

MSCALE 2015

User Manual

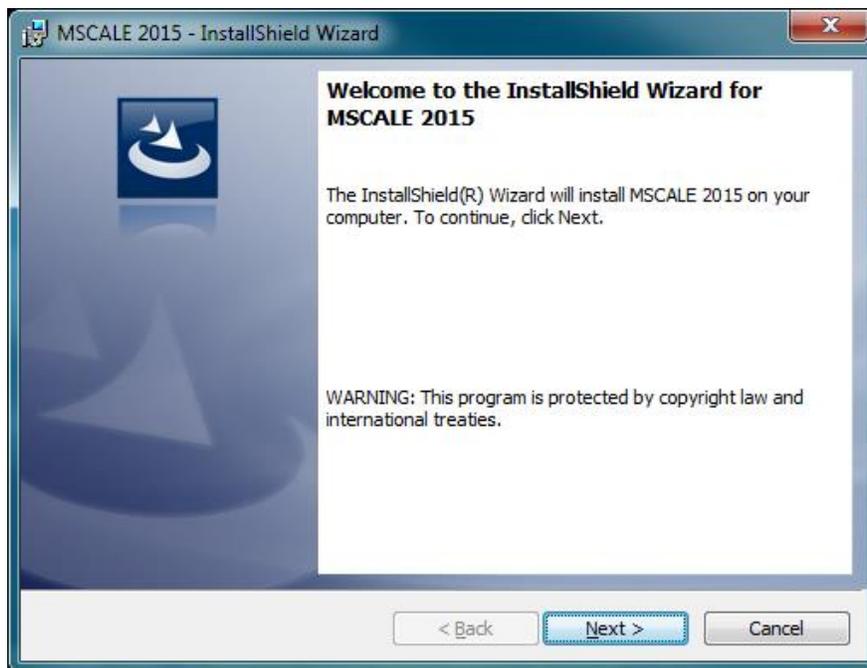
For MSCALE 2015 Version 2.0.2.0

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1. INSTALLATION

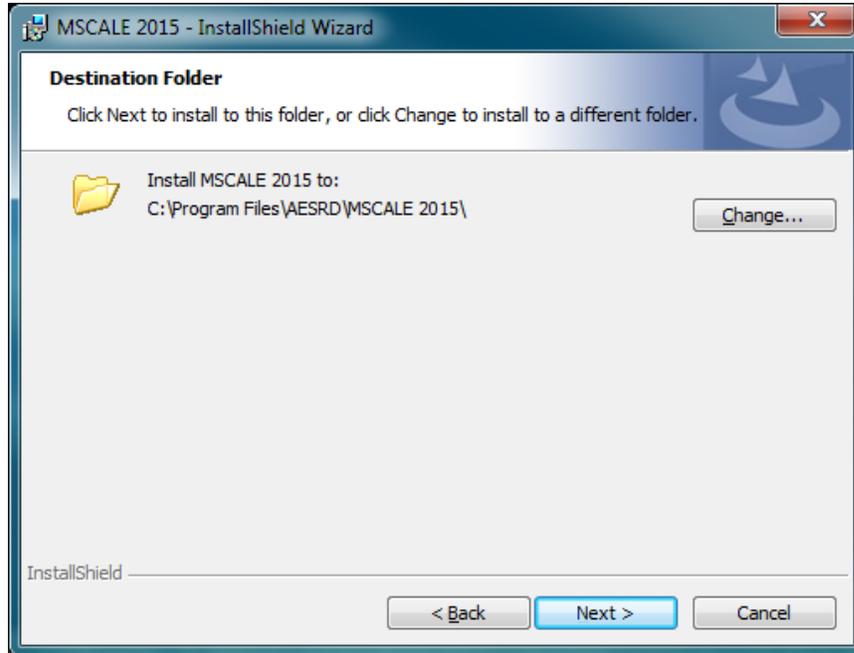
- In order to install MSCALE 2015 you must have Administrator privileges on your computer.
 - The following is a typical example installation experience, however depending on your version and configuration of Windows, your experience may vary.
1. Please acquire the version of MSCALE 2015 that is appropriate for you operating system.
 - For 32 bit Windows operating systems: MSCALE_2015_2.0_Install_x86.exe
 - For 64 bit Windows operating systems: MSCALE_2015_2.0_Install_x64.exe
 2. Double click on the installation file and after a few seconds the following screen will be displayed:



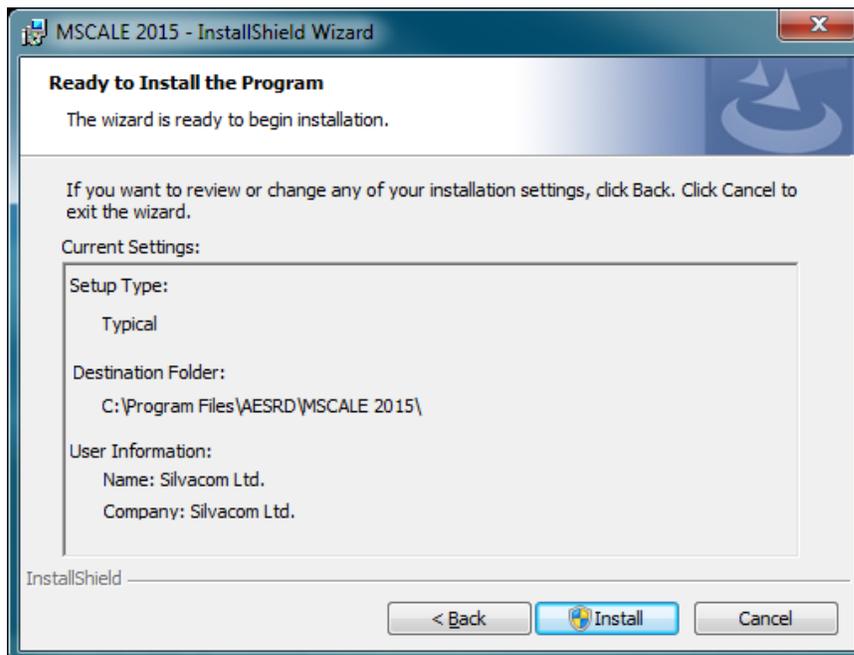
Note: Some operating system's built in security or third party security software may block this stage and provide a warning message (e.g. unknown publisher). Please acknowledge the warnings and continue the install process. If the installer file was acquired from AESRD, the file will be safe to install.

3. Click Next to begin installation.

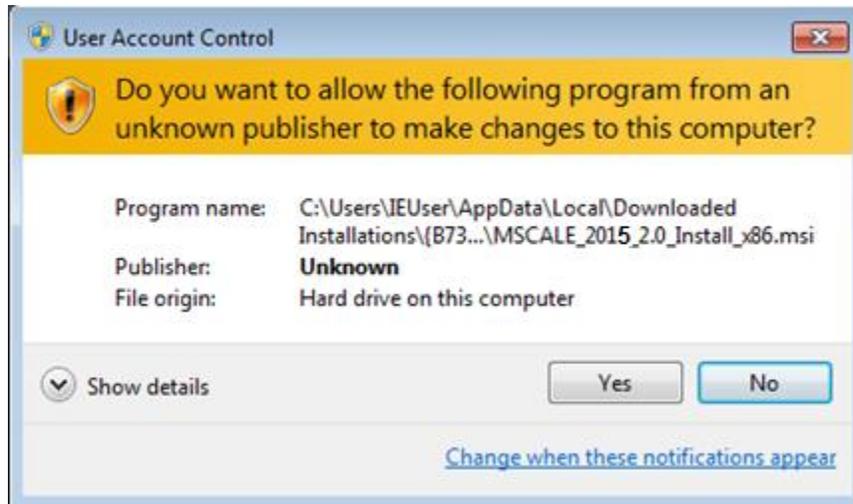
4. Accept the default destination folder or choose a different one using the “Change...” button. Click Next.



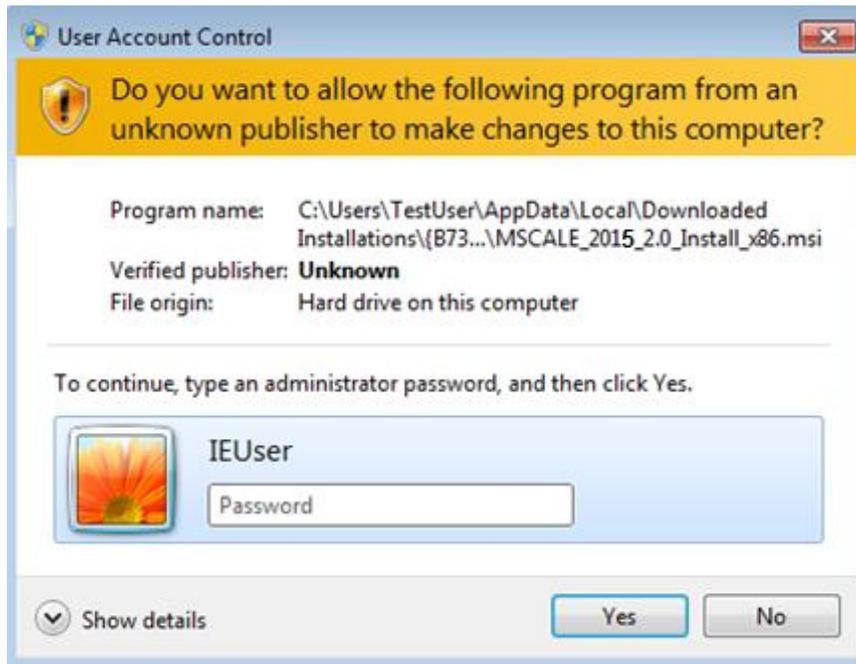
5. Click Install.



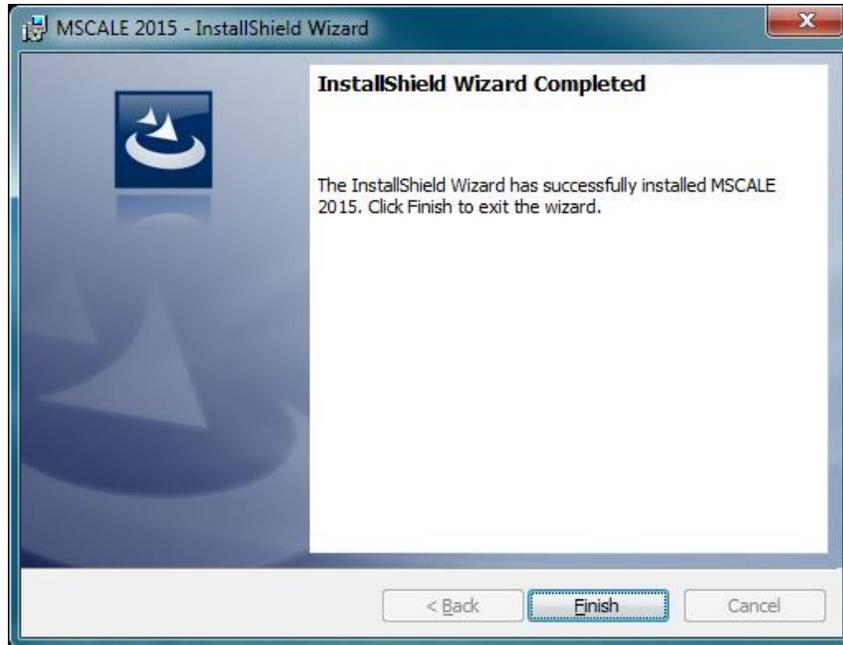
6. If the following screen appears answer Yes.



7. If a screen similar to the following appears an Administrator's password will be required to complete the installation.



8. Click Finish.



1.1 STARTING MSCALE

Usually, a shortcut will be placed on the Windows Desktop by the installer. Double click the MSCALE 2015 icon on the Desktop to start the program.

There are other ways to launch programs in the various versions of Windows operating systems – please refer to your operating system’s documentation.

2. PROGRAM DESCRIPTION

2.1 GENERAL NOTES

MSCALE 2015 is a Windows application that was developed by Alberta Environment and Sustainable Resource Development to help mills submit load, log, and volume information in an approved format for submission to a government audit system.

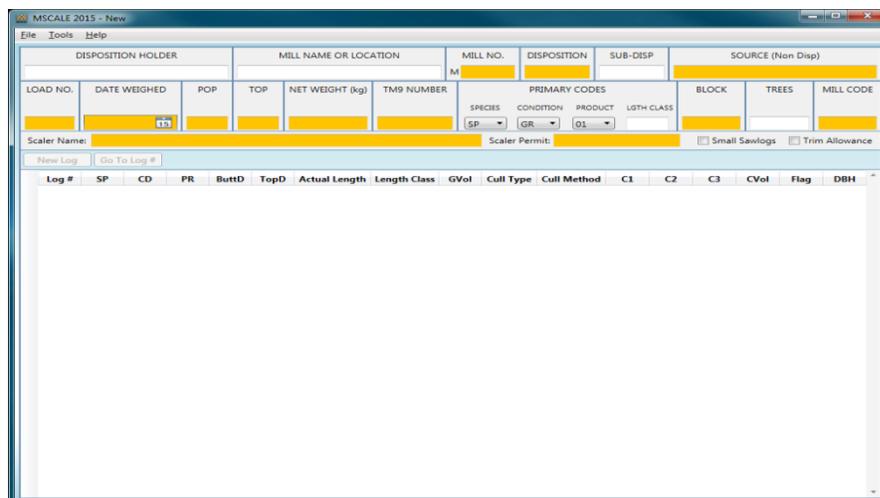
MSCALE 2015 is an updated version of MSCALE 1.2 developed to operate on the latest Windows operating systems (tested up to Windows 8.1). MSCALE 2015 may run on Windows XP (now unsupported by Microsoft), but requires .NET Framework 4 installed as a prerequisite.

MSCALE 2015 can operate in OSB mode by setting the header primary codes product code to 18. OSB mode applies different rules to each row when determining the logs appropriate product code (PR). Switching the primary product code will trigger an immediate recalculation of every log within the load. This may produce undesired changes in the individual product codes on any log row. It is recommended that once the primary product is set it should remain that way throughout the load's life. Existing loads that have the header primary product code set to 18 will be treated as OSB load when opened or imported.

2.1.1 NEW LOAD

This menu option is used to enter a new load from the TM-32 forms which have been filled in by the scaler.

2.1.1.1 DESCRIPTION OF HEADER DATA FIELDS

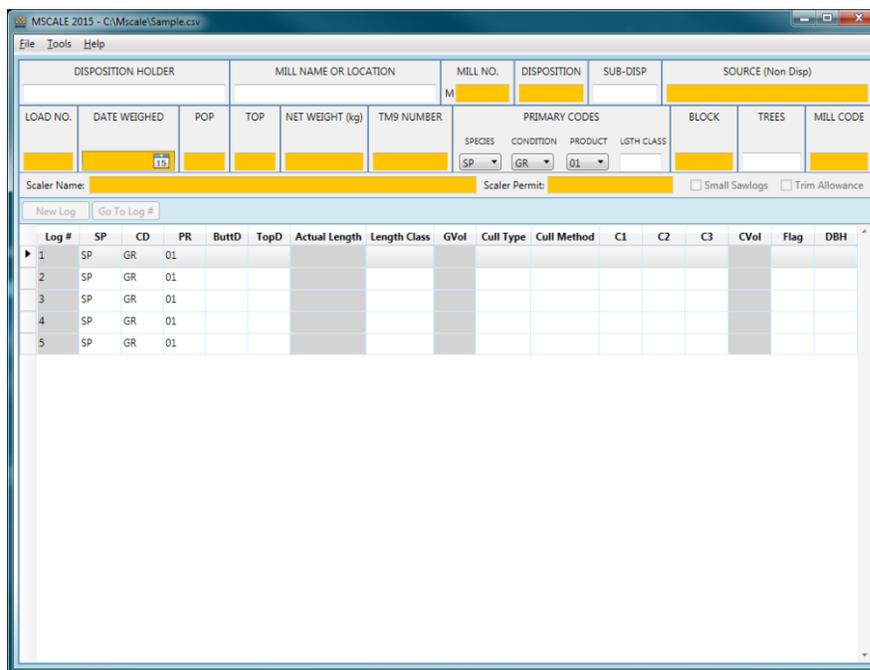


- Required data has a highlighted background.
- The definition of each field, together with restrictions which apply to that field (if any), and the maximum number of characters or digits allowed (in parentheses at the end of the description) are listed below:

FIELD TITLE	DEFINITION / RESTRICTIONS (MAX LENGTH)
Lessee, Licensee, or Permittee:	Company name / no restrictions (20)
Mill Location or Name:	Mill location or name / no restrictions (20)
Disposition:	Disposition / first three letters must be selected from the following: CTP, CTL, FMA, DTP, DTL (10)
Sub-Disposition:	Sub-disposition / no restrictions (4)
Source:	Source / first three letters can be anything but the following: CTP, CTL, FMA, DTP, DTL (20)
Mill Number: M	Mill number / numbers only (6)
Block Number:	Block number / numbers only (4)
Load Number:	Load number / numbers only (8)
Date Weighed:	Date weighed / valid date format must be in format yyyy/mm/dd (10)
Population:	Population / numbers only (3)
Top Diameter:	Top diameter / numbers only (2)
Net Weight:	Net weight (kg) / numbers only (6)
Small Sawlogs	Determine if small stem conifer qualification calculations should occur on log data / pick list containing: Y, N (1)
Trim Allowance	Determine if trim allowance is factored into calculating log lengths; if checked, log lengths entered in centimetres and trim allowance calculated; if not checked, log lengths entered in decimetres and trim allowance not calculated
TM 9 Number:	TM 9 number / no restrictions (10)
Primary Species:	Defaults species code / pick list as defined in Appendix C (2)
Primary Condition:	Default condition code / pick list as defined in Appendix C (2)
Primary Product:	Default product code / pick list as defined in Appendix C (2)

Mill Code:	Two letter code assigned by AESRD for each mill using MSCALE in the province / should use the code assigned by AESRD (2)
Number of Trees in Load:	Numbers of logs in load / numbers only (4)
Scaler Name	Scaler Name / Mandatory field (20)
Scaler Permit	Scaler Permit / Mandatory field (6)

2.1.1.2 DESCRIPTION OF LOG DATA FIELDS



The column headings found on the log data input screen are defined as follows:

HEADING	DEFINITION
LOG #	Log number: System automatically generates the log number.
SP	Log species: This field will automatically have the same entry as the default species code entered in the load header; This field can be changed but must be selected from the pick list as defined in Appendix C.

HEADING	DEFINITION																
CD	<p>Condition code: This field will automatically have the same entry as the default condition code entered in the load header; This field can be changed but must be one selected from the pick list as defined in Appendix C.</p>																
PR	<p>Product code: This field will automatically have the same entry as the default product code entered in the load header; This field can be changed but must be one selected from the pick list as defined in Appendix C.</p>																
TopD	<p>Top diameter of the log in centimetres: Must be an even number from 8 to 76 (cm) or 0.</p>																
Actual Length	<p>Log length in centimetres (100 centimetres in a meter): Must be a number in the range 51 through 745. Values can be entered only if the Trim Allowance on the header screen is turned on.</p>																
Length Class	<p>Log length in decimetres (10 decimetres in a meter): Must be an even number from 6 to 72 (dm) or 0. If the Trim Allowance on the header screen is turned on, then this field is a display only calculated field that is calculated by applying a trim allowance to the actual length. If the Trim Allowance on the header screen is turned off, then values can be entered into this field.</p>																
GVol	<p>Gross volume in cubic metres x 1000: This field is not filled in by the program user. It is calculated by the MSCALE application. Using Smalian's Formula, gross volume is calculated as soon as a valid butt diameter, top diameter, and log length have been entered.</p>																
Cull Type	<p>Cull Type: Numeric codes from 1 to 7, or blank, as follows:</p> <table border="1"> <thead> <tr> <th>Number</th> <th>Cull Type</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Heart Rot</td> </tr> <tr> <td>2</td> <td>End Rot</td> </tr> <tr> <td>3</td> <td>Sap Rot</td> </tr> <tr> <td>4</td> <td>Cat Face</td> </tr> <tr> <td>5</td> <td>Crook or Sweep</td> </tr> <tr> <td>6</td> <td>Shake or Crack</td> </tr> <tr> <td>7</td> <td>Crotch or Fork</td> </tr> </tbody> </table>	Number	Cull Type	1	Heart Rot	2	End Rot	3	Sap Rot	4	Cat Face	5	Crook or Sweep	6	Shake or Crack	7	Crotch or Fork
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3	Sap Rot																
4	Cat Face																
5	Crook or Sweep																
6	Shake or Crack																
7	Crotch or Fork																

HEADING	DEFINITION																		
Cull Method	<p>Cull deduction method: This field will automatically be filled in with a cull method when the cull type is entered. The default cull method for each cull type is entered in the Load Cull Defaults tab on the Preferences screen. This field can be changed but must be a numeric code from 1 to 8, or blank, as follows:</p> <table border="1"> <thead> <tr> <th>Number</th> <th>Cull Deduction Method</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Diameter Reduction</td> </tr> <tr> <td>2</td> <td>Length Reduction</td> </tr> <tr> <td>3</td> <td>Percent Reduction</td> </tr> <tr> <td>4</td> <td>Fraction Reduction</td> </tr> <tr> <td>5</td> <td>Blocking Out</td> </tr> <tr> <td>6</td> <td>Internal Log Reduction</td> </tr> <tr> <td>7</td> <td>Cube Reduction</td> </tr> <tr> <td>8</td> <td>End Rot Options</td> </tr> </tbody> </table>	Number	Cull Deduction Method	1	Diameter Reduction	2	Length Reduction	3	Percent Reduction	4	Fraction Reduction	5	Blocking Out	6	Internal Log Reduction	7	Cube Reduction	8	End Rot Options
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6	Internal Log Reduction																		
7	Cube Reduction																		
8	End Rot Options																		
C1	Cull defect measurement 1																		
C2	Cull defect measurement 2																		
C3	Cull defect measurement 3																		
CVol	<p>Cull volume in cubic metres x 1000: This field is not filled by the user. This field is calculated by the MSCALE application once all applicable cull measurement data is entered.</p>																		
Flag	<p>Flag for incomplete log: This field is optional. It is only necessary to fill in this field if the data will be used for further analysis (such as the construction of local log tables). Valid entries are:</p> <table border="1"> <thead> <tr> <th>Code</th> <th>Incomplete Log Flag</th> </tr> </thead> <tbody> <tr> <td>*</td> <td>Incomplete Log</td> </tr> <tr> <td>B</td> <td>Butt Log</td> </tr> <tr> <td>T</td> <td>Top Log</td> </tr> </tbody> </table>	Code	Incomplete Log Flag	*	Incomplete Log	B	Butt Log	T	Top Log										
Code	Incomplete Log Flag																		
*	Incomplete Log																		
B	Butt Log																		
T	Top Log																		
DBH	Diameter at breast height, 0 to 99																		

2.1.1.3 SMALL SAWLOGS

Small Sawlogs must be enabled before logs are entered for a new load. Once the first log is entered, the setting cannot be changed.

The default setting for this field can be set in the Load Header Defaults tab on the Preferences screen.

2.1.1.4 TRIM ALLOWANCE

Trim Allowance must be enabled before logs are entered for a new load. Once the first log is entered, the setting cannot be changed.

The default setting for this field can be set in the Load Header Defaults tab on the Preferences screen.

2.1.1.5 NEW LOG

Select new log to create a log at the end of the current load.

2.1.1.6 GO TO LOG

Select Go To Log and enter Log # to navigate to a certain log.

2.1.1.7 DELETE LOG

Right click anywhere on a log row and select Delete Current Log.

2.1.1.8 INSERT LOG

Right click anywhere on a log row and select Insert After Current Log.

2.1.1.9 UNDERSIZE QUALIFICATIONS

MSCALE provides the ability to read the dimensions of each log and change the product code to "99" (i.e. undersize) where the criteria for an undersize log is met.

The criteria for an undersize qualification is as follows:

- Log has a top diameter less than the top diameter as set in the header record.

2.1.1.10 PRODUCT CODE OVERRIDE

MSCALE provides the ability to override the automatic product coding of "06", provided that the Small Sawlogs field on the header tab is set to "Y". When the user is about to change a "06" to either a "01" or a "99" code, a message will appear asking the user to confirm the override.

If the user responds “Y” (yes) to the prompt, then the product code override field for the record will be set to “Y”. This indicates that both the small stem conifer and undersize qualifications logic should bypass this record if the product code needs to be recalculated.

If the user responds “N” (no) to the prompt, then the product code override field for the record will be set to “N”, and the product code field will revert back to its original “06” value.

2.1.1.11 SMALL STEM CONIFER QUALIFICATIONS

MSCALE provides the ability to read the dimensions of each log and change the product code to “06” (i.e. “small stem conifer”) where the criteria for a small stem conifer log is met.

The criteria for a small stem conifer qualification is as follows:

- On header screen, Small Sawlogs = “Y”.
- Log has a coniferous species code: (S, P, SP, F, FA, PW, LT, SB, DF, SE, PF, IC, IF, OC)
- Log product code is not equal to “99” (undersize).
- Product Override Code must be set to N. Product code override has not been confirmed by the user.
- Gross Volume / log length calculation is less than or equal to 0.024 m³/m.
- If log attributes meet the above criteria the program will automatically change the product code to 06.
- If log attributes do not meet the above criteria the program will automatically change the product code to 01.

2.1.2 OPEN LOAD

This menu option is used to edit an existing load file.

- By default, the directory that initially appears is the one defined in the File Location Defaults tab on the Preferences screen.

2.1.3 IMPORT LOAD (LEGACY FILE)

This menu option is used import data from previous MSCALE 1.2 load file versions (“txt” file extension). The older format is supported for a one-time import only. After a legacy file is imported, only the Save As option is enabled. The user must save a load file into the new MSCALE 2015 format (“cvs” file extension) and continue editing the newer file.

2.1.4 SAVE

This menu option is used to save data to the load file.

- This menu option is only enabled if a data entry screen is active.

2.1.5 SAVE AS

This menu option is used to save load information to another filename. It is also used to save load information if a new load has been created or imported.

- This menu option is only enabled if a data entry screen is active.

2.1.6 CLOSE

This menu option is used to close the data entry screen.

- This menu option is only enabled if the data entry screen is active

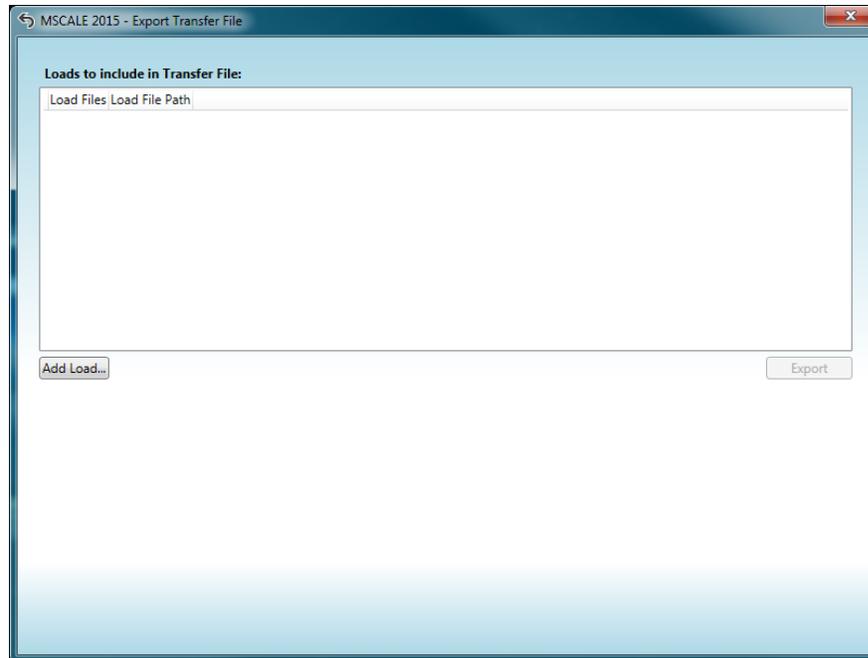
2.1.7 EXIT

This menu option is used to exit the MSCALE application.

2.2 TOOLS MENU

2.2.1 EXPORT TRANSFER FILE

This menu option is used to export a Transfer File (see Appendix A for file format). The Transfer File is for submission to AESRD.

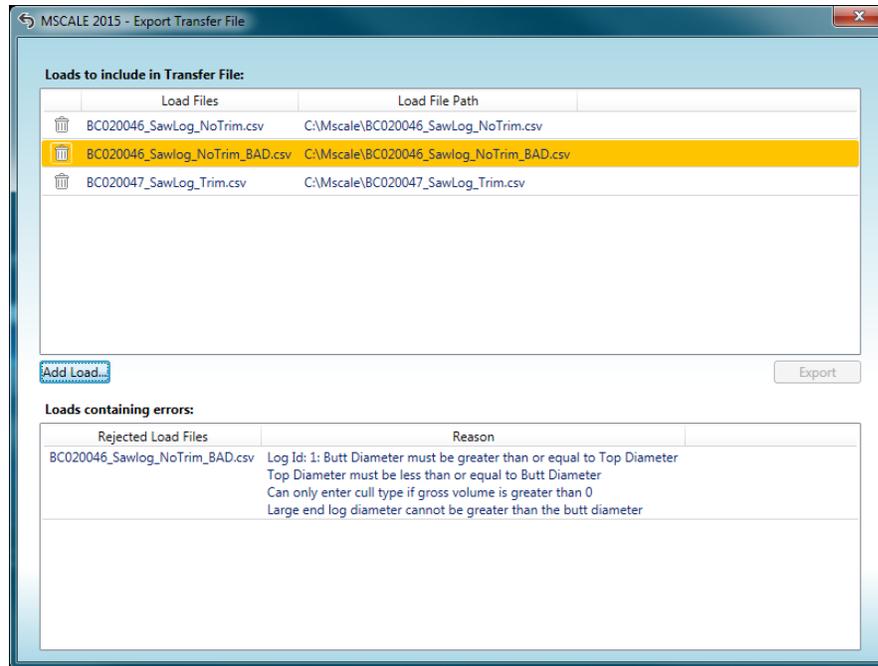


- Select Add Load... and select Load files to be included in the creation of the Transfer File.

Tip: While selecting files in the Windows file browser, you can hold the Control key down to select more than one file.

- Select Export to create a Transfer File.
- If any Load files do not pass validation an export cannot be created until they are removed from the list.

Example of invalid Load files preventing the export of the Transfer File:

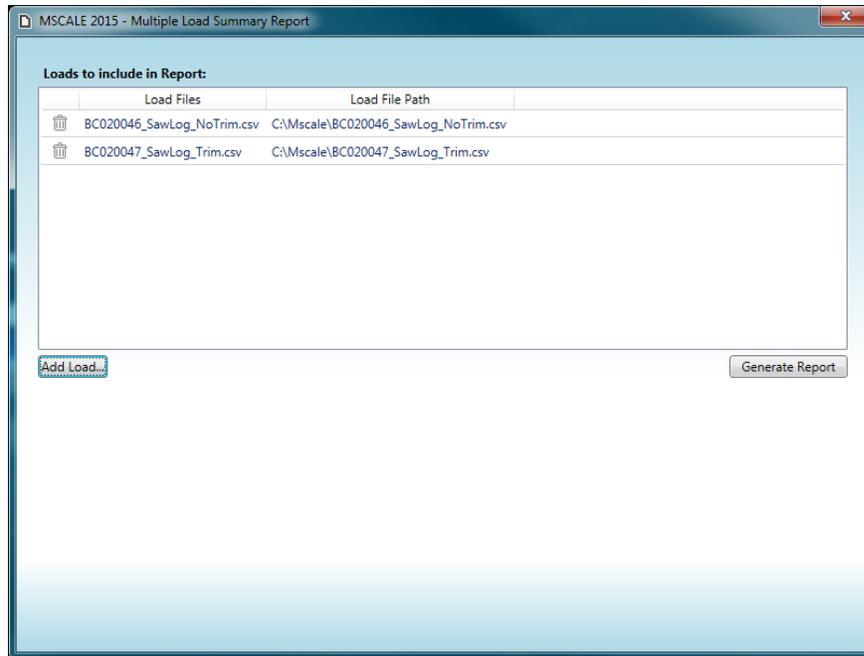


2.2.2 REPORTS

2.2.2.1 MULTIPLE LOAD SUMMARY

This report uses multiple Load files to create its output. Select “Add Load...” to select Load files to be included in the creation of the report. If any Load files do not pass validation, the report cannot be created until they are removed from the list.

- Select Tools > Reports > Multiple Load Summary



2.2.2.2 LOAD SUMMARY

This report operates on the current Load file. Select Tools > Reports > Load Summary

2.2.2.3 LOAD LOG LISTING

This report operates on the current Load file. Select Tools > Reports > Load Log Listing

2.2.2.4 LOG LISTING WITH LOAD SUMMARY

This report operates on the current Load file. Select Tools > Reports > Log Listing with Load Summary

2.2.2.5 VIEWING REPORTS

Once a report is generated the ReportView window is used to view, print and export the report.

- Print allows the report to be sent directly to a printer.
- Export allows the report to be saved in PDF format.
- If the report contains multiple pages, the arrows can be used to navigate the pages.

MSCALE 2015 - ReportView

1 of 1 Page Width Find | Next

MULTIPLE LOAD SUMMARY REPORT

Lessee, License, Permit	Mill	Disposition	Sub Disp.	Mill No.	Load	Small Sawlogs
BLACK BEAR LUMBER	SLAVE LAKE	CTLS040001	5	M 439	46	Y

Date Weighed	Pop	Top	Net Weight (Kg)	TM9 Number	Block	SP	CD	PR	Source
2003-01-11	102	12	35860	A13906409	21	SP	GR	01	

SP	CD	PR	Logs	Length (m)	Gross Vol. (m³)	Cull Vol. (m³)	Net Vol. (m³)	Cull %
SP	GR	01	27	113.4	4.784	0.274	4.510	5.73
F	GR	01	3	13.2	0.798	0.000	0.798	0.00
SP	GR	99	1	2.0	0.019	0.000	0.019	0.00
SP	GR	06	7	25.0	0.438	0.000	0.438	0.00
DF	GR	06	1	4.8	0.075	0.000	0.075	0.00
F	GR	06	1	4.0	0.071	0.000	0.071	0.00
Totals			40	162.4	6.185	0.274	5.911	4.43

Trees	Gross m³ / Trees	Avg. Log Size (m³ / m)	Wt/Vol Conv. (kg / m³)
75	0.0001	0	6066.655

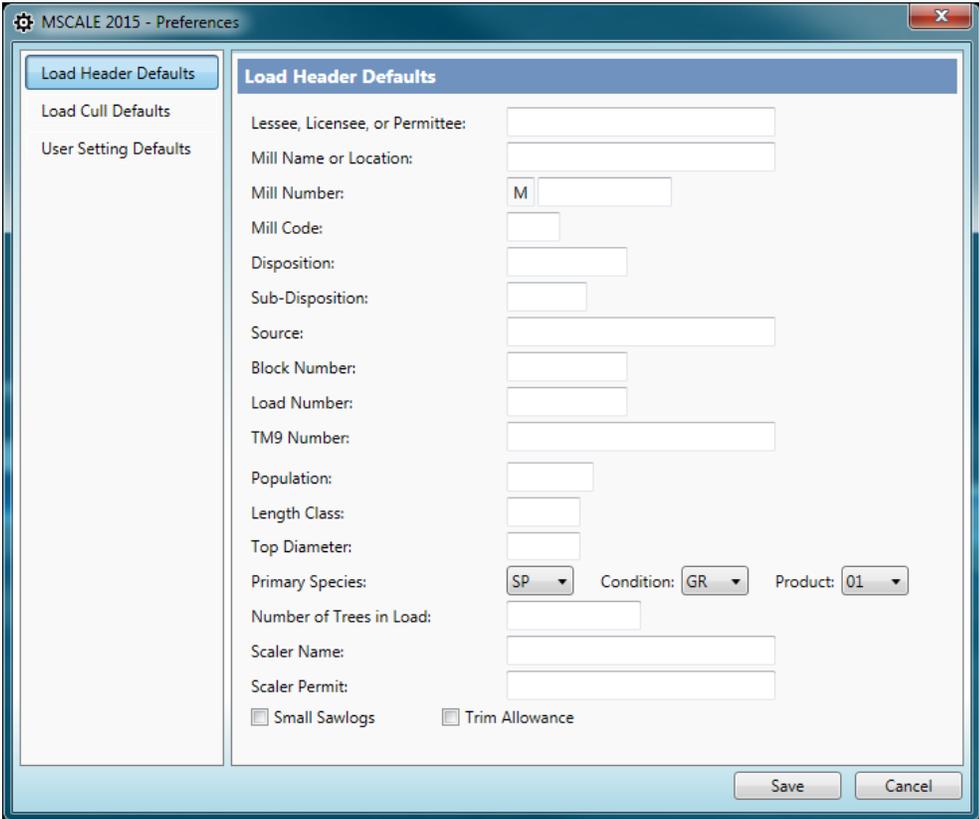
Lessee, License, Permit	Mill	Disposition	Sub Disp.	Mill No.	Load	Small Sawlogs
BLACK BEAR LUMBER	SLAVE LAKE	CTLS040001		M 439	47	Y

Date Weighed	Pop	Top	Net Weight (Kg)	TM9 Number	Block	SP	CD	PR	Source

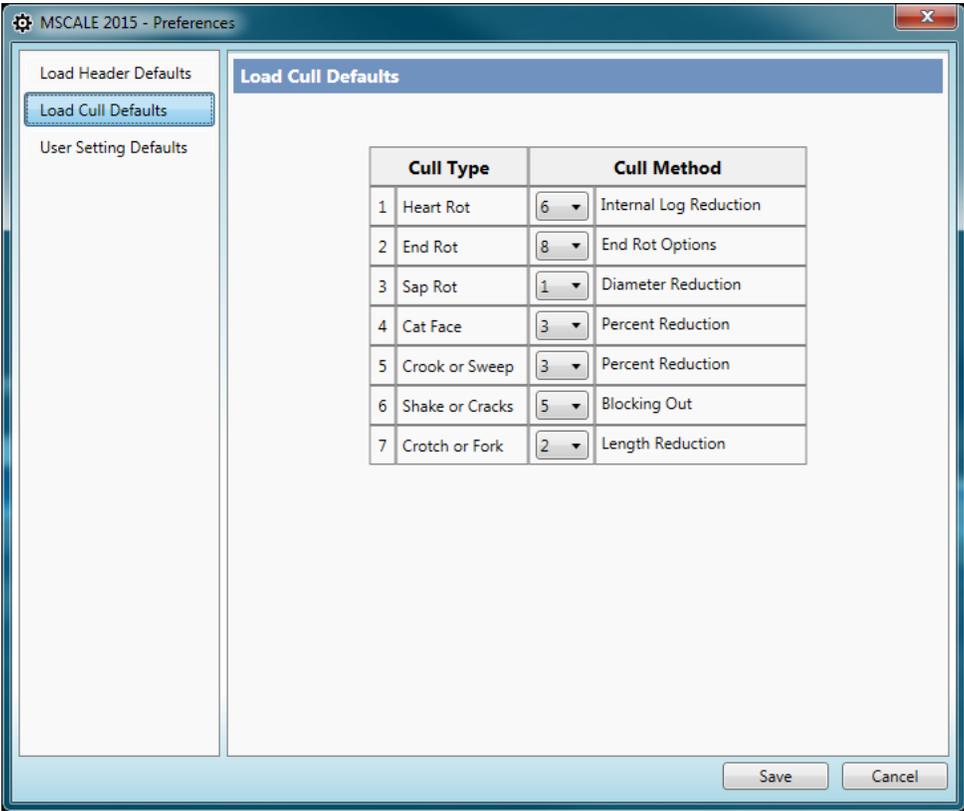
2.2.3 PREFERENCES

This menu option is used to edit system preference information.

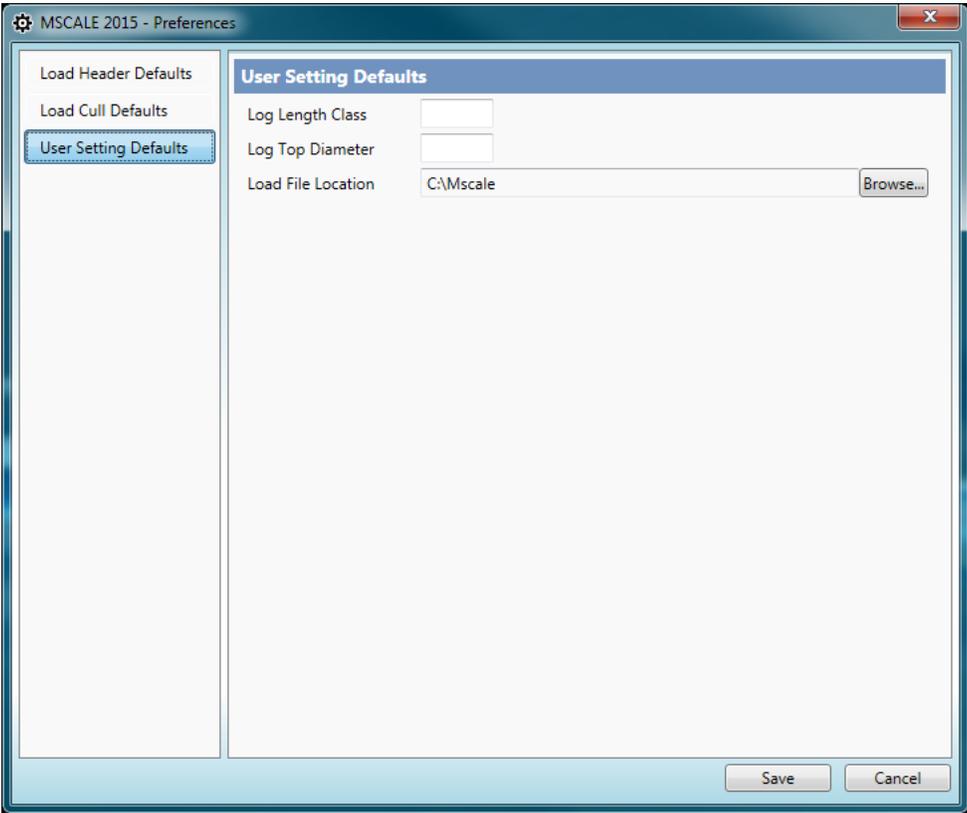
2.2.3.1 LOAD HEADER DEFAULTS



2.2.3.2 LOAD CULL DEFAULTS



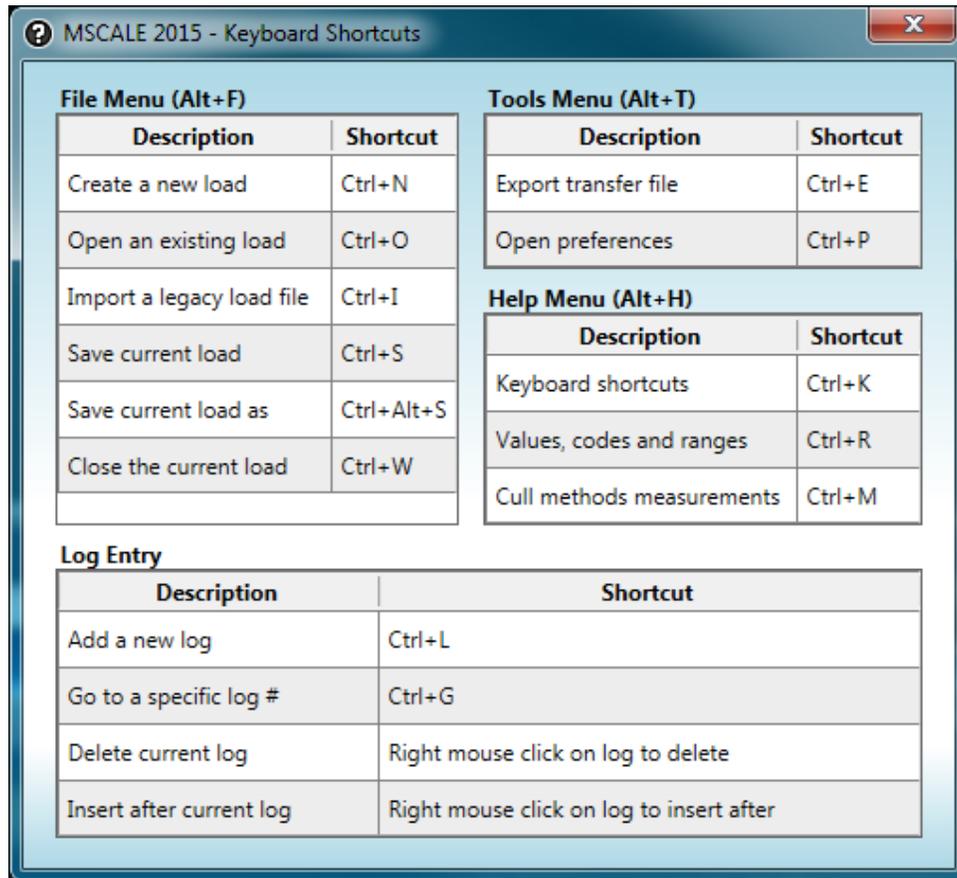
2.2.3.3 FILE LOCATION DEFAULTS



Note: The default data file directory is the location where the Windows file browser will default to. This location can be overridden when opening or saving particular load files.

2.3 HELP MENU

2.3.1 KEYBOARD SHORTCUTS



This menu option will display the built in keyboard shortcuts.

2.3.2 VALUES, CODES & RANGES

Species Codes		Condition Codes		Product Codes		Valid Ranges		
Code	Name	Code	Name	Code	Name		Min	Max
A	Aspen	BD	Blowdown	01	Conifer Sawlogs & Pulp	Butt Diameter (cm)	8	150
AB	Aspen/Poplar	BK	Beetle Killed	02	Deciduous Pulpwood	Top Diameter (cm)	2	76
B	Birch	D	Dead	05	Class B Post	Actual Length (cm)	51	9025
DF	Douglas Fir	EN	Endangered	06	Small Stem Conifer	Length Class (dm)	6	900
F	Balsam Fir	FK	Fire Killed	13	Chips			
FA	Alpine Fir	GR	Green	14	Veneer			
IC	Incidental Coniferous	ID	Insect Damaged	18	Oriented Strand Board			
ID	Incidental Deciduous	IS	Industrial Salvage	19	Laminated Veneer Lumber			
IF	Incidental Fir	OD	Other Damage	20	Fuelwoods			
LT	Larch			99	Undersize			
OC	Other Coniferous							
OD	Other Deciduous							
P	Pine							
PB	Black Poplar							
PF	Limber Pine							
PW	Whitebark Pine							
S	Spruce							
SB	Black Spruce							
SE	Engelmann Spruce							
SP	Spruce/Pine							

Cull Types and Allowable Cull Methods			Cull Methods	
Code	Name	Allowed Methods	Code	Name
1	Heart Rot	2, 3, 4, 5, 6, 7	1	Diameter Reduction
2	End Rot	3, 4, 5, 7, 8	2	Length Reduction
3	Sap Rot	1, 2, 3, 4, 5, 7	3	Percent Reduction
4	Cat Face	2, 3, 4, 5, 7	4	Fraction Reduction
5	Crook or Sweep	2, 3, 4, 7	5	Blocking Out
6	Shake or Cracks	2, 3, 4, 5, 7	6	Internal Log Reduction
7	Crotch or Fork	2, 3, 4, 5, 7	7	Cube Reduction
			8	End Rot Options

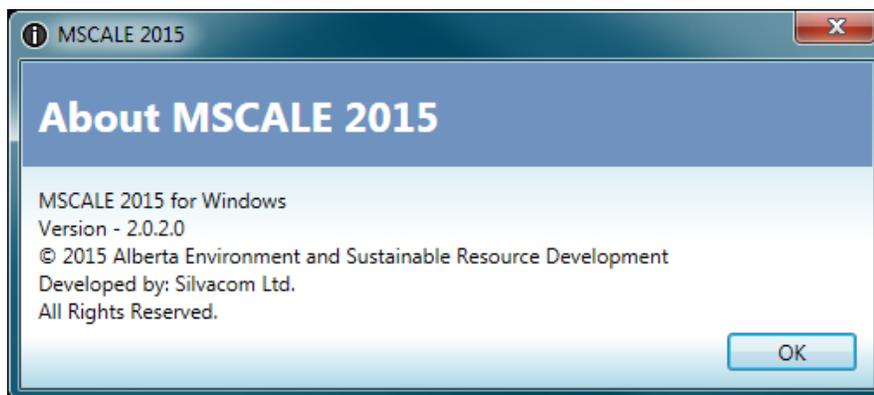
This menu option will display code abbreviation, values and valid measurement ranges.

2.3.3 CULL METHODS MEASUREMENTS

Cull Method	(#)	C1	C2	C3
Diameter Reduction	1	Sound Wood Butt Diameter (cm)	Sound Wood Top Diameter (cm)	N/A
Length Reduction	2	Cull Length (dm)	N/A	N/A
Percent Reduction	3	Cull Percent (%)	N/A	N/A
Fraction Reduction	4	Numerator	Denominator	N/A
Blocking Out	5	Cull Height (cm)	Cull Width (cm)	Cull Length (dm)
Internal Log Reduction	6	Cull Top Diam. (cm)	Cull Butt Diam. (cm.)	Cull Length (dm)
Cube Reduction	7	Cull Volume (Cu.M. x 1000)	N/A	N/A
End Rot Options	8	Large End Diameter (cm)	Cull Diam. At Affected End (cm)	Cull Length (dm)

2.3.4 ABOUT

This menu option will display the program version number and copyright information.



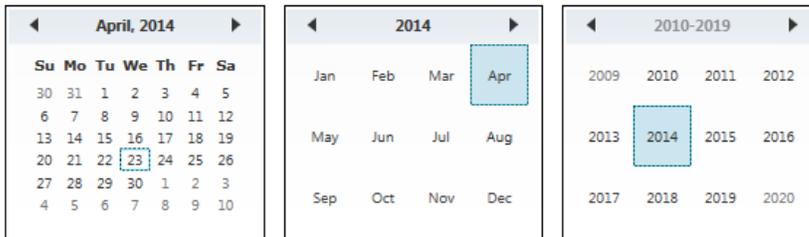
2.4 KEYBOARD NAVIGATION

2.4.1 HEADER

NAVIGATION	
Tab	Moves to the next input field.
Shift + Tab	Move to the previous input field.
←	Moves left between characters of current field being edited.
→	Moves right between characters of current field being edited.

Date Weighed cannot be entered using the keyboard. To enter a Date Weighed:

- Left mouse click on the calendar image  to get the month view shown on the left. Select the desired date.



- To select a different month, **click the calendar header** (the month and year label at the top) and the calendar will switch to a monthly view (center image above). Select the desired month to return to the daily view for that month.
- To select a year first switch to the monthly view, **click the calendar header** (the year label at the top) and the calendar will switch to a yearly view (right image above). Select the desired year to return to a monthly view of that year.

2.4.2 DATA ENTRY GRID

NAVIGATION	
Tab	<ul style="list-style-type: none"> Moves to the next editable field. If on the last field of a row then moves to the first editable field of the next row. If on the last field of the last row a new log entry row will be created.
Shift + Tab	Moves to the previous editable field of the current row.
Enter	<ul style="list-style-type: none"> Moves to the next editable field. If on the last field of a row then moves to the first editable field of the next row. If on the last field of the last row a new log entry row will be created.
←	Moves left between characters of current field being edited.

NAVIGATION

→ Moves right between characters of current field being edited.

↑ Moves to the previous row.

↓ Moves to the next row.

APPENDIX A. LOAD FILE FORMAT

The “Load File” is a comma delimited text file consisting of header data and log data.

The file has an extension “.csv” (comma-separated values).

Any values for a character field containing commas must be in quotations. For example: ABC,DEF would become “ABC,DEF” in the delimited output.

HEADER SECTION

The first line of the file contains a list comma delimited field/header names (no length restrictions).

The line following this header row contains the actual header data (length restrictions).

#	FIELD/HEADER NAME	DATA TYPE	MAX WIDTH	NOTES
1	DISPOSITION HOLDER	Alphanumeric	20	Lessee, Licensee, or permittee.
2	MILL NAME OR LOCATION	Alphanumeric	20	
3	MILL NO.	Numeric	6	Number portion of only (no letter prefix)
4	DISPOSITION	Alphanumeric	10	<ul style="list-style-type: none"> ■ Disposition and Source cannot have entries at the same time ■ Must equal 10 ■ Must start with CTL, CTP, DTL, DTP or FMA
5	SUB-DISP	Alphanumeric	4	
6	SOURCE (Non Disp)	Alphanumeric	20	<ul style="list-style-type: none"> ■ Source and Disposition cannot have entries at the same time ■ Must NOT start with CTL, CTP, DTL, DTP or FMA
7	LOAD NO.	Numeric	8	
8	DATE WEIGHED	Numeric String	8	Format yyyyMMdd
9	POP	Numeric	3	Population

#	FIELD/HEADER NAME	DATA TYPE	MAX WIDTH	NOTES
10	TOP	Numeric	2	Top Diameter - Even number 2 to 76 cm
11	NET WEIGHT (kg)	Numeric	6	
12	TM9 NUMBER	Alphanumeric	10	
13	PRIMARY SP	String	2	Primary species code
14	PRIMARY CD	String	2	Primary condition code
15	PRIMARY PR	Numeric String	2	Primary product code
16	PRIMARY LENGTH	Numeric	3	Primary length class
17	BLOCK	Alphanumeric	4	Block number
18	TREES	Numeric	4	
19	MILL CODE	Alphanumeric	2	
20	SCALER NAME	Alphanumeric	20	
21	SCALER PERMIT	Alphanumeric	6	
22	SMALL SAWLOG	String	1	Y or N
23	TRIM ALLOWANCE	String	1	Y or N

BLANK ROW

There is a blank/empty row between the end of the header data and the start of the log data header. This blank/empty row is intentional.

LOG DATA SECTION

The first line contains comma delimited header field names (no length restrictions).

The lines following this header row will contain the actual header data (length restrictions).

#	FIELD/HEADER NAME	DATA TYPE	MAX WIDTH	NOTES
1	LOG NO.	Numeric	N/A	Should be sequential
2	SP	String	2	
3	CD	String	2	
4	PR	Numeric String	2	
5	BUTT	Numeric	3	Even number from 8 to 150 cm
6	TOP	Numeric	2	Even number from 2 to 76 cm
7	LENGTH	Numeric	3	Depends on header Trim Allowance setting. <ul style="list-style-type: none"> ■ Even number from 6 to 900 dm (length class) ■ Number from 51 to 9025 cm (Actual length)
8	GROSS VOL	Numeric	5	m ³
9	CULL TYPE	Numeric	1	
10	CULL METHOD	Numeric	1	
11	C1	Numeric	3	
12	C2	Numeric	3	
13	C3	Numeric	3	
14	CULL VOL	Numeric	5	m ³
15	FLAG	String	1	Incomplete log flag (<blank>, *, B or T)
16	DBH	Numeric	2	Diameter at breast height
17	PRODUCT OVERRIDE	String	1	Y or N

APPENDIX B. CULL TYPES & METHODS OF CALCULATIONS

Seven different cull types are allowed by the MSCALE application (following the Alberta scaling regulations):

NUMBER	CULL TYPE
1	Heart Rot
2	End Rot
3	Sap Rot
4	Cat Face
5	Crook or Sweep
6	Shake or Crack
7	Crotch or Fork

Eight different methods of cull calculations are used by the MSCALE application (also following the Alberta scaling regulations):

NUMBER	CULL DEDUCTION METHOD
1	Diameter Reduction
2	Length Reduction
3	Percent Reduction
4	Fraction Reduction
5	Blocking Out
6	Internal Log Reduction
7	Cube Reduction
8	End Rot Options

Any of these cull calculation methods can be used with any of the cull types. However, there are recommended cull calculation methods for each type of cull (also following the Alberta scaling regulations):

CULL TYPE (NUMBER)	RECOMMENDED CULL METHOD (NUMBER)	VALID METHODS
Heart Rot	(1) Internal Log Reduction	(6), 2,3,4,5,7
End Rot	(2) Depends on cull size:	

CULL TYPE (NUMBER)	RECOMMENDED CULL METHOD (NUMBER)	VALID METHODS
	<ul style="list-style-type: none"> ■ Reduce the length of the log by half the cull length (Cull Area \geq 50%) ■ Deduct half the volume shown in the volume table for a piece equal to the length of the rot (Cull Area $<$ 50%) 	(8) 2,3,4,5,7
Sap Rot	(3) Diameter Reduction	(1), 2,3,4,5,7
Cat Face	(4) Fraction Reduction	(3), 2,4,5,7
Crook or Sweep	(5) Percent Reduction	(3), 2,4,7
Shake or Crack	(6) Blocking Out	(5), 2,3,4,7
Crotch or Fork	(7) Length Reduction	(2), 3,4,5,7

The MSCALE application uses the AESRD recommended calculation methods as defaults on the TM-32 Data Input Screen. When the user enters a cull type under the T column, a cull method number automatically appears under the M column, and the definition for this cull calculation method appears on the first line of the screen. If you want to accept the default cull calculation method, simply press ENTER.

The user can, however, choose any cull calculation method (that is allowed for the particular defect type), simply by entering the corresponding number under the M column (thereby overwriting the default number).

Once a cull calculation method has been selected by the user, the MSCALE application will prompt for C1 and possibly C2 and C3. The definitions C1, C2, and C3 depend on the cull calculation method selected, as follows:

CULL METHOD	(#)	C1	C2	C3
Diameter Reduction	(1)	Sound Wood Top Diam. (cm)	Sound Wood Top Diam. (cm)	N/A
Length Reduction	(2)	Cull Length (dm)	N/A	N/A
Percent Reduction	(3)	Cull Percent (%)	N/A	N/A
Fraction Reduction	(4)	Numerator	Denominator	N/A

CULL METHOD	(#)	C1	C2	C3
Blocking Out	(5)	Cull Height (cm)	Cull Width (Cm.)	Cull Length (dm)
Internal Log Reduction	(6)	Cull Top Diam. (cm)	Cull Butt Diam. (Cm.)	Cull Length (dm)
Cube Reduction	(7)	Cull Volume (Cu.M. x 1000)	N/A	N/A
End Rot Options	(8)	Large End Diameter (cm)	Cull Diam. @ Large End (cm)	Cull Length (dm)

N/A = Not Applicable

It should be noted that if the scaling practices/procedures call for 2 cm to be added to any log or cull dimension, the scaler must perform this addition. MSCALE **will not** do this automatically (except for basal area comparisons). As soon as MSCALE has enough information (as per the above table), a cull volume will be calculated and displayed under the CVOL column. If a log has 2/3 or greater cull, the entire gross log volume is culled. Thus, if you enter 99% with a percentage reduction log, the entire log is culled.

APPENDIX C. SPECIES/CONDITION/PRODUCT VALUES

All the valid codes for species, condition and products codes are listed below:

FIELDS	VALUE CODES & MEANING	
Species Codes:	S	Spruce
	P	Pine
	SP	Spruce/Pine
	F	Balsam Fir
	A	Aspen
	B	Birch
	PB	Black Poplar
	AB	Aspen/Poplar
	FA	Alpine Fir
	PW	Whitebark Pine
	LT	Larch
	SB	Black Spruce
	DF	Douglas Fir
	SE	Engelmann Spruce
	PF	Limber Pine
	IC	Incidental Coniferous
	ID	Incidental Deciduous
	IF	Incidental Fir
	OC	Other Coniferous
	OD	Other Deciduous
Condition Codes:	GR	Green
	D	Dead

FIELDS	VALUE CODES & MEANING	
	BD	Blowdown
	FK	Fire-Killed
	ID	Insect Damaged
	BK	Beetle-Killed
	EN	Endangered
	IS	Industrial Salvage
	OD	Other Damage
Product Codes:	01	Conifer sawlogs and pulp
	02	Deciduous Pulpwood
	05	Class B Posts
	06	Small stem conifer
	13	Chips
	14	Veneer
	18	Oriented Strand Board
	19	Laminated Veneer Lumber
	20	Fuelwood
	99	Undersize