Blue Thumb Data Sheet

Site Name: _____ WBID #: _____

Lat./Long: _____ Date (MM/DD/YY): _____

Site Time (Military): _____

Samplers: _____

Total Volunteer Hours: _____

SITE CONDITIONS: Do not monitor if lightning/thunder is occurring.

WEATHER:
1. Cloudless/Fair Skies
2. Cloudy/Partly Cloudy
3. Overcast
4. Fog/Dust
5. Drizzle/Light Rain
6. Rain
7. Snow/Sleet/Hail

STREAM STAGE:
1. Above Normal
2. Normal
3. Low flow
4. Trace
5. Elevated/No Flow
6. Flood
7. Dry

STAGE QUALIFIER:
1. Stable
2. Rising
3. Falling

WATER CLARITY/SECCHI DEPTH:

Meters _____
(ex. third mark on the string = 0.3 meters)

Is Secchi disk visible while resting on the bottom of the stream?

Yes No

TEMPERATURE: Air: _____ °C Water: _____ °C Always measure air temperature first. Measure both for 2 minutes. Put bulb 15 cm below surface and read while still in water.

STREAM SITE OBSERVATIONS: Circle *all* that apply then discuss in comments:

1. Clean
2. Manure in stream
3. Unsightly appearance (color)
4. Foam/Scum
5. Floating Detritus
6. Significant algae
7. Fish kill
8. Dead animal(s) in stream
9. Iron precipitates
10. Siltation
11. Flow alteration
12. Habitat alteration
13. Oily film/Grease
14. Offensive odor
15. Trash: Low, Medium, High

Comments and Restock Needs:

Site: _____ Date: _____

DISSOLVED OXYGEN TEST:

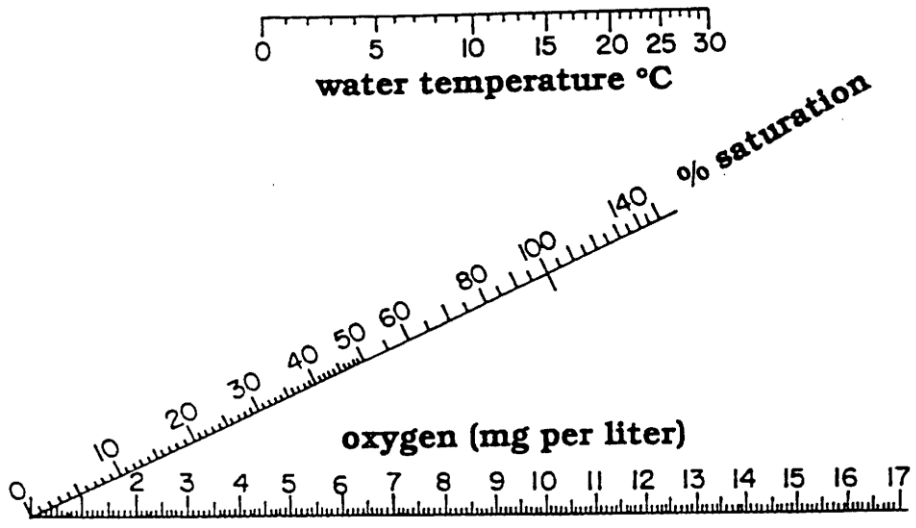
RANGE	COMMENTS	READING	CALCULATIONS	mg/L D.O.
High - use this most of the time.	Count drops of sodium thiosulfate to bring about color change from black (or blue) to colorless. Don't go beyond.	No Blank 1. _____ 2. _____	None. Each drop = 1 mg/L of dissolved oxygen.	1. _____ mg/L 2. _____ mg/L
Low - switch to this if reading is 3 or less	Pour off contents to 30 ml.	1. _____ 2. _____	Multiply # drops by 0.2.	1. _____ mg/L 2. _____ mg/L

Note: This test is the reason you must try to monitor in the a.m. and/or at the same time each month.

Interpreting Results: Values less than 3 mg/L D.O. stress the fish. Please call us.

To calculate % D.O. saturation, use a straight edge to connect LOWEST D.O. value at bottom with water temp. on top. Then read and record % saturation off the diagonal line.

_____**% OXYGEN SATURATION**



pH TEST:

No Blank	**1. _____ pH**	**2. _____ pH**

Interpreting Results: Any pH between 6 - 9 is optimum for most aquatic organisms in our streams.

Site: _____ Date: _____

NITRATE NITROGEN/NITRITE NITROGEN TEST STRIP:

TEST	COMMENTS	READING	CALCULATION	mg/L N
NITRATE	Read the top pad (farthest from your thumb) at **30 seconds.**	1. _____ 2. _____	None.	1. _____ mg/L 2. _____ mg/L
NITRITE	Read the bottom pad (closest to your thumb) at **30 seconds.**	1. _____ 2. _____	None.	1. _____ mg/L 2. _____ mg/L

Interpreting Results: Call us if the Nitrate Nitrogen is 10 mg/L or more.

AMMONIA NITROGEN TEST: (RUN THE BLANK AT THE LOW RANGE ONLY, EVEN IF YOUR CREEK WATER REQUIRES THE MID RANGE**)**

	mg/L NH_3-N
Blank	
1.	
2.	

Note: Match the color of the sample to the color on the cube and write your result. Please interpolate.

Interpreting Results: Ammonia toxicity is dependent on the water temperature and pH. Please call us if you have 1.0 mg/L NH_3-N or more.

ORTHOPHOSPHATE TEST: (RUN THE BLANK FIRST AND AT THE LOW RANGE ONLY, EVEN IF YOUR CREEK WATER REQUIRES THE MID OR HIGH RANGE**)**

RANGE	COMMENTS	READING	CALCULATION	mg/L PO4-P
Low: 0 - 0.33 mg/L	Use mirror and no caps.	Blank _____ 1. _____ 2. _____	Divide by 150. (See below)	Blank _____ mg/L 1. _____ mg/L 2. _____ mg/L
Mid: 0 - 1.67 mg/L	Read directly through the sample. Do not use the mirror.	1. _____ 2. _____	Divide by 30.	1. _____ mg/L 2. _____ mg/L

Interpreting Results: Please call us if you have 1.0 mg/L PO4-P or more.

1/150 = 0.007	5/150 = 0.033	9/150 = 0.06	13/150 = 0.087	17/150 = 0.113
2/150 = 0.013	6/150 = 0.04	10/150 = 0.067	14/150 = 0.093	18/150 = 0.12
3/150 = 0.02	7/150 = 0.047	11/150 = 0.073	15/150 = 0.10	19/150 = 0.127
4/150 = 0.027	8/150 = 0.053	12/150 = 0.08	16/150 = 0.107	20/150 = 0.133

CHLORIDE TEST: (RUN THE BLANK FIRST AND AT THE LOW RANGE ONLY, EVEN IF YOUR CREEK WATER REQUIRES THE HIGH RANGE**)**

RANGE	COMMENTS	DROPS USED	CALCULATION	mg/L Cl
Low: 0 - 100 mg/L	Fill mixing bottle to 23 ml line.	Blank _____ 1. _____ 2. _____	Multiply by 5.	Blank _____ mg/L 1. _____ mg/L 2. _____ mg/L
High: 0 - 400 mg/L	Use measuring tube to measure water into mixing bottle.	1. _____ 2. _____	Multiply by 20.	1. _____ mg/L 2. _____ mg/L

Note: The color change is very rapid. It will turn from yellow to a slight orange. Rust color is too far.
Interpreting Results: If your results are much higher than normal, please call us.

Site: _____ Date: _____

Rinse Procedures:

1. Before blank test:
   - Rinse twice with deionized water.
2. After blank test:
   - Rinse 3X with deionized water.
3. Before 1st creek sample test:
   - Rinse 3X with sample water.
4. After 1st creek sample test:
   - Rinse 3X with deionized water.
   - Rinse 3X with sample water.
5. After last test:
   - Rinse twice with sample water.
   - Rinse twice with deionized water.

Rules for Monitoring:

1. Dissolved Oxygen is chemically fixed on site.
2. **Always run blanks** using deionized water, and run them first before testing creek water.
3. Use sample water in the comparator tubes.
4. Fill in raw data and calculated data.
5. Rinse, rinse, rinse. We've learned the hard way that a bit of residue left from a previous test will alter the results.
6. Achieve **repeatability**.
7. Enter data via App Link (ask Kim or see website) **OR** mail data sheet to Blue Thumb Office in OKC.
8. Wash all equipment in the lab with detergent provided. Rinse 3X in hot tap water. Rinse 3X with deionized water. Allow equipment to air dry. Put equipment away. Store in temperature controlled environment out of the reach of children.

For help or information call:

Kim Shaw	**Candice Miller**
(405) 627-3787	**(405) 464-2838**
Becky Zawalski	**Cheryl Cheadle**
(405) 761-7401	**(918) 398-1804**

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