Somerset Berkley Regional High School 2014-2015 GLOBE Protocols

Site Name: Grandview Avenue Test Site

Site GPS: 41.739 °N

71.159 °W

Collection Time:

Local Time (LT): 1-12 o’clock method

Universal Time (UT): Military time…. LT + 4 hours

Water Collection:

1. Throw bucket out into water
2. Surface scrape the water into the bucket
3. Dump out bucket away from test area
4. Repeat 3X
5. Collect a final copy

Transparency:

Cloud Cover:

1. Observe Sky
2. Note location/presence of clouds
3. Use Cloud Cover Chart to identify clouds

Water Turbidity:

1. Secchi Disk
   1. Record measurement at surface
   2. Release disk into water
   3. Record measurement where disk is no longer seen
   4. Repeat 3X , record data and take average
2. Turbidity Tube
   1. Obtain water sample
   2. Pour water into tube
   3. With back to sunlight, look through tube to find Secchi disk
   4. Record data
   5. Repeat 3X and find average

Water Temperature:

1. Calibrate thermometer to 0°C using ice directly
2. Place in river or bucket
3. Wait 5 minutes and take reading
4. Repeat 3X and take average

Dissolved Oxygen:

1. Submerge water collection under water and cap when full
2. Empty foil packets #1 and #2 into glass jar and store in darkness and wait for sedimentation to fall below white line on jar
3. Add white pillow packet into jar and shake
4. Take fixed water in jar and transfer it to cuvet and then into square bottle
5. Add sodium thiosulfate to square bottle until water is transparent
   1. # of drops = # ppm of D.O.
6. Rinse with distilled water and repeat 3X and take average

\*\* Preferable time is before 10 a.m. due to low amounts of photosynthesis

pH Measurement:

1. Calibrate using a known buffer solution
2. Rinse the electrode with distilled water and blot the area dry
3. Immerse the electrode into a collected or running sample of solution (do not over-immerse)
4. Stir once and let sit (while holding) to stabilize
5. Record data
6. Repeat 3X and take average

Salinity:

1. Rinse the sampling container 3X
2. Fill the cylinder with same water about 2-3 cm form top
3. Place the hydrometer in the cylinder and let it settle
4. Take the specific gravity reading at meniscus = 1.0 \_ \_
5. Record data
6. Take temperature and specific gravity and read the salinity in ppt on the salinity charts
7. Repeat 3 x and take average

Times of High and Low Tide:

1. Obtain the times of high and low tides for the location nearest site
2. Can be found in newspaper or on line
3. Should be read for the tide preceding your collection