



FVS Newsletter

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Forest Vegetation Simulator



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Highlights

Welcome to the twenty-fourth issue of the Forest Vegetation Simulator (FVS) Newsletter. In this newsletter we describe the major updates since our last FVS version release dated January 2023.

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 may [email](#) us with any advice, ideas, or other input that you think will help.

Release Info

Version: 2023.2

Revision: 20230518

Sixth Forest Vegetation Simulator (FVS) Conference

The 2023 Forest Vegetation Simulator Conference was held March 7th – 9th in Fort Collins Colorado. The sixth in a series of conferences dating back to 1997. The conference was dedicated to bringing together developers and users of the Forest Vegetation Simulator and had an overall goal of providing the medium to share our experiences, our triumphs, and our lessons learned.

To review the proceedings or presentations, please see the [FVS Conference webpage](#) or contact Erin Smith-Mateja, Conference Coordinator at (202) 579-2926 or SM.FS.fvs-support@usda.gov.

Base FVS Updates

This section highlights the main updates to the base FVS code.

Addition of Lorey's Height Event Monitor Variables

Lorey's Height is defined as the mean stand height weighted by basal area. A before thinning Lorey's height (BHTWTBA) and after thinning Lorey's height (AHTWTBA) have been added to the available Event Monitor variables for use across all variants.

Updated Default Merchantability Limits for National Forests in North Carolina

The default merchantability limits for the National Forests in North Carolina, contained in the Southern (SN) variant, have been updated to conform to FSH 2409.18 Ch 50, Supplement R8_NC_2409.18-2022-1.

Revised Forest Typing Algorithm

Updated have been made to the forest type algorithm to comply with the FIA species code change for other softwoods (species code OS), from a code of 298 to 299. This is in effect across all variants.

Corrected Location Mapping for Pine Ridge Reservation in CR Variant

The location mapping for the Pine Ridge Reservation has been corrected to a default model type of Black Hills Ponderosa Pine. Users of the Central Rockies (CR) variant should now see location appropriate growth and volume estimates when using the Pine Ridge Reservation location code (7104).

FVS Interface Updates

This section highlights the updates and improvements made to the FVS interface which are intended to provide an improved user experience.

Improved Keyword Writing Logic

A control was added to the keyword writing function to prevent two successive END keywords from being written when conditionally scheduled activities were planned in certain circumstances. Users of all variants may notice increased reliability and functionality when planning conditional activities.

Correction to Database Keyword List

An outdated keyword value (BurnRept) was identified in the 'Keywords' dropdown list when viewing the available 'Database Extension' keywords. This value has been corrected to 'BurnReDB' in the dropdown list of values for the 'Database Extension'. This change is in effect across all variants.

Additional Keyword Dialog Inputs

The 'Database Extension' keywords dropdown list of values has been updated to include INVSTATS, which signals the creation of the FVS_Stats_Species and FVS_Stats_Stand tables, and REGREPTS, which signals the creation of the Establishment Model regeneration reports. More information on these keywords as well as other database specific keywords can be found in chapter 4.2 of the [Users Guide to the Database Extension of the Forest Vegetation Simulator](#).

Improvements to Graphing

Users attempting to create graphs while using the species codes, SpeciesFVS, SpeciesPLANTS, or SpeciesFIA, in the 'plot by' field may have received erroneously large values along the y-axis of the graph due to internal summation errors when dealing with these recently added species codes. Users attempting to use any of these species codes in the 'plot by' field should now see the proper anticipated functionality.

Intuitive Stand and Activity Removal from Run Contents

When deleting the only stand from a run that had components attached to groups (thus creating a blank-appearing run), the components were being inherited by any subsequently-added stands. This made sense for runs with multiple stands (where deleting one stand left other stands listed in the run) but was confusing for single stand

runs (where deleting the stand results in a blank run) since adding stands into a blank run should not carry any keyword inheritance.

Any groups and their attached keywords associated with the stand being deleted from a single-stand run are now removed from the run upon clicking “Cut/Delete”.

Improved Stand and Stock Table Generation

The “Rebuild StdStk” button has been improved to allow for the immediate rebuilding and updating of the “DBHClasses” under the Explore menu following the change to the “DBH class size” or “Large DBH” options regardless of a run being selected in the “Run to Consider” window.

Improved User Guidance when Using SQLIN/SQLOUT

Users may notice additional tools and guidance when using the SQLIN or SQLOUT dialog windows. These improvements include updated example text and code added to the lower portion of the windows as well as a column ruler added above the editor window.

Ability to Import Custom SQL Queries

Users are now able to import a custom SQL query using the ‘Import runs and other items’ tools under the ‘Manage Projects’ tab.

Improved Input Checking Logic

When trying to add in the THINRDSL keyword into the Run contents using a non-NE (Northeast) variant, a crash was occurring (keyword only applies to the NE variant).

That keyword can now be added to any non-NE run (even though it won't actually be performed).

Improved Root Disease Keyword Logic

An issue where users attempting to manually add the RRTREIN and BBCLEAR root disease keywords resulted in an error that prevented the program from continuing, has been resolved.

Updated Spatial Data Handling

FVS has updated to use the R spatial data package ‘[sf](#)’.

The ‘sf’ package is used within the ‘View on Maps’ tools within FVS. While the functionality of the View on Maps

menu is still the same with this updated package, the Upload map data menu no longer has the projection library and projection string menu/field.

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