

Critical Update of Small Basin Files for OB8.3 FFMP

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Background: With OB8.3, FFMP will be moving from radar centric precipitation processing to grid based precipitation processing. This will allow for easier FFMP processing and displays for WFO sites with multiple radars. There is also an expected benefit for WFOs with limited radar data as FFMP will be able to ingest any forecaster selected multi-sensor gridded precipitation estimates and forecasts data. The current small basin files, provided by NSSL, were only provided for the area under the radar umbrella. All WFOs will need to obtain new small basin files that cover their entire warning area and any backup areas they are responsible for. **FFMP OB8.3 will not work without these new small basin files.**

If desired, WFOs will still be able to select the local radar as their precipitation input source, but they must still update their small basin files for FFMP OB8.3 to work.

NSSL has created a web-interface to the new small basin files. Each WFO will need to access the website, download the new files, and merge the files with any customization the WFO may have done to the original radar centric small basin files. The alpha sites who recently completed this task estimate the level of effort to range from 2 hours for the basic download and preparation to 4 hours if customization primarily included modifying stream names and basin names. If more extensive customization was done that included editing basin boundaries more time will be required.

At this time, you will need the ArcView 3.x GIS software to process the FFMP shapefiles. The instructions will be updated for ArcGIS 9.2 by January. Additionally, Ami Arthur will conduct a GoTo kick-off training session in mid-January. This training will inform the regions and WFO's of the upcoming needs related to basin datasets for OB8.3, describe how to accomplish the necessary tasks, and offer continued technical support. You will receive details about this training through your regions and through the FFMP list server.

ACTION: All WFOs must update their small basin files before they install OB8.3

For a WFO to update small basin files with ArcView 3.x GIS:

1. Provide Ami Arthur (Ami.Arthur@noaa.gov or 405-325-6457) the IP address they will be using when downloading the small basin files.
2. Access the NSSL web-based GIS data server to the National FFMP Small Basin Repository (<http://nmqxr-29.nssl.noaa.gov/Website/ffmp%5Fnbr/viewer.htm>)
3. Decide on the approach to develop new shapefile datasets. There are two approaches for developing the new shapefile datasets:
 - a. Complete FFMP Shapefile Replacement: Download new basin and stream shapefiles to cover the expanded domain and prepare these for use in FFMP Advanced. This approach includes instructions for transferring any new or modified stream names that may be in your previous FFMP

- shapefiles. This approach will probably take a couple of hours to complete, but most of that will simply be letting processes run in the GIS.
- b. Integration of Downloaded FFMP Shapefiles with Previous FFMP Shapefiles: Download new basin and stream shapefiles for the expanded domain and combine them with your previous FFMP shapefiles (or a subset of them) so that you can preserve any customization you have done. This approach is rather involved and requires a reasonable level of familiarity with GIS. This option is recommended only if you have done extensive customization such editing the basin boundaries or clipping lakes. The time required to complete this option will vary depending on how much previous customization was done.
4. Follow the instruction provided on NSSLs web-site for the chosen approach.

If the WFO encounters any problems or needs clarification on this process, please contact Ami Arthur (Ami.Arthur@noaa.gov or 405-325-6457).

Frequently Asked Questions:

Q: Do I absolutely have to download new basins?

A: Yes. Every office will need to download expanded-domain basins in preparation for FFMP Advanced (OB8.3) ability to ingest any gridded precipitation source.

Q: Will I lose any previously customized basin files?

A: No. The instructions include a procedure for integrating the new basins with any previous basins so that you will not lose the customization work you have done. This includes any stream names that may have been modified or added in previous files. These stream names can be transferred to the newly downloaded basins. When this is done, there will be ~10-15% that will need to be ***checked*** to make sure the name is still what you want. This is because the names will be transferred from an aggregated-basin dataset (*aggr_basins) to a non-aggregated dataset, so there is not a direct one- to-one transfer. Of the 10-15%, the names that will need to be checked are those that include a tributary name with the mainstem or other very specific distance information (stream Y 0.5 miles from town X). Of the 10-15%, almost all will be okay unless the customizer was extremely descriptive. Most of the time, the main stem name is used, even in an aggregated basin, and the main stem name should result in a correct transfer.

Q: When and from where can I get the basins?

A: The small basins for the expanded domain are now available from the NSSL FFMP Basin Repository website. The security is currently maintained through an IP address access list, so anyone who would like to access this website and download these shapefiles should send Ami Arthur (Ami.Arthur@noaa.gov or 405-325-6457) their IP address. The web-site (<http://nmqxr-29.nssl.noaa.gov/Website/ffmp%5Fnbr/viewer.htm>) contains download instructions as well as instructions for preparing the shapefiles for FFMPA and AWIPS.

Q: If I follow the 'Complete FFMP Shapefile Replacement' instructions will FFMP work with no further customization?

A: Yes. However, this may result in basins having the same name or no name. If there is no name this will show up in the FFMP basin table as 'xxxxx'. Although this is not a problem for FFMP, this will be problematic for the new WarnGen capability of using stream names in the warning.