

CHEMICAL AND FLOW MONITORING DATA SHEET

1. Check that equipment is prepared and calibrated:

<input checked="" type="checkbox"/>	Equipment Prep
	Equipment gathered, inspected, and ready to use
	Hanna Instruments Meter calibrated with 1,413 $\mu\text{S}/\text{cm}$ & 4.01 and 7.0 pH calibration solution

2. Record the sampling and site information in the boxes below:

Sampling Information		Site Information	
Monitor Name		Stream Name	
Sample Collection Date		Site ID	
Sample Collection Time			

3. Record general observations in the boxes below:

Air Temperature ($^{\circ}\text{C}$)								
Rainfall Today (mm)								
Rainfall Within 48 Hours (mm)								
Stream Flow (circle one)	Negligible	Low	Normal	High				
Water Color (circle one)	Normal		Abnormal					
Water Color Description (circle one)	Clear	Brown		Green				
Weather Conditions Today (circle one)	Sun	Partial Cloud	Overcast	Fog	Drizzle	Rain	Snow	
Weather Conditions Yesterday (circle one)	Sun	Partial Cloud	Overcast	Fog	Drizzle	Rain	Snow	

Observations/Notes:

4. Calculate Stream Discharge

Part 1 Determine the stream's cross-sectional area (m²)

Measure **stream width**: _____ meters

Measure 3 depths across width of stream: (1) _____ (2) _____ (3) _____

Calculate average **stream depth**: (1) _____ + (2) _____ + (3) _____ / **3** = _____ meters

Multiply **stream width** by average **stream depth** to find cross-sectional area

$$\begin{array}{ccc} \text{_____ meters} & \times & \text{_____ meters} = \text{_____ m}^2 \\ \text{(width)} & & \text{(depth)} \quad \text{(cross-sectional area)} \end{array}$$

Part 2 Determine the velocity of the stream (m/sec)

Float time of twig/ping pong ball _____ seconds

Multiply float time by length of run (10 m)

_____ seconds x 10 meters = _____ meters/second

(Float time)

Part 3 Calculate stream discharge

Multiply the stream's cross-sectional area (m²) by its velocity (m/sec)

$$\text{_____ m}^2 \times \text{_____ m/sec} = \text{_____ m}^3/\text{sec}$$

5. Chemical Monitoring

Parameter	Units	Acceptable Range	Rep #1	Rep #2	Rep #3*	Average
Conductivity	µS/cm	±10 µS/cm				
pH	SU	± 1 pH unit				
Water Temp	°C	± 0.5				
TDS	mg/L	± 10 mg/L				
DO	ppm	± 0.5 ppm				
Alkalinity	mg/L	± 5 mg/L				
Nitrate	mg/L	± 5 mg/L				
Cl ⁻	mg/L	± 5 mg/L				
SO ₄	mg/L	± 5 mg/L				

*If the second replicate value falls outside the acceptable range listed in the chart, test the sample again. Record the average of the two values that are within the acceptable range in the final column.