



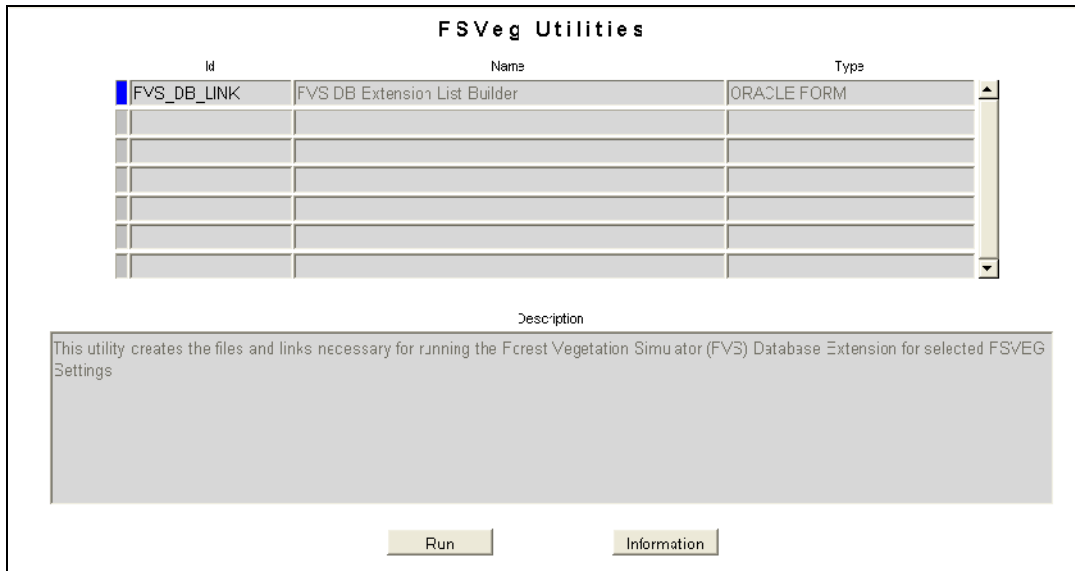
CHAPTER 8: UTILITIES

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UTILITIES MAIN SCREEN

The Utilities menu contains programs that load data into FSVEg and access FSVEg data.



Utilities Main Screen

Running a Utility

To run or execute a utility, highlight the desired utility and select the RUN button.

Utility Information

The Utility Details Form is used to display information about a utility. Required field names contain an asterisk (*). The gray section at the bottom of the screen displays messages regarding current actions. An appropriate description or direction will appear in the gray section when the cursor is placed in any field or on a button.

Utility Details			
Id	FVS_DB_LINK	Name	FVS DB Extension List Builder
Type/Subtype	UTILITY ORACLE FORM	Command	fsveg_list_editor.fmx
Description	This utility creates the files and links necessary for running the Forest Vegetation Simulator (FVS) Database Extension for selected FSVEG Settings	Support	Supported by the NRIS Staff.
Output Description	This utility produces the following files: (1) suppose.loc (2) FVS_Data.mdb	Uses Preference	Y
Created By	FSDBA	Modified By	FS_NRIS_FSVEG
Created Date	DEC-13-2004	Modified Date	SEP-04-2009
		Is Mandatory Utility	N

Utility Details Form

These fields are the same as those in the Add/Delete screen, and are for display only.

National Utilities

Name	Description	Output
FVS_DB_Link	Creates the files and link necessary to run the Forest Vegetation Simulator (FVS) database extension for selected settings	This utility creates the suppose.loc and FVS_Data.mdb files

FVS_DB_LINK UTILITY

The FVS_DB_LINK utility builds Forest Vegetation Simulator (FVS) data files for settings stored in FSVeg. The utility creates an Microsoft Access database that can be used as input to SUPPOSE/FVS. These links will only work with Suppose, version 2.0 and beyond and FVS variants posted after 03/15/2007.

Directions on using the FVS_DB_LINK utility

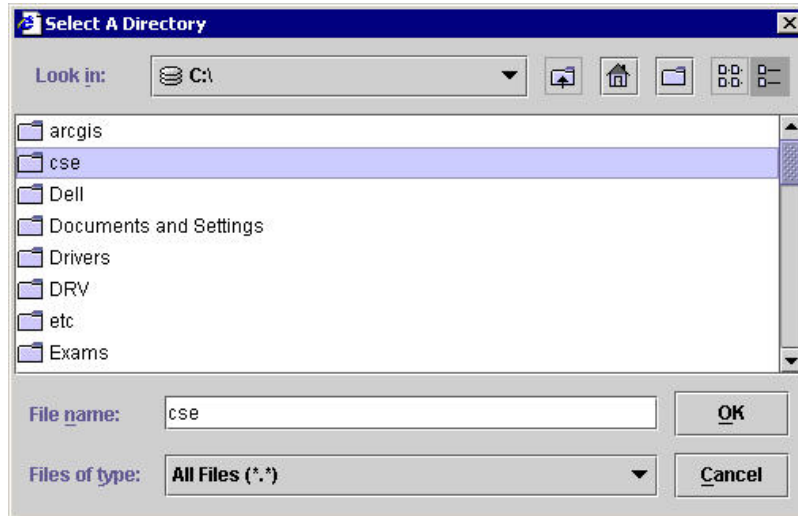
Provide the utility three pieces of information:

1. The directory to store the FVS-ready files.
2. A default FVS variant.
3. The name of the list that contains the FSVeg Setting IDs you want to download.

The screenshot shows the 'FVS Database Extension List Builder' window. It contains a text input field for the directory where FVS files will be stored, with a 'Select Target Directory' button to its right. Below this is a dropdown menu for selecting a default FVS variant, with the text 'Select Default FVS Variant: when unable to make assignment for non-NFS data' above it. Underneath is another text input field for the list name, with a 'Create/Select List' button to its right. At the bottom center of the window is a 'Create FVS Files' button.

1) Selecting your Target Directory.

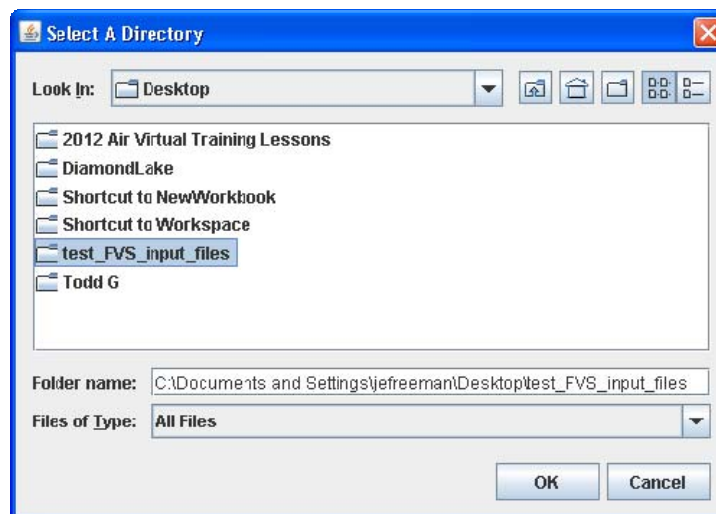
- a) Click "Select Target Directory" button.
- b) Navigate to a project folder to store your data, or create one now.



c) Click the “OK” button.

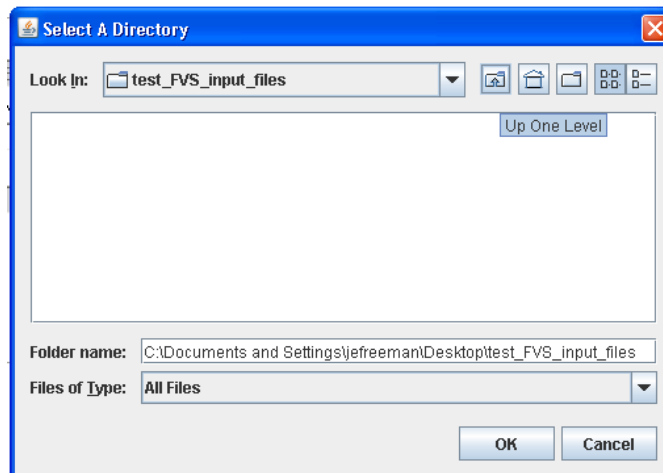
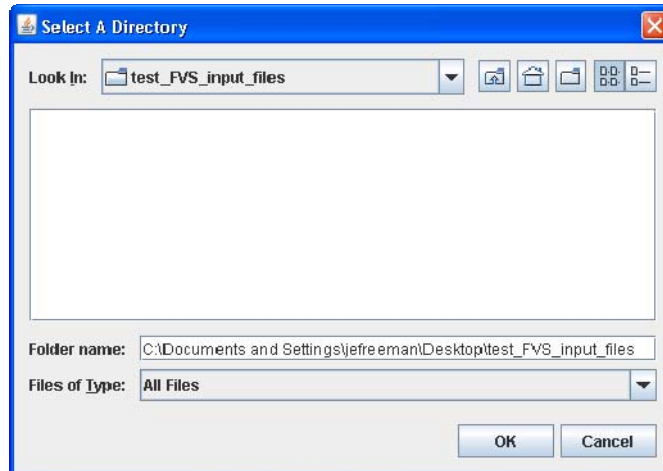
If, after selecting a target directory in FVS_DB_LINK, the window freezes (i.e., clicking on “OK” doesn’t do anything and it looks like the program stops dead in its tracks), then you are opening, rather than selecting, the folder of interest.

For example, if the target folder is “test_FVS_input_files” and then single-click that item and it will look like this:



At this point, click “OK” to proceed.

However, if you double-click that folder, it will “open”—and then the process will appear to freeze.

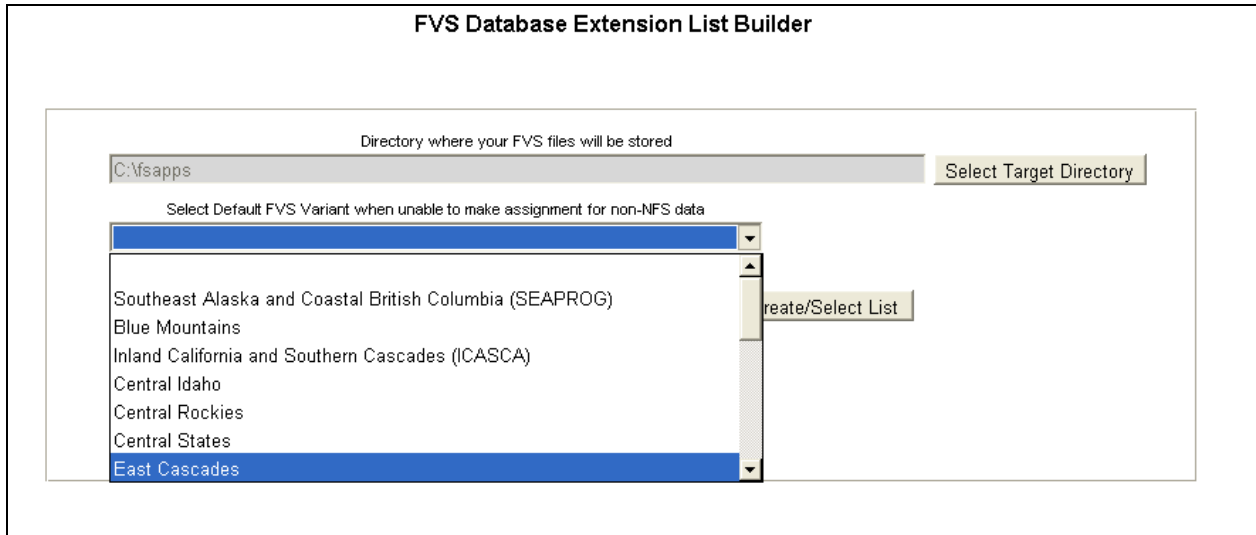


Select the “up one level” button and when you get back to the prior level, single-click on the correct folder, select “OK,” and proceed from there.

2) Selecting a default FVS Variant.

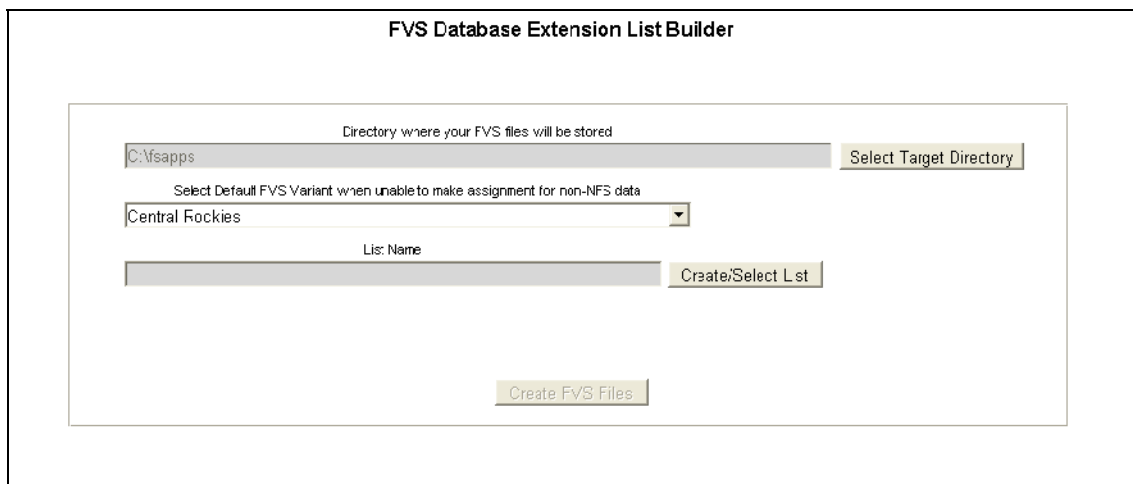
FVS variants are automatically assigned to each FSVeg Setting ID based on the Region and Forest number. Some data may not contain a Region and Forest number, such as FIA strategic grid inventory data from State lands or County lands adjacent to your Forest. The default FVS variant is only assigned to data in the Setting ID list that does not contain a Region and Forest number.

- a) Select the arrow to access the drop down list of FVS variants.
- b) Select a default FVS variant.



3) Selecting a List of Setting Ids to use with FVS.

- a) Click on the “Create/Select List” button.



This will open the FSveg List Editor form that will enable you to assign your stand exams to a list for downloading. If a list has already been created for selecting the desired settings, it can be selected using the down arrow button to the right of the box for List Name. Once selected, close the window and skip to step (4) below. Usually an appropriate list will not exist, so the following steps will be followed.

FSVeg List Editor

List Name

List Description

Instructions for creating a list:

1. Clear the form (if a list has already been entered) by selecting the Clear Record icon
2. Enter a list name and list description
3. Save it (disk icon)
4. Click the Preferences button
5. Add settings to the list by selecting All Setting Ids -> Add to List or selecting Single/Multiple Setting Ids -> Add to List
6. Repeat step 5 to add more settings to the list
7. To leave the Preferences form, click the Close button

Preferences

	Setting Id	Meas No	Measurement Date	Reg Admin	Forest Admin	Reg. Proc	Forest District Proc	Stand/ Cluster Id	Location	Project Name
▲										
▼										

- b) Clear the form (if a list has already been entered) by selecting the clear record icon.



- c) Enter a list name and list description for the stand exams you wish to download.

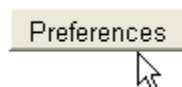
List Name

List Description

- d) Click the yellow disk icon to save the list name.



- e) Click on the Preferences Button.



f) The following window will open:

Adjust the preferences to select the desired settings from FSVeg.

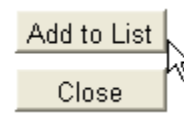
To include all setting ids:

1. Select "All Setting Ids"

To include selected setting ids:

1. Select "Single/Multiple Setting Ids"
2. Select a setting id in the left list box.
3. Click the right-arrow (->) button to move the setting id to the right list box.
4. Add any additional desired settings by selecting them and using the right-arrow.

g) When finished selecting setting ids click the "Add to List" button.



h) Click the "Close" button.

i) Click the yellow disk icon to save the preferences

The list name and associated setting IDs are now displayed in the List Editor.

FSVeg List Editor

List Name:

List Description:

Instructions for creating a list:

1. Clear the form (if a list has already been entered) by selecting the Clear Record icon
2. Enter a list name and list description
3. Save it (disk icon)
4. Click the Preferences button
5. Add settings to the list by selecting All Setting Ids -> Add to List or selecting Single/Multiple Setting Ids -> Add to List
6. Repeat step 5 to add more settings to the list
7. To leave the Preferences form, click the Close button

Setting Id	Meas No	Measurement Date	Reg Admin	Forest Admin	Reg Proc	Forest Proc	Stand/ Cluster Id	Location	Project Name	Purpose Code
0209041052010004	1	01-JUN-1977	02	09	02	09	04 0004	105201	RMSTAND	SE
0209041052010005	1	01-JUL-1977	02	09	02	09	04 0005	105201	RMSTAND	SE
0209041053010003	1	01-SEP-1976	02	09	02	09	04 0003	105301	RMSTAND	SE
0209041053010005	1	01-SEP-1976	02	09	02	09	04 0005	105301	RMSTAND	SE
0209041053010009	1	01-AUG-1987	02	09	02	09	04 0009	105301	RMSTAND	SE
0209041053020010	1	01-SEP-1983	02	09	02	09	04 0010	105302	RMSTAND	SE
0209041053020020	1	01-SEP-1983	02	09	02	09	04 0020	105302	RMSTAND	SE
0209041053020022	1	01-SEP-1983	02	09	02	09	04 0022	105302	RMSTAND	SE
0209041053020023	1	01-SEP-1983	02	09	02	09	04 0023	105302	RMSTAND	SE

To close the FSVeg List Editor, select the red folder icon located on the upper left-hand corner of the form.



4) Creating the FVS-ready files.

You now have the capability of creating the FVS input files by clicking the “Create FVS Files” button, which will save your stand and tree data into an MS-Access database in the project folder.

- a) Click the “Create FVS Files” button. A black window will appear for a short time and then control will be returned to the FVS Database Extension Utility

Directory where your FVS files will be stored

Select Default FVS Variant when unable to make assignment for non-NFS data

List Name

Close the Utility form by selecting the red folder icon and exit FSVeg. If a message appears asking “Do you want to save the changes you have made?” Click the “Yes” button.

Two FVS data-ready files are created when the utility is run and saved in the project folder. The two files are:

<u>Filename</u>	<u>Description</u>
suppose.loc	Identifies Project in “Select Simulation Stands” window
FVS_Data.mdb	MS-Access database containing Setting Id and tree data

The fsveg_fvs.mdb MS-Access Database contains four tables:

<u>Filename</u>	<u>Description</u>
FVS_GroupAddFilesAndKeywords	Stores add files and keywords related to grouping codes
FVS_StandInit	Contains the stand level data
FVS_TreeInit	Contains the tree level data
FVS_Plotinit	Contains plot level data; this data is not used in stand-level FVS scenarios
Metadata	Contains metadata

All files should be saved for future use. A description of the keywords is contained in the Users Guide to the Database Extension of the Forest Vegetation Simulator Version 2.0 (Forest Management Service Center, 2003, Revised 2011).

Note in the FVS_StandInit table that BAF is set to 0 and the breakpoint diameter is 999. This is because FSVegDBLink software converts each tree to its per-acre per plot equivalence in the FSV_TreeInit table.

The FSV_StandInit table then has the following:

BASAL_AREA_FACTOR ▾	INV_PLOT_SIZE ▾	BRK_DBH ▾
0	1	999
0	1	999
0	1	999
0	1	999

Where INV_PLOT_SIZE is the Fixed Area Plot Size = 1 acre and breakpoint diameter (BRK_DBH) = 999 inches

For example, you have two plots and your sampling methodology is:

- Large trees >+ 5.0 inches were collected with a BAF = 20
- Small trees < 5.0 inches were collected on a 1/100th fixed acre plot

If there are two trees on Plot #1...

Tree 1	10" PIPO
Tree 2	20" PIPO

...and three trees on Plot #2

Tree 3	15" PIPO
Tree 4	20" PIPO
Tree 5	4" PIPO

The trees per acre (TPA) calculations are:

Tree 1 TPA = 20" BAF / (10 * 10 * 0.00545415) = 36.669/2 (plots) =	18.334
Tree 2 TPA = 20" BAF / (20 * 20 * 0.00545415) = 9.188/2 (plots) =	4.594
Tree 3 TPA = 20" BAF / (15 * 15 * 0.00545415) = 16.297/2 (plots) =	8.148
Tree 4 TPA = 20" BAF / (20 * 20 * 0.00545415) = 9.188/2 (plots) =	4.594
Tree 5 TPA =	= 100.000/2 (plots) = 50.000
The total number of trees per acre	= 85.616