

## **Changes to the Provincial Forest Cover in the 2010 Projection**

This document describes changes to the VEG\_COMP\_LYR\_R1\_POLY made during the 2010 projection. In addition to the continued modelling of Mountain Pine beetle impacts begun in the 2009 projection, the 2010 projection features the inclusion of four new attributes describing the above ground biomass at the polygon level. These attributes are:

Whole\_stem\_biomass\_per\_ha  
Branch\_biomass\_per\_ha  
Foliage\_biomass\_per\_ha  
Bark\_biomass\_per\_ha

Nationally and internationally there is increasing interest in assessing carbon-budgets due to climate change, i.e., carbon uptake and release. British Columbia has a stake in this assessment, given its large forested land base.

Biomass is fed into carbon models, to assess changes in sequestration over time, and to evaluate the availability of bio-energy resources. Biomass is the over-dried weight (Kilograms or tonnes per hectare) of organic matter that can be found in ecosystem at any given time. This includes both live and dead vegetation material. Biomass estimates to each Vegetation Resources Inventory (VRI) polygon provide above ground biomass information at a polygon level for the British Columbia forest inventory. More information on the how the biomass factors were developed can be found here [\[download\]](#).

The changes to the VEG\_COMP\_LYR\_R1\_POLY made during the 2009 projection including the impacts of the Mountain Pine Beetle (MPB) on the Provincial Forest Inventory. The 2009 projection allowed for some significant additions to the VEG\_COMP-LYR\_R1\_POLY data model including the addition of a field called Forest Management Land Base Indicator (FMLB) and the re-introduction of projected age class, projected height class and projected crown closure class [\[download\]](#).

Appendix 1

**VRI Attributes in Veg\_comp\_lyr\_r1\_poly including new attributes in **Yellow** for 2009 and **Blue** for 2010**

<b>Attribute Name</b>	<b>Attribute Type</b>	<b>Short name</b>
feature_id	number(38)	FEATURE_ID
map_id	varchar2(7)	MAP_ID
polygon_id	number(9)	POLY_ID
opening_ind	varchar2(1)	OPEN_IND
opening_source	varchar2(5)	OPEN_SRC
opening_number	varchar2(4)	OPEN_NUM
feature_class_skey	number(38)	FEAT_SKEY
inventory_standard_cd	varchar2(10)	INV_STD_CD
polygon_area	number(15,1)	POLY_AREA
non_productive_descriptor_cd	varchar2(5)	NP_DESC
non_productive_cd	varchar2(10)	NP_CODE
input_date	date	INPUT_DATE
<b>coast_interior_cd</b>	<b>varchar2(1)</b>	<b>C_I_CODE</b>
surface_expression	varchar2(10)	SURF_EXP
modifying_process	varchar2(10)	MOD_PROCES
site_position_meso	varchar2(10)	SITE_MESO
alpine_designation	varchar2(10)	ALPN_DESIG
soil_nutrient_regime	varchar2(10)	SOIL_NUTR
ecosys_class_data_src_cd	varchar2(10)	ECO_SRC_CD
bclcs_level_1	varchar2(10)	BCLCS_LV_1
bclcs_level_2	varchar2(10)	BCLCS_LV_2
bclcs_level_3	varchar2(10)	BCLCS_LV_3
bclcs_level_4	varchar2(10)	BCLCS_LV_4
bclcs_level_5	varchar2(10)	BCLCS_LV_5
interpreter	varchar2(30)	INTERPRETR
interpretation_date	date	INTRP_DATE
project	varchar2(100)	PROJECT_ID
reference_year	number(4)	REF_YR_ID
special_cruise_number	number(4)	CRUISE_NO
special_cruise_number_cd	varchar2(1)	CRUISE_CD
inventory_region	number(2)	INV_REGION
compartment	number(3)	COMPARTMNT
compartment_letter	varchar2(1)	COMP_LET
fiz_cd	varchar2(1)	FIZ_CD
<b>fmlb</b>	<b>varchar2(1)</b>	<b>FMLB</b>
attribution_base_date	date	ATTRIB_DATE
projected_date	date	PROJ_DATE
shrub_height	number(4,1)	SHRB_HT
shrub_crown_closure	number(3)	SHRB_CC
shrub_cover_pattern	varchar2(10)	SHRB_PATT
herb_cover_type	varchar2(10)	HERB_TYPE
herb_cover_pattern	varchar2(10)	HERB_COVER
herb_cover_pct	number(3)	HERB_PCT
bryoid_cover_pct	number(3)	BRYOID_PCT
non_veg_cover_pattern_1	varchar2(10)	NVEG_COV_1

non_veg_cover_pct_1	number(3)	NVEG_PCT_1
non_veg_cover_type_1	varchar2(10)	NVEG_TYP_1
non_veg_cover_pattern_2	varchar2(10)	NVEG_COV_2
non_veg_cover_pct_2	number(3)	NVEG_PCT_2
non_veg_cover_type_2	varchar2(10)	NVEG_TYP_2
non_veg_cover_pattern_3	varchar2(10)	NVEG_PCT_3
non_veg_cover_pct_3	number(3)	NVEG_COV_3
non_veg_cover_type_3	varchar2(10)	NVEG_TYP_3
land_cover_class_cd_1	varchar2(10)	LAND_CD_1
est_coverage_pct_1	number(3)	COV_PCT_1
soil_moisture_regime_1	varchar2(10)	SOIL_MST_1
land_cover_class_cd_2	varchar2(10)	LAND_CD_2
est_coverage_pct_2	number(3)	COV_PCT_2
soil_moisture_regime_2	varchar2(10)	SOIL_MST_2
land_cover_class_cd_3	varchar2(10)	LAND_CD_3
est_coverage_pct_3	number(3)	COV_PCT_3
soil_moisture_regime_3	varchar2(10)	SOIL_MST_3
avail_label_height	number(38)	AV_LBL_HT
avail_label_width	number(38)	AV_LBL_WD
full_label	Varchar 2(500)	FULL_LABEL
label_centre_x	number(38)	LBL_CTR_X
label_centre_y	number(38)	LBL_CTR_Y
label_height	number(38)	LBL_HT
label_width	number(38)	LBL_WIDTH
line_1_opening_number	varchar2(4)	LBL_OPN_NO
line_1_opening_symbol_cd	varchar2(1)	LBL_OPN_CD
line_2_polygon_id	varchar2(10)	LBL_POLYID
line_3_tree_species	varchar2(50)	LBL_SPECIS
line_4_classes_indexes	varchar2(12)	LBL_CLS_IN
line_5_vegetation_cover	varchar2(11)	LBL_VEGCOV
line_7_activity_hist_symbol	varchar2(1)	LBL_HIS_SY
line_6_site_prep_history	varchar2(10)	LBL_HIST
line_7a_stand_tending_history	varchar2(39)	LBL_TEND
line_7b_disturbance_history	varchar2(40)	LBL_DISTUR
line_8_planting_history	varchar2(80)	LBL_PLANT
printable_ind	varchar2(1)	PRINTABLE
small_label	Varchar2(100)	SM_LABEL
opening_id	number(10)	OPEN_ID
org_unit_no	number(10)	ORGUNIT_NO
org_unit_code	varchar2(6)	ORGUNIT_CD
adjusted_ind	varchar2(1)	ADJST_IND
bec_zone_code	varchar2(10)	BEC_ZONE
bec_subzone_code	varchar2(10)	BEC_SZONE
bec_phase	varchar2(10)	BEC_PHSE
bec_variant_code	varchar2(10)	BEC_VAR
earliest_nonlogging_dist_type	varchar2(10)	N_LOG_DIST
earliest_nonlogging_dist_date	date	N_LOG_DATE
stand_percentage_dead	number(3)	DEAD_PCT
free_to_grow_ind	varchar2(1)	FTG_IND
harvest_date	date	HRVSTDT

layer_id	varchar2(10)	LAYER_ID
for_cover_rank_cd	varchar2(10)	RANK_CD
non_forest_descriptor	varchar2(10)	NFOR_DESC
interpreted_data_src_cd	varchar2(10)	INTERP_CD
quad_diam_125	number(8,3)	Q_DIAM_125
quad_diam_175	number(8,3)	Q_DIAM_175
quad_diam_225	number(8,3)	Q_DIAM_225
est_site_index_species_cd	varchar2(10)	EST_SI_SPC
est_site_index	number(5,1)	EST_SI
est_site_index_source_cd	varchar2(10)	SI_DATA_CD
crown_closure	number(3)	CR_CLOSURE
<b>crown_closure_class_cd</b>	<b>number(3)</b>	<b>CC_CLASS</b>
reference_date	date	REF_DATE
site_index	number(5,1)	SITE_INDEX
dbh_limit	number(2)	DBH_LIMIT
basal_area	number(10,6)	BASAL_AREA
data_source_basal_area_cd	varchar2(10)	B_A_DTA_CD
vri_live_stems_per_ha	number(8)	LIVE_STEMS
data_src_vri_live_stem_ha_cd	varchar2(10)	<b>STEM_HA_CD</b>
vri_dead_stems_per_ha	number(4)	DEAD_STEMS
tree_cover_pattern	varchar2(10)	TREE_PATRN
vertical_complexity	varchar2(10)	VERT_COMPL
species_cd_1	varchar2(10)	SPEC_CD_1
species_pct_1	number(5,2)	SPEC_PCT_1
species_cd_2	varchar2(10)	SPEC_CD_2
species_pct_2	number(5,2)	SPEC_PCT_2
species_cd_3	varchar2(10)	SPEC_CD_3
species_pct_3	number(5,2)	SPEC_PCT_3
species_cd_4	varchar2(10)	SPEC_CD_4
species_pct_4	number(5,2)	SPEC_PCT_4
species_cd_5	varchar2(10)	SPEC_CD_5
species_pct_5	number(5,2)	SPEC_PCT_5
species_cd_6	varchar2(10)	SPEC_CD_6
species_pct_6	number(5,2)	SPEC_PCT_6
proj_age_1	number(4)	PROJ_AGE_1
<b>proj_age_class_1</b>	<b>number(4)</b>	<b>P_AGE_CAS1</b>
proj_age_2	number(4)	PROJ_AGE_2
<b>proj_age_class_2</b>	<b>number(4)</b>	<b>P_AGE_CAS2</b>
data_source_age_cd	varchar2(10)	AGE_DTA_CD
proj_height_1	number(5,1)	PROJ_HT_1
<b>proj_height_class_1</b>	<b>number(4)</b>	<b>P_HT_CAS1</b>
proj_height_2	number(5,1)	PROJ_HT_2
<b>proj_height_class_2</b>	<b>number(4)</b>	<b>P_HT_CAS2</b>
data_source_height_cd	varchar2(10)	HT_DATA_CD
live_vol_per_ha_spp1_125	number(8,3)	LVOLSP1_125
live_vol_per_ha_spp1_175	number(8,3)	LVOLSP1_175
live_vol_per_ha_spp1_225	number(8,3)	LVOLSP1_225
live_vol_per_ha_spp2_125	number(8,3)	LVOLSP2_125
live_vol_per_ha_spp2_175	number(8,3)	LVOLSP2_175
live_vol_per_ha_spp2_225	number(8,3)	LVOLSP2_225

live_vol_per_ha_spp3_125	number(8,3)	LVOLSP3_125
live_vol_per_ha_spp3_175	number(8,3)	LVOLSP3_175
live_vol_per_ha_spp3_225	number(8,3)	LVOLSP3_225
live_vol_per_ha_spp4_125	number(8,3)	LVOLSP4_125
live_vol_per_ha_spp4_175	number(8,3)	LVOLSP4_175
live_vol_per_ha_spp4_225	number(8,3)	LVOLSP4_225
live_vol_per_ha_spp5_125	number(8,3)	LVOLSP5_125
live_vol_per_ha_spp5_175	number(8,3)	LVOLSP5_175
live_vol_per_ha_spp5_225	number(8,3)	LVOLSP5_225
live_vol_per_ha_spp6_125	number(8,3)	LVOLSP6_125
live_vol_per_ha_spp6_175	number(8,3)	LVOLSP6_175
live_vol_per_ha_spp6_225	number(8,3)	LVOLSP6_225
dead_vol_per_ha_spp1_125	number(8,3)	DVOLSP1_125
dead_vol_per_ha_spp1_175	number(8,3)	DVOLSP1_175
dead_vol_per_ha_spp1_225	number(8,3)	DVOLSP1_225
dead_vol_per_ha_spp2_125	number(8,3)	DVOLSP2_125
dead_vol_per_ha_spp2_175	number(8,3)	DVOLSP2_175
dead_vol_per_ha_spp2_225	number(8,3)	DVOLSP2_225
dead_vol_per_ha_spp3_125	number(8,3)	DVOLSP3_125
dead_vol_per_ha_spp3_175	number(8,3)	DVOLSP3_175
dead_vol_per_ha_spp3_225	number(8,3)	DVOLSP3_225
dead_vol_per_ha_spp4_125	number(8,3)	DVOLSP4_125
dead_vol_per_ha_spp4_175	number(8,3)	DVOLSP4_175
dead_vol_per_ha_spp4_225	number(8,3)	DVOLSP4_225
dead_vol_per_ha_spp5_125	number(8,3)	DVOLSP5_125
dead_vol_per_ha_spp5_175	number(8,3)	DVOLSP5_175
dead_vol_per_ha_spp5_225	number(8,3)	DVOLSP5_225
dead_vol_per_ha_spp6_125	number(8,3)	DVOLSP6_125
dead_vol_per_ha_spp6_175	number(8,3)	DVOLSP6_175
dead_vol_per_ha_spp6_225	number(8,3)	DVOLSP6_225
live_stand_volume(125)	number(8,3)	LVOLTOT_125
live_stand_volume(175)	number(8,3)	LVOLTOT_175
live_stand_volume(225)	number(8,3)	LVOLTOT_225
dead_stand_volume(125)	number(8,3)	DVOLTOT_125
dead_stand_volume(175)	number(8,3)	DVOLTOT_175
dead_stand_volume(225)	number(8,3)	DVOLTOT_225
Whole_stem_biomass_per_ha	Number(8,3)	Bioms_ws
Branch_biomass_per_ha	Number(8,3)	Bioms_brch
Foliage_biomass_per_ha	Number(8,3)	Bioms_fol
Bark_biomass_per_ha	Number(8,3)	Bioms_bark
geometry	mdsys.sdo_geometry	GEOMETRY
object_i	number(38)	OBJECTID