CO-OPS Engineering Bulletin 17-003

Engineering Change: Standardize the Number of Digits for Transmitting Conductivity Data
Systems Affected: All systems implementing conductivity sensors
Originating Team: Chesapeake Instrument Lab
MSCS Approval Date: 12JUN17

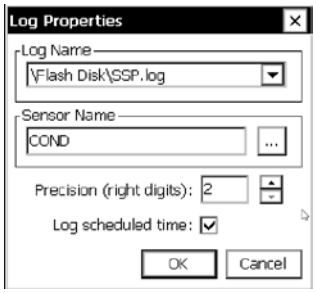
Background: NOAA CO-OPS Conductivity (CT) data has always been disseminated and plotted in units of millisiemens per centimeter (ms/cm), however the data has not always been stored in the raw station logs using those same units. In order to standardize CT data across all NOAA CO-OPS stations, an effort was completed to adjust all CT sensors to log their raw data in units of ms/cm. Because of the change, some stations were not transmitting enough digits via GOES messages to be properly decoded by the ingestion system; as a result, the data would come in a factor of 10 lower than what was being logged at the station. Originally, the ingestion system used a "Special CT" list that would multiply specific stations' CT values by a factor of 10 to correct the sensor values before the data was plotted. This ultimately caused differences between data that was ingested via GOES and data that was ingested via polling, and continually resulted in suspect CT data whenever ingestion was using both methods simultaneously. To reconcile the issue, the "Special CT" list was removed from ingestion and all stations were adjusted to log two digits of precision after the decimal point for CT data. The extra digit allows the data to be stored and transmitted in the proper units without the use of any correction factors.

Action Required: All stations employing a CT sensor should be adjusted to log the conductivity data with 2 digits of precision after the decimal point. As well, the NOSGOESFormat file will need to be updated in order to transmit all of the available digits.

1.) Correct the NOSGOESFormat file for the conductivity sensor: (N is the sequence of the sensor)

Original: N,Greenspan Conductivity,G1,7,COND,1,3,SVS
Corrected: N,Greenspan Conductivity,G1,7,COND,1,3,SV

2.) Change the conductivity log properties for "Precision (right digits)" from 1 digit to 2:



Estimated Time To Complete: 15 minutes per CT Sensor