

SeriesSEE source codes

The FORTRAN, VBA, and XML source codes for the SeriesSEE add-in are in appendix B (Figure 1). Source files for the FORTRAN programs NoComment and WLmodel are in the subfolder FORTRAN.

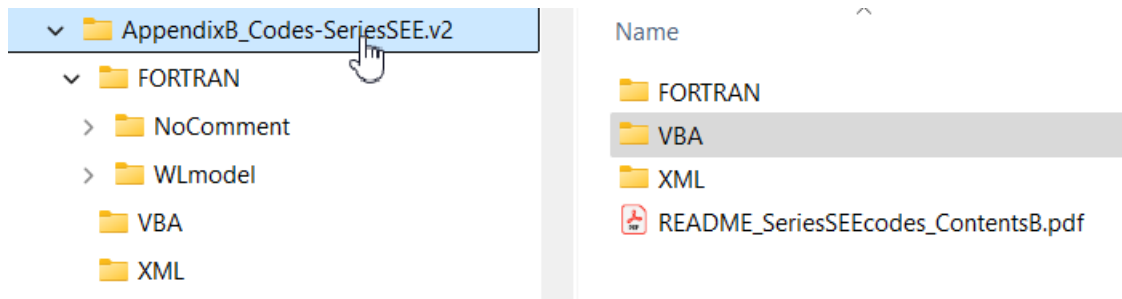


Figure 1.—Root directory and subfolders for SeriesSEE source codes, appendix B.

FORTRAN

The WLM utility in SeriesSEE uses NoComment to build a single PEST control file from multiple annotated input files (Figure 2). NoComment is a FORTRAN utility for managing input files for programs with limited commenting and file management abilities. Input files can be annotated with both comment lines and remarks to the right of data fields. Large input files can be subdivided into multiple files that are concatenated by NoComment. NoComment also can count the number of lines to be read in a section of input and specify that value in the uncommented input file. Usage of NoComment is explained in the Documentation subfolder (Figure 2).

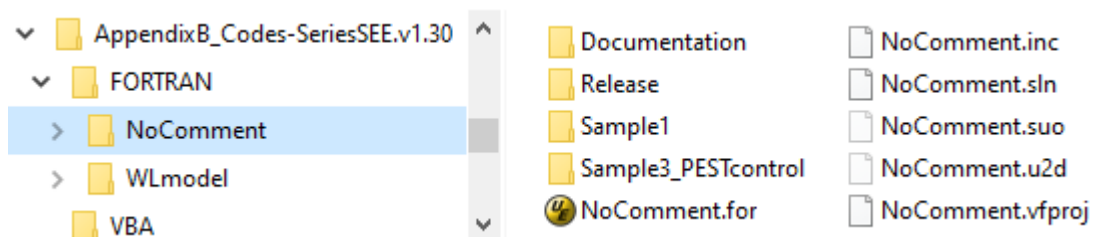


Figure 2.—Folder with source code, documentation, and examples for the FORTRAN program NoComment.

The FORTRAN program WLmodel reads ASCII input, transforms component series to WLM components, sums WLM components, and writes results to an ASCII output file (Figure 3). The analytical transforms are verified in appendix C.

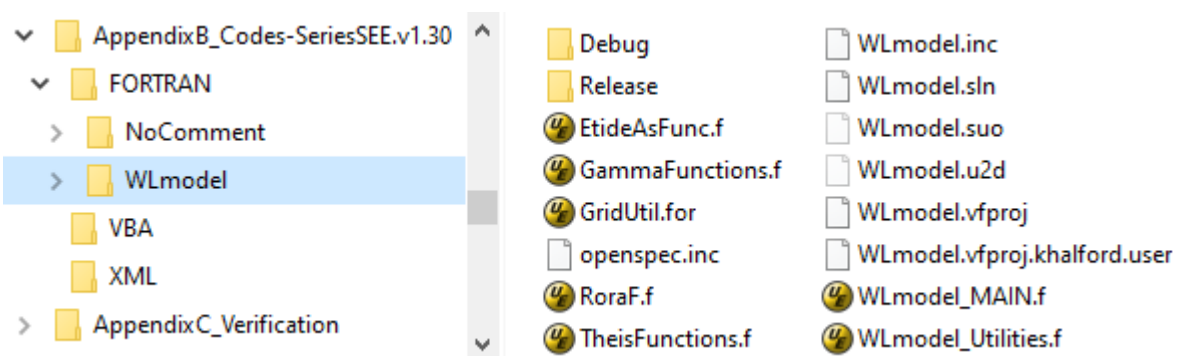


Figure 3.—Folder with source code for the FORTRAN program WLmodel.

VBA

The file SeriesSee.v2.xlsm is the readable source file for SeriesSee.v2.xlam and is located in the subfolder VBA (Figure 4). Sources for macros and supporting data are in the SSmodule_*.xlsm files. The VBA code is distributed through multiple workbooks for operational efficiency and ease of programming. The file CommentADDER-WLM.xlsm is a stand-alone utility that adds explanatory comments to the headings in the water-level model template workbook, TEMPLATE_WLmodel.xlsm.

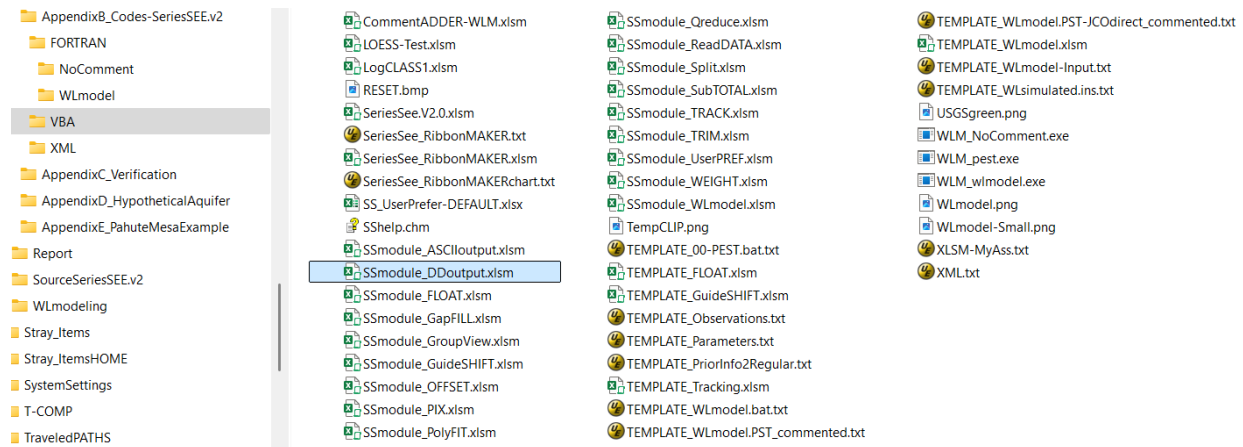


Figure 4.—Folder with VBA source code for the SeriesSEE and supporting modules.

XML

The SeriesSEE interface is a customization of the ribbon in Excel and is defined with XML. The XML that defines the SeriesSEE interface is created with the workbook SeriesSee_RibbonMAKER.xlsm (Figure 5). Creating a custom interface in Excel is explained well by [Ron de Bruin](https://www.rondebruin.nl/win/s2/win001.htm), <https://www.rondebruin.nl/win/s2/win001.htm>.

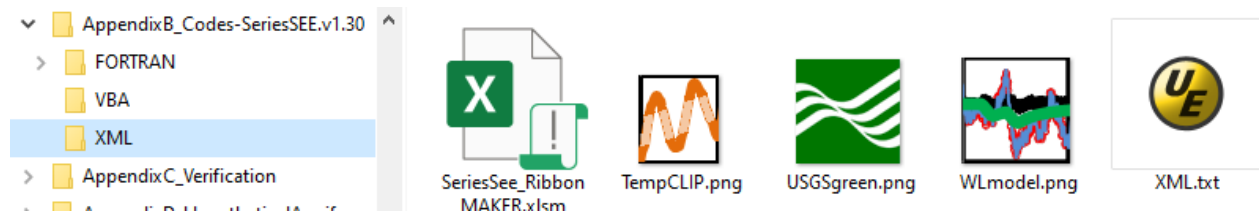


Figure 5.—Folder with workbook for building XML that defines the SeriesSEE ribbon interface, icon images, and XML output.