CBP Tidal Tributary Field Audit Checklist

Date _____

Agency/Monitoring Program	Auditors
Site Location(s)	Agency Personnel

A. FIELD MEASUREMENTS

1	Are Temperature, DO, pH and salinity measured?	☐ Yes	☐ No	☐ NA
2	Are instrument/probes calibrated according to SOP? Field or office? (circle one)	☐ Yes	☐ No	☐ NA
3	Is calibration checked prior to using each day?	☐ Yes	☐ No	☐ NA
4	Is calibration checked after using? (post-calibration)	☐ Yes	☐ No	☐ NA
5	Are instrument calibration and maintenance log books kept?	☐ Yes	☐ No	☐ NA
6	How is Station Depth measured?	☐ Manual Line	☐ Instru ment	☐ Pressure Transducer
7	Is the pycnocline calculated to determination sampling depths?	☐ Yes	☐ No	☐ NA
8	Are all field measurements taken *in-situ* ?	☐ Yes	☐ No	☐ NA
9	Depth profile of field measurements consists of: Surface @ __ meters	☐ Bottom	☐ AP/BP	☐ Other
10	Are measurements recorded by hand or stored in the instrument? (circle one)			
11	Is the accuracy of the temperature sensor checked annually over a range of temperatures against a NIST-certified thermometer? By whom?	☐ Yes	☐ No	☐ NA
12a	Make and model of DO meter/probe: _____			☐ NA
12b	What type of DO probe is used? (Amperometric or Luminescent)	☐ Amp	☐ Lum	☐ NA
12c	Is DO meter calibrated using the water-saturated air technique?	☐ Yes	☐ No	☐ NA
12d	Are probes allowed to equilibrate for at least 1 min. before values are recorded?	☐ Yes	☐ No	☐ NA
13a	Make and model of Specific Conductance meter: _____ Does the meter compensate for temperature?	☐ Yes	☐ No	☐ NA
13b	Is Specific Conductivity calibrated against 2-3 standard solutions each day of use? Source of reference solutions: _____	☐ Yes	☐ No	☐ NA
14a	Make and model of pH meter/probe: _____			
14b	Is the pH probe calibrated against fresh standard buffer solutions that bracket the expected pH of the area?	☐ Yes	☐ No	☐ NA
15	Are values for DO, pH and salinity reported to 3 sign. figures?	☐ Yes	☐ No	☐ NA
16	Secchi depth is measured during daylight hours on shady side of vessel, without wearing sunglasses.	Yes	No	NA

B. SAMPLE COLLECTION

1	Are the stations sampled according to scheduled date and time?	☐ Yes	☐ No	☐ NA
2	Are the sample bottles, caps, and processing materials appropriate?	☐ Yes	☐ No	☐ NA
3	Are sample bottles labeled to identify sample type, date, time, and site ID?	☐ Yes	☐ No	☐ NA

4	Are samples collected at specified depths using a submersible pump and hose?	☐ Yes	☐ No	☐ NA
5	Are sample bottles rinsed with sample water before filling?	☐ Yes	☐ No	☐ NA
6	Is sufficient sample volume collected for all parameters?	☐ Yes	☐ No	☐ NA
7	Are whole-water samples iced immediately or preserved according to SOP?	☐ Yes	☐ No	☐ NA
C. PROCESSING (Field filtration)				
1	Are samples processed in a clean area, protected from contamination?	☐ Yes	☐ No	☐ NA
2	Are gloves worn while processing samples?	☐ Yes	☐ No	☐ NA
3	Type(s) of filters used? Diameter & Pore sizes: _____	☐ GFF	☐ Other	☐ NA
4	If using vacuum filtration, is vacuum pressure ≤ 10 in Hg (5psi)?	☐ Yes	☐ No	☐ NA
5	Are filters pre-rinsed rinsed with DI water?	☐ Yes	☐ No	☐ NA
6	Are samples shaken and quickly poured into a graduated cylinder to obtain a respresentative subsample?	☐ Yes	☐ No	☐ NA
6	Are cleaned forceps always used when handling filters?	☐ Yes	☐ No	☐ NA
7	Is the duration for Chlorophyll-a filtration ≤ 10 minutes?	☐ Yes	☐ No	☐ NA
8	Are TSS filter pads rinsed with 3 times with DI water to remove traces of dissolved solids?	☐ Yes	☐ No	☐ NA
10	Are particulate carbon and nitrogen samples filtered correctly using fired, GFFs?	☐ Yes	☐ No	☐ NA
11	For particulate parameters, are the volumes of sample filtered recorded on containers and data sheets?	☐ Yes	☐ No	☐ NA
12	Are filters immediately placed in labeled storage containers and cooled to ≤ 6°C? (packed on ice)	☐ Yes	☐ No	☐ NA
13	Are lot numbers of filters and preservatives recorded on the field sheet?	☐ Yes	☐ No	☐ NA
D. QUALITY CONTROL				
1	Are equipment cleaning procedures adequate for nutrients and sediment?	☐ Yes	☐ No	☐ NA
2a	Is DI water brought into the field for rinsing filters and preparing field blanks? Source of DI:_____	☐ Yes	☐ No	☐ NA
2b	Are field blanks exposed to all sampling equipment, processed, preserved and analyzed exactly the same as samples?	☐ Yes	☐ No	☐ NA
2c	How many blanks are collected per station per year?	☐ 0	☐ < 1	☐ ≥ 1
3	Are field duplicate samples collected and processed identically to the original?	☐ Yes	☐ No	☐ NA
3a	Indicate type of field duplicate samples – FS1/FS2, or S1/S2 (concurrent)	☐ FS1/FS2		☐ S1/S2
3b	How often are duplicate samples collected?	☐ 5%	☐ 10%	☐ Other ____
4	Is documentation sufficient to permit reconstruction of exactly how individual samples and field measurements were taken?	☐ Yes	☐ No	☐ NA
E. SAMPLE HANDLING & TRANSPORT				
1	Are sample bottles and particulate filters chilled to ≤ 6°C immediately after collection?	☐ Yes	☐ No	☐ NA
2	When are samples transported to the lab? Hand carried or shipped? (circle one)	☐ Same day	☐ Next day	
3	Name(s) of laboratory used for nutrient analyses:			
		☐	☐	☐