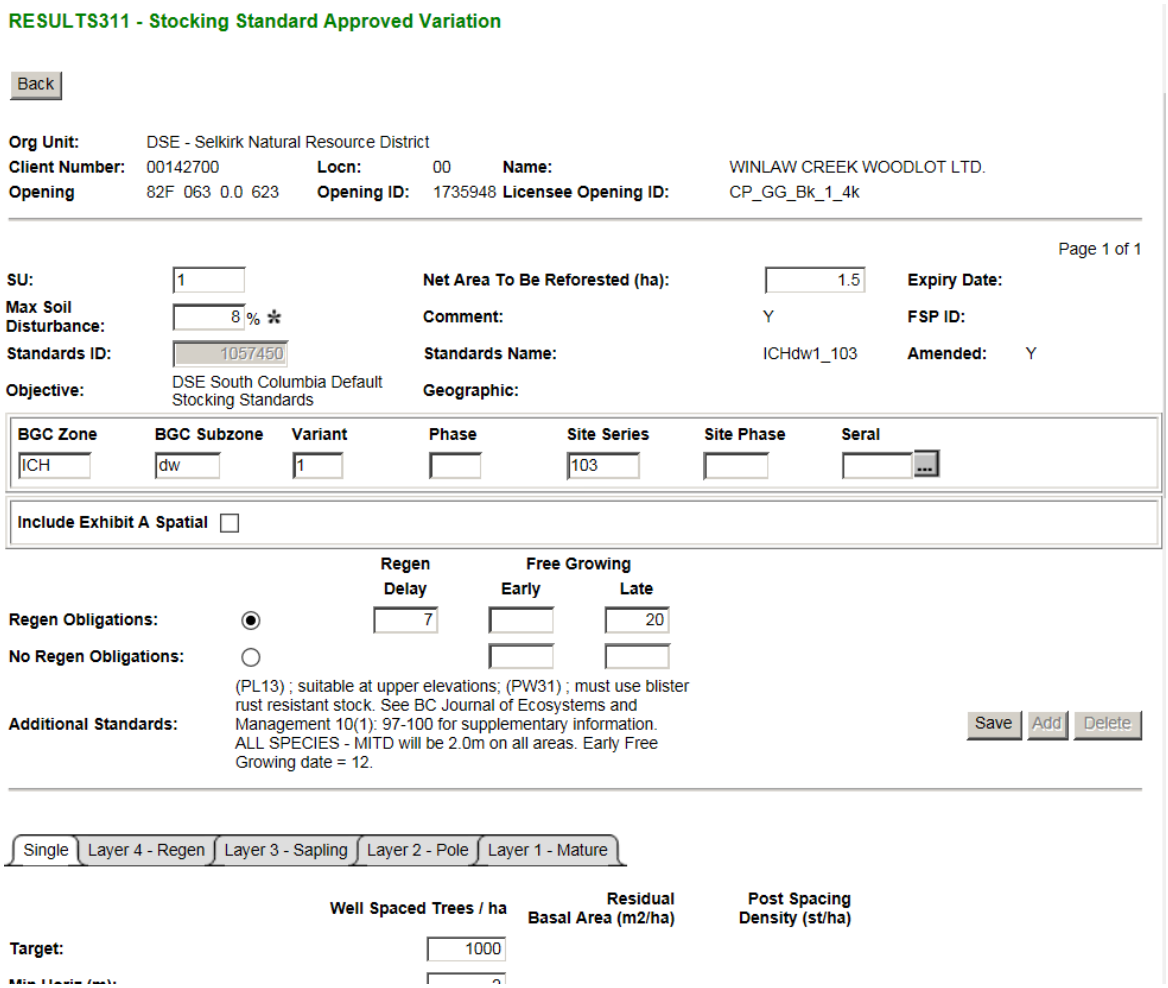
Approved Variation | Site Plan Amendment | Amendment

After you click it, you see:

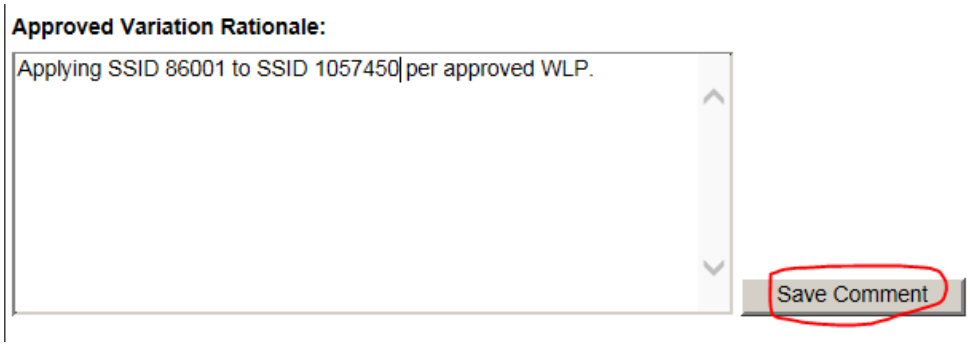


As I never tire of whinging about, there isn't a word about WLPPR in there, and this ain't no site plan. But there is no alternative. Accept the poorly worded attestation.

Things change. You are dropped into RESULTS 311 - Stocking Standard Approved Variation:



Scroll down to the bottom of the page. The Rationale box. Enter you rationale. Mine is simple: "Applying SSID 86001 to SSID 1057450 per approved WLP."

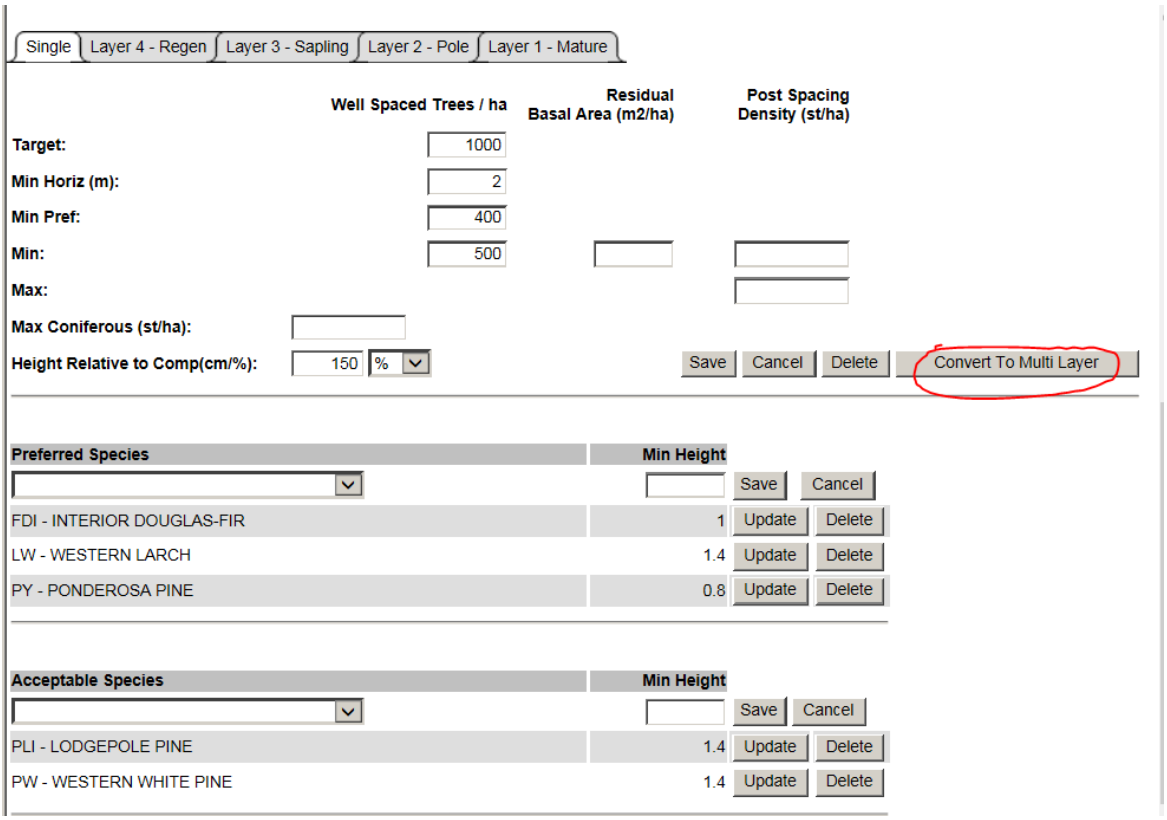


And <Save>.

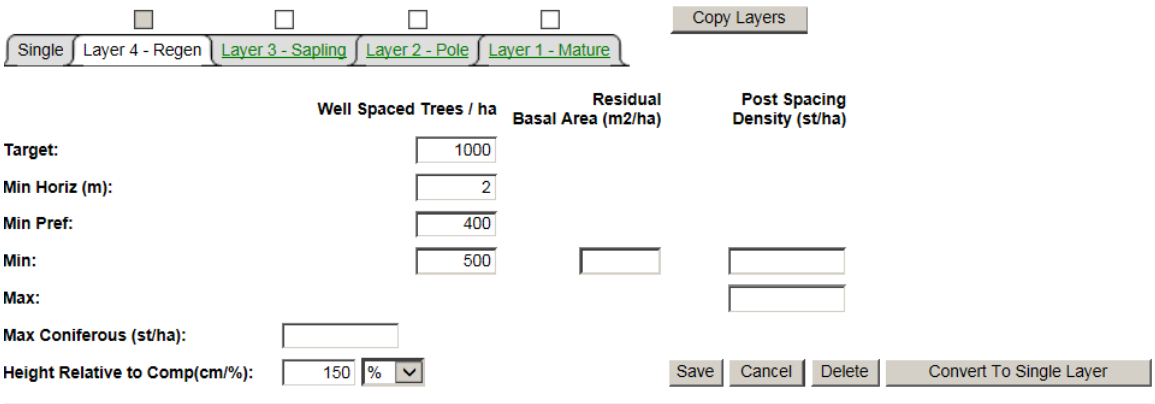
How do I know it is 86001? 1057450 has a TSS of 1000 st/ha. 86001 is the Single Tree selection standard that applies to 1000 st/ha.

Why Rationale first? I have more than once done all the work and quit and then realized I forgot to enter the Rationale. Awkward. I then have to enter the Rationale in General Comments. This way is better.

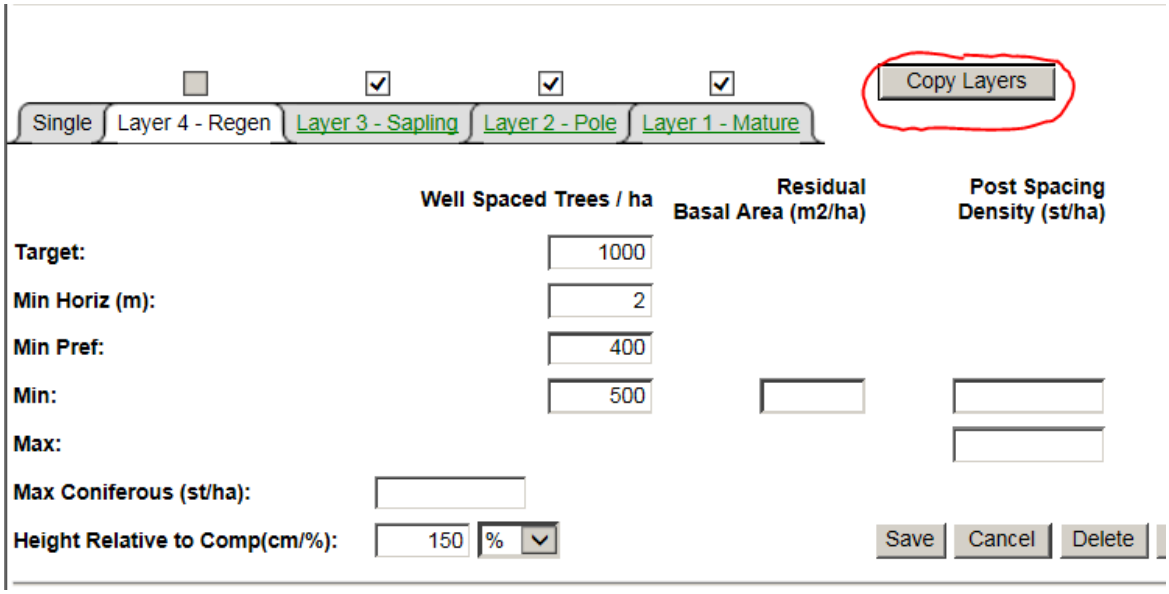
The actual Work Site is mid page. Find this area, and start by clicking on ,Convert to Multi Layer>



Things change:



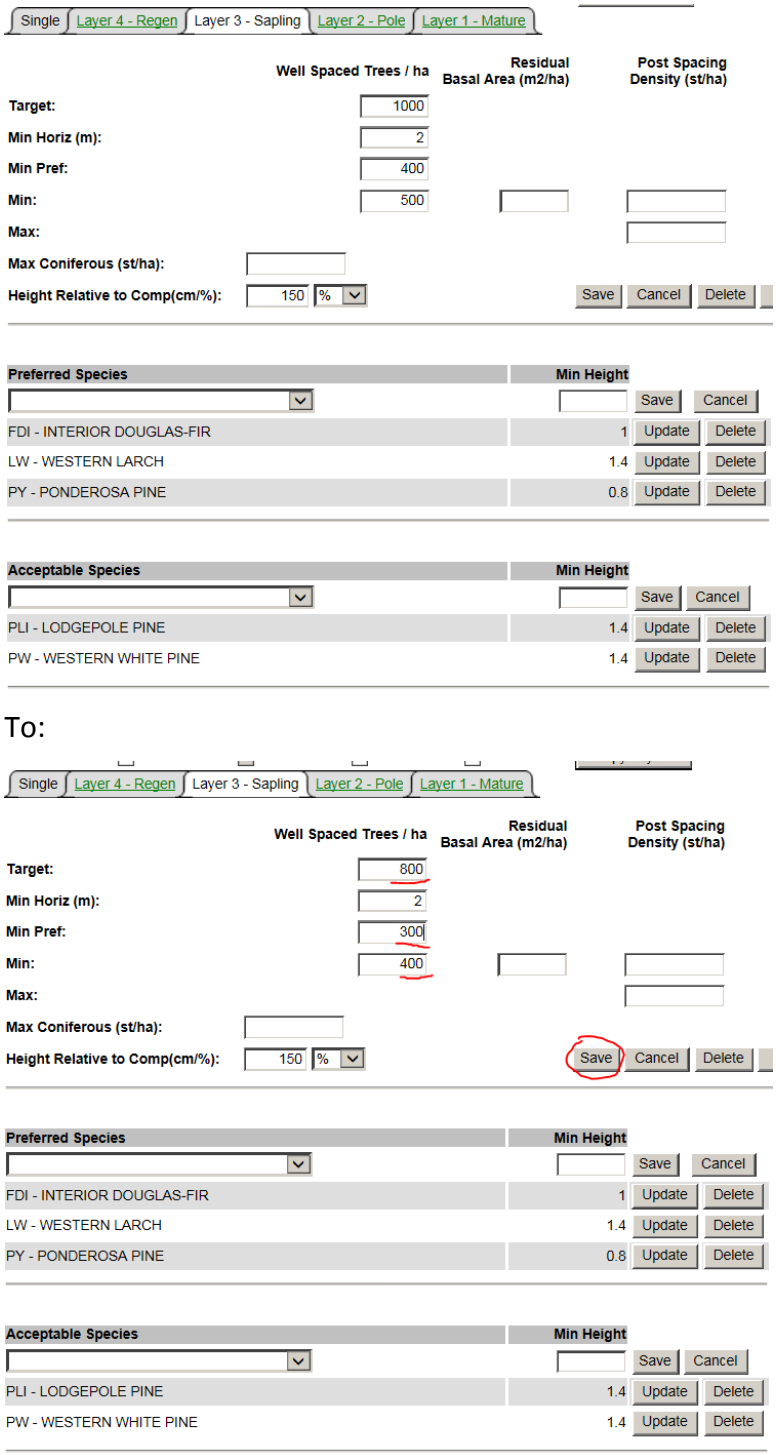
Now, click/tic those little boxes above Layer 3 - Sapling, Layer 2, etc, then click <Copy Layers>



What this does is copy the species info from Layer 4 to all the other layers. This is a big help! It also copied the Layer 4 TSS, MinP and Min numbers, which we now have to edit. So you go to each of the Layer 3, Layer 2 and Layer 1 tabs and edit the TSS, Min and MinP to match the specs in SSID 86001.

Target from Table A standards	Layer**	Stocking***		
		Target pa	MIN pa	MIN p
(stems/ha)		(well-spaced/ha)		
1000	1	400	200	200
ID 86001 (all layers)	2	600	300	250
	3	800	400	300
	4	1000	500	400

So, you change Layer 3 from:



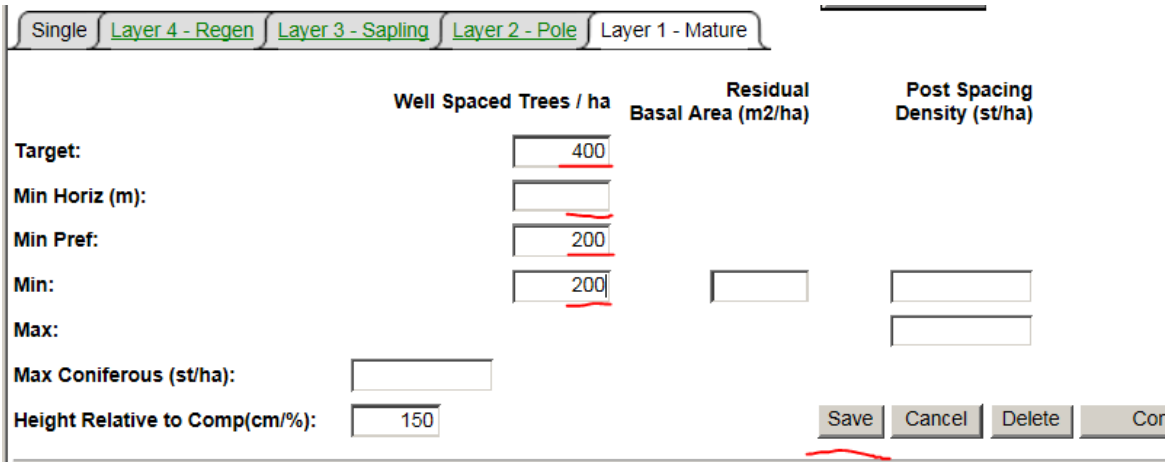
To:

And <Save>

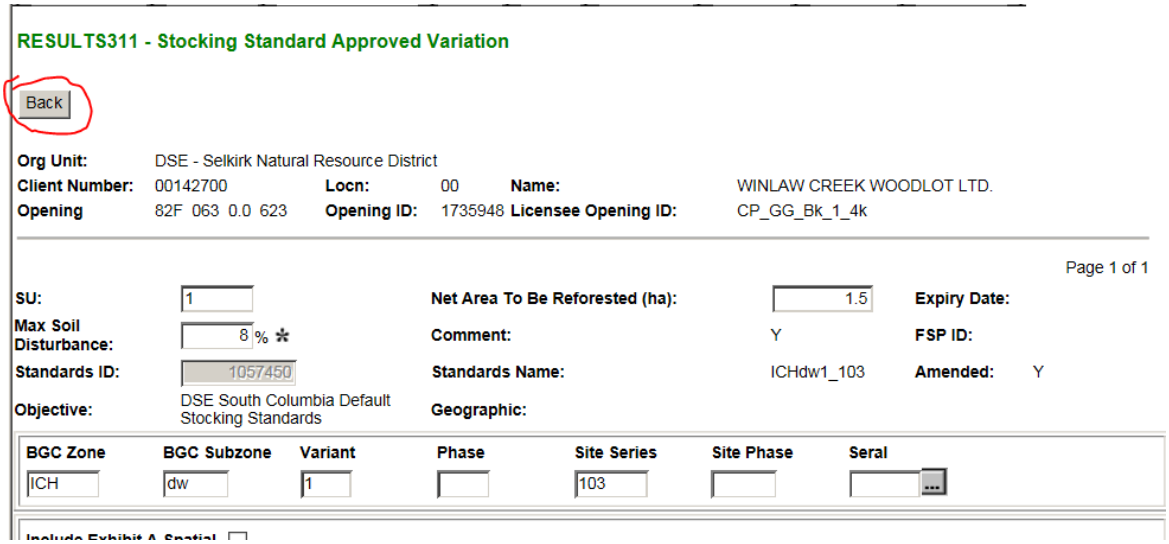
You note the Pref and Acceptable species have crazy min heights, given that Layer 3 tree are > 1.3 m tall by definition. I used to be offended by this, but I no longer care. I just leave them as is.

Repeat for Layer 2.

Repeat for Layer 1, with one important difference: There is no minimum intertree distance for Layer 1 trees. So delete the Min Intertree for Layer 1; make it a blank.



When you are all done, quickly check your data entry in the layer, then go <Back>



RESULTS 310 now has multi-layered standards.

RESULTS310 - Stocking Standards 1 of 1

Back

SU:	1	**Net Area To Be Reforested (ha):**	1.5	**Max Soil Disturbance:**	8%
Comment:	Y	**Attachment:**	N		
Amendment #:	1	SU History			

BGC Zone	BGC Subzone	Variant	Phase	Site Series	Site Phase	Seral
ICH	dw	1		103		

Standards Regime			
Standards ID:	1057450	**Standards Name:**	ICHdw1_103
FSP ID:			

	Regen Delay	Free Growing Early	Free Growing Late
Regen Obligations:	7		20
No Regen Obligations:			

Additional Standards: Yes

	Species Ht(m)		Well Spaced Trees (st/ha)					Post Spacing Density(st/ha)			
Layer	**Preferred**	**Acceptable**	**Target**	**Min**	**Min Pref**	**Min Hz(m)**	**Basal Area**	**Min**	**Max**	**Max Conif (st/ha)**	**Ht To Comp**
4 - Regen	FDI/1, LW/1.4, PY/.8	PLI/1.4, PW/1.4	1000	500	400	2					150%
3 - Sapling	FDI/1, LW/1.4, PY/.8	PLI/1.4, PW/1.4	800	400	300	2					150%
2 - Pole	FDI/1, LW/1.4, PY/.8	PLI/1.4, PW/1.4	600	300	250	2					150%
1 - Mature	FDI/1, LW/1.4, PY/.8	PLI/1.4, PW/1.4	400	200	200						150%

Approved Variation | Site Plan Amendment | Amendment

Quickly scan those numbers to be SURE that TSS > Min > MinP, and MinHz for Layer 1 is null.

Done! You now have Opening, SU and Stocking standards entries in RESULTS.

Add activity information:

RESULTS315 - Activities

Back

Activity Status <BOTH>

2 rows returned

Trial Comment: No

		Activity											
RsIt	**ATU ID**	**Base**	**Tech**	**Method**	**Objective**	**Start Date**	**Completion Date**	**Area**	**Fund**	**Project Id**	**Cmt**	**Map**	
Y	2735318	DN	L	SELEC		2011-10-17	2011-12-07	1.5			N	N	Details Delete
Y	2819008	DN	L	SELEC		2012-06-18	2012-10-01	11.6			N	N	Details Delete

Back

Copy Regime | Add Activity | Add Disturbance

•Feedback •Disclaimer •Privacy •Copyright

We stopped for the snowy season, so there are two entries.

Now, what about forest cover?

RESULTS materials stress that you must report forest cover with your Opening and SU information.

But in this case, I am sure my harvest area is not NSR, and I expect to make stocking target and be Free Growing with retained Layer 1 trees. So I do not want to report

"NSR". But I have no forest cover to report as I have not surveyed. Per the 86001 footnotes and WLPPR s75, I cannot survey "for real" for at least 12 months have passed, and I am not paying to survey it twice. So I do not report forest cover at this time.

RISS-wl Section 7.2 specifies:

> Forest cover information required per WLPPR s 75(5) for intermediate or partial cut areas subject to WLPPR s 34(2)(d) or (e) is submitted at least 12 months and not more than 36 months from the completion of harvesting.

So I feel safe doing this. I do include a Forest Cover Comment that says:

> This is a partial cut harvest area that is believed to be fully stocked following harvest.
>
> Forest cover will be reported for the harvest area between 1 and 3 years after the completion of harvesting on the area per WLPPR 75(5).

A multi-layered harvest are can require regeneration in Layer 4 to meet stocking targets. In such a case, it would be accurate to call the area NSR and report NSR forest cover. This would be based on opinion, not a survey, in most cases.

And areas may be stocked but not free growing if meeting stocking target requires that the smaller Layer 3 and 4 trees are counted. In such a case, you would have to wait until the Layer 3 and 4 trees were above minimum FG height and free of brush competition to survey and declare the free growing milestone.

After I have the survey results in hand, and a signed declaration from a forest professional that the area meets the stocking targets and is free growing, I file the Free Growing milestone in on-line RESULTS:

Compliance Date Indicator: HARVEST — 9 rows returned — Page 1 of 1

SU	SU Area	Declaration Type	Due Early	Due Late	Declared Date (YYYY-MM-DD)	Declared User ID	Declared Cmt	Submission Date		
									Save	Cancel
1	9.6	Post Harvest			2012-10-20	BCEID\TBRADLEY	No	2013-03-20	Update	Undeclare
1	9.6	Regeneration		2018-10			No		Update	Undeclare
1	9.6	Free Growing		2026-10	2013-10-29	BCEID\TBRADLEY	No	2014-03-30	Update	Undeclare

It looks darn weird having FG declared and Regen blank, but WL have no legal Regen milestone under WLPPR, so I can leave Regen blank. Or I can fill it in at this time just to make it look tidy. Note that if I were to declare the Regeneration Milestone before the Free Growing milestone, I have to upload "regeneration" forest cover to RESULTS (WLPPR 84(3)).

15.4.2 RESULTS Reporting - Uniform Partial Cut - Code Era

Very similar to FRPA process.

Except you do not access existing stocking standards using a SSID.

You report the existence of the Opening and the SU as per usual after harvest, as a Opening and SU submission.

Then you get out the approved paper site plan, and enter the approved single tree selection stocking standards from the paper site plan directly into RESULTS as a stocking standard Correction.

Hopefully your approved paper site plan specifies everything you need to enter. But a lot of the time, your Site Plan will say:

> The free growing stand in SU 1 will be established in accordance with the stocking specifications in the Woodlot Licence Forest Management Regulation (November, 1998) Division 2 of Part 6 and Table B of Schedule A.

You then have your work cut out for you. WLFMR spells out many things like early and late free growing period, maximum and minimum densities, etc. Many WLFMR standards are split into "applies to even aged" and "applies to multi-layered" - you have to read carefully. This was discussed back in Section 13.2 . You will also be poring through Table A of Schedule A for target stocking standards and min FG heights, and Table B for minimum stocking standards by layer.

Once you have Opening, SU and stocking standards in RESULTS, the remaining reporting process is identical to the FRPA era discussion.

16. Milestone Reporting

Remember that the purpose of RESULTS, as stated by the folks who built it, is:

> The RESULTS (Reporting Silviculture Updates and Land status Tracking System) application tracks silviculture information by managing the submission of Openings, Disturbances, Silviculture activities and **Obligation declarations** as required by the Forest and Range Practices legislation. (My bold.)

We declare that we have successfully met our legal obligations by making a *milestone declaration* in RESULTS.

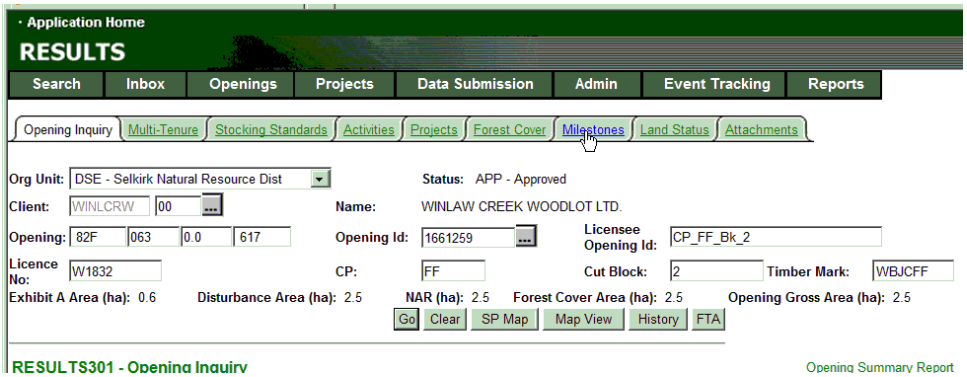
And actually, that is the whole purpose of our involvement with RESULTS. We report Openings and SUs and Forest Cover and Stocking Standards and Logging and Planting to set the scene and describe what we have done. Then we Declare we have met our legal obligations, and that we are Done.

Interestingly, the act of "declaring " is *voluntary*. FRPA 107:

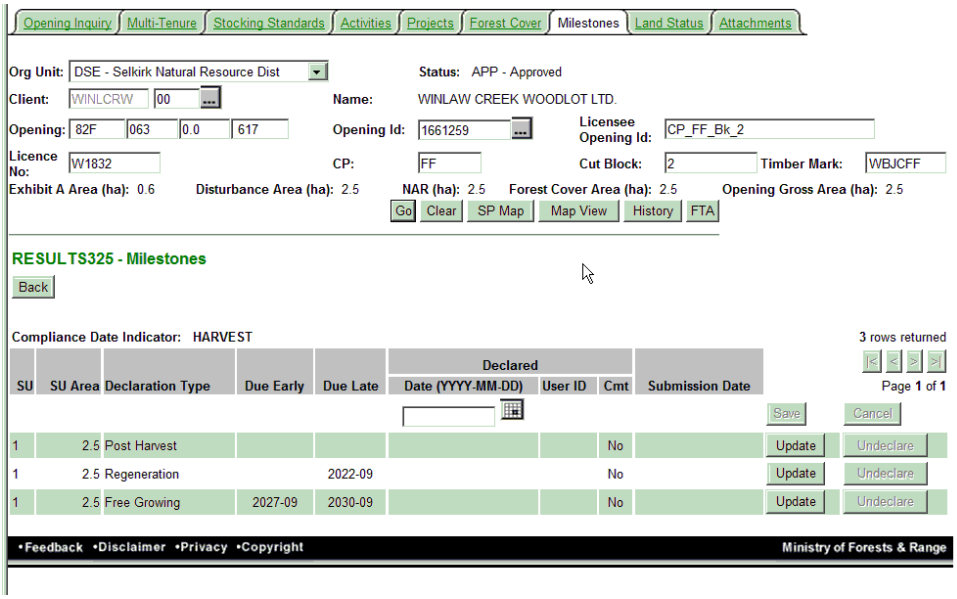
> A person who is the holder of a (woodlot) **may** submit to the district manager a written declaration specifying obligations under this Act, or under an operational plan, permit or other authorization, that have been fulfilled….

That is nice, but it is in our business interests to declare Free Growing as expeditiously as possible to identify that we have fulfilled our legal obligations.

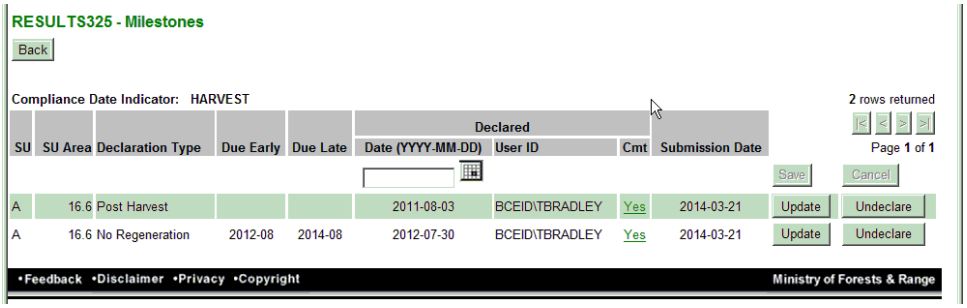
You get to the Milestones section by clicking on Milestones in the menu tabs in any opening display:



Once there, there are 4 possible milestones:



and



Post Harvest, Regeneration, Free Growing and No Regeneration. We shall discuss.

16.1 Post Harvest

16.1.1 Overview and Discussion

I see a hundred old openings at least in a year. Many to most do not have a post harvest milestone declared. Basically because there is no immediate impact of failing to make the declaration, nothing gets held up, no red letters on the opening details screen. And as RISS-wl 8.6 states:

> Due dates are blank for post-harvest, given no requirement to submit post-harvest milestones for openings other than partial cuts or other intermediate cuts.

Two points in there: “Generally no requirement to submit”, and “Yes, required to submit for partial cuts”.

But *SUBMITTING FOREST COVER TO RESULTS FOR OPENINGS WITH TREED RETENTION Edition 1.3 March 31, 2014,* the guide to partial cut reporting, does not mention the Post Harvest Milestone. Odd.

RISS-ls provides a suggestion:

> The disturbance completion date is used to set the post-harvest milestone due dates for stands with no regeneration obligations managed under FPPR 44(4) (i.e. commercial thinning) whereby a post-harvest survey is conducted to confirm residual stand condition.

Except the submission of logging completion date has no such effect in a intermediate cut harvest report, and the required declaration is the No Regen declaration, not Post Harvest. It is pretty confusing.

RISS-wl 8.8 adds:

> Post-harvest milestone declarations may be used to declare the completion of harvest and soil rehabilitation activities associated with soil disturbance or access structures rehabilitation for any silvicultural system.

RISS-ls adds:

> When post harvest has been declared on all SUs in an opening, the FTA cutblock status for the opening automatically changes to S-Silviculture if it is not already set to that status. Post-harvest declarations may be submitted after the completion of harvest activities.

In late 2020, I turned to Resource Practices Branch for assistance on this matter. We discussed all of the above. In the end, we agreed that there is no regulatory content under FRPA that defines what this milestone may be declaring success in or that requires it to be declared.

Declaring the Post Harvest Milestone does change the Block Status from LC - Logging Complete to S - Silviculture in RESULTS and in FTA. This is desirable. S - Silviculture is a more accurate description of a unit that is being managed to achieve stocking standards. The recommendation from Resource Practices Branch is to declare the Post Harvest Milestone for FRPA blocks to change the block status to S - Silviculture.

(I spent a number of years wondering how/why some blocks were S and some were LC. Seems that FLNRO may come by and make the status change in the background regardless of Post Harvest Milestone status.)

Under the Code, there was regulatory content that required an assessment of whether the many specific practice requirements set in the PHSP or Site Plan for the standards unit had been met. The Post Harvest Milestone was the opportunity for the holder to assert they had turned mind to and had complied.

16.1.2 Post Harvest Under FRPA

I declare the Post Harvest milestone when harvest is complete to change the block status in RESULTS and in FTA from LC - Logging Complete to S - Silviculture.

16.1.3 Post Harvest Under The Code

I declare the Post Harvest milestone when:

- Harvest is complete.
- I have turned my mind the performance standards that apply to the harvest.
- I am satisfied that the performance standards have been met, or
- If performance standards are not met, there is a rationale citing approved reasons for not meeting or remediation work has been completed and I have reported said remediation work completion in Activities.

What Code era performance standards apply to any harvest opening?

- Read the Forest Development Plan and the Site Plan. Performance standards can be set in either (See WLFMR s 14).

  The old Code site plans can be very complicated. All of the usual soil disturbance and permanent access standards, and often others. For example, a commitment to rehabilitate a spur road, a commitment to rehabilitate landings, etc. Those are legally binding commitments. Making the Post Harvest declaration declares that they are met/done.
- You also may need to consider WLFMR content. For example, s 37 and s 38 address the limits on area that may be occupied by permanent access structures and by soil disturbance. Most old Site Plans contained these standards, but they are not required. And in the case of a "no SitePlan" beetle salvage under WLFMR 22.01, there would not be a site plan to house them.

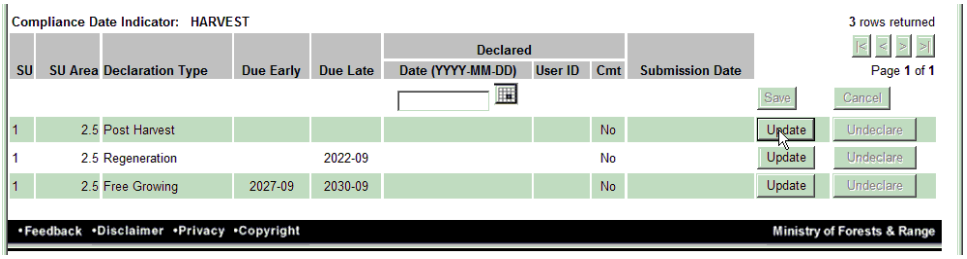
I am not doing a thorough review of WLFMR here. Suffice it to say that if you are reporting on a Code block, you need to turn your mind to a regulation that was replaced in 2004.

The assessment of compliance with practice requirements and the milestone declaration is the practice of professional forestry. I want a paper declaration with a signature, and I upload a copy to RESULTS. RESULTS requests that you add a comment identifying the Forest Processional who made the declaration by name and number.

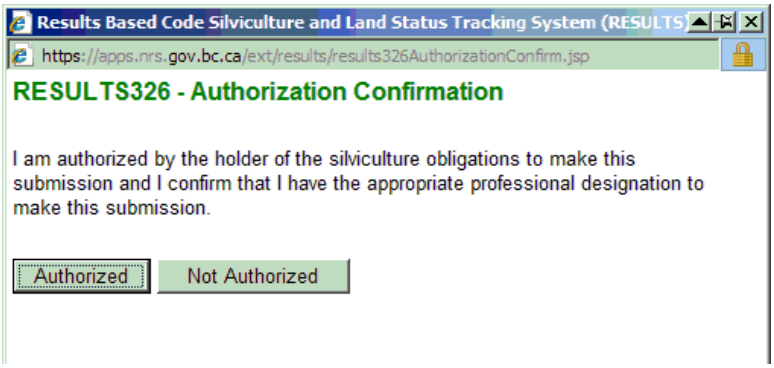
If a rationale is required, I also upload it as an attachment.

16.1.4 How To Do It

Mechanics of milestone declaration in on-line RESULTS are simple. Start by clicking the Update button in the declaration line.

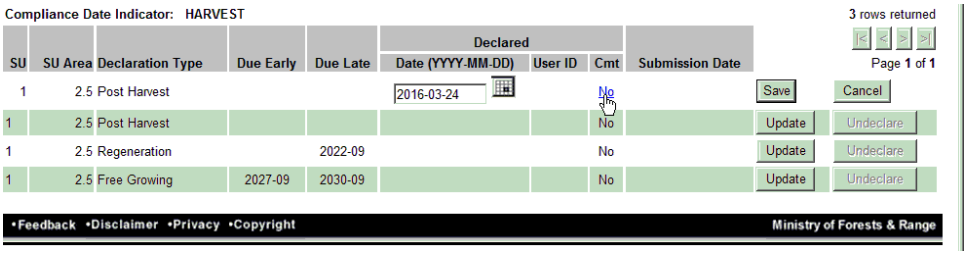


A "affirm you know what you are doing" screen appears:

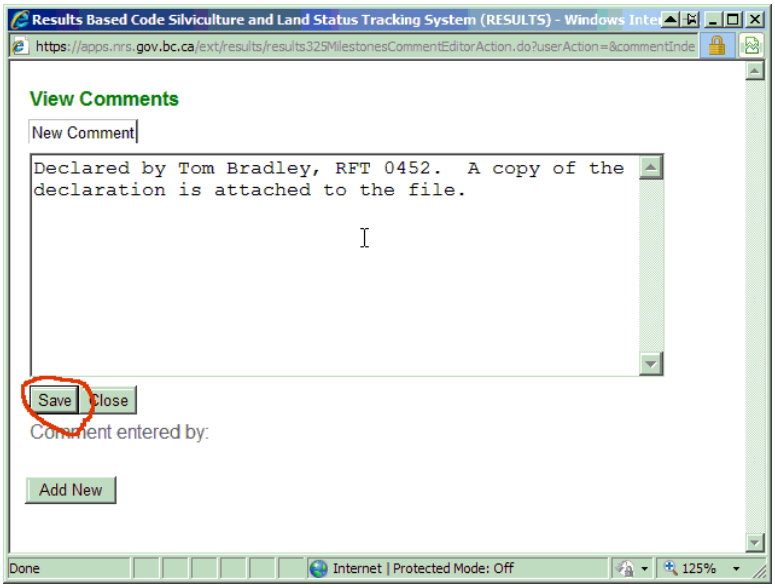


I would argue strenuously that no professional designation is required to make a *submission*. A professional designation is required to make the *Declaration*. Making a submission is clerical work. But I am used to RESULTS "agree if you want to do your job" boxes that I believe are incorrect, so I click the positive response.

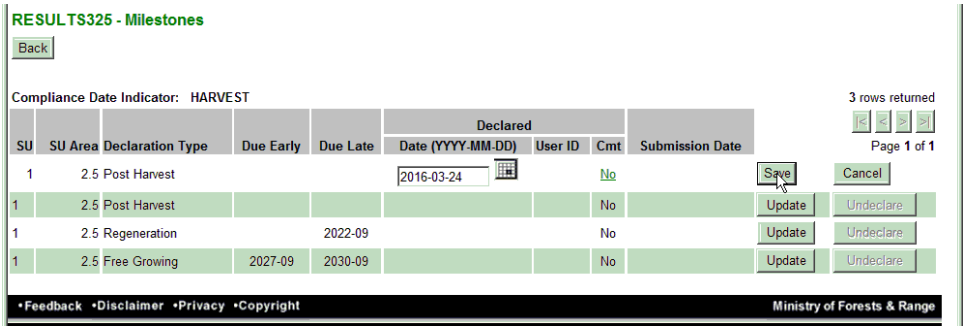
Give it a date of declaration, per the paper declaration. Say you want to add a comment.



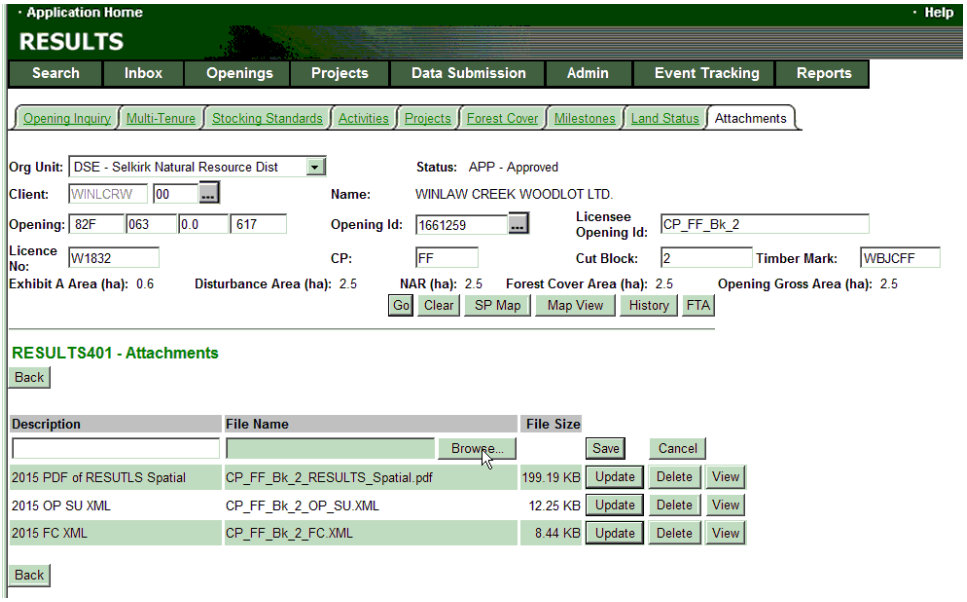
Add the comment in the comment box, and save the comment.



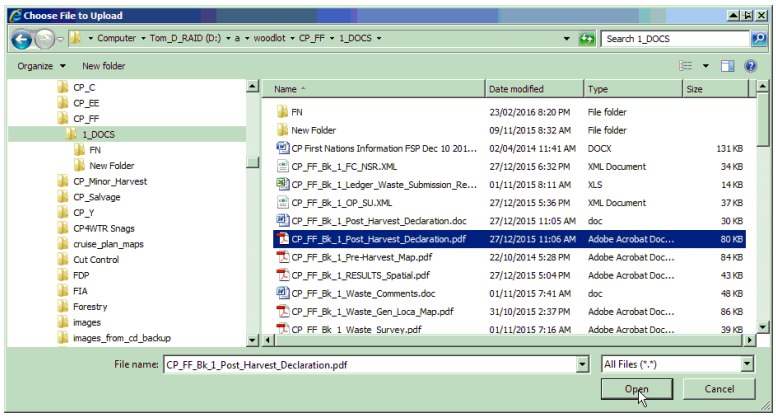
Save! And you are done.



Now, add the attachment you promised. Go to the Attachments tab. Browse for your declaration.

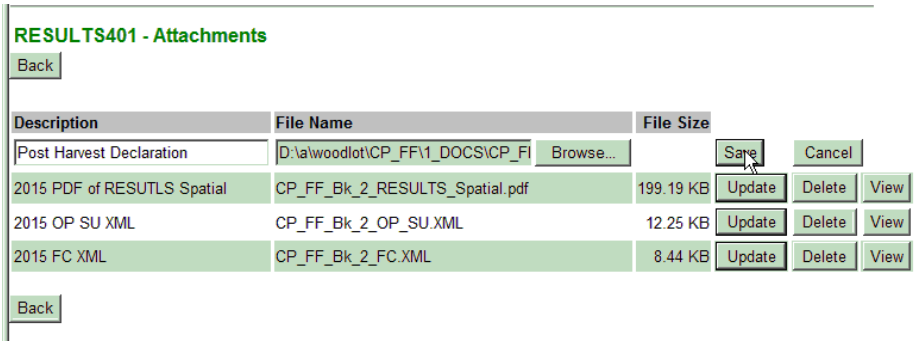


The usual Windows browse screen opens. Hunt down your file.

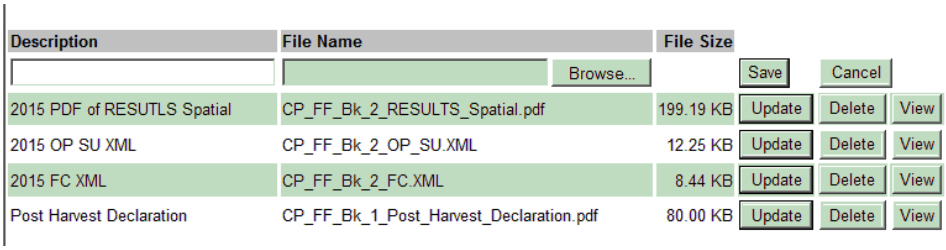


Tell it to "Open". It does not open it, it drops you back into RESULTS attachments.

Give it a user friendly Description title, and Save.



File is now on govt system.



16.2 Regeneration Milestone

16.2.1 Overview and Discussion

The Regeneration Milestone is obviously a declaration that you have achieved your legal regeneration targets.

A survey to the specs in the current Silviculture Survey Procedures Manual will be required, as will a paper declaration signed by a professional (RFT or RPF).

Now, does this milestone apply to Woodlots? Do we report Regeneration achievements or not? As usual, we have to consider Code and FRPA.

16.2.2 Code Era

Woodlot Code blocks are and always will be governed by WLFMR. WLFMR 88 and 89 specify that:

> A holder of a woodlot licence who is required to establish a free growing stand on an area must carry out an assessment for the net area to be reforested by the regeneration date, showing whether or not the stocking requirements for the regeneration date have been met.
>
> …. a holder of a woodlot licence must…keep a written record of a survey or assessment and, if required by the district manager, provide it to the district manager.
>
> … A holder of a woodlot licence must submit to the district manager, on or before April 30 each year, an annual report in the form required by the chief forester describing, for the previous calendar year, silviculture treatments and harvesting activities carried out and results achieved.

(The above citation is an excerpt, I encourage you to read the full sections if you have any questions.)

So, are we are required to report the Regen Milestone for Code era blocks to RESULTS? No, there is no material in WLFMR or the Chief Forester's reporting requirements that makes reporting the Regeneration Milestone as an obligation. It is an option, not a requirement.

WL are required to meet the applicable regen performance standards, must survey before regeneration date, and must report the outcomes of the survey and new forest cover to RESULTS. If standards are not met, WL are required to notify the District Manager (WLFMR s 24) But we do not "have to" make the regeneration milestone declaration.

Bear in mind that no one I can find has a business case for not declaring the Regeneration Milestone for a Code block, and there are good reasons to do so, such as documenting the establishment of your young stand in case of forest fire and documenting your compliance with performance standards.

Further confusion: FRPA/WLPPR do not require surveying and reporting by the regen date. Unfortunately, when FRPA was introduced in 2004, the message that was received by WL was “no more reporting regen”. Not true. The WLFMR s 88/89 regen reporting is required on Code Blocks.

16.2.3 FRPA Era

FRPA blocks are governed by WLPPR. WLPPR 35 (2) states:

> (2) A woodlot licence holder who is required to establish a free growing stand on an area must,
>
> > (a) by the applicable regeneration date, establish a stand that conforms to the stocking standards that relate to the biogeoclimatic ecosystem classification for the area,

No confusion, you have to achieve regeneration target by the regen date.

However, WLPPR 75 - Surveys - makes no mention of a regeneration survey. And WLPPR 75 (7) is the reg that requires reporting:

> (7) A woodlot licence holder must
>
> > (c) keep a record of each survey or assessment prepared under this section, and
> >
> > (d) provide a copy of the records under paragraph (c) to the minister when submitting the annual report for the year in which the survey or assessment was carried out, unless the minister requires the copy at a different time.

So as Section 75 does not speak to regen surveys, WL have no responsibility under 75(7)(d) to report anything to RESULTS at the regeneration date.

And what about the inverse? RESULTS does not differentiate between Woodlots and other licenses. FRPA stocking standards for WL have a Regen Date. Once that date is past, RESULTS displays Regeneration Overdue: **Yes** on the opening details page and in all reports generated on Licensee performance. This galls some Licensees, who declare the Regen Milestone on FRPA blocks to make the red letters go away.

Thankfully, conversations with the ABCFP indicate that making a declaration that has no basis in regulation is not considered a significant practice violation.

But do note that WLPPR 84(3) states:

> (3) A woodlot licence holder who makes a declaration under section 107 of the Act that the requirements for the regeneration date or free growing date on an area have been met **must include with the declaration a forest cover inventory for the area** to which the declaration applies. (my bold)

If you make the Regeneration Declaration on a WL FRPA block, you have to submit forest cover that describes the regenerated stand to RESULTS. Failing to do so is non-compliance.

If you do not make a Regeneration Declaration on a FRPA block, you do not have to make a forest cover submission at regeneration date.

16.2.4 How To Do It

Identical process to the Post Harvest Milestone. All Milestone declaration processes are identical actually. See the Post Harv section, above.

16.3 Free Growing Milestone

16.3.1 Overview and Discussion

The free growing milestone is a lot simpler.

If the stocking standards that are applicable to the harvest area require the holder to establish a free growing stand, a survey for and reporting of free growing forest cover is required in both Code and FRPA admin blocks. (WLFMR s 88(3) and 89; WLPPR s 75(3) and 76.).

However, once again, there is no requirement to declare the Free Growing Milestone in RESULTS. A holder "may submit" a declaration (FRPA 107).

The business case to submit the Free Growing declaration is to start the process to inform govt that you have met all of the legal obligations on the harvest unit, and are Done. FLNRO has the opportunity to review the declaration, then, after 15 months, the declaration is accepted, subject to important limitations per in FRPA s 107 (5) and (6).

> (5) The minister must not give written notice under subsection (4) of an order to the effect that an obligation in respect of establishing a free growing stand on an area has not been fulfilled unless the minister has determined that
>
> (a) a free growing stand has not been established, or
>
> (b) a free growing stand has been established and the following circumstances apply:

(i) at the time the declaration was made, the stand was under threat from
(A) competing plants, shrubs or other trees established on the area, or
(B) factors adverse to forest health in the area;
(ii) as a result of the threats referred to in subparagraph (i), the stand is unlikely to remain a free growing stand without further treatment.

(6) A person who submits a declaration under subsection (1) remains responsible for fulfilling an obligation that under subsection (1) (a) was specified as having been met if
(a) the minister has determined by order under subsection (4), of which notice has been given in accordance with that section, that the obligation has not been fulfilled, or
(b) the person
(i) made a material misrepresentation or misstatement of fact in the declaration in relation to the obligation, or
(ii) omitted information from the declaration that the person knew or ought to have known was material to determining whether the obligation had been fulfilled.

Licensees want the free growing declaration process to happen so that their legal obligations to reforest a site come to an end. Declaring the Free Growing Milestone starts the process.

16.3.2 Sample Free Growing Declaration

A written declaration signed by a forest professional is required to report the Free Growing milestone. It is good practice to attached the declaration to the RESULTS file.

My approach is to list the subject matter that I considered in determining if the unit was in fact free growing in the declaration. Not required, but I am trying to reduce uncertainty / provide my rationale.

Code Admin

<DATE>

Upon consideration of:

1. the applicable stocking standards in the approved Site Plan,
2. the Woodlot Licence Forest Management Regulation,
3. disturbance extent in satellite imagery,
4. mapped roads,
5. summary of silviculture survey carried out and prepared by _____ _____, Accredited Silviculture Surveyor AA_____, and
6. calculation of preferred species stocking levels,

I herby certify the following declarations for Woodlot Licence W1234 Cutting Permit B Block 2 SU 1:

SU 1: Free to Grow Date: <DATE>

SU 1: Net Area Reforestable: 4.5 ha

Tom Bradley

RFT 0452

FRPA Admin

<DATE>

Upon consideration of:

1. the stocking standards in SSID 83016, which was approved for use ion W1234 in this BEC Site Association in the WLP dated <DATE>,
2. the Woodlot Licence Planning and Practices Regulation,
3. disturbance extent in satellite imagery,
4. mapped roads,
5. summary of silviculture survey carried out and prepared by _____ _____, Accredited Silviculture Surveyor AA_____, and
6. calculation of preferred species stocking levels,

I herby certify the following declarations for Woodlot Licence W1234 Cutting Permit BB Block 1 SU 1:

SU 1: Free to Grow Date: <DATE>

SU 1: Net Area Reforestable: 12.3 ha

Tom Bradley

RFT 0452

16.3.3 How To Do It

Identical process to the Post Harvest Milestone. All Milestone declaration processes are identical actually. See the Post Harv section, above.

16.4 No Regeneration Milestone

16.4.1 Overview and Discussion

No Regeneration. Interesting name. "I hereby declare there is no regeneration." Maybe time to panic?

No, hopefully not.

This milestone pertains to intermediate cuttings that have no free growing or regeneration objectives, as the harvest is not intended to initiate regeneration.

Intermediate cuttings are subject to stocking standards, but those standards address the quantity of, species of, and condition of mature trees that must be retained on a site after a harvest. The No Regeneration Milestone may be used to declare, in the prescribed time frame, that an intermediate cut area meets the applicable standards.

WLPPR 75 requires that the holder carry out a survey of an intermediate cut area from 12 to 36 months after completion of harvest that identifies the forest cover inventory and damage to trees by insects, disease or other factors. WLPPR 75 also requires that the holder provide a copy of a record of the survey to the Minister. WLPPR 76 specifies the time frame for the reporting and that the Chief Forester may set the reporting format (which is RESULTS).

Code Era? Similar enough, though self inflicted complexities were common. Discussed in Section 15.3.2.

But again no reg requires the No Regeneration Milestone to be declared.

As with the Free Growing Milestone, no one I speak to is aware of an argument not to declare it when the obligations have been met, and it is a strongly recommended optional action.

16.4.2 How To Do It

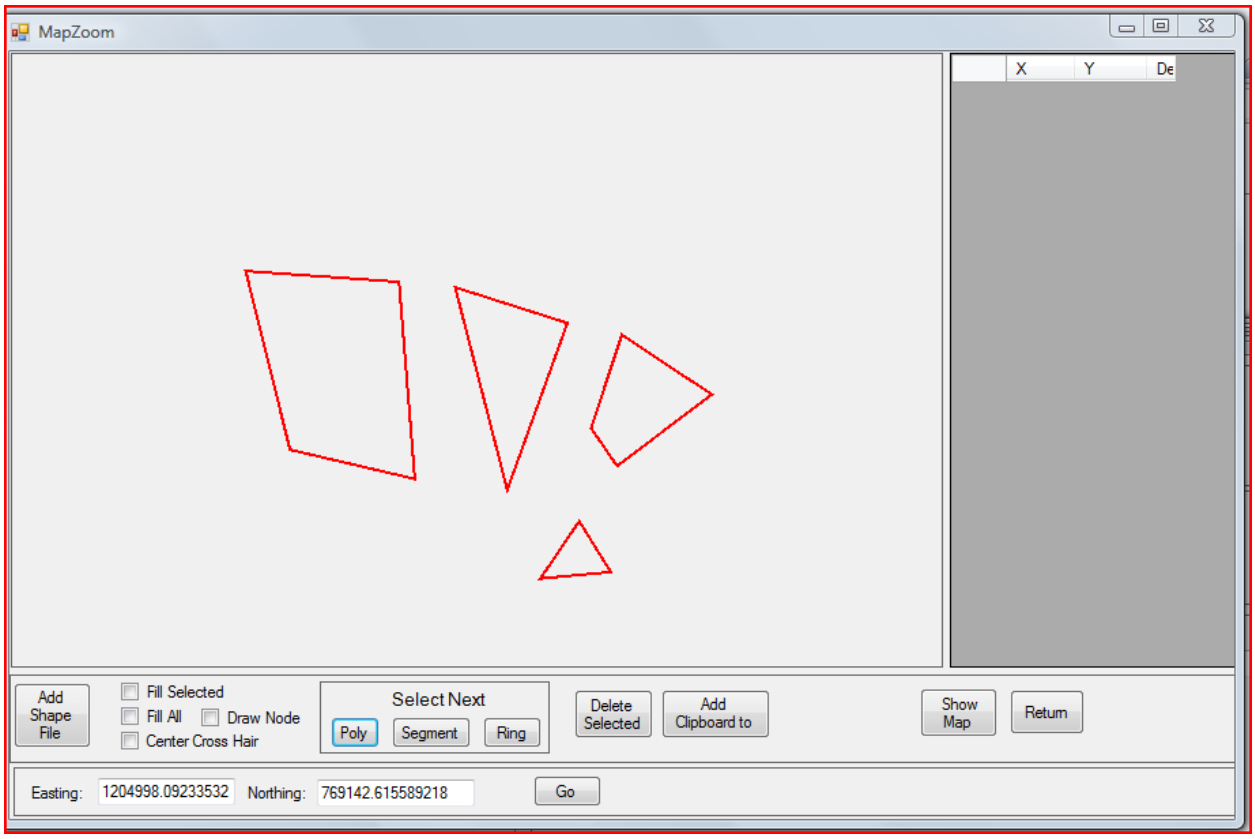
Identical process to the Post Harvest Milestone. All Milestone declaration processes are identical actually. See the Post Harv section, above.

17. The End

That is all for now.

Appendix 1: Spatial Tool Documentation

This appendix is to introduce some basic spatial concepts and explain how to use the woodlot ESF tool to figure out what you have and maybe to help turn what you have into what you want. The spatial viewer looks like this:

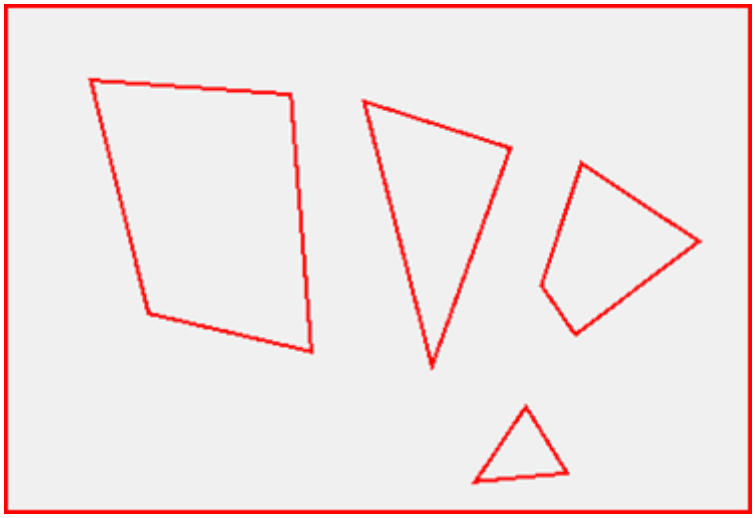


The basics:

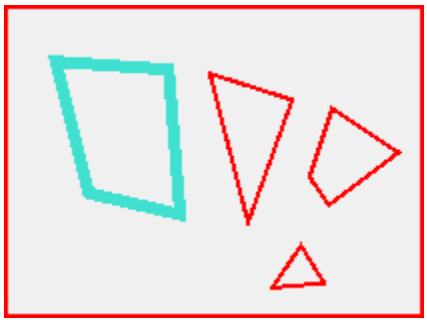
Just like you learned back in high school, we have points, lines and polygons. Line segments are defined by two points and polygons are a series of line segments that end at the same point they started. (Think an opening or a forest cover polygon) Of course, this being computer stuff there are some subtle picky details that can make them very annoying and frustrating. For now we will only deal with lines (which are multiple line segments joined together but which do not end at the same point they start (think a road or a river) and polygons.

Polygons

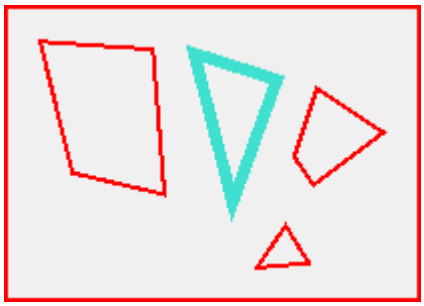
To start this journey, let's look at a simple example. This looks like 4 polygons.



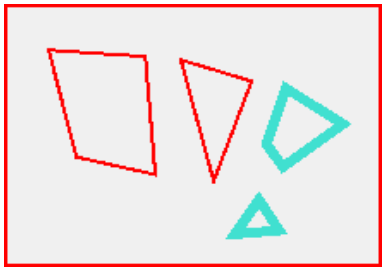
Of course, nothing is quite as simple as it seems. The first tool we will look at is the select polygon button. This tool will highlight a polygon. If you look at the panel labeled Select Next you will see buttons for poly (polygons), Segments, and Rings. A polygon is the whole shape, segment is one of the lines that make up a polygon and ring is the set of segments that make up one closed circle (more on this later). So we can figure out where the beginning and end of the file is, it does not highlight anything between the first and last polygon. Click the poly button and you see this:



Clicking it again will move to the next polygon

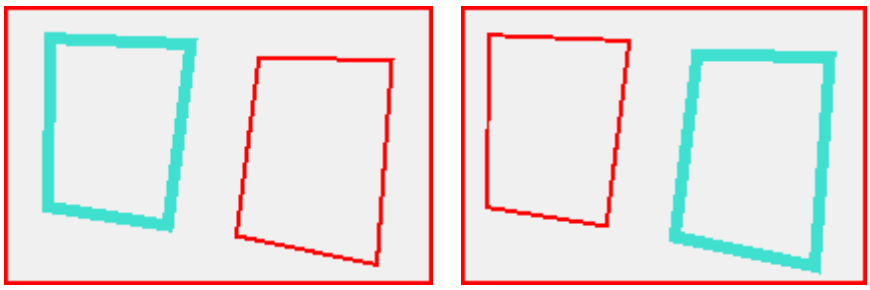


Once more and you see this:

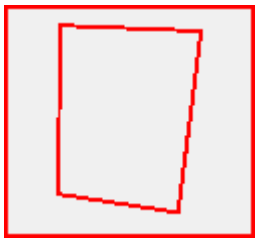


This last one is called a multipart polygon. It is a single polygon and represents a single feature like a tenure, SU, FC polygon etc but it has two parts. You might end up with something like this if you had a piece of property and the government expropriated a corridor down the middle to build a road. You still have one piece of property but it is in two parts.

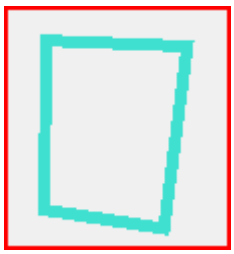
Sometimes what you have is a file with two separate polygons but what you want is a single multipart polygon. For example if you have:



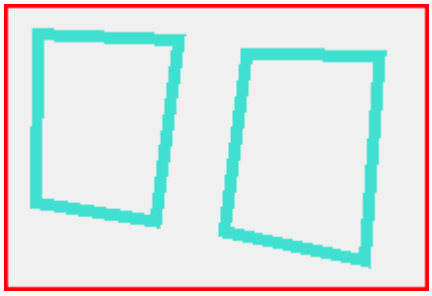
And you want to merge them into a single multipart polygon you could use the "delete selected" tool to get this:



Clicking the poly button twice gets this:

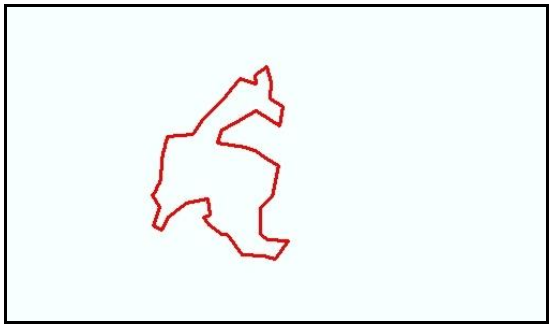


And finally clicking the "Add Clipboard to" button will merge the ring we deleted with the currently selected polygon to give us:

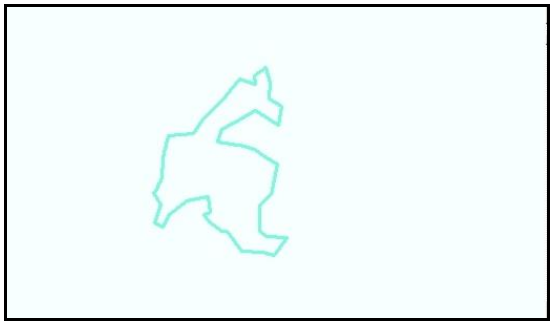


Now, what if your goal was to add a polygon shown in a second shape file to a first shape file, *without* creating a multipart shape. Like when you want to make a 2 block CP submission to FTA, but your block traverses are in 2 different shape files.

First, use Add Shape File load in one of your shape files:

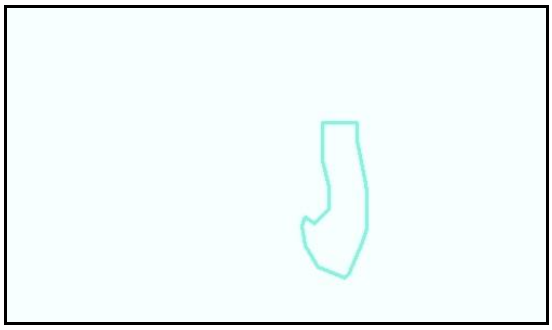


Select it using the Select Next Poly button:

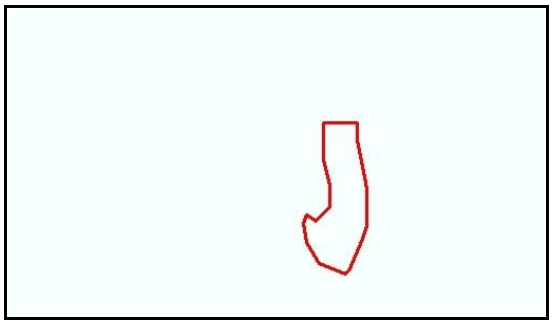


And delete it.

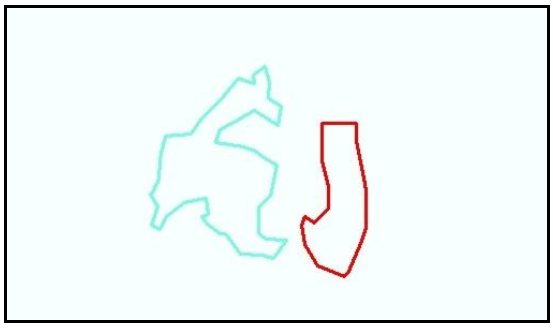
Now, use Add Shape File to open the other shape file:



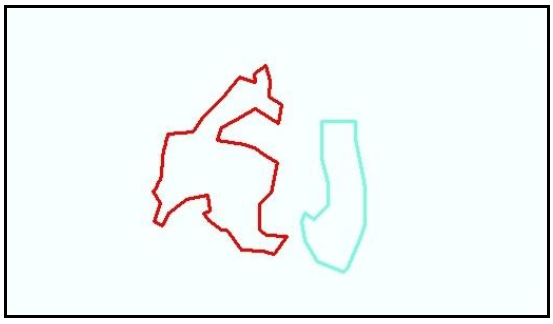
If it comes in "selected", that is blue, use Select Next Poly to unselect it.

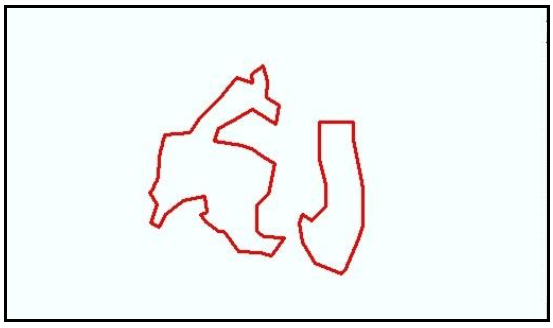


Now the merge. Click the Add Clipboard To button. The deleted shape, which was stored on the clipboard, will be added in.



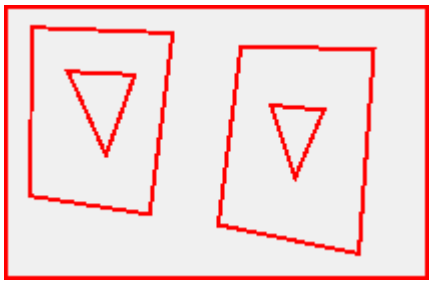
You can use Select Next Poly to cycle through and be sure they are all really there.



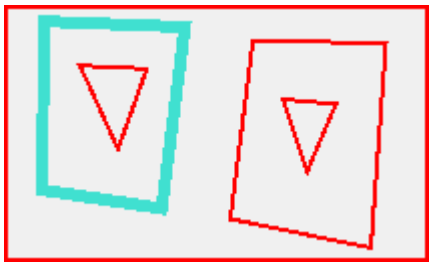


When you click Return, you will be dropped back into WLGML with two cutblock details entry lines because you have two shape files / openings. However, it may show you one of the shapes - it may be zoomed in too far. Alternate click on the little map view window in the main WLGML screen and it will zoom out and show you both blocks.

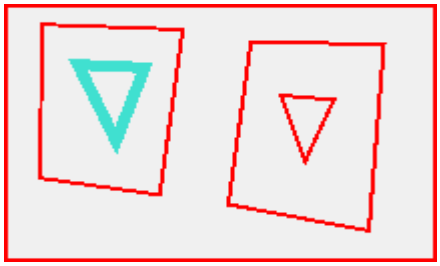
The next example looks like this:



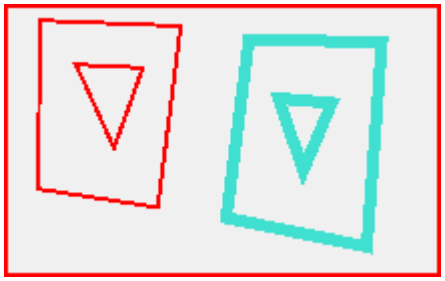
This could be two polygons with holes in them or maybe some overlapping polygons. To figure out which we have we first have to figure out which pieces go together. Use the select polygon tool and we see this:



So this one is a single polygon. Click the poly button once more and you get:

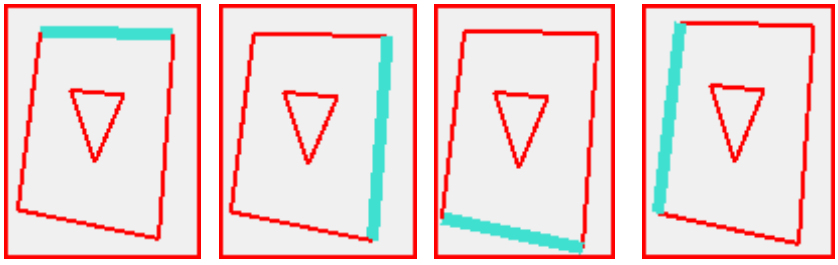


This is another polygon but it overlaps the first one. This might be valid if one was a forest cover polygon and the other was an SU but it is not valid to RESULTS if they are both the same type of feature. Clicking the poly button one more time we get:

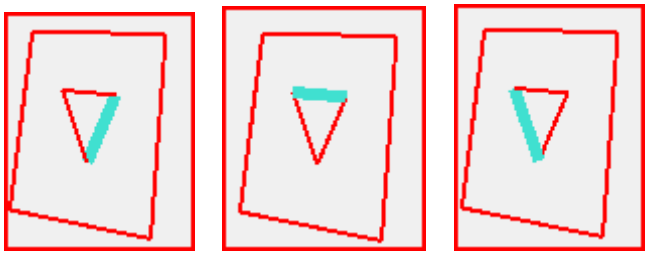


So this is either an invalid multipart polygon (because it can't overlap itself) or it is a polygon with a hole in it. (which is often called a doughnut polygon for obvious reasons)

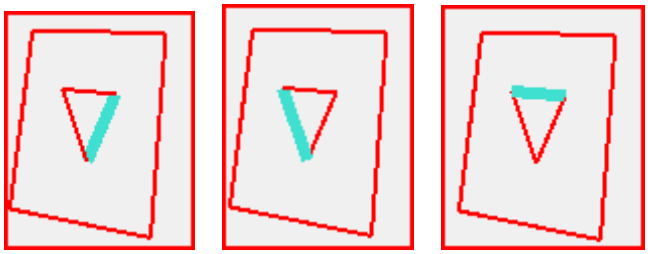
To figure out which it is, the best way is to use the select segment tool. The way we define a polygon with a hole in it uses what we call the right hand rule. If you walk around the boundary the inside of the polygon is always on the right hand side of us. Using the select segment tool repeatedly we get a series of pictures like this.



Notice that as we go around the outside in the direction the segments are moving, the inside of the polygon is to the right of us. When we get to the beginning of the ring that makes up the outside of the polygon clicking the segment button 3 more times gives us:

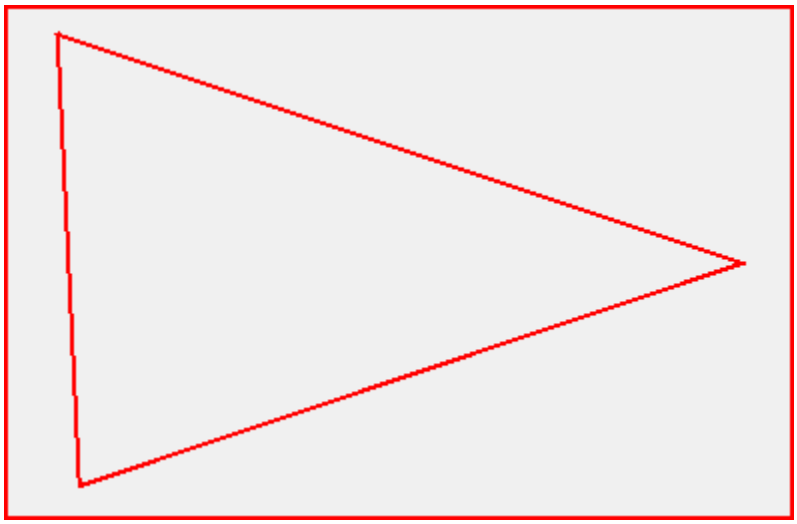


Notice that if we were walking in the direction the segments are moving that the "meat" of the doughnut is still to our right hand side. To our left is the "hole" of our doughnut. This is actually outside the polygon because it is not part of the stuff you could eat if this were a real doughnut. This is a valid hole. If the segments were in the other direction like this:

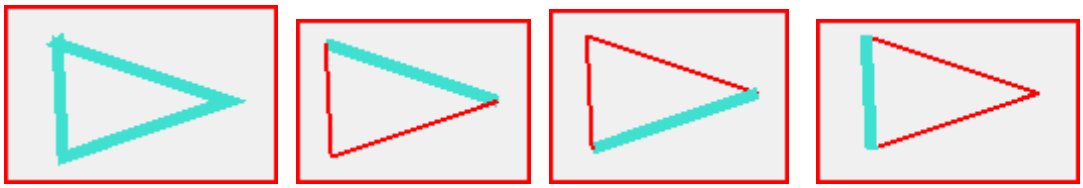


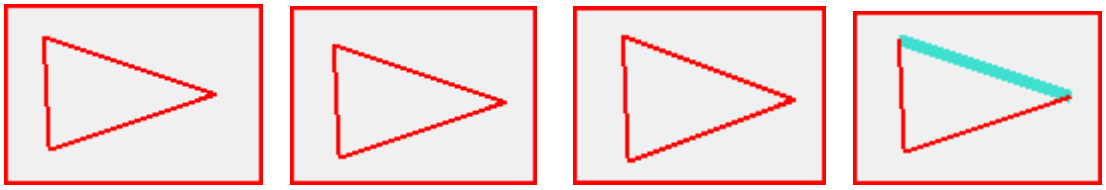
It would not be a valid hole. ESF would reject this as a self intersecting polygon. (Do we want a section and a tool on how to correct this?)

Sometimes you have what looks like a perfectly good polygon like this:

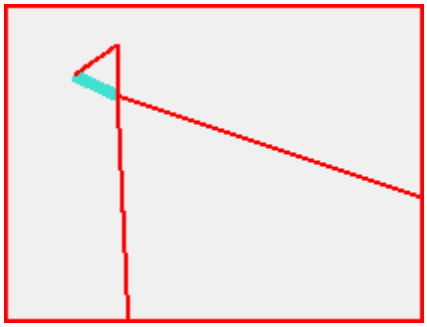


But ESF keeps rejecting it calling it a self intersecting polygon. To try and figure out what is happening, you can Select the polygon (using the poly button) and then "walk" around the outside clicking the segment button like this:

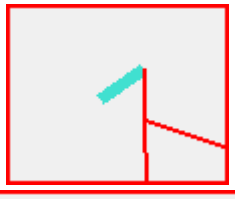
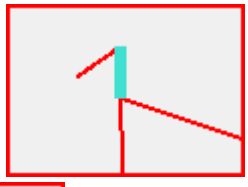


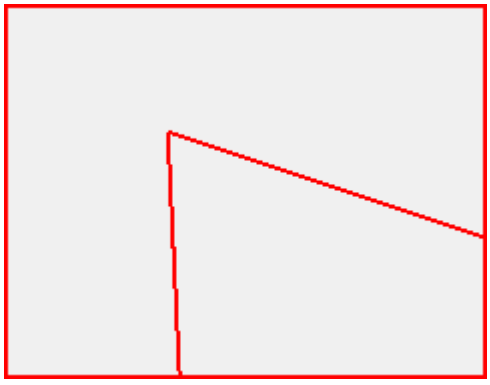


Now we were expecting one of the pictures to have the highlight disappear when we got back to the beginning of the polygon but we were not expecting the highlight to disappear for more than one click. Use the left mouse button to zoom way way way in near where the highlight was last seen and we get this:



Sure enough, somebody screwed up and ruined a perfectly good polygon. This might have happened with a GPS that collected several points because we stopped for a smoke or it could have been an AutoCAD user that had snap set incorrectly. Remember, computers are very anal and even though this looks fine to us and it is perfectly obvious what we mean, computers have no sense of humour and this is still screwed up as far as it is concerned. This is easy to fix with the delete selected button.

Once:  Twice  And again



Appendix 2: Capturing Spatial Data from MapView

2021 Note: This appendix was written in 2016. Shortly thereafter, MapView stopped working for several years. The new age replacement, iMap, did keep working, and we were all supposed to migrate to it. I have nothing good to say about iMap. Use of iMap is discussed in Appendix 6.

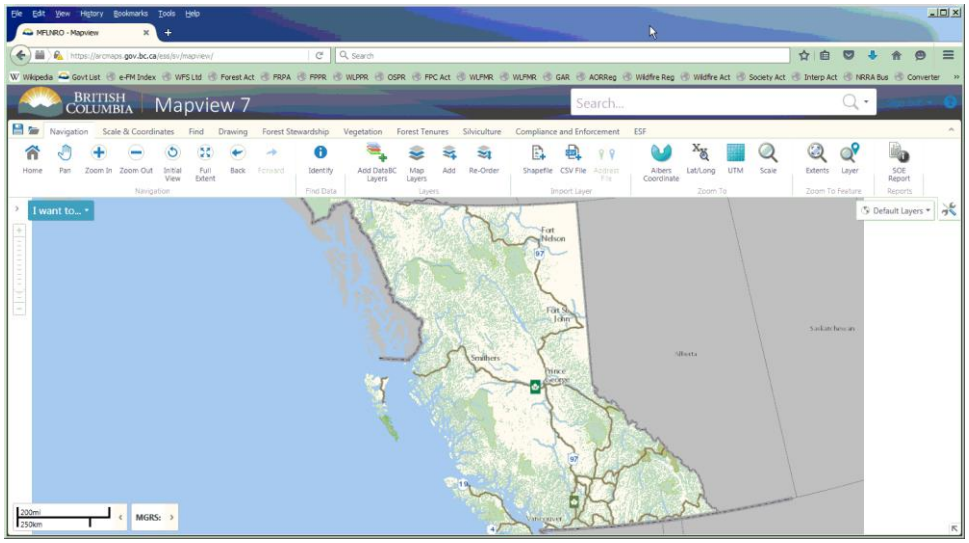
Then in 2020 a WLGML user told me that MapView was alive again. As of time of writing, it is indeed still alive. So the very useful MapView tenure search abilities, documented below, are back. iMap will also do the "download a shape" trick, but has no useful tenure search abilities, to my knowledge.

Mapview is a very useful web tool that lets those with high speed internet to look at the spatial and tabular information that is on file for their Woodlot, and lots of other stuff too. In my opinion, new Mapview will not work on a dial up connection. Some computer in the chain will "time out" before any success is achieved.

Occasions often arise when a Licencee needs to update the forest cover for an opening that already exists in RESULTS. The spatial data (shapefile) for such openings usually already exists in MapView[21]. This can be extremely handy. If someone has already posted spatial data to RESULTS, you can get it back from MapView and use it to make a submission with WLGML.

New MapView is way harder to use than old MapView, and slower, but it can be done.

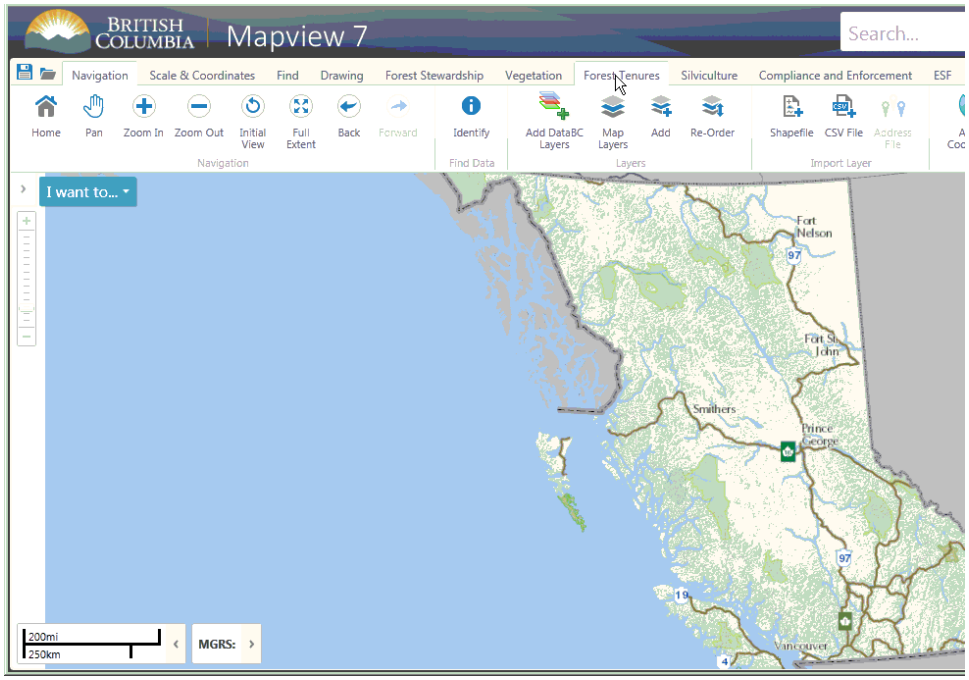
First, open MapView. I have cleared away the useless clutter that autoloads with MapView now in shot below.



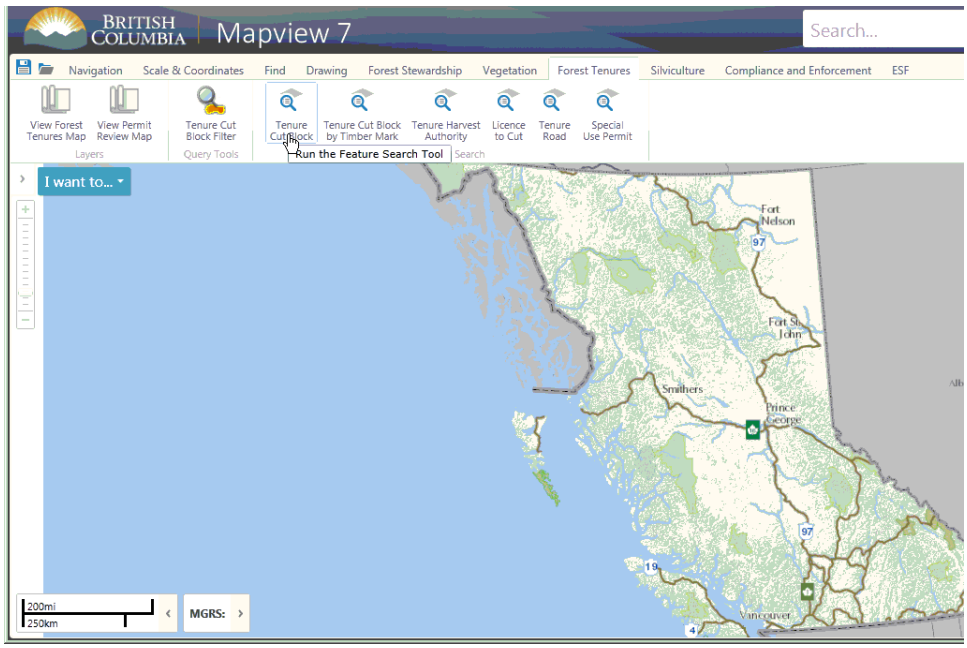
There are many ways to get the data. For this example, I am going to find the Forest Tenure (Opening) and download it. This may work for you. You may prefer to / need to find and download something from the Silviculture tab.

So, click on Forest Tenures.

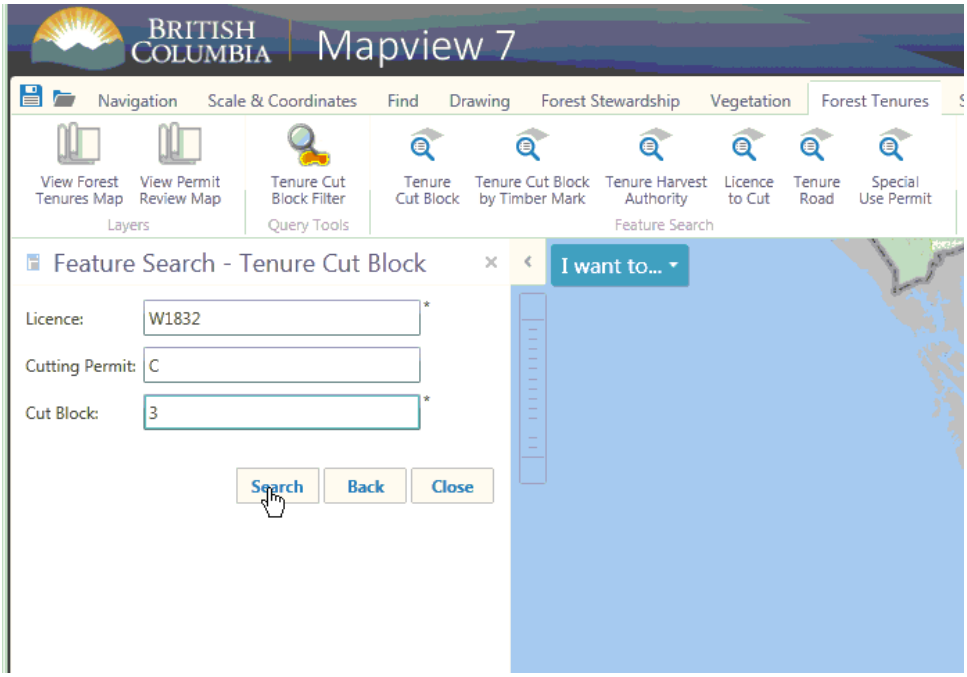
[21] Well, it is actually required to be in Mapview, but sometimes is not. There were more than a few errors made in the early days of RESULTS, and submission requirements have evolved over time.



Searchability opens. I am going to look for a cutblock to get the opening. Or at least get to the right location.

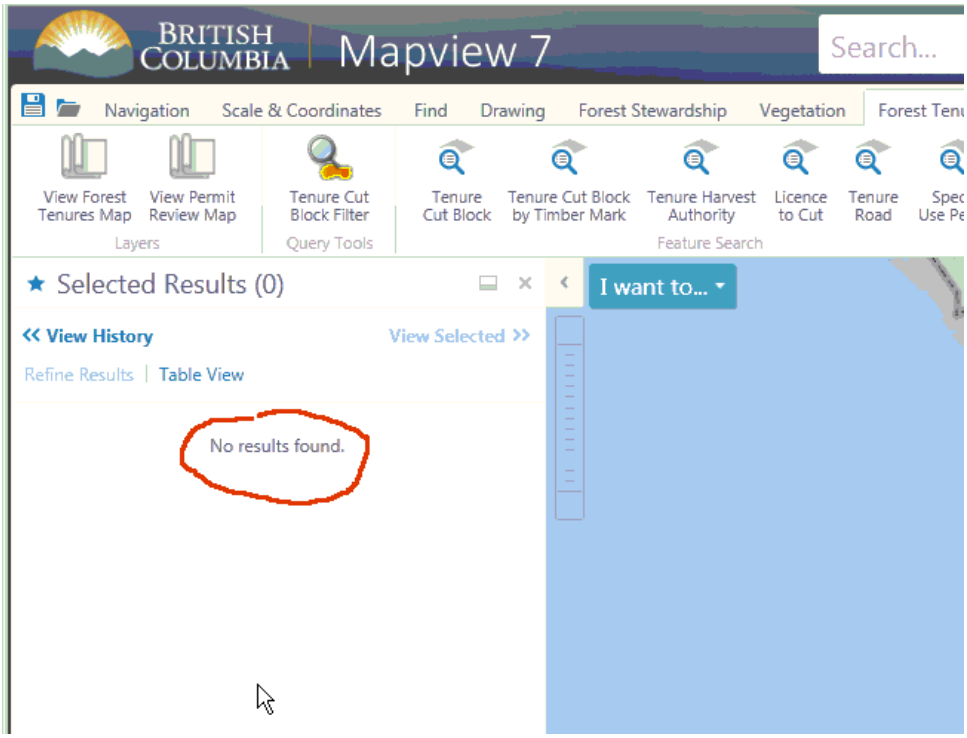


Provide info And click Search:

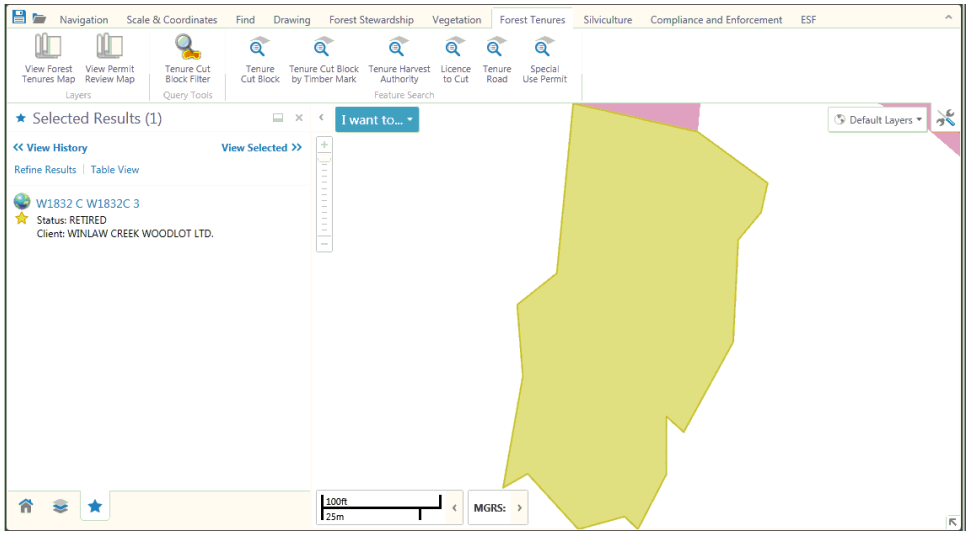


Wait. Wait more. Ponder life. Keep waiting.

It tries to get rid of you:



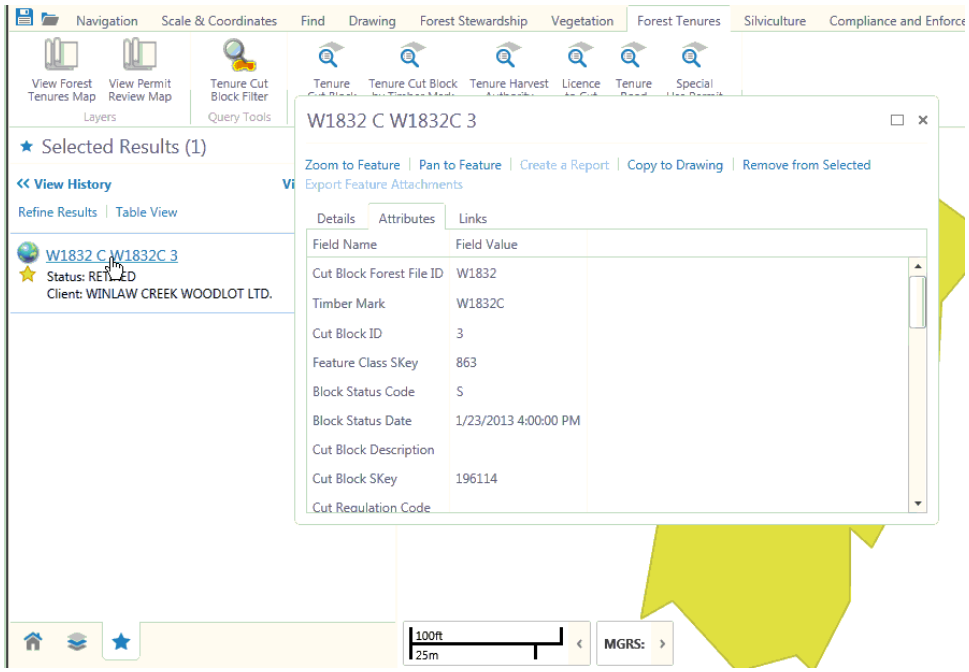
Don't fall for it. Keep waiting. Yep, I love new MapView. And then:



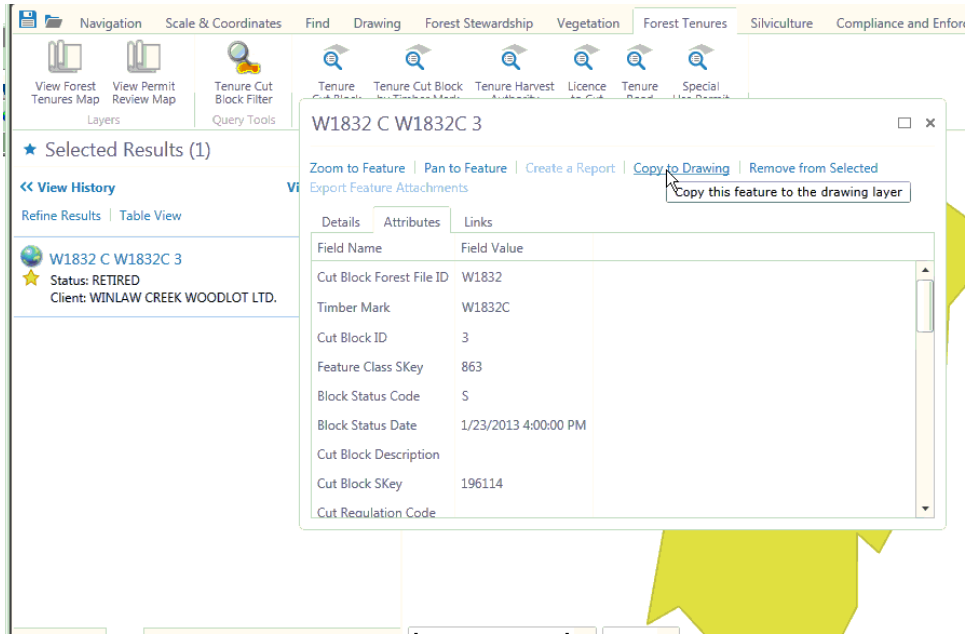
It is my block!

There are likely a bunch of ways to do the following, but this is the one I know. May not be the most efficient, but it does work.

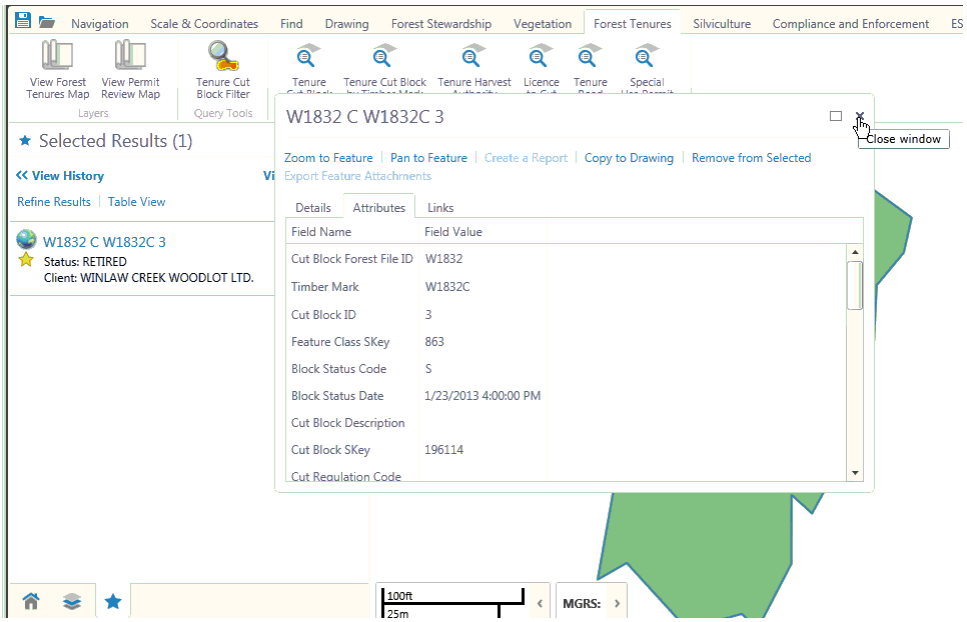
Click on the blue link text that "titles" the search results, in this case, the W1832 C W1832C 3 . A pop-up window opens:



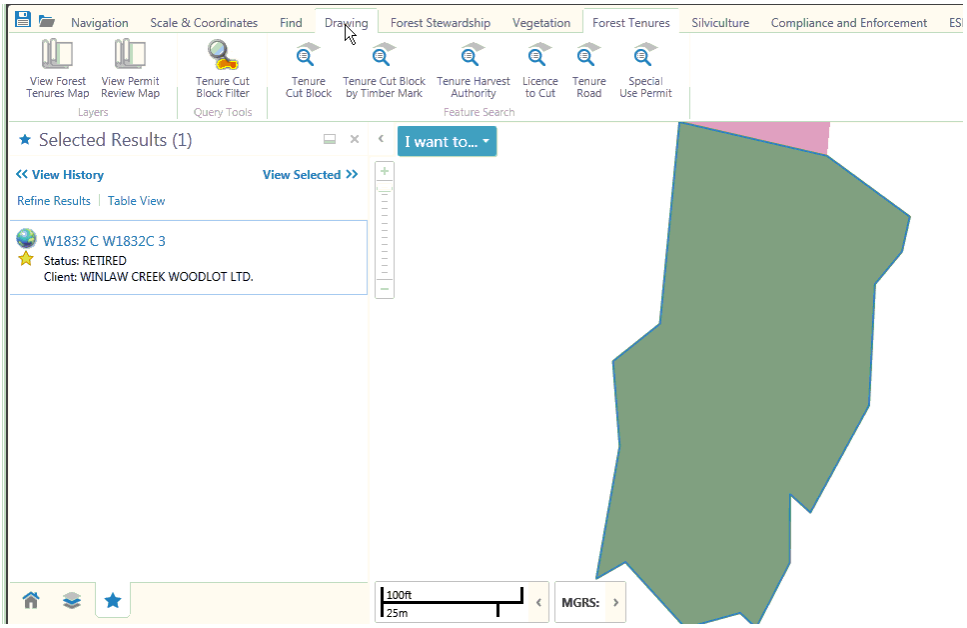
You want to Copy to Drawing .



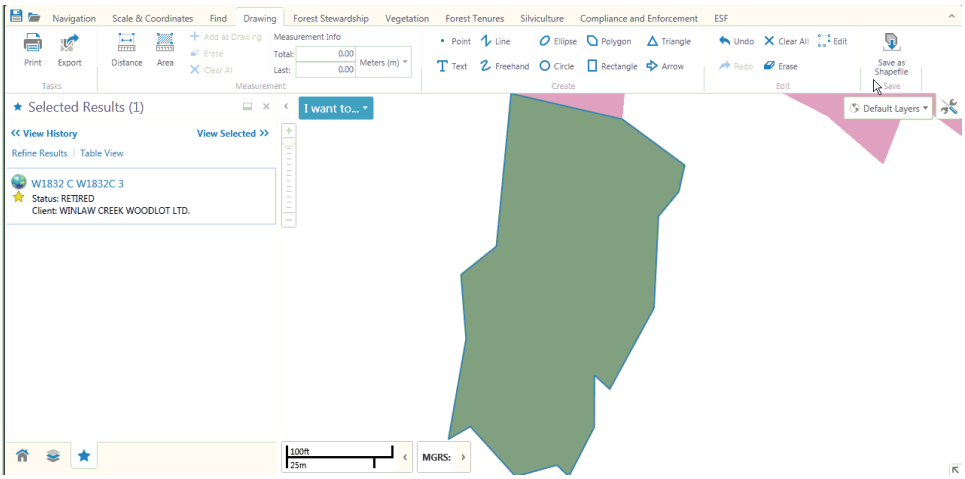
A color change occurs in the background . It did something. Close de pop-up window.



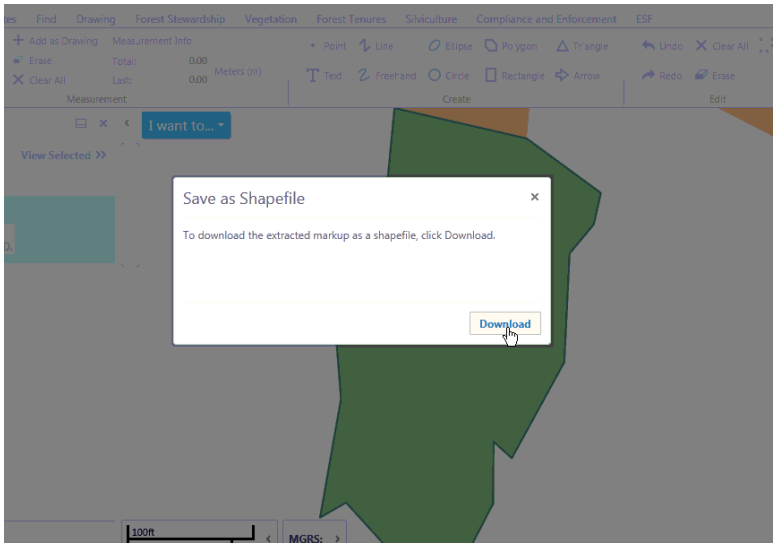
Now, select Drawing from the top menu bar.



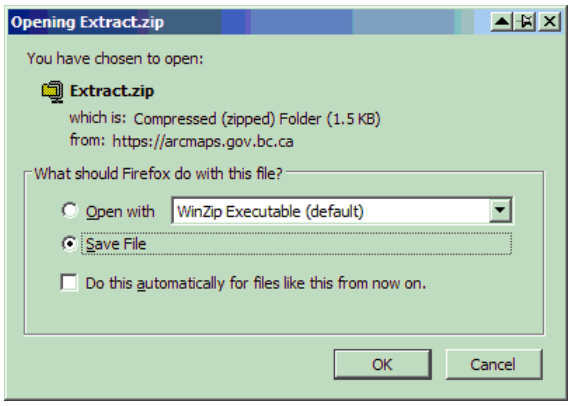
And then way, way over on the right (may have to adjust your screen extent), Save as Shapefile .



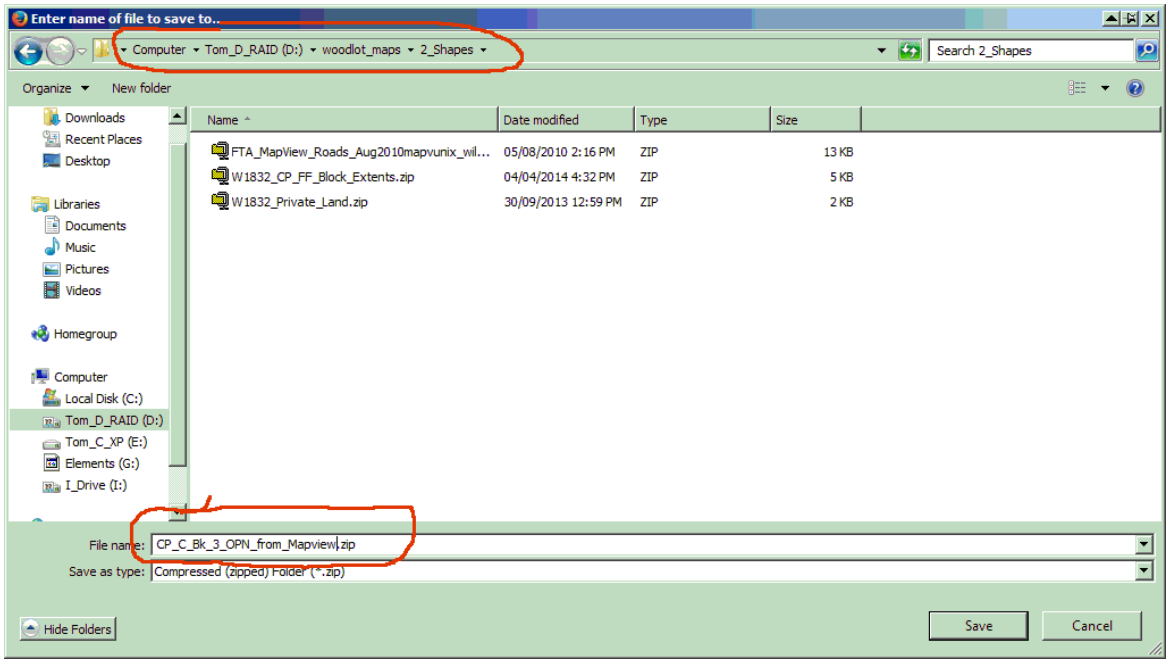
I know you can guess the correct answer to next prompt.



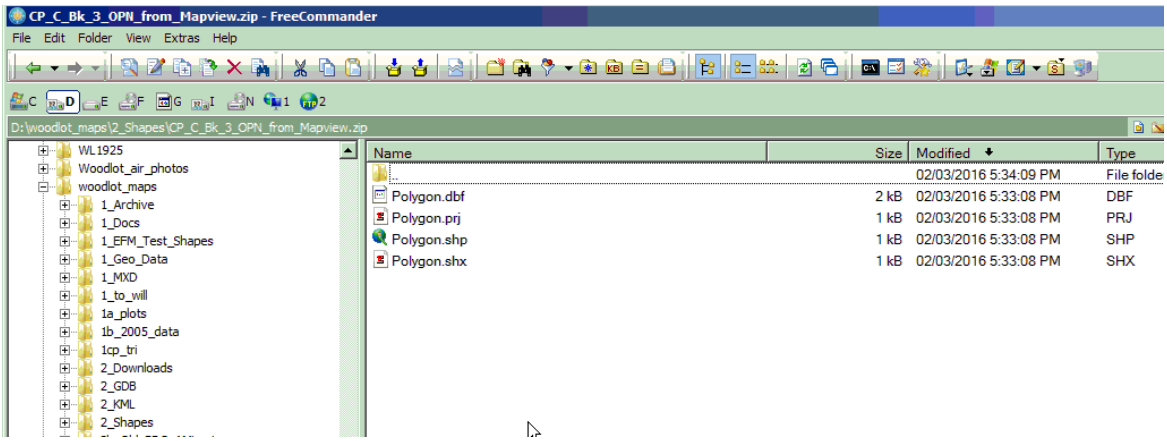
Standard Windows save-a-file process starts.



Note that I chose what folder to put it in, and renamed the export file from Extract.zip (the default) to something more meaningful. You are allowed to rename files-to-be-saved, and it is a very good idea to do so.



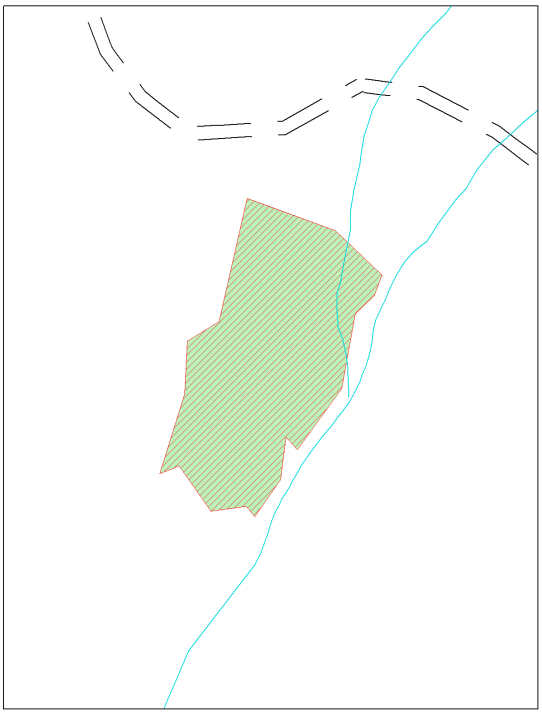
It puts it where I told it to with name I choose. Contents of the ZIP is a shape file called "Polygon". OK , that is going to cause issues before too long, but I do have my spatial data.



Don't forget that all spatial data from The System will be in BC Albers projection:

```
PROJCS["NAD_1983_BC_Environment_Albers", GEOGCS["GCS_North_American_1983", DATUM["D_North_American_1983'
```

And because I have learned to have trust issues and am a GIS geek, I flash open ArcMap and check the new data. Yes, it is in my WL and exactly where it should be.



This process is not a perfect solution to all problems.

If the spatial in RESULTS is no good in the first place, or if you need to somehow subdivide the shape files you can download to accurately depict your forest cover, you will need other mapping methods. Such as QGIS, which is GIS software you can use for no cost. But, "extract from MapView" can be a very useful tool to completely or partially fulfill your spatial data needs.

Appendix 3: Adding Custom FRPA Era Stocking Standards

If the Woodlot Licence Plan for the woodlot in question approved stocking standards which differ from the standards listed in the on-line stocking standards library, you will need to add them to the SSID library to use them.

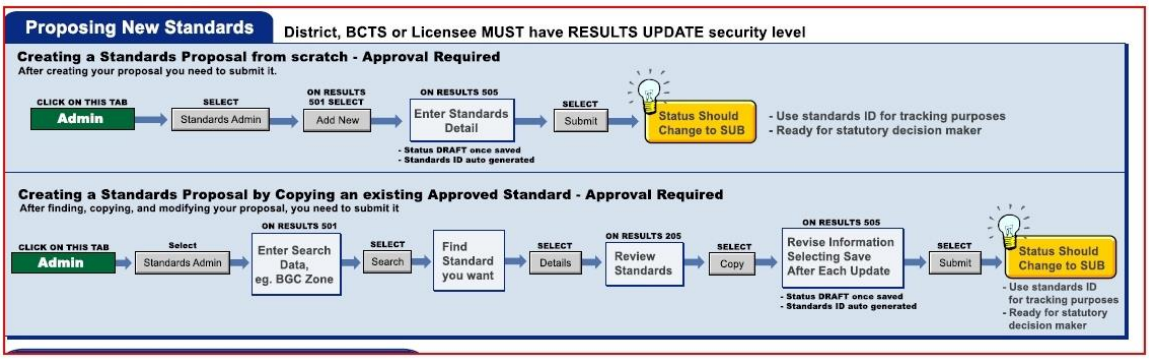
If you need to propose a new standard after WLP approval, you will also use this process.

It is not very hard.

To reiterate:

> This process applies to standards unit under FRPA/WLPPR administration.
>
> This process applies to stocking standards approved in your WLP or to new standards you are proposing to add to your WLP after approval.
>
> If you committed to the Provincial or District defaults, just look them up per Appendix 7.

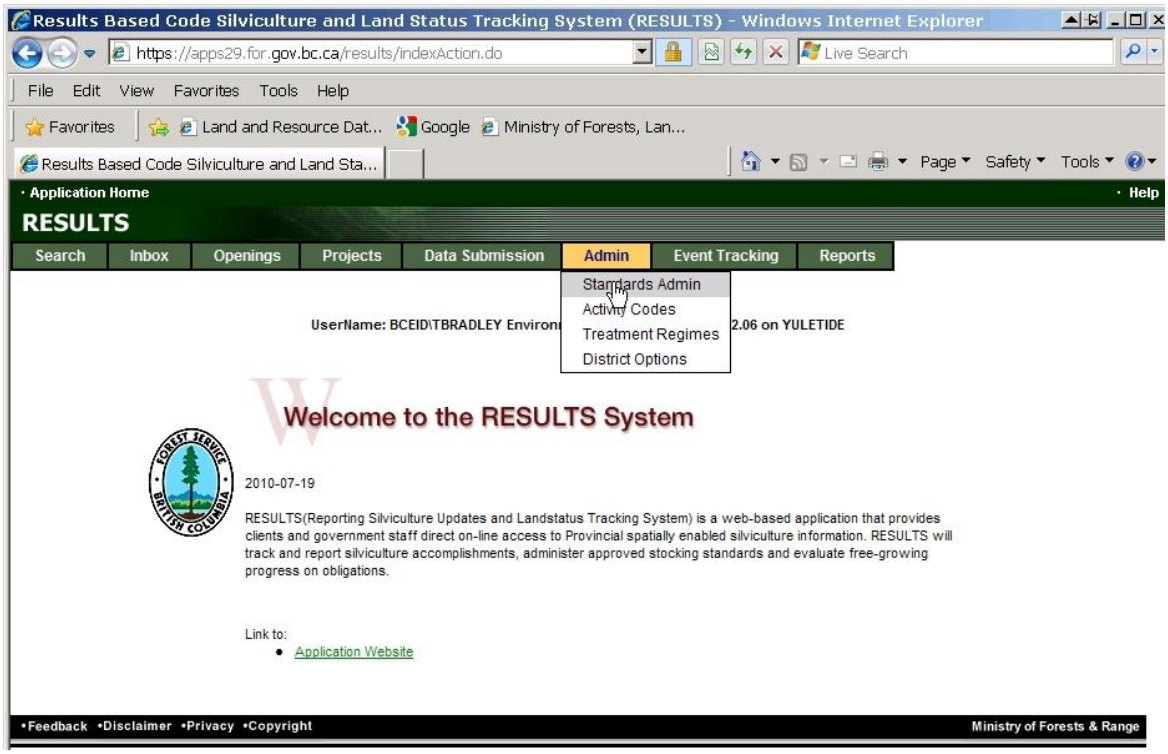
Here is a Ministry flowchart that illustrates what we are about to do:



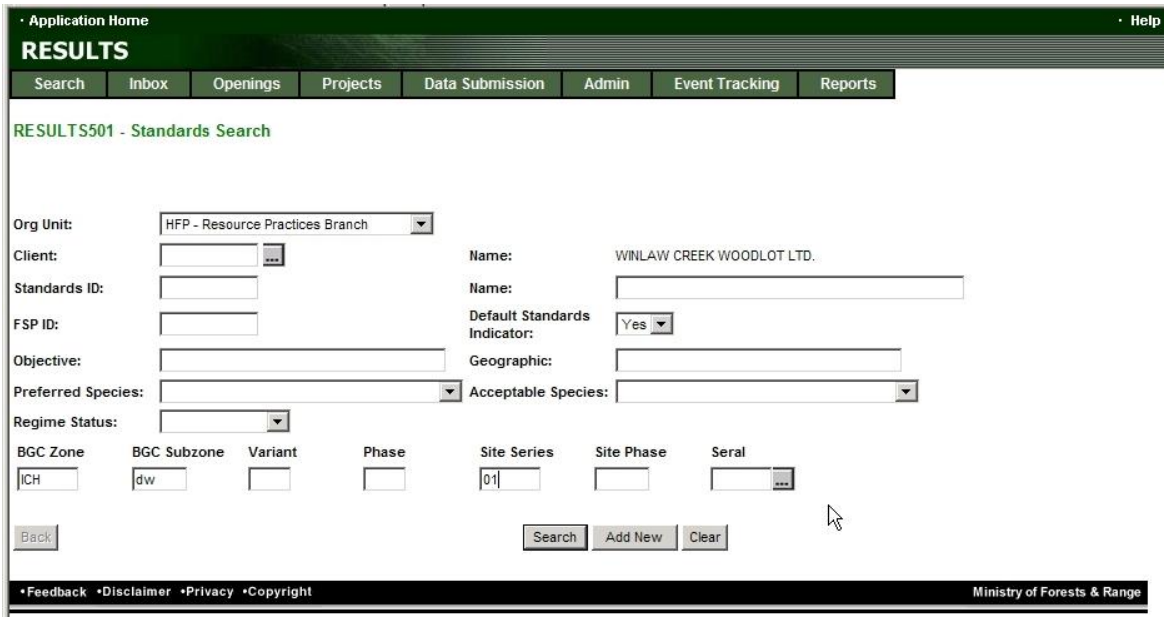
This process applies to BOTH asking for approval of a new standard and creating an SSID for already approved standard.

You can enter all the info in a Stocking Standard by hand/from scratch, but everyone who does this actually copies an existing similar standard and then edits/modifies it to suit their goals. (Line 2 in chart above.)

So, the usual: go to RESULTS and log in for the woodlot in question. Then select <Admin> <Standards Admin>:



You are dropped into a search form. You can now go hunt down a stocking standard to serve as your "draft". You will generally want Org Unit = HFP Resource Practices Branch, no entry in Client (highlight the default entry in Client and delete it), and Default Standards Indicator = YES. If there was a specific FSP standard you knew of that you wanted to copy, you could vary your search terms to find it instead.

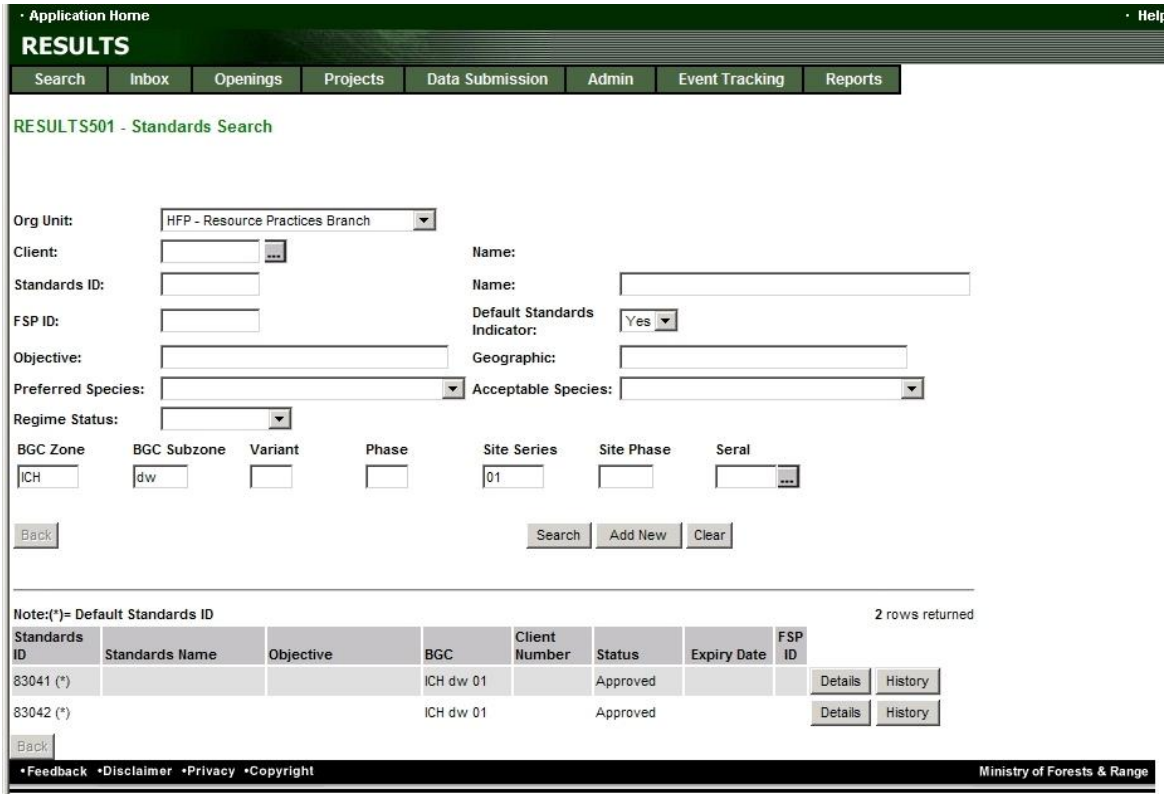


You also want to put in some BEC info to reduce the search outcomes to a manageable number. But, be careful! I tied myself in knots for 20 minutes on this search because I entered:

BGC Zone	BGC Subzone	Variant	Phase	Site Series	Site Phase	Seral
ICH	dw			01	a	

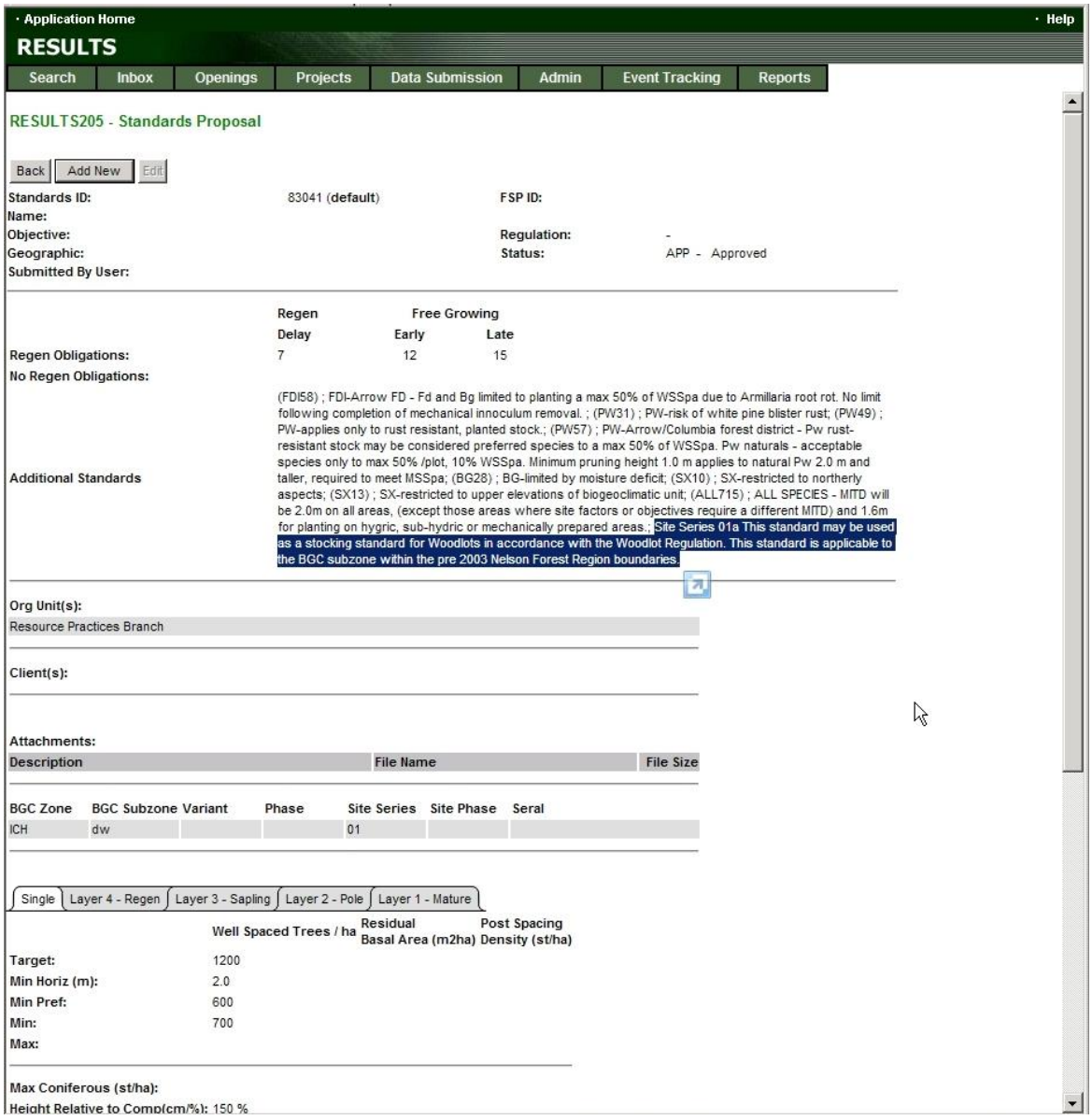
at the start. The real name of my BEC classification is indeed ICHdw 01a, but it was *filed* under ICHdw01 in the System. No "a". Was a good few minutes before I figured that one out! You can search for "ICH", then "ICH dw", then "ICH dw 01" to sequentially narrow down the search results if there is any chance of confusion.

So, my search for ICHdw01 returns:



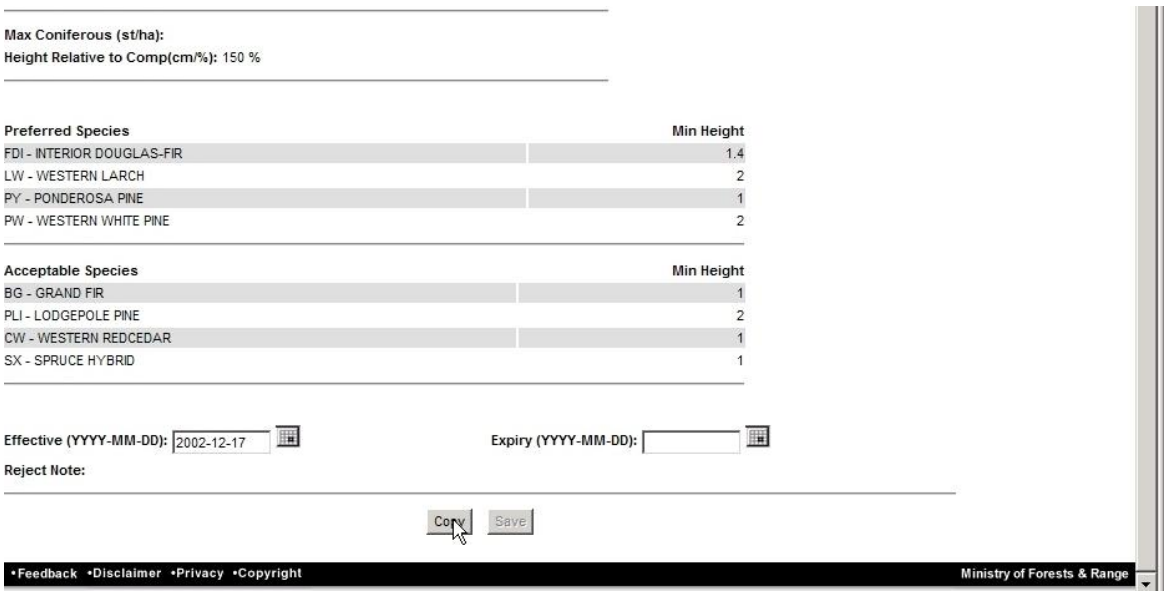
Two listings. As discussed in Appendix 7, a bit confusing, but looking at both will reveal that one is for 01a, one is for 01b. Not like RESULTS to just tell you that or anything, though.

So I click <Details> for go into 83041, and see:



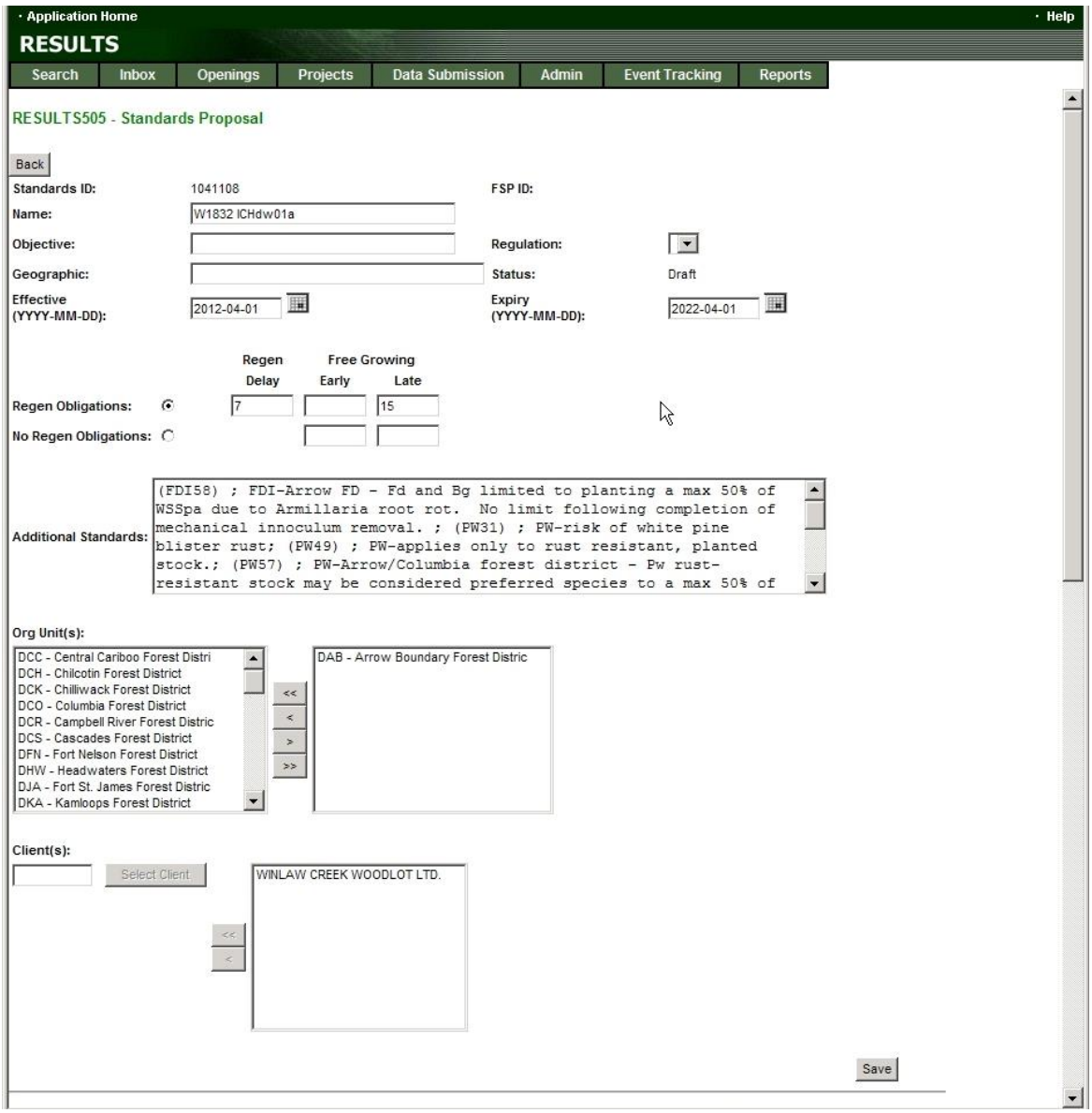
It is the boiler plate I want to start editing.

Down at the bottom of the page, I will find <Copy>:



The System knows who you are and what Woodlot you are working for, so it copies the selected SSID to your Woodlot and presents it for editing.

You of course do want to edit it. If you did not, you would just use the Default and would not be doing all this work.



Go through and carefully make the required changes to reflect the content of the new stocking standard.

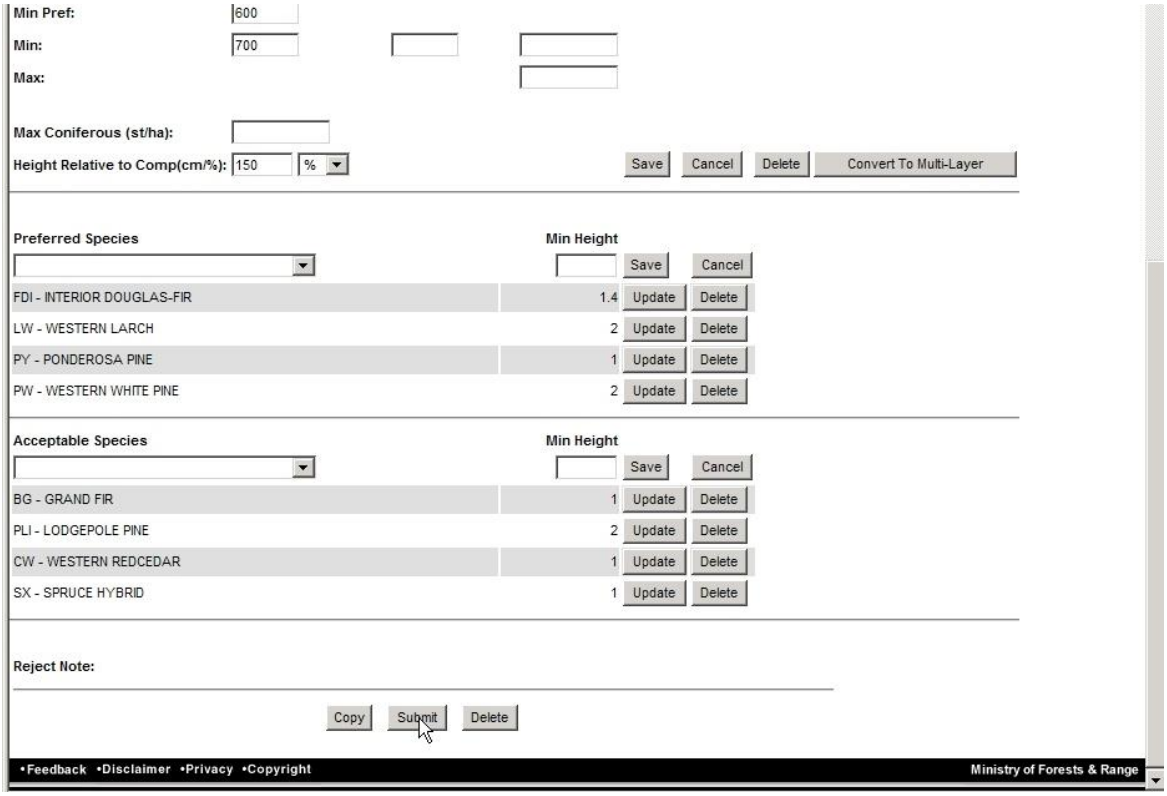
I took out the early FG date, and some stuff in the Additional Standards box, like the "can be used for Woodlots under the Woodlot Regulation".

If you are creating an SSID for a stocking standards that was approved in a WLP, any edits/changes you make are to reflect the content of the approved standard.

If you are proposing anew standard for approval, change the draft input to match the terms of the new standard.

Be careful! This is fussy work, and it is easy to make a mistake. Mistakes are fixable, but it is easier to just get it right.

When you are happy you've got it all right, <Submit>.



Done!

Even if the standard may have already been approved in your WLP, you still have to submit and wait for formal approval. If the standard is already approved, this is a formality.

If you are proposing a new standard for approval, you will need to discuss the matter with your forest professional and with FLNRO Stewardship Forester, and supply a professional rationale for the new standard. The Factors s 6 at the end of WLPPR provided guidance on topics to turn mind to in the rationale.

If the "new" standard is something like adding an intermediate cut standard with a new basal area retention target, the discussion may be verbal and brief. If you are proposing a significant change in stewardship, discussion could be lengthy.

FSP holders are supposed to enter all the Stocking Standards for all the BEC zones in their Forest Development Units through the FSP tracking site, but I have not heard instructions (yet) for woodlots. I suspect that a lot of us may just enter them as needed to complete an Opening/SU submission. And many of us will just be using the District Defaults, and not doing any of this custom work.

Appendix 4: Shape Files 101

This is not a entry level GIS course. But it is important to cover off a few simple things that can confuse those using shape files for the first time.

1. **What are these things?** Shape files were originally created by Environmental Systems Research Institute (ESRI) as a file format for ArcView in the early 1990s, and are still supported by ESRI products like ArcMap. Spatial data in shape file format is now read and written by many software packages.
2. **A shape file is not just "a file".** It is a collection of flies. We call it "a shapefile" to confuse the uninitiated. "A shapefile" created by ArcMap 9 called CP_F_Blk1 is really the following collection of files:

   CP_F_Blk1.dbf
   CP_F_Blk1.prj
   CP_F_Blk1.sbn
   CP_F_Blk1.sbx
   CP_F_Blk1.shp
   CP_F_Blk1.shx

   Older Arc systems can produce valid shapefiles with just three components: the *.shp, *.dbf and *.shx files. Other programs can produce varying file combinations. Whatever. The key things are:

   a) when you copy a "shape file" between disks or folders, or send to another party, copy everything that has the designated shape file name, regardless of the file extension, and

   b) point the browse function in the WLGML program at the *.shp file when you are asked for "a shapefile".

   Many of us send the collection of files that make up a shape file to others combined in a single PKZIP archive file. Makes it easier to keep track of the pieces while sending or receiving.
3. **Topology matters**. Topology in this case means the configuration of the points and lines that make a shape. Some key requirements:
   - A block boundary must be collection of line segments that join end to end.
   - The end of the last segment must join to the start of the first segment.
   - Dangly bits of line, lines that cross each other, etc are not allowed.
   - See Appendix 1 for more details.
4. **Digital maps have a projection**. This defines which map reference system was used to create the map. You have to know the projection of your shapefile/map to use it for an ESF submission.

   How to figure this out:

   - If your shapefile has a *.prj file associated with it, open the *.prj file in Notepad or any text editor. It is along string of gibberish, but right at the start you will see something like "NAD_1983_UTM_Zone_11N",GEOGCS["GCS_North_American_1983",DATUM" or some

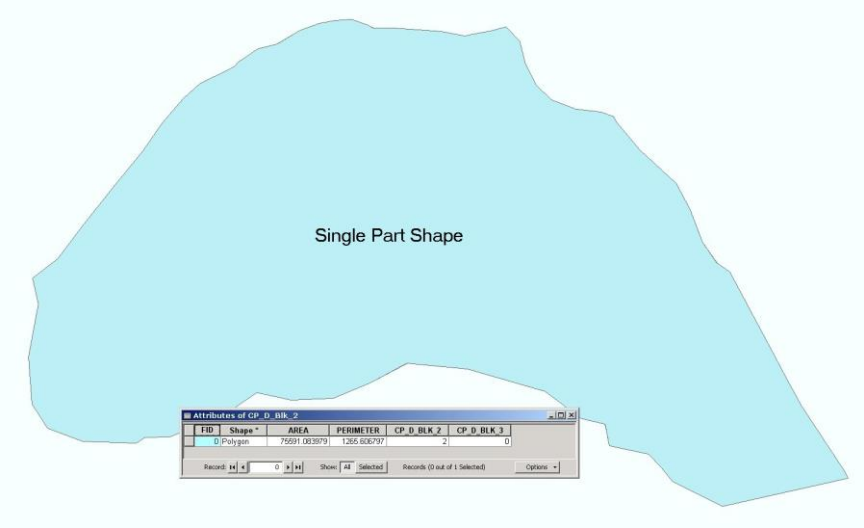
other clue to your map's projection. Compare the clue to the list of projections presented by the WLGML program, and you will likely find a match.

- No *.prj file? First choice is ask whoever made the map if they can tell you what projection it is in.
- You made the shapefile from your GPS and you do not know what projection it is in? Try your GPS users manual. It will have a section on setting projection in the GPS, and you can use it to get to the "set projection" screen in your GPS and see what projection your GPS is set to.
- We used to be able to Upload to ESF then View the uploaded spatial in MapView. They broke that very useful feature, which was a good way to check to see if your spatial looked correct.

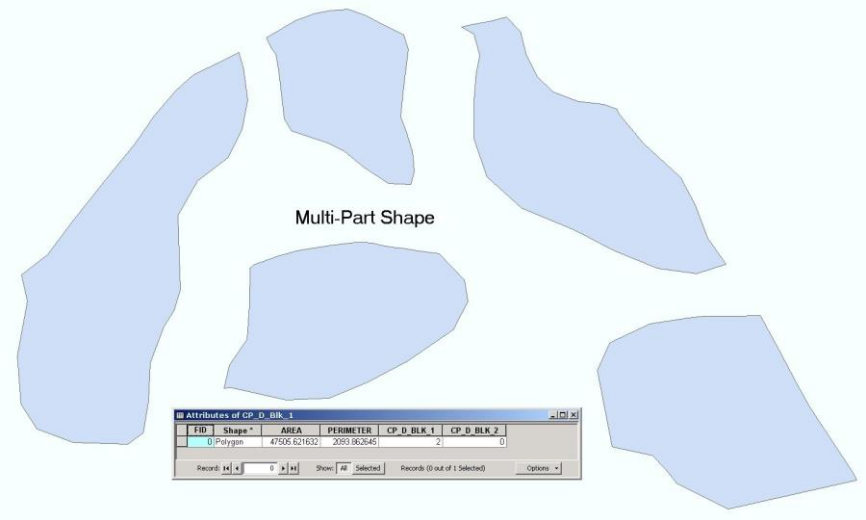
You can not mix 'n match projections. If you have some data in one projection and some in another, you must standardize to a uniform projection. Simple task if you know how and have the right software tools, pretty hard if not.

5. **Rocket Science**: shapes can be single part or multi-part.

   A single part shape is made of a polygon, which has data attributes. This is what we all think of when we think of "a polygon".



A multipart shape is two or more discrete "polygons" that share a single ,common data entry. This is useful for describing things like partial cut patches that are spatially distinct, but which are all just part of the same bigger thing (the harvest unit). (See pages 39 to 40 in RISS-ls.)



FTA and RESULTS make extensive use of multi-part shapes to manage data efficiently and to avoid entering (and storing) the same information multiple times.

It may be easiest to get someone who has ArcMap to create a multipart shape for you if you need one. But the Add Spatial window has the ability to create multi-part shapes from a set of single part shapes if you need to. It is a bit tricky, but it can be done. Instructions in Appendix 1.

Appendix 5: Creating a 1 CP Triangle from Nothing

Your goal, seeing as how you are here, is to replace the X,Y coordinate list in a 1 CP XML file with a 0.6 ha isosceles triangle that lies within your woodlot.

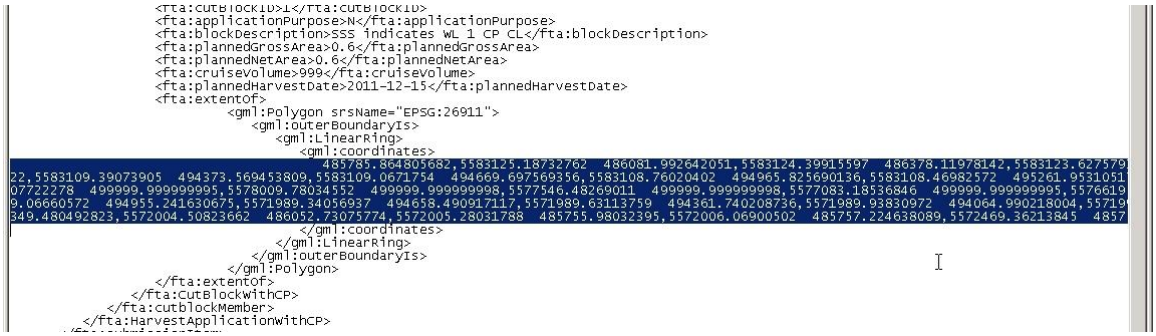
Further, we assume that you do not have a shape file of such a thing on hand.

So, open the spreadsheet 1_CPDEL DEL _Triangle_Calc.xls, obtained from the WLGML web site. If you fill in the X,Y of the bottom left corner of the desired triangle, it will calculate the rest for you. You can then copy and paste the GML coordinates from the orange highlighted cell in the spreadsheet into the XML document.

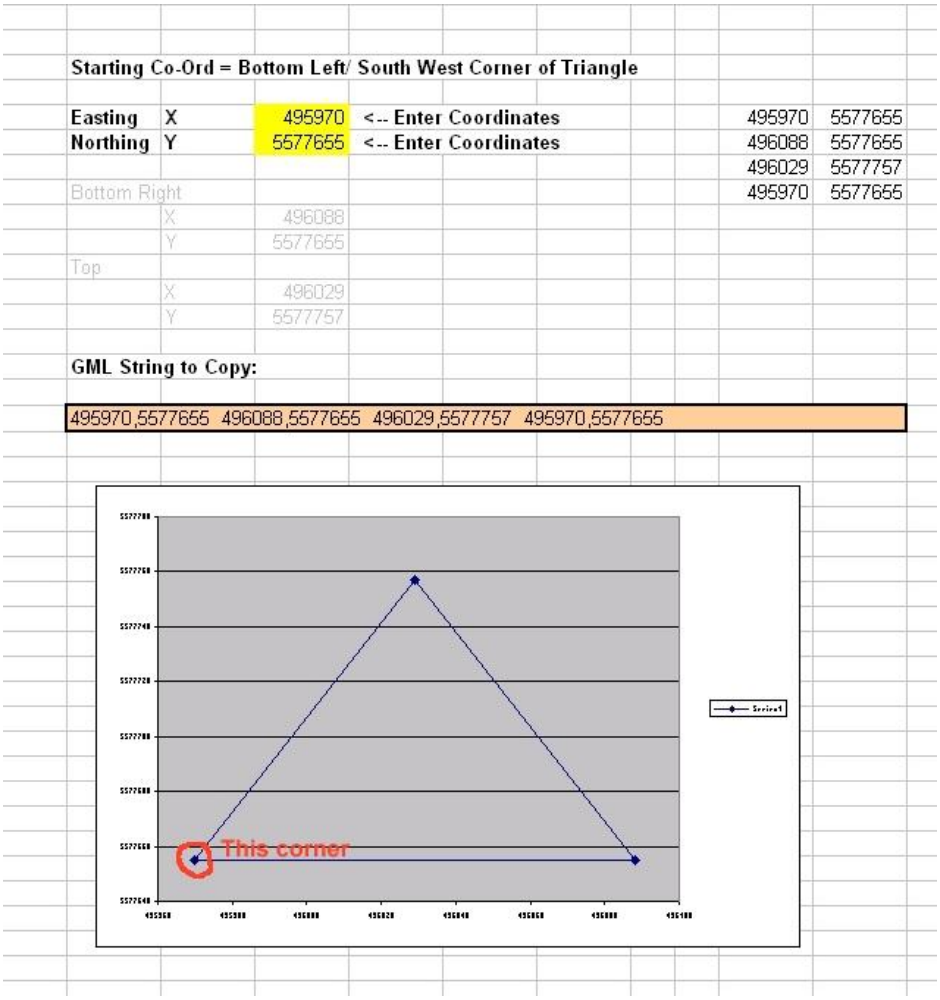
OK, from the top:

Find the right place in the XML file:

Highlight the block of X,Y coordinates that are in there, and delete them. You may have to bash on it for awhile, but clean them all out.



Now, to the Excel spreadsheet:



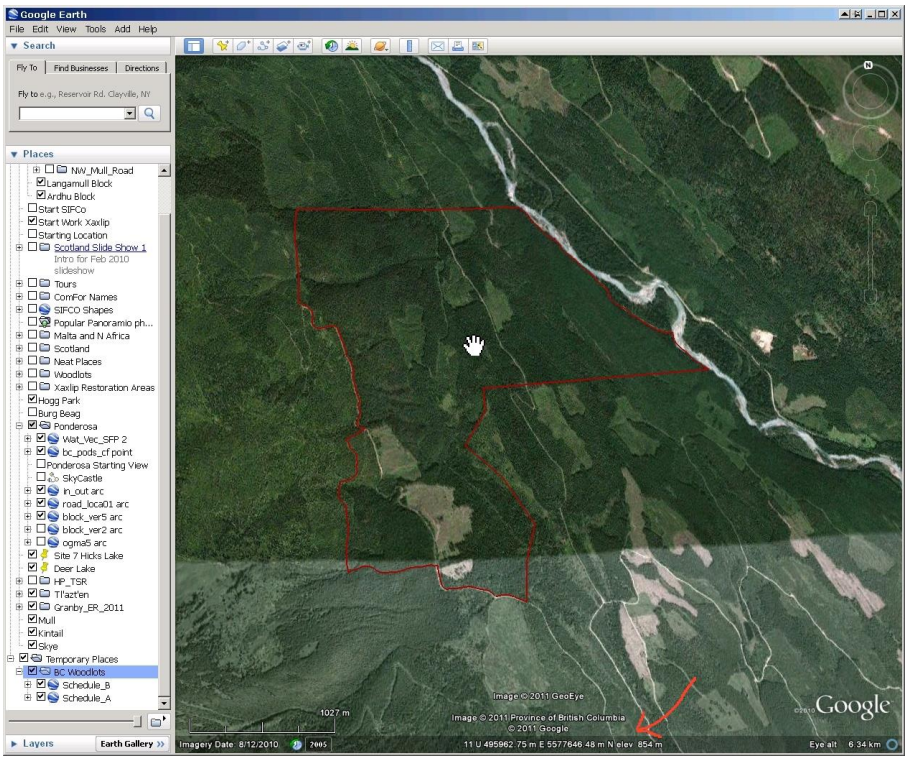
It wants you to tell it the X,Y of the bottom left (aka South West) cornet of a triangle with 118 meter sides that will be near the center of your woodlot and will:

- Use the same projection / co-ordinate system as the shape file you fed into WLGML at the start of the process.
- Not extend across your woodlot boundary.
- Not intersect any older CP's.
- Be wholly within either the private or crown portion of your woodlot, depending on whether the 1 CP is covering the private or crown portion.

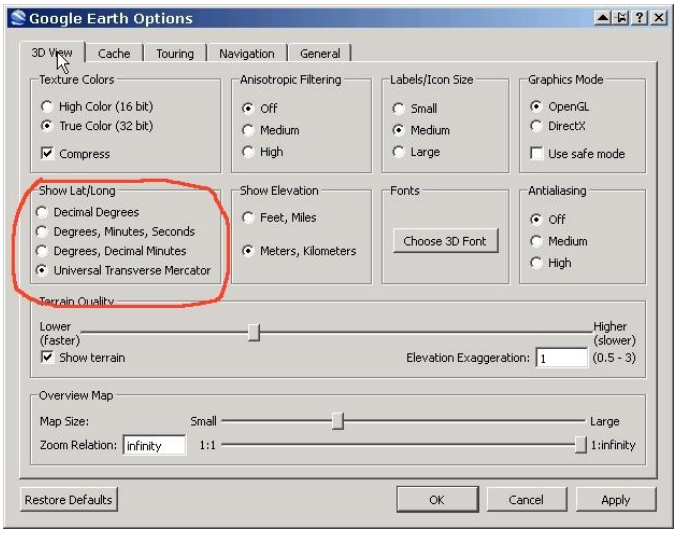
Now, where the heck do you get this info? Quite a few options:

- Load a shape of your woodlot outline in the same projection into the WLGML Add Spatial module and read the X,Y of a central point form the bottom of the screen.
- Get out a paper 1:50,000 topo map and do some orienteering work to figure out the UTM of a central point, assuming you used a shape in UTM projection in the first step.

- Crack open the Google Earth map of all woodlots from http://www.woodlot.bc.ca/gearth.html , find your woodlot, and read the UTM coordinates from the bottom of the GE screen. Again, assuming you used a shape in UTM projection in the first step.



No coordinates in GE? <Tools><Options>



- Drive out to the middle of the woodlot with a Garmin GPS and beep a waypoint.
- Ask your mapping consultant for help.

Appendix 6: Lookup What Has Been Reported to RESULTS and FTA Already

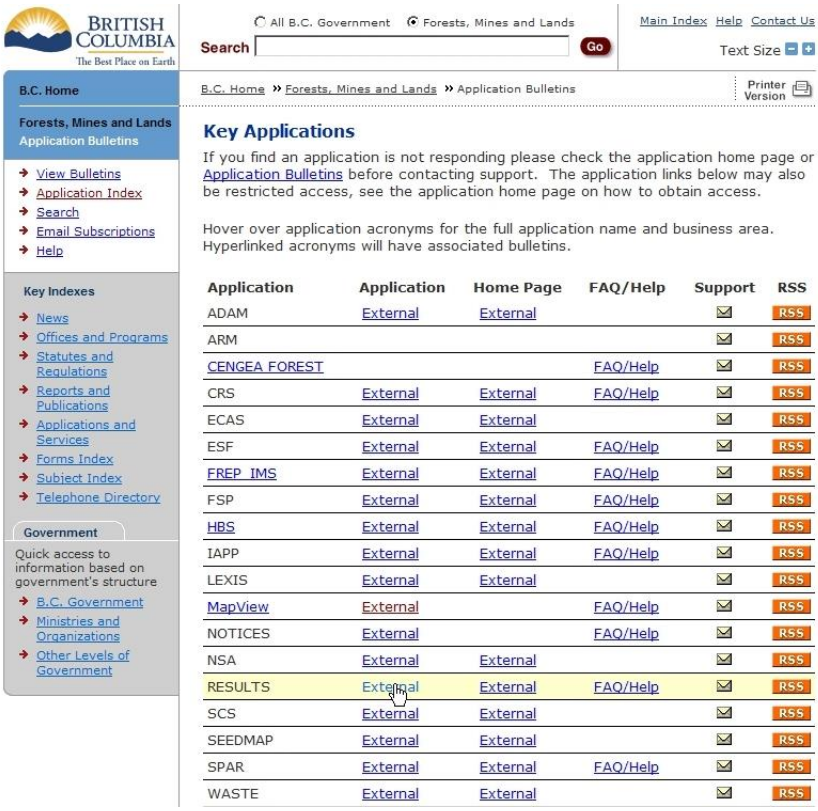
Sometimes we can be surprised to find that a block is already in RESULTS.

This section shows you how to check existing RESULTS reporting for a WL (a) using the RESULTS web based interface and (b) using iMap BC.

What Info is In RESULTS for My Woodlot?

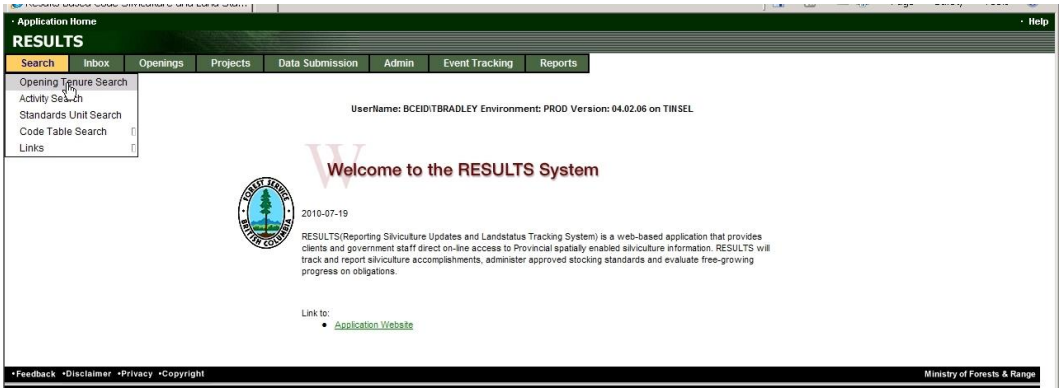
One way to find out is to review the info in the RESULTS SIL56 Screen, which is loaded from Opening Tenure Search.

Start at the e-FM application index. Click RESULTS Application External:

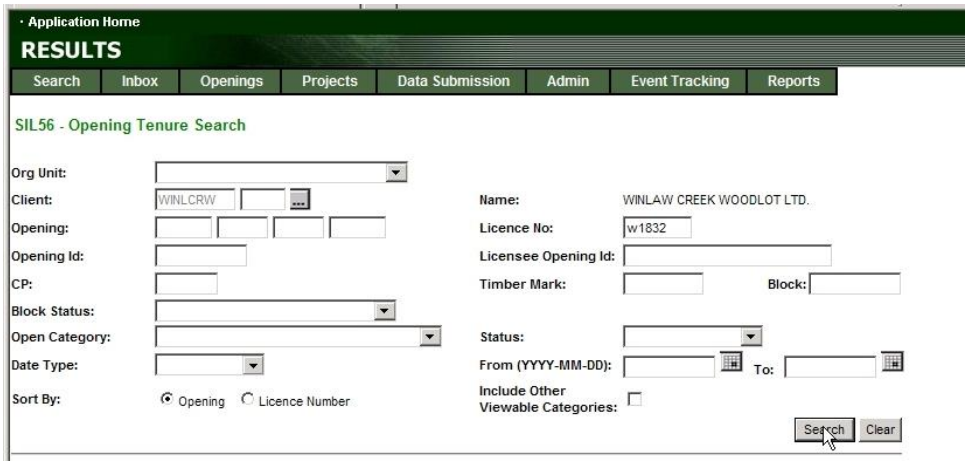


You get asked for your BCeID and password, and then RESULTS opens.

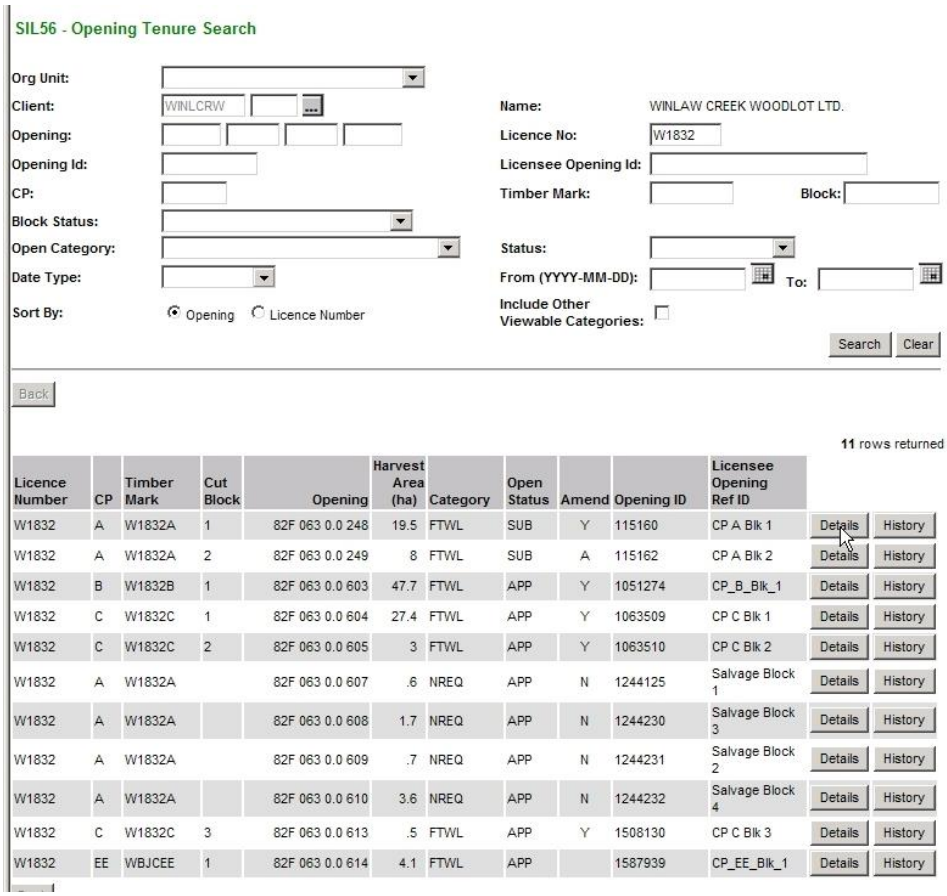
Your want Opening Tenure Search.



Tell it your Licence number, and click Search.



A list of your openings on file appears.



Licence Number	CP	Timber Mark	Cut Block	Opening	Harvest Area (ha)	Category	Open Status	Amend	Opening ID	Licensee Opening Ref ID		
W1832	A	W1832A	1	82F 063 0.0 248	19.5	FTWL	SUB	Y	115160	CP A Blk 1	Details	History
W1832	A	W1832A	2	82F 063 0.0 249	8	FTWL	SUB	A	115162	CP A Blk 2	Details	History
W1832	B	W1832B	1	82F 063 0.0 603	47.7	FTWL	APP	Y	1051274	CP_B_Blk_1	Details	History
W1832	C	W1832C	1	82F 063 0.0 604	27.4	FTWL	APP	Y	1063509	CP C Blk 1	Details	History
W1832	C	W1832C	2	82F 063 0.0 605	3	FTWL	APP	Y	1063510	CP C Blk 2	Details	History
W1832	A	W1832A		82F 063 0.0 607	.6	NREQ	APP	N	1244125	Salvage Block 1	Details	History
W1832	A	W1832A		82F 063 0.0 608	1.7	NREQ	APP	N	1244230	Salvage Block 3	Details	History
W1832	A	W1832A		82F 063 0.0 609	.7	NREQ	APP	N	1244231	Salvage Block 2	Details	History
W1832	A	W1832A		82F 063 0.0 610	3.6	NREQ	APP	N	1244232	Salvage Block 4	Details	History
W1832	C	W1832C	3	82F 063 0.0 613	.5	FTWL	APP	Y	1508130	CP C Blk 3	Details	History
W1832	EE	WBJCEE	1	82F 063 0.0 614	4.1	FTWL	APP		1587939	CP_EE_Blk_1	Details	History

If one of them seems to be the opening you want to report on, click Details beside it. Check things like area and timber mark and dates of activities. If it is the opening you want to report further on, carefully record the OpeningID. It is the key you want to use to link the information you report to the correct record set in RESULTS.

If you find yourself uncertain, or really prefer not to go through a long list of blocks one at a time trying to figure out which is which, you can also use the spatial search in iMap option described next. "Seeing" your blocks is often very helpful.

Lookup RESULTS Block Info in iMap

iMap is the modern govt map viewer. iMap allows you to view the FLNR information-on-file for your harvest units that has "a spatial component".

iMap replaced MapView. MapView was a superior product for desktop use, but that does not count in our tablet and phone world. iMap is slow and awkward, with poor quality search abilities.

Note that if the info you seek exists only as a text entry - an incorrect RESULTS submission with no spatial data or a second or subsequent 1 CP block in FTA - it will not show up in iMap.

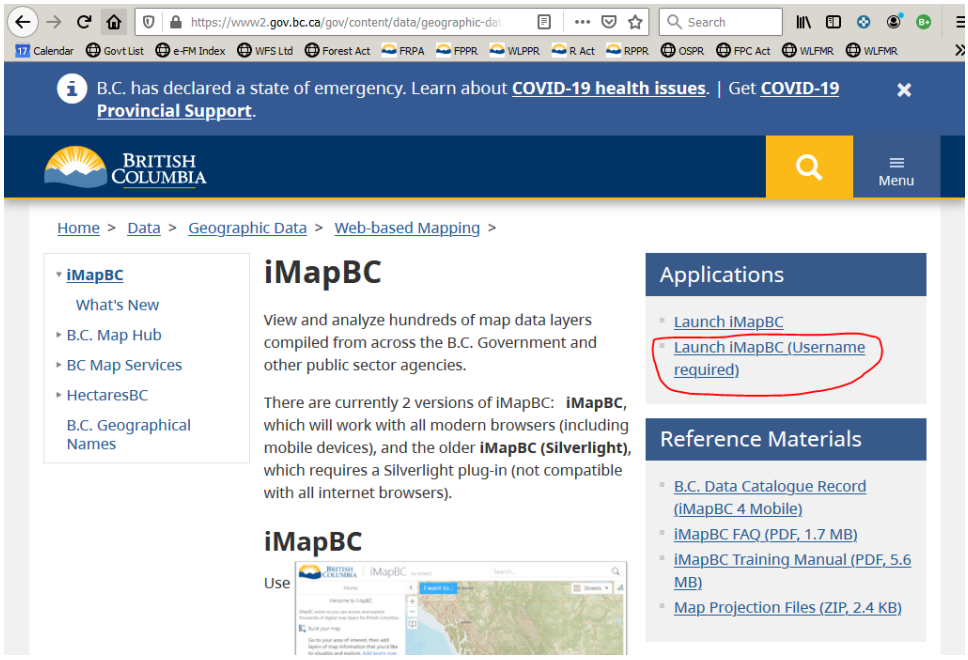
iMap does not run on a dial up connection, so if you are on dial up, skip this section. If you have satellite or better internet access, carry on.

iMap is not dependant on Internet Explorer to function. It seems to run fine on Chrome or Firefox. If you are having troubles using iMap, try a different browser. I have seen that fix "it is not working" issues.

So, go to:

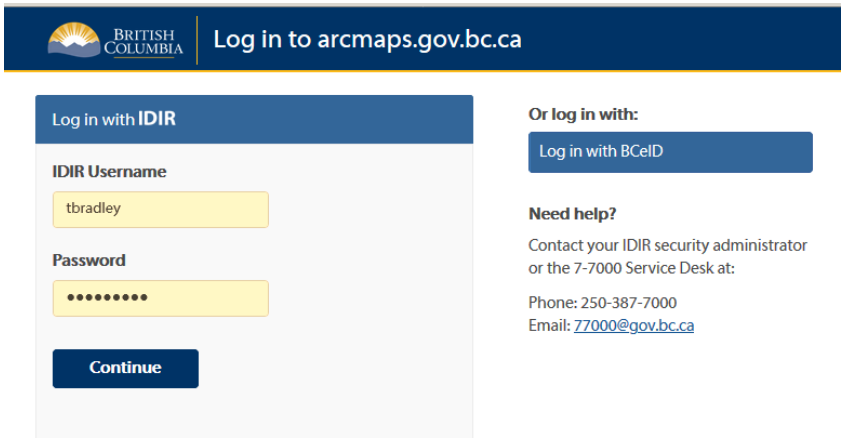
https://www2.gov.bc.ca/gov/content/data/geographic-data-services/web-based-mapping/imapbc

Or just search for imapbc and follow the obvious link. What you see is:



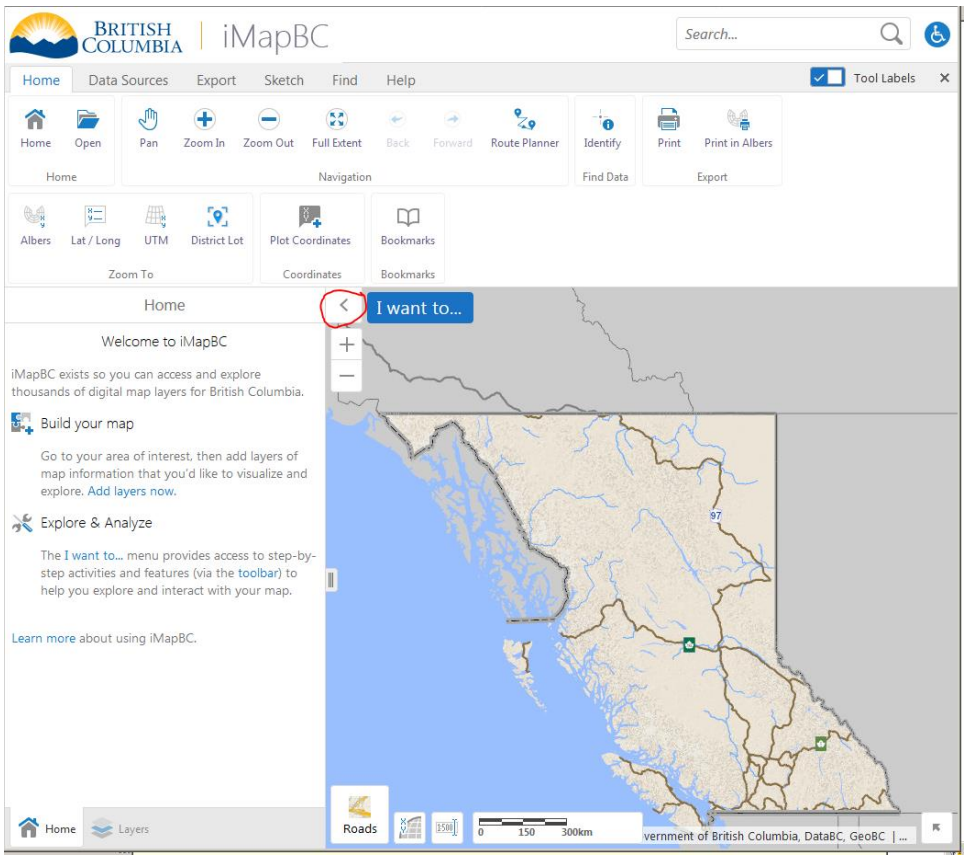
Launch the Username Required version. You want permission access to as many data items as possible.

Just to start off on the wrong foot, it opens with:



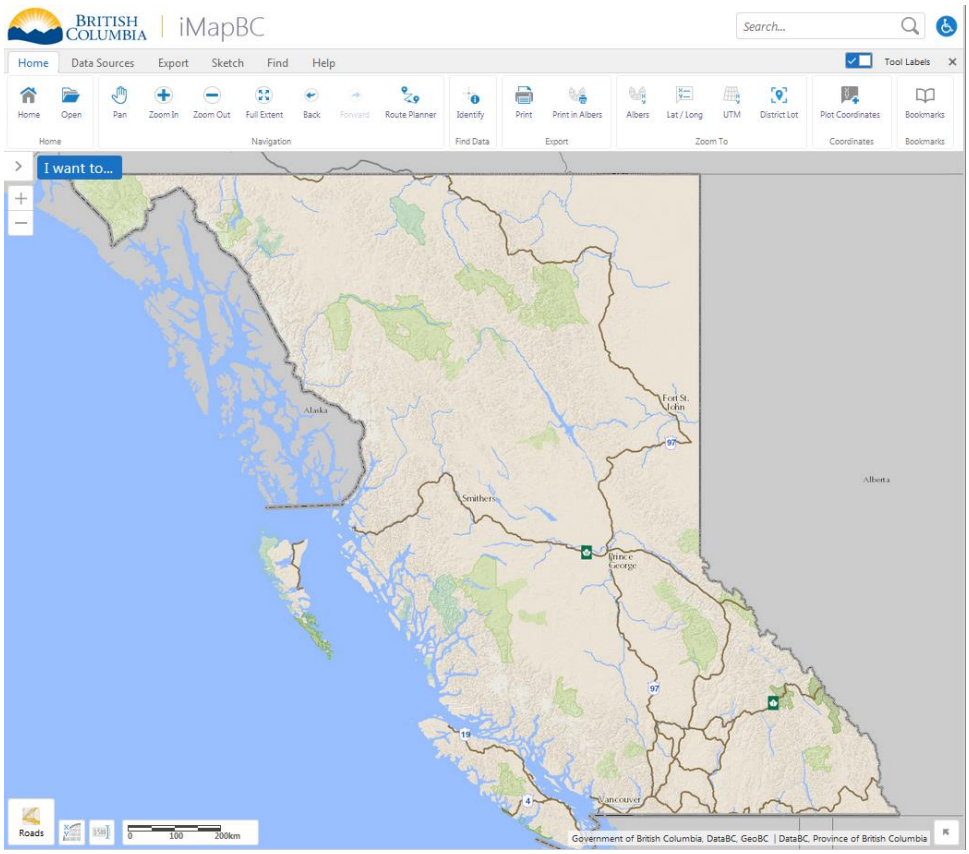
I can't count the number of times I have clicked Continue on this screen. I am *trained* to click Continue. It does not work. This is the login for IDIRs - govt users. Us citizens have to click the Log in with BCeID button to get to our login box.

After logging in, you hope to see:



Ohh goody! We can Build a Map!! We can Explore and Analyze!! Have I mentioned how much I hate helpful useless interface garbage? And fully 30% of the screen is occupied by giant icons! I came here to use a map, not admire your fab icons.

So toggle that arrow hilted in red above to get rid of the screen eating sidebar. Then click once in the vast icon area and hit <Control - > twice. Prunes the icon acreage back to "bearable".

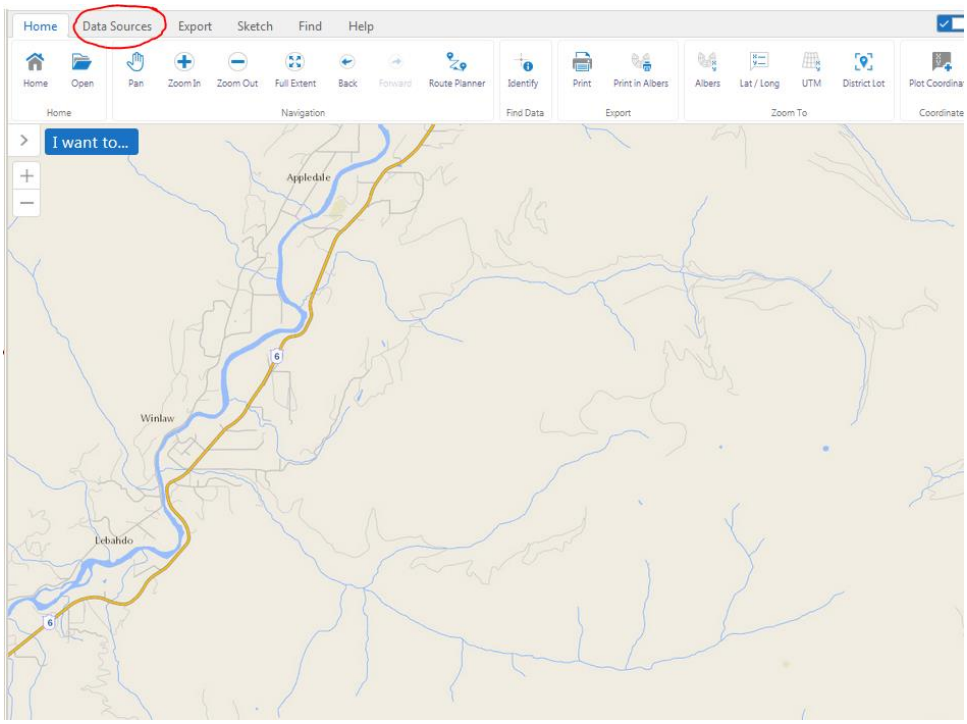


There used to be a great search engine in MapView that would find your WL, or your CP and Block. Sorry, gone.

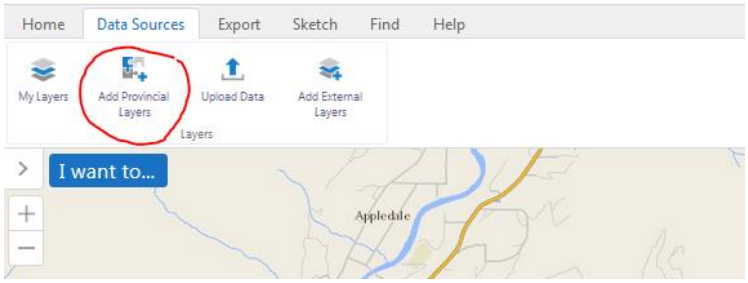
So use the Pan and Zoom In / Zoom Out abilities to navigate to where your WL area of interest is. Note that <Control +> and <Control -> zoom in and out after you click in the map area with the "Pan Hand" tool. So does your mouse wheel.

If you issue a zoom command and nothing happens, give it some time. Response can be very slow on rural internet.

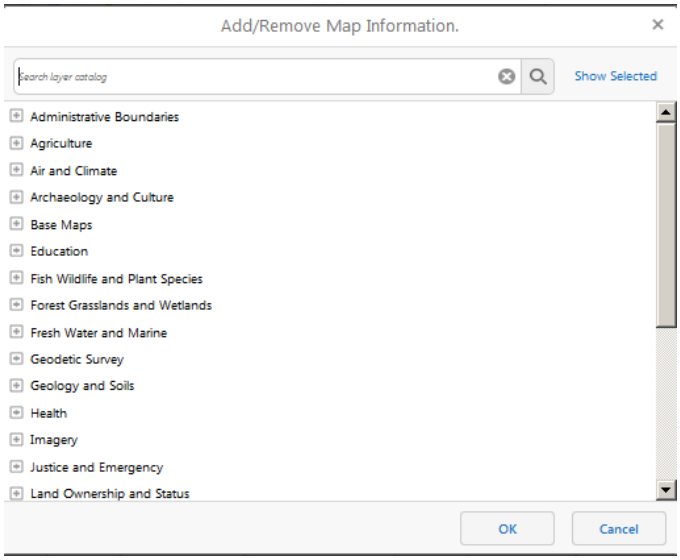
Once you get to around where your area of interest is, click on Data Sources in the top menu bar.



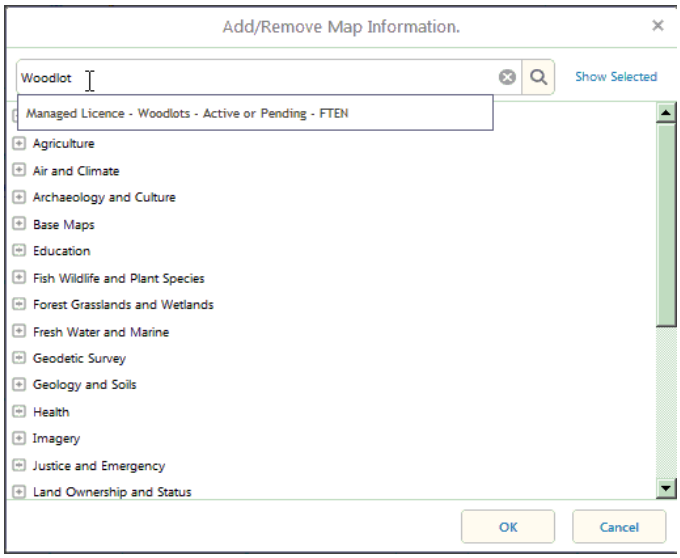
And then Add Provincial Layers.



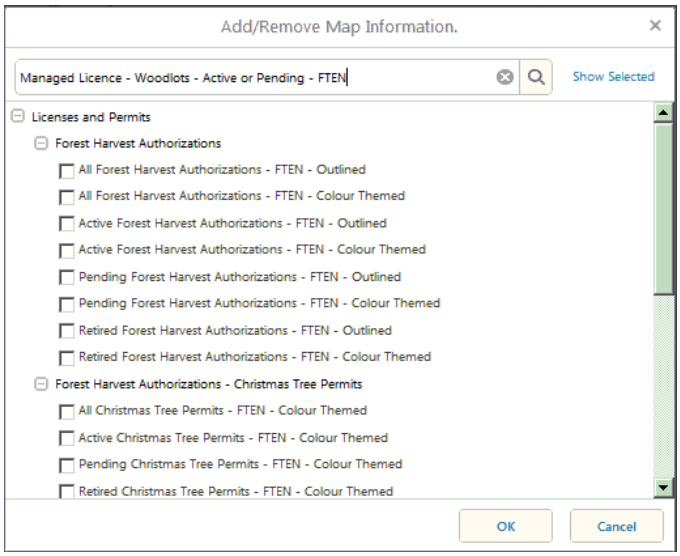
This brings up a *very* complex list and interface in a tiny box that makes it hard to use.



Box is not resizable. The search function works fine, **if** you can guess what the person who built the search called what you want to find. Try "woodlot". Well, that looks hopeful.

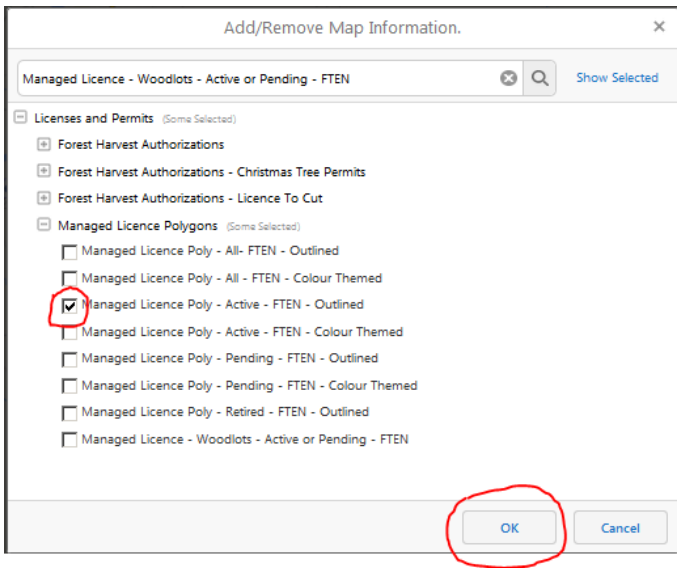


Click on the suggestion, and… Fail. It opens up every tab in the entire Licenses and Permits folder. Way too much info.

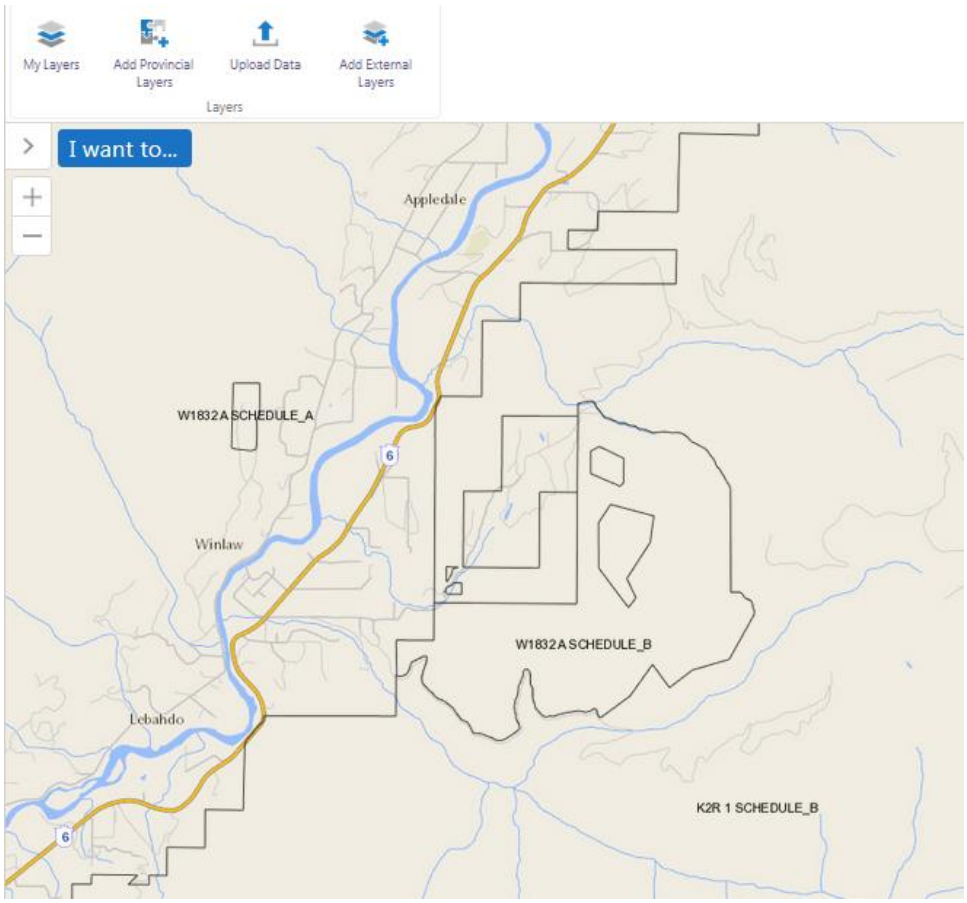


A person is likely better off pecking your way though the list by hand.

Anyway, however you choose to get there, we are after Licences and Permits, Managed Licence Polygons, Managed Licence Poly - Active - FTEN - Outlined. ("Managed Licences" are for CFA, WL and FN WLL.)



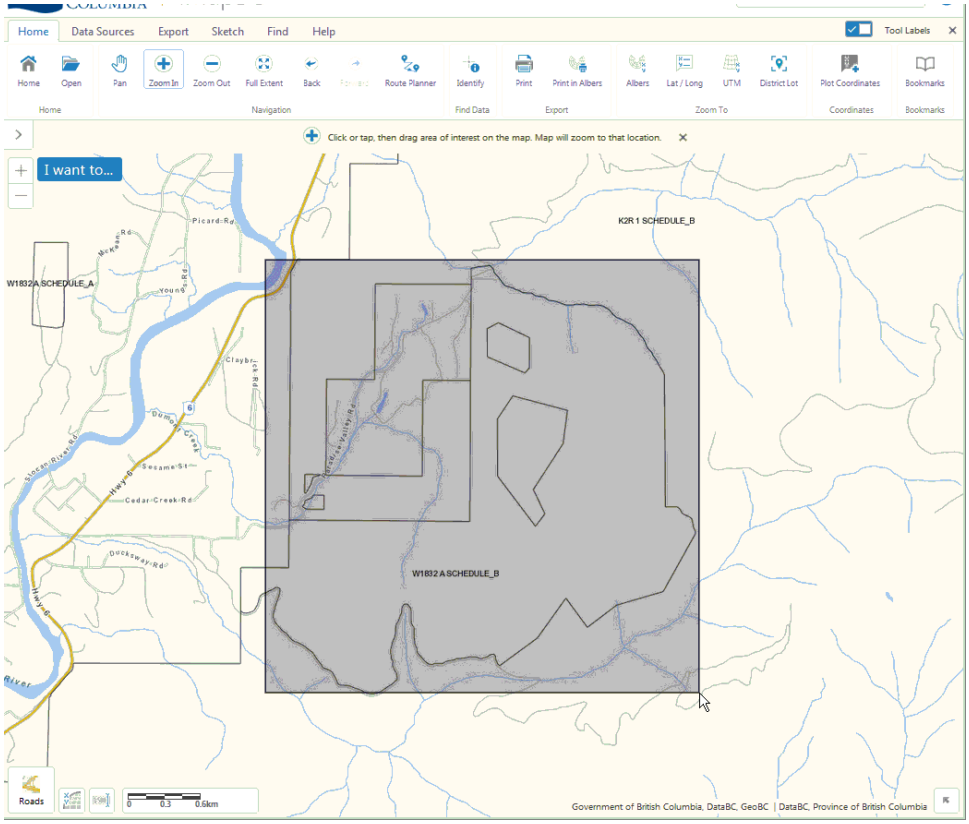
Toggle that layer on and click OK. WL and CFA show up. Could have chosen the Woodlots - Active or Pending - FTEN, but I wanted just Active.



Hmm, the Sched A was removed from W1832 10 years ago. And this is the "Active" tenures data. Wonder when they update?

Whatever. Zoom in more on your WL AOI.

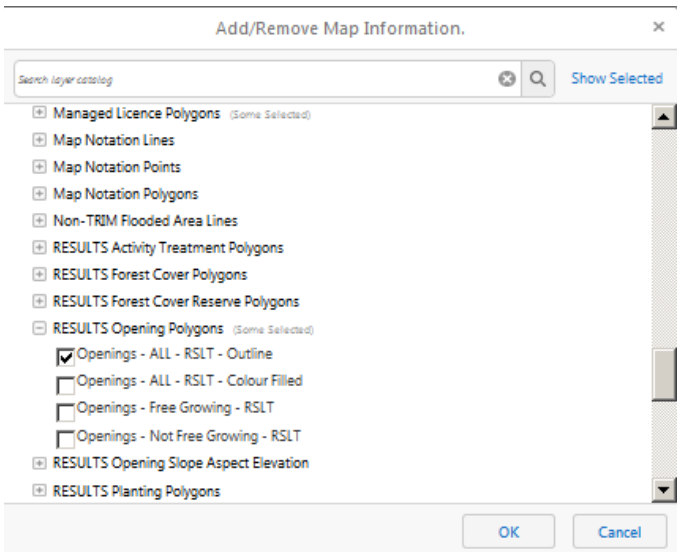
If you click on Home to get back to the Zoom In icon, it will activate a standard "click and drag" zoom rectangle which can be quite helpful.



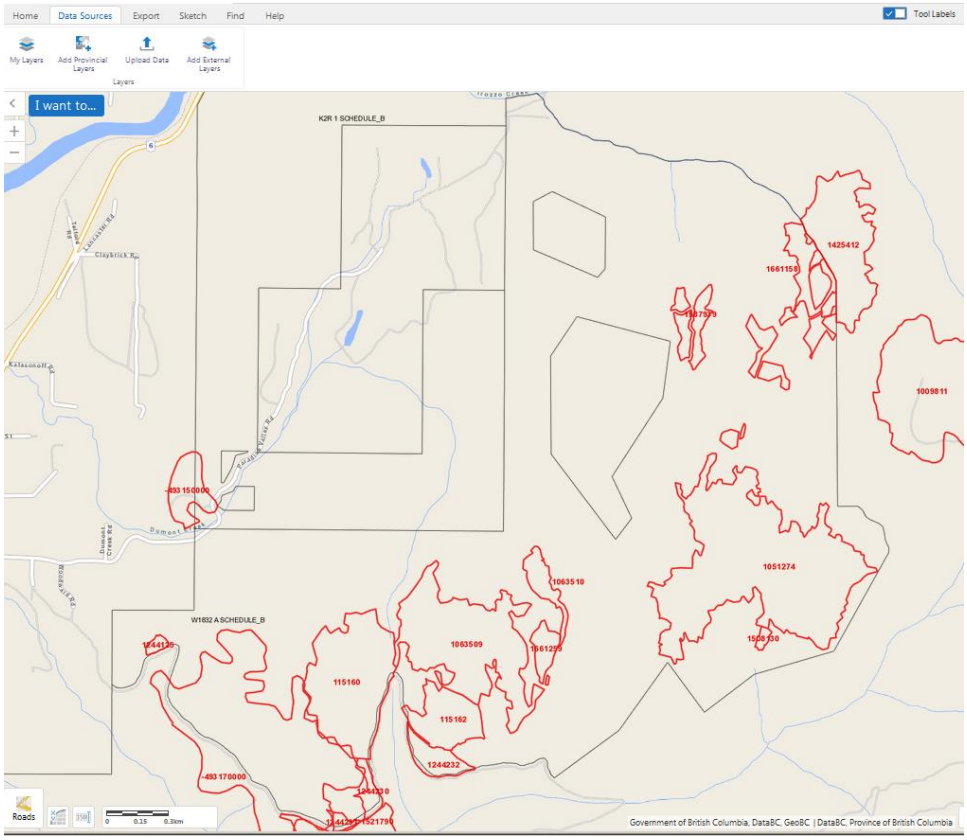
Having *finally* got to a map of the AOI, we can now use the iMap data access abilities.

Back to Add Provincial Layers, Licences and Permits.

But go way down the list and find RESULTS Opening Polygons. I prefer outlined, you may prefer color filled.

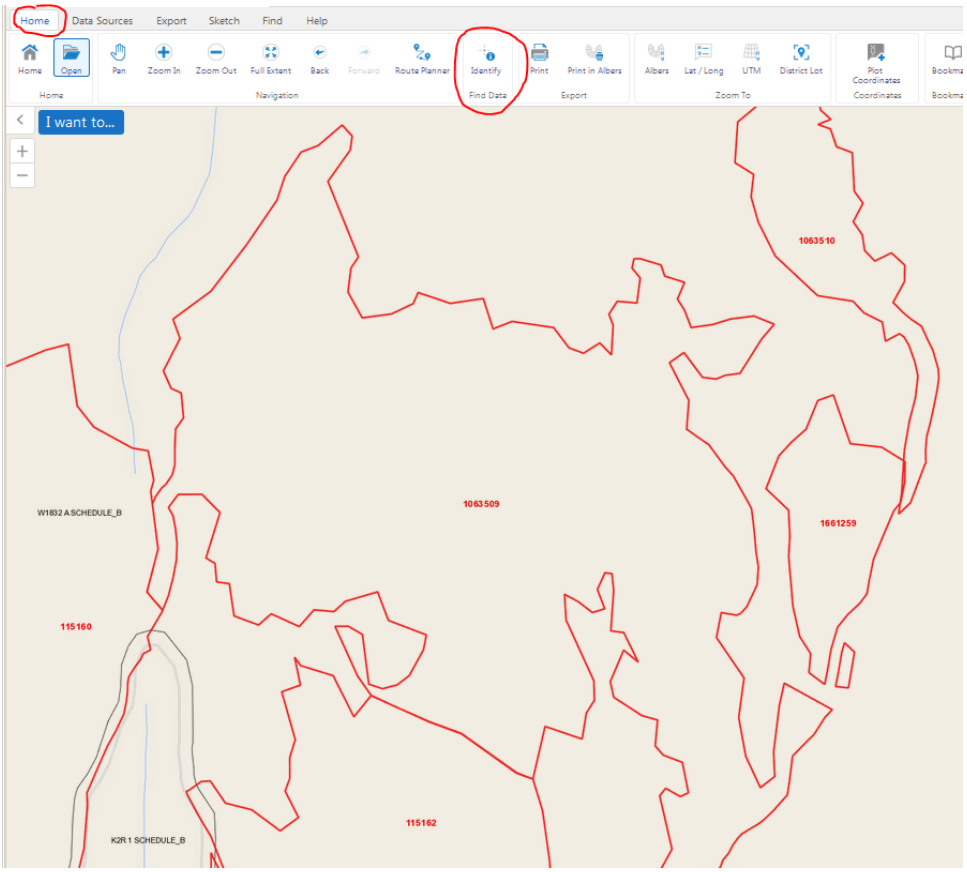


Click OK, and map changes to:

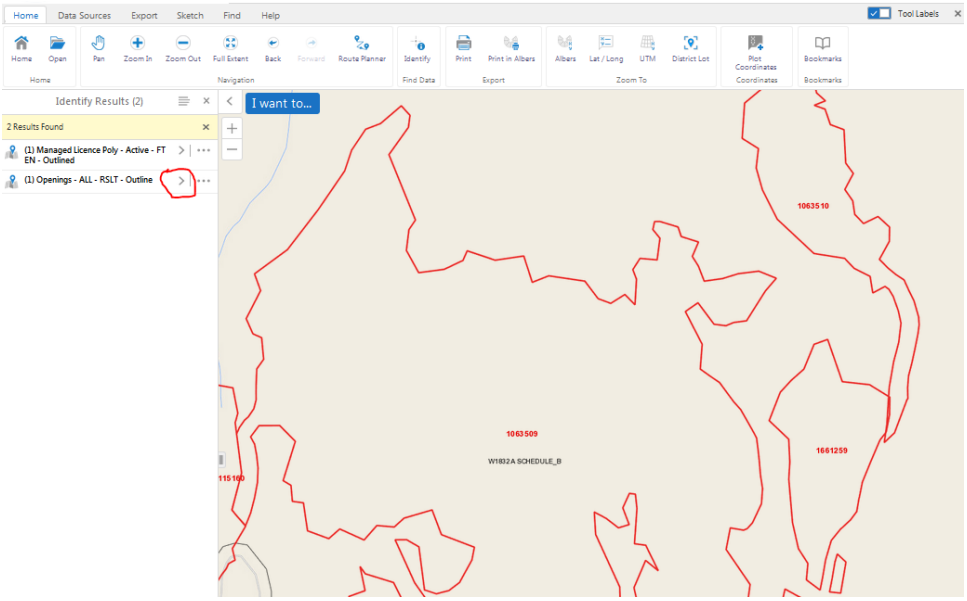


Those are the RESULTS openings in my WL. If I was looking for a particular opening, I would find it easier to locate it on this map than in the text listing option. I will now zoom in on one opening and demonstrate some data review.

Zoom in. Then go back to the Home tab and select the Identity tool.



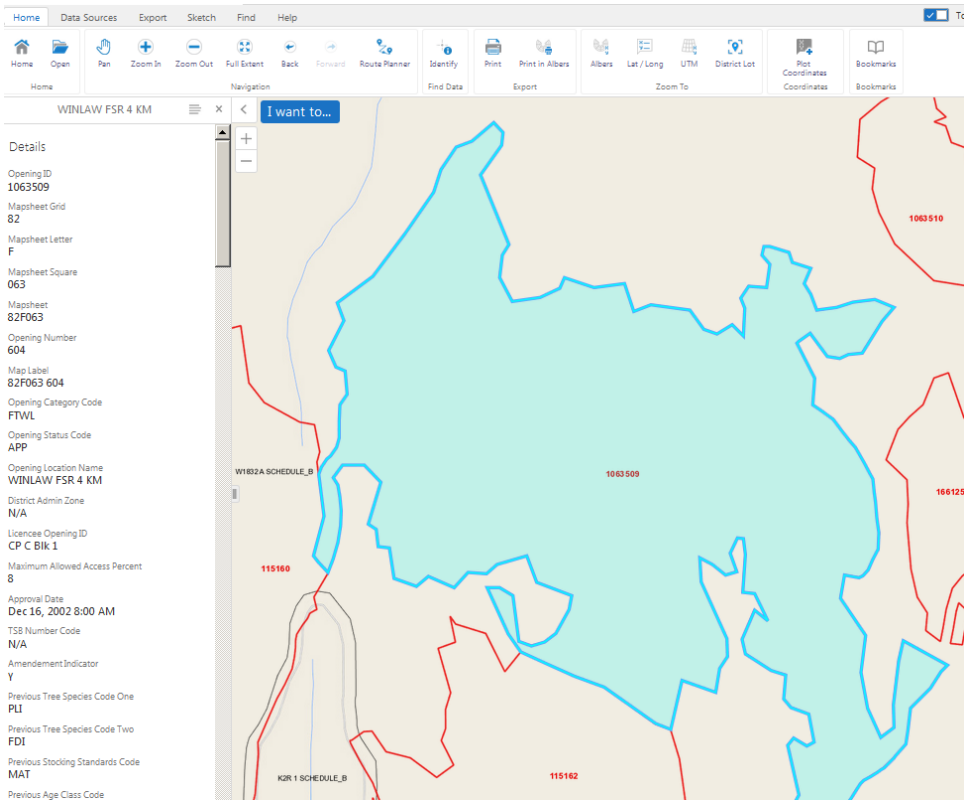
Click within the opening of interest. A sidebar opens.



The sidebar has two items:

1. Managed Licence Poly because we have WL outlines turned on, and
2. Openings - ALL_RSLT because we have openings turned on.

Click that little arrow symbol beside Openings - ALL_RSLT until a sidebar of data opens.



A lot of data, actually. The table below shows what is in that sidebar. Too much info, and many things you may want to know about are way down the list somewhere and hard to find.

But the point is: There is a RESULTS opening report for an opening here. What is more, the very first data item is that this is Opening ID 1063509. If you go to RESULTS Opening Tenure Search and search for Opening ID 1063509, it will take you to the right data set instantly. And because I use descriptive Licencee Opening ID's, the info that this is CP C Blk 1 shows up pretty near the top.

Details	Region Name	Region Code	Planting Technique
Opening ID	Kootenay-Boundary	RKB	Code Two
1063509	Natural Resource	Denudation	N/A
Mapsheet Grid	Region	Disturbance Code	Planting Treatment
82	District Code	One	Area Two
Mapsheet Letter	DSE	L	N/A
F	District Name	Denudation	Planting Completion
Mapsheet Square	Selkirk Natural	Silvicultre	Date Two
063	Resource District	System Code One	N/A
Mapsheet	BCTS Code	CCRES	Planting Count
82F063	N/A	Denudation	1
Opening Number	BCTS Name	Silvicultre	Brushing Technique
604	N/A	Variant One	Code
Map Label	Opening Gross Area	N/A	N/A
82F063 604	27.3	Denudation Cut	Brushing Treatment
Opening Category Code	Forest File ID	Phase Code One	Area
FTWL	W1832	REMOV	N/A
Opening Status Code	Cutting Permit ID	Denudation	Brushing Completion
APP	C	Completion Date	Date

Opening Location Name
WINLAW FSR 4 KM
District Admin Zone
N/A
Licencee Opening ID
CP C Blk 1
Maximum Allowed Access Percent
8
Approval Date
Dec 16, 2002 8:00 AM
TSB Number Code
N/A
Amendement Indicator
Y
Previous Tree Species Code One
PLI
Previous Tree Species Code Two
FDI
Previous Stocking Standards Code
MAT
Previous Age Class Code
5
Previous Hight Class Code
3
Previous Site Index
18
Previous Site Index Source Code
H
Results Submission ID
874280
SLOPE
8.9
ASPECT
327.1
MAXIMUM_ELEVATION
1059
MINIMUM_ELEVATION
944
AVERAGE_ELEVATION
1023.1
OPENING_SEA_CALC_RESULT_CODE
COM
OPENING_SEA_CONFIDENCE_CODE
M
Created By
IDIR\BCKALS
Created Date
Mar 7, 2006 4:26 PM
Updated By
BCEID\TBRADLEY
Updated Date
Dec 29, 2016 7:26 PM
Feature Class SKEY
2409
Object ID
3036016
Area Square Meters
273348.1702

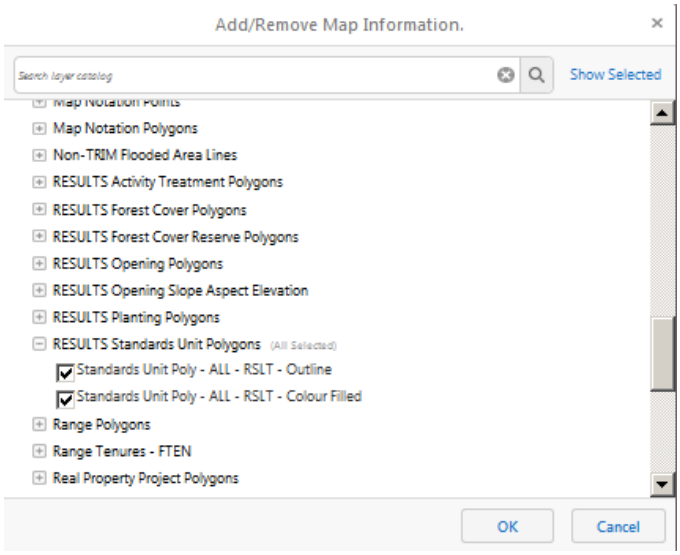
Timber Mark
W1832C
Cut Block ID
1
Management Unit ID
N/A
Management Unit Type Code
F
Management Unit Description
N/A
File Type Code
A04
Disturbance Start Date
Feb 27, 2006 8:00 AM
Disturbance End Date
Dec 15, 2006 8:00 AM
Client Name
WINLAW CREEK WOODLOT LTD.
Client Number
00142700
Client Location Code
00
Generalized BCG Code
ICH
Generalized BCG Subzone Code
dw
Generalized BCG Variant
N/A
Generalized BCG Phase
N/A
Generalized BCG Site Series
01
Generalized BCG Site Type
a
Generalized BEC Serl
N/A

One
Dec 15, 2006 8:00 AM
Denudation Disturbance Code Two
N/A
Denudation Silviculture System Code Two
N/A
Denudation Silviculture Variant Two
N/A
Denudation Cut Phase Code Two
N/A
Denudation Completion Date Two
N/A
Denudation Count
1
Site Prep Technique Code One
N/A
Site Prep Treatment Area One
N/A
Site Prep Completion Date One
N/A
Site Prep Technique Code Two
N/A
Site Prep Treatment Area Two
N/A
Site Prep Completion Date Two
N/A
Site Prep Count
0
Planting Technique Code One
PL
Planting Treatment Area One
14.6
Planting Completion Date One
May 23, 2009 7:00 AM

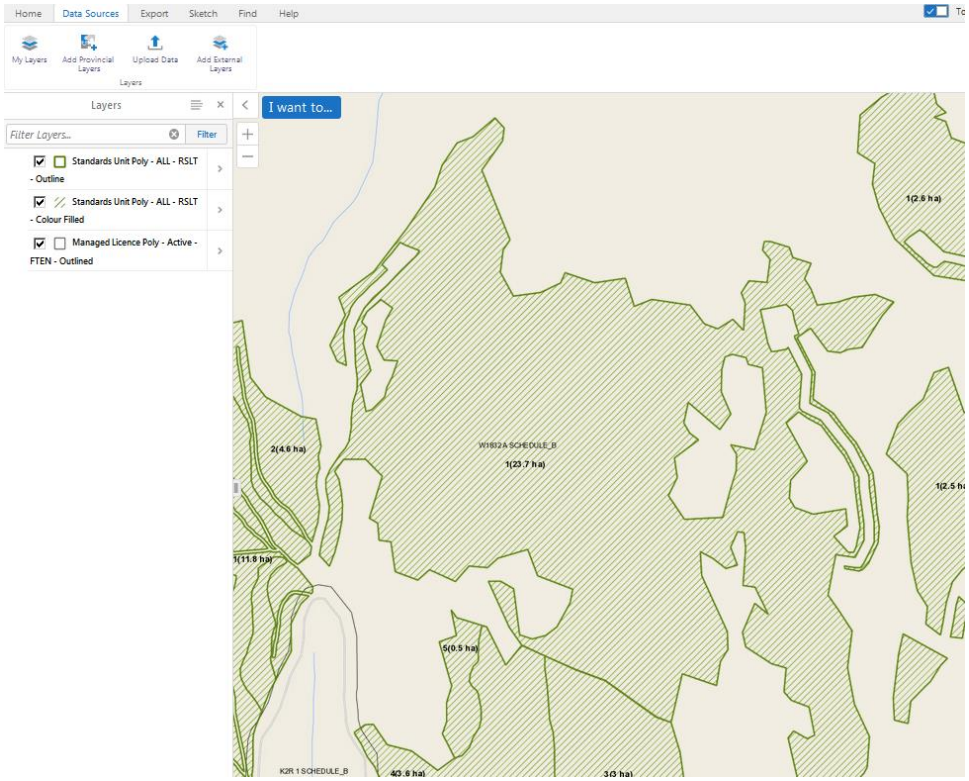
N/A
Brushing Count
0
Spacing Treatement Area
N/A
Spacing Completion Date
N/A
Spacing Count
0
Fertilization Treatment Area
N/A
Fertilization Completion Date
N/A
Fertilization Count
0
Pruning Treatment Area
N/A
Pruning Completion Date
N/A
Pruning Count
0
Geometry Exists Indicator
Y
Feature Area
27.3348
Feature Perimeter
4624.6824
Capture Method Code
N/A
Data Source Code
N/A
Observation Date
N/A
Data Quality Comment
N/A
Submitted By
BCEID\TBRADLEY
Submitted Date
Jan 18, 2011 8:00 AM

Is there an SU report in RESULTS? You can find out. Back to Add Provincial Layers, Licences and Permits.

Turn off RESULTS Opening Polygons and turn on RESULTS Standards Units Polygons. **Use both outlined and color filled**.



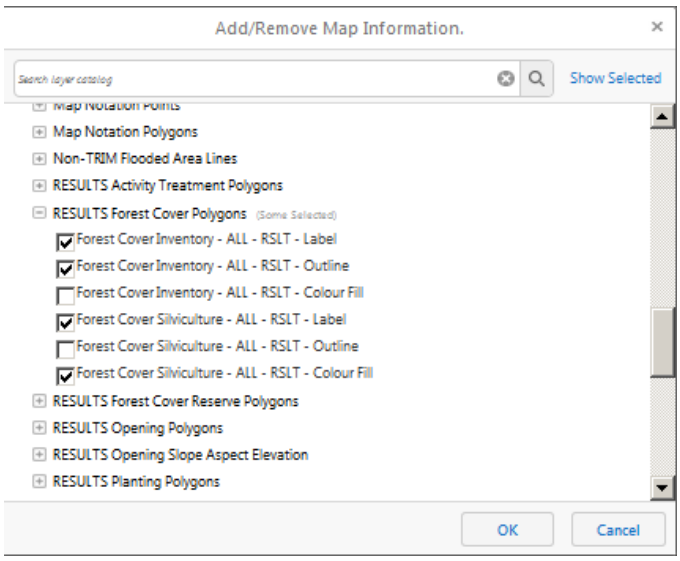
To get:



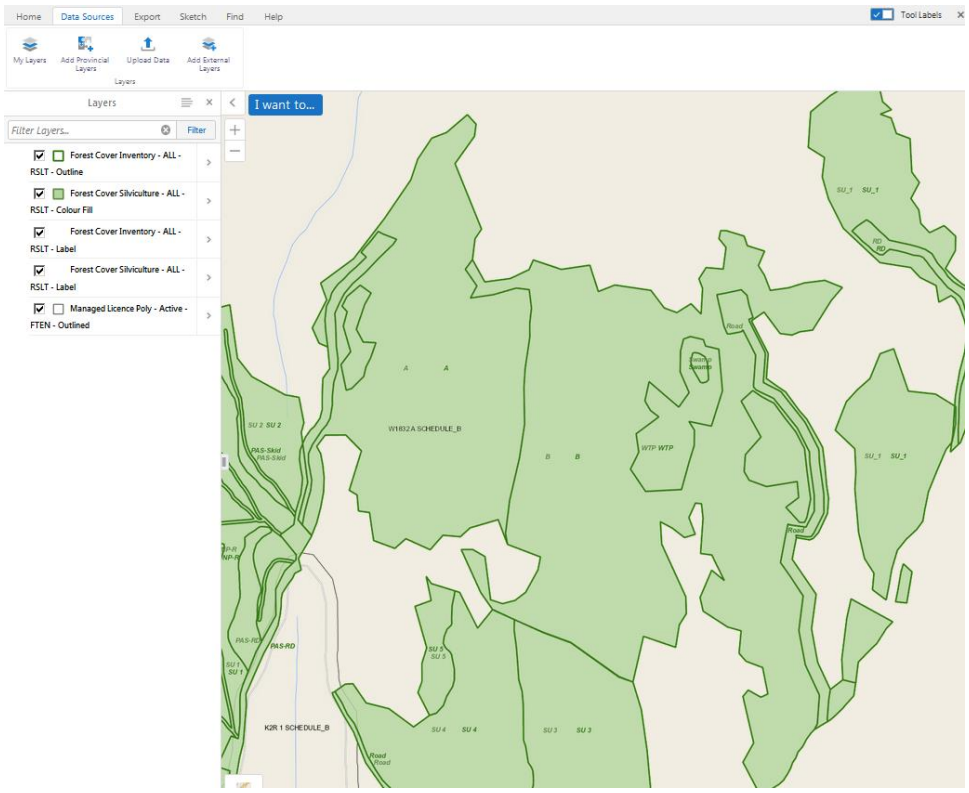
There is an SU 1 shown. If you want to know what there is to know about SU 1, you can use the Identity tool. But frankly, it is A LOT easier to just open the Stocking Standards tab in on-line RESULTS and view the info there.

You can repeat for Forest Cover.

Turn off SU and turn on a variety of RESULTS Forest Cover options:



To get:

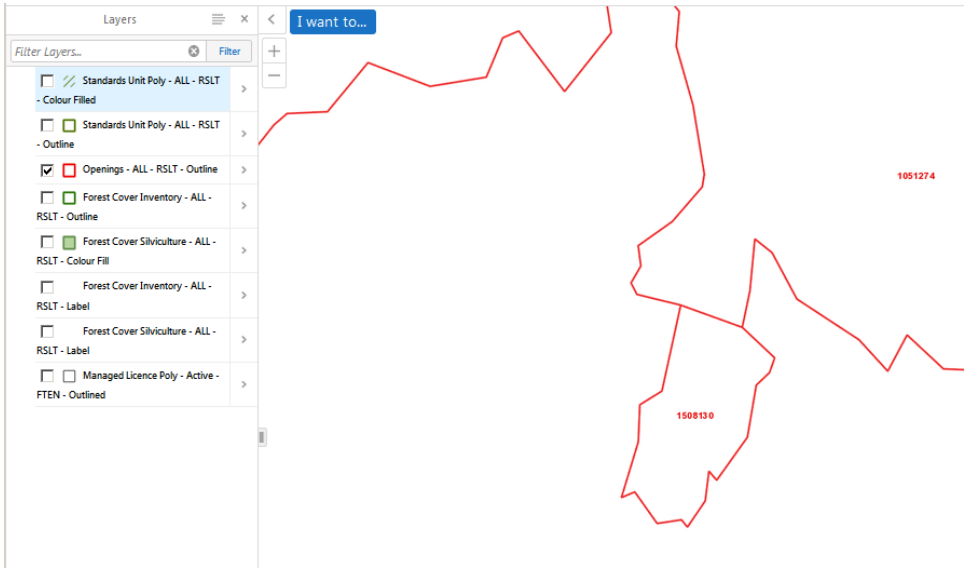


Definitely is forest cover. Olde Style forest cover: check out those road tubes! We do not "do" road tubes any more. You can toggle layers On and Off to learn more. If you want to know what is in any particular polygon, you can use the Identity tool. But it is A LOT easier to just open the Forest Cover tab in on-line RESULTS and view the info there.

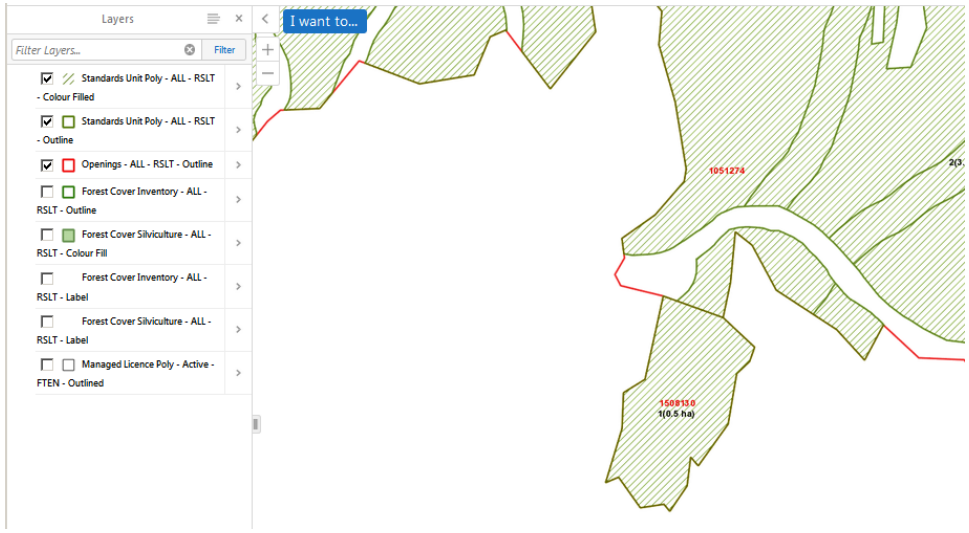
So this block exists in RESULTS. Standards Units and Forest Cover with spatial have been reported. Does not mean everything reported is correct and perfect, but reporting has occurred. The reporting is filed in RESULTS under Opening ID 1063509.

You can also load all the layers discussed above at once from Add Provincial Layers, Licences and Permits and toggle various ones on and off. This example shows something interesting!

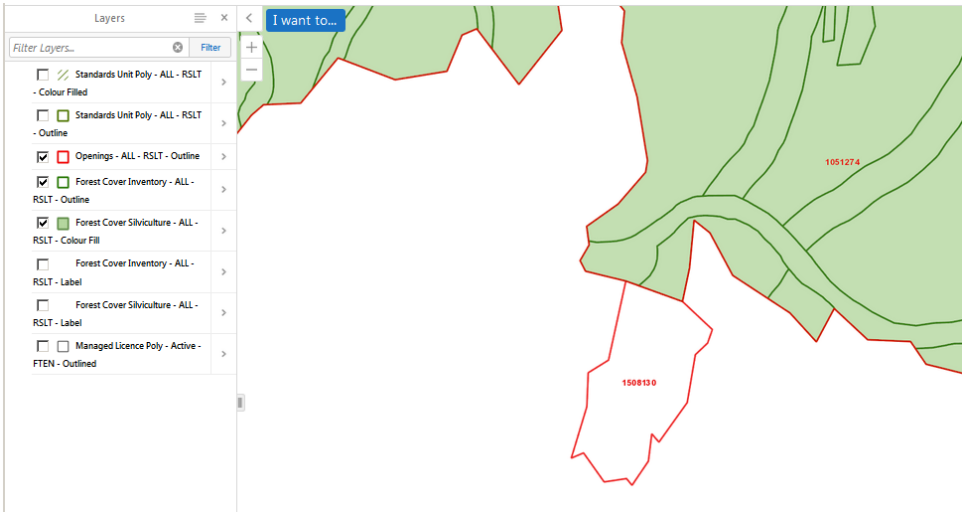
Opening:



SU's:



Forest Cover:

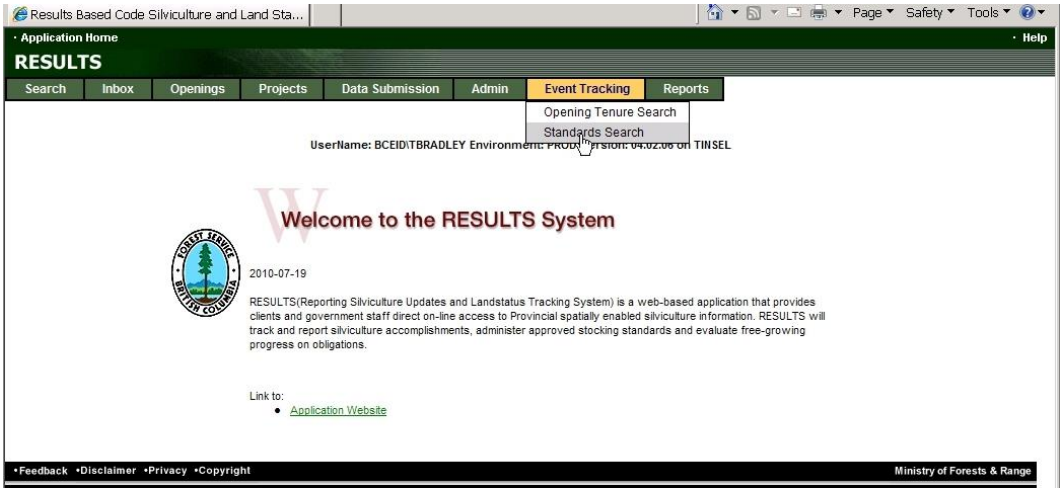


Wait a sec: That weird little opening at the bottom has no forest cover reporting!! Well, actually it does, but I know it is forest cover attribute data only. I deliberately broke "the link" between the attribute data and the spatial data the other week while doing research. It is really good that it shows up as "no forest cover" here. That is a clear message to the viewer that something is wrong. Or to be more precise, Non Compliant.

In this case, and in many cases, what is wrong is that there is no forest cover spatial data linked to the forest cover attribute data due to user error. The weird little opening needs a data repair, which can be accomplished by uploading forest cover spatial and attribute data in an XML file created using WLGML.

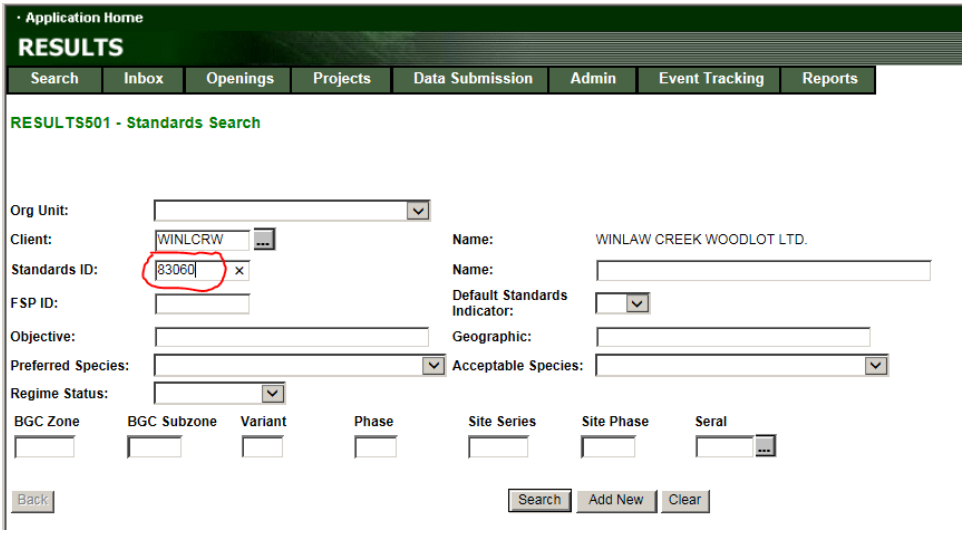
Appendix 7: Looking up Stocking Standards Using RESULTS Search

There are many Standards Search screens in RESULTS, you want the one accessed using the Event Tracking tab shown below.



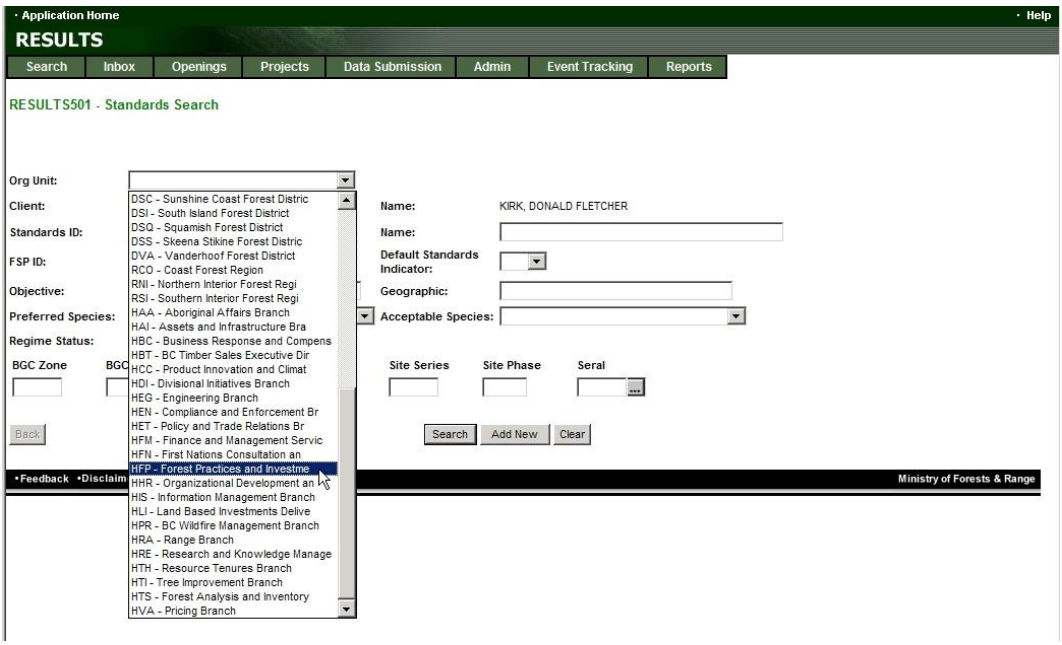
A search window opens.

If you know the SSID for the standard you think you want, from the Reference Guide for Forest Development Plan Stocking Standards or other source, enter it in the search screen.

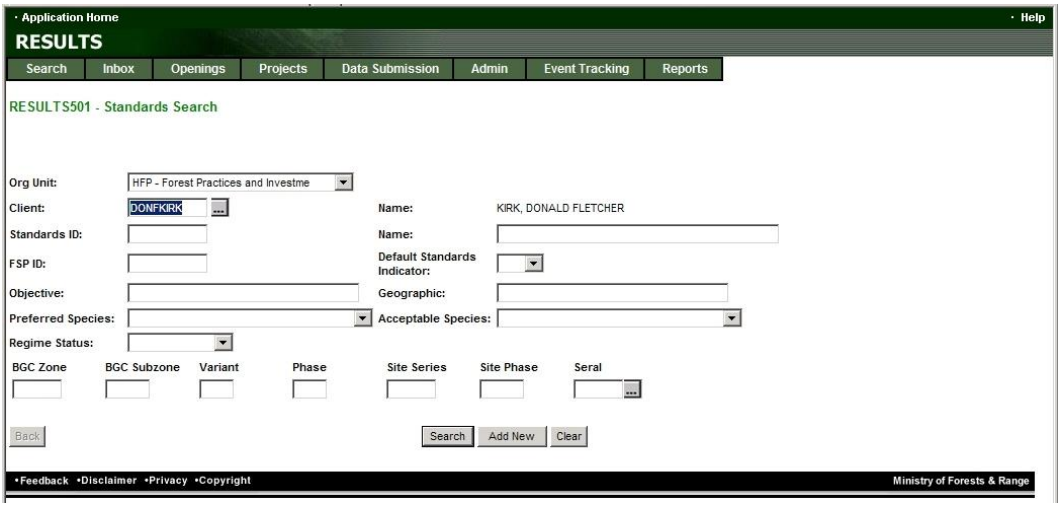


If no, continue,

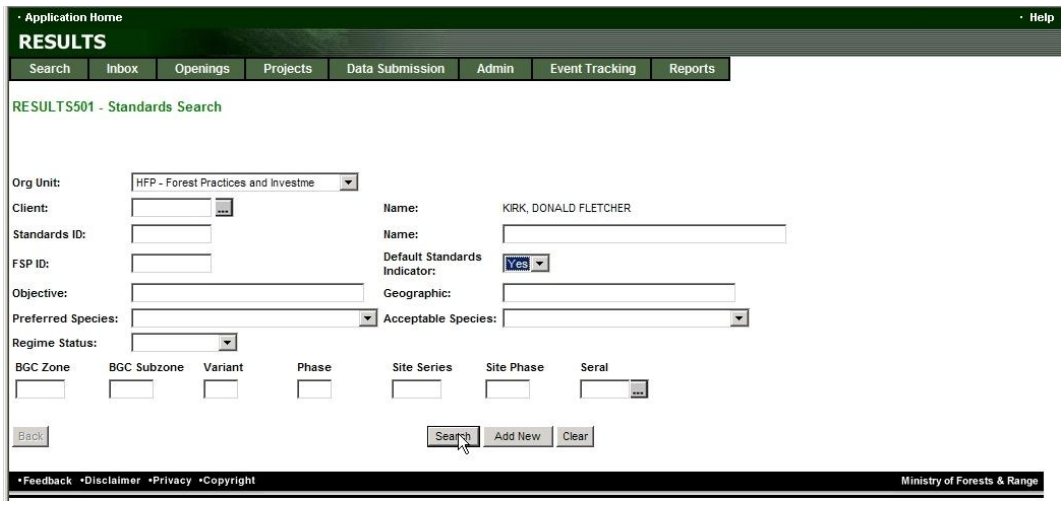
If you are looking for Provincial defaults, use the Org Unit dropdown list to find HFP - Resource Practices Branch. (They change the names on these things regularly - you want HFP.) For District Defaults, select your District. Click it.



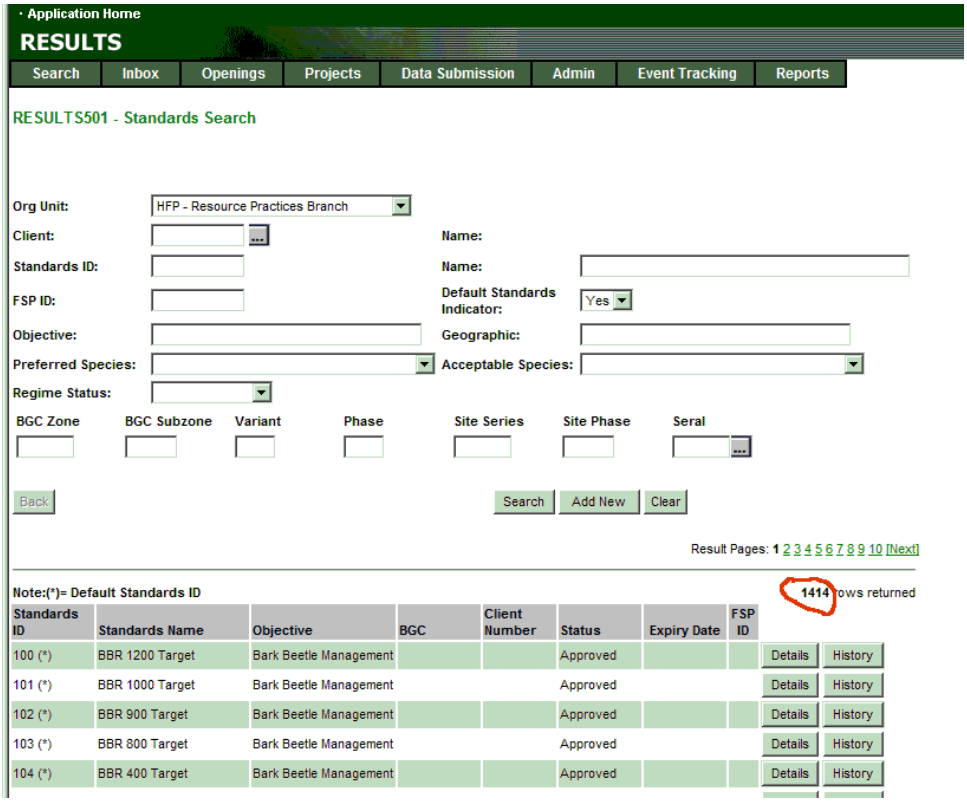
Now, highlight Client and delete it. You want a blank Client.



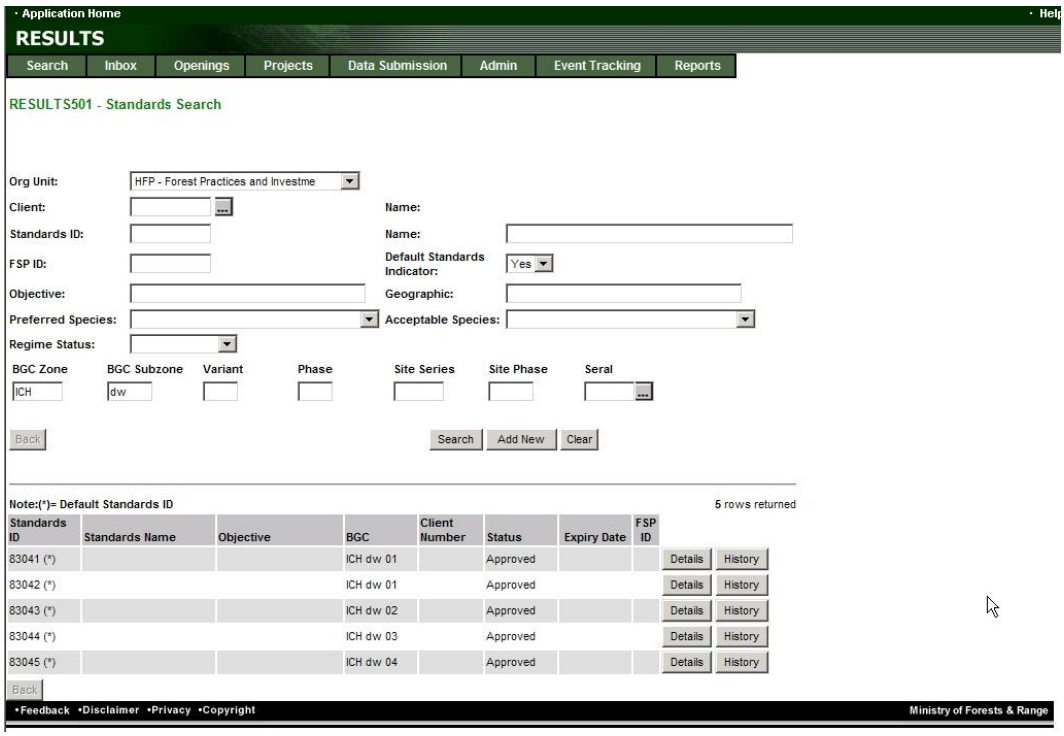
And finally, turn Default Standards Indicator to Yes. And click Search.



One thousand four hundred and fourteen standards?!?! I am not scrolling thought 1414 standards looking for the right one!

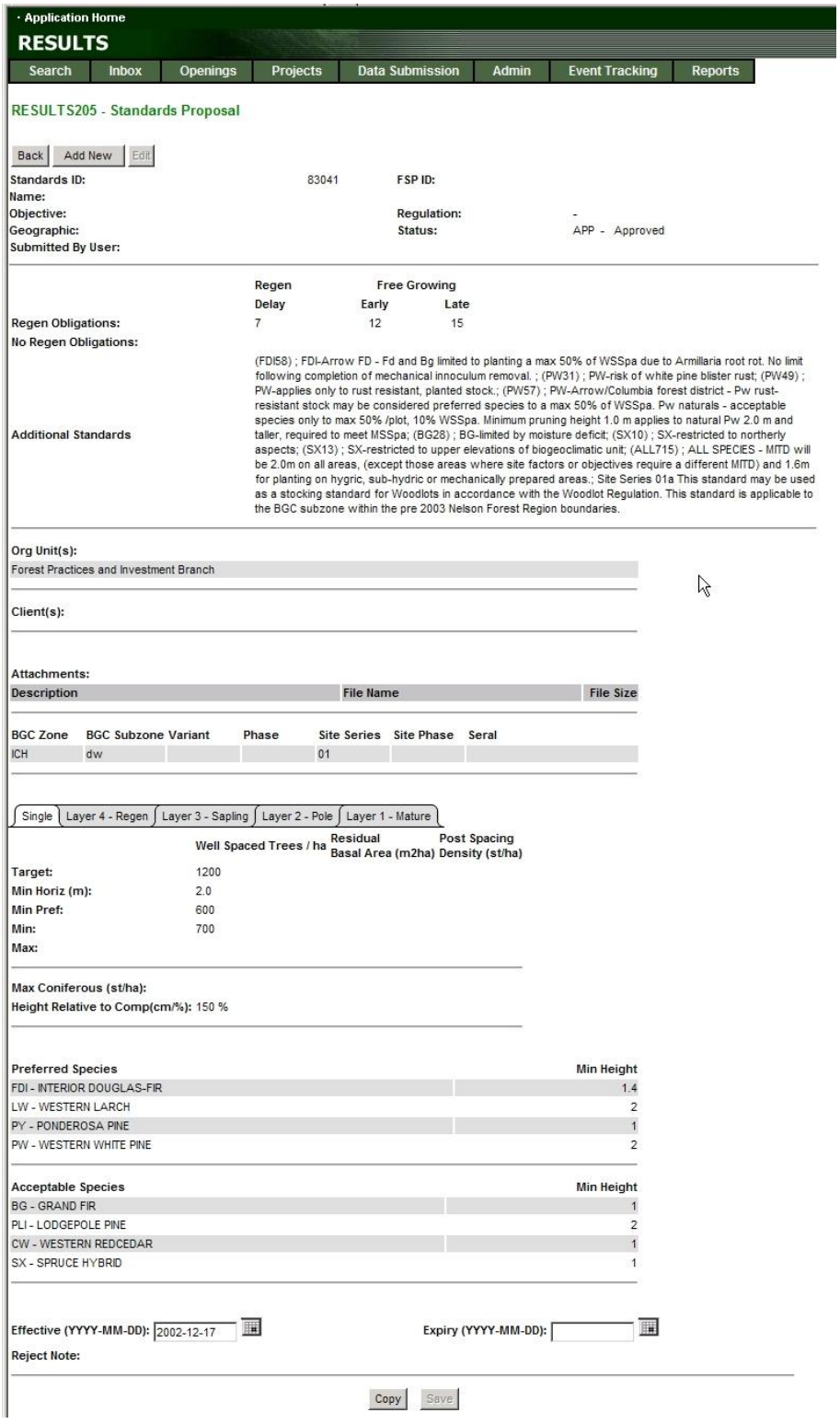


Fortunately, there is a logical fix. Start telling it some biogeoclimatic information. Our area of interest is in the ICHdw1, so let's start with ICH and dw.



Much better. Five standards. Should be a snap. You click on Details to get details about any standard. And you definitely want to do that before you input a SSID, so you know what you are committing to. But wait a sec: why are there 2 standards for ICH dw 01?

What comes up for SSID 83041 is:



· Application Home

RESULTS

Search | Inbox | Openings | Projects | Data Submission | Admin | Event Tracking | Reports

RESULTS205 - Standards Proposal

Back | Add New | Edit

Standards ID: 83041 **FSP ID:**
Name:
Objective: **Regulation:** -
Geographic: **Status:** APP - Approved
Submitted By User:

	Regen Delay	Free Growing Early	Free Growing Late
Regen Obligations:	7	12	15
No Regen Obligations:			

Additional Standards

(FDI58) ; FDI-Arrow FD - Fd and Bg limited to planting a max 50% of WSSpa due to Armillaria root rot. No limit following completion of mechanical innoculum removal. ; (PW31) ; PW-risk of white pine blister rust; (PW49) ; PW-applies only to rust resistant, planted stock.; (PW57) ; PW-Arrow/Columbia forest district - Pw rust-resistant stock may be considered preferred species to a max 50% of WSSpa. Pw naturals - acceptable species only to max 50% /plot, 10% WSSpa. Minimum pruning height 1.0 m applies to natural Pw 2.0 m and taller, required to meet MSSpa; (BG28) ; BG-limited by moisture deficit; (SX10) ; SX-restricted to northerly aspects; (SX13) ; SX-restricted to upper elevations of biogeoclimatic unit; (ALL715) ; ALL SPECIES - MTD will be 2.0m on all areas, (except those areas where site factors or objectives require a different MTD) and 1.6m for planting on hygric, sub-hydric or mechanically prepared areas.; Site Series 01a This standard may be used as a stocking standard for Woodlots in accordance with the Woodlot Regulation. This standard is applicable to the BGC subzone within the pre 2003 Nelson Forest Region boundaries.

Org Unit(s):
Forest Practices and Investment Branch

Client(s):

Attachments:

Description	File Name	File Size

BGC Zone	BGC Subzone	Variant	Phase	Site Series	Site Phase	Seral
ICH	dw			01		

Single | Layer 4 - Regen | Layer 3 - Sapling | Layer 2 - Pole | Layer 1 - Mature

	Well Spaced Trees / ha	Residual Basal Area (m2ha)	Post Spacing Density (st/ha)
Target:	1200		
Min Horiz (m):	2.0		
Min Pref:	600		
Min:	700		
Max:			

Max Coniferous (st/ha):
Height Relative to Comp(cm/%): 150 %

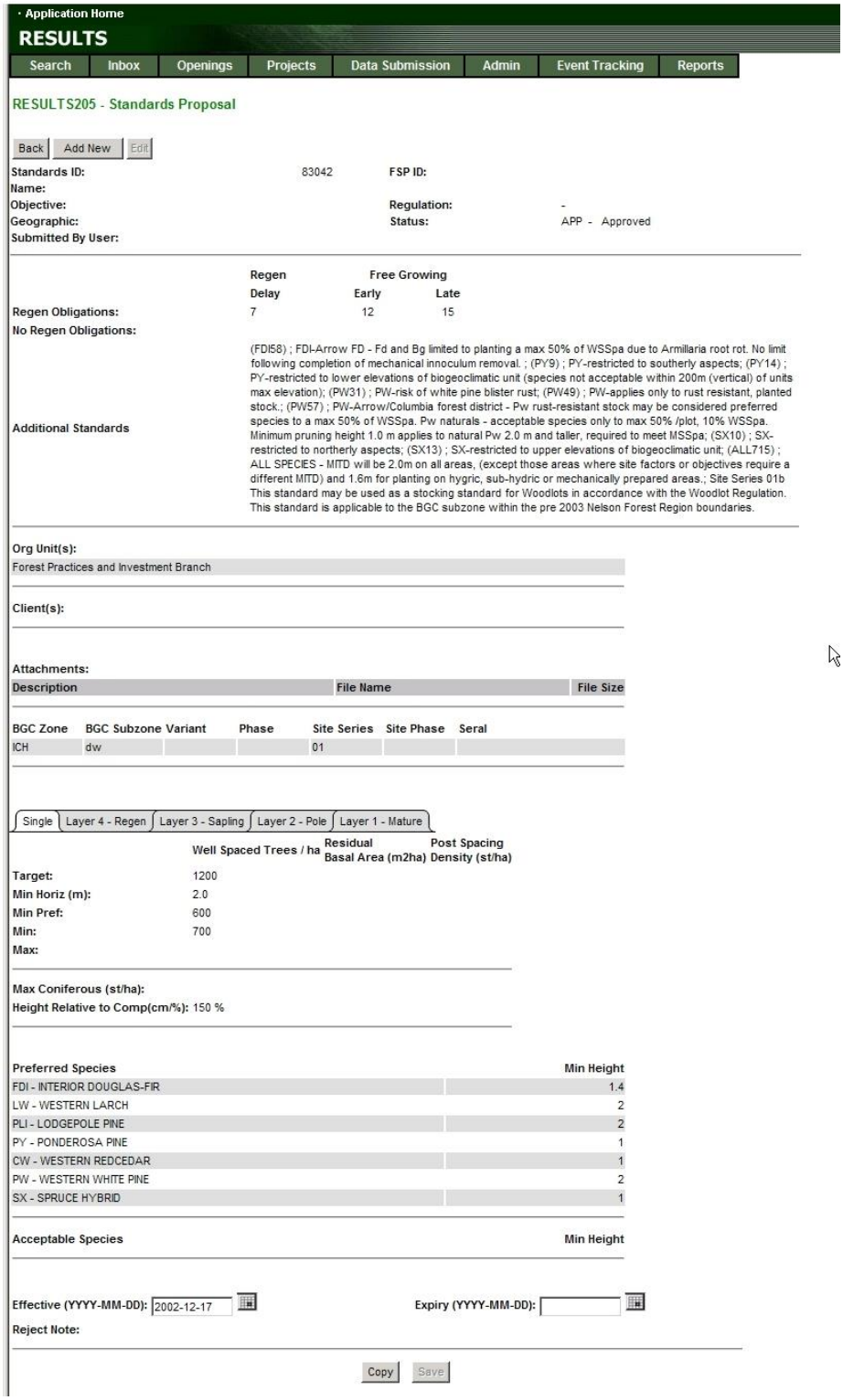
Preferred Species	Min Height
FDI - INTERIOR DOUGLAS-FIR	1.4
LW - WESTERN LARCH	2
PY - PONDEROSA PINE	1
PW - WESTERN WHITE PINE	2

Acceptable Species	Min Height
BG - GRAND FIR	1
PLI - LODGEPOLE PINE	2
CW - WESTERN REDCEDAR	1
SX - SPRUCE HYBRID	1

Effective (YYYY-MM-DD): 2002-12-17 **Expiry (YYYY-MM-DD):**
Reject Note:

Copy | Save

OK. What comes up for 83042 is:



· Application Home

RESULTS

Search | Inbox | Openings | Projects | Data Submission | Admin | Event Tracking | Reports

RESULTS205 - Standards Proposal

Back | Add New | Edit

Standards ID: 83042 **FSP ID:**
Name:
Objective: **Regulation:** -
Geographic: **Status:** APP - Approved
Submitted By User:

	Regen Delay	Free Growing Early	Late
Regen Obligations:	7	12	15
No Regen Obligations:			

Additional Standards

(FDI58) ; FDI-Arrow FD - Fd and Bg limited to planting a max 50% of WSSpa due to Armillaria root rot. No limit following completion of mechanical innoculum removal. ; (PY9) ; PY-restricted to southerly aspects; (PY14) ; PY-restricted to lower elevations of biogeoclimatic unit (species not acceptable within 200m (vertical) of units max elevation); (PW31) ; PW-risk of white pine blister rust; (PW49) ; PW-applies only to rust resistant, planted stock.; (PW57) ; PW-Arrow/Columbia forest district - Pw rust-resistant stock may be considered preferred species to a max 50% of WSSpa. Pw naturals - acceptable species only to max 50% /plot, 10% WSSpa. Minimum pruning height 1.0 m applies to natural Pw 2.0 m and taller, required to meet MSSpa; (SX10) ; SX-restricted to northerly aspects; (SX13) ; SX-restricted to upper elevations of biogeoclimatic unit; (ALL715) ; ALL SPECIES - MTD will be 2.0m on all areas, (except those areas where site factors or objectives require a different MTD) and 1.6m for planting on hygric, sub-hydric or mechanically prepared areas.; Site Series 01b This standard may be used as a stocking standard for Woodlots in accordance with the Woodlot Regulation. This standard is applicable to the BGC subzone within the pre 2003 Nelson Forest Region boundaries.

Org Unit(s):
Forest Practices and Investment Branch

Client(s):

Attachments:

Description	File Name	File Size

BGC Zone	BGC Subzone	Variant	Phase	Site Series	Site Phase	Seral
ICH	dw			01		

Single | Layer 4 - Regen | Layer 3 - Sapling | Layer 2 - Pole | Layer 1 - Mature

	Well Spaced Trees / ha	Residual Basal Area (m2ha)	Post Spacing Density (st/ha)
Target:	1200		
Min Horiz (m):	2.0		
Min Pref:	600		
Min:	700		
Max:			

Max Coniferous (st/ha):
Height Relative to Comp(cm/%): 150 %

Preferred Species	Min Height
FDI - INTERIOR DOUGLAS-FIR	1.4
LW - WESTERN LARCH	2
PLI - LODGEPOLE PINE	2
PY - PONDEROSA PINE	1
CW - WESTERN REDCEDAR	1
PW - WESTERN WHITE PINE	2
SX - SPRUCE HYBRID	1

Acceptable Species	Min Height

Effective (YYYY-MM-DD): 2002-12-17 **Expiry (YYYY-MM-DD):**
Reject Note:

Copy | Save

It is in the fine, fine print, towards the bottom of that dense paragraph of Additional Standards: One is for Site Series 01a, one is for Site Series 01b. Both can be used for

Woodlots. You need to read that paragraph in every case, looking for things that say you can or can not use the standard.

It might have been nice of them to say "in accordance with the Woodlot Planning and Practices Regulation", as most of us still remember that there was a Woodlot Licence Forest Management Regulation as well. "The Woodlot Regulation" is a touch vague. It matters a little because we only use SSIDs for blocks harvested under FRPA/WLPPR/WLP regime, not for older administrative regimes such as FPCBCA/WLPPR/FDP/SitePlan.

So you would choose one of the standards, write down the SSID number, and proceed.

Read / Save / Print Your Stocking Standards

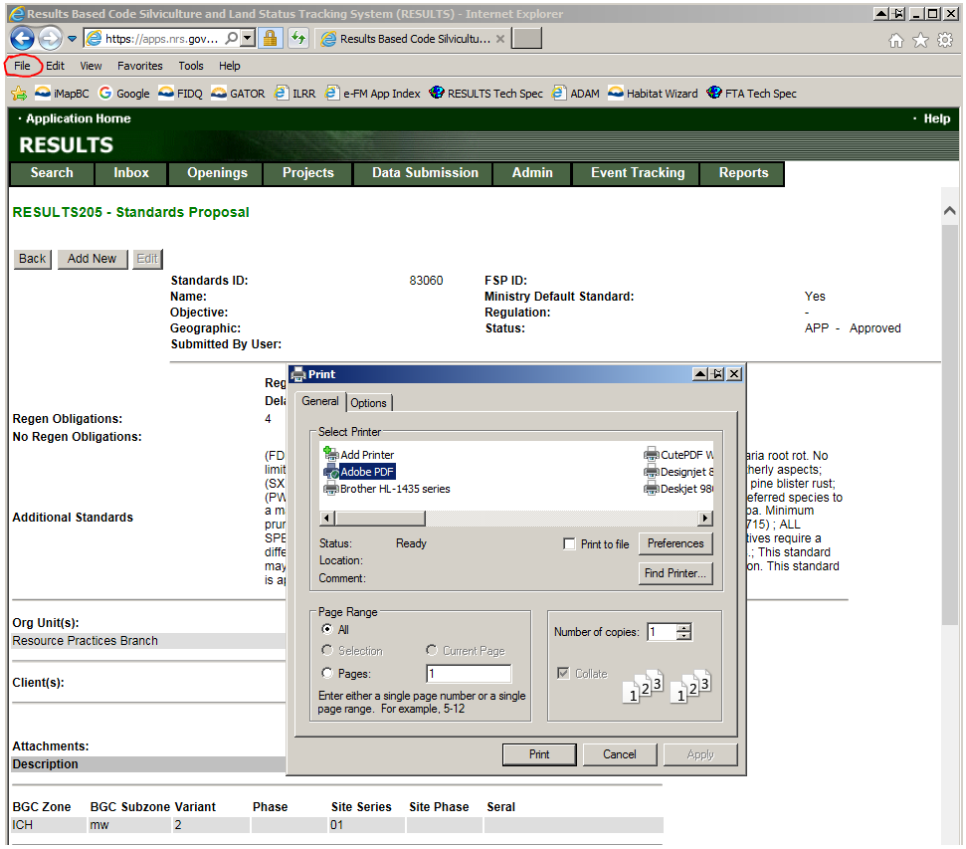
Having found the applicable stocking standards, make yourself a copy.

I have seen surveys carried out using incorrect Pref/Accept lists. I have seen Licensees who reforested to Pl because the previous stand was healthy Pl only to eventually find out that the Provincial default standard had Pl as acceptable only. All because there was no file copy of applicable standards on hand and our memories are faulty.

You should do this before you harvest. If, upon thoughtful review, you think the applicable standard per your WLP is out to lunch, work with your forest professional to add a new, more suitable standard to your WLP before you harvest. You will require agreement from your statutory decision make, usually represented by Woodlot Forester and Stewardship Officer, to accomplish that.

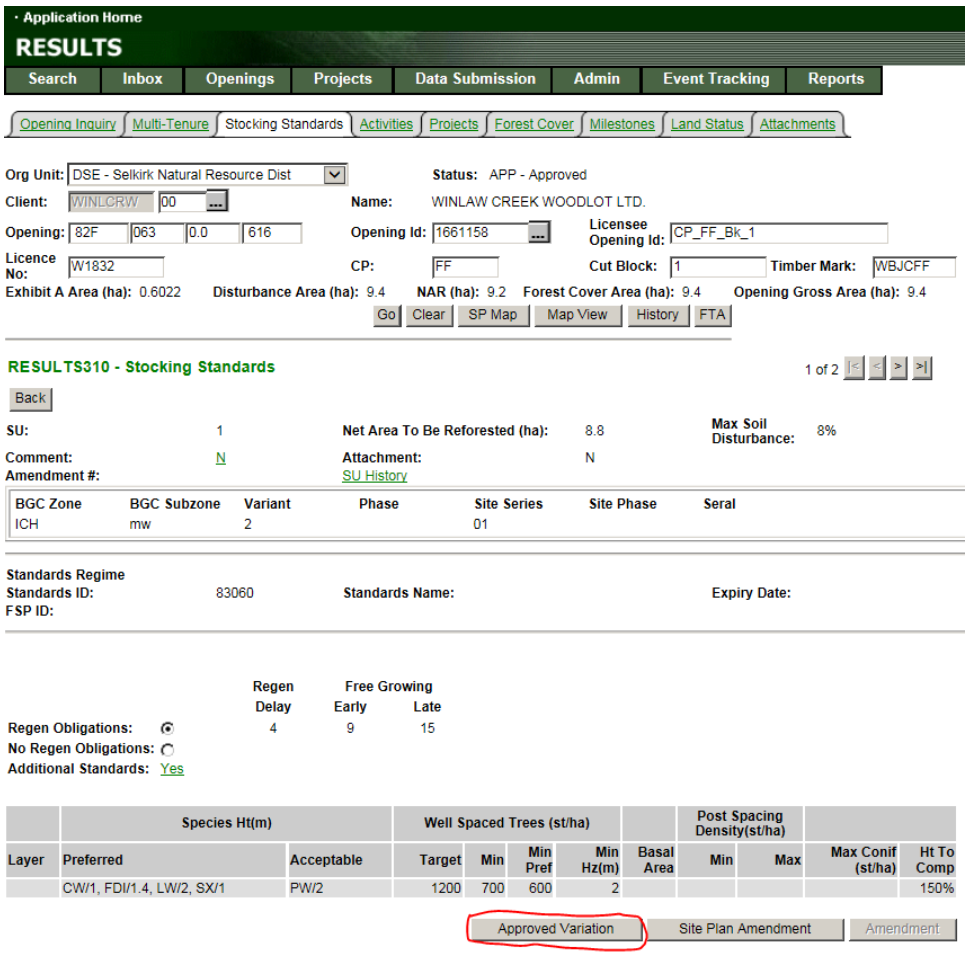
To make a copy, either:

A) If unit is not reported to RESULTS yet, track down the applicable standard in Standards Search, per above. Use the Explorer <File> <Print> to print them.

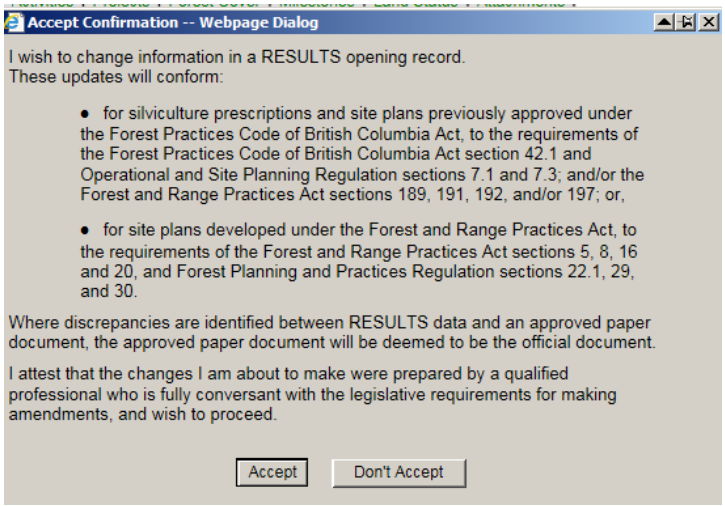


B) If the opening has been reported, you better print out what RESULTS has been told the correct standard is.

Go into your WL RESULTS data, and go to the Stocking Standards tab for the Block and SU in question. Then click Approved Variation (You do not want to make an Approved Variation, you just want the screen display for Approved Variation.)

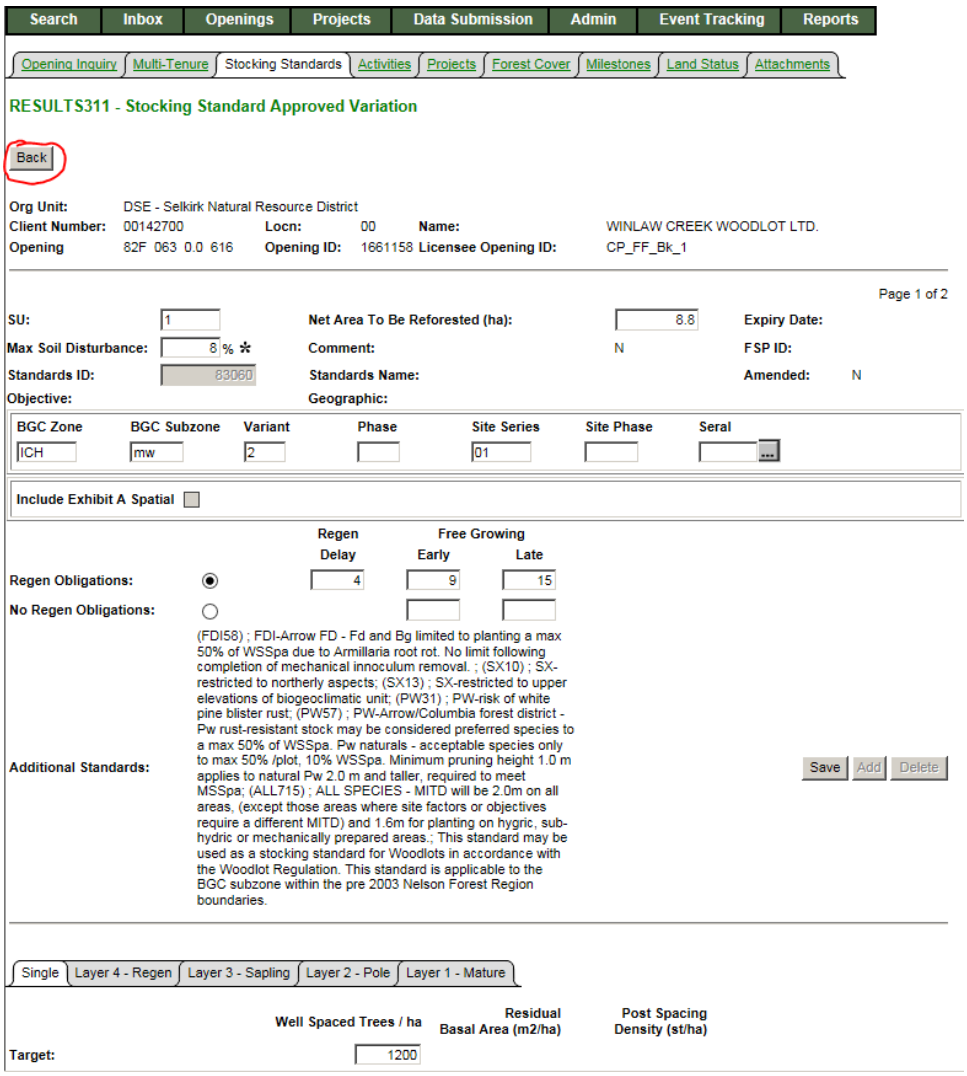


It asks if you are serious. You are not, but Accept anyway. Besides, there is not a word about Woodlots or our regs in there…..



A nicely formatted screen that contains all the relevant info pops up. Print it to paper, make a PDF of it, use the Windows Snip tool to save an image - whatever works.

When you are done, click Back to exit with no harm done.


Search
Inbox
Openings
Projects
Data Submission
Admin
Event Tracking
Reports
Opening Inquiry
Multi-Tenure
Stocking Standards
Activities
Projects
Forest Cover
Milestones
Land Status
Attachments
RESULTS311 - Stocking Standard Approved Variation
Back
Org Unit: DSE - Selkirk Natural Resource District
Client Number: 00142700 Locn: 00 Name: WINLAW CREEK WOODLOT LTD.
Opening 82F 063 0.0 616 Opening ID: 1661158 Licensee Opening ID: CP_FF_Bk_1
Page 1 of 2
SU: 1 Net Area To Be Reforested (ha): 8.8 Expiry Date:
Max Soil Disturbance: 8 % Comment: N FSP ID:
Standards ID: 83060 Standards Name: Amended: N
Objective: Geographic:
BGC Zone BGC Subzone Variant Phase Site Series Site Phase Seral
ICH mw 2 01
Include Exhibit A Spatial
Regen Delay Free Growing Early Free Growing Late
Regen Obligations: 4 9 15
No Regen Obligations:
(FDI58) ; FDI-Arrow FD - Fd and Bg limited to planting a max 50% of WSSpa due to Armillaria root rot. No limit following completion of mechanical innoculum removal. ; (SX10) ; SX-restricted to northerly aspects; (SX13) ; SX-restricted to upper elevations of biogeoclimatic unit; (PW31) ; PW-risk of white pine blister rust; (PW57) ; PW-Arrow/Columbia forest district - Pw rust-resistant stock may be considered preferred species to a max 50% of WSSpa. Pw naturals - acceptable species only to max 50% /plot, 10% WSSpa. Minimum pruning height 1.0 m applies to natural Pw 2.0 m and taller, required to meet MSSpa; (ALL715) ; ALL SPECIES - MITD will be 2.0m on all areas, (except those areas where site factors or objectives require a different MITD) and 1.6m for planting on hygric, sub-hydric or mechanically prepared areas.; This standard may be used as a stocking standard for Woodlots in accordance with the Woodlot Regulation. This standard is applicable to the BGC subzone within the pre 2003 Nelson Forest Region boundaries.
Additional Standards:
Save
Add
Delete
Single
Layer 4 - Regen
Layer 3 - Sapling
Layer 2 - Pole
Layer 1 - Mature
Well Spaced Trees / ha
Residual Basal Area (m2/ha)
Post Spacing Density (st/ha)
Target: 1200

Appendix 8: Editing Forest Cover Attributes in On-Line RESULTS Interface

FLNRO monitors the extent of serious errors in RESULTS several times a year. Serious errors are those that prevent the RESULTS system from tracking silviculture obligations or that compromise RESULTS' ability to provide data to other data systems, such as the Vegetation Resource Inventory (VRI) system.

One particular error has been and continues to be pre-dominant. In June 2019, 547 errors, or 41% of all serious Woodlot RESULTS errors, were due to "missing forest cover spatial data". In these situations, there are text/attribute entries that describe the vegetation cover in the unit, but no spatial data (aka "map") is linked to that veg cover info. These openings are Non-Compliant with the reporting required by regulations, as C&E or the Forest Practices Board will point out to you. Better to fix before they are in the room. Best to not make the mistake in the first place.

We believe we know why this error is so prevalent. Discussed below.

We have also found a way to determine if your existing forest cover has a working link to spatial data, that is, is compliant with reporting standards. Also discussed below.

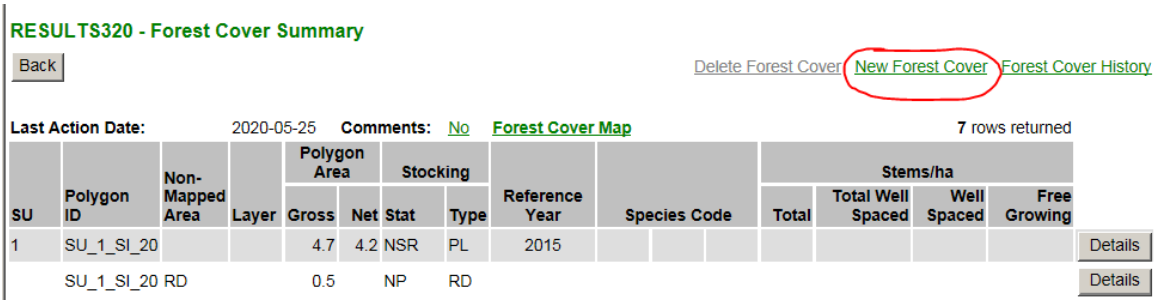
Using the On-Line RESULTS Interface - Wrong Way and Right Way

The on-line, web based RESULTS interface allows the user to revise the attribute entries for vegetation cover (species, density, age, height, unmapped NP areas, etc) without re-reporting the relevant spatial data. This could make sense if all you are doing is saying that the forest cover polygons reported as NSR a decade ago are now free growing and have forest cover attributes of _____. No change in spatial/map data, just in forest cover attributes.

There are two ways to accomplish this task using the on-line RESULTS interface. The obvious (and **wrong**) way and the less obvious (and right) way.

The **WRONG** way is discussed first, just because it is so tempting to the user. **DO NOT DO THIS.**

When you click the Forest Cover tab in on-line RESULTS, you are dropped into screen RESULTS320. Right there, in the header, towards the right, is a link for <New Forest Cover>.



RESULTS320 - Forest Cover Summary

Back

Delete Forest Cover | New Forest Cover | Forest Cover History

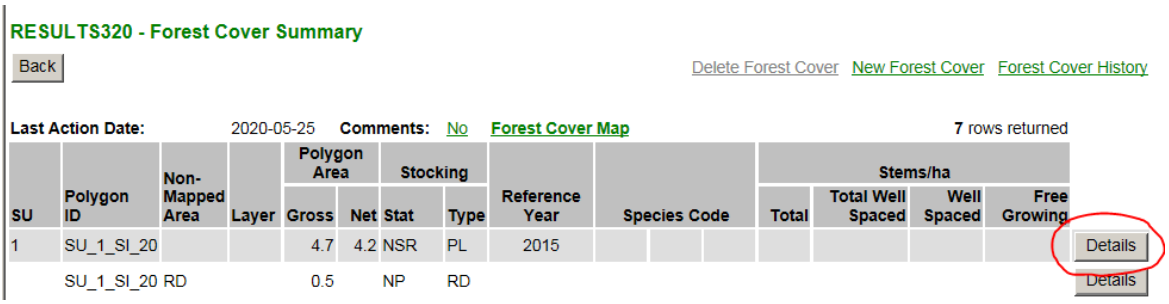
Last Action Date: 2020-05-25 Comments: No Forest Cover Map 7 rows returned

SU	Polygon ID	Non-Mapped Area	Layer	Polygon Area		Stocking		Reference Year	Species Code			Stems/ha				
				Gross	Net	Stat	Type					Total	Total Well Spaced	Well Spaced	Free Growing	
1	SU_1_SI_20			4.7	4.2	NSR	PL	2015								Details
	SU_1_SI_20	RD		0.5		NP	RD									Details

Sounds like what you want to do, add some new forest cover information. **It is not. DO NOT DO THIS.** Click it and you are dropped into an interface to add forest cover

information. You can add info, <Save> and…… break the link to your spatial data. This creates the "missing forest cover spatial data" error. There is no "Ooops, I did not mean to, please bring it back." button. The only fix is to submit a full XML/GML report to replace the forest cover spatial you just unintentionally incinerated.

The correct way to edit forest cover attributes in the RESULTS on-line interface is to click the <Details> link beside any of the entry lines in RESULTS320.



RESULTS320 - Forest Cover Summary

Back

Delete Forest Cover | New Forest Cover | Forest Cover History

Last Action Date: 2020-05-25 **Comments:** No Forest Cover Map 7 rows returned

SU	Polygon ID	Non-Mapped Area	Layer	Polygon Area		Stocking		Reference Year	Species Code			Stems/ha				
				Gross	Net	Stat	Type					Total	Total Well Spaced	Well Spaced	Free Growing	
1	SU_1_SI_20			4.7	4.2	NSR	PL	2015								Details
	SU_1_SI_20	RD		0.5		NP	RD									Details

That brings up RESULTS321, which has an <Edit> link top right.

RESULTS321 - Forest Cover Detail

Back

Edit

1 of 3 |< < > >|

Last Action Date:	2020-05-25 04:31:31 PM	**Comments:**	No		
SU:	1	**Forest Cover ID:**	4021893	**Polygon :**	SU_1_SI_20
Gross Area(ha):	4.7	**Net Area(ha):**	4.2		
Reference Year:	2015	**Reserve Type:**	N - No Reserve	**Reserve Objective:**	
Site Class:		**Site Index:**	20	**Site Index Source:**	H - SI from stand before harvest
Stocking Status:	NSR - Not Satisfactorily Restocked	**Stocking Type:**	PL - Plantable	**SI Species:**	FDI - interior Douglas-fir
Tree Cover Pattern:				**Re-Entry Year:**	

Non Mapped Area

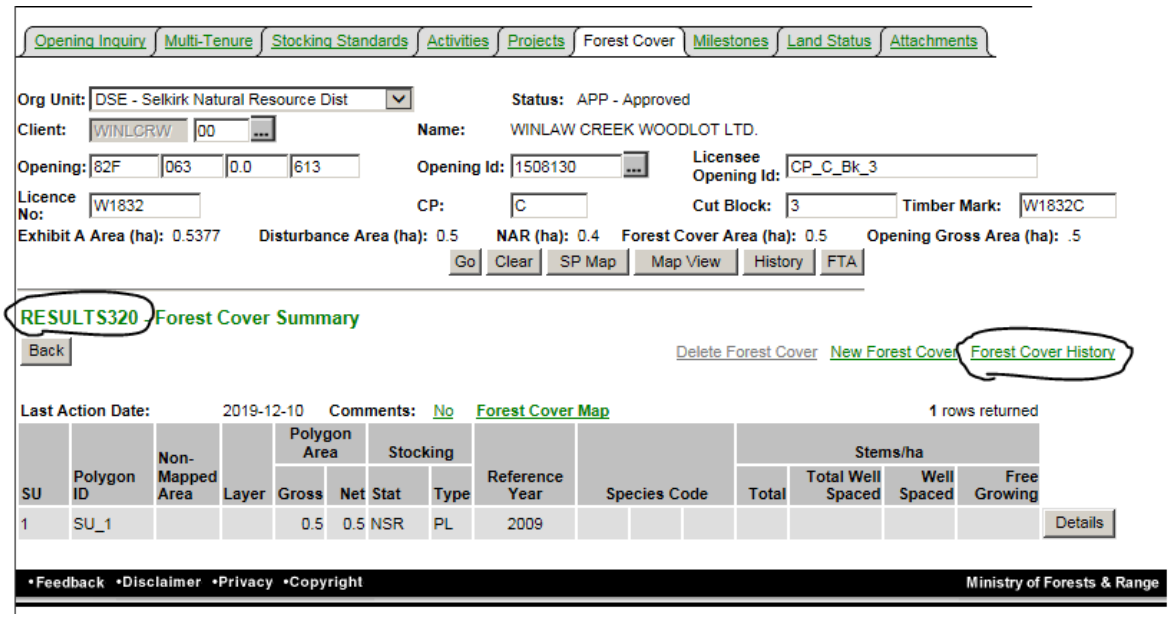
Id	Area	Status	Type
RD	0.5	NP	RD

Click the <Edit> and an interface opens that will allow you to revise the forest cover info to reflect the results of your surveys, without breaking the link to the spatial data. This is the right way to do it.

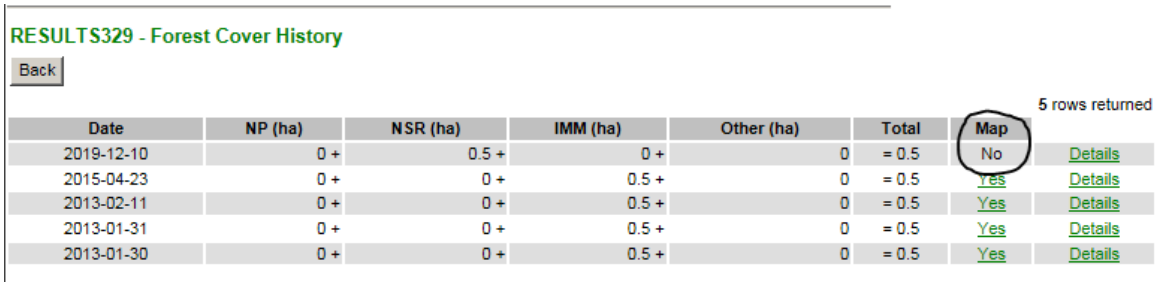
Is this a Great Tool to use to enter forest cover attributes? Not in my opinion. I used the on-line RESULTS interface a bunch while doing research on this. It was not willing to <Save> until I had everything correctly entered. More than half way through the task, the RESULTS system (predictably) timed out and I lost all my work. Re-do. It did that more than once. I greatly prefer the stability and ease of use of creating an XML/GML submission off line and uploading it through ESF.

How to Tell If the Spatial Link is Broken

Go to the RESULTS320 - Forest Cover Summary page.



Click the green <Forest Cover History> link on right side of screen. The forest cover history records open up.



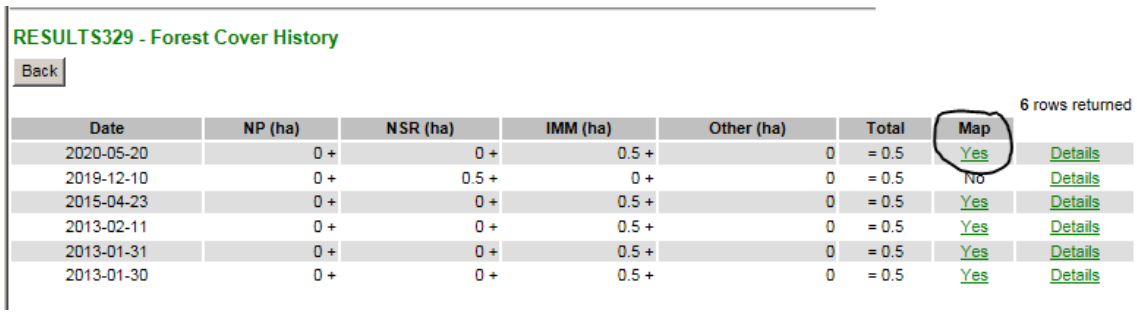
The Map column on the right says this unit has no map. Meaning no spatial data. It had a map (aka forest cover spatial) for many years, but on 2019-12-10, the map became extinct. Why? Well, I deliberately went in through the Web interface and made one of those incorrect forest cover attribute edits discussed above during research. I "broke the link".

So, I can see there is an error: no map, meaning no forest cover spatial data.

To fix, I create and upload a valid XML/GML forest cover data submission, with spatial data of course, to RESULTS.

If there is no change in the spatial data, I can just open my last valid XML/GML submission, carefully stored on my hard drive in my Woodlot folder, and edit the attribute data entries in it to meet my needs. It hen submit the XML/GML.

After a few minutes, the Forest Cover History changes to "Yes". (I have seen instances where the change takes a day to take effect. Could be cached data somewhere in the chain.)



RESULTS329 - Forest Cover History

Back

6 rows returned

Date	NP (ha)	NSR (ha)	IMM (ha)	Other (ha)	Total	Map	
2020-05-20	0 +	0 +	0.5 +	0	= 0.5	Yes	Details
2019-12-10	0 +	0.5 +	0 +	0	= 0.5	No	Details
2015-04-23	0 +	0 +	0.5 +	0	= 0.5	Yes	Details
2013-02-11	0 +	0 +	0.5 +	0	= 0.5	Yes	Details
2013-01-31	0 +	0 +	0.5 +	0	= 0.5	Yes	Details
2013-01-30	0 +	0 +	0.5 +	0	= 0.5	Yes	Details

There is now valid spatial for the forest cover submission, and as long as the forest cover attributes I reported are correct, my RESULTS forest cover reporting for this opening is compliant with the reporting requirements.

If you have taken advantage of the RESULTS web interface to edit forest cover attributes, I urge you to take the time to verify that there is valid forest cover spatial data linked to all your reported openings using this method.

If the answer is "No", better undertake repairs.