Name_____ Date_____ Time_____

Stream Name_____ Location_____

(County, Road, Site # if known, Township, Range, Section)

WATER ACTION VOLUNTEERS

1. SITE LOCATION

Length Assessed: _____ ft.

2. STREAM WIDTH & DEPTH

Stream Width: _____ ft.

If stream ≤ 20 ft. wide, measure depth every foot across the width. If stream is > 20 ft. wide, measure depth at 20 equal intervals across the entire width.

Interval	Depth (10th ft.)
1	0
2	
3	
4	
5	
6	
7	
8	
9	
10	
sum	ft.

Add together

Interval	Depth (10th ft.)
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
sum	ft.

_____ ft. **Total Sum of Depths**

_____ ft. ÷ _____ = _____ ft.

sum of depths *# of intervals* **Average Depth**

_____ ft. × _____ ft. = _____ ft.²

average depth *stream width* **Cross-Sectional Area**

3. VELOCITY MEASUREMENT

Float Trials	Time (seconds)
1	
2	
3	
4	
sum of trials:	sec.

# of trials

_____ ÷ _____ = _____ sec.

Average Float Time

_____ ft. ÷ _____ sec. = _____ ft./sec.

length assessed *average float time* **Average Surface Velocity**

4. CALCULATING STREAM FLOW

Correction value for rough, loose, coarse, weedy bottom: 0.8

Correction value for smooth bottom: 0.9

_____ × _____ ft./sec. = _____ ft./sec.

correction value *average surface velocity* **Corrected Surface Velocity**

_____ ft.² × _____ ft./sec. × **0.76** = _____ ft.³/sec.

cross-sectional area *corrected surface velocity*

FINAL CORRECTED STREAM FLOW:

(round to the nearest tenth)

Measuring stream flow with the surface float test method overestimates flow by 24%. This is why we must **multiply our stream flow by 0.76** for a final corrected stream flow discharge.

Sample Stream Flow Worksheet

Depth Conversion Chart

Inches	Tenths of ft.
3/8 - 7/8	0.05
1/1 1/2	0.1
1 5/8-2	0.15
2 1/8- 2 5/8	0.2
2 3/4-3 1/4	0.25
3 3/8-3 7/8	0.3
4-4 3/8	0.35
4 1/2-5	0.4
5 1/8-5 5/8	0.45
5 3/4-6 1/4	0.5
6 3/8-6 7/8	0.55
7-7 3/8	0.6
7 1/2-8	0.65
8 1/8-8 5/8	0.7
8 3/4-9 1/4	0.75
9 3/8-9 7/8	0.8
10/10 3/8	0.85
10 1/2-11	0.9
11 1/8-11 5/8	0.95
11 3/4-12	1.0

Name: Vick Volunteer Date: 6/5/2005 Time: 9:30 AM

Stream Sampled: Lee Creek Location: Berg Rd. Crossing, Iowa Co., T6NR2E, S10
(County, Road, Site # if known, Township, Range, Section)

WAV WATER ACTION VOLUNTEERS

1. SITE LOCATION

Length Assessed: 20 ft.

2. STREAM WIDTH & DEPTH

Stream Width: 7.85 ft.

If stream ≤ 20 ft. wide, measure depth every foot across the width. If stream is > 20 ft. wide, measure depth at 20 equal intervals across the entire width.

Interval	Depth (ft./in.)	Depth (10ths ft.)	Interval	Depth (ft./in.)	Depth (10ths ft.)
1	0	0	11		
2	6 3/8"	0.55	12		
3	7 5/8"	0.65	13		
4	8 1/4"	0.7	14		
5	9 5/8"	0.8	15		
6	1ft 1 1/2"	1.1	16		
7	9 3/4"	0.8	17		
8	8 1/4"	0.7	18		
9	7 1/4"	0.6	19		
10			20		
sum	5.9 ft.	← Add together →			sum ft.

Total Sum of depths: 5.9 ft.

5.9 ft. (sum of depths) ÷ 9 (# of intervals) = 0.66 ft. (Average Depth)

3. VELOCITY MEASUREMENT

Float Trials	Time (seconds)
1	11.62
2	11.59
3	9.66
4	9.22
sum	42.1

42.1 ÷ 4 (# of trials) = 10.5 sec. (Average Float Time)

20 ft. (length assessed) ÷ 10.5 sec. (ave. float time) = 1.9 ft./sec. (Ave. Surface Velocity)

4. CALCULATING STREAM FLOW

Correction value for rough, loose, coarse, weedy bottom: 0.8
Correction value for smooth bottom: 0.9

0.9 (correction value) x 1.9 ft./sec. (ave. surface velocity) = 1.7 ft./sec. (Corrected Surface Velocity)

Compute Ave. Cross-Sectional Area:

0.66 ft. (average depth) x 7.85 ft. (width) = 5.2 ft.² (Cross-Sectional Area)

5.2 ft.² (cross-sectional area) x 1.7 ft./sec. (corrected surface velocity) = **STREAM FLOW:** 8.8 cubic feet per sec. (round to the nearest tenth)

For more information, contact WAV staff at wav@extension.wisc.edu
Learn more at www.wateractionvolunteers.org