EDEN FRAMES

USER GUIDE

MAF (Multiaged Forest) Volumes

Objective: Produce Predicted Total Sawlog Volumes (m^3) and Total Pulp Volumes (t) for each Unlogged Coupe.

Method: Multiply SF's prelogging assessed volumes per ha * BRS. Net harvestable area per coupe.

Procedure:

1. qryInv. Selects the latest prelogging inventory for each coupe.

   [max (dtm Date of Inventory)] from tbl Inventory
   ["prelogging" (str Inventory Type)] from tbl Inventory
   [Group by (int Cpt No.)] from tlkp Unlogged Cpes
   [Group by (int Cpe No.)] from tlkp Unlogged Cpes

2. qryInv2. Selects the assessed Sawlog Per ha and Pulp Per ha for the latest prelogging inventory for each Coupe

   [int Cpt No.] from qryInv
   [int Cpe No.] from qryInv
   [str Inventory] from qryInv
   [dtm Date of Inventory] from qryInv

3. qry MAF 1997. Calculates Net Harvestable area for each unlogged Cpe

   [Group by (str Mngt Sect)] from qryMAF1997
   [Group by (int Cpt No.)] from qryMAF1997
   [Group by (int Cpe No.)] from qryMAF1997
   [Group by (txt Operation Type)] from tblMAFOpType
   Total Sawlog: [Net Area] from qryMAF 1997 * [sng Sawlog Per Ha] from qryInv2
   Total Pulp:[Net Area] from qryMAF1997 * [sng Pulp Per Ha] from qryInv2

MAF Volumes by Species and Diameter Class

Objective: Produce a table of MAF Sawlog Volumes by Diameter Class and Species Group for each Coupe.

Method: Analyse past sawlog sales figures extracted from SF FROPRAC and FORSALE sales systems and apply % to predicted sawlog volumes.

Diameter classes were analysed as % per Management Section Species Group were analysed as % per compartment. For those compartments without previous sales figures species group were analysed as % per Management Section.

Procedure:

qry % Dia Class1. Sum the sawlog volume for each Management Section

[Group by (str Mngt Sect)] from tbl Cpe
[Sum (Volume)] from tbl Dia Vols Per Cpt

qry % Dia Class2. Sum the Sawlog Volume for each Dia Class for each Management Section

[Group by (str Mngt Sect)] from tbl Cpe
[Group by (Dia Class)] from tbl Dia Vols Per Cpt
[Sum (Volume)] from tbl Dia Vols Per Cpt

qry % Dia Class3. Calculate the Sawlog Volume per Diameter Class as a percentage of Management Section Sawlog Volume.

[Group by (str Mngt Sect)] from qry % DiaClass1
[Group by (Dia Class)] from qry % DiaClass2
% Dia Class:[Sum of Volume] from qry %DiaClass2 /
[Sum of Volume] from qry %DiaClass1

qry % spp1. Sum Sawlog Volumes for each Compartment

[Group by (Cpt)] from tbl Spp Vol Per Cpt
[Sum (Sawlog)] from tbl Spp Vol Per Cpt

qry % spp2. Sum Sawlog Volumes for each Species Group for each Compartment

[Group by (Cpt)] from tbl Spp Vol Per Cpt
[Group by (Species Group)] from tbl Spp Code
[Sum (Sawlog)] from tbl Spp Vol Per Cpt

qry % spp 3. Calculate % Sum of Sawlog Volumes per Species Group of Sum of Sawlog Volume per Cpt

[Group by (Cpt)] from qry % Spp2

[Group by (Species Group)] from qry % Spp 2
% Spp Group: [Sum of Sawlog] from qry % Spp1 / [Sum of Sawlog] from % Spp2

qry Spp Dia Class Vols
(make table qry)

Calculate the predicted MAF Volumes per Species Group per Dia Class per Coupe and Makes the table tbl Alt Cpe

[str Mngmt Sect] from tbl 1997 MAF Volumes
[int Cpt No.] from tbl 1997 MAF Volumes
[int Cpe No.] from tbl 1997 MAF Volumes
[Species Group] from qry % Spp3
[Dia Class] from qry % Dia Class 3
Sawlog:[% Dia Class) from qry % Dia Class 3 * (% Spp Group) from qry % Spp3 * (Total Sawlog) from tbl 1997 MAF Volumes

qry Other Cpes 1. Sums Sawlog Volumes for each Management Section

[Group by (str Mngt Sect)] from tbl 1997 MAF Volume
[Sum (Sawlog)] from tbl Spp Vol Per Cpt

qry Other Cpes2. Calculates the % Species Group for each Management Section

[Group by (str Mngt Sect)] from tbl 1997 MAF Volume
[Group by (Species Group] from tbl Spp Code
% Spp: [Sum (Sawlog)] from tbl Spp tbl Per Cpt / [Sum (Sawlog)] from qry other Cpes1

qry Other Cpe3. Calculates the predicted MAF Volumes per Species Group per Dia Class per Coupe

[int Cpt No.] from tbl 1997 MAF Volumes
[int Cpe No.] from tbl 1997 MAF Volume
[Species Group] from qry Other Cpes2
[Dia Class] from qry % Dia Class 3
Sawlog:(% Spp) from qry Other Cpes2 * (% Dia Class) from qry Dia Class 3 (Total Sawlog) from tbl 1997 MAF Volume

qry Other Spp Dia Class Vols
(make table qry)

Calculates the predicted MAF Volumes per Species Group per Dia Class per Coupe not in the tbl Alt Cpe

[str Mngt Sections] from qry Other Cpes3
[int Cpt No.] from qry Other Cpes3
[int Cpe No.] from qry Other Cpes3
[Species Group] from qry Other Cpes3
[Dia Class] from qry Other Cpes3

[Sawlog] from qry Other Cpes3
[IS NULL (int Cpt No.)] from tbl Alt Cpe

qry Total Volume 1
qry Total Volume 2. joins tbl Alt Cpe + tbl Mngt Sections to make a table tbl Total Volumes

FIRE REGROWTH

Objective: Calculate the predicted Future Sawlog and Pulp Volumes from areas of Regrowth resulting from past wildfire events.

Method: Areas of Fire regrowth were calculated from SF API regrowth project.

Thinnable Area was generated from BRS.

Each Cpe was allocated to a particular strata as follow:

Strata	Regrowth Type	Site Productivity Index	Location
1	Fire Regrowth	<0.6	Coast
2	Fire Regrowth	>0.6	Coast
3	Fire Regrowth	>0.6	Coast
4	Logging Regrowth	0.5-0.7	Coast
5	Logging Regrowth	>0.7	Coast
6	Fire Regrowth	already Tl'd	Coast
7	Fire Regrowth	<0.6	Coast
8	Fire Regrowth	>0.6	Coast
9	Logging Regrowth	<0.5	Coast
10	Logging Regrowth	<0.5	Tablelands
11	Logging Regrowth	0.5-0.7	Tablelands
12	Logging Regrowth	>0.7	Tablelands
13	Fire Regrowth	already Tl'd	Tablelands

This table incorporated BRS. Site productivity index project.

Each Cpe is linked to a yield table showing; Strata, Operation type, Stand Age, Sawlog PerHa, Pulp PerHa.

These volumes per ha were generated from STANDSIM.

The Total Volumes were calculated by thin Area * Volumes per ha and the year scheduled was calculated by adding the Stand Age to the year origin of the regrowth.

qry Fire Regrowth. Calculates the Total Sawlog and Total Pulp Volumes for each Cpe that contains Fire Regrowth and the operation type to be carried out and the year it is to be scheduled.

[int Cpt No.] from tbl Fire Regrowth
[int Cpe No.] from tbl Cpe No.
Thin Area:[dbl Thin Area] from tbl BRS Area * [% Regrowth] from

tbl Fire Regrowth
[dtm Yr Origin] from tbl Fire Regrowth
[txt Operation type] from tbl Yield Table
Total Sawlog:[Thin Area] * [int Sawlog] from tbl Yield Table
Total Pulp:[Thin Area] * [int Pulp] from tbl Yield Table
Year Scheduled: Date Add ("years", [int Stand Age] from tbl Yield Table, [dtm Yr Origin] from tbl Fire Regrowth)

NB. Date Add is an inbuilt function

Logging Regrowth

Objective: Calculate the predicted Future Sawlog Pulp volumes from areas of regrowth resulting from logging events.

Method: The method is the same as Fire Regrowth.

qry Logging Regrowth

Calculates the Total Sawlog and Total Pulp volumes for each Cpe that contains Logging regrowth and the operation type to be carried out and the year it is to be scheduled.

[int Cpt No.] from tlkp Regrowth Cpes
[int Cpe No.] from tlkp Regrowth Cpes
Thin Area:[Thin Area] from tbl BRS Area * [% Regrowth] from tlkp Regrowth Cpes
[txt Operation Type] from tbl Yield Table
[dtm Yr Origin] from tlkp Regrowth Cpes
Total Sawlog:[Thin Area] * [int Sawlog] from tbl Yield Table
Total Pulp:[Thin Area] * [int Pulp] from tbl Yield Table
Year Scheduled: Date Add ("years", [int Stand Age] from tbl Yield Table, [dtm Yr Origin] from tlkp Regrowth Cpes]

Regrowth Summary

qry Log Regrowth Sum (make table) and qry Fire Regrowth Sum (append query)

Objective: To join the two Regrowth Sources into 1 table.

Eden Mngt Area

qrt EMA1 (make table) and qry EMA2 (append query)

Objective: To join the Regrowth table and the MAF tbl.

qry EMA Wood Flow

Sum the total Volumes of Sawlog and Pulp for each Year Scheduled by operation type.

[Group by (Year Scheduled)] from tlkp EMA1
[Group by (txt Operation type)] from tlkp EMA1
[Sum (total Sawlog)] from tlkp EMA1
[Sum (Total Pulp)] from tlkp EMA1

Scenarios

Objective: Exclude cpts for different scenarios and calculate the remaining volumes for each Year Scheduled by Operation type.

Method: Produce a list of Cpts to be excluded in tbl Scenario.

Procedure:

tbl Scenario. Enter compartment numbers to be excluded from harvesting.

qry Scenario. Excludes Cpts in tbl Scenario.

[str Mngt Sect] from tlkp EMA1
[int Cpt No.] from tlkp EMA1
[int Cpe No.] from tlkp EMA1
[Year Scheduled] from tlkp EMA1
[Total Sawlog] from tlkp EMA1
[Total Pulp] from tlkp EMA1
[Is Null (int Cpt No.)] from tbl Scenario

qry Scenario Woodflow. Calculate the Total Sawlog and Pulp remaining for each Year Scheduled

[Group by (Year Schedule)] from qry Scenario
[Sum (Total Sawlog)] from qry Scenario
[Sum (Total Pulp)] from qry Scenario

qry Scenario Woodflow

Averages the Sawlog and Pulp totals over 2 period 1997-2019 and 2020-2040.

These periods are variable and are changeable in tlkp Period.

[Group by (Period)] from tlkp Period
[Group by (Period Description)] from tlkp Period
[Group by (Year Scheduled)] from qry Scenario Woodflow
[Av (Sum of Total Sawlog)] from qry Scenario Woodflow
[Av (Sum of Total Pulp)] from qry Scenario Woodflow