

# WYOMING STREAM TEAM WATER MONITORING

## Basic Stream Information and Water Quality

STREAM NAME: \_\_\_\_\_  
 SITE LOCATION: \_\_\_\_\_ ELEVATION: \_\_\_\_\_  
 DATE: \_\_\_\_\_ TIME: \_\_\_\_\_  
 COLLECTORS (Organization and Leaders): \_\_\_\_\_

**WEATHER CONDITIONS:**

Today: Sunny Partly Cloudy Cloudy Rainy Snowing Air Temperature: \_\_\_\_\_°C  
 Past 24 Hours: Sunny Partly Cloudy Cloudy Rainy Snowing

**LEGAL SITE DESCRIPTION:**

UTM: Northing \_\_\_\_\_ Easting \_\_\_\_\_ or Latitude: N \_\_\_\_\_ Longitude: W \_\_\_\_\_

**PHYSICAL FEATURES** \*Select one to circle that best applies. All others that apply can be underlined.

<p><b>Substrate:</b>                  mud sand gravel                  cobbles boulders bedrock</p>	<p><b>Streambank Vegetation:</b>                  barren grasses shrub/brush                  deciduous coniferous % stream shading _____</p>
<p><b>Bank Materials:</b>                  soil sand gravel boulders</p>	<p><b>Stream Control:</b>                  none channelized dam upstream                  upstream diversions</p>
<p><b>Bank Stability:</b>                  stable slightly eroded moderately eroded                  severely eroded undercut banks</p>	<p><b>Water Colors:</b>                  none green white brown grey other _____</p>
<p><b>Local Land Use:</b>                  urban suburban agricultural                  grassland forest recreational</p>	<p><b>Water Odors:</b>                  normal sewage petroleum                  chemical other _____</p>

**WATER QUALITY PARAMETERS**

Mandatory Parameters	Optional Parameters
Water Temperature: _____°C Range: 0-60	Nitrates: _____mg/l Range: 0-10
DO: _____ mg/l Range: 3-15	Orthophosphates: _____mg/l Range: 0-10
Alkalinity: _____ mg/l Range: 0-500	Coliform: _____colonies/100ml Range: 0-500
pH: _____ Range: 6.5-10	Notes:
Turbidity: _____NTU Range: 0-240	
Conductivity: _____ μS Range: 50-4000	





## Velocity and Discharge

Distance (D) = \_\_\_\_\_ ft.

Time Trial 1 = \_\_\_\_\_ s

Time Trial 2 = \_\_\_\_\_ s

Time Trial 3 = \_\_\_\_\_ s

Avg. Time ( $t_{avg}$ ) = \_\_\_\_\_ s

Corrected Time (t) =  $t_{avg} * K$

K = 0.8 for rocky bottom;  
0.9 for sand, silt bottom

Corrected Time (t) = \_\_\_\_\_ s

Velocity (V) =  $\frac{D}{t}$

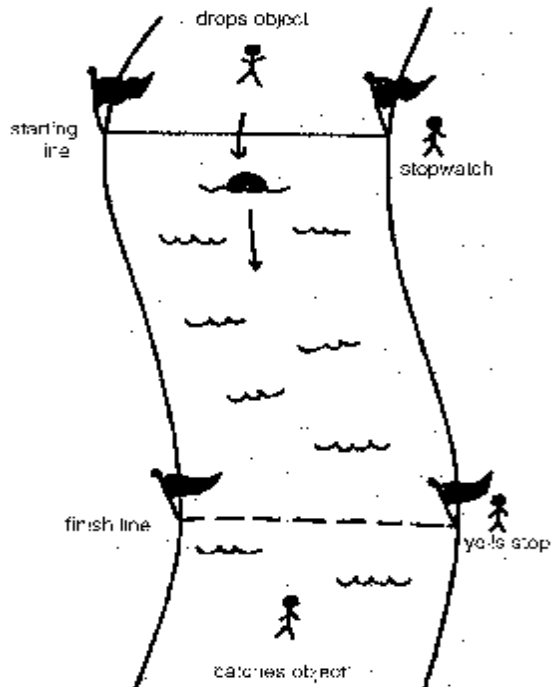
Velocity (V) = \_\_\_\_\_ ft/s

X-Sectional Area = \_\_\_\_\_ ft<sup>2</sup>

Graph cross section or  
mean width\*mean depth

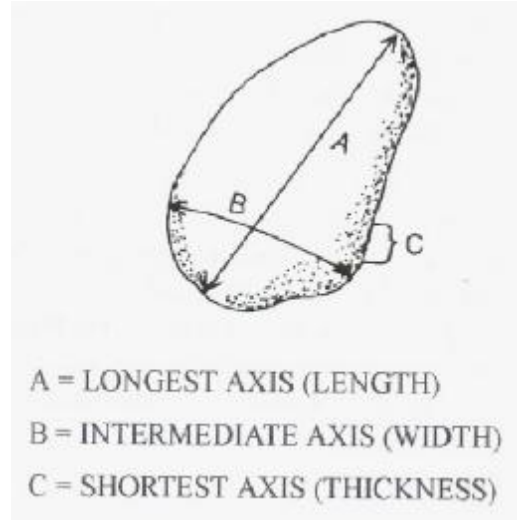
Discharge (D) = V\*X-Sect.Area

Discharge (Q) = \_\_\_\_\_ cfs



## Pebble Count

Measure and tally the size of the intermediate axis of 100 substrate samples.



Class	Size (mm)	Size (in)	Tally
Bedrock	Solid rock		
Boulder	>256	>10	
Cobble	64-256	3-10	
Gravel	64-2	1/16-3	
Sand	2-0.062	1/500-1/16	
Silt/Clay	<.062	<1/500	

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## RIPARIAN VEGETATION

### Vegetation Categories

GREENLINE		Deep Rooted Plants		Shallow Rooted Plants		Bare Ground
		Sedges and Rushes	Shrubs and Trees	Grasses	Forbs	
Row 1	Record Vegetation Category at Each Pace Along 100 ft. Greenline					
Row 2	Total Observations Per Category					
Row 3	Total # Observations (total # of paces)					
Row 4	% of Each Category (divide row 2 values by total in row 3. Multiply by 100)					
Row 5	Factor	9	8	6	3	1
Row 6	Site Score (multiply row 4 by row 5)					
Row 7	Total (sum of row 6 scores)		The higher your score the stronger your plant roots are and the more your stream banks will resist erosion.			

## CANOPY COVER

		Miss (Open Sky)	Hit (Vegetation)
Row 1	At each pace along greenline, record as a slash whether you see a miss (open sky) or hit (vegetation) with your ocular tube		
Row 2	Total (sum the slash marks above)		
Row 3	Total observations (total # paces)		The higher the percent canopy cover, the greater shading received by the stream.
Row 4	Percent Canopy Cover (divide row 2 hits (vegetation) by row 3 and multiply by 100)		

## GROUND COVER (15 paces at five transects)

	1	2	3	4	5	Category Total	Percent of Each Category (category total divided by 75 (the total number of paces))
Live Vegetation							
Litter							
Rocks							
Bare Ground							

