

## VERIFY INTERIM RELEASE

The interim release of the verification software fixes bugs involving the naming convention used on the national verification program statistics files, application of the add adjustment factor located in the vaddadjust table of the archive database, and provides new templates for building pairs files corresponding to the national verification program statistics files.

### Installation Instructions

```
ftp ftp.nws.noaa.gov (205.156.54.206)
Name: anonymous
password: your email address
(use binary transfer)
ftp>binary
(Change directories)
ftp>cd oh/hsd_fixes
ftp>get verify.interim.20040701.tar.gz
```

To install, place the file on the Archiver Server (RAX) machine in the /rfc\_arc directory and do the following:

```
gunzip verify.interim.2004.20040701.tar.gz
tar -xvf verify.interim.20040701.tar
```

This will unload the four template files and 3 jar files within the tar package into their appropriate location (/rfc\_arc/verify/input for the templates, /rfc\_arc/verify/bin/RELEASE for the jar files).

### Documentation

Below is provided a rewrite of Section 10 of the release notes for ob4-r25, under the heading "verify Enhancements".

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The verification software has been ported over to the RFC archive (rax) machines. The old verify program on the AWIPS platform will not be delivered for ob4. The new software consists of five programs:

- 1) Vfyruninfo Editor -- A graphical user interface (GUI) that allows editing the vfyruninfo table. The vfyruninfo table stores parameters for the pairing algorithm and must be populated before any verification can be done. This program is executed using the script ivpruninfo.
- 2) Verify Pairs Ingestor -- A program that allows for data contained in pairs files (constructed using the old verify program; ob3 and earlier) to be ingested into the vfpairs table of the archive database. This program is executed using the ingestpairs script.
- 3) IVP Batch Program -- A program that processes batch files in order to populate the vfpairs table and calculate verification statistics. This program is executed using the ivpbatch script.
- 4) IVP Batch Builder -- A GUI that provides tools for editing an IVP batch file. This program is executed using the ivpbatchb script.
- 5) IVP GUI -- Identical to the old IVP program (ob3 and earlier), except for bug fixes. This script is executed using the ivp script.

The new verification software takes advantage of the increased speed of running on a Linux platform and a more efficient algorithm for faster pairing of forecast and observed values. The new software also allows for more flexible user control of pairing parameters and provides for calculation of additional statistics.

To use the software, observed river stage data must be stored in either the pcrsep or pehpsep table for the location where verification statistics are to be calculated. Similarly, forecast data must be stored in the pedfsep table. If the data is not stored in these tables, the only way to populate the vfpairs table so verification statistics can be calculated is by using the Verify Pairs Ingestor.

The complete documentation for the new software is available at <http://www.nws.noaa.gov/oh/hrl/verification/verification.php>.

As part of this release, accompanying the software are four template batch files, all placed on the archive machine in the directory /rfc\_arc/verify/input. The template files are as follows:

1) buildpairs\_template.txt -- It is the template for a run of the pairing algorithm. It is intended to be processed once per week in a cron and provides for building all pairs over a two week interval, allowing for overlapping of pairing runs. This template can also be used as a basis for pairing runs executed from the command line.

2) natlstats\_template.txt -- It is the template for calculation of statistics for the national verification program. To use the template, the START\_TIME and END\_TIME command values must be changed to reflect the dates of the verification run to be performed.

3) natlstats\_pairs\_template.below.txt; natlstats\_pairs\_template.above.txt -- These are templates used to produce pairs files corresponding to national verification program statistics files. It is intended to only be executed when the user wishes to more closely examine the verification statistics calculated for the national verification program. To use the template, the locations to be examined must be determined and set within the batch file using DEF\_LOC commands at the top. Also, the DEF\_GRP commands within the file must all state the locations to use (in a comma delimited list), and the PAIRS\_FILE commands must be changed to use the correct five letter rfc identifier instead of "xxrfc".

In general, it is recommended that verification studies be performed using the CALCSTATS action described in the documentation, since this is a more powerful tool providing a larger number of statistics than that used for the national verification program and greater flexibility in selecting pairs to use in verification.