

Snow Density Documentation

1.0 General Information

1.1 Application Description

- a) Name. Snow Density
- b) Version Number, 1.0
- c) Version Date, November 2002
- d) Type. Computation Application on DS
- e) Languages. Informix ESQL/C and Unix Shell Script
- f) Description. ss_script.sc executes an Informix eSQL-C program, which retrieves 7 days worth of SW (snow water)data and the corresponding SD (snow depth) i.e. within few hours of SW observations from Informix, calculates SS (snow density), creates a shef message, sends the shef message locally into textdb, puts shef message into the DS operational database via ./ispan/hydro, and rcp message to the AX's for decoding RFC Archive DB Informix Database. This script is launched each day on cron as oper. It calls ss_calc.ec which retrieves the stations flagged for calculations.

1.2 Design Considerations

Although the program is written specifically for the DS, ss_script.sc can be configured to run on the AX. After trial testing at the NERFC, it is preferred to run the script on the DS so that both the operational and archive database could be populated. On the DS, the user will need to ensure that the shef message is sent out through the Wan so that the data is also populated on the AX server. As a stand-alone on the AX, the snow density data is not written to the DS.

1.3 Assumptions application makes

on the DS, ss_output, which is a shef encoded message, is put into the directory which shef_decoder reads for processing.

on the DS, shef message is sent so that message is viewable on the text browser, assuming a product name as CCCNNNXXX from the .Apps_defaults token

xdat_afosid and assuming that it has been setup to be captured via SBN. To process snow density data on the AX, CCCNNNXXX will also need to be setup for ingesting on the AX

on the AX, CCCNNNXXX will also need to be setup for ingesting so that the message will be put into shef decoder dairectory for input.

on the AX, shef decoder will write data assuming Informix database schema developed by the NWS National RFC Archive Database Team

2.0 Configuration Information

a) apps_defaults tokens on DS1:

server:	server name
db_name:	the database name
shef_data_dir	the shef input directory
xdat_afosid :	product name for delivering through SBN
adb_raw_que:	archive directory to write data
adb_dir_ds:	archive directory where programs are kept

b) Environment variables

All enviroment variables needed to run INFORMIX must be configured properly

HOME	used for saving data if apps_defaults tokens not set
LOGNAME	used in SHEF-encoded edited data file

c) Programs and scripts

\$adb_dir_ds/sdswss/bin/ss_script.sc	script to launch esql C program and deliver products through DS1 and AX.
\$adb_dir_ds/sdswss/bin/ss_calc	esql C program to retrieve snow data from snow tables.
\$adb_dir_ds/sdswss/bin/ss_sw.sql	sql command to retrieve stations which had snow density reports.

d) Directories used

\$adb_dir_ds/sdswss/bin/ directory where programs are kept.

\$adb_dir_ds/sdswss/log/ directory containing copies of output and log of files processed by program

3.0 User How-To

None, the program automatically computes data and triggered from cron.

4.0 Troubleshooting Information

If run with a background window, error messages are displayed if INFORMIX related problems occur. All other problems, bugs should be reported to the maintenance programmer listed in section 6 of this documentation.

5.0 Installation Instructions

Snow Density is packaged as a tar file with all necessary directory structures, source code and a compiled executable. To install, place tar file in desired directory and

type:

```
tar -xvf sdsyss.tar
```

This will create a Snow Density directory with log and bin subdirectories. If the newly compiled executable still does not work, contact the maintenance programmer listed in section 6.

6.0 Maintenance Information

Original Programmer:

Victor Hom
Northeast River Forecast Center (NERFC)
508-824-5116 x260

Maintenance Programmer:

Victor Hom
Northeast River Forecast Center (NERFC)
508-824-5116 x260

7.0 References

None