ENGINEERING BULLETIN

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Engineering Change: Create Water Temperature Sensor Replacement Cycle

System: All Water Level and Met Stations with Water Temp Sensors Installed

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Background Information:

Numerous water temperature sensors have failed during the past field season. The vast majority of these sensors were more than 10 years old. When one of these sensors fails soon after inspection it is often not feasible to replace it until the next scheduled maintenance at a station, which can be more than a year later. To prevent long term gaps in the water temperature data a policy of proactively replacing these sensors after 10 ± 1 years has been adopted. Additionally, new water temperature sensors will be serialized by the Instrument Labs.

Directive:

Replace the water temperature sensor during the next scheduled maintenance visit to a station after the existing sensor is greater than 9 years old. The goal is to replace the sensor at 10 ± 1 years of age. The instructions for replacement of affected sensors will be provided in the annual Project Instructions.

OET will query the database and station files to determine the age of currently installed water temperature sensors. If a sensor is due for replacement, it will be noted in the Project Instructions for that specific station. Any non-standard water temperature sensor (e.g., sensors with a cable other than 22AWG, sensors with cables that have been spliced) shall be noted in the site report by the field party so that OET can add it to the following year's Project Instructions for replacement. After a sensor has been replaced, update the site report with the most recent installation date.

To aid in future identification of sensor vintage, the Instrument Labs will begin serializing all water temperature sensors. The serial number will consist of the issuing Lab (i.e., either CIL for Chesapeake Instrument Lab or SIL for Seattle Instrument Lab), the type of sensor (e.g., WT for water temp), the two digit year of construction, and the three digit number of issue. For example, the first water temperature sensor issued by the Seattle Instrument Lab in 2009 will be serialized with SIL-WT-09-001

If you have any questions or concerns regarding this Engineering Bulletin please contact Caleb.Gostnell@noaa.gov.