

THE POSSIBILITIES ARE INFINITE



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**TO:**

Ministry of Sustainable Resource  
Management

Attention: Dave Chater

**Version 2.1.1 – Final**

**Integrated Registry – Data Assessment**

**Ministry of Forests Supplement**

# DOCUMENT HISTORY

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| <b>Version Number</b> | <b>Description of Change</b>    | <b>Author</b> | <b>Date</b>     |
|-----------------------|---------------------------------|---------------|-----------------|
| 1.0                   | Initial Draft                   | Randy Prokop  | July 22, 2003   |
| 1.5                   | Add MoF and MSRM comments       | Randy Prokop  | July 29,2003    |
| 2.0                   | Add FTAS information about FSRs | Randy Prokop  | August 1, 2003  |
| 2.1                   | Add additional comments         | Randy Prokop  | August 14, 2003 |
| 2.1.1                 | Add Record of Meetings          | Randy Prokop  | August 19, 2003 |

# TABLE OF CONTENTS

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|           |  |           |
|-----------|--|-----------|
| <b>1.</b> | <b><u>BACKGROUND</u></b> .....                               | <b>4</b>  |
| 1.1       | <u>DOCUMENT REVIEW</u> .....                                 | 5         |
| <b>2.</b> | <b><u>FOREST ACT TENURE ROADS</u></b> .....                  | <b>6</b>  |
| 2.1       | <u>ROAD PERMIT</u> .....                                     | 6         |
| 2.1.1     | <u>Data</u> .....  | 6         |
| 2.1.2     | <u>Major Issues</u> .....                                    | 6         |
| 2.1.3     | <u>Data Reconciliation Estimates</u> .....                   | 7         |
| <b>3.</b> | <b><u>FOREST PRACTICES CODE ACT TENURE ROADS</u></b> .....   | <b>8</b>  |
| 3.1       | <u>SPECIAL USE PERMIT (SUP) ROADS</u> .....                  | 8         |
| 3.1.1     | <u>Data</u> .....  | 8         |
| 3.1.2     | <u>Major Issues</u> .....                                    | 8         |
| 3.1.3     | <u>Data Reconciliation Estimates</u> .....                   | 9         |
| <b>4.</b> | <b><u>NON TENURE FOREST ROADS</u></b> .....                  | <b>10</b> |
| 4.1       | <u>NON STATUS ROADS (NSR)</u> .....                          | 10        |
| 4.1.1     | <u>Data</u> .....  | 10        |
| 4.2       | <u>FOREST SERVICE ROAD (FSR)</u> .....                       | 10        |
| 4.2.1     | <u>Data</u> .....  | 10        |
| 4.2.2     | <u>Major Issues</u> .....                                    | 11        |
| 4.2.3     | <u>Data Reconciliation Estimates</u> .....                   | 11        |
| 4.3       | <u>FSR – DETERMINATION</u> .....                             | 11        |
| 4.3.1     | <u>Data</u> .....  | 11        |
| 4.3.2     | <u>Major Issues</u> .....                                    | 12        |
| 4.3.3     | <u>Data Reconciliation Estimates</u> .....                   | 12        |
| 4.4       | <u>FSR – GAZETTES – UNSURVEYED</u> .....                     | 12        |
| 4.4.1     | <u>Data</u> .....  | 12        |
| 4.4.2     | <u>Major Issues</u> .....                                    | 12        |
| 4.4.3     | <u>Data Reconciliation Estimates</u> .....                   | 12        |
| 4.5       | <u>FSR – DEDICATIONS</u> .....                               | 12        |
| 4.5.1     | <u>Data</u> .....  | 12        |
| 4.5.2     | <u>Major Issues</u> .....                                    | 13        |
| 4.5.3     | <u>Data Reconciliation Estimates</u> .....                   | 13        |
| 4.6       | <u>FSR – GAZETTES – SURVEYED</u> .....                       | 13        |
| 4.6.1     | <u>Data</u> .....  | 13        |
| 4.6.2     | <u>Major Issues</u> .....                                    | 13        |
| 4.6.3     | <u>Data Reconciliation Estimates</u> .....                   | 13        |
| 4.7       | <u>FSR – GRAVEL PIT</u> .....                                | 13        |
| 4.7.1     | <u>Data</u> .....  | 13        |
| 4.7.2     | <u>Major Issues</u> .....                                    | 14        |
| 4.8       | <u>RIGHT OF WAY – 20 YEAR EASEMENT PERMIT (20 YEP)</u> ..... | 14        |
| 4.8.1     | <u>Major Issues</u> .....                                    | 14        |
| 4.8.2     | <u>Data Reconciliation Estimates</u> .....                   | 14        |

**5. RECOMMENDATION SUMMARY .....15**  
**APPENDIX A – INCOSADA ROAD DATA SUMMARY .....17**  
**APPENDIX B- FTAS TO INCOSADA COMPARISON.....23**  
**APPENDIX C - RECORD OF MEETINGS .....25**

# 1. BACKGROUND

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This is an addendum to the data quality report titled: Integrated Registry – Assessment of Ministry of Forests Data and deals specifically with roads that are the responsibility of the Ministry of Forests (MoF). The original report focused on the data quality of legislated forms of agreement as defined in the *Forest Act*, *Range Act* and *Forest Practices Code of British Columbia Act*. that are administered by the MoF. The previous report also discussed: (i) the impact that downsizing is having on the MoF’s ability to maintain data quality; and (ii) the spatial and attribute databases that the MoF maintains. Therefore, this report should be read in the context of previous report.

MoF administered roads provide the primary means of accessing timber to be harvested from Crown land and provide the major means of transporting that timber to processing facilities such as sawmills and pulp mills. In some cases, logs are “barged” on water or transported by rail. Even so, roads are used to transport the logs to railhead where they are loaded onto rail cars or booming grounds where they are sorted into booms and made ready for water transport.

In General there are two types of MoF administered roads. The first type are temporary roads built to access specific cutting permits and cut blocks. These are usually built by the licensee and built under the authority of the timber tenure that they access. Often these roads are “put to bed” after all the silviculture obligations are met. These temporary roads are not part of this report since they are not captured in a spatial database specifically as a road. They are usually captured as either part of the timber harvesting tenure or are captured as part of a specific road cutting permit pursuant to a major timber harvesting licence such as a Tree Farm Licence or Forest Licence.

The other general type of road does interest this report; they are roads that are generally built by or for the MoF to access particular geographic areas and are permanent in the sense that they are used and maintained year after year. In most cases this type of road usually connects with the Ministry of Transportation network of roads throughout the province. In addition to being used by the forest industry to transport timber, they often are used by other industrial users such as the oil and gas industry, the mining industry, commercial tourist industry, ranchers, and utility companies. They also provide access for hunters, fishermen and other people pursuing back-country recreation. There are thousands and thousands of kilometres of these MoF administered roads. In fact, there are more kilometres of MoF administered roads than public (Ministry of Transportation) roads in the province.

This report includes road information about Dawson Creek and Merritt Forest Districts. When the previous report about other forest tenures was done, information about these two forest districts was not available.

## 1.1 Document Review

This document was reviewed by MoF, Resource Tenures and Engineering Branch (RTE), and the Information Management Group (IMG). Both branches provided positive feedback. The MoF Engineering group points out that the Forest Road Management Application (FRMA) which is currently under development is assisting in providing more accurate road information; however, their processes are impacted by downsizing and no completion data is known. The IMG points out that the re-write of Forest Tenure Administration System (FTAS), which is called Forest Tenure Administration (FTA), will clearly add more confidence to all MoF data when implemented. Both RTE and IMG expressed the opinion that the estimates supplied in this report are likely low at this time; however, since MoF has a number of data cleaning initiatives underway, including cleaning FTAS data as it is moved to FTA, MoF is not prepared to speculate on the effort required to bring their data up to standards useable by the ILRR.

Ministry of Sustainable Resource Management, Surveyor General Branch, Registry Data Section, provided positive feedback as well. However, they do pointed out that forest districts have not diligently captured Forest Service Roads (FSR) in FTAS. In fact some forest districts did not record any of their FSRs in FTAS.

## 2. FOREST ACT TENURE ROADS

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The *Forest Act* defines only one form of agreement for roads, that is a road permit.

### 2.1 Road Permit

A road permit authorizes the construction or modification of a road over Crown land to facilitate access to Crown timber. It can authorize harvesting Crown timber if such harvesting is required to construct or modify the road. A road permit is also issued to maintain an existing road over Crown land if the road is not a forest service road (see section 4.2). Road permits are captured spatially in INCOSADA as lines and their attributes are recorded in Forest Tenure Administration System (FTAS).

Very often a “road permit” is confused with a “road use permit.” To ensure that the reader of this report avoids such confusion, the following is provided: the *Forest Act* is very clear that a road use permit is not a form of agreement and hence not a tenure. It is issued by the district manager to industrial users of forest roads, forest service roads and special use permit roads authorizing them to use the forest administered road. Road use permits are not recorded in FTAS or captured in INCOSADA.

#### 2.1.1 Data

Road permits are captured spatially in INCOSADA usually as road networks, i.e., a main stem road with branch roads. The road network is given a road ID and each branch is designated by a section ID. The road ID and section ID, together, make up a unique part of a road network and are given a feature ID or business key that will eventually link to FTAS and to the Forest Road Management Application (FRMA). FRMA is presently under development; it is an attribute and spatial database that will specifically be used to administer forest roads. Therefore, in the future, the road permit attributes will become available for use by the Integrated Land and Resource Register (ILRR).

The spatial road permit data in INCOSADA are lines and all branches are topologically connected. In addition, the road ID is a cascading key to the Road Section Table. What this means is that only the road ID requires registration in the ILRR not each branch (or section ID) in order to access all the necessary attribute information.

There are 4888 road permits registered in INCOSADA and 4625 identified in FTAS. This represents a 5% discrepancy between the attribute and spatial databases.

#### 2.1.2 Major Issues

The only identifiable issue at this time is the difference between the FTAS attribute database and the spatial INCOSADA database. The two databases should be compared and the discrepancies reconciled.

### **2.1.3 Data Reconciliation Estimates**

27 effort days.

More spatial data exists than does attribute data; therefore, it is assumed that most of the reconciliation work will be gathering attribute information and not plotting new roads in the spatial database. The above estimate is based on one person reconciling 10 road permits per day.



### 3. FOREST PRACTICES CODE ACT TENURE ROADS

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The only form of agreement or tenure that is defined in the *Forest Practices Code Act* is the special use permit.

#### 3.1 Special Use Permit (SUP) Roads

SUPs have been discussed at length in the previous report; however, the salient points concerning an SUP road are:

1. it must be within a provincial forest;
2. it authorizes construction and maintenance including bridges and other drainage structures;
3. it authorizes the right to occupy; and
4. it must be for forest related purposes.

Road SUPs (like all SUPs) do not authorize any harvesting of timber; they authorize occupation of Crown land within a Provincial Forest. The holder of an SUP must pay annual rent unless the road SUP is registered in the name of the Minister of Forests. They are replaceable upon expiry. Road SUPs are land based tenures and should be entered in the ILRR.

##### 3.1.1 Data

Like road permits, SUP roads can have many branches. They are captured spatially in INCOSADA as lines and are networked; hence, only the road ID needs to be registered in the ILRR for the whole road to be registered.

There are 233 SUP roads in INCOSADA. SUP roads are not easily identifiable in FTAS and a comparison between INCOSADA SUP roads and FTAS was not undertaken.

##### 3.1.2 Major Issues

INCOSADA has two tables that record SUP features; they are: (i) Special Use Permit contained in the Feature Group TENURE database; and (ii) Special Use Permits – Roads as contained in the Feature Group ROADS database. Based upon a sample of 5 forest districts, 17% of all the SUP roads in the Feature Group Roads database are duplicated in the Feature Group TENURE database. The MoF must determine which database is the official road SUP database. Once this is done, the two databases should be reconciled.

A second issue is reconciliation between INCOSADA SUP roads and FTAS SUP roads. This requires examining all FTAS SUPs by purpose and listing only those with the purpose of: “construction and maintenance of a road, including construction and maintenance of bridges and other drainage structures” as defined in the *Provincial Forest Use Regulation*. This list of FTAS SUP roads requires comparison to INCOSADA SUP roads forest district by forest district and discrepancies require correction.

### **3.1.3 Data Reconciliation Estimates**

30 effort days.

This estimate is based upon 10 days to reconcile the SUP road features in the INCOSADA TENURE and ROADS databases; and 20 days to reconcile the FTAS SUP roads with the INCOSADA SUP roads.

## 4. NON TENURE FOREST ROADS

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There are four types of forest roads that are not forms of agreement pursuant to legislation and hence are not tenures. They are non status roads, forest service roads, right of way – 20 year easement permit, and resource development roads. This last type, resource development roads, is a feature class table in INCOSADA but no districts have entered any data in the table; therefore, it is not an issue for this report. The other three feature types do have data in their tables and are dealt with below.

These four categories of non tenure forest roads are extremely import to the MoF and the forest industry and require protection. Presently, they are protected only through administrative procedures exercised by the forest district manager. See section 5.0 of the original report for a more detailed discussion of this issue.

### 4.1 Non Status Roads (NSR)

These are roads that are on Crown land but are not under the specific jurisdiction of any provincial Ministry or agency. In addition MoF does not have any formal designation for recording this roads such as road permit, forest service road, or SUP road. The MoF may issue a road use permit to industrial users of these roads.

#### 4.1.1 Data

Only one district, Campbell River, has populated the NSR table in INCOSADA even though most all districts will have this category of road. In addition, FTAS does not record any of these roads. Consequently, there is not much that can but done about this category of road and it is recommended that they not be registered in the ILRR at this time since they are not protected by either legislation or operational procedures.

### 4.2 Forest Service Road (FSR)

An FSR is defined in the *Forest Act* as: ““forest service road” means a road that is constructed, modified or maintained by the minister under section 121, or is declared a forest service road under section 115.” In practice, these are roads built by the MoF to access timber. They do not have protection as a *Forest Act* tenure but are protected by administrative procedures exercised by forest district managers. They are very important and should be registered in the ILRR.

#### 4.2.1 Data

All forest districts in the province have FSRs with the exception of Cassiar Forest District. INCOSADA records 1647 FSRs; FTAS lists 1508 FSRs and this does not

include Kamloops Forest District which has not entered any of its FSRs into FTAS. FRMA also is recording FSRs but this operational database is still under development.

A direct FTAS to INCOSADA comparison by forest district cannot easily be done. As of April 1, 2003, MoF reduced the number of forest districts from 41 to 29 through amalgamation. The FTAS database was immediately amended to reflect the changes in districts. INCOSADA has not been converted and still is organized by the old 41 forest districts. Appendix B attempts to outline the changes and compare FTAS FSRs to the FSR data in INCOSADA.

The discrepancy between the total number of FSRs listed by FTAS and the total number recorded INCOSADA is only 139 or 8%; however, this number is deceiving. When the discrepancies are looked at district by district they jump to 379 or 23%. This is solely looking at the difference in number of FSRs recorded in the two respective databases and does not reflect the number of FSRs that do not match with respect to road identity.

#### **4.2.2 Major Issues**

The FTAS database is reported by both MoF and MSRM to be unreliable with respect to FSR data. In addition, neither FTAS nor FRMA is presently linked to INCOSADA. However, FRMA will be linked to INCOSADA sometime in the future as will FTAS, once the FTA initiative is fully implemented. At that time both FRMA and FTAS FSRs should be reconciled with INCOSADA FSRs.

#### **4.2.3 Data Reconciliation Estimates**

127 effort days.

This estimate is based upon one person being able to reconcile three roads per day and assumes that about half of all the roads will have to be captured spatially or will be imported into INCOSADA from FRMA.

### **4.3 FSR – Determination**

This is a legacy term that has been super-ceded in the *Forest Act* by the term FSR – Declaration. It means a “road permit” road that has been designated by the Minister of Forests as an FSR. INCOSADA has a road type called FSR – Declaration; however, no roads are recorded in that table at the present time.

#### **4.3.1 Data**

There are 19 FSR Determinations in INCOSADA; 13 are duplicated in FSR table, 6 are not.

### **4.3.2 Major Issues**

All FSR Determinations should also be in the FSR table; therefore, the 6 missing FSR Determinations should be included. The specific road ID's at issue are identified in the table summary in Appendix A.

### **4.3.3 Data Reconciliation Estimates**

2 effort days.

## **4.4 FSR – Gazettes – Unsurveyed**

This is a legacy designation and is no longer in use. It refers to public notification by publishing in the official Province of BC Gazette the establishment of an FSR on Crown land for which its right of way was not surveyed.

### **4.4.1 Data**

There are only 7 FSR – Gazettes – Unsurveyed in the province. They all should be duplicated in the FSR table.

### **4.4.2 Major Issues**

One FSR – Gazettes – Unsurveyed is not duplicated in the FSR table. It is FSR 5325 located in the Cranbrook Forest District; it should be included in the FSR table.

### **4.4.3 Data Reconciliation Estimates**

1 effort day.

## **4.5 FSR – Dedications**

This term means the sale of a portion of private land to the Crown as represented by the Minister for Forests for the purpose of constructing an FSR or portion of an FSR.

### **4.5.1 Data**

There are 70 FSR – Dedications within 11 forest districts. In addition to the project ID, the INCOSADA table carries an official plan ID as registered in the land title office.

This information could be useful to the ILRR. The road right of way is BCLS surveyed and removed from the private parcel of land. Spatially, INCOSADA captures this right of way as a closed polygon. In addition, it should become part of the cadastral database maintained by the Surveyor General Branch of MSRM; however, this was not verified. These roads should be duplicated in the FSR table but this was not investigated.

FSR Dedications are not recorded in FTAS; however, they will be documented in the FRMA database when it become operational.

#### **4.5.2 Major Issues**

There are no major issues with this data; however, FSR – Dedications should be reconciled with the FSR table.

#### **4.5.3 Data Reconciliation Estimates**

2 effort days

### **4.6 FSR – Gazettes – Surveyed**

These roads are the same as FSR Dedications; however, they were removed from private land prior to the *Expropriation Act* of 1987. The method was to publish an official notice in the Gazette indicating that a right of way for an FSR was removed from private land.

#### **4.6.1 Data**

There are 72 FSR – Gazettes – Surveyed within 9 forest districts. See section 4.5.1 for further information.

#### **4.6.2 Major Issues**

See section 4.5.2.

#### **4.6.3 Data Reconciliation Estimates**

2 effort days.

### **4.7 FSR – Gravel Pit**

These are gravel pits within a provincial forest that are used to build and maintain specific FSRs.

#### **4.7.1 Data**

There currently are 456 gravel pits associated with FSRs; they are captured as closed polygons in INCOSADA. There is a one to many relationship between FSRs and FSR - Gravel Pit. In addition to the FSR project ID, gravel pits also carry a gravel pit number; hence, with these two fields, any FSR – Gravel Pit can be uniquely identified.

FTAS does not record FSR – Gravel Pit; however, FRMA will record them and will be linked to INCOSADA in the future.

#### **4.7.2 Major Issues**

There are no issues with FSR – Gravel Pit INCOSADA data.

### **4.8 Right of Way – 20 Year Easement Permit (20 YEP)**

A permit that is approved by the Ministry of Forests, that grants a right of way or easement over Crown land for a term not to exceed 20 years.

#### **4.8.1 Major Issues**

Even though these permits are captured in INCOSADA spatially they are not entered in FTAS. However, they will be linked to FRMA sometime in the future. At that time 20 YEP attribute information in FRMA should be reconciled with INCOSADA 20 YEP and then recorded in the ILRR.

#### **4.8.2 Data Reconciliation Estimates**

No estimate required at this time.

## 5. RECOMMENDATION SUMMARY

| Road Type                | Recommendation  | Section Reference | Estimated Effort <sup>1</sup> |
|--------------------------|---|-------------------|-------------------------------|
| Road Permit              | 1. Register Road Permits in ILRR.   | 2.1.1             | 0                             |
|                          | 2. Reconcile INCSADA with FTAS.   | 2.1.2             | 27                            |
| Special Use Permit Roads | 1. Register SUP Roads in ILRR.  | 3.1               | 0                             |
|                          | 2. MoF to determine whether SUP table in TENURE feature group or SUP Roads table in ROADS feature group is official source of SUP. If SUP table in TENURE feature group is the definitive source, then it must be reconciled with the SUP Roads table in the ROADS feature group. | 3.1.2             | 10                            |
|                          | 3. Reconcile INCOSADA SUP roads with FTAS SUP roads.  | 3.1.2             | 20                            |
| Non Status Roads         | 1. Do not register these roads in ILRR.   | 4.1.1             | 0                             |

<sup>1</sup> Estimated effort is expressed in effort days, 1 effort day = the effort of one person for an 8 hour period.



| <b>Road Type</b>                       | <b>Recommendation</b>  | <b>Section Reference</b> | <b>Estimated Effort</b> |
|--|--|--------------------------|-------------------------|
| Forest Service Road (FSR)              | 1. Register Forest Service Roads in ILRR                           | 4.2                      | 0                       |
|  | 2. Reconcile FSR INCOSADA with FRMA as soon as FRMA is operational | 4.2.2                    | 127                     |
| FSR Determination                      | 1. Reconcile FSR Determination table with FSR table.               | 4.3.2                    | 2                       |
| FSR – Gazettes - Unsurveyed            | 1. Reconcile FSR 5325 with FSR table.                              | 4.4.2                    | 1                       |
| FSR Dedications                        | 1. Reconcile FSR – Dedications table with FSR table.               | 4.5.2                    | 2                       |
| FSR – Gazettes – Surveyed              | 1. Reconcile FSR – Gazettes – Surveyed table with FSR table.       | 4.6.2                    | 2                       |
| FSR – Gravel Pit                       | 1. No recommendations required.                                    |                          | 0                       |
| Right of Way – 20 Year Easement Permit | 1. Reconcile 20 YEP with FRMA once FRMA is operational             | 4.8.1                    | tbd                     |

**Total Estimated Effort 191 effort days**

## APPENDIX A – INCOSADA ROAD DATA SUMMARY

### INCOSADA Road Data Summary

Data Effective: May 21, 2003

| District Code | District Name   | Road Permit | SUP Roads        | Non Status Roads | FSR | FSR Determination   | FSR Gazettes Unsurveyed                | R/W 20 Yr Easement Permit | FSR Dedications | FSR Gazettes Surveved | FSR Gravel Pit |
|---------------|-----------------|-------------|------------------|------------------|-----|---------------------|--|---------------------------|-----------------|-----------------------|----------------|
| DAR           | Arrow           | 148         | 7 no duplication | 0                | 35  | 0                   | 0                                      | 4                         | 0               | 0                     | 0              |
| DBC           | Bulkey Cassiar  | 73          | 5                | 0                | 20  | 0                   | 0                                      | 0                         | 0               | 0                     | 7              |
| DBO           | Boundary        | 221         | 2                | 0                | 54  | 0                   | 0                                      | 5                         | 10              | 0                     | 5              |
| DCB           | Cranbrook       | 291         | 10               | 0                | 61  | 1 duplicated in FSR | 4 5325 branch 00 not duplicated in FSR | 1                         | 2               | 0                     | 3              |
| DCC           | Cassiar Central | 0           | 2                | 0                | 0   | 0                   | 0                                      | 0                         | 0               | 0                     | 1              |

| District Code | District Name  | Road Permit | SUP Roads | Non Status Roads                                | FSR  | FSR Determination   | FSR Gazettes Unsurveyed | R/W 20 Yr Easement Permit   | FSR Dedications | FSR Gazettes Surveved | FSR Gravel Pit |    |
|---------------|----------------|-------------|-----------|---|------|---------------------|-------------------------|---|-----------------|-----------------------|----------------|----|
| DCE           | Cassiar East   | 7           | 7         | 0   | 11   | 0                   | 0                       | 0   | 0               | 0                     | 0              |    |
| DCH           | Chilcotin      | 110         | 4         | 0   | 38   | 0                   | 0                       | 0   | 0               | 0                     | 7              |    |
| DCK           | Chilliwack     | 98          | 18        | 0   | 59   | 1 duplicated in FSR | 0                       | 9   | 0               | 0                     | 0              |    |
| DCL           | Clearwater     | 29          | 2         | 0   | 60   | 0                   | 0                       | 0   | 5               | 5                     | 0              |    |
| DCO           | Columbia       | 74          | 9         | S08180 duplicated in TEN.MDB                    | 0    | 65                  | 0                       | 0   | 0               | 12                    | 6              |    |
| DCR           | Campbell River | 129         | 20        | S09059L, S11958L & S23567 duplicated in TEN.MDB | 3439 | 22                  | 5                       | 4830 (01, 02, 03) duplicated in FSR; 8640 (01) and 8960 (01) not in FSR | 0               | 4                     | 0              | 14 |
| DC W          | Cassiar West   | 0           | 0         | ddd   | 0    | 0                   | 0                       | 0   | 0               | 0                     | 0              |    |

| District Code | District Name | Road Permit | SUP Roads                               | Non Status Roads | FSR | FSR Determination | FSR Gazettes Unsurveyed | R/W 20 Yr Easement Permit | FSR Dedications | FSR Gazettes Surveved | FSR Gravel Pit |
|---------------|---------------|-------------|---|------------------|-----|-------------------|-------------------------|---------------------------|-----------------|-----------------------|----------------|
| DDC           | Dawson Creek  | 213         | 1 ddd                                   | 0                | 38  | 0                 | 0                       | 23                        |                 |                       |                |
| DFN           | Fort Nelson   | 73          | 0 ddd                                   | 0                | 1   | 0                 | 0                       | 0                         | 0               | 0                     | 0              |
| DH<br>O       | Horsefly      | 44          | 3 S09998 & S11867 duplicated in TEN.MDB | 0                | 40  | 0                 | 0                       | 0                         | 0               | 0                     | 12             |
| DIN           | Invermere     | 125         | 8                                       | 0                | 35  | 0                 | 0                       | 0                         | 0               | 0                     | 2              |
| DJA           | Fort St James | 271         | 1                                       | 0                | 14  | 0                 | 0                       | 0                         | 0               | 0                     | 0              |
| DJO           | Fort St John  | 128         | 0                                       | 0                | 24  | 0                 | 0                       | 0                         | 0               | 0                     | 0              |
| DKA           | Kamloops      | 63          | 7                                       | 0                | 118 | 0                 | 2 duplicated in FSR     | 0                         | 6               | 3                     | 2              |
| DKI           | Kispiox       | 50          | 1                                       | 0                | 23  | 0                 | 0                       | 0                         | 0               | 0                     | 4              |
| DKL           | Kootenay lake | 116         | 0                                       | 0                | 70  | 0                 | 0                       | 0                         | 0               | 0                     | 0              |
| DK<br>M       | Kalum         | 174         | 7                                       | 0                | 45  | 0                 | 1 duplicated in FSR     | 0                         | 0               | 2                     | 1              |

| District Code | District Name  | Road Permit | SUP Roads | Non Status Roads | FSR | FSR Determination                                    | FSR Gazettes Unsurveyed | R/W 20 Yr Easement Permit | FSR Dedications | FSR Gazettes Surveved | FSR Gravel Pit |
|---------------|----------------|-------------|-----------|------------------|-----|--|-------------------------|---------------------------|-----------------|-----------------------|----------------|
| DLA           | Lakes          | 117         | 0         | 0                | 67  | 0  | 0                       | 0                         | 2               | 0                     | 19             |
| DLI           | Lillooet       | 19          | 6         | 0                | 32  | 0  | 0                       | 2                         | 8               | 0                     | 1              |
| DM C          | Mid Coast      | 55          | 0         | 0                | 34  | 0  | 0                       | 5                         | 0               | 8                     | 4              |
| DM E          | Merritt        | 17          | 1         | 0                | 54  | 0  | 0                       | 3                         |                 |                       |                |
| DM H          | 100 Mile House | 153         | 7         | 0                | 69  | 0  | 0                       | 0                         | 10              | 0                     | 12             |
| DM K          | MacKenzie      | 434         | 16        | 0                | 30  | 0  | 0                       | 0                         | 0               | 0                     | 85             |
| DM O          | Morice         | 163         | 0         | 0                | 40  | 2 both are 8772 (01) but with different determinatio | 0                       | 5                         | 0               | 0                     | 1              |

| District Code | District Name           | Road Permit | SUP Roads                      | Non Status Roads | FSR | FSR Determination   | FSR Gazettes Unsurveyed | R/W 20 Yr Easement Permit | FSR Dedications | FSR Gazettes Surveved | FSR Gravel Pit |
|---------------|-------------------------|-------------|--------------------------------|------------------|-----|---------------------|-------------------------|---------------------------|-----------------|-----------------------|----------------|
| DNC           | North Coast             | 28          | 4                              | 0                | 19  | 0                   | 0                       | 0                         | 0               | 0                     | 1              |
| DPE           | Penticton               | 29          | 23                             | 0                | 63  | 0                   | 0                       | 10                        | 0               | 5                     | 5              |
| DPG           | Prince George           | 336         | 2                              | 0                | 45  | 0                   | 0                       | 0                         | 0               | 0                     | 134            |
| DPM           | Port McNeill            | 102         | 7 S19221 duplicated in TEN.MDB | 0                | 21  | 0                   | 0                       | 0                         | 0               | 0                     | 0              |
| DQC           | Queen Charlotte Islands | 49          | 1                              | 0                | 10  | 1 duplicated in FSR | 0                       | 1                         | 0               | 0                     | 3              |
| DQU           | Quesnel                 | 163         | 2                              | 0                | 37  | 0                   | 0                       | 0                         | 0               | 1                     | 6              |
| DRV           | Robson Valley           | 145         | 8                              | 0                | 26  | 0                   | 0                       | 4                         | 3               | 0                     | 17             |

| District Code | District Name  | Road Permit | SUP Roads  | Non Status Roads | FSR         | FSR Determination  | FSR Gazettes Unsurveyed | R/W 20 Yr Easement Permit | FSR Dedications | FSR Gazettes Surveved | FSR Gravel Pit |
|---------------|----------------|-------------|------------|------------------|-------------|--|-------------------------|---------------------------|-----------------|-----------------------|----------------|
| DSA           | Salmon Arm     | 59          | 0          | 0                | 39          | 0  | 0                       | 1                         | 0               | 25                    | 6              |
| DSC           | Sunshine Coast | 125         | 18         | 0                | 39          | 9 3477 (00),<br>7445 (00),<br>7575 (00), &<br>8138 (00)<br>not in FSR;<br>all others<br>duplicated<br>in FSR | 0                       | 22                        | 17              | 3                     | 0              |
| DSI           | South Island   | 108         | 16         | 0                | 43          | 0  | 0                       | 0                         | 2               | 0                     | 8              |
| DSQ           | Squamish       | 61          | 1          | 0                | 52          | 0  | 0                       | 0                         | 0               | 0                     | 3              |
| DVA           | Vanderhoof     | 158         | 1          | 0                | 22          | 0  | 0                       | 0                         | 0               | 6                     | 87             |
| DVE           | Vernon         | 46          | 6          | 0                | 39          | 0  | 0                       | 9                         | 1               | 2                     | 0              |
| DWL           | Williams Lake  | 84          | 0          | 0                | 33          | 0  | 0                       | 0                         | 0               | 0                     | 0              |
| <b>Totals</b> |                | <b>4888</b> | <b>233</b> | <b>3439</b>      | <b>1647</b> | <b>19</b>  | <b>7</b>                | <b>104</b>                | <b>70</b>       | <b>72</b>             | <b>456</b>     |

## APPENDIX B- FTAS TO INCOSADA COMPARISON

### Forest Service Roads

This table compares the number of FSRs that are listed in FTAS with those that are spatially recorded in INCOSADA.

NB: INCOSADA records the roads by the old forest district code (41) and FTAS uses the new forest district code (29).

| <b>New District Code</b> | <b>New District Name</b>        | <b>FTAS</b> | <b>Old District Code</b> | <b>Old District Name</b> | <b>INCOSADA</b> |
|--------------------------|---------------------------------|-------------|--------------------------|--------------------------|-----------------|
| DAB                      | Arrow Boundary                  | 143         | DAR                      | Arrow                    | 35              |
|                          |                                 |             | DBO                      | Boundary                 | 54              |
|                          |                                 |             |                          |                          | 89              |
| DCC                      | Central Cariboo                 | 79          | DWL                      | Williams Lake            | 33              |
|                          |                                 |             | DHO                      | Horsefly                 | 40              |
|                          |                                 |             |                          |                          | 73              |
| DCH                      | Chilcotin                       | 1           | DCH                      | Chilcotin                | 38              |
| DCK                      | Chilliwack                      | 57          | DCK                      | Chilliwack               | 59              |
| DCO                      | Columbia                        | 68          | DCO                      | Columbia                 | 65              |
| DCR                      | Campbell River                  | 52          | DCR                      | Campbell River           | 22              |
| DCS                      | Cascades                        | 75          | DME                      | Merritt                  | 54              |
|                          |                                 |             | DLI                      | Lillooet                 | 32              |
|                          |                                 |             |                          |                          | 86              |
| DFN                      | Fort Nelson                     | 3           | DFN                      | Fort Nelson              | 1               |
| DHW                      | Headwaters                      | 84          | DCL                      | Clearwater               | 60              |
|                          |                                 |             | DRV                      | Robson Valley            | 26              |
|                          |                                 |             |                          |                          | 86              |
| DIC                      | Norh Island<br>Central<br>Coast | 57          | DPM                      | Port McNeill             | 21              |
|                          |                                 |             | DMC                      | Mid Coast                | 34              |
|                          |                                 |             |                          |                          | 55              |
| DJA                      | Fort St James                   | 28          | DJA                      | Fort St James            | 14              |
| DKA                      | Kamloops                        |             | DKA                      | Kamloops                 | 118             |
| DKL                      | Kootenay lake                   | 68          | DKL                      | Kootenay lake            | 70              |
| DKM                      | Kalum                           | 41          | DKM                      | Kalum                    | 45              |
| DMH                      | 100 Mile House                  | 63          | DMH                      | 100 Mile House           | 69              |
| DMK                      | MacKenzie                       | 31          | DMK                      | MacKenzie                | 30              |
| DNC                      | North Coast                     | 21          | DNC                      | North Coast              | 19              |
| DND                      | Nadina                          | 109         | DLA                      | Lakes                    | 67              |
|                          |                                 |             | DMO                      | Morice                   | 40              |
|                          |                                 |             |                          |                          | 107             |



| <b>New District Code</b> | <b>New District Name</b> | <b>FTAS</b> | <b>Old District Code</b> | <b>Old District Name</b> | <b>INCOSADA</b> |
|--------------------------|--------------------------|-------------|--------------------------|--------------------------|-----------------|
| DOS                      | Okanagan Shuswap         | 101         | DVE                      | Vernon                   | 39              |
|                          |                          |             | DPE                      | Penticton                | 63              |
|                          |                          |             | DSA                      | Salmon Arm               | 39              |
|                          |                          |             |                          |                          | 141             |
| DPC                      | Peace                    | 56          | DDC                      | Dawson Creek             | 38              |
|                          |                          |             | DJO                      | Fort St John             | 24              |
|                          |                          |             |                          |                          | 62              |
| DPG                      | Prince George            | 37          | DPG                      | Prince George            | 45              |
| DQC                      | Queen Charlotte Islands  | 8           | DQC                      | Queen Charlotte Islands  | 10              |
| DQU                      | Quesnel                  | 35          | DQU                      | Quesnel                  | 37              |
| DRM                      | Rocky Mountain           | 99          | DCB                      | Cranbrook                | 61              |
|                          |                          |             | DIN                      | Invermere                | 35              |
|                          |                          |             |                          |                          | 96              |
| DSC                      | Sunshine Coast           | 34          | DSC                      | Sunshine Coast           | 39              |
| DSI                      | South Island             | 43          | DSI                      | South Island             | 43              |
| DSQ                      | Squamish                 | 53          | DSQ                      | Squamish                 | 52              |
| DSS                      | Skeena Stikine           | 40          | DBC                      | Bulkey Cassiar           | 20              |
|                          |                          |             | DKI                      | Kispiox                  | 23              |
|                          |                          |             | DCC                      | Cassiar Central          | 0               |
|                          |                          |             | DCE                      | Cassiar East             | 11              |
|                          |                          |             | DCW                      | Cassiar West             | 0               |
|                          |                          |             |                          |                          | 54              |
| DVA                      | Vanderhoof               | 22          | DVA                      | Vanderhoof               | 22              |
| <b>TOTAL</b>             |                          | <b>1508</b> | <b>TOTAL</b>             |                          | <b>1647</b>     |

## APPENDIX C - RECORD OF MEETINGS

| Met With                         | Title  | Organisation                 | Date     | Nature of Meeting   |
|----------------------------------|--|------------------------------|----------|---|
| Jane Wynrib                      | LDS Officer                                    | MSRM, Registry Data Section  | 03-07-02 | Provided INCOSADA road data and clarified road specifications |
| John Mallett,                    | Manager  | MoF, RTE                     | 03-07-07 | Discussed all Forest Roads                                    |
| Ron Davis                        | Chief Engineer                                 | MoF, RTE                     | 03-07-07 | FRMA  |
| Janet Adams                      | Unit Head Admin. Boundaries                    | MSRM, Registry Data Section, | 03-05-02 | Non Status Roads, Teleconference                              |
| Olga Kopriva                     | Manager, Registry Data                         | MSRM Surveyor General Branch | 03-07-20 | Discussed INCOSADA and FTAS data quality                      |
| Dona Stapley                     | Integrity Analyst                              | MoF, RTE                     | 03-08-06 | Provided FTAS data. FSRs, teleconference discussion.          |
| Jim Gowriluk,<br>Charlie Western | Mgr Timber Tenures; Sr. Timber Tenure Forester | MoF RTE                      | 03-05-06 | MoF Roads discussed during original MoF Tenures meeting.      |
| Ken Balaski,<br>Jim Kirby        | Manager, Range Policy                          | MoF Forest Practice Branch   | 03-05-07 | Roads discussed during original Range Tenure discussions.     |

NB: MoF roads were discussed with Jim Gowriluk, Charlie Western, Ken Balaski, and Jim Kirby during the original *Forest and Range Act* tenure discussion in May 2003.