



FVS Newsletter

Issue 8

March 07, 2019

Forest Vegetation Simulator



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Highlights

Welcome to the eighth issue of the Forest Vegetation Simulator (FVS) Newsletter! In this issue we discuss FVS highlights, to include our most recent instructor-led trainings. We also highlight any major updates since our last FVS version release in November 2018.

Our goal is to keep FVS users up-to-date on recent changes and new additions to the software. For more information on FVS, or to find past issues of our Newsletters or Bulletins, please visit our [website](#).

Feel free to let us know how we are doing. You can pass along any advice, ideas, or other input that you think will help to our [email](#).

Completed Trainings

The fiscal year (FY) 2019 FVS training schedule is complete! Even with the furlough we were able to complete all courses on time. Thank you participants for sticking with us and remaining flexible during the period of uncertainty at the beginning of the year.

The following three basic level courses were conducted:

- Sacramento, CA: Dec 03 – 07, 2018

Special thanks to Joe Sherlock, R5 Silviculturist for coordinating the logistics behind the training. 17 students attended.

- Fort Collins, CO: Feb 04 – 08, 2019

Special thanks to Laurie Swisher, R2 Vegetation Application Coordinator for coordinating the logistics, Megan Lowell, R2 Silviculturist, and Lance David, Senior Systems Analyst of the FVS staff for giving presentations on insect and disease applications and silviculture prescription modeling in FVS. 19 students attended.

- Asheville, NC: Feb 25 – Mar 01, 2019

Special thanks to Janet Hinchee, R8 Silviculturist for coordinating the logistics, and for giving a presentation on silviculture prescription modeling in FVS. 33 students attended.

We also conducted the first Advanced Training in over five years:

- Fort Collins, CO: Nov 06 – 08, 2018

We will be working on FY20 dates/times for instructor led trainings and possibly new avenues for web based trainings. We will also be updating trainings for use with the new FVSOnline/Onlocal formats. Please continue to check out our [FVS Training](#) webpage for the most up-to-date information.

FVS Online/Onlocal

FVS Online/Onlocal is slated to ultimately become the successor to Suppose in FY20. The interface was designed to run in a true client/server configuration, whereby the data and software are stored on a server and the user interaction is through a web browser. However, the software can also be installed on a personal computer or in a Citrix (or similar) system. The interaction is still through a web browser, but the software, inputs and outputs, are all stored on the "personal computer". This configuration is called FVS Onlocal.

The system was built using R, Shiny, and many other R packages. It uses SQLite3 as the primary database format, but can import other formats as well. If you're interested in trying out the interface software in its current form, contact the FVS helpdesk. Specify if you're interested in the Online and/or Onlocal (Windows only) configuration, and we will provide access, as well as training information, and other useful informational links to get you started. Note: Users will be working with "under development" software that has limited resources available to help the user. Any feedback you are willing to provide will be valued.

AK Variant

The FVS staff has continued work on the development of a new AK variant. To date, all the equations that are required to run a simulation have been fit. The staff is now in the process of programming these equations into FVS. Once this process is complete, the revised variant will undergo a period of verification. The new AK variant is expected to be released in 2019.

ECON Extension Training and Exercises

In an effort to promote the ECON extension of FVS, we have created a user friendly training guide and video. The intent is to give potential users a basic understanding of how the ECON Extension works and what the minimum requirements are in order for ECON to function properly.

We hope these training materials will give users a foundational level of understanding so they have the tools necessary to apply ECON to larger projects where cost/benefits can be used in the analysis of management actions and silvicultural prescriptions. You can find the guide and video in the *Self-Paced* and *Training Videos* sections of the [FVS Training](#) webpage.

FVS Updates – All Versions

The FVS staff is in the process of working on two versions of FVS simultaneously. In order to reduce confusion as to which version a particular update/modification applies, we will divide the FVS Updates section appropriately. The following updates apply to all versions of FVS.

Parallel Processing Extension (PPE) Code Removed

Variants affected: All

As part of ongoing maintenance and code cleanup, the code linking base FVS with the PPE has been removed. The PPE was retired several years ago and there remained various pieces of PPE code scattered throughout FVS code. There may still be small portions of less obvious PPE code scattered throughout FVS and this will be removed as it is encountered.

Impact on users: None.

R8 Volume Errors

Variants affected: SN

There were volume equation misidentifications occurring in the Southern Variant. The result was that some tree species had incorrect volume equations assigned or had no volume equations selected at all. This has been remedied.

Impact on users: Calculated volumes for affected species may change. Users of the Southern (SN) variant should obtain new executables.

FVS Updates – Online/Onlocal

As we continue in the design and development phase of FVS Online/Onlocal, we are constantly working out the kinks and identifying potential errors. But that is not all we are undertaking. We are also seeking out new ways to improve the user experience. In this section, we highlight both modifications and improvements that apply only to the Online/Onlocal version of FVS.

SQLite Tree Data Input

Variants affected: All

Tree records with missing attributes (e.g. height) in SQLite databases were not being initialized properly. This problem only occurred when the attribute was blank or null. Attributes with values or zeros were being initialized correctly. The issue with improper initialization has been fixed.

Impact on users: Users of SQLite databases should obtain new executables. Simulations utilizing SQLite databases with more than one stand should be rerun.

SQLite Fire Fuels Extension (FFE) Snag Report

Variants affected: All

Incorrect records were being written to the cutlist, usually with extremely small trees-per-acre values. These records were outside the specified range of cutting activity and rendered erroneous values to the snag report in SQLite. This error has been remedied.

Impact on users: Invalid records no longer appear in the cutlist.

FVS Treelist East Table in SQLite

Variants affected: NE, SN, LS, CS

In eastern variants (NE, SN, LS, and CS), the types of tree volumes reported in the treelist are slightly different than those in western variants. There has been some confusion on the part of new users of eastern variants as to what volume is actually being recorded because the column names have always been indicative of western variants

volumes. In the SQLite format, we have corrected the column names to display the actual merchantability volumes in the southern variant. The following are new column headers:

- MCuFt: merchantable stem (pulp) cubic foot
- SCuFt: sawlog stem cubic foot
- SBdFt: sawlog stem board foot
- Ht2TDMCF: height to top diameter for merchantable cubic foot
- Ht2TDSCF: height to top diameter for saw timber cubic foot

Accommodating this change required the creation of three new tables in SQLite:

- FVS_Treelist_East
- FVS_ATRTLlist_East
- FVS_CutList_East

Impact on users: Users of these variants will see a “_East” suffix on the treelist data tables and these new tables will have three different column names.

This change can also impact FVSONline users in the following circumstance. If you have an existing project, that contains the FVS_Treelist_East table, and you update your FVS program (using the Tools tab in FVSONline), then the new headers will not be compatible with the existing table in the output database. The solution is to delete all outputs in your project and then rerun the runs. There is an option in the Tools tab to accomplish this task.

New FVS Summary2 Databases in SQLite

Variants affected: All

Two new output data tables have been added in the SQLite version of FVS:

- FVS_Summary2
- FVS_Summary2_East

These tables were added to facilitate the graph creation efficiency for FVS Online.

Impact on users: None, unless the number 2 is added to the Data Base Extension “Summary” keyword in Field 1. Then the FVS_Summary2 databases are built.

Regional coordinators for information specific to your geographic area.

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