

Subject: Updated High Resolution Basin Files /OB3

Date: August 5, 2005

From: NWS/OCWWS/Hydrologic Services Division & MDL

Enclosed are new basin shapefiles to be used with the Flash Flood Monitoring and Prediction (FFMP) application on AWIPS. They have been updated by the National Severe Storms Laboratory (NSSL), and now contain basins and stream segments which are hydrologically linked (connected). This CD replaces any previous versions you may have received. Please discard any previous versions. The enclosed kxxx_aggr_basins.shp and kxxx_bins.shp file(s) are ready to be loaded **as is** to run FFMP if you choose not to customize.

In FY03 NSSL contracted with the NWS to continue to support WFO personnel for basin customization. For assistance with customizing your basin shapefiles, please call Ami Arthur at NSSL at (405)366-0488 Monday - Friday 9:00 - 3:00 CST, or send an email to ami.arthur@noaa.gov.

In the Basin Customization course a significant amount of the course was spent on the use of the basin customization extension. However, basin shapefiles had to be "prepared" in order to be used by the extension. The following lectures and labs were included in the course to "prepare" the shapefiles to be used by the extension.

1. Adding Upstream/Downstream Links
2. Basin Customization - Adding Links Lab 1
3. Basin Customization - Adding Links Lab 2
4. Basin Customization - Adding Links Lab 3
5. Basin Customization - Adding Links Lab 4
6. Basin Customization - Adding Links Lab 5

NSSL has performed all of these labs for you and they have included these updates on the enclosed CD. You no longer need to go through labs 1-5 to add links in order to use the basin customization extension. The enclosed CD contains the necessary data/information needed to use the basin customization extension. Please read the README.txt file on the enclosed CD for more information on the files. **It is important to note** that the files containing "connectivity" are located in a directory called kxxx/custom on the CD. You **cannot** directly load these "connected" files into AWIPS. In order to use this file in AWIPS please refer to the "Preparing Shapefiles for AWIPS Location" lecture notes given during the Basin Customization Course. The lecture notes can be found on the COMET website at:

http://www.comet.ucar.edu/class/basin_customization/03_3_basin/html/schedule.htm. (The link is the first link listed for Friday.) (This website is password protected. Please use "classroom" and "eraser" to get into the site.) If you need help with this process, please contact Ami Arthur at NSSL. If you need to download the extension, go to: <http://www.erh.noaa.gov/er/rnk/amber/customization/index.html>

If you choose to localize FFMP (AWIPS) with the enclosed kxxx_aggr_basins.shp and kxxx_bins.shp file(s), please give the CD and Installation Instructions (attached) to the appropriate person (AWIPS focal point, ITO, ESA). For technical assistance with FFMP and localization, please call Iris Boon at MDL at (301)713-0224 x145.

If you have any questions please feel free to call me at (301)713-0006 x162.

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Supplemental Installation Instructions for Small Basins

For technical assistance on FFMP call MDL: Iris Boon (301-713-0224 x145).

There are a total of 31 files on the CD. Six (sets) shapefiles and a README file. ONLY 2 (sets) of these files will be placed on AWIPS. You may want to check swapinfo. This is done to ensure swap space is not full. The command will tell how much memory is left. If swap space becomes full you could run into a problem during Localization. Enter the following command as root:

```
swapinfo -at
```

NOTE: In order for FFMP to run on AWIPS, you must install the basin data sets, and add the DHR product to your RPS list.

1. Mount the compact disk (titled by radar) on the DS1 as follows. Insert the compact disk into the CD-ROM drive on the DS1 and run the following command as **root**:

For K class server:

```
mount /dev/dsk/c3t2d0 /cdrom
```

For D class server:

```
mount /dev/dsk/c1t2d0 /cdrom
```

2. Go to the nationalData directory and copy the necessary files there from the compact disk. Also note there will be two .gz files. These files will be left as .gz on AWIPS (do NOT uncompress).

```
cd /data/fxa/nationalData
cp /cdrom/kxxx/kxxx_aggr* ./
cp /cdrom/kxxx/kxxx_bins* ./
```

3. Change the ownership and permissions for the shapefiles in the /data/fxa/nationalData directory.

```
chown fxa:fxalpha kxxx_aggr* kxxx_bins*
chmod 775 kxxx_aggr* kxxx_bins*
```

4. Unmount the compact disk

```
cd /
fuser -k /cdrom
umount /cdrom
```

5. **Localization:** (Please read thoroughly.) As user “**fxa**”, localize for scan (not forced) on each Linux workstation, one workstation at a time.

```
cd /awips/fxa/data/localization/scripts  
mainScript.csh -scan
```

(Repeat these steps as user “**fxa**” on each Linux workstation)

(NOTE: If you are localizing for a radar for the **first time** (e.g.: you have just acquired the basin shape files for a radar you want to use for Service Backup), you will need to run a radar localization **before running the scan localizations**.

```
mainScript.csh f -radar
```

This sets up the proper menus.)

Note that the first of these workstation localizations will likely take the longest amount of time, because it is creating lookup files which will be shared by all the workstations (in a mounted directory). Subsequent localizations will skip over the creation of these shared files, and therefore take less time. Also note that while performing these localizations, neither SCAN nor FFMP should be in use on any of the workstations.

6. On PX1, as user “**fxa**”, run the stopFFMPprocessor command. This will stop FFMP’s background processor.
7. Go to the /data/fxa/radar/kxxx/ffmp/ directory, and remove the following data files (so they won’t interfere with new data files from FFMP):

```
rm yyyy* (where yyyy is the year of the files present)  
rm accumulations.*  
rm FFG?hr.dat
```

8. Still as user “**fxa**”, restart the FFMPprocessor on PX1 by using the startFFMPprocessor command. Your new basins will now be monitored by FFMP.