Standard for Digital Terrain Data Capture in British Columbia

Terrain Technical Standard and Database Manual

Errata 2006-1.1

to accompany Version 1 (1998 RIC)

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Ministry of Environment
Ecosystem Information Section, Ecosystem Branch
for the Land Base Investment Program, Forest Investment Account

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Contents   Page

Preface

The Ecosystem Information Section, Ecosystems Branch, BC Ministry of Environment has undertaken to load and store a variety of terrain, ecosystem and wildlife data in the Land and Resource Data Warehouse (LRDW), for access by the public, terrain community and other potential users of the data. In order to load and store terrain data, the project files submitted to MoE must be in the specified file formats, and with the specified field names, field characteristics, and allowable codes, as documented in this Errata.

The Errata 2006-1.1 replaces Errata 2006-1-LBIP which was based on Addenda 2005-1 which was published as a Draft for Field Testing in March 2005. The specifications in Addenda 2005-1 were implemented with some minor modifications for a data clean-up/conversion project undertaken to update older terrain project data to the new digital standard in order to loading this data to the Land and Resource Data Warehouse (LRDW). Errors or omissions in digital data specifications in Addenda 2005-1 and Errata 2006-1.1 identified to MoE prior to March 15th, 2007 are incorporated in Errata 2006-1.1.

See Section 1.2 for a summary of changes in digital deliverables from those defined in the Standard for Digital Terrain Data Capture in BC (1998 RIC). Appendix I summarizes the changes from Errata 2006-1-LBIP to 2006-1.1.

The Ministry of Environment (MoE) is planning to revise this Errata and update other relevant Terrain Mapping standards to meet the Resource Inventory Standard Committee (RISC) standards. The revision/update processes will follow the RISC Change Management Policy outlined at http://ilmbwww.gov.bc.ca/risc/o_docs/other/richange.htm. The MoE terrain and ecosystem specialists will be working together to coordinate the review and update of relevant RISC standards, to ensure consistency and efficiency in areas of overlap (e.g. with bioterrain mapping in Terrestrial Ecosystem Mapping projects).

Any comments or concerns regarding these standards may be addressed to soilterrain@victoria1.gov.bc.ca.

1 Introduction

1.1   Background

The Ministry of Environment, Ecosystem Information Section, Ecosystems Branch is now the custodian of terrain information and the terrain standards.

This Standard for Digital Terrain Data Capture in British Columbia – Errata 2006-1.1 (Errata) defines the required digital formats of Terrain mapping project deliverables and accompanies the Standard for Digital Terrain Data Capture in BC (1998 RIC), (http://ilmbwww.gov.bc.ca/risc/pubs/earthsci/terrain/index.htm) which contains important information about allowable codes and Feature Codes. Supplemental (new) Feature Codes for project boundaries and terrain polygons are documented in the Errata. The digital file formats as outlined in the 1998 RIC Standard are no longer valid, and are replaced by specifications in this Errata.

(For brevity, the Standard for Digital Terrain Data Capture in BC (1998 RIC) may be referenced as the '1998 RIC Standard', in this document.)

These Errata digital data capture standards apply to all terrain mapping projects which are BC Government funded (e.g. Forest Investment Account (FIA)). These digital data standards should also be applied pending publication of RIC standards for projects completed in order to meet the requirements for government permits or project approvals (e.g. Environmental Assessment). No substantive content changes are expected in publication of this Errata to RISC standards.

This Errata includes specifications for file structure and formats for the following types of data:
  Project Information
  Terrain Polygon Attributes (including 'traditional' fields, new attribute fields, and user-defined fields)
  Terrain Features (Line, point and polygon features)
  Sample sites
  Reports
  Other documents (e.g. sign-off letters, legends, figures, maps, field notes)

This Errata contains information of importance to the terrain project manager, the terrain professional and the data capture/GIS team.

1.2   Summary of Errata standards:

Mandatory project deliverables for terrain mapping projects remain unchanged.

The following is a summary of changes to the Standard for Digital Terrain Data Capture in BC (1998 RIC) as detailed in this Errata (this document). Changes consist mainly of changes to files formats, the addition of new attribute fields, the addition of a structured format for

documentation of user-defined fields, and details regarding sign-off letters or Project Completion Certificates. **Data must be delivered in formats consistent with this Errata.**

Summary of changes

A project identification number (BAPID) must be requested from the province at the onset of the terrain project. The BAPID must be used in naming of files and should be referenced in any correspondence about the project.

Files must be submitted in specified folders, file formats and following file naming requirements (see details in Section 2):

Spatial Data:
- o Spatial data files in Arc Info Export format (.e00) with full attributes (embedded)
- o One spatial file for each dataset for the project area (not one file per mapsheet)
- o Spatial files for the following datasets (as applicable):
    - ▪ project boundary with project information (filename: T*BAPID*J.e00),
    - ▪ terrain polygons with full attributes (previously ter.e00, new filename: T*BAPID*R.e00),
    - ▪ terrain on-site features (previously tef.e00; new filename T*BAPID*F.e00) and area-based on-site features (previously tea.e00; new filename: T*BAPID*A.e00), and
    - ▪ sample sites (previously tes.e00; new filename: T*BAPID*S.e00); and
- o All polygons, arcs (lines) and points to be assigned an FCODE (new for project and terrain polygons).

Reports, Maps and Other Files:
- o Reports, sign-off letters or Project Completion Certificates and other documents in .pdf format
- o Field notes/field data captured in database/spreadsheet (.xls), or scanned field notes in .pdf format.
- o Maps and figures, legends, in .pdf format.
- o Quality Assurance, Quality Control and Accuracy Assessment Reports, (if applicable), in .pdf format.

Files in other formats (optional):
- o Spatial data files (.dgn, .igds, etc), plotfiles (.000, .hp2, .rtl, etc), and any other files that are in non-standard formats may be submitted to government in addition to the required files in the standard formats. These files will be loaded to EcoCat and made available to potential users of the project data. The government recognizes that these alternate file formats may be the preferred by some mapping project clients or data users, and therefore wishes to support ease of access to data in these alternate formats.
- o Spatial data files in .e00 format, by mapsheet, may also be preferred or required by the project client. These files may also be submitted to government.
- o These files should be submitted in the Non-standard_Data folder.

Delivery of Files:

- o All project files must be delivered to the province's FTP site at: ftp:\\fshftp.env.gov.bc.ca\pub\incoming\TerrainData with email notification about the delivery to soilterrain@victoria1.gov.bc.ca.

The following attributes have been modified from the 1998 RIC Standard:

- o Project information includes several new attribute fields and minor changes to some field names. (see Table 2.3.1.1 for new project data table).
- o There are some minor changes to field names for attributes for the terrain polygons (see Table 2.3.2.1). Additional standard (optional) terrain polygon attributes have been defined. See Table 2.3.2.1 for the new standardized field names to be used for attributes that have commonly been captured in user-defined fields. (These new fields are also applicable for TEM, PEM and TEM-VRI mapping projects).
- o If user defined fields are created, a table of the custom field names, the field definition, allowable codes, and code definitions must be submitted with final deliverables (see Table 2.4.1.1). Please e-mail a draft table to soilterrain@victoria1.gov.bc.ca early in the project for approval.

1.3   Mandatory Deliverables

The following continue to be **mandatory** for provincially funded projects (including FIA projects):

- o All data and deliverables must be supplied to the Ministry of Environment, submitted to the government ftp site at: ftp:\\fshftp.env.gov.bc.ca to folder: \pub\incoming\TerrainData with email notification to soilterrain@victoria1.gov.bc.ca.
- o Sign-off letter or Project Completion Certificate must be completed by each of the following: a) the responsible terrain professional and b) the GIS supervisor or GIS project manager, indicating that the project has been completed to the required terrain mapping and digital data standards.
- o The project report.
- o Field data (in digital spreadsheet format, or field notes scanned to .pdf)
- o Digital files containing project information, terrain polygons with full attributes, terrain on-site features, sample sites, and user-defined fields (as applicable) in the formats as defined in this Errata.

Project data for projects funded by other levels of government, by the private sector, or other proponents, should also be delivered to MoE . That project data will also be loaded to the LRDW to facilitate access to data by potential users.

1.4   Optional Deliverables

Optional deliverables include:

- o Spatial data files and plotfiles in non-standard formats or by mapsheet (including spatial files in .dgn/igds, .shp or other formats; plotfiles/legends in .000, .hp2, .rtl or other formats.)

These data will be made available to potential data users online via EcoCat (see: http://srmwww.gov.bc.ca/ecology/tem/dataware.html)

2 Detailed Description of Deliverable Specifications

The following section gives details of the file formats for project deliverables for all terrain projects including terrain inventory mapping, terrain stability mapping projects, and stand alone bioterrain mapping in support of Terrestrial Ecosystem Mapping (TEM), Predictive Ecosystem Mapping (PEM), Sensitive Ecosystem Mapping (SEI), and Vegetation Resource Inventory (VRI).

Bioterrain Mapping:

Bioterrain submitted as part of a TEM continues to use the TEM standards. If any of the new terrain fields are used they should be added to the end of the polygon attribute table using the ITEM NAME and specifications in Table 2.3.2.1 and defined in the user-defined spreadsheet according to the TEM standards and TEMDC user guide. (see: http://ilmbwww.gov.bc.ca/risc/pubs/teecolo/index.htm and http://srmwww.gov.bc.ca/ecology/tem/forms.html)

TEM, PEM, SEI and VRI standards are to be followed for those projects, except for the use of the new item names as applicable. These are identified in the column 'New Field (Y) Renamed (R)' in Table 2.3.2.1.

All terrain projects (other than bioterrain) must follow the specifications below.

2.1 Folder Structure Specifications

See **Table 2.1.1** for specifications regarding the folder structure to be used in delivering terrain project data sets. All folders and files must be zipped into a file and delivered to the Ministry's FTP site.

Table 2.1.1 Folder Structure

Folder name	Description of folder contents
BAPID-Proj_id	Root Folder containing all subfolders listed below
Data_inputs	If project is an update/upgrade or otherwise based on another project dataset, include the original data here, including original coverages, spreadsheets, documents, etc.
Base_data	contains any TRIM, digital airphotos, etc. that were used for the project
Coverages	contains the final coverages (.e00) for the terrain project as per table 2.2.1, one spatial file for the project area per data type
Reports_etc	contains reports, legends, maps, figures, project sign-off letters or Project Completion Certificates, QA, QC or AA reports (if applicable) in .pdf format and field data(in .pdf or .xls formats).
Non-standard_data	contains non-standard spatial files (e.g. .dgn, .igds, etc); spatial files by mapsheet; documents, figures, legends, etc in non-standards formats (These files are optional)
Plotfiles	contains plot files (hpgl , 000, other formats) (These files are optional.)

2.2   File Naming Convention Specifications

All formats must be consistent with specifications detailed in this Errata. These are the files to be stored in the folders Final_Coverages or Final_Reports_etc, as appropriate.

BAPID

Each terrain mapping project must have a unique identification number – a BAPID (Business Area Project ID). On initiation of a terrain project, the project manager or responsible terrain professional must contact MoE to request a BAPID number. Contact soilterrain@victoria1.gov.bc.ca. When requesting the BAPID, the following information will be required: a) Project name b) geographic location (geographic name) and c) mapsheets underlying the project.

If the terrain mapping project consists of several non-contiguous areas (e.g. watersheds), these may be split into separate projects, each with its own BAPID, or they may be treated as one study area. If the original project is split into multiple project areas, each with a unique BAPID, each project dataset submitted must contain copies of any 'common' documents (e.g. a report.)

The BAPID must be used in naming all project files and should be referenced in any correspondence about the project (**Table 2.2.1**).

The BAPID for the project replaces the characters '*BAPID*' below. (E.g. the 1998 RIC Standard ter.e00 file would be named T1234R.e00 where the project BAPID = 1234.)

Table 2.2.1 File Names for Terrain Project Files

1998 RIC Standard	File name	Dataset	Description
n/a	T*BAPID*J.e00	Project boundary and project attributes	As per Section 2.3.1
ter.e00	T*BAPID*R.e00	Terrain polygons with attributes for the whole project area	As per Section 2.3.2
tef.e00	T*BAPID*F.e00	Terrain features/on-site symbols - points and lines with attributes	As per Section 2.3.3
tea.e00	T*BAPID*A.e00	Area-based terrain features/on-site symbols – polygons with attributes	As per Section 2.3.4
tes.e00	T*BAPID*S.e00	Sample Sites – points or lines (for traverses) with attributes	As per Section 2.3.5
Reports etc	T*BAPID*_productname.pdf	Report, maps, figures, legend, field notes, sign-off letters or Project Completion Certificates (where 'productname' is 'Report', 'Figure1', etc.)	Submit all products in .pdf format as per Section 2.4.2
n/a – User Defined Fields	T*BAPID*_UserDefinedFields.xls	This file provides documentation regarding the user-defined fields used in the terrain polygon coverage file	As per Section 2.4.1. Submit this file in the Reports_etc folder
n/a - QA, QC, AA reports	T*BAPID*_filename.pdf and .xls, etc.)	These documents are the Quality Assurance, Quality Control or Accuracy Assessment reports (if applicable) and any accompanying files. ('Filename' is the QA report, etc.)	Submit these report(s) (if applicable) in the Reports_etc folder.

n/a - Sign-off Letter(s) or Project Completion Certificates	T_*BAPID*_signoff.pdf or T_*BAPID*_Compl_Certific.pdf	Sign-off letters or Project Completion Certificates are required from the responsible Terrain professional and the GIS supervisor or project manager, certifying that the project data meets the terrain mapping standards and the specifications in this Errata.	The original signed letters or certificates should be scanned to .pdf and included in the Reports_etc folder.

The 1998 RIC Standard file naming convention for file names have been provided for reference below (as working file names), in addition to the required filenames for delivered .e00 and other files. (e.g. ter.e00/TBAPIDR.e00)

2.3   Spatial coverages:

Terrain spatial coverages must include the following:
- standard GIS metadata
- FCODES for all spatial features
- the project BAPID

Spatial data files must be delivered in ArcInfo Export format (.e00) with full attributes (embedded). The spatial files delivered must consist of one spatial file for each dataset type (e.g. sample sites) for the project area (not one file of each dataset type per mapsheet).

Metadata:

All spatial .e00 files (as listed below) must have a standard GIS metadata INFO table with the minimum requirements as outlined in **Table 2.3**. For more details see: http://ilmbwww.gov.bc.ca/gis/arcmetadata.html.

Table 2.3 .meta INFO Table

Field	Description
TITLE	The Project Name (same as Proj_name)
DESCRIPTION	A brief description including project purpose (e.g. Terrain Stability Mapping) and geographic location
SOURCE	The public or private-sector organization responsible for the mapping project. (same as Org_name)
ACCURACY	An indication on how well this data represents the earth
MODIFIED	Date, agency or person who digitally captured and /or modified the data, and what was done.

FCODES

All spatial features must be assigned a feature code (FCODE). New FCODEs have been created for the project boundary, terrain polygons, and generic terrain features.

See discussion in **Sections 2.3.1** and **2.3.2** for the new FCODEs.

For other commonly used Terrain FCODES see **Tables 4-9 through 4-14** in <u>Standard for Digital Terrain Data Capture in British Columbia Version 1 (1998 RIC)</u> and for online query of FCODEs see <u>http://srmwww.gov.bc.ca/gis/featurecodes.html</u> or <u>http://srmwww.gov.bc.ca:8000/pls/feature_code/fcode.formquery</u>.
Note: the online database was not completely current (at the time of publication of this Errata) and may not contain the new FCODEs listed in Sections 2.3.1 and 2.3.2.

2.3.1   Project Boundary Specifications
(working file: prj.e00; deliverable filename: T*BAPID*J.e00)

This file contains one or more polygons representing the terrain project area with attributes describing the project. If the study area is represented by more than one polygon, the file should contain one record per polygon. Typically, the project boundary would be generated by dissolving the internal terrain polygons to create the project boundary polygon(s).

The project information attached to the project boundary includes much the same information as items 1 – 14 in **Table 2-1** in the 1998 RIC Standard, with some columns renamed and a few new attributes.

Standard GIS metadata must be captured in a .meta table (INFO table) see **Table 2.3.**

Table 2.3.1.1 outlines the specifications for the attribute fields for the project, in the **.pat**. INFO table. Fields indicated as **R** (renamed) are modified from the 1998 RIC Standard field names, as indicated in the 'Data Entry Instructions' column, to the name in the 'Item Name' column.

All fields indicated as mandatory must be filled in.

The Project polygon must use the FCODE **FF84550000.**

Table 2.3.1.2 outlines the specifications for the attribute file for the project arcs, the **.aat** INFO table. All fields indicated as mandatory must be filled in.

Use FCODE **FF84550000** for the project boundary arcs. Appropriate codes are to be used for SRC_CODE s for arcs derived from other digital sources such as terrain boundaries, rivers, watershed boundaries, TFA boundaries, municipal boundaries, and private land.

Table 2.3.1.1 Attribute Table for Project Boundary (Prj.pat/T*BAPID*J.pat)

Field Number	Field Long Name	Field Description	Data Entry Instructions	New Field(Y) Renamed(R) Field	COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE	Mandatory field
		System-generated field in .pat table for the coverage	No input required - generated when coverage is created.		1	AREA	4	16	F	M
		System-generated field in .pat table for the coverage	No input required - generated when coverage is created.		5	PERIMETER	4	12	F	M
		System-generated field in .pat table for the coverage	No input required - generated when coverage is created.		8	PRJ#	4	5	B	M
		System-generated field in .pat table for the coverage	No input required - generated when coverage is created.		12	PRJ-ID	4	5	B	M
1	Project Type	A six letter code indicating the type of mapping project.	TEM=terrestrial ecosystem , PEM =predictive ecosystem, TER=terrain inventory , SEI=sensitive ecosystem, TSM=terrain stability, TBT=bioterrain, TBS=bioterrain with terrain stability, NEM=terrestrial ecosystem without bioterrain, NEMPRE=pre-TEM with no bioterrain, NEMNSS=terrestrial ecosystem with no bioterrain or structural stage, TEMNSS= terrestrial ecosystem with no structural stage, TEMPRE= preTEM (e.g., biophysical mapping)	Y		Proj_Type	6	6	C	M
2	Project Name	The common name of the project, usually a well known local place or feature.				Proj_name	100	100	C	M
3	Geographic Location	The geographic location of the mapping project. This is a gazetted name taken from published map; for example, a town, lake, or watershed.				Geog_loc	254	254	C	M
4	Project Map Scale	The scale of the project maps produced. For example, use 20000, not 1:20000	Renamed from 'Scale'	R		Proj_scale	8	8	I	M
5	Project Completion Date	The date on which the project was completed, Format: yyyy-mm-dd	Renamed from 'Rec_date'	R		Compl_date	10	10	C	
6	Date Surveyed	Date(s) of field inventory(s)	Include information about the months and years during which field surveys were conducted.			Surv_date	254	254	C	
7	Terrain Survey Intensity Level	The extent to which the terrain mapping for the current project has been checked on the ground. See Table: Terrain Survey Intensity Level.	If project has more than one TSIL then indicate the lowest TSIL and note in Proj_Com.			TSIL	1	1	C	
8	Accuracy Assessment	A number from 1-6 based level of accuracy assessment used. See Protocol for quality assurance and accuracy assessment of ecosystem maps. Draft. on (Meidinger, 1999).	New field for Terrain.	Y		Accuracy	1	1	I	
9	Mapsheet List	The mapsheet(s) in the project. See Table: Map Number Recording Convention.	A leading zero is required for mapsheets not starting with 1. Left justified with no decimal or / separator. E.g., 083E073. Caution: ensure this is a character field if data is first captured in Excel, as mapsheet	R		Mapsh_lst	254	254	C	

Field Number	Field Long Name	Field Description	Data Entry Instructions	New Field(Y) Renamed(R) Field	COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE	Mandatory field
			numbers containing an E may be converted into scientific notation on data import or export. Use multiple rows to capture multiple mapsheets.							
1 0	Consultant/ Organization	The public or private-sector organization responsible for the mapping project.				Org_name	80	80	C	
1 1	Project Supervisor	The professional responsible for project signoff.	New field for Terrain.	Y		Proj_Sup	80	80	C	
1 2	Terrain Mapper	The licenced professional who has done the terrain mapping (polygon delineation and pre-typing/typing). Where there is more than one mapper on a project, this is the name of the project leader.	Renamed from 'Mapper'.	R		Ter_map	80	80	C	
1 3	Digital Data Capture	The public or private-sector individual or organization responsible for digital capture of spatial data. For SEI data, this field is used if SE data is mapped traditionally from stereo images; if SE data is modelled from TEM or other mapping, refer to t	New field for Terrain.	Y		Dig_cap	125	125	C	
1 4	GIS Supervisor	The public or private-sector individual responsible for sign off on the spatial digital data.	New field for Terrain.	Y		GIS_Sup	80	80	C	
1 5	Recorder Name	The person(s) who entered the project and polygon attribute data into a database.				Rec_Name	254	254	C	
1 6	Client	The client (public or private organization) for whom the project was completed.	New field for Terrain.	Y		Client	80	80	C	
1 7	TRIM Version	The version of TRIM mapsheets used for the project mapping.	New field for Terrain.	Y		Trim_nbr	1	1	C	
1 8	Image Type	Indicates specific details about the image type.	New field for Terrain.	Y		Pho_type	1	1	C	
1 9	Image Scale	Scale of air photos/images used for polygon delineation and pre-typing. For example, 20000 represents 1:20000.	New field for Terrain.	Y		Pho_sc	8	8	C	
2 0	Image Year	Year of air photo(s) or images (yyyy) used for polygon delineation and pre-typing. In the case where several vintages of air photos/images were used, the year applicable to the majority.	New field for Terrain.	Y		Pho_yr	4	4	I	
2 1	Terrain Legend Source	The origin of a customized legend, if utilizing a legend developed for another project. See Table: Metadata for Header on Data Form.	Renamed from Legend Source	R		Ter_Leg_sc	50	50	C	
2 2	Terrain Legend Type(s)	The type of legend associated with the map; refer to the *Terrain Mapping Methodology* (RIC) for legend format and specifications.	Renamed from Legend Type(s). Use G for General, S for Short, TS for Terrain stability, O for Other and C for Custom.	R		Ter_Leg_tp	3	3	C	

Field Number	Field Long Name	Field Description	Data Entry Instructions	New Field(Y) Renamed(R) Field	COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE	Mandatory field
2 3	Version of Package Used	Versions of standards used for project mapping. As codes have changed over time, indicates the versions of manuals used for the project.	New field for Terrain. Use code T1 if following data standards from 1998 or earlier, and T2 if following Addenda 2005-1, T3 if following data conversion specifications of February 2006, T4 if following Errata 2006-1.1. .	Y		Pack_nbr	2	2	C	
2 4	Stability Classification Type	The classification system used to classify slope stability for the current project. Indicate only one of the following with an (R) Recon, (D) Detailed, or (E) Es.				Stbcls_Tp	1	1	C	
2 5	Slope Units	The type of units, if slope classes were done for this database, percent or degrees denoting slope steepness. See Table: Metadata for Header on Data Form and see Table: Slope Steepness.	The same units must be used for all slope steepness values in a given project. Indicate one of the following with a (P) Percent, (D) Degrees or (N) Null.			Slp_Unit	1	1	C	
2 6	Project Comments	This field records any other pertinent information regarding the project. At all times attempt to use referenced classifications which are well defined and understood in the science, or provide thorough definitions for the user. This field may also be u	At all times attempt to use referenced classifications which are well defined and understood in the science, or provide thorough definitions for the user. This field may also be used to identify user defined data files or other documents associated with			Proj_com	254	254	C	
2 7	Project Identification	A unique identifier for each project being delivered within a singe contract. This is the same proj_id as in the terrain polygon attribute table (.pat)	Use same Proj_id as for polygon data.	Y		Proj_id	5	5	C	M
2 8	Project Boundary Fcode	The feature code for a Terrain Project boundary .	New Field. BIS standards require an FCODE for all spatial features. Use **FF84550000**	Y		FCODE	10	10	C	M
2 9	Business Area Project ID	This field contains a unique project identifier. The project BAPID is used in all .e00 files.	If not already done, request a project BAPID from Soilterrain@victoria1.gov.bc.ca	Y		BAPID	5	5	I	M
3 0	Project Polygon Tag	This field contains a unique tag for each project polygon	Assign a unique polygon tag to each polygon. Tag should be: BAPID-polygon number	Y		PRJ_TAG	21	21	C	M

Table 2.3.1.2 Attribute Table for Project Boundary Arcs (Prj.aat/T*BAPID*J.aat)

COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE	N.DEC	ALTERNATE NAME	INDEXED	MANDATORY
1	FNODE#	4	5	B	-	-		
5	TNODE#	4	5	B	-	-		
9	LPOLY#	4	5	B	-	-		
13	RPOLY#	4	5	B	-	-		
17	LENGTH	4	12	F	3	-		
21	TER_ PROJECT#	4	5	B	-	-		
25	TER_ PROJECT-ID	4	5	B	-	-		
29	**FCODE**	10	10	C	-	-	indexed	M
39	**SRC_CODE**	10	10	C	-	-		
49	**BAPID**	5	5	I				M

(First seven items in this and subsequent similar tables are ArcInfo system generated when coverages are created and do not require data input)

2.3.2   Terrain Polygon Specifications
(working file: ter.e00; deliverable filename: T*BAPID*R.e00)

Terrain Polygons:

This file contains terrain polygons and attributes. Polygon attributes include a description of the terrain in accordance with the Terrain Classification System for British Columbia (Howes and Kenk, 1997)[1] and other related information such as drainage class and slope stability class.

Standard GIS metadata must be captured in a .meta table (INFO table) see **Table 2.3**.

Use FCODE = FF84555210 for the terrain polygons (this is a new field in the **.pat**).

Table 2.3.2.1 outlines the specifications for the attribute data for the terrain polygon .**pat**. Fields indicated as 'Renamed' have been modified from the 1998 RIC Standard. All fields indicated as mandatory must be filled in.

Table 2.3.2.1 is based on Table 2-1in the 1998 RIC Standard, with renamed fields and **new standard fields** for attributes commonly collected for previous terrain and bioterrain projects. Until the Terrain Professional is familiar with the specifications in the Errata, it is advised that the Terrain Professional review the new fields, their definitions and allowable codes prior to undertaking a mapping project to identify any new standard fields that may be used for that project. Additional 'custom' or user-defined fields may also be used. These user-defined fields must be documented according to specifications in Section 2.4.1.

The fields in Table 2.3.2.1 must not be used with non-standard coding or code definitions. User-defined fields must be used instead.

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[1] See References

The final terrain polygon file (T*BAPID*R.e00) must include all fields up to and including Field Number 169, Project Comments, Proj_Com. (the 'traditional' fields). Note that attributes for the terrain polygon Component 1 (Field Numbers 8 through 44) are repeated for Components 2 and 3, but these fields are not described in Table 2.3.2.1 (for the purpose of brevity). Fields for Component 1, numbered 8 through 44, repeat for Components 2 and 3 as field numbers 45 through 117.

The new standard fields used and the user-defined fields must be included in the .e00 file, and should be appended at the end of the 'traditional' fields (after the polygon comments field (poly_com)). These additional fields may be listed in any order. Unused (blank) new standardized fields need not be included in the .e00 file.

(Terrain Polygon bounding arcs are discussed following Table 2.3.2.1.)

Table 2.3.2.1 Polygon Attribute Table for the Terrain Polygons (Ter.pat/T*BAPID*R.pat)

Field Number	Field Long Name	Field Description	Data entry instructions	Allowable Codes	New Field(Y) Renamed(R)	COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE
	Area	Polygon Area - System generated	Do not edit			1	AREA	4	16	F
	Perimeter	Polygon perimeter - System generated	Do not edit			5	PERIMETER	4	12	F
	KEY#	System generated polygon key	Do not edit			9	TER#	4	5	B
	KEY-ID	System generated polygon number	System generated; May be edited, if required.			13	TER-ID	4	5	B
1	Feature code	This field contains the feature code for the terrain polygon	Mandatory field. Use the code **FF84555210** for terrain polygons. (Use WI25200300 for ecosystem-terrain polgyons.)	FF84555210 WI25200300			FCODE	10	10	C
2	Project Type	A six letter code indicating the type of mapping project.	Mandatory field. TEM=terrestrial ecosystem , PEM =predictive ecosystem, TER=terrain inventory , SEI=sensitive ecosystem, TSM=terrain stability, TBT=bioterrain, TBS=bioterrain with terrain stability, NEM=terrestrial ecosystem without bioterrain, NEMPRE=pre-TEM with no bioterrain, NEMNSS=terrestrial ecosystem with no bioterrain or structural stage, TEMNSS= terrestrial ecosystem with no structural stage, TEMPRE= preTEM (e.g., biophysical mapping), LIM=landslide inventory mapping, THM=terrain hazard mapping	TEM PEM TER SEI TSM TBT TBS NEM NEMPRE NEMNSS TEMNSS TEMPRE LIM THM	Y		Proj_Type	6	6	C
3	Terrain Tag - Unique key	This field contains a unique polygon identifier for linking attribute data to spatial data. See Standard for Digital Terrain Data Capture in BC .	Mandatory for terrain inventory projects and terrain stability projects. The tag is made up of Proj_ID, Mapsh_Nbr and Poly_Nbr.				Ter_tag	21	21	C
4	ECP Tag - unique key	This field contains a unique polygon identifier for linking attribute data to spatial data for TEM, PEM and SEI data.	Mandatory for ecosystem projects. Do not include this field in terrain inventory project datasets.				ECP_Tag	15	15	C

Field Number	Field Long Name	Field Description	Data entry instructions	Allowable Codes	New Field(Y) Renamed(R)	COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE
5	Project Identification	A unique identifier (project short name) for each project being delivered. See Section: Digital Data Specification and Table: Metadata for Header on Data Form.	Use a 5 character idenfifier				Proj_ID	5	5	C
6	Mapsheet Number	Where the project mapping falls entirely within a single mapsheet, the number of the mapsheet. In cases where the project includes several mapsheets, this is captured for each polygon. Where a polygon straddles mapsheets, the mapsheet underlying the greatest portion of the polygon is to be used. See Table: Map Number Recording Convention.	A leading zero is required for mapsheets not starting with 1. Do not use a decimal or '/' separator. E.g., 083E073. Caution: ensure this is a character field if data is first captured in MS Excel, as mapsheet numbers containing an E may be converted into scientific notation on data import or export.				Mapsh_Nbr	9	9	C
7	Polygon Number	An identifying number for polygon being mapped. Polygons may be numbered consecutively within projects, or within projects and mapsheets, depending on the preference of the lead mapper and on project objectives.	Mandatory field	0- 99999999			Poly_Nbr	8	8	I
8	Decile of Terrain Component 1	Describes the proportion of the polygon covered by Terrain Component 1, in deciles (**i.e., a proportion out of 10**). See Table: Component Relation Delimiters Codes. Note: This field is typically used for Ecosystem Mapping .	e.g., a decile of 10=100%of polygon, 8=80% of polygon, 2=20% of polygon	1-10			Tdec_1	2	2	I
9	Partial Cover Flag of Component 1	A flag indicating that the overlying material in the terrain component only partially covers the underlying material. It means a moderately extensive but discontinuous cover of surface material. Eolian veneer is an example.		/			Prtflg_1	1	1	C
10	Surficial Material Texture of Component 1	The surficial material texture of the first stratum of terrain component 1 (represented by 1-3 codes). Texture is the size, shape and sorting of particles in clastic sediments (or the proportion and degree of decomposition of plant fibre in organic sediments). Texture codes are shown in the order: tertiary, secondary, dominant, in the terrain label on a map (with the dominant texture adjacent to the surficial material type). See Table: Terrain Texture Codes.		a b c d e g h k m p r s u x y z			Ttex_1	3	3	C

Field Number	Field Long Name	Field Description	Data entry instructions	Allowable Codes	New Field(Y) Renamed(R)	COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE
11	Surficial Material Texture 3, Component 1	The tertiary surficial material texture of the first stratum of terrain component 1 (one of up to three codes). Texture is the size, shape and sorting of particles in clastic sediments (or the proportion and degree of decomposition of plant fibre in organic sediments). Texture codes are shown in the order: tertiary, secondary, dominant, in the terrain label on a map (with the dominant texture adjacent to the surficial material type). See Table: Terrain Texture Codes.		a b c d e g h k m p r s u x y z			Ttex_1c	1	1	C
12	Surficial Material Texture 2, Component 1	The secondary surficial material texture of the first stratum of terrain component 1 (one of up to three codes). Texture is the size, shape and sorting of particles in clastic sediments (or the proportion and degree of decomposition of plant fibre in organic sediments). Texture codes are shown in the order: tertiary, secondary, dominant, in the terrain label on a map (with the dominant texture adjacent to the surficial material type). See Table: Terrain Texture Codes.		a b c d e g h k m p r s u x y z			Ttex_1b	1	1	C
13	Surficial Material Texture 1, Component 1	The dominant surficial material texture of the first stratum of terrain component 1 (one of up to three codes). Texture is the size, shape and sorting of particles in clastic sediments (or the proportion and degree of decomposition of plant fibre in organic sediments). Texture codes are shown in the order: tertiary, secondary, dominant, in the terrain label on a map (with the dominant texture adjacent to the surficial material type). See Table: Terrain Texture Codes.		a b c d e g h k m p r s u x y z			Ttex_1a	1	1	C
14	Surficial Material of Component 1	A code identifying the geomorphic origin of the surficial material in the first stratum of terrain component 1. See Table: Surficial Material Codes.	Mandatory field.	A C D E F FG I L LG M N R V W WG			Surfm_1	2	2	C
15	Surficial Material Qualifier of Component 1	A code used to specify whether the surficial material of the first stratum of terrain component 1 is currently undergoing formation or not. The assumed (default) status is not recorded. See Table: Surficial Material and Geomorphological Process Qualifier Codes and Surficial Material Terms and Symbols.	Only entered if the status of activity is contrary to the assumed state defined for each material.	A G I			Surfm_Q1	1	1	C
16	Surficial Material Subtype of Component 1	A project-specific code for the subtype of the surficial material in the first stratum of terrain component 1 . A surficial material subtype is used when its characteristics cannot be adequately represented by standard terrain classes. For example, basal till. See Table: Surficial Material Subtype.	Subtypes must be defined in the project comments field PROJ_COM. Detailed descriptions can be included in the project report,	1-9			Surfm_St1	1	1	I

Field Number	Field Long Name	Field Description	Data entry instructions	Allowable Codes	New Field(Y) Renamed(R)	COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE
17	Surface Expression of Component 1	The surface expressions for the first stratum of surficial material in terrain component 1 . A series of 1-3 lowercase letter codes used in combination to describe the three-dimensional shape of the surficial material. The first code is the dominant surface expression. See Table: Surficial Expression Codes.		a b c d f h j k m p r s t u v w x			Surf_E1	3	3	C
18	'Surface Expression 1 of Component 1	The dominant surface expression for the first stratum of surficial material in terrain component 1 (one of up to three codes). Surface expression describes the three-dimensional shape of the surficial material. See Table: Surficial Expression Codes.		a b c d f h j k m p r s t u v w x			Surf_E1a	1	1	C
19	'Surface Expression 2 of Component 1	The second surface expression for the first stratum of surficial material in terrain component 1 (one of up to three codes). Surface expression describes the three-dimensional shape of the surficial material. See Table: Surficial Expression Codes.		a b c d f h j k m p r s t u v w x			Surf_E1b	1	1	C
20	'Surface Expression 3 of Component 1	The third surface expression for the first stratum of surficial material in terrain component 1 (one of up to three codes). Surface expression describes the three-dimensional shape of the surficial material. See Table: Surficial Expression Codes.		a b c d f h j k m p r s t u v w x			Surf_E1c	1	1	C
21	Bedrock Type of Component 1	The type of bedrock in the terrain component. (This is only applicable where surficial material is of origin type `R'). See Table: Bedrock Classification Codes. The intent of using the bedrock code is to provide auxiliary information, to help qualify texture and/or terrain stability information. It is not intended to provide bedrock stratigraphy.		kf km kc kz kd kh ks kg ka kn kb uf um uc zl md sh ss gk ak cg bk pk pu tv ls do gy li ba ok oc ma lg co ia ii ib sy gr qm gd qd di qg gb py pd du ea ei eb ep tr rh da an qb bs la tu vb ag ff fm fc sl ph sc gn gg dg mi nf nm nc nk ar sp gl qt hf am hb mb dm sm			Bedrock_1	2	2	C

Field Number	Field Long Name	Field Description	Data entry instructions	Allowable Codes	New Field(Y) Renamed(R)	COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE
22	Subsurficial Material Texture of Component 1	The surficial material texture of the second stratum of terrain component 1 (represented by 1-3 codes). Texture is the size, shape and sorting of particles in clastic sediments (or the proportion and degree of decomposition of plant fibre in organic sediments). Texture codes are shown in the order: tertiary, secondary, dominant, in the terrain label on a map (with the dominant texture adjacent to the surficial material type). See Table: Terrain Texture Codes.		a b c d e g h k m p r s u x y z			Sttex_1	3	3	C
23	Subsurficial Material Texture 3, Component 1	The tertiary surficial material texture of the second stratum of terrain component 1 (one of up to three codes). Texture is the size, shape and sorting of particles in clastic sediments (or the proportion and degree of decomposition of plant fibre in organic sediments). Texture codes are shown in the order: tertiary, secondary, dominant, in the terrain label on a map (with the dominant texture adjacent to the surficial material type). See Table: Terrain Texture Codes.		a b c d e g h k m p r s u x y z			Sttex_1c	1	1	C
24	Subsurficial Material Texture 2, Component 1	The secondary surficial material texture of the second stratum of terrain component 1 (one of up to three codes). Texture is the size, shape and sorting of particles in clastic sediments (or the proportion and degree of decomposition of plant fibre in organic sediments). Texture codes are shown in the order: tertiary, secondary, dominant, in the terrain label on a map (with the dominant texture adjacent to the surficial material type). See Table: Terrain Texture Codes.		a b c d e g h k m p r s u x y z			Sttex_1b	1	1	C
25	Subsurficial Material Texture 1, Component 1	The dominant surficial material texture of the second stratum of terrain component 1 (one of up to three codes). Texture is the size, shape and sorting of particles in clastic sediments (or the proportion and degree of decomposition of plant fibre in organic sediments). Texture codes are shown in the order: tertiary, secondary, dominant, in the terrain label on a map (with the dominant texture adjacent to the surficial material type). See Table: Terrain Texture Codes.		a b c d e g h k m p r s u x y z			Sttex_1a	1	1	C
26	Subsurficial Material of Component 1	A code identifying the geomorphic origin of the surficial material in the second stratum of terrain component 1. See Table: Surficial Material Codes.		A C D E F FG I L LG M N R V W WG			Ssurfm_1	2	2	C

Field Number	Field Long Name	Field Description	Data entry instructions	Allowable Codes	New Field(Y) Renamed(R)	COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE
27	Subsurficial Material Qualifier of Component 1	A code used to specify whether the surficial material of the second stratum of terrain component 1 is currently undergoing formation or not. The assumed (default) status is not recorded. See Table: Surficial Material and Geomorphological Process Qualifier Codes and Surficial Material Terms and Symbols.	Only entered if the status of activity is contrary to the assumed state defined for each material.	A G I			Ssurfm_Q1	1	1	C
28	Subsurficial Material Subtype of Component 1	A project-specific code for the subtype of the surficial material in the second stratum of terrain component 1 . A surficial material subtype is used when its characteristics cannot be adequately represented by standard terrain classes. For example, basal till. See Table: Surficial Material Subtype.	Subtypes must be defined in the project comments field PROJ_COM. Detailed descriptions can be included in the project report,	1-9			Ssurfm_St1	1	1	I
29	Subsurface Expression of Component 1	The surface expressions for the second stratum of surficial material in terrain component 1 . A series of 1-3 lowercase letter codes used in combination to describe the three-dimensional shape of the surficial material. The first code is the dominant surface expression. See Table: Surficial Expression Codes.		a b c d f h j k m p r s t u v w x			Ssurf_E1	3	3	C
30	Subsurface Expression 1 of Component 1	The dominant surface expression for the second stratum of surficial material in terrain component 1 (one of up to three codes). Surface expression describes the three-dimensional shape of the surficial material. See Table: Surficial Expression Codes.		a b c d f h j k m p r s t u v w x			Ssurf_E1a	1	1	C
31	Subsurface Expression 2 of Component 1	The second surface expression for the second stratum of surficial material in terrain component 1 (one of up to three codes). Surface expression describes the three-dimensional shape of the surficial material. See Table: Surficial Expression Codes.		a b c d f h j k m p r s t u v w x			Ssurf_E1b	1	1	C
32	Subsurface Expression 3 of Component 1	The third surface expression for the second stratum of surficial material in terrain component 1 (one of up to three codes). Surface expression describes the three-dimensional shape of the surficial material. See Table: Surficial Expression Codes.		a b c d f h j k m p r s t u v w x			Ssurf_E1c	1	1	C

Field Number	Field Long Name	Field Description	Data entry instructions	Allowable Codes	New Field(Y) Renamed(R)	COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE
33	Sub-Subsurficial Material Texture of Component 1	The surficial material texture of the third stratum of terrain component 1 (represented by 1-3 codes). Texture is the size, shape and sorting of particles in clastic sediments (or the proportion and degree of decomposition of plant fibre in organic sediments). Texture codes are shown in the order: tertiary, secondary, dominant, in the terrain label on a map (with the dominant texture adjacent to the surficial material type). See Table: Terrain Texture Codes.		a b c d e g h k m p r s u x y z			Tttex_1	3	3	C
34	Subsurficial Material Texture 3, Component 1	The tertiary surficial material texture of the third stratum of terrain component 1 (one of up to three codes). Texture is the size, shape and sorting of particles in clastic sediments (or the proportion and degree of decomposition of plant fibre in organic sediments). See Table: Terrain Texture Codes.	Texture codes are shown in the order: tertiary, secondary, dominant, in the terrain label on a map (with the dominant texture adjacent to the surficial material type).	a b c d e g h k m p r s u x y z	Y		Tttex_1c	1	1	C
35	Sub-Subsurficial Material Texture 2, Component 1	The second surficial material texture of the third stratum of terrain component 1 (one of up to three codes). Texture is the size, shape and sorting of particles in clastic sediments (or the proportion and degree of decomposition of plant fibre in organic sediments). See Table: Terrain Texture Codes.	Texture codes are shown in the order: tertiary, secondary, dominant, in the terrain label on a map (with the dominant texture adjacent to the surficial material type).	a b c d e g h k m p r s u x y z	Y		Tttex_1b	1	1	C
36	Sub-Subsurficial Material Texture 1, Component 1	The dominant surficial material texture of the third stratum of terrain component 1 (one of up to three codes). Texture is the size, shape and sorting of particles in clastic sediments (or the proportion and degree of decomposition of plant fibre in organic sediments). See Table: Terrain Texture Codes.	Texture codes are shown in the order: tertiary, secondary, dominant, in the terrain label on a map (with the dominant texture adjacent to the surficial material type).	a b c d e g h k m p r s u x y z	Y		Tttex_1a	1	1	C
37	Sub-Subsurficial Material of Component 1	A code identifying the geomorphic origin of the surficial material in the third stratum of terrain component 1. See Table: Surficial Material Codes.		A C D E F FG I L LG M N R V W WG			Tsurfm_1	2	2	C
38	Sub-Subsurficial Material Qualifier of Component 1	A code used to specify whether the surficial material of the third stratum of terrain component 1 is currently undergoing formation or not. The assumed (default) status is not recorded. See Table: Surficial Material and Geomorphological Process Qualifier Codes and Surficial Material Terms and Symbols.	Only entered if the status of activity is contrary to the assumed state defined for each material.	A G I			Tsurfm_Q1	1	1	C

Field Number	Field Long Name	Field Description	Data entry instructions	Allowable Codes	New Field(Y) Renamed(R)	COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE
39	Sub-Subsurficial Material Subtype of Component 1	A project-specific code for the subtype of the surficial material in the second stratum of terrain component 1 . A surficial material subtype is used when its characteristics cannot be adequately represented by standard terrain classes. For example, basal till. See Table: Surficial Material Subtype.	Subtypes must be defined in the project comments field PROJ_COM. Detailed descriptions can be included in the project report,	1-9			Tsurfm_St1	1	1	I
40	Sub-Subsurface Expression of Component 1	The surface expressions for the third stratum of surficial material in terrain component 1 . A series of 1-3 lowercase letter codes used in combination to describe the three-dimensional shape of the surficial material. The first code is the dominant surface expression. See Table: Surficial Expression Codes.		a b c d f h j k m p r s t u v w x			Tsurf_E1	3	3	C
41	Sub-Subsurface Expression 1 of Component 1	The dominant surface expression for the third stratum of surficial material in terrain component 1 (one of up to three codes). Surface expression describes the three-dimensional shape of the surficial material. See Table: Surficial Expression Codes.		a b c d f h j k m p r s t u v w x	Y		Tsurf_E1a	1	1	C
42	Sub-Subsurface Expression 2 of Component 1	The second surface expression for the third stratum of surficial material in terrain component 1 (one of up to three codes). Surface expression describes the three-dimensional shape of the surficial material. See Table: Surficial Expression Codes.		a b c d f h j k m p r s t u v w x	Y		Tsurf_E1b	1	1	C
43	Sub-Subsurface Expression 3 of Component 1	The third surface expression for the third stratum of surficial material in terrain component 1 (one of up to three codes). Surface expression describes the three-dimensional shape of the surficial material. See Table: Surficial Expression Codes.		a b c d f h j k m p r s t u v w x	Y		Tsurf_E1c	1	1	C
44	Relation of Component 1 and 2	A general indicator of the relative areal proportions of the first and second terrain components within the current polygon. (Note: These proportional indicators are commonly used for terrain stability mapping in place of deciles). See Table: Component Relation Delimiters Codes.		/ . //			Comrel1_2	2	2	C
		REPEAT AS ABOVE FOR COMPONENT 2 AND COMPONENT 3								
118	1st Geomorphological Process Class	The sole or most significant geomorphological process affecting the terrain polygon. See Table: Geomorphological Process Codes.		A B C D E F H I J K L M N P R S U V W X Z			Geop_1	1	1	C

Field Number	Field Long Name	Field Description	Data entry instructions	Allowable Codes	New Field(Y) Renamed(R)	COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE
119	1st Process Qualifier	A code used to specify whether the first geomorphologic process of the terrain polygon is currently active or inactive. See Table: Surficial Material and Geomorphological Process Qualifier Codes.	Only entered if the status of activity is contrary to the assumed state defined for each process. See Table: Geomorphological Process Terms and Symbols, Column: Assumed Status of Geological Process.	A I			Geop_Q1	1	1	C
120	1st Process Subtype	A project-specific numeric code used to further specify the first geomorphological process within the current terrain polygon. Project specific subtypes of the standard geomorphological processes may be established to distinguish characteristics that cannot be adequately represented by the standard process classes alone. These subtypes should be described in the terrain legend. See Table: Geomorphological Process Subtype.	Subtypes must be defined in the project comments field PROJ_COM. Detailed descriptions can be included in the project report,	1-9			Geop_St1	1	1	I
121	1st Process Initiation Zone Indicator	A symbol that indicates that the polygon is an initiation zone for one or more of the subclasses of the first geomorphological process .	2005 - the initiation zone indicator has been split out from the other subtypes to facilitate sorting, querying and theming the data. This also allows for 3 subtypes to be used in addition to the ".	"	Y		Geop_InZ1	1	1	C
122	1st Process Subclass	The subclass modifiers for the first geomorphological process , used to further describe the process (represented by 1-3 codes). See Tables: Mass Movement Process Subclass Codes, Avalanche Process Subclass Codes, Fluvial Process Subclass Codes and Permafrost Process Subclass Codes.		a b c d e f g j k l m o p q r s t u w x			Geop_Scm1	3	3	C
123	1st Process Initiation Zone Indicator for Subclass 1	A symbol that indicates that the polygon is an initiation zone for the first subclasses of the first geomorphological process.	This field allows for the indication of initiation zone by subclass. It will make it easier for mappers to distinguish which mass movement processes represent initiation zone and which are transport or runout zone in the terrain polygon.	^	Y		Geop_InZ1a	1	1	C

Field Number	Field Long Name	Field Description	Data entry instructions	Allowable Codes	New Field(Y) Renamed(R)	COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE
124	1st Process Subclass 1	The dominant subclass modifier for the first geomorphological process, used to further describe the process (one of up to three codes). See Tables: Mass Movement Process Subclass Codes, Avalanche Process Subclass Codes, Fluvial Process Subclass Codes and Permafrost Process Subclass Codes.		a b c d e f g j k l m o p q r s t u w x			Geop_Scm1a	1	1	C
125	1st Process Initiation Zone Indicator for Subclass 2	A symbol that indicates that the polygon is an initiation zone for the second subclasses of the first geomorphological process.	This field allows for the indication of initiation zone by subclass. It will make it easier for mappers to distinguish which mass movement processes represent initiation zone and which are transport or runout zone in the terrain polygon.	^	Y		Geop_InZ1b	1	1	C
126	1st Process Subclass 2	The second subclass modifier for the first geomorphological process, used to further describe the process (one of up to three codes). See Tables: Mass Movement Process Subclass Codes, Avalanche Process Subclass Codes, Fluvial Process Subclass Codes and Permafrost Process Subclass Codes.		a b c d e f g j k l m o p q r s t u w x			Geop_Scm1b	1	1	C
127	1st Process Initiation Zone Indicator for Subclass 3	A symbol that indicates that the polygon is an initiation zone for the third subclasses of the first geomorphological process.	This field allows for the indication of initiation zone by subclass. It will make it easier for mappers to distinguish which mass movement processes represent initiation zone and which are transport or runout zone in the terrain polygon.	^	Y		Geop_InZ1c	1	1	C
128	1st Process Subclass 3	The third subclass modifier for the first geomorphological process, used to further describe the process (one of up to three codes). See Tables: Mass Movement Process Subclass Codes, Avalanche Process Subclass Codes, Fluvial Process Subclass Codes and Permafrost Process Subclass Codes.		a b c d e f g j k l m o p q r s t u w x			Geop_Scm1c	1	1	C
129	2nd Geomorphological Process Class	An uppercase letter representing the second most significant geomorphological process to affect terrain within the current polygon. See Table: Geomorphological Process Subtype.		A B C D E F H I J K L M N P R S U V W X Z			Geop_2	1	1	C

Field Number	Field Long Name	Field Description	Data entry instructions	Allowable Codes	New Field(Y) Renamed(R)	COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE
130	2nd Process Qualifier	A code used to specify whether the second geomorphologic process of the terrain polygon is currently active or inactive. See Table: Surficial Material and Geomorphological Process Qualifier Codes.	Only entered if the status of activity is contrary to the assumed state defined for each process. See Table: Geomorphological Process Terms and Symbols, Column: Assumed Status of Geological Process.	A I			Geop_Q2	1	1	C
131	2nd Process Subtype	A project-specific numeric code used to further specify the second geomorphological process within the current terrain polygon. Project specific subtypes of the standard geomorphological processes may be established to distinguish characteristics that cannot be adequately represented by the standard process classes alone. These subtypes should be described in the terrain legend. See Table: Geomorphological Process Subtype.	Subtypes must be defined in the project comments field PROJ_COM. Detailed descriptions can be included in the project report,	1-9			Geop_St2	1	1	I
132	2nd Process Initiation Zone Indicator	A symbol that indicates that the polygon is an initiation zone for one or more of the subclasses of the second geomorphological process .	2005 - the initiation zone indicator has been split out from the other subtypes to facilitate sorting, querying and theming the data. This also allows for 3 subtypes to be used in addition to the ".	"	Y		Geop_InZ2	1	1	C
133	2nd Process Subclass	1-3 standard codes attached to the second geomorphological process within the current terrain polygon. Subclass modifiers are used to further describe the process. They are usually mapped at a more detailed level. New subclass modifiers have been added to the Terrain Classification Manual, Howes and Kenk, Version 2.0. See Tables: Mass Movement Process Subclass Codes, Avalanche Process Subclass Codes, Fluvial Process Subclass Codes and Permafrost Process Subclass Codes.		a b c d e f g j k l m o p q r s t u w x			Geop_ Scm2	3	3	C
134	2nd Process Initiation Zone Indicator for Subclass 1	A symbol that indicates that the polygon is an initiation zone for the first subclasses of the second geomorphological process.	This field allows for the indication of initiation zone by subclass. It will make it easier for mappers to distinguish which mass movement processes represent initiation zone and which are transport or runout zone in the terrain polygon.	^	Y		Geop_InZ2a	1	1	C

Field Number	Field Long Name	Field Description	Data entry instructions	Allowable Codes	New Field(Y) Renamed(R)	COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE
135	2nd Process Subclass 1	The 1st of up to 3 codes describing the second geomorphological process within the current terrain polygon. Subclass modifiers are used to further describe the process. They are usually mapped at a more detailed level. See Tables: Mass Movement Process Subclass Codes, Avalanche Process Subclass Codes, Fluvial Process Subclass Codes and Permafrost Process Subclass Codes		a b c d e f g j k l m o p q r s t u w x			Geop_Scm2a	1	1	C
136	2nd Process Initiation Zone Indicator for Subclass 2	A symbol that indicates that the polygon is an initiation zone for the second subclasses of the second geomorphological process.	This field allows for the indication of initiation zone by subclass. It will make it easier for mappers to distinguish which mass movement processes represent initiation zone and which are transport or runout zone in the terrain polygon.	^	Y		Geop_InZ2b	1	1	C
137	2nd Process Subclass 2	The 2nd of up to 3 codes describing the second geomorphological process within the current terrain polygon. Subclass modifiers are used to further describe the process. They are usually mapped at a more detailed level. See Tables: Mass Movement Process Subclass Codes, Avalanche Process Subclass Codes, Fluvial Process Subclass Codes and Permafrost Process Subclass Codes		a b c d e f g j k l m o p q r s t u w x			Geop_Scm2b	1	1	C
138	2nd Process Initiation Zone Indicator for Subclass 3	A symbol that indicates that the polygon is an initiation zone for the third subclasses of the second geomorphological process.	This field allows for the indication of initiation zone by subclass. It will make it easier for mappers to distinguish which mass movement processes represent initiation zone and which are transport or runout zone in the terrain polygon.	^	Y		Geop_InZ2c	1	1	C

Field Number	Field Long Name	Field Description	Data entry instructions	Allowable Codes	New Field(Y) Renamed(R)	COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE
139	2nd Process Subclass 3	The 3rd of up to 3 codes describing the second geomorphological process within the current terrain polygon. Subclass modifiers are used to further describe the process. They are usually mapped at a more detailed level. See Tables: Mass Movement Process Subclass Codes, Avalanche Process Subclass Codes, Fluvial Process Subclass Codes and Permafrost Process Subclass Codes		a b c d e f g j k l m o p q r s t u w x			Geop_Scm2c	1	1	C
140	3rd Geomorphological Process Class	An uppercase letter representing the third most significant geomorphological process to affect terrain within the current polygon. See Table: Geomorphological Process Subtype.		A B C D E F H I J K L M N P R S U V W X Z			Geop_3	1	1	C
141	3rd Process Qualifier	A code used to specify whether the third geomorphologic process of the terrain polygon is currently active or inactive. See Table: Surficial Material and Geomorphological Process Qualifier Codes.	Only entered if the status of activity is contrary to the assumed state defined for each process. See Table: Geomorphological Process Terms and Symbols, Column: Assumed Status of Geological Process.	A I			Geop_Q3	1	1	C
142	3rd Process Subtype	A project-specific numeric code used to further specify the third geomorphological process within the current terrain polygon. Project specific subtypes of the standard geomorphological processes may be established to distinguish characteristics that cannot be adequately represented by the standard process classes alone. These subtypes should be described in the terrain legend. See Table: Geomorphological Process Subtype.	Subtypes must be defined in the project comments field PROJ_COM. Detailed descriptions can be included in the project report,	1-9			Geop_St3	1	1	I
143	3rd Process Initiation Zone Indicator	A symbol that indicates that the polygon is an initiation zone for one or more of the subclasses of the third geomorphological process .	2005 - the initiation zone indicator has been split out from the other subtypes to facilitate sorting, querying and theming the data. This also allows for 3 subtypes to be used in addition to the ".	"	Y		Geop_InZ3	1	1	C

Field Number	Field Long Name	Field Description	Data entry instructions	Allowable Codes	New Field(Y) Renamed(R)	COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE
144	3rd Process Subclass	1-3 standard codes attached to the third geomorphological process within the current terrain polygon. Subclass modifiers are used to further describe the process. They are usually mapped at a more detailed level. New subclass modifiers have been added to the Terrain Classification Manual, Howes and Kenk, Version 2.0. See Tables: Mass Movement Process Subclass Codes, Avalanche Process Subclass Codes, Fluvial Process Subclass Codes and Permafrost Process Subclass Codes.		a b c d e f g j k l m o p q r s t u w x			Geop_ Scm3	3	3	C
145	3rdProcess Initiation Zone Indicator for Subclass 1	A symbol that indicates that the polygon is an initiation zone for the first subclasses of the third geomorphological process.	This field allows for the indication of initiation zone by subclass. It will make it easier for mappers to distinguish which mass movement processes represent initiation zone and which are transport or runout zone in the terrain polygon.	^	Y		Geop_InZ3a	1	1	C
146	3rd Process Subclass 1	The 1st of up to 3 codes describing the third geomorphological process within the current terrain polygon. Subclass modifiers are used to further describe the process. They are usually mapped at a more detailed level. See Tables: Mass Movement Process Subclass Codes, Avalanche Process Subclass Codes, Fluvial Process Subclass Codes and Permafrost Process Subclass Codes		a b c d e f g j k l m o p q r s t u w x			Geop_Scm3a	1	1	C
147	3rd Process Initiation Zone Indicator for Subclass 2	A symbol that indicates that the polygon is an initiation zone for the second subclasses of the third geomorphological process.	This field allows for the indication of initiation zone by subclass. It will make it easier for mappers to distinguish which mass movement processes represent initiation zone and which are transport or runout zone in the terrain polygon.	^	Y		Geop_InZ3b	1	1	C

Field Number	Field Long Name	Field Description	Data entry instructions	Allowable Codes	New Field(Y) Renamed(R)	COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE
148	3rd Process Subclass 2	The 2nd of up to 3 codes describing the third geomorphological process within the current terrain polygon. Subclass modifiers are used to further describe the process. They are usually mapped at a more detailed level. See Tables: Mass Movement Process Subclass Codes, Avalanche Process Subclass Codes, Fluvial Process Subclass Codes and Permafrost Process Subclass Codes		a b c d e f g j k l m o p q r s t u w x			Geop_Scm3b	1	1	C
149	3rd Process Initiation Zone Indicator for Subclass 3	A symbol that indicates that the polygon is an initiation zone for the third subclasses of the third geomorphological process.	This field allows for the indication of initiation zone by subclass. It will make it easier for mappers to distinguish which mass movement processes represent initiation zone and which are transport or runout zone in the terrain polygon.	^	Y		Geop_InZ3c	1	1	C
150	3rd Process Subclass 3	The 3rd of up to 3 codes describing the third geomorphological process within the current terrain polygon. Subclass modifiers are used to further describe the process. They are usually mapped at a more detailed level. See Tables: Mass Movement Process Subclass Codes, Avalanche Process Subclass Codes, Fluvial Process Subclass Codes and Permafrost Process Subclass Codes		a b c d e f g j k l m o p q r s t u w x			Geop_Scm3c	1	1	C
151	1st Soil Drainage Class of Polygon	The dominant soil drainage class the terrain polygon. Soil drainage refers to the rapidity and extent of water removal from the soil in relation to additions; this refers to the annual moisture status of the soil, not just the permeability. See Table: Soil Drainage Codes.		v p i m w r x			Drain_1	1	1	C
152	Soil Drainage Separator of Polygon	Symbols used, where a terrain polygon includes more then one drainage class, to indicate the relationship between the two classes (i.e. two **discrete** classes, a range of classes, or the relative proportion of the polygon occupied by each class). See Table: Drainage Separator Codes.		, - / //			Drain_Sep	2	2	C
153	2nd Soil Drainage Class of Polygon	The secondary soil drainage class the terrain polygon. Soil drainage refers to the rapidity and extent of water removal from the soil in relation to additions; this refers to the annual moisture status of the soil, not just the permeability. See Table: Soil Drainage Codes.		v p i m w r x			Drain_2	1	1	C

Field Number	Field Long Name	Field Description	Data entry instructions	Allowable Codes	New Field(Y) Renamed(R)	COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE
154	Slope: Lower Limit of Dominant Slope Range	The lower limit of the range of slopes (in percent or degrees) within a terrain polygon, or, where a polygon includes distinctly gentler and steeper slopes (e.g., stepped topography), the lower limit of the slope range associated with most of the polygon. See Table: Slope Steepness.	The data entered in percent slope (rise/run*100), e.g., 12% would be entered as 12; Use 999 for vertical. Data entered in degrees use 0 to 90. All values within a project must be entered either in percent or degrees, not both.	0-999			Slpll_1	3	3	I
155	Slope: Upper Limit of Dominant Slope Range	The upper limit of the range of slopes within a terrain polygon (in percent or degrees), or where a polygon includes distinctly gentler and steeper slopes (i.e. stepped topography), the upper limit of the slope range associated with most of the polygon. See Table: Slope Steepness.	The data entered in percent slope (rise/run*100), e.g., 12% would be entered as 12; Use 999 for vertical. Data entered in degrees use 0 to 90. All values within a project must be entered either in percent or degrees, not both.	0-999			Slpul_1	3	3	I
156	Slope: Lower Limit of Subdominant Slope Range	The lower limit of the subdominant slope range (in percent or degrees) for the terrain polygon (e.g., stepped topography). See Table: Slope Steepness.	The data entered in percent slope (rise/run*100), e.g., 12% would be entered as 12; Use 999 for vertical. Data entered in degrees use 0 to 90. All values within a project must be entered either in percent or degrees, not both.	0-999			Slpll_2	3	3	I
157	Slope: Upper Limit of Subdominant Slope Range	The upper limit of the subdominant slope range (in percent or degrees) for the terrain polygon (e.g., stepped topography). See Table: Slope Steepness.	The data entered in percent slope (rise/run*100), e.g., 12% would be entered as 12; Use 999 for vertical. Data entered in degrees use 0 to 90. All values within a project must be entered either in percent or degrees, not both.	0-999			Slpul_2	3	3	I
158	Slope Stability Class	A code representing a class of slope stability of the terrain polygon. See Tables: Terrain Stability Classes - Slope Stability Classes for Detailed Mapping; Classes for Reconnaissance Terrain Stability Mapping. Stability criteria are defined on a project by project basis. Please see the project report for details.	Only one slope stability classification scheme may be used within a project.	I II III IV V U P S			Slpstb_Cls	3	3	C

Field Number	Field Long Name	Field Description	Data entry instructions	Allowable Codes	New Field(Y) Renamed(R)	COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE
159	Slope Stability Qualifier For Roads	A flag indicating class IV terrain where road construction is likely to cause landslides, but harvesting (without roads) is not likely to cause landslides (see Forest Practices Code, 1995, p.9). See Table: Slope Stability Qualifier for Roads.	Submit table of class definitions with project files and include definitions in map legend.	R			Rdstb_Flg	2	2	C
160	Surface Erosion Potential Class of Terrain Polygon	The Surface erosion potential class for the terrain polygon. A class which indicates the likelihood of soil erosion on bare or disturbed soil after logging or road construction (e.g. from ditches or cutbanks). Surface erosion refers to the removal of soil, particle by particle, by surface runoff. It results in sheet erosion and the development of rills and gullies. See Table: Surface Erosion Potential Class Codes.	Submit table of class definitions with project files and include definitions in map legend.	VL L M H VH			Sfcero_Pot	2	2	C
161	Landslide Induced Stream Sedimentation Class	A rating class indicating the likelihood of landslide-induced stream sedimentation for the polygon. See Table: Landslide Induced Stream Sediment Class Codes.	Submit table of class definitions with project files and include definitions in map legend.	1-3			Lssed_Cls	3	3	I
162	Surface Erosion Sedimentation Class	A rating class indicating the likelihood of stream sedimentation due to surface erosion. This rating is assigned by the terrain mapper on the basis of air photo interpretation with occasional field confirmation. See Table: Class Codes for Potential Sediment Delivery From Surface Erosion Sources.	Submit table of class definitions with project files and include definitions in map legend.	vl l m h vh			Sesed_Cls	2	2	C
163	Bouldery or Blocky Substrate of Polygon	A flag indicating that the ground within the current polygon is covered by sufficiently large clasts to adversely affect soil development and forest growth. This area will present severe problems for restocking after logging due to absence of topsoil. See Table: Bouldery or Blocky substrate.		b			Bbsub_Flg	1	1	C
164	Mean Aspect of Polygon	The general direction in which the current polygon is facing, measured to the nearest degree of azimuth. See Table: Mean Aspect.		0-360			Mean_Asp	3	3	I
165	Ea Avalanche Hazard Flag	A flag indicating that timber removal from the current polygon may result in increased avalanche hazard to sites downslope. This designation is from the BC Forest Service Environmentally Sensitive Mapping Codes in the Historical Forest Cover Mapping System. See Table: 'Ea' (Forest Service) Snow Avalanche Hazard Flag.		a			Avlhaz_Flg	1	1	C
166	Polygons of Relatively Low Reliability	A flag indicating that for reasons such as cloud cover on an air photo the current polygon has been mapped with significantly less reliability than adjacent polygons. See Table: Polygons of Relatively Low Reliability Flag.		L			Lowrel_Flg	1	1	C

Field Number	Field Long Name	Field Description	Data entry instructions	Allowable Codes	New Field(Y) Renamed(R)	COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE
167	Field Check of Polygon	A class which describes the level of field checking done on the current polygon (detailed/reconnaissance/visual). See Table: Field Check Class.	Renamed from 'Fldchktp'	d r v	R		SMPL_TYPE	1	1	C
168	Field Site Number	Identifies the field site number (s) in the polygon (unique within the project).	Use a comma to separate more then one field site in one polygon.		Y		fldnum	20	20	C
169	Polygon Comments	This field may be used to record any pertinent information regarding the polygon. At all times attempt to use referenced classifications which are well defined and understood in the science, or provide thorough definitions for the user. This project specific data will be stored in flat file format, unless keyword or standard designations are required, then contact the data custodian. The data custodian will keep records of new or additional classifications, which are commonly used for project specific applications.	Renamed from 'Comments'. Maximum field length is an ArcInfo requirement.		R		Poly_com	254	254	C
170	1st Soil Drainage Class of Terrain Component 1	The dominant soil drainage class for terrain component 1 of the current terrain polygon. Soil drainage refers to the rapidity and extent of water removal from the soil in relation to additions; this refers to the annual moisture status of the soil, not just the permeability. See Table: Soil Drainage Codes.		x r w m i p v	Y		Drain_1a	1	1	C
171	Soil Drainage Separator of Terrain Component 1	Symbols used, where **the terrain component** includes more then one drainage class, to indicate the relationship between the two classes (i.e. two **discrete** classes, a range of classes, or the relative proportion of the polygon occupied by each class). See Table: Drainage Separator Codes.		, - / //	Y		Drain_Sep1	2	2	C
172	2nd Soil Drainage Class of Terrain Component 1	The secondary soil drainage class for terrain component 1 of the current terrain polygon. Soil drainage refers to the rapidity and extent of water removal from the soil in relation to additions; this refers to the annual moisture status of the soil, not just the permeability. See Table: Soil Drainage Codes.		x r w m i p v	Y		Drain_1b	1	1	C
173	1st Soil Drainage Class of Terrain Component 2	The dominant soil drainage class for terrain component 2 of the current terrain polygon. Soil drainage refers to the rapidity and extent of water removal from the soil in relation to additions; this refers to the annual moisture status of the soil, not just the permeability. See Table: Soil Drainage Codes.		x r w m i p v	Y		Drain_2a	1	1	C

Field Number	Field Long Name	Field Description	Data entry instructions	Allowable Codes	New Field(Y) Renamed(R)	COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE
174	Soil Drainage Separator of Terrain Component 2	Symbols used, where **the terrain component** includes more then one drainage class, to indicate the relationship between the two classes (i.e. two **discrete** classes, a range of classes, or the relative proportion of the polygon occupied by each class). See Table: Drainage Separator Codes.		, - / //	Y		Drain_Sep2	2	2	C
175	2nd Soil Drainage Class of Terrain Component 2	The secondary soil drainage class for terrain component 2 of the current terrain polygon. Soil drainage refers to the rapidity and extent of water removal from the soil in relation to additions; this refers to the annual moisture status of the soil, not just the permeability. See Table: Soil Drainage Codes.		x r w m i p v	Y		Drain_2b	1	1	C
176	1st Soil Drainage Class of Terrain Component 3	The dominant soil drainage class for terrain component 3 of the current terrain polygon. Soil drainage refers to the rapidity and extent of water removal from the soil in relation to additions; this refers to the annual moisture status of the soil, not just the permeability. See Table: Soil Drainage Codes.		x r w m i p v	Y		Drain_3a	1	1	C
177	Soil Drainage Separator of Terrain Component 3	Symbols used, where **the terrain component** includes more then one drainage class, to indicate the relationship between the two classes (i.e. two **discrete** classes, a range of classes, or the relative proportion of the polygon occupied by each class). See Table: Drainage Separator Codes.		, - / //	Y		Drain_Sep3	2	2	C
178	2nd Soil Drainage Class of Terrain Component 3	The secondary soil drainage class for terrain component 3 of the current terrain polygon. Soil drainage refers to the rapidity and extent of water removal from the soil in relation to additions; this refers to the annual moisture status of the soil, not just the permeability. See Table: Soil Drainage Codes.		x r w m i p v	Y		Drain_3b	1	1	C
179	Slope Stability Class of Terrain Component 1	A code representing a class of slope stability of terrain component 1. See Tables: Terrain Stability Classes - Slope Stability Classes for Detailed Mapping.	Only one slope stability classification scheme may be used within a project.	I II III IV V U P S	Y		Slpstb_Cl1	3	3	C
180	Slope Stability Class of Terrain Component 2	A code representing a class of slope stability of terrain component 2. See Tables: Terrain Stability Classes - Slope Stability Classes for Detailed Mapping.	Only one slope stability classification scheme may be used within a project.	I II III IV V U P S	Y		Slpstb_Cl2	3	3	C
181	Slope Stability Class of Terrain Component 3	A code representing a class of slope stability of terrain component 3. See Tables: Terrain Stability Classes - Slope Stability Classes for Detailed Mapping.	Only one slope stability classification scheme may be used within a project.	I II III IV V U P S	Y		Slpstb_Cl3	3	3	C

Field Number	Field Long Name	Field Description	Data entry instructions	Allowable Codes	New Field(Y) Renamed(R)	COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE
182	Surface Erosion Potential Class of Terrain Component 1	Surface erosion potential class of terrain component 1. A class which indicates the likelihood of soil erosion on bare or disturbed soil after logging or road construction (e.g. from ditches or cutbanks). Surface erosion refers to the removal of soil, particle by particle, by surface runoff. It results in sheet erosion and the development of rills and gullies. See Table: Surface Erosion Potential Class Codes.	Submit table of class definitions with project files and include definitions in map legend.	VL L M H VH	Y		Sfcero_Pt1	3	3	C
183	Surface Erosion Potential Class of Terrain Component 2	Surface erosion potential class of terrain component 2. A class which indicates the likelihood of soil erosion on bare or disturbed soil after logging or road construction (e.g. from ditches or cutbanks). Surface erosion refers to the removal of soil, particle by particle, by surface runoff. It results in sheet erosion and the development of rills and gullies. See Table: Surface Erosion Potential Class Codes.	Submit table of class definitions with project files and include definitions in map legend.	VL L M H VH	Y		Sfcero_Pt2	3	3	C
184	Surface Erosion Potential Class of Terrain Component 3	Surface erosion potential class of terrain component 3. A class which indicates the likelihood of soil erosion on bare or disturbed soil after logging or road construction (e.g. from ditches or cutbanks). Surface erosion refers to the removal of soil, particle by particle, by surface runoff. It results in sheet erosion and the development of rills and gullies. See Table: Surface Erosion Potential Class Codes.	Submit table of class definitions with project files and include definitions in map legend.	VL L M H VH	Y		Sfcero_Pt3	3	3	C
185	Generalized Texture Class of Terrain Component 1	The generalized texture class of the first stratum of surficial material for Terrain Component 1.	Codes include: f - fine, m - medium, c - coarse, and v - very coarse (coarse fragments comprise 90% or more of the soil mass (by volume), with too little fine earth (<10% by volume) to fill interstices larger than 1 mm). The first three classes are defined in table: Site Modifiers for Atypical Conditions, *Describing Terrestrial Ecosystems in the field, 1998.* Used for modelling (e.g., PEM).	f m c v	Y		Ttex_gen1	1	1	C

Field Number	Field Long Name	Field Description	Data entry instructions	Allowable Codes	New Field(Y) Renamed(R)	COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE
186	Generalized Texture Class of Terrain Component 2	The generalized texture class of the first stratum of surficial material for Terrain Component 2.	Codes include: f - fine, m - medium, c - coarse, and v - very coarse (coarse fragments comprise 90% or more of the soil mass (by volume), with too little fine earth (<10% by volume) to fill interstices larger than 1 mm). The first three classes are defined in table: Site Modifiers for Atypical Conditions, *Describing Terrestrial Ecosystems in the field, 1998*. Used for modelling (e.g., PEM).	f m c v	Y		Ttex_gen2	1	1	C
187	Generalized Texture Class of Terrain Component 3	The generalized texture class of the first stratum of surficial material for Terrain Component 3.	Codes include: f - fine, m - medium, c - coarse, and v - very coarse (coarse fragments comprise 90% or more of the soil mass (by volume), with too little fine earth (<10% by volume) to fill interstices larger than 1 mm). The first three classes are defined in table: Site Modifiers for Atypical Conditions, *Describing Terrestrial Ecosystems in the field, 1998*. Used for modelling (e.g., PEM).	f m c v	Y		Ttex_gen3	1	1	C
188	surficial material thickness class of Terrain Component 1	Identifies the interpreted thickness of the surficial material (s) in terrain component 1.	A - very thin (<20cm), B - thin (20-100cm), C - thick (101-300 cm), D - very thick (>300 cm), N - not applicable. Used for modeling (e.g., PEM).	A B C D N	Y		ThkCls_1	1	1	C
189	surficial material thickness class of Terrain Component 2	Identifies the interpreted thickness of the surficial material (s) in terrain component 2.	A - very thin (<20cm), B - thin (20-100cm), C - thick (101-300 cm), D - very thick (>300 cm), N - not applicable. Used for modeling (e.g., PEM).	A B C D N	Y		ThkCls_2	1	1	C
190	surficial material thickness class of Terrain Component 3	Identifies the interpreted thickness of the surficial material (s) in terrain component 3.	A - very thin (<20cm), B - thin (20-100cm), C - thick (101-300 cm), D - very thick (>300 cm), N - not applicable. Used for modeling (e.g., PEM).	A B C D N	Y		ThkCls_3	1	1	C

Field Number	Field Long Name	Field Description	Data entry instructions	Allowable Codes	New Field(Y) Renamed(R)	COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE
191	Landslide Induced Stream Sedimentation Class of Terrain Component 1	A rating class indicating the likelihood of landslide-induced stream sedimentation for terrain component 1. See Table: Landslide Induced Stream Sediment Class Codes.	Submit table of class definitions with project files and include definitions in map legend.	1-3	Y		Lssed_Cls1	3	3	I
192	Landslide Induced Stream Sedimentation Class of Terrain Component 2	A rating class indicating the likelihood of landslide-induced stream sedimentation for terrain component 2. See Table: Landslide Induced Stream Sediment Class Codes.	Submit table of class definitions with project files and include definitions in map legend.	1-3	Y		Lssed_Cls2	3	3	I
193	Landslide Induced Stream Sedimentation Class of Terrain Component 3	A rating class indicating the likelihood of landslide-induced stream sedimentation for terrain component 3. See Table: Landslide Induced Stream Sediment Class Codes.	Submit table of class definitions with project files and include definitions in map legend.	1-3	Y		Lssed_Cls3	3	3	I
194	Surface Erosion Sedimentation Class	A rating class indicating the likelihood of stream sedimentation due to surface erosion in terrain component 1. This rating is assigned by the terrain mapper on the basis of air photo interpretation with occasional field confirmation. See Table: Class Codes for Potential Sediment Delivery From Surface Erosion Sources.	Submit table of class definitions with project files and include definitions in map legend.	vl l m h vh	Y		Sesed_Cls1	2	2	C
195	Surface Erosion Sedimentation Class	A rating class indicating the likelihood of stream sedimentation due to surface erosion for terrain component 2. This rating is assigned by the terrain mapper on the basis of air photo interpretation with occasional field confirmation. See Table: Class Codes for Potential Sediment Delivery From Surface Erosion Sources.	Submit table of class definitions with project files and include definitions in map legend.	vl l m h vh	Y		Sesed_Cls2	2	2	C
196	Surface Erosion Sedimentation Class	A rating class indicating the likelihood of stream sedimentation due to surface erosion for terrain component 3. This rating is assigned by the terrain mapper on the basis of air photo interpretation with occasional field confirmation. See Table: Class Codes for Potential Sediment Delivery From Surface Erosion Sources.	Submit table of class definitions with project files and include definitions in map legend.	vl l m h vh	Y		Sesed_Cls3	2	2	C

Field Number	Field Long Name	Field Description	Data entry instructions	Allowable Codes	New Field(Y) Renamed(R)	COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE
197	Slope: Lower Limit of Dominant Slope Range of Terrain Component 1	The lower limit of the range of slopes (in percent) within terrain component 1 or, where a component includes distinctly gentler and steeper slopes (e.g., stepped topography), the lower limit of the slope range associated with most of the component. See Table: Slope Steepness.	The data must be entered in percent slope (rise/run*100), e.g., 12% would be entered as 12. Use 999 for vertical.	1-999	Y		Slpll_1a	3	3	I
198	Slope: Upper Limit of Dominant Slope Range of Terrain Component 1	The upper limit of the range of slopes (in percent) within terrain component 1, or where a component includes distinctly gentler and steeper slopes (i.e. stepped topography), the upper limit of the slope range associated with most of the component. See Table: Slope Steepness.	The data must be entered in percent slope (rise/run*100), e.g., 12% would be entered as 12. Use 999 for vertical.	1-999	Y		Slpul_1a	3	3	I
199	Slope: Lower Limit of Subdominant Slope Range of Terrain Component 1	The lower limit of the subdominant slope range (in percent) associated with terrain component 1. See Table: Slope Steepness.	The data must be entered in percent slope (rise/run*100), e.g., 12% would be entered as 12. Use 999 for vertical.	1-999	Y		Slpll_1b	3	3	I
200	Slope: Upper Limit of Subdominant Slope Range of Terrain Component 1	The upper limit of the subdominant slope range (in percent) associated with terrain component 1. See Table: Slope Steepness.	The data must be entered in percent slope (rise/run*100), e.g., 12% would be entered as 12. Use 999 for vertical.	1-999	Y		Slpul_1b	3	3	I
201	Slope: Lower Limit of Dominant Slope Range of Terrain Component 2	The lower limit of the range of slopes (in percent) within terrain component 2 or, where a component includes distinctly gentler and steeper slopes (e.g., stepped topography), the lower limit of the slope range associated with most of the component. See Table: Slope Steepness.	The data must be entered in percent slope (rise/run*100), e.g., 12% would be entered as 12. Use 999 for vertical.	1-999	Y		Slpll_2a	3	3	I
202	Slope: Upper Limit of Dominant Slope Range of Terrain Component 2	The upper limit of the range of slopes (in percent) within terrain component 2, or where a component includes distinctly gentler and steeper slopes (i.e. stepped topography), the upper limit of the slope range associated with most of the component. See Table: Slope Steepness.	The data must be entered in percent slope (rise/run*100), e.g., 12% would be entered as 12. Use 999 for vertical.	1-999	Y		Slpul_2a	3	3	I
203	Slope: Lower Limit of Subdominant Slope Range of Terrain Component 2	The lower limit of the subdominant slope range (in percent) associated with terrain component 2. See Table: Slope Steepness.	The data must be entered in percent slope (rise/run*100), e.g., 12% would be entered as 12. Use 999 for vertical.	1-999	Y		Slpll_2b	3	3	I

Field Number	Field Long Name	Field Description	Data entry instructions	Allowable Codes	New Field(Y) Renamed(R)	COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE
204	Slope: Upper Limit of Subdominant Slope Range of Terrain Component 2	The upper limit of the subdominant slope range (in percent) associated with terrain component 2. See Table: Slope Steepness.	The data must be entered in percent slope (rise/run*100), e.g., 12% would be entered as 12. Use 999 for vertical.	1-999	Y		Slpul_2b	3	3	I
205	Slope: Lower Limit of Dominant Slope Range of Terrain Component 3	The lower limit of the range of slopes (in percent) within terrain component 3, or, where a component includes distinctly gentler and steeper slopes (e.g., stepped topography), the lower limit of the slope range associated with most of the component. See Table: Slope Steepness.	The data must be entered in percent slope (rise/run*100), e.g., 12% would be entered as 12. Use 999 for vertical.	1-999	Y		Slpll_3a	3	3	I
206	Slope: Upper Limit of Dominant Slope Range of Terrain Component 3	The upper limit of the range of slopes (in percent) within terrain component 3, or where a component includes distinctly gentler and steeper slopes (i.e. stepped topography), the upper limit of the slope range associated with most of the component. See Table: Slope Steepness.	The data must be entered in percent slope (rise/run*100), e.g., 12% would be entered as 12. Use 999 for vertical.	1-999	Y		Slpul_3a	3	3	I
207	Slope: Lower Limit of Subdominant Slope Range of Terrain Component 3	The lower limit of the subdominant slope range (in percent) associated with terrain component 3. See Table: Slope Steepness.	The data must be entered in percent slope (rise/run*100), e.g., 12% would be entered as 12. Use 999 for vertical.	1-999	Y		Slpll_3b	3	3	I
208	Slope: Upper Limit of Subdominant Slope Range of Terrain Component 3	The upper limit of the subdominant slope range (in percent) associated with terrain component 3. See Table: Slope Steepness.	The data must be entered in percent slope (rise/run*100), e.g., 12% would be entered as 12. Use 999 for vertical.	1-999	Y		Slpul_3b	3	3	I
209	Business Area Project ID	This field contains a unique project identifier. The project BAPID is used in all .e00 files.	Contact Soilterrain@victoria1.gov.bc.ca for a valid number.	1-99999	Y		BAPID	5	5	I

Terrain Polygon Arcs:

Table 2.3.2.2 outlines the specifications for the output attribute file for the terrain polygon arcs .aat. All fields indicated as mandatory must be filled in.

The following FCODEs are commonly used for terrain polygon arcs:

Feature Code   **Feature Attribute**

FF84555000   Terrain Polygon Boundary (generic)
FF84555110   Terrain Polygon Boundary – well-defined (solid)
FF84555120   Terrain Polygon Boundary – approximate (dashed)
FF84555130   Terrain Polygon Boundary – assumed (dotted)

Table 2.3.2.2 Attribute Table for Terrain Polygon Arcs (Ter.aat/T*BAPID*R.aat)

COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE	N.DEC	ALTERNATE NAME	INDEXED	Mandatory
1	FNODE#	4	5	B	-	-		
5	TNODE#	4	5	B	-	-		
9	LPOLY#	4	5	B	-	-		
13	RPOLY#	4	5	B	-	-		
17	LENGTH	4	12	F	3	-		
21	TER#	4	5	B	-	-		
25	TER-ID	4	5	B	-	-		
29	FCODE	10	10	C	-	-	indexed	M
39	SRC_FCODE	10	10	C	-	-		
49	COMMENT	30	30	C	-	-		
79	BAPID	5	5	I				M

2.3.3   Terrain Point/Line Feature Specifications
(working file: tef.e00; deliverable filename T*BAPID*F.e00)

Terrain features include escarpments, slides, slide headwalls/scarps and many others. See Tables 4-10 and 4-11 in Standard for Digital Terrain Data Capture in British Columbia Version 1 (1998 RIC) (http://ilmbwww.gov.bc.ca/risc/pubs/earthsci/terrain/index.htm), for a list of the majority of the common terrain features and their FCODE.

Terrain Point and Line features/on-site symbols are stored in the **TEF.**e00 coverage. These features must have a feature code (FCODE), and require a source feature code (SRC_FCODE) where applicable. Additional information may be stored in the Comment field.   The .pat table is used to store the values for points and the .aat table is used to store the arc attributes for linear features. Digitizing of directional lines is in the 'downstream' direction.

If these features are assigned a unique identifier, the identifier should be captured in the TEF_tag field.

Note that sample sites belong in the TES files. If a terrain feature coincides with sample site location, then there must be a record in the TEF for the feature and a record in the TES for the sample site (e.g., where the sample site location is also a slide headscarp).

Table 2.3.3.1 - Point Attribute Table for Point On-Site Symbols (Tef.pat/ T*BAPID*F.pat).

COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE	N.DEC	ALTERNATE NAME	INDEXED	Manda tory
1	AREA	4	16	F	0	-		
5	PERIMETER	4	12	F	3	-		
8	TEF#	4	5	B	-	-		
12	TEF-ID	4	5	B	-	-		M
17	FCODE	10	10	C	-	-	indexed	
27	SRC_FCODE	10	10	C	-	-		
37	COMMENT	30	30	C	-	-		
67	TEF_TAG	18	18	C				
85	BAPID	5	5	I				M

Table 2.3.3.2 - ARC Attribute Table for Linear on-site symbols (Tef.aat/T*BAPID*F.aat).

COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE	N.DEC	ALTERNATE NAME	INDEXED	Manda tory
1	FNODE#	4	5	B	-	-		
5	TNODE#	4	5	B	-	-		
9	LPOLY#	4	5	B	-	-		
13	RPOLY#	4	5	B	-	-		
17	LENGTH	4	12	F	3	-		
21	TEF#	4	5	B	-	-		
25	TEF-ID	4	5	B	-	-		
29	FCODE	10	10	C	-	-	indexed	M
39	SRC_FCODE	10	10	C	-	-		
49	COMMENT	30	30	C	-	-		
79	TEF_TAG	18	18	C				
97	BAPID	5	5	I				M

2.3.4   Area-based Terrain Feature Specifications
(working file: tea.e00; deliverable filename: T*BAPID*A.e00)

Terrain features/on-site symbols representing area based terrain features (polygons), are stored in the **TEA** coverage.   The polygon features and the associated arcs are assigned feature codes (FCODE), and source feature codes (SRC_FCODE) (if these are features derived from another product such as a TRIM map). Additional information may be stored in the Comments field. A feature identifier number, if assigned, is stored in the TEA_TAG field.   Each coverage must contain a .pat table which stores the feature code (FCODE) values for the polygons and an .aat table with the feature code (FCODE) values for the arcs making up the polygons.

See Table 4-12 in Standard for Digital Terrain Data Capture in British Columbia Version 1 (1998 RIC)   (http://ilmbwww.gov.bc.ca/risc/pubs/earthsci/terrain/index.htm) for common terrain polygon feature FCODES.

Table 2.3.4.1 - Polygon Attribute Table for Polygon On-Site Symbols (Tea.pat/T*BAPID*A.pat).

COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE	N.DEC	ALTERNATE NAME	INDEXED	Mand atory
1	AREA	4	16	F	0	-		
5	PERIMETER	4	12	F	3	-		
8	TEA#	4	5	B	-	-		
12	TEA-ID	4	5	B	-	-		
17	FCODE	10	10	C	-	-	indexed	M
27	SRC_FCODE	10	10	C	-	-		
37	COMMENT	30	30	C	-	-		
67	TEA_TAG	18	18	C				
85	BAPID	5	5	I				M

Table 2.3.4.2 - ARC Attribute Table for Polygon Linework (Tea.aat/T*BAPID*A.aat).

COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE	N.DEC	ALTERNATE NAME	INDEXED	Manda tory
1	FNODE#	4	5	B	-	-		
5	TNODE#	4	5	B	-	-		
9	LPOLY#	4	5	B	-	-		
13	RPOLY#	4	5	B	-	-		
17	LENGTH	4	12	F	3	-		
21	TEA#	4	5	B	-	-		
25	TEA-ID	4	5	B	-	-		
29	FCODE	10	10	C	-	-	indexed	M
39	SRC_FCODE	10	10	C	-	-		
49	COMMENT	30	30	C	-	-		
79	TEA_TAG	18	18	C				
97	BAPID	5	5	I				M

2.3.5   Sample Site Specifications
(working file: Tes.e00; deliverable filename: T*BAPID*S.e00)

This file contains point and/or linear (traverse) sample sites.   The coverage containing these sample sites must have a .pat for storing FCODE, SRC_FCODE, TES_TAG, Comments and the project BAPID number for points, and an .aat with the same fields for lines or linear sample sites such as traverses. Site identification numbers are captured in the (new) TES_TAG field. These must be a unique identifier for each site.

FCODES are mandatory and should reflect the appropriate terrain sample site codes. Search under custodian 'TER' and feature 'sample site' at the following site http://srmwww.gov.bc.ca:8000/pls/feature_code/fcode.formquery or see Tables 4-13 and 4-14 in Standard for Digital Terrain Data Capture in British Columbia Version 1 (1998 RIC) (http://ilmbwww.gov.bc.ca/risc/pubs/earthsci/terrain/index.htm)

Any additional field data (such as field notes, etc.) should reference the TES_TAG identifiers and can be delivered as per the specifications in Section 2.4.2.

Table 2.3.5.1 - Point Attribute Table for Point Sample Sites (Tes.pat/T*BAPID*S.pat).

COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE	N.DEC	ALTERNATE NAME	INDEXED	Mand atory
1	AREA	4	16	F	0	-		
5	PERIMETER	4	12	F	3	-		
8	TES#	4	5	B	-	-		
12	TES-ID	4	5	B	-	-		
17	FCODE	10	10	C	-	-	indexed	M
27	SRC_FCODE	10	10	C	-	-		
37	COMMENT	30	30	C	-	-		
67	TES_TAG	18	18	C				M
85	BAPID	5	5	I				M

Table 2.3.5.2 - ARC Attribute Table for Linear Sample Sites (Tes.aat/TBAPIDS.aat).

COLUMN	ITEM NAME	WIDTH	OUTPUT	TYPE	N.DEC	ALTERNATE NAME	INDEXED	Mand atory
1	FNODE#	4	5	B	-	-		
5	TNODE#	4	5	B	-	-		
9	LPOLY#	4	5	B	-	-		
13	RPOLY#	4	5	B	-	-		
17	LENGTH	4	12	F	3	-		M
21	TES#	4	5	B	-	-		
25	TES-ID	4	5	B	-	-		
29	FCODE	10	10	C	-	-	indexed	M
39	SRC_FCODE	10	10	C	-	-		M
49	COMMENT	30	30	C	-	-		
79	TES_TAG	18	18	C				
97	BAPID	5	5	I				M

2.4   Documentation Requirements and Other Specifications

2.4.1   User-Defined Fields:

User-defined fields are attribute fields that do not correspond to the 'traditional' fields in the 1998 RIC Standard or to the new standard fields defined in this document (and Addenda 2005-1)[2].

User-defined fields are to be documented in an MS Excel or equivalent file as per the format in Template_UserDefinedFields.xls. A template (with examples) is available from: ftp://fshftp.env.gov.bc.ca/pub/outgoing/Terrain_Standards/   Please e-mail a draft table to soilterrain@victoria1.gov.bc.ca early in the project for approval.

The completed User-defined Fields file must be saved to the file name: T*BAPID*_userdefined.xls, and submitted in the Reports_etc folder.

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[2] See References

Table 2.4.1.1 provides information about the required format of the User Defined Field database file. (These specifications are based on the specifications for TEM user defined Fields.)

Table 2.4.1.1 Description of Attribute Fields for Terrain User-Defined Data

Field #	Field Short Name	Description	Field Length
1	Applies_To	The section of the Terrain information that the user defined information pertains to. E.g. Project Information, Terrain polygon, Terrain Component, Terrain feature, Sample site, etc.	10
2	Item_ Name	The Item Name in the spatial coverage/.e00 file for the attribute being referred to: (The new 'user defined' item name.) Note: the Item Name must not exceed a length of 10 characters. The Item Name cannot match any of the standard field names as per this Errata. Ex. Gully_Typ	10
3	Value_Type	The field format for the category of the type of data to be entered. Ex. C - character or I – integer or N - numeric	1
4	Field_Length	The valid or maximum length of the data entry. The entry can be of a specific length for a list of specific codes or have a maximum if entry is variable. Field Length must not exceed 254 characters (as this is a limitation of .shp files, which may be exported from LRDW)	3
5	Decimals	How decimal places the entry is taken to, if applicable.	10
6	Required	Designates whether the entry a mandatory attribute. Ex. Y or N	1
7	Case	The field format for the form of the character. Ex. L - Lower, U - Upper or M - Mixed.	2
8	Minimum_Value	The minimum value the entry can be. Ex. Minimum = 1, therefore an entry of 0 or a blank would be invalid.	10
9	Maximum_Value	The maximum value the entry can be. Ex. Maximum = 99, therefore an entry of 100 would be invalid.	10
10	Unit_of_ Measure	The unit of measure used for the entry. Ex. Centimetres, hectares, etc.	20
11	Description	A description of the column (attribute). Provide additional information in the User-Def Comments field if more space is needed.	20
12	Value	The valid values for the entry. The entry can be left blank if any data is valid. * Add additional rows to the table, one row for each valid code.	10
13	Value_Description	A written description/definition of the value in the previous column.	40
14	Component	List the Component(s) the item pertains to (123)	3
15	Rules	List any applicable rules and required relationships between columns or values in related columns	254
16	UserDef_Comments	Add any additional explanation or comments.	254

An example spreadsheet is available for download from:
ftp://fshftp.env.gov.bc.ca/pub/outgoing/Terrain_Standards/

2.4.2   Reports, Maps, Figures, Legends, Field Notes and other documents

Mandatory project deliverables for terrain mapping projects remain unchanged.

Reports, figures, legends and any other required documents must be submitted in .pdf format. The must be delivered in the Reports_etc folder.

Deliver .pdf files of maps, as applicable, in the Reports_etc folder and plotfiles (e.g. .000 files) in the Plotfiles folder. Digital plot files or .pdf's of maps are not mandatory. If these have been delivered to the project client, please also deliver them to the province, in order to make them available to potential data users.

Quality Assurance, Quality Control or Accuracy Assessment Reports (if applicable) and any accompanying files, should be submit in the Reports_etc folder.

Field Notes must be delivered in .pdf format in the case of scanned field notes, or as database files (.xls).

Sign-off letters or Project Completion Certificates are required from each of the following: a) the responsible Terrain Professional and b) the GIS supervisor or project manager from the vendor providing digital data capture services for the project. The Sign-off letter or Project Completion Certificate must certifying that the project data delivered is complete and meets the terrain mapping standards and the specifications of this Errata. Note: In no way does submission of a sign-off letter or Project Completion Certificate by a representative of the GIS vendor absolve the Terrain Profession or Project Manager of the duty of due diligence in ensuring the project deliverables meet all the required specifications.

A template for the Project Completion Certificate is available from:
ftp://fshftp.env.gov.bc.ca/pub/outgoing/Terrain_Standards/

3 Resources and References

3.1 *Resources*

The following documents are available via the province's ftp site, for the use of the Terrain Professional and/or GIS Vendor:

- o **QA checklist**. This document highlights some common errors encountered by the province in review of previously submitted terrain mapping project, and may be useful for quality assurance proposes.

- o **Terrain_check.AML**. This is a script developed for use in the ArcInfo environment for checking the terrain polygon data against a list of allowable codes as defined in this Errata. This script was developed by and for the use of GIS vendors recently involved in project data clean-up and conversion work for the province. Some modifications to this AML may be necessary prior to implementing the scripts for new projects, as this Errata specifies that only the new standardized fields that are utilized need be included in the project dataset, while the AML currently requires all standardized fields to be present in the order specified in Addenda 2005-1 and contract specifications of February 2006.

The above resources are made available for use by the terrain mapping community to support efficient and cost-effective terrain project delivery and to assist in reduction of the costs associated with digital data capture and quality control and assurance.

The above documents are available from our ftp site at:
ftp://fshftp.env.gov.bc.ca/pub/outgoing/Terrain_Standards/

The AML and QA checklist are provided for free of charge, subject to copyright. Please provide a copy of any modified or improved versions of these documents or scripts to the Ministry (at no charge) by emailing these to soilterrain@victoria1.gov.bc.ca. The Ministry will in turn make these available on the ftp site for other potential users.

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All of the documents (including digital files, data, applications, etc) available from the Ministry's ftp sites, websites, or by other means are the property of the Province of BC. The materials provided on BC Government web sites and ftp sites are provided "as is" without warranty of any kind, whether express or implied. These materials are owned by the Government of British Columbia and protected by copyright law. For more information see: Copyright Information Page <http://www.gov.bc.ca/com/copy>

3.2 REFERENCES:

Terrain Standards:

Guidelines and Standards to Terrain Mapping in BC (1996)
http://ilmbwww.gov.bc.ca/risc/pubs/earthsci/012/index.htm

Terrain Stability Mapping in BC: A review and suggested methods for landslide hazard and risk mapping – final draft (1996)
http://ilmbwww.gov.bc.ca/risc/pubs/earthsci/terrain2/index.htm

Standard for Digital Terrain Data Capture in British Columbia Version 1 (1998 RIC)
http://ilmbwww.gov.bc.ca/risc/pubs/earthsci/terrain/index.htm

Terrain Classification System for British Columbia (1997)
http://ilmbwww.gov.bc.ca/risc/pubs/teecolo/terclass/index.html

Standard for Digital Terrain Data Capture Addenda 2005-1 Draft for Field Testing. (superseded by Errata 2006-1.1)
http://srmwww.gov.bc.ca/tib/fia/ter_add05.pdf

Other Related Documents:

Mapping and Assessing Terrain Stability Guidebook (1999)
http://www.for.gov.bc.ca/tasb/legsregs/fpc/fpcguide/terrain/

A User's Guide to Terrain Stability Mapping in BC (DEGIFS/APEGBC, 2002)
http://www.degifs.com/pdf/TS Mapping User Guide.pdf

Guildelines for Terrain Stability Assessments in the Forest Sector (APEGBC, 2003)
http://www.degifs.com/pdf/Final Terrain Stability Guidelines as published.pdf

Terrain Mapping and Interpretations: Skill Sets for Qualified Registered Professionals (APFBC/APEGBC Joint Practice Board, 2002)
http://www.degifs.com/pdf/Terrain Mapping and Interpretations JPB.pdf

APPENDIX I –Summary of changes to Errata 2006-1-LBIP

Errata 2006-1.1, completed in March of 2007, replaces Errata 2006-1-LIBP. It includes minor changes related to formatting, punctuation and grammar and the changes listed in the following table.

Page	Change Location	Change
3	Paragraph 4, Sentence 2	*Land and Data Resource Warehouse* to *Land and Resource Data Warehouse*
4	Paragraph 2, Sentence 2	*not longer valid* to *no longer valid*
6	Before Section 1.3 Mandatory Deliverables	soilterrain@victoria1.bc.ca to soilterrain@victoria1.gov.bc.ca
7	Section 2.1 Folder Structure Specifications	*See Table 2.2.1* to *See Table 2.1.1*
8	Paragraph 4, Sentence 2	Add **(Table 2.2.1)** to end of sentence.
9	Paragraph 1	*…file naming convention for file names, filenames have been provided…* to *…file naming convention for file names have been provided…*
11	Field #5, Project Completion Date	Type: *D*(ate) to *C*(haracter)
11	Field #7, Terrain Survey Intensity Level	Under Data Entry Instructions add: *If project has more than one TSIL then indicate the lowest TSIL and note in Proj_Com.*
11	Field #9	*Mapsheet Number* to *Mapsheet List* Change Field Description: *The mapsheet(s) in the project. See Table: Map Number Recording Convention.* Change Data Entry Instructions: *A leading zero is required for mapsheets not starting with 1. Left justified with no decimal or / separator. E.g., 083E073. Caution: ensure this is a character field if data is first captured in Excel, as mapsheet numbers containing an E may be converted into scientific notation on data import or export. Use multiple rows to capture multiple mapsheets.* Renamed Field: *R* *Mapsh_nbr* to *Mapsh_lst* Width and Output: *254*
14	Table 2.3.1.2, Column for BAPID	*38* to *49*
16	Field #1, Feature Code	Under Allowable Codes: *W125200300* to *WI25200300*
16	Field #2, Project Type	Under Data Entry Instructions: *TEMNESS* to *TEMNSS*
37	Fields 195 & 196	Width and Output: *2*
40	Table 2.3.2.2, COMMENTS row	Column: *49* *COMMENTS* to *COMMENT* Width and Output: *30* *Type: C*
40	Table 2.3.2.2, Column for BAPID	*38* to *79*
42	Table 2.3.4.1, Column for BAPID	*38* to *85*
43	Table 2.3.5.2, Column 97 BAPID	Item is Mandatory: *M*
43	Last sentence.	soilterrain@victoria1.bc.ca to soilterrain@victoria1.gov.bc.ca
40-47	Footer	*Addenda* to *Errata*