The CEUS zip file, CEUS.map.input.zip, contains the input ascii files and binary files that are required for running hazgridXnga2 for background sources in the central and eastern US (CEUS). The binary files which are included in this zip file were written for a Windows or similar operating system. They will not work on a Solaris system. Users will have to modify folder or subdirectory names to their specific needs. The equivalent Solaris-system binary files can be created by a simple byte-swap process.

A cshell script, run.ceus.2007, shows the various runs that are required to compute the background source hazard using the 2008 USGS seismic-hazard model. The Fortran 95 code hazgridXnga2.f is also included here. A companion zip files, CEUSchar.zip, contains the files for running the Charleston, S.C. characteristic source models. HazgridXnga2.f is the program to use for both Charleston, S.C., and all background sources in the CEUS.

A second companion zip file, CEUS.faults.zip, contains the input fault files for the New Madrid Seismic Zone and for the Cheraw and Meers faults. These files are run with the program hazFXnga7c.f.

The zipped cshell scripts may work on Linux systems but will not work in typical Windows environments. However, the information contained in the script should help users to understand how the CEUS model was put together, i.e., all of the components. The scripts were originally written for SUN computers with Solaris Operating System. Brand names are for descriptive purposes only and do not constitute endorsement.

Once all of the CEUS source models have been run, the various output files from these runs must be combined. They can be combined to yield output curves or uniform hazard estimates at a grid of locations. The input files all define a grid of sites which covers much of the CEUS, 115 d W to 65 d W, and 24.6 d N to 50 d N. Sampling is uniform in 0.1 degree increments in latitude and longitude. The user can choose any rectangular grid of sites, but all input files must define the same grid if you wish to combine output files. The zip file CEUS.combine.zip contains the program hazallXL.v2.f and the input files that are used to combine these binary files. The cshell script, combine.ceusmap.csh, is run to get the uniform hazard values for the 2% in 50 year or 10% in 50 year Probability of Exceedance (PE). The companion script, combine.ceush.csh, is run to compute a binary hazard curve at each site in the grid. The resulting hazard curves for the CEUS are combined with a set of hazard curves for the WUS to get a set of US hazard curves. The merging of west and east is another step in the process. If you do not proceed with this next step of combining CEUS with WUS hazard curves, the CEUS hazard west of about 105 d W will be incomplete. However, you can safely make maps with western edge at 105 d W or less and have a complete CEUS hazard model in that region without also running the WUS hazard model.