

G-5. ofsshef

1.0 General Information

1.1 Application Description

The ofsshef application SHEF encodes user selected time series and model states from the NWSRFS processed database (PDB) and preprocessor parametric database (PPPDB). The application is written in Fortran77. The output files can then be passed to the appropriate shefdecoder on the RFC Archive Database/Files System.

This application can be installed on any AWIPS Linux OS system.

1.2 Background Information

This application is based on an application originally developed by NCRFC.

1.3 Assumptions application makes

The ofsshef application is designed to work with NWSRFS version 20 or greater.

1.5 Enhancements/Bug Fixes/Changes

Build OB7.2

This application was updated to take into account the upgrade of the OS in ob7.2. Documentation was updated to reflect this change.

Build OB6

Bug Fixes

- ER-18 OFSSHEF: Add capability to SHEF encode OFS Snow-17 data.
- R1-47 The resulting output file does not contain the encoded data requested in the input file.

2.0 Configuration Information

Apps defaults tokens

The following apps_defaults tokens are used:

ofsshef_input	name of directory where input file is located
ofsshef_output	name of directory where output files are written

Input File

This application is not available via *arcmenu*; it can only be run at the command line. Before running this application, the user must create an input file. The file must be in the *ofsshef_input* directory. The format for the input file is as follows:

Ofsshef_input_any_name_youwish
where *any_name_youwish* is specified by the user.

The format for this input file is as follows:

The first line is a description line. From there every line must have the following nine columns:

1 2 3 4 5 6 7 8 9

where column # =

1. Up to 8 character ID.
2. Data type (eg. QINE).
3. Observed shef code (eg. HGIRZZ).
4. The number of days back that need to be coded.
5. Future shef code (eg. HGIFZ).
6. The number of days in the future that need to be coded.
7. Valid units for NWSRFS Data type (eg. MM).
8. Timestep of data in hours
9. Segment ID for ID of data to be coded. Only needed for SAC-SMA values, but must have an entry (eg. PERL1SEG for SAC-SMA or "NONE" for none).

An example input file is shown below.

```
This a description of input
DARL1 QINE QRIPZ 3 QTIFZ 5 CFS 6 NONE
CGSL101H SMZC TESTING 3 TESTING 5 MM 1 CGSL1
CGSL101H SSTG HGIRZ 3 HGIFZ 5 FT 1 NONE
LPOL1 MAP PPQMP 2 PPQFM 5 IN 6 NONE
LPOL1 MAPX PPQPX 2 PPQFM 0 IN 6 NONE
FRNL1 SSTG HGIZZZZ 4 HGIFZ 4 FT 3 NONE
BXAL1 MAPE EMDPM 13 EMDFF 14 IN 24 NONE
PERL1 SMZC TESTING 5 TESTING 5 MM 6 PERL1
FLTT1 SMZC TESTING 2 TESTING 4 MM 6 FLTT1
```

3.0 User How-To

This application is not available via *arcmenu*; it can only be run at the command line. The program requires some user input that needs to be included on the command line. At the command line the user types the following:

`ofsshef any_name_youwish`

where *any_name_youwish* is the last field after the 2nd underline in the input file name; `ofsshef_input_any_name-youwish`.

Your environmental TZ must be GMT in order to run the program, if it is not, type the following command before running.

```
export TZ=GMT
```

After the application has finished running, the output file can be found in the directory indicated by the `apps_defaults` token `ofsshef_output` with the following filename:

`ofsshef_any_name_youwish`

where *any_name_youwish* is the “name” specified at run time.

4.0 Output File

An example output file is shown below.

```
: Tue Feb 18 1336 L 2003
:
.ER DARL1      0215 Z DH18/DC200302181336/QRIPZ /DIH06: OBS SHEF
.E1          .32/      .60/      3.03/      4.45/      4.59/      4.53/      4.72/      4.67/
.E2          3.87/      2.89/      2.24/      1.99/
.ER DARL1      0218 Z DH18/DC200302181336/QTIFZ /DIH06: FCST SHEF
.E1          1.03/      .40/      .18/      .03/      .00/      .00/      .00/      .00/
.E2           .00/      .00/      .00/      .00/      .00/      .00/      .00/      .00/
.E3           .00/      .00/      .00/      .00/

.ER LPOL1      0216 Z DH18/DC200302181336/PPQMP /DIH06: OBS SHEF
.E1          .00/      .00/      .00/      .00/      .00/      .00/      .00/      .00/
.ER LPOL1      0218 Z DH18/DC200302181336/PPQFM /DIH06: FCST SHEF
.E1          .00/      .00/      .00/      .00/      .00/      .00/      .00/      .00/
.E2          .00/      .00/      .00/      .00/      .00/      .00/      .00/      .00/
.E3          .00/      .00/      .00/      .00/

.ER LPOL1      0216 Z DH18/DC200302181336/PPQPX /DIH06: OBS SHEF
.E1          .00/      .00/      .00/      .00/      .00/      .00/      .00/      .00/

.ER FRNL1      0214 Z DH18/DC200302181336/HGIZZZZ/DIH06: OBS SHEF
.E1          1.51/      1.45/      1.40/      1.35/      1.30/      1.62/      2.55/      4.01/
.E2          4.53/      5.21/      5.54/      5.40/      5.19/      4.96/      4.64/      4.46/
.ER FRNL1      0218 Z DH18/DC200302181336/HGIFFZ /DIH06: FCST SHEF
.E1          4.25/      4.08/      3.89/      3.69/      3.50/      3.32/      3.17/      3.04/
.E2          3.04/      2.95/      2.88/      2.83/      2.79/      2.74/      2.69/      2.66/

.ER BXAL1      0206 Z DH12/DC200302181336/EMDPM  /DIH24: OBS SHEF
```

```
.E1      .08/      .01/      .03/      .06/      .04/      .06/      .07/      .09/
.E2      .10/      .06/      .07/      .07/      .03/
.ER BXAL1      0219 Z DH12/DC200302181336/EMDF /DIH24: FCST SHEF
.E1      .04/      .06/      .08/      .08/      .08/      .08/      .08/      .08/
.E2      .08/      .09/      .09/      .06/      .06/      .06/
```

:END OF MESSAGE

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5.0 References

NWS Manual 10-942 Standard Hydro meteorological Exchange Format (SHEF) Manual
www.nws.noaa.gov/directives/

NWS River Forecast System (NWSRFS) User's Manual
www.nws.noaa.gov/oh/hrl/nwsrfs/users_manual/htm/formats.htm