



THE IZAAK WALTON LEAGUE OF AMERICA

Creek Freaks | *Physical Monitoring Data Form*

Name of Stream: _____ River or Lake Basin: _____

County: _____ Township: _____ School or Group Name: _____

Field Personnel Involved: _____

Survey Date: _____ Start Time: _____ End Time: _____

Location (description): _____

GPS Coordinates: _____

Weather Conditions (last 3 days): _____

VISUAL OBSERVATIONS																																
Water Appearance <input type="checkbox"/> Clear <input type="checkbox"/> Brownish <input type="checkbox"/> Blackish <input type="checkbox"/> Foamy <input type="checkbox"/> Oily <input type="checkbox"/> Milky <input type="checkbox"/> Muddy <input type="checkbox"/> Scummy <input type="checkbox"/> Other _____	Stream Bottom Appearance <input type="checkbox"/> Grey <input type="checkbox"/> Orange/red <input type="checkbox"/> Yellow <input type="checkbox"/> Black <input type="checkbox"/> Brown <input type="checkbox"/> Other _____	Odor <input type="checkbox"/> None <input type="checkbox"/> Musky <input type="checkbox"/> Rotten eggs <input type="checkbox"/> Oil <input type="checkbox"/> Sewage <input type="checkbox"/> Other _____	Algae Color and Texture <input type="checkbox"/> Light green <input type="checkbox"/> Dark green <input type="checkbox"/> Brown <input type="checkbox"/> Matted <input type="checkbox"/> Hairy	Algae Amount <input type="checkbox"/> Scarce <input type="checkbox"/> Scattered <input type="checkbox"/> Moderate <input type="checkbox"/> Dense																												
Stream Bed Stability <i>(Bed sinks beneath your feet in)</i> <input type="checkbox"/> No spots <input type="checkbox"/> A few spots <input type="checkbox"/> Many spots	Riparian Zone Width <i>(looking upstream from transect)</i> <table style="width: 100%; text-align: center;"> <tr> <td></td> <td>0-10'</td> <td>11-50'</td> <td>51-100'</td> <td>100+'</td> </tr> <tr> <td>Left Bank</td> <td>----</td> <td>----</td> <td>----</td> <td>----</td> </tr> <tr> <td>Right Bank</td> <td>----</td> <td>----</td> <td>----</td> <td>----</td> </tr> </table>				0-10'	11-50'	51-100'	100+'	Left Bank	----	----	----	----	Right Bank	----	----	----	----	Stream Channel Shade <i>(estimate)</i> <input type="checkbox"/> >80% (excellent) <input type="checkbox"/> 50%-80% (high) <input type="checkbox"/> 20%-49% (moderate) <input type="checkbox"/> <20% (almost none)													
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STREAM FLOW ESTIMATEEstimated flow rate: high moderate low negligible**STREAM FLOW MEASUREMENT**

Measured flow rate: Flow = Area x Velocity = Cubic Feet Per Second

Area**Measure Stream Depth at Five Equidistant Intervals Across the Stream:** *Depth will be measured in inches and needs to be converted into feet. Convert by dividing number of inches measured by 12. For example, 6 inches/12 inches = .5 feet.*

1 _____ inches /12 = _____ feet 4 _____ inches /12 = _____ feet

2 _____ inches /12 = _____ feet 5 _____ inches /12 = _____ feet

3 _____ inches /12 = _____ feet

Calculate Average Stream Depth: *Calculate average stream depth by adding the results, in feet, of 1 through 5 above and dividing by 5.*

Average Stream Depth: _____ feet

Measure Stream Width: *Measure stream width at a point that visually appears to be the average width of the stream. Measure width rounded to the nearest foot.*

Stream Width: _____ feet

Calculate Area of Stream Transect: *Average Stream Depth x Stream Width = Area.*

Area of Stream Transect: _____ square feet

Velocity

Measure and mark a distance along the stream (normally from 20 to 30 feet, depending on the stream) where you will start and end your float trials.

Length of Stream Run: _____ feet

Float Time Trials: *Time how long it takes for a wiffle ball to travel the length of the stream run.*

1 _____ seconds 4 _____ seconds

2 _____ seconds 5 _____ seconds

3 _____ seconds

Average Float Time: *Calculate average float time by adding results for trials 1 through 5 and dividing by 5.*

Average Float Time: _____ seconds

Calculate Average Velocity: *Velocity is a measurement of feet traveled per second. Divide length of stream run by average float time.*

Average Velocity: _____ feet/second

Flow Rate: *Calculate the flow rate by multiplying Area of Stream Transect by Average Velocity.*

Flow or discharge = Area x Average Velocity = _____ cubic feet/second