



Citizen Stream Field Sampling Protocol

Transparency:

1. Collect your water sample in a clean bucket/bottle at mid-stream & depth:
 - a. Wading or from streambank: Always sample safely - don't wade into fast-moving water or areas of unknown depth. If you cannot sample safely, make visual observations only (*Appearance* etc.). If a sample from mid-stream and depth is not possible, avoid stagnant water and sample as far from the shoreline as is safe.
 - Try not to stir up the bottom
 - Face upstream as you fill your bucket.
 - Avoid collecting sediment from the stream bottom or materials from the water surface
 - b. From atop a bridge or culvert:
With a rope tied to its handle, lower a bucket down to the stream, collect water, and pull the bucket back up.
2. Take your tube readings in open conditions. Avoid direct sunlight by turning your back to the sun if necessary.
3. Pour the water from your bucket into the tube until the symbol on the bottom is no longer visible.
4. While looking down into your tube, open the valve at the bottom and slowly release water until you can JUST begin to make out the symbol on the bottom. Note this depth.
5. Release a bit more water until the symbol is clearly visible. Note depth.
6. Record the average of the two depths noted in steps 4. and 5. (depth 4. + depth 5., divided by 2) on your data sheet to the nearest centimeter. If the symbol is still visible when your tube is full, indicate this on the data sheet (e.g. > 60 cm).

Rain gage and Rain event:

Record the amount of rainfall during the last 24 hours, to the nearest hundredths of an inch (e.g. 0.07). Write "T" for less than 0.005 inch; "0" if no rain has fallen. Put a "Y" in the "Rain event" box if you are sampling in response to a significant rainfall event; an "N" if not.

Appearance:

Each day that you sample, please record the one number that best describes the appearance of stream water within one meter of your sampling site.

- 1 = Clear - crystal clear, transparent water
- 2 = Milky - not quite crystal clear; cloudy white or gray
- 3 = Foamy - natural or from pollution--generally detergents, nutrients or dissolved organic material (several inches of foam that does not brush apart easily is generally due to pollution of some sort)
- 4 = Tea-colored - clear, but tea-colored due to wetland or bog influences
- 5 = Muddy - cloudy brown due to high sediment levels
- 6 = Green - might indicate excess nutrients released into the stream
- 7 = Green OR Muddy plus one or more of the following:
 - extensive floating scum on the stream or washed up on shore
 - strong foul odor

Recreational Suitability:

Please use the one number each day that you sample that best describes your opinion of how suitable the stream water is for recreation and enjoyment.

- 1 = Beautiful, could not be better
- 2 = Very minor aesthetic problems: excellent for body-contact recreation (swimming, wading, frog catching, etc.)
- 3 = Body-contact recreation and aesthetic enjoyment slightly impaired
- 4 = Recreation potential and level of enjoyment of the stream substantially reduced (would not swim but boating/canoeing is okay)
- 5 = Swimming and aesthetic enjoyment of the stream nearly impossible

Temperature and Photographs(OPTIONAL):

Stream Temperature:

If you have a non-mercury thermometer, measure stream temperature by holding it in the stream water (or sample water) for 2 minutes. Record the temperature in degrees Fahrenheit.

Picture Taken:

If possible, take pictures of your site under a variety of transparency, appearance, and recreational suitability conditions. Place a check in the box on your data sheet each time a picture is taken. Once developed, date each photograph and keep them with other site records.



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Stream Stage:

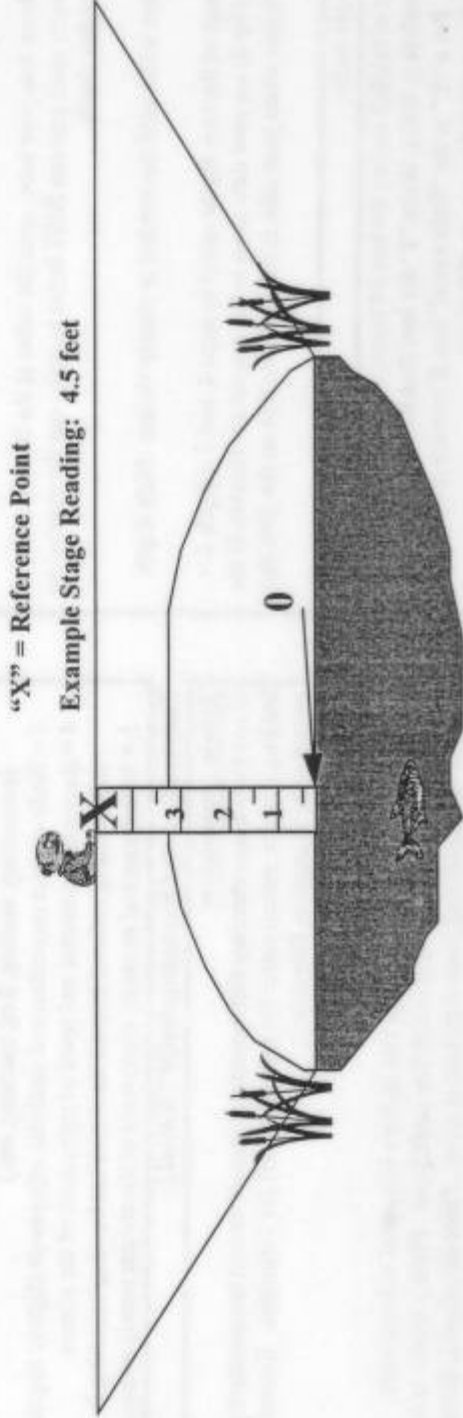
Stream Stage (ext.): Please estimate the water level each time you sample

N=normal
L=low
H=high

Stream Stage - (meas.): If possible, measure the distance from your established reference point to the top of the stream water:

1. Using a tape measure or a rope on which inches have been marked, lower the end marked "0" from your reference point to the water surface.
2. Note the distance on your end of the tape or rope to the nearest inch. Note that a smaller number reflects a higher stream stage; a larger number a lower stage.
3. Record this distance, in inches, in the stream stage (meas.) column on your data sheet.

Stream Stage Measurement from a Bridge or Culvert





Minnesota Pollution Control Agency

2005 Citizen Stream Monitoring Data Sheet 4

Your Name: _____

Stream Name: _____

Site: **NEW**

- Make sure your back is to the sun when taking a measurement.
- Fill your tube until the symbol disappears.
- Release water until you can JUST make out the symbol. Note depth.
- Release a bit more water until the symbol is visible. Note depth.
- Record the average of the two depths to the nearest centimeter.
- If the symbol is visible when the tube is full, record as '>60 cm'.

#	Date	Time	Appearance	Recr. Suit.	Transparency (nearest cm)	Rainfall event? (Y/N)	OPTIONAL			Comments/Picture Taken?
							Stream Stage Estimate (Low, Normal, High)	Tape Down Distance (inches)	Gage Height (Decimal feet)	
40		am pm			cm		inches	feet		
41		am pm			cm		inches	feet		
42		am pm			cm		inches	feet		
43		am pm			cm		inches	feet		
44		am pm			cm		inches	feet		
45		am pm			cm		inches	feet		
46		am pm			cm		inches	feet		
47		am pm			cm		inches	feet		
48		am pm			cm		inches	feet		
49		am pm			cm		inches	feet		
50		am pm			cm		inches	feet		



Minnesota Pollution Control Agency 2005 CSMP Rain Gauge Data sheet

Name _____ Time of daily reading _____

County _____ CSMP Site _____

	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	REMARKS-SEVERE WEATHER-STORM DAMAGE
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
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20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										
Total										

INSTRUCTIONS:

1. Try and record precipitation at the same time each day. Record daily reading time at top of form
2. Record precipitation to the nearest 1/100 of an inch (.01, .31, 1.31, etc.), record "0" if no rainfall occurs.
3. If precipitation is less than .01" record "T" for trace.
4. Use remarks column to note if precip. is SNOW, or there is other severe weather; record date for which remarks apply.
5. Sum precipitation for each month and record at the bottom of each column.

(OVER→)