Chesapeake Monitoring Cooperative

Non-tidal Field Data Sheet

Site Name & # \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Stream Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date \_\_\_\_\_\_/\_\_\_\_\_\_/\_\_\_\_\_\_ Time (military time) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Rainfall (mm last 48 hrs) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Monitors: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |
| --- | --- | --- | --- |
| **Parameter** | **Method Used**(Circle Applicable) | **Calibration**Pre / Post Sampling | **Measurement**1st / 2nd / 3rd Replicateor Circle observation |
| Weather Conditions (cloud cover) |  | Clear / Partly CloudyCloudy / Fog or Haze |
| Stream Flow | Low / Med / High / NA |
| Water Color | Clear / Milky / Muddy Oil slick / Other |
| Air Temperature (°C) | Armored Classic / Digital / Probe | Verified? Y / N |  |  |  |
| Water Temperature (°C) | Armored Classic / Digital / Probe | Verified? Y / N |  |  |  |
| Dissolved Oxygen (mg/L) | Winkler Titration / Probe |  |  |  |  |  |
| pH | Kit / Probe / ColorpHast Strips |  |  |  |  |  |
| Conductivity (µS/cm) | Probe  |  |  |  |  |  |
| TDS (mg/L) | Probe |  |  |  |  |  |
| Turbidity (JTU) | LaMotte 7519 |  |  |  |  |
| Water Clarity (cm) | Secchi Disk / Turbidity Tube  |  |
| Alkalinity (mg/L) | Hanna Digital Checker | Pre only: |  |  |  |
| Alkalinity (mg/L) | LaMotte 4491-DR-01 / LaMotte 3467-01 LaMotte 4533-DR-01 |  |  |  |  |
| Phosphate (mg/L) | Hanna Digital Checker | Pre only:  |  |  |  |
| Orthophosphate (mg/L) | Hach PO-19 224800Hanna HI 38061 |  |  |  |  |
| Nitrate (mg/L) | Hach NI-14 1416100 / LaMotte 3110 LaMotte 3354 |  |  |  |  |

Comments:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Use this chart to determine if your two replicates are within range of each other. If not, perform a third test.**

|  |  |
| --- | --- |
| **Parameter** | **Acceptable Range** |
| Temperature | Armored (+/- 1° C) / Digital (+/- 0.5° C ) |
| Dissolved Oxygen Sodium Thiosulfate Check | Only perform 1 test. If <9.4 or >10 mg/L, do a second test. If both tests are not within 0.4 mg/L of each other, do not measure DO. |
| Dissolved Oxygen | +/- 0.6 mg/L |
| pH | +/- 1 pH unit |
| TDS / Conductivity | ± 2% FS |
| Nitrate | Low range (0–1 mg/L) = +/- 0.1 mg/LMid range (1–10 mg/L) = +/- 1 mg/L |
| Phosphate | +/- 0.04 mg/L |
| Alkalinity | < 100 mg/L = +/- 10 mg/L> 100 mg/L = +/- 20 mg/L |
| Turbidity | +/- 5 JTU |

**E. coli Bacteria Measurement (using Coliscan Easygel** **plates)**

Incubation time: \_\_\_\_\_\_\_ hours (to nearest hour)

Incubation temp: \_\_\_\_\_\_.\_\_\_\_ o C (to nearest half degree)

Media expiration date: \_\_\_\_\_\_\_\_ Plate expiration date: \_\_\_\_\_\_\_\_\_\_\_\_\_

**Amount of water sample added to media bottle (max 5 ml per Rep):**

Rep1:\_\_\_\_\_\_(A1)Rep2:\_\_\_\_\_(A2)

**Total # of purple or dark blue colonies on plate:** Rep1:\_\_\_\_\_\_\_\_(B1) Rep2:\_\_\_\_\_\_\_\_(B2)

Note: disregard any pink, blue-green or white colonies- these are not E. coli bacteria

**To calculate the Total Colonies of E. coli bacteria per 100 ml of water:**

1. Divide 100 by the ml of water used. 2. Multiply this quotient by the number of purple colonies counted

**Rep1: ([100 ÷ A1] \* B1) = \_\_\_\_\_\_\_\_\_\_\_\_\_(C1) Rep2: ([100 ÷ A2] \* B2) = \_\_\_\_\_\_\_\_\_\_\_\_\_ (C2)**

**Total Time Spent Monitoring:**(Includes travel to and from monitoring site; equipment preparation; sample collection; water’s edge time; and time spent filling out data sheets):

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hours: \_\_\_\_\_\_\_\_\_\_ (Round to nearest 15 min.)

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hours: \_\_\_\_\_\_\_\_\_\_ (Round to nearest 15 min.)

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hours: \_\_\_\_\_\_\_\_\_\_ (Round to nearest 15 min.)

**Lead Monitor Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_**

Once datasheets have been entered in the database, send original forms to your coordinator or:

Alliance for the Chesapeake Bay

Or

Attn: Chesapeake Monitoring Coop

612 Hull St. Suite 101C

Richmond, VA 23225

ALLARM
Dickinson College-Environmental Studies Dept.
P.O. Box 1773-College & Louther Streets
Carlisle , PA 17013