**Each Deployment**

Calibration Information

* + Fill out logs completely
  + Remember to note diagnostics at calibration AND post deployment information

Field Information

* + Include all deployment and retrieval information
  + Note the time when sonde was put in water and pulled out
  + Make sure to take field readings at each sonde swap and record on both deployment logs
  + Note any fouling seen on sonde or at station that may have impacted data
  + Note any station maintenance or other activity that may have impacted data

**Quarterly Data QAQC Process**

Data QAQC

* + Review data files
  + Do not delete data
  + Record rejected, suspect and/or anomalous data in the metadata document
    - Check deployment logs and local weather data
    - Check notes left in comment sections during calibration, post, and notes from the field – flag/code if data were impacted
    - Flag/Code periods of data rejected or suspect for the following
      * Check for out of range sensor diagnostics
        + Applies to conductivity cell constant, pH mV or slope, DO charge

Flag/code entire deployment 1 SDG

* + - * Post-calibration out of range SPC
        + Check matchup at sonde swap, field readings
        + Flag/code 1 SPC or -3 SPC depending on severity
      * Fouling – use CBF if fouling was present or suspected
        + Generally suspect or rejected; good data flag can be used if fouling seemed to resolve itself
      * Sensor drift SSD, may be used with CBF
      * Wiper malfunction SWM, may be used with CBF
      * Incorrect calibration SIC should only be used when incorrect calibration is noted in logs or known
      * Sensor malfunction SSM
      * Blocked optics SBO, may be used with CBF
    - Check for Turbidity outliers
      * If out of sensor range (1000 FNU for 6600, 4000 FNU for EXO) data MUST be rejected
      * If using the 1 or -3 flag, use the STS code for spikes
      * Flag/code based on issues noted in logs, e.g: blocked optics SBO
    - Out of water events
      * If affects all sensors data is marked -3 GOW
      * If affects specific sensors data is marked -3 SOW
      * Remember to flag/code dependent parameters
    - Disjunct readings at sonde swap
    - Anomalous trends or events visible in data
      * Generally flag suspect to highlight
      * Include any information available with GSM/CSM codes, and/or use CCU

**Quarterly Metadata**

Metadata

* Create quarterly metadata document
* PLEASE use the most current quarterly and annual metadata templates
* Other remarks section
  + Check that all data comments for the AP Data Coordinator are listed in the Other Remarks section as well as all see metadata comments (CSM or GSM) for data users
  + Include any additional information that would be helpful to an end user
* Data Collection Period
  + First and last records where sonde was IN the water at the correct depth
* Site location and characteristics
  + Most up to date lat/long and include all required descriptors
  + Please include distance of sonde from bottom (ex. 0.5 m)
* Remember to update sensor information for sondes/sensors in use
* If using multiple sonde types note which sonde type used (by station, deployment, etc.)
  + 6600s and EXOs, vented and non-vented

**Annual QAQC Process**

Data and Metadata

* + Merge quarterly files into annual files
  + Review annual files to make sure nothing was missed during quarterly review
  + Review metadata for completeness
  + Save files to shared file location

**Reminders**

* + Refer to WQ QAQC Common Issues, and WQ Flag Code Cheat Sheet documents for further guidance during QAQC flag and code process
  + Use of GSM and CSM codes
    - Used to refer to other remarks section of metadata
    - May be used with any flag
    - Apply when data is unique or needs an explanation
  + Dependent Parameters
    - In the case of rejection of the temperature or conductivity parameters, dependent parameters must be rejected as well
    - Catastrophic temp probe failure: ALL parameters must be rejected
      * Except turbidity for EXO
      * In the event of such a severe failure of the EXO CT probe that the sonde powers it down, QC’d DO%, pH and ChlFluor data MAY not need to be rejected
      * -3 STF for all data
    - Conductivity probe failure: SpCond, salinity, DO mg/L and depth must be rejected
    - Example flags/codes: -3 SCF for all; -3 SSD, -3 SPC, -3 SSM for SpCond/salinity and -3 SCF for other dependent parameters
  + Flags/Codes
    - Check that all -4 and -5 flags are replaced with -3 or 1
    - Check that all -3, 1 or 5 flags are accompanied by a QAQC code
    - Check that no 0 flag was applied over any primary QAQC flag
    - Check that a maximum of 2 QAQC codes are used per value (macro flag tool will not allow)
      * A General Code OR Sensor Error code may be applied, and either can be accompanied by a Comment Code. Or a Comment Code may be used alone