

Data Administration Standards - Guide S38

Introduction

This document defines some of the standards on which data administration is founded.

"Data Administration" in its broadest concept means a working environment in which information is treated as a vitally important resource of an organization (in this case, the "organization" being the Ministry of Forests). Much of the "product" produced by government is *information* -- how much timber is available, where a recreation site is, what the logging plans are for a particular area under the ministry's control. Being able to access the "raw materials" of appropriate data (facts that the ministry is interested in, about people, places, things, or concepts) and being able to turn that data into useful information is crucial to the ministry's overall success.

Data proliferation / Information starvation

Staff in the ministry have available to them an abundance of data from many sources. However, they are often constrained by not having access to the particular data they want at the time they want it -- there is too much available, with little in the form required for effective use. Learning what specific data is out there, where it is available from, how it was collected, and how it was manipulated into its present form is often time consuming and error-prone. The goal of data administration is to answer these questions about data and in addition, relate together sets of data from different program areas.

In general, people have focused on the business from a functional perspective. The problem with that is that how a business gets things done often changes with new procedures, new technology, etc., whereas what the business deals with (the data) usually stays constant.

- *"Relative to most other components of the enterprise -- including functions and processes and especially organizational charts -- data possesses far greater permanence and stability. Furthermore, data possesses innate organization (which directly reflects some static image of the business) whose continuing existence is largely independent of applications."* [\[1\]](#)

This means that data is relatively stable through the life of an organization, and is not tied to the functions, processes, or organizational structure of the organization. Therefore, good standards for data should give us a better chance at being able to meet the information demands that will appear in the future.

Computing systems and tools are continually becoming more and more powerful. This power, however, will be of little use if staff cannot communicate effectively with each other because of a lack of a common language -- for example, common sets of codes that are used across different parts of the business.

Data Administration Purposes

- Increase the ministry's ability to exploit information so that it can better meet its business objectives.
- Promote an integrated view of the business by providing a vision for the totality of the data resource.
- Help the ministry identify its future information needs.
- Keep the sense of perspective about data on the *business*, not on technology or automation.

Data Administration Principles

- Manage ministry data as a corporate resource.
- Model the inherent logic in ministry data structures and make the models available to ministry staff.
- Communicate through standard message protocols (e.g. standard codes, standard data names, standard metadata structures, etc.).
- Identify future issues so that any required data structure changes can be planned for well ahead of emergency situations.

Coordinate sharable data and related application system components across the ministry -- promote data sharing and integration

Market information as a vital resource for all areas of the ministry, and market the management of information as an essential and worthwhile effort by all staff

Data Administration Standards

There are many kinds of "standards" that fall under the responsibility of the data administration area:

Naming standards

Naming standards (see Guide S19, Data Naming Standards) relate to the language the ministry uses to communicate about the business, to be used in developing automated systems. The name that identifies a data element has a great impact on the understanding of those using that element later on. Naming well fosters understanding; naming poorly reduces communication and increases confusion.

Modelling standards

Data modelling is a technique that is used to define information requirements, by utilizing diagrams for easier understanding. See Guide S7, Data Modelling Guide for more information.

Common tables standards

In any large database there are a number of "overhead" functions that must be provided for to make use of the database environment in the most effective manner. Things such as providing printer support should be provided in a standard way, so

that each application being developed doesn't have to re-invent how it's done. See Guide S21, Common Tables for more information.

Standard codes

The use of standard codes provides a ministry-wide set of meaningful abbreviations that all staff can use to help them deal with the information they use in their jobs. If we all used different codes to mean the same things, we'd spend most of our time just learning the translation mechanisms instead of getting real work done. There is further information later on in this document about standard codes.

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Standard Codes

Part of the ministry's need for information can be satisfied by well-designed code structures. Exchange of information is facilitated, understanding is increased, consistent answers are obtained, and operational effectiveness is improved by using codes that are standardized throughout the ministry. Benefits of *corporate* codes are many. In contrast, the drawbacks of using different codes for the same thing, or the same codes for different things, can act as a drag on all sorts of ministry processes, significantly reducing the effectiveness of ministry staff's efforts.

For these reasons, standard codes are developed for use in the ministry (see [Ministry Policy 7.1: Standard Identification Codes and Symbols](#)). This document provides more detail about the particular code sets that have been through a formal approval process and are designated *ministry standard codes*. Not all codes used across the ministry need to go through a formal process to be designated as ministry standard; only those that significantly affect ministry operations, are used by multiple areas of the ministry, or where significant confusion or significant disagreement exists.

EXAMPLES*****

Standard Identification Code Description Template

The use and context of all standard identification codes are fully described using the following format:

- **Definition**

Defines what business the codes are used for and specifies the reasons for their creation.

- **Custodian**

Specifies which program area is responsible for the code definition (usually assigned at the Branch Director level, or the equivalent level in Operations division -- see [Ministry Policy 7.3: Corporate Information Custodianship](#)).

- **Scope**

Defines the scope of use within the ministry -- who uses the code (e.g. which program areas, what automated and manual systems).

- **Structure**

Describes the code structure, how its elements are defined and used.

- **Determining Coded Values**

Describes how to invent new coded values based on the plan of the structure.

- **Exceptions**

Lists any exceptions to the procedure for determining new coded values, or any other exceptions to the general rules stated in the code definition.

- **Code List**

All code lists are provided on the web from the [Integrated Data Dictionary \(IDD\)](#). A printed copy of the codes can also be obtained from there. For further information, please contact Data Administration staff in Information Management Group at 250.387.8449.

Standard Identification Code Index

The following Standard Identification Codes have been sponsored and are formalized as corporate codes:

Code Name	Custodian (Sponsor)	Approved	Last Update	Comments re "Update"
Organizational Unit	Information Management Group	1989/07/07	2003/03/31	Major ministry reorganization
Timber Supply Area	Resource Tenures & Engineering Branch	1990/04/30	--	
Vegetation & Ecosystems	Research Branch	1986	1993/04/01	See Policy
Tree/Log Species Conversion (A B)	Research / Revenue	1993/01/15	--	

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Organizational Unit

- **Definition**

This standard Organizational Unit code provides a mechanism to identify Programs within Regional and District offices, Timber Sales offices, and Sections within Branch offices, in a short-form code. The code does not direct how to organize reporting relationships in each office.

An Organizational Unit is defined as an element of the ministry's organizational structure which, for supervisory and management purposes, is organized pursuant to the ministry's approved principles, to accomplish certain objectives, directly or indirectly, in accordance with the ministry's Programs and activities. In other words, an Organizational Unit is a distinct office with specific duties that may be further broken down organizationally.

Branch, Regional, District, and Timber Sales offices have in the past used manual and automated systems that had multiple and incompatible code structures that required increasing amounts of staff time both to translate codes and to resolve inconsistencies. With the increasing use of automated systems, making it technically possible to exchange data much more easily than in the past, this problem would have rapidly become unmanageable without a standardized code.

- **Custodian**

Information Management Group

- **Scope**

Manual systems may use this set of codes immediately (as of approved date). New automated systems, and new releases of existing automated systems that are implemented after the approval date, are required to use this set of codes when representing Organizational Units.

- **Structure**

The full code length is six characters, broken up as follows: x yy zz a

X Represents the organizational level of the ministry, and is one of:

D District Forestry Office

E Executive

H Headquarters Branch

R Regional Forestry Office

T Timber Sales Office

X External to Ministry of Forests

x **YY** Represents an office within a specific organizational level, for example, "H FP" is Forest Practices Branch.

x yy **ZZ** Represents a Section or Program within an office, for example, "H FP FD" is Forest Development Section, Forest Practices Branch.

x yy zz **A** Represents a subsection within a Section. Subsections have not yet been coded, except for Nurseries, Provincial Warehouses, Research Stations, and Seed Orchards.

- **Determining Coded Values**

The following are the rules to follow in sequence, to determine new or changed coded values for Organizational Units:

1. If the office name contains two words (e.g. "Campbell River"), use the **first character** from each word ("Mac"/"Mc" names are treated as two words).
2. If the office name contains only one word (e.g. "Boundary"), use the **first two characters** from that name (treat "Fort St. James" and "Fort St. John" as one-word names -- ignore "Fort St.>").
3. If there exists a "tie" after the above, change the name that comes later alphabetically, and use the **first and last characters** of the name.
4. If there still exists a "tie" after the above, change the name that comes later alphabetically, and use whatever makes sense that isn't repetitive.

- **Exceptions**

The following are general exceptions to the coding rules in the Organizational Unit codes.

"Recreation" is referred to as "RN" throughout, to avoid a conflict with Research Branch;

"Timber" is referred to throughout Regions and Districts as "TH", to correspond with the code for Timber Harvesting Branch*;

"Finance" is referred to throughout Regions and Districts as "FS", to correspond with the code for Financial Services Branch*;

"Systems" is referred to throughout Regions as "IS", to correspond with the code for Information Systems Branch*;

Kamloops District is referred to as "KA", and Kalum District is referred to as "KM", to avoid different codes for Kamloops District and Kamloops Region, even though Kalum District comes first alphabetically (following the naming rules exactly would have coded Kalum District "KA" and Kamloops District "KS").

- **"Generic" Codes**

The existing codes include a generic "Staff Manager" at the Region and District level. Regions and Districts may organize their Programs as they require and use these codes as necessary. Specific organizational design is not forced on any office by being inherent in this code structure.

- **Code List**

This code list is provided on the web from the [Integrated Data Dictionary \(IDD\)](#). A printed copy of the codes can also be obtained from there. For further information, please contact Data Administration staff in Information Management Group at 250.387.8449.

- *** (footnote)**

The examples used here were developed at the time the code structure was developed in 1988, and although many office names and corresponding abbreviations have changed (and will change again!), the above examples continue to illustrate the point.

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Timber Supply Area (TSA)

- **Definition**

This standard TSA code provides a mechanism to identify the ministry's Timber Supply Areas throughout the province on manual and automated systems. In the ten years before 1990, two major sets of codes came into use by different areas of the ministry. Timber Harvesting and Valuation used one set, while Inventory, Protection, Silviculture, and Planning had standardized on another. This was a problem for field staff, but was not such a big problem for the computer systems of the decade, because few of the ministry's applications shared common databases. Increased emphasis on shared data makes standardization on a single code for *TSA number* imperative.

- **Custodian**

Resource Tenures and Engineering Branch

- **Scope**

Most tenures issued by the ministry include a reference to the TSA they are issued within, so any staff involved with tenures will access the TSA code. As of April 30, 1990, all manual and automated systems are required to use this code. Note that no stored manual files (for example, *Exhibit 'A'* documents) have to be converted. An information memo will have been sent to all clients, where necessary, indicating the simple coding change.

- **Structure**

The full code length is two numeric characters, with no special structure inherent within the code. Current values are between '01' and '43' inclusive, although some numbers are not represented. See the attached list of allowable codes.

- **Determining Coded Values**

TSA numbers (/codes) for new TSAs will be assigned by Resource Tenures and Engineering Branch.

- **Code List**

This code list is provided electronically from the [Integrated Data Dictionary \(IDD\)](#) (search on Code Name: "TSA". For further information, please contact [Data Administration staff](#)).

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Tree/Log Species Conversion

- **Definition**

Historically the ministry developed two distinct sets of codes for dealing with tree species: one set follows the scientific naming conventions used in biological areas, and the other was developed for harvested timber (logs), using an abbreviation of the English species name.

Staff resources are required to check and correct errors produced from the use of the two overlapping and different code sets, causing operational difficulties and making ministry staff less effective. This conversion table has been developed to assist staff who are required to convert between the two code sets, so that across the ministry all staff are at least using a single standard for conversion.

- **Custodian**

Research Branch (custodian for Tree Species)

Revenue Branch, Scaling Program (primary user of Log Species)

- **Scope**

The scaling area of the ministry and industry is the only area that uses the log codes; all others (e.g. cruising, research, silviculture, inventory, etc.) use the biological code. Where conversion between the two sets of codes is necessary, all staff must use the attached table (see Appendix A).

- **Structure**

See conversion table.

- **Determining Coded Values**

Not applicable; see conversion table.

- **Exceptions**

Not applicable; see conversion table.

- **Code List**

A complete list of the conversions between the Tree Species code and the HDBS Log Species code follows (see [Appendix A](#) and [Appendix B](#)).

This code list is provided electronically from the [Integrated Data Dictionary \(IDD\)](#) (search on Code Name: "tree_species". For further information, please contact [Data Administration staff](#)).

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Appendix A - Code Conversion Rules

HDBS Log to Standard Tree Species

The Species level (two characters) should be used as much as possible. Some HDBS codes translate only to the Genus level (one character) in the Ministry standard codes.

<i>Originating HDBS Log Species</i>		<i>Destination Standard Tree Species</i>		<i>Conversion Comment</i>
AL	Alder	DR	red alder	95% of alder in industry is red alder.
AR	Arbutus	RA	arbutus	
AS	Aspen	AT	trembling aspen	
BA	Balsam	B	true fir	
BI	Birch	EP	paper birch	95% of birch in industry is paper birch.
CE	Cedar	CW	western redcedar	
CO	Cottonwood	AC	poplar	
CY	Cypress	YC	yellow-cedar	
FI	Fir	FD	Douglas-fir	
HE	Hemlock	H	hemlock	
LA	Larch	L	larch	
LO	Lodge-pine	PL	lodgepole pine	
MA	Maple industry	MB	bigleaf maple	95% maple in industry is bigleaf maple.
OT	Other species Tree			No corresponding Species code.
R	Rejects Tree			No corresponding Species code.
SP	Spruce	S	spruce	
UU	Yew	TW	western yew	

WA Tree	Waste			No corresponding Species code.
WB	White Bark Pine	PA	whitebark pine	
WH	White Pine	PW	western white pine	
WI	Willow	W	willow	
YE	Yellow Pine	PY	yellow pine	
ZZ Tree	Rejects			No corresponding Species code.

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Appendix B - Code Conversion Rules

Standard Tree Species to HDBS Log

<i>Originating Standard Tree Species</i>		<i>Destination HDBS Log Species</i>		<i>Conversion Comment</i>
A HDBS	poplar			No corresponding code.
AC	poplar	CO	Cottonwood	
ACB	balsam poplar	CO	Cottonwood	
ACT	black cottonwood	CO	Cottonwood	
AT	trembling aspen	AS	Aspen	
B	true fir	BA	Balsam	
BA	amabilis fir	BA	Balsam	
BG	grand fir	BA	Balsam	
BL	subalpine fir	BA	Balsam	
C	western redcedar	CE	Cedar	
CW	western redcedar	CE	Cedar	
D	alder	AL	Alder	

DR	red alder	AL	Alder	
E	birch	BI	Birch	
EA	Alaska paper birch	BI	Birch	
EP	paper birch	BI	Birch	
F	Douglas-fir	FI	Fir	
FD	Douglas-fir	FI	Fir	
FDC	Douglas-fir (coast)	FI	Fir	
FDI	Douglas-fir (interior)	FI	Fir	
G HDBS	dogwood			No corresponding code.
GP HDBS	western flowering dogwood			No corresponding code.
H	hemlock	HE	Hemlock	
HM	mountain hemlock	HE	Hemlock	
HW	western hemlock	HE	Hemlock	
J HDBS	juniper			No corresponding code.
JR HDBS	Rocky Mountain juniper			No corresponding code.
K HDBS	cascara			No corresponding code.
KC HDBS	cascara			No corresponding code.
L	larch	LA	Larch	
LA	alpine larch	LA	Larch	
LT	tamarack	LA	Larch	
LW	western larch	LA	Larch	

M	maple	MA	Maple	
MB	bigleaf maple	MA	Maple	
P HDBS	pine			No corresponding code.
PA	whitebark pine	WB	White Bark Pine	
PF HDBS	limber pine			No corresponding code.
PJ HDBS	jack pine			No corresponding code.
PL	lodgepole pine	LO	Lodge-pine	
PLC	lodgepole pine (coast)	LO	Lodge-pine	
PLI	lodgepole pine (interior)	LO	Lodge-pine	
PW	western white pine	WH	White Pine	
PY	yellow pine	YE	Yellow Pine	
Q HDBS	oak			No corresponding code.
QG HDBS	Garry oak			No corresponding code.
R	arbutus	AR	Arbutus	
RA	arbutus	AR	Arbutus	
S	spruce	SP	Spruce	
SB	black spruce	SP	Spruce	
SE	Engelmann spruce	SP	Spruce	
SS	sitka spruce	SP	Spruce	
SW	white spruce	SP	Spruce	
SX	spruce hybrid	SP	Spruce	
T	yew	UU	Yew	

TW	western yew	UU	Yew
W	willow	WI	Willow
Y	yellow-cedar	CY	Cypress
YC	yellow-cedar	CY	Cypress

Footnotes

1. From "The Information Credo", *Data Administration and Information Resource Development Seminar Workbook*, by Ronald G. Ross, 21st Edition, August 20, 1991, page D4.

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